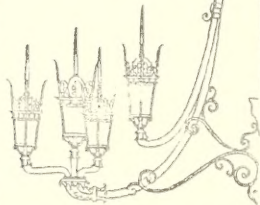




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BOSTON REDEVELOPMENT AUTHORITY
SOUTH END PROJECT R-56
SOUTH END URBAN RENEWAL AREA
INVESTIGATION
OF
SUBSOIL
AND
FOUNDATION CONDITIONS

PART I

DECEMBER 1963

THE THOMPSON & LICHTNER CO., INC.
ENGINEERS
BROOKLINE, MASSACHUSETTS

South End
371E
Part I

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END PROJECT, MASS. R-56
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December 27, 1963
THE THOMPSON & LIGHTNER CO., INC.
8 ALTON PLACE
BROOKLINE, MASS.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END PROJECT MASS. R-56
SOUTH END URBAN RENEWAL AREA

INVESTIGATION
OF
SUBSOIL
AND
FOUNDATION CONDITIONS

PART I - REPORT

December 27, 1963
THE THOMPSON & LICHTNER CO., INC.
8 ALTON PLACE
BROOKLINE, MASS.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

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- SECTION 3 - Inspection of Foundations
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BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 1. Scope of Work

The scope of work covered by this report is as required by the contract for Engineering Services by and between the Boston Redevelopment Authority and The Thompson & Lichtner Co., Inc., dated March 12, 1963. This contract required the following professional services:

1. Consult with and advise the Authority or its authorized representatives regarding the functions performed and to be performed hereunder and the several aspects of the Authority's plans and programs which are related to the study to be performed by the Engineer under this contract.
2. The Engineer shall gather information of record as to subsoil and boring data for the entire project area.
3. The material shall be suitably organized and presented to the Authority together with appropriate plans and drawings necessary to support and document the findings and recommendations, and a report commenting on the reliability of the information, the source, the import of the information as to soil bearing qualities, and recommendations for locations of additional exploratory borings.
4. The report shall contain recommendations and estimates in regard to the building of economical types of foundations and shall include information on the feasibility of chemical treatment of the soil for the purpose of stabilization, particularly as this data relates to the types of structures proposed in areas of new construction. These recommendations shall be related to the various soil conditions disclosed by the gathering and analysis of the subsoil and boring data.
5. Consult with the Authority as to the location of borings recommended to be made and as to probable costs.
6. The Engineer shall gather information of record as to the types of foundation and piling supporting the various structures within the area. He shall also investigate through records or other readily available sources the reasons for demolition, structural repairs and foundation repairs which have taken place in the last 15 years.
7. The Engineer shall conduct a survey and inspection of footings and pilings of fifteen structures, the number having been determined by the Engineer as being adequate to make proper determinations. The Engineer shall select the structures to be investigated to provide a representative picture of foundation and soil conditions for the area. The location of the structures must be approved by the Project Director in order that permission from owners of the structures may be obtained.

If the Project Director is unable to obtain permission from an owner, an alternate structure will have to be selected by the Engineer for which owner permission can be obtained.

8. The work of the Engineer shall include the uncovering of the footings and the piling, if any, the observation of and recording of the condition of the foundations, piling and the structure as affected by the foundation condition. Elevation of the footing and the piling to Boston City Base shall be recorded. There shall also be taken a boring to the depth of at least 50 feet, or to bedrock, whichever is the lesser, to give subsoil data at the location of each structure investigated.

9. A report, together with appropriate plans and drawings shall be made and submitted in 25 copies setting forth the findings, including the boring logs, the conclusions as to the condition of foundations, pilings and structures in the area, as well as an analysis of the subsoil conditions for the area. Also the report shall contain recommendations for the most economical methods of repair or remedying of any unsatisfactory conditions found and estimated costs for the same. Any known, apparent or deducible trends with regard to the subsoil area, ground water levels, piling and foundation conditions shall be reported and projected into the future.

Investigations, studies, findings, conclusions and recommendations covering the above scope of work are included in this report under the following headings:

<u>PART I</u>	-	<u>REPORT</u>
SECTION 1		Scope of Work
SECTION 2		Borings and Subsoil Data
SECTION 3		Inspection of Foundations
SECTION 4		Photographs
SECTION 5		Examination of Public Records
SECTION 6		Chemical Treatment of Soils
SECTION 7		Laboratory Soils Tests
SECTION 8		Findings
SECTION 9		Conclusions and Recommendations
SECTION 10		Research
<u>PART II</u>	-	<u>EXHIBITS</u>
SECTION 1		Boring Data
SECTION 2		Photographs
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SECTION 1		Key Plan
SECTION 2		Soils Profiles

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

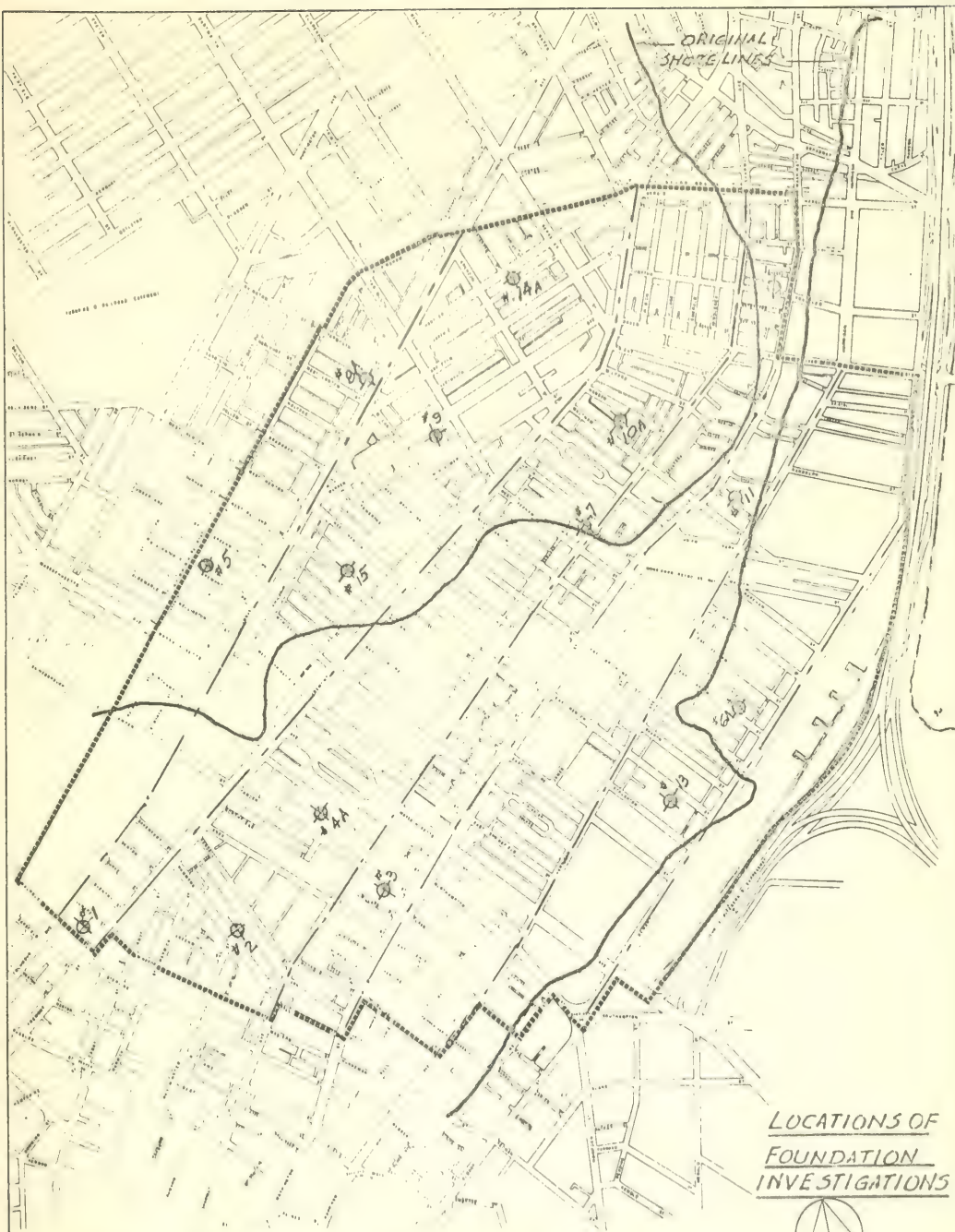
SECTION 2. Borings and Subsoil Data

a. In accordance with contract requirements, information of record was gathered as to subsoil and boring data for the South End Urban Renewal Area. This information is presented in PART II, SECTION 1 of this report in 99 sheets showing boring logs and subsoil data, and in PART III, SECTION 2 on soils profiles prepared for the area.

b. In PART II, SECTION 1, Sheets No. 1 through No. 5 present boring and subsoil data for the fifteen specific locations at which foundation investigations were made under this study. These boring logs are documented by Raymond International, Inc. Test Boring Reports dated June 18 and August 12, 1963 and are included at the end of the section. Sheets No. 6 through No. 99 present boring and subsoil data obtained from various sources indicated on the sheets.

c. All boring and subsoil data has been incorporated into the soils profiles included in PART III, SECTION 2. Locations of borings and excavations are shown on the plan section of soils profile drawings. A key plan, included in PART III of this report, gives the general location of each drawing.

d. The fifteen specific locations where boring and excavations uncovering footings were made are shown on the following map.



ORIGINAL SHORE LINES

LOCATIONS OF
FOUNDATION
INVESTIGATIONS



SOUTH END URBAN RENEWAL AREA

0 200 400 600 800 1000 1200 1400 1600

BOSTON REDEVELOPMENT AUTHORITY

SCALE
APRIL 1962
DRAWING NUMBER

R 56

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 3. Inspection of Foundations

a. In accordance with the requirements of the contract, a survey and inspection of footings and pilings of fifteen structures, selected to provide a representative picture of foundations and soil conditions for the South End Urban Renewal Area, was conducted.

b. Prior to selecting the structures to be surveyed, a large number of boring logs in the area were reviewed to obtain a general picture of soils conditions. Approximately four hundred city-owned properties and numerous privately-owned properties were carefully viewed. The location of the original shore lines and their relationship to the proposed structures to be surveyed and the relationship of the areas for new development set forth by the Authority as to the location of the structures proposed for the investigation were studied.

As a result of this study, six locations to the west of the original shore line, eight locations on original land between the two shores, and one location to the east of the original shore line were selected. Eleven of the fifteen locations were located in or adjacent to areas for new development and four were located outside such areas.

Locations No. 5, 8A, 10A, 14A and 15 are located in the area of the South End, west of the original shore line, and are therefore in a fill area. Location No. 6A is also in a fill area to the east of the original shore line. Locations No. 1, 2, 3, 4A, 7, 11, 12 and 13 are located between the shore lines and on original ground.

Locations No. 1, 2, 3, 6A, 7, 11 and 12 are in proposed areas of development; Locations No. 4A, 8A, 9 and 13 are adjacent to these areas; and Locations No. 5, 10A, 14 and 15 are outside such areas.

Foundations in the ground locations between the original shore lines were constructed as follows:

- Location No. 1 - 23 Walpole Street - dry laid granite block bearing on gravelly sand, some silt.
- Location No. 2 - 53 Hammond Street - pile foundation with mortar and random stone cap.
- Location No. 3 - 22-24 Camden Street - dry laid solid stone footing bearing on clay.
- Location No. 4A - 196 Northampton Street - stone foundation bearing on clay and silt - upper part of foundation laid with mortar - lower part of foundation laid dry.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

- Location No. 7 - 335 Shawmut Avenue - foundation of dry laid boulders and granite blocks, top layer with mortar bearing on stiff yellow clay.
- Location No. 11 - 10 Rollins Street - footing of dry laid boulders bearing on hard yellow clay.
- Location No. 12 - 11 Compton Street - footing of dry laid granite blocks on stiff clay.
- Location No. 13 - East Newton Street Armory - granite block footing bearing on sandy silt, some clay.

The foundations in the so-called fill areas were constructed as follows:

- Location No. 5 - 27-29 Claremont Street - footing of granite block and boulders laid dry bearing on sand and gravel, little silt.
- Location No. 6A - 106 East Canton Street - pile foundation capped with dry laid granite blocks.
- Location No. 8A - 373 Columbus Avenue - pile foundation capped with dry laid granite blocks.
- Location No. 9 - 72 Warren Avenue - granite block foundation laid in mortar on granite slab footing bearing on silty sand, some gravel and clay. Building Department records indicate a pile foundation at this location; however, no piles were encountered.
- Location No. 10A - 20 Hanson Street - footing of irregular sizes of granite laid dry bearing on clay and silt, some fine sand.
- Location No. 14A - 70 Chandler Street - pile foundation capped by granite block.
- Location No. 15 - 21 Rutland Square - footing of dry laid granite block and boulders bearing on miscellaneous and clay fill.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

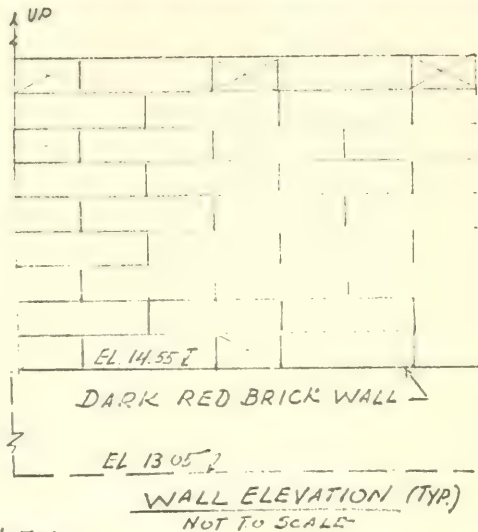
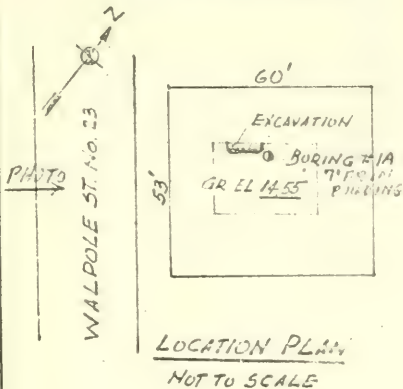
The area between the original shore lines on the so-called natural soils, one location out of eight locations was found where piles were used. There is a question as to piles being used on the East Newton Street Armory; however, none were encountered. In the areas of so-called fill, outside the shore lines, we found piles at three out of seven locations with a question as to piles being used at the Warren Avenue Fire Station. If piles were used at the Fire Station and the Armory, a total of six locations with pile foundations and nine locations where footings bear on soil would be had. Observations of foundation conditions are shown on the next 15 pages.

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 1 of 15
 DATE 11/2/63
 MADE BY V.O.
 CHECKED BY RFB

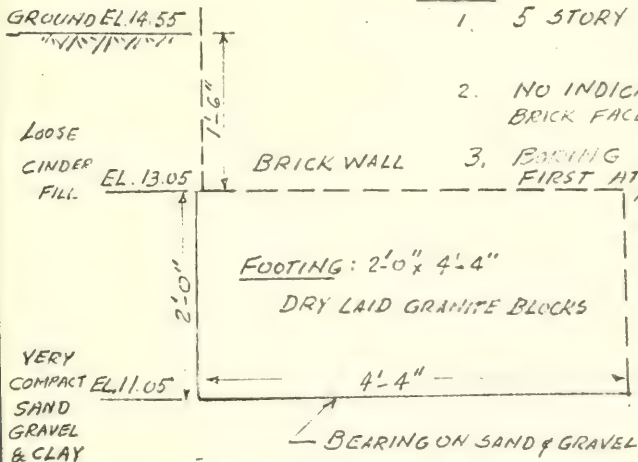
SUBJECT INSPECTION OF FOUNDATIONS SOUTH END P-55

EXCAVATION No. 1



NOTES:

- 5 STORY BRICK DWELLING HOUSE WITH WOOD FLOORS
- NO INDICATION OF SETTLEMENT BRICK FACE IS IN GOOD CONDITION
- BORING COMPLETED 6/19/63 FIRST ATTEMPT HIT OBSTRUCTION AT 5' DEPTH - HOLE DROPPED
- EXCAVATION COMPLETED 6/21/63 PHOTOSMADE.
- 2 JAR SAMPLES OBTAINED FROM BOTTOM. SOIL TYPE - GRAVELLY SAND SOME SILT



- AS OF AUGUST 5, 1963 ALL SASH WERE OUT AND FRAMES ARE SPLIT. CONDITIONS INDICATE A PROLONGED LACK OF MAINTENANCE.

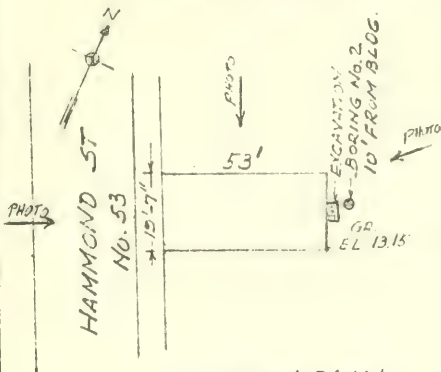
BORING OBSERVED BY C. ALBANESE
 EXCAVATION OBSERVED BY C. ALBANESE
 FOUNDATION VIEWED BY RF BATTLES
 BUILDING EXAMINED BY HB SNELL

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 2 of 15
 DATE 11/13/63
 MADE BY V.O.
 CHECKED BY RFB

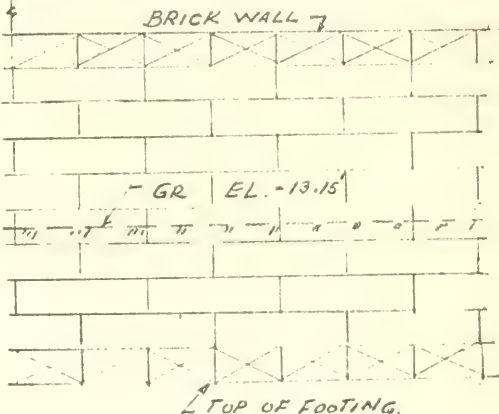
SUBJECT INSPECTION OF FOUNDATIONS - SOUTH END R-56

EXCAVATION No. 2



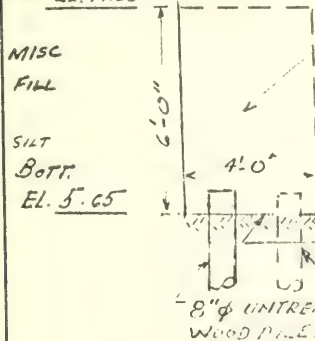
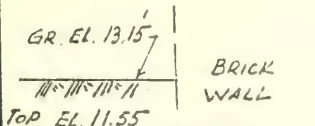
LOCATION PLAN
 NOT TO SCALE

FRONT BRICK IN FAIR CONDITION
 NEEDS POINTING. SIDE AND REAR
 UP BRICK POORLY LAID UP, IN POOR CONDITON



BOTTOM OF FOOTING
 SUPPORTED BY WOOD PILES

WALL ELEVATION (TYP)
 NOT TO SCALE



FOUNDATION SECTION
 SCALE 1" = 1'-0"

- FOUNDATION
 OF MORTAR &
 RANDOM SPONGE
 IRREGULAR SHAPE
 SEE PHOTOGRAPH

NOTES:

1. 4 STORY AND BASEMENT DWELLING HOUSE WITH BRICK WALLS - WOOD FLOORS ON WOOD JOISTS
2. NO INDICATION OF SETTLEMENT IN FOUNDATION OR IN WALLS
3. BORING COMPLETED 6/25/63, 3 SHFLBY TUBE SAMPLES OBTAINED,
4. EXCAVATION COMPLETED 7/5/63

BORING OBSERVED BY C. ALFAN
 EXCAVATION OBSERVED BY C. ALFAN
 FOUNDATION VIEWED BY M.N. CLAY
 BUILDING EXAMINED BY H.B. SNELL

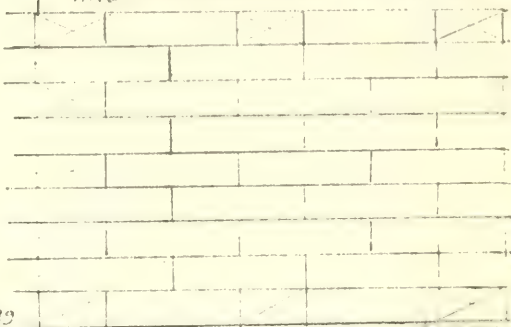
5. SAMPLE OF WOOD PILES OBTAINED PILES IN GOOD CONDITION.
6. AS OF AUGUST 5, 1963, A LARGE NUMBER OF WINDOW SILL WERE OUT, FRAMES SPLIT AND GENERAL LACK

THE THOMPSON & LICHTNER CO., INC.

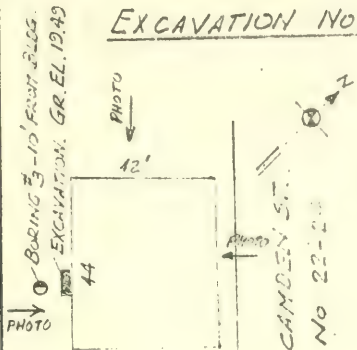
SHEET No. 3 of 15
 DATE 11/13/63
 MADE BY V.O.
 CHECKED BY RFB

SUBJECT INSPECTION OF FOUNDATIONS - SOUTH END R-56

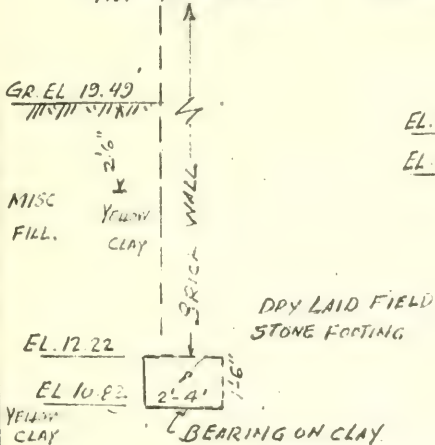
BRICKS ARE LOOSENING AT SILLS.
 FRONT BRICKS - JOINTS OPENING OVER
 UP FIRST STORY WINDOWS. CRACKS
 SECOND TO THIRD FLOORS, REAR
 AND SIDE WALLS NEED POINTING.



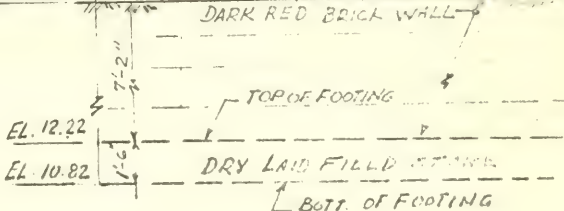
EXCAVATION No. 3



LOCATION PLAN
 NOT TO SCALE



GR. EL. 19.49



WALL ELEVATION (TYP.)
 NOT TO SCALE

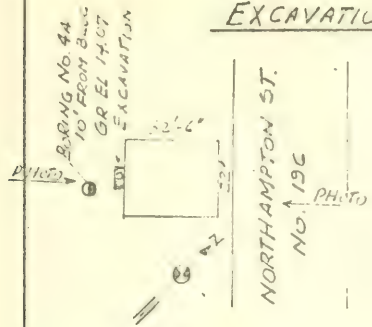
NOTES

- 3 STORY BRICK DWELLING HOUSE WITH WOOD FLOORS ON WOOD JOISTS
- NO INDICATION OF WALL OR FOUNDATION SETTLEMENT
- BORING COMPLETED 6/3/63
- EXCAVATION COMPLETED 6/7/63
- SAMPLE OF MATERIAL UNDER FOOTING OBTAINED BY TROWEL SHEEPY TUBE INTO CLAY
- AS OF AUGUST 5, 1963 LACK OF MAINTENANCE IS LARGELY RESPONSIBLE FOR THE DETERIORATION OF THE BUILDING

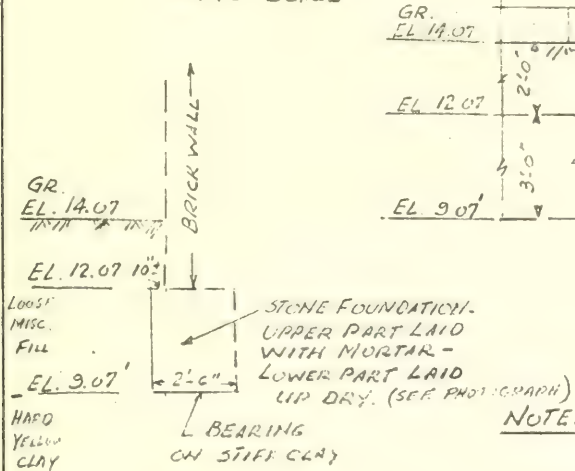
BORING OBSERVED BY C. ALBANESE
 EXCAVATION OBSERVED BY C. ALBANESE
 FOUNDATION VIEWED BY M. C. UICHI & R. F. BATTLES
 BUILDING EXAMINED BY H. B. SNELL

SUBJECT INSPECTION OF FOUNDATIONS SOUTH END P-56

EXCAVATION NO. 4A



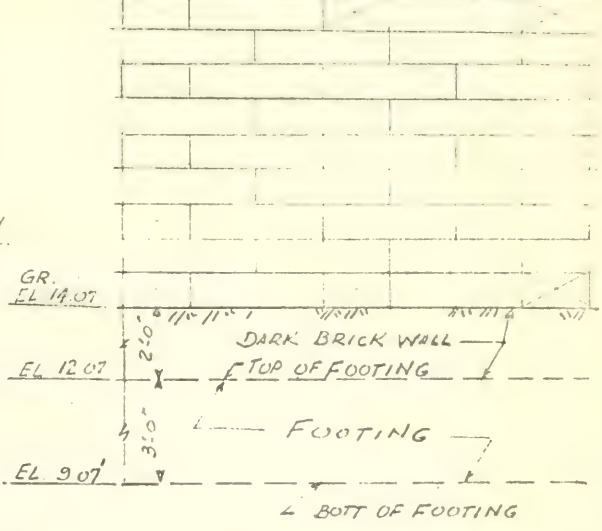
LOCATION PLAN
 NOT TO SCALE



FOUNDATION SECTION
 SCALE $\frac{1"}{4} = 1'-0"$

BORING OBSERVED BY C. ALBANESE.
 EXCAVATION OBSERVED BY C. ALBANESE.
 FOUNDATION VIEWED BY MCLAIR & RFBATTLES.
 BUILDING EXAMINED BY HBSNELL.

FACE BRICK WORK OK EXCEPT FOR
 HORIZONTAL CRACKS AT WINDOW SILL &
 BRICK ON REAR ELEVATION IN
 NEED OF POINTING OR
 DARK RED BRICK WALL



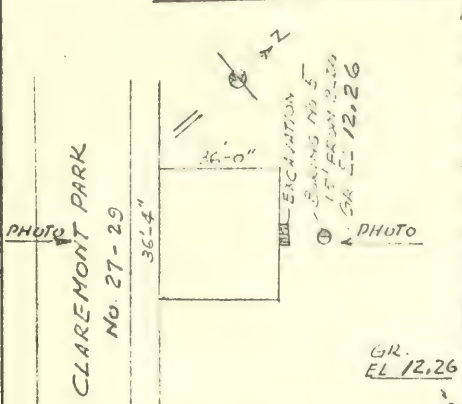
WALL ELEVATION (TYP.)
 NOT TO SCALE

NOTES

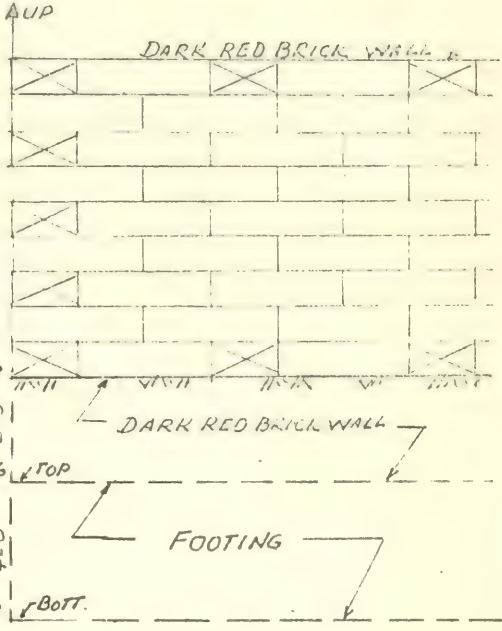
1. 3 1/2 STORY BRICK DWELLING HOUSE.
2. FRONT BASEMENT WALL SHOWS GRANITE FROM SIDEWALK TO 1ST FLOOR LINE WITH GRANITE ENTRANCE STEPS
3. NO INDICATION OF FOUNDATION SETTLEMENT.
4. BORING COMPLETED 5/31/63
5. EXCAVATION COMPLETE 6/5/63 TWO JAR SAMPLES OBTAINED OF CLAY UNDER FOOTING.
6. WATER LEVEL - EXCAVATION - EL. = 10.07

SUBJECT INSPECTION OF FOUNDATIONS SOUTH END R-56

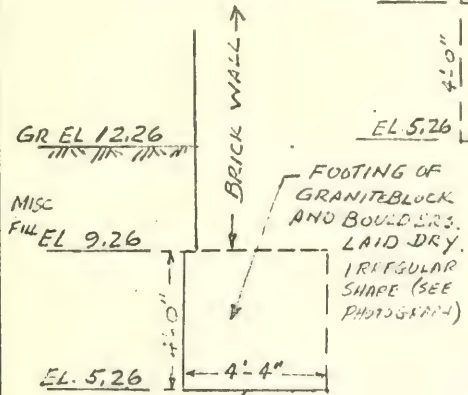
EXCAVATION No. 5



LOCATION PLAN
 NOT TO SCALE



WALL ELEVATION (TYP.)
 NOT TO SCALE



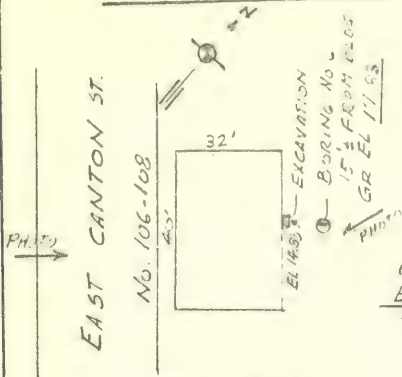
FOOTING SECTION
 SCALE $\frac{1"}{4} = 1'-0"$

NOTES:

1. 3 STORY BRICK DWELLING HOUSE
2. NO INDICATION OF FOUNDATION SETTLEMENT IN MASONRY
3. BORING COMPLETED 6/5/63
4. EXCAVATION COMPLETED 6/20/63
5. WATER LEVEL - EXCAVATION - EL. 8.96'
6. TWO JAR SAMPLES OBTAINED OF MATERIAL UNDER FOOTING.

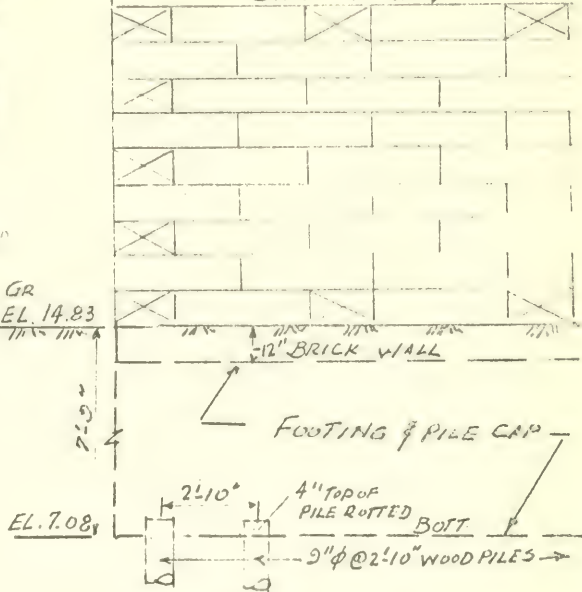
BORING OBSERVED BY C. ALBANESE
 EXCAVATION OBSERVED BY C. ALBANESE
 FOUNDATION VIEWED BY R.F. BATTLES
 BUILDING EXAMINED BY H.B. SNELL.

EXCAVATION #6A

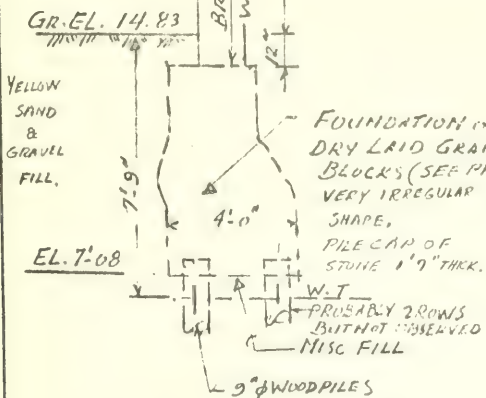


LOCATION PLAN
 NOT TO SCALE

UP BRICK WORK IN POOR CONDITION.
 BRICK WALL 7



WALL ELEVATION
 NOT TO SCALE



FOUNDATION SECTION

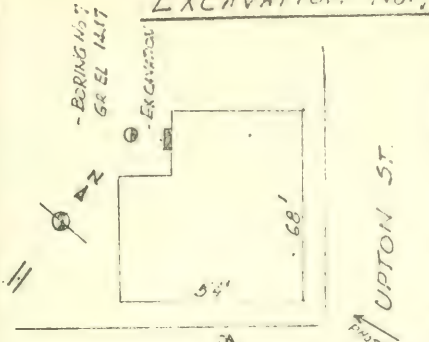
SCALE: 1/4" = 1'-0"

1. 4-STORY WITH BASEMENT BRICK DWELLING HOUSE
2. ENDS OF WOOD PILES WERE ROTTED BUT NO INDICATION OF FOUNDATION SETTLEMENT WAS NOTED.
3. BORING COMPLETED 8/14/63 THREE SHELBY TUBE SAMPLES OF CLAY OBTAINED.
4. EXCAVATION COMPLETED 8/3/63 THREE SAMPLE CORSS FROM WOOD PILES OBTAINED.
5. WATER TABLE ESTIMATED 9" BELOW TOP OF PILES 7' 4" OF ONE PILE ROTTED.

BORING OBSERVED BY G.R. HILL.
 EXCAVATION OBSERVED BY H.B. SNELL.
 FOUNDATION VIEWED BY H.B. SNELL.
 BUILDING EXAMINED BY H.B. SNELL.

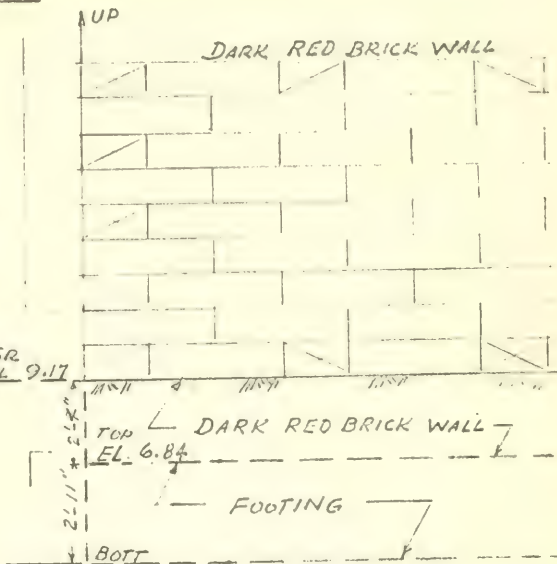
SUBJECT INSPECTION OF FOUNDATIONS SOUTH END P-5

EXCAVATION No. 1

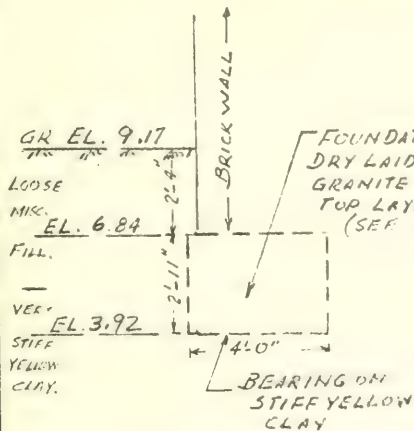


SHAWMUT AVE No. 395

LOCATION PLAN
 NOT TO SCALE



WALL ELEVATION (TYP.)
 NOT TO SCALE



FOUNDATION SECTION
 SCALE: $\frac{1}{4}'' = 1'-0''$

NOTES

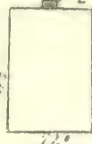
1. 5 STORY BRICK APARTMENT BLDG. WITH BASEMENT
2. NO EVIDENCE OF FOUNDATION SETTLEMENT
3. BORING COMPLETED 6/4/63
4. EXCAVATION COMPLETED 6/7/63
 ONE SAMPLE OF MATERIAL UNDER FOOTING OBTAINED IN SIGHT TUBE.
5. WATER LEVEL - EXCAVATION - FL. 5.172

BORING OBSERVED BY C. ALBANESE.
 EXCAVATION OBSERVED BY C. ALBANESE.
 FOUNDATION VIEWED BY M.N. CLAIR & R.F. BATTLES.
 BUILDING EXAMINE BY H.B. SNELL.

SUBJECT INSPECTION OF FOUNDATION. SOUTH END R-56

EXCAVATION No. 8A

GR. EL. 11.69 BORING No. 8
 15' FROM BLDG
 EXCAVATION



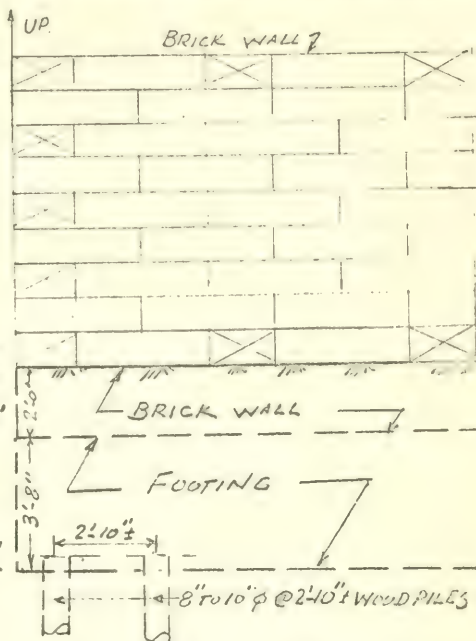
No. 373
 COLUMBUS AVE

LOCATION PLAN
 NOT TO SCALE

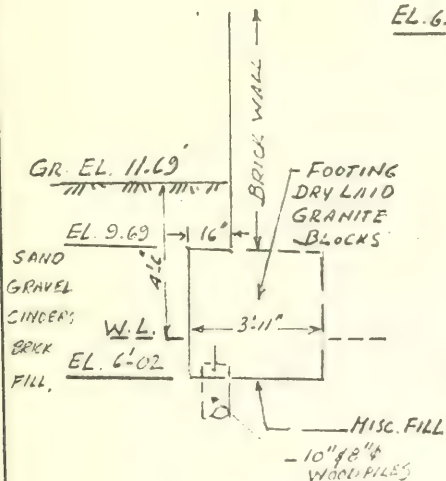
GR
 EL. 11.69

EL. 9.69

EL. 6.02



WALL ELEVATION
 NOT TO SCALE



FOUNDATION SECTION
 SCALE 1/4" = 1'-0"

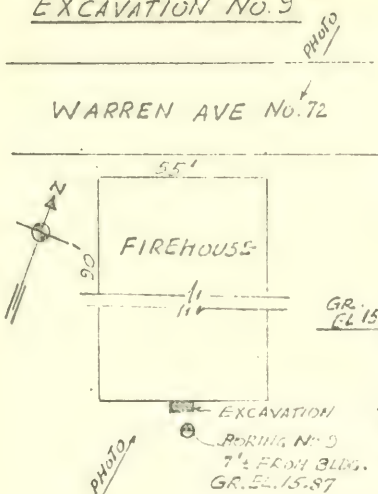
NOTES.

1. 4 1/2 STORY (MANSARD ROOF) BRICK DWELLING HOUSE - STORES ON GR. FL.
2. NO INDICATION OF FOUNDATION SETTLEMENT.
3. BORING COMPLETED 7/3/63 TWO SHELBY TUBE SAMPLES OF CLAY OBTAINED.
4. EXCAVATION COMPLETED 7/25/63. WATER LEVEL - EL. 7.19.
5. WOOD PILES IN GOOD CONDITION. TWO WOOD CORE SAMPLES OBTAINED. THERE ARE APPARENTLY TWO ROWS OF PILES HOWEVER ONLY ONE ROW OBSERVED.

BORING OBSERVED BY C. ALBANESE.
 EXCAVATION OBSERVED BY H. B. SNELL.
 FOUNDATION VIEWED BY H. B. SNELL.
 BUILDING EXAMINED BY H. B. SNELL.

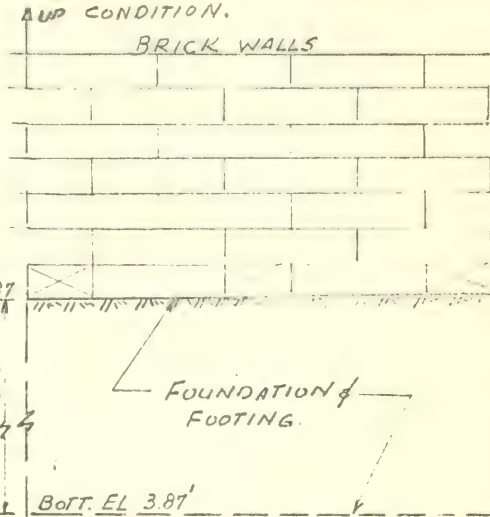
SUBJECT INSPECTION OF FOUNDATIONS SOUTH END R-56

EXCAVATION No. 9



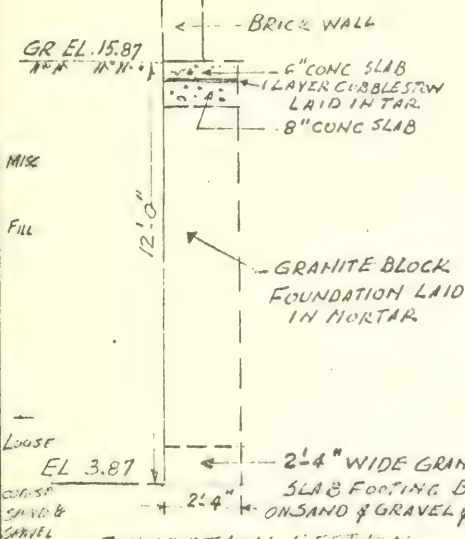
MASONRY WALL ARE IN GOOD
 AND CONDITION.

BRICK WALLS



LOCATION PLAN

NOT TO SCALE



SCALE: 1/4" = 1'0"

WALL ELEVATION (TYP)
 NOT TO SCALE

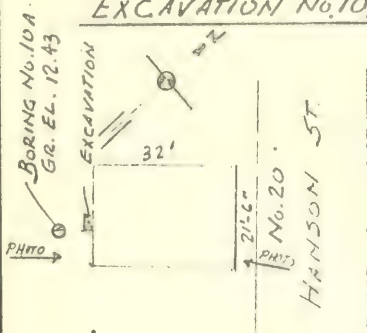
NOTES

1. 3 STORY AND BASEMENT BRICK FIREHOUSE.
2. NO INDICATION OF FOUNDATION SETTLEMENT
3. BORING COMPLETED 6/21/63.
4. EXCAVATION COMPLETED 6/29/63
5. CITY OF BOSTON RECORDS INDICATE A FOUNDATION OF 40' PILES CAPPED BY GRANITE. HOWEVER PILES WERE NOT OBSERVED.
6. TWO JAR SAMPLES OF MATERIAL FROM UNDER SIDE OF FOOTING OBTAINED.
7. INTERIOR BURNED OUT, BUILDING NOT IN USE.

BORING OBSERVED BY CALBANESE.
 EXCAVATION OBSERVED BY C. ALBANESE.
 FOUNDATION VIEWED BY REBATTLES
 BUILDING EXAMINED BY H. B. SNELL

SUBJECT INSPECTION OF FOUNDATIONS SOUTH END R-56

EXCAVATION No. 10A

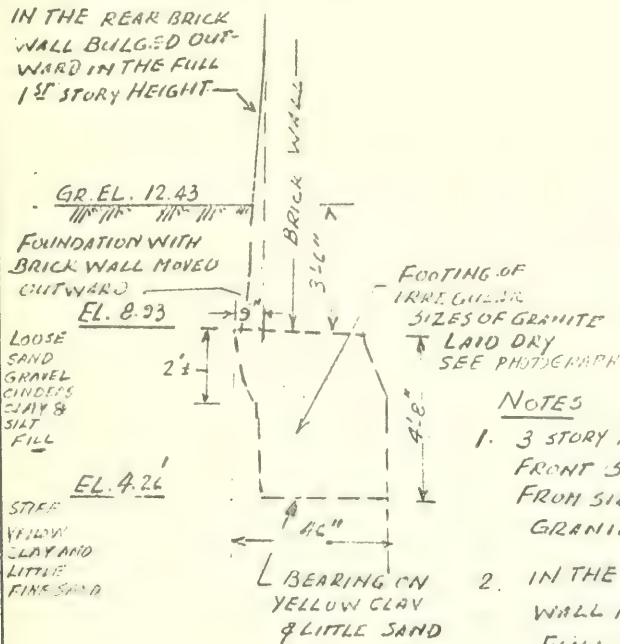


SEE WALL PHOTOS

LOCATION PLAN

NOT TO SCALE

IN THE REAR BRICK WALL BULGED OUTWARD IN THE FULL 1ST STORY HEIGHT



NOTES

1. 3 STORY BRICK DWELLING HOUSE - FRONT STEPS AND BASEMENT WALL FROM SIDEWALK ABOUT 4 1/2" UP HARD GRANITE FACE
2. IN THE REAR FOOTING WITH BRICK WALL MOVED OUTWARD IN THE FULL 1ST STORY HEIGHT
3. BORING COMPLETED 7/9/63.
 - A. EXCAVATION COMPLETED 7/22/63. TWO JAN SAMPLES OF MATERIAL UNDER FOOTING OBTAINED.

FOUNDATION SECTION

SCALE: 1/4" = 1'0"

BORING OBSERVED BY A.W. MOUNT.

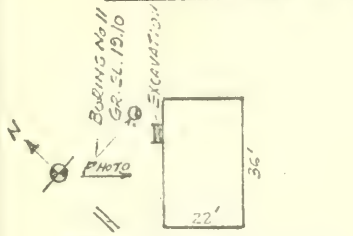
EXCAVATION OBSERVED BY A.W. MOUNT.

FOUNDATION VIEWED BY MAXIMAR & REYNOLDS. S. WATER LEVEL = 7.43.

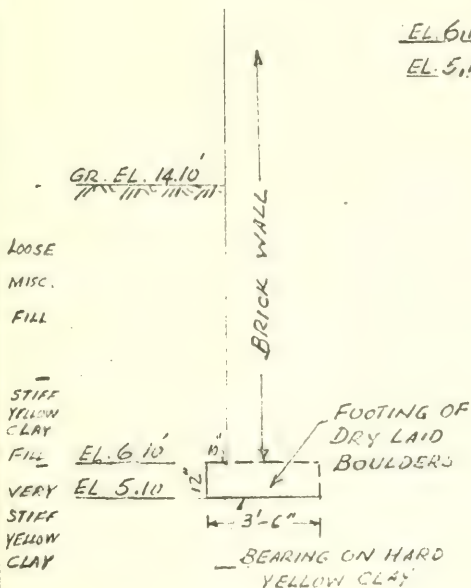
BUILDING EXAMINED BY H.R. WELLS.

SUBJECT INSPECTION OF FOUNDATIONS SOUTH END R-2

EXCAVATION NO. 11

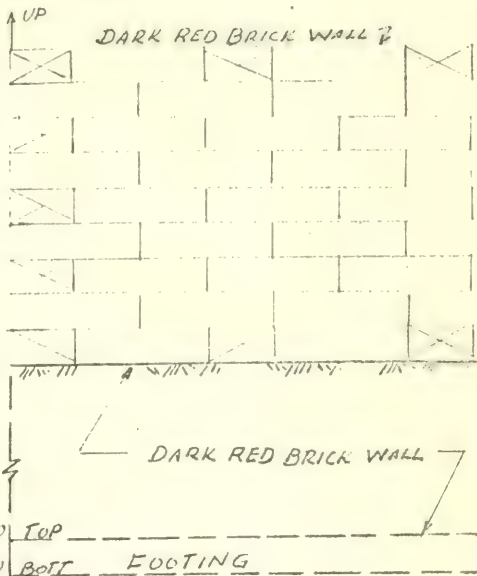


LOCATION PLAN
NOT TO SCALE



FOUNDATION SECTION
SCALE: 1/4" = 1'0"

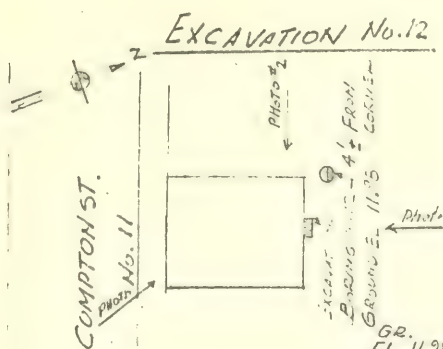
BORING OBSERVED BY C. ALBANESE.
 EXCAVATION OBSERVED BY C. ALBANESE.
 FOUNDATION VIEWED BY R.F. BATTLES.
 BUILDING EXAMINED BY H.B. SNELL.



NOTES:

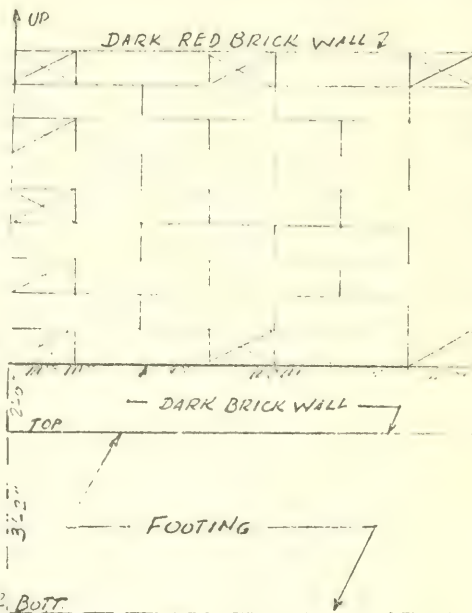
1. 3 1/2 STORY BRICK DWELLING HOUSE (INCLUDING MANSARD ROOF)
2. NO INDICATION OF FOUNDATION SETTLEMENT, (NO MASONRY CRACKS)
3. BORING COMPLETED 6/4/63
4. EXCAVATION COMPLETED 6/19/63. SAMPLE OF MATERIAL UNDER FOOTING OBTAINED IN SHALLOW TUBE.
5. BRICK WORK IN FRONT WALL NEED TO BE POINTED UP. CORNICE BRICK ARE LOOSE.

SUBJECT INSPECTION OF FOUNDATIONS SOUTH END P-56

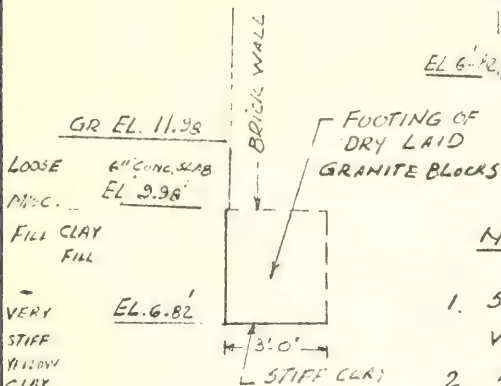


LOCATION PLAN
NOT TO SCALE

EL. 9.98



WALL ELEVATION
NOT TO SCALE



FOOTING SECTION

SCALE: $\frac{1}{4}$ " = 1'-0"

NOTES

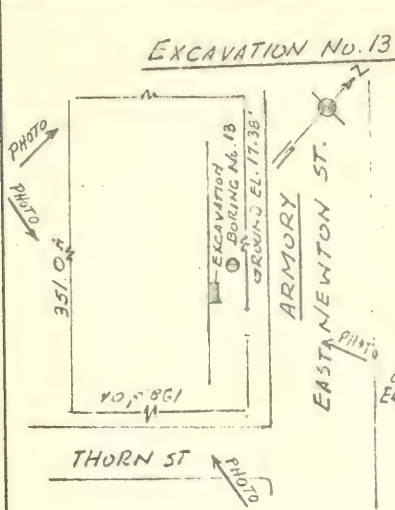
1. 5 STORY BRICK DWELLING HOUSE WITH WOOD FLOORS & JOISTS
2. NO INDICATION OF FOUNDATION SETTLEMENT.
3. BORING COMPLETE 6/10/63
4. EXCAVATION COMPLETED 6/11/63 SAMPLE OF MATERIAL UNDER

BORING OBSERVED BY C. ALBANESE. FOOTING OBTAINED IN SHELBY TUBE.
EXCAVATION OBSERVED BY C. ALBANESE. 5.
FOUNDATION VIEWED BY R.F. BATTLES.
BUILDING EXAMINED BY H.B. SNELL.

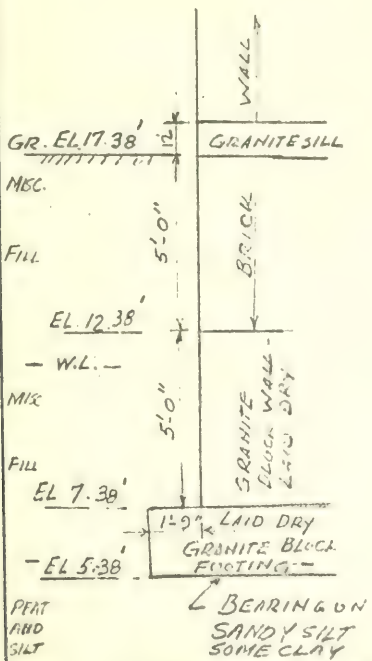
THE THOMPSON & LICHTNER CO., Inc.

SHEET No. 15 OF 15
 DATE 11/18/63
 MADE BY V.O.
 CHECKED BY R.F.B.

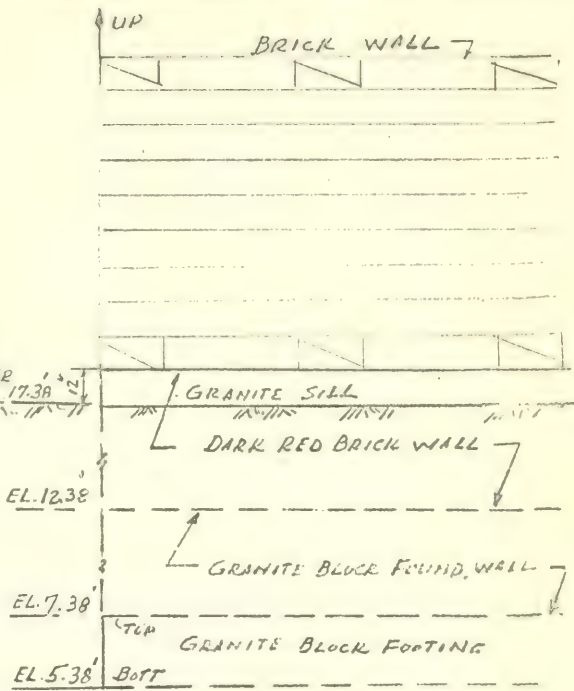
SUBJECT INSPECTION OF FOUNDATIONS SOUTH END R-56



LOCATION PLAN
 NOT TO SCALE



FOUNDATION SECTION
 SCALE $\frac{1}{4}'' = 1'-0''$



WALL ELEVATION
 NOT TO SCALE

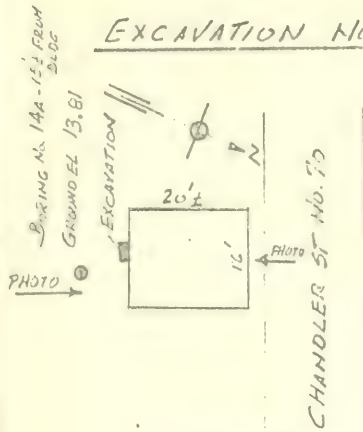
NOTES:

1. ARMOY: 1 STORY DRILL HALL WITH BASEMENT FLANKED WITH TOWER WINGS - ONE 3 STORY AND ONE 4 STORY BUILDINGS WITH BRICK WALLS
2. NO INDICATION OF FOUNDATION SETTLEMENT
3. BORING COMPLETED ON 6/24/63.
4. EXCAVATION COMPLETED ON 7/12/63. TWO JAR SAMPLES OF MATERIAL UNDER FOOTING WERE OBTAINED.
5. SOILS INDICATE PILES SHOULD EXIST. HOWEVER NONE WERE ENCOUNTERED.

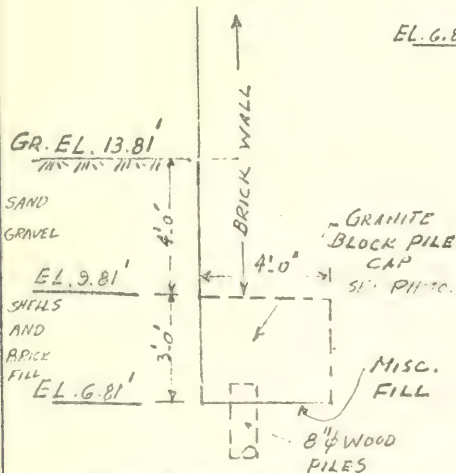
EXCAVATION OBSERVED BY A.W. 11/18/63
 FOUNDATION VIEWED BY R. BATTLE & V. KONG

BORING OBSERVED BY C. M. RAYSE. BUILDING EXAMINED BY H. B. SWELL.

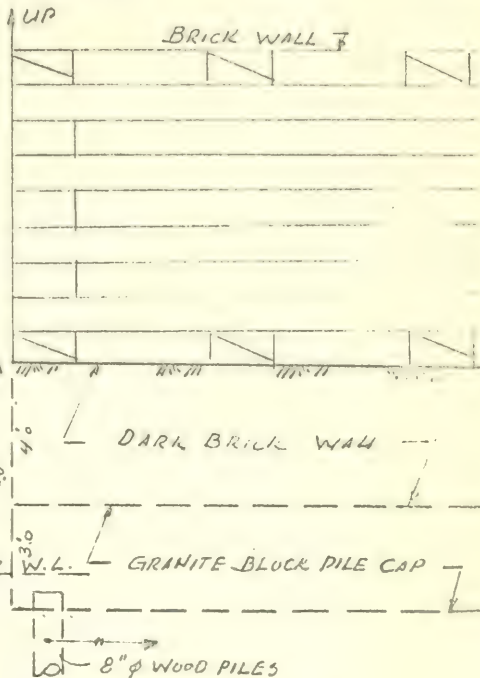
EXCAVATION No. 14



LOCATION PLAN
 NOT TO SCALE



FOUNDATION SECTION
 SCALE $\frac{1}{4}'' = 1'-0''$



WALL ELEVATION
 NOT TO SCALE

NOTE

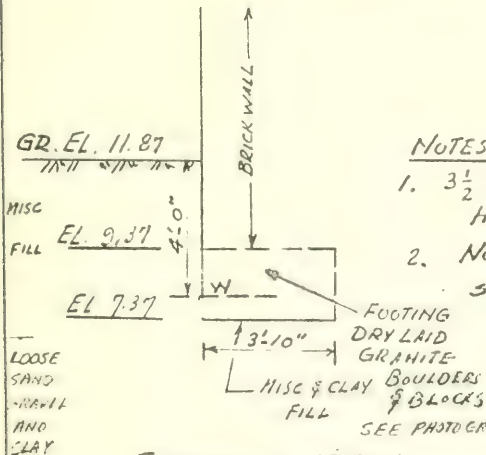
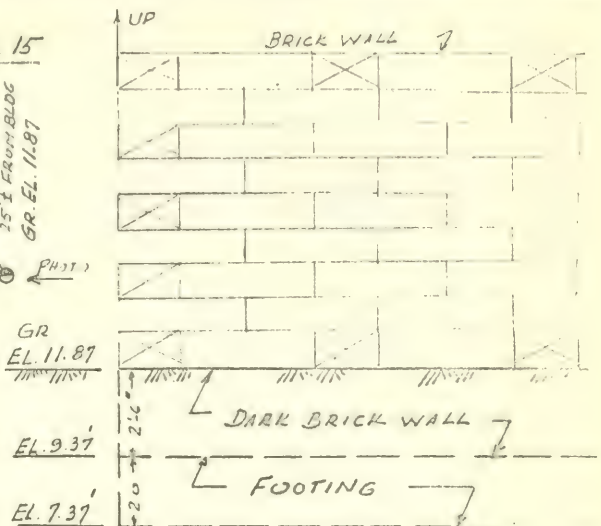
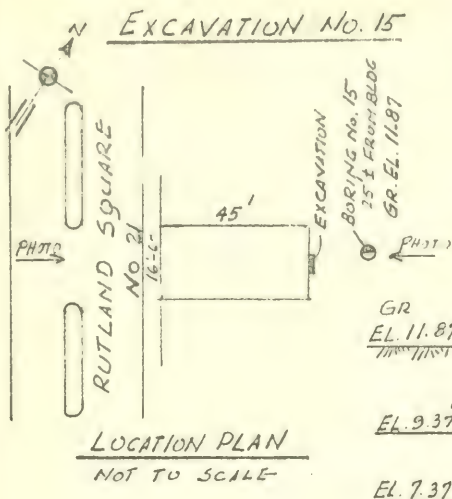
1. 3 1/2 STORY (MANSARD ROOF) BRICK DWELLINGHOUSE.
2. NO INDICATION OF FOUNDATION SETTLEMENT
3. BORING COMPLETED 7/5/63
4. EXCAVATION COMPLETED 7/18/63
- TWO JAR SAMPLES OF MATERIAL UNDER PILE CAP OBTAINED, WOOD CORE SAMPLE OF PILE OBTAINED. PILE IN GOOD COND.
5. WATER LEVEL 12" ABOVE PILE FOUNDATION VIEWED BY REFLECTOR, CUT OFF.
6. MAINTENANCE FULLY NEEDED.

BORING OBSERVED BY C. ALBANESE. EXCAVATION OBSERVED BY W.C. HATCH. FOUNDATION VIEWED BY REFLECTOR, CUT OFF. BUILDING EXAMINED BY H.B. SNELL.

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 15 of 15
 DATE 11/17/63
 MADE BY V.O.
 CHECKED BY P.F.

SUBJECT INSPECTION OF FOUNDATIONS SOUTH END R-56



SCALE: 1/4" = 1'0"

NOTES.

1. 3 1/2 STORY (MANSARD ROOF) BRICK DWELLING HOUSE
2. NO INDICATION OF FOUNDATION SETTLEMENT.
3. BORING COMPLETED 6/12/63
4. EXCAVATION COMPLETED 6/17/63
TWO JAR SAMPLES OF MATERIAL UNDER FOOTING OBTAINED. MATERIAL TOO HARD FOR A SHELBY TUBE SAMPLE.

BORING OBSERVED BY C. ALBANESE,
 EXCAVATION OBSERVED BY C. ALBANESE,
 FOUNDATION VIEWED BY R. BATTLES,
 BUILDING EXAMINED BY H. B. SAFFO.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 4. Photographs

During investigation of foundations and the condition of the structures, a series of photographs were taken to illustrate and document the conditions as found. These photographs are included in PART II, SECTION 2 of this report. Locations and descriptions of the photographs are as follows:

- Sheet No. 1 - Location No. 1 - 23 Walpole Street
- a. Front view taken 8/5/63
 - b. Foundation view, interior courtyard, west wall taken 6/24/63
- Sheet No. 2 - Location No. 2 - 53 Hammond Street
- a. Front view taken 8/5/63
 - b. Rear view taken 8/5/63
 - c. West side view taken 8/5/63
- Sheet No. 3 - Location No. 2 - 53 Hammond Street
- a. Foundation view, rear wall, full depth, taken 7/5/63
 - b. View of wood core from pile taken 7/8/63
- Sheet No. 4 - Location No. 3 - 22-24 Camden Street
- a. Front view taken 8/5/63
 - b. Rear view taken 8/5/63
 - c. West side view looking east taken 8/5/63
- Sheet No. 5 - Location No. 3 - 22-24 Camden Street
- a. Foundation view, rear wall, SW corner, taken 6/7/63
 - b. Foundation view, rear wall near SW corner taken 6/7/63
- Sheet No. 6 - Location No. 4A - 196 Northampton Street
- a. Front view taken 8/6/63
 - b. Rear view taken 8/6/63
 - c. Foundation view, rear wall taken 6/5/63

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

- Sheet No. 7 - Location No. 5 - 27-29 Claremont Park
- a. Front view taken 8/7/63
 - b. Rear view taken 8/7/63
 - c. Foundation view, rear wall taken 6/20/63
- Sheet No. 8 - Location No. 6A - 106-108 East Canton Street
- a. Front view taken 7/26/63
 - b. Rear view taken 7/26/63
 - c. Foundation view, rear wall and piles taken 8/3/63
- Sheet No. 9 - Location 6A - 106-108 East Canton Street
- a. Foundation view, rear wall taken 8/2/63
 - b. Cores from wooden piles; west pile, 2 cores; east pile, 1 core
- Sheet No. 10 - Location No. 7 - 335 Shawmut Avenue
- a. Front view taken 8/6/63
 - b. Side view, Upton Street looking West, taken 8/6/63
 - c. Foundation view, west wall taken 6/7/63
- Sheet No. 11 - Location No. 8A - 373 Columbus Avenue
- a. Front view taken 8/7/63
 - b. Foundation view, rear wall and piles taken 7/25/63
- Sheet No. 12 - Location No. 8A - 373 Columbus Avenue
- a. Foundation view, rear wall and piles taken 7/25/63
 - b. Cores from piles, East pile and West pile
- Sheet No. 13 - Location No. 9 - 72 Warren Avenue (Firehouse)
- a. Front view taken 8/7/63
 - b. West wall view looking East taken 8/7/63
 - c. Foundation view, rear wall taken 6/27/63
- Sheet No. 14 - Location No. 10A - 20 Hanson Street
- a. Front view taken 8/7/63
 - b. Rear view taken 8/27/63
 - c. Foundation view, rear wall taken 7/22/63

BOSTON REDEVELOPMENT AUTHORITY
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PART I - REPORT

- Sheet No. 15 - Location No. 11 - 10 Rollins Street
- a. Front view taken 8/6/63
 - b. West side view taken 8/6/63
 - c. Foundation view, rear wall taken 6/14/63
- Sheet No. 16 - Location No. 12 - 11 Compton Street
- a. Front and side view taken 8/1/63
 - b. Rear view taken 8/1/63
 - c. Foundation view, rear wall taken 6/11/63
- Sheet No. 17 - Location No. 13 - East Newton Street Armory
- a. East Newton Street face taken 8/8/63
 - b. Thorn Street side taken 8/8/63
 - c. Stoughton Street side taken 8/8/63
- Sheet No. 18 - Location No. 13 - East Newton Street Armory
- a. Stoughton Street side taken 8/8/63
 - b. Foundation view, East Newton Street side taken 7/12/63
- Sheet No. 19 - Location No. 14A - 70 Chandler Street
- a. Front view taken 8/7/63
 - b. Rear view taken 12/5/63
- Sheet No. 20 - Location No. 14A - 70 Chandler Street
- a. Foundation view, rear wall taken 7/18/63
 - b. Core sample of wood pile taken 12/4/63
- Sheet No. 21 - Location No. 15 - 21 Portland Square
- a. Front view taken 8/8/63
 - b. Rear view taken 8/8/63
 - c. Foundation view, rear wall taken 6/17/63

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 5. Examination of Public Records

a. In accordance with requirements of the contract that an investigation through records, or other readily available sources, as to reasons for demolition, structural repairs and foundation repairs which have occurred within the last 15 years, the records of the Boston Building Department were examined.

b. Examination of the Boston Building Department records were made as follows:

<u>Date</u>	<u>Ward No.</u>	<u>Streets</u>
April 4, 1963	4	Appleton, Carleton, Claremont, Claremont Park, Columbus Avenue, Concord Square, Dartmouth, Greenwich Park, Holyoke, Rutland Square, Tremont, Warren Avenue, West Newton, West Rutland, Yarmouth, West Canton
April 4, 1963	5	Cazenove, Chandler
April 4, 1963	3	Acton, Bradford, Briggs Place
April 5, 1963	3	Dover, Dwight, Fay, Groton, Hanson, Harrison Avenue, Laconia, Medford Court, Milford, Rollins, Savoy, Shawmut, Waltham, Washington, Wilkes
April 5, 1963	9	Arnold, Benton, Cabot, Camden
April 8, 1963	9	Columbus Avenue, Comet Place, Cumston, Cumston Place, Dilworth, Fabin, Greenough, Greenough Court, Hammond, Ivanhoe, Kendall, Lenox, Mass. Avenue, Newland
April 9, 1963	9	Northfield, Northampton, Pelham, Rutland
April 10, 1963	9	Sabine, Shawmut Avenue, Stevens, Sussex, Tremont, Trumbull, Walpole, Warwick, Washington, Wellington, West Brookline, West Canton, West Dedham, West Haven, West Newton, West Springfield
April 11, 1963	Various	Berkeley, Dover, Clarendon, Waltham, Union Park, West Dedham, West Newton, Claremont Park, Worcester, Worcester Park, Northampton, Woodbury, Windsor, Thorndike, Walpole

During the above examination, notes were gathered on a total of 361 separate properties contained in the records. Presented below is pertinent information for 100 of the properties.

Of these 100 properties, records indicate that 6 were torn down before 1948, 54 were torn down in 1948 or after, and 40 were still standing as of early 1963.

The reasons for demolition of the 60 buildings are as follows:

a. Structural wall failures	36
b. Structural foundation failures	6
c. Fire damage	2
d. Age	4
e. No reason indicated	12

Of the 40 buildings still standing, records indicate 15 have had repairs and 25 have had no repairs; 8 of the 40 have had fire damage at one time or another. Types of foundations are indicated for 25 of the 40 buildings still standing.

Pertinent information from the City Building Department files on these 100 properties is as follows:

1. 42 Holyoke Street - 4-story dwelling, 20' X 20' X 40', Brick IV, entered in records in 1926, torn down in 1961. In 1958-1959 front wall settled, fractures in brick, bulge in back wall.
2. 142 Warren Avenue - 4-story dwelling, 22' X 22' X 75', Brick, built in 1884, foundation on piles capped with stones. No repairs required.
3. 84 Rutland Street - 4-story dwelling, 56' X 56' X 70', Brick IV, built in 1881, foundation on piles capped by block stones, no repairs required. Building taken down in 1946-no reason given.
4. 4 Briggs Place - 2½-story dwelling, 20' X 20' X 30', Brick IV, entered in records in 1918, repairs to lower cellar bottom in 1932, foundations underpinned. Fire 1932; in 1957 wall bulged.
5. 137 Dover Street - 3½-story dwelling and store, 20' X 20' X 30', Brick, entered in records in 1918, repairs, 1925 fire, 1937 unsafe wall bulge, 1957 taken down because foundation in poor condition, walls out of plumb, brick disintegrating.
6. 141 Dover Street - 3½-story dwelling and store, 24' X 24' X 40', Brick and Wood, entered in records in 1918, repairs 1932, pile tops exposed and decayed, front wall bulge, dangerous, complaint rendered 1932. 1933 foundation repaired, also wall repairs, 1937 rear wall settling, 1955 repaired rear wall, 1957 building taken down because walls not plumb, front wall not tied in, foundation poor, bricks disintegrating.

7. 20 Fay Street - 4-story dwelling and store, 20' X 30', Brick IV, entered in records 1930, repairs, 1930, fair structural condition, 1957 foundation brick loose and disintegrating. Building taken down 1957.
8. 14 Hanson Street - 2-story dwelling, 25' X 25' X 40', Brick, entered in records 1925, repairs 1925, fire floor timbers, 1944 open, vacant, rear wall cracked, settling. Building taken down 1944.
9. 16 Hanson Street - 3-story dwelling, 20' X 20' X 25', Brick, entered in records 1943, repairs 1943, cornice loose, 1944 open and vacant, rear wall settled. Building taken down 1944.
10. 407 Harrison Avenue - 4-story dwelling, 20' X 20' X 50', Brick IV, built in 1893, repairs 1893, front wall split from backing foundation, 1906 store addition, 14' X 15' X 44', Brick, block granite on piles, 12" walls, 1957 wall collapsed 4 floors. Building taken down 1957.
11. 20 Laconia Street - 3½-story dwelling, 20' X 20' X 40', IV, entered in records 1917, repairs 1957, front wall fractured, 1959 fire, open and vacant, former party wall not bonded, foundation, store walls 12", 1961 open and dangerous. Building taken down 1961.
12. 24 Laconia Street - 3½-story dwelling, 18' X 45', IV, entered in records in 1918, repairs 1926, major fire, 1948 front wall bulge, foundation questioned, 1957 front wall bulge, rear wall fractured, 1958 vacant and open. Building taken down 1959.
13. 11 Savoy Street - 2-story bathhouse, 40' X 40' X 50', Brick, constructed in 1908, foundation stone on earth, repairs, fire 1919.
14. 228 Shawmut Avenue - 4-story dwelling, 20' X 20' X 30', IV, entered in records in 1929, repairs. 1960 razing of next building, 8" party wall had no lateral support, 8" walls pulling away. Building taken down 1961.
15. 230 Shawmut Avenue - 3½-story dwelling and store, 23' X 23' X 34', Brick, entered in records in 1925, repairs 1961, next building razed, corners not legally bonded. Building taken down 1961.
16. 44 Cabot Street - 4-story dwelling, 24' X 24' X 40', IV, repairs, 1956 vacant and open, walls deflected, caused by collapse of nearby buildings. Building taken down 1956.
17. 26 Camden Street - 2-story dwelling, 20' X 20', Wood, entered in records in 1918, repairs 1957, framing rotted, open to trespass. Building taken down 1958.

18. 53 Camden Street 3 story dwelling 20' X 20' X 42' IV, entered in records in 1916. Repairs 1960 - walls fractured, 8" brick walls, no support. 1958 the same. Building taken down 1962.
19. 86 Camden Street 3 story dwelling - 18' X 18' X 32' brick, entered in records in 1922 - repairs 1922 - front wall settled, bulging, dangerous, front wall reconstructed, 1953 fire building taken down in 1959.
20. 90-94 Camden Street 3 story dwelling 20' X 20' X 40' brick. entered in records in 1922 - repairs 1922 - front wall settled and bulged, reconstructed - 1958 open and vacant. Building taken down in 1959.
21. 106 Camden Street 3 story dwelling 20' X 20' X 56' IV. No record of date - repairs, 1960 - questionable foundation, front wall bulge. Building taken down 1960.
22. 114 Camden Street 3 story dwelling 25' X 25' X 32' brick, entered in records in 1930 - repairs 1947, fire - 1960 front wall bulge, questionable foundations, open and vacant. Building taken down in 1960.
23. 128 Camden Street 3 story dwelling 32' X 32' X 45' brick. entered in records in 1936, repairs - 1936 front wall bulge - 4" wall - 1948 minor fire, 1959 not secure, 1961 building taken down.
24. 561 Columbus Avenue - 4 story dwelling 22' X 22' X 95' brick. Constructed in 1881. Foundation filled land, piles 18, stone Repairs - 1956 minor fire, 1957 pointing front and side.
25. 3 Dilworth Street 3 story dwelling 22' X 22' X 47' IV. Constructed in 1898. Foundation filled land, 20 piles, 2 rows top = 10" bottom 7" capped granite. Repairs - 1946 fire, 1958 fracture front wall.
26. 11 Dilworth Street 3 story dwelling 21' X 16' X 21' brick constructed in 1899, foundations - 2 rows of 20' piles on 2' centers, top = 10", bottom 7" granite cap, piles grade el. 5, gravel base el. 12. Repairs - 1947 rear wall badly fractured, 1958 wall bulge and fracture, building taken down in 1959.
27. 14 Dilworth Street 3 story dwelling 21' X 16' X 50' brick. Constructed in 1899. Foundations - Piles on 3' centers 10" top, 7" bottom, granite cap. Cut grade = el 5, basement el.12. Repairs 1958 - front wall pulled, no lateral support. Building taken down in 1958.

28. 15 Dilworth Street - 4-story dwelling, 22' X 16' X 50', Brick, constructed in 1899; foundations 26' piles on 3' centers, 10" tops, 7" bottom, granite cap; piles at el. 5, basement at 31.12; repairs 1946, front wall fracture, rebuilt. Building taken down 1959.
29. 17 Dilworth Street - 3-story dwelling, 21' X 16' X 50', Brick, constructed in 1899; foundations 20' piles, 2 rows spaced at 3' centers, piles 10" top, 7" bottom, granite cap; piles at elev. 2, basement at elev. 12; repairs 1933, pointing of brickwork, 1946 rebuilt front wall, 1958 vacant and open. Building taken down 1959.
30. 22 Dilworth Street - 3-story dwelling, 23' X 23' X 47', Brick, constructed in 1899; foundations 20' piles, 2 rows spaced at 3' centers, pile top 12", bottom 7", granite cap; elev. piles +6.0, elev. basement +11.0
 Repairs - 1927, front wall cracked and settling
 1946, " " " " "
 1958, " " " " "
 Building taken down 1958.
31. 4 Fabin Street - 2½-story dwelling, 20' X 20' X 40', IV, entered in records in 1929; 1953 open and vacant, structure unsafe due to decay and neglect. Building taken down 1953.
32. 57 Greenwich Street - 3-story dwelling, 20' X 20' X 40', IV, constructed in 1888; foundations on earth, Roxbury stone, solid land.
 Repairs - 1958, front wall bulge
 1960, " " "
 1963, open and vacant
33. 3 Greenwich Court - 2-story dwelling, 13' X 13' X 34', Brick, constructed in 1887; foundations on earth, Roxbury stone, solid land, 8" walls. No record of repairs.
34. 5 Greenwich Court - 2-story dwelling, 13' X 13' X 34', Brick, constructed in 1887; foundations on earth, Roxbury stone, solid land, 8" walls. No record of repairs.
35. 8 Greenwich Court - 2-story dwelling, 15' X 15' X 40', Brick, constructed in 1887; foundations on earth, Roxbury stone, solid land, 8" walls; repairs 1958, open and vacant. Building taken down.
36. 61 Hammond Street - 3-story dwelling, 22' X 22' X 45', IV, entered in records in 1918, repairs 1935, front wall bulge, 1958 fire, settling. Building taken down 1958.

37. 22 Kendall Street 3 story dwelling 20' X 20' X 40' IV,
Entered in records in 1940. Repairs - 1952 fire. 1958
rear wall collapse, basement rotted and broken, settling
Building taken down in 1958.
38. 24 Kendall Street 3 story dwelling 20' X 20' X 40' brick,
entered in records in 1924. Repairs 1958 - rear wall collapse,
Basement rotting and settling. Building taken down in 1958.
39. 28 Kendall Street - 3 story dwelling 18' X 18' X 32' IV,
Entered in records in 1919.
Repairs - 1925 - Shoring rear wall
1957 - Walls bulged, foundation wall deteriorating
Building taken down in 1958.
40. 74 Kendall Street - 3 story dwelling 20' X 30' IV,
Entered in records in 1930
Repairs - 1938 - Front wall fractured and bulged
1949 - Tied party wall
1952 - Next building razed but walls O.K.
1952 - Walls collapsed
1959 - Front wall bulge
1958-1960 - Bulge and fractured walls
Building taken down in 1961
41. 78 Kendall Street - 3 story dwelling 18' X 18' X 40', brick
Entered in records in 1933.
Repairs - 1957 - repair rear wall that had fallen
1960 - Rear and front wall bulge
Building taken down in 1961
42. 92 Kendall Street - 3 story dwelling - 20' X 20' X 30', IV
Entered in records in 1926
Repairs - 1959 - Front wall bulge, fractured and basement wall
pulling
43. 102 Kendall Street - 3 story dwelling 20' X 40', IV
Entered in records in 1930
Repairs - 1931 - Rear wall falling
1945 - Fractured wall
1946 - Tie front wall
1955 - Back wall bulge, bricks deteriorating
1957 - Open and vacant, walls bulge & fractured
1957 - Building taken down
44. 114 Kendall Street - 4 story dwelling 20' X 40', IV
Entered in records in 1931
Repairs - 1938 - settling, fractured & bulge, front wall
1946 - Rear wall bad fracture
1957 - Open, vacant, walls fractured and bulged
1957 - Building taken down
45. 73 Lenox Street - 4 story dwelling - 25' X 25' X 35', brick
Entered in records in 1920
Repairs - 1958 - Party wall insecure, bulge in front wall
vacant and open - taken down in 1958

46. 81 Lenox Street - 2 story stable - 30' X 30' X 50', brick.
Constructed in 1884, Foundation solid land, foundation on
stone. No record of demolition.
- 81 Lenox Street - 4 story dwelling - 20' X 20' X 40', brick
Entered in records in 1926
Repairs - 1929 Rear wall unsafe
1930 Photographs taken
1933 Building taken down
47. 83 Lenox Street - 1 story blacksmith shop and cleaners
14' X 14' X 25', Brick - Constructed in 1896. Foundation on
earth, solid land stone. Building taken down in 1946.
48. 129 Lenox Street - 4 story dwelling 35' X 40', IV
Constructed in 1876. Foundation on earth, stone
Repairs - 1951 - Sidewall fracture
1962 - Open and vacant
49. 528 Mass. Ave. - 4 story dwelling - Hospital 20' X 20' X 70'
Brick. Entered in records in 1896. Foundation-stone.
50. 75 Newland Street - 3 story dwelling 25' X 25' X 40', IV
Entered in records in 1927. Foundation - stone.
Repairs - 1927 fire.
51. 11 Northfield Street - 3 story dwelling 20' X 20' X 35'
Brick - Constructed in 1876 - Foundation solid land, on
earth, stone.
52. 44 Northfield Street - 4 story dwelling 20' X 30', IV
Entered in records in 1916
Repairs - 1946 - Major fire
1947 - Fire
1952 - wall fractured and bulging
1953 - " " " "
1955 - " " " "
1956 - Walls falling. Building taken down
53. 47 Northfield Street - 3 story storage 35' X 35' X 60', VI
Entered in records in 1917. Repairs - 1956 open and vacant,
foundation sagging and deteriorating - wood rotting.
Building taken down 1956.
54. 53 Northfield Street - 3 story dwelling 20' X 30', VI
No record of date of construction
Repairs - 1957 Foundation wall cracking, 1958 Building
taken down.
55. 55 Northfield Street - 3 story dwelling 40' X 40' X 30', VI
Entered in records in 1950's. Repairs - 1957 Foundation wall
cracked. 1958 Foundation wall cracked. 1956 Building taken
down.

56. 57 Northfield - 3 story dwelling 20' X 20' X 20', VI
 Entered in records in 1923
 Repairs - 1957 - Foundation wall fractured
 1958 - " " "
 1958 - Building taken down
57. 59 Northfield Street - 3 story dwelling 25' X 25' X 35', VI
 Entered in records in 1925
 Repairs - 1925 - Fire
 1957 - Foundation cracked
 1958 - " "
 1958 - Building taken down
58. 186 Northampton Street - 3 story dwelling 20' X 20' X 30' IV
 Entered in records in 1916
 Repairs - 1958 - Front wall bulging
 1960 - " " "
 1961 - " " pulling away
 1961 - Building taken down
59. 6 Pelham Street - 4 story dwelling - 23' X 23' X 25', Brick
 Entered in records in 1925
 Repairs - 1958 - Filled land, 16" walls, fractured front wall,
 rear wall falling
 1958 - Building taken down.
60. 10-14 Pelham Street - 1 story commercial - 50' X 50' X 75', brick
 Entered in records in 1916, 1-2 1/2-5 mix, on earth, cinder fill,
 concrete.
- 10 - 4 story dwelling 23' X 23' X 25' } 1957 open & vacant -
 brick, entered in records in 1926 } fire damage, wood rot-
 } ting, taken down 1958
- 14 - 4 story dwelling 25' X 25' X 40' } 1957 open & vacant-
 brick, entered in records in 1926 } front wall fractured -
 } taken down 1958
61. 18 Pelham Street - 4 story dwelling 20' X 20' X 50'
 IV, Entered in records in 1928.
 1957 - Open and vacant, front wall fractured, found granite
 1958 - Building taken down.
62. 8 Rutland Street - 4 story dwelling 18' X 18' X 30', IV
 Entered in records in 1926
 1957 - Walls bulging and fractured beyond repair
 1957 - Building taken down
63. 20 Rutland Street (2) 1 story store 18' X 18' X 22', brick
 entered in records in 1923
 1958 - Open and vacant - front wall bulge
 1959 - Building taken down
64. 22 Rutland Street - 3 1/2 story dwelling 18' X 18' X 27', brick
 Entered in records in 1923
 Repairs - Front wall fractured and bulging, 1926
 1927 Took down and rebuilt front wall

65. 1,2,3, Rutland Street - 3 story dwelling 16' X 16' X 51'
brick. Entered in records in 1920's. 8" walls - stone
foundation.
1958 - Side wall bulge
1959 - " " "
66. 544 Shawmut Avenue - 3 story dwelling 18' X 35', IV
Entered in records in 1916. Stone foundation.
1961 - Open and vacant
1962 - " " "
67. 630 Shawmut Avenue - 4 story dwelling 25' X 25' X 40', brick
Entered in records in 1930's
1931 - Walls bulged
1958 - Open and vacant, bulged
68. 794 Tremont Street - 4 story dwelling and store 20' X 20'
brick, Entered in records in 1920's - Stone foundation
1958 - Fractured walls
1959 - " "
69. 24 Warwick Street - 3 story dwelling 20' X 20' X 40', brick
Entered in records in 1925, stone foundation
1958 - Walls fractured and bulging
1959 - Wall falling, pile caps under wall have rolled or settled
1959 - Building taken down
70. 27 Warwick Street - 3 story dwelling 19' X 19' X 32', IV
Entered in records in 1940's
Stone foundation - 8" walls
1958 - vacant and open, bulging
1949 - Walls dangerous
1949 - Remove 4" wall - replace to 12" wall
1958 - Building taken down
71. 18 Wellington Street - 4 story dwelling 16' X 16' X 40', IV
Entered in records in 1921, stone foundation
72. 91 West Brookline Street - 4 story dwelling 26' X 36', IV
Entered in records in 1927
1958 - Walls bulged and falling
1958 - Building taken down.
73. 30 West Canton Street - 2 story dwelling 30' X 30' X 35', wood
Entered in records in 1930's
1958-1959 - Side walls rotting
1960 - Open and vacant
1961 - All walls have structural defects
1961 - Building taken down

74. 146 West Canton Street - 2 story dwelling 20' X 20' X 50', VI
Entered in records in 1918
1927 - Section of foundation replaced
1958 - Open and vacant
1958 - Building taken down
75. 50 West Canton Street - 2 story dwelling - 20' X 20' X 50', wood
Entered in records in 1929
1958 - Foundation bulging and bricks missing
1958 - Building taken down
76. 107 West Dedham Street - 5 story commercial - 5' X 5' X 18'
Iron - Entered in records in 1894.
Foundation on earth-brick piers
1958 - Vacant and open - beyond repair
1959 - Building taken down.
77. 106 West Springfield Street - 4 story dwelling 16' X 16' X 34'
Brick - Entered in records in 1918
Stone foundation
1919 - Fire
1955-1957 - Open and vacant
1957 - Building taken down
78. 8 Dartmouth Street - 1 story store - 21' X 20' X 60', brick
Entered in records in 1917
Solid land - Foundation stone and concrete, 1-2-4, on
stiff blue clay
1945 - Fire
79. 216 Camden Street - 3 story storage - 50' X 50' X 90', brick
Entered in records in 1888
Filled land - piles - stone foundation
80. 40 Berkeley Street - (1) 5 story dwelling - 105' X 105' X 75'
Brick - Entered in records in 1883
Filled land - piles, wood - foundation block
1951 - Building taken down
81. 40 Berkeley Street - (2) 7 story dwelling 140' X 140' X 80'
Brick - Entered in records in 1952
Existing wood piles
82. 90 Berkeley Street - (1) 4 story dwelling 23' X 23' X 48'
Brick - Entered in records in 1884
Piles - filled land
1923 - Building taken down
83. 90 Berkeley Street - (2) 3 story storage - 39' X 25' X 200'
Brick - Entered in records in 1923
Foundation concrete piles 31', 3 rows, 18-3-6, capped concrete.
Piles cut off at 9.5, Basement 10.71
84. - 8 Clarendon Street - 4 story dwelling 25' X 25' X 50', brick
Entered in records in 1889
Filled land - piles - stone
1928 - Major fire repair

85. 75 Clarendon Street - 1 story filling station - 24' X 24' X 16'
brick - Entered in records in 1929
Filled land - concrete, 1-2-4, on old church foundation
86. 130 Clarendon Street - 4 story offices - 82' X 82' X 100'
Steel and brick - Entered in records in 1924
Stone & Webster, Filled land - concrete - grade of
basement +14.
87. 25 Clarendon Park - 3 story dwelling - 21' X 21' X 41'
Brick - Entered in records in 1882
Filled land - piles - stone
88. 50 Waltham Street - 4 story dwelling 25' X 25' X 60'
Brick - Entered in records in 1920's
Stone foundation
89. 5 Union Park Street - 1 story store 15' X 15' X 26', iron.
Entered in records in 1891
Solid land - Stone foundation on earth.
90. 78 Union Park Street - 3 story convent 49' X 49' X 50'
Concrete and brick - Entered in records in 1913.
Filled land - Concrete foundation on piles, 30' - 2 rows,
2-10-6, concrete caps, piles off at 5 - Basement grade 9'
91. 130 Union Park Street - 3 story dwelling - 22' X 22' X 50'
Brick - Entered in records in 1895
Filled land - Piles 35 ft - 3 rows, 3-10-6, granite capped.
Stone foundation
92. 39 West Newton Street - 2 story laundry - 25' X 25' X 100'
Brick and concrete - Entered in records in 1930's
Stone foundation.
93. 85 West Newton Street - 2 story parsonage - 35' X 35' X 52'
Brick - Entered in records in 1898
Solid land - granite foundation on earth
1954 Hurricane damage
94. 150 West Newton Street - 3 story dwelling - 20' X 20' X 40'
Brick - Entered in records in 1918
Stone foundation
1918 - Fire
95. 34 East Newton Street - 4 story dwelling - 45' X 45' X 24'
Brick - Entered in records in 1924 - Filled land, foundation
concrete, 1-2 1/2-5, Piles 10 ft and earth. Wood piles
2 rows - 2 X 3 - 10-6, stone capped.
96. 88 East Newton Street - 4 story dwelling - 20' X 20' X 42'
Brick - Entered in records in 1892.
Piles 26 ft stone, 2 rows, 18-6-9, granite capped, cut off
5 & 12.
1961 walls fractured and bulging.

97. 150 Worcester Street - 4 story dwelling - 26' X 13' X 63'
Brick - Entered in records in 1888
Filled land - stone foundation - piles
1917 - front wall rebuilt
98. 35 Woodbury Street - 3 story dwelling - 48' X 46' X 27'
Brick - Entered in records in 1896
Solid land.
99. 9-13 Windsor Street - 3 story community 58' X 58' X 54'
Brick - Entered in records in 1930
Filled land - concrete caissons - concrete foundation,
1-2-4, basement grade 12+
100. 16 Walpole Street - 3 story dwelling - 20' X 16' X 50'
Brick - Entered in records in 1907.
Stone foundation on solid earth.

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SECTION 6. Chemical Treatment of Soils

a. The scope of this report requires furnishing information on the feasibility of chemical treatment of the soil for the purpose of stabilization, particularly as this data relates to the types of structures proposed in areas of construction.

b. Soil stabilization by chemical additives is normally done by adding various quantities of Portland cement; chemicals, such as sodium silicate, sulphite, waste liquor; other materials, including fly ash, lime and asphalt emulsions to fine grained soils so as to increase the strength of the soil. Soil stabilization of sands and gravels can be done by adding Portland cement, and many pavements are constructed in this manner in various localities where first class roads are not needed or the expense warranted.

c. After study of soil conditions in the South End Urban Renewal Area, it has been concluded that there is no possibility for utilizing chemical treatment of the soils to reduce costs of foundations.

d. The use of cement, lime, fly ash and asphalt emulsions for stabilizing subgrades of paving and parking areas will be economically feasible in many locations. The procedures, depths and amounts of treatment must be based on tests of soils at each location and the required loadings. In general, soil to a depth of one foot is mechanically mixed in place with the stabilizing material and compacted. The pavement base or subbase is constructed on this improved subgrade.

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PART I - REPORT

SECTION 7. Laboratory Soils Test

a. During this investigation and study, a total of 15 new soils borings were made at the following locations:

- No. 1 - 23 Walpole Street - interior courtyard of building
- No. 2 - 53 Hammond Street - rear of building
- No. 3 - 22-24 Camden Street - rear of building
- No. 4A - 196 Northampton Street - rear of building
- No. 5 - 27-29 Claremont Park - rear of building
- No. 6A - 106-108 East Canton Street - rear of building
- No. 7 - 335 Shawmut Avenue - rear of building
- No. 8A - 373 Columbus Avenue - rear of building
- No. 9 - 72 Warren Avenue - Firehouse - rear of building
- No. 10A - 20 Hanson Street - rear of building
- No. 11 - 10 Rollins Street - side of building
- No. 12 - 11 Compton Street - rear of building
- No. 13 - East Newton Street Armory - side of building
- No. 14A - 70 Chandler Street - rear of building
- No. 15 - 21 Rutland Square - rear of building

b. Boring Logs, sample designations and field description are given in SECTION 2 of this report. In order to check field descriptions of soils, a total of 8 typical soils boring samples were selected for soil identification tests.

The basis for laboratory soils identification tests is "Grain Size Analysis of Soils", ASTM Designation D422-61T, in which sieve analysis and hydrometer analysis tests are set down.
Gravel gradation limits range from 3" to Sieve No. 4
Sand gradation limits range from Sieve No. 4 to Sieve No. 200
Coarse sand limits range from Sieve No. 4 to Sieve No. 10
Medium sand limits range from Sieve No. 10 to Sieve No. 40
Fine sand limits range from Sieve No. 40 to Sieve No. 200

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Silt sizes range from 0.074 mm to 0.005 mm
Clay sizes are smaller than 0.005 mm
Colloids are smaller than 0.001 mm

Our laboratory soils descriptions are based on application of the percentages of soils type as follows:

- 36% to 100% - Major (Gravel, sand, silt or clay)
(predominating group)
- 21% to 35% - Major modified by less important constituents
(sandy, silty, gravelly or clayey)
- 11% to 20% - Some (some sand, some gravel, some silt, some clay)
- 3% to 10% - Little (Little sand, little gravel, little silt,
(little clay)
- 0.1% to 2% - Trace (trace sand, trace of gravel, trace of silt,
(trace of clay)

Example:

Material with 52% gravel, 22% sand, 17% clay and 9% silt is described as sandy gravel, some clay, little silt.

<u>Boring No.</u>	<u>Field Description</u>	<u>Laboratory Description</u>
<u>Boring No. 1A</u> Sample No. 2 Depth - 10' to 13' Blow Count 66/ft	Very compact yellow sand	Sand, some silt
<u>Boring No. 5</u> Sample No. 8 Depth - 30' to 33.5' Blow Count - 7/ft	Loose medium sand & gravel with trace of clay	Sand & silt, little gravel & clay
<u>Boring No. 6A</u> Sample No. 4 Depth - 34' to 38.5' Blow Count - 13/ft	Stiff yellow clay	Clay & silt, some fine sand
<u>Boring No. 8A</u> Sample No. 4 Depth - 15.5' to 17' Blow Count - 2/ft	Very loose sandy peaty silt	Clayey organic silt

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<u>Boring No.</u>	<u>Field Description</u>	<u>Laboratory Description</u>
<u>Boring No. 9</u> Sample No. 6 Depth - 26' to 28' Blow Count - 21/ft	Very stiff blue clay with trace of gravel	Clayey sandy silt
<u>Boring No. 12</u> Sample No. 3 Depth - 8.5' to 10' Blow Count - 17/ft	Very stiff yellow clay with trace of fine sand	Silty clay
<u>Boring No. 14A</u> Sample No. 4 Depth - 15' to 17' Blow Count - 12/ft	Sand, gravel, shells and brick fill	Sandy gravel, some silt
<u>Boring No. 15</u> Sample No. 6 Depth - 22.5' to 24' Blow Count - 4/ft	Soft blue clay	Clay and silt, some fine sand

Laboratory test data is included at the end of this section under soil identification tests.

c. During foundation investigations at the 15 locations listed at the start of this section, a series of jar soils samples were obtained at elevations directly under footings. Typical locations were selected and laboratory soils tests were made to identify these soils. Our findings are summarized below.

<u>Excavation No.</u>	<u>Elevation, Bottom of Footings</u>	<u>Laboratory Soils Identification</u>
1	11.05'	Gravelly sand, some silt
4A	9.07'	Clay and silt
5	5.26'	Sand and gravel, little silt
9	3.87'	Silty sand, some gravel and clay
10A	4.26'	Clay and silt, some fine sand
13	5.38'	Sandy silt, some clay

Laboratory test results are included at the end of this section under soil identification tests.

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d. After excavations had progressed for a few days it became apparent that many of the structures in the South End were founded directly on the underlying soils, and in many cases these soils were clay. It was then decided that a number of undisturbed soils samples were necessary to fully evaluate the soils conditions in the area. Shelby tube samples were obtained at 3 representative locations as follows:

<u>Boring No.</u>	<u>Elevation of Sample</u>	<u>Field Description of Sample</u>
2	-2.85' to -4.85'	Stiff blue clay with trace of gravel
2	-6.85' to -8.85'	Medium blue clay with trace of gravel
2	-29.85' to -31.85'	Soft blue clay with layers of fine sand
6A	-12.17' to -14.17'	Stiff blue clay
6A	-22.17' to -24.17'	Medium blue clay
6A	-30.17' to -32.17'	Medium blue clay
8A	-23.31' to -25.31'	Stiff blue clay and fine sand
8A	-31.31' to -33.31'	Medium blue clay

The 3 samples from Boring No. 2 are reported on later in this section under T&L Test Report No. EE934; the 3 samples from Boring No. 6A are reported under T&L Test Report No. FF156; the 2 samples from Boring No. 8 are reported under T&L Test Report No. EE955. Unconfined compression, consolidation, shear, hydrometer, specific gravity and soil identification tests were made on the 8 undisturbed samples, except that unconfined compression and shear tests were not made on the upper sample from Boring No. 2 due to insufficient sample left after other tests were made.

Laboratory test results are included at the end of this section under proper headings.

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e. During the excavations, an attempt was made to extract undisturbed samples at the bottom of footings in several locations as follows:

<u>Location No.</u>	<u>Elevation, Bottom of Footing</u>	<u>Test No. and Type</u>
3	10.82'	EE839 Hydrometer, specific gravity and soil identification
7	3.92'	EE840 Hydrometer, specific gravity and soil identification
11	5.10'	EE841 Unconfined compression, hydrometer, specific gravity and soil identification
12	6.81'	EE883 Consolidation, hydrometer, specific gravity and soil identification

f. The following 39 pages give results of soils tests referred to in paragraphs b to e, above.

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PART I - REPORT

SECTION 7. Laboratory Soils Tests

Summary of Special Tests on Clays

1. EE-934 - Location 2 - Elevation -2.85' to -4.85'
Soil Identification: Silty 36%
Clay 52%
Some Fine
Sand 12%
Consolidation test: Pressure = 3150 psf, voids ratio = 0.659
Unconfined compression test Not made
Direct shear test Not made

2. EE-934 - Location 2 - Elevation -6.85' to -8.85'
Soil Identification: Silty 35%
Clay 65%
Consolidation test: Pressure = 3050 psf, voids ratio = 0.776
Unconfined Compression test: peak shear stress = 1825 psf
peak strain = 7.1%
test moisture = 27.6%
Direct Shear test: peak shear strength = 2496 psf
shear displacement peak = 0.098"
Normal stress = 1/3 T psf
Test moisture = 27.0%

3. EE-934 - Location 2 - Elevation -29.85' to -31.85'
Soil Identification: Clay 57%
Silt 40%
Little Fine
Sand 3%
Consolidation test: Pressure = 5800 psf, voids ratio = 1.125
Unconfined Compression Test: peak shear stress = 375 psf
peak strain = 14.4%
test moisture = 32.2%
Direct Shear Test: peak shear strength = 812 psf
shear displacement peak = 0.113"
Normal stress = 1/3 T psf
Test moisture = 41.5%

4. FF-156 - Location 6A - Elevation -12.17' to -14.17'
Soil Identification: Silty 32%
Clay 64%
Little Fine
Sand 4%

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Consolidation Test: Pressure = 4600 psf, voids ratio = 0.766
Unconfined compression test: peak shear stress = 2200 psf
peak strain = 12.8 %
Test moisture = 27.2 %
Direct Shear Test: peak shear strength = 1600 psf
shear displacement peak = 0.188"
normal stress = 1/3 T psf
Test moisture = 25.4 %

5. EE 156 - Location 6A - Elevation -22.17' to -24.17'

Soil Identification: Silt 52%
Clay 48%
Consolidation test: Pressure = 2500 psf, voids ratio = 0.579
Unconfined Compression Test: peak shear stress = 860 psf
peak strain = 12.4 %
test moisture = 33.8 %
Direct shear test: peak shear strength = 823 psf
shear displacement peak = 0.179"
normal stress = 1/3 T psf
test moisture = 35.8 %

6. EE-156 - Location 6A - Elevation -30.17' to -32.17'

Soil Identification: Silty 32%
Clay 65%
Little fine sand 3%
Consolidation test: Pressure = 5000 psf, voids ratio = 0.995
Unconfined compression test: peak shear stress = 483 psf
peak strain = 4.6 %
test moisture = 39.3 %
Direct Shear Test: peak shear strength = 965 psf
shear displacement peak = 0.085"
normal stress = 1/3 T psf
test moisture = 41.5 %

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7. EE-955 - Location 8-A - Elevation -23.31' to -25.31'

Soil Identification	Silty Clay	35% 65%
Consolidation test Pressure = 2900 psf, voids ratio 0.755		
Unconfined compression test: peak shear stress = 1515 psf		
peak strain = 7.9 %		
test moisture = 23.2 %		
Direct shear test: peak shear strength = 2652 psf		
shear displacement peak = 0.195"		
normal stress = 1/3 T psf		
test moisture = 23.2 %		

8. EE-955 - Location 8-A - Elevation -31.31 to -33.31

Soil Identification	Clay Silt Little fine sand	49 % 42 % 9 %
Consolidation test: Pressure = 4000 psf, voids ratio = 0.664		
Unconfined compression test: peak shear stress = 2840 psf		
peak strain = 20.3 %		
test moisture = 24.9 %		
Direct shear test peak shear strength = 2640		
shear displacement peak = 0.125"		
normal stress = 1/3 T psf		
test moisture = 24.6 %		

9. EE 841 - Location 11 - Elevation +5.10 to +3.10

Soil Identification	Silty Clay Little fine sand	33% 60% 7%
Consolidation test: Not made		
Unconfined compression test: peak shear stress = 1915 psf		
peak strain = 5.2 %		
test moisture = 21.4 %		
Direct shear test: Not made		

10. EE-883 - Location 12 - Elevation +6.81 to +4.81

Soil Identification	Clayey Sandy Silt	29 % 33 % 38 %
Consolidation test: Pressure = 3200 psf, voids ratio = 0.660		
Unconfined compression test: Not made		
Direct shear test: not made		

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SECTION 7. Laboratory Soils Tests

Index of Soil Identification Tests

<u>Test No.</u>	<u>Location No.</u>	<u>Elevation</u>	<u>Sheet No.</u>
EE934-A	2	-2.85 to -4.85	1
EE934-B	2	-6.85 to -8.85	1
EE934-C	2	-29.85 to -31.85	1
FF156-A	6A	-12.17 to -14.17	1
FF156-B	6A	-22.17 to -24.17	1
FF156-C	6A	-30.17 to -32.17	2
EE955-A	8A	-23.31 to -25.31	2
EE955-B	8A	-31.31 to -33.31	2
EE883-A	12	+6.81 to +4.81	2
EE839-A	3	+10.82 to +8.82	2
EE841-A	11	+5.10 to +3.10	3
EE840-A	7	+3.92 to +1.92	3
FF386-A	1	+11.05 to +9.05	3
FF386-B	4A	+9.07 to +7.07	3
FF386-C	5	+5.26 to +3.26	3
FF386-D	9	+3.87 to +1.87	4
FF386-E	10A	+4.26 to +2.26	4
FF386-F	13	+5.38 to +3.38	4
FF387-A	1	-4.55 to +1.55	4
FF387-B	5	-17.74 to -21.24	4
FF387-C	6A	-16.17 to -20.67	5
FF387-D	8A	-3.81 to -5.31	5
FF387-E	9	-10.13 to -12.13	5
FF387-F	12	+3.48 to +1.98	5
FF387-G	14A	-1.19 to -3.19	5
FF387-H	15	-10.63 to -12.13	5

Gradations, specific gravities and hydrometer results for the above tests are given in the next 5 pages of this report.

THE THOMPSON & LICHTNER CO., Inc.

SHEET No. 1
 DATE 11/9/45
 MADE BY P.T.D.
 CHECKED BY VO

SUBJECT SOIL IDENTIFICATION TESTS

TEST NO	EE-934-A	EE-934-B	EE-934-C	FF-156-A	FF-156-B
TYPE SAMPLE	SHELBY	SHELBY	SHELBY	SHELBY	SHELBY
DEPTH (ELEV.)	-2.85 TO -4.85	-6.85 TO -8.85	-29.85 TO -31.95	-12.19 TO -11.19	-22.19 TO -24.19
SIEVE SIZE % PASSING					
3"					
2'					
1 1/2"					
1"					
3/4"					
1/2"					
3/8"					
#4					
#10					
#20					
#40					
#60	100				
#100	96		100	100	
#200	88	100	97	96	100
HYDROMETER S.G.	2.71	2.71	2.71	2.86	2.75
ANALYSIS % SMALLER THAN					
0.074 MM	88	100	97	96	100
0.005 MM	52	65	57	64	48
ANALYSIS BY WEIGHT %					
GRAVEL	0	0	0	0	0
SAND	12	0	3	4	0
COARSE SAND	0	0	0	0	0
MEDIUM SAND	0	0	0	0	0
FINE SAND	12	0	3	4	0
SILT	36	35	40	32	52
CLAY	52	65	57	64	48
SOIL TYPE (LAB)	SILTY CLAY	SILTY CLAY	CLAY & SILT	SILTY CLAY	SILT & CLAY
	SOME FINE SAND	CLAY	LITTLE FINE SAND	LITTLE FINE SAND	CLAY
LOCATION	No 2	No 2	No 2	No 2	No 2
BORING DESCRIPTION	STIFF BLUE MEDIUM BLUE CLAY WITH SILT	MEDIUM BLUE CLAY WITH SILT	SOFT BLUE CLAY WITH SILT	STIFF BLUE CLAY WITH SILT	MEDIUM BLUE CLAY WITH SILT

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 2
 DATE 11/21
 MADE BY RFP
 CHECKED BY NO

SUBJECT SOIL IDENTIFICATION TESTS

TEST NO. FF-156C EE-955-A EE-955-B EE-893-A EE-874
 TYPE OF TEST SHELBY SHELBY SHELBY TUBE
 GRADATION (ELEV) -30.17 to -32.19 -23.31 to -25.31 -31.31 to -33.31 +6.81 to +4.51 +10.82 to +8.82
 SURFACE FINISH

3"

2"

1 1/2"

1"

3/4"

1/2"

3/8"

#4

#10

#20

#40

#60

#100

#200

100

97

91

100

97

100

2.69

100

91

2.90

93

67

2.66

100

97

2.92

HYDROMETER S.G. 2.98

ANALYSIS % SMALLER THAN

0.074 MM

0.005 MM

97

65

100

65

91

49

87

29

97

41

ANALYSIS

BY WEIGHT %

GRAVEL

SAND

COARSE SAND

MEDIUM SAND

FINE SAND

SILT

CLAY

0

3

0

0

3

32

65

0

0

0

0

35

65

0

9

0

0

0

42

49

0

33

0

0

30

38

29

0

0

0

0

3

53

41

SOIL TYPE (LAB)

SILTY CLAY

SILTY

CLAY WITH

CLAYEY

CLAY WITH

LITTLE FINE

CLAY

LITTLE FINE

SANDY

LITTLE FINE

SAND

SAND

SILT

SILT

LOCATION

NO 8A

NO 8A

NO 8A

NO 12

NO 3

BORING DESCRIPTION

MEDIUM

STIFF BLUE

MEDIUM

LOOSE

VERY STIFF YELLOW

BLUE

CLAY AND

BLUE

CLAY

CLAY WITH TRACE

CLAY

FINE SAND

CLAY

FULL

OF GRAVEL

THE THOMPSON & LIGHTNER CO., INC.

SHEET NO. 3 of 5
 DATE 11/2/33
 MADE BY RFB
 CHECKED BY VO

SUBJECT SOIL IDENTIFICATION TESTS

TEST NO.	EE-841-A	EE-840A	FF-386-A	FF-386 B	FF-386C
TYPE SAMPLE	TUBE	TUBE	JAR	JAR	JAR
SPERMATION (ELEV.)	+5.10 ₇ +3.10	+3.92 ₇ +1.92	+11.05	+3.05 +9.07 ₇ +9.04	+5.26 +3.26

SIEVE SIZE % PASSING:

3"					
2"					100
1 1/2"			100		97
1"			94		89
3/4"			87		84
1/2"			82		77
3/8"			78		73
#4			67		62
#10			54		51
#20			41		37
#40	100		27		22
#60	99	100	20		18
#100	97	95	16		12
#200	93	87	13	100	4

HYDROMETER S.G.

2.78 2.79 — 2.66 —

ANALYSIS % SMALLER THAN

0.075 MM	93	87	—	100	—
0.025 MM	60	46	—	60	—

ANALYSIS

BY WEIGHT %

GRAVEL	0	0	33	0	38
SAND	7	13	54	0	57
COARSE SAND	0	0	13	0	11
MEDIUM SAND	0	0	27	0	29
FINE SAND	7	13	14	0	18
SILT	33	41	13	40	4
CLAY	60	46	—	60	—

SOIL TYPE (LAB)

SILT & CLAY SILT GRAVELLY CLAY & SAND &
 LITTLE FINE SOME FINE SAND SILT GRAVEL
 SAND SAND SOME SILT LITTLE SILT

LOCATION

N-11 N-9 N-1 N-10 N-5

BORING DESCRIPTION

VERY STIFF VERY STIFF & HARD YELLOW MISC.
 YELLOW SAND & FINE CLAY CLAY WITH FINE FILL
 CLAY CLAY AND Boulders of SAND & GRAVEL

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 4010
 DATE 11/2/60
 MADE BY RFE
 CHECKED BY VO

SUBJECT

SOIL IDENTIFICATION TESTS

TEST NO	FF-386-D	FF-386-E	FF-386-F	FF-389-A	FF-389-B
TYPE SAMPLE	JAR	JAR	JAR	BORING	BORING
GRADATION (ELEV.)	+3.87 To +1.87	+4.26 To +2.26	+5.38 To +3.38	+4.55 To 4.55	-17.74 To -17.74
SIEVE SIZE & PASSING					
3"					
2"					
1 1/2"					
1"					
3/4"					100
1/2"					99
3/8"					99
#4	91				92
#10	99				83
#20	62			100	81
#40	52		100	85	70
#60	49	100	89	29	60
#100	49	96	98	23	53
#200	42	89	66	15	47
HYDROMETER S.G.	2.62	2.71	2.75	-	2.63
ANALYSIS % SMALLER THAN					
0.075 MM	42	89	66	-	47
0.005 MM	12	50	14	-	7
ANALYSIS BY WEIGHT %					
GRAVEL	19	0	0	0	8
SAND	39	11	34	85	45
COARSE SAND	2	0	0	0	4
MEDIUM SAND	27	0	0	15	18
FINE SAND	10	11	34	70	23
SILT	30	39	52	15	40
CLAY	12	50	14	-	7

SOIL TYPE (LAB)	SILTY SAND CLAY &	SANDY SILT	SAND	SAND & SILT
	SOME GRAVEL	SILT, SOME	SOME	LITTLE
	& CLAY	FINE SAND	SILT	GRAVEL & CLAY

LOCATION	NO 9	NO 10A	NO 13	NO 1	NO 5
BORING DESCRIPTION	LOOSE	STIFF YELLOW	MISC. FILL	VERY COMPACT	LOOSE MEDIUM
	COARSE SAND	CLAY AND LITTLE	PEAT AND	YELLOW	SAND & GRAVEL
	AND LITTLE FINE SAND	SILT - 6"			WILLING SAND

THE THOMPSON & LICHTNER CO., Inc.

SHEET NO. 373
 DATE 11/21/57
 MADE BY RFD
 CHECKED BY VO

SUBJECT: SOIL IDENTIFICATION TESTS

TEST NO	FF-387-C	FF-387-D	FF-387-E	FF-387-F	FF-387-G	FF-387-H
TYPE SAMPLE	BORING	BORING	BORING	BORING	BORING	BORING
SPADATION (ELEV)	-16.17 to -20.67	-3.81 to -5.21	-10.13 to -12.13	+3.45 to +1.95	-1.17 to -3.17	-10.63 to -12.13
SIEVE SIZE % PASSING						
3"						
2"						
1½"						
1"					10	
¾"					27	
½"					83	
⅜"					99	
#4			100		65	
#10			95		53	
#20			91		43	
#40	100		87		30	100
#60	99		80		23	96
#100	94		77		19	90
#200	89	100	66	100	13	83
HYDROMETER S.G.	2.72	2.65	2.75	2.73	-	2.74

ANALYSIS & SIEVES

0.074 MM	89	100	66	100	-	83
0.005 MM	50	23	28	54	-	38

ANALYSIS

BY WEIGHT %

GRAVEL	0	0	0	0	35	0
SAND	11	0	34	0	52	17
COARSE SAND	0	0	5	0	12	0
MEDIUM SAND	0	0	8	0	23	0
FINE SAND	11	0	21	0	17	17
SILT	39	97	38	46	13	45
CLAY	50	23	28	54	-	38

SOIL TYPE (LAB)	CLAY & SILT	CLAYEY	CLAYEY	SILT	SANDY	CLAY & SILT
	SOME	ORGANIC	SANDY	CLAY	GRAVEL	SOME
	FINE SAND	SILT	SILT		SANDY SILT	FINE SAND

LOCATION	NOGA	NOGA	NO7	NO12	NO1-11	NO15
----------	------	------	-----	------	--------	------

BORING DESCRIPTION	STIFF	VERY LOOSE	VERY STIFF	VERY STIFF	SANDY	SOFT
	YELLOW	SANDY	BLUE CLAY	YELLOW	SANDS AND	BLUE
	CLAY	PEATY SILT	TO NEARLY	WITH	BRN FILL	CLAY

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART I - REPORT

SECTION 7 - Laboratory Soils Tests

Index of Consolidation Tests

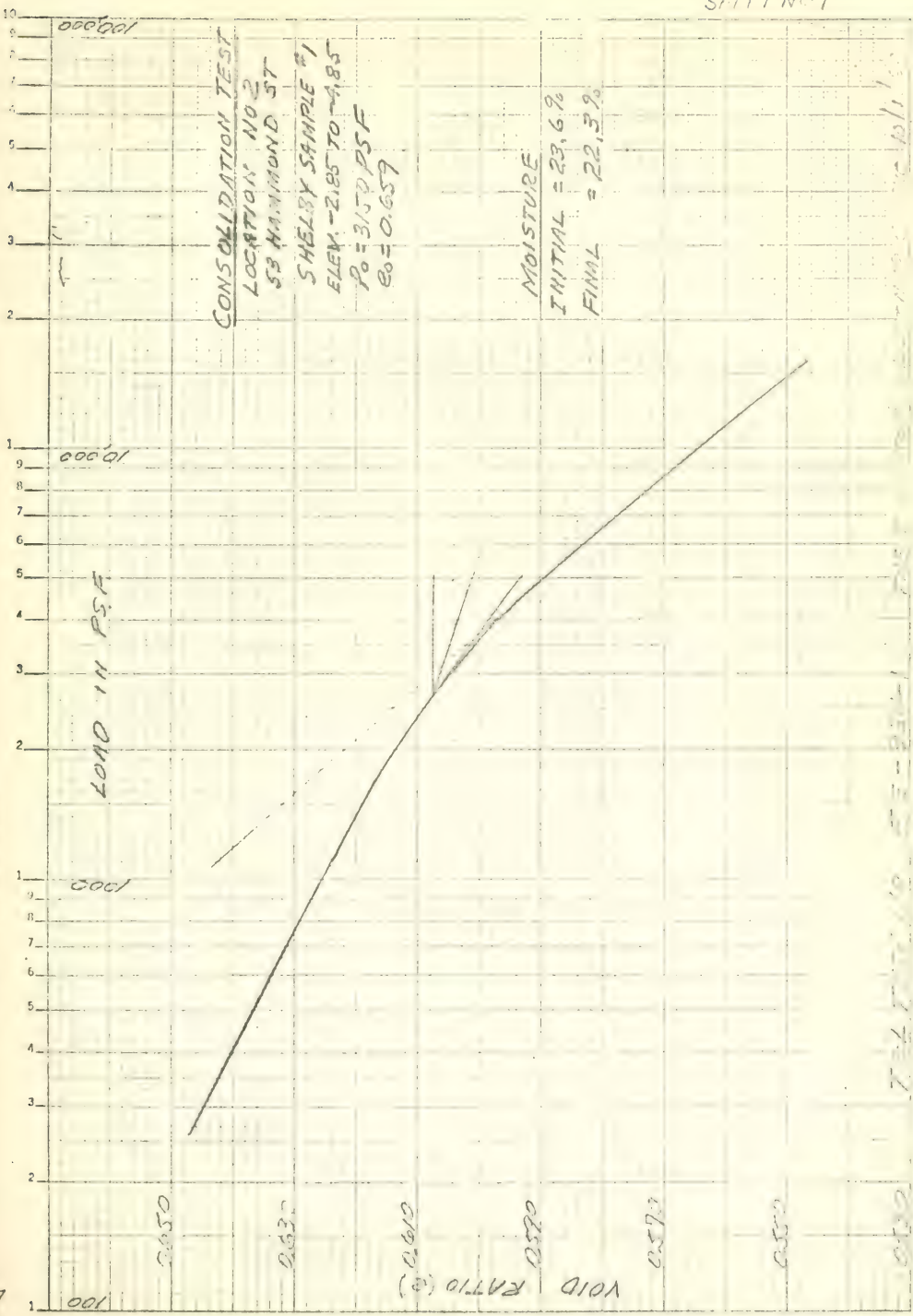
<u>Test No.</u>	<u>No. of Location</u>	<u>Elevation</u>	<u>Sheet No.</u>
EE 934-1	2	-2.85 to -4.85	1
EE 934-2	2	-6.85 to -8.85	2
EE 934-3	2	-29.85 to -31.85	3
FF 156-1	6-A	-12.17 to -14.17	4
FF 156-2	6-A	-22.17 to -24.17	5
FF 156-3	6-A	-30.17 to -32.17	6
EE 955-1	8-A	-23.31 to -25.31	7
EE 955-2	8-A	-31.31 to -33.31	8
EE 883	12	+6.81 to +4.81	9

The above consolidation tests are summarized on the next page with curves and test data given on the following nine pages.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART I - REPORT

SUMMARY OF CONSOLIDATION TEST RESULTS

<u>Test No.</u>	<u>Po Pressure</u>	<u>e_o Void Ratio</u>
EE 934 Location 2 -2.85 to -4.85	3150 psf	0.659
EE 934 Location 2 -6.85 to -8.85	3050 psf	0.776
EE 934 Location 2 -29.85 to -31.85	5800 psf	1.125
FF 156 Location 6-A -12.17 to -14.17	4600 psf	0.766
FF 156 Location 6-A -22.17 to -24.17	2300 psf	0.579
FF 156 Location 6-A -30.17 to -32.17	5000 psf	0.995
EE 955 Location 8-A -23.31 to 25.31	2900 psf	0.755
EE 955 Location 8-A -31.31 to -33.31	4000 psf	0.664
EE 883 Location 12 +6.81 to +4.81	3200 psf	0.408



3 CYCLES AT 70% & 80%

71

CONSOLIDATION TEST

LOCATION No 2
53 HAMMOND ST

SHELL BY SAMPLE #2

ELEV - 6.85 TO - 8.85

$P_b = 3050$ PS.F

$e_p = 0.916$

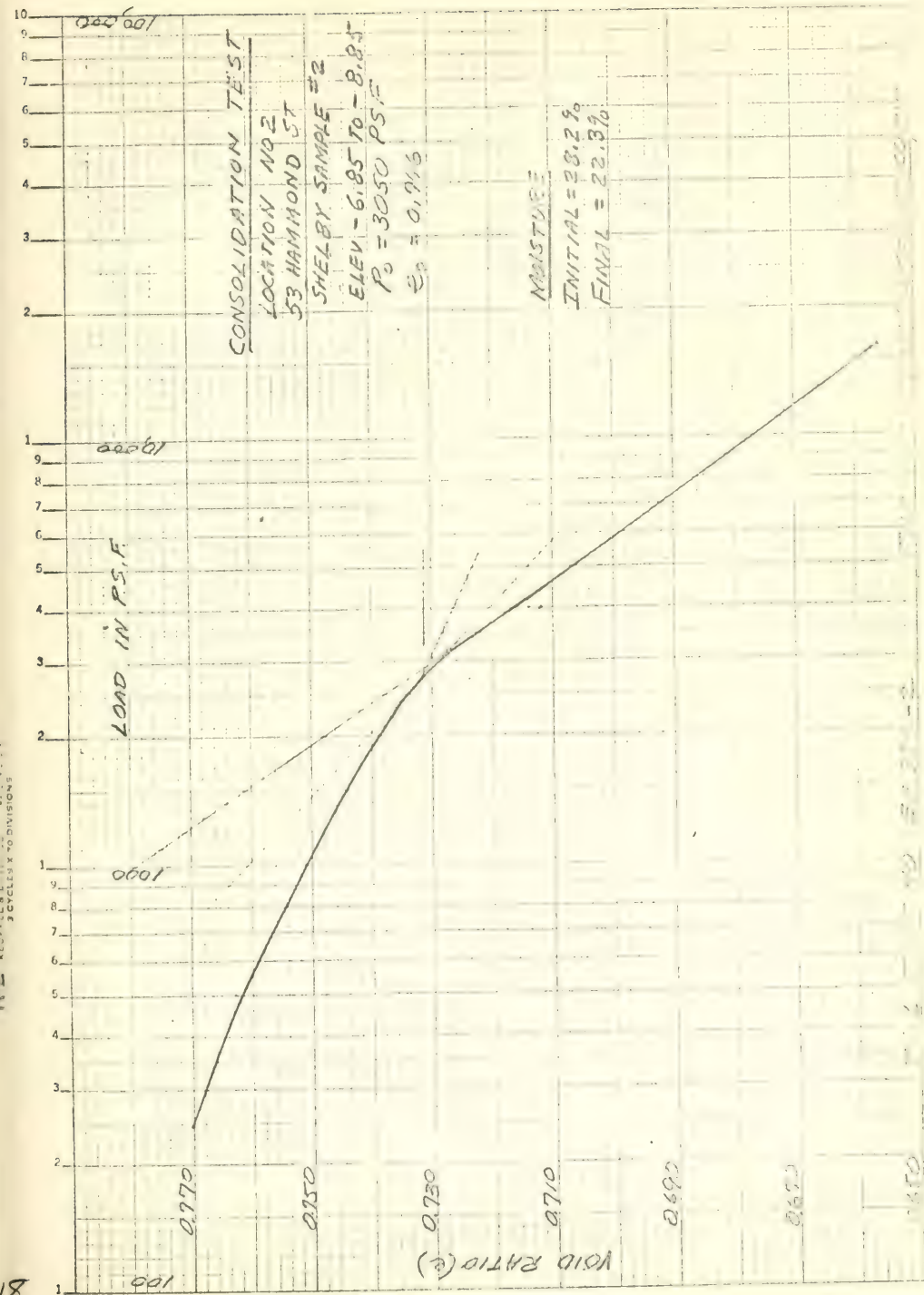
MOISTURE

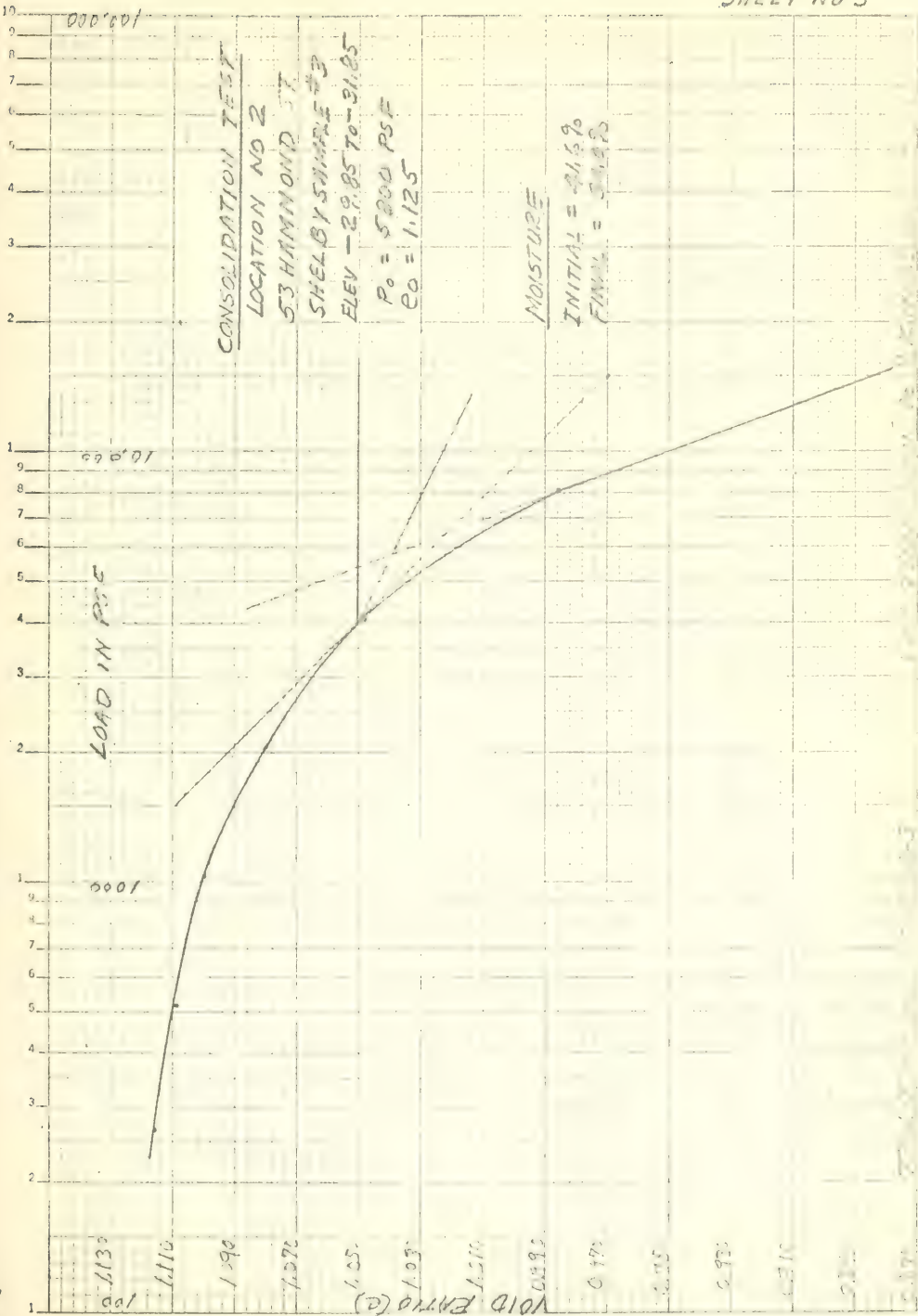
INITIAL = 20.2%

FINAL = 22.3%

LOAD IN P.S.F.

VOID RATIO (e)





3 CYCLES X 10 DIVISIONS

6

CONSOLIDATION TEST

LOCATION NO 6A
106-108 EAST CANTON ST
SHELBY SAMPLE #1
ELEV - 12.17 TO - 12.17

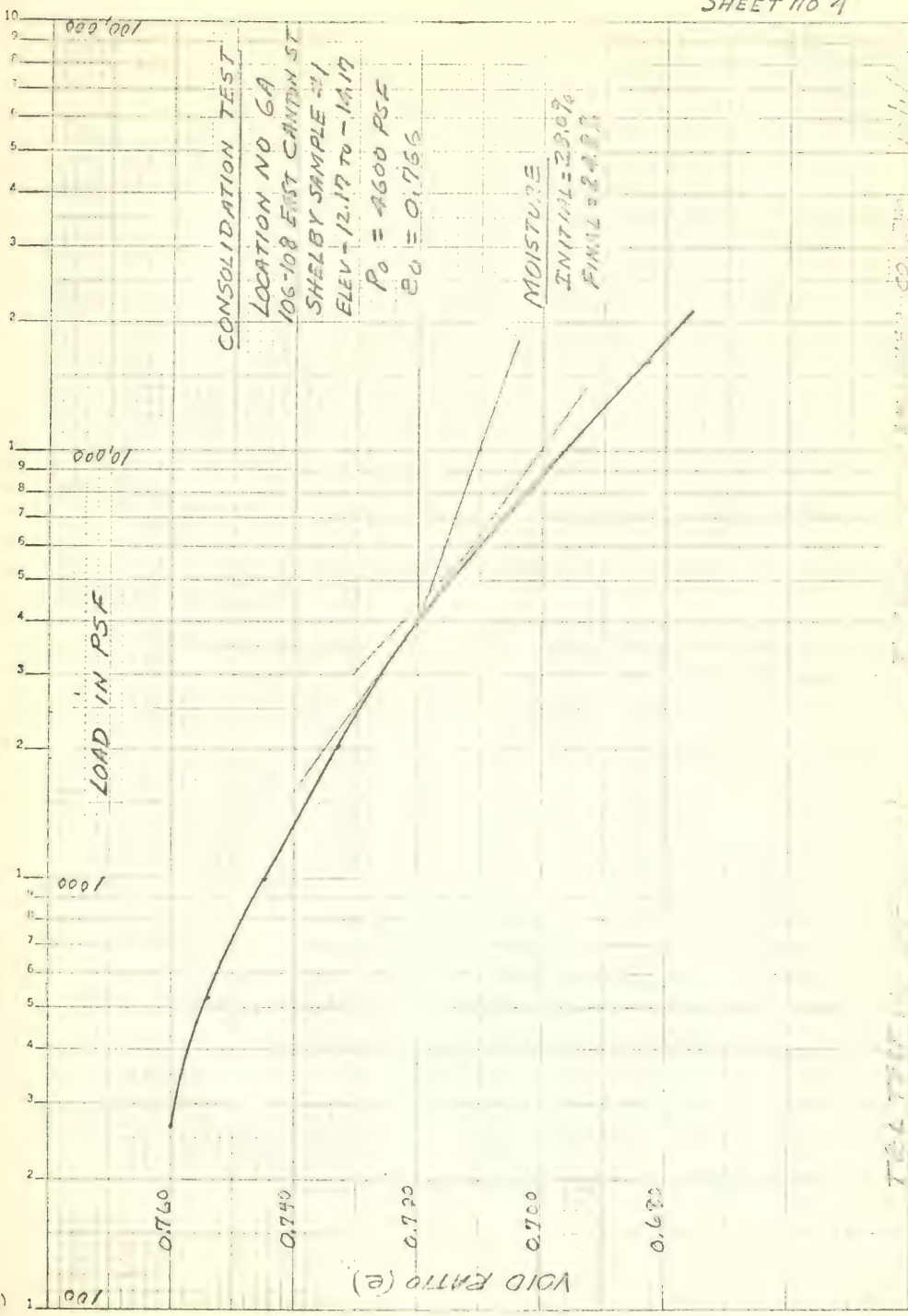
$P_0 = 4600$ PSF
 $e_0 = 0.766$

MOISTURE

INITIAL = 28.0%
FINAL = 22.2%

LOAD IN PSF

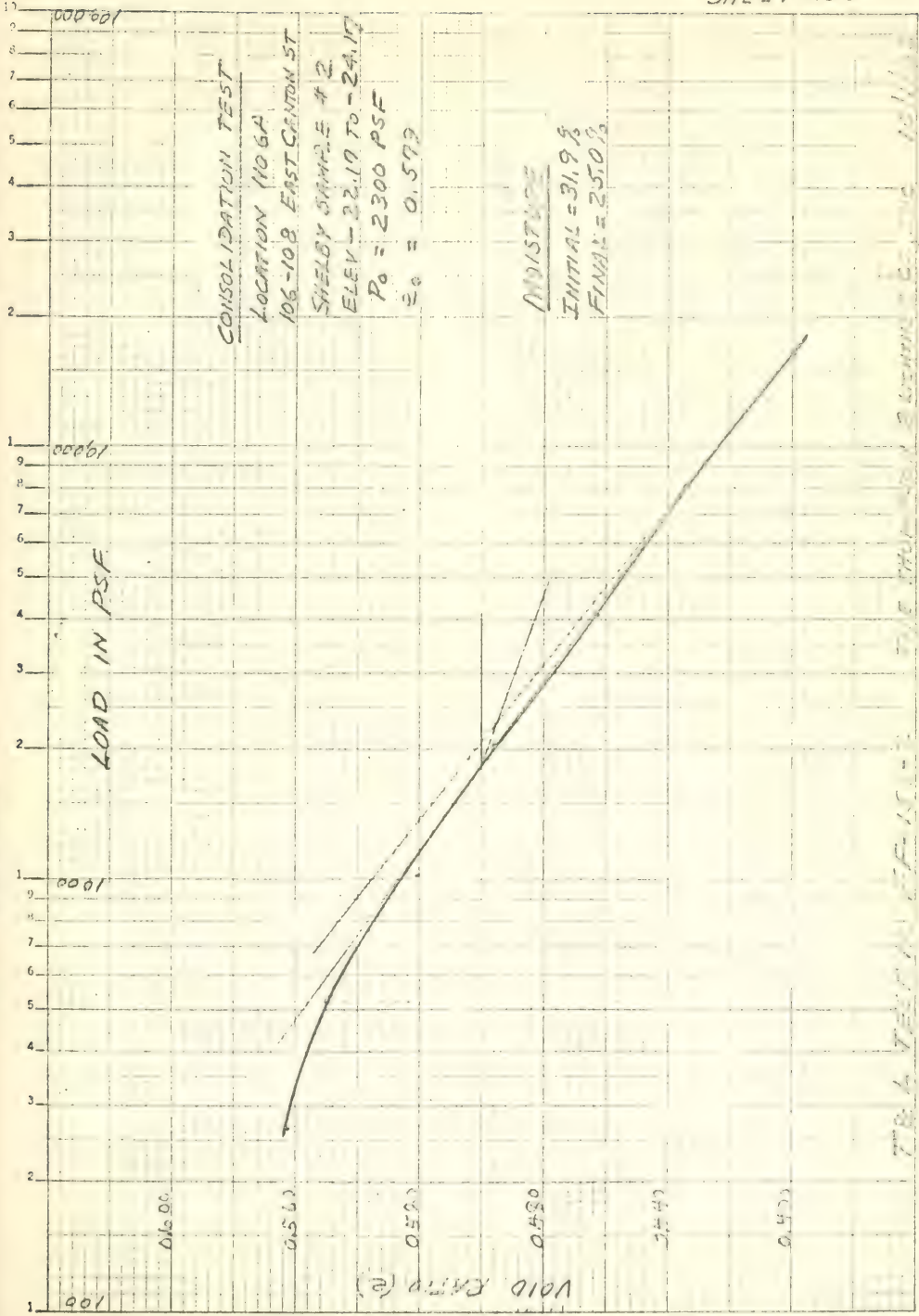
VOID RATIO (e)



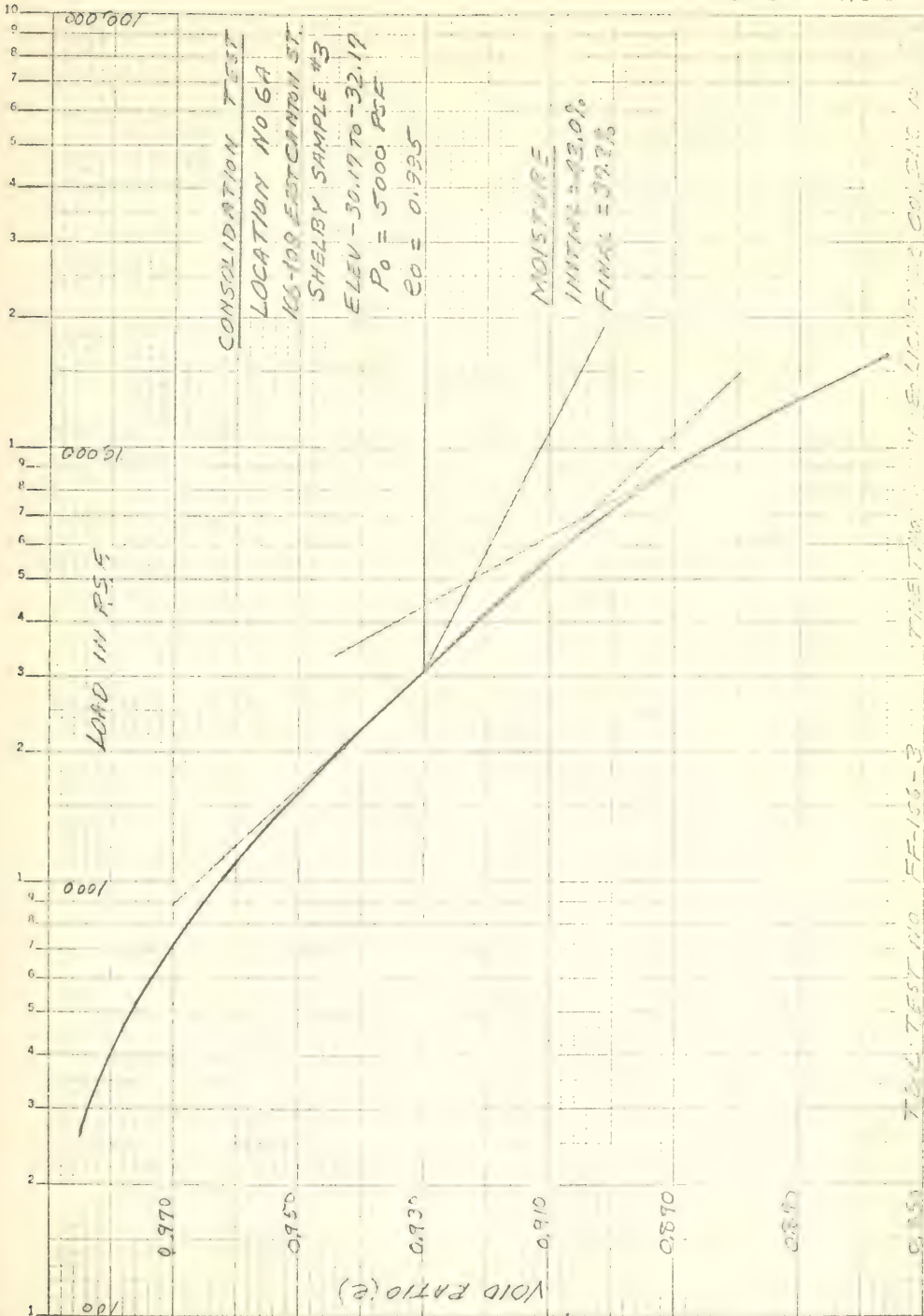
TR-4754

100' 00" 00"

100'



TR-6 TEST OF E.F. 15-17 THE THOMAS ENGINEERING CO. 1911



TEST NO. FF-156-3

3 CYCLES x 70 DIVISIONS

10000

1000

1000

LOAD IN PSF

CONSOLIDATION TEST

LOCATION No 8A
373 COLUMBUS AVE

SHELDY SAMPLE 1

FLEX - 23.31 TO - 25.31

P₀ = 2900 PSF

e₀ = 0.755

MOISTURE

INITIAL = 27.5%

FINAL = 29.1%

0.760

0.720

0.680

0.640

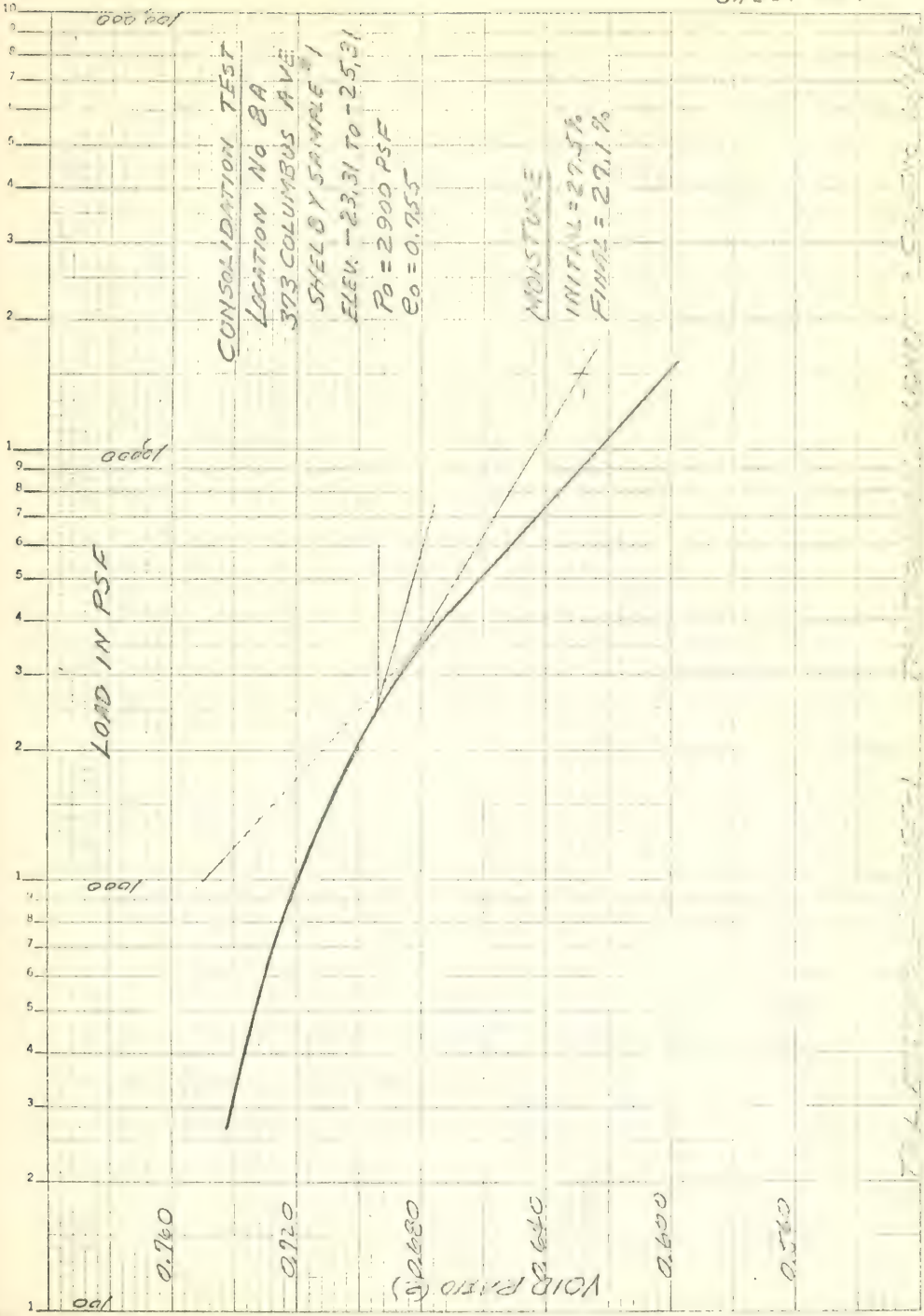
0.600

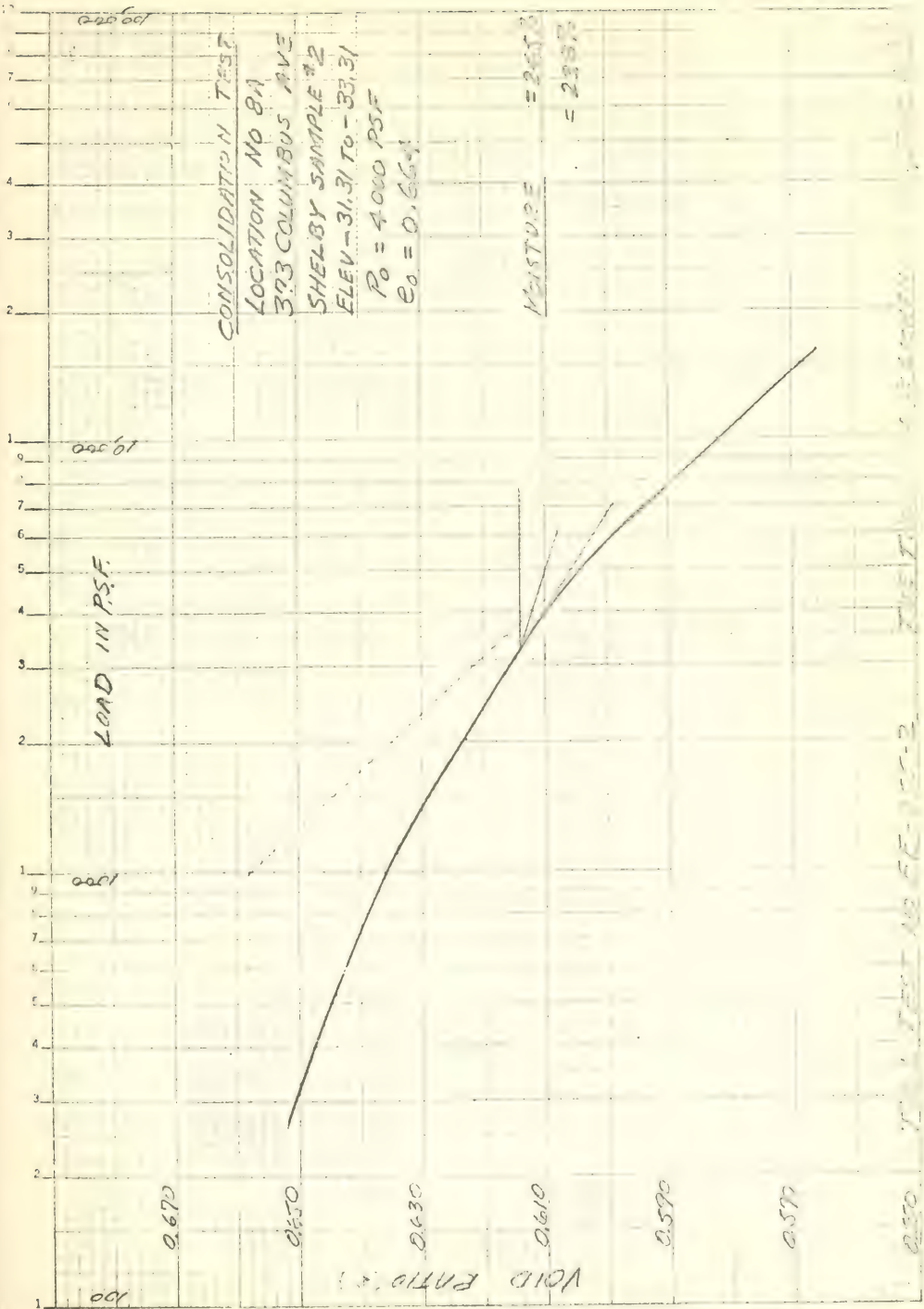
0.560

VOID RATIO (e)

3 CYCLES X 70 DIVISIONS

3





TEST NO. 8A-1-1-2

CONSOLIDATION TEST

LOCATION NO 12

11 COMPTON ST

TUBE SAMPLE

ELEV = +6.91 TO +6.91

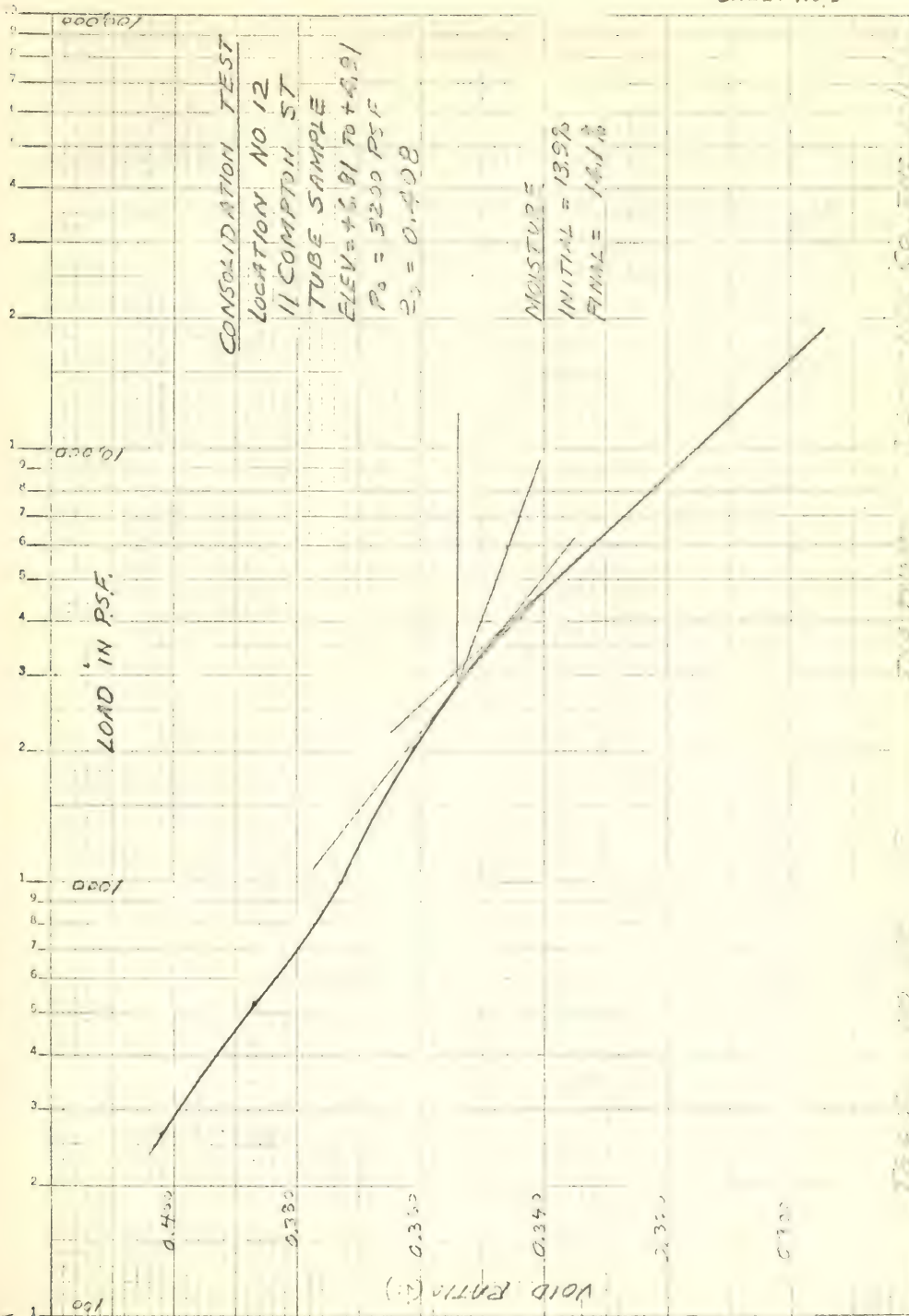
$P_0 = 5200$ PSF

$e_0 = 0.408$

MOISTURE =

INITIAL = 13.9%

FINAL = 14.1%



T. S. ... Co., Inc.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART I - REPORT

SECTION 7 - Laboratory Soils Tests

Index of Unconfined Compression Tests

<u>Test No.</u>	<u>Location No.</u>	<u>Elevation</u>	<u>Sheet No.</u>
EE 934-2	2	-6.85 to -8.85	1
EE 934-3	2	-29.85 to -31.85	2
FF 156-1	6-A	-12.17 to -14.17	3
FF 156-2	6-A	-22.17 to -24.17	4
FF 156-3	6-A	-30.17 to -32.17	5
EE 955-1	8-A	-23.31 to -25.31	6
EE 955-2	8-A	-31.31 to -33.31	7
EE 841	11	+5.10 to +3.10	8

The above unconfined compression tests are summarized on the next page with curves and test data reported on the following eight pages.

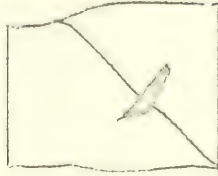
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART I - REPORT

Summary of Unconfined Compression Tests

<u>Test No.</u>	<u>Peak Shear Stress, psi</u>	<u>Peak Strain %</u>	<u>Test Moisture, %</u>
EE 934 Location 2 -6.85 to -8.85	1825	7.1	27.6
EE 934 Location 2 -29.85 to -31.85	375	14.4	32.2
FF 156 Location 6A -12.17 to -14.17	2200	12.8	27.2
FF 156 Location 6A -22.17 to -24.17	860	12.4	33.8
FF 156 Location 6A -30.17 to -32.17	483	4.6	39.3
EE 955 Location 8A -23.31 to -25.31	1515	7.9	23.2
EE 955 Location 8A -31.31 to -33.31	2840	20.3	24.9
EE 841 Location 11 +5.10 to +3.10	1015	5.2	21.4

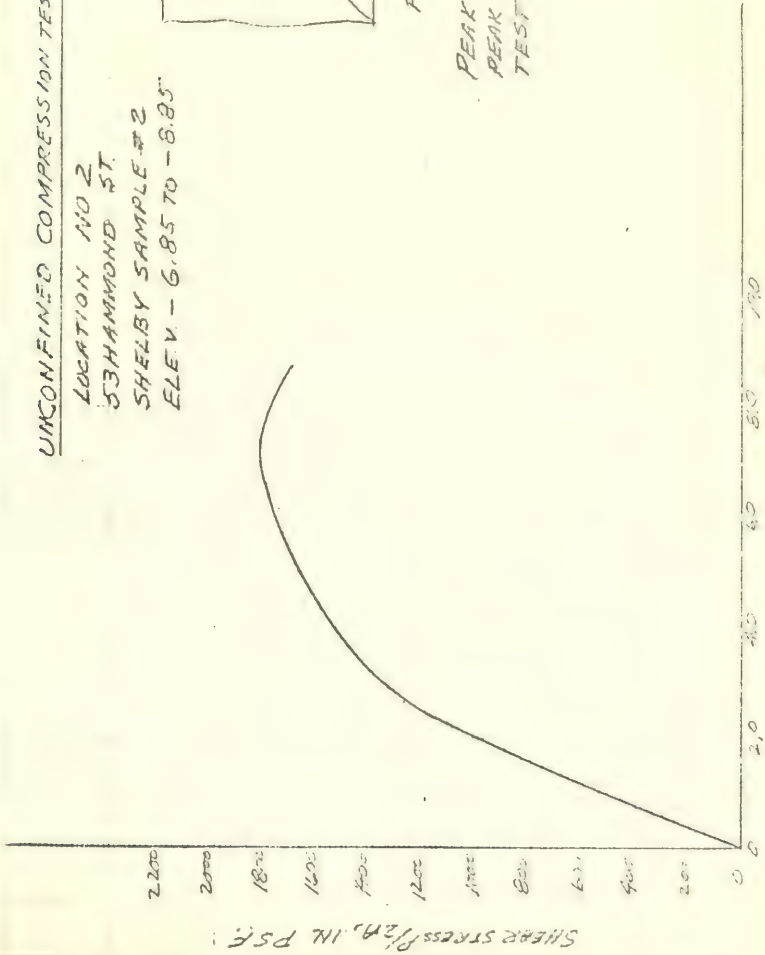
UNCONFINED COMPRESSION TEST

LOCATION NO 2
53 HAMMOND ST.
SHELBY SAMPLE #2
ELEV. - 6.85 TO - 8.85'



FAILURE

PEAK SHEAR STRESS = 1825 PSF
PEAK STRAIN = 7.1%
TEST MOISTURE = 23.6%

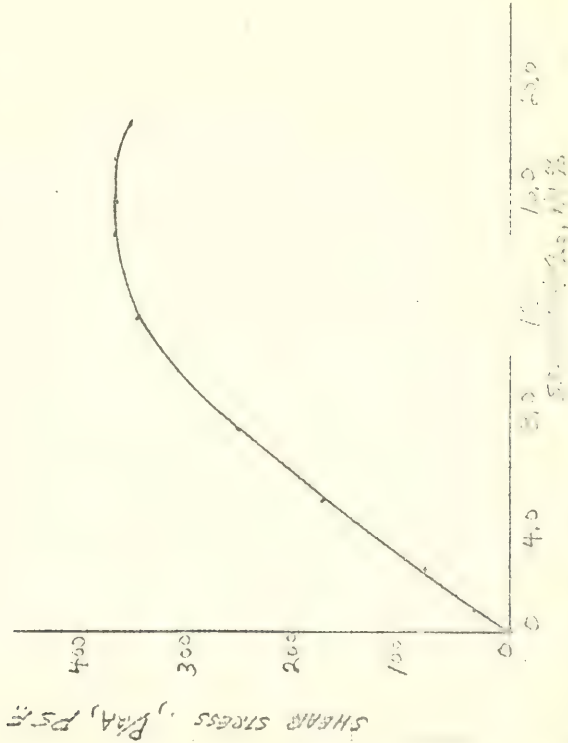


570 N 4 1/2 IN 7 1/2

THE TRIANGLE COMPANY, INC. JULY 1941/53

UNCONSOLIDATED COMPRESSION TEST

LOCATION NO 2
 53 HAMMOND ST.
 SHELBY SAMPLE #3
 ELEV. - 29.85 TO -31.85



FAILURE

PEAK SHEAR STRESS = 375 PSF
 PEAK STRAIN = 14.4 %
 TEST MOISTURE = 32.2 %

TEST NUMBER: 201-5-1-1
 TEST DATE: 10/1/53
 TESTER: GEORGE L. HENNINGER, JR., P.E.

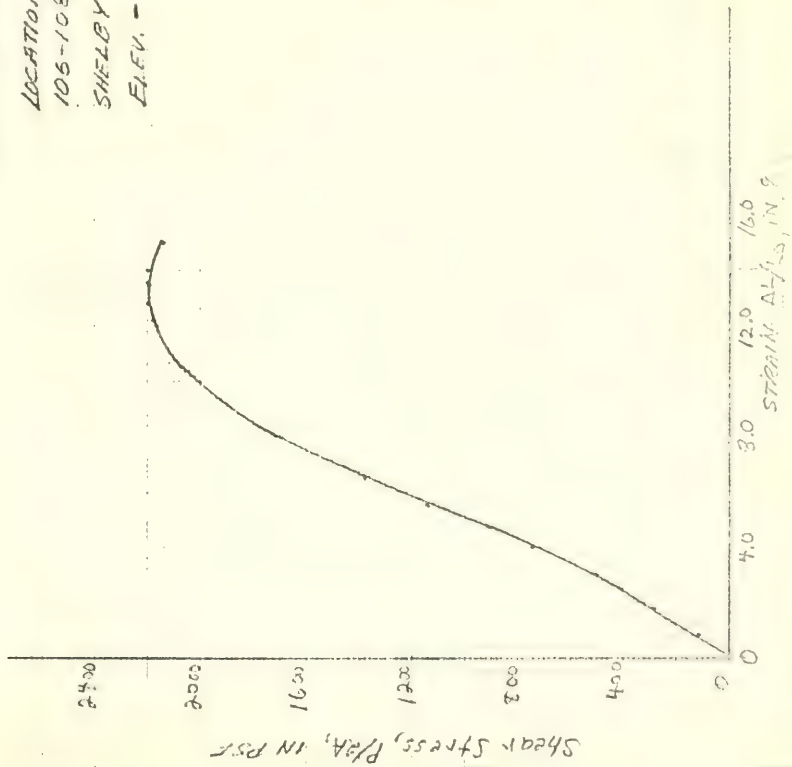
UNCONFINED COMPRESSION TEST

LOCATION NO 6A
106-108 EAST CARROLL ST
SHELBY SAMPLE #1
ELEV. - 12.10 TO - 12.17



FAILURE

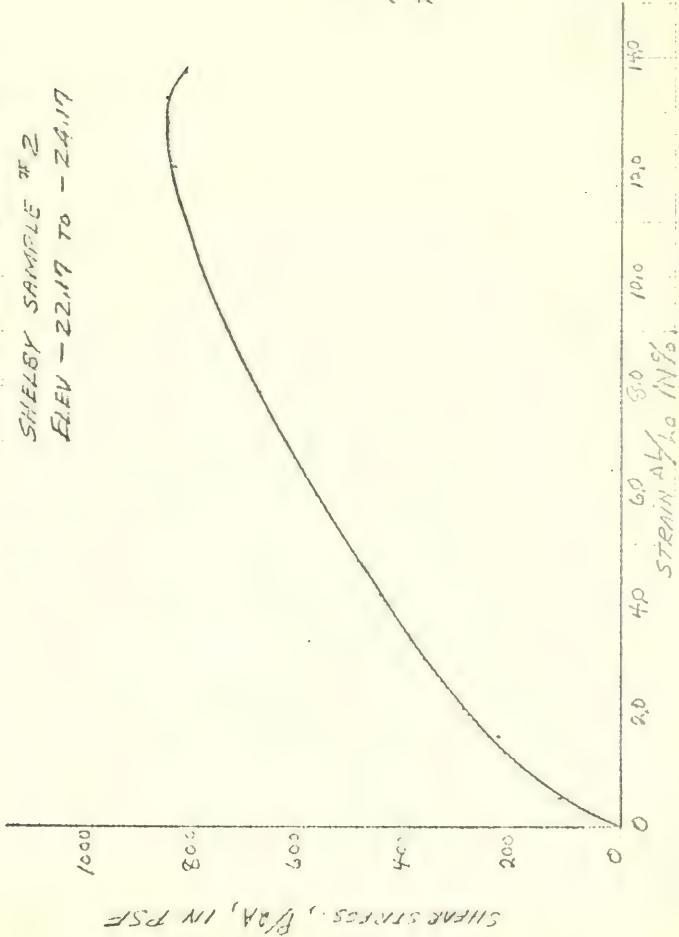
PEAK SHEAR STRESS = 2200 PSF
PEAK STRAIN = 12.9 %
TEST MOISTURE = 27.2 %



TEST NO FF-156-1 THE TYPICAL & ALSO

UNCONFINED COMPRESSION TEST

LOCATION NO 6A
106-108 EAST CANTON ST.
SHELBY SAMPLE #2
ELEV - 22.17 TO - 24.17



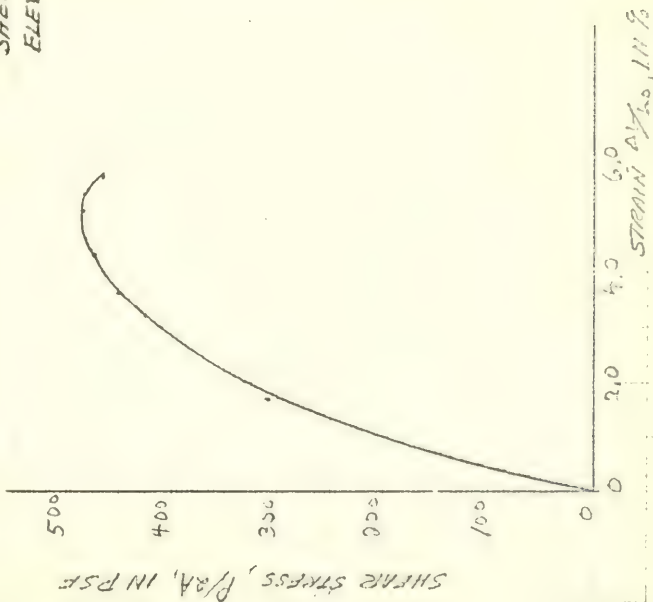
FAILURE

PEAK SHEAR STRESS = 860 PSF
PEAK STRAIN = 12.4%
TEST MOISTURE = 33.9%

TESTED BY: F. L. G. P. THE THOMSON COLLINETER CO., INC. 10/1/61

UNCONFINED COMPRESSION TEST

LOCATION NO 6A
106-108 EAST CANTON ST.
SHELBY SAMPLE #3
ELEV. - 30.17 TO - 32.17



FAILURE

PEAK SHEAR STRESS = 483 PSF

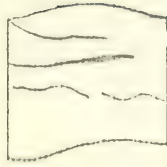
PEAK STRAIN = 4.6 %

TEST MOISTURE = 39.3 %

TRIAL TEST NO. FF-1516-E THE TRINITY ENGINEERING CO., INC. 10/1/58

UNCONFINED COMPRESSION TEST

LOCATION NO. 8A
373 COLUMBUS AVE
SHELBY SAMPLE NO 1
ELEV. -23.31 TO -25.31



FAILURE

PEAK SHEAR STRESS = 1515 PSF

PEAK STRAIN = 7.9%

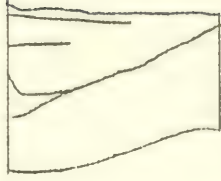
TEST MOISTURE = 23.2%

STRAIN, %

TESTING STATION THE THOMPSON BRICK TOWER CO., CHICAGO

UNCONFINED COMPRESSION TEST

LOCATION NO BA.
373 COLUMBUS AVE
SHELBY SAMPLE #2
ELEV - 31.31 TO - 33.31

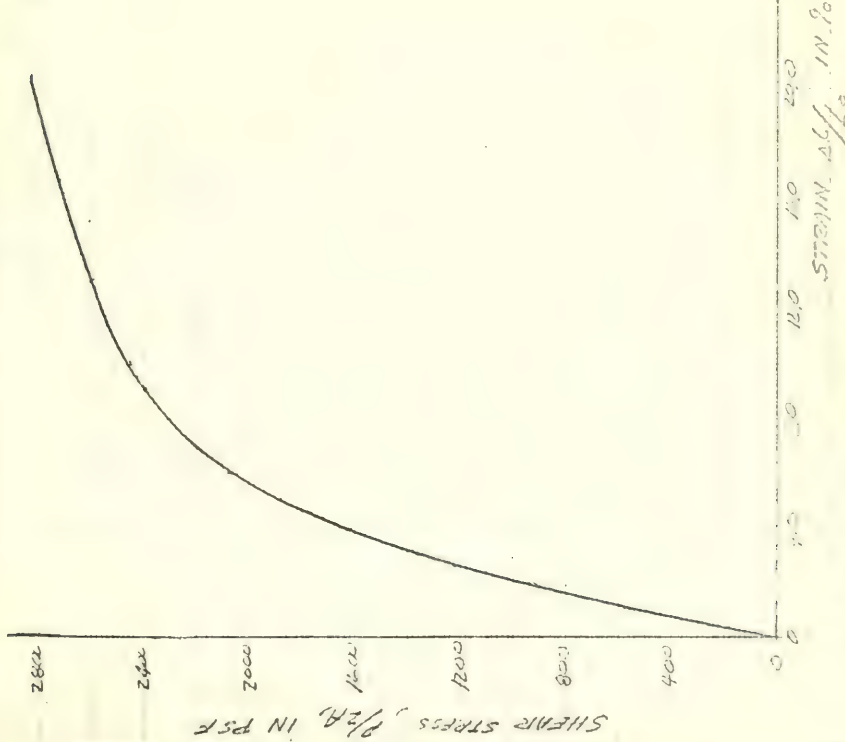


FAILURE

PEAK SHEAR STRESS = 2040 PSF

PEAK STRAIN = 20.9%

TEST MOISTURE = 24.9%



THROUGH REFINES THE TYPICAL DATA. SHELLS

UNCONFINED COMPRESSION TEST

LOCATION NO 11

10 ROLLINS ST

TUBE SAMPLE

ELEV + 5.10 TO + 3.10

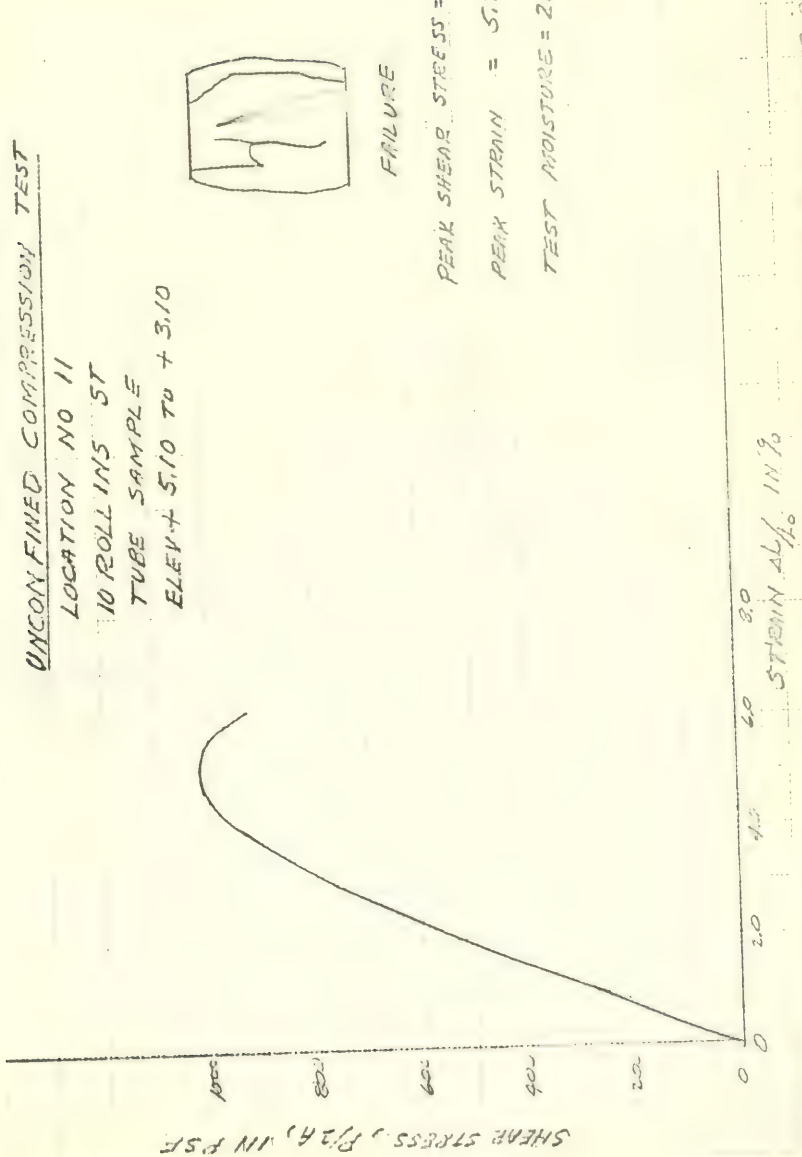


FAILURE

PEAK SHEAR STRESS = 1015 P.S.F

PEAK STRAIN = 52%

TEST MOISTURE = 21.4%



T&L TEST NO. FE-841 THE THOMPSON ENGINEERING CO. INC. 10/1/52

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R 56
PART I - REPORT

SECTION - 7 LABORATORY SOILS TEST

Index of Direct Shear Tests

<u>Test No.</u>	<u>Location No.</u>	<u>Elevation</u>	<u>Sheet No.</u>
EE-934-2	2	-6.85 to - 8.85	1
EE-934-3	2	-29.85 to -31.85	2
FF 156-1	6-A	-12.17 to -14.17	3
FF 156-2	6-A	-22.17 to -24.17	4
FF 156-3	6-A	-30.17 to -32.17	5
EE 955-1	8-A	-23.31 to -25.31	6
EE 955-2	8-A	-31.31 to -33.31	7

The above Direct Shear Tests are summarized on the next page with curves and test data given on the seven following pages.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R 56
PART I - REPORT

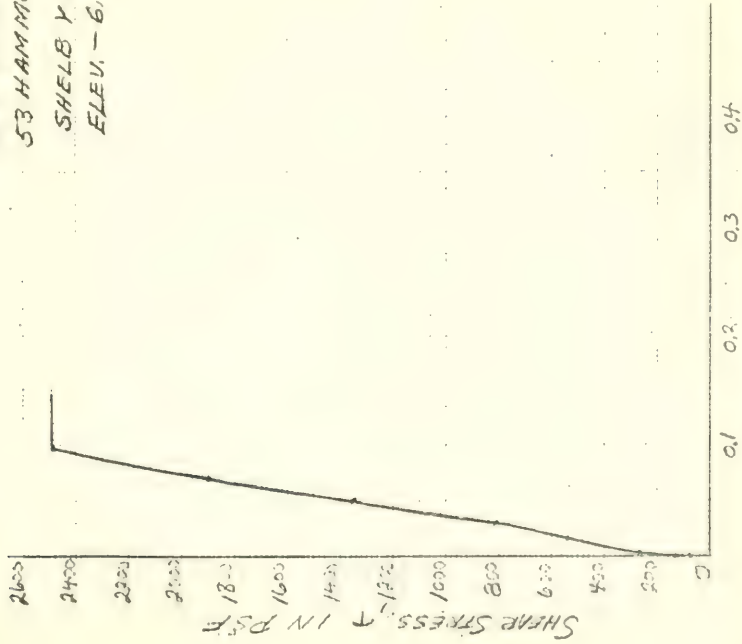
Summary of Direct Shear Tests

<u>Test No.</u>	<u>Peak Shear Test, psf</u>	<u>Shear Displacement Peak</u>	<u>Normal Stress</u>	<u>Test Moisture, %</u>
EE 934 Location 2 -6.85 to -8.85	2496	0.098"	1/3 T psf	27.0
EE 934 Location 2 -29.85 to -31.85	812	0.113"	1/3 T psf	41.5
FF 156 Location 6-A -12.17 to -14.17	1600	0.188"	1/3 T psf	25.4
FF 156 Location 6-A -22.17 to -24.17	823	0.179"	1/3 T psf	35.8
FF 156 Location 6-A -30.17 to -32.17	965	0.085"	1/3 T psf	41.5
EE 955 Location 8-A -23.31 to -25.31	2652	0.195"	1/3 T psf	23.2
EE 955 Location 8-A -31.31 to -33.31	2640	0.126"	1/3 T psf	24.6

DIRECT SHEAR TEST

LOCATION NO 2
53 HAMMOND ST.

SHELB Y SAMPLE #2
ELEV. - 6,8570 - 8,85



PEAK SHEAR STRESS = 2496 PSF

SHEAR DISPLACEMENT (PEAK) = 0.099"

NORMAL STRESS $\sigma = \frac{1}{3} T$ PSF

TEST MOISTURE = 27.0%

SHR 41

SHEAR DISPLACEMENT IN INCHES

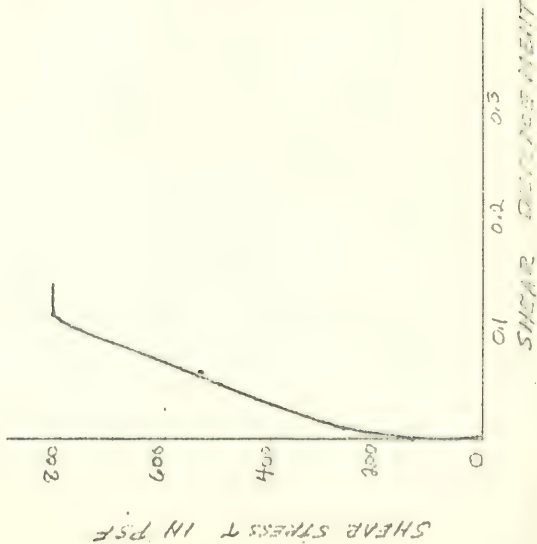
TR & TEST NO. EF-934-C

THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

10/1/63

DIRECT SHEAR TEST

LOCATION NO 2
53 HAMMOND ST
SHELBY SAMPLE #3
ELEV - 29.85 TO -31.85



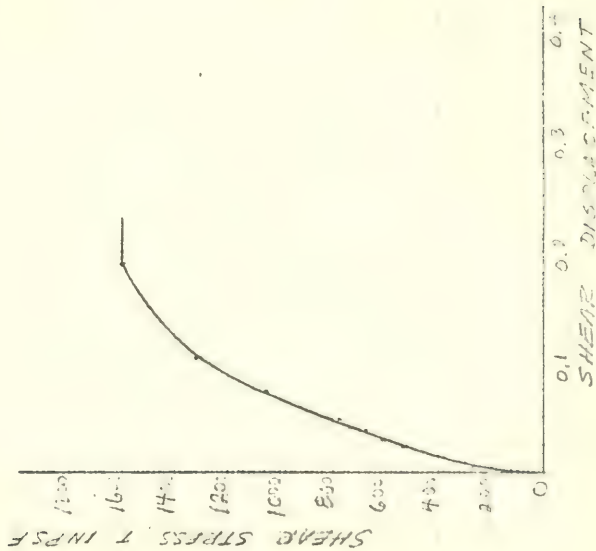
PEAK SHEAR STRESS = 812 PSF
SHEAR DISPLACEMENT (PEAK) = 0.113"
NORMAL STRESS $\sigma = \frac{1}{3} T, \text{PSF}$
TEST MOISTURE = 41.5 %

SHEET NO 2

T&L TEST NO. EE - 924 - 3 THE THOMPSON & LIGHTNER CO., INC. 10/1/53

DIRECT SHEAR TEST

LOCATION NO 6A
106-108 EAST CANTON ST
SHELBY SAMPLE #1
ELEV - 12.17 TO -14.17

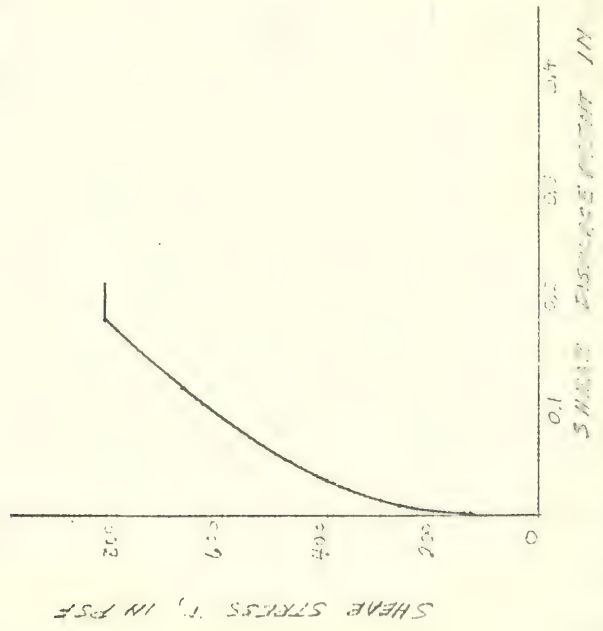


PEAK SHEAR STRESS = 1600 PSF
SHEAR DISPLACEMENT (PEAK) = 0.180"
NORMAL STRESS $\sigma = 1/3$ T PSF
TEST MOISTURE = 25.4 %

SHEET NO 3

T8-4 TEST NO. SF-154-1 THE THOMPSON & LIGHTNER CO., INC 10/1/63

DIRECT SHEAR TEST
 LOCATION NO 6A
 106-108 EAST CANTON ST
 SHELBY SAMPLE #2
 ELEV. -22.17 TO -24.17



SHEAR STRESS (τ) IN PSF

SHEAR DISPLACEMENT IN INCHES

TEST NO. 6A-1-2 THE UNIVERSITY OF ALABAMA CO. ENG. BLDG.

PEAK SHEAR STRESS = 823 PSF
 SHEAR DISPLACEMENT (PEAK) = 0.179"
 NORMAL STRESS $\sigma = 1/3 \tau$ PSF
 TEST MOISTURE = 35.8%

DIRECT SHEAR TEST

LOCATION NO 6A
106-108 EAST CANTON ST.

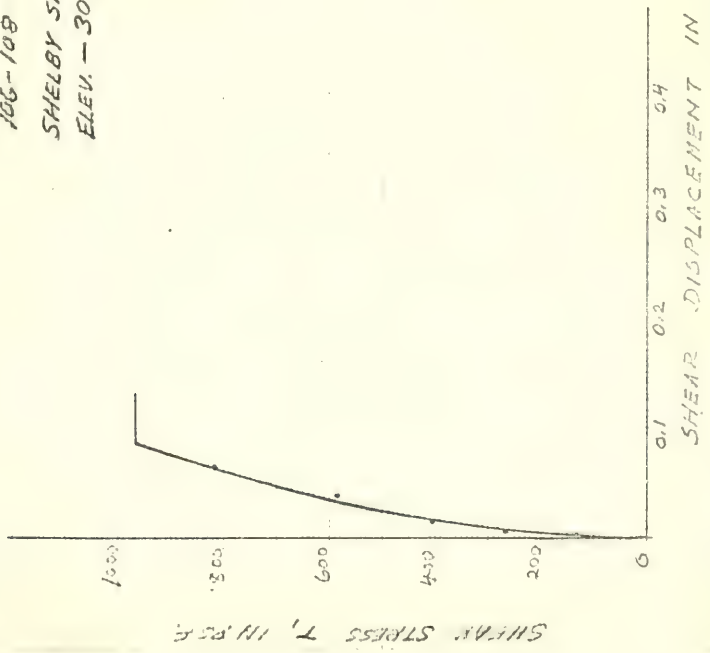
SHELBY SAMPLE #3
ELEV. - 30.17 TO - 32.17

PEAK SHEAR STRESS = 965 PSF

SHEAR DISPLACEMENT (PEAK) = 0.085"

NORMAL STRESS $\sigma = 1/3 T$ PSF

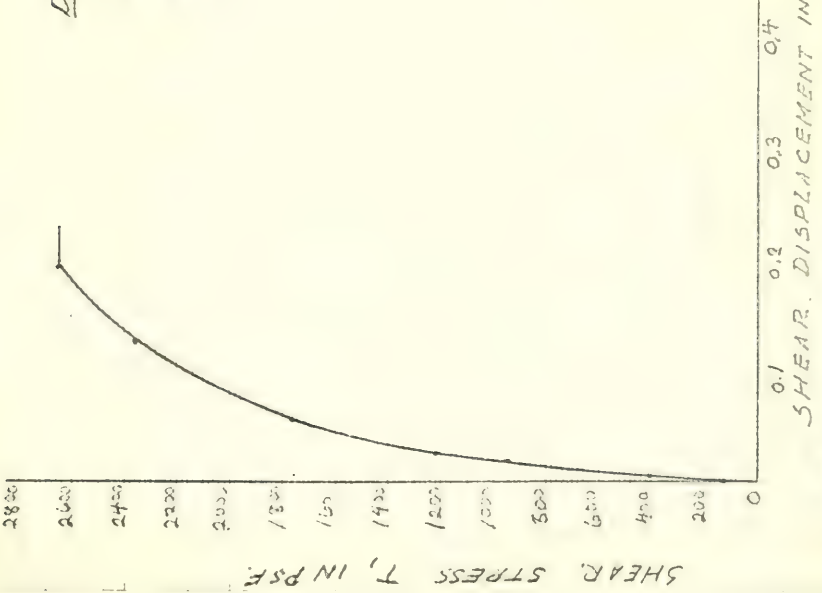
TEST MOISTURE = 41.5%



TEST NO. FE 156-3 THE THOMPSON ENGINEERING COMPANY

DIRECT SHEAR TEST
LOCATION NO BA
303 COLUMBUS AVE
SHELBY SAMPLE #1
ELEV. -23.31 TO -25.31

PEAK SHEAR STRESS = 2552 PSF.
SHEAR DISPLACEMENT (PEAK) = 0.195"
NORMAL STRESS $\sigma = 1/3 T$ PSF
TEST MOISTURE = 23.2 %



TEST NO. 50-45-500-1
THE TIMMONS & LICHTNER CO., INC. 10/1/58

DIRECT SHEAR TEST

LOCATION NO 8A
373 COLUMBUS AVE

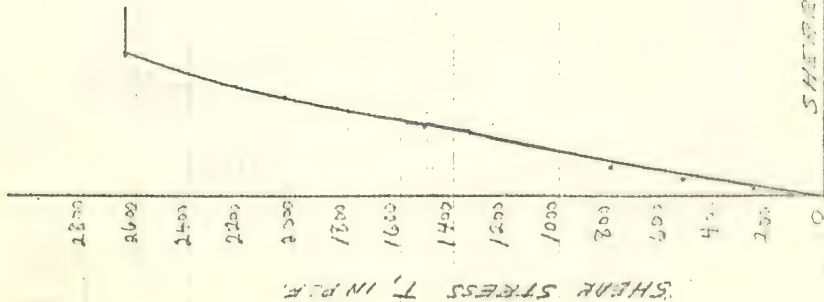
SHELBY SAMPLE #2
ELEV. -31.31 TO -33.31

PEAK SHEAR STRESS = 2640 PSF

SHEAR DISPLACEMENT (PEAK) = 0.125"

NORMAL STRESS $\sigma_v = 1/3 T$ PSF

TEST MOISTURE = 24.6%



SHEAR DISPLACEMENT IN INCHES

0.1 0.2 0.3 0.4

TEST NO. 8A-557-2

THE TULLY FOUNDATION CO., INC. 10/1/63

SHEAR STRESS T, IN P.S.F.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 8. Findings

Reference is made to the 15 sketches included in SECTION 3, PART I and photographs included in SECTION 2, PART II of this report which show footings and piles which were uncovered as a part of the study of foundations, piling and structures. The locations of the structures investigated were selected in an attempt to provide a representative picture of foundation and soil conditions for the entire South End Project Area. Findings at the locations were as follows:

<u>Location No.</u>	<u>Address</u>	<u>Foundation</u>	<u>Elev.</u>	<u>Piling Soil</u>
1	23 Walpole Street	Dry laid granite blocks	+11.05	Sand and gravel
2	53 Hammond Street	Mortar and random stone	+5.65	8" wood piles
3	22-24 Camden Street	Dry laid field stones	+10.82	Yellow clay
4A	196 Northampton Street	Stone foundation Upper part laid with mortar Lower part laid up dry	+9.07	Hard yellow clay
5	27-29 Claremont Park	Granite block and boulders, laid dry	+5.26	Sand and gravel fill
6A	106-108 East Canton Street	Foundation of dry laid granite blocks, pile caps of stone 1'-7" thick	+7.08	9" wood piles
7	335 Shawmut Avenue	Foundation of dry laid boulders and granite blocks, top layer with mortar	+3.92	Stiff yellow clay
8A	373 Columbus Avenue	Footing of dry laid granite blocks	+6.02	8" and 10" wood piles
9	72 Warren Avenue	Granite block foundation laid in mortar, wide granite slab footing	+3.87	Sand, gravel and clay

10A	20 Hanson Street	Granite block footing laid dry	+4.26'	Yellow clay and little sand
11	10 Rollins Street	Footing of dry laid boulders	+5.10	Hard yellow clay
12	11 Compton Street	Footing of dry laid granite block	+6.82	Stiff clay
13	East Newton Street Armory	Foundation of granite block laid dry on 2' thick dry laid granite block footing	+5.38	Sandy silt, some clay
14	70 Chandler Street	Granite block pile cap	+6.81	8" wood piles
15	21 Rutland Square	Dry laid granite block and boulders	+7.37	Misc. and clay fill

The foundations and pilings as uncovered and observed were generally in good condition except for the following:

Location
No.

Condition Defect

- | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6A | Foundation of irregular shape, probably built that way. Top 4" of one pile observed was rotted. Water table measured 8" below top of piles. No indication of foundation settlement. |
| 9 | City of Boston records indicate a foundation of 40' piles capped by granite; however, no piles were encountered. |
| 10A | Foundation with brick wall moved outward 5". The upper wall has moved outward in the full first story height. There is no indication of foundation settlement. |
| 13 | Soils, peat and silt, indicate piles should exist; however, none were encountered. There is no indication of foundation settlement. |

In the fifteen locations surveyed there were four pile foundations where wooden core samples from the piles were found to be in good condition. At one location, No. 6A, two piles were observed and sampled: one of which was in good condition; the other was rotted at the top. Water was found to be approximately 8" below the top of the wood piles.

Other Findings and Observations

The entire South End Area is underlain with blue clay of varying consistency, from hard to soft.

At Tremont and Herald Streets, blue clay extends to 110' below the surface at which point very compact fine sand, gravel and little shale exists.

At Tremont and Northampton Streets, blue clay extends to 122' below the surface with gravel and clay to 141' where ledge is found.

At Washington and West Canton Streets, soft clay extends to 75' below the surface where sand, gravel and clay is found.

At Washington and Dover Streets, soft blue clay extends to 71' below the surface; between 71' below and 99' medium stiff blue clay with veins of fine sand is found, and between 99' and 110' below, firm fine sand exists.

At Harrison Avenue and East Lenox Streets, soft blue clay extends to 103.5' below the surface, with loose medium sand to 107.0'; firm medium gray sand and gravel to 126.0', and hard coarse sand and gravel to 132.0' below.

At Albany and Randolph Streets, blue clay extends to 130.0' below the surface, with medium sand and some fine gravel to 131.5', and fine sand, little clay and some fine gravel to 136.9' below.

At Tremont and West Springfield Streets, soft blue clay extends to 85.5' below the surface; hard fine sand and gravel is found between 85.5' and 87.0' below.

At Shawmut Avenue and Herald Streets, blue gray silty clay extends at least to 71.5' below the surface, as is also the case at Washington Street and Herald Street.

At Washington Street and Massachusetts Avenue, blue gray silty clay with little sand extends at least to 72.0' below the surface.

At Harrison Avenue and Worcester Square, soft blue clay extends to 114.0' below the surface; very hard fine sand, gravel and stones are found up to 121.0' below the surface.

At Harrison Avenue and East Dedham Street, soft blue clay extends to 74.3' below the surface; boulder hard pan is found down to 76.0' below, with refusal encountered at 76.0' below.

At Albany and Stoughton Streets, blue clay extends to 87.5' below the surface; fine sand, some clay and medium coarse gravel is found between 87.5' and 95.0' below, with refusal encountered at 95.0' below.

In general, the Columbus Avenue Area soils profile above clay indicates - 3' to 30' - fill
over 2' to 10' - sand and gravel, or
over 2' to 11' - silt and peat, or
11' to 27' - silt, sand, mud,
then 2' to 38' - mixture of sand, gravel and clay

Deep borings, adjacent to Columbus Avenue, indicate stratas of clay to be 115'; at Columbus Avenue and the railroad tracks, at the boundary of the South End Area, approximately 125' of sand covers the ledge found. Peat was found between Benton Street and Northampton Street near Claremont and Wellington Streets, as well as in the mud near Yarmouth and Dartmouth Streets.

The Tremont Street soils profile above the clay, in general indicates:

3' to 17.5' - fill
over 0' to 15' - mixture sand, gravel clay, or
1' to 17' - silt or peat, or
4' to 13' - sand and gravel

Deep borings adjacent to Tremont Street indicate clay strata to be (1) 92'; (2) 120'; (3) 73'; (4) over 60'. Peat is found between Cunard Street and Coventry Street, also between Benton Street and Northampton Street, and near Herald Street.

The Shawmut Avenue soils profile above the clay, in general indicates:

1' to 11.5' - fill
0' to 47' - mixture of sand, silt and clay

Deep borings in the vicinity of Shawmut Avenue indicate clay strata of 75', 78', 80' and 103' in thickness. Peat is encountered between Windsor and Woodbury Street on Shawmut Avenue.

The Washington Street soils profile above the clay, in general indicates:

3' to 14' - fill
0' to 64' - mixture of sand, silt and clay

Deep borings adjacent to Washington Street indicate the clay strata ranges from 50' to 55' thick. Peat also exists in four specific areas adjacent to Washington Street.

The Harrison Avenue soils profile above the clay, in general indicates:

4' to 17' - fill
4' to 19.5' - peat and silt

Deep borings in the vicinity of Harrison Avenue indicate clay strata to be between 57' and 88.5' thick. There are a few locations where the peat strata is not encountered; namely, in the area between Savoy and Dover Streets.

The Albany Street soils profile, in general shows the following above clay:

4' to 24' - fill
over 3.5' to 45' - mud or silt,
or 4' to 17' - peat and silt

Deep borings in the vicinity of Albany Street indicate the clay strata to be between 70' and 110' thick.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 9. Conclusions and Recommendations

A. Conclusions

1. Despite great variations in details reported herein, there is, for the most part, a uniformity of soils conditions throughout the South End Area. Generally, one-to-forty-foot fills cover a strata of two-to-thirteen-feet of sand and gravel, or one-to-twenty-feet of silt and peat, or eleven-to-forty-five-feet of silt, sand and mud mixture than either one-to-sixty-four-feet of sand, gravel and clay mixture, or varying thicknesses up to 120 feet of soft to stiff clay over sand and gravel.

2. Examination of existing piling showed some rotting, indicating probable lowering of the water levels in some areas, but, generally, water levels are as would be expected from the elevation cutoff and location of piles. Actual lengths of piles are not known but it may be assumed that they were driven to the capacity allowed by the Boston Building Code.

3. On-site observations and information obtained from the records of the Boston Building Department as to conditions of structures supported by pile foundations indicate, that although the piles, in general, were in good condition, a large proportion of these structures were considered in such poor condition as to be condemned. The fault, however, appears not in the piles but largely in poorly constructed foundation walls.

4. Bulging and cracking of building walls were the principal defects listed as reason for condemnation; bulging, cracking and settlement defects in foundation walls were the next principal reason. Building wall defects were apparently due to (1) failure to bond front and rear brick walls to the side brick walls; (2) lack of proper ties between the floor framing and the masonry walls; (3) settlement or lateral movement of foundations; (4) loss of wall integrity due to lack of maintenance against weather. A number of walls collapsed after adjacent structures were removed.

5. Two-thirds of the buildings which have been demolished were less than fifty years old, which would be a minimum life if the buildings were properly maintained. Most structures examined showed gross lack of proper maintenance with respect to both interior and exterior structural elements. Quality of original masonry in most cases was adequate.

6. Many of the structures still standing are in good condition with respect to foundations and walls, and have a potential life of several decades if properly maintained.

B. Recommendations

1. In general, foundations for structures up to three stories can be of the spread footing type placed on compacted gravel. The gravel must be of an 8-inch minimum thickness and must be compacted to 95% of Standard AASHTO Density. Bearing values for these footings may be 1-to-2-ton per square foot. In no case should footings bear on soil where there is a peat or organic silt strata below the bearing soil.

2. In general, structures over three stories in height must be on piles. Piles for structures over eight stories should be of sufficient length to bear on the sand and gravel strata below the clay. In general, steel encased cast-in-place concrete piles of 60 tons or more capacity would be most economical. In a few cases, wooden piles of a 15-ton capacity may be competitive; however, the use of treated wood piles only is recommended.

3. Existing piles can be considered for reuse with loadings of 10 tons per pile; however, the foundation walls of structures that have had the superstructures removed are not reusable. Any piles considered for reuse must have the top section uncovered and examined. Foundation walls and piles of existing buildings to be continued in use should be thoroughly examined.

4. Information developed in this study gives subsurface soils data in more detail than has been previously available, and is sufficient to provide architects and engineers guidance for preliminary considerations in foundation design. Supplementing borings should be taken and soils investigations made for each proposed structure to be built. The data in this report will be of value in determining the kind, depth and number of such borings, and should minimize the number necessary for proper design analysis.

The following map of the South End Urban Renewal Area, with the original shore lines indicated, shows six areas within the renewal area on which are indicated the types of foundation that generally will be required. The seven pages following the map give in detail recommended foundations for each of the six areas.

FOUNDATION AREAS

- ① COLUMBUS AVE. AREA
- ② TREMONT ST. AREA
- ③ SHAWMUT AVE. AREA
- ④ WASHINGTON ST. AREA
- ⑤ HARRISON AVE. AREA
- ⑥ ALBANY ST. AREA



LEGEND

- ① FOUNDATION AREAS 1-6
- [Dotted pattern] SPREAD WALL FOOTINGS AREAS FOR 1 TO 3 STORY BLDGS.
- [Hatched pattern] PILE FOUNDATION AREAS FOR 1 TO 3 STORY BUILDINGS
- NOTE: IN ALL FOOTING AREAS FROM ① TO ⑥ FOR BUILDINGS HIGHER THAN 3 STORIES - PILE FOUNDATIONS ARE RECOMMENDED



FOUNDATION AREAS

SOUTH END URBAN RENEWAL AREA

BOSTON REDEVELOPMENT AUTHORITY

SCALE
APRIL 1967
DRAWING NUMBER

R 56

SUBJECT SOUTH END URBAN RENEWAL AREA R-5CRECOMMENDED FOUNDATIONSGENERAL NOTES

1. RECOMMENDED FOUNDATIONS ARE IN ACCORDANCE WITH SOIL PROFILES AT CENTER LINES OF 6 STREETS THROUGH THE SOUTH END URBAN RENEWAL AREA AND ARE INDICATED FOR 6 AREAS, AS FOLLOWS:
 - 1) COLUMBUS AVE AREA - FROM WALPOLE ST. TO CLARENDON ST.,
 - 2) TREMONT ST AREA - FROM WALPOLE ST. TO HERALD ST.
 - 3) SHAWMUT AVE AREA - FROM BALL ST. TO HERALD ST.
 - 4) WASHINGTON ST AREA - FROM BALL ST. TO HERALD ST.
 - 5) HARRISON AVE AREA - FROM THORNDIKE ST. TO DOVER ST.
 - 6) ALBANY ST AREA - FROM NORTHAMPTON ST. TO DOVER ST.
2. IN ALL 6 AREAS THE RECOMMENDED FOUNDATIONS ARE INDICATED FOR TWO TYPES OF BUILDING HEIGHTS:
 - a) BUILDINGS 1 STORY TO 3 STORIES HIGH, AND
 - b) BUILDINGS - FROM 1 STORY TO 9 STORIES HIGH
3. IN ACCORDANCE WITH SOIL CONDITION IN VARIOUS AREAS TWO MAIN TYPES OF FOUNDATIONS ARE RECOMMENDED:
 - a) SPREAD WALL FOOTINGS FOR 1-3 STORY BUILDINGS WITH MAX. ALLOWABLE SOIL PRESSURE 1 TO 2TH/SQ. FT
 IN SOME AREAS WHERE SOIL PROFILE SHOWS DEEP FILL OR SOFT ORGANIC MATERIALS - PILE FOUNDATIONS ARE RECOMMENDED FOR BUILDINGS AS BEING A MORE ECONOMICAL AND SAFE SOLUTION
 - b) FOR BUILDINGS HIGHER THAN 3 STORIES IN ALL AREAS ONLY PILE FOUNDATIONS ARE RECOMMENDED, ESPECIALLY IN THE ALBANY ST. AREA WHERE DEEP MUD AREAS EXIST.
4. SEE SHEETS No 2 TO No 7 FOR DETAILS

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 2
 DATE 1/3/68
 MADE BY V.O.
 CHECKED BY PEP

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

RECOMMENDED FOUNDATIONS

AREA No	AREA / LOCATION	TYPE OF BUILDINGS	TYPE OF FOUNDATION	REMARKS
1.	<u>COLUMBUS AVE</u>			NOTES:
	1) <u>WALPOLE ST. TO BENTON ST</u> <u>DWG. SP-1</u>	1 STORY TO 3 STORIES	<u>SPREAD WALL</u> <u>FOOTINGS ON</u> <u>COMPACTED</u> <u>GRAVEL FILL</u> MAY LOAD 2TH SP.FT	1. SEE LOCATION PLAN FOR EACH DWG. EACH DWG.
	2) <u>BENTON ST TO</u> <u>NORTHAMPTON ST</u> <u>DWG SP-1</u>	2 STORIES - UP	<u>PILES</u>	2. DEPTH OF FOOTINGS PILES DEPENDS ON THE HEIGHT OF THE STRUCTURE AND OF SOIL CONDITION AT DESIGNATION
	3) <u>NORTHAMPTON ST TO</u> <u>WEST SPRINGFIELD ST.</u> <u>DWG. SP-2</u>	1 STORY - UP	<u>PILES</u>	3. ALL ORGANIC MATERIALS SHALL BE REMOVED FROM THE SPREAD WALL FOOTING AREA AND REPLACED WITH COMPACTED GRAVEL
	4) <u>WEST SPRINGFIELD ST</u> <u>TO DAVENPORT ST</u> <u>DWG. SP-3</u>	1 STORY - UP	<u>PILES</u>	
	5) <u>DAVENPORT ST</u> <u>TO CLARENDON ST</u> <u>DWG SP-4</u>	1 STORY - UP	<u>PILES</u>	

THE THOMPSON & LICHTNER CO., INC.

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 3
 DATE 1/3/64
 MADE BY V.O.
 CHECKED BY R.P.P.

RECOMMENDED FOUNDATIONS

AREA No.	AREA/LOCATION	TYPE OF BUILDING	TYPE OF FOUNDATION	REMARKS
2	<u>TREMONT ST.</u>			SEE NOTES 1, 2 & 3 ON SHEET NO. 2
	1) <u>WALPOLE ST TO CAMDEN ST.</u> <u>DWG. SP-5</u>	1 STORY-UP	<u>PILES</u>	
	2) <u>CAMDEN ST. TO RUTLAND ST.</u> <u>DWG. SP-6</u>	1 STORY-UP	<u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> MAX. LO. <u>1.5 TN/SQ. FT.</u> <u>OR PILES</u>	
		3 STORIES-UP	<u>PILES</u>	
	3) <u>RUTLAND ST TO UNION PARK ST</u> <u>DWG-SP-7</u>	1-3 STORIES	<u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> MAX LOAD <u>2 TN/SQ. FT.</u> <u>OR PILES</u>	
		3 STORIES-UP	<u>PILES</u>	
	4) <u>UNION PARK ST TO HERALD ST.</u> <u>DWG SP-8</u>	1 TO 3 STORIES	<u>PILES</u> <u>OR SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> MAX LOAD <u>1.5 TO 2 TN/SQ. FT.</u>	
		3 STORIES-UP	<u>PILES</u>	

THE THOMPSON & LICHTNER CO., Inc.

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 1
 DATE 1/3/54
 MADE BY V.O.
 CHECKED BY EFF

RECOMMENDED FOUNDATIONS

AREA No.	AREA / LOCATION	TYPE OF BUILDING	TYPE OF FOUNDATION	REMARKS
3	<u>SHAWMUT AVE</u>			SEE NOTES 1, 2 & 3 ON SHEET No. 2
	1) <u>BALL ST. TO LENOX ST</u> <u>DWG. SP-9</u>	1 STORY-UP	<u>PILES</u>	
	2) <u>LENOX ST. TO MASSACHUSETTS AVE</u> <u>DWG. SP-9</u>	1-3 STORIES- 3 STORIES-UP	<u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> <u>MAX LOAD 2 TH/15 FT</u> <u>PILES</u>	
	3) <u>MASSACHUSETTS AVE TO WORCESTER ST.</u> <u>DWG. SP.10</u>	1-3 STORIES 3 STORIES-UP	<u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> <u>MAX LOAD 2 TH/15 FT</u> <u>PILES</u>	
	4) <u>WORCESTER ST TO RUTLAND ST</u> <u>DWG. SP.10</u>	1 STORY-UP	<u>PILES</u>	
	5) <u>RUTLAND ST TO W- CANTON ST</u> <u>DWG SP.10</u>	1-3 STORIES 3 STORIES-UP	<u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> <u>MAX LOAD - 2 TH/15 FT</u> <u>PILES</u>	
	6) <u>WEST CANTON ST TO DWIGHT ST.</u> <u>DWG SP.11</u>	1-3 STORIES 3 STORIES-UP	<u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> <u>MAX LOAD 1.5 TH/15 FT</u> <u>PILES</u>	
7) <u>DWIGHT ST. TO HERALD ST</u> <u>DWG. SP.12</u>	1-3 STORIES 3 STORIES-UP	<u>PILES</u> OR <u>SPREAD WALL FOOTINGS ON COMP. GRAVEL FILL</u> <u>MAX. LOAD 1.5 TH/15 FT.</u> <u>PILES</u>		

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 13

DATE 1/3/54

MADE BY V.O.

CHECKED BY RFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

RECOMMENDED FOUNDATIONS

AREA NO	AREA / LOCATION	TYPE OF BUILDING	TYPE OF FOUNDATION	REMARKS
4	<u>WASHINGTON ST</u>			
	1) <u>BALL ST. TO WORCESTER ST</u> <u>DWG. SP.13</u>	1-3 STORIES	SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL MAX LOAD 2 TH 39 FT.	SEE NOTES 1, 2 & 3 ON SHEET No. 2
		3 STORIES - UP	<u>PILES</u>	
	2) <u>WORCESTER ST. TO</u> <u>EAST - SPRINGFIELD ST</u> <u>DWG SP.13</u>	1-3 STORIES	SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL MAX LOAD 2 TH 12	
		3 STORIES - UP	<u>PILES</u>	
	3) <u>E - SPRINGFIELD ST TO</u> <u>E. - BROOKLINE ST. DWG SP.14</u>	1-3 STORIES	SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL MAX. LOAD 1.5 - 2 TH 13 FT	
		3 STORIES - UP	<u>PILES</u>	
	4) <u>E. BROOKLINE ST. TO</u> <u>UNION - PARK ST. DWG. SP.15</u>	1-3 STORIES	SPREAD WALL FOOTINGS ON COMPACTED - GRAVEL FILL MAX LOAD 2 TH 52 FT	
		3 STORIES - UP	<u>PILES</u>	
5) <u>UNION - PARK ST. TO</u> <u>RUTLAND ST.</u> <u>DWG. SP.15</u>	1 STORY - UP	<u>PILES</u>		
6) <u>RUTLAND ST. TO DOVER ST</u> <u>DWG. SP.16</u>	1-3 STORIES	SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL MAX LOAD 1.5 TH 52 FT.		
	3 STORIES - UP	<u>PILES</u>		
7) <u>DOVER ST. TO COMPTON ST.</u> <u>DWG. SP.16</u>	1 STORY - UP	<u>PILES</u>		
8) <u>COMPTON ST. TO</u> <u>HERALD ST.</u> <u>DWG. SP.16</u>	1-3 STORIES	SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL MAX L = 2 TH 51 FT.		
	3 STORIES - UP	<u>PILES</u>		

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 6
 DATE 1/11/64
 MADE BY V.O.
 CHECKED BY ETD

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

RECOMMENDED FOUNDATIONS

AREA No.	AREA/LOCATION	TYPE OF BUILDING	TYPE OF FOUNDATION	REMARKS
5	<u>HARRISON AVE</u>			SEE NOTES 1, 2 & 3 ON SHEET No. 2
	1.) <u>THORNDIKE ST. TO EAST CONCORD ST.</u> <u>DWG. SP. 17</u>	1 STORY-UP	<u>PILES</u>	
	2.) <u>EAST CONCORD ST. TO PLYMOUTH ST</u> <u>DWG. SP. 18</u>	1 STORY-UP	<u>PILES</u>	
	3.) <u>PLYMOUTH ST. TO ROLLINS ST.</u> <u>DWG. SP. 19</u>	1 STORY-UP	<u>PILES</u>	
	4.) <u>ROLLINS ST. TO DOVER ST</u> <u>DWG. SP. 19</u>	1-3 STORIES	<u>PILES</u> / OR <u>SPREAD WALL FOOTINGS ON COMPACTED GRAVEL FILL</u> <u>MAX LOAD 1.0 TON / SQ. FT.</u>	

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 7
 DATE 11/5/68
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 CHECKED BY FFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

RECOMMENDED FOUNDATIONS

AREA NO.	AREA / LOCATION	TYPE OF BUILDING	TYPE OF FOUNDATION	REMARKS
6	<u>ALBANY ST.</u>			SEE NOTES 1, 2 & 3 ON SHEET NO. 2
	1) <u>NORTHAMPTON ST.</u> TO <u>EAST NEWTON ST</u> <u>DWG. SP. 20</u>	1 STORY-UP	<u>PILES</u>	
	2) <u>EAST NEWTON ST TO</u> <u>MALDEN ST</u> <u>DWG. SP. 21</u>	1 STORY-UP	<u>PILES</u>	
	3) <u>MALDEN ST. TO</u> <u>DOVER ST.</u> <u>DWG. SP. 22</u>	1 STORY-UP	<u>PILES</u>	

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART I - REPORT

SECTION 10. Research

a. During investigations into subsoil and foundation conditions in the South End Renewal Area, research was conducted at the following places:

1. Boston Public Library and Boston School Department
2. Mass. Institute of Technology - Main Library
3. Boston Society of Civil Engineers Library
4. Widener Library - Harvard University
5. McKam Engineering Library - MIT
6. Hayden Library - Boston University
7. Geology and Science Library - MIT
8. Boston University Geography Department
9. Carr-Dee Test Boring and Construction Corp.
10. Raymond Concrete Pile Division
11. City of Boston Highway Division and Water Division
12. Metropolitan Transit Authority
13. Metropolitan District Commission - Construction Division
14. Massachusetts Turnpike Authority
15. Boston Housing Authority
16. Boston Building Department
17. New York, New Haven and Hartford Railroad Company

b. At the Boston Public Library, card and catalog headings were investigated for information on subsoil data for the South End Area of Boston. No pertinent information could be found under the following headings:

A. Historical Section.

1. Geology
2. Reconstruction
3. Construction
4. Boston - Street Laying Out Department. Buildings, etc.
5. Roxbury

B. Science Department

1. Geology
2. Subsurface Data
3. Reconstruction
4. Demolition
5. Repair
6. Buildings
7. Borings
8. Soil Surveys
9. Tenement Houses
10. Boston
11. Drilling
12. Excavations
13. Pedology
14. Federal Housing Administration

c. At the Massachusetts Institute of Technology Main Library no pertinent information was found under the following headings:

1. Foundations
2. Building
3. Caissons
4. Shoring and Underpinning
5. Borings
6. Soil Survey
7. Demolition
8. Geology
9. Subsurface Exploration
10. Sampling
11. Soils
12. Soil Mechanics
13. Boston
14. Tenement Houses
15. Buildings - Repair and Reconstruction
16. Taylor, D.W.
17. Gow, Charles R.

d. At the Boston Society of Civil Engineers Library, the only information available was found in October 1949 Journal of the Boston Society of Civil Engineers from which the following is quoted:

"Boring Data from Greater Boston - Section 1: Boston Peninsula
Prepared by Committee on Subsoils of Boston

The Committee on Subsoils of Boston has existed for many years. Under the chairmanship of Harry E. Sawtell, from 1920 to 1939, this

committee was active in collecting boring data and a report which many members of the Society are still using was published in the Journal of September 1931. This report also contains comments on ground-water conditions. An earlier treatise on "Boston Foundations" which was published by J.R. Worcester in the Journal in 1914, also contained boring data.

In the years immediately subsequent to 1931, much boring data was accumulated by the Committee in cooperation with the Emergency Planning and Research Bureau, Inc. and smaller amounts have been collected in more recent years. Also, a series of maps was prepared to show locations of borings in the following general areas: Boston Peninsula, Brighton, Brookline, Cambridge, Charlestown, Chelsea, Dorchester, East Boston, Everett, Hyde Park, Roxbury, Somerville, South Boston and West Roxbury.

The data and maps have been available for reference in the Society rooms but they have not been published. The aim of the series of articles, of which this is the first, is to make available to the profession in better and more convenient form this information on subsurface conditions in the Boston Area.

It is proposed that other sections will be published at fairly frequent intervals in the Journal. Also, consideration is being given to the inclusion of other subsurface data. In a later section, it is proposed to give a summary of the geological features which have bearing on subsoil conditions.

Since the borings represented are from many sources, it is inevitable that the terminology used will not be entirely consistent. It is believed, however, that the various terms used for describing soil types are in reasonable agreement with those most commonly used and with those given in the Building Code of the City of Boston, 1944 edition, page 234.

The tabulation which follows, covers the Boston Peninsula and includes 1556 borings and 6 open cut excavations to bedrock. Accompanying this report is Map No. 1 showing locations of all borings and excavations covered by the tabulation. A key to boring notations is given on the map. Column 1 of the tabulation contains two items, the boring number and the coordinates defining the location on the map. Columns 2 and 3 give elevations or depth, elevations are given with plus or minus signs and refer to Boston City Base, 5.65 feet below mean sea level, whereas depths are used when elevations are not known and it is to be noted that figures without sign always represent depth. In the final column soil types are given.

Miles N. Clair
Irving B. Crosby
Stanley M. Dore
Lawrence G. Ropes
Donald W. Taylor, Chairman
Committee on Subsoils of Boston"

May 26, 1949 .

Of the 1556 borings on Map No. 1 - Boston Peninsula - approximately 228 are located in the South End Urban Renewal Area. Of those 228 borings, a total of 70 were used to fill in the voids in data obtained from other sources.

e. At the Widener, McKam, Geology and Science, and Hayden Libraries, card catalogs, thesis files and indexes were examined for information on South End Foundations and Soils. Information obtained has been incorporated into this report.

f. At the Boston University Geography Department, the Professor of Boston Geography was interviewed for possible information on geography or geology of the South End of Boston.

g. Visits were made to Car-Doe Test Boring and Construction Corp. and to Raymond Concrete Pile Division and various boring data obtained. This data has been tabulated and presented in other sections of this report.

h. Visits were made to various agencies of the City of Boston, including the Highway Division and the Water Division of the Public Works Department. Street elevations at principal intersections were obtained from the Highway Division. Also examined at the City Hall were the several volumes of boring data formerly made for water and sewer division use. Boring locations and soil data obtained for the South End Area has been included in the section of this report on borings.

i. Also visited were: the Metropolitan Transit Authority, where boring and subsoil data along a proposed subway route through the South End was provided; the Metropolitan District Commission provided borings and subsoil data relative to sewer construction along Columbus Avenue and Tremont Street; the Massachusetts Turnpike Authority provided boring information along the route of the Massachusetts Turnpike Extension on the boundary of the South End Area; the Boston School Department provided borings in connection with various recent school constructions in the South End; the Boston Housing Authority provided boring and subsoil data at various public housing locations in the area; and the New York, New Haven and Hartford Railroad provided no information. All of the data obtained that applied to the South End Area has been incorporated in other sections of this report.

j. Boring data was also provided by the Massachusetts Department of Public Works along the Roxbury Canal and Dorchester Brook. Certain of this data has been used in this report.

k. Records of the Boston Building Department were also examined and pertinent data used in this report.

A
I
II ✓

INDUSTRIAL PROCESSING PLANT INVESTIGATION
SOUTH END, BOSTON
SOUTH END MORGAN RENOVATION AREA
INVESTIGATION
OF
BLENDING
FUNDAMENTAL INVESTIGATION

PART II

DECEMBER 1963

THE THOMPSON & LIGHTNER CO., INC.
ENGINEERS
BROOKLINE, MASSACHUSETTS

n End
71I
II

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END PROJECT, MASS. R-56
SOUTH END URBAN RENAISSANCE AREA

BOSTON PUBLIC LIBRARY

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INVESTIGATION OF SUBSOIL
and
FOUNDATION CONDITIONS

*Autumn 1963
12/27/63
12/11*

PART II - EXHIBITS

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December 27, 1963

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BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

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PART II - EXHIBITS

SECTION 1 - BORING DATA

SECTION 2 - PHOTOGRAPHS

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART II - EXHIBITS

SECTION 1 - Boring Data

a. During this study, existing boring data and subsurface information was obtained from various sources. For purposes of this report and to allow for ease in reproducing this data, the following 100 sheets giving the information obtained have been prepared. Notes are given on Sheet A.

b. Boring locations appear on the Plan Section of Soils Profiles included in PART III of this report. The soils profiles on which a boring is shown are indicated on the first line below the boring number. For Boring No. 1, the soils profiles are Columbus No. 1 and Tremont No. 5.

c. Included at the end of this Section are the following:

1. Test Boring Report - Raymond Concrete Pile Division, Raymond International, Inc., dated June 18, 1963, and covering Borings Nos. 1, 1A, 3, 4A, 5, 7, 11, 12 and 15.

2. Test Boring Report - Raymond Concrete Pile Division, Raymond International, Inc., dated August 12, 1963, and covering Borings Nos. 2, 6A, 8A, 9, 10A, 13 and 14A.

d. All elevations are referred to the City of Boston Base.

NOTES

- * 1. NUMBER OF BLOWS REQUIRED TO DRIVE 2" O.D. SPLIT SAMPLER 12 INCHES, USING 140-LB WEIGHT FALLING 30 INCHES. NOTE 1A = 1" SAMPLER NOTE 1B - SIZE OF SAMPLER NOT KNOWN.
- * 2. BORINGS BY HYDRO-CONCRETE PILE CORP.
- * 3. BORING DATA FROM CITY OF BOSTON, PUBLIC WORKS DEPT. 1950
- * 4. BORING DATA FROM BOSTON SOCIETY OF CIVIL ENGINEERS JOURNAL, OCTOBER 1950
- * 5. BORINGS BY THE GOW COMPANY, INC.
- * 6. BORINGS BY CARR-DEE TEST BORING AND CONST. CORP.
- * 7. BORINGS BY B.F. SMITH COMPANY
- * 8. BORINGS FOR HAYDEN HOUSING AUTHORITY 1939
- * 9. BORINGS FOR BOSTON SCHOOL DEPARTMENT 1959
- * 10. BORINGS FOR MASS. DRW. FOXBURY CANAL 1963
- * 11. BORINGS FOR MTA 1940

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 1
DATE 10/2/63
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SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 1 SURFACE ELEVATION = 14.55 #2 R 1963
COLUMBUS NO. 1, AND TREMONT NO. 5.

FROM	TO	THICKNESS	DESCRIPTION	#1 BLOWS
14.55 TO 11.55		3.0'	- LOOSE CINDER FILL	-
11.55 TO 4.55		7.0'	- VERY COMPACT SAND GRAVEL CLAY AND GRAVEL	100
4.55 TO 1.55		3.0'	- VERY COMPACT YELLOW SAND	65
1.55 TO -2.95		4.5'	- VERY STIFF YELLOW CLAY AND SAND	100
-2.95 TO -19.95		15.0'	- MEDIUM BLUE CLAY	7-60
-19.95 TO -23.45		5.5'	- LOOSE MEDIUM SAND GRAVEL AND CLAY	5
-23.45 TO -24.45		1.0'	- VERY COMPACT SAND GRAVEL AND CLAY	50
-24.45 TO -35.45		11.0'	- HARD COARSE SAND GRAVEL AND CLAY	
WATER LEVEL		6/7/63	ELEVATION = +10.05	

BORING NO 2 SURFACE ELEVATION = 13.15 #2-R 1213
TREMONT NO. 5, AND SHAWMUT NO 9.

FROM	TO	THICKNESS	DESCRIPTION	#1 BLOWS
13.15 TO 8.65		4.5'	- MISC. FILL	-
8.65 TO -0.85		9.5'	- PEAT AND SILT	1-1
-0.85 TO -5.85		5.0'	- STIFF BLUE CLAY WITH TRACE OF GRAVEL	15
-5.85 TO -17.85		12.0'	- MEDIUM BLUE CLAY WITH TRACE OF GRAVEL	2-7
-17.85 TO -36.85		19.0'	- SOFT BLUE CLAY WITH LAYERS OF FINE SAND	3-
WATER LEVEL		6/25/63	ELEVATION = +10.15	

BORING NO 3 SURFACE ELEVATION = 19.49 #2-R 1213
SHAWMUT NO 9, AND WASHINGTON NO 13.

FROM	TO	THICKNESS	DESCRIPTION	#1 BLOWS
19.49 TO 11.49		8.0'	- MISC. FILL	7-
11.49 TO 5.99		5.5'	- VERY STIFF YELLOW CLAY WITH TRACE OF GRAVEL	10
5.99 TO -2.51		8.5'	- MEDIUM YELLOW CLAY	8-6
-2.51 TO -7.51		5.0'	- MEDIUM BLUE CLAY	6
-7.51 TO -22.51		15.0'	- MEDIUM BLUE CLAY WITH LAYERS OF FINE SAND	5-5
-22.51 TO -32.51		10.0'	- MEDIUM BLUE CLAY	5-5
WATER LEVEL		6/3/63	ELEVATION = GROUND SURFACE	

*1 SEE NOTE NO. 1, *2 SEE NOTE NO 2

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

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SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 4A SURFACE ELEVATION = 14.07 *2 R 1963
TREMONT NO 6, AND SHALMUT NO 9.

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*BLOWS</u>
14.07 to 9.07		5.0'	- LOOSE MISC. FILL	5
9.07 to 4.07		5.0'	- HARD YELLOW CLAY WITH TRACES OF SAND & GRAVEL	34
4.07 to 0.37		3.7'	- VERY STIFF YELLOW CLAY	18
0.37 to -29.93		30.3'	- MEDIUM BLUE CLAY 9-6-5-5	
-29.93 to -35.93		6.0'	- STIFF BLUE CLAY 10-9	
WATER LEVEL		5/31/63	ELEVATION = +6.07	

BORING NO 5 SURFACE ELEVATION = 12.26 *2-R 1963
COLUMBUS NO 2.

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*BLOWS</u>
12.26 to 4.26		8.0'	- MISC. FILL	6-7
4.26 to 0.26		4.0'	- LOOSE SAND AND GRAVEL FILL WITH TRACES OF BRICK	4
0.26 to -7.94		8.0'	- LOOSE SAND AND GRAVEL FILL WITH TRACES OF CLAY	3
-7.94 to -13.94		6.0'	- ORGANIC SILT AND SHALS	2-2
-13.94 to -17.94		4.0'	- ORGANIC SILTY PEAT	3
-17.94 to -21.24		3.5'	- LOOSE MEDIUM SAND & GRAVEL WITH TRACES OF CLAY	7
-21.24 to -24.94		3.5'	- STIFF BLUE CLAY	14
-24.94 to -37.14		13.0'	- MEDIUM BLUE CLAY	6-6-6
WATER LEVEL		6/5/63	ELEVATION = +8.26	

BORING NO 6A SURFACE ELEVATION = 17.83 *2-R 1963
ALBANY NO 21

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*BLOWS</u>
17.83 to 7.83		10.0'	- YELLOW SAND AND GRAVEL FILL	105
7.83 to -7.17		15.0'	- LOOSE YELLOW SAND AND GRAVEL FILL	8-25-6-7
-7.17 to -11.17		4.0'	- BENTY SILT	5
-11.17 to -17.17		6.0'	- STIFF BLUE CLAY (SHALS)	N.S. DATA
-17.17 to -21.67		4.5'	- STIFF YELLOW CLAY	13
-21.67 to -33.17		11.5'	- MEDIUM BLUE CLAY (2 SHALS)	8
WATER LEVEL		8/7/63	ELEVATION = +10.00	

*1 SEE NOTE NO 1, *2 SEE NOTE NO 2.

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SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 7 SURFACE ELEVATION = 9.17 *2-R1265

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
9.17	To 8.92	0.25'	BRICKS	-
8.92	To 5.17	3.75'	LOOSE MISC FILL	4
5.17	To -0.33	5.5'	VERY STIFF YELLOW CLAY	23
-0.33	To -5.83	5.5'	STIFF YELLOW CLAY	10
-5.83	To -13.83	8.0'	MEDIUM YELLOW CLAY	7-6
-13.83	To -42.83	29.0'	MEDIUM BLUE CLAY	6-5-5-5-5-5
WATER LEVEL		6/4/63	ELEVATION = +10.07	

BORING NO 8A SURFACE ELEVATION = 11.69 *2-R1265

COLUMBUS NO 3 AND NO 4

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
11.69	To -3.81	15.5'	SAND, GRAVEL CINDERS AND BRICK FILL	16-1-1
-3.81	To -20.81	17'	VERY LOOSE SANDY PEATY SILT	2-1-1
-20.81	To -31.31	10.5'	STIFF BLUE CLAY AND FINE SAND	14-5-1
-31.31	To -38.31	7.0'	MEDIUM BLUE CLAY	8-1-1
WATER LEVEL		7/3/63	ELEVATION = +7.19	

BORING NO 9 SURFACE ELEVATION = 15.87 *2-R1265

TREMONT NO 8

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
15.87	To 5.87	10'	MISC FILL	3
5.87	To 2.37	3.5'	LOOSE COARSE SAND AND GRAVEL	7
2.37	To -3.13	5.5'	LOOSE SANDY SILT	3
-3.13	To -10.13	7'	LOOSE PEATY SANDY SILT	3-6
-10.13	To -13.13	3'	VERY STIFF BLUE CLAY WITH TRACE OF GRAVEL	21
-13.13	To -16.13	3'	STIFF YELLOW CLAY WITH TRACE OF GRAVEL	11
-16.13	To -36.13	20'	MEDIUM BLUE CLAY WITH TRACE OF GRAVEL	8-8-9-7
WATER LEVEL		6/21/63	ELEVATION = +12.37	

*1 SEE NOTE NO 1

*2 SEE NOTE NO 2

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 4
DATE 10/2/63
MADE BY RFB
CHECKED BY VO

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 10A SURFACE ELEVATION = 12.43 *2-R-1963

TREMONT NO 8

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.43	To 5.43	7.0'	- LOOSE SAND GRAVEL CINDERS CLAY AND SILT FILL	8
5.43	To -10.51	16.3'	- STIFF YELLOW CLAY AND LITTLE FINE SAND	19-24
-10.51	To -39.59	27.0'	- MEDIUM BLUE CLAY AND FINE SAND	8-9-9-6-9-6
WATER LEVEL 7/9/63 ELEVATION = +5.93				

BORING NO 11 SURFACE ELEVATION = 14.10 *2-R-1963

WASHINGTON NO 15 AND HARRISON NO 13

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
14.10	To 8.60	5.5'	- LOOSE MISC. FILL	4
8.60	To 6.10	2.5'	- STIFF YELLOW CLAY FILL	13
6.10	To -4.90	11.0'	- VERY STIFF YELLOW CLAY	17-18
-4.90	To -8.90	4.0'	- MEDIUM YELLOW CLAY	8
-8.90	To -35.90	27.0'	- SOFT BLUE CLAY	4-4-4-4-4-4
WATER LEVEL 6/4/64 ELEVATION = +8.60				

BORING NO 12 SURFACE ELEVATION = 11.98 *2-R-1963

SHAWMUT NO 12 AND WASHINGTON NO 16

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
11.98	To 3.48	8.5'	- LOOSE MISC FILL	5-3
3.48	To -1.52	5.0'	- VERY STIFF YELLOW CLAY WITH TRACE OF FINE SAND	17
-1.52	To -7.02	5.5'	- STIFF YELLOW CLAY WITH TRACE OF FINE SAND	9
-7.02	To -38.02	31'	- MEDIUM BLUE CLAY WITH TRACE OF SAND	6-5-6-5-6-6-6
WATER LEVEL 6/10/63 ELEVATION = +8.48				

*1 SEE NOTE NO 1 *2 SEE NOTE NO 2

THE THOMPSON & LIGHTNER CO., INC.
 BORING - 1963

SUBJECT SOUTH END URBAN REHABIL AREA R-56

BORING NO 13 SURFACE ELEVATION = 17.33 *2-R1

ALBANY NO 20

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOW
17.38 TO	4.98	12.5'	MISC. FILL	13-26-13
4.98 TO	-2.62	7.5'	PEAT AND SILT	5-3
-2.62 TO	-4.62	2.0'	STIFF BLUE CLAY WITH LAYERS OF FINE SAND	10
-4.62 TO	-10.62	6.0'	VERY STIFF YELLOW CLAY	17
-10.62 TO	-16.62	6.0'	MEDIUM YELLOW CLAY	7
-16.62 TO	-34.62	18.0'	SOFT BLUE CLAY	A-5-A-4
WATER LEVEL		6/24/63	ELEVATION = +10.38	

BORING NO 14A SURFACE ELEVATION = 13.91 *2-R1963

COLUMBUS NO 4 AND TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOW
13.91 TO	-5.19	19.0'	SAND GRAVEL SHELLS AND ICE FILL 12-14-14	
-5.19 TO	-17.19	12.0'	VERY LOOSE SANDY SILT AND SHELLS	2-2-
-17.19 TO	-29.19	12.0'	STIFF YELLOW CLAY	17-19-10
-29.19 TO	-36.19	7.0'	MEDIUM BLUE CLAY AND FINE SAND	8-1
WATER LEVEL		7/5/63	ELEVATION + 7.81	

BORING NO 15 SURFACE ELEVATION = 11.97 *2-

COLUMBUS NO 3, TREMONT NO 6 AND H 1

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOW
11.97 TO	6.89	5.0'	MISC FILL	5'
6.89 TO	1.39	5.0'	LOOSE SAND, CEMENTED CLAY FILL	3
1.39 TO	-1.13	3.0'	VERY STIFF YELLOW CLAY WITH TRACE OF SAND	16
-1.13 TO	-5.63	4.5'	VERY STIFF YELLOW CLAY WITH TRACE OF CLAYE	11
-5.63 TO	-10.63	5.0'	MEDIUM YELLOW CLAY	
-10.63 TO	-38.13	27.5'	SOFT BLUE CLAY	A-4-A-2-1-2-2
WATER LEVEL		6/6/63	ELEVATION = +6.87	

*1 SEE NOTE NO 1. *2 SEE NOTE NO 2.

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 6
DATE 2-7-
MADE BY R.P.
CHECKED BY 162

SUBJECT SOUTH END URBAN RENEWAL AREA - R-56

BORING NO 16 SURFACE ELEVATION = 18.1 #2-R-1504

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	#%
18.1	TO 16.1	2'	- MACADAM & CONCRETE	- 125
16.1	TO 14.1	2'	- SAND & GRAVEL FILL	- 5
14.1	TO 10.1	4'	- SAND, GRAVEL & BOULDERS FILL	- 15 & 9
10.1	TO 8.1	2'	- COMPACT MEDIUM SAND GRAVEL & BOULDERS	- 45
8.1	TO 4.1	4'	- VERY COMPACT MEDIUM CLAYIFIED SAND	- 5
4.1	TO 2.1	2'	- COMPACT FINE SAND & LITTLE CLAY	- 42
2.1	TO -3.9	6'	- MEDIUM FINE SAND & LITTLE CLAY	- 21-31-15
-3.9	TO -7.9	4'	- SOFT BLUE CLAY	- 4-4
-7.9	TO -9.9	2'	- SOFT BLUE CLAY & LITTLE SAND	-
-9.9	TO -11.9	2'	- MEDIUM FINE SAND & LITTLE CLAY	- 16
-11.9	TO -13.9	2'	- STIFF CLAY & STRATA OF FINE SAND	- 3
-13.9	TO -15.9	2'	- STIFF CLAY, LITTLE GRAVEL	- 11
-15.9	TO -16.9	1'	- STIFF CLAY & LITTLE FINE SAND	- 14

NO WATER LEVEL SHOWN.

BORING NO 17 SURFACE ELEVATION = 18.1 #2-R-1505

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	#%
18.1	TO 16.1	2'	- FINE SAND GRAVEL & CONCRETE	- 14
16.1	TO 10.1	6'	- LOAMY SAND, GRAVEL & BRK. FILL	- 5-5-
10.1	TO 8.1	2'	- VERY COMPACT LOAMY SAND, GRAVEL & BOULDERS	- 92
8.1	TO 6.1	2'	- VERY DENSE FINE SAND C. BY F. SAND	- 10
6.1	TO 4.1	2'	- COMPACT FINE SAND, CLAY & BOULDERS	- 35
4.1	TO 2.1	2'	- MEDIUM FINE SAND & SOME CLAY	- 20
2.1	TO 0.1	2'	- MEDIUM FINE SAND & CLAY	- 25
0.1	TO -1.9	2'	- LOOSE FINE SAND & CLAY	- 8
-1.9	TO -3.9	2'	- STIFF BLUE CLAY & SAND	- 9
-3.9	TO -7.9	4'	- MEDIUM BLUE CLAY & LITTLE SAND	- 5-5
-7.9	TO -9.9	2'	- MEDIUM BLUE CLAY & SAND	- 8
-9.9	TO -25.9	16'	- MEDIUM BLUE CLAY & LITTLE SAND	- 7-7-7-8-6-6-1
-25.9	TO -27.9	2'	- MEDIUM BLUE CLAY, LITTLE SAND, GRAVEL	- 6
-27.9	TO -31.9	4'	- MEDIUM BLUE CLAY & LITTLE SAND	- 6-7

NO WATER LEVEL SHOWN

*SEE NOTE NO 1, *2 SEE NOTE NO 2,

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 7

DATE 2-1

MADE BY RLC

CHECKED BY VO

SUBJECT SOUTH END URBAN RENEWAL AREA - R-2

BORING NO 18 SURFACE ELEVATION = 19.1 *2-7-1

COLUMBUS NO 1

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
18.1	TO 16.1	2'	- CONCRETE & LOOSE SAND	- 10
16.1	TO 14.1	2'	- LOOSE SAND, GRAVEL	- 9
14.1	TO 12.1	2'	- LOOSE LOAMY SAND, GRAVEL & WOOD	- 5
12.1	TO 10.1	2'	- MEDIUM DIRTY FINE SAND, GRAVEL & BOULDERS	- 20
10.1	TO 8.1	2'	- VERY COMPACT SAND GRAVEL & BOULDERS	- 10
8.1	TO 6.1	2'	- MEDIUM FINE SAND & SOME CLAY	- 25
6.1	TO 4.1	2'	- DENSE FINE SAND & CLAY	- 35
4.1	TO 2.1	2'	- LOOSE FINE SAND & CLAY	- 10
2.1	TO 0.1	2'	- MEDIUM FINE SAND & CLAY	- 12
0.1	TO -1.9	2'	- STIFF CLAY & SAND	- 9
-1.9	TO -16.9	15'	- MEDIUM CLAY & LITTLE SAND	- 8-9-8

NO WATER LEVEL SHOWN.

BORING NO 19 SURFACE ELEVATION = 18.1 *2-R-1954

COLUMBUS NO 1

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	
18.1	TO 16.1	2'	- CONCRETE & ASPHALT	- 18
16.1	TO 10.1	6'	- SAND, GRAVEL & MISC. FILL	- 10-9-8
10.1	TO 8.1	2'	- MEDIUM FINE SAND & GRAVEL	- 21
8.1	TO 6.1	2'	- VERY STIFF CLAY & LITTLE SAND	- 21
6.1	TO 4.1	2'	- MEDIUM SAND, LITTLE GRAVEL	- 18
4.1	TO 2.1	2'	- STIFF YELLOW CLAY & LITTLE SAND	- 15
2.1	TO 0.1	2'	- VERY STIFF CLAY, LITTLE FINE SAND	- 17
0.1	TO -1.9	2'	- MEDIUM BLUE CLAY	- 8
-1.9	TO -5.9	4'	- MEDIUM BLUE CLAY & LITTLE SAND	- 10-1
-5.9	TO -9.9	4'	- MEDIUM BLUE CLAY	- 6-6
-9.9	TO -11.9	2'	- VERY STIFF BLUE CLAY	- 16
-11.9	TO -19.9	8'	- MEDIUM BLUE CLAY	6-7-6-6
-19.9	TO -21.9	2'	- MEDIUM BLUE CLAY & BOULDERS	- 7
-21.9	TO -31.9	10'	- MEDIUM BLUE CLAY	6-6-6-6

NO WATER LEVEL SHOWN.

*1 SEE NOTE NO 1 *2 SEE NOTE NO 2

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTHBEND URBAN RENEWAL AREA P-5%

BORING NO 20 SURFACE ELEVATION = 18.1 *2-R-1-51

COLUMNS NO 1

FROM	TO	THICKNESS	DESCRIPTION	#BLOWS
18.1	TO 16.1	2'	CONCRETE & LOOSE SAND FILL	- 10
16.1	TO 14.1	2'	VERY LOOSE SAND FILL	- 8
14.1	TO 12.1	2'	LOOSE COARSE SAND FILL	- 10
12.1	TO 10.1	2'	MEDIUM SAND GRAVEL & CINDERS	- 15
10.1	TO 8.1	2'	LOOSE COARSE SAND FILL	- 10
8.1	TO 4.1	4'	COMPACT MEDIUM BLUE SAND	- 50
4.1	TO 2.1	2'	MEDIUM FINE YELLOW SAND & CLAY	- 15
2.1	TO -11.9	14'	MEDIUM BLUE CLAY & LITTLE FINE SAND	
-11.9	TO -16.9	5'	STIFF BLUE CLAY & LITTLE FINE SAND	- 9-9
WATER LEVEL		11/24/54 = ELEVATION + 11.1		

BORING NO 21 SURFACE ELEVATION = 18.1 *2-R-1-

COLUMNS NO 1

FROM	TO	THICKNESS	DESCRIPTION	#BLOWS
18.1	TO 16.1	2'	CONCRETE & LOOSE SAND	- 5
16.1	TO 14.1	2'	LOOSE SAND, GRAVEL, BRICK FILL	- 6
14.1	TO 12.1	2'	MEDIUM SAND, GRAVEL, BRICK FILL	- 20
12.1	TO 10.1	2'	LOOSE SAND, GRAVEL, BRICK FILL	- 6
10.1	TO 8.1	2'	LOOSE MISC. FILL	- 5
8.1	TO 6.1	2'	PEAT	-
6.1	TO 4.1	2'	MEDIUM FINE SAND, GRAVEL & BOULDER	- 2
4.1	TO 0.1	4'	VERY STIFF YELLOW CLAY, SAND	- 20
0.1	TO -3.9	4'	VERY STIFF YELLOW CLAY, SAND & GRAVEL	-
-3.9	TO -7.9	4'	STIFF BLUE CLAY & LITTLE SAND	- 9-
-7.9	TO -23.9	16'	MEDIUM BLUE CLAY & LITTLE SAND	- 7-5-5-
-23.9	TO -31.9	8'	SOFT BLUE CLAY & LITTLE SAND	- 4-5-
WATER LEVEL		11/27/54 = ELEVATION + 9.1		

*1 SEE NOTE NO 1.

*2 SEE NOTE NO 2

THE THOMPSON & LIGHTNER CO., Inc.

BORING LOGS

SHEET No. _____

DATE 5-1

MADE BY RLP

CHECKED BY ML

SUBJECT

SOUTH END URBAN RENEWAL AREA 1

BORING NO 22 SURFACE ELEVATION = 18.2

COLUMBUS NO 1

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*ELEVATIONS</u>
18.2	TO 16.2	2'	CONCRETE, SAND, GRAVEL	- 18
16.2	TO 12.2	4'	SAND GRAVEL & MISC. FILL	- 9-1
12.2	TO 10.2	2'	CLAY, SAND & GRAVEL FILL	- 10
10.2	TO 8.2	2'	SAND, GRAVEL BOULDER FILL	- 9
8.2	TO 6.2	2'	PEATY SAND	
6.2	TO 4.2	2'	VERY STIFF BLUE CLAY	- 1
4.2	TO 0.2	4'	VERY STIFF CLAY, SAND & GRAVEL	- 18-19
0.2	TO -1.8	2'	VERY STIFF CLAY, LITTLE SAND	- 2
-1.8	TO -3.8	2'	STIFF YELLOW CLAY	- 12
-3.8	TO -5.8	2'	STIFF YELLOW CLAY	- 13
-5.8	TO -7.8	2'	MEDIUM YELLOW CLAY	- 3
-7.8	TO -13.8	6'	MEDIUM BLUE CLAY	- 9-9-9
-13.8	TO -16.8	3'	STIFF BLUE CLAY	- 9-9

NO WATER LEVEL SHOWN.

BORING NO 23 SURFACE ELEVATION = 18.3

COLUMBUS NO 1

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*ELEVATIONS</u>
18.3	TO 16.3	2'	CONCRETE, SAND, CINDER & GRAVEL FILL	- 15
16.3	TO 14.3	2'	MISC. SAND & BRICK FILL	- 7
14.3	TO 10.3	4'	SAND, GRAVEL & MISC FILL	- 8-9
10.3	TO 6.3	4'	CLAY, SAND & GRAVEL FILL	- 12-8
6.3	TO 4.3	2'	PEAT	- 4
4.3	TO 0.3	4'	SILTY PEAT	- 3-2
0.3	TO -1.7	2'	STIFF BLUE CLAY	- 10
-1.7	TO -3.7	2'	VERY STIFF YELLOW CLAY & GRAVEL	- 22
-3.7	TO -5.7	2'	VERY STIFF YELLOW CLAY	- 19
-5.7	TO -11.7	6'	STIFF YELLOW CLAY	13-12-9
-11.7	TO -15.7	4'	MEDIUM YELLOW CLAY	6 -
-15.7	TO -19.7	4'	MEDIUM BLUE CLAY	6-6
-19.7	TO -21.7	2'	MEDIUM BLUE CLAY & FINE SAND	- 7
-21.7	TO -23.7	2'	SOFT BLUE CLAY, LITTLE SAND	- 4
-23.7	TO -27.7	4'	SOFT BLUE CLAY	- 3-3
-27.7	TO -29.7	2'	MEDIUM BLUE CLAY & SAND	- 5
-29.7	TO -31.7	2'	MEDIUM BLUE CLAY	- 6

WATER LEVEL

11/30/54 - ELEVATION = +10.3

*SEE NOTE NO. 1

*SEE NOTE NO. 2

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 10
 DATE 3-1
 MADE BY F.L.L.
 CHECKED BY V.O.

BORING NO 24 SURFACE ELEVATION = 17.8 *2-R-100

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
17.8	TO 15.8	2'	ASPHALT & CONCRETE	- 25
15.8	TO 13.8	2'	LOOSE MISC. FILL	- 6
13.8	TO 9.8	4'	MEDIUM LOAMY SAND & GRAVEL FILL	- 8
9.8	TO 7.8	2'	MEDIUM DIRTY SAND GRAVEL BOUNDER FILL	- 6
7.8	TO 5.8	2'	ORGANIC SILTY SAND, GRAVEL, BOULDERS & WOOD FILL	- 18
5.8	TO 1.8	4'	ORGANIC SILT & WOOD	- 35-6
1.8	TO -0.2	2'	SANDY ORGANIC SILT	4
-0.2	TO -4.2	4'	SOFT ORGANIC SILT & SHELLS	3-3
-4.2	TO -8.2	4'	VERY STIFF YELLOW CLAY, SAND, GRAVEL	24-20
-8.2	TO -12.2	4'	STIFF YELLOW CLAY, LITTLE SAND	10-9
-12.2	TO -14.2	2'	STIFF BLUE CLAY, LITTLE SAND, GRAVEL	9
-14.2	TO -16.2	2'	STIFF BLUE CLAY, SAND	10
-16.2	TO -17.2	1'	STIFF BLUE CLAY, LITTLE SAND & GRAVEL	12
WATER LEVEL		11/30/54 = ELEVATION = +12.3		

BORING NO 25 SURFACE ELEVATION = 18.3 *2-R-1

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
18.3	TO 16.3	2'	SAND, GRAVEL & BOULDER FILL	- 44
16.3	TO 14.3	2'	SAND, GRAVEL & MISC. FILL	- 60
14.3	TO 10.3	4'	LOAMY SAND & GRAVEL FILL	- 14-10
10.3	TO 6.3	4'	FILL (LOST SAMPLE)	2-2
6.3	TO 0.3	6'	ORGANIC SILT	- 3-3-2
0.3	TO -1.7	2'	MEDIUM SILT	- 2
-1.7	TO -3.7	2'	MEDIUM FINE SAND, CLAY, GRAVEL & BOULDERS	7-2
-3.7	TO -7.7	4'	VERY STIFF CLAY, LITTLE SAND, GRAVEL	29-16
-7.7	TO -9.7	2'	STIFF YELLOW CLAY, LITTLE FINE SAND	-
-9.7	TO -13.7	4'	MEDIUM YELLOW CLAY & LITTLE FINE SAND	- 7-8
-13.7	TO -17.7	4'	STIFF BLUE CLAY & LITTLE FINE SAND	9-9
-17.7	TO -19.7	2'	STIFF BLUE CLAY & FINE SAND	- 12
-19.7	TO -21.7	2'	LOOSE FINE GRAY SAND & LITTLE CLAY	- 9
-21.7	TO -27.7	6'	MEDIUM BLUE CLAY & LITTLE SAND	8-10
-27.7	TO -31.7	4'	MEDIUM BLUE CLAY & SAND	- 8-6

NO WATER LEVEL SHOWN

*1 SEE NOTE NO 1.

*2 SEE NOTE NO 2.

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SUBJECT SOUTH END ULMAN REFINERY AREA R-56

SHEET NO. 11
DATE 9-1-54
MADE BY
CHECKED BY WJ

BORING NO 26 SURFACE ELEVATION = 17.7

*2-12-1954

COLUMBUS NO 1

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*112</u>
17.7	TO 13.7	4'	- ASHES & CINDERS FILL	- 32-11
13.7	TO 9.7	4'	- CLAY SAND & GRAVEL FILL	- 12-8
9.7	TO 7.7	2'	- CLAY SAND, GRAVEL & WOOD FILL	- 16
7.7	TO 5.7	2'	- SAND & GRAVEL FILL	- 13
5.7	TO 3.7	2'	- PEAT	-
3.7	TO 1.7	2'	- SOFT PEAT	- 3
1.7	TO -0.3	2'	- SOFT BLUE CLAY	- 3
-0.3	TO -8.3	8'	- VERY STIFF YELLOW CLAY	- 28-25-12-16
-8.3	TO -10.3	2'	- STIFF YELLOW CLAY	- 9
-10.3	TO -12.3	2'	- STIFF YELLOW CLAY, LITTLE SAND	- 9
-12.3	TO -14.3	2'	- MEDIUM YELLOW CLAY, LITTLE SAND	- 5
-14.3	TO -16.3	2'	- MEDIUM BLUE CLAY, LITTLE SAND	- 8
-16.3	TO -17.3	1'	- STIFF BLUE CLAY	- 10

NO WATER LEVEL SHOWN

BORING NO 27

SURFACE ELEVATION = 16.3

*2-R-18

COLUMBUS NO 1

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*112</u>
16.3	TO 14.3	2'	- CONCRETE	- 55
14.3	TO 12.3	2'	- SAND & GRAVEL FILL	- 11
12.3	TO 8.3	4'	- SAND, GRAVEL & TRACE OF CLAY FILL	- 8-15
8.3	TO 4.3	4'	- SAND, GRAVEL & BOULDERS FILL	- 21-3
4.3	TO 0.3	4'	- PEAT	- 7-7
0.3	TO -1.7	2'	- VERY STIFF BLUE CLAY	- 13
-1.7	TO -5.7	4'	- VERY STIFF YELLOW CLAY	- 20-21
-5.7	TO -13.7	8'	- STIFF YELLOW CLAY	- 14-11-10-10
-13.7	TO -29.7	16'	- MEDIUM BLUE CLAY - 5-5-5-5	- 6-8-7-8
-29.7	TO -33.7	4'	- STIFF BLUE CLAY	- 9-11
WATER LEVEL		.12/2/54 = ELEVATION + 9.8		

*1 SEE NOTE NO 1

*2 SEE NOTE NO 2

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 12

DATE: 9-10

MADE BY: 1/1

CHECKED BY: 1/0

SUBJECT SOUTH END URBAN REHABIL AREA - P. 56

BORING NO 28

SURFACE ELEVATION = 17.7

*3-

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	DEPTH
17.7 TO	16.2	1.5'	BROKEN STONE	NO. 1
16.2 TO	12.8	3.4'	SAND & GRAVEL FILL	" "
12.8 TO	6.8	6.0'	SILT (SOFT)	" "
6.8 TO	-3.2	10.0'	STIFF BROWN PEAT	" "
-3.2 TO	-11.3	8.1'	STIFF BLUE CLAY WITH SAND	" "

NO WATER LEVEL SHOWN.

BORING NO 29

SURFACE ELEVATION = NO DATA

*4-B-5C

COLUMBUS NO 1.

FROM	TO	THICKNESS	DESCRIPTION	DEPTH
-28.0 TO	-35.6	7.6'	SAND & GRAVEL FILL	No
-35.6 TO	-39.0	3.4'	FINE SILTY SAND	" "
-39.0 TO	-49.0	10'	VERY STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 30

SURFACE ELEVATION = 18.3

*2-R-1

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	DEPTH
18.3 TO	16.3	2'	MISC. FILL	-8
16.3 TO	14.3	2'	SAND, GRAVEL, BOULDER FILL	-10
14.3 TO	12.3	2'	MISC. SAND & GRAVEL FILL	-12
12.3 TO	10.3	2'	LOAMY SAND & GRAVEL FILL	-14
10.3 TO	6.3	4'	VERY LOOSE SAND & GRAVEL FILL	-18
6.3 TO	2.3	4'	MEDIUM SAND, SILTY	-22-24
2.3 TO	0.3	2'	MEDIUM SAND, FINE SILT, SOME CLAY	-26
0.3 TO	-1.7	2'	VERY STIFF YELLOW CLAY, LITTLE SILT	-28
-1.7 TO	-3.7	2'	MEDIUM FINEYEADED SAND, CLAY	-30
-3.7 TO	-15.7	12'	MEDIUM BLUE CLAY	-32-44
-15.7 TO	-19.7	2'	VERY STIFF SANDY CLAY & GRAVEL	-46
-19.7 TO	-21.7	4'	STIFF CLAY, SOME SAND & GRAVEL	-50
-21.7 TO	-23.7	2'	STIFF CLAY, SOME SAND & GRAVEL	-54
-23.7 TO	-25.7	2'	STIFF BLUE CLAY, LITTLE SILT	-56
-25.7 TO	-31.7	6'	VERY STIFF CLAY, SOME SAND	-62

NO WATER LEVEL SHOWN

*1 SEE NOTE NO 1. *2 SEE NOTE NO 2. *3 SEE NOTE NO 3. *4 SEE

THE THOMPSON & LICHTNER CO., INC.
 BORING LOGS

SUBJECT SOUTH EAST URBAN RENEWAL AREA

BORING NO 31 SURFACE ELEVATION = 17.5 #3-BUS-1902

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.5	TO 16.5	1'	BROKEN STONE	NO DATA
16.5	TO 14.5	2'	SAND & GRAVEL FILLING	" "
14.5	TO 4.8	9.7'	SILT	" "
4.8	TO -4.2	9'	STIFF BROWN PEAT	" "
-4.2	TO -10.5	6.3'	STIFF BLUE CLAY WITH SAND	" "

NO WATER LEVEL SHOWN.

BORING NO 32 SURFACE ELEVATION = 16.9 #3-BUS-1902

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.9	TO 13.9	3'	ROAD BED	NO DATA
13.9	TO -2.7	16.6'	SAND, GRAVEL, ASHES FILLING	" "
-2.7	TO -6.7	4'	STIFF BROWN PEAT	" "
-6.7	TO -13.1	6.4'	STIFF BLUE CLAY	" "

WATER LEVEL = ELEVATION = +10.9

BORING NO 33 SURFACE ELEVATION = 16.8 #3-BUS-1902

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.8	TO 1.3	15.5'	SAND, GRAVEL ASHES FILLING	NO DATA
1.3	TO -5.7	7'	SILT	" "
-5.7	TO -9.7	4'	STIFF BROWN PEAT	" "
-9.7	TO -16.2	6.5'	STIFF BLUE CLAY WITH SAND	" "

NO WATER LEVEL SHOWN.

BORING NO 34 SURFACE ELEVATION = 17.0 #4-BUS

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.0	TO 1.5	15.5'	FILL; SAND, GRAVEL, ASH,	NO DATA
1.5	TO -5.5	7'	SILT	" "
-5.5	TO -10.0	4.5'	STIFF BROWN PEAT	" "
-10.0	TO -16.0	6'	STIFF BLUE CLAY AND SAND	" "

NO WATER LEVEL SHOWN.

*3 SEE NOTE NO 3 *4 SEE NOTE NO 4.

THE THOMPSON & LIGHTNER CO., INC.

SHEET NO. 16

DATE 9-20-25

MADE BY BE

CHECKED BY V

SUBJECT SOUTH END URBAN RENOVATION AREA R-56

BORING NO 35 SURFACE ELEVATION = No DATA #4 PSCE

COLUMBUS NO 1

FROM	TO	THICKNESS	DESCRIPTION	PLUMS
BOTTOM OF PIT TO	3'	3' -	FILL	NO DATA
3'	TO 20'	17' -	PEAT, MUD	" "
20'	TO 26'	6' -	HARD CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 36 SURFACE ELEVATION = No DATA #4 PSCE

COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	PLUMS
CELLAR FLOOR TO	13'	13' -	FILL	NO DATA
13'	TO 17'	4' -	MUD	" "
17'	TO 30'	13' -	HARD BLUE CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 37 SURFACE ELEVATION = 14.0 #4 BSCE

COLUMBUS NO 2.

FROM	TO	THICKNESS	DESCRIPTION	PLUMS
14	TO 0	14' -	FILL	NO DATA
0	TO -11	11' -	SAND AND GRAVEL FILL	" "
-11	TO -26	15' -	HARD BLUE CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 38 SURFACE ELEVATION = 13.0 #5 G-1035

COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	PLUMS
13.0	TO 7.0	6' -	RUBBISH FILL	NO DATA
7.0	TO -1.0	8' -	CLAY FILL	" "
-1.0	TO -11.5	10.5' -	HARD YELLOW CLAY	29
-11.5	TO -32.0	20.5' -	MEDIUM BLUE CLAY	11
WATER LEVEL 10/22/36 ELEVATION = 1.0				

*1 SEE NOTE NO 1. *4 SEE NOTE NO 4. *5 SEE NOTE NO 5

THE THOMPSON & LICHTNER CO., INC.

BURIN 1005

SUBJECT SOUTH END URBAN GENERAL AREA R-56

BORING NO 39 SURFACE ELEVATION = 19.0

*6-CD-130

COLUMBUS NO 2

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>NO BLOWS</u>
19.0	TO 11.0	8'	LOOSE SAND, SOME GRAVEL, CINDERS WOOD & BRICK FILL	5
11.0	TO 4.0	7'	LOOSE MEDIUM SAND	6
4.0	TO 0.0	4'	LOOSE MEDIUM SAND	6
0.0	TO -3.0	3'	MEDIUM BLUE CLAY, TRACE OF STONES	9
-3.0	TO -10.0	7'	HARD YELLOW CLAY	13
-10.0	TO -15.0	6'	MEDIUM BLUE CLAY	6
WATER LEVEL		11/9/59	ELEVATION +10.0	

BORING NO 40 SURFACE ELEVATION = 19.0

*6-CD-1250

COLUMBUS NO 2

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>NO BLOWS</u>
19.0	TO 15.0	4'	LOOSE SAND, GRAVEL & CINDERS FILL	2
15.0	TO 7.5	7.5'	LOOSE SAND & GRAVEL FILL	3
7.5	TO 5.0	2.5'	MEDIUM BLUE CLAY	4
5.0	TO -1.0	6'	HARD YELLOW CLAY	14
-1.0	TO -6.0	5'	MEDIUM YELLOW CLAY	7
-6.0	TO -9.0	3'	MEDIUM BLUE CLAY	3
-9.0	TO -36.0	27'	MEDIUM BLUE CLAY, VEINS OF FINE SAND	6
WATER LEVEL		11/5/63 & 11/20/53	ELEVATION +11.0	

BORING NO 41 SURFACE ELEVATION = 17.8

*4-BSCB

COLUMBUS NO 2.

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.8	TO -2.2	20'	SAND	NO DATA
-2.2	TO -7.2	5'	PEAT	" "
-7.2	TO -47.2	40'	CLAY	" "
-47.2	TO -62.2	15'	NO DATA	" "
-62.2	TO - ?	60'	NO DATA	" "
- ?	TO -122.2		CLAY	" "
-122.2	TO -129.0	48'	SAND	" "
-129.0	TO -130.2	3.2'	BLACK SAND	" "
-130.2	TO -139.2	7'	FINE SAND	" "
-139.2	TO -141.0	3.8'	NO DATA	" "
-141.0	TO -216.0	75'	LEDGE, GRAY SHALE	" "

NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A. *4 SEE NOTE NO 4. *6 SEE NOTE NO 6.

THE THOMPSON & LIGHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET NO. 16
 DATE 10/1/63
 MADE BY RFB
 CHECKED BY VO

BORING NO 42 SURFACE ELEVATION = NO DATA *4-BSES
 COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 11' BELOW		11' -	FILL	NO DATA
11' BELOW TO 30' BELOW		19' -	HARD CLAY	" "

NO WATER LEVEL SHOWN.

BORING NO 43 SURFACE ELEVATION = NO DATA *4-BSES
 COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 13' BELOW		13' -	FILL	NO DATA
13' BELOW TO 22' BELOW		9' -	HARD CLAY	" "
22' BELOW TO 29' BELOW		6' -	MEDIUM CLAY	" "

NO WATER LEVEL SHOWN.

BORING NO 44 SURFACE ELEVATION = 17.08 *7-BFS
 COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.08 TO 0.08		17' -	SAND AND GRAVEL FILLING	NO DATA
0.08 TO -9.92		10' -	FINE SILTY SAND AND MUD	" "
-9.92 TO -10.92		1' -	PENT AND MUD	" "
-10.92 TO -14.92		4' -	HARD YELLOW CLAY WITH LITTLE FINE SAND	" "

NO WATER LEVEL SHOWN.

BORING NO 45 SURFACE ELEVATION = 17.08 *7-BFS
 COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.08 TO 2.08		15' -	SAND AND GRAVEL FILLING	NO DATA
2.08 TO -8.42		10.5' -	FINE SILTY SAND AND MUD	" "
-8.42 TO -14.92		6.5' -	HARD YELLOW CLAY	" "

NO WATER LEVEL SHOWN.

BORING NO 46 SURFACE ELEVATION = 17.08 *7-BFS
 COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.08 TO 0.08		17' -	SAND, GRAVEL, ECT, FILLING	NO DATA
0.08 TO -14.92		15' -	FINE SILTY SAND AND MUD	" "
-14.92 TO -17.42		2.5' -	COMPACT MEDIUM SAND	" "
-17.42 TO -20.92		3.5' -	HARD BLUE CLAY WITH LITTLE FINE SAND	" "

NO WATER LEVEL SHOWN.

THE THOMPSON & LIGHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 47 SURFACE ELEVATION = 17.08 *7-BFS

COLUMBUS NO 2

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.08	TO 1.08	16'	SAND AND ASHES FILLING	NO DATA
1.08	TO -17.92	19'	FINE SILTY SAND AND MUD	" "
-17.92	TO -20.92	3'	HARD BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 48 SURFACE ELEVATION = 17.08 *7-BFS

COLUMBUS NO 2.

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.08	TO 2.58	14.5'	ASHES AND GRAVEL FILLING	NO DATA
2.58	TO -17.42	20'	FINE SILTY SAND AND MUD	" "
-17.42	TO -18.92	1.5'	HARD BLUE CLAY	" "

NO WATER LEVEL SHOWN.

BORING NO 49 SURFACE ELEVATION = 17.08 *7-BFS

COLUMBUS NO 2

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.08	TO -0.92	18'	SAND AND GRAVEL FILLING	NO DATA
-0.92	TO -10.92	10'	FINE SILTY SAND AND MUD	" "
-10.92	TO -13.92	3'	PEAT AND MUD	" "
-13.92	TO -14.92	1'	SAND AND GRAVEL	" "
-14.92	TO -18.92	4'	HARD BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 50 SURFACE ELEVATION = 17.00 *7-BFS

COLUMBUS NO 2.

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.00	TO 7.00	10'	ASHES, SAND AND GRAVEL FILLING	NO DATA
7.00	TO -3.58	10.58'	COMPACT SAND AND GRAVEL FILLING	" "
-3.58	TO -15.50	11.92'	FINE SILTY SAND AND MUD	" "
-15.50	TO -23.00	7.5'	HARD BLUE CLAY	" "

WATER LEVEL APPROXIMATE ELEVATION = +3.00.

* 7 SEE NOTE NO 7.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA B-56

SHEET No. 1
 DATE 10/5/57
 MADE BY RFL
 CHECKED BY VA

BORING NO 51 SURFACE ELEVATION = 17.00

* 7 BFS
 SEE NOTE NO 9

COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.0	TO 7.0	10'	- ASHES AND SAND FILLING AND OLD BRICK NO DATA	
7.0	TO -3.5	10.5'	- COMPACT SAND AND GRAVEL FILLING	" "
-3.5	TO -9.67	6.17'	- FINE SILTY SAND AND MUD	" "
-9.67	TO -16.0	6.33'	- HARD YELLOW CLAY	" "
WATER LEVEL APPROXIMATE ELEVATION = +3.00				

BORING NO 52 SURFACE ELEVATION = NO DATA

* 56-100
 SEE NOTE NO 9

COLUMBUS NO 2

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 16.66 BELOW	16.66'	- FILL COARSE SAND AND GRAVEL	NO DATA
16.66 BELOW	TO 26.5' BELOW	9.84'	- SILT, VERY LITTLE FINE SAND AND SHELLS	" "
26.5 BELOW	TO 38.0' BELOW	11.50'	- HARD BLUE CLAY	" "
WATER LEVEL 3/2/20 60' BELOW SURFACE.				

BORING NO 53 SURFACE ELEVATION = NO DATA

* 3-BUS-1932

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 9.75 BELOW	9.75'	- SAND, GRAVEL AND ROCKS FILLING	NO DATA
9.75 BELOW	TO 33.5' BELOW	23.75'	- FINE SILTY SAND AND MUD	" "
33.5' BELOW	TO 42.0' BELOW	8.5'	- MEDIUM BLUE CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 54 SURFACE ELEVATION = NO DATA

* 3-BUS-1932

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 11' BELOW	11'	- SAND GRAVEL AND CINDER FILL	NO DATA
11' BELOW	TO 17' BELOW	6'	- SAND FILLING AND MUD, BROWN SHEALS	" "
17' BELOW	TO 43' BELOW	26'	- FINE SILTY SAND AND MUD	" "
43' BELOW	TO 48' BELOW	5'	- MEDIUM BLUE CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 55 SURFACE ELEVATION = NO DATA

* 3-BUS-1932

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 12.83' BELOW	12.83'	- SAND GRAVEL AND CINDER FILLING	NO DATA
12.83' BELOW	TO 37.50' BELOW	24.67'	- FINE SILTY SAND AND MUD	" "
37.50' BELOW	TO 45.0' BELOW	7.50'	- MEDIUM BLUE CLAY	" "
NO WATER LEVEL SHOWN				

* 3 SEE NOTE NO 9

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET No. 10
DATE 10/1
MADE BY RFB
CHECKED BY VO

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 56 SURFACE ELEVATION - NO DATA *3 BGS - 1932
COLUMBUS NO 3

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 9'.83' BELOW	9'.83'	9'.83'	SAND, GRAVEL AND COMPO FILLING	" "
9'.83' BELOW TO 13' BELOW	3'.17'	3'.17'	SAND AND GRAVEL FILLING	" "
13' BELOW TO 39'.83' BELOW	26'.83'	26'.83'	FINE SILTY SAND AND MUD	" "
39'.83' BELOW TO 48' BELOW	8'.17'	8'.17'	MEDIUM BLUE CLAY	" "
WATER LEVEL 8/3/32 10'.83' BELOW SURFACE				

BORING NO 57 SURFACE ELEVATION = 18.0 *4 BSCE
COLUMBUS NO 3

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
18.0 TO 12.0	6'	6'	DIRT FILL	NO DATA
12.0 TO 2.0	10'	10'	FINE RED SAND	" "
2.0 TO -1.0	3'	3'	COARSE BLUE SAND	" "
NO WATER LEVEL SHOWN				

BORING NO 58 SURFACE ELEVATION = 18.0 *4 BS
COLUMBUS NO 3

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
18.0 TO 13.0	5'	5'	SAND AND LOAM	NO DATA
13.0 TO 11.0	2'	2'	FINE RED SAND	" "
11.0 TO 9.0	4'	4'	COARSE RED SAND AND GRAVEL	" "
NO WATER LEVEL SHOWN				

BORING NO 59 SURFACE ELEVATION = 11.0 *4 BS
COLUMBUS NO 3

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
11.0 TO 10.0	1'	1'	ASH FILL	NO DATA
10.0 TO 8.0	2'	2'	FILL, DIRT SAND STONE	" "
8.0 TO 4.0	4'	4'	COARSE RED SAND AND GRAVEL	" "
4.0 TO -1.0	5'	5'	FINE RED SAND SOME SILT	" "
-1.0 TO -9.0	8'	8'	FINE BLUE SAND SOME SILT	" "
-9.0 TO -11.0	2'	2'	GRAVEL, HARD PAN	" "
NO WATER LEVEL SHOWN				

*3 SEE NOTE NO 3

*4 SEE NOTE NO 4.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT

SOUTH END URBAN RENEWAL AREA R-56

SHEET NO. 20
 DATE 10/1/56
 MADE BY RFE
 CHECKED BY VO

BORING NO 60 SURFACE ELEVATION = 17.0 * 4-BSCF

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.0	TO 9.5	7.5'	- DIRT FILL SOME SAND	NO DATA
9.5	TO 8.0	1.5'	- FINE RED SAND	" "
8.0	TO 4.0	4.0'	- COARSE RED SAND AND GRAVEL	" "

NO WATER LEVEL SHOWN.

BORING NO 61 SURFACE ELEVATION = 18.0 * 4-BSCF

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
18.0	TO -1.0	19'	- GRAVEL FILL	NO DATA
-1.0	TO -23.0	22'	- MUD	" "
-23.0	TO -28.0	5'	- BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 62 SURFACE ELEVATION = NO DATA * 3-BOS

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
CURB	TO 4' BELOW	4'	- PEMBROKE ST CURB TO SURFACE	-
SURFACE	TO 5' BELOW	5'	- SAND AND CINDER FILL	NO DATA
5' BELOW	TO 14' BELOW	9'	- LOOSE SAND AND GRAVEL FILL	" "
14' BELOW	TO 15.5' BELOW	1.5'	- SOFT BLUE CLAY	" "
15.5' BELOW	TO 17.5' BELOW	2'	- HARD YELLOW CLAY	" "

WATER LEVEL 6' BELOW SURFACE

BORING NO 63 SURFACE ELEVATION = NO DATA * 3-BOS

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
CURB	TO 4' BELOW	4'	- PEMBROKE ST CURB TO SURFACE	-
SURFACE	TO 14' BELOW	14'	- SAND, GRAVEL AND BRICK FILL	NO DATA
14' BELOW	TO 17' BELOW	3'	- HARD YELLOW CLAY	" "

WATER LEVEL 6.5' BELOW SURFACE

BORING NO 64 SURFACE ELEVATION = NO DATA * 3-BOS

COLUMBUS NO 3

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
CURB	TO 5' BELOW	5'	- PEMBROKE ST CURB TO SURFACE	-
SURFACE	TO 10' BELOW	10'	- CINDER, ASH AND SAND FILL	19
10' BELOW	TO 17.5' BELOW	7.5'	- CLAY AND SAND FILL	" "
17.5' BELOW	TO 19' BELOW	1.5'	- HARD YELLOW CLAY	14

NO WATER LEVEL SHOWN

* 3 SEE NOTE NO 3.

* 4 SEE NOTE NO 4.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 51

DATE 10/1/19

MADE BY L.S.

CHECKED BY NO

SUBJECT SOUTH END UPPON RENEWAL AREA R-56

BORING NO 65 SURFACE ELEVATION = NO DATA +4 BSCE

COLUMBUS NO 4

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 13' BELOW	13' -	FILL	NO DATA
13' BELOW	TO 32' BELOW	19' -	SILT, MUD	" "
32' BELOW	TO 39' BELOW	7' -	HARD BLUE CLAY	" "
39' BELOW	TO 45' BELOW	6' -	MEDIUM BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 66 SURFACE ELEVATION = 26.0 +4-BSCE

COLUMBUS NO 4

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
26.0	TO -4.0	30' -	FILL	NO DATA
-4.0	TO -19.0	15' -	DOCK MUD	" "
-19.0	TO -X		UNKNOWN DEPTH OF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 67 SURFACE ELEVATION = 23.4 +4-BSCE

COLUMBUS NO 4

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
23.4	TO -6.6	30' -	MEDIUM SAND	NO DATA
-6.6	TO -101.6	95' -	FINE SAND	" "
-101.6	TO -104.0	3.4' -	NOT GIVEN	" "
-104.0	TO -192.0	68' -	LEDGE - BLACK SHALE	" "

NO WATER LEVEL SHOWN

BORING NO 68 SURFACE ELEVATION = NO DATA +3 BS 1900

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 9' BELOW	9' -	FILLING	NO DATA
9' BELOW	TO 14.5' BELOW	5.5' -	BLUE CLAY	" "
14.5' BELOW	TO 17' BELOW	2.5' -	HARD BLUE GRAVEL & SAND	" "
17' BELOW	TO 21' BELOW	4' -	SAND AND LITTLE CLAY	" "

NO WATER LEVEL SHOWN

*3 SEE NOTE NO 3

*4 SEE NOTE NO 4

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET No. 22
DATE 10/31/54
MADE BY R.L.S.
CHECKED BY V.D.

SUBJECT SOUTH END URBAN RENEWAL AREA E-56

BORING NO. 69 SURFACE ELEVATION = NO DATA #3-BOS 1892

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 5' BELOW	5'	-	SAND AND GRAVEL FILL	NO DATA
5' BELOW TO 14' BELOW	9'	-	SAND AND GRAVEL	" "
14' BELOW TO 18' BELOW	4'	-	HARD BROWN SILT	" "

NO WATER LEVEL SHOWN

BORING NO 70 SURFACE ELEVATION = NO DATA #3 BOS 1893

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 7' BELOW	7'	-	FILLING	NO DATA
7' BELOW TO 14' BELOW	7'	-	SAND AND GRAVEL	" "
14' BELOW TO 15.5' BELOW	1.5'	-	BLUE CLAY & SAND	" "
15.5' BELOW TO 17' BELOW	1.5'	-	FINE SAND	" "
17' BELOW TO 20' BELOW	3'	-	HARD BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 71 SURFACE ELEVATION = NO DATA #3-BOS 1894

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW	9'	-	FILLING	NO DATA
9' BELOW TO 14' BELOW	5'	-	SAND AND GRAVEL	" "
14' BELOW TO 20' BELOW	6'	-	HARD BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 72 SURFACE ELEVATION = NO DATA #3 BOS 1895

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW	9'	-	FILLING	NO DATA
9' BELOW TO 13' BELOW	4'	-	SAND AND GRAVEL	" "
13' BELOW TO 20' BELOW	7'	-	BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 73 SURFACE ELEVATION = NO DATA #3-BOS 1896

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 7' BELOW	7'	-	SAND AND GRAVEL FILLING	NO DATA
7' BELOW TO 15' BELOW	8'	-	SILTY SAND	" "
15' BELOW TO 18' BELOW	3'	-	BLUE CLAY	" "

NO WATER LEVEL SHOWN

* 3 SEE NOTE NO 3

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 23
 DATE 11/3/57
 MADE BY F.P.
 CHECKED BY VO

SUBJECT SOUTH END URBAN RENEWAL AREA P-36

BORING NO 74 SURFACE ELEVATION = NO DATA

+3-8051

TRENDONT NOS

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW		9' -	FILLING	NO DATA
9' BELOW TO 14.4' BELOW		5.4' -	SILT AND PEAT	" "
14.4' BELOW TO 20' BELOW		5.6' -	BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 75 SURFACE ELEVATION = NO DATA

+3-8051

TRENDONT NOS

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW		9' -	FILLING	NO DATA
9' BELOW TO 12' BELOW		3' -	SILT AND PEAT	" "
12' BELOW TO 20' BELOW		8' -	HARD BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 76 SURFACE ELEVATION = NO DATA

+3-8051/2

TRENDONT NOS

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW		9' -	FILLING	NO DATA
9' BELOW TO 20' BELOW		11' -	BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 77 SURFACE ELEVATION = NO DATA

+3-8051

TRENDONT NOS

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW		9' -	FILLING	NO DATA
9' BELOW TO 16' BELOW		9' -	SILT AND PEAT	" "
16' BELOW TO 21.4' BELOW		5.4' -	BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 78 SURFACE ELEVATION = NO DATA

+3-80519

TRENDONT NOS

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 9' BELOW		9' -	FILLING	NO DATA
9' BELOW TO 12' BELOW		5' -	SAND & GRAVEL LITTLE CLAY	" "
12' BELOW TO 15' BELOW		3' -	SILT & PEAT	" "
15' BELOW TO 20' BELOW		5' -	CLAY	" "

NO WATER LEVEL SHOWN

*3 SET NO. 1 = NO. 3

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA P. 26

SHEET No. 4
 DATE 10/1
 MADE BY 1958
 CHECKED BY 10

BORING NO 79 SURFACE ELEVATION = NO DATA #3-205 1960

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOW'S
SURFACE TO 9' BELOW		9' -	FILLING	NO DATA
9' BELOW TO 16.4' BELOW		7.4' -	PEAT	" "
16.4' BELOW TO 20' BELOW		3.6' -	BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 80 SURFACE ELEVATION = 16.7 #2-R 1958

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*BLOW'S
16.7 TO 14.7		2' -	CONCRETE SAND AND GRAVEL FILL	15
14.7 TO 10.7		4' -	SAND, GRAVEL AND BOULDER FILL	18-24
10.7 TO 8.7		2' -	SAND AND GRAVEL FILL	9
8.7 TO 6.7		2' -	DIRTY SAND GRAVEL AND BOUNDER FILL	12
6.7 TO 4.7		2' -	SILTY PEAT	3
4.7 TO 2.7		2' -	STIFF CLAY, FINE SAND AND GRAVEL	14
2.7 TO 0.7		2' -	VERY STIFF YELLOW CLAY LITTLE SAND	25
0.7 TO -9.3		10' -	VERY STIFF YELLOW CLAY AND SAND-23-25-25-28-19	
-9.3 TO -11.3		2' -	STIFF YELLOW CLAY AND SAND	12
-11.3 TO -13.3		2' -	STIFF YELLOW CLAY LITTLE SAND	15
-13.3 TO -15.3		2' -	MEDIUM BLUE CLAY AND LITTLE SAND	8
-15.3 TO -18.3		3' -	STIFF BLUE CLAY AND LITTLE SAND	10-14

NO WATER LEVEL SHOWN

BORING NO 81 SURFACE ELEVATION = NO DATA #3-103 1961

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOW'S
SURFACE TO 11.17' BELOW		11.17' -	HARD SAND AND GRAVEL FILL	NO DATA
11.17' BELOW TO 14.42' BELOW		3.25' -	SOFT PEAT	" "
14.42' BELOW TO 17.0' BELOW		2.58' -	HARD COARSE BLUE SAND, GRAVEL & CLAY	

NO WATER LEVEL SHOWN

*1 SEE NOTE NO 1

*2 SEE NOTE NO 2

*3 SEE NOTE NO 3.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 25
 DATE 10/2/55
 MADE BY RFL
 CHECKED BY VO

SUBJECT SOUTH END URBAN RENOVATION AREA R-56

BORING NO 82 SURFACE ELEVATION = 15.4 *2-R 1954

TREATMENT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 FEET
15.4 TO 13.4		2'	CONCRETE	
13.4 TO 9.4		4'	SAND AND GRAVEL FILL	12-10
9.4 TO 7.4		2'	STIFF PEAT	5
7.4 TO 5.4		2'	SOFT PEAT	3
5.4 TO 3.4		2'	STIFF CLAY, SOME FINE SAND LITTLE GRAVEL	13
3.4 TO -4.6		8'	VERY STIFF YELLOW CLAY - 21-20-19-16	
-4.6 TO -8.6		4'	STIFF CLAY	9-9
-8.6 TO -34.6		26'	MEDIUM BLUE CLAY - 8-8-6-7-7-6-6-6-5-7-8-8-8	
WATER LEVEL 12/8/54 ELEVATION 9.4				

BORING NO 83 SURFACE ELEVATION = 8.0 *4 BSC E

TREATMENT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 FEET
8.0 TO 5.0		3'	PEAT	NO DATA
5.0 TO 4.0		1'	SAND GRAVEL CLAY	" "
4.0 TO -18.0		22'	HARD YELLOW CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 84 SURFACE ELEVATION = 17.2 *8-B-11A 1

TREATMENT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 FEET
17.2 TO 6.2		11'	CONCRETE SAND GRAVEL BROWN & BEAN FILL	3
6.2 TO 0.7		5.5'	SILTY PEAT	NO DATA
0.7 TO -0.8		1.5'	FIRM COARSE DIRTY SAND & GRAVEL	10
-0.8 TO -7.8		7'	HARD YELLOW CLAY	18
-7.8 TO -12.8		5'	MEDIUM BLUE CLAY	7
-12.8 TO -19.8		7'	SOFT BLUE CLAY	5

WATER LEVEL AUG 1939 ELEVATION = 4.11

BORING NO 85 SURFACE ELEVATION = 17.69' *8-B-11A 1

TREATMENT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 FEET
17.69 TO 4.69		13'	CONCRETE LOCAL SAND GRAVEL BRICK & CLAY FILL	10
4.69 TO -0.31		5'	SILTY PEAT	" "
-0.31 TO -2.31		2'	MEDIUM BLUE CLAY	10
-2.31 TO -8.31		6'	HARD YELLOW CLAY	22
-8.31 TO -17.31		9'	MEDIUM YELLOW CLAY	8
-17.31 TO -22.31		5'	SOFT BLUE CLAY	6

WATER LEVEL AUG 1939 ELEVATION

*1 SEE NOTE NO 1. *2 SEE NOTE NO 2. *4 SEE NOTE NO 4

*3 SEE NOTE NO 3. *18 SEE NOTE NO 18

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN REDEVELOPMENT AREA B-56

SHEET NO. _____
 DATE 10/21/39
 MADE BY RFB
 CHECKED BY VO

BORING NO 86 SURFACE ELEVATION = 19.96 *8-BHA 1230

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 BLOWS
18.46	TO 3.46	15'	CONCRETE, LOOSE SAND GRAVEL & BRICK FILL	4
3.46	TO -0.54	4'	SILTY PEAT	NO DATA
-0.54	TO -6.54	6'	HARD YELLOW CLAY	22
-6.54	TO -14.54	8'	MEDIUM BLUE CLAY	8
-14.54	TO -21.54	7'	SOFT BLUE CLAY	6

WATER LEVEL AUG 1939 ELEVATION = 9.96

BORING NO 87 SURFACE ELEVATION = 19.05 *8-BHA 1230

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 BLOWS
19.05	TO 7.55	9.5'	LOOSE COARSE YELLOW SAND GRAVEL & CLAY FILL	NO DATA
7.55	TO 3.55	4'	PEAT	" "
3.55	TO -7.95	11.5'	HARD YELLOW CLAY LITTLE FINE SAND	18
-7.95	TO -62.95	55'	SOFT BLUE CLAY LITTLE FINE SAND	5
-62.95	TO -88.95	26'	SOFT BLUE CLAY LITTLE FINE SAND	6

AT ELEVATION - 88.95 ROCK OR BOULDER REFUSAL.
 NO WATER LEVEL SHOWN.

BORING NO 88 SURFACE ELEVATION = 18.15 *8-BHA 1230

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 BLOWS
18.15	TO 9.15	9'	LOOSE COARSE SAND GRAVEL & BRICK FILL	9
9.15	TO 4.59	4.58'	SILTY PEAT	NO DATA
4.59	TO -8.85	13.42'	HARD YELLOW CLAY	18
-8.85	TO -15.35	6.5'	MEDIUM BLUE CLAY	8
-15.35	TO -21.85	6.5'	SOFT BLUE CLAY	6

WATER LEVEL AUG 1939 ELEVATION = +10.45

BORING NO 89 SURFACE ELEVATION = 15.86 *8-BHA 1230

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	*18 BLOWS
15.86	TO 9.86	6'	PAVING, LOOSE SAND GRAVEL CLAY & BRICK FILL	4
9.86	TO 7.36	2.5'	MEDIUM YELLOW CLAY	8
7.36	TO 0.86	6.5'	HARD YELLOW CLAY LITTLE FINE GRAVEL	22

WATER LEVEL AUG 1939 ELEVATION = +13.86

*18 SEE NOTE NO 18 *8 SEE NOTE NO 8.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 30
 DATE 11/1/30
 MADE BY J.L.
 CHECKED BY

BORING LOGS

SUBJECT SOUTH END OF SANITARIUM AVENUE 1925

BORING NO 90 SURFACE ELEVATION = 17.75 #8-BHA 1930

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	#B BLOWS
17.75 TO 9.08		8.67'	- LOOSE BROWN SAND AND GRAVEL FILL	3
9.08 TO 6.75		2.33'	- SOFT FINE SAND CLAY AND LITTLE GRAVEL FILL	3
6.75 TO 3.75		3.0'	- HARD FINE SAND AND GRAVEL LITTLE CLAY	18
3.75 TO -5.25		9.0'	- HARD YELLOW CLAY	18
-5.25 TO -19.25		14.0'	- MEDIUM YELLOW CLAY	8
-19.25 TO -24.25		5.0'	- SOFT BLUE CLAY	5

WATER LEVEL AVG 1930 ELEVATION = +8.75

BORING NO 91 SURFACE ELEVATION = NO DATA #3-BOS 1920

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
CURB TO 8' BELOW		SURFACE IS 3' BELOW CURB	CANDEN STREET CURB	
SURFACE TO 2.5' BELOW		2.5'	- PEAT	NO DATA
2.5' BELOW TO 3.5' BELOW		1'	- SAND GRAVEL AND CLAY	" "
3.5' BELOW TO 25.5' BELOW		22'	- HARD YELLOW CLAY	" "

NO WATER ENCOUNTERED.

BORING NO 92 SURFACE ELEVATION = NO DATA #3-BOS 1920

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
CURB TO 2.5' BELOW		SURFACE IS 2.5' BELOW CURB	CANDEN STREET CURB	
SURFACE TO 6.58' BELOW		6.58'	- FILL	NO DATA
6.58' BELOW TO 8.0' BELOW		1.42'	- SAND GRAVEL AND CLAY	" "
8.0' BELOW TO 26.33' BELOW		18.33'	- HARD YELLOW CLAY	" "

NO WATER ENCOUNTERED

BORING NO 93 SURFACE ELEVATION = NO DATA #3-BOS 1920

TREMONT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
CURB TO 2.5' BELOW		SURFACE IS 2.5' BELOW CURB	CANDEN STREET CURB	
SURFACE TO 8.0' BELOW		8'	- FILL	NO DATA
8.0' BELOW TO 27' BELOW		19'	- HARD YELLOW CLAY	" "

NO WATER ENCOUNTERED

*1B SEE NOTE NO 1 B *3 SEE NOTE NO 3 *8 SEE NOTE NO 8

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET No. 20

DATE 10/2/58

MADE BY RFB

CHECKED BY VO

SUBJECT SOUTH END URBAN REDEVELOPMENT P. 16

BORING NO 94 SURFACE ELEVATION = NO DATA #3-BOS 1928

TREMBLANT NO 5

FROM	TO	THICKNESS	DESCRIPTION	FEET
CURB TO 2' BELOW			SURFACE IS 2' BELOW CAMDEN STREET CURB	-
SURFACE TO 6.75' BELOW		6.75'	- CLAY FILL	NO DATA
6.75' BELOW TO 24.83' BELOW		18.08'	- HARD YELLOW CLAY	" "

NO WATER ENCOUNTERED

BORING NO 95 SURFACE ELEVATION = NO DATA #3-BOS 1909

TREMBLANT NO 5

FROM	TO	THICKNESS	DESCRIPTION	FEET
SURFACE TO 7.5' BELOW		7.5'	- FILLING	NO DATA
7.5' BELOW TO 14.0' BELOW		6.5'	- ROTTED CLAY	" "
14.0' BELOW TO 20.0' BELOW		6.0'	- HARD CLAY	" "

NO WATER ENCOUNTERED

BORING NO 96 SURFACE ELEVATION = NO DATA #3-BOS 1906

TREMBLANT NO 5

FROM	TO	THICKNESS	DESCRIPTION	FEET
SURFACE TO 0.9' BELOW		0.9'	- ROAD BED	NO DATA
0.9' BELOW TO 4.9' BELOW		4.0'	- SAND GRAVEL CINDERS	" "
4.9' BELOW TO 12.1' BELOW		7.2'	- CINDER FILLING	" "
12.1' BELOW TO 19.6' BELOW		7.5'	- STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 97 SURFACE ELEVATION = NO DATA #3-BOS 1906

TREMBLANT NO 5

FROM	TO	THICKNESS	DESCRIPTION	FEET
SURFACE TO 0.9' BELOW		0.9'	- ROAD BED	NO DATA
0.9' BELOW TO 3.9' BELOW		3.0'	- SAND GRAVEL CINDERS	" "
3.9' BELOW TO 9.4' BELOW		5.5'	- CINDERS FILLING	" "
9.4' BELOW TO 12.9' BELOW		3.5'	- PEAT	" "
12.9' BELOW TO 19.9' BELOW		7.0'	- STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

*3 SEE NOTE NO 3.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 28
 DATE 12/1/55
 MADE BY L.P.
 CHECKED BY V

SUBJECT SOUTH FIELD URBAN SANITARY AREA P. 16

BORING NO 98 SURFACE ELEVATION = NO DATA *3-BOS 1906

TREMENT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 0.6' BELOW		0.6'	ROAD BED	NO DATA
0.6' BELOW TO 2.8' BELOW		2.6'	SAND GRAVEL CINDERS	" "
2.8' BELOW TO 6.1' BELOW		6.1'	CINDERS FILLING	" "
6.1' BELOW TO 13.4' BELOW		4.5'	PEAT	" "
13.4' BELOW TO 18.6' BELOW		5.2'	STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 99 SURFACE ELEVATION = 17.8 *4-BSC E

TREMENT NO 5

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.8 TO 12.8		5'	SAND, CLAY	NO DATA
12.8 TO 9.8		5'	BLUECLAY, PEAT	" "
9.8 TO -2.1		9.9'	FINE SAND	" "
-2.1 TO -122.1		120'	CLAY	" "
-122.1 TO -129.1		5'	CLAY, SAND, GRAVEL	" "
-129.1 TO -141.0		13.9'	GRAVEL, CLAY	" "
-141.0			LEDGE	" "

NO WATER LEVEL SHOWN

BORING NO 100 SURFACE ELEVATION = NO DATA *2-R 1949

TREMENT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1A BLOWS
SURFACE TO 13.5' BELOW		13.5'	CINDERS, BRICK AND GRASS FILL	—
13.5' BELOW TO 18.0' BELOW		4.5'	MEDIUM YELLOW CLAY	14
18.0' BELOW TO 26.5' BELOW		8.5'	MEDIUM YELLOW CLAY	7
26.5' BELOW TO 39.5' BELOW		11'	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 101 SURFACE ELEVATION = 16.5 *4-BSC E

TREMENT NO 6

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.5 TO 21.5		14'	FILL; SAND, GRAVEL, CLAY AND BRICK	NO DATA
21.5 TO -0.5		3'	STIFF YELLOW CLAY	" "

NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A *2 SEE NOTE NO 2, *3 SEE NOTE NO 3, *4 SEE NOTE NO 4

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 103
 DATE 10/1/53
 MADE BY WLS
 CHECKED BY WLS

SUBJECT SOUTH END UPPER PENNSYLV. AREA R-56

BORING NO. 102 SURFACE ELEVATION = 15.5 *4-BSC

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	BLDG
15.5	TO -6.5	22'	FILL; SAND GRAVEL CLAY ASH BRICK	NO
-6.5	TO -9.5	3'	STIFF YELLOW CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 103 SURFACE ELEVATION = 15.0 *4-BSC

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	BLDG
15.0	TO 3.0	12'	FILL; SAND GRAVEL CLAY ASH	NO
3.0	TO 0.0	3'	STIFF YELLOW CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 104 SURFACE ELEVATION = 19.0 *6-CD 10

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1A BLDG
19.0	TO 16.5	2.5'	CONCRETE	-
16.5	TO 3.5	13'	LOOSE SAND, GRAVEL & CINDER FILL	8
3.5	TO 2.5	1'	SOFT SILT	2
2.5	TO -6.5	9'	VERY STIFF YELLOW & BLUE CLAY	18
-6.5	TO -11.5	5'	STIFF YELLOW & BLUE CLAY	2
-11.5	TO -44.0	32.5'	MEDIUM BLUE CLAY	4
-44.0	TO -46.0	2'	FIRM FINE SAND GRAVEL & CLAY	2

REFUSAL ROCK OR BOULDER AT ELEVATION -46.0

WATER LEVEL 1-28-58 ELEVATION = +9.00

BORING NO 105 SURFACE ELEVATION = 20.96 *9-BSD-1000

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1A BLDG
20.96	TO 11.96	9.0'	LOOSE SAND & GRAVEL FILL	3
11.96	TO 8.46	3.5'	PEAT TRACE OF SAND	2
8.46	TO 3.96	4.5'	HARD YELLOW CLAY	12
3.96	TO -4.04	8.0'	MEDIUM YELLOW CLAY	7
-4.04	TO -64.54	60.5'	SOFT BLUE CLAY	3
-64.54	TO -66.04	1.5'	HARD FINE SAND & GRAVEL	22

NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A

*4 SEE NOTE NO 4, *6 SEE NOTE NO 6, *9 SEE NOTE NO 9

SHEET NO. 31
 DATE 10/19/53
 MADE BY REB
 CHECKED BY VO

THE THOMPSON & LICHTNER CO., INC.
 BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 105 SURFACE ELEVATION = 20.96 #9-BSD-105

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1A BLOWS
20.96 TO	7.26	13.5'	FIRM SAND & GRAVEL & WOOD SOME BRICK FILL	8
7.26 TO	2.96	4.5'	HARD YELLOW & BLUE CLAY	13
2.96 TO	-5.24	8.0'	MEDIUM YELLOW CLAY	8
-5.24 TO	-29.24	24.0'	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 107 SURFACE ELEVATION = 21.05 #9-BSD-107

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1A BLOWS
21.05 TO	12.05	9.0'	LOOSE SAND GRAVEL SOME WOOD & BRICK FILL	5
12.05 TO	9.55	2.5'	LOOSE SAND GRAVEL WOOD SOME SILT FILL	3
9.55 TO	8.55	1.0'	MEDIUM BLUE CLAY TRACE FINE SAND	7
8.55 TO	2.55	6.0'	HARD YELLOW & BLUE CLAY	16
2.55 TO	-5.95	8.5'	MEDIUM YELLOW CLAY	7
-5.95 TO	-28.95	23.0'	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 108 SURFACE ELEVATION = 20.43 #9-BSD-108

TREMONT NO 6

FROM	TO	THICKNESS	DESCRIPTION	*1A BLOWS
20.43 TO	11.43	9.0'	LOOSE MISC. FILL	4
11.43 TO	8.93	2.5'	LOOSE SILTY SAND	4
8.93 TO	7.93	1.0'	MEDIUM BLUE CLAY TRACE OF GRAVEL	9
7.93 TO	1.43	6.5'	HARD YELLOW CLAY	13
1.43 TO	-3.57	5.0'	MEDIUM YELLOW CLAY	7
-3.57 TO	-31.57	28.0'	SOFT BLUE CLAY	2
-31.57 TO	-33.57	2.0'	MEDIUM BLUE CLAY TRACE OF GRAVEL	10
-33.57 TO	-39.57	6.0'	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A.

*9 SEE NOTE NO 9.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 5
 DATE 10/19/63
 MADE BY RFD
 CHECKED BY VO

SUBJECT SOUTH END URBAN RENEWAL AREA - R-56

BORING NO 109 SURFACE ELEVATION = +8.0 *4 BSCE-
 TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
8.0	TO 0.0	8'	FILL; SAND GRAVEL-BRICK SOFT WET	NO DATA
0.0	TO -4.0	4'	STIFF YELLOW CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 110 SURFACE ELEVATION = 18.0 *4 BSCE
 TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
18.0	TO -2.0	20'	FILL; SAND GRAVEL CLAY	NO DATA
-2.0	TO -7.0	5'	SOFT SILT	" "
-7.0	TO -11.0	4'	STIFF YELLOW CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 111 SURFACE ELEVATION = NO DATA *5 G-1923
 TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SIDEWALK	TO 5.9' BELOW	5.9'	TO SURFACE	—
SURFACE	TO 6.3' BELOW	6.3'	SAND GRAVEL BRICK FILL	NO DATA
6.3' BELOW	TO 14.7' BELOW	8.4'	HARD YELLOW CLAY	" "
14.7' BELOW	TO 25.0' BELOW	11.3'	MEDIUM BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 112 SURFACE ELEVATION = NO DATA *5 G-191A
 TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SIDEWALK	TO 10.0' BELOW	10'	TO SURFACE	—
SURFACE	TO 7.2' BELOW	7.2'	RUBBISH FILL	NO DATA
7.2' BELOW	TO 25.0' BELOW	17.8'	VERY STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 113 SURFACE ELEVATION = NO DATA *4 BSCE
 TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 10.0' BELOW	10'	FILL; CINDER, ASH, SAND	NO DATA
10.0' BELOW	TO 17.5' BELOW	7.5'	CLAY AND SAND FILL	" "
17.5' BELOW	TO 19.0' BELOW	1.5'	HARD YELLOW CLAY	" "

NO WATER LEVEL SHOWN.

*4 SEE NOTE NO 4.

*5 SEE NOTE NO 5.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 22
 DATE 10/19/63
 MADE BY RFB
 CHECKED BY VO

SUBJECT SOUTH END URBAN GENERAL AREA R-56

BORING NO 114 SURFACE ELEVATION = NO DATA *3 BOS-

TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	*IC BLOWS
CURB	TO 5.0' BELOW	5.0'	5.0' BELOW PEMBERNE STREET CURB	-
SURFACE	TO 9.5' BELOW	9.5'	CINDER, GRAVEL CLAY & BRICK FILL	NO DATA
	9.5' BELOW TO 10.5' BELOW	1.0'	SOFT BLUE CLAY	6
	10.5' BELOW TO 12.0' BELOW	1.5'	HARD YELLOW CLAY	16
WATER LEVEL 6.5' BELOW SURFACE				

BORING NO 115 SURFACE ELEVATION = 10.0 *4 BSCB

TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
10.0	TO 2.0	8'	FILL; SAND GRAVEL ASH (SOFT) WET	NO
	2.0 TO -1.0	3'	CLAY LITTLE SAND AND GRAVEL	" "
	-1.0 TO -5.0	4'	STIFF YELLOW CLAY	" "
NO WATER LEVEL SHOWN				

BORING NO 116 SURFACE ELEVATION = 19.6 *9 BSD 1955

TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
19.6	TO -1.4	10'	MISCELLANEOUS FILL	-
	-1.4 TO -7.9	6.5'	SILT & SHELLS	-
	-7.9 TO -9.0	1.1'	CLAY & SHELLS, HARD	-
	-9.0 TO -15.9	6.9	VERY HARD CLAY	24
	-15.9 TO -19.9	4.0	MED. CLAY	-
WATER LEVEL 10' BELOW SURFACE				

BORING NO 117 SURFACE ELEVATION = 12.6 *9 BSD 1955

TREMONT NO 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.6	TO -2.4	15'	MISCELLANEOUS FILL	-
	-2.4 TO -7.9	5.5'	SILT	3
	-7.9 TO -9.4	1.5'	WOOD	-
	-9.4	-	-	REFUSAL

WATER LEVEL AT 4.5' BELOW SURFACE

*1C SEE NOTE 1C

*3 SEE NOTE 3

*4 SEE NOTE 4

*9 SEE NOTE 9

THE THOMPSON & LIGHTNER CO., INC.

BORING LOGS

SHEET No. 2

DATE 12/17/68

MADE BY A.S.

CHECKED BY V.D.

SUBJECT SOUTH END URBAN REHABILITATION AREA R-56

BORING No 118 SURFACE ELEVATION 17.3 *9 BSD 1955

TREMONT No 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
17.3	To -2.7	20.0'	MISCELLANEOUS FILL	11
-2.7	To -7.7	5.0'	SILT, LITTLE SAND & SHELL	3
-7.7	To -8.7	1.0'	SAND & CLAY	10
-8.7	To -14.7	6.0'	VERY HARD CLAY	24
-14.7	To -19.7	5.0'	MED CLAY	8

WATER LEVEL AT 11' ± BELOW SURFACE

BORING No 119 SURFACE ELEVATION 11.8 *9 BSD 1955

TREMONT No 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
11.8	To 0.3	11.5	MISCELLANEOUS FILL	—
0.3	To -9.2	9.5	SILT	3
-9.2	To -13.7	4.5	HARD CLAY	14
-13.7	To -19.7	6.0	MED. CLAY	5

WATER LEVEL AT 4.0' BELOW SURFACE

BORING No 120 SURFACE ELEVATION 12.6 *9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.6	To -2.4	15.0'	MISCELLANEOUS FILL	—
-2.4	To -6.9	4.5'	SILT	3
-6.9	To -11.4	4.5'	HARD CLAY	16
-11.4	To -17.4	6.0'	HARD CLAY	14

WATER LEVEL AT 5' BELOW SURFACE

BORING No 121 SURFACE ELEVATION 17.6 *9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
17.6	To 0.6	17.0'	MISCELLANEOUS FILL	—
0.6	To -7.9	8.5'	SILT & SHELLS	2
-7.9	To -9.0	1.1'	—	—
-9.0	To -9.4	0.4'	CLAY & SAND, HARD	—
-9.4	To -18.4	9.0'	VERY HARD CLAY	24
-18.4	To -22.4	4.0'	MED. CLAY	8

WATER LEVEL AT 10' BELOW SURFACE

*1 SEE NOTE NO 1, *9 SEE NOTE NO 9.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 35
 DATE 12/17/68
 MADE BY AS
 CHECKED BY VO

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No 122 SURFACE ELEVATION 11.8 * 9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
11.8	To -4.7	16.5'	MISCELLANEOUS FILL	4
-4.7	To -11.8	7.1'	SILT	3
-11.8	To -21.2	9.4'	HARD CLAY	12

WATER LEVEL AT 4.5' BELOW SURFACE

BORING No 123 SURFACE ELEVATION 16.8 * 9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
16.8	To -0.2	17.0'	MISCELLANEOUS FILL	-
-0.2	To -9.7	9.5'	SILT	3
-9.7	To -20.7	11.0'	SAND & CLAY (DRY)	12
-20.7	To -26.2	5.5'	HARD CLAY	24
-26.2	To -31.2	5.0'	MED. CLAY	8

WATER LEVEL AT 9.0' BELOW SURFACE

BORING No 124 SURFACE ELEVATION 17.4 * 9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
17.4	To -0.6'	18.0'	MISCELLANEOUS FILL	-
-0.6	To -11.1	10.5'	SILT & SHELLS	-
-11.1	To -12.6	1.5'	PEAT	2
-12.6	To -13.2	0.6'	CLAY & SAND, HARD	-
-13.2	To -19.1	5.9'	VERY HARD CLAY	-
-19.1	To -23.6	4.5'	MED. CLAY	8

NO WATER LEVEL SHOWN

BORING No 125 SURFACE ELEVATION 12.8 * 9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
12.8	To -3.7	16.5'	MISCELLANEOUS FILL	4
-3.7	To -9.2	5.5'	SILT	2
-9.2	To -10.2	1.0'	PEAT	-
-10.2	To -13.7	3.5'	HARD CLAY	14
-13.7	To -20.2	6.5'	MED CLAY	9

NO WATER LEVEL SHOWN

* 1 SEE NOTE NO 1 * 9 SEE NOTE NO 9

THE THOMPSON & LICHTNER CO., Inc.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET NO. 36

DATE 12/17/63

MADE BY AS

CHECKED BY VO

BORING No 126 SURFACE ELEVATION 16.1 * 9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
16.1	To - 2.9	19.0'	MISCELLANEOUS FILL	4
- 2.9	To - 10.4	7.5	FINE SILT	3
- 10.4	To - 14.9	4.5	HARD BLUE CLAY & STONES	11
- 14.9	To - 19.9	5.0	HARD YELLOW CLAY	19

WATER LEVEL AT 9.0' BELOW SURFACE

BORING No 127 SURFACE ELEVATION 17.5 * 9 BSD 1955

TREMONT No 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
17.5	To - 1.0	18.5'	MISCELLANEOUS FILL	-
- 1.0	To - 9.5	8.5'	SILT & SHELLS	3
- 9.5	To - 10.5	1.0'	PEAT	2
- 10.5	To - 12.5	2.0'	VERY FINE SAND & CLAY	10
- 12.5	To - 18.5	6.0'	VERY HARD CLAY	24
- 18.5	To - 23.0	4.5'	MED. CLAY	8

WATER LEVEL AT 10' BELOW SURFACE

BORING No 128 SURFACE ELEVATION 16.3 * 9 BSD 1955

TREMONT No 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
16.3	To - 3.2	19.5'	MISCELLANEOUS FILL	-
- 3.2	To - 7.3	4.1'	SILT	3
- 7.3	To - 10.7	3.4'	MED. CLAY	10
- 10.7	To - 14.7	4.0'	HARD CLAY	18
- 14.7	To - 18.7	4.0'	MED CLAY	8

WATER LEVEL AT 9.0' BELOW SURFACE

BORING No 129 SURFACE ELEVATION 12.3 * 9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
12.3	To - 2.2	14.5'	MISCELLANEOUS FILL	4
- 2.2	To - 9.7	7.5'	SILT	4
- 9.7	To - 13.7	9.0'	HARD CLAY	12

WATER LEVEL AT 5.5' BELOW SURFACE

* 1 SEE NOTE NO 1. * 9 SEE NOTE NO 9.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 37
 DATE 12/17/60
 MADE BY AS
 CHECKED BY YD

SUBJECT SOUTH END URBAN TOWNHIP AREA P.S.

BORING No 130 SURFACE ELEVATION 12.8 * 9 BSD 1955

TREMONT No.7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.8	To -7.7	20.5'	MISCELLANEOUS FILL	-
-7.7	To -17.7	10.0'	SILT & SHELLS	3
-17.7	To -29.2	11.5'	MED. CLAY	8

WATER LEVEL AT 9.5' BELOW SURFACE

BORING No 131 SURFACE ELEVATION 12.4 * 9 BSD 1955

TREMONT No.7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.4	To -1.6	14.0	MISCELLANEOUS FILL	-
-1.6	To -10.1	8.5	SILT	3
-10.1	To -14.1	4.0	MED. CLAY	7
-14.1	To -19.6	5.5	HARD CLAY	15

WATER LEVEL AT 5.5' BELOW SURFACE

BORING No 132 SURFACE ELEVATION 14.0 * 9 BSD 1955

TREMONT No.7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
14.0	To -2.7	17.6'	MISCELLANEOUS FILL	-
-2.7	To -9.6	6.9'	SILT	3
-9.6	To -10.6	1.0'	MED. CLAY	7
-10.6	To -18.6	8.0'	HARD CLAY	19

WATER LEVEL AT 8.0' BELOW SURFACE

BORING No 133 SURFACE ELEVATION 12.6 * 9 BSD 1955

TREMONT No.7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.6	To -1.9'	14.5'	MISCELLANEOUS FILL	4
-1.9'	To -8.4'	6.5'	SILT	3
-8.4'	To -18.4'	10.0'	HARD CLAY	14-12

WATER LEVEL AT 5.0' BELOW SURFACE

*1 SEE NOTE NO 1. *9 SEE NOTE NO 9.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 30
 DATE 12/17/63
 MADE BY AS
 CHECKED BY VO

SUBJECT SOUTH END URBAN FILTRAL AREA R-56

BORING LOGS

BORING No 134 SURFACE ELEVATION 12.4 *9 BSD 1955

TREMONT No 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
12.4	To -1.9	14.3'	MISCELLANEOUS FILL	4
-1.9	To -8.3	6.4'	SILT	3
-8.3	To -12.1	3.8'	BLUE CLAY & STONES	10
-12.1	To -18.6	6.5'	HARD YELLOW CLAY	15

WATER LEVEL AT 5.5' BELOW SURFACE

BORING No 135 SURFACE ELEVATION 14.8 *9 BSD 1955

TREMONT No. 7

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
14.8	To -2.7	17.5'	MISCELLANEOUS FILL	4
-2.7	To -9.2	6.5'	SILT	3
-9.2	To -13.2	4.0'	HARD CLAY	14
-13.2	To -19.2	6.0	LITTLE SAND & STONES	16

WATER LEVEL AT 8' BELOW SURFACE

BORING No 136 SURFACE ELEVATION 16.0 *4 BSCE

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.0	To -3.5	19.5'	FILL; SAND, GRAVEL, CLAY, BRICK	-
-3.5	To -8.0	4.5'	SOFT SILT	-
-8.0	To -12.0	4.0'	STIFF YELLOW CLAY	-

NO WATER LEVEL SHOWN

BORING No 137 SURFACE ELEVATION - NO DATA *5 G 1926

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	To 6.0' BELOW	6.0'	RUBBISH, FILL	-
6.0' BELOW	To 10.5' BELOW	4.5'	CLAY & GRAVEL FILL	-
10.5' BELOW	To 13.0' BELOW	2.5'	SILTY FINE SAND	-
13.0' BELOW	To 18.0' BELOW	5.0'	SILT, FINE SAND AND SHELLS	-
18.0' BELOW	To 18.5' BELOW	0.5'	STONE	-
18.5' BELOW	To 19.5' BELOW	1.0'	MED. BLUE CLAY, SOME FINE SAND	-
19.5' BELOW	To 24.0' BELOW	4.5'	HARD YELLOW CLAY AND LITTLE VERY FINE SAND	-
24.0' BELOW	To 28.0' BELOW	4.0'	MEDIUM BLUE CLAY	-

WATER LEVEL AT 7.7' BELOW SURFACE

*1 SEE NOTE NO 1

*5 SEE NOTE NO 5,

*4 SEE NOTE NO 4

*9 SEE NOTE NO 9.

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 39

DATE 12/17/63

MADE BY AE

CHECKED BY VO

BORING LOGS

SUBJECT SOUTH END URBAN CENTRAL AREA R-56

BORING No 138 SURFACE ELEVATION 20.0 * 4 BSCE

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
20	To 8	12'	FILL	-
8	To -4	12'	FINE SILTY SAND, MUD, OLD TIMBERS	-
-4	To -20	16'	HARD YELLOW CLAY	-

NO WATER LEVEL SHOWN

BORING No 139 SURFACE ELEVATION 10.5 * 4 BSCE

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
10.5	To 4.5	6'	FILL; SAND, GRAVEL, ASH	-
4.5	To -2.5	7'	SILT, SAND	-
-2.5	To -14.5	12'	HARD BLUE CLAY	-

NO WATER LEVEL SHOWN

BORING No 140 SURFACE ELEVATION 18 * 4 BSCE

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
18	To 9	9'	GRAVEL, CLAY, SAND FILL	-
9	To 2	7'	YELLOW CLAY, BLUE MIXED	-
2	To -4	6'	YELLOW CLAY	-

NO WATER LEVEL SHOWN

BORING No 141 SURFACE ELEVATION 17.5 * 4 BSCE

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.5	To 10.5	7'	ASH FILL	-
10.5	To 3.5	7'	GRAVEL, CLAY	-
3.5	To -2.5	6'	COARSE GRAVEL	-

NO WATER LEVEL SHOWN

* 4 SEE NOTE NO 4,

THE THOMPSON & LIGHTNER CO., INC.

SHEET NO. 40
 DATE 12/17/63
 MADE BY AS
 CHECKED BY VO

BORING LOGS

SUBJECT SOUTH END URSAH RESEARCH AREA R-55

BORING No 142 SURFACE ELEVATION 19.5 * 4 BSCE

TREMONT No 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
19.5	To 13.5	6'	SAND, GRAVEL	-
13.5	To 8.5	5'	CLAY, MUD, SHELLS	-
8.5	To 3.5	5'	FINE SAND, LITTLE CLAY	-
3.5	To -1.5	5'	SAND, BLUE CLAY, MIXED	-
-1.5	To -6.5	5'	YELLOW CLAY	-

NO WATER LEVEL SHOWN

BORING No 143 SURFACE ELEVATION — * 2 R 1955

TREMONT No. 8

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
SURFACE	To 50.0' BELOW	50'	—	—
50.0' BELOW	To 85' BELOW	35'	SOFT BLUE CLAY	—
AT 85'		-	LAYER OF BOULDERS IN SOFT BLUE CLAY	
85' BELOW	To 90' BELOW	5'	SOFT BLUE CLAY, FEW BOULDERS	
90' BELOW	To 110' BELOW	20'	SOFT BLUE CLAY	
110' BELOW	To 112' BELOW	2'	VERY COMPACT FINE GRAY SAND, GRAVEL AND LITTLE SHALE	63

AT 112'

REFUSAL

WATER LEVEL AT 8' 0" BELOW SURFACE - 4-30-55, 6:00 PM

BORING No 144 SURFACE ELEVATION 22 * 4 BSCE

TREMONT No. 8

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
22	To -4	26'	FILL; HARD SAND, GRAVEL, CLAY	-
-4	To -12	8'	SOFT SILT	-
-12	To -13	1'	SILTY SAND	-
-13	To -21	8'	SILTY PEAT	-
-21	To -31	10'	HARD BLUE CLAY	-
-31	To -39	8'	HARD FINE SAND	-
-39	To -50	11'	MEDIUM BLUE CLAY	-

NO WATER LEVEL SHOWN

- * 1 SEE NOTE NO 1
- * 2 SEE NOTE NO 2
- * 4 SEE NOTE NO 4

SHEET NO. 41
 DATE 1-17-68
 MADE BY AS
 CHECKED BY VO

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH BAY BRIDGE GENERAL AREA 1-56

BORING No 145 SURFACE ELEVATION 19 * 11 MTA

SHAWMUT No 9

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
19	To 10	9'	FILL; SAND, GRAVEL, BRICK, ASHES	-
10	To 7.5	2.5'	DARK BROWN PEAT	-
7.5	To -10	17.5'	YELLOW BR. CLAY & SILT; SOME F. SAND (MED)	-
-10	To -13	3'	PUR. GRAY SILTY CLAY - LITTLE SAND (MED)	-
-13	To -20	7'	BLUE GRAY SAND - TRACE SILTY CLAY (VERY COMPACT)	-

WATER LEVEL 10' BELOW SURFACE

BORING No 146 SURFACE ELEVATION 19.13 #4 - B-3-1969

SHAWMUT No. 9

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
19.13	To 10.13	9.0'	MISC. FILL	-
10.13	To 8.63	1.5'	SILT & MUD	-
8.63	To 1.63	7.0'	PEAT	-
1.63	To -0.37	2.5'	FINE SAND	-

NO WATER LEVEL SHOWN

BORING No 147 SURFACE ELEVATION 19.10 #4 - B-3-1969

SHAWMUT No 9

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
19.1	To 11.1	8.0'	MISC. FILL	-
11.1	To -0.9	12.0'	SAND & LITTLE CLAY	-

NO WATER LEVEL SHOWN

BORING No 148 SURFACE ELEVATION 18.50 * 8 P11A 1969

SHAWMUT No 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOW
18.50	To 6.5	12.0'	CONCRETE, LOOSE SAND, GRAVEL & BRICK FILL	-
6.5	To 0.0	6.5'	SILTY PEAT	-
0.0	To -5.5	5.5'	MEDIUM BLUE CLAY, LITTLE FINE SAND	9
-5.5	To -11.5	6.0'	HARD BLUE CLAY & FINE SAND	16
-11.5	To -16.5	5.0'	SOFT BLUE CLAY	6

WATER LEVEL AT 6.0' BELOW SURFACE

- *1 SEE NOTE NO 1
- *4 SEE NOTE NO 4.
- *11 SEE NOTE NO 11.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 42

DATE 12/17/63

MADE BY AS

CHECKED BY VO

SUBJECT SOUTH END URBAN GENERAL AREA R-56

BORING LOGS

BORING No 149 SURFACE ELEVATION - 18.95 * 8 BHA 1939

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
18.95	To 4.95	14.0'	CONCRETE, LOOSE SAND, GRAVEL, BRICK & CLAY FILL	4
4.95	To -3.55	8.5'	SILTY PEAT	—
-3.55	To -11.05	7.5'	MEDIUM BLUE CLAY, LITTLE FINE SAND	9
-11.05	To -13.55	2.5'	HARD BLUE CLAY, LITTLE FINE SAND	16
-13.55	To -15.55	2.0'	FIRM FINE SAND	7
-15.55	To -21.05	5.5'	HARD YELLOW CLAY	19

WATER LEVEL AT 8.0' BELOW SURFACE

BORING No 150 SURFACE ELEVATION - 19.75 * 8 BHA 1939

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.75	To 4.75	15.0'	CONCRETE, LOOSE SAND, GRAVEL & CLAY FILL	4
4.75	To 0.25	4.5'	SILTY PEAT	—
0.25	To -8.25	8.5'	HARD YELLOW CLAY	19
-8.25	To -14.25	6.0'	MEDIUM YELLOW CLAY	10
-14.25	To -20.25	6.0'	SOFT BLUE CLAY	6

WATER LEVEL AT 7.5' BELOW SURFACE

BORING No 151 SURFACE ELEVATION - 19.50 * 8 BHA 1939

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.50	To 4.5	15.0'	CONCRETE, LOOSE SAND, GRAVEL, ASH, CLAY & BRICK FILL	4
4.5	To 1.5	3.0'	SILTY PEAT	—
1.5	To 0.0	1.5'	SOFT BLUE CLAY	3
0.0	To -9.0	9.0'	HARD YELLOW CLAY	21
-9.0	To -15.5	6.5'	MEDIUM YELLOW CLAY	8
-15.5	To -23.5	8.0'	SOFT BLUE CLAY	4

WATER LEVEL AT 12.0' BELOW SURFACE

BORING No 152 SURFACE ELEVATION - 17.5 * 11 MTA

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.5	To 9.2	8.3'	FILL; SAND, GRAVEL, BRICK, ASHES	—
9.2	To 0.8	8.4'	DARK BR. PEAT	—
0.8	To -23.4	24.2'	YELLOW BR. CLAY & SILT & SAND, tr. GRAVEL (STIFF)	—

WATER LEVEL AT 6.3' BELOW SURFACE

*1 SEE NOTE NO. 1. *8 SEE NOTE NO. 8. *11 SEE NOTE NO. 11.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 43
 DATE 12/17/63
 MADE BY AS
 CHECKED BY LD

SUBJECT SOUTH END OF THE GENERAL APT. R-56

BORING No 153 SURFACE ELEVATION - 13.06 * 8 BHA 1930

SHAWMUT No. 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
18.06	To 9.06	9.0'	LOOSE BRICK, SAND, GRAVEL & CLAY FILL	3
9.06	To 3.56	5.5'	SOFT, SILTY PEAT	-
3.56	To 2.56	1.0'	HARD YELLOW CLAY	21
2.56	To -1.94	4.5'		

WATER LEVEL AT 6.0' BELOW SURFACE

BORING No 154 SURFACE ELEVATION - 19.08 * 8 BHA 1930

SHAWMUT No. 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.08	To 11.58	7.5'	LOOSE SAND, GRAVEL, CLAY & BRICK FILL	3
11.58	To -2.92	14.5'	HARD YELLOW CLAY	21
-2.92	To -12.92	10.0'	MEDIUM BLUE CLAY	8
-12.92	To -20.92	8.0'	SOFT BLUE CLAY	6

WATER LEVEL AT 5.5' BELOW SURFACE

BORING No 155 SURFACE ELEVATION - 13.5 * 11 MTH

SHAWMUT No. 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
19.5	To 15.5	4.0'	FILL; SAND, GRAVEL, BRICK	-
15.5	To -1.0	16.5'	YELLOW BR. CLAY & SILT. LITTLE SAND & GRAVEL (STIFF)	
-1.0	To -16.0	15.0'	BLUE-GRAY SILTY CLAY - LITTLE SAND (SOFT)	
-16.0	To -23.0	7.0'	BLUE-GRAY SAND (LOOSE)	

WATER LEVEL AT 6.0' BELOW SURFACE

BORING No 156 SURFACE ELEVATION - 20.4 * 8 BHA 1930

SHAWMUT No. 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
20.4	To 11.9	8.5'	LOOSE SAND, GRAVEL, BRICK & ASH FILL	3
11.9	To 2.4	9.5'	HARD YELLOW CLAY, LITTLE FINE GRAVEL	22
2.4	To -2.6	5.0'	MEDIUM BLUE CLAY	9
-2.6	To -14.6	12.0'	SOFT BLUE CLAY	5

WATER LEVEL AT 8.0' BELOW SURFACE

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 8.

*11 SEE NOTE NO 11.

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 49

DATE 12/12/68

MADE BY AS

CHECKED BY YO

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No 157 SURFACE ELEVATION - 18.97 *8 BHA 1930

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
18.97	To 8.97	10.0'	CONCRETE, LOOSE SAND, GRAVEL, BRICK FILL	3
8.97	To 4.97	4.0'	SOFT PEAT, SAND, GRAVEL, CLAY FILL	-
4.97	To 2.97	2.0'	MEDIUM BLUE CLAY	8
2.97	To -2.03	5.0'	HARD YELLOW CLAY	21

WATER LEVEL AT 6.0' BELOW SURFACE

BORING No 158 SURFACE ELEVATION - 13.0 *8 BHA 1930

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
13.0	To 7.0	6.0'	LOOSE SAND, GRAVEL, BRICK, CLAY, ASH FILL	3
7.0	To 1.0	6.0'	SILTY PEAT	-
1.0	To 0.0	1.0'	MEDIUM BLUE CLAY, SAND, LITTLE GRAVEL	8
0.0	To -12.0	12.0'	HARD YELLOW CLAY	22
-12.0	To -19.0	7.0'	MEDIUM YELLOW CLAY	10
-19.0	To -25.0	6.0'	SOFT BLUE CLAY	6

WATER LEVEL AT 7.0' BELOW SURFACE

BORING No 159 SURFACE ELEVATION - 16.04 *8 BHA 1930

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
16.04	To 9.54	6.5'	LOOSE COARSE SAND, GRAVEL, CLAY FILL	3
9.54	To -8.96	18.5'	HARD YELLOW CLAY, LITTLE FINE GRAVEL	22
-8.96	To -17.96	9.0'	MEDIUM YELLOW CLAY	9
-17.96	To -23.96	6.0'	SOFT BLUE CLAY	6

WATER LEVEL AT 6.0' BELOW SURFACE

BORING No 160 SURFACE ELEVATION - 13.40 *8 BHA 1930

SHAWMUT No 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
13.40	To 13.4	5.0'	LOOSE SAND, GRAVEL, BRICK FILL	-
13.4	To 0.4	13.0'	HARD YELLOW CLAY, LITTLE FINE GRAVEL	22
0.4	To -11.1	11.5'	MEDIUM BLUE CLAY	9
-11.1	To -16.6	5.5'	SOFT BLUE CLAY	6

WATER LEVEL AT 4.5' BELOW SURFACE

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 11.

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 15
 DATE 12/1/38
 MADE BY J. J.
 CHECKED BY H. B.

BORING LOGS

SUBJECT SOUTH END URBAN LANDFILL AREA R-56

BORING NO 161 SURFACE ELEVATION 18.05 *8 BHA 1939

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
18.0	9.5	8.5'	LOOSE BRICK, SAND, GRAV, CLAY FILL	3
9.5	7.0	2.5	SOFT SILTY PEAT	NO DATA
7.0	2.0	5.0	HARD YELLOW CLAY	21

WATER LEVEL 6.0' BELOW SURFACE

BORING NO 162 SURFACE ELEVATION 17.7 *8 BHA 1937

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
17.7	8.9	8.5	SAND, GRAV, BRICK, CLAY FILL	3
8.9	4.9	4.0	SOFT SILT, LITTLE SAND	—
4.9	-5.6	10.5	HARD YEL. CLAY, LITTLE F. SAND	15
-5.6	-12.6	7.0	MEDIUM BLUE CLAY	8
-12.6	-17.6	5.0	SOFT BLUE CLAY	6

WATER LEVEL 6.0' BELOW SURFACE

BORING NO 163 SURFACE ELEVATION 17.3 *8 BHA-1737

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
17.3	8.8	8.5	LOOSE BRICK, SAND, GRAV, CLAY FILL	3
8.8	2.3	6.5	HARD YELLOW CLAY	22

WATER LEVEL 6.0' BELOW SURFACE

BORING NO 164 SURFACE ELEVATION 17.1 *8 BHA-1737

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
17.1	9.4	7.5	LOOSE BRICK & SAND/FILL	3
9.4	8.1	1.5	SOFT BLUE CLAY	4
8.1	-3.9	12.6	HARD YELLOW CLAY	20
-3.9	-12.9	9.0	MED. YEL. CLAY, LITTLE GRAVEL	9
-12.9	-17.9	5.0	SOFT BLUE CLAY	6

WATER LEVEL 6.5' BELOW SURFACE

*1 SEE NOTE NO 1

*8 SEE NOTE NO 8

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-50

BORING NO 165 SURFACE ELEVATION 14.5 *8 BHA 1939

SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
14.5	8.0	6.5	LOOSE COARSE SAND, GRAV & BRK FILL	3
8.0	6.0	2.0	SOFT BLUE CLAY	3
6.0	-6.5	12.5	HARD YELLOW CLAY	22
-6.5	-13.0	6.5	MEDIUM YELLOW CLAY	8
-13.0	-20.5	7.5	SOFT BLUE CLAY	6

WATER LEVEL 4.5 BELOW SURFACE

BORING NO 166 SURFACE ELEVATION 14.6 *8 BHA 1939

SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
14.6	8.6	6.0	LOOSE SAND, BRICK & ASH FILL	3
8.6	-9.5	18.1	HARD YELLOW CLAY	18
-9.5	-20.9	11.4	MEDIUM YELLOW CLAY	10
-20.9	-25.4	4.5	SOFT BLUE CLAY	6

WATER LEVEL 2.5 BELOW SURFACE

BORING NO 167 SURFACE ELEVATION 14.6 *8 BHA 1939

SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
14.6	7.6	7.0	LOOSE BRICK, SAND, GRAV, ASH FILL	3
7.6	6.4	1.2	MED. BLUE CLAY, LITTLE F. GRAVEL	12
6.4	2.6	3.8	HARD YEL. CLAY, LITTLE F. GRAVEL	22

WATER LEVEL 3.0 BELOW SURFACE

BORING NO 169 SURFACE ELEVATION 17.5 *11 MTA 1940

SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
17.5	14.0	3.5	SAND, GRAV, CONCRETE FILL	- No DATA
14.0	-8.0	22.0	YEL. BR. CLAY & SILT, SOME SAND	"
-8.0	-10.0	2.0	YEL. BR. SAND, LITTLE CLAY & SILT	"
-10.0	-20.0	16.0	BLUE GRAY SILTY CLAY, TR. SAND	"
-20.0	-23.0	2.0	BLUE GRAY SAND, SOME CLAY, SILT	"

NO WATER LEVEL SHOWN

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 8.

*11 SEE NOTE NO 11.

SHEET NO. 17
 DATE 12/19/63
 MADE BY JHS
 CHECKED BY PTB

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-55

BORING NO 169 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	*1 <u>BLOWS</u>
19.0	15.0	4.0	LOAM, ETC. FILL	9
15.0	5.5	9.5	HARD CLAY	29
5.5	-4.0	9.5	MED. TO HARD CLAY	18
-4.0	-12.0	8.0	MEDIUM CLAY	13

WATER LEVEL AT 14.0 ELEVATION

BORING NO 170 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	*1 <u>BLOWS</u>
19.0	15.0	4.0	LOAM, COAL, DUST, ETC. FILL	9
15.0	-2.0	17.0	HARD CLAY	26
-2.0	-11.0	9.0	MEDIUM CLAY	16

WATER LEVEL AT 14.0 ELEVATION

BORING NO 171 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	*1 <u>BLOWS</u>
19.0	14.5	4.5	CLAY, ETC. FILL	8
14.5	7.0	7.5	HARD CLAY	25
7.0	-2.5	9.5	MED. TO HARD CLAY	19
-2.5	-11.0	8.5	MEDIUM CLAY	10

WATER LEVEL AT 14.0 ELEVATION

BORING NO 172 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	*1 <u>BLOWS</u>
19.0	13.5	5.5	ASHES, ETC. FILL	10
13.5	-3.5	17.0	HARD CLAY	29
-3.5	-11.5	8.0	MEDIUM CLAY	9

WATER LEVEL AT 14.0 ELEVATION

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 8.

SHEET NO. 45
 DATE. 12/17/53
 MADE BY. JAS
 CHECKED BY. RFB

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 173 SURFACE ELEVATION 18.5 #8 BHA 1949
 SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
18.5	17.0	1.5	LOAM	4
17.0	13.0	4.0	COMPACT CLAY, SAND, GRAV. FILL	22
13.0	7.0	6.0	HARD CLAY	36
7.0	2.0	5.0	MED. TO HARD CLAY	16
2.0	-12.5	14.5	MEDIUM CLAY	9
-12.5	-6 1/2	5 1/2	SOFT CLAY	3

WATER LEVEL AT 14.0 ELEVATION

BORING NO 174 SURFACE ELEVATION 19.0 #8 BHA 1948
 SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOW
19.0	12.5	7.0	LOAM, RUBBLE, ETC. FILL	8
12.0	-3.5	15.5	HARD CLAY	29
-3.5	-11.5	8.0	MEDIUM CLAY	9

WATER LEVEL AT 14.0 ELEVATION

BORING NO 175 SURFACE ELEVATION 19.0 *8BHA 1948
 SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
19.0	11.0	8.0	BUILDING REFUSE FILL	8
11.0	-2.5	13.5	HARD CLAY	18
-2.5	-11.5	9.0	MEDIUM CLAY	12

WATER LEVEL AT 14.0 ELEVATION

BORING NO 176 SURFACE ELEVATION 19.0 #8 BHA 1948
 SHAWMUT NO 9

FROM	TO	THICKNESS	DESCRIPTION	*1 BLOWS
19.0	12.5	6.5	SAND, CINDER, ETC. FILL	12
12.5	3.0	9.5	HARD CLAY	29
3.0	-2.5	5.5	MED. TO HARD CLAY	17
-2.5	-16.0	7.5	MEDIUM CLAY	13

WATER LEVEL AT 14.0 ELEVATION

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 8.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 39

DATE: 12/12/57

MADE BY: V.L.

CHECKED BY: _____

SUBJECT SOUTH AND URBAN DEVELOPMENTAL AREA R-56

BORING LOGS

BORING NO. 177 SURFACE ELEVATION 11.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.0	10.0	9.0	BUILDING REFUSE FILL	9
10.0	-2.5	12.5	HARD CLAY	19
-2.5	-11.0	8.5	MEDIUM CLAY	13

WATER LEVEL AT 14.0 ELEVATION

BORING NO. 178 SURFACE ELEVATION 14.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.0	12.0	7.0	ASHES, ETC. FILL	10
12.0	-3.0	15.0	HARD CLAY	29
-3.0	-11.5	8.5	MEDIUM CLAY	9

WATER LEVEL AT 14.0 ELEVATION

BORING NO. 179 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.0	16.3	2.7	LOAM	3
16.3	10.5	5.8	COMPACT CLAY, SAND, GRAY FILL	30
10.5	7.0	3.5	COMPACT CLAY, ETC. FILL	20
7.0	-5.5	12.5	HARD CLAY	25

WATER LEVEL AT 14.0 ELEVATION

BORING NO. 180 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
19.0	11.0	8.0	NOT GIVEN	10
11.0	3.0	8.0	" "	30
3.0	-11.5	14.5	" "	16

WATER LEVEL AT 14.0 ELEVATION

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 8

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 50
DATE 12/19/43
MADE BY JAC
CHECKED BY RFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 181 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1</u>	<u>BLOWS</u>
19.0	11.0	8.0	FILL & LOAM MIXED		8
11.0	9.0	2.0	HARD CLAY		19
9.0	-13.0	22.0	MEDIUM CLAY		13

WATER LEVEL AT 14.0 ELEVATION

BORING NO 182 SURFACE ELEVATION 14.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1</u>	<u>BLOWS</u>
14.0	14.0	5.0	BUILDING REFUSE, GRAV. FILL		8
14.0	7.0	7.0	BRICK FRAG. ETC. FILL		10
7.0	-2.5	9.5	HARD CLAY, SOME SAND		29
-2.5	-11.0	8.5	MEDIUM CLAY		9

WATER LEVEL AT 14.0 ELEVATION

BORING NO 183 SURFACE ELEVATION 19.0 *8 BHA 1948

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1</u>	<u>BLOWS</u>
19.0	12.5	6.5	LOAM & FILL		3
12.5	7.5	5.0	CLAY, POSSIBLE FILL		5
7.5	6.0	1.5	HARD CLAY		19
6.0	-12.5	18.5	MEDIUM CLAY		9

WATER LEVEL AT 14.0 ELEVATION

BORING NO 184 SURFACE ELEVATION NO DATA *3 BOS 1928

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0	1.5	1.5	—	—
1.5	7.5	6.0	CINDER & CLAY FILL	—
7.5	27.1	19.6	HARD YELLOW CLAY	—

NO WATER LEVEL SHOWN

- *1 SEE NOTE NO 1,
- *3 SEE NOTE NO 3,
- *8 SEE NOTE NO 8,

SHEET No. 51
 DATE 12/2/43
 MADE BY JAE
 CHECKED BY RFE

THE THOMPSON & LICHTNER CO., INC.
 BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 185 SURFACE ELEVATION NO DATA *3 BOS 1928

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0	2.0	2.0	—	—
2.0	8.7	6.7	CLAY FILL	—
8.7	26.9	18.2	HARD YELLOW CLAY	—

NO WATER LEVEL SHOWN

BORING NO 186 SURFACE ELEVATION 16.5 #11-HTA-1928

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
16.5	9.5	7.0	SAND, GRAVEL, BRICK FILL	—
9.5	1.5	8.0	YELLOW BROWN CLAY & LITTLE SAND (SOFT)	—
1.5	-6.5	8.0	BLUE-GRAY SILTY CLAY (SOFT)	—
-6.5	-8.5	2.0	BLUE-GRAY SAND	—
-8.5	-36.0	27.5	BLUE-GRAY SILTY CLAY & LITTLE SAND (SOFT)	—

NO WATER LEVEL SHOWN

BORING NO 187 SURFACE ELEVATION 17.0 #11-HTA-1928

SHAWMUT NO 9

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.0	9.0	8.0	SAND, GRAVEL, BRICK FILL	—
9.0	-3.0	12.0	GRAY BROWN SILTY CLAY LITTLE SAND (MEDIUM)	—
-3.0	-55.0	52.0	BLUE GRAY SILTY CLAY LITTLE SAND	—

NO WATER LEVEL SHOWN

BORING NO 188 SURFACE ELEVATION 17.0 #11-MTA-1928

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
17.0	9.0	8.0	SAND, GRAVEL, CLAY & BRICK FILL	— NO DATA
9.0	-3.0	12.0	YELLOW GRAY SILTY CLAY, LITTLE SAND "	—
-3.0	-37.0	34.0	BLUE GRAY SILTY CLAY, LITTLE SAND "	—

NO WATER LEVEL SHOWN

*3 SEE NOTE NO 3.

*11 SEE NOTE NO 11.

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 53
DATE 12/20/63
MADE BY JAC
CHECKED BY KFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 189 SURFACE ELEVATION 18.03 # 9-BSD-1950

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
18.0	11.5	6.5	LOOSE SAND, GRAVEL, BRICK FILL	-
11.5	3.5	8.0	HARD YELLOW BLUE CLAY	-
3.5	-3.0	6.5	MEDIUM YELLOW CLAY	-
-3.0	-42.0	39.0	SOFT BLUE CLAY	-

NO WATER LEVEL SHOWN

BORING NO 190 SURFACE ELEVATION 14.58 # 9 BSD 1757

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1 BLOWS</u>
14.5	10.5	4.5	FIRM SAND, GRAVEL, TRACE CLAY FILL	8
10.5	8.5	2.0	FINE SAND & CLAY	3
8.5	0	8.5	HARD YELLOW & BLUE CLAY	12
0	-6.5	6.5	MEDIUM YELLOW CLAY	6
-6.5	-94.5	88.0	SOFT BLUE CLAY	2
-94.5	-100.5	6.0	HARD FINE SAND, SOME GRAVEL; TRACE OF CLAY	18

NO WATER LEVEL SHOWN

BORING NO 191 SURFACE ELEVATION 12.2 # 9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1 BLOWS</u>
12.2	9.6	2.6	LOOSE SAND, GRAVEL, SOME CLAY FILL	4
9.6	1.2	8.4	HARD YELLOW & BLUE CLAY	15
1.2	-6.3	7.5	MEDIUM YELLOW CLAY	6
-6.3	-47.8	41.5	SOFT BLUE CLAY	2

NO WATER LEVEL SHOWN

BORING NO 192 SURFACE ELEVATION 14.59 # 9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1 BLOWS</u>
14.6	10.6	4.0	LOOSE SAND, GRAVEL, BRICK FILL	5
10.6	3.1	7.5	HARD YELLOW & BLUE CLAY	17
3.1	-2.9	6.0	MEDIUM YELLOW CLAY	
-2.9	-35.4	32.5	SOFT BLUE CLAY	

NO WATER LEVEL SHOWN

*1 SEE NOTE NO 1.

*9 SEE NOTE NO 9.

THE THOMPSON & LIGHTNER CO., INC.
BORING LOGS

SHEET NO. 53
DATE 10/2/53
MADE BY JAC
CHECKED BY JEM

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 193 SURFACE ELEVATION 16.6 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
16.6	12.1	4.5	LOOSE SAND, GRAVEL, BRICK FILL	4
12.1	4.6	7.5	HARD YELLOW & BLUE CLAY	18
4.6	-0.9	5.5	MEDIUM YELLOW CLAY	8
-0.9	-33.4	32.5	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 194 SURFACE ELEVATION 11.9 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
11.9	9.4	2.5	LOOSE SAND, GRAVEL, BRICK FILL	4
9.4	0.9	8.5	HARD YELLOW & BLUE CLAY, GRAVEL	17
0.9	-5.1	6.0	MEDIUM YELLOW CLAY	7
-5.1	-38.1	33.0	SOFT BLUE CLAY	2

NO WATER LEVEL SHOWN

BORING NO 195 SURFACE ELEVATION 15.8 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
15.8	11.8	4.0	LOOSE SAND, GRAVEL FILL	5
11.8	3.3	8.5	HARD YELLOW & BLUE CLAY	17
3.3	-2.2	5.5	MEDIUM YELLOW CLAY	8
-2.2	-34.2	32.0	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 196 SURFACE ELEVATION 10.5 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
10.5	8.0	2.5	LOOSE SAND & GRAVEL FILL	6
8.0	-1.5	9.5	HARD YELLOW CLAY	16
-1.5	-8.5	7.0	MEDIUM YELLOW CLAY	7
-8.5	-39.5	31.0	SOFT BLUE CLAY	2

NO WATER LEVEL SHOWN

*1 SEE NOTE NO 1

*9 SEE NOTE NO 9

THE THOMPSON & LICHTNER CO., Inc.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET NO. 54
 DATE 12/29/59
 MADE BY JAC
 CHECKED BY BEB

BORING NO 197 SURFACE ELEVATION 13.6 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
13.6	10.6	3.0	LOOSE SAND, GRAVEL, BRICK FILL	3
10.6	2.1	2.5	HARD YELLOW & BLUE CLAY	17
2.1	-3.4	5.5	MEDIUM YELLOW CLAY	8
-3.4	-36.4	33.0	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 198 SURFACE ELEVATION 15.5 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
15.5	9.0	6.5	LOOSE SAND, GRAVEL & CLAY FILL	7
9.0	3.5	5.5	MEDIUM YELLOW CLAY	
			TRACE OF GRAVEL	10
3.5	-4.0	7.5	MEDIUM YELLOW CLAY	7
-4.0	-37.5	30.5	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 199 SURFACE ELEVATION 12.9 *9 BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
12.9	9.4	3.5	FIRM SAND, SOME GRAVEL & RED BRICKS, TRACE OF CLAY FILL	10
9.4	1.4	8.0	HARD YELLOW CLAY, TRACE OF GRAVEL	15
1.4	-6.1	7.5	MEDIUM YELLOW CLAY	7
-6.1	-68.6	62.5	SOFT BLUE CLAY	3
-68.6	-70.1	1.5	HARD FINE SAND & GRAVEL	22

NO WATER LEVEL SHOWN

*1 SEE NOTE NO. 1.

*9 SEE NOTE NO 9.

SHEET NO. 55
 DATE 12/17/63
 MADE BY JAC
 CHECKED BY RFB

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA P-56

BORING NO 200

SURFACE ELEVATION = 12.28

*9. BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1B - BLOWS</u>
12.28	8.7	3.5	LOOSE SAND, GRAV. & CLAY FILL	5
8.7	-0.3	9.0	HARD YELLOW CLAY, TRACE GRAVEL	15
-0.3	-6.8	6.5	MEDIUM YELLOW CLAY	7
-6.8	-39.8	31.0	SOFT BLUE CLAY	2

NO WATER LEVEL SHOWN

BORING NO 201

SURFACE ELEVATION = 20.63

*9. BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1B - BLOWS</u>
20.6	11.6	9.0	LOOSE SAND & GRAVEL FILL	5
11.6	9.6	2.0	LOOSE SAND, GRAVEL, SILT FILL	3
9.6	2.5	7.6	HARD YELLOW & BLUE CLAY	12
2.5	-1.9	3.7	MEDIUM YELLOW CLAY	9
-1.9	-5.7	4.0	MEDIUM YELLOW CLAY	7
-5.7	-29.4	23.5	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 202

SURFACE ELEVATION = 20.75

*9. BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1B - BLOWS</u>
20.7	10.2	10.5	LOOSE SAND & GRAVEL FILL	6
10.2	1.7	8.5	HARD YELLOW & BLUE CLAY	12
1.7	-7.3	6.0	MEDIUM YELLOW CLAY	7
-7.3	-29.3	25.5	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 203

SURFACE ELEVATION = 20.69

*9. BSD 1959

SHAWMUT NO 10

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1B - BLOWS</u>
20.6	10.6	10.0	LOOSE SAND & GRAVEL FILL	3
10.6	8.6	2.0	FINE SAND, GRAVEL & CLAY FILL	5
8.6	2.1	6.5	HARD YELLOW & BLUE CLAY	10
2.1	-5.4	7.5	MEDIUM YELLOW CLAY	7
-5.4	-29.4	24.0	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

*1B SEE NOTE NO 1B

*9 SEE NOTE NO 9.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 56

DATE 12/17/63

MADE BY JAC

CHECKED BY KFB

SUBJECT SOUTHWEST URBAN RENEWAL AREA R-56

BORING LOGS

BORING NO 204

SURFACE ELEVATION = 20.87

*9. BSD 1759

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
20.8	10.8	10.0	LOOSE SAND & GRAVEL FILL	3
10.8	8.8	2.0	FINE SAND & CLAY	8
8.8	2.8	6.0	HARD YELLOW & BLUE CLAY	12
2.8	-5.2	8.0	MEDIUM YELLOW CLAY	7
-5.2	-29.2	24.0	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 205

SURFACE ELEVATION = 20.24

*9. BSD 1959

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
20.2	10.2	10.0	LOOSE SAND & GRAVEL FILL	4
10.2	8.2	2.0	FINE SAND & CLAY	8
8.2	1.2	7.0	HARD YELLOW & BLUE CLAY	12
1.2	-4.8	6.0	MEDIUM YELLOW CLAY	7
-4.8	-29.8	25.0	SOFT BLUE CLAY	3

NO WATER LEVEL SHOWN

BORING NO 206

SURFACE ELEVATION = 20.1

*9. BSD 1959

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
20.1	8.1	12.0	LOOSE SAND, LOAM & GRAVEL FILL	5
8.1	1.1	7.0	HARD YELLOW CLAY	12
1.1	-4.9	6.0	MEDIUM YELLOW CLAY	8
-4.9	-67.9	63.0	SOFT BLUE CLAY	3
-67.9	-69.4	1.5	HARD FINE SAND, GRAVEL,	42

NO WATER LEVEL SHOWN

SOME CLAY

BORING NO 207

SURFACE ELEVATION = 15.5

*9. BSD 1959

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
15.5	8.5	7.0	SAND, GRAVEL & BRICK FILL	NO DATA
8.5	1.5	7.0	YELLOW BROWN CLAY & SILT	"
1.5	-35.0	36.5	CLAY, LITTLE SAND	"

NO WATER LEVEL SHOWN

*18 SEE NOTE NO 18

*9 SEE NOTE NO 9

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RECREATIONAL AREA P-5

SHEET NO. 57
 DATE: 12/17/63
 MADE BY: JAC
 CHECKED BY: RFH

BORING NO 208

SURFACE ELEVATION = NO DATA

*3 BOS 1963

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
0	1	1	NO DATA	NO DATA
1	8	7	SAND & LITTLE GRAVEL	"
8	18	10	BLUE CLAY	"

NO WATER LEVEL SHOWN

BORING NO 209

SURFACE ELEVATION = NO DATA

*3 BOS 1963

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
0	1	1	SAND FILL	NO DATA
1	17.5	16.5	GRAY SAND	"

NO WATER LEVEL SHOWN

BORING NO 210

SURFACE ELEVATION = NO DATA

*3 BOS 1963

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#18 - BLOWS
0	1	1	SAND FILL	NO DATA
1	8	7	FINE BROWN SAND	"
8	18	10	MEDIUM BROWN SAND	"

NO WATER LEVEL SHOWN

BORING NO 211

SURFACE ELEVATION = 16.0

*11 MTA 1940

SHAWMUT NO. 10

FROM	TO	THICKNESS	DESCRIPTION	#1A BLOWS
16.0	8.0	8.0	BROWN GRAY SAND & GRAVEL	NO DATA
8.0	-3.5	11.5	YELLOW CLAY, SILT SOME GRAVEL.	"
-3.5	-30.0	26.5	BLUE GRAY SILTY CLAY, LITTLE SAND	"

NO WATER LEVEL SHOWN

BORING NO 212

SURFACE ELEVATION = 17.0

*11 MTA 1940

SHAWMUT NO 10

FROM	TO	THICKNESS	DESCRIPTION	#1A - BLOWS
17.0	8.5	5.5	SAND, GRAVEL & ASH FILL	NO DATA
8.5	0.5	8.0	YELLOW BROWN CLAY & SILT	"
0.5	-5.5	6.0	MEDIUM YELLOW CLAY & SILT	"
-5.5	-37.0	31.5	BLUE GRAY SILTY CLAY	"

NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A

*18 SEE NOTE NO 18

*3 SEE NOTE NO 3,

*11 SEE NOTE NO 11.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END UPPER REMOVAL AREA

SHEET No. 58
 DATE 12/17/63
 MADE BY JAC
 CHECKED BY RFB

BORING NO 213 SURFACE ELEVATION = 15.0 #11 MTA 1940

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
15.0	10.5	4.5	SAND, GRAVEL, BRICK FILL	NO DATA
10.5	-5.0	15.5	YELLOW CLAY & SILT, SOME SAND	"
-5.0	-36.5	31.5	BLUE GRAY SILTY CLAY, SOME SAND	"

NO WATER LEVEL SHOWN

BORING NO 214 SURFACE ELEVATION = 14.5 #11 MTA 1940

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
14.5	9.5	5.0	SAND, GRAVEL & CINDER FILL	NO DATA
9.5	4.0	5.5	GRAY BROWN SAND - SILT	"
4.0	-6.0	10.0	YELLOW CLAY & SILT, SOME SAND	"
-6.0	-36.5	30.5	BLUE GRAY SILTY CLAY, SOME SAND	"

NO WATER LEVEL SHOWN

BORING NO 215 SURFACE ELEVATION = NO DATA #3 MTA 1940

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
0	11.0	11.0	SAND, GRAVEL & BRICK FILL	NO DATA
11.0	18.5	7.5	YEL. BROWN CLAY & SILT	"
18.5	42.0	23.5	BLUE GRAY SILTY CLAY	"

NO WATER LEVEL SHOWN

BORING NO 216 SURFACE ELEVATION = 13.5 #11 MTA 1940

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
13.5	3.5	10.0	SAND, GRAVEL & CINDER FILL	NO DATA
3.5	-1.0	4.5	GRAY SILT, SOME SAND	"
-1.0	-7.0	3.0	YELLOW CLAY & SILT, SOME SAND	"
-7.0	-25.0	21.0	BLUE GRAY CLAYEY SILT	"
-25.0	-27.0	2.0	VERY COMPACT BLUE GRAY SAND	"
-27.0	-37.5	10.5	BLUE GRAY SILTY CLAY, LITTLE SAND	"

NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A

*3 SEE NOTE NO 3

*11 SEE NOTE NO 11

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN REHABIL AREA R-56

SHEET NO. 59
 DATE 1/19/83
 MADE BY JAC
 CHECKED BY RET

BORING NO 217 SURFACE ELEVATION = 13.0 *3 BOS 1921

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#18- BLOWS
13.0	6.3	6.7	MISCELLANEOUS FILL	NO DATA
6.3	5.8	0.5	SILTY SAND	"
5.8	-6.0	11.8	HARD CLAY	"

NO WATER LEVEL SHOWN

BORING NO 218 SURFACE ELEVATION = NO DATA *5 G 1914

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#18- BLOWS
0	9.7	9.7	NO DATA	NO DATA
9.7	13.0	3.3	"	"
13.0	25.0	12.0	"	"

NO WATER LEVEL SHOWN

BORING NO 219 SURFACE ELEVATION = NO DATA *3 BOS 1921

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#18- BLOWS
0	10.9	10.9	FILL	NO DATA
10.9	13.0	2.1	SILT & FINE SAND	"
13.0	15.2	2.2	HARD CLAY	"
15.2	16.0	0.8	HARD CLAY & GRAVEL	"
16.0	23.0	7.0	HARD CLAY	"

NO WATER LEVEL SHOWN

BORING NO 220 SURFACE ELEVATION = 14.0 *11 MTA 1770

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
14.0	7.0	7.0	SAND, GRAVEL, BRICK, CINDER FILL	NO DATA
7.0	2.0	5.0	BLUE GRAY SAND, LITTLE CLAY & SILT	"
2.0	-6.5	8.5	YELLOW CLAY & SILT, SOME SAND	"
-6.5	-33.0	26.5	BLUE GRAY SILTY CLAY, LITTLE SAND	"

NO WATER LEVEL SHOWN

- *1A SEE NOTE NO 1A
- *1B SEE NOTE NO 1B
- *3 SEE NOTE NO 3
- *5 SEE NOTE NO 5
- *11 SEE NOTE NO 11

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 60
 DATE 12/19/58
 MADE BY JAC
 CHECKED BY ELK

SUBJECT

BORING LOGS
 SOUTH END URBAN DEVELOPMENT AREA P. 56

BORING NO 221 SURFACE ELEVATION = 12.0 *11 MTA-1770

SHAWMUT NO 11

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
12.0	4.0	8.0	SAND, GRAVEL, CLAY, BANK FILL	NO DATA
4.0	-12.0	16.0	GRAY CLAY & SILT, SOME SAND	"
-12.0	-34.0	22.0	BLUE GRAY SILTY CLAY, LITTLE SAND	"

NO WATER LEVEL SHOWN

BORING NO 222 SURFACE ELEVATION = 10.0 *4 BSCE-1010

SHAWMUT NO 12

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
10.0	3.0	7.0	SAND, GRAVEL & ASH FILL	NO DATA
3.0	0.5	2.5	SILT, SAND	"
0.5	-10.0	10.5	STIFF BLUE CLAY	"

NO WATER LEVEL SHOWN

BORING NO 223 SURFACE ELEVATION = 14.0 *11 MTA-1740

SHAWMUT NO 12

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
14.0	6.0	8.0	SAND, GRAVEL, BOULDER FILL	NO DATA
6.0	1.5	4.5	BANK SILT, CLAY, FINE SAND	"
1.5	-11.5	13.0	YELLOW CLAY SILT, SOME SAND	"
-11.5	-37.0	25.5	BLUE GRAY SILTY CLAY, LITTLE SAND	"

NO WATER LEVEL SHOWN

BORING NO 224 SURFACE ELEVATION = 18.0 *4 BSCE 1110

SHAWMUT NO 12

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
18.0	0	18.0	MISCELLANEOUS FILL	NO DATA
0	-20.0	20.0	CLAY	"

NO WATER LEVEL SHOWN

BORING NO 225 SURFACE ELEVATION = 15.5 *11 MTA 1110

SHAWMUT NO 12

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
15.5	7.5	8.0	SAND & GRAVEL FILL	NO DATA
7.5	4.0	3.5	YELLOW CLAY & SILT	"
4.0	-30.0	34.0	BLUE GRAY SILTY CLAY	"

NO WATER LEVEL SHOWN

THE THOMPSON & LICHTNER CO., Inc.

BORING LOGS

SHEET NO. 61
 DATE 12/15/13
 MADE BY JAC
 CHECKED BY RFH

SUBJECT SOUTH END URBAN RESIDENTIAL AREA

BORING NO 226 SURFACE ELEVATION = 21.5 *11 MTA 1940

SHAWMUT NO 12

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
21.5	9.0	12.5	SAND & GRAVEL FILL	NO DATA
9.0	-4.5	13.5	YELLOW SILTY CLAY, TRACE PEAT	"
-4.5	-5.00	45.5	BLUE GRAY SILTY CLAY,	"
NO WATER LEVEL SHOWN			LITTLE SAND, TRACE GRAVEL	

BORING NO 227 SURFACE ELEVATION NO DATA *3 BOS 1707

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0	6.0	6.0	FILL	NO DATA
6.0	20.0	14.0	HARD CLAY	"
NO WATER LEVEL SHOWN				

BORING NO 228 SURFACE ELEVATION = 16.5 *4 BSCE 1717

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
18.5	18.0	0.5	MACADAM	NO DATA
18.0	13.5	5.5	SAND FILL	"
13.5	2.5	11.0	HARD RUBBLE FILL	"
2.5	-4.5	7.0	COARSE SAND, GRAVEL	"
-4.5	-6.5	2.0	GRAVEL HARD PAN	"
NO WATER LEVEL SHOWN				

BORING NO 229 SURFACE ELEVATION = 15.5 *3 BOS 1915

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
15.5	8.5	7.0	SAND, GRAVEL, BRICK FILL	NO DATA
8.5	1.5	7.0	YELLOW CLAY & SILT, SOME SAND	"
1.5	-35.0	36.5	CLAY, LITTLE SAND	"
NO WATER LEVEL SHOWN				

NOTE: SHEETS NO 60 & NO 61,

- *1A SEE NOTE NO 1A
- *3 SEE NOTE NO 3
- *4 SEE NOTE NO 4
- *11 SEE NOTE NO 11.

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 62
DATE 12/13/67
MADE BY JAC
CHECKED BY ETP

SUBJECT SOUTH END URBAN REHABILITATION AREA P-5

BORING NO 230 SURFACE ELEVATION = NO DATA *3 BOS 1915

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0	10.0	10.0	SANDY FILL	NO DATA
10.0	15.0	5.0	DIRTY SAND	"
15.0	19.0	4.0	SAND & BLUE CLAY	"
19.0	20.0	1.0	HARD YELLOW CLAY	"

NO WATER LEVEL SHOWN

BORING NO 231 SURFACE ELEVATION = NO DATA *3 BOS 1915

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0	5.0	5.0	SANDY FILL	NO DATA
5.0	16.0	11.0	HARD RUBBLE FILL	"
16.0	23.0	7.0	COARSE SAND & GRAVEL	"
23.0	25.0	2.0	GRAVEL HARDPAN	"

NO WATER LEVEL SHOWN

BORING NO 232 SURFACE ELEVATION = NO DATA *4 BOS 1919

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0	62.0	62.0	CLAY	NO DATA
62.0	105.0	43.0	CLAY	"
105.0	131.0	26.0	FINE GRAY SAND	"

NO WATER LEVEL SHOWN

BORING NO 233 SURFACE ELEVATION = 16.5 *3 BOS 1736

SHAWMUT NO 7

FROM	TO	THICKNESS	DESCRIPTION	*1B - BLOWS
16.5	9.7	6.6	SAND, GRAVEL, CLAY, BRICK FILL	17
9.7	7.6	2.3	MUD & FILL MIXED	11
7.6	-8.5	16.1	HARD YELLOW CLAY	28

WATER LEVEL 5.5 BELOW SURFACE

*1B SEE NOTE NO 1B.

*3 SEE NOTE NO 3.

*4 SEE NOTE NO 4.

THE THOMPSON & LICHTNER CO., INC.

BORINGS LOGS

SUBJECT SOUTH END URBAN REHABIL AREA R-56

BORING NO 234 SURFACE ELEVATION = NO DATA *3 BOSTON

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	#1B- BLOWS
0	5.5	5.5	SAND, GRAVEL, CLAY, BRICK FILL	NO DATA
5.5	8.0	2.5	MUD & FILL MIXED	3
8.0	26.0	18.0	HARD YELLOW CLAY	28

WATER LEVEL 5.5 BELOW SURFACE

BORING NO 235 SURFACE ELEVATION = NO DATA *3 BOSTON

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	#1B- BLOWS
0	6.5	6.5	SAND, GRAVEL, CLAY, CINDER FILL	NO DATA
6.5	7.5	1.0	MUD & FILL MIXED	"
7.5	8.0	0.5	FIRM BLUE CLAY & SAND	11
8.0	25.0	17.0	HARD YELLOW CLAY	24

WATER LEVEL 6.5 BELOW SURFACE

BORING NO 236 SURFACE ELEVATION = NO DATA *3 BOSTON

WASHINGTON NO 13

FROM	TO	THICKNESS	DESCRIPTION	#1B- BLOWS
0	7.4	7.4	SAND, GRAVEL & CLAY FILL	NO DATA
7.4	11.6	4.2	MUD & PEAT FILL MIXED	0
11.6	29.0	15.4	HARD YELLOW CLAY	38

WATER LEVEL 5.0 BELOW SURFACE

BORING NO 237 SURFACE ELEVATION = 14.8 *8 BHA-1716

WASHINGTON NO 14

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
14.8	9.8	5.0	SAND, GRAVEL & STONE FILL	NO DATA
9.8	7.0	2.8	SAND, GRAVEL & CLAY FILL	"
7.0	-2.5	9.5	YELLOW CLAY & FINE SAND	10
-2.5	-10.2	7.7	YELLOW CLAY & FINE SAND	6

NO WATER LEVEL SHOWN

- *1A SEE NOTE NO 1A.
- *1B SEE NOTE NO 1B.
- *3 SEE NOTE NO 3.
- *8 SEE NOTE NO 8.

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 67

DATE 12/18/45

MADE BY UAC

CHECKED BY LLL

SUBJECT SOUTH END UPPER RECREATION AREA R 56

BORING NO 238 SURFACE ELEVATION = 15.9 * 8 BHA-1716

WASHINGTON NO 14

FROM	TO	THICKNESS	DESCRIPTION	*IA- BLOWS
15.9	11.0	4.9	SAND & GRAVEL FILL	NO DATA
11.0	9.0	2.0	CLAY & GRAVEL FILL	"
9.0	-2.0	11.0	YELLOW CLAY & FINE SAND	11
-2.0	-9.0	7.0	YELLOW CLAY & FINE SAND	6

NO WATER LEVEL SHOWN

BORING NO 239 SURFACE ELEVATION = 15.9 * 8 BHA-1716

WASHINGTON NO 14

FROM	TO	THICKNESS	DESCRIPTION	*IA- BLOWS
15.9	10.5	5.4	SAND & GROUND FILL	NO DATA

OBSTRUCTION AT 10.5

NO WATER LEVEL SHOWN

BORING NO 240 SURFACE ELEVATION = 16.4 * 8 BHA-1716

WASHINGTON NO 14

FROM	TO	THICKNESS	DESCRIPTION	*IA- BLOWS
16.4	6.5	9.9	SAND W/ M, GRAVEL, CLAY FILL	NO DATA
6.5	-1.0	7.5	PEAT	"
-1.0	-2.5	1.5	SOFT BLUE CLAY & SAND	3
-2.5	-13.5	11.0	HARD YELLOW CLAY, LITTLE FINE SAND.	14

WATER LEVEL AT 9.2 ELEVATION

BORING NO 241 SURFACE ELEVATION = 15.3 * 8 BHA-1716

WASHINGTON NO 14

FROM	TO	THICKNESS	DESCRIPTION	*IA- BLOWS
15.3	7.0	8.3	CLAY, SAND, GRAVEL & WOOD FILL	NO DATA
7.0	6.0	1.0	SOFT BLACK MUD & CLAY FILL	"
6.0	5.0	1.0	SOFT CLAY & SAND	3
5.0	-7.0	12.0	HARD YELLOW CLAY & FINE SAND	16

NO WATER LEVEL SHOWN

*IA SEE NOTE NO 11

*8 SEE NOTE NO 9

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 65

DATE 12/1/50

MADE BY JAC

CHECKED BY JEP

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING LOGS

BORING NO 242 SURFACE ELEVATION = 18.0 *4 BSC 1179

WASHINGTON NO 14

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
18.0	17.0	1.0	PAVING	NO DATA
17.0	15.0	2.0	SAND & GRAVEL FILL	"
15.0	11.0	4.0	HARD YELLOW CLAY	"
11.0	10.0	1.0	SAND, GRAVEL, CLAY	"
10.0	-2.0	12.0	HARD CLAY	"

NO WATER LEVEL SHOWN

BORING NO 243 SURFACE ELEVATION = 12.2 *2 RAY 1942

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
12.2	5.2	7.0	HARD SAND, GRAVEL & CLAY FILL	NO DATA
5.2	-5.3	10.5	MEDIUM YELLOW CLAY	12
-5.3	-10.8	5.5	MEDIUM YELLOW CLAY	8
-10.8	-20.8	10.0	SOFT YELLOW CLAY	5

WATER LEVEL AT 10.2 ELEVATION

BORING NO 244 SURFACE ELEVATION = 17.4 *8 BHA-116

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
17.4	14.4	3.0	SAND & GRAVEL FILL	NO DATA
14.4	3.0	11.4	YELLOW CLAY & FINE SAND	14
3.0	-7.0	10.0	YELLOW CLAY & FINE SAND	7

NO WATER LEVEL SHOWN

BORING NO 245 SURFACE ELEVATION = 18.2 *8 BHA-116

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
18.2	12.0	6.2	SAND, GRAVEL & STONE FILL	NO DATA
12.0	5.0	7.0	YELLOW CLAY & FINE SAND	10
5.0	-8.0	13.0	YELLOW CLAY & FINE SAND	7

NO WATER LEVEL SHOWN

- *1A SEE NOTE NO 1A
- *2 SEE NOTE NO 2
- *4 SEE NOTE NO 4
- *8 SEE NOTE NO 8

THE THOMPSON & LIGHTNER CO., INC.

SHEET NO. 65
 DATE 12/19/53
 MADE BY VAC
 CHECKED BY FLC

SUBJECT SOUTH END URBAN DEVELOPMENT AREA

BORING NO 246 SURFACE ELEVATION = 16.9 *8 BHA-174

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1A- BLOWS</u>
16.9	9.0	7.9	BRICK, SAND, GRAVEL, WOOD, MUD FILL	NO DATA
9.0	10.0	1.0	MEDIUM CLAY & SAND	7
10.0	-5.5	15.5	HARD YELLOW CLAY, LITTLE	16

WATER LEVEL AT 12.0 ELEVATION FINE SAND

BORING NO 247 SURFACE ELEVATION = 16.5 *8 BHA-174

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1A- BLOWS</u>
16.5	7.0	9.5	SAND GRAVEL & BRICK FILL	NO DATA
7.0	4.0	3.0	MEDIUM BLUE CLAY	1
4.0	0.0	4.0	YELLOW CLAY & FINE SAND	17
0.0	-7.5	7.5	YELLOW CLAY & FINE SAND	9
-7.5	-16.0	8.5	SOFT CLAY	3
-16.0	-34.0	18.0	SOFT CLAY	2
-34.0	-57.5	23.5	SOFT CLAY	1
-57.5	-61.0	3.5	SAND, GRAVEL & CLAY	40

REFUSAL AT -61.0
 NO WATER LEVEL SHOWN

BORING NO 248 SURFACE ELEVATION = 14.4 *8 BHA-174

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1A- BLOWS</u>
14.4	2.5	11.9	SAND, GRAVEL, CLAY, MUD, BRICK FILL	NO DATA
2.5	-5.0	7.5	PEAT	"
-5.0	-6.0	1.0	MEDIUM CLAY & SAND	8
-6.0	-17.0	11.0	HARD YELLOW CLAY & SAND	13

NO WATER LEVEL SHOWN

BORING NO 249 SURFACE ELEVATION = 14.6 *8 BHA-174

WASHINGTON NO 15

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1A- BLOWS</u>
14.6	9.0	3.6	FILL	NO DATA

OBSTRUCTION AT 9.0 ELEVATION
 NO WATER LEVEL SHOWN

*1A SEE NOTE NO 1A.
 *8 SEE NOTE NO 8.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 611

DATE 12/21/38

MADE BY J. J. ...

CHECKED BY J. J. ...

SUBJECT SOUTH END URBAN INDUSTRIAL AREA P. 53

BORING NO 250 SURFACE ELEVATION = 14.6 *8 BHA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	*1A- BLOWS
14.6	8.5	6.1	FILL	NO DATA

OBSTRUCTION AT 8.5 ELEVATION
NO WATER LEVEL SHOWN

BORING NO 251 SURFACE ELEVATION = 14.6 *8 BHA

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	*1A- BLOWS
14.6	10.5	4.1	FILL	NO DATA

OBSTRUCTION AT ELEVATION 10.5
NO WATER LEVEL SHOWN

BORING NO 252 SURFACE ELEVATION = 12.0 *8 BHA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	*1A- BLOWS
12.0	11.0	1.0	BRICK & STONES	10
11.0	10.8	0.2	CONCRETE	NO DATA
10.8	9.7	1.1	SAND & GRAVEL FILL	10
9.7	-5.0	14.7	YELLOW CLAY & FINE SAND	5
-5.0	-14.0	9.0	NO DATA	10
-14.0	-36.0	22.0	SOFT CLAY	25
-36.0	-60.5	24.5	SOFT CLAY	55
-60.5	-65.0	4.5	SAND, GRAVEL & CLAY	15

REFUSAL AT -65.0 ELEVATION
NO WATER LEVEL SHOWN
HARDPAN

BORING NO 253 SURFACE ELEVATION = 14.6 *8 BHA-1

WASHINGTON NO. 15

FROM	TO	THICKNESS	DESCRIPTION	*1A- BLOWS
14.6	11.0	6.6	SAND, GRAVEL, CLAY FILL	NO DATA
11.0	-8.0	19.0	HARD YELLOW CLAY, LITTLE SAND	16
-8.0	-18.0	10.0	MEDIUM YELLOW CLAY,	6

NO WATER LEVEL SHOWN
LITTLE SAND

*1A SEE NOTE NO 1A

*8 SEE NOTE NO 8

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 177

DATE 12/1/46

MADE BY JAC

CHECKED BY TLP

BORING LOGS

SUBJECT SOUTH END URBAN PLUMBER AREA R-56

BORING NO 254 SURFACE ELEVATION = 17.1 *8 PBA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
17.1	11.0	6.1	SAND, GRAVEL, BRICK, CLAY, WOOD FILL NO DATA	
11.0	-3.0	14.0	HARD YELLOW CLAY, LITTLE FINE SAND	15

NO WATER LEVEL SHOWN

BORING NO 255 SURFACE ELEVATION = 18.4 *8 BHA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
18.4	12.2	6.2	SAND, GRAVEL, BRICK FILL NO DATA	
12.2	10.0	2.2	CLAY, SAND, & BRICK FILL	"
10.0	5.2	4.8	YELLOW CLAY & FINE SAND	16
5.2	-4.6	9.8	YELLOW CLAY & FINE SAND	7

NO WATER LEVEL SHOWN

BORING NO 256 SURFACE ELEVATION = 17.5 *8 BHA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
17.5	11.5	6.0	SAND, GRAVEL, CLAY & BRICK FILL NO DATA	
11.5	-2.5	14.0	HARD YELLOW CLAY, FINE SAND	15

NO WATER LEVEL SHOWN

BORING NO 257 SURFACE ELEVATION = 13.4 *9 BHA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
13.4	4.8	8.6	SAND, BRICK, CLAY, WOOD FILL NO DATA	
4.8	1.0	3.8	SILTY PEAT	"
1.0	0.0	1.0	SOFT BLUE CLAY & SAND	3
0.0	9.0	9.0	HARD YELLOW CLAY & LITTLE SAND	14

WATER LEVEL AT 6.2 ELEVATION

BORING NO 258 SURFACE ELEVATION = 15.3 *8 BHA-1746

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#1A- BLOWS
15.3	4.8	10.5	MISCELLANEOUS FILL NO DATA	
4.8	-8.0	12.8	YELLOW CLAY	12
-8.0	-14.8	6.8	BLUE CLAY	5

WATER LEVEL AT 8.0 ELEVATION

NOTED BY JAC 11/1/46

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 10
 DATE 12/17/53
 MADE BY JAC
 CHECKED BY RFR

SUBJECT SOUTH END UPRAN AREA, AREA R-50

BORING LOGS

BORING NO 259 SURFACE ELEVATION = 14.5 * 5 C-1936

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#18-BLOWS
14.5	3.5	11.0	SAND, GRAVEL, BRICK FILL	NO DATA
3.5	-14.0	17.5	SILTY PEAT	"
-14.0	-16.5	2.5	MEDIUM BLUE CLAY, LITTLE SAND	10
-16.5	-20.5	4.0	HARD BLUE SAND, LITTLE CLAY	22

WATER LEVEL AT 8.5 ELEVATION

BORING NO 260 SURFACE ELEVATION = 14.5 * 5 G-1937

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	#18-BLOWS
14.5	8.0	6.5	SAND GRAVEL & BRICK FILL	NO DATA
8.0	-6.0	14.0	SOFT SILT, FINE SAND & SHELLS	"
-6.0	-8.0	2.0	PEAT	"
-8.0	-9.5	1.5	MEDIUM BLUE CLAY	8
-9.5	-15.0	5.5	HARD YELLOW CLAY	17
-15.0	-17.5	2.5	MEDIUM YELLOW CLAY, LITTLE SAND	3
-17.5	-20.5	3.0	FIRM YELLOW SAND	16

WATER LEVEL AT 11.2 ELEVATION

BORING NO 261 SURFACE ELEVATION = 16.0 * 4 BSCE1997

WASHINGTON NO 15

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.0	4.0	12.0	ASH FILL	NO DATA
4.0	-70.0	14.0	STIFF YELLOW CLAY	"

NO WATER LEVEL SHOWN

BORING NO 262 SURFACE ELEVATION = NO DATA * 2 MAY-1

WASHINGTON NO 16

FROM	TO	THICKNESS	DESCRIPTION	#1A-BLOWS
0	0.5	0.5	PAVEMENT	NO DATA
0.5	14.0	13.5	SAND GRAVEL, ASH, WOOD, METAL FILL	"
14.0	29.5	15.5	SOFT SANDY SILT	"
29.5	31.5	2.0	MEDIUM BLUE CLAY, SAND, GRAVEL	7
31.5	35.0	3.5	HARD YELLOW CLAY, LITTLE SAND, GRAVEL	16
35.0	40.0	5.0	MEDIUM YELLOW CLAY, LITTLE SAND, GRAVEL	6

WATER LEVEL 9.0 BELOW SURFACE

NOTES SEE SHEET NO 10

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 70
 DATE 12/12/50
 MADE BY JAC
 CHECKED BY WFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO 263

SURFACE ELEVATION = 13.3

6 CD - 1945

WASHINGTON NO 16

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
13.3	7.3	6.0	FIRM SAND & GRAVEL FILL	12
7.3	1.8	5.5	MEDIUM STIFF YELLOW CLAY	5
1.8	-6.7	8.5	VERY SOFT BLUE CLAY	1
-6.7	-31.7	25.0	VERY LOOSE FINE SAND	1
-31.7	-47.7	16.0	VERY SOFT BLUE CLAY	1
-47.7	-57.7	10.0	SOFT BLUE CLAY	2
-57.7	-86.2	28.5	MEDIUM-STIFF BLUE CLAY, TRACE SAND	4
-86.2	-96.7	10.5	FIRM FINE SAND	16

WATER LEVEL 6.0 BELOW SURFACE

BORING NO 264

SURFACE ELEVATION = 15.0

* 2 PLACE 1199

WASHINGTON NO 16

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
15.0	1.0	14.0	MISCELLANEOUS FILL	NO DATA
1.0	-2.0	3.0	PEAT MUD	"
-2.0	-15.0	13.0	HARD CLAY	"

WATER LEVEL NOT SHOWN

NOTES SHEETS NO 68, NO 69, & NO 70.

- * 1A SEE NOTE NO 1A
- * 1B SEE NOTE NO 1B
- * 2 SEE NOTE NO 2
- * 3 SEE NOTE NO 3
- * 4 SEE NOTE NO 4
- * 5 SEE NOTE NO 5
- * 6 SEE NOTE NO 6
- * 8 SEE NOTE NO 8

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 71

DATE 12/17/63

MADE BY V.O.

CHECKED BY R.P.

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING NO. 265

SURFACE EL = RANDALL ST. SIDEWALK ±

HARRISON No. 17

#2 R-1955

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 13.5 BELOW		13.5'	MISC FILL	No. DATA
13.5' BELOW TO 33.0 BELOW		19.5'	PEATY SILT	" "
33.0' BELOW TO 43.0' BELOW		10.0'	MED. YELLOW CLAY	" "
43.0' BELOW TO 103.5' BELOW		60.5'	SOFT BLUE CLAY	" "
103.5' BELOW TO 107.0' BELOW		3.5'	LOOSE MED SAND, GRAVEL	" "
107.0' BELOW TO 126.0' BELOW		19.0'	FIRM MED GRAY SAND & GRAVEL	" "
126.0' BELOW TO 132.0' BELOW		6.0'	HARD COARSE SAND & GRAVEL	" "

WATER LEVEL 17.0' BELOW SURFACE

BORING NO. 266

SURFACE ELEVATION = +16.8 ±

HARRISON No. 17

#4 BSCE-1945

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+16.8 DOWN TO 4.0 BELOW		4.0'	FILL	No. DATA
+4.0' BELOW TO (-) 22 BELOW		18.0'	MED. HARD CLAY, SAND	" "
-22.0' BELOW TO (+) 35' BELOW		13.0'	SOFT BLUE CLAY	" "

TOTAL 35.0'

BORING NO. 267

HARRISON No. 17

SURFACE EL. = +16.0

#4 BSCE-1945

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+16.0 DOWN TO +11.0 BELOW		5.0'	ROD BED	No. DATA
+11.0' BELOW TO +5.0' BELOW		6.0'	BROWN PEAT	" "
+5.0' BELOW TO (-) 4.0' BELOW		9.0'	STIFF BROWN CLAY	" "

BORING NO. 268

SURFACE EL = +15.0

HARRISON No. 17

#4 BSCE-1945

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+15.0 DOWN TO +8.0 BELOW		7.0'	FILL	No. DATA
+8.0' BELOW TO +2.0' BELOW		6.0'	PEAT	" "
+2.0' BELOW TO +1.0' BELOW		1.0'	MED. BLUE CLAY	" "
+1.0' BELOW TO (-) 5.0' BELOW		6.0'	HARD YELLOW CLAY, FINE SAND	" "
-5.0' BELOW TO (-) 10.0' BELOW		5.0'	MED. YELLOW CLAY	" "
-10.0' BELOW TO (-) 15' BELOW		5.0'	MED. BLUE CLAY	" "

*2 SEE NOTE NO 2

*4 SEE NOTE NO 4

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-5

SHEET NO. 73

DATE 12/6/33

MADE BY V.P.

CHECKED BY J.P.B.

BORING No 260 SURFACE EL. = +16.10

*5-G-1926

HARRISON No. 17 BOT. OF BORING EL. = (+) 13.1

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0	DOWN TO 15.0' BELOW	15.0'	FILL	NO DATA
15.0'	BELOW TO 23.0' BELOW	8.0'	PEAT	" "
23.0'	BELOW TO 26.0' BELOW	3.0'	HARD BLUE CLAY	" "
26.0'	BELOW TO 30.0' BELOW	4.0'	HARD YELLOW CLAY & LITTLE FINE SAND	" "

WATER LEVEL 18.3' BELOW SURFACE

BORING No 270

SURFACE EL. = 16.2

*6-CD-1931

HARRISON No. 17

BOTT. OF BORING EL. = (+) 105.0 ±

FROM	TO	THICKNESS	DESCRIPTION #1A-BLOWS	BLOWS
0.0	DOWN TO 13.5' BELOW	13.5'	FIRM SAND & GRAVEL FILL	18
13.5'	BELOW TO 18.0' BELOW	4.5'	PEAT, SOME ORGANIC SILT	3
18.0'	BELOW TO 22.0' BELOW	4.0'	ORGANIC SILT & SHELLS	4
22.0'	BELOW TO 26.0' BELOW	4.0'	PEAT, TRACE OF ORGANIC SILT	4
26.0'	BELOW TO 31.0' BELOW	5.0'	MED. BLUE CLAY	8
31.0'	BELOW TO 34.5' BELOW	3.5'	VERY STIFF YELLOW CLAY	22
34.5'	BELOW TO 54.5' BELOW	20.0'	SOFT BLUE CLAY	4
54.5'	BELOW TO 114.0' BELOW	59.5'	SOFT BLUE CLAY	3
114.0'	BELOW TO 121.0' BELOW	7.0'	VERY HARD FINE SAND, GRAVEL, SAND, CC	

REFUSAL NO WATER LEVEL SHOWN

BORING No 271

SURFACE EL. = 16.5

*5-G-1930

HARRISON No. 17

BOTT. OF BORING EL. = (+) 11.1'

FROM	TO	THICKNESS	DESCRIPTION #1B-BLOWS	BLOWS
0.0	DOWN TO 11.75' BELOW	11.75'	LOAM, SAND & GRAVEL FILL	NO DATA
11.75'	BELOW TO 21.0' BELOW	9.25'	PESTY (DRY) SILT	" "
21.0'	BELOW TO 26.5' BELOW	5.5'	PEAT (DRY) LOTS OF GAS	" "
26.5'	BELOW TO 30.0' BELOW	3.5'	FINE BLUE SAND & CLAY	10
30.0'	BELOW TO 35.5' BELOW	5.5'	HARD YELLOW CLAY, LITTLE SAND	12
35.5'	BELOW TO 37.5' BELOW	2.0'	MED. BLUE CLAY	10

WATER LEVEL 9.5' BELOW SURFACE

#11 SEE NOTE NO 1A

#18 SEE NOTE NO 1B

#5 SEE NOTE NO 5

#6 SEE NOTE NO 6

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 73
DATE 12/15/68
MADE BY V.O.
CHECKED BY K.P.

SUBJECT SOUTH END URBAN RENEWAL AREA R-58

BORING No 272 SURFACE EL = CITY HOSEYARD GRADE #2-R-1956
HARRISON No 17

FROM	TO	THICKNESS	DESCRIPTION	#1A - BLOWS
0.0 DOWN TO	15.42' BELOW	15.42'	SAND, GRAVEL & CLINDERS FILL	NO DATA
15.42' BELOW TO	27.67' BELOW	12.25'	PEAT	" "
27.67' BELOW TO	34.5' BELOW	6.83'	HARD BLUE CLAY	10
34.5' BELOW TO	40.0' BELOW	5.5'	MED. BLUE CLAY	8

WATER LEVEL 11.0' BELOW SURFACE

BORING No. 273 SURFACE #4 - BSCE-1940
HARRISON No 18

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	1.5' BELOW	1.5'	LOAM	NO DATA
1.5' BELOW TO	12.0' BELOW	10.5'	SAND AND GRAVEL FILL	" "
12.0' BELOW TO	27.5' BELOW	15.5'	FINE, SILTY SAND, MUD	" "
27.5' BELOW TO	35.0' BELOW	7.5'	HARD YELLOW CLAY	" "
35.0' BELOW TO	50.0' BELOW	15.0'	MED. BLUE CLAY	" "

BORING No. 274 SURFACE EL = WASHINGTON ST PAY. #3 - BUS-1913
HARRISON No. 17

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	8.83' BELOW	8.83'	SAND, GRAVEL & CLAY FILL	NO DATA
8.83' BELOW TO	10.17' BELOW	1.34'	MUD	" "
10.17' BELOW TO	13.0' BELOW	2.83'	PEAT	" "
13.0' BELOW TO	32.0' BELOW	19.0'	HARD YELLOW CLAY	" "

WATER LEVEL 5.0' BELOW SURFACE

BORING No 275 SURFACE EL = WASHINGTON ST PAY. #3 - BUS - 1913
HARRISON No. 17

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	8.5' BELOW	8.5'	SAND, GRAVEL & LITTLE CLAY FILL	NO DATA
8.5' BELOW TO	11.42' BELOW	2.92'	PEATY MUD	" "
11.42' BELOW TO	31.25' BELOW	19.83'	HARD YELLOW CLAY	" "

WATER LEVEL 6' BELOW SURFACE

BORING No. 276 SURFACE EL = WASH. ST PAY. #3 - BUS - 1913
HARRISON No. 17

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	7.67' BELOW	7.67'	SAND, GRAVEL & CLAY, CLINDERS FILL	NO DATA
7.67' BELOW TO	11.25' BELOW	3.58'	MUD	" "
11.25' BELOW TO	29.0' BELOW	17.75'	HARD YELLOW CLAY	" "

WATER LEVEL 6.5' BELOW SURFACE

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET No. 74
 DATE 12/18/63
 MADE BY V.O.
 CHECKED BY RFB

SUBJECT SOUTH END URBAN RENEWAL AREA 12-52

BORING No 277

HARRISON No. 18

SURFACE EL = 116.5'
 BORING BOT. EL = 114.25'

5-G-1970

FROM	TO	THICKNESS	DESCRIPTION	#18 -	BLOWS
0.0 DOWN TO	14.0' BELOW	14.0'	FILL		No DATA
14.0' BELOW TO	17.0' BELOW	3.0'	PEAT		" "
17.0' BELOW TO	20.5' BELOW	3.5'	PEAT		" "
20.5' BELOW TO	23.0' BELOW	2.5'	BLUE CLAY & VEIN OF SAND		7
23.0' BELOW TO	30.0' BELOW	7.0'	HARD YELLOW CLAY		11
30.0' BELOW TO	37.5' BELOW	7.5'	SOFT YELLOW CLAY		5

WATER LEVEL 9.5' BELOW SURFACE

BORING No 278

HARRISON No. 18

SURFACE EL = 116.0'

5-G-1917

BORING BOT. EL = (-) 29.0'

FROM	TO	THICKNESS	DESCRIPTION	#18 -	BLOWS
0.0 DOWN TO	3.5' BELOW	3.5'	CINDERS		No DATA
3.5' BELOW TO	15.7' BELOW	12.2'	CLAY, SAND & GRAVEL FILL		" "
15.7' BELOW TO	28.0' BELOW	12.3'	PEAT		" "
28.0' BELOW TO	29.2' BELOW	1.2'	RATHER SOFT BLUE CLAY		" "
29.2' BELOW TO	34.0' BELOW	4.8'	RATHER STIFF YELLOW CLAY		" "
34.0' BELOW TO	45.0' BELOW	11.0'	STIFF YELLOW CLAY		" "

NO WATER LEVEL SHOWN

BORING No 279

HARRISON No. 18

SURFACE EL - NO DATA

3-BOS 1922

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	10.0' BELOW	10.0'	SAND GRAVEL & RUBBISH FILL	No DATA
10.0' BELOW TO	28.2' BELOW	18.2'	SILT & FINE SAND	" "
28.0' BELOW TO	32.0' BELOW	4.0'	PEAT	" "
32.0' BELOW TO	40.0' BELOW	8.0'	HARD CLAY	" "

BORING No 280

HARRISON No. 18

SURFACE EL - NO DATA

3-BOS-1922

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	20.5' BELOW	20.5'	PAVING & FILL	" "
20.5' BELOW TO	30.7' BELOW	10.2'	SILT & FINE SAND	" "
30.7' BELOW TO	33.6' BELOW	2.9'	PEAT	" "
33.6' BELOW TO	34.7' BELOW	1.1'	FINE SILTY SAND	" "
34.7' BELOW TO	42.0' BELOW	7.3'	HARD BLUE CLAY	" "

WATER LEVEL 8.5' BELOW SURFACE

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET No. 75
DATE 1/21/52
MADE BY W.C.
CHECKED BY W.C.

SUBJECT SOUTH END URBAN RENEVAL AREA R-56

BORING NO. 281 SURFACE EL = SIDEWALK EL # 2-R-1952
HARRISON No 18

FROM	TO	THICKNESS	DESCRIPTION	# 1/8 - BLOWS
0.0 DOWN TO	10.0 BELOW	10.0'	MISC. FILL	NO DATA
10.0' BELOW TO	12.5' BELOW	2.5'	SILTY PEAT	3
12.5' BELOW TO	18.0' BELOW	5.5'	PEATY SILT	3
18.0' BELOW TO	29.0' BELOW	11.0'	PEATY SILT	3
29.0' BELOW TO	36.0' BELOW	7.0'	HARD BLUE CLAY	20
36.0' BELOW TO	50.0' BELOW	14.0'	SOFT BLUE CLAY	4

WATER LEVEL 7.0' BELOW SURFACE

BORING NO. 282

HARRISON No 18 SURFACE EL = 16.3' # 8 - BHA-1946

FROM	TO	THICKNESS	DESCRIPTION	# 1/8 - BLOWS
+16.3' DOWN TO	+1.5' BELOW	14.8'	LOAM, SAND, GRAVEL, CLAY & MUD FILL	NO DATA
+1.5' BELOW TO	-4.5' BELOW	6.0'	SILTY PEAT	" "
-4.5' BELOW TO	-5.7' BELOW	1.2'	MED BLUE CLAY & SAND	6
-5.7' BELOW TO	-16.1' BELOW	11.0'	HARD YELLOW CLAY & LITTLE FINE SAND	14

TOTAL 33.0'

WATER LEVEL 7.0' BELOW SURFACE

BORING NO. 283

HARRISON No 18 SURFACE EL = +16.3 # 8 - BHA-1946

FROM	TO	THICKNESS	DESCRIPTION	# 1/8 - BLOWS
+16.3 DOWN TO	+2.5' BELOW	13.5'	LOAM, SAND, GRAVEL, CLAY & MUD	NO DATA
+2.5' BELOW TO	-4.7' BELOW	7.5'	PEAT	" "
-4.7' BELOW TO	-3.2' BELOW	1.5'	SOFT CLAY & SAND	3
-3.2' BELOW TO	-11.2' BELOW	14.0'	HARD YELLOW CLAY & LITTLE FINE SAND	14
-11.2' BELOW TO	-26.7' BELOW	15.5'	SOFT BLUE CLAY & LITTLE SAND	3

TOTAL 46.0'

WATER LEVEL 6.0' BELOW SURFACE

BORING NO. 284

HARRISON No 18 SURFACE EL = 15.0' # 8 - BHA-1946

FROM	TO	THICKNESS	DESCRIPTION	# 1/8 - BLOWS
+15.0 DOWN TO	+2.4' BELOW	13.5'	SAND, GRAVEL, BRICK & MUD FILL	NO DATA
+2.4' BELOW TO	-4.1' BELOW	6.5'	SILTY PEAT	" "
-4.1' BELOW TO	-2.8' BELOW	1.3'	MED BLUE CLAY & SAND	6
-2.8' BELOW TO	-16.0' BELOW	13.2'	HARD YELLOW CLAY & LITTLE FINE SAND	14

WATER LEVEL 6.5' BELOW SURFACE

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No. 285 SURFACE EL = 15.4' # 8-BHA-1945
 HARRISON No. 18

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	#18	<u>BLOWS</u>
+15.4 DOWN TO +4.0 BELOW		11.4'	CLAY, SAND, GRAVEL, BRICK & MUDFILL	No. DATA	
+4.0' BELOW TO -3.0' BELOW		7.0'	SOFT SILTY PEAT	" "	
-3.0' BELOW TO -4.7' BELOW		1.7'	MED. BLUE CLAY		6
-4.7' BELOW TO -19.0' BELOW		14.3'	HARD YELLOW CLAY & LITTLE FINE SAND		13
		<u>TOTAL 34.4'</u>			

WATER LEVEL 6.5' ± BELOW SURFACE

BORING No. 286 SURFACE EL = +15.0 # 8-BHA-1946
 HARRISON No. 18

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	#18	<u>BLOWS</u>
+15.0' DOWN TO +6.0' BELOW		9.0'	SAND, GRAVEL & CLAY FILL	No. DATA	
+6.0' BELOW TO +1.5' BELOW		4.5'	LOOSE SAND FILL	" "	
+1.5' BELOW TO -2.5' BELOW		4.0'	PEAT	" "	
-2.5' BELOW TO -3.8' BELOW		1.3'	BLUE CLAY		7
-3.8' BELOW TO -7.5' BELOW		3.7'	YELLOW CLAY & FINE SAND		16
-7.5' BELOW TO -11.0' BELOW		3.5'	YELLOW CLAY & FINE SAND		9
-11.0' BELOW TO -18.0' BELOW		7.0'	SOFT CLAY		3
-18.0' BELOW TO -35.0' BELOW		17.0'	SOFT CLAY		2
-35.0' BELOW TO -63.0' BELOW		28.0'	SOFT CLAY		1
-63.0' BELOW TO -66.7' BELOW		3.7'	SAND, GRAVEL & CLAY HARD PAN		62
		<u>TOTAL 88.7'</u>			

WATER LEVEL NOT SHOWN

BORING No. 287 SURFACE EL = 15.0 # 8-BHA-1946
 HARRISON No. 18

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	#18	<u>BLOWS</u>
+15.0 DOWN TO +9.2' BELOW		5.8'	SAND & GRAVEL & CLAY FILL	No. DATA	
OBSTRUCTION					

BORING No. 288 SURFACE EL = 12.5' # 8-BHA-1947
 HARRISON No. 18

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	#18	<u>BLOWS</u>
+12.5 DOWN TO +3.5' BELOW		9.0'	BRICK, WOOD, SAND & GRAVEL FILL	No. DATA	
+3.5' BELOW TO -6.0' BELOW		9.5'	SOFT SILTY PEAT		1
-6.0' BELOW TO -8.5' BELOW		2.5'	SOFT BLUE CLAY & LITTLE FINE SAND		3
-8.5' BELOW TO -22.5' BELOW		14.0'	STIFF YELLOW CLAY		3
		<u>TOTAL 35.0'</u>			

WATER LEVEL 4.0' BELOW SURFACE

THE THOMPSON & LIGHTNER CO., INC.

SHEET NO. 11
 DATE: 12/19/63
 MADE BY: V.O.
 CHECKED BY: R.F.

SUBJECT SOUTH END URBAN RENEWAL AREA B-56

BORING No 289

* 8 - BHA - 194C

HARRISON No. 18 SURFACE EL = +14.5

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
+14.5' DOWN TO +2.5' BELOW		12.0'	SAND GRAVEL & CLAY FILL	No DATA
+ 2.5' BELOW TO -6.0' BELOW		8.5'	SILTY PEAT	" "
- 6.0' BELOW TO -8.0' BELOW		2.0'	BLUE CLAY	6
-8.0' BELOW TO -13.5' BELOW		5.5'	YELLOW CLAY	10
-13.5' BELOW TO -20.5' BELOW		7.0'	SOFT CLAY	3
-20.5' BELOW TO -35.5' BELOW		15.0'	SOFT CLAY	2
-35.5' BELOW TO -57.0' BELOW		21.5'	SOFT CLAY	1
-57.0' BELOW TO -61.5' BELOW		4.5'	SAND GRAVEL & CLAY HARD PAN	20 TO 25
TOTAL = 76.0'				

BORING No 290

* 8 - BHA - 194C

SURFACE EL = +15.3

HARRISON No. 18

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
+ 15.3' BELOW TO +4.8' BELOW		10.5'	SAND, GRAVEL, CLAY, BRICK & LOAM FILL	No DATA
+ 4.8' BELOW TO +1.3' BELOW		3.5'	SOFT PEAT	" "
+ 1.3' BELOW TO -0.2' BELOW		1.5'	SOFT CLAY & SAND	3
-0.2' BELOW TO -10.1' BELOW		10.5'	HARD YELLOW CLAY & LITTLE SAND	14
-10.1' BELOW TO -24.7' BELOW		14.0'	SOFT BLUE CLAY & LITTLE FINE SAND	3
TOTAL = 40.0'				

WATER LEVEL 6.0' BELOW SURFACE

BORING No. 291

* 8 - BHA - 194C

SURFACE EL = +14.6'

HARRISON No. 18

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+14.6 DOWN TO +7.1' BELOW		7.5'	FILL	No DATA
OBSTRUCTION				

BORING No. 292

* 8 - BHA - 194C

SURFACE EL = +14.6'

HARRISON No. 18

FROM	TO	THICKNESS	DESCRIPTION	* 1 BLOWS
+14.6' DOWN TO +7.1' BELOW		7.5'	BRICK SAND & STONES FILL	No DATA
+7.1' BELOW TO +5.1' BELOW		2.0'	SILT & BRICK	" "
+5.1' BELOW TO -2.1' BELOW		7.1'	PEAT	" "
-2.0' BELOW TO -6.0' BELOW		4.0'	YELLOW CLAY & FINE SAND	9
-6.0' BELOW TO -12.4' BELOW		6.4'	SOFT BLUE CLAY	3
-12.4' BELOW TO -35.4' BELOW		23.0'	SOFT BLUE CLAY	2
-35.4' BELOW TO -59.4' BELOW		24.0'	SOFT BLUE CLAY	1
-59.4' BELOW TO -61.4' BELOW		2.0'	BOULDER HARD PAN - REFUSE	40
TOTAL 75.0'				
* 1 SEE NOTE NO. 1.				* 9 SEE NOTE NO. 1.

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 78 78
DATE 12/20/63
MADE BY V.O.
CHECKED BY RFB

BORING No. 293
HARRISON No 16

SURFACE EL = 15.6

#8 - DIA - 10" G

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
+15.6 DOWN TO -0.9 BELOW		16.4'	SAND, GRAVEL, CLAY & BRICK FILL	No. DATA
-0.8 BELOW TO -12.8 BELOW		12.0	PEAT	" "
-12.8 BELOW TO -14.6 BELOW		1.8	STIFF BLUE CLAY, SAND & GRAVEL	10
-14.6' BELOW TO -25.2		10.8	HARD YELLOW CLAY & LITTLE FINE SAND	14
		<u>TOTAL 41.0'</u>		

WATER LEVEL 10' ± BELOW SURFACE

BORING No 294

HARRISON No 18

SURFACE EL = 14.4

#8 - DIA - 10"

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+14.6 DOWN TO +12.6' BELOW		4.0'	FILL	No. DATA
		OBSTRUCTION		

BORING No 295

HARRISON No 18

SURFACE EL = +11.2

#8 - DIA - 10"

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>*1 BLOWS</u>
+11.2' DOWN TO +4.7' BELOW		6.5'	LOAM, BRICK, SAND & GRAVEL FILL	No. DATA
+4.7' BELOW TO -4.3' BELOW		9.0'	SOFT SILTY PEAT	1
-4.3' BELOW TO -5.3' BELOW		1.0	SOFT CLAY SAND	3
-5.3' BELOW TO -15.3' BELOW		10.0	STIFF YELLOW CLAY	8
-15.3' BELOW TO -36.8' BELOW		21.5'	SOFT BLUE CLAY	3
		<u>TOTAL 48.0'</u>		

WATER LEVEL 6.0' ± BELOW SURFACE

*1 SEE NOTE NO 1.

*8 SEE NOTE NO 8.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-52

BORING No. 296

HARRISON No. 18

SURFACE EL = 12.5'

#8-BHA-1966

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1 BLOWS</u>
+12.5' DOWN TO +1.0' BELOW		11.5'	BRICK & SAND & CLAY FILL	NO DATA
+1.0' BELOW TO -4.5' BELOW		5.5'	PEAT	" "
-4.5' BELOW TO -7.0' BELOW		2.5'	SOFT BLUE CLAY	3
-7.0' BELOW TO -8.0' BELOW		1.0'	SHARP SAND & LITTLE CLAY	5
-8.0' BELOW TO -18.5' BELOW		10.5'	HARD YELLOW CLAY & LITTLE SAND	10
		TOTAL		31.0

WATER LEVEL 7.0' BELOW SURFACE

BORING No. 297

HARRISON No. 18

SURFACE EL = +16.2

#8-BHA-1946

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+16.2 DOWN TO +11.2' BELOW		5.0'	SAND, GRAVEL, CLAY & BOULDER	" "

BORING No. 298

HARRISON No. 18

SURFACE EL = 12.2'

#8-BHA-1946

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1 BLOWS</u>
+12.2' DOWN TO +1.2' BELOW		11.0'	BRICK, SAND, GRAVEL, CLAY & MUD FILL	NO DATA
+1.2' BELOW TO -0.2' BELOW		1.4'	MED. CLAY & SAND	5
-0.2' BELOW TO -10.8' BELOW		10.6'	HARD YELLOW CLAY & LITTLE FINE SAND	13
		TOTAL		23.0

WATER LEVEL 6.0' BELOW SURFACE

*1 SEE NOTE NO. 1.

*8 SEE NOTE NO. 8.

THE THOMPSON & LICHTNER CO., INC.

BORING DATA

SHEET No. 20
 DATE 12/10/32
 MADE BY V.D.
 CHECKED BY M.L.

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No. 299

HARRISON No. 19

SURFACE EL. = 12.0

#8-BHA-1946

BORING BOT. EL. = 11.0

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 11.0' BELOW		11.0'	BRICK, SAND & GRAVEL, CLAY, MUD FILL	NO DATA
11.0' BELOW TO 12.0' BELOW		1.0'	MED. CLAY SAND	" "
12.0' BELOW TO 23.0' BELOW		11.0'	HARD YELLOW CLAY & LITTLE FINE SAND	" "

WATER LEVEL 6.0' BELOW SURFACE

BORING No. 300

HARRISON No. 19

SURFACE EL. = +0.67'

#5-G-1935

BORING BOT. EL. = (-) 54.33

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#13 - BLOWS</u>
0.0 DOWN TO 16.0' BELOW		16.0'	CINDER, BRICK & RUBBISH FILL	NO DATA
16.0' BELOW TO 24.5' BELOW		8.5'	PEAT	" "
24.5' BELOW TO 26.5' BELOW		2.0'	SOFT BLUE CLAY, LITTLE FINE SAND	" "
26.5' BELOW TO 33.5' BELOW		7.0'	FIRM FINE YELLOW SAND, VERY LITTLE CLAY	" "
33.5' BELOW TO 55.0' BELOW		21.5'	SOFT BLUE CLAY	3

WATER LEVEL 10.0' BELOW SURFACE

BORING No. 301

HARRISON No. 19

SURFACE EL. = BASEMENT FLOOR

#5-G-1935

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#13 - BLOWS</u>
0.0 DOWN TO 4.5' BELOW		4.5'	PEAT FILL	NO DATA
4.5' BELOW TO 8.5' BELOW		4.0'	SAND & GRAVEL FILL	" "
8.5' BELOW TO 21.5' BELOW		13.0'	SILT & SHELLS	" "
21.5' BELOW TO 23.0' BELOW		1.5'	MED. BLUE CLAY	" "
23.0' BELOW TO 32.0' BELOW		9.0'	HARD YELLOW CLAY, LITTLE FINE SAND	19
32.0' BELOW TO 36.0' BELOW		4.0'	MED. YELLOW CLAY & FINE SAND	3

NO WATER LEVEL SHOWN

BORING No. 302

HARRISON No. 19

SURFACE EL. = NO DATA

#5-G-1918

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 9.3' BELOW		9.3'	SAND, GRAVEL AND CLAY FILL	NO DATA
9.3' BELOW TO 21.5' BELOW		12.2'	SILTY PEAT	" "
21.5' BELOW TO 33.0' BELOW		11.5'	SOFT SILT	" "
33.0' BELOW TO 35.3' BELOW		1.7'	PEAT	" "
35.3' BELOW TO 40.5' BELOW		5.2'	FINE SAND & CLAY	" "
40.5' BELOW TO 55.0' BELOW		14.5'	MED. BLUE CLAY	" "

WATER LEVEL 6.0' BELOW SURFACE

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 91
 DATE 12/19/63
 MADE BY V.P.
 CHECKED BY R.P.

SUBJECT SOUTH END URBAN RENEWAL AREA R-5C

BORING NO 303 SURFACE EL = +15.0

#4-BSCE-1249

HARRISON No. 13

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+15.0 DOWN TO	-10.5 BELOW	25.5'	FILL-SAND, GRAVEL BRICK, BOULDER	NO DATA
-10.5' BELOW TO	-13.5 BELOW	3.0	PEAT	" "
-13.5' BELOW TO	-14.5 BELOW	1.0	SOFT SILT, PEAT	" "
-14.5' BELOW TO	-20.5 BELOW	6.0	STIFF BLUE CLAY	" "
		TOTAL 35.5'		

BORING NO. 304

SURFACE EL = NO DATA

#4-BSCE-1249

HARRISON No. 19

(SIDEWALK EL = +14.6 ±)

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+14.6 DOWN TO	+2.6 BELOW	12.0'	FILL	NO DATA
+2.6' BELOW TO	-1.4 BELOW	4.0	PEAT	" "
-1.4' BELOW TO	-3.4 BELOW	2.0	MED BLUE CLAY	" "
-3.4' BELOW TO	-15.4 BELOW	12.0	HARD YELLOW CLAY	" "
		TOTAL 30.0'		

BORING NO. 305

SURFACE EL = +14.0

#4-BSCE-1249

HARRISON No. 19

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+14.0 DOWN TO	+1.5 BELOW	12.5'	FILL-SAND, GRAVEL, CLAY, BRICK	NO DATA
+1.5' BELOW TO	-16.5 BELOW	18.0'	SILT PEAT	" "
-16.5' BELOW TO	-21.5 BELOW	5.0'	STIFF BLUE CLAY	" "
		TOTAL 35.5'		

BORING NO. 306

SURFACE EL = +15.0

#4-BSCE-1249

HARRISON No. 19

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+15.0 DOWN TO	+0.5 BELOW	14.5'	FILL	NO DATA
+0.5 BELOW TO	-4.0 BELOW	4.5	HARD BROWN CLAY	" "

BORING NO. 307

SURFACE EL = NO DATA

#3 BOS-1320

HARRISON No. 19

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO	14.58' BELOW	14.58'	FILL	NO DATA
14.58' BELOW TO	19.0' BELOW	4.42'	HARD BROWN CLAY	" "

BORING NO. 308

SURFACE EL = +16.0

#4-BSCE-1249

HARRISON No. 19

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+16.0 DOWN TO	+7.0 BELOW	9.0'	DIRT FILL	NO DATA
9.0' BELOW TO	+1.0 BELOW	6.0'	FINE SAND & SILT	" "
+1.0' BELOW TO	-2.0' BELOW	3.0	HARD YELLOW CLAY	" "

#3 SEE NOTE NO 3, #4 SEE NOTE NO. 4.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 2

DATE 12/11

MADE BY V.S.

CHECKED BY T.

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No. 300 ALBANY SIDEWALK ELEVATION #5 G-1930
ALBANY No 20

FROM	TO	THICKNESS	DESCRIPTION	#18	BLOWS
0.0 DOWN TO 14.67' BELOW		14.67'	LOOSE SAND AND GRAVEL FILL		--
14.67' BELOW TO 20.0' BELOW		5.33'	SILTY PEAT		--
20.0' BELOW TO 26.16' BELOW		6.16'	LOOSE COARSE DIRTY SAND AND GRAVEL		5
26.16' BELOW TO 30.0' BELOW		3.74'	HARD BLUE CLAY		22

WATER LEVEL SHOWN AT 12.0' DOWN FROM SURFACE

BORING No. 310 EL. ALBANY ST SIDEWALK #3 BOS-1930
ALBANY No 20

FROM	TO	THICKNESS	DESCRIPTION	#18	BLOWS
0.0 DOWN TO 10.67' BELOW		10.67'	LOOSE SAND & GRAVEL FILL		NO DATA
10.67' BELOW TO 28.0' BELOW		17.33'	SILTY PEAT		" "
28.0' BELOW TO 35.0' BELOW		7.0'	MED. BLUE CLAY		15

WATER LEVEL 7.0' DOWN FROM SURFACE

BORING No. 311 EL. ALBANY ST SIDEWALK #3 - BOS-1930
ALBANY No.

FROM	TO	THICKNESS	DESCRIPTION	#18	BLOWS
0.0 DOWN TO 10.0' BELOW		10.0'	HARD SAND BRICK CLAY FILL		NO DATA
10.0' BELOW TO 14.0' BELOW		4.0'	DRY PEAT		" "
14.0' BELOW TO 20.0' BELOW		6.0'	HARD YELLOW CLAY		20

WATER LEVEL 6.25' FROM SURFACE

BORING No. 312 EL. ALBANY ST SIDEWALK #3 BOS-1930
ALBANY No 20

FROM	TO	THICKNESS	DESCRIPTION	#18	BLOWS
0.0 DOWN TO 14.67' BELOW		14.67'	LOOSE SAND & GRAVEL FILL		NO DATA
14.67' BELOW TO 20.0' BELOW		5.33'	SILTY PEAT		" "
20.0' BELOW TO 26.16' BELOW		6.16'	LOOSE COARSE DIRTY SAND & GRAVEL		5
26.16' BELOW TO 30.0' BELOW		3.84'	HARD BLUE CLAY		22

WATER LEVEL 12.0' FROM SURFACE

BORING No. 313 BORING SURFACE (11.0' BELOW TOP OF M.H.) #3 BOS-1930
ALBANY No. 20 14" OPEN TRENCH

FROM	TO	THICKNESS	DESCRIPTION	#18	BLOWS
0.0 DOWN TO 5.0' BELOW		5.0'	SAND GRAVEL MUD FILL		NO DATA
5.0' BELOW TO 9.0' BELOW		4.0'	SILT, FINE SAND & SHELLS		" "
9.0' BELOW TO 10.75' BELOW		1.75'	SOFT BLUE CLAY		" "
10.75' BELOW TO 17.0' BELOW		6.25'	HARD YELLOW CLAY		" "

BOTTOM OF BORING 16.0' + 17.0' = 33.0' DOWN FROM ST. LEVEL

THE THOMPSON & LIGHTNER CO., INC.

SUBJECT SOUTH END URBAN RENEWAL AREA R-52

SHEET NO. 83
 DATE: 12/16/63
 MADE BY: V.O.
 CHECKED BY: RFB

BORING NO. 314

#3 BOS-1930

ALBANY No 20 BORING SURFACE (14.5' BELOW TOP OF M,
 14' OPEN TRENCH)

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO 8.75' BELOW		8.75'	SILT, FINE SAND & SHELLS	NO DATA
8.75' BELOW TO 10.25' BELOW		1.50'	SOFT BLUE CLAY	" "
10.25' BELOW TO 16.0' BELOW		5.75'	HARD YELLOW CLAY	" "
BOTTOM OF BORING 14.5 + 16.0 = 30.5' DOWN FROM ST LEVEL				

BORING NO. 315
 ALBANY No. 20

SURFACE EL. = +17.0

#4 BSCE-1949

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+17.0 DOWN TO +11.0' BELOW		6.0' -	GRAVEL	NO DATA
+11.0' BELOW TO +7.0' BELOW		4.0' -	SOFT MUD	" "
+7.0' BELOW TO -5.5' BELOW		12.5' -	HARD MUD	" "
-5.5' BELOW TO -13.0' BELOW		7.5' -	GRAVEL MUD	" "
-13.0' BELOW TO -20.5' BELOW		7.5' -	GRAVEL	" "
-20.5' BELOW TO -28.5' BELOW		7.5' -	CLAY	" "
TOTAL 45.0'				

BORING NO. 316

ALBANY No. 20

SURFACE EL. = +17.0

#4 BSCE-1949

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+17.0' DOWN TO +10.0' BELOW		7.0'	GRAVEL	NO DATA
+10.0' BELOW TO +7.0' BELOW		3.0'	SOFT MUD	" "
+7.0' BELOW TO -8.5' BELOW		15.5'	HARD MUD	" "
-8.5' BELOW TO -18.5' BELOW		10.0'	GRAVEL MUD	" "
-18.5' BELOW TO -29.5' BELOW		11.0'	CLAY	" "
TOTAL = 46.5'				

BORING NO. 317
 ALBANY No. 20

SURFACE ELEV. = ALBANY ST SIDEWALK

#5 G-1925

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO 11.7' BELOW		11.7'	SAND, GRAVEL AND LITTLE CLAY FILL	NO DATA
11.7' BELOW TO 29.8' BELOW		18.1'	SILT AND LITTLE SHELLS	" "
29.8' BELOW TO 42.0' BELOW		12.2'	MED BLUE CLAY	" "

* 3 SEE NOTE NO 3

* 4 SEE NOTE NO 4

* 5 SEE NOTE NO 5

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 84
DATE 12/16/53
MADE BY V.O.
CHECKED BY RFB

BORING No. 318
ALBANY No 20

SURFACE EL = ALBANY ST SIDEWALK

#5 G-1925
BLOWS

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 11.7' BELOW		11.7'	SAND, GRAVEL AND LITTLE CLAY FILL	NO DATA
11.7' BELOW TO 28.3' BELOW		16.6'	SILT AND LITTLE SHELLS	" "
28.3' BELOW TO 42.0' BELOW		13.7'	MED. BLUE CLAY	" "

BORING No. 319
ALBANY No 20

SURFACE EL = ALBANY ST SIDEWALK

#5 G-1925

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 11.5' BELOW		11.5'	SAND, GRAVEL AND LITTLE CLAY FILL	NO DATA
11.5' BELOW TO 29.6' BELOW		18.1'	SILT AND LITTLE SHELLS	" "
29.6' BELOW TO 45.0' BELOW		15.4'	MED. BLUE CLAY	" "

BORING No. 320
ALBANY No 20

SURFACE EL = ALBANY ST SIDEWALK

#5 G-1925

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 13.7' BELOW		13.7'	SAND, GRAVEL AND LITTLE CLAY	NO DATA
13.7' BELOW TO 28.3' BELOW		14.7'	SILT AND LITTLE SHELLS	" "
28.3' BELOW TO 40.0' BELOW		40.0'	MED. BLUE CLAY	" "

BORING No 321
ALBANY No 20

SURFACE EL = ALBANY ST. SIDEWALK

#5 G-1925

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 17.5' BELOW		17.5'	CINDERS, WOOD AND RUBBAGE FILL	NO DATA
17.5' BELOW TO 31.3' BELOW		13.8'	SILT AND LITTLE SHELLS	" "
31.3' BELOW TO 45.0' BELOW		13.7'	MED. BLUE CLAY	" "

BORING No. 322
ALBANY No 20

SURFACE EL = ALBANY ST SIDEWALK

#5 G-1925

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 12.5' BELOW		12.5'	SAND, GRAVEL AND LITTLE CLAY FILL	NO DATA
12.5' BELOW TO 31.4' BELOW		18.9'	SILT AND LITTLE SHELLS	" "
31.4' BELOW TO 42.0' BELOW		10.6'	MED. BLUE CLAY	" "

WATER LEVEL 10.5' DOWN FROM SURFACE-

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 85
 DATE 12/19/43
 MADE BY V.O.
 CHECKED BY P.F.F.

BORING No. 323 SURFACE EL = ALBANY ST SIDEWALK
 ALBANY No. 20 #5 G-1925

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO 13.2' BELOW		13.2'	SAND, GRAVEL AND LITTLE CLAY FILL	NO DATA
13.2' BELOW TO 31.0' BELOW		17.8'	SILT AND LITTLE SHELLS	" "
31.0' BELOW TO 45.0' BELOW		14.0'	MED. BLUE CLAY	" "

BORING No. 324 SURFACE EL = ALBANY ST SIDEWALK #5 G-1925
 ALBANY No. 20

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
0.0 DOWN TO 13.5' BELOW		13.5'	COARSE SAND, COARSE GRAVEL, LITTLE CLAY FILL	" "
13.5' BELOW TO 35.0' BELOW		21.5'	SILT AND LITTLE SHELLS	" "
35.0' BELOW TO 48.0' BELOW		13.0'	MED. BLUE CLAY	" "

BORING No. 325 SURFACE EL = +16.5 #4 BSCE-1945
 ALBANY No. 20

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+16.5 DOWN TO +2.0' BELOW		14.5'	SAND AND GRAVEL FILL	NO DATA
+2.0' BELOW TO (-) 3.0' BELOW		5.0'	SAND AND GRAVEL, SILTY PEAT	" "
(-) 3.0' BELOW TO (-) 8.0' BELOW		5.0'	SILT, PEAT	" "
- 8.0' BELOW TO (-) 14.5' BELOW		6.5'	SOFT SILT	" "
- 14.5' BELOW TO (-) 25.0' BELOW		10.5'	BLUE CLAY, FAIRLY STIFF	" "
		TOTAL	41.5'	

BORING No. 326 SURFACE EL = +14.5 #4 BSCE-1945
 ALBANY No. 20

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+14.5 DOWN TO +4.0' BELOW		10.5'	FILL; SAND, GRAVEL, SILT	NO DATA
+ 4.0' BELOW TO +2.0' BELOW		2.0'	VERY SOFT SILT	" "
+ 2.0' BELOW TO (-) 2.0' BELOW		4.0'	SOFT SILT	" "
(-) 2.0' BELOW TO (-) 10.5' BELOW		8.5'	STIFF YELLOW CLAY	" "
		TOTAL	25.0'	

BORING No. 327 SURFACE EL = +17.0 #4 BSCE-1945
 ALBANY No. 20

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+17.0 DOWN TO (-) 5.0' BELOW		22.0'	GRAVEL	NO DATA
(-) 5.0' BELOW TO -23.0' BELOW		18.0'	CLAY	" "
		TOTAL	40.0'	

THE THOMPSON & LICHTNER CO., INC.

SHEET NO. 1
 DATE 12/17/63
 MADE BY V.O.
 CHECKED BY P.L.

SUBJECT BORING LOGS SOUTH END URBAN RENOVATION AREA R-5

BORING NO 328 SURFACE EL. = +10.0 #5 G-1940
 ALBANY No. 20

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 5.5' BELOW		5.5'	RUBBISH FILL	No DATA
5.5' BELOW TO 12.0' BELOW		6.5'	SILT & PEAT	" "
12.0' BELOW TO 23.0' BELOW		11.0'	HARD YELLOW CLAY	" "
23.0' BELOW TO 34.0' BELOW		11.0'	MED. YELLOW CLAY	" "

WATER LEVEL 4.10' DOWN FROM SURFACE

BORING NO 329 SURFACE EL. = +10.0 #5 G-1940
 ALBANY No. 20

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 4.5' BELOW		4.5'	RUBBISH FILL	No DATA
4.5' BELOW TO 12.5' BELOW		8.0'	PEAT	" "
12.5' BELOW TO 14.5' BELOW		2.0'	FINE SAND & CLAY	" "
14.5' BELOW TO 23.0' BELOW		8.5'	HARD YELLOW CLAY	" "
23.0' BELOW TO 31.0' BELOW		8.0'	MED. YELLOW CLAY	" "

WATER LEVEL 1.0' BELOW SURFACE

BORING NO 330 SURFACE EL. = +14.0 #5 G-1940
 ALBANY No. 20

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 8.0' BELOW		8.0'	RUBBISH FILL	No DATA
8.0' BELOW TO 14.0' BELOW		6.0'	PEAT	" "
14.0' BELOW TO 20.0' BELOW		6.0'	HARD YELLOW CLAY	" "

WATER LEVEL 6.0' BELOW SURFACE

BORING NO 331 SURFACE EL. = +15.5 #5 G-1940
 ALBANY No. 20

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 9.0' BELOW		9.0'	HARD RUBBISH FILL	No DATA
9.0' BELOW TO 14.68' BELOW		5.68'	SILT & PEAT	" "
14.68' BELOW TO 23.68' BELOW		9.0'	HARD YELLOW CLAY	" "
23.68' BELOW TO 35.0' BELOW		11.32'	MED. YELLOW CLAY	" "

WATER LEVEL 5.5' BELOW SURFACE

BORING NO. 332 SURFACE EL. = +16.0 #5 G-1940
 ALBANY No. 20

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
0.0 DOWN TO 12.0' BELOW		12.0'	HARD RUBBISH FILL	No DATA
12.0' BELOW TO 18.0' BELOW		6.0'	STIFF SILT & PEAT	" "
18.0' BELOW TO 27.5' BELOW		9.5'	HARD YELLOW CLAY	" "
27.5' BELOW TO 37.0' BELOW		9.5'	MED. YELLOW CLAY	" "

WATER LEVEL 9.0' BELOW SURFACE

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 217
DATE 10/19/62
MADE BY RFB
CHECKED BY VO

SUBJECT SOUTH END URBAN REDEVELOPMENT AREA R-56

BORING NO 333 SURFACE ELEVATION = 17.0 #4 BSCE
ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.0	TO -3.0	20'	- GRAVEL	NO DATA
-3.0	TO -20.5	17.5'	- CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 334 SURFACE ELEVATION = 17.0 #4 BSCE
ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
17.0	TO -4.5	21.5'	- GRAVEL	NO DATA
-4.5	TO -8.0	3.5'	- MUD	" "
-8.0	TO -22.5	14.5'	- CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 335 SURFACE ELEVATION = NO DATA #7 BS1933
ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 15.25' BELOW	15.25'	- SAND AND GRAVEL FILLING HARD	NO DATA
15.25' BELOW	TO 22.08' BELOW	6.83'	- FINE SILTY SAND AND MUD	" "
22.08' BELOW	TO 24' BELOW	1.92'	- HARD BLUE CLAY	" "
24' BELOW	TO 33.92' BELOW	9.92'	- HARD YELLOWISH CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 336 SURFACE ELEVATION = NO DATA #7 BS1933
ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 14.08' BELOW	14.08'	- SAND AND GRAVEL FILLING HARD	NO DATA
14.08' BELOW	TO 20.25' BELOW	6.17'	- FINE MUD	" "
20.25' BELOW	TO 22.75' BELOW	2.5'	- COMPACT FINE SAND	" "
22.75' BELOW	TO 34.50' BELOW	11.75'	- HARD YELLOW CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 337 SURFACE ELEVATION = NO DATA #7 BS1933
ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE	TO 15.33' BELOW	15.33'	- SAND AND GRAVEL FILLING HARD	NO DATA
15.33' BELOW	TO 19.33' BELOW	4.0'	- COARSE SAND FILLING	" "
19.33' BELOW	TO 23.0' BELOW	3.67'	- FINE SILTY SAND AND MUD	" "
23.0' BELOW	TO 33.5' BELOW	10.5'	- HARD YELLOWISH CLAY	" "

NO WATER LEVEL SHOWN

*4 SEE LOG # NO 4

*7 SEE LOG # NO 4

THE THOMPSON & LIGHTNER CO., Inc.

BORING LOGS

SUBJECT SOUTH END URBAN REPAIR WORK AREA R-56

SHEET NO. 5
 DATE 10/9/63
 MADE BY RT
 CHECKED BY JO

BORING NO 338 SURFACE ELEVATION = 19.0 #4

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	PROVS
17.0	To 9.0	8' -	GRAVEL	NO DATA
9.0	To 4.0	5' -	MUD	" "
4.0	To -22.5	26.5' -	GRAVEL	" "

NO WATER LEVEL SHOWN.

BORING NO 339 SURFACE ELEVATION = 17.0 #4 BSCE

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	PROVS
17.0	To 11.5	5.5' -	FILL	NO DATA
11.5	To 5.0	6.5' -	MUD	" "
5.0	To 2.0	3.0' -	GRAVEL	" "
2.0	To 0.5	1.5' -	STONE	" "
0.5	To -8.0	8.5' -	GRAVEL	" "
-8.0	To -20.5	12.5' -	SAND	" "
-20.5	To -32.5	12' -	CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 340 SURFACE ELEVATION = 16.5 #4 BSCE

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	PROVS
16.5	To 3.5	13' -	GRAVEL	NO DATA
3.5	To -0.5	4' -	MUD	" "
-0.5	To -10.0	9.5' -	GRAVEL	" "
-10.0	To -23.0	13' -	CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 341 SURFACE ELEVATION = 16.8 #5

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	PROVS
SURFACE	To 0.7' BELOW	0.7' -	PAVEMENT	NO DATA
0.7' BELOW	To 24.5' BELOW	23.8' -	FILL	" "
24.5' BELOW	To 30.7' BELOW	6.2' -	SILT AND FINE SAND	" "
30.7' BELOW	To 32.0' BELOW	1.3' -	PEAT	" "
32.0' BELOW	To 38.0' BELOW	6' -	HARD CLAY	" "

NO WATER LEVEL SHOWN.

*4 SEE NOTE NO 4.

*5 SEE NOTE NO 5.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT

SOUTH END URBAN RENEWAL AREA R-56

SHEET NO. 33

DATE 12/1

MADE BY RFB

CHECKED BY VO

BORING NO 342 SURFACE ELEVATION: NO DATA

*5 G.I.

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO 0.7' BELOW	0.7'	-	PAVEMENT	NO DATA
0.7' BELOW TO 20.7' BELOW	20'	-	FILL	" "
20.7' BELOW TO 30.5' BELOW	9.8'	-	SILT AND FINE SAND	" "
30.5' BELOW TO 31.5' BELOW	1'	-	PEAT	" "
31.5' BELOW TO 40.5' BELOW	8.5'	-	HARD YELLOW CLAY	" "

NO WATER LEVEL SHOWN.

BORING NO 343 SURFACE ELEVATION - 16.5

*4 BSCE

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.5 TO 10.5	6'	-	GRAVEL	NO DATA
10.5 TO 4.0	6.5'	-	SOFT MUD	" "
4.0 TO -5.5	9.5'	-	HARD MUD	" "
-5.5 TO -15.0	9.5'	-	SAND	" "
-15.0 TO -28.0	13'	-	CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 344 SURFACE ELEVATION - 16.5

*4 BSCE

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.5 TO 8.5	8.0'	-	GRAVEL	NO DATA
8.5 TO 4.5	4.0'	-	MUD	" "
4.5 TO -11.0	15.5'	-	GRAVEL	" "
-11.0 TO -23.0	12.0'	-	CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 345 SURFACE ELEVATION: 16.5

*4 BSCE

ALBANY NO 21

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
16.5 TO 10.5	6'	-	GRAVEL	NO DATA
10.5 TO 2.5	8'	-	MUD	" "
2.5 TO -14.0	16.5'	-	GRAVEL MUD	" "
-14.0 TO -18.0	4'	-	GRAVEL	" "
-18.0 TO -28.5	10.5'	-	CLAY	" "

NO WATER LEVEL SHOWN

*4 SEENOTE NO 4,

*5 SEE NOTE N.15,

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT

SOUTH END URBAN GENERAL MAPS R-56

SHEET NO. 70
 DATE 10/1
 MADE BY J.P.
 CHECKED BY J.P.

BORING NO 346 SURFACE ELEVATION = 16.5 #4 ESC

ALBANY NO 21

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
16.5	TO 9.5	7' -	GRAVEL	NO DATA
9.5	TO 4.5	5' -	MUD	" "
4.5	TO -21.5	26' -	GRAVEL MUD	" "
-21.5	TO -29.5	7' -	CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 347 SURFACE ELEVATION = 16.5 #4 C

ALBANY NO 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
16.5	TO 10.0	6.5' -	GRAVEL	NO DATA
10.0	TO 5.5	4.5' -	MUD	" "
5.5	TO -22.5	28' -	DRY MUD	" "
-22.5	TO -32.0	9.5' -	CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 348 SURFACE ELEVATION = NO DATA #3 EAST

ALBANY NO 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE	TO 12' BELOW	12' -	SAND GRAVEL AND ASHES FILLING	NO DATA
12' BELOW	TO 25' BELOW	13' -	BROWN SAND AND GRAVEL FILLING	" "
25' BELOW	TO 43' BELOW	18' -	SILT AND SHELLS SOFT	" "
43' BELOW	TO 48' BELOW	5' -	SOFT BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING NO 349 SURFACE ELEVATION = NO DATA #3 WEST

ALBANY NO 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE	TO 12.1' BELOW	12.1' -	SAND, GRAVEL AND ASHES FILLING	NO DATA
12.1' BELOW	TO 20' BELOW	7.9' -	BROWN SAND FILLING	" "
20.0' BELOW	TO 40.0' BELOW	20.0' -	SILT AND ASHES FILLING	" "
40.0' BELOW	TO 45.0' BELOW	5.0' -	STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

*3. SEE NOTE NO 3. *4. SEE NOTE NO 4.

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET No. 21
 DATE 12/12/1903
 MADE BY V.O.
 CHECKED BY RFB

SUBJECT SOUTH END URBAN REDEVELOPMENT AREA R-50

BORING NO 350 SURFACE ELEVATION - NO DATA #3 B.O.S. 1903

ALBANY NO 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 10' BELOW	10'	-	ASHES FILLING	NO DATA
10' BELOW TO 22.5' BELOW	12.5'	-	SAND & GRAVEL FILLING	" "
22.5' BELOW TO 36.0' BELOW	13.5'	-	SILT & SHELLS	" "
36.0' BELOW TO 41' BELOW	5.0'	-	STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING No. 351

ALBANY No. 22 SURFACE ELEVATION = NO DATA #3 B.O.S. 1903

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 12' BELOW	12'	-	SAND GRAVEL & ASHES FILLING	NO DATA
12' BELOW TO 34' BELOW	22'	-	SILT SHELLS	" "
34' BELOW TO 39' BELOW	5'	-	STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING No. 352

ALBANY No. 22 SURFACE ELEVATION = NO DATA #3 B.O.S. 1903

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 5' BELOW	5'	-	WHARF TO SURFACE	NO DATA
5' BELOW TO 10' BELOW	5'	-	ASHES FILLING	" "
10' BELOW TO 30' BELOW	20'	-	SILT SAND & SHELLS	" "
30' BELOW TO 35' BELOW	5'	-	STIFF BLUE CLAY	" "

NO WATER LEVEL SHOWN

BORING No. 353 SURFACE ELEVATION - NO DATA #3 B.O.S. 1903

ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 15' BELOW	15'	-	WHARF TO WATER	NO DATA
15' BELOW TO 18.5'	3.5'	-	WATER	" "
18.5' BELOW TO 22.5'	4'	-	SILT	" "
22.5' BELOW TO 33'	10.5'	-	BROWN PEAT	" "

NO WATER LEVEL SHOWN

#3 SEE NOTE No. 3

THE THOMPSON & LICHTNER CO., INC.
BORING LOGS

SHEET NO. 92
DATE 12/23/63
MADE BY V.O.
CHECKED BY R.F.C.

SUBJECT SOUTH END URBAN RENEWAL AREA R-52

BORING NO. 354 SURFACE ELEVATION = NO DATA #4 BSCE
ALBANY No 22

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
SURFACE TO	9.0'	9.0'	- GRAVEL FILL	NO DATA
9' BELOW TO	20.0'	11.0'	- GRAVEL FILL	" "
20' BELOW TO	30.0'	10.0'	- CLAY, GRAVEL, STONES	" "

NO WATER LEVEL SHOWN

BORING NO. 355 SURFACE ELEVATION = +16.5' " "
ALBANY No. 22 #4 BSCE

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+16.5' BELOW TO +12.5' BELOW		4.0'	- GRAVEL	NO DATA
+12.5' BELOW TO +10.5' BELOW		2.0'	- SOFT MUD	NO DATA
+10.5' BELOW TO -33.5' BELOW		43.5'	- DRY MUD	NO DATA
-33.0' BELOW TO -35.0' BELOW		2.0'	- SOFT CLAY	NO DATA

TOTAL 51.5'

NO WATER LEVEL SHOWN

BORING NO. 356 SURFACE ELEVATION = +16.5' #4 BSCE
ALBANY No 22

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+16.5' BELOW TO +9.5'		7.0'	- GRAVEL	NO DATA
+9.5' BELOW TO +3.5'		6.0'	- SOFT MUD	" "
+3.5' BELOW TO -29.5'		33.0'	- DRY MUD	" "
-29.5' BELOW TO -35.0'		5.5'	- SOFT DRY	" "

TOTAL 51.5'

NO WATER ELEVATION SHOWN

BORING NO. 357 SURFACE ELEVATION = +16.5' #4 BSCE
ALBANY No 22

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+16.5' BELOW TO +9.5'		7.0'	GRAVEL	NO DATA
+9.5' BELOW TO +5.5'		4.0'	SOFT MUD	" "
+5.5' BELOW TO -23.0'		28.5'	MUD, GRAVEL	" "
-23.0' BELOW TO -27.0'		4.0'	SAND	" "
-27.0' BELOW TO -38.5'		11.5'	CLAY	" "

TOTAL 55.0'

#4 SEE NOTE NO. 4

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 28
 DATE 12/13/63
 MADE BY V.O.
 CHECKED BY RFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No 358 SURFACE ELEVATION = +16.5' #4 BSCC
 ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+16.5' BELOW TO +10.5'		6.0'	- GRAVEL	NO DATA
+10.5' BELOW TO +7.5'		3.0'	- SOFT MUD	" "
+7.5' BELOW TO -21.0'		28.5'	- GRAVEL MUD	" "
-21.0' BELOW TO -23.0'		2.0'	- CLAY	
		<u>TOTAL 39.5'</u>		

NO WATER LEVEL SHOWN

BORING No. 359 SURFACE ELEVATION = +16.5' #4 BSCC
 ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
+16.5' BELOW TO +10.5'		6.0'	- GRAVEL	NO DATA
+10.5' BELOW TO +4.0'		6.5'	- SOFT MUD	" "
+4.0' BELOW TO -17.0'		21.0'	- DRY MUD	" "
-17.0' BELOW TO -31.0'		14.0'	- HARD CLAY	" "
		<u>TOTAL 47.5'</u>		

NO WATER LEVEL SHOWN

BORING No. 360 SURFACE ELEVATION = NO DATA #3 BOS
 ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 16.67' BELOW	16.67'	-	FILLING	NO DATA
16.8' BELOW TO 27.17' BELOW	11.5'	-	SANDY MUD	" "
27.17' BELOW TO 34.17' BELOW	7.16'	-	HARD GRAY CLAY	" "

NO WATER LEVEL SHOWN

BORING No. 361 SURFACE ELEVATION = NO DATA #3 BOS
 ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>BLOWS</u>
SURFACE TO 13.5' BELOW	13.5'	-	FILLING	NO DATA
13.5' BELOW TO 20.33' BELOW	6.83'	-	SANDY	" "
20.33' BELOW TO 25.0' BELOW	1.67'	-	HARD CLAY	" "

NO WATER LEVEL SHOWN

SEE #3 NOTE No. 3
 #4 -- No. 4

THE THOMPSON & LICHTNER CO., Inc.

BORING LOGS

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

SHEET No. 74

DATE 1/2

MADE BY V.G.

CHECKED BY

BORING No. 362 SURFACE ELEVATION = SIDE WALK #2.5' BORING #2

ALBANY No. 22

FROM	TO	THICKNESS	DESCRIPTION #1A	BLOWS
SURFACE TO 14.0 BELOW		14.0'	PAVEMENT - SAND, GRAVEL, NAILS, WOOD & METAL	NO B
14.0' BELOW TO 29.5' BELOW		15.5'	SOFT SANDY SILT	" "
29.5' BELOW TO 31.5' BELOW		2.0'	BLUE CLAY, SAND, GRAVEL	4
31.5' BELOW TO 35.0' BELOW		3.5'	HARD YELLOW CLAY, LITTLE SAND, GRAVEL	1
35.0' BELOW TO 40.0' BELOW		5.0'	MED. YELLOW CLAY, LITTLE SAND, FINE GRAVEL	

WATER LEVEL FROM PAVEMENT 9.0' DOWN

BORING No. 363 SURFACE ELEVATION = +17.5' #4 D.S.

ALBANY No. 22

FROM	TO	THICKNESS	DESCRIPTION	BLOWS
+17.5' BELOW TO +8.5' BELOW		9.0'	GRAVEL	NO B
+8.5' BELOW TO +5.5' BELOW		3.0'	SOFT MUD	" "
+5.5' BELOW TO -17.5' BELOW		23.0'	MUD, GRAVEL	" "
-17.5' BELOW TO -27.0' BELOW		9.5'	CLAY	" "

TOTAL 44.5'

NO WATER LEVEL SHOWN

BORING No. 364 SURFACE ELEVATION = 15.925' #10 MDPW-RC-17-3

ALBANY No. 22

FROM	TO	THICKNESS	DESCRIPTION #1A	BLOWS
0.0 DOWN TO 8.7' BELOW		8.7'	SAND, GLASS & DUMP, FILL	5
8.7' BELOW TO 14.0' BELOW		5.6'	PUSHED BOULDER & NO SAMPLE	-
14.0' BELOW TO 22.0' BELOW		8.0'	SAND, CLAY & SOME COARSE GRAVEL-FILL	21
22.0' BELOW TO 27.5' BELOW		5.5'	SILTY MED. SAND, GRAVEL & WOOD-FILL	31
27.5' BELOW TO 37.5' BELOW		10.0'	ORGANIC SILT AND SHELLS	41
37.5' BELOW TO 41.0' BELOW		3.5'	SANDY ORGANIC SILT & SHELLS	9
41.0' BELOW TO 94.5' BELOW		53.5'	MED. BLUE CLAY (BLOWS 5, 4, 4, 5, 3)	3
94.5' BELOW TO 104.5' BELOW		10.0'	SOFT, SANDY, BLUE CLAY	3
104.5' BELOW TO 120.9' BELOW		16.4'	SOFT BLUE CLAY	3
120.9' BELOW TO 126.7' BELOW		5.8'	FINE SAND, LITTLE CLAY & LITTLE MED GRAVEL-FILL	50

WATER LEVEL 11.3' DOWN FROM SURFACE

#10 SEE NOTE NO 10

#4 SEE NOTE NO 4,

#2 SEE NOTE NO 2,

NOTE: FOR SAMPLES & BLOWS ON BORING LOGS No. 364 TO No. 379 SEE NOTE No. 1A

THE THOMPSON & LICHTNER CO., INC.

SHEET No. 05

DATE 12/13/63

MADE BY V.O.

CHECKED BY J.F.P.

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING LOGS

BORING NO. 365 SURFACE ELEVATION = 1.0' ± #10 MDPW-1963
ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
0.0 DOWN TO 6.0' BELOW		6.0'	FINE SAND, SOME FINETUNED GRAVEL-FILL	20
6.0' BELOW TO 15' BELOW		9.0'	SANDY, PEATY ORGANIC SILT	2
15.0' BELOW TO 23.0' BELOW		8.0'	STIFF YELLOW CLAY	14
23.0' BELOW TO 30.0' BELOW		15.0'	MED. BLUE CLAY	5, 4

NO WATER LEVEL SHOWN.

BORING NO. 366 SURFACE ELEVATION = 15.32' ± #10 MDPW-1963
ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
0.0 DOWN TO 7.3' BELOW		7.3'	SAND, CINDERS, GLASS AND BOULDERS	9
7.3' BELOW TO 14.0' BELOW		6.7'	BRICK, GRAVEL, SAND & CLAY	16
14.0' BELOW TO 29.0' BELOW		15.0'	FINE SAND, GRAVEL & CLAY-FILL	9
29.0' BELOW TO 36.0' BELOW		7.0'	SANDY ORGANIC SILT & SHELLS	8, 19
36.0' BELOW TO 39.0' BELOW		3.0'	STIFF YELLOW CLAY	27
39.0' BELOW TO 50.0' BELOW		11.0'	MED BLUE CLAY	6

WATER LEVEL 9.4' DOWN FROM SURFACE

BORING NO. 367 SURFACE ELEVATION = 15.32' ± #10 MDPW-1963
ALBANY No. 22

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A - BLOWS</u>
0.0 DOWN TO 10' BELOW		10.0'	CINDER GLASS & FILL	12
10.0' BELOW TO 18' BELOW		8.0'	CINDER & GLASS FILL	40
18.0' BELOW TO 36.4' BELOW		18.4'	ORGANIC SILT	1, 1
36.4' BELOW TO 41.0' BELOW		4.6'	MED. YELLOW CLAY	8
41.0' BELOW TO 51.0' BELOW		10.0'	MED. BLUE CLAY	5

WATER LEVEL 11.3' DOWN FROM SURFACE

#10 SEE NOTE NO 10

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SHEET NO. 17
 DATE 12/16/61
 MADE BY V.C.
 CHECKED BY RFB

SUBJECT SOUTH END URBAN RENEWAL AREA R-56

BORING No. 371

ALBANY No. 22

SURFACE EL. = 16.72'

*10 MDPW-1963

FROM	TO	THICKNESS	DESCRIPTION	#1A - BLOWS
0.0 DOWN TO 9.0' BELOW	9.0'	9.0'	ORGANIC RIVER SILT & GRAVEL	3
9.0' BELOW TO 12.0' BELOW	12.0'	3.0'	ORGANIC SILTY SAND & SHELLS	3
12.0' BELOW TO 16.0' BELOW	16.0'	4.0'	VERY STIFF YELLOW CLAY	16
16.0' BELOW TO 121' BELOW	121.0'	105.0'	MED. BLUE CLAY	10, 5, 4, 4, 4, 4, 6, 10
121.0' BELOW TO 123.0' BELOW	123.0'	2.0'	HARD BLUE SANDY CLAY	35
123.0' BELOW TO 124.0' BELOW	124.0'	3.0'	FINE SAND, CLAY & SOME COARSE GRAVEL-FILL	55
REFUSAL AT 124.0'				

BORING No. 372

ALBANY No. 21

SURFACE ELEVATION = 6.5'

*10 MDPW - 1963

FROM	TO	THICKNESS	DESCRIPTION	#1A - BLOWS
0.0 DOWN TO 10.0' BELOW	10.0'	10.0'	SAND, SILT AND GRAVEL-FILL	14
10.0' BELOW TO 12.0' BELOW	12.0'	2.0'	SAND & GRAVEL-FILL	18
12.0' BELOW TO 19.5' BELOW	19.5'	7.5'	ORGANIC SILT WOOD & SAND	6
19.5' BELOW TO 28.0' BELOW	28.0'	8.5'	MED. YELLOW CLAY	8
28.0' BELOW TO 42.0' BELOW	42.0'	14.0'	MED. BLUE CLAY	5, 5

BORING No. 373

ALBANY No. 21

SURFACE EL. = 2.5'

*10 MDPW-1963

FROM	TO	THICKNESS	DESCRIPTION	#1A - BLOWS
0.0 DOWN TO 8.0' BELOW	8.0'	8.0'	SAND, SILT AND GRAVEL FILL	15
8.0' BELOW TO 13.5' BELOW	13.5'	5.5'	SANDY ORGANIC SILT	2
13.5' BELOW TO 17.0' BELOW	17.0'	3.5'	STIFF YELLOW CLAY	12
17.0' BELOW TO 29.5' BELOW	29.5'	12.5'	SANDY MEDIUM YELLOW CLAY	8, 8
29.5' BELOW TO 39.0' BELOW	39.0'	9.5'	MED. BLUE CLAY	5, 5

BORING No. 374

ALBANY No. 21

SURFACE ELEVATION = 1.5' *10 MDPW - 1963

FROM	TO	THICKNESS	DESCRIPTION	#1A - BLOWS
0.0 DOWN TO 11.0' BELOW	11.0'	11.0'	ORGANIC RIVER SILT	1
11.0' BELOW TO 13.0' BELOW	13.0'	2.0'	PEATY ORGANIC SILT	2
13.0' BELOW TO 18.0' BELOW	18.0'	5.0'	VERY STIFF BLUE & YELLOW CLAY	12
18.0' BELOW TO 47.0' BELOW	47.0'	29.0'	MED. YELLOW CLAY	5, 6, 7
47.0' BELOW TO 99.5' BELOW	99.5'	52.5'	MED. SANDY BLUE CLAY	5, 5, 4, 5, 6
99.5' BELOW TO 106.0' BELOW	106.0'	6.5'	FINE SAND, LITTLE CLAY & SOME MED. GRAVEL	53
106.0' BELOW TO 103.0' BELOW	103.0'	3.0'	FINE SAND, SOME CLAY & LITTLE MED. GRAVEL	87

*10 SEE NOTE No. 10

THE THOMPSON & LICHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END URBAN RENAISSANCE AREA R-52

SHEET NO. 98
 DATE: 12/16/63
 MADE BY: V.O.
 CHECKED BY: JFB

BORING No. 375 SURFACE ELEVATION = 1.0' ± #10 MDPW-1963
 ALBANY No. 21

FROM	TO	THICKNESS	DESCRIPTION #1A	BLOWS
0.0 DOWN TO	13.0' BELOW	13.0'	SANDY ORGANIC RIVER SILT	0
13.0' BELOW TO	17.0' BELOW	4.0'	PEATY ORGANIC SILT AND SHELLS	4
17.0' BELOW TO	23.0' BELOW	6.0'	STIFF BLUE & YELLOW CLAY	14
23.0' BELOW TO	30.0' BELOW	7.0'	MED. BLUE CLAY	5
30.0' BELOW TO	35.0' BELOW	5.0'	MED. BLUE CLAY	3

BORING No. 376 SURFACE EL. = 13.82' #10 MDPW-1963
 ALBANY No. 21

FROM	TO	THICKNESS	DESCRIPTION #1A	BLOWS
0.0 DOWN TO	13.5' BELOW	13.5'	CINDERS AND DUMP FILL	4, 9
13.5' BELOW TO	18.0' BELOW	4.5'	BLUE CLAY - FILL -	1
18.0' BELOW TO	29.0' BELOW	11.0'	SAND, GRAVEL, BRICK AND CLAY FILL	7, 8
29.0' BELOW TO	35.0' BELOW	6.0'	SAND, SILT & METAL - FILL -	10
35.0' BELOW TO	38.0' BELOW	3.0'	STIFF, SANDY, YELLOW CLAY	14
38.0' BELOW TO	51.5' BELOW	13.5'	SOFT, SANDY, BLUE CLAY	3, 3

WATER LEVEL 11.0' DOWN FROM SURFACE

BORING No. 377 SURFACE ELEVATION = 2.7' ± #10 MDPW-1963
 ALBANY No. 20

FROM	TO	THICKNESS	DESCRIPTION #1A	BLOWS
0.0 DOWN TO	12.5' BELOW	12.5'	SANDY ORGANIC RIVER SILT	1, 4
12.5' BELOW TO	14.5' BELOW	2.0'	STIFF YELLOW CLAY	10
14.5' BELOW TO	17.0' BELOW	2.5'	VERY STIFF YELLOW CLAY & LITTLE COARSE GR.	24
17.0' BELOW TO	23.0' BELOW	6.0'	STIFF YELLOW CLAY	10
23.0' BELOW TO	32.0' BELOW	9.0'	MED BLUE CLAY	7
32.0' BELOW TO	34.0' BELOW	2.0'	FINE SAND, CLAY AND W/TE COARSE GRAVEL	9

BORING No. 378 SURFACE ELEVATION = 3.7' ± #10 MDPW-1963
 ALBANY No. 20

FROM	TO	THICKNESS	DESCRIPTION #1A	BLOWS
0.0 DOWN TO	15.0' BELOW	15.0'	SANDY ORGANIC RIVER SILT & LITTLE COARSE GR.	6, 1
15.0' BELOW TO	20.0' BELOW	5.0'	VERY STIFF YELLOW CLAY	15
20.0' BELOW TO	30.0' BELOW	10.0'	STIFF YELLOW & BLUE CLAY	10
30.0' BELOW TO	40.0' BELOW	10.0'	MED. BLUE CLAY	10

#10 SEE NOTE NO. 10

THE THOMPSON & LIGHTNER CO., INC.

BORING LOGS

SUBJECT SOUTH END RENEWAL AREA R-56

SHEET NO. 29
 DATE 12/16/63
 MADE BY V.O.
 CHECKED BY RFB

BORING No. 370

ALBANY No 20

SURFACE ELEVATION = 6.0 ± *10 MOUNT-1243

<u>FROM</u>	<u>TO</u>	<u>THICKNESS</u>	<u>DESCRIPTION</u>	<u>#1A</u>	<u>BLOWS</u>
0.0 DOWN TO	10.0' BELOW	10.0'	ORGANIC RIVER SILT		2
10.0' BELOW TO	16.0' BELOW	6.0'	ORGANIC SILTY SAND		11
16.0' BELOW TO	22.0' BELOW	6.0'	STIFF YELLOW CLAY		9
22.0' BELOW TO	58.0' BELOW	36.0'	MED. BLUE CLAY	8, 5, 5, 4	
58.0' BELOW TO	87.5' BELOW	29.5'	SANDY BLUE CLAY	4, 4	
87.5' BELOW TO	95.0' BELOW	7.5'	FINE SAND, SOME CLAY AND SOME MED. COARSE GRAVEL		58

*10 SEE NOTE NO 10.

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION
RAYMOND INTERNATIONAL INC.
140 CEDAR STREET - NEW YORK 6, N. Y.

To THOMPSON AND LIGHTNER

Date JUNE 18 1963

Address 8 ALTON PLACE, BROOKLINE, MASSACHUSETTS

We have completed the following borings for you at SEAN Egan DEVELOPMENT PROJECT, BOSTON, MASS.

with results shown below. In accordance with your instructions, we have sent labelled samples of the strata encountered
To ABOVE Address

Via UNITED PARCEL SERVICE under date of LATE Raymond Concrete Pile Division
Raymond International Inc. **LOCATION PLAN** **SCALE 1" =**

NO BORING LOCATION PLAN AVAILABLE
AT THIS TIME

Compass Points



This boring report prepared in the
BOSTON OFFICE of the
Raymond Concrete Pile Division
RAYMOND INTERNATIONAL INC.

By RGR
Job No. B-2116-506
Sheet 1 of 4

TEST BORING REPORT

RAYMOND

CONCRETE PILE DIVISION

BOSTON

To THOMPSON AND LICHTNER Date JUNE 14 1963 Job No. BB-201
 Location of Borings SOUTH END REDEVELOPMENT PROJECT, BOSTON, MASSACHUSETTS

All borings are plotted to a scale of 1" = 8 ft. using _____ as a fixed datum.
 No. 1 No. 1A No. 3 No. 4A

GROUND SURFACE	ELEV. 11.35' GROUND SURFACE	ELEV. 10.40' GROUND SURFACE	ELEV. 14.07' GROUND SURFACE
LOOSE MISC. FILL 8	LOOSE LINDER FILL	MISC. FILL 7	LOOSE MD MISC. FILL 5
SEE NOTE # 72	VERY COMPACT SAND GRAVEL, CLAY AND BOULDERS 135	VERY STIFF YELLOW CLAY WITH TRACE OF GRAVEL 16	HARD YELLOW CLAY WITH TRACE OF SAND & GRAVEL 34
5.0' 6.0'	10.0'	8.0'	10.0'
	VERY COMPACT YELLOW SAND 66	MEDIUM YELLOW CLAY 8	VERY STIFF YELLOW CLAY 10
	13.0'	13.5'	MEDIUM BLUE CLAY 9
	VERY STIFF YELLOW CLAY AND SAND 17	6	6
	17.5'	6	5
	MEDIUM BLUE CLAY 7	22.0'	5
	6	6	5
	6	27.0'	5
	6	5	5
	LOOSE MEDIUM SAND GRAVEL AND CLAY 32.5'	5	5
	9	5	5
	38.0' 39.0'	5	5
SEE NOTE #	HARD COARSE SAND GRAVEL AND CLAY 60'	5	5
	24	5	44.0'
	31	5	10
	50.0'	5	50.0'
NOTE #	VERY COMPACT SAND GRAVEL AND CLAY	5	52.0'

3-7-63 6-7-63 6-2-63 6-31-63
 Used of " Casing Used of " Casing Used of " Casing Used of " Casing

Total Footage 158.0'
 Foreman P. McGRATH
 Classification by FOREMAN
 Sheet 2 of 4

Figures in right hand column indicate number of blows required to drive sampling pipe one foot, using 140-lb. weight falling 30 inches.

TEST BORING REPORT

RAYMOND

CONCRETE PILE DIVISION

BOSTON

To THOMPSON AND LIGHTNER Date JUNE 18 19 63 Job No. EP-2816-100

Location of Borings SOUTH END REDEVELOPMENT PROJECT, BOSTON, MASSACHUSETTS

All borings are plotted to a scale of 1" = 8 ft. using _____ no fixed datum.

No. _____ No. 15 No. _____ No. _____

ELEV. 11.871
GROUND SURFACE

MISC. FILL 5

5.0' WL

LOOSE SAND
GRAVEL AND
CLAY FILL 3

10.0'

VERY STIFF
YELLOW CLAY
WITH TRACE OF
GRAVEL 16

13.0'

VERY STIFF
YELLOW CLAY
WITH TRACE OF
BLUE CLAY AND
GRAVEL 17

17.5'

MEDIUM
YELLOW CLAY

6 22.5'

SOFT BLUE
CLAY

4

4

5

4

4

4 50.0'

9-8-63

Used _____ of _____ " Casing

Used _____ of _____ " Casing

Used _____ of _____ " Casing

Used _____ of _____ " Casing

Total Footage 50.0'

Foreman P. McGRATH

Classification by FOREMAN

Sheet 4 of 4

Figures in right hand column indicate number of blows required to drive sampling pipe one foot, using 140-lb. weight falling 30 inches.

TEST BORING REPORT

RAYMOND

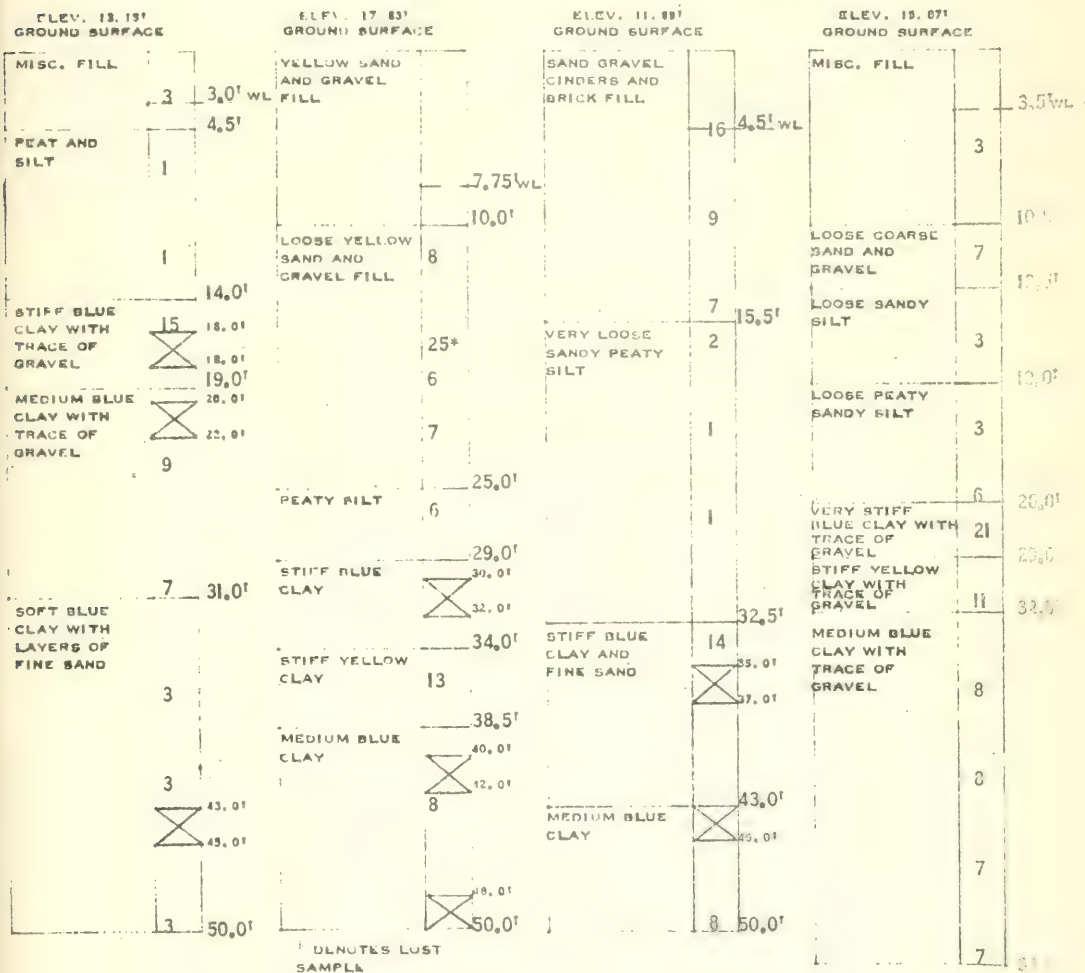
CONCRETE PILE DIVISION

BOSTON

To THOMPSON AND LIGHTNER Date AUGUST 12, 1963 Job No. EB 2316 BGG
 Location of Borings SOUTH END REDEVELOPMENT PROJECT, BOSTON, MASSACHUSETTS

All borings are plotted to a scale of 1" = 8' ft. using _____ as a fixed datum.

No. 2 No. 6A No. 8A No. 9



P. McGRATH 6-25-63	W. McGRATH 8-7-63	A. MONACO 7-3-63	P. McGRATH 8-21-63
Used _____ of _____ " Casing	Used _____ of _____ " Casing	Used _____ of _____ " Casing	Used _____ of _____ " Casing

Total Footage 202.0'

Figures in right hand column indicate number of blows required to drive sampling pipe one foot, using 140-lb. weight falling 50 inches.

Foreman AS ABOVE

Classification by FOREMEN _____

Sheet 2 of 3

TEST BORING REPORT

RAYMOND

CONCRETE PILE DIVISION

BOSTON

To THOMPSON AND LIGHTNER Date AUGUST 12 1963 Job No. BB-2014-000
 Location of Borings SOUTH END REDEVELOPMENT PROJECT, BOSTON, MASSACHUSETTS

All borings are plotted to a scale of 1" = 8 ft. using _____ as a fixed datum.

No. 10A No. 13 No. 14A No. _____

ELEV. 12.43' GROUND SURFACE	ELEV. 17.81' GROUND SURFACE	ELEV. 13.81' GROUND SURFACE
LOOSE SAND GRAVEL CINDERS CLAY AND SILT FILL 8 STIFF YELLOW CLAY AND LITTLE FINE SAND 19 14 11 23.0' MEDIUM BLUE CLAY AND FINE SAND 8 7 7 6 7 6 7 6	MISC. FILL 13 26 13 PEAT AND SILT 5 3 20.0' SEE NOTE * 10 22.0' VERY STIFF YELLOW CLAY 17 28.0' MEDIUM YELLOW CLAY 7 34.0' SOFT BLUE CLAY 4 5 4 4 4 52.0'	SAND GRAVEL SHELLS AND BRICK FILL 10 11 12 12 19.0' VERY LOOSE SANDY SILT AND SHELLS 2 2 2 31.0' STIFF YELLOW CLAY 17 14 10 43.0' MEDIUM BLUE CLAY AND FINE SAND 8 17 50.0'
6.5' WL 7.0'	7.0' WL	6.0' WL
50.0'	52.0'	50.0'

NOTE *
STIFF BLUE CLAY WITH LAYERS OF FINE SAND

7-9-63 A. MONACO Used of "Casing
 8-24-63 P. McGRATH Used of "Casing
 7-5-63 A. MONACO Used of "Casing

Figures in right hand column indicate number of blows required to drive sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 152.0'
 Foreman AS ABOVE
 Classification by FOREMAN
 Sheet 3 of 3

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART II - EXHIBITS

SECTION 2 - Photographs

a. During the investigation of foundations and structure conditions, a series of photographs were obtained which are included in this report in the next twenty-one pages. These photographs are identified and described in PART I, SECTION 4, of this report, as well as on the exhibits themselves.

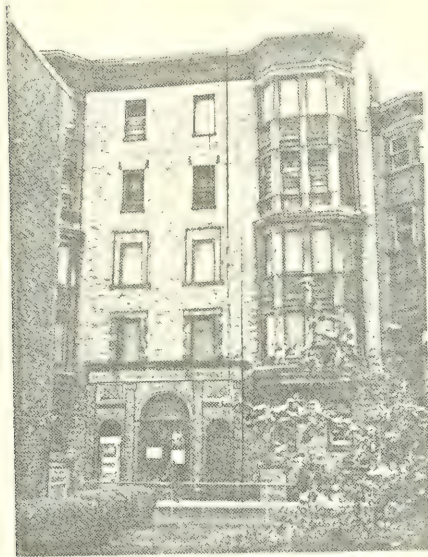
b. Photographs of the structures investigated were made during physical examinations which are described elsewhere in this report. The photographs of the foundation conditions were made at the completion of excavations by Raymond International, Inc. and before the excavations were backfilled. Photographs of the wood cores obtained from wood piles existing in certain of the excavations were made in the offices of The Thompson & Lichtner Co., Inc.

THE THOMPSON & LICHTNER CO., INC.

BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.

SOUTH END R-56
PART II - SECTION 2

LOCATION NO. 1 - 23 WALPOLE STREET

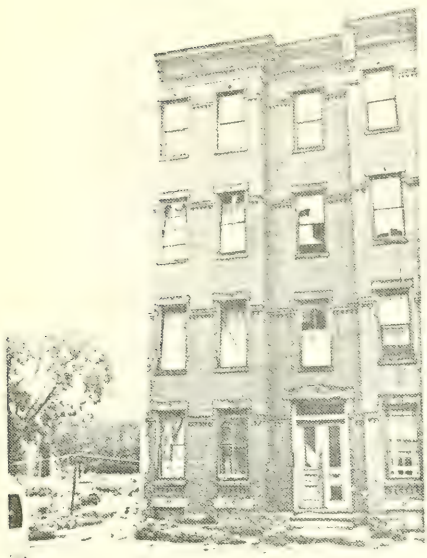


Front View
8/5/63

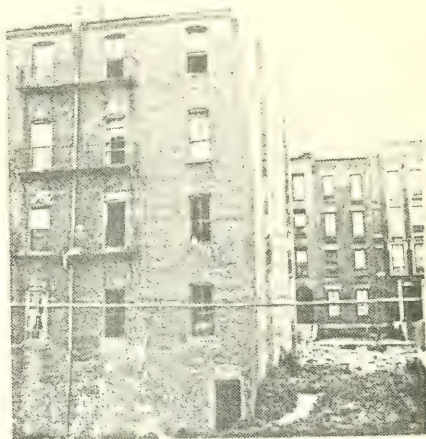


Foundation View
Interior Courtyard
West Wall
6-24-63

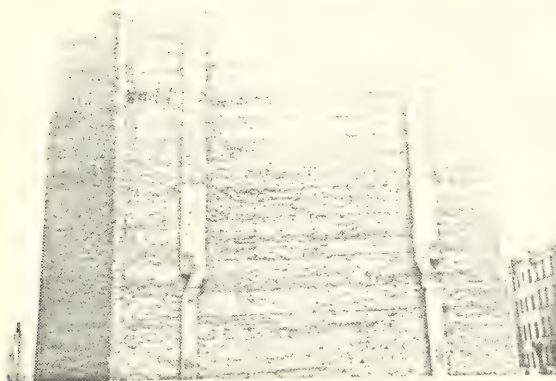
THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END R-56
PART II - SECTION 2
LOCATION NO. 2 - 53 HAMMOND STREET



Front View
8/5/63



Rear View
8/5/63

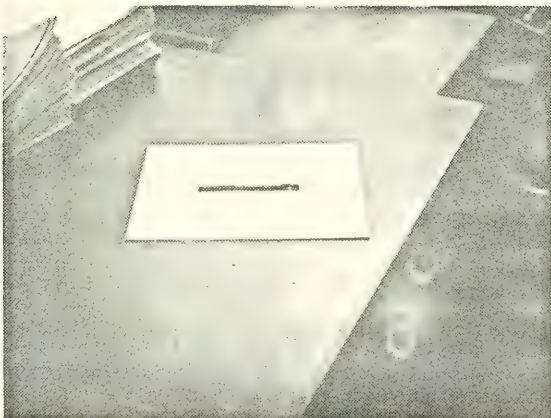


West Side View Looking
East 8/5/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56
PART II - SECTION 2
LOCATION 2 - 53 HALMOND STREET



Foundation View
Rear Wall
Full Depth
7/5/63



View of Wood Core
from Pile
7/8/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56
PART II - SECTION 2
LOCATION NO. 3 - 22, 24 CAMDEN STREET



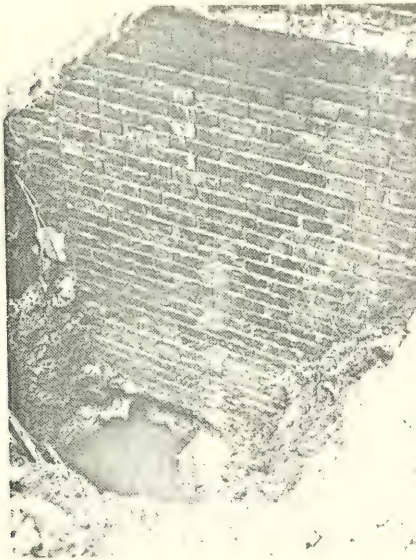
Front View
8/5/63

Rear View
8/5/63

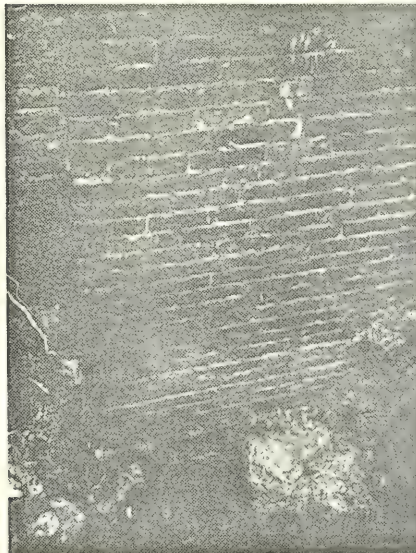


West Side View Looking
East
8/5/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56
PART II - SECTION 2
LOCATION NO. 3 - 22, 24 GARDEN STREET



Foundation View
Rear Wall
Near SW Corner
6/7/63

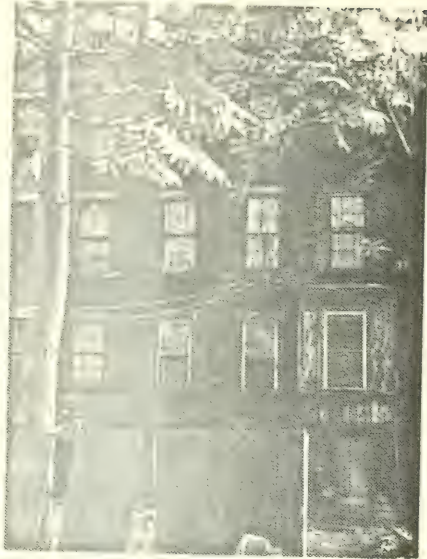


Foundation View
Rear Wall
Near SW Corner
6/7/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56
PART II - SECTION 2
LOCATION NO. 4A - 196 NORTHAMPTON STREET



Front View
8/6/63



Rear View
8/6/63



Foundation View
Rear Wall
6/5/63

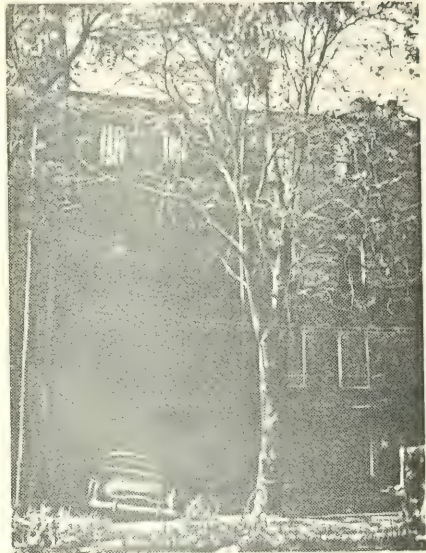
THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY

BOSTON, MASS.
SOUTH END - R 56
PART II - SECTION 2

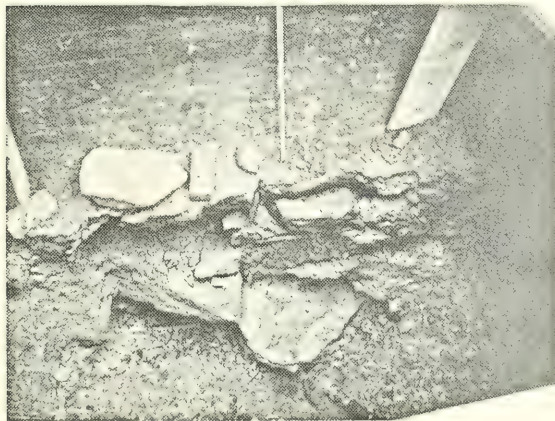
LOCATION NO. 5 - 27, 29 CLAREMONT PARK



Front View
8/7/63



Rear View
8/7/63



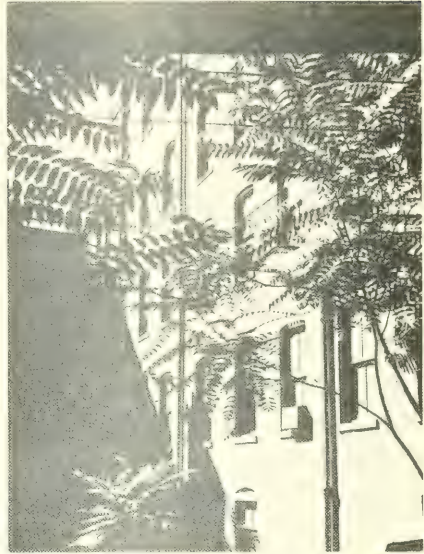
Foundation View
Rear Wall
6/20/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56

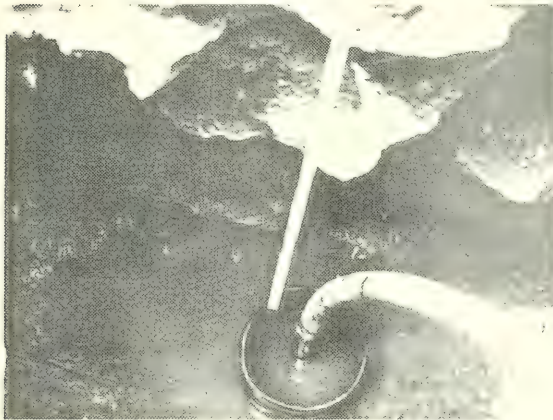
PART II - SECTION 2
LOCATION NO. 6A - 106-108 EAST CANTON STREET



Front View
7/26/63

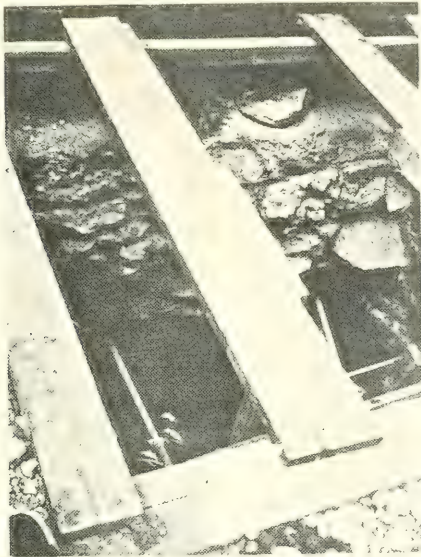


View Looking Toward
7/26/63

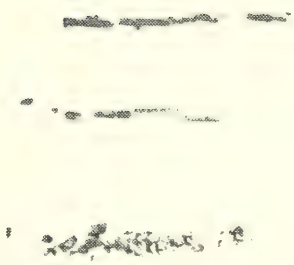


Foundation View
Rear Wall and Piles
9/3/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56
PART II - SECTION 2
LOCATION NO. 6A - 106-108 EAST CANTON STREET

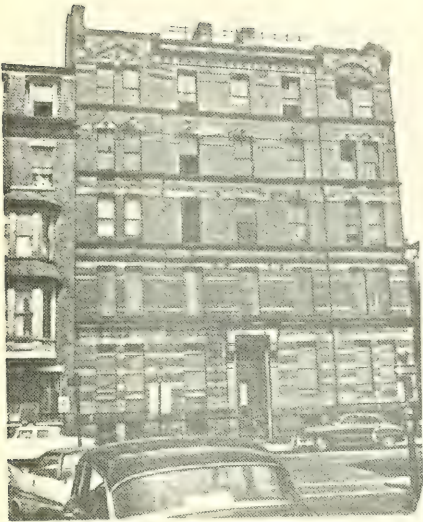


Foundation view
Rear wall
2/2/63

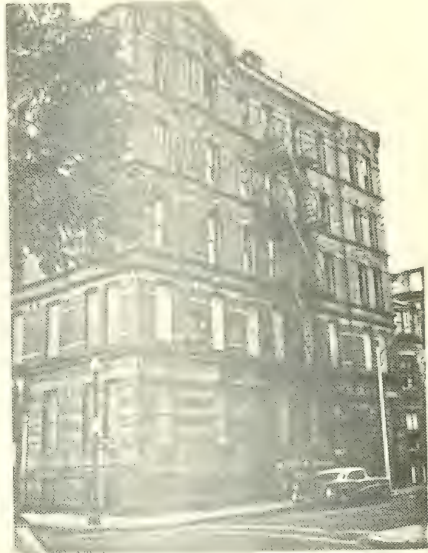


Series from wooden
piles
West Pile
2 cores
East Pile

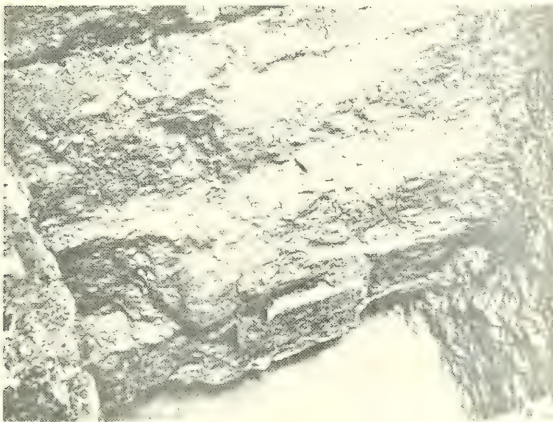
THE THOMPSON & LICHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.
SOUTH END - R-56
PART II - SECTION 2
LOCATION NO. 7 - 335 SIBBOLD ST - 1101



front view
6/7/63



view from street
6/7/63



Foundation View - West Wall
6/7/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY

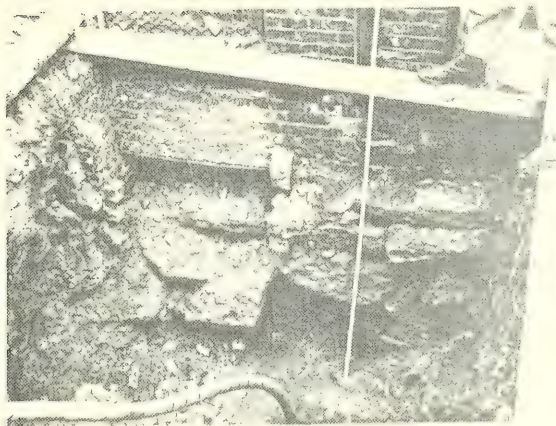
DU. OH, MILS.
SOUTH END - R-56
PART II - SECTION 2

LOCATION NO. 8A - 373 COLUMBUS AVENUE



FRONT VIEW

5/8/53

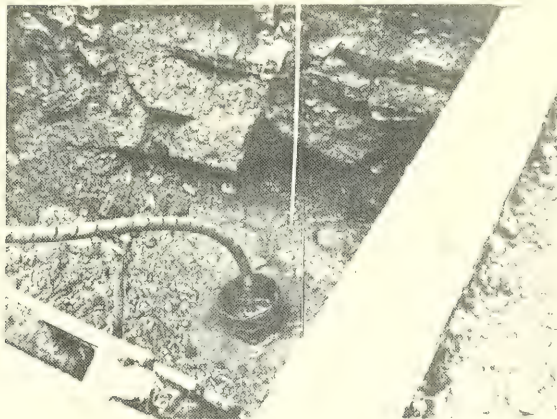


Foundation View
Rear Wall & Piles

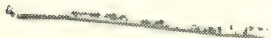
7/25/53

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
BOSTON, MASS.

SOUTH END - R-56
PART II - SECTION 2
LOCATION NO. 8A - 373 COLUMBUS AVENUE



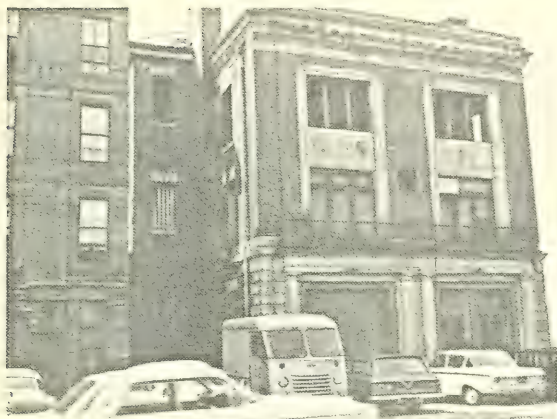
Foundation View
Rear Wall & Piles
7/25/63



Cores from Piles
East Pile
West Pile

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART II - SECTION 2

Location No. 9 - 72 Warren Ave. (Firehouse)

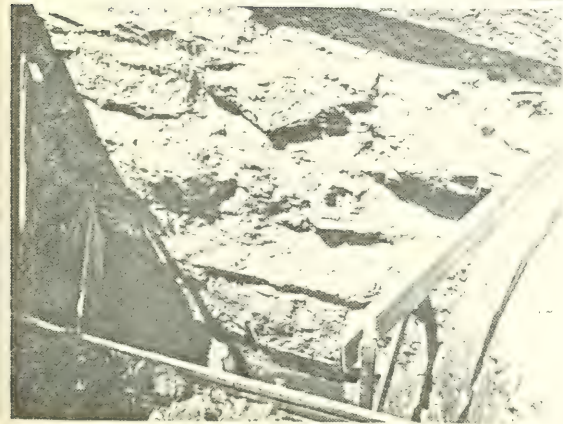


Front View
8/7/63

West Wall View
Looking East
8/7/63

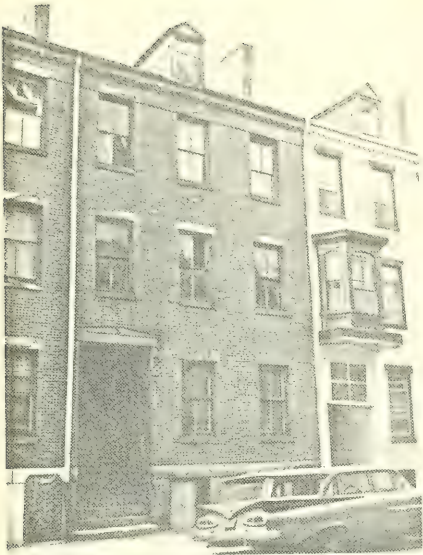


Foundation View
Rear Wall
6/27/63

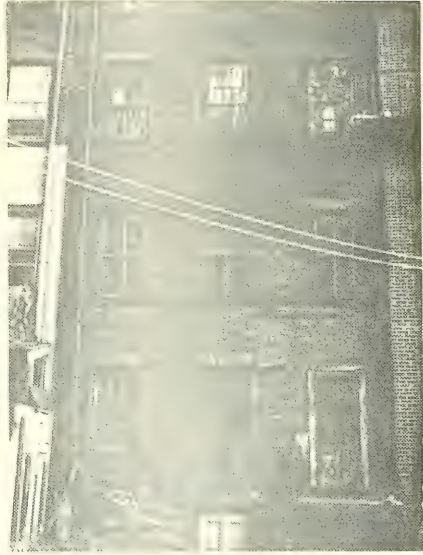


THE THOMPSON & LICHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART II - SECTION 2

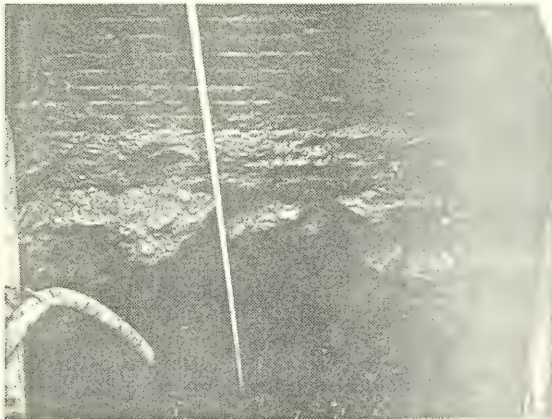
Location No. 10 A - 20 Hanson Street



Front View
8/7/63



Rear View
8/27/63



Foundation View - Rear wall
7/22/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R 56
PART II - SECTION 2

Location No. 13 - East Newton Street Armory



East Newton Street Face

8/8/63

Thorn Street
Side
8/8/63



Stoughton Street
Side

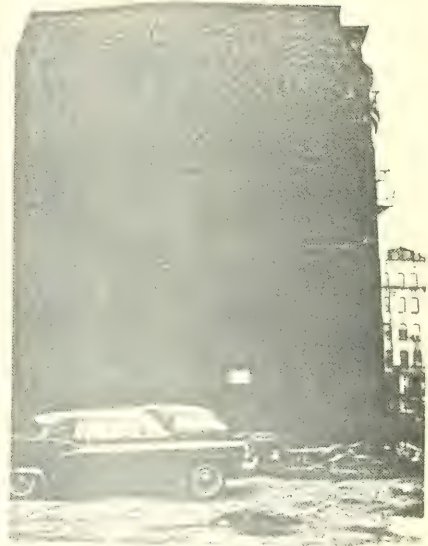
8/8/63

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART II - SECTION 2

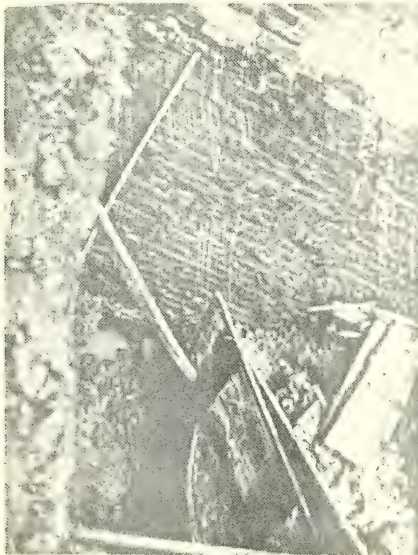
Location No. 11 - 10 Rollins Street



Front View
8/6/63



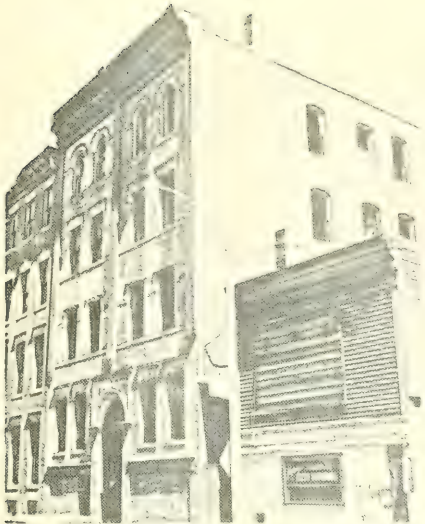
West Side View
8/6/63



Foundation View
Rear Wall
6/14/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART II - SECTION 2

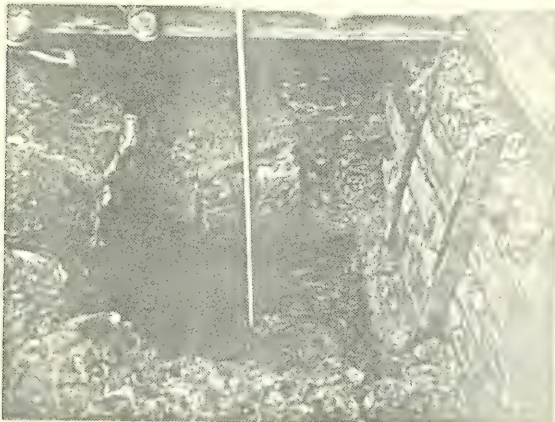
Location No. 12 - 11 Compton Street



Front and Side View
8/1/63



Rear View
8/1/63



Foundation View-Rear wall
6/11/63

THE THOMPSON & LICHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART II - SECTION 2

Location #13 - East Newton Street Armory



Stoughton Street
Side 8/8/63



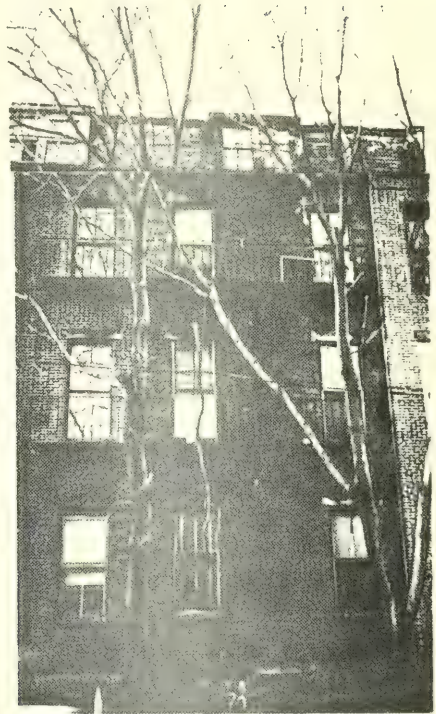
Foundation View
East Newton St. Side
7/12/63

THE THOMPSON & LICHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R-56
PART II - SECTION 2

Location No. 14 A - 70 Chandler Street



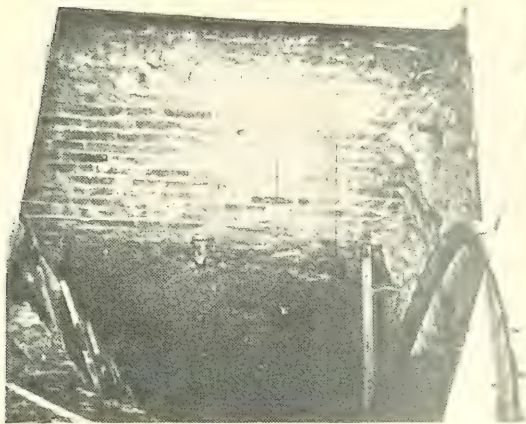
Front View
8/7/63



Rear View
12/5/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END - R 56
PART II - SECTION 2

Location No. 14 A - 70 Chandler Street



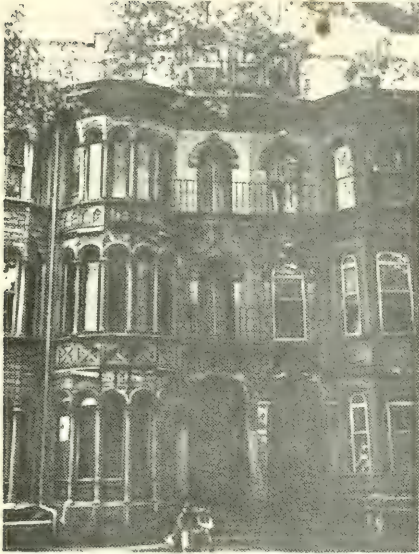
Foundation View
Rear Wall
7/18/63



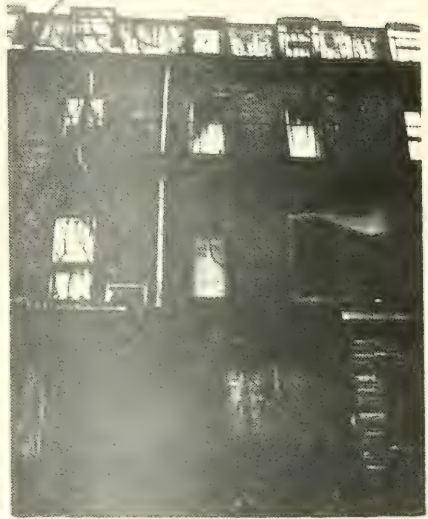
Core Sample of
Wood Pile
12/4/63

THE THOMPSON & LIGHTNER CO., INC.
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56
PART II - SECTION 2

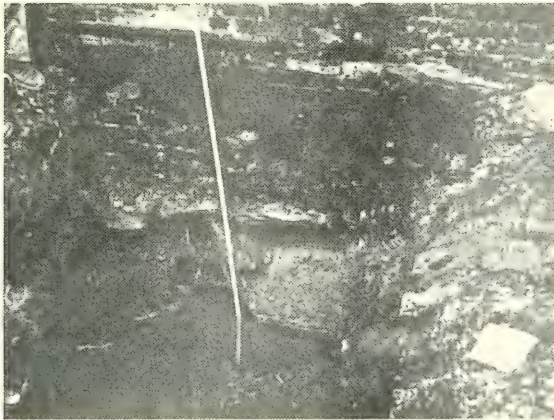
Location No. 15-21 Rutland Square



Front View
8/8/63



Rear View
8/8/63



Foundation View
Rear Wall
6/17/63



BRA
2011
Part III

BOSTON PLAN 2-56

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END PROJECT R-56
SOUTH END URBAN RENEWAL AREA
INVESTIGATION
OF
SUBSOIL
AND
FOUNDATION CONDITIONS

PART III

DECEMBER 1963

THE THOMPSON & LIGHTNER CO., INC.
ENGINEERS
BROOKLINE, MASSACHUSETTS

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BOSTON REDEVELOPMENT AUTHORITY
SOUTH END PROJECT, MASS.R-56
SOUTH END URBAN RENEWAL AREA

BOSTON PUBLIC LIBRARY

INVESTIGATION OF SUBSOIL
and
FOUNDATION CONDITIONS

PART III - DRAWINGS

December 27, 1963

THE THOMPSON & LIGHTNER CO., INC.
8 Alton Place
Brookline, Mass.

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

INDEX

PART III - DRAWINGS

SECTION 1 - KEY PLAN

SECTION 2 - SOILS PROFILES

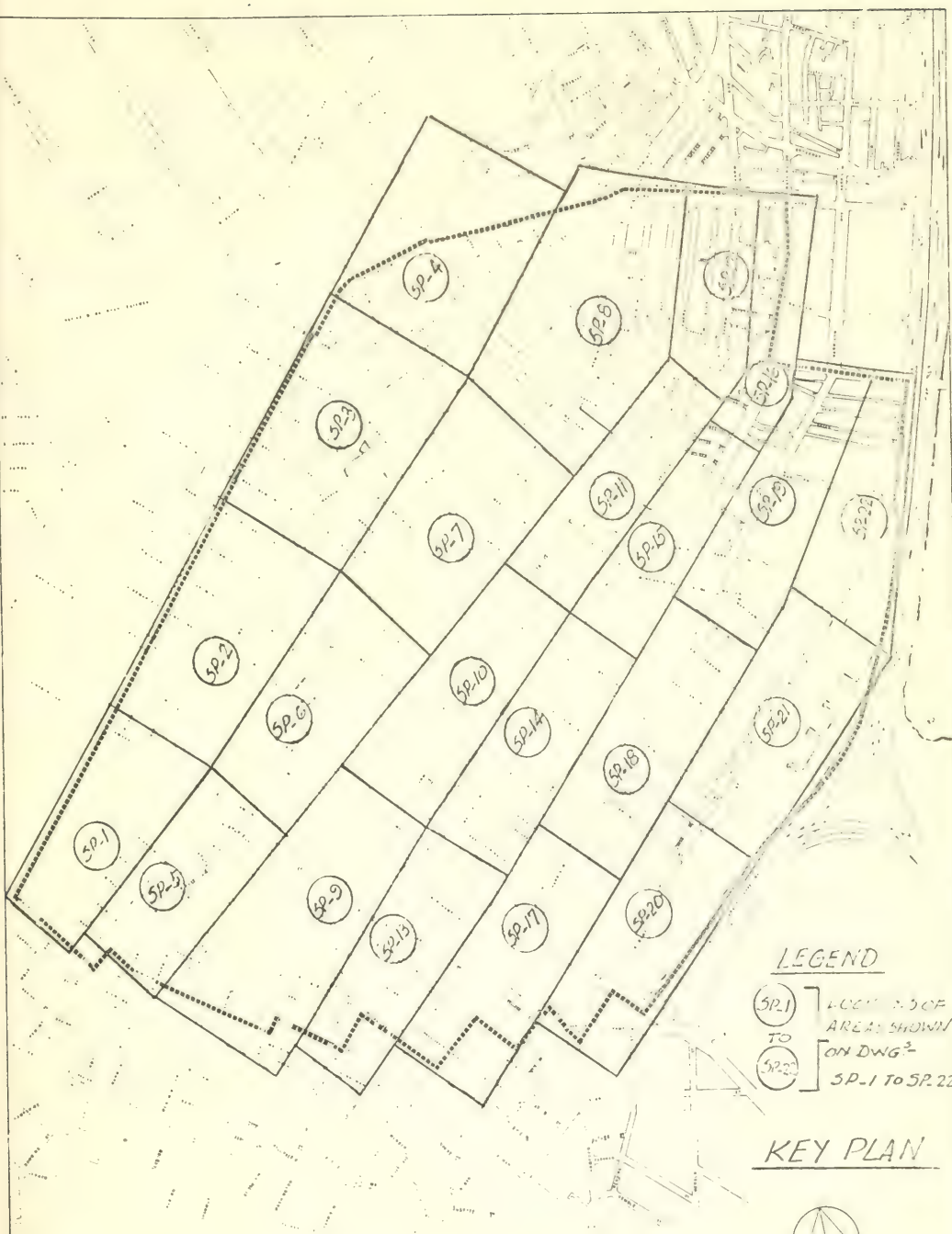
BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART III - DRAWINGS

SECTION 1 - Key Plan

The following "Key Plan" shows limits of areas covered by plan - profile drawings SP-1 to SP-22, inclusive, included in SECTION 2 of this part of the report.





LEGEND

(SP-1) [UPPER END OF
 AREA SHOWN
 TO
 (SP-22)] ON DWG-2
 SP-1 TO SP-22

KEY PLAN



SOUTH END URBAN RENEWAL AREA

BOSTON REDEVELOPMENT AUTHORITY

SCALE
 1" = 100'
 DRAWING NUMBER

R 56

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END R-56

PART III - DRAWINGS

SECTION 2 - Soils Profiles

a. During this study, available subsoil and boring information of record was gathered for the entire project area. In addition, new borings were made at fifteen specific building locations where the footings or piles were exposed for examination. Observations, findings and conclusions are given in detail in PART I of this report with the collected boring data given in PART II - Exhibits of this report.

b. To best present the subsoil picture for the South End Urban Renewal Area, a series of soils profiles have been prepared, using data included in this report. The location of these profiles has been selected so that the location can be identified on the basis of street intersections, with profiles having been prepared for

A. Columbus Avenue from Walpole Street to railroad at Clarendon Street. (Plan and Profile Drawings SP-1 to SP-4, inclusive.)

B. Tremont Street from Walpole Street to railroad at Herald Street. (Plan and Profile Drawings SP-5 to SP-8, inclusive.)

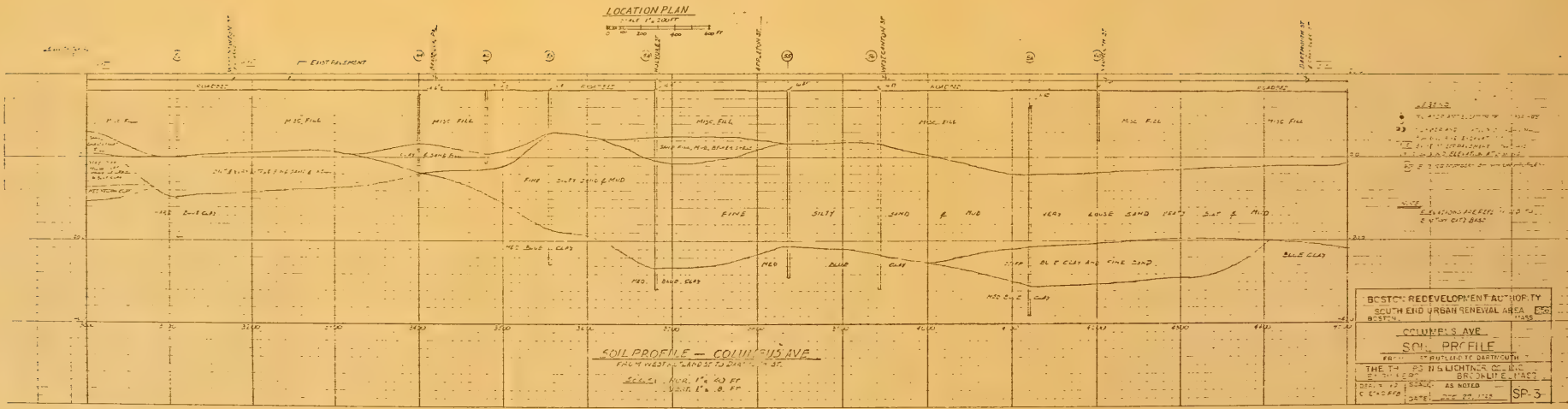
C. Shawmut Avenue from Windsor Street to railroad at Herald Street. (Plan and Profile Drawings SP-9 to SP-12, inclusive.)

D. Washington Street from Ball Street to railroad at Herald Street. (Plan and Profile Drawings SP-13 to SP-16, inclusive.)

E. Harrison Avenue from Thorndike Street to Dover Street. (Plan and Profile Drawings SP-17 to SP-19, inclusive.)

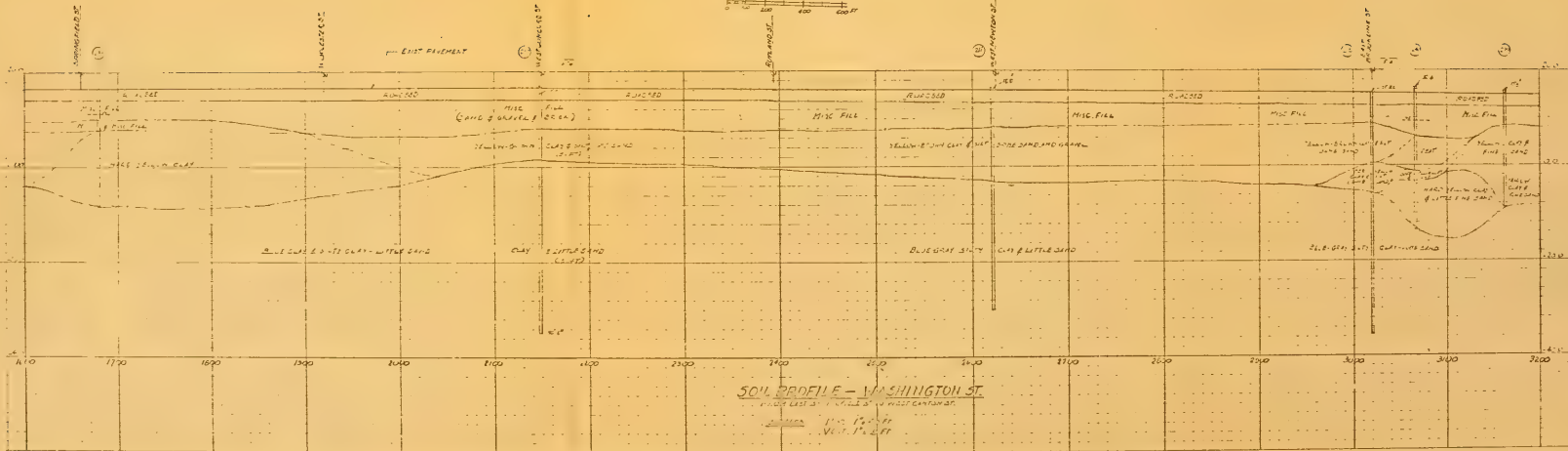
F. Albany Street from Southampton Street to Dover Street. (Plan and Profile Drawings SP-20 to SP-22, inclusive.)

c. Plan and Profile Drawings SP-1 to SP-22, inclusive, follow.





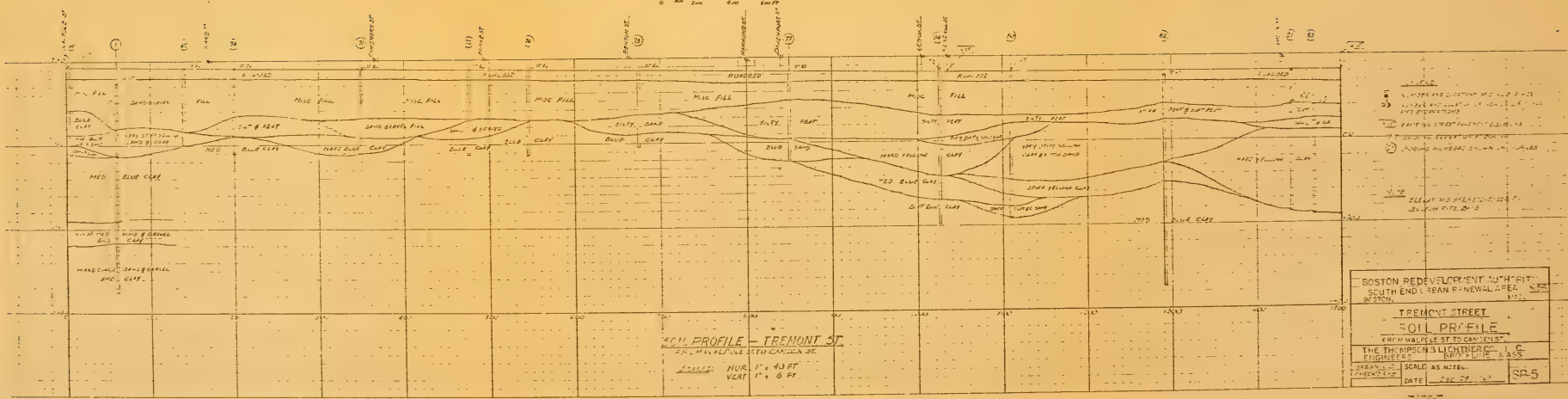
LOCATION PLAN
SCALE 1" = 100 FT



SOIL PROFILE - WASHINGTON ST
STATION 170 TO 3200
VERT. 1" = 10 FT

- LEGEND
- 1. BORING NO. 1
 - 2. BORING NO. 2
 - 3. BORING NO. 3
 - 4. BORING NO. 4
 - 5. BORING NO. 5
 - 6. BORING NO. 6
 - 7. BORING NO. 7
 - 8. BORING NO. 8
 - 9. BORING NO. 9
 - 10. BORING NO. 10
 - 11. BORING NO. 11
 - 12. BORING NO. 12
 - 13. BORING NO. 13
 - 14. BORING NO. 14
 - 15. BORING NO. 15
 - 16. BORING NO. 16
 - 17. BORING NO. 17
 - 18. BORING NO. 18
 - 19. BORING NO. 19
 - 20. BORING NO. 20
 - 21. BORING NO. 21
 - 22. BORING NO. 22
 - 23. BORING NO. 23
 - 24. BORING NO. 24
 - 25. BORING NO. 25
 - 26. BORING NO. 26
 - 27. BORING NO. 27
 - 28. BORING NO. 28
 - 29. BORING NO. 29
 - 30. BORING NO. 30
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 - 33. BORING NO. 33
 - 34. BORING NO. 34
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 - 37. BORING NO. 37
 - 38. BORING NO. 38
 - 39. BORING NO. 39
 - 40. BORING NO. 40
 - 41. BORING NO. 41
 - 42. BORING NO. 42
 - 43. BORING NO. 43
 - 44. BORING NO. 44
 - 45. BORING NO. 45
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 - 81. BORING NO. 81
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 - 85. BORING NO. 85
 - 86. BORING NO. 86
 - 87. BORING NO. 87
 - 88. BORING NO. 88
 - 89. BORING NO. 89
 - 90. BORING NO. 90
 - 91. BORING NO. 91
 - 92. BORING NO. 92
 - 93. BORING NO. 93
 - 94. BORING NO. 94
 - 95. BORING NO. 95
 - 96. BORING NO. 96
 - 97. BORING NO. 97
 - 98. BORING NO. 98
 - 99. BORING NO. 99
 - 100. BORING NO. 100

BOSTON REDEVELOPMENT AUTHORITY	
SOUTH END URBAN REDEVELOPMENT AREA - RE	
BOSTON	
WASHINGTON ST.	
SOIL PROFILE	
DRAWN BY: THE BOSTON REDEVELOPMENT AUTHORITY	
ENGINEERS: THE THOMPSON ENGINEERING COMPANY, INC.	
BOSTON, MASS.	
DATE: DEC 27, 1962	SCALE: AS NOTED
CHECKED BY: [Signature]	DATE: DEC 27, 1962
SP 4	



BOSTON REDEVELOPMENT AUTHORITY
SOUTH END REAN/RENEWAL AREA
SECTION 1172

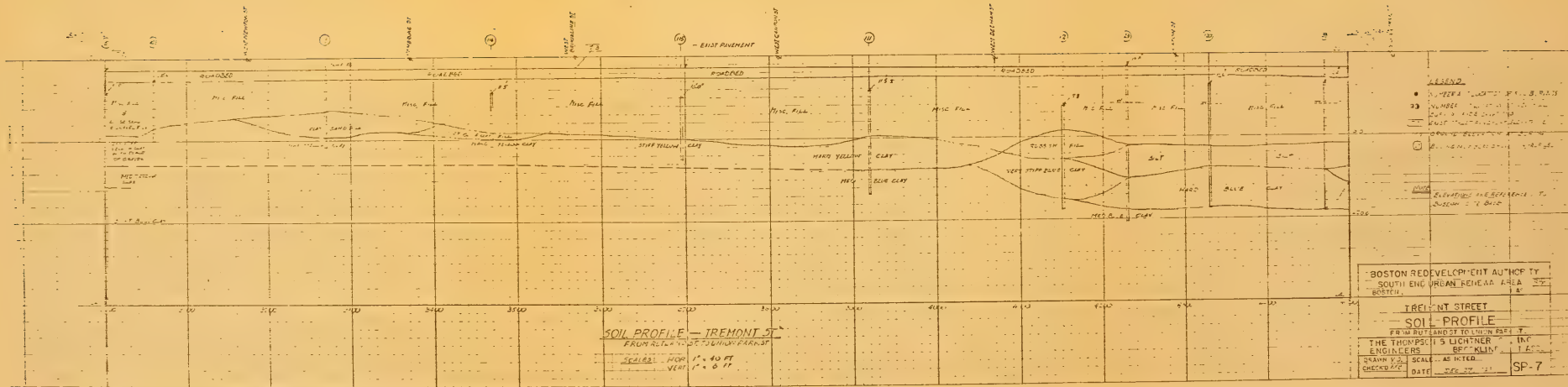
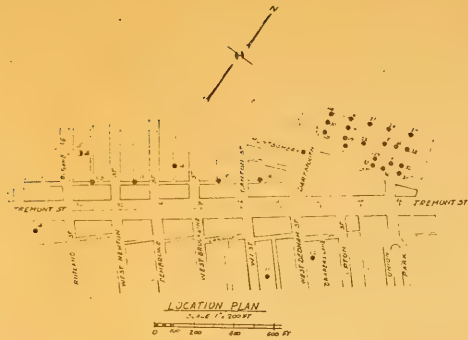
TREMONT STREET
SOIL PROFILE

FROM WALKWAY ST TO CANAL ST.

THE THOMPSON LIGHTNER CO. I.C.
ENGINEERS & SURVEYORS

DATE: DEC 27 1955

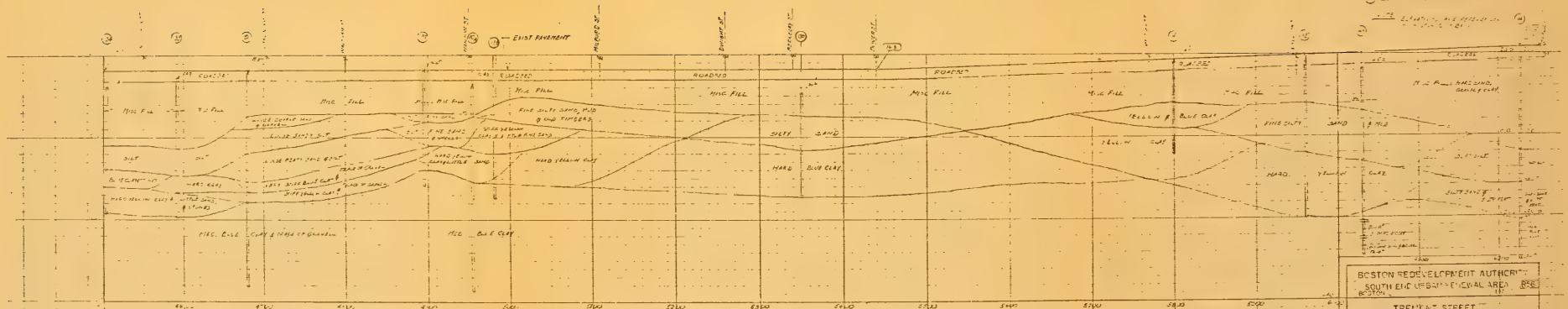
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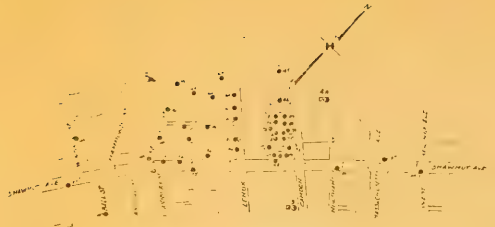
LOCATION PLAN
SCALE 1" = 60 FT

- LEGEND
- NUMBER AND LOCATION OF BUREAU HOLE
 - NUMBER AND LOCATION OF BUREAU BORING AND EXCAVATION
 - EXIST. STREET-PAVEMENT ELEVATION
 - ④ GROUND ELEVATION AT BUREAU
 - ⑤ SURFACE ELEVATION AT BUREAU

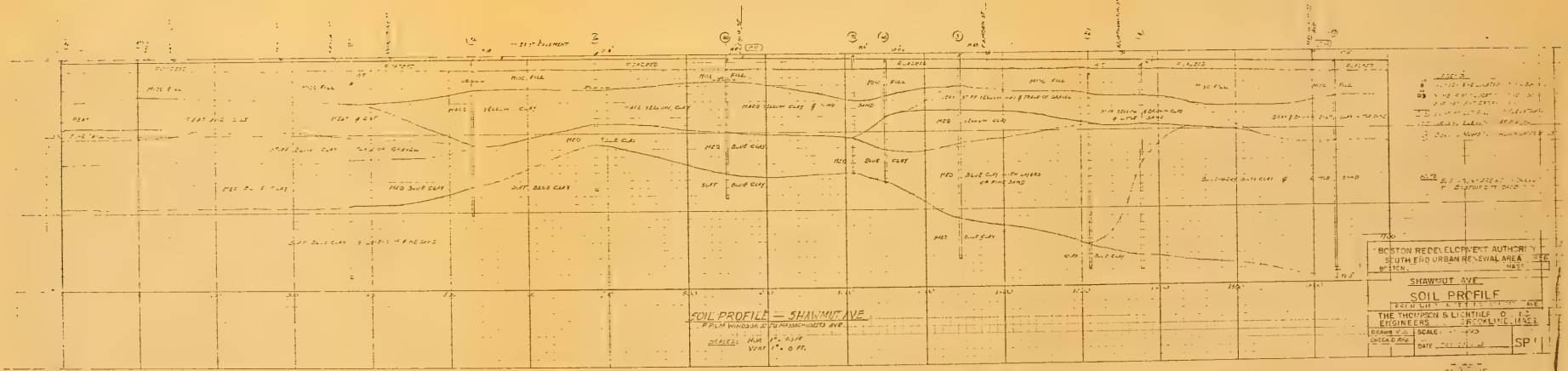


SOIL PROFILE - TREMONT ST.
FROM BUREAU RECORDS, TREMONT ST.
SCALE: HORIZ. 1" = 30 FT
VERT. 1" = 8 FT

BOSTON REDEVELOPMENT AUTHORITY	
SOUTH END URBAN REDEVELOPMENT AREA	
TREMONT STREET	
SOIL PROFILE	
NO. 13	
DR. G. W. BROWN	DATE: 12-1-51
ENGR. J. W. LIGHTNER, JR.	DATE: 12-1-51
CHECKED BY: [Signature]	DATE: 12-1-51
SP-8	



LOCATION PLAN
SCALE: 1" = 100 FT



SOIL PROFILE = SHAWMUT AVE.
FROM WINDSOR ST TO MASSACHUSETTS AVE.
SCALE: HORIZ. 1" = 25 FT
VERT. 1" = 10 FT

BOSTON REDEVELOPMENT AUTHORITY
SOUTH END URBAN RENOVATION AREA
BOSTON, MASS.

SHAWMUT AVE

SOIL PROFILE

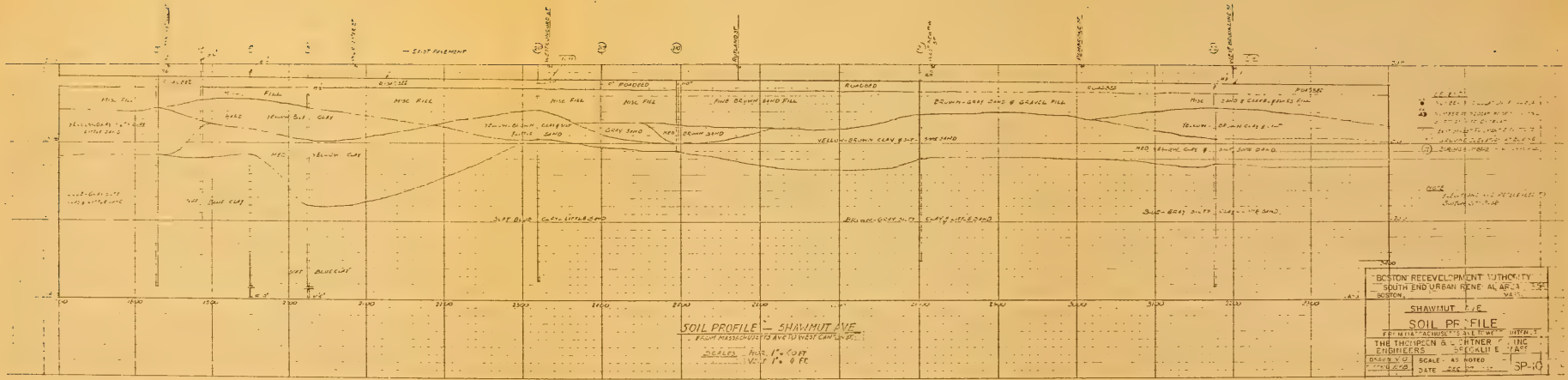
THE THOMPSON & LIGHTHILL ENGINEERS
BROOKLINE, MASS.

DATE: 12-27-58

SP 11



LOCATION PLAN
 SCALE 1" = 200 FT
 0 200 400 600 FT



BOSTON REDEVELOPMENT AUTHORITY
 SOUTH END URBAN REDEVELOPMENT
 BOSTON, MASS.

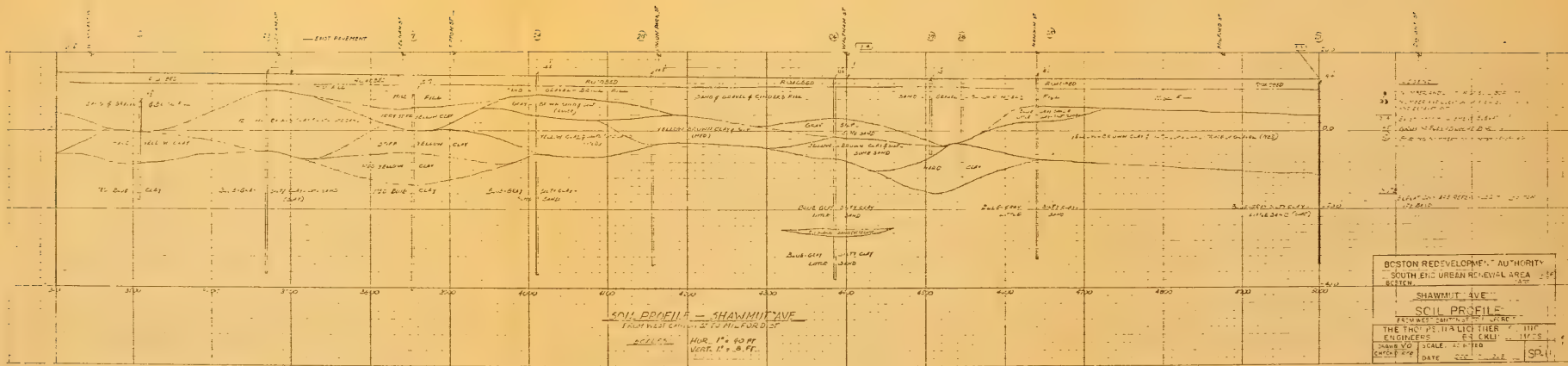
SHAWMUT P.E.
 SOIL PROFILE

PREPARED BY: J. P. O'NEILL
 THE THOMPSON & SHINER ENGINEERS
 100 STATE STREET, BOSTON, MASS.

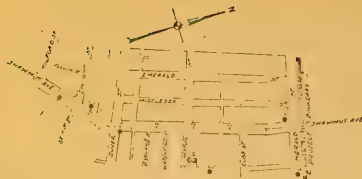
DATE: MAR 17, 1957
 SCALE: AS NOTED
 SHEET: SP-10



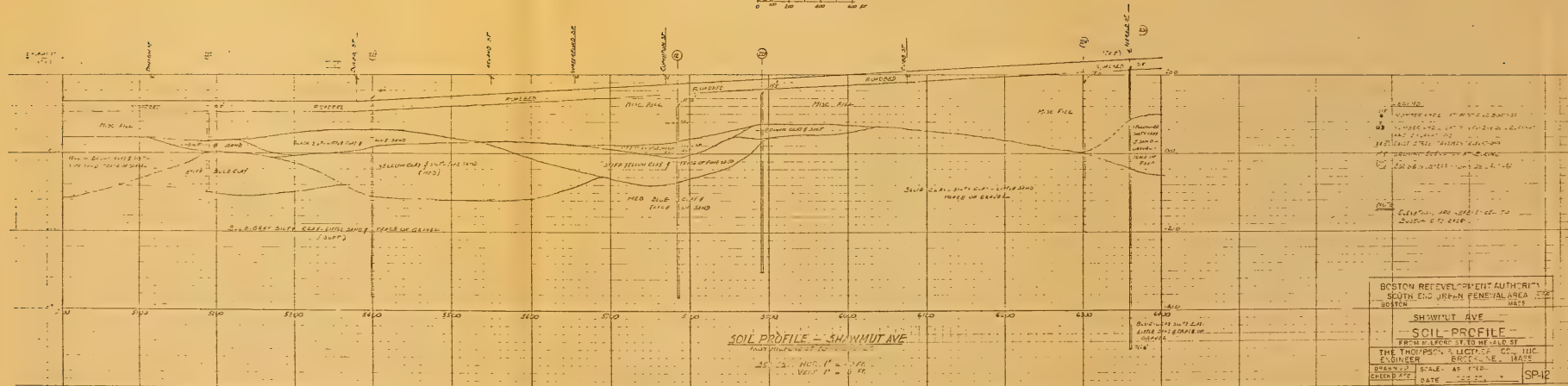
LOCATION PLAN
SCALE: 1" = 100 FT



BOSTON REDEVELOPMENT AUTHORITY			
SOUTH END URBAN REDEVELOPMENT AREA			
SECTION			
SHAWMUT AVE			
SOIL PROFILE			
PREPARED BY: [Name]			
THE THORNTON THAYER ENGINEERS P.C.			
SCALE: 1" = 40 FT	DATE: [Date]	DRW: [Name]	SP: [Name]



LOCATION PLAN
SCALE: 1" = 100 FT
0 100 200 300 400 500 FT



NOTES

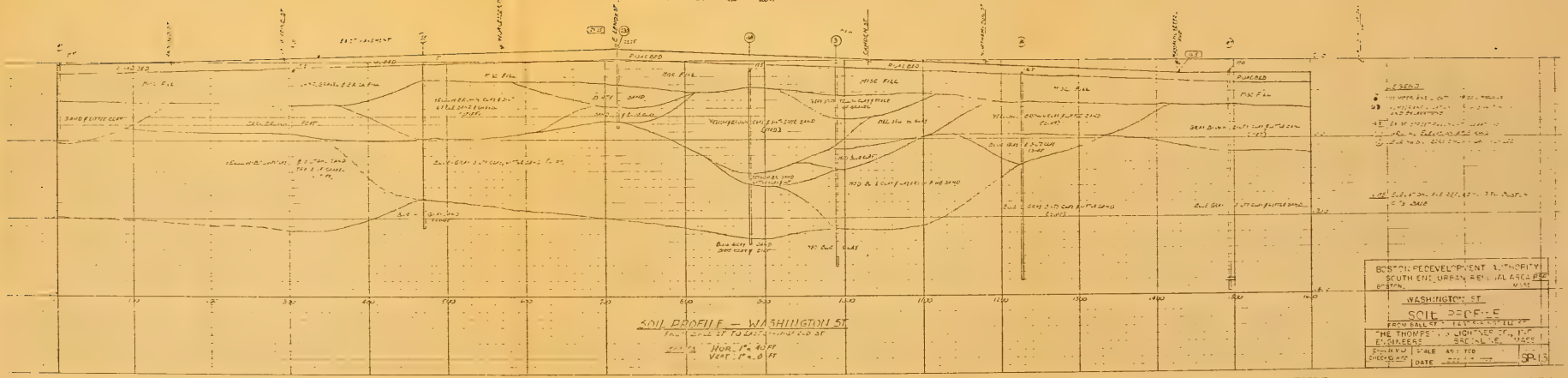
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11. ELEVATIONS ARE REFERRED TO BOSTON CITY GRID.

BOSTON REDEVELOPMENT AUTHORITY	
SOUTH END JERSEY AREA	
BOSTON	
SHAWMUT AVE	
SOIL PROFILE	
FROM N. END OF ST. TO N. END ST.	
THE THOMPSON & LITTLE CO., INC.	
ENGINEERS BOSTON, MASS.	
DRAWN BY	DATE
CHECKED BY	DATE
	SP-12

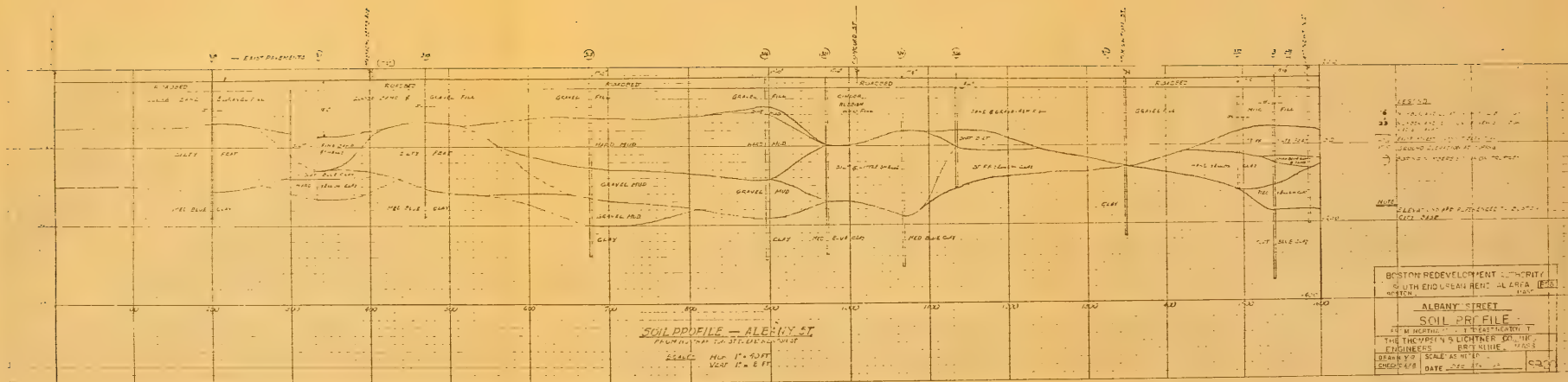


LOCATION PLAN
SCALE: 1" = 300 FT
0 100 200 300 400 500 600 FT

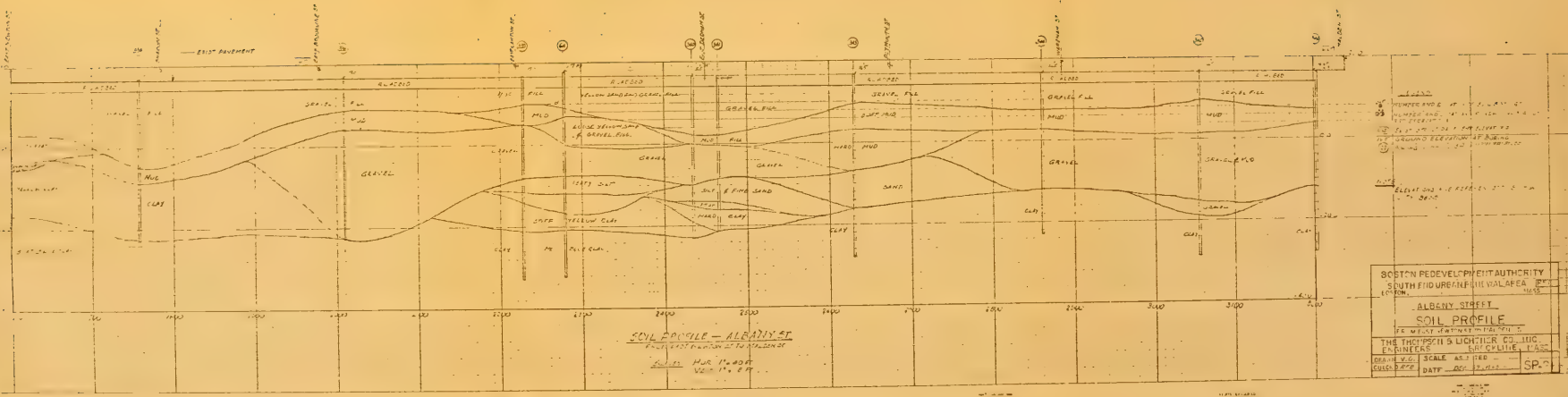
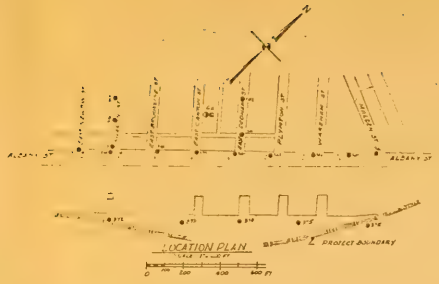


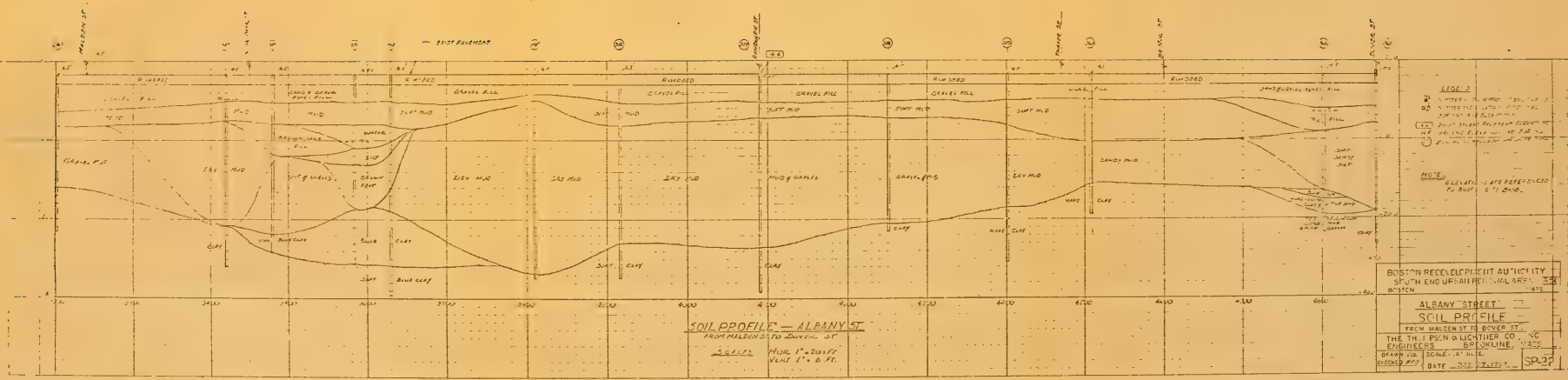
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- 10. SAND & SILT

BOSTON DEVELOPMENT AUTHORITY
SOUTH END URBAN REHABILITATION
WASHINGTON ST
SOIL PROFILE
THE THOMPSON ENGINEERING CORPORATION
ENGINEERS AND ARCHITECTS
100 STATE ST. BOSTON, MASS.
DATE: 1954



1. SEE PLAN
2. SEE PLAN
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T 3711

Investigation of Subsoil and

Foundation Conditions.

Inv
For

Part III
SOUTH END

DATE	ISSUED TO
1932	[Signature]

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