



COMMONWEALTH OF MASSACHUSETTS
THE GENERAL COURT

STATE HOUSE, BOSTON 02133-1053

January 9, 2018

Jonathan Gulliver, Highway Administrator
Massachusetts Department of Transportation
10 Park Plaza, Suite 4160
Boston, MA 02116

Dear Mr. Gulliver:

We are writing to express our strong support for the application submitted by the Town of Leicester for funding through the Municipal Small Bridge Program to repair or replace the Church Street Bridge (No. L-06-011). It is our sincere hope that the Massachusetts Department of Transportation (MassDOT) will prioritize this application which seeks to address a critical infrastructure problem within the Leicester community.

A bridge closure recommendation was issued by MassDOT for the Church Street Bridge on July 31, 2017 because of multiple cracks in the stone masonry slabs supporting the roadway. We have enclosed a copy of the Inspection Report for your review.

It is our understanding that MassDOT is currently evaluating a prior Municipal Small Bridge Program grant application from the Town of Leicester for replacing the Auburn Street Bridge. However, the Town is now seeking to prioritize the Church Street Bridge project over the previous application because of the serious deficiencies with the condition of the Church Street Bridge. Moreover, the bridge closure would result in a traffic detour which spans several miles.

To that end, we would appreciate your careful consideration of the Church Street Bridge as a funding priority during the current round of funding through the Municipal Small Bridge Program. We would also appreciate MassDOT's assistance with interim measures to help the Town maintain bridge usage until comprehensive repairs or a replacement is possible.

Thank you for your time and attention to this request. If you have any further questions, or if there is any additional information we can provide in support of the Church Street Bridge project, please do not hesitate to contact either of our offices.

Sincerely,

A handwritten signature in blue ink that reads "Michael O. Moore".

MICHAEL O. MOORE
State Senator
Second Worcester District

A handwritten signature in blue ink that reads "Kate D. Campanale".

KATE D. CAMPANALE
State Representative
Seventeenth Worcester District

Enclosure

CC: Leicester Board of Selectmen
David Genereux, Leicester Town Administrator (*via email*)
Barry Lorion, District 3 Acting Highway Director, MassDOT (*via email*)
Donny Dailey, Government and Public Affairs, MassDOT (*via email*)

Town of Leicester Bridge Evaluation:

Church Street over Kettle Brook



Preliminary 7/31/2017

Preliminary Cost Estimate

Scope of Work:

Rehabilitate structure

Construction Costs

Items/ Description	Unit	Unit Cost	Quantity	Item Cost
Demolition (remove existing superstructure)	LS	\$ 31,800	1	\$ 31,800.00
Bridge Excavation	CY	\$ 80	60	\$ 4,800.00
Gravel Borrow for Backfilling Structures	CY	\$ 80	20	\$ 1,600.00
Highway Guardrail (including bridge railing)	LF	\$ 100	100	\$ 10,000.00
Highway Guardrail Terminals	EA	\$ 2,000	4	\$ 8,000.00
4000 psi Concrete (bridge slab)	CY	\$ 2,500	20	\$ 50,000.00
Asphalt overlay	TON	\$ 300	9	\$ 2,700.00
Erosion Control	FT	\$ 20	120	\$ 2,400.00
Masonry (repair/construct wingwalls)	SF	\$ 150	270	\$ 40,500.00
Masonry (repair abutment)	LS	\$ 8,000	1	\$ 8,000.00
Signing and Pavement Markings	LS	\$ 4,000	1	\$ 4,000.00
Repainting	LF	\$ 50	167	\$ 8,347.50
Temporary Shoring	LS	\$ 20,000	1	\$ 20,000.00
Mobilization	LS	\$ 20,000	1	\$ 20,000.00
Control of Water (wingwall construction)	LS	\$ 40,000	1	\$ 40,000.00

Subtotal: \$ 252,147.50

Contingency: 25% \$ 63,036.88

Estimated Construction Cost \$ 315,184.38

Design Services

Bridge/Highway Design:	\$ 95,000.00
Construction Phase Services (Inspection, Shop Dwg Review, Rating Report)	\$ 28,000.00
Survey:	\$ 6,000.00
Permitting:	\$ 8,000.00
Hydraulic Report:	\$ 16,000.00
Subtotal:	\$ 153,000.00

Miscellaneous

Traffic Management and Police	5%	\$ 15,759.22
Utility Temporary Support/Relocation	7%	\$ 22,062.91
Subtotal:		\$ 37,822.13

Project Total: \$ 506,006.50

Total Conceptual Estimate: \$ 507,000.00

Additional Details on above items:

Design fee estimated based on percentage of construction cost.

Assumes all work can be performed within the right-of-way.

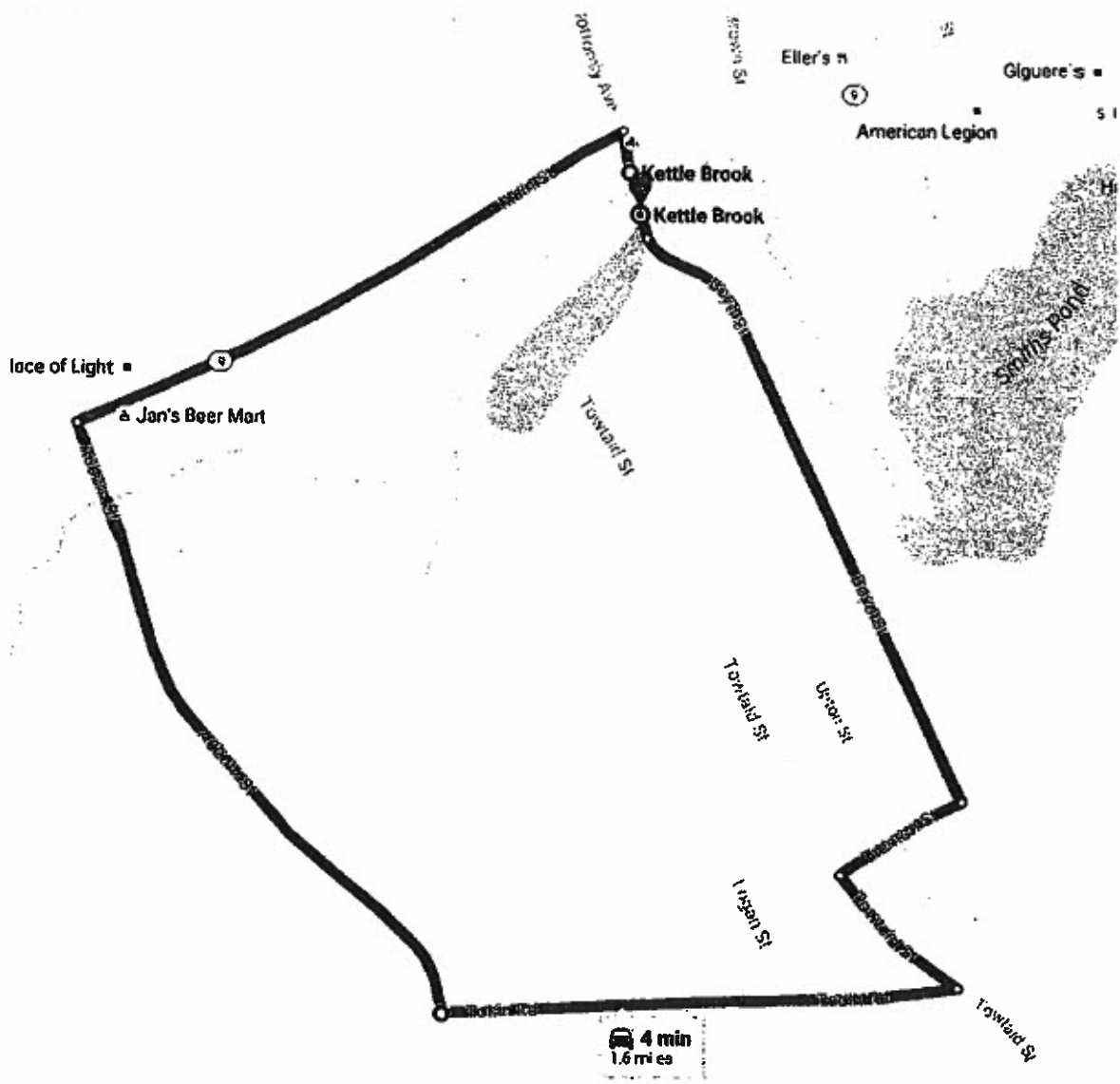
A contingency of 25% for unknowns has been provided.

Further design is needed and this estimate has been prepared for programming purposes.

Assumes \$7,500 for Post Construction Load-Rating under Construction Phase Services

Prepared by: ATB/RWP

Reviewed by: JJB





Town of Leicester
OFFICE OF THE TOWN ADMINISTRATOR
Town Hall, 3 Washburn Square
Leicester, Massachusetts 01524-1333
Phone: (508) 892-7000 Fax: (508) 892-7070
www.leicesterma.org

August 15, 2017

Mr. Barry Lorion
District 3 Acting District Highway Director
403 Belmont Street
Worcester MA 01604

Subject: Small Bridge Program (SBP)


Dear Mr. Lorion:

The Town of Leicester is in receipt of a MassDot bridge inspection field report on the Church Street bridge over Kettle Brook. The deficiencies cited in said report prompted a July 26, 2017 recommendation from D3 Bridge Engineer Mohammed Nabulsi to close the bridge. We are evaluating that and other short-term options at this time. Our long-term objective is to repair or replace the structure with SBP assistance.

MassDot is currently evaluating a prior SBP grant application from the Town for replacing the Auburn Street bridge. We now ask that MassDot prioritize the Church Street bridge ahead of the Auburn Street request in the current round of funding.

Thank you for your attention to this request.

Sincerely,



James P. Purcell
Interim Town Administrator

Cc: Board of Selectmen
Tom Wood, Highway Supervisor ✓



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, Secretary & CEO
Jonathan L. Gulliver, Acting Highway Administrator



**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

July 31, 2017

Town of Leicester
Town Administrator
3 Washburn Sq.
Leicester, MA 01524

Attn: Thomas Wood, Highway Supt.

**SUBJECT: NATIONAL BRIDGE INSPECTION STANDARDS (NBIS)
BRIDGE CLOSURE**

Leicester: CHURCH ST / KETTLE BROOK
Bridge No: L-06-011
BIN No: 6R2
Structure No: L06011-6R2-MUN-BRI

Dear Select Board:

The Massachusetts Department of Transportation (MassDOT) - Highway Division has undertaken the inventory, inspection, and rating of locally-owned bridges to assist the cities and towns in complying with State and Federal Legislation.

The above bridge was inspected on May 21, 2017 and on July 19, 2017 and it is recommended that the bridge be **CLOSED** to vehicular traffic.

The reason for this recommendation is due to the multiple cracked stone masonry slabs supporting the roadway.

This letter confirms the notification to closed the bridge per a telephone conversation on July 21, 2017 between Mohammed Nabulsi, MassDOT District3 Bridge Engineer, and Thomas P. Wood, Town Superintendent of the Town of Leicester.

Your immediate action is requested. Please respond in writing confirming your action not later than August 31, 2017.

A copy of the Inspection Report regarding this recommendation is enclosed. Jonathan L. Gulliver, the District Highway Director, will be pleased to review the report with you and advise you of any programs available regarding this bridge.

Thank you for your cooperation.

Sincerely,

Patricia A. Leavenworth, P.E.
for Chief Engineer

GK/gk
cc: DHD, D-3 & DBIE, D-3
Duplicate sent by Regular First Class Mail

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

2-DIST
03

B.I.N.
6R2

STRUCTURES INSPECTION FIELD REPORT

SPECIAL MEMBER INSPECTION

BR. DEPT. NO.
L-06-011

CITY/TOWN LEICESTER	8-STRUCTURE NO. L06011-6R2-MUN-BRI	11-Kilo. POINT 000.692	90-ROUTINE INSP. DATE Nov 21, 2016	93*-SPEC. MEMB. INSP. DATE May 28, 2017
07-FACILITY CARRIED HWY CHURCH ST	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 1850	106-YR REBUILT 0000	*YR. REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER KETTLE BROOK	26-FUNCTIONAL CLASS Urban Local	DIST. BRIDGE INSPECTION ENGINEER M. Aziz		
43-STRUCTURE TYPE 801 : Masonry Slab	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER D. Smith	
107-DECK TYPE 9 : Other	WEATHER Cloudy	TEMP. (air) 21°C	TEAM MEMBERS R. ORLANDO	

WEIGHT POSTING	Not Applicable <input checked="" type="checkbox"/>	At bridge	Advance	PLANS (Y/N): <input type="checkbox"/> N
Actual Posting	H 3 382 Single <input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> N	N S <input type="checkbox"/> <input type="checkbox"/>	N S <input type="checkbox"/> <input type="checkbox"/>	(V.C.R.) (Y/N): <input type="checkbox"/> N
Recommended Posting	<input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> N	Legibility/Visibility <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	TAPE#:
Waived Date: 00/00/0000	EJDMT Date: 00/00/0000			

RATING

Rating Report (Y/N): N Date:

Request for Rating or Rerating (Y/N): Y

If YES please give priority:
HIGH () MEDIUM () LOW ()

REASON: **Never rated. Condition of slab.**

Inspection data at time of existing rating
I 58: - I 59: - I 60: - I 62: - Date: **00/00/0000**

SPECIAL MEMBER(S):

	MEMBER	CRACK (Y/N):	WELD'S CONDITION (0-6)	LOCATION OF CORROSION, SECTION LOSS (%), CRACKS, COLLISION DAMAGE, STRESS CONCENTRATION, ETC.	CONDITION		INV. RATING OF MEMBER FROM RATING ANALYSIS			Deficiencies
					PREVIOUS	PRESENT	H-20	3	382	
					(0-6)	(0-6)				
A	Item 58.2 - Deck Condition	N	N	See item 59.15.	3	3	Not Rated			S-A
B	Item 59.15 - Masonry Slab	N	N	See remarks in comments section.	3	3	Not Rated			S-A
C										
D										
E										

List of field tests performed:
None

	I-58	I-59	I-60	I-62
(Overall Previous Condition)	3	3	5	-
(Overall Current Condition)	3	3	5	-

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

M= Minor Deficiency - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scoring, Clogged drainage, etc.

S= Severe/Major Deficiency - Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebar, Considerable settlement, Considerable scouring or underpinning, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

C-H= Critical Hazard Deficiency - A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate - [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP - [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].

P = Prioritize - [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN LEICESTER	B.I.N. 6R2	BR. DEPT. NO. L-06-011	8.-STRUCTURE NO. L06011-6R2-MUN-BRI	INSPECTION DATE MAY 28, 2017
------------------------	---------------	---------------------------	--	---------------------------------

REMARKS

BRIDGE ORIENTATION
According to the compass the approaches are North and South and the elevations are East and West. This is a 2 span stone masonry slab bridge with 11 slabs in each span numbered West to East. The spans and both stone masonry abutments are labeled North and South. There is a stone masonry pierwall. See Sketch 1.

GENERAL REMARKS
The town of Leicester was not able to provide any plans for this bridge.

ITEM 59 - SUPERSTRUCTURE

Item 59.15 - Masonry Slab
There are many areas of missing and deteriorated pointing between slabs resulting in large gaps averaging 4 in. wide. Some gaps have minor active leakage and moderate to heavy efflorescence. See Photo 1.

South span

Slab #5: The slab has been replaced by concrete encased steel beams. The concrete encasement has longitudinal hairline cracks with heavy efflorescence, a 2 ft. long x 10 in. wide x 1-1/2 in. deep spall at the South end, a 26 in. long x 10 in. wide x 1-1/2 in. deep spall at 3 ft. from the South end and a 6 in. diameter x 3/4 in. deep spall at the North end. See Photo 2.

Slab #7: At 30 in. from the South end there is a full height x full slab width x 1 in. wide crack. The slab has collapsed down and is sagging 3 in. below the the adjacent slabs. Between slabs #7 and #8 there is a full length x 10 in. wide x full depth gap with a 2 ft. long x 8 in. deep void above the crack. See Photo 3. The wearing surface shows no settlement above this area.

Slab #9: There are timber boards across the full span that are assumed to be falsework for concrete. See Photo 4.

Slab #10: At the South end there is a 2 ft. long x full width x 3 in. thick delaminated section of stone. The delamination has separated 2 in. from the slab above and has a full width x 1/2 in. wide crack. See Photo 5.

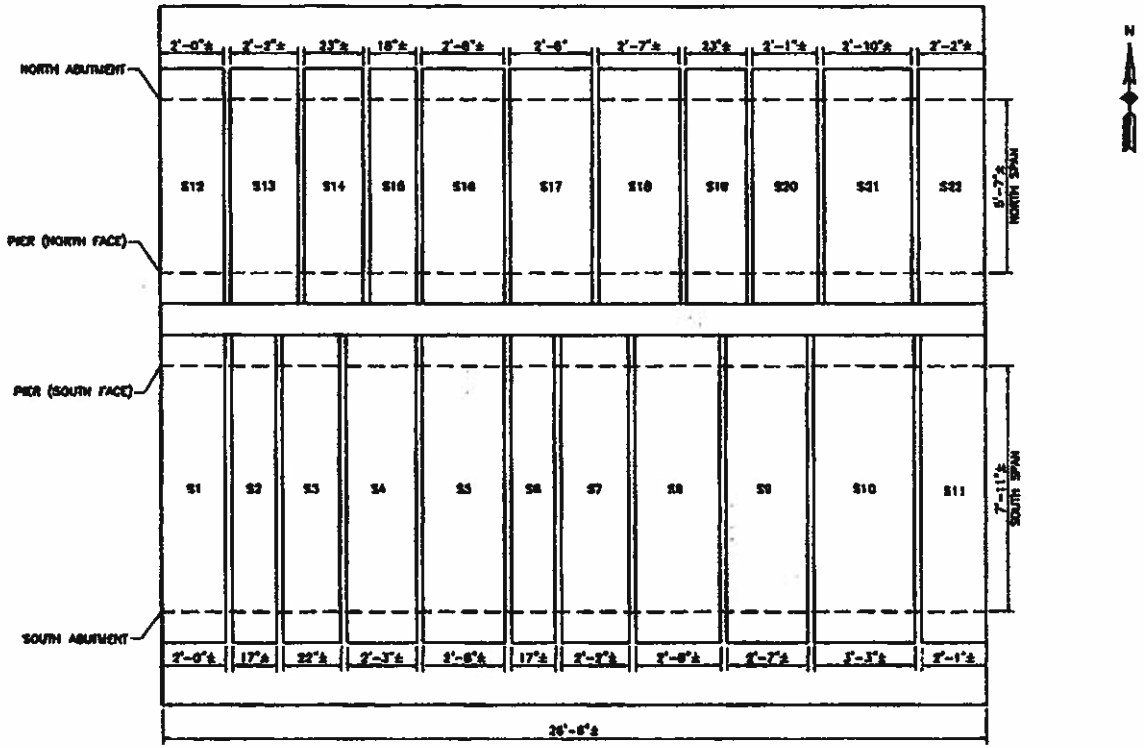
Slab #11: At 2 ft. from the South end there is a full slab width x 0.04 in. wide crack that extends 6-1/2 in. up the fascia side of the slab. At 3 ft. from the pier there is a full slab width x 0.04 in. wide x full height crack with adjacent delaminated and chipped stone. See Photo 6.

Sketch / Photo Log

Sketch 1 : Framing plan.
Photo 1 : West side of South span.
Photo 2 : Slab #5 in South span.
Photo 3 : Slab #7 in South span.
Photo 4 : Slab #9 in South span.
Photo 5 : Slab #10 in South span.
Photo 6 : Slab #11 in South span.

CITY/TOWN LEICESTER	B.I.N. 6R2	BR. DEPT. NO. L-06-011	S-STRUCTURE NO. L06011-6R2-MUN-BRI	INSPECTION DATE MAY 28, 2017
------------------------	---------------	---------------------------	---------------------------------------	---------------------------------

SKETCHES



FRAMING PLAN
NFS

- NOTES:**
1. ORIGINAL BRIDGE DRAWINGS WERE NOT AVAILABLE.
 2. SKETCHES DONE BY OLL ENGINEERING.
 3. ALL DIMENSIONS WERE FIELD MEASURED.
 4. SUPERSTRUCTURE IS COMPOSED OF ROUGH CUT STONE MASONRY BLOCKS WITH VARYING DIMENSIONS. ALL DIMENSIONS RECORDED FOR STONE MASONRY COMPONENTS ARE APPROXIMATE.

- LEGEND:**
- MASONRY STONE SLAB
 - TIMBER BOARDS
 - CONCRETE ENCASMENT
 - CHUNKY STONES

Sketch 1: Framing plan.

CITY/TOWN LEICESTER	B.I.N. 6R2	BR. DEPT. NO. L-06-011	8-STRUCTURE NO. L06011-6R2-MUN-BRI	INSPECTION DATE MAY 28, 2017
------------------------	---------------	---------------------------	---------------------------------------	---------------------------------

PHOTOS



Photo 1: West side of South span.

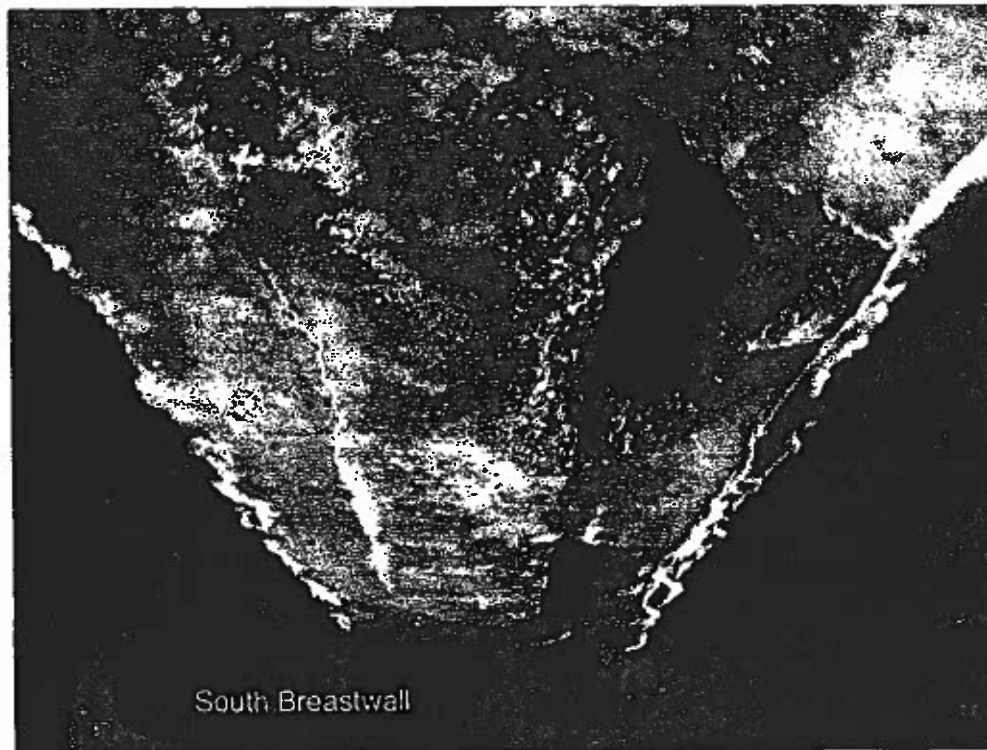


Photo 2: Slab #5 in South span.

CITY/TOWN LEICESTER	B.I.N. 6R2	BR. DEPT. NO. L-06-011	8.-STRUCTURE NO. L06011-6R2-MUN-BRI	INSPECTION DATE MAY 28, 2017
------------------------	---------------	---------------------------	--	---------------------------------

PHOTOS



Photo 3: Slab #7 in South span.



Photo 4: Slab #9 in South span.

CITY/TOWN LEICESTER	B.I.N. 6R2	BR. DEPT. NO. L-06-011	8-STRUCTURE NO. L06011-6R2-MUN-BRI	INSPECTION DATE MAY 28, 2017
------------------------	---------------	---------------------------	---------------------------------------	---------------------------------

PHOTOS

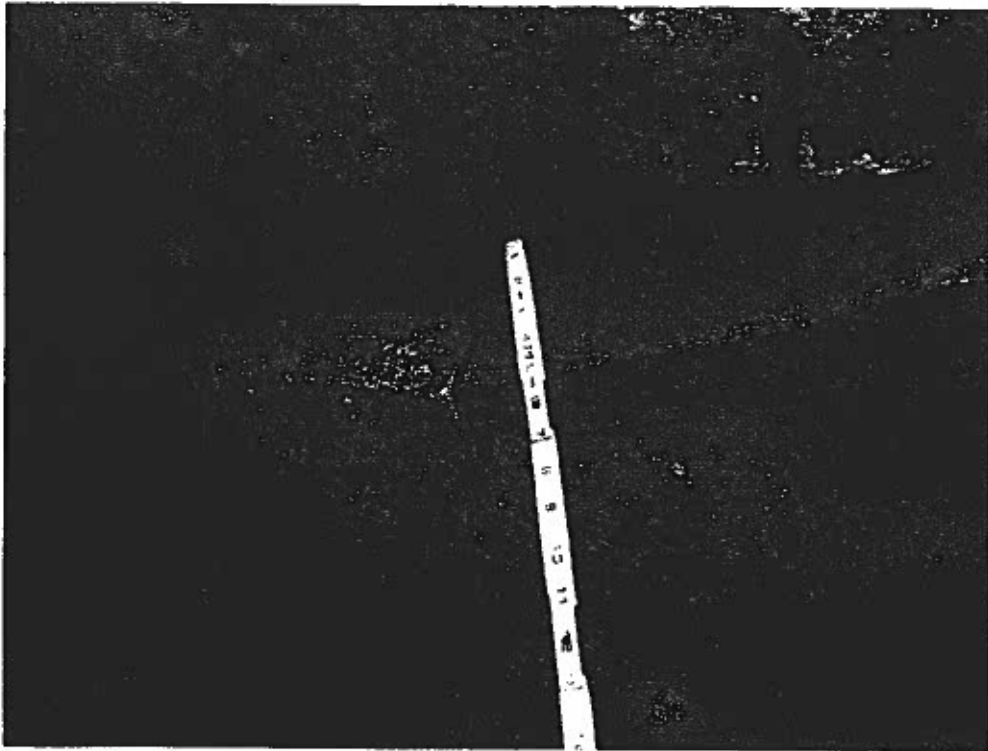


Photo 5: Slab #10 in South span.



Photo 6: Slab #11 in South span.