Theat

BLOCK 671 LOT 8 ADDRESS (SITE) PERMIT NO. [crossed out] 381-97

RECEIVED
DEC 9 1996
DIV. OF INSPECTION

CONSTRUCTION PERMIT APPLICATION

Applicant Completes Sections I, II, III (optional), IV, VI and VII

SONY Theatre

I. IDENTIFICATION

1. Proposed Work-site at: BRICK PLAZA MALL, TOWNSHIP OF BRICK, NJ.
2. Name of Owner in Fee: BRICK PLAZA CINEMAS, INC. Tel. (212) 833-6656
   Address 711 FIFTH AVE., 10TH FLOOR, NY, NEW YORK 10022 (street / municipality / zip code)
3. Ownership in Fee: Public ______ Private X
4. Principal Contractor: TO BE DETERMINED Tel. (201) 461-5550
   Address C RAIMONDO & SONS, 540 BERGEN BLVD, P.O. BOX 1381 FORT LEE, N.J. 07024
   License No. OR, if new home, Builder Reg. No. ______ Exp. Date ______
   Federal Emp. No. 22-2479411 Social Security No. ______
5. Architect or Engineer FTC&H Tel. (616) 676-2666
   Address 6090 EAST FULTON, ADA, MICHIGAN 49301
6. Responsible Person in Charge of Work STEVEN C. FERINGA, A.I.A. Tel. (616) 676-2666 EXT. 603

c/c

A. [illegible] FINAL APPROVAL

V. FEE SUMMARY (for office use only)

262-3431

			Update	Update
1. Building	$	30901		
2. Electrical				
3. Plumbing		1990		
4. Fire Protection		1420		
5. Elevator Devices				
6. Subtotal	$	34311		
7. Less 20% for State Plan Review				
8. Subtotal	$			
9. DCA Training Fee		1978		
10. Subtotal	$			
11. Cert. of Occupancy		3431		
12. Other ZPA + PP		$30		
13. TOTAL	$	39750		

VI. BUILDING/SITE CHARACTERISTICS

(office use only)

1. Number of Stories 1 STORY, + PROJ. MEZZ.
2. Height of Structure 24 ft.
3. Area—Largest Floor 44,784 sq. ft.
4. New Building Area 44,784 sq. ft.
5. Volume of New Structure 1,074,816 cu. ft.
6. Construction Classification 2A — 7236 038
7. Total Land Area Disturbed 47,500 sq. ft.
8. Flood Hazard Zone C
9. Base Flood Elevation 12.0 FEET (MAX.) ft.
10. Wetlands yes ______ sq. ft. no X
11. Max. Live Load 100 P.S.F. (GRADE FLOOR)
12. Max. Occupancy Load 2612
    PLUS → 100 P.S.F. & 125 P.S.F. (ELEVATED)

Theatre

II. PROPOSED WORK

	Est. Cost
1. ☐ Minor work (single trade)	
2. ☐ Small Job ($5,000 and no prior approvals)	
3. ☒ New Building	4.6 MIL.
4. ☐ Addition	
5. ☐ Alteration	
6. ☐ Fire Protection	
7. ☒ Plumbing	
8. ☐ Electrical	
9. ☐ Elevator Devices	
10. ☐ Asbestos Abatement	
11. ☐ Demolition	
TOTAL COSTS	4.6 MIL.

OPTIONAL (for office use only)

Plans Rec'd By	Date Rec'd	Rejection Date	Approval Date	Reviewer	Resubmission Dates Approval	Resubmission Dates Rejection	Reviewer
UE	12/9/96		2-14-97	FM	FOOTING FOUNDATION ONLY 9/18/97	TEO	OH
			2-14-97		9/5/97	TEO	
			1-29-97		8/28/97		
					9/8/97		
EWO	1/24/97		2/10/97	[illegible]			

III. DO YOU WANT: (optional) 1 ☐ Partial Releases 2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/Dumbwaiters/Moving Walks
2. ☐ High Pressure Boilers
4. ☐ Refrigeration Systems
5. ☒ Cross Connections/Backflow Preventers
7. ☒ Sprinklers
8. ☐ Smoke Control Systems in Open Wells
9. ☐ Underground Storage Tanks

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL
1. ☐ Hotels (R-1)
2. ☐ Multi-Family (R-2)
3. ☐ Two-Family (R-3) BOCA
4. ☐ Two-Family (R-4) CABO
5. ☐ One-Family (R-3) BOCA
6. ☐ One-Family (R-4) CABO

No of dwelling units:
Before Construction ______
After Construction ______
Net gain or loss ______

B. NON-RESIDENTIAL
1. State Specific Use: MOVIE THEATRE (10 SCREENS)
2. Use Group: A-1 ASSEMBLY
3. Change in Use Group, Indicate Former:

COMMERCIAL

PRELIMINARY PLAN APPROVAL

H.E.L. 0 ASSOCIATES 0 LEE CO. [illegible]

LDS BR 10208703

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

A. ( ) I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such faot shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

B. ( )I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

C. ( ) I further certify that I will perform or supervise the following work:
C.1. ( ) Building C.2. ( ) Fire Protection
I further certify that I will perform the following work:
C.3. ( ) Electrical C.4. ( ) Plumbing

D. ( ) I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION

(to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

( ) Check if contractor.

Agent Name FISHBECK, THOMPSON, CARR & HUBER

Address 6090 EAST FULTON, P.O. BOX 211
ADA, MICHIGAN 49301

Telephone (616) 676-2666

Signature Steven C. Feringa Date 12-6-96
STEVEN C. FERINGA, A.I.A.

OFFICE DATE RECEIVED: _____

VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Planning Board							X	X	
☐ Zoning Board			X	X	X	X	X	X	
☐ Sewer Authority							X	X	
☐ Water Authority							X	X	
☐ Fire Department					X	X	X	X	
☐ Police Department			X	X	X	X	X	X	
☐ Health Department					X	X			
☐ Soil Conservation							X	X	
☐ N.J. Dept. of Community Affairs	X	X	X	X	X	X			
☐ N.J. Department of Transportation	X	X	X	X	X	X			
☐ N.J. Dept. of Environmental Protect.	X	X	X	X	X	X			
☐ Utility Dig No.			X	X	X	X	X	X	
☐ Other									
☐									
☐									

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE **(office use only—optional)**

Name of Code & Edition		Name of Code & Edition			
Building		Energy		Other	
Electrical		Barrier Free			
Plumbing		Flood Hazard			
Fire Protection		As Built Elevation Cert.			
Mechanical		Other			

X. CERTIFICATES ISSUED **(office use only)**

☐ Temporary Certificate of Occupancy	No. 381	8/29/97	DATE EXPIRED 9-12-97	
☐ Temporary Certificate of Occupancy	No.			
☐ Continued Certificate of Occupancy	No.			
☒ Certificate of Occupancy	No. 381	5/26/99	Eng. 9-26-97	O/C Soil Dept. rec'd.
☐ Certificate of Approval	No.			

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

Date Issued 05/26/99
Control #
Permit # 97-381.1

UCC NEW JERSEY
CERTIFICATE

IDENTIFICATION

Block 671 Lot 8 Qual
Work Site Location SONY THEA CEDARBRIDGE AVE/RTE 70
SONY THEATRE
Owner in Fee/Occupant BRICK PLAZA CINEMA'S INC
Address 711 FIFTH AVE 10TH FLOOR
NY NY, NY 10022-
Telephone (212)833-6655
Contractor C. RAIMONDO & SONS
Address 540 BERGEN BLVD PO 1381
FORT LEE, NJ 07024-
Telephone ( ) Fax ( )
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. 22-2479411

Home Warranty No. N/A
Type of Warranty Plan: [ ] State [X] Private
Use Group A-1
Maximum Live Load 0
Construction Classification
Maximum Occupancy Load 0
Description of Work/Use:

10 SCREEN SONY THEATRE

[X] CERTIFICATE OF OCCUPANCY
This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

[ ] CERTIFICATE OF CLEARANCE - LEAD ABATEMENT 5:17
This serves notice that based on written certification, lead abatement was performed as per NJAC 5:17, to the following extent:
[ ] Total removal of lead-based paint hazards in scope of work
[ ] Partial or limited time period (___ years); see file

[ ] CERTIFICATE OF APPROVAL
This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

[ ] CERTIFICATE OF CONTINUED OCCUPANCY
This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

[ ] TEMPORARY CERTIFICATE OF OCCUPANCY/COMPLIANCE
If this is a Temporary Certificate of Occupancy or Compliance, the following conditions must be met no later than _____, ___ or the owner will be subject to fine or order to vacate:

[ ] CERTIFICATE OF COMPLIANCE
This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until _____, ___.

A Caniazza
CONSTRUCTION OFFICIAL
U.C.C. P260 (rev. 3/96)

Fee $ 10
Paid [X] Check No. 41396
Collected by: TL

CERTIFICATE

Date Issued 8-29-97
Control #
Permit # 381-97

IDENTIFICATION

Block 671 Lot 8
Work Site Location Brick Blvd., Brick Plaza

Owner in Fee Brick Plaza Cinemas, Inc.
Address 711 Fifth Ave., 10th floor
New York, NY 10022
Tele. ( )
Contractor C. Raimondo & Sons
Address 540 Bergen Blvd.
Fort Lee, NJ07024
Tele. ( )
Lic. No. or Bldrs. Reg. No.
Federal Emp. No.
or Social Security No.

Home Warrantly No. N/A
Use Group A-1 3 hours
Maximum Live Load
Description of Work/Use:

Leows Cinema, 10 screen movie theatre

Type of Warranty Plan: [ ] State [ ] Private
Construction Classification
Maximum Occupancy Load

CERTIFICATE OF OCCUPANCY/APPROVAL

☐ **CERTIFICATE OF OCCUPANCY** ☐ **CERTIFICATE OF APPROVAL**

This serves notice that said building, structure, or equipment has been constructed or installed in accordance with the New Jersey Uniform Construction Code, and is approved for use and/or occupancy.

☐ **CERTIFICATE OF CONTINUED OCCUPANCY**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

XXXX☑ **TEMPORARY CERTIFICATE OF OCCUPANCY**

If this is a Temporary Certificate of Occupancy the following conditions must be met no later than September 12, 19 97 or the owner will be subject to a fine or order to vacate:

Pending compliance with Building, Fire, Electrical, Engineering and O.C. Soil.

ok rec'd 5/26/99

ok 9/8/97 9/5/97 ok 9/8/97 rec'd 9/26/97 ok

K Cuniazza
CONSTRUCTION OFFICIAL

Fee $
Paid [ ] Check No.
Collected by:

U.C.C. Form F-260A

1 WHITE—APPLICANT 2 CANARY—OFFICE 3 PINK—TAX ASSESSOR

CERTIFICATE

Date Issued 2-4-98
Control #
Permit # 381-97

IDENTIFICATION

Block 671 Lot 8
Work Site Location Brick Blvd., Brick Plaza

Owner in Fee Brick Plaza Cinemas, Inc.
Address 711 Fifth Ave., 10th Floor
New York, NY 10022
Tele. ( )
Contractor C. Raimondo & Sons
Address 540 Bergen Blvd.
Fort Lee, NJ 07024
Tele. ( )
Lic. No. or Bldrs. Reg. No.
Federal Emp. No.
or Social Security No.

Home Warranty No. N/A
Use Group A-1 3 hours
Maximum Live Load
Description of Work/Use:

Leows Cinema, 10 screen movie theatre

Type of Warranty Plan: [ ] **State** [ ] **Private**
Construction Classification
Maximum Occupancy Load

CERTIFICATE OF OCCUPANCY/APPROVAL

☐ **CERTIFICATE OF OCCUPANCY** ☐ **CERTIFICATE OF APPROVAL**

This serves notice that said building, structure, or equipment has been constructed or installed in accordance with the New Jersey Uniform Construction Code, and is approved for use and/or occupancy.

☐ **CERTIFICATE OF CONTINUED OCCUPANCY**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

XXX☐ **TEMPORARY CERTIFICATE OF OCCUPANCY**

If this is a Temporary Certificate of Occupancy the following conditions must be met no later than March 30, 19 98 or the owner will be subject to a fine or order to vacate: Pedding compliamce with Engineering and O. C. Soil District.

L Cimarra

CONSTRUCTION OFFICIAL

Fee $
Paid [ ] Check No.
Collected by:

U.C.C. Form F-260A

1 WHITE—APPLICANT 2 CANARY—OFFICE 3 PINK—TAX ASSESSOR

Sony Theatre

A-1 318

CONSTRUCTION PERMIT

Date Issued 3-3-97.
Control #
Permit # 381-97

IDENTIFICATION Block 671 Lot 8

Work Site Location Brick Plaza Mall (Sony)

Owner in Fee Brick Plaza Cinemas Inc.
Address 711 5th Ave. 10th Floor. New York, New York
Tele. (212)

Contractor C. Raimondi & Sons.
Address 540 Bergen Blvd. P.O. Box 1381, Fort Lee, N.J. 07024
Tele. ( )
Lic. No. or Bldrs. Reg. No. Exp. Date
Federal Emp. No. 22-2479411
or Social Security No.

is hereby granted permission to perform the following work:

[X] BUILDING [X] PLUMBING [ ] OTHER
[ ] ELECTRICAL [X] FIRE PROTECTION
[ ] ELEVATOR DEVICES

DESCRIPTION OF WORK:

New Theatre.

NOTE: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work $ 4.6 Million

CONSTRUCTION OFFICIAL

U.C.C. Form F-170C

1 WHITE - OFFICE 2 CANARY - TAX ASSESSER 3 PINK - JACKET 4 GOLD - APPLICANT

PAYMENTS (Office Use Only)

Building	30 901. -
Plumbing	1 990 -
Electrical	
Fire Protection	1420 -
Other	
Other	
DCA Training Fee	197K. -
Cert. of Occ.	3431 -
Other 2 DEP	30 -
Total	39 750 -
Check No.	41396
Cash	
Collected By:	N Jute

PERMIT UPDATE

Date Update Issued 970826
Control #
Permit # 901586
Date Permit Issued 970305

BRICK

IDENTIFICATION Block 671 Lot 8

Work Site Location BRICK PLAZA
BRICK BLVD

Owner in Fee SONY THEATRES
Address 711 5TH AVE
NY, NY, 10022-5109
Tele. (212) 833-6659

Contractor JOHNSON ELECTRIC
Address 201 HUDSON ST
HACKENSACK, N.J. 07601
Tele. (201) 487-0080
Lic. No. or Bldrs. Reg. No. 4206
Federal Emp. No. 22-1907928
or Social Security No.

is hereby granted permission to perform the following work:

[ ] BUILDING [ ] PLUMBING [ ] OTHER
[✓] ELECTRICAL [ ] FIRE PROTECTION
[ ] ELEVATOR DEVICES

DESCRIPTION OF WORK: 250 SPEAKER OUTLETS
10 AUDIO RACKS

Estimated Cost of Work $ 6,000

CONSTRUCTION OFFICIAL

PAYMENTS (Office Use Only)	
Building	
Electrical	
Plumbing	
Fire Protection	
Elevator Devices	
Other	
DCA Training Fee	
Cert. of Occ.	
Other	
Total	35.
Check No.	3167
Cash	
Collected By:	

U.C.C. Form F-190B

1 WHITE – INSPECTOR COPY 2 CANARY – OFFICE COPY 3 PINK – OFFICE COPY 4 GOLD – APPLICANT COPY

BRICK, N.J.

[redacted]

PERMIT UPDATE

Date Update Issued 4/18/97
Control #
Permit # 381-97
Date Permit Issued

IDENTIFICATION Block 671 Lot 8
Work Site Location Brick Plaza

Owner In Fee Brick Plaza Cinemas Inc
Address 711 5th Ave 10th floor NY NY
Tele. (212) 833-6654

Contractor J.A. CHRISTMAN INC
Address PO Box 2037 Red Bank N.J. 07701
Tele. (908) 842-1899
Lic. No. or Bldrs. Reg. No. 5896
Federal Emp. No. 222204970
or Social Security No.

is hereby granted permission to perform the following work:

[ ] BUILDING [X] PLUMBING [ ] Other Change of Contractor
[ ] ELECTRICAL [ ] FIRE PROTECTION

DESCRIPTION OF WORK:
Sanitary, Roof Drain & Gas Piping

Estimated Cost of Work $ 260,000.00

CONSTRUCTION OFFICIAL

PAYMENTS **(Office Use Only)**
Building
Plumbing Paid
Electrical
Fire Protection
Other
Other Change
DCA Training Fee
Cert. of Occ.
Other
Total
Check No. Conte
Cash
Collected By

U.C.C. Form F-190A

1 WHITE—INSPECTOR COPY 2 CANARY—OFFICE COPY 3 PINK—OFFICE COPY 4 GOLD—APPLICANT COPY REED 28A

Sony Theatre

PERMIT UPDATE

Date Update Issued 8/27/97
Control #
Permit # 381-97 + B
Date Permit Issued

IDENTIFICATION Block 671 Lot 8
Work Site Location [illegible] PLAZA
Owner in Fee [illegible]
Address [illegible]
Tele. ( )

Contractor Reliable Fire Protection
Address 123 White Oak Lane (illegible)
Old Bridge NJ 08857
Tele. (908) 607-1500 Call Dave
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. 22-3103000
or Social Security No.

is hereby granted permission to perform the following work:

[ ] BUILDING [ ] PLUMBING [ ] OTHER
[ ] ELECTRICAL [X] FIRE PROTECTION
[ ] ELEVATOR DEVICES

DESCRIPTION OF WORK:

Estimated Cost of Work $ 1,850 00

CONSTRUCTION OFFICIAL

PAYMENTS (Office Use Only)	
Building	
Electrical	
Plumbing	
Fire Protection	92 -
Elevator Devices	
Other	T 12
DCA Training Fee	2 -
Cert. of Occ.	
Other	
Total	94 -
Check No.	
Cash	
Collected By:	CAS

U.C.C. Form F-1908

1 WHITE—INSPECTOR COPY 2 CANARY—OFFICE COPY 3 PINK—OFFICE COPY 4 GOLD—APPLICANT COPY

NEW JERSEY UNIFORM CONSTRUCTION CODE

PERMIT UPDATE

Date Update Issued 6/6/97
Control #
Permit #
Date Permit Issued 381-97

IDENTIFICATION Block 671 Lot 8
Work Site Location Focus (Sony Theatres) Brick Plaza
Owner in Fee Lowes Brick Plaza
Address 711 Fifth Ave N.Y.
Tele. (_____)

Contractor Higgins Fire Protec.
Address **0002** Cenomas Inc
301**
Tele. (_____) +H BLOCK 0.00
Lic. No. or Bldrs. Reg. No. 671 8
Federal Emp. No. LOT 0.00
or Social Security No. [redacted]
.00

is hereby granted permission to perform the following work:

[ ] BUILDING [ ] PLUMBING [ ] OTHER ________
[ ] ELECTRICAL [X] FIRE PROTECTION
[ ] ELEVATOR DEVICES

DESCRIPTION OF WORK:

Estimated Cost of Work $ 76000-

J Curiozza / 3
CONSTRUCTION OFFICIAL

PAYMENTS (Office Use Only)	
	TOTAL 620.00
Building	CHECK 620.00
Electrical	CHANGE 0.00
Plumbing	06/06/97 NO. 5 0020A005 09:25
Fire Protection	620
Elevator Devices	
Other	
DCA Training Fee	
Cert. of Occ.	
Other	
Total	620
Check No.	10342
Cash	
Collected By:	

U.C.C. Form F-190B

1 WHITE—INSPECTOR COPY 2 CANARY—OFFICE COPY 3 PINK—OFFICE COPY 4 GOLD—APPLICANT COPY

Loews Cine

SUBCODE
TECHNICAL SECTION

Date Issued
Control #
Permit # 381-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 82
Work Site Location

Owner in Fee BRICK PLAZA CINEMAS, INC.
Address 711 FIFTH AVE., 10TH FLOOR
NEW YORK, N.Y., 10022
Tele. (212) 833-0655
Contractor
Address

Tele. ( )
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. or Social Security No.

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

John C. Ferriga, A.I.A.
Signature

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

NEW 10 SCREEN MOVIE THEATRE COMPLEX INCLUDING PERIMETER SIDEWALK. MASONRY VENEER AND STEEL FRAME CONSTRUCTION. SITEWORK BEYOND THE PERIMETER SIDEWALK IS "BY OTHERS".

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial
[ ] No Plans Req.		
[ ] All		
[ ] Footing	2/14	FM
[ ] Foundation	2/14	FM
[ ] Frame		
[ ] Other		

Joint Plan Review Required:
[ ] Elec. [ ] Plumb. [ ] Fire

SUBCODE APPROVAL
[ ] CO [ ] CCO [ ] CA
Date: 9-8-97
Approved By: FM

INSPECTIONS	Dates (Month/Day)			
Type:	Failure	Failure	Approval	Initial
Footing			over	
Foundation				
Slab				
Frame				
Insulation				
Finishes:				
Energy				
Mechanical				
TCO				
Other				
Final			9-8-97	FM

B. BUILDING CHARACTERISTICS

Use Group	Present N.A.	Proposed A-1
Constr. Class	Present N.A.	Proposed 2A
No. of Stories	ONE (W/PROJ. MEZZ.)	
Height of Structure	74	Ft.
Area—Largest Floor	44,784	Sq. Ft.
New Bldg. Area/All Floors	44,784	Sq. Ft.
Volume of New Structure	1,074,816	Cu. Ft.
Total Land Area Disturbed	47,500	Sq. Ft.

Est. Cost of Bldg., Work:
1. New Bldg. $ Five MILLION
2. Alteration $
3. Total (1+2) $

TYPE OF WORK:
[X] New Building
[ ] Addition
[ ] Alteration
[ ] Roofing
[ ] Siding
[ ] Fence Height (6' or over)
[ ] Sign Sq. Ft.
[ ] Pool
[ ] Asbestos Abatement
[ ] Other
[ ] Other
[ ] Demolition

(Office Use Only)
FEE
$

Administrative Surcharge $
Paid [ ] Check # Minimum Fee $
Collected by: DCA TRAINING FEE $
TOTAL FEE $

change of contractor

Brick

ELECTRICAL SUBCODE TECHNICAL SECTION

Date Received
Date Issued
Control #
Permit # 970305.001586

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 0

Work Site Location 1 Bowes Avenue / Brick Blvd

Owner in Fee/Occupant BRICK PLAZA CINEMAS

Address 711 FIFTH AVE 10th Floor
NEW YORK, NY. 10022

Tele. (212) 833-1655

Contractor JORDANO ELECTRIC, INC.

Address 260 HUDSON STREET
HACKENSACK, NJ. 07601

Tele. (201) 489-4800 Fax (201) 487-5071

Lic. No. 4206

Federal Emp. No. 22-1907928

B. ELECTRICAL CHARACTERISTICS

Use Group Present _____ Proposed _____

[ ] Pole/Pad # _____ [ ] Temporary [ ] Other _____

Building Occupied as _____ Utility Co. _____

Est. Cost of Elec. Work $ _____

JOB SUMMARY (Office Use Only)

PLAN REVIEW — Date — Initial

[ ] No Plans Required

Joint Plan Review Required:

[ ] Building [ ] Plumbing

[ ] Fire [ ] Elevator

[ ] Elec. Plans Approved

Date: _____

Approved by: _____

SUBCODE APPROVAL

[ ] CO [ ] CCO [ ] CA

Date: _____

Approved by: _____

INSPECTIONS Type:	Dates (Month/Day) Failure	Failure	Approval	Initial
Rough				
Temp. Serv.				
Constr. Serv.				
TCO				
Other				
Service				
Final				

Temp. Cut-in-Card Date Issued _____

Final Cut-in-Card Date Issued _____

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

_____
Applicant's Signature/Contractor's Seal and Signature

[ ] Licensed Electrical Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA

QTY.	SIZE	ITEMS	FEE (Office Use Only)
1700		Lighting Fixtures	
260		Receptacles	
50		Switches	
1510		Detectors	
—		Light Poles	
—		Motors—Fract. HP	
		Emergency & Exit Lights	
1		Communications Points	
98		Alarm Devices/F.A.C. Panel	
		.....	
		TOTAL NUMBERS	$
		Pool Permit/with UW Lights	
		Storable Pool/Spa/Hot Tub	
		KW Elec. Range/Receptacle	
		KW Oven/Surface Unit	
2	4.5	KW Elec. Water Heater	
		KW Elec. Dryer/Receptacle	
		KW Dishwasher	
		HP Garbage Disposal	
12	12KW	KW Central A/C Unit 36.0 KW	
3		HP/KW Space Heater/Air Handler	
		KW Baseboard Heat	
81		HP Motors 1/+ HP	
1	35	KW Transformer/Generator	
1	2000	AMP Service	
25		AMP Subpanels	
		AMP Motor Control Center	
13		KW Elec. Sign/Outline Light	
3		EMERGENCY FIXTURES	
		.....	

Administrative Surcharge $ _____

CK 4137 Minimum Fee $ _____

DCA Training Fee $ _____

RPP TOTAL FEE $ 4735.

U.C.C. F120 (rev. 3/96)

1 White = Inspector Copy 2 Canary = Office Copy
3 Pink = Office Copy 4 Gold = Applicant Copy

WR# 188516 Ready

Brick

ELECTRICAL SUBCODE
TECHNICAL SECTION

Date Received
Date Issued
Control #
Permit # APR 19700251 0

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 571 Lot 8

Work Site Location New Loews Theater Construction Site Brick Blvd.

Owner in Fee Ramada Construction

Address 540 Bergen Blvd. P.O. Box 1381 Fort Lee, N.J. 07024

Tele. (201) 461-5550

Contractor Kelam Electrical Inc.

Address 636 Herman Rd Jackson, N.J. 08527

Tele. (908) 928 0606

Lic. No. 7088

Federal Emp. No. 22-2802179 or Social Security No.

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed

[ ] Pole/Pad # [X] Temporary [ ] Other

Building Occupied as Utility Co.

Est. Cost of Elec. Work $ 4000.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required:
[ ] Bldg. [ ] Plumb.
[ ] Fire [ ] Elevator
[ ] Elec. Plans Approved
Date:
Approved by:

SUBCODE APPROVAL
[ ] CO [ ] CCO [ ] CA
Date:
Approved By:

INSPECTIONS Type:	Dates (Month/Day) Failure	Failure	Approval	Initial
Rough				
Temporary				
Constr. Serv.				
TCO				
Other				
Service				
Final				

Temp. Cut-in-Card Date Issued
Final Cut-in-Card Date Issued

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Signature—Contractor Seal

[X] Licensed Electrical Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA

NO.	SIZE	ITEM	FEE (Office Use Only)
		Fixtures (1)	
1		Receptacles (2)	
		Switches (3)	
1		Total 1 + 2 + 3	
	Kw	Range	
	Kw	Oven(s)	
	Kw	Surface Unit	
	hp	Dishwasher	
	hp	Garbage Disposal	
	Kw	Dryer	
	Kw	A/C Unit	
		Burglar Alarms	
		Intercoms Panels	
		Smoke Detectors	
	hp	Whirlpool/spa	
		Pool Bonding	
	hp	Pool Filter Motor	
		Pool Lights	
	Kw	Water Heater(s)	
	Kw	Central heat:	
		oil, gas or elec.	
	Kw	Baseboard Heat Units	
		Thermostats	
	hp	Heat Pump	
	hp	Pump(s)	
~~1~~	~~100~~ Amp	~~Meter Control Center/Sub Panels~~	
		Signs	
		Light Standards	
	hp	Motors—Fractional H.P.	
	hp	Motors—All Others	
	Kw	Transformers	
	Kw	Generators	
1	100 Amp	Service Entrance	
		Other temp pole	

Administrative Surcharge $
Paid [ ] Check # CASH Minimum Fee $
DCA Training Fee $
Collected by: TOTAL FEE $ 35.

U.C.C. Form F-1208 T

1 White = Inspector Copy 2 Canary = Office Copy
3 Pink = Office Copy 4 Gold = Applicant Copy

RECEIVED
MAY 22 1997

10:00 THUR

Thurs 7-31-97 Loews 2:30

FIRE PROTECTION SUBCODE
TECHNICAL SECTION

Date Received 6/6/97
Date Issued
Control #
Permit # 381-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

DIV. OF INSPECTION

Block 01 Lot 8

Work Site Location LOEWS THEATRES BRICK PLAZA

Owner in Fee LOEWS BRICK PLAZA CINEMAS INC.

Address 711 FIFTH AVENUE 10TH FLOOR
NEW YORK, N.Y. 10022

Tele. ( )

Contractor HIGGINS FIRE PROTECTION, INC.

Address 1120 CENTRAL AVENUE
HILLSIDE N.J. 07205 (458-3341)

Tele. (908) 352-3487

Lic. No. [redacted]

Federal Emp. [redacted] or Social Security No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present ✓ Proposed A-3

Constr. Class. Present Proposed

Heating Systems [ ] New [ ] Existing

Type: [ ] Gas [ ] Oil [ ] Electrical [ ] Solar

[ ] Other

Location:

Total Est. Cost of Fire Prot. Work $ 76,000.00 [ ] Other

JOB SUMMARY (Office Use Only)

PLAN REVIEW:

[ ] No Plans Required

Joint Plan Review Required

[ ] Bldg. [ ] Plumb.

[ ] Elec. [ ] Elevator

[ ] Fire Plans Approved

Date: 5/29/97

Approved by: [signature]

SUBCODE APPROVAL

[✓] CO [ ] CCO [ ] CA

Date 9-5-97

Approved by: [signature]

INSPECTIONS: Dates (Month/Day)

Type	Failure	Failure	Approval	Initial
Suppression Test			8-28-97	[initials]
Fire Alarm Test			8-28-97	[initials]
Smoke Test			8-28-97	[initials]
Mechanical				
CO			8-28-97	
Other Fire SPR-HYDRO TEST 7-28-97			7-31-97	[initials]
Other				
Other Final [illegible]			9-5-97	

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

[signature]
SIGNATURE

MICHAEL KULIK

D. TECHNICAL SITE DATA

Description of Work

Water Supply Source 8" CITY MAIN

Method of Valve Supervision TAMPER SWITCH

Local Alarm Supervision water flow switch.

Central Supervision

Proprietary Supervision

Flammable Liquid Storage Tanks	( ) Capacity	Fuel	
Combustible Liquid Storage Tanks	( ) Capacity	Fuel	
L.P.G. Storage Tanks	( ) Capacity	Fuel	
L.N.G. Storage Tanks	( ) Capacity	Fuel	

	Number	FEE (Office Use Only)
Wet Sprinkler Heads	439	585
Dry Sprinkler Heads	4	
TOTAL	443	
Smoke Detectors		35
Heat Detectors		
TOTAL		
Stand Pipes		
Kitchen Hood Exhaust Systems		
Pre-Engineered Systems		
CO_2 Suppression		
Halon Suppression		
Foam Suppression		
Dry Chemical		
Wet Chemical		
Gas or Oil Fired Appliance		
OTHER		

out side Bell, Tamper Switch, water flow alarm, Central sta. } others Div.

Administrative Surcharge $ 620-

Paid [ ] Check # Minimum Fee $

DCA Training Fee $

Collected by: TOTAL FEE $

U.C.C. Form F 140B — 1 White Inspector Copy; 2 Canary Office Copy; 3 Pink Office Copy; 4 Gold Applicant Copy

M 7-28-97 FIRE SPRINKLER HYDRO TEST - FAIL NOT READY

M 7-28-97 FIELD INSP NEW A-3 - FAIL

(1) ADD ADDITIONAL SPRINKLER 2ND FL PROJECTION AREAS
(2) RAIL DRIP
(3) INSP FLOW TEST - TESTED 38 SEC
(4) DRAIN TEST (TESTED)
(5) HOOK UP TAMPERS - TESTED (?)
(6) HEAD UNDER STAIRS
(7) VALVE TAGS
(8) EXTERIOR ALARM FIRE-FDC
(9) SIGN DOOR "CONTROL VALVE"
(10) HYDRO TEST SYSTEM
(11) HVAC DUCT - OBSTRUCT HEADS
(12) HYDRAULIC PLATE ON RISER
(13) PULL STATION - NOT IN + TEST
(14) SMOKE DET NOT IN + TEST
(15) HVAC - SYSTEM CONTROL
(16) HVAC - ROOF - GUARDS

M 7-31-97 FIRE SPRINKLER HYDRO & AIR TEST - APP

M 8-28-97 MANUAL PULL ALARM TESTED AND APP

M 8-28-97 EMER. LIGHTING TESTED AND APP

M 8-28-97 HVAC SYSTEM CONTROL DUCT DET - TESTED AND APP

M 8-28-97 FIRE SUPP TEST AND APP OVER COOKING AREA (POPCORN)

M 8-28-97 SMOKE detector TESTED AND APP

M 8-28-97 FIRE SPRINKLER "INSP TEST" - TESTED

M 8-28-97 FIRE SPRINKLER FLOW ALARM/TAMPER ALARM TESTED, DRAIN TEST

M 8-28-97

M 8-28-97 T.C.O NEW A3 - PENDING ATTACHED LIST AND FIRE WATCH

M 9-5-97 FINAL NEW A1 - APP LIST APP

Sony theatre

FIRE PROTECTION SUBCODE
TECHNICAL SECTION

Date Received 8/27/97
Date Issued
Control # 381-97
Permit #

update Pre-engineered System

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 8
Work Site Location CEDAR BRIDGE RD. - BRICK PLAZA
BRICK, NJ
Owner in Fee LOWES THEATRES
Address CEDAR BRIDGE RD. - BRICK PLAZA
BRICK NJ
Tele. (____)
Contractor RELIABLE FIRE PROTECTION -DOUG
Address 123 WHITE OAK LN. SUITE 225
OLD BRIDGE, NJ 08857
Tele. (732) 607-1500
Lic. No.
Federal Emp. No. 22-3103000 or Social Security No.

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present A Proposed A1
Constr. Class. Present ______ Proposed 2A
Heating Systems [ ] New [ ] Existing
Type: [ ] Gas [ ] Oil [ ] Electrical [ ] Solar
[ ] Other
Location:
Total Est. Cost of Fire Prot. Work $ 1,850.00 [ ] Other

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required:
[ ] Bldg. [ ] Plumb.
[ ] Elec. [ ] Elevator
[X] Fire Plans Approved
Date: 8-20-97
Approved by:
SUBCODE APPROVAL:
[X] CO [ ] CCO [ ] CA
Date: 9-5-97
Approved by:

INSPECTIONS: Dates (Month/Day)

Type	Failure	Failure	Approval	Initial
Suppression Test			8-28-97	
Fire Alarm Test				
Smoke Test				
Mechanical				
TCO				
Other				
Other				
Other FINAL	NA	A1	9-9-97	

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

SIGNATURE

D. TECHNICAL SITE DATA

Description of Work

Water Supply Source
Method of Valve Supervision
Local Alarm Supervision
Central Supervision
Proprietary Supervision

Flammable Liquid Storage Tanks ( ) Capacity ____ Fuel ____
Combustible Liquid Storage Tanks ( ) Capacity ____ Fuel ____
L.P.G. Storage Tanks ( ) Capacity ____ Fuel ____
L.N.G. Storage Tanks ( ) Capacity ____ Fuel ____

COMMERCIAL

	Number	FEE (Office Use Only)
Wet Sprinkler Heads		
Dry Sprinkler Heads		
TOTAL		
Smoke Detectors		
Heat Detectors		
TOTAL		
Stand Pipes		
Kitchen Hood Exhaust Systems		
Pre-Engineered Systems		
CO_2 Suppression		
Halon Suppression		
Foam Suppression		
Dry Chemical		
Wet Chemical	1	92
Gas or Oil Fired Appliance		
OTHER		

Administrative Surcharge $
Paid [ ] Check # ______ Minimum Fee $
DCA Training Fee $
Collected by: ______ TOTAL FEE $

U.C.C. Form F-140B
1 White = Inspector Copy 2 Canary = Office Copy
3 Pink = Office Copy 4 Gold = Applicant Copy

[illegible] 8-28-97 Fire supp system tested and app

[illegible] 9-5-97 Final [illegible] A-? + sup system [illegible] app

FIRE PROTECTION SUBCODE
TECHNICAL SECTION

Date Received 6/6/97
Date Issued
Control #
Permit # 351-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block _____ Lot _____
Work Site Location LOEWS THEATRES BRICK PLAZA

Owner in Fee LOEWS BRICK PLAZA CINEMAS INC.
Address 711 FIFTH AVENUE 10TH FLOOR
NEW YORK, N.Y. 10022

Tele. (____) _____
Contractor HIGGINS FIRE PROTECTION, INC.
Address 1120 CENTRAL AVENUE
HILLSIDE N.J. 07205
Tele. (908) 352-3487
Lic. No. _____
Federal Emp. N [redacted] or Social Security No. _____

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present _____ Proposed _____
Constr. Class. Present _____ Proposed _____
Heating Systems [ ] New [ ] Existing
Type: [ ] Gas [ ] Oil [ ] Electrical [ ] Solar
[ ] Other _____
Location: _____
Total Est. Cost of Fire Prot. Work $ 76,000 ⁰⁰ [ ] Other _____

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required
[ ] Bldg [ ] Plumb
[ ] Elec. [ ] Elevator
[ ] Fire Plans Approved
Date. 7/29/97
Approved by. NL

SUBCODE APPROVAL
[ ] CO [ ] CCO [ ] CA
Date
Approved by

INSPECTIONS Type	Dates (Month/Day) Failure	Failure	Approval	Initial
Suppression Test				
Fire Alarm Test				
Smoke Test				
Mechanical				
CO				
Other				
Other				
Other				

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application

Michael Kulik
SIGNATURE

MICHAEL KULIK

D. TECHNICAL SITE DATA

Description of Work

Water Supply Source 8" CITY MAIN
Method of Valve Supervision TAMPER SWITCH
Local Alarm Supervision VIA 1 FIRE UNIT
Central Supervision
Proprietary Supervision

Flammable Liquid Storage Tanks ( ) Capacity ____ Fuel ____
Combustible Liquid Storage Tanks ( ) Capacity ____ Fuel ____
L.P.G. Storage Tanks ( ) Capacity ____ Fuel ____
L.N.G. Storage Tanks ( ) Capacity ____ Fuel ____

	Number	FEE (Office Use Only)
Wet Sprinkler Heads	439	505
Dry Sprinkler Heads	4	
TOTAL	443	
Smoke Detectors	other	35
Heat Detectors	Divers	
TOTAL		
Stand Pipes		
Kitchen Hood Exhaust Systems		
Pre-Engineered Systems		
CO_2 Suppression		
Halon Suppression		
Foam Suppression		
Dry Chemical		
Wet Chemical		
Gas or Oil Fired Appliance		
OTHER		

Administrative Surcharge $ 620
Paid [ ] Check # _____ Minimum Fee $ _____
DCA Training Fee $ _____
Collected by: _____ TOTAL FEE $ _____

UCC Form F 1408 1 White Inspector Copy 2 Canary Office Copy 3 Pink Office Copy 4 Gold Applicant Copy

PLUMBING SUBCODE
TECHNICAL SECTION

Date Received [redacted] 3-3-97
Date Issued
Control # 381-97
Permit #

IDENTIFICATION—APPLICANT COMPLETE ALL APPLICABLE INFORMATION WHEN CHANG
NG CONTRACTORS NOTIFY THIS OFFICE CALL UTILITY DIG NO 1 800 272 1000

Block 671 Lot 8 Sony Theatre
Work Site Location BRICK PLAZA MALL, Twnsp of Brick
Owner in Fee BRICK PLAZA CINEMAS, INC
Address 711 FIFTH AVE, 10TH FLOOR, NEW YORK, NY 10022
Tele ( ) JA Chestman
Contractor GALDI PLUMBING & HEATING INC
Address 215 GATES RD - UNIT I, LITTLE FERRY NJ 07643
Tele (201) 641 6700
Lic No 8301
Federal Emp No 22-2446866 or Social Security No

PLUMBING CHARACTERISTICS

Use Group Present ______ Proposed ______
Building Sewer Size
Water Service Size
Estimated Cost of Plumbing Work $

JOB SUMMARY (Office Use Only)

PLAN REVIEW
[ ] No Plans Required
Joint Plan Review Required
[ ] Bldg [ ] Elec [ ] Fire
[✓] Plumb Plans Approved
Date 1-29-97
Approved by [signature]

SUBCODE APPROVAL
[ ] CO [ ] CCO [ ] CA
Approved by
Date

INSPECTIONS Type	Failure	Failure	Approval	Initial
Slab			4/5/97	[initials]
Rough				
Water				
Sewer				
Fixtures				
Gas Equipment				
Gas Final				
Solar				
TCO				

Dates (Month/Day)

D TECHNICAL SITE DATA (List all fixtures)

Job Phone
Kenny 262-3398
Beep (201) 231-5975

NO	FIXTURE/EQUIPMENT	FEE (Office Use Only)
30	Water Closet	300-
7	Urinal/Bidet	70-
	Bath Tub	
27	Lavatory	270-
	Shower	
22	Floor Drain	220-
2	Sink	20
0	Dishwasher	
4	Drinking Fountain	40
	Washing Machine	
2	Hose Bibb	20
Roof & In	Gas Piping	25
0	Fuel Oil Piping	
3	Water Heater	105
0	Steam Boiler	
0	Hot Water Boiler	
0	Sewer Pump	
0	Interceptor/Separator	
9	Backflow Preventer	315
1	Greasetrap	70
17	Water Cooled A/C or Refrigeration Unit	595
1	Sewer Connection	
1	Water Service Connection	
	Gas Service Connection	
0	Active Solar System	
	Other	

Administrative Surcharge $
Paid [ ] Check # ______ Minimum Fee $ 1990-
Collected by ______ TOTAL $

CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application

[✓] Licensed Plumbing Contractor [ ] Exempt Applicant

[signature]
Signature Contractor Seal

U C C Form F 130A   1 White Office Copy   3 Pink Applicant Copy   2 Canary = Office Copy   4 Hard Inspector Copy

4-24-97 Concession area in Center, slab

7-8-97 gang baths & mezz dwv & water

7-15-97 2- auxiliary concession stands rough

1- sewer tie in with building drain.

7-21-97 8" fire line tested to 200 P.S.I. OK.

4" Domestic line tested to 125 PSI. OK.

8-4-97 Gas - Drip tee's should be after the valves.

cut sheet needed for fittings.

8-15-97 Watts 909 ASSE 1013 3" PR2 Backflow

Domestic water

Febco 825Y ASSE 1013 RP atmospheric

ASSE 1048 DOUBLE Check

PLUMBING SUBCODE
TECHNICAL SECTION

Date Received
Date Issued
Control #
Permit # 38. 77

Change of Contr. 8/22/97

A. IDENTIFICATION—APPLICANT:
COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 8
Work Site Location [illegible]
[illegible] NJ 0-723
Owner in Fee [illegible]
Address 711 [illegible]
[illegible] NY 10022
Tele. (212) 833-6659
Contractor J A CHRISTMAN INC.
Address PO BOX 2037
KEYPORT, NJ 07701
Tele. (908) 842-1899
Lic. No. 5896
Federal Emp. No. 22-2204970 or Social Security No. ______

B. PLUMBING CHARACTERISTICS
Use Group Present ______ Proposed ______
Building Sewer Size ______ Public Sewer ______ Private Septic ______
Water Service Size ______ Public Water ______ Private Well ______
Estimated Cost of Plumbing Work $ ______

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required:
[ ] Bldg. [ ] Elec.
[ ] Fire [ ] Elevator
[ ] Plumb. Plans Approved
Date: ______
Approved by: ______

SUBCODE APPROVAL:
[ ] CO [ ] CCO [ ] CA
Approved By: ______
Date: ______

INSPECTIONS Type:	Failure	Failure	Approval	Initial
Slab				
Rough				
Water				
Sewer				
Fixtures				
Gas Equipment				
Gas Piping				
Solar				
TCO				

Dates (Month/Day)

C. CERTIFICATION IN LIEU OF OATH
I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Signature—Contractor Seal

STATE OF NEW JERSEY LICENSED MASTER PLUMBER 5896

[ ] Licensed Plumbing Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
30	Water Closet	
	Urinal/Bidet	
	Bath Tub	
27	Lavatory	
	Shower	
	Floor Drain	
2	Sink	
	Dishwasher	
4	Drinking Fountain	
	Washing Machine	
	Hose Bibb	
3	Water Heater	
	Fuel Oil Piping	
	Gas Piping	
	Steam Boiler	
	Hot Water Boiler	
	Sewer Pump	
	Interceptor/Separator	
	Backflow Preventer	
1	Greasetrap	
	Water Cooled A/C or Refrigeration Unit	
1	Sewer Connection	
1	Water Service Connection	
	Active Solar System	
	Other	

Administrative Surcharge $ ______
Paid [ ] Check # ______ Minimum Fee $ ______
DCA Training Fee $ ______
Collected by: ______ TOTAL $ ______

U.C.C. Form F-130B

1 White = Inspector Copy
2 Canary = Office Copy
3 Pink = Office Copy
4 Gold = Applicant Copy

PLUMBING SUBCODE
TECHNICAL SECTION

Date Received 8-8-97
Date Issued
Control #
Permit # 2359-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 8
Work Site Location BRICK PLAZA

Owner in Fee SONY THEATRES
Address 711 5th AVE NY, NY 10022-3109

Tele. (212) 883-6654
Contractor C. RAIMONDO + SONS CONST. CO, INC...
Address 540 BERGEN BLVD PO BOX 1381
FORT LEE, NJ 07024
Tele. (201) 461-5550
Lic. No.
Federal Emp. No. 22-2479411 or Social Security No.

B. PLUMBING CHARACTERISTICS

Use Group Present ______ Proposed ______
Building Sewer Size ______ Public Sewer ______ Private Septic ______
Water Service Size ______ Public Water ______ Private Well ______
Estimated Cost of Plumbing Work $ ______

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required:
[ ] Bldg. [ ] Elec.
[ ] Fire [ ] Elevator
[ ] Plumb. Plans Approved
Date: 7-11-97
Approved by: [signature]

SUBCODE APPROVAL:
[ ] CO [ ] CCO [ ] CA
Approved By:
Date:

INSPECTIONS Type:	Failure	Failure	Approval	Initial
Slab				
Rough				
Water				
Sewer				
Fixtures				
Gas Equipment				
Gas Piping				
Solar				
TCO				

Dates (Month/Day)

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

[signature]
Signature—Contractor Seal

[ ] Licensed Plumbing Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA (List all fixtures.)

COMMERCIAL

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
	Water Closet	
	Urinal/Bidet	
	Bath Tub	
	Lavatory	
	Shower	
	Floor Drain	
	Sink	
	Dishwasher	
	Drinking Fountain	
	Washing Machine	
	Hose Bibb	
	Water Heater	
	Fuel Oil Piping	
	Gas Piping	
	Steam Boiler	
	Hot Water Boiler	
	Sewer Pump	
	Interceptor/Separator	
	Backflow Preventer	
	Greasetrap	
	Water Cooled A/C or Refrigeration Unit	
	Sewer Connection	
	Water Service Connection	
	Active Solar System	15
1	Other Amt. meter heads	120

Administrative Surcharge $
Paid [ ] Check # ______ Minimum Fee $ 135.00
DCA Training Fee $
Collected by: ______ TOTAL $

45 heads

U.C.C. Form F-130B

1 White = Inspector Copy
2 Canary = Office Copy
3 Pink = Office Copy
4 Gold = Applicant Copy

PLUMBING SUBCODE
TECHNICAL SECTION

Date Received
Date Issued
Control #
Permit # 381-97

Change of Contr. 4-18-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000. Loew's Theatres

Block 671 Lot 8
Work Site Location Brick Plaza Mall
Brick N.J 08723
Owner in Fee Brick Plaza Cinema's Inc.
Address 711 5th Ave 10th Fl.
New York N.Y 10022
Tele. (212) 833-6654
Contractor J A CHRISTMAN INC.
Address PO Box 2037
RED BANK NJ 07701
Tele. (908) 842-1899
Lic. No. 5896
Federal Emp. No. 222204970 or Social Security No.

B. PLUMBING CHARACTERISTICS

Use Group Present Proposed
Building Sewer Size Public Sewer Private Septic
Water Service Size Public Water Private Well
Estimated Cost of Plumbing Work $

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required:
[ ] Bldg. [ ] Elec.
[ ] Fire [ ] Elevator
[ ] Plumb. Plans Approved
Date:
Approved by:

SUBCODE APPROVAL:
[X] CO [ ] CCO [ ] CA
Approved By:
Date: 6-26-97

INSPECTIONS Type:	Failure	Failure	Dates (Month/Day) Approval	Initial
Slab			4-15-97	
Rough			7-17-97	
Water			6-9-97	
Sewer			8-15-97	
Fixtures			8-22-97	
Gas Equipment			8-22-97	
Gas Piping	8-4-97		8-11-97	
Solar				
TCO				
Joker			8-15-97	
9/c cond	8-22-97		8-28-97	

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Signature—Contractor Seal

[ ] Licensed Plumbing Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
30	Water Closet	
	Urinal/Bidet	
	Bath Tub	
27	Lavatory	
	Shower	
	Floor Drain	
2	Sink	
	Dishwasher	
4	Drinking Fountain	
	Washing Machine	
	Hose Bibb	
3	Water Heater	
	Fuel Oil Piping	
	Gas Piping	
	Steam Boiler	
	Hot Water Boiler	
	Sewer Pump	
	Interceptor/Separator	
	Backflow Preventer	
1	Greasetrap	
	Water Cooled A/C or Refrigeration Unit	
1	Sewer Connection	
1	Water Service Connection	
	Active Solar System	
	Other	

Administrative Surcharge $
Paid [ ] Check # Minimum Fee $
DCA Training Fee $
Collected by: TOTAL $

U.C.C. Form F-130B

1 White = Inspector Copy
2 Canary = Office Copy
3 Pink = Office Copy
4 Gold = Applicant Copy

PLUMBING SUBCODE
TECHNICAL SECTION

Date Received [redacted] 3-3-97.
Date Issued
Control #
Permit # 381-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 8 Sony Threatre
Work Site Location Brick Plaza Mall, Twnsp. of Brick.

Owner in Fee Brick Plaza Cinemas, Inc.
Address 711 Fifth Ave, 10th Floor,
New York, N.Y. 100dd.
Tele. (____)
Contractor Galdi Plumbing & Heating Inc.
Address 215 Gates Rd. - Unit I
Little Ferry, N.J. 07643
Tele. (201) 641-6700.
Lic. No. 8301
Federal Emp. No. 22-2946866 or Social Security No. ——

B. PLUMBING CHARACTERISTICS

Use Group Present ________ Proposed ________
Building Sewer Size ________
Water Service Size ________
Estimated Cost of Plumbing Work $ ________

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required
Joint Plan Review Required:
[ ] Bldg. [ ] Elec. [ ] Fire
[✓] Plumb. Plans Approved
Date: 1-29-97
Approved by: [signature]

SUBCODE APPROVAL:
[ ] CO [ ] CCO [ ] CA
Approved by: ________
Date: ________

INSPECTIONS: Dates (Month/Day)

Type	Failure	Failure	Approval	Initial	
Slab			4-15-97	[initials]	Partial
Rough			7-8-97	[initials]	7-15-97
Water serv			6-9-97	[initials]	7-21-97
Sewer			8-15-97	[initials]	
Fixtures					
Gas Equipment					
Pipe Gas Final	8-4-97		8-21-97	[initials]	
Solar					
TCO [signature]			8-15-97	[initials]	

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

[✓] Licensed Plumbing Contractor [ ] Exempt Applicant

Ronald Galdi
Signature-Contractor Seal

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
30	Water Closet	300 -
7	Urinal/Bidet	70 -
—	Bath Tub	
27	Lavatory	270 -
—	Shower	—
22	Floor Drain	220 -
2	Sink	20 -
0	Dishwasher	—
4	Drinking Fountain	40
0	Washing Machine	—
2	Hose Bibb	20
● Roof & In Stump	Gas Piping	25
0	Fuel Oil Piping	—
3	Water Heater	105
0	Steam Boiler	—
0	Hot Water Boiler	—
0	Sewer Pump	—
0	Interceptor/Separator	—
9	Backflow Preventer	315 -
1	Greasetrap	10 -
17	Water Cooled A/C or Refrigeration Unit	595
1	Sewer Connection	
1	Water Service Connection	
	Gas Service Connection	
0	Active Solar System	
	Other	

Administrative Surcharge $________
Paid [ ] Check # ________ Minimum Fee $________
Collected by: ________ TOTAL $ 1990 -

U.C.C. Form F-130A

1 White = Office Copy
3 Pink = Applicant Copy
2 Canary = Office Copy
4 Hard = Inspector Copy

PLUMBING SUBCODE TECHNICAL SECTION

Date Received 3-3-97
Date Issued
Control #
Permit # 381-97

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 8 Sony Theatre
Work Site Location BRICK PLAZA MALL, TWNSP. OF BRICK.
Owner in Fee BRICK PLAZA CINEMAS, INC.
Address 711 FIFTH AVE 10TH FLOOR, NEW YORK, N.Y. 10022.
Tele. ( ) ____
Contractor CALDI PLUMBING & HEATING, INC.
Address 215 GATES RD. - UNIT I LITTLE FERRY, N.J. 07643
Tele. (201) 641-6700.
Lic. No. 8301
Federal Emp. No. 22-2946866 or Social Security No. ____

B. PLUMBING CHARACTERISTICS

Use Group Present ____ Proposed ____
Building Sewer Size ____
Water Service Size ____
Estimated Cost of Plumbing Work $ ____

JOB SUMMARY (Office Use Only)

PLAN REVIEW:
[ ] No Plans Required.
Joint Plan Review Required:
[ ] Bldg. [ ] Elec. [ ] Fire
[✓] Plumb. Plans Approved
Date: 2-27-97
Approved by: [signature]

SUBCODE APPROVAL:
[ ] CO [ ] CCO [ ] CA
Approved by: ____
Date: ____

INSPECTIONS: Type:	Dates (Month/Day) Failure	Failure	Approval	Initial
Slab				
Rough				
Water				
Sewer				
Fixtures				
Gas Equipment				
Gas Final				
Solar				
TCO				

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

[signature] Signature-Contractor Seal

[✓] Licensed Plumbing Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
30	Water Closet	300 -
1	Urinal/Bidet	10 -
—	Bath Tub	—
27	Lavatory	270 -
—	Shower	—
22	Floor Drain	220 -
2	Sink	20 -
0	Dishwasher	—
4	Drinking Fountain	40 -
0	Washing Machine	—
2	Hose Bibb	20 -
5	Gas Piping (ROOF & INSIDE)	25 -
0	Fuel Oil Piping	—
3	Water Heater	105 -
0	Steam Boiler	—
0	Hot Water Boiler	—
0	Sewer Pump	—
0	Interceptor/Separator	—
9	Backflow Preventer	315 -
1	Greasetrap	10 -
19	Water Cooled A/C or Refrigeration Unit	595 -
1	Sewer Connection	—
1	Water Service Connection	—
—	Gas Service Connection	—
0	Active Solar System	—
—	Other	—
	Administrative Surcharge	$ ____
Paid [ ] Check # ____	Minimum Fee	$ 1990 -
Collected by: ____	TOTAL	$ ____

U.C.C. Form F-130A 1 White = Office Copy 2 Canary = Office Copy 3 Pink = Applicant Copy 4 Hard = Inspector Copy

Thea.

PLUMBING SUBCODE TECHNICAL SECTION

Date Received
Date Issued
Control #
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 8

Work Site Location

Owner in Fee BRICK PLAZA CINEMAS, INC.

Address 711 FIFTH AVE., 10TH FLOOR

NEW YORK, N.Y., 10022

Tele. (212) 8233-6655

Contractor

Address

Tele. (___)

Lic. No.

Federal Emp. No. ______ or Social Security No.

Save

B. PLUMBING CHARACTERISTICS

Use Group Present N.A. Proposed A-1

Building Sewer Size 6" Public Sewer 6" Private Septic N.A.

Water Service Size 4" Public Water 4" Private Well N.A.

Estimated Cost of Plumbing Work $

JOB SUMMARY (Office Use Only)

PLAN REVIEW:

[ ] No Plans Required

Joint Plan Review Required:

[ ] Bldg. [ ] Elec.

[ ] Fire [ ] Elevator

[ ] Plumb. Plans Approved

Date:

Approved by:

SUBCODE APPROVAL:

[ ] CO [ ] CCO [ ] CA

Approved By:

Date:

INSPECTIONS Type:	Failure	Failure	Approval	Initial
		Dates (Month/Day)		
Slab				
Rough				
Water				
Sewer				
Fixtures				
Gas Equipment				
Gas Piping				
Solar				
TCO				

D. TECHNICAL SITE DATA (List all fixtures.)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
30	Water Closet	300
7	Urinal/Bidet	70
0	Bath Tub	
27	Lavatory	270
0	Shower	
22	Floor Drain	220
2	Sink	20
0	Dishwasher	
4	Drinking Fountain	40
0	Washing Machine	
2	Hose Bibb	20
3	Water Heater	105
0	Fuel Oil Piping	
ON ROOF & IN STORAGE	Gas Piping	25
0	Steam Boiler	
0	Hot Water Boiler	
0	Sewer Pump	
0	Interceptor/Separator	
9	Backflow Preventer	315
1	Greasetrap	10
~~8~~ 17	~~Water Cooled~~ A/C or Refrigeration Unit	~~105~~ 595
1	Sewer Connection	
1	Water Service Connection	
0	Active Solar System	
~~8~~ 14	Other ~~[illegible]~~ Furnaces	~~[illegible]~~

Administrative Surcharge $

Paid [ ] Check # ______ Minimum Fee $ 2,1575

DCA Training Fee $

Collected by: ______ TOTAL $ ~~1500~~

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Signature—Contractor Seal

[ ] Licensed Plumbing Contractor [ ] Exempt Applicant

U.C.C. Form F-130B

1 White = Inspector Copy
3 Pink = Office Copy
2 Canary = [illegible] Copy
4 Gold = Applicant Copy

~~2,575~~
~~1,595~~
~~1,980~~
#1,990.-

TOWNSHIP OF BRICK

ZONING PERMIT

Date of Issue: January 23, 1997 1997 - 0045

Block 671 Lot 8 Zone B-3, H.D.

Property Address: Cedar Bridge Avenue, Brick Plaza

Owner: Federal Realty Investment Trust (Phone): 301-998-8100

Applicant: Steven Feringa; Fishbeck, Thompson Carr & Huber (Phone): 616-676-2666

Mailing Address: 6090 East Fulton, Ada, MI 49301

Existing Use: Vacant land in Brick Plaza

Proposed Use: Loew's Movie Theater building

Proposed Construction (if any): One-story building with mezzanine, 24 feet high; 44,784 square feet, ten movie screens.

Conditions: Site plan approved by Planning Board, Phase II. Case No. 2102-A-PSP-V/FSP-6/96

Resolution No. R-52-96 approved September 11, 1996.

Resolution No. R-59-96 approved October 9, 1996.

Resolution No. R-62-96 approved October 23, 1996.

Resolution No. R-65-96 approved November 13, 1996.

Maps signed January 23, 1997.

Please note that a Construction Permit, as well as a Zoning Permit, must be obtained prior to any construction. You will be notified by the Division of Inspections to pick up and pay for your entire Construction Permit.

This permit shall be null, void and of not effect if any of the facts contained in the application upon the basis of which this permit was granted are false or untrue in any material respect. This permit shall expire one (1) year after the date of issuance if the use or substantial construction has not been commenced.

Michael P. Fowler, AICP/PP
Municipal Planner

Sean Kinnevy
Zoning Officer

THE BRICK TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

1551 HIGHWAY 88 WEST
BRICK, NEW JERSEY 08724
458-7000

CERTIFICATE OF COMPLIANCE

Date 9-5-97

NAME Federal Realty Investment

ADDRESS 1626 E. Jefferson St. Rockville, MD

PROPERTY LOCATION Brick Plaza-Sony Theatre

Account No. C592814 Block 671 Lot 8

I hereby certify that the above applicant has complied with all Rules and Regulations of this Authority and has paid all required fees and charges.

For the Authority Patti Ewan

New Jersey Natural Resources Conservation Program

OCEAN COUNTY SOIL CONSERVATION DISTRICT

714 LACEY ROAD, FORKED RIVER, N.J. 08731
Telephone (609) 971-7002

REPORT OF COMPLIANCE

TO: CONSTRUCTION CODE OFFICIAL MUNICIPALITY: BRICK

PROJECT: BRICK PLAZA PHASE II SCD NO.: 5666

BLOCK NO.(s) 465 LOT NO.(s) 1-9 10.01-10.03

671 24, 9 11 12

Final Compliance ☐ Conditional Compliance ☐

Block No.	Lot No.	Conditions
		APPLICANT REMAINS RESPONSIBLE FOR PERMANENT STABILIZATION.

FAX MEMO
PAGES 1 DATE FAX
TO WAYNE
FROM MIKE
CO. OCSCA
PH # FAX #

TOTAL FEES DUE: $ ———

This verifies that the soil erosion and sediment control measures for the above designated block and lot numbers are in compliance to the extent indicated above with the soil erosion and sediment control plan as certified by the Ocean County Soil Conservation District and required by Chapter 251, P.L. 1975 as amended, the Soil Erosion and Sediment Control Act, (N.J.S.A. 4:24-39 et. seq.).

AGENT RESPONSIBLE FOR PROJECT: _____

AUTHORIZED DISTRICT SIGNATURE: _____

DATE: 4/1-/99

DISTRIBUTION: WHITE - Township
CANARY - Applicant
PINK - District

Revised 6/96

A5671^

New Jersey Natural Resources Conservation Program

OCEAN COUNTY SOIL CONSERVATION DISTRICT

714 LACEY ROAD, FORKED RIVER, N.J. 08731
Telephone (609) 971-7002

REPORT OF COMPLIANCE

TO: CONSTRUCTION CODE OFFICIAL MUNICIPALITY: BRICK

PROJECT: BRICK PLAZA PHASE II SCD NO.: 5666

BLOCK NO.(s) N/A LOT NO.(s) N/A

Final Compliance ☐ Conditional Compliance ☑

Block No.	Lot No.	Conditions
		This CONDITIONAL COMPLIANCE expires on 9/15/97. The applicant is required to notify this office when work is PROPERLY COMPLETED. A $75.00 re-inspection fee will be billed to the applicant for each day the required work is NOT properly completed.

SOLA THEATERS ONLY

TOTAL FEES DUE: $ 75.00

This verifies that the soil erosion and sediment control measures for the above designated block and lot numbers are in compliance to the extent indicated above with the soil erosion and sediment control plan as certified by the Ocean County Soil Conservation District and required by Chapter 251, P.L. 1975 as amended, the Soil Erosion and Sediment Control Act, (N.J.S.A. 4:24-39 et. seq.).

AGENT RESPONSIBLE FOR PROJECT: Gary Esbach

AUTHORIZED DISTRICT SIGNATURE:

DATE: 8/29/97

DISTRIBUTION: WHITE - Township
CANARY - Applicant
PINK - District

Revised 6/96

A5671^

INSPECTOR: Nick Murgolo

DATE: 2/4/93

JOB: BRICK PLAZA
LOEWS Theatre

SECTION:

TYPE OF WORK: FINAL ENG.

WEATHER: Cloudy

LOCATION: Brick Plaza
Phase II

TEMPERATURE: 40°

BLOCK: 478-671

LOT: Enclusive

ENGINEERING RECOMMENDATIONS FOR CERTIFICATE OF OCCUPANCY INSPECTION CHECK LIST

ITEMS TO BE COMPLETED	COMPLETED	DEFICIENT
1. Driveway	X	
2. Grading	X	
3. Sidewalk	X	
4. Road Pavement	X	
5. Landscaping & Sodding	X	
6. Clean-up Procedures	X	
7. Note on going construction in immediate area	X	
8. Safety	X	

COMMENTS REFERENCING ITEM NUMBER:

OTHER (1) Missing TAXI Parking Sign only
(2) Loading Zone in REAR of BLDG, PLAN Calls For white Stripping + white letterins, CREW installed in Yellow.
(3) NO PARKING FIRE Lane Stripping NO IN By loading Zone

RECOMMENDATIONS:

☒ TEMP. C.O.

☐ FINAL C.O.

☐ DETAILED REINSPECTION

☐ HOLD INSPECTION UNTIL LOT ELEVATION FIELD VERIFIED

PLANNING BOARD ENGINEER

MUNICIPAL ENGINEER

I _____, Authorized representative of _____, hereby acknowledge the above deficiencies, and further realize that the Certificate of Occupany will be conditioned upon the acceptable resolution thereof within _____ days of the issuance of Certificate of Occupancy..

INSPECTOR: Nick Murgolo

JOB: Loew's Theatre SECTION: ~~II~~

WEATHER: Sunny

TEMPERATURE: 80°

DATE: 9/15/98

TYPE OF WORK:

LOCATION: Brick Plaza

BLOCK: 671 LOT: 2

ENGINEERING RECOMMENDATIONS FOR CERTIFICATE OF OCCUPANCY INSPECTION CHECK LIST

ITEMS TO BE COMPLETED	COMPLETED	DEFICIENT
1. Driveway		
2. Grading		
3. Sidewalk		
4. Road Pavement		
5. Landscaping & Sodding		
6. Clean-up Procedures		
7. Note on going construction in immediate area		
8. Safety		

COMMENTS REFERENCING ITEM NUMBER: Taxi + Stop Sign (OK) 9/17/98

RECOMMENDATIONS:

☐ TEMP. C.O.

☒ FINAL C.O.

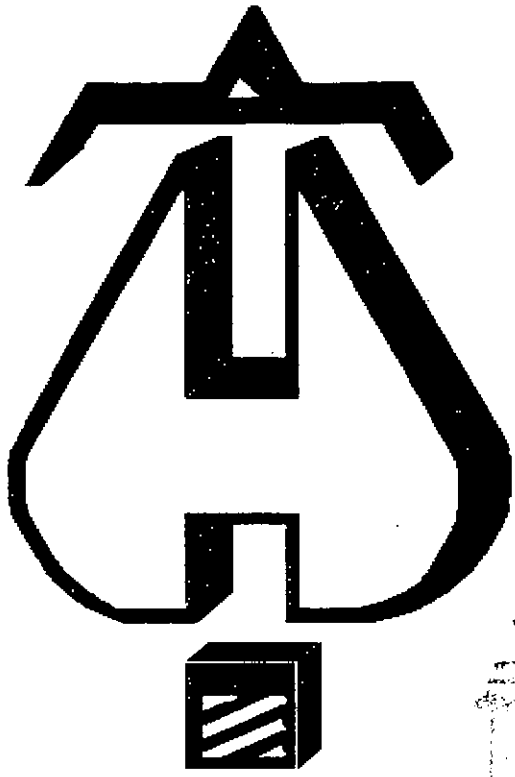
☐ DETAILED REINSPECTION

☐ HOLD INSPECTION UNTIL LOT ELEVATION FIELD VERIFIED

PLANNING BOARD ENGINEER

Frank C. Hoyer MUNICIPAL ENGINEER

I _____, Authorized representative of _____, hereby acknowledge the above deficiencies, and further realize that the Certificate of Occupany will be conditioned upon the acceptable resolution thereof within _____ days of the issuance of Certificate of Occupancy.



RECEIVED

MAY 2 2 1997

DIV. OF INSPECTION

. . . Fire Protection by Computer Design

FRANCIS E. CONDREN, P.E.
Professional Engineer
New Hyde Park, N.Y. 11040
P.E. 23166

HIGGINS FIRE PROTECTION INC.
N.J BRANCH OFFICE
1120 CENTRAL AVE.
HILLSIDE N.J. 07205
908-352-3487

Job Name : LOEWS THEATRES
Building : All Areas
Location : Brick Plaza Brick NJ
System : 1
Contract : B97171
Data File : D1.WX1

Hydraulic Design Information Sheet

Name - LOEWS THEATRES Date - 051997
Location - Brick Plaza Brick NJ
Building - Auditorium Area System No. - 1
Contractor - C> Raimondo & Sons Contract No. - B97171
Calculated By - MK Drawing No. - 1
Construction: ( ) Combustible (X) Non-Combustible Ceiling Height - Varies
Occupancy - A-1 Assembly

SYSTEM DESIGN

(X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other

Specific Ruling	Made By	Date

Area of Sprinkler Operation	- 1500	System Type	Sprinkler/Nozzle
Density	- 0.1	(X) Wet	Make RELIABLE
Area Per Sprinkler	- 168	( ) Dry	Model G4-FR
Elevation at Highest Outlet	- 22.8	( ) Deluge	Size 1/2
Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 5.6
Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.165
Hose Allowance - Outside	- 250		

Note

Calculation Summary: Flow Required - 449.69 Press Required - 46.145 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

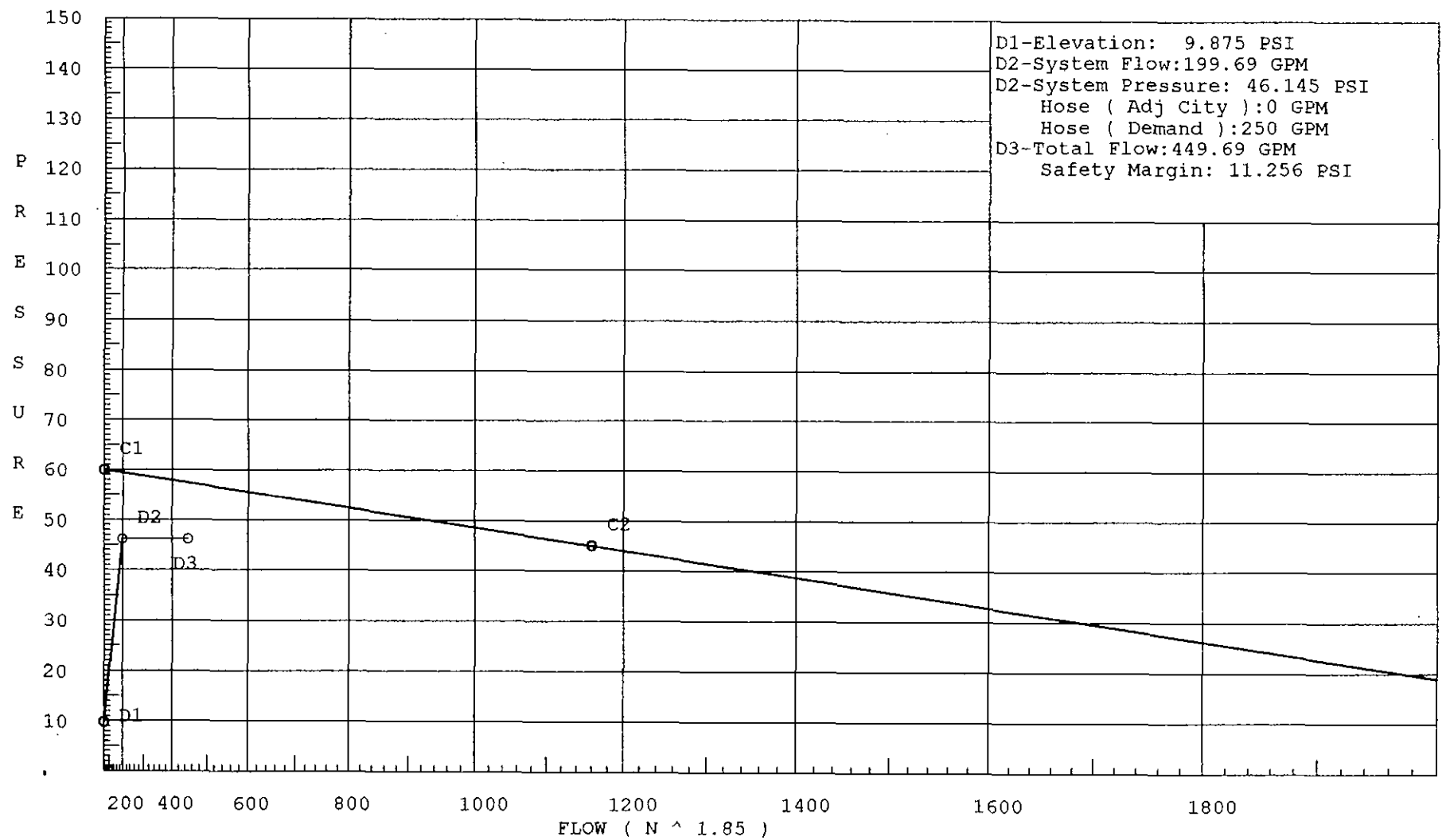
Water Flow Test:		Pump Data:		Tank or Reservoir:
Date of Test	- 4/28/97			Cap. -
Time of Test	- 10:00 AM	Rated Cap.-		Elev.-
Static Press	- 60	@ Press	-	
Residual Press	- 45	Elev.	- 0	Well
Flow	- 1160			Proof Flow
Elevation	- 0			

Location - 8" CITY MAIN 20ft FROM SPRINKLER VALVE ROOM

Source of Information - Flow Test by Higgins Fire Protection and Water Department.

City Water Supply:
C1-Static Pressure: 60 PSI
C2-Residual Pressure: 45 PSI
C2-Residual Flow: 1160 GPM

Pump Data:



Fitting Legend

Abbrev.	Name
A	Generic Alarm Va
B	Generic Butterfly Valve
C	Roll Groove Coupling
D	Dry Pipe Valve
E	90' Standard Elbow
F	45' Elbow
G	Gate Valve
K	Detector Check Valve
L	Long Turn Elbow
M	Medium Turn Elbow
Q	Deluge Valve
S	Swing Check Valve
T	90' Flow thru Tee
W	Wafer Check Valve
Z	Flow Switch

Unadjusted Fittings Table

	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A							7.7	21.5		17.0
B							7	10		12
C	1	1	1	1	1	1	1	1	1	1
D							9.5	17		28
E	2	2	2	3	4	5	6	7	8	10
F	1	1	1	1	2	2	3	3	3	4
G						1	1	1	1	2
K								14		14
L	1	1	2	2	2	3	4	5	5	6
M		2	2	3	3	4	5	6	6	8
Q						18		29		35
S	4	5	5	7	9	11	14	16	19	22
T	3	4	5	6	8	10	12	15	17	20
W										10.3
Z	2	2	2	3	4	5	6	7	8	10

	5	6	8	10	12	14	16	18	20	24
A	17	27	29							
B	9	10	12	19	21					
C	1	1	1	1	1	1	1	1	1	1
D		47								
E	12	14	18	22	27	35	40	45	50	61
F	5	7	9	11	13	17	19	21	24	28
G	2	3	4	5	6	7	8	10	11	13
K		36	55	45						
L	8	9	13	16	18	24	27	30	34	40
M	10	12	16	19	22					
Q		33								
S	27	32	45	55	65	76	87	98	109	130
T	25	30	35	50	60	71	81	91	101	121
W		13.1	31.8	35.8	27.4					
Z	12	14	18	22	27	35	40	45	50	61

Node No.	Elevation	K-Fact	Press Actual	Flow Added	Density Req.	Area	Press Req.
D001	22	5.6	9	16.8	.1000	168.00	7.000
D002	22	5.6	9	16.8	.1000	168.00	7.000
53	22.8	K = K @ EQ01	9.87	17.66			
51	22.8	K = K @ EQ02	11.07	18.41			
48	22.8	K = K @ EQ02	12.29	19.4			
50	22.8	K = K @ EQ02	15	21.43			
70	22.8		21.8				
49	22.8	K = K @ EQ01	22.09	26.41			
68	22.8		23.28				
69	22.8		23.61				
55	22.8	K = K @ EQ01	8.94	16.8			
54	22.8	K = K @ EQ02	10.4	17.84			
52	22.8	K = K @ EQ02	11.49	18.76			
47	22.8	K = K @ EQ02	14.02	20.72			
46	22.8	K = K @ EQ02	16.21	22.27			
64	22.8		19.76				
65	22.8		23.37				
66	22.8		23.48				
67	22.8		23.94				
11	22.8		29.35				
39	22.1		33.67				
12	13.3		39.79				
CONN	0		46.11				
TEST	0		46.15	250			

The maximum velocity is 15.19 and it occures in the pipe between nodes 46 and 64

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
D001	16.80	1.049	1E	2.000	1.000	9.000	9.000	K Factor = 5.6
to		120			2.000	-0.346		
EQ01	16.80	0.0943			3.000	0.283		Vel = 6.237
	16.80					8.937		K Factor = 5.62
D002	16.80	1.049	1T	5.000	1.000	9.000	9.000	K Factor = 5.6
to		120			5.000	-0.346		
EQ02	16.80	0.0943			6.000	0.566		Vel = 6.237
	16.80					9.220		K Factor = 5.53
53	17.66	1.049			11.580	9.871	9.871	K Factor @ node EQ01
to		120						
51	17.66	0.1034			11.580	1.197		Vel = 6.556
51	18.40	1.380			12.000	11.067	11.067	K Factor @ node EQ02
to		120						
48	36.06	0.1018			12.000	1.222		Vel = 7.735
48	19.40	1.38			12.000	12.290	12.290	K Factor @ node EQ02
to		120						
50	55.46	0.2258			12.000	2.710		Vel = 11.896
50	21.43	1.610	2E	4.000	26.830	15.000	15.000	K Factor @ node EQ02
to		120			8.000			
70	76.89	0.1951			34.830	6.796		Vel = 12.117
70		2.067	2E	5.000	9.080	21.795	21.795	
to		120	1T	10.000	20.000			
66	76.89	0.0578			29.080	1.680		Vel = 7.352
	76.89					23.475		K Factor = 15.87
49	26.41	1.049	1T	5.000	0.500	22.087	22.087	K Factor @ node EQ01
to		120			5.000			
68	26.41	0.2176			5.500	1.197		Vel = 9.804
68		1.610			12.000	23.284	23.284	
to		120						
69	26.41	0.0270			12.000	0.324		Vel = 4.162
69		2.067	2T	10.000	21.080	23.608	23.608	
to		120			20.000			
67	26.41	0.0080			41.080	0.329		Vel = 2.525
	26.41					23.937		K Factor = 5.40
55	16.80	1.049	1E	2.000	13.500	8.936	8.936	K Factor @ node EQ01
to		120			2.000			
54	16.80	0.0943			15.500	1.461		Vel = 6.237
54	17.84	1.380			11.580	10.397	10.397	K Factor @ node EQ02
to		120						
52	34.64	0.0946			11.580	1.095		Vel = 7.430

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
52	18.76	1.38			12.000	11.492	11.492	K Factor @ node EQ02
to		120						
47	53.40	0.2106			12.000	2.527		Vel = 11.454
47	20.72	1.610			12.000	14.019	14.019	K Factor @ node EQ02
to		120						
46	74.12	0.1823			12.000	2.188		Vel = 11.681
46	22.27	1.610			12.000	16.206	16.206	K Factor @ node EQ02
to		120						
64	96.39	0.2964			12.000	3.557		Vel = 15.190
64		2.067	2T	10.000	21.080	19.763	19.763	
to		120			20.000			
65	96.39	0.0878			41.080	3.606		Vel = 9.216
65		3.260			11.160	23.369	23.369	
to		120						
66	96.39	0.0096			11.160	0.107		Vel = 3.705
66	76.89	3.260			16.330	23.475	23.475	
to		120						
67	173.28	0.0282			16.330	0.461		Vel = 6.660
67	26.41	3.260	4E	9.408	89.580	23.937	23.937	
to		120	1T	20.159	57.790			
11	199.69	0.0367			147.370	5.412		Vel = 7.676
11		3.260	4E	9.408	51.660	29.349	29.349	
to		120	1T	20.159	57.790	0.303		
39	199.69	0.0367			109.450	4.019		Vel = 7.676
39		4.260	6E	13.167	125.410	33.671	33.671	
to		120	1T	26.334	105.336	3.811		
12	199.69	0.0100			230.746	2.303		Vel = 4.495
12		4.26	1E	13.167	18.000	39.785	39.785	
to		120	1A	22.384	38.184	5.760		
CONN	199.69	0.0100	1G	2.633	56.184	0.561		Vel = 4.495
CONN		7.98	1E	22.654	40.000	46.106	46.106	
to		140	1G	5.034	71.737			
TEST	199.69	0.0003	1T	44.049	111.737	0.039		Vel = 1.281
	250.00							Qa = 250.00
	449.69					46.145		K Factor = 66.20

Hydraulic Design Information Sheet

Name - LOEWS THEATRES
Date - 051997
Location - Brick Plaza Brick NJ
Building - 2nd Floor Storage Area
System No. - 1
Contractor - C. Raimondo & Sons
Contract No. - B97171
Calculated By - MK
Drawing No. - 1
Construction: ( ) Combustible (X) Non-Combustible
Ceiling Height - Varies
Occupancy - A-1 Assembly

SYSTEM DESIGN

(X) NFPA 13 ( ) Lt. Haz. Ord.Haz.Gp. (X) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other
Specific Ruling Made By Date

Area of Sprinkler Operation	- 1500	System Type	Sprinkler/Nozzle
Density	- 0.15	(X) Wet	Make RELIABLE
Area Per Sprinkler	- 120	( ) Dry	Model G4-FR
Elevation at Highest Outlet	- 21.3	( ) Deluge	Size 1/2
Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 5.6
Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.165
Hose Allowance - Outside	- 250		

Note

Calculation Summary: Flow Required - 546.12 Press Required - 48.824 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

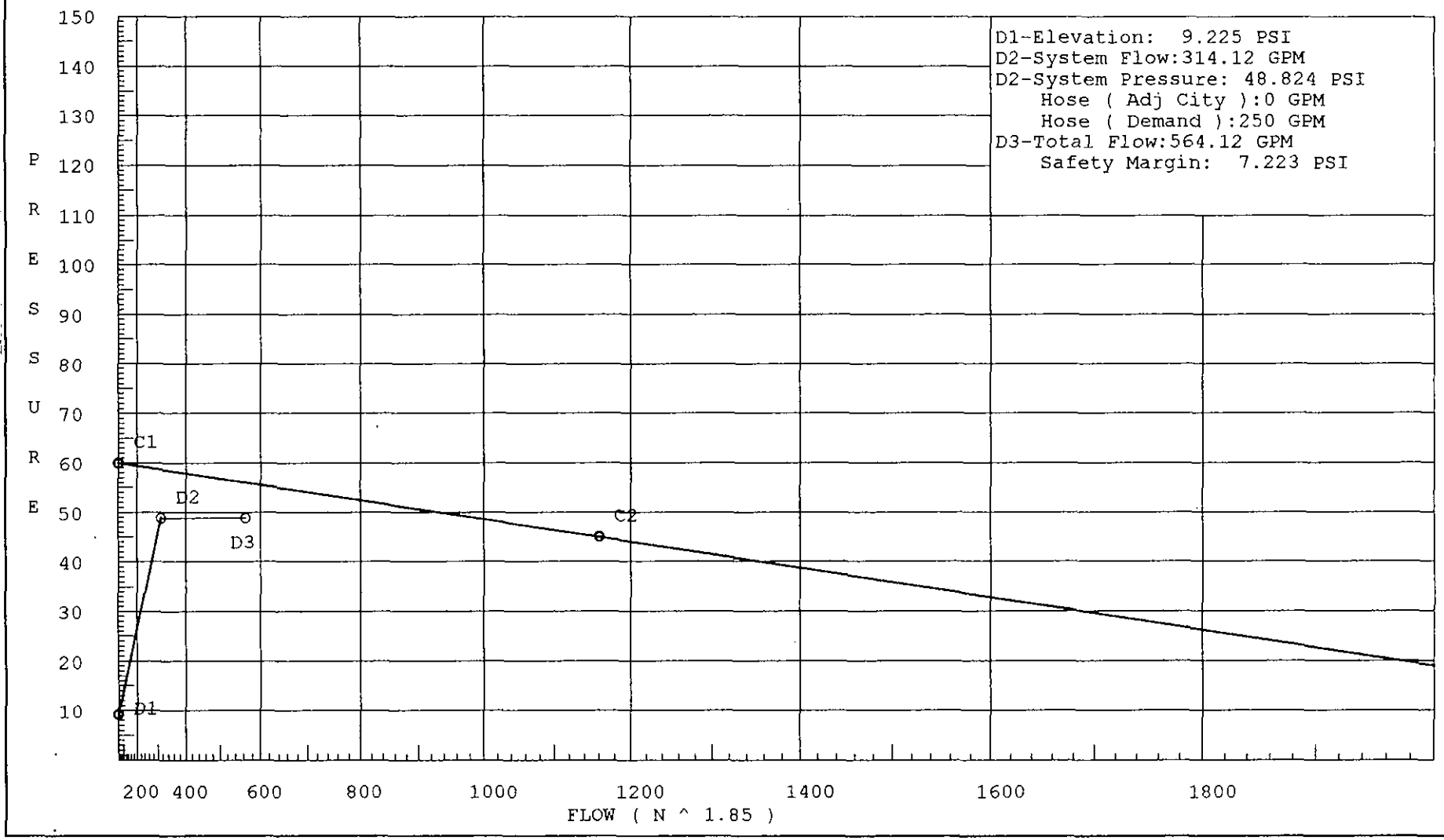
Water Flow Test:		Pump Data:		Tank or Reservoir:
Date of Test	- 4/28/97			Cap. -
Time of Test	- 10:00 AM	Rated Cap.-		Elev.-
Static Press	- 60	@ Press	-	
Residual Press	- 45	Elev.	- 0	Well
Flow	- 1160			Proof Flow
Elevation	- 0			

Location - 8" CITY MAIN 20ft FROM SPRINKLER VALVE ROOM

Source of Information - Flow Test by Higgins Fire Protection and Water Department.

City Water Supply:
C1-Static Pressure: 60 PSI
C2-Residual Pressure: 45 PSI
C2-Residual Flow: 1160 GPM

Pump Data:



Node No.	Elevation	K-Fact	Press Actual	Flow Added	Density Req.	Area	Press Req.
D001	20.83	5.6	10.33	18	.1500	120.00	7.000
38	21.3	K = K @ EQ01	10.45	18			
37	21.3	K = K @ EQ01	11.61	18.98			
36	21.3	K = K @ EQ01	12.61	19.77			
35	21.3	K = K @ EQ01	14.09	20.91			
21	21.3	K = K @ EQ01	10.71	18.23			
22	21.3		11.13				
23	21.3		12.36				
24	21.3		13.42				
25	21.3		14.99				
26	21.3		15.68				
34	21.3	K = K @ EQ01	11.33	18.74			
33	21.3	K = K @ EQ01	12.59	19.76			
32	21.3	K = K @ EQ01	13.67	20.59			
17	21.3	K = K @ EQ01	11.55	18.92			
18	21.3		11.97				
19	21.3		13.29				
20	21.3		14.43				
31	21.3	K = K @ EQ01	15.3	21.78			
13	21.3	K = K @ EQ01	16.17	22.39			
14	21.3		17.14				
15	21.3		17.2				
16	21.3		17.37				
30	21.3	K = K @ EQ01	10.51	18.05			
29	21.3	K = K @ EQ01	11.68	19.03			
28	21.3	K = K @ EQ01	12.69	19.83			
27	21.3	K = K @ EQ01	14.1	20.91			
1	21.3	K = K @ EQ01	10.71	18.22			
2	21.3		11.1				
3	21.3		12.33				
4	21.3		13.39				
5	21.3		14.88				
6	21.3		15.58				
7	21.3		16.95				
8	21.3		17.06				
9	21.3		17.28				
10	21.3		17.82				
43	20.3		22.08				
11	21.3		23.6				
39	22.1		32.54				
12	13.3		41.68				
CONN	0		48.73				
TEST	0		48.82	250			

The maximum velocity is 12.07 and it occures in the pipe between nodes 10 and 43

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
D001	18.00	1.049	1E	2.000	1.000	10.332	10.332	K Factor = 5.6
to		120			2.000	-0.204		
EQ01	18.00	0.1070			3.000	0.321		Vel = 6.682
	18.00					10.449		K Factor = 5.57
38	18.00	1.049	1T	5.000	1.330	10.449	10.449	K Factor @ node EQ01
to		120			5.000			
22	18.00	0.1071			6.330	0.678		Vel = 6.682
	18.00					11.127		K Factor = 5.40
37	18.98	1.049	1T	5.000	1.330	11.612	11.612	K Factor @ node EQ01
to		120			5.000			
23	18.98	0.1182			6.330	0.748		Vel = 7.046
	18.98					12.360		K Factor = 5.40
36	19.77	1.049	1T	5.000	1.330	12.610	12.610	K Factor @ node EQ01
to		120			5.000			
24	19.77	0.1273			6.330	0.806		Vel = 7.339
	19.77					13.416		K Factor = 5.40
35	20.91	1.049	1T	5.000	1.330	14.094	14.094	K Factor @ node EQ01
to		120			5.000			
25	20.91	0.1412			6.330	0.894		Vel = 7.762
	20.91					14.988		K Factor = 5.40
21	18.23	1.38	1E	3.000	11.330	10.714	10.714	K Factor @ node EQ01
to		120			3.000			
22	18.23	0.0288			14.330	0.413		Vel = 3.910
22	18.00	1.38			12.000	11.127	11.127	
to		120						
23	36.23	0.1028			12.000	1.233		Vel = 7.771
23	18.97	1.61			10.000	12.360	12.360	
to		120						
24	55.20	0.1057			10.000	1.057		Vel = 8.699
24	19.78	2.067	2E	5.000	18.500	13.417	13.417	
to		120			10.000			
25	74.98	0.0552			28.500	1.572		Vel = 7.169
25	20.90	2.067			8.000	14.988	14.988	
to		120						
26	95.88	0.0869			8.000	0.695		Vel = 9.167
26		2.067	1T	10.000	5.790	15.684	15.684	
to		120			10.000			
8	95.88	0.0870			15.790	1.373		Vel = 9.167

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
	95.88					17.057		K Factor = 23.22
34	18.74	1.049	1T	5.000	0.500	11.331	11.331	K Factor @ node EQ01
to		120			5.000			
18	18.74	0.1155			5.500	0.635		Vel = 6.957
	18.74					11.966		K Factor = 5.42
33	19.76	1.049	1T	5.000	0.500	12.591	12.591	K Factor @ node EQ01
to		120			5.000			
19	19.76	0.1273			5.500	0.700		Vel = 7.335
	19.76					13.291		K Factor = 5.42
32	20.59	1.049	1T	5.000	0.500	13.672	13.672	K Factor @ node EQ01
to		120			5.000			
20	20.59	0.1373			5.500	0.755		Vel = 7.644
	20.59					14.427		K Factor = 5.42
17	18.92	1.38	1E	3.000	10.500	11.549	11.549	K Factor @ node EQ01
to		120			3.000			
18	18.92	0.0309			13.500	0.417		Vel = 4.058
18	18.75	1.38			12.000	11.966	11.966	
to		120						
19	37.67	0.1104			12.000	1.325		Vel = 8.080
19	19.76	1.61			10.000	13.290	13.290	
to		120						
20	57.43	0.1137			10.000	1.137		Vel = 9.051
20	20.58	2.067	2E	5.000	28.120	14.427	14.427	
to		120	1T	10.000	20.000			
9	78.01	0.0594			48.120	2.856		Vel = 7.459
	78.01					17.283		K Factor = 18.76
31	21.78	1.049	1E	2.000	5.500	15.299	15.299	K Factor @ node EQ01
to		120	1T	5.000	7.000			
15	21.78	0.1524			12.500	1.905		Vel = 8.085
	21.78					17.204		K Factor = 5.25
13	22.39	1.049	1T	5.000	1.000	16.175	16.175	K Factor @ node EQ01
to		120			5.000			
14	22.39	0.1603			6.000	0.962		Vel = 8.312
14		2.067			11.290	17.137	17.137	
to		120						
15	22.39	0.0059			11.290	0.067		Vel = 2.141
15	21.79	2.067			8.000	17.204	17.204	
to		120						
16	44.18	0.0208			8.000	0.166		Vel = 4.224

Hyd. Ref. Point	Qa / Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
16		2.067	1E	5.000	6.870	17.370	17.370	
to		120	1T	10.000	15.000			
10	44.18	0.0207			21.870	0.453		Vel = 4.224
	44.18					17.823		K Factor = 10.46
30	18.05	1.049	1T	5.000	0.500	10.506	10.506	K Factor @ node EQ01
to		120			5.000			
2	18.05	0.1076			5.500	0.592		Vel = 6.701
	18.05					11.098		K Factor = 5.42
29	19.03	1.049	1T	5.000	0.500	11.680	11.680	K Factor @ node EQ01
to		120			5.000			
3	19.03	0.1187			5.500	0.653		Vel = 7.064
	19.03					12.333		K Factor = 5.42
28	19.83	1.049	1T	5.000	0.500	12.688	12.688	K Factor @ node EQ01
to		120			5.000			
4	19.83	0.1282			5.500	0.705		Vel = 7.361
	19.83					13.393		K Factor = 5.42
27	20.91	1.049	1T	5.000	0.500	14.102	14.102	K Factor @ node EQ01
to		120			5.000			
5	20.91	0.1413			5.500	0.777		Vel = 7.762
	20.91					14.879		K Factor = 5.42
1	18.22	1.38	1E	3.000	10.500	10.709	10.709	K Factor @ node EQ01
to		120			3.000			
2	18.22	0.0288			13.500	0.389		Vel = 3.908
2	18.05	1.38			12.000	11.098	11.098	
to		120						
3	36.27	0.1029			12.000	1.235		Vel = 7.780
3	19.03	1.61			10.000	12.333	12.333	
to		120						
4	55.30	0.1060			10.000	1.060		Vel = 8.715
4	19.84	2.067	2E	5.000	16.830	13.393	13.393	
to		120			10.000			
5	75.14	0.0554			26.830	1.486		Vel = 7.184
5	20.91	2.067			8.000	14.879	14.879	
to		120						
6	96.05	0.0872			8.000	0.698		Vel = 9.183
6		2.067	1T	10.000	5.790	15.576	15.576	
to		120			10.000			
7	96.05	0.0872			15.790	1.377		Vel = 9.183
7		3.26			10.870	16.953	16.953	
to		120						
8	96.05	0.0095			10.870	0.103		Vel = 3.692

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
8	95.88	3.26			6.660	17.056	17.056	
to		120						
9	191.93	0.0341			6.660	0.227		Vel = 7.377
9	78.01	3.26			8.410	17.284	17.284	
to		120						
10	269.94	0.0641			8.410	0.539		Vel = 10.376
10	44.18	3.26	3E	9.408	16.790	17.823	17.823	
to		120			28.223	0.433		
43	314.12	0.0849			45.013	3.822		Vel = 12.074
43		3.26	1T	20.159	2.830	22.078	22.078	
to		120			20.159	-0.433		
11	314.12	0.0849			22.989	1.952		Vel = 12.074
11		3.26	4E	9.408	51.660	23.596	23.596	
to		120	1T	20.159	57.790	-0.346		
39	314.12	0.0849			109.450	9.292		Vel = 12.074
39		4.26	6E	13.167	125.410	32.542	32.542	
to		120	1T	26.334	105.336	3.811		
12	314.12	0.0231			230.746	5.323		Vel = 7.071
12		4.26	1E	13.167	18.000	41.677	41.677	
to		120	1A	22.384	38.184	5.760		
CONN	314.12	0.0231	1G	2.633	56.184	1.296		Vel = 7.071
CONN		7.98	1E	22.654	40.000	48.733	48.733	
to		140	1G	5.034	71.737			
TEST	314.12	0.0008	1T	44.049	111.737	0.091		Vel = 2.015
	250.00							Qa = 250.00
	564.12					48.824		K Factor = 80.73

Hydraulic Design Information Sheet

Name - LOEWS THEATRES Date - 051997
Location - Brick Plaza Brick NJ
Building - Lobby Area System No. - 1
Contractor - C. Raimondo & Sons Contract No. - B97171
Calculated By - MK Drawing No. - 1 AREA 3
Construction: ( ) Combustible (X) Non-Combustible Ceiling Height - Varies
Occupancy - A-1 Assembly

SYSTEM DESIGN

(X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other

Specific Ruling	Made By	Date

Area of Sprinkler Operation	- 1500	System Type	Sprinkler/Nozzle
Density	- 0.1	(X) Wet	Make VIKING
Area Per Sprinkler	- 168	( ) Dry	Model M EX. COV.
Elevation at Highest Outlet	- 26.3	( ) Deluge	Size 17/32
Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 8.1
Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.155
Hose Allowance - Outside	- 250		

Note

Calculation Summary: Flow Required - 461.57 Press Required - 31.056 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

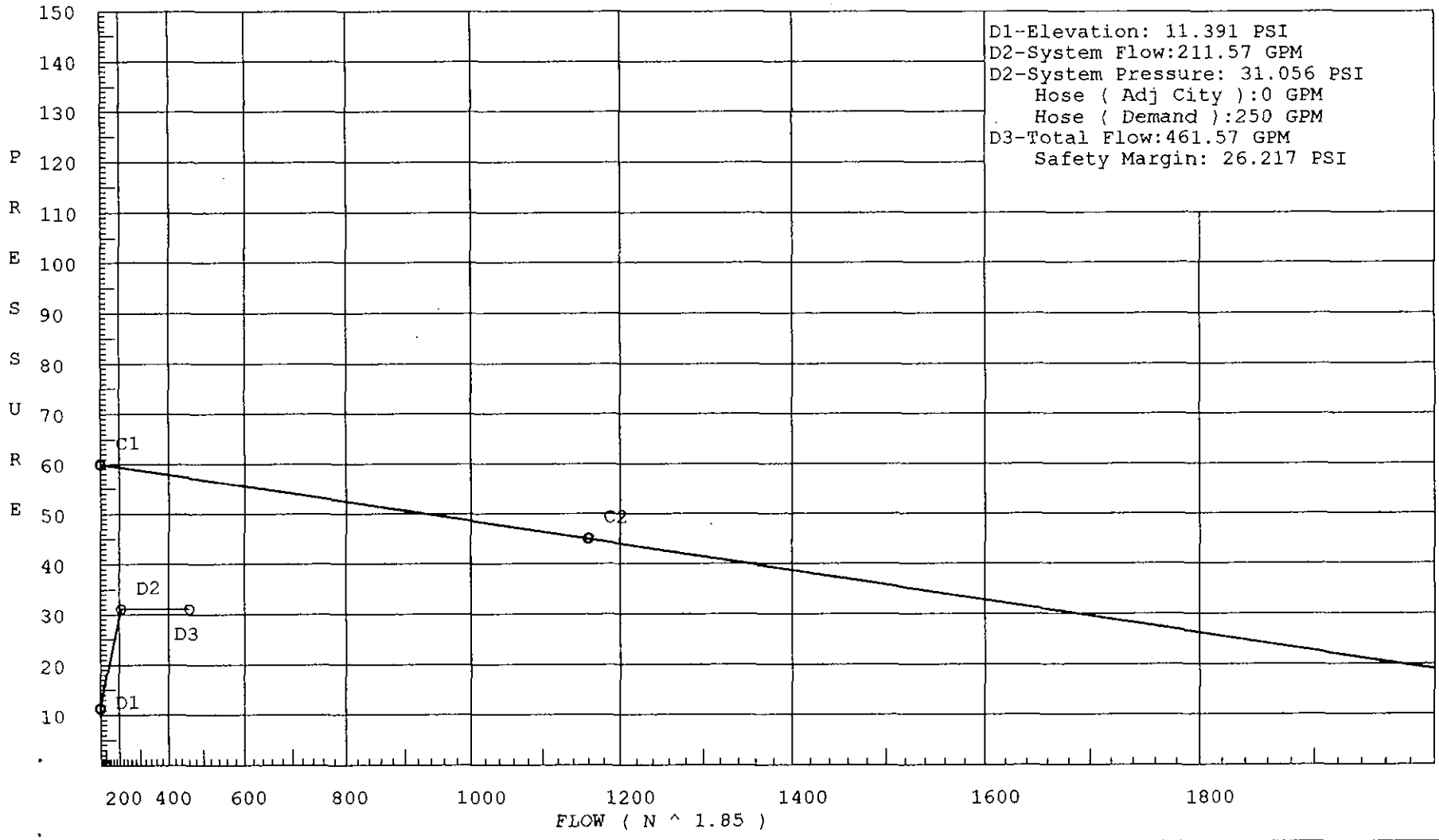
Water Flow Test:	Pump Data:	Tank or Reservoir:
Date of Test - 4/28/97		Cap. -
Time of Test - 10:00 AM	Rated Cap.-	Elev.-
Static Press - 60	@ Press -	
Residual Press - 45	Elev. - 0	Well
Flow - 1160		Proof Flow
Elevation - 0		

Location - 8" CITY MAIN 20ft FROM SPRINKLER VALVE ROOM

Source of Information - Flow Test by Higgins Fire Protection and Water Department.

City Water Supply:
C1-Static Pressure: 60 PSI
C2-Residual Pressure: 45 PSI
C2-Residual Flow: 1160 GPM

Pump Data:



Node No.	Elevation	K-Fact	Press Actual	Flow Added	Density Req.	Area	Press Req.
100	26.3	8.1	8.3	23.34	.1000	192.00	8.300
99	26.3		10.7				
95	26.3	K = K @ 95	11.03	23.34			
96	26.3	K = K @ 95	11.58	23.91			
97	26.3	K = K @ 95	12.53	24.87			
98	26.3	K = K @ 95	13.15	25.47			
89	26.3		18.01				
40	21.8		20.26				
91	26.3	K = K @ 95	15.91	28.02			
92	26.3	K = K @ 95	16.11	28.19			
93	26.3	K = K @ 95	16.49	28.53			
94	26.3	K = K @ 95	17.32	29.24			
39	22.1		20				
12	13.3		24.63				
CONN	0		31.01				
TEST	0		31.06	250			

The maximum velocity is 10.9 and it occures in the pipe between nodes 94 and 39

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
100	23.34	1.049	2E	2.000	4.870	8.300	8.300	K Factor = 8.1
to		120	1T	5.000	9.000			
99	23.34	0.1732			13.870	2.402		Vel = 8.664
99		1.380	1T	6.000	1.330	10.701	10.701	
to		120			6.000			
95	23.34	0.0456			7.330	0.334		Vel = 5.006
	23.34					11.035		K Factor = 7.03
95	23.34	1.38			12.000	11.035	11.035	K Factor @ node 95
to		120						
96	23.34	0.0456			12.000	0.547		Vel = 5.006
96	23.90	1.61			12.000	11.581	11.581	K Factor @ node 95
to		120						
97	47.24	0.0793			12.000	0.951		Vel = 7.445
97	24.87	2.067			12.000	12.532	12.532	K Factor @ node 95
to		120						
98	72.11	0.0513			12.000	0.616		Vel = 6.895
98	25.47	2.067	1E	5.000	29.120	13.148	13.148	K Factor @ node 95
to		120	2T	10.000	25.000			
89	97.58	0.0898			54.120	4.860		Vel = 9.330
89		4.260	2E	13.167	60.120	18.008	18.008	
to		120	1T	26.334	52.668	1.949		
40	97.58	0.0027			112.788	0.299		Vel = 2.196
40		4.260	9E	13.167	115.290	20.256	20.256	
to		120	1T	26.334	144.838	3.681		
12	97.58	0.0027			260.128	0.690		Vel = 2.196
	97.58					24.627		K Factor = 19.66
91	28.02	2.067	1T	10.000	12.000	15.909	15.909	K Factor @ node 95
to		120			10.000			
92	28.02	0.0089			22.000	0.196		Vel = 2.679
92	28.19	2.067			12.000	16.106	16.106	K Factor @ node 95
to		120						
93	56.21	0.0323			12.000	0.388		Vel = 5.374
93	28.53	2.067			12.000	16.494	16.494	K Factor @ node 95
to		120						
94	84.74	0.0692			12.000	0.830		Vel = 8.102
94	29.24	2.067			7.160	17.324	17.324	K Factor @ node 95
to		120				1.819		
39	113.98	0.1197			7.160	0.857		Vel = 10.898
39		4.260	6E	13.167	125.410	20.000	20.000	
to		120	1T	26.334	105.336	3.811		
12	113.98	0.0035			230.746	0.816		Vel = 2.566
12	97.59	4.26	1E	13.167	18.000	24.628	24.628	
to		120	1A	22.384	38.184	5.760		
CONN	211.57	0.0111	1G	2.633	56.184	0.624		Vel = 4.762

Hyd. Ref. Point	Qa / Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
CONN		7.98	1E	22.654	40.000	31.012	31.012	
to		140	1G	5.034	71.737			
TEST	211.57	0.0004	1T	44.049	111.737	0.044		Vel = 1.357
	250.00							Qa = 250.00
	461.57					31.056		K Factor = 82.83

C. RAIMONDO & SONS
CONSTRUCTION CO., INC.
540 Bergen Blvd. P.O. Box 1381
FORT LEE, NEW JERSEY 07024
(201) 461-5550

Front Office FAX (201) 461-6023
Estimating Dept. FAX (201) 944-4012

LETTER OF TRANSMITTAL

TO F.T.C. & H.

RECEIVED
MAY 13 1997
F.T.C. & H.

DATE	JOB NO.
5-8-97	3C-3762

ATTENTION Mr. Phil Davis

RE: Loews Brick
U.S.E.L.
Inspection Reports

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via Fed Ex the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	3-31/4-16	97-03-100	Field Inspection, Compaction, & Concrete Pour Reports

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☒ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☒ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

Field Reports will be continuously submitted as required

Thank You.

COPY TO U.S.E.L. w/1, W. Schaffer w/1, K. Skook w/1, F.T.C. + H. w/o
File @ Loews File
SIGNED: A. Garcia

If enclosures are not as noted, kindly notify us at once.

Transmitted via Brick T. Courier w/1

903 East Hazelwood Avenue
Rahway, N.J. 07065
Tel: 908-382-3553 Fax: 908-382-8840

USEL
U.S. ENGINEERING LABORATORIES, INC.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

LETTER OF TRANSMITTAL

Project: Brick Plaza Sony Movie Theater Complex
To: Ken Skoojn
C. Raimondo & Sons Construction Co.,Inc.

Telephone: _____ Fax: _____
Page _____ of _____

Project Number: 97-03-100
Date: April 18, 1997

If enclosures are not as noted, please inform us immediately.
If checked below, please:
( ) Acknowledge receipt of enclosures.
( ) Return enclosures to us.

WE TRANSMIT:

☒ herewith ☐ under separate cover via _____
☐ in accordance with your request _____

FOR YOUR:

☐ approval ☐ distribution to parties ☐ information
☐ review & comment ☒ record
☐ use ☐ _____

THE FOLLOWING

☐ Weekly Reports ☐ Laboratory Reports ☒ Field Reports ☐ Letter
☐ Specifications ☐ Change Order ☐ Company Literature ☐ Memo
☐ _____

COPIES	DATE	NO.	DESCRIPTION
			Reports for your Review

REMARKS: _____

Sent Via:
☐ Messenger
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C.C. A. Garcia, C. Raimondo

☐ w/o Enclosures
☐ w/o Enclosures
☐ w/o Enclosures
☐ w/o Enclosures
☐ w/o Enclosures
☐ w/o Enclosures

Respectfully Submitted:

U.S. Engineering Laboratories, Inc.

By: Christopher O'Malley

USEL

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Rahway, N.J. 07065
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U.S. ENGINEERING LABORATORIES

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo + Sons
Date Apr. 16, 1997
Project Name Loew's Theater
Architect FTC+H
Project Address Buck, NJ
Construction Mgr.
Project Address
Engineer FTC+H
Contractor C. Raimondo + Sons
Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____ yds. of _____ psi concrete were placed at the ~~following~~ locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete ~~tests~~ are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 _____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe ✓ dynamic cone penetrometer _____ the following ~~footings~~ Plumbing trenches were ✓ were not ___ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: U.S.E.L. representative arrived on site for testing of soil compaction using Geo Tech Probe in plumbing trenches for Men's + Women's rest rooms and are found to be suitably compacted. Yesterdays compaction of concession area in west side of site was dug up for corrections + retested using Geo Tech Probe + were found to be suitably re-compacted. There were no descrepancies noted.

INSPECTORS NAME GORDON JUNG (Print Clearly) INSPECTORS SIGNATURE Gordon Jung DATE 4/16/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

USEL

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Rahway, N.J. 07065
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U.S. ENGINEERING LABORATORIES, Inc.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo + Sons. Date Apr 15, 1997
Project Name Loew's Theater Architect FTC+H
Project Address Brick, N.J. Construction Mgr. _____
Project Address _____ Engineer FTC+H.
Contractor C. Raimondo + Sons Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of ____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe ✓ dynamic cone penetrometer _____ the following ~~footings~~ Trenches were ____ were not ___ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: U.S.E.L. representative arrived on site for testing for compaction of plumbing trenches using Keg Tech Probe + testing shows area is suitably compacted. Plate tamper was used for compaction. There were no descrepancies noted. Location of testing are shown on 2nd page.

INSPECTORS NAME GORDON JUNG (Print Clearly) INSPECTORS SIGNATURE Gordon Jung DATE 4/15/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

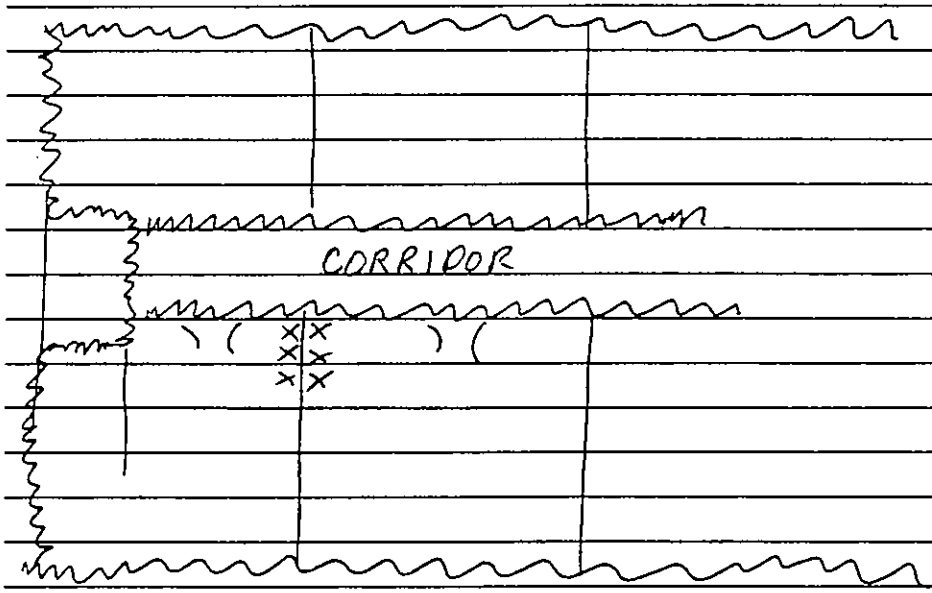
MEMBER ACIL

U.S. ENGINEERING LABORATORIES, INC.

Date 4/15/97

INSPECTION REPORT

Project Name (per plans) Loew's Theater



X = area probed.

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Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo & Sons. Date Apr 14, 1997
Project Name Loew's Theater Architect FTC+H
Project Address Brick, N.J. Construction Mgr. _____
Project Address _____ Engineer FTC+H.
Contractor C. Raimondo & Sons. Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Inspection

Structural fill _____ back fill ✓ other ( ) _____ was tested for compaction using a soil moisture-density gauge ✓ sand cone _____ at the following locations: _____. Project specifications require 95 % of maximum dry density as determined in accordance with ASTM D1557 ✓ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe ✓ dynamic cone penetrometer _____ the following ~~footings~~ foundation walls were ✓ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: U.S.E.L. representative arrived on site for testing of soil compaction at plumbing trenches & interior perimeter foundation walls using moisture density gauge & Geo Tech Probe. Foundation walls were tested & found suitably compacted as shown in locations - (See 2nd page drawing). Plumbing trenches were also suitably compacted with testing results shown on "Report of Field Compaction" with location drawn on 2nd pag

INSPECTORS NAME GORDON JUNG (Print Clearly) INSPECTORS SIGNATURE Gordon Jung DATE 4/14/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion c project control.*

MEMBER ACIL

U.S. ENGINEERING LABORATORIES, INC.
903 East Hazelwood Avenue, Rahway, N.J. 07065
Telephone (908) 382-3553 • Fax (908) 382-8840

REPORT OF FIELD COMPACTION TEST

DATE: 4/14/97 PROJECT: 97-03-100 PROJECT NO.: Loew's Theater INSPECTOR: Gordon Jung

TEST #	LOCATION OF TEST	FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
1	see 2ND page	6.4	8.4	115.4	115.6	100	95	2A
2	see 2ND page	8.6	8.4	110.6	115.6	95	95	2A
3	see 2ND page	6.2	8.4	112.6	115.6	97	95	2A
4	see 2ND page	6.6	8.4	110.1	115.6	95	95	2A
5	see 2ND page	6.9	8.4	120.3	115.6	100	95	2A.

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

★
1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans, specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

U.S. ENGINEERING LABORATORIES, INC.
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REPORT OF FIELD COMPACTION TEST

DATE: Apr 14, 1997 PROJECT: Loew's Theater PROJECT NO.: 97-03-100 INSPECTOR: H Jung

TEST #	LOCATION OF TEST					
6	see 2ND page.					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *
8.6	8.4	115.6	115.6	100	95	2A.

TEST #	LOCATION OF TEST					
	see 2ND page					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *

TEST #	LOCATION OF TEST					
	see 2ND page					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *

TEST #	LOCATION OF TEST					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *

TEST #	LOCATION OF TEST					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

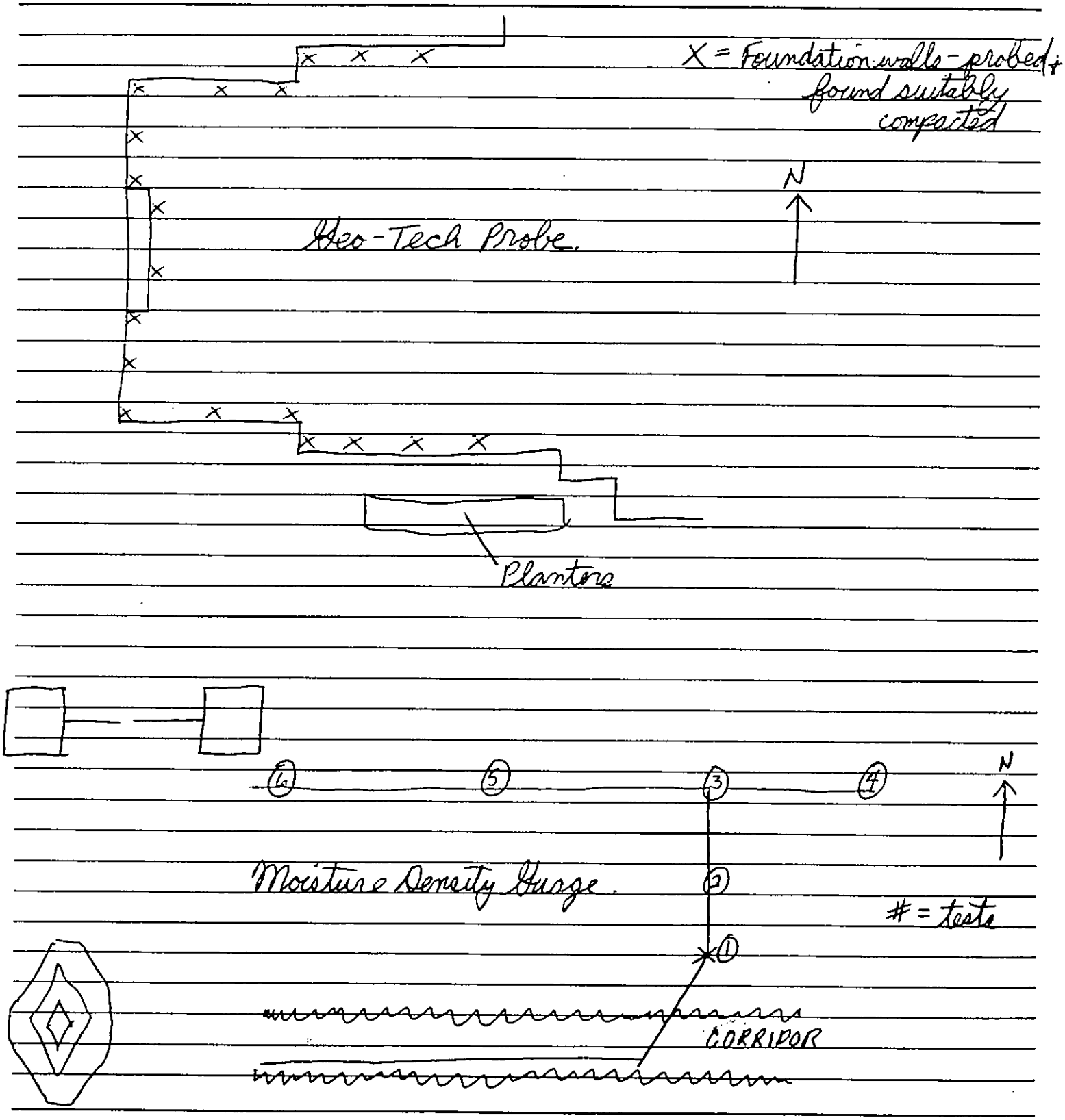
CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans,specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

U.S. ENGINEERING LABORATORIES, INC.

Date 4/14/97

INSPECTION REPORT

Project Name (per plans) Loew's Theater



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Tel: 908-382-3553 Fax: 908-382-8840

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2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo + Sons Date Apr 11, 1997.
Project Name Loew's Theater Architect FTC+H
Project Address Brick, N.J. Construction Mgr. _____
Project Address _____ Engineer FTC+H
Contractor C. Raimondo + Sons Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____ yds. of _____ psi concrete were placed at the following locations: _____
_____ footings _____ foundation walls _____ slabs _____
Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Inspection

Structural fill _____ back fill ✓ other ( ) _____ was tested for compaction using a soil moisture-density gauge ✓ sand cone _____ at the following locations: see 2nd page _____. Project specifications require 95 % of maximum dry density as determined in accordance with ASTM D1557 ✓ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were _____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: U.S.E.L. representative arrived on site for testing of backfill materia for compaction in plumbing trenches using a soil moisture density guage see "Report of Field Compaction Tests" for results.
See 2nd page for locations
Testing show backfilling is suitably compacted + according to spec

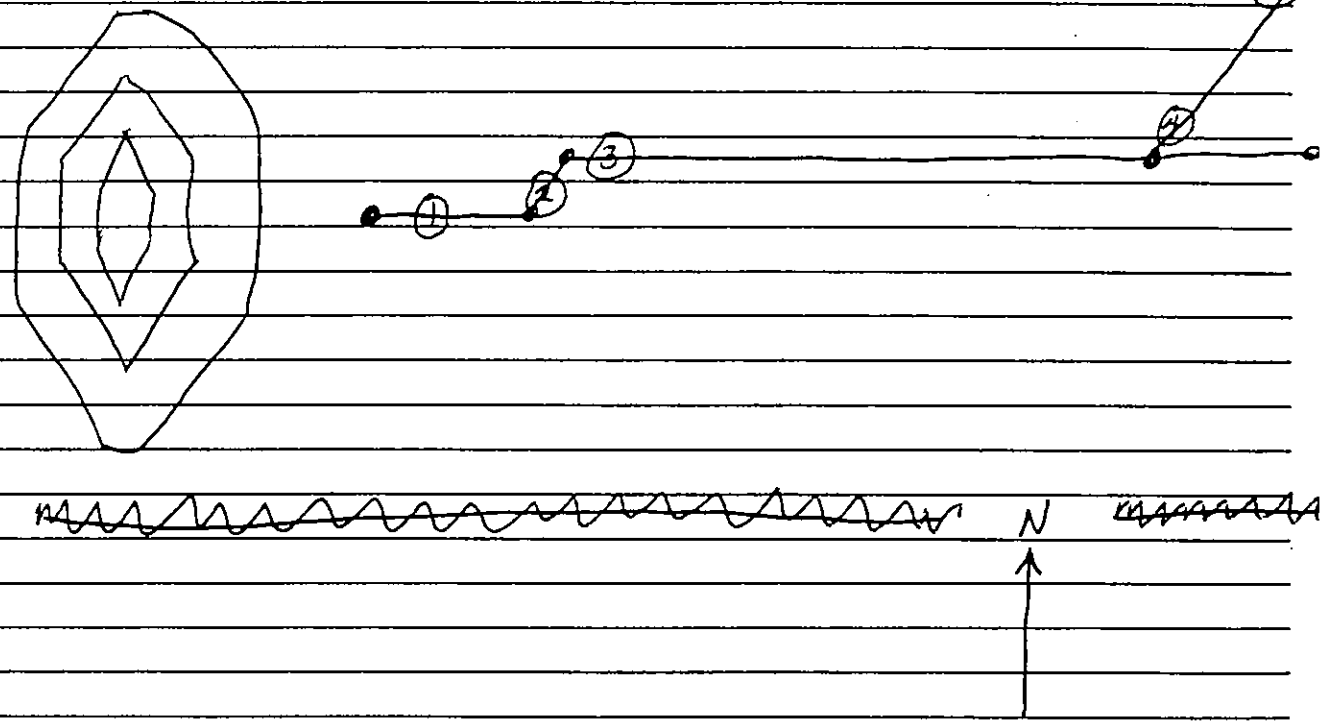
INSPECTORS NAME GORDON JUNG (Print Clearly) INSPECTORS SIGNATURE Gordon Jung DATE 4/11/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion c project control.*

MEMBER ACIL

INSPECTION REPORT

Project Name (per plans) Loew's Theater



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903 East Hazelwood Avenue, Rahway, N.J. 07065
Telephone (908) 382-3553 • Fax (908) 382-8840

REPORT OF FIELD COMPACTION TEST

DATE: 4/11/97 PROJECT: 97-03-100 PROJECT NO.: Loew's Theater INSPECTOR: Gordon Jung

TEST #	LOCATION OF TEST					
(1)	see 2ND Page.					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
5.8	8.4	118.1	115.6	100	95	2A

TEST #	LOCATION OF TEST					
(2)	see 2ND page					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
6.0	8.4	114.7	115.6	99	95	2A

TEST #	LOCATION OF TEST					
(3)	see 2ND page.					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
5.4	8.4	115.3	115.6	100	95	2A

TEST #	LOCATION OF TEST					
(4)	see 2ND page.					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
7.2	8.4	1203	115.6	100	95	2A

TEST #	LOCATION OF TEST					
(5)	see 2ND page.					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
6.0	8.4	115.9	115.6	100	95	2A

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

★ 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans, specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

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2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo & Sons Inc. Date 4/11/1997
Project Name Loew's Theater Architect FTC+H
Project Address Brick Township, N.J. Construction Mgr. ———
Project Address ——— Engineer FTC+H
Contractor C. Raimondo & Sons Inc. Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

3 yds. of 3000 psi concrete were placed at the following locations: Piers; col. line E/3, D/3 line A; 3 thrus, D/6, line 9 between M+J footings _____ foundation walls _____ slabs _____.
Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # S-7 shop drawing # _____ at the following locations: Same as above

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____
_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 ____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: Arrived on site for concrete and rebar inspection. Prior to the installation of 3 yds. of 3000 psi concrete which formed the piers in the above noted areas, rebar was checked and found to comply with job specifications. Concrete tests and samples were taken at time of placement. See attached report for details. Entire pour monitored by USEL.

INSPECTORS NAME Dan Wood (Print Clearly) INSPECTORS SIGNATURE Dan Wood DATE 4/11/1997

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

FIELD INSPECTION OF CONCRETE

Technician Dan Ward Project Name Loew's Theater Date 4/11/1997

Project No. 97-03-100 Concrete Supplier Clayton Contractor C. Raimondo & Sons Inc.

Type of Concrete 3000 psi Air Temperature: 8 A.M. _____ 12 Noon 55°F

Superplastisizer Yes ____ No ✓ 4 P.M. 52°F

General Location Piers; 1 on E/3, 1 on D/3, line A; 344, line A; 546, 1 on D/4
3 on line 9 between M+T

# of Cyl. Made	Control Number	Time Truck Dispatched	Time Truck Unloaded	Yards of Concrete	Slump	Air Content	Conc. Temp.	Location Poured
4	991807	1:09pm	2:14pm	3	3"	5%	69°F	column D/3

Specifications: Air Content : 5% ± 1½% Slump: ≤3" w/ HRWR Temperature: 50°-80°F Time: ≤ 90 min.

Remarks: _____

USEL

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U.S. ENGINEERING LABORATORIES, Inc.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo + Sons
Date Apr 10, 1997
Project Name Loew's Theater
Architect FTC+H
Project Address Buck, N.J.
Construction Mgr.
Project Address
Engineer FTC+H
Contractor C. Raimondo + Sons
Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____ yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Inspection

Structural fill _____ back fill ✓ other ( ) _____ was tested for compaction using a soil moisture-density gauge ✓ sand cone _____ at the following locations: see 2nd page drawing _____. Project specifications require 95 % of maximum dry density as determined in accordance with ASTM D1557 ✓ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: U.S.E.L. representative arrived on site for testing of soil compaction using moisture density gauge for backfilling of plumbing trenches
See "Report of Field Compaction Test" for tests results
See "2nd page for locations
Tests of backfill material is suitably compacted + according to specs.

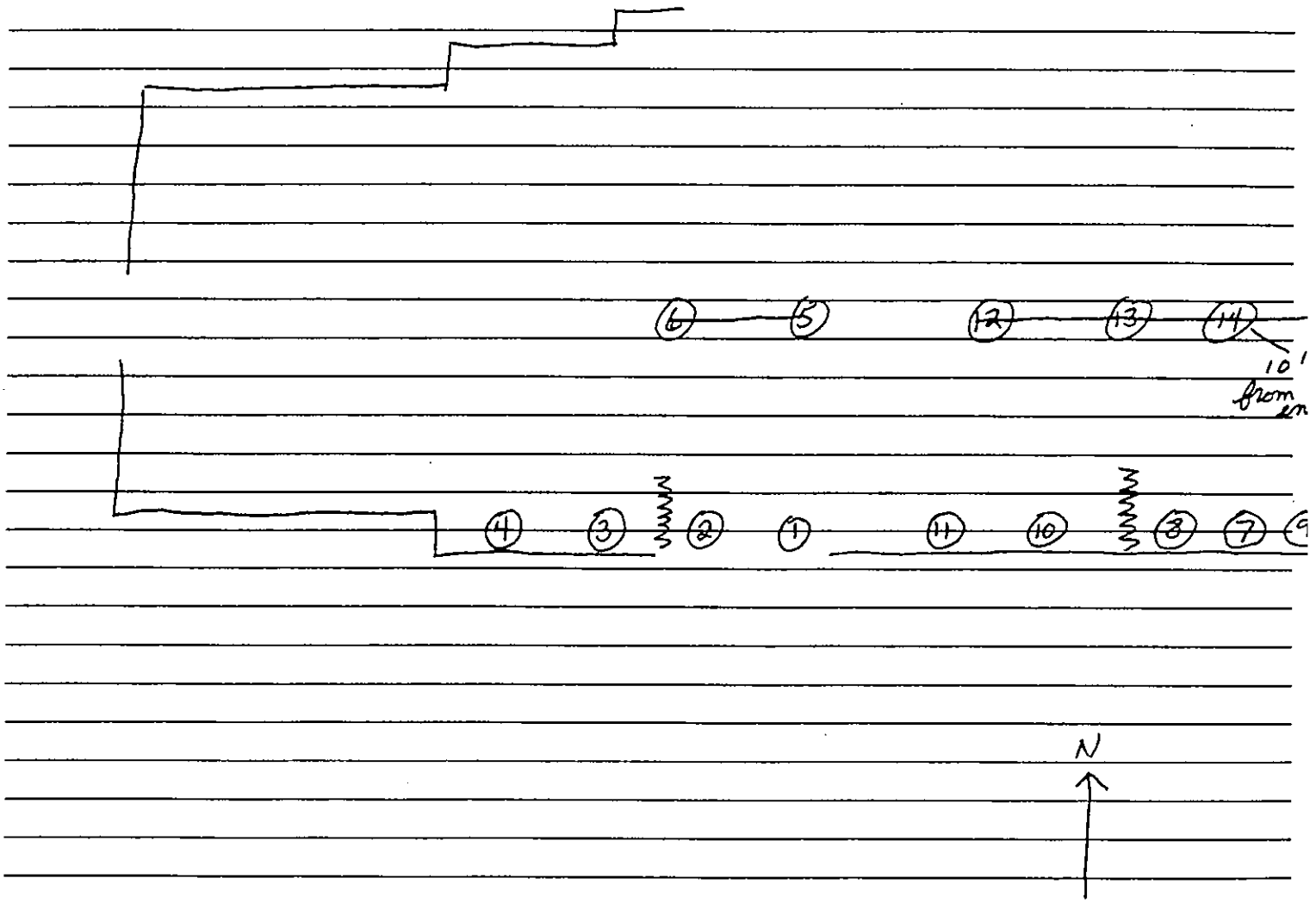
INSPECTORS NAME GORDON JUNG (Print Clearly) INSPECTORS SIGNATURE Gordon Jung DATE 4/10/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

INSPECTION REPORT

Project Name (per plans) Loew's Theater



U.S. ENGINEERING LABORATORIES, INC.

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Telephone (908) 382-3553 • Fax (908) 382-8840

REPORT OF FIELD COMPACTION TEST

DATE Apr 10, 1997 PROJECT: 97-03-100 PROJECT NO.: Loews Theatre INSPECTOR: Gordon Jung

TEST #	LOCATION OF TEST					
(1)						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
7.4	8.4	118.7	115.6	100	95	2A

TEST #	LOCATION OF TEST					
(2)						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
7.2	8.4	120.1	115.6	100	95	2A

TEST #	LOCATION OF TEST					
(3)						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
5.3	8.4	115.6	115.6	100	95	2A

TEST #	LOCATION OF TEST					
(4)						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
8.6	8.4	111.8	115.6	97	95	2A

TEST #	LOCATION OF TEST					
(5)						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
4.9	8.4	114.8	115.6	99	95.	2A

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

★
1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans, specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

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REPORT OF FIELD COMPACTION TEST

DATE: Apr 10, 1997 PROJECT: Loews Theater PROJECT NO.: 97-03-109 INSPECTOR: Gordon Jung

TEST #	LOCATION OF TEST					
6						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
5.3	8.4	113.5	115.6	98	95	2A

TEST #	LOCATION OF TEST					
7						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
5.6	8.4	112.9	115.6	97.	95	2A

TEST #	LOCATION OF TEST					
8						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
7.1	8.4	112.6	115.6	97	95	2A

TEST #	LOCATION OF TEST					
9						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
7.9	8.4	111.3	115.6	96	95	2A

TEST #	LOCATION OF TEST					
10						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
6.4	8.4	113.4	115.6	98	95	2A.

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

★ 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans,specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

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REPORT OF FIELD COMPACTION TEST

DATE: Apr 10, 97 PROJECT: Loews' Theater PROJECT NO.: 97-03-100 INSPECTOR: Gordon Jung

TEST #	LOCATION OF TEST					
11						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *
6.4.	8.4	116.4	115.6	100	95	2A

TEST #	LOCATION OF TEST					
12						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *
5.8.	8.4	114.8	115.6	99	95	2A

TEST #	LOCATION OF TEST					
13						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *
5.5	8.4	114.8	115.6	99	95	2A

TEST #	LOCATION OF TEST					
14						
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *
7.5	8.4.	112.2	115.6	97	95.	2A.

TEST #	LOCATION OF TEST					
FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: *

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans, specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

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U.S. ENGINEERING LABORATORIES, Inc.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo + Sons Const. Date Apr 8, 1997
Project Name Loews Theater Architect FTC+H
Project Address Brick, N.J. Construction Mgr. _____
Project Address _____ Engineer FTC+H
Contractor C. Raimondo + Sons Const Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Inspection

Structural fill _____ back fill ✓ other ( ) _____ was tested for compaction using a soil moisture-density gauge ✓ sand cone _____ at the following locations: see 2ND page. _____. Project specifications require 95 % of maximum dry density as determined in accordance with ASTM D1557 ✓ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: U.S.E.L. representative arrived on site for backfilling of on site fill material, testing for compaction using moisture density guage for waste trenches. Testings show these areas are suitably compacted as shown in (Report of Field Compaction) at locations shown of 2ND page of report. Shallower pipes were also checked using Geo Tech Probe. There were no descrepancies.

INSPECTORS NAME GORDON JUNG (Print Clearly) INSPECTORS SIGNATURE Gordon Jung DATE 4/8/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

U.S. ENGINEERING LABORATORIES, INC.

Page 2 of 2

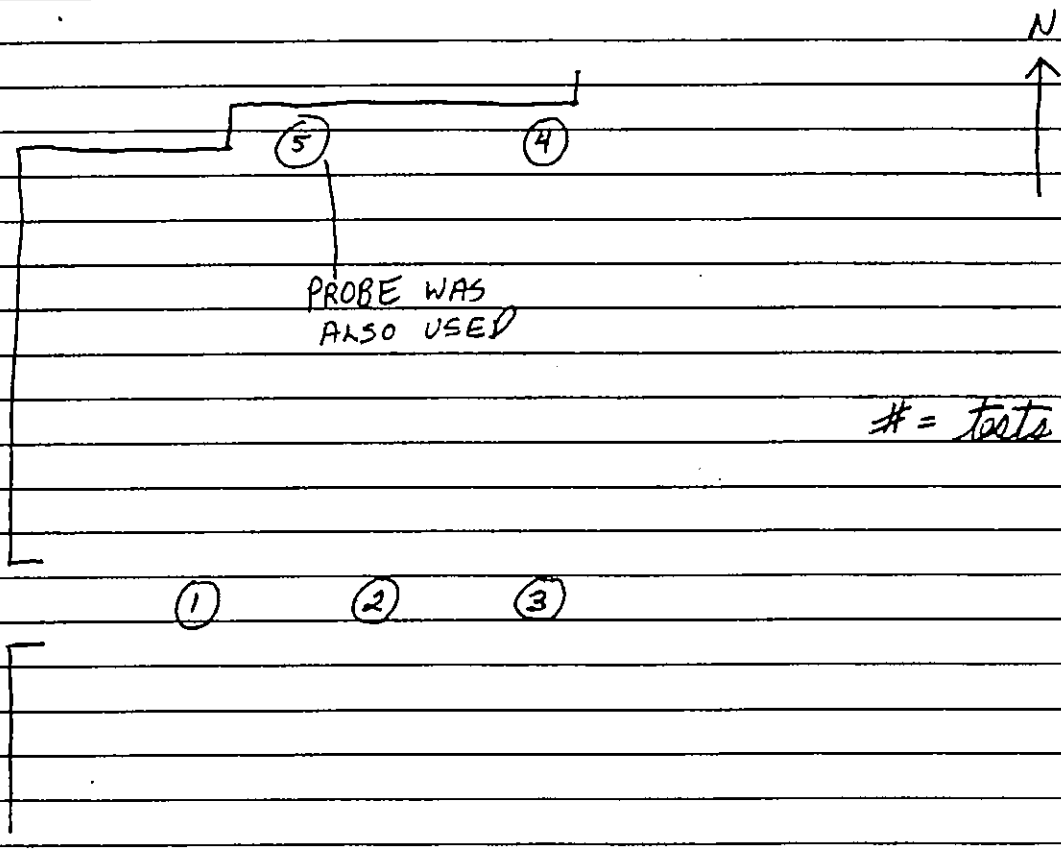
Date 4/8/97

INSPECTION REPORT

Project Name (per plans) Loew's Theater

4' south of column lines 02-3

bet HK, 1-3 down center of corridor



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Telephone (908) 382-3553 • Fax (908) 382-8840

REPORT OF FIELD COMPACTION TEST

DATE: 4/8/97 PROJECT: Lowes Theater PROJECT NO.: 97-03-100 INSPECTOR: Gordon Jung

TEST #	LOCATION OF TEST	FIELD MOISTURE %	OPTIMUM MOISTURE %	FIELD DRY DENSITY P.C.F.	MAXIMUM DRY DENSITY	PERCENT RELATIVE COMPACTION	PERCENT REL. COMP. REQUIRED	REMARKS: ★
1	see 2ND page	6.1	8.4	112.5	115.6	97	95	2A
2	see 2ND page	7.0	8.4	112.1	115.6	97	95	2A
3	see 2ND page	6.1	8.4	111.8	115.6	96	95	2A
4	see 2ND page	4.6	8.4	110.6	115.6	95	95	2A
5	see 2ND page	4.4	8.4	113.2	115.6	98	95	2A.

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Percent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on laboratory sample.

★
1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

CERTIFICATION OF COMPLIANCE: All of the work, unless otherwise noted, complies with approved plans, specifications and applicable sections of the building codes. This report covers the locations of the work tested only and does not constitute engineering opinion or project control.

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2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo & Sons Inc. Date 4/3/1997
Project Name Lowe's Theater Architect FTC+H
Project Address Brick Township, N.J. Construction Mgr. ———
Project Address ——— Engineer FTC+H
Contractor C. Raimondo & Sons Inc. Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

3 yds. of 3000 psi concrete were placed at the following locations: Piers; column line Road #1 _____ footings _____ foundation walls _____ slabs _____

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # S-7 shop drawing # _____ at the following locations: Same as above

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 ____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: Arrived on site to inspect the installation of 3 yds of 3000 psi concrete which formed the piers in the above mentioned areas. Prior to placement, reinforcing steel was checked for compliance with design requirements. No discrepancies noted. Concrete was conveyed to point of placement directly from the truck chute. Tests and samples were taken at this time. Entire pour monitored by U.S.E.L.

INSPECTORS NAME Dan Ward (Print Clearly) INSPECTORS SIGNATURE Dan Ward DATE 4/3/1997

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

FIELD INSPECTION OF CONCRETE

Technician Dan Wood Project Name Lacy's Theater Date 4/3/1997

Project No. 97-03-100 Concrete Supplier Clayton Contractor C. Raimondo

Type of Concrete 3,000 psi. Air Temperature: 8 A.M. _____ 12 Noon 55°F

Superplastisizer Yes ___ No ✓ 4 P.M. 53°F

General Location Column line M and #2 (Piers)

# of Cyl. Made	Control Number	Time Truck Dispatched	Time Truck Unloaded	Yards of Concrete	Slump	Air Content	Conc. Temp.	Location Poured
4	10K1104	1:13 pm	2:40 pm	3	3"	5%	68°F	

Specifications: Air Content : 5% ± 1½% Slump: ≤3" w/ HRWR Temperature: 50°-80°F Time: ≤90 min.

Remarks: _____

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Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo & Sons Inc. Date 4/2/1997
Project Name Loew's Theater Architect FTC & H
Project Address Brick Township, N.J. Construction Mgr. ———
Project Address ——— Engineer FTC & H
Contractor C. Raimondo & Sons Inc. Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

5 yds. of 3000 psi concrete were placed at the following locations: Exterior Piers; Column line D, B, M / 13, 14, 15 footings _____ foundation walls _____ slabs _____
Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # S-7 shop drawing # _____ at the following locations: Same as above

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____
_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 _____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: Arrived on site to inspect the installation of 5 yds of 3000 psi concrete which formed the piers in the above mentioned areas. Prior to placement, reinforcing steel was checked for compliance with design requirements. No discrepancies were noted. Concrete tests and samples were taken at time of placement. See attached report for details.
Entire pour monitored by U.S.E.C.

INSPECTORS NAME Dan Ward (Print Clearly) INSPECTORS SIGNATURE Dan Ward DATE 4/2/1997

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

FIELD INSPECTION OF CONCRETE

Technician Dan Wood Project Name Loew's Theater Date 4/2/1997

Project No. 97-03-100 Concrete Supplier Clayton Contractor C. Raimondo & Sons Inc.

Type of Concrete 3000 psi Air Temperature: 8 A.M. _____ 12 Noon 55°F

Superplastisizer Yes ___ No ✓ 4 P.M. 52°F

General Location Column Line D, B, A / 13, 14, 15

# of Cyl. Made	Control Number	Time Truck Dispatched	Time Truck Unloaded	Yards of Concrete	Slump	Air Content	Conc. Temp.	Location Poured
4	1014018	12:58 pm	2:25 pm	5	2½"	5%	60°F	

Specifications: Air Content : 5% ± 1½ Slump: ≤3" 4% HRWR Temperature: 60°-80°F Time: <90 min.

Remarks: _____

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Egg Harbor Township, N.J. 08234
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INSPECTION REPORT

Client C. Raimondo & Sons Inc. Date 4-1-97

Project Name Sony THEATER Architect FTC & H

Project Address Brick Township, N.J. Construction Mgr. _____

Project Address _____ Engineer FTC & H

Contractor C. Raimondo & Sons Inc. Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

_____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 _____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were _____ were not ___ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel _____ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: ARRIVED ON SITE 7:00 FOR CONCRETE AND SOILS INSPECTION. NO ACTIVITY DUE TO INCLEMENT WEATHER CONDITIONS.

INSPECTORS NAME S Splain (Print Clearly) INSPECTORS SIGNATURE S. Splain DATE 4-1-97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACI

USEL

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2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client C. Raimondo & Sons Inc. Date 3/31/1997
Project Name Lewis Theater Architect FTC+H
Project Address Brick Township, N.J. Construction Mgr. ———
Project Address ——— Engineer FTC+H
Contractor C. Raimondo & Sons Inc. Project # 97-03-100

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of ____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

_____

Soil Compaction Inspection

Structural fill _____ back fill_____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry_____ Structural Steel _____ Asphalt _____ Fireproofing_____ Other (specify) _____

Remarks: As requested, a USEL representative arrived on site for concrete + rebar inspection.

Pour cancelled due to unfavorable weather conditions.

INSPECTORS NAME Dan Ward (Print Clearly) INSPECTORS SIGNATURE Dan Ward DATE 3/31/1997

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

USEL

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U.S. ENGINEERING LABORATORIES

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client LOEWS/SONY
Date 5 JUNE 97
Project Name LOEWS/SONY THEATERS
Architect FISHBECK THOMPSON CARR & HUBER
Project Address 1000 CHAMBERSBURG RD
Construction Mgr. _____
Project Address BRICK N.J.
Engineer FISHBECK THOMPSON CARR & HUBER
Contractor C. RAIMONDO & SONS
Project # _____

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

_____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____% of maximum dry density as determined in accordance with ASTM D1557 _____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were _____ were not _____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel ✓ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: INSPECTED STRUCTURAL STEEL, 95% COMPLEATE WITH EXCEPTION OF FRONT CANOPY ENTRANCE ARCH & REAR ENTRANCE ARCH - CONCRETE DECK INSTALLED BUT NOT CONNECTED (WELDED) TO STEEL. STEEL BEAMS AT/SUPPORTING 2ND FLOOR DECKING NOT WELDED (BOLTS MISSING & BOLTS NOT TIGHT) TO ANGLE CLIPS ROOF DECKING 85% COMPLEATE OVER THEATER WINGS WELDED & SCREWED AS PER PLANS & SPECS

INSPECTORS NAME JAMES PETER KOKKALIS (Print Clearly) INSPECTORS SIGNATURE _____ DATE 6/7/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

903 East Hazelwood Avenue
Rahway, N.J. 07065
Tel: 908-382-3553 Fax: 908-382-8840

USEL
U.S. ENGINEERING LABORATORIES, Inc.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client LOEWS/SONY THEATERS Date 5/29/97

Project Name LOEWS/SONY THEATERS Architect FISHBECK, THOMPSON, CARR & HUBER

Project Address BRICK PLAZA Construction Mgr. _____

Project Address BRICK NEW JERSEY Engineer FISHBECK, THOMPSON, CARR & HUBER

Contractor C RAYMOND & SONS Project # _____

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

_____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 _____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were _____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel ✓ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: STRUCTURAL STEEL COL. LINE 5 TO 15 & A TO M INSPECTED & FOUND TO BE ERECTED & CONNECTIONS AS PER STRUCTURAL DRAWINGS S2-3, SPECIFICATION SECTION 05120 & ERECTION DRAWINGS E1E PREPARED BY N. MALTESE & SONS INC

INSPECTORS NAME JAMES PETER KOKKALIS (Print Clearly) INSPECTORS SIGNATURE _____ DATE 5/29/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

USEL

903 East Hazelwood Avenue
Rahway, N.J. 07065
Tel: 908-382-3553 Fax: 908-382-8840

U.S. ENGINEERING LABORATORIES, Inc.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client LOEWS/SONEY
Date 5/27/97
Project Name LOEWS/SONEY
Architect EHRENBECK, THOMPSON, CARR & HORAK
Project Address 10000 CHAMBERSBURG ROAD
Construction Mgr. _____
Project Address BRICK, NJ
Engineer EHRENBECK, THOMPSON, CARR & HORAK
Contractor C. RAYMOND & SONS
Project # _____

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____ yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

_____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 ____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel ✓ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: 20% STRUCTURAL STEEL ERECTED - 20% OF CONNECTIONS COMPLETED
STEEL ROOF DECKING BEING INSTALLED
CONCRETE PLANK ON - BLDG

INSPECTORS NAME JAMES PETER KOKKALIS (Print Clearly) INSPECTORS SIGNATURE _____ DATE 5/27/97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

USEL

903 East Hazelwood Avenue
Rahway, N.J. 07065
Tel: 908-382-3553 Fax: 908-382-8840

U.S. ENGINEERING LABORATORIES, Inc.

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

INSPECTION REPORT

Client _____ Date 10/10/17

Project Name [illegible] THEATERS Architect [illegible]

Project Address [illegible] Construction Mgr. _____

Project Address [illegible] Engineer _____

Contractor [illegible] Project # _____

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Inspection

_____yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of required concrete tests are summarized on the attached report of concrete inspection.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

_____

Soil Compaction Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 ____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were _____ were not ___ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel ✓ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: STRUCTURAL STEEL BEING ERECTED APPROX 50% COMPLETE - NO FINAL CONNECTIONS MADE

INSPECTORS NAME JAMES PETER KOKKALIS (Print Clearly) INSPECTORS SIGNATURE _____ DATE 10/10/17

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or project control.*

MEMBER ACIL

INSPECTION REPORT

Project Name (per plans) LOEWS/SONY BRICK PLAZA, BRICK N J

STRUCTURAL STEEL

STEEL DECKING COL LINE 1 TO 3 & A TO M INSPECTED AND FOUND TO BE IN CONFORMANCE W/ PLANS PREPARED BY NICHOLAS J. BOURAS INC (DATED MAY 21 1997) THE ONLY DEVIATION BEING A FAILED WELD @ COL LINE D-3 & 37 RIDGES OF DECKING SAW CUT FROM COL 2 TO 3 @ COL LINE E

CONCRETE PLANK - WELDS BETWEEN DECKING & STRUCTURAL STEEL VISUALY INSPECTED & FOUND TO BE ACCEPTABLE WITH ACCEPTION OF THREE WELDS FOR ROOF PLANKS @ COL LINE G-13 TO 14 & @ ROOF PLANK A COL G-3

STRUCTURAL STEEL - BOLTS MISSING @ ANGLE CLIPS COL LINE K FOR W16x40 @ COLUMNS WITH CROSS BRACING/MEZZINNE LEVAL. ONE (1) BOLT (A-325) MISSING @ EACH ANGLE CLIP FOR A TOTAL OF FOUR

ENTRANCE CANOPY ERECTED 95% COMPLEATE - ALL BOLTS) CONNECTION'S COMPLEATED TENSION & ~~TORQUE~~ TORQUE SPLINES SNAPPED OFF. BEAM RETURNS NOT MADE DUE TO MASONRY WALL NOT BEING IN PLACE

USEL

2511 Fire Road, Suite A-1
Egg Harbor Township, N.J. 08234
Tel: 609-407-1020 Fax: 609-407-1022

U.S. ENGINEERING LABORATORIES, Inc.

903 East Hazelwood Avenue
Rahway, N.J. 07065
Tel: 732-382-3553 Fax: 732-382-8840

TESTING & INSPECTION REPORT

Client _____ Date 23 JUNE 97

Project Name LOEWS/SONY THEATER Architect FISHBACK, THOMPSON CARR & HUBER

Project Address 10000 CHAMBERSBRIDGE ROAD Construction Mgr. _____

Project Address BRICK N J Structural Engineer FISHBACK THOMPSON CARR & HUBER

Contractor C. RANONDO & SONS Project # _____

A U.S. Engineering Laboratories representative was present at the above referenced site for the following activities:

Concrete Testing / Inspection

_____ yds. of _____ psi concrete were placed at the following locations: _____

_____ footings _____ foundation walls _____ slabs _____.

Results of concrete tests are summarized on the attached report.

Reinforcing Steel Inspection

Reinforcing steel was checked for required size, spacing, placement, clearance, lap, cover and cleanliness in accordance with project drawing # _____ shop drawing # _____ at the following locations: _____

Soil Compaction Testing / Inspection

Structural fill _____ back fill _____ other ( ) _____ was tested for compaction using a soil moisture-density gauge _____ sand cone _____ at the following locations: _____

_____. Project specifications require _____ % of maximum dry density as determined in accordance with ASTM D1557 _____ ASTM D698 _____. Results are summarized on the attached report of soil compaction.

Foundation Inspection

Shallow foundations were checked at subgrade elevations determined by the contractor. Using a geotechnical probe _____ dynamic cone penetrometer _____ the following footings were ____ were not ____ verified for an allowable soil bearing pressure of _____ as defined in the project specifications _____

Additional Inspections

Masonry _____ Structural Steel ✓ Asphalt _____ Fireproofing _____ Other (specify) _____

Remarks: AT REQUEST OF MR. KENSKOOG PROJECT SUPT. FOR C. RANONDO SONS I INSPECTED THE INSTALLATION OF THE MEZZININE CONCRETE PLANK DECKING & ROOF DECKING. SEE PAGE 2 FOR INSPECTION FINDINGS. UPON COMPLEATION OF INSPECTION I REVIEWED FINDINGS WITH MK SIGGOG.

INSPECTORS NAME JAMES PETER KOLOKALIS (Print Clearly) INSPECTORS SIGNATURE _____ DATE 23 JUNE 97

NOTE: *This report covers the locations of the work inspected and tested following recognized standards and does not constitute engineering opinion or control.*

MEMBER ACIL

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY

401 CHAMBERS BRIDGE ROAD, BRICK, N.J. 08723

Office of Affordable Housing
Carol A. Wolfe
Affordable Housing Administrator
(908) 262-1048

CASE # _____

APPROVAL DATE: _____
(Planning Board/BOA)

DATE: _____

TO: Frederick R. Millman, CTA
Tax Assessor

FROM: Carol A. Wolfe
Affordable Housing Administrator

RE: BLOCK _____ LOT _____ SITE ADDRESS _____

TYPE OF SITE _____ TYPE OF BUSINESS _____
(Residential/Commercial)

APPLICANT _____ CITY & STATE _____

☑ Please review the attached application for an **estimated** assessed value for the proposed construction.

The **estimated** assessed value for the construction at the above referenced site is:

$ _____

_____
Frederick R. Millman, CTA, Tax Assessor

_____
Date

☐ Please review the attached application for a final assessed value for the construction at the above referenced site:

$ _____

_____
Frederick R. Millman, CTA, Tax Assessor

_____
Date

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY
401 CHAMBERS BRIDGE ROAD, BRICK, N.J. 08723

Department of Administration & Finance

Office of Land Use Management
Michael P. Fowler, AICP/PP
Municipal Planner
(908) 262-1042
Fax (908) 262-8954

Zoning Office
(908)262-1041

December 11, 1996

OK 11/23/97

Steven Feringa
Fishbeck, Thompson, Carr & Huber
6090 East Fulton
PO Box 211
Ada, Michigan, 49301

Re: Block 671, Lot 8
Brick Plaza - Proposed Loew's Theater
Zoning permit application

Dear Mr. Feringa:

Your application for a zoning permit for a movie theater building on the referenced property is denied because the site plan has not yet been signed by the Planning Board.

Very truly yours,

Sean Kinnevy
Zoning Officer

cc: Scott MacFadden, BusAdm.
Michel Fowler, MunPlanner
Joseph Curiazza, Construction Official

SCHOOR DEPALMA
Engineers and Design Professionals
1466 Route 88 West
PO Box 1429
Brick, NJ 08723-0285
TEL: 908.840.1700
FAX: 908.840.0600

LETTER OF TRANSMITTAL

DATE November 21, 1996	JOB NO. C92029X
ATTENTION: Mr. Steven C. Feringa , AIA	
RE: Federal Realty Investment Trust	
Brick Plaza	
SONY Theatres	

To **Fishbeck,Thompson,Carr,&Huber**

6090 East Fulton

Ada , Michigan 49301-0211

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via the following items:

☐ Shop Drawings ☒ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
2	11/15/96	28	Sets of Site Plan Drawings

THESE ARE TRANSMITTED as checked below:

☐ For Approval ☐ Approved as submitted ☐ Resubmit copies for approval

☐ For your use ☐ Approved as noted ☐ Submit copies for distribution

☒ As requested ☐ Returned for correction ☐ Return corrected prints

☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO Gary Klacik

SIGNED: Robert M. Mannix III , P.E.

If enclosures are not as noted, kindly notify us at once.

N:\PROJECT\C92092\X\LETTER\FERINGA1.WPD

fishbeck, thompson, carr & huber
engineers • scientists • architects

LETTER OF TRANSMITTAL

Package 3 of 3

Ms. Winnie Palo
Division of Inspections
401 Chambers Bridge Road
Brick Township, NJ 08723

December 6, 1996
Project No. F96024CA
Re: Loews Theatres - Brick Plaza
(Previously "Sony" Theatres)

Enclosed: ____ For Review ___√___ For Your Use ____ As Requested

Copies	Date	Description
1 Each	12/06/96	Completed Construction Permit Application
2 Each	10/14/96	Sealed Exiting Plan
2 Sets	01/28/94	Sealed Civil Documents (Site Plan) (Prepared and Sealed by Schoor Depalma, Inc.)
2 Sets	10/14/96	Sealed Construction Documents (Building) (Prepared and Sealed by FTC&H)

Comments:

Please contact our office if you require any additional information. Thank you.

Signed: Steven C. Feringa, A.I.A./kk

By Federal Express - Priority

cc: Mr. Cary Spiegel - Loews Theatres

J:\DOC96\C96024CA\TR-PALO.SCF

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

fishbeck, thompson, carr & huber
engineers • scientists • architects

LETTER OF TRANSMITTAL

Package 2 of 3

Ms. Winnie Palo
Division of Inspections
401 Chambers Bridge Road
Brick Township, NJ 08723

December 6, 1996
Project No. F96024CA
Re: Loews Theatres - Brick Plaza
(Previously "Sony" Theatres)

Enclosed: ____ For Review ___√___ For Your Use ____ As Requested

Copies	Date	Description
1 Each	12/06/96	Completed Construction Permit Application
2 Each	10/14/96	Sealed Exiting Plan
2 Sets	01/28/94	Sealed Civil Documents (Site Plan) (Prepared and Sealed by Schoor Depalma, Inc.)
2 Sets	10/14/96	Sealed Construction Documents (Building) (Prepared and Sealed by FTC&H)

Comments:

Please contact our office if you require any additional information. Thank you.

Signed: Steven C. Feringa, A.I.A./kk

By Federal Express - Priority

cc: Mr. Cary Spiegel - Loews Theatres

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6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

fishbeck, thompson, carr & huber
engineers • scientists • architects

LETTER OF TRANSMITTAL

Package 1 of 3

Ms. Winnie Palo
Division of Inspections
401 Chambers Bridge Road
Brick Township, NJ 08723

December 6, 1996
Project No. F96024CA
Re: Loews Theatres - Brick Plaza
(Previously "Sony" Theatres)

Enclosed: ____ For Review ___√___ For Your Use ____ As Requested

Copies	Date	Description
1 Each	12/06/96	Completed Construction Permit Application
2 Each	10/14/96	Sealed Exiting Plan
2 Sets	01/28/94	Sealed Civil Documents (Site Plan) (Prepared and Sealed by Schoor Depalma, Inc.)
2 Sets	10/14/96	Sealed Construction Documents (Building) (Prepared and Sealed by FTC&H)

Comments:

Please contact our office if you require any additional information. Thank you.

Signed: Steven C. Feringa, A.I.A./kk

By Federal Express - Priority

cc: Mr. Cary Spiegel - Loews Theatres

J:\DOC96\C96024CA\TR-PALO.SCF

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

PLOT PLAN REVIEW

CHECK LIST

TOWNSHIP OF BRICK

BLOCK: 671 LOT: 8 DATE RECEIVED:

ADDRESS:

APPLICANT: FISHBECK, THOMSON, CARR & HUBER PHONE: (616) 676-2666

CONTRACTOR: (TO BE DETERMINED) PHONE:

ADDRESS: SUBDIVISION:

TYPE OF WORK: NEW CONSTRUCTION ZONING APPROVAL:

REVIEW: FLOOD ZONE IDENTIFIED BY FIRM SCHOOR DEPALMA ELEV. 12 FEET (MAX.)

PANEL # MAP# DATED:

FEMA LETTER RECEIVED: YES NO

	SHOWN	ACCEPTED	DEFICIENT	N/A
1. SITE PLAN &/OR SURVEY SIGNED & SEALED				
2. DRAW TO A SCALE OF NOT LESS THAN 1"=100'				
3. EXISTING ELEVATIONS (NGVD) IN FLOOD ZONES)				
4. SIDE PROPERTY LINES & DWELLING & PROP. CORNERS				
5. STREET GUTTER, TOP CURB & CENTER LINE ELEV.				
6. CONTOURS; 1' INCREMENTS/IF ELEV. FLUCTUATES 2'				
7. ADJACENT DWELLING CORNERS				
8. PROPOSED GRADING				
9. GARAGE/1ST FLOOR/CRAWLSPACE/BASEMENT ELEV.				
10. LOT GRADING/FILLING & FINAL ELEVATION				
11. METHOD OF DRAINING				
12. FLOOD OPENINGS SIZED & PLACED				
13. DRIVEWAY WIDTH/TYPE & DRAINAGE				
14. DIMENSIONS/ACREAGE OF PARCEL IN QUESTION				

190-31. Plot plan (Added 12-28-80 by Ord. No. 354-2P-80; amended 6-12-84 by Ord. NO. 354-2XXX-84)

A. Except where approval has been obtained after application under Part 3 or 4 of this chapter, no principal building or addition to a principal building shall be constructed in the Township of Brick except after approval by the Township Engineer of a plot plan to be submitted in accordance with the following specifications.

(1) Such plot plan shall be a survey of the lot in question showing the existing topography of the lot and the proposed location and elevation of the building and/or addition and the proposed grading. Existing topography and proposed grading shall at a minimum, consist of elevations at the property corners and the corners of the proposed building and/or addition. In the event that there is more than a two-foot difference in lot elevations, contours at one-foot intervals shall be shown. The existing topography of the lots immediately adjacent to the lot in question and the road fronting such lot shall also be indicated on the plot plan.

(2) Such plot plan shall include the following additional information:

(a) The width and type of pavement on the road in front of the proposed building and/or addition.
(b) The proposed method of drainage from the property in question.
(c) The proposed garage and first floor elevations.

(3) Plot plans must be prepared by a licensed engineer or land surveyor and shall bear his signature and seal. Surveys and topographical information certified to National Geodetic Vertical Datum must be prepared by a licensed land surveyor and shall bear his signature and seal.

(4) Building or additions in a flood hazard area shall be in compliance with the National Flood Insurance Program (NFIP) as regulated by Federal Emergency Management Agency (FEMA).

B. Exemption from the plot plan requirement for an addition is subject to the approval of the Township Engineer, said exemption to be contingent upon:

(1) Proof that the subject addition is not in a flood hazard area.

(2) A survey locating the existing dwelling.

(3) a site inspection by a Brick Township Engineering Inspector to verify that the proposed addition will not create a drainage problem.

C. Petitions for plot plan exemptions are to be made to the Township Engineer in writing.

Brick Plaza Cinemas, Inc.
711 Fifth Avenue
New York, NY 10022

ARCHITECT: Fishbeck, Thompson, Carr & Huber, Inc.
6090 East Fulton, P.O. Box 211
Ada, MI 49301

DRAWING REVISION NO.: A1
DRAWING SHEETS ISSUED HEREWITH: A-15, S-2.1, E-17
SKETCHES ISSUED HEREWITH: A1-1, A1-2
BIDS DUE: November 6, 1996, 3:00 p.m. E.S.T. -- ISSUED TO ALL PLANHOLDERS

This Addendum is a part of the Contract Documents and modifies the previously issued Bidding Documents. Acknowledge receipt of this Addendum in the space provided on the Bid form; failure to do so may result in rejection of the Bid.

SPECIFICATION CHANGES

ITEM NO. 1:
Section 00312 - Bid
Revise and reissue in its entirety for the following:
1. The substantial completion date has been revised from June 6, 1997, to April 20, 1997 with the commencement of work starting December 1, 1996.
2. Add Alternative 4.
3. Add Alternative 5.

ITEM NO. 2:
Section 07210 - Insulation
Revise paragraph 2.01.H.2 as follows:

2. Black Screen Wall Insulation
   a. Schuller, 2-inch Microlite 1.5PCF Density Roll.
   b. Schuller, 1-inch Microlite 1.5 PCF Density Roll.
   c. All exposed insulation fastener heads are to be painted black.

ITEM NO. 3:
Section 09250 - Gypsum Board Systems
In paragraph 3.01.D., delete Item Nos. 1 through 5.

ITEM NO. 4:
Section 15640 - Electric Resistance Heating Unit
1. Change paragraph 2.01.B.1. to read "16 gage steel."
2. Change paragraph 2.01.C.1. to read "***Nichrome, open-wire*** heating elements, warranted for five years."
3. Delete paragraph 2.01.C.3. it reads "Power disconnect switch."
4. Change paragraph 2.01.F.1. to read "Unit mounted motor speed switch."

ITEM NO. 5:
Section 15860 - Power Ventilators
Change paragraph 2.03.A.3. to read "***Galvanized*** bird screen in discharge outlet."

ITEM NO. 6:
Section 15891 - Fibrous Glass Ductwork
Replace the entire section with the attached revised section.

DRAWING CHANGES

ITEM NO. 7:
Sheet A-2 - Floor Plan
Steel columns at Concession Nos. 106 and 120 (column lines 2 and 11) are to be moved to the concession stand's south wall. Refer to Sheet S-2 for correct locations.

ITEM NO. 8:
Sheet A-9.1 - Details
Delete Detail No. 5.

ITEM NO. 9:
Sheet A-10 - Roof Plan, Details
1. Revise the note at the lower right of the roof plan regarding a ballasted EPDM roof as follows:
   FULLY ADHERED EPDM ROOF MEMBRANE OVER 3-INCH RIGID INSULATION (MECHANICALLY ATTACHED) OVER SLOPING METAL DECK (TYPICAL U.N.O.).
2. Detail 3 - Add: "L3x3x1/4 from bottom flange of support beam to bottom chord of steel joist at first panel point. Typical at all joists along exterior wall."
3. Detail 4 - Add: "L3x3x1/4 from bottom flange of support beam to top chord of adjacent steel joist at 4'-0" on center. Typical at all exterior walls for this roof edge condition."

ITEM NO. 10:
Sheet A-15 - Tile Plans
Reissue sheet for clarity.

ITEM NO. 11:
Sheet S-2.1 - Mezzanine Floor Framing Plans
Alternative 5:
Provide a poured concrete composite metal deck mezzanine floor framing system as indicated on Drawing S-2.1 issued with this Addendum. Refer to Specification Section 00312 - Bid, also issued with this Addendum.

ITEM NO. 12:
Sheet M-3 - Right Mechanical Mezzanine Floor Plan
1. Change note corresponding to RTU-17 showing RTU-24 to the actual number of RTU-17 and change note to read:
   ROUTE SUPPLY AND RETURN AIR DUCTWORK FROM RTU-17 IN JOIST SPACE. ROUND SUPPLY AND RETURN AIR DUCTWORK CONNECTED TO RTU-17 MAY BE EXTERNALLY INSULATED WITH 1-1/2-INCH FIBERGLASS DUCT WRAP. SCHULLER MICROLITE TYPE 150, OR ENGINEER APPROVED EQUAL.
2. Change Keynote No. 5 to correspond to the actual number of roof mounted condensing units:
   "INSTALL TWO CONDENSING UNITS FOR ICE MACHINES, FURNISHED BY OWNER, . . ."

ITEM NO. 13:
Sheet M-4 - Schedules and Details
1. T-1 of schedule does not apply to Drawings.
2. Add EF-6 to Fan Schedule:
   EF-6; Greenheck; GB-70-4; 1; 100; 0.25"; 870; 0.02; 2.7; 1/4; 120/1

ITEM NO. 14:
Sheet E-2 - Partial Power Plan - Lobby and Restrooms
1. Add the following note to video machine duplex receptacles:
   TWO RECEPTACLES PER CIRCUIT.

2. Delete the following note:
   SIX DUPLEX RECEPTACLES, FLUSH MOUNTED 54 INCHES AFF. SEE ARCHITECTURAL SHEET A-6 FOR LOCATIONS (120V EACH). PROVIDE SIX VIDEO OUTLETS NEXT TO J-BOX. RUN VIDEO CABLE TO MEZZANINE 202. OWNER TO SUPPLY CABLE. ELECTRICAL SUBCONTRACTOR TO INSTALL TWO VIDEO CABLES PER TV OUTLET. RUN CABLES BEHIND AUDITORIUM NO. 5 DRAPERY WALLS. CONNECT NO MORE THAN TWO RECEPTACLES PER CIRCUIT.
   and replace with the following:
   PROVIDE ONE DUPLEX RECEPTACLE AND ONE VIDEO OUTLET FOR EACH TV MONITOR. MOUNT AT 54 INCHES AFF. CONTRACTOR SHALL PROVIDE TWO CABLES TO EACH MONITOR. SEE NOTE 2, SHEET E-8. CONNECT NO MORE THAN TWO RECEPTACLES PER CIRCUIT.
3. Delete conduit connecting junction box and Panel BPF in Storage Room No. 102.
4. Add lighting contactor in Storage Room No. 102. Contactor shall be mounted on west wall of room, next to Panel BPF, at 5'-0" above finished floor.

ITEM NO. 15:
Sheets E-2 - Partial Power Plan - Lobby and Restrooms
E-11 - Fire Alarm System Riser Schematic
1. Add a fire alarm manual pull station at Door No. 147 adjacent to Storage Room No. 128.
2. Add a fire alarm combination speaker/strobe at Door No. 147 adjacent to Storage Room No. 128.

ITEM NO. 16:
Sheets E-6 - Left Power Plan
E-11 - Fire Alarm System Riser Schematic
Delete the fire alarm combination speaker/strobe in Foyer No. 104 at Door No. 113.

ITEM NO. 17:
Sheet E-9 - Right Roof Power Plan
Provide manual motor starter for exhaust fan EF-6. EF-6 is to be 1/4 HP, located above Locker Room No. 207. Circuit EF-6 to LPI-25. Provide two No. 12, No. 12G, 1/2-inch C from exhaust fan to motorized damper.

ITEM NO. 18:
Sheet E-11 - Fire Alarm System Riser Schematic
1. Delete RTU-9B and its two fire alarm duct smoke detectors.
2. Rename RTU-9A to RTU-9.
3. Delete RTU-10B and its two fire alarm duct smoke detectors.
4. Rename RTU-10A to RTU-10.

ITEM NO. 19:
Sheet E-14 - Outdoor Theatre Sign Riser Diagram
Delete riser diagram and replace with Sketch A1-1.

ITEM NO. 20:
Sheet E-17 - Lighting Fixture Legend, Symbol Legends
Make changes to Fixture Type "PTS" (Automated Spotlights) Wiring Diagram and fixtures V, CC, NEC, and PTS as indicated in the reissued Drawing.

ITEM NO. 21:
Sheet E-18 - Auditorium Entry/Lighting Details
Add Programmable Moving Light Mounting Detail (Fixture Type "PTS"). See Sketch A1-2.

END OF ADDENDUM

SECTION 00312

BID

Bid of _____ hereinafter called Bidder,

organized and existing under the laws of or a resident of the State of _____,

doing business as _____.*

*Insert as applicable: "a corporation", "a partnership" or "an individual".

To Brick Plaza Cinemas, Inc., hereinafter called OWNER.

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work for the Loews Brick Plaza Theatre as specified or indicated in the Contract Documents for the Contract Price and within the Contract Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders. This Bid will remain subject to acceptance for 60 days after the day of Bid opening. Bidder will sign and submit the Agreement within 10 days after receipt from the OWNER.

3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

   a. Bidder has examined and carefully studied the Bidding Documents and the following Addenda receipt of all which is hereby acknowledged:

Date	Addendum Number

   b. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, performance and furnishing of the Work.

   c. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

   d. Bidder has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the Site which have been included in Section 00220 - Geotechnical Data. Bidder accepts that only the actual boring logs may be relied upon for the actual location and time at which they were completed. Bidder acknowledges that such reports are not Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that OWNER and ARCHITECT do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the Site. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relates to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary

for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

e. Bidder is aware of the general nature of Work to be performed by OWNER and others at the Site that relates to Work for which this Bid is submitted as indicated on the Contract Documents.

f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

g. Bidder has given ARCHITECT written notice of all conflicts, errors, ambiguities or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by ARCHITECT is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

4. Bidder will complete the Work for the following price:

Base Bid _____ ($_____)
(use words) (figures)

All specific cash allowances are included in the price set forth above.

Alternative 1 - Fiberglass Ductwork — Deduct $ _____

Alternative 2 - Delete mechanical system verification services including air systems testing and balancing report as described in Section 15991 - Mechanical Systems Verification — Deduct $ _____

Alternative 3 - Poured concrete foundation system — Add/Deduct $ _____

Alternative 4 - Deduct cost of performance, labor and material payment bond — Deduct $ _____

Alternative 5 - Poured concrete composite slab mezzanine floor system as indicated on Drawing S-2.1 — Add/Deduct $_____

_____
Bidder (Firm or Corporation Name)

5. Bidder agrees that the Work will be substantially complete by April 20, 1997, based on the date of Commencement of the Work of December 1, 1996, and completed and ready for final payment by May 20, 1997.

6. Liquidated Damages and Bonus:

   a. It is the express understanding of the parties that OWNER will suffer serious economic damage in the event that the project does not open to the public for business at the date of Substantial Completion, which damages are difficult to precisely ascertain. The parties agree that if (i) the project is not substantially complete by April 20, 1997, to permit the issuance of a temporary certificate of occupancy permitting occupancy the Theater Building with the seats for the normal conduct of Owner's Business, that OWNER shall be entitled to receive as liquidated damages (and not as penalty) the sum of $10,000 per week or any portion thereof for the period, if any, from April 20, 1997, to the date that the project is Substantial Complete. Said liquidated damages shall be payable within ten days after demand by OWNER (or at the election of OWNER, credited in whole or in part against the Contract Sum).

   b. In the event that the OWNER elects to open the Theater Building to the public for the regular conduct of OWNER's business prior to April 20, 1997, then the OWNER shall pay the Contractor $1,000 for each week prior to said date that the Theater Building is to open for business. Nothing contained in this Section 6 shall require the OWNER to open the Theater Building to the public for business prior to April 20, 1997.

7. Bid Supplement - Section 00313 and the Schedule of Values as described in the General Conditions and Section 01026 shall be completed and submitted with the Bid.

8. The Bid security shall be submitted with the Bid.

9. Communications to Bidders concerning this Bid shall be addressed to the address indicated below.

SUBMITTED on _____ __, 19__ BY: _____

Date* Name of Bidder*

_____ _____

Street* Signature

_____ _____

City, State, and Zip* Name and Title of Signatory*

_____

Telephone Number*

Corporate Seal if Required in the State where the Work is Performed

*Typed or printed in ink.

END OF BID

ftc&h
fishbeck, thompson, carr & huber
engineers • scientists • architects

February 14, 1997
Project No. F96024CA

Mr. Frank Mizer
Building Department
Township of Brick
401 Chambers Bridge Road
Brick, NJ 08723

Re: Loews Theatres
Brick Plaza

Dear Mr. Mizer:

The following are FTC&H responses to your review letter dated February 5, 1997. The numbers of these items correspond to your review corrections list:

Item No. 1: A dimensioned seating layout will be submitted to your office for review, at a future date (upon completion of seating drawings from the seating manufacturer).

Item No. 2: Translucent skylight data and sprinkler information at the skylight will be submitted to your office for review.

Item No. 3: FTC&H will review the ceiling suspension system with regards to the seismic conditions and make all necessary revisions if required. All revisions will be submitted to your office for review.

Item No. 4: Ductwork will not be supported from the bottom chord of roof trusses. Drawing M-5 has been revised and will be issued in future Bulletin No. 1.

Item No. 5: The acoustical deck gage is currently being review by FTC&H's Structural Engineers. All revisions (if required) will be submitted to your office for review.

Item No. 6: FTC&H will submit this information in future Bulletin No. 1.

Item No. 7: FTC&H will submit this information in future Bulletin No. 1.

Item No. 8: Pull stations are located at all exits. Refer to electrical drawings.

Item No. 9: A remote station panel can be installed at the Manager's Office (Guest Services) if required by Local Authorities. Refer to note on the Riser Diagram on Drawing E-11.

Note: A copy of the correction list is enclosed.

SECTION 15891

FIBROUS GLASS DUCTWORK

PART 1 - GENERAL

1.01 SUMMARY:

A. Section includes:
1. This Section includes, but is not necessarily limited to, the furnishing and installation of all fibrous glass ductwork and appurtenances:
a. As indicated on the Drawings.
b. As specified herein.
c. As required to provide a complete and operational air distribution system.
d. As necessary for the proper and complete performance of the Work.

B. Related Sections:
1. Documents affecting work of this Section include, but are not necessarily limited to:
a. General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
b. Section 01030 - Alternatives.
c. Section 15240 - Vibration Isolation.
d. Section 15905 - Duct Hangers and Supports.
e. Section 15910 - Duct Accessories.
f. Section 15920 - Sound Attenuation.
g. Section 15940 - Air Inlets/Outlets.

1.02 REFERENCES:

A. Except as herein specified or as indicated on the Drawings, the work of this Section shall comply with the following:
1. ASHRAE Standards and Guidelines:
a. 90.1 - 1989 - Energy Efficient Design of New Buildings.
b. 1993 Handbook - Chapter 32 - "Duct Design".
2. ASTM Standard Test Methods:
a. C 665 - Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
b. C 1104 - Determining the Water Vapor Sorption of Unfaced Mineral-Fiber Insulation.
3. NFPA Standards:
a. 90A - Installation of Air Conditioning and Ventilating Systems.
b. 90B - Installation of Warm Air Heating and Air Conditioning Systems.
4. SMACNA Guidelines:
a. "HVAC Duct Construction Standards, Metal and Flexible".
b. "Fibrous Glass Duct Construction Standards".
5. UL Standards:
a. 181 - Factory Made Air Ducts and Connectors.
b. 181A - Closure Systems for Use with Rigid Air Ducts and Air Connectors.
c. 723 - Surface Burning Characteristics of Building Materials.
6. North American Insulation Manufacturer's Association (NAIMA):
a. ASH-100-74 - Flexural Rigidity Test Method.
b. Fibrous Glass Construction Standards - Low Velocity Systems, 2 Inches W.G. Maximum Static Pressure.

1.03 SYSTEM DESCRIPTION:

A. All duct dimensions indicated on Drawings are internal free area.

B. Duct construction pressure classifications:

DUCT SYSTEM	SMACNA PRESSURE CLASSIFICATION
1. Supply duct downstream of rooftop units	1" W.G.

1.04 SUBMITTALS:

A. Submit in accordance with Section 01300 - Submittals.

B. Manufacturer's data:
1. Sequential parts list.
2. For each part:
a. Name of Manufacturer.
b. Part name and model number.
c. Dimensions.

C. Duct pressure test:
1. Written procedure for leak testing installed ductwork system 30 days prior to testing.
2. Duct pressure test report.

1.05 QUALITY ASSURANCE:

A. Qualifications:
1. Fabrication and installation personnel:
a. Trained and experienced in the fabrication and installation of the materials and equipment.
b. Knowledgeable of the design and the reviewed Shop Drawings.

B. Requirements of regulatory agencies:
1. All state and local codes and ordinances.
2. OWNER's insurer.
3. Flexible ductwork shall comply with:
a. U.L. listed - Class 1 Air Duct Material, Standard 181.
b. NFPA Standard 90A - Flame spread: 25. Smoke developed: 50.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

A. Duct board systems:
1. CertainTeed - Ultra Duct.
2. Owens-Corning.
3. Schuller.

B. All manufactured ductwork and fittings shall be of one Manufacturer to ensure tight fit of all ductwork and components.

C. Manufacturer's stamp:
1. Manufacturer's stamp shall be on the outside of the ductwork.
2. Stamp shall be clean and clear, indicating the ductboard thickness.

2.02 MATERIALS:

A. Fibrous glass:
1. 1-inch thick ductboard.
2. Class 1 UL 181 listing.
3. Flexural rigidity (EI) rating of not less than 800 pounds-inches^2 as determined by NAIMA Test AHS-100-74.
4. Deflection limited to 1/100 of span based on stress in the material not exceeding the proportional elastic limit of the material.
5. Factory applied foil scrim kraft facing.
6. Water vapor sorption shall not exceed 5% by weight in accordance with ASTM C 1104.
7. Noncorrosive in accordance with ASTM C 665.
8. Thermal performance: k valve of 0.23 at 75 degrees mean temperature.
9. Acoustical performance: Minimum NRC of 0.65.

B. Acceptable closure systems:
1. Conform to UL 181 installed in accordance with the Manufacturer's Class 1 Air Duct listing.
2. Pressure-sensitive tape:
a. Conform to UL 181A/P.
b. High pressure rated nonhardening.
c. Water and fire resistant.
3. Heat-activated tape:
a. Conform to UL 181 A/H.
b. High pressure rated, nonhardening.
c. Water and fire resistant.
4. Provide structural connection of ducts.
5. Provide sealing of seams and joints.
6. In accordance with NAIMA Fibrous Glass Duct Construction Standards.

C. Sealants:
1. Fire and smoke hazard rating as tested by ASTM-E84, NFPA255, or U.L. 723 not to exceed:
a. Flame spread 25.
b. Smoke Develop 50.
2. Exterior mastic sealant shall be certified to pass 600 hours QUV; or equivalent weather testing.

3. Comply with ASTM freeze/thaw standard C 731 and D 2202.
4. Specifically formulated for the job of sealing the field joints.
5. U.L. listed.

D. Staples:
1. Approved by Manufacturer.
2. Outward clinching.

2.03 FABRICATION:

A. General:
1. Construct all rectangular ductwork and fittings in accordance with the SMACNA and NAIMA Fibrous Glass Duct Construction Standards, current editions.

B. Transitions:
1. Make every change in size or shape of duct with taper not exceeding 20 degrees.

C. Connections:
   1. Make all connections to equipment as indicated on Drawings or called for by these Specifications.
   2. For rectangular connections:
      a. Slit facing flaps back at corners.
      b. Connect two sections together with male and female shiplaps tightly fitted together.
      c. Staple flaps on all four sides with 1/2-inch outward clinching staples at 2-inch centers.
      d. Tape circumferential joint.
      e. Rub tape firmly until facing scrim can be clearly seen.
   3. Fabric shall not be stressed other than by air pressure.

D. Elbows and tees:
   1. Provide rectangular mitered elbows with acoustic turning vanes as indicated on the Drawings. Refer to Paragraph 2.04.A of this Section for acoustic turning vanes.
   2. Where mitered elbows are not shown on the Drawings:
      a. Maintain radius of 1-1/2 times width of duct to centerline.

E. Distribution devices:
   1. Where registers, grilles or diffusers are located less than 5 equivalent duct diameters from the main duct, provide complete with the necessary distribution grids or turning vanes to ensure even distribution of air over the entire face of the outlet.

F. Obstructions:
   1. Wherever a pipe or other obstruction passes through a duct (this condition is to be avoided if possible), pass said obstacle through an airfoil sleeve in the duct.
   2. Increase duct areas at said obstruction if more than 20% of duct area is displaced by obstruction.
   3. Streamline sleeve to maintain all angles at duct size changes at 20 degree angle.

G. Provide all necessary plastering frames and drawbands required.

H. Branch ducts:
   1. Construct with full radius elbow turning into a transition section in the main duct.
   2. Provided with damper and quadrant as specified in Section 15910 - Duct Accessories.

2.04 MANUFACTURED UNITS:

A. Acoustic turning vanes:
   1. Manufacturer:
      a. Schuller, "Supervane", turning vane.
      b. ARCHITECT approved equal.
   2. Constructed of resin-bonded, flame-attenuated glass fibers.
   3. Self-supporting.
   4. Air foil design corresponding to latest ASHRAE and SMACNA double wall turning vane dimensions.
   5. Coated on airstream side with an immobilized EPA registered anti-microbial agent.
   6. Facing:
      a. Factory-applied black acrylic coating.
      b. Fire-resistant:
         1) Comply with NFPA 90 A.
         2) UL-listed.
         3) 25 flame spread and 50 smoke developed rating.
      c. Rated for velocities at 5000 fpm tested in accordance with UL 181 without wearing of the surface or entrainment of glass fibers into air stream.
      d. Designed to minimize friction loss.
      e. The insulation must be resistance to microbial growth as determined by:
         1) UL 181 - Mold Growth and Humidity Test.
         2) ASTM C 1071 - Fungi Resistance Test.
         3) ASTM G 21 - Determining Resistance of Synthetic Materials to Fungi.
         4) ASTM G 22 - Determining Resistance of Synthetic Materials to Bacteria.

B. Takeoffs from round 1-inch pressure classification duct:
   1. Made with factory fabricated lateral type fittings.
   2. At an angle of no more than 45 degrees.

C. Flexible duct:
   1. Construction:
      a. Liner of laminated aluminum foil/fiberglass/aluminated polyester.
      b. 1-inch thick, 1 pound/cubic foot insulation.
      c. Seamless copolymer vapor barrier jacket.
      d. Rated for pressure class of system used in.
   2. Maximum flexible duct length not to exceed 5 feet, maximum flex duct turn not to exceed 45 degrees.

2.05 SOURCE QUALITY CONTROL:

A. Certified testing:
   1. Suppliers of manufactured round ductwork shall have on file with ENGINEER certified copies of test data made by an independent United States laboratory covering all pipe and fittings as manufactured by that Supplier.
   2. The fitting test data shall cover the friction loss tests of all fittings used on the project.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. Cap the ends of all ductwork, registers and diffuser openings with temporary caps during all stages of construction in order to keep system clean. Cap roof openings with temporary sheet metal caps.

B. Install ductwork and accessories to provide a system free from buckling, warping, breathing, vibration, rattling, or whistling.

C. All ducts shall be air-tight, rigid, securely hung or bracketed in position. The duct system shall be supported at all fittings and at a maximum of 8 feet on center.

D. Provide collar where exposed duct passes through walls or floors:
   1. 2- x 2- x 1/8-inch angle.
   2. As required to cover space.

E. Install screws and rivets or other fasteners of such length that they do not interfere with the operation of manual or automatic dampers.

F. Install all ductwork in concealed spaces as high as possible coordinating with other trades.

G. Turning vanes:
   1. Install evenly spaced along elbow diagonal with leading and trailing edges aligned to sides of duct.
   2. Install vanes on 3-3/4 inch centers.

3.02 APPEARANCE:

A. Where exposed ducts pass through walls or floors:
   1. Provide bent angle collar:
      a. Not less than 2- x 2-inch.
      b. As required to cover annular space.
   2. Fit collars tight around duct and surrounding surface.

B. Takeoffs from round 1-inch pressure classification duct:
   1. Made with factory fabricated lateral type fittings.
   2. At an angle of no more than 45 degrees.

C. Flexible duct:
   1. Construction:
      a. Liner of laminated aluminum foil/fiberglass/aluminated polyester.
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E. Install screws and rivets or other fasteners of such length that they do not interfere with the operation of manual or automatic dampers.

F. Install all ductwork in concealed spaces as high as possible coordinating with other trades.

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   1. Install evenly spaced along elbow diagonal with leading and trailing edges aligned to sides of duct.
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   1. Provide bent angle collar:
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A. Where exposed ducts pass through walls or floors:
   1. Provide bent angle collar:
      a. Not less than 2- x 2-inch.
      b. As required to cover annular space.
   2. Fit collars tight around duct and surrounding surface.

3.03 FIELD QUALITY CONTROL:

A. Pressure testing:
   1. Pressurize the installed duct system to a test pressure 50% over the designated SMACNA pressure classification.
   2. Measure air leakage at the test pressure by an orifice type of flow meter which has been individually calibrated against a primary standard and this calibrated curve permanently attached to the orifice tube assembly.
   3. If the system is tested in sections, add the leakage rates to give the performance of the whole system.
   4. Total allowable leakage of the system shall not exceed 1/2 of 1% of the air handling capacity of the system.
   5. Correct objectionable noise leakage:
      a. Even if the system passes the leakage rate criteria.
      b. To the satisfaction of ENGINEER.

B. Perform testing in accordance with a printed procedure reviewed by the ENGINEER.

C. Notify ENGINEER 1 week prior to duct pressure test to allow ENGINEER the option to be available to observe testing.

D. Protection against duct overpressurization or underpressurization during testing is the responsibility of CONTRACTOR.
   1. Verify that all control and balancing dampers are open.
   2. Verify that all pressure relief panels or controls are operational.

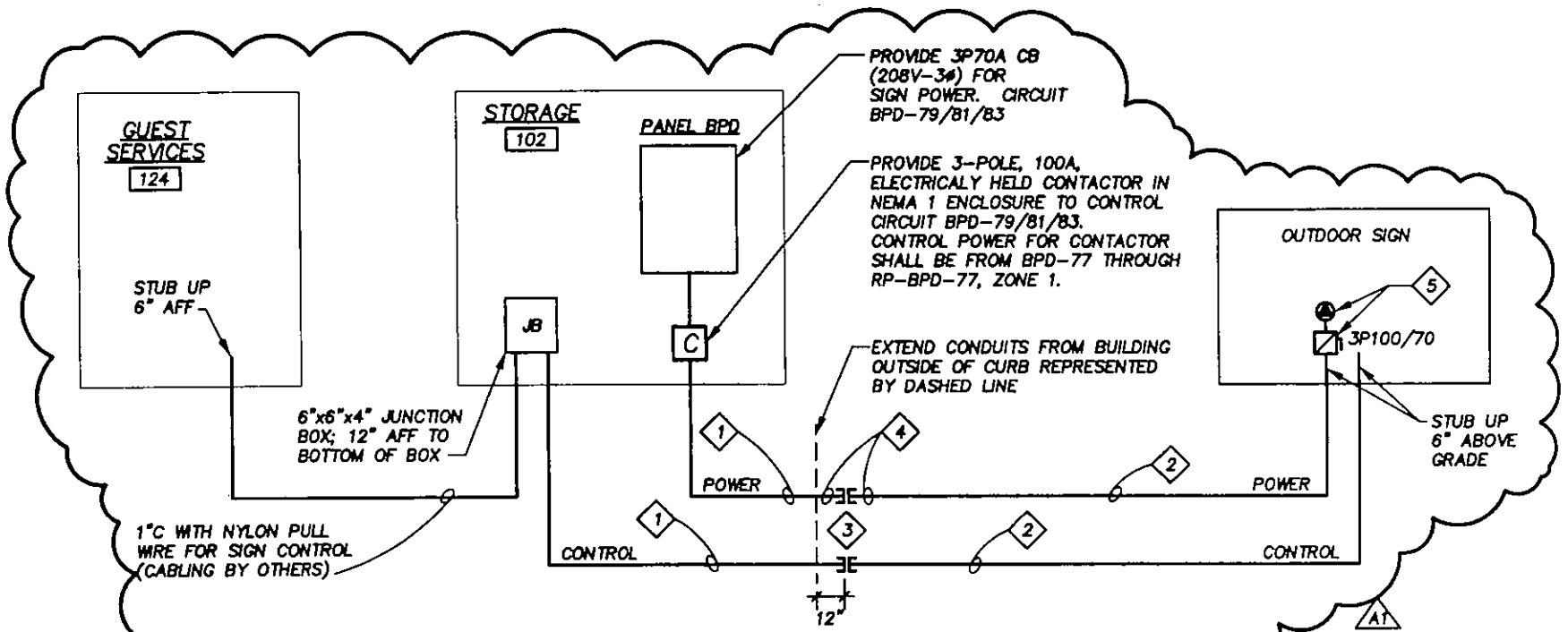
END OF SECTION

fc&h
fishbeck, thompson, carr & huber
engineers • scientists • architects
Ada • Lansing
Michigan

LOEWS THEATRES
BRICK, NEW JERSEY
BRICK PLAZA

PROJECT NO. 96024CD
DATE 10/29/96

SKETCH NO. A1-1
REFERENCE SHEET NO. E-14



OUTDOOR SIGN RISER NOTES

1. 2"C WITH NYLON PULL WIRE; STUB OUT 24" BELOW GRADE AND 12" OUTSIDE CURB. SEE SHEET E-2 (BY BUILDING ELECTRICAL SUBCONTRACTOR).
2. 2"C WITH NYLON PULL WIRE; STUB OUT 24" BELOW GRADE AND 12" OUTSIDE CURB. SEE SHEET E-2 (BY SITEWORK CONTRACTOR).
3. BUILDING ELECTRICAL SUBCONTRACTOR TO COORDINATE CONNECTION OF SIGN POWER AND CONTROL CONDUITS.
4. BUILDING ELECTRICAL SUBCONTRACTOR TO PROVIDE 4#4,#8G IN 2"C FOR SIGN POWER. TELEPHONE CABLING FOR SIGN CONTROL BY OTHERS.
5. SIGN DISCONNECT AND POWER CONNECTIONS BY BUILDING ELECTRICAL SUBCONTRACTOR.

OUTDOOR THEATRE SIGN RISER DIAGRAM

NO SCALE

RISER DIAGRAM INDICATES SITEWORK AND BUILDING ELECTRICAL SUBCONTRACTOR RESPONSIBILITIES IF THEATRE SIGN IS LOCATED ON THE SAME SITE AS THE BUILDING. IF SIGN IS LOCATED OFF SITE, THIS WORK IS NOT REQUIRED.

PROGRAMMABLE MOVING LIGHT MOUNTING DETAIL

FIXTURE TYPE "PTS"

NO SCALE

fishbeck, thompson, carr & huber engineers • scientists • architects Ada • Lansing Michigan	LOEWS THEATRES BRICK, NEW JERSEY BRICK PLAZA PROJECT NO. 96024CD DATE 10/29/96	REFERENCE SHEET NO. E–18 SKETCH NO. A1–2

ftc&h
fishbeck, thompson, carr & huber
engineers • scientists • architects

February 14, 1997
Project No. F96024CA

Mr. Frank Mizer
Building Department
Township of Brick
401 Chambers Bridge Road
Brick, NJ 08723

Re: Loews Theatres
Brick Plaza

Dear Mr. Mizer:

The following are FTC&H responses to your review letter dated February 5, 1997. The numbers of these items correspond to your review corrections list:

Item No. 1: A dimensioned seating layout will be submitted to your office for review, at a future date (upon completion of seating drawings from the seating manufacturer).

Item No. 2: Translucent skylight data and sprinkler information at the skylight will be submitted to your office for review.

Item No. 3: FTC&H will review the ceiling suspension system with regards to the seismic conditions and make all necessary revisions if required. All revisions will be submitted to your office for review.

Item No. 4: Ductwork will not be supported from the bottom chord of roof trusses. Drawing M-5 has been revised and will be issued in future Bulletin No. 1.

Item No. 5: The acoustical deck gage is currently being review by FTC&H's Structural Engineers. All revisions (if required) will be submitted to your office for review.

Item No. 6: FTC&H will submit this information in future Bulletin No. 1.

Item No. 7: FTC&H will submit this information in future Bulletin No. 1.

Item No. 8: Pull stations are located at all exits. Refer to electrical drawings.

Item No. 9: A remote station panel can be installed at the Manager's Office (Guest Services) if required by Local Authorities. Refer to note on the Riser Diagram on Drawing E-11.

Note: A copy of the correction list is enclosed.

Should you have any questions or require additional information, please contact us.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

Steven C. Feringa, A.I.A.

kk

Enclosure

cc: Mr. Mike Norris - Loews Theatres
Mr. Eric J. Hugger, A.I.A. - FTC&H

J:\DOC96\C96024CA\LT-MIZER.SCF

Facsimile Transmission

Fishbeck, Thompson, Carr & Huber, Inc.
6090 East Fulton, P.O. Box 211
Ada, Michigan 49301-0211
Phone: (616) 676-2666
Fax: (616) 676-8173

Pages Including Cover 4 **FTC&H Project No.** F96024CA

To: Mr. Frank Mizer - Brick Building Department

Fax No.: (908) 262-8954 **Phone No.:** (908) 262-1027

From: Steven C. Feringa, A.I.A.

Date: February 14, 1997 **Time:**

Re: Loews Theatres - Brick Plaza

Please contact Kristi Kelly (Ext.658) if you do not receive all pages. Thank you.

Comments:

Hard copy to follow by Federal Express

fishbeck, thompson, carr & huber
engineers • scientists • architects

LETTER OF TRANSMITTAL

Mr. Frank Mizer
Brick Building Department
401 Chambers Bridge Road
Brick, NJ 08723

February 14, 1997
Project No. F96024CA
Re: Loews Theatres - Brick Plaza

Enclosed: ____ For Review ___√__ For Your Use _____ As Requested

Copies	Date	Description
1	02/14/97	FTC&H Response to Building Department Review

Comments:

Should you have any questions, please contact our office. Thank you.

Signed: Steven C. Feringa, A.I.A./kk

By Federal Express - priority

cc\enc: Mr. Mike Norris - Loews Theatres
Mr. Eric J. Hugger, A.I.A. - FTC&H

J:\DOC96\C96024CA\TR-MIZER.SCF

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

fishbeck, thompson, carr & huber
engineers • scientists • architects

February 14, 1997
Project No. F96024CA

Mr. Frank Mizer
Building Department
Township of Brick
401 Chambers Bridge Road
Brick, NJ 08723

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Note: A copy of the correction list is enclosed.

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

Should you have any questions or require additional information, please contact us.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

Steven C. Feringa, A.I.A.

kk

Enclosure

cc: Mr. Mike Norris - Loews Theatres
Mr. Eric J. Hugger, A.I.A. - FTC&H

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TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY
401 CHAMBERS BRIDGE ROAD, BRICK, N.J. 08723

Department of Administration & Finance

Division of Inspections

FACISIMILE CORRESPONDENCE

(908) 262-8954

Date 2-7-97 To Fax No. 301-998-3705 Pages 1

To GARY

Attn:

From: Frank Mizen

Message

Enclosed is initial Review Sheet on Sony Theater

Steve. Ferriga

616-676-2666

SIZING FOR WATER AND SEWER SERVICES

Property Owner Brick Plaza/Sony Date 2-3-97

Property Address _____ Block 671 Lot 8

Zoning _____ Use Group _____

Contractor _____ License No. Registration _____

Water Main Size _____ Water Pressure _____ Sewer Main Size _____

Plumbing Fixtures	Number	(sfu) Water Units	(dfu) Drainage Units
1. Water Closet	30	( )	( )
2. Lavatory	27	( )	( )
3. Bath Tub		( )	( )
4. Shower Stall		( )	( )
5. Kitchen Sink	2	( )	( )
6. Service Sink		( )	( )
7. Laundry Tray		( )	( )
8. Dishwasher		( )	( )
9. Washing Machine		( )	( )
10. Urinal	7	( )	( )
11. Floor Drain		( )	( )
12. Drinking Fountain	4	( )	( )
13. Air Conditioner (water cooled)		( )	( )
14. Dental Unit		( )	( )
15. Lawn Sprinkler- No. of Heads		( )	( )
16. Fire Sprinkler No. of Heads		( )	( )
17. _____		( )	( )
18. _____		( )	( )
Total			

Gallons per minute _____

Size of Service 3"

Date: 3-3-97 Approved: Daniel Meenan

Brick Township Plumbing Inspector

SINCE 1955
Kalwall CORPORATION
1111 Candia Rd., P.O. Box 237, Manchester, NH 03105
Phone 603-627-3861 FAX 603-627-7905

RE: LOEWS THEATRE - BRICK PLAZA NJ
Kw #960576

FAXED
PLEASE ROUTE THIS COPY TO FILE

BTOR
Reinforced Plastic

February 15, 1994

KALWALL CORP

R7416 (N)
(S-cont. from A card)

	Dull Surface	Glossy Surface		
		Type 20LS		
Flame Spread	25	35		
Smoke Developed	50	125		
	Type A	Type 25	Type B-170	
Flame Spread	15	20	45	
Smoke Developed	over 500	200	350	

1111 CANDIA RD P O BOX 237

LOOK FOR CLASSIFICATION MARKING ON PRODUCT

Replaces R7415B dated February 7, 1994.

457825002 Underwriters Laboratories Inc.® AII/0131747

57

Post-it® Fax Note 7671	Date 6-26-97	# of pages ▶ 1
To Phil DAVIS	From GLEN STONE	
Co./Dept. FTC + H	Co. KALWALL CORP.	
Phone #	Phone # 800-258-9777	
Fax # 616-676-8173	Fax # 603-627-7905	

FILE COPY

fishbeck, thompson, carr & huber
engineers • scientists • architects

SHOP DRAWING TRANSMITTAL

Mr. Walter Schaffer
Loews Theatres
711 Fifth Avenue
New York, NY 10022

March 10, 1997
Project No. F96024CA
Re: Loews Theatres
Brick Plaza

Enclosed: _____ For Review ___✓___ For Your Use _____ As Requested

Copies	Date	No.	Description	Action
1	02/25/97	05	Section 07820-Translucent Skylight System Kalwall Drawing #K96-1963	1

Action:

1 Reviewed, no exceptions taken
2 Reviewed, with corrections noted
3 Rejected, resubmit

Comments:

I recommend that the general contractor sign the Letter of Guarantee. They are still responsible for the rough opening dimensions.

Signed: Steven C. Feringa, A.I.A./kk

By Federal Express - priority

J:\DOC96\C96024CA\2-SHOPTR.XXX

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

fishbeck, thompson, carr & huber
engineers • scientists • architects

SHOP DRAWING TRANSMITTAL

Mr. Andy Garcia
C. Raimondo & Sons Construction Co., Inc.
540 Bergen Blvd
P.O. Box 1381
Fort Lee, NJ 07024

March 10, 1997
Project No. F96024CA
Re: Loews Theatres
Brick Plaza

Enclosed: _____ For Review ___✓___ For Your Information _____ As Requested

Copies	Date	No.	Description	Action
1	02/25/97	05	Section 07820-Translucent Skylight System Kalwall Drawing #K96-1963	1

Action:

1 Reviewed, no exceptions taken
2 Reviewed, with corrections noted
3 Rejected, resubmit

Comments:

This is an owner furnished and installed item. For information only.

Signed: Steven C. Feringa, A.I.A./kk

cc: Mr. Walter Schaffer - Loews Theatres

J:\DOC96\C96024CA\SHOPTRAN.XXX

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

FISHBECK, THOMPSON, CARR
& HUBER, INC.
Consulting Engineers & Scientists
6090 East Fulton
P.O. Box 211
ADA, MICHIGAN 49301
Area Code 616 676-2666

SUBJECT LOEWS THEATRES
BRICK PLAZA

PROJECT NO. F96024CP (TD)
SHEET NO. ____ OF ____
COMP. BY SCF DATE 10-9-96
CHKD BY ____ DATE ____
(Grid 1/4")

KALWALL SKYLIGHT
(R.O. DIMENSIONS)

* LENGTH: 138'-11½" OVERALL R.O. (VERIFIED W/ ARCH. & STRUCTURAL SCF.)

[3'-5¾ END PANEL | 38 MODULES @ 4'-0" = 152'-0" | 3'-5¾" END PANEL]

* WIDTH 17'-0" OUT TO OUT OF CURBS

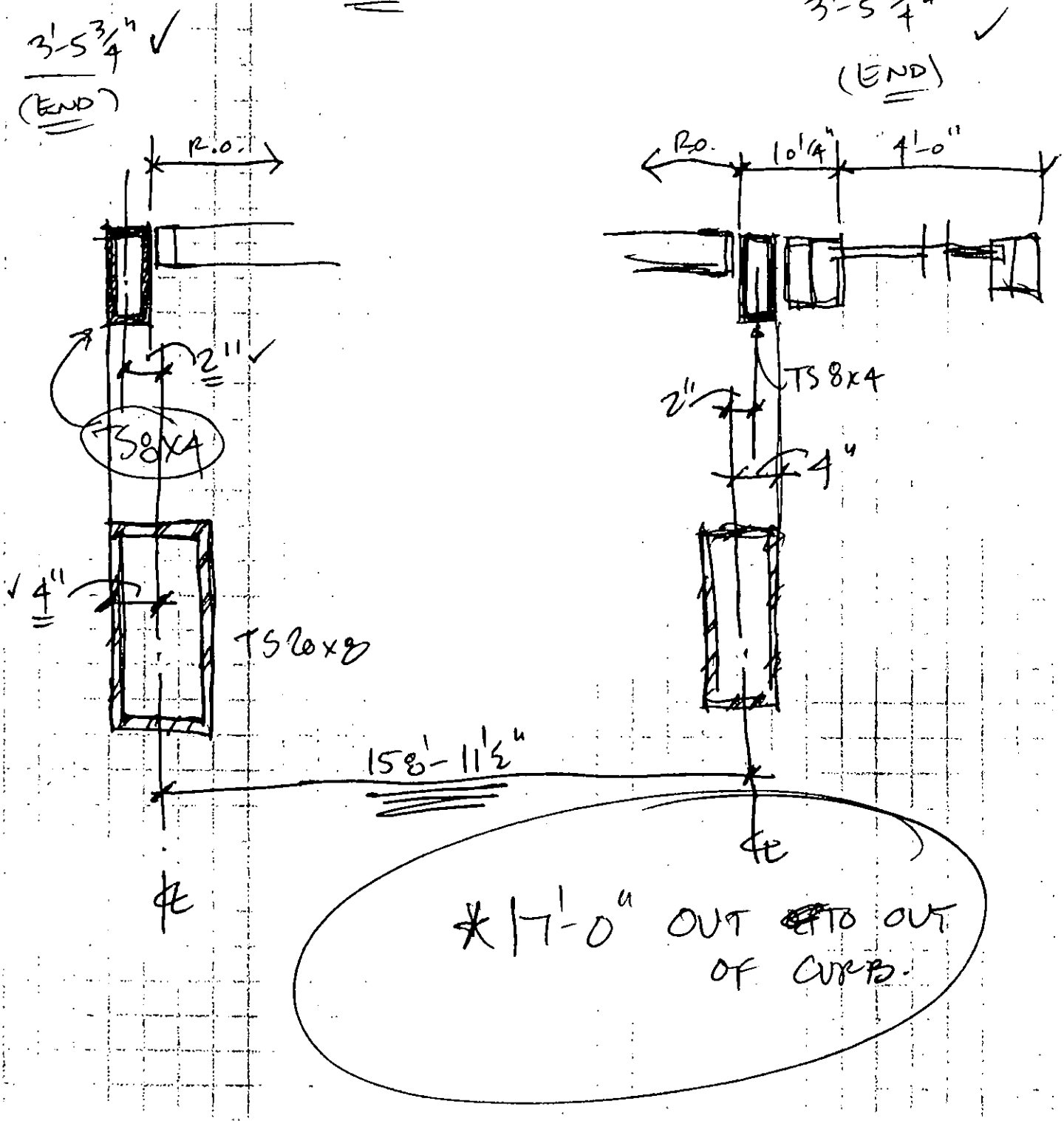
ARCHITECTS WORKSHEE
* DO NOT PASS ON

BECK, THOMPSON, CARR
& HUBER, INC.
Consulting Engineers & Scientists
6090 East Fulton
P.O. Box 211
ADA, MICHIGAN 49301
Area Code 616 676-2666

SUBJECT LOEWS THEATRES BRICK PLAZA
PROJECT NO.
SHEET NO. OF
COMP. BY DATE
CHKD BY DATE
(Grid 1/4")

KALWALL SKYLIGHT (R.O. DIMENSIONS)

38 MODULES AT 4'-0" = 152'-0"
(EQUAL)



fishbeck, thompson, carr & huber
engineers • scientists • architects

SHOP DRAWING TRANSMITTAL

Mr. Chris Bristol
Irwin Seating Company
3251 Fruit Ridge Avenue, NW
Grand Rapids, MI 49504

May 15, 1997
Project No. F96024CA
Re: Loews Theatres • Brick Plaza

Enclosed: _____ For Review ___✓___ For Your Use _____ As Requested

Copies	Date	No.	Description	Action
1		23A	Seating Layout	1

Action:

1 Reviewed, no exceptions taken
2 Reviewed, with corrections noted
3 Rejected, resubmit

Philip M. Davis, A.I.A.

bjn

By Federal Express

cc/enc: Mr. Walter Schaffer - Loews Theatres
Mr. Magdy Botros - Loews Theatres

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

#23A

Irwin Seating Company

"Irwin Seating Company's Mission is to be successful in all our businesses - dedicated to Customer Satisfaction, employee well-being and profitable growth."

May 9, 1997

Mr. Magdy Botros
LOEWS THEATRES
711 Fifth Avenue
10th Floor
New York, NY 10022

Dear Mr. Botros:

Please find enclosed 3 copies of the seating layout for the Brick Plaza, Brick, NJ. The seating layout was revised per marked up plans supplied by the architect. The total number of Irwin Model #15650 Regular Height Celebrity 2,569, and 27 7692 A.D.A. Atlas chairs.

This project has been submitted to production based on these plans that were revised based on FTC&H mark ups labled "reviewed w/ corrections noted". This was done in the interest of being able to have the chairs made to meet Loew's opening date. Any further changes that change chair quantity, size or incline will result in a billable add on order.

Seating Layout Comments:
- No changes in size or quantity. Dimensional changes only.

Please let me know should you have any questions or concerns.

Sincerely,
IRWIN SEATING COMPANY

Chris Bristol

Chris Bristol
Project Administrator

CC: Paul Winter
Jeff Chick, FTC&H, 6090 East Fulton, Ada, MI 49301-0211

General Mailing: P.O. Box 2429
Grand Rapids, Michigan 49501

Office and Plant: 3251 Fruit Ridge Road, N.W.
Grand Rapids, Michigan 49544
Telephone: (616) 784-2621
Fax: (616) 784-5819
Internet Address: www.irwin-seat.com

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY
401 CHAMBERS BRIDGE ROAD, BRICK, N.J. 08723

Joseph C. Scarpelli, Mayor

Township Council:
Michael A. Thulen, President
Stephen C. Acropolis
Martin J. Anton
Victor Cantillo
Helen Fayad
Lee Hartman
Mary Lou Powner

Office of Affordable Housing
Carol A. Wolfe
Affordable Housing Administrator
(908) 262-1048

CASE # _____

APPROVAL DATE: _____
(Planning Board/BOA)

DATE: 1/23/97

TO: Frederick R. Millman, CTA
Tax Assessor

FROM: Carol A. Wolfe
Affordable Housing Administrator

RE: BLOCK 671 LOT 8 SITE ADDRESS Brick Blvd.

TYPE OF SITE Commercial TYPE OF BUSINESS Movie Theater
(Residential/Commercial)

APPLICANT Brick Plaza Cinemas Inc CITY & STATE NY, NY

☑ Please review the attached application for an **estimated** assessed value for the proposed construction.

The **estimated** assessed value for the construction at the above referenced site is:

$ 5 871.528.

Frederick R. Millman, CTA, Tax Assessor

1-28-97

Date

☐ Please review the attached application for a final assessed value for the construction at the above referenced site:

$ 5,871,528

Frederick R. Millman, CTA, Tax Assessor

7-21-97

Date

|m|a|h|a|r|a|m|

PO Box 6900, Rasons Court
Hauppauge, NY 11788

516.582-3434
516.232-1026 Fax

FAX TRANSMITTAL

To:	**Frank Mizer -Brick,NJ Inspection**	**From:**	**Theresa Farley**
Subject:	**Sony Theater/Brick, NJ**	**Date:**	**September 8, 1997**

Dear Frank,

Attached is a copy of the NFPA 701 Small Scale test that was performed on Custom Sony Expo. This fabric passes the requirements.

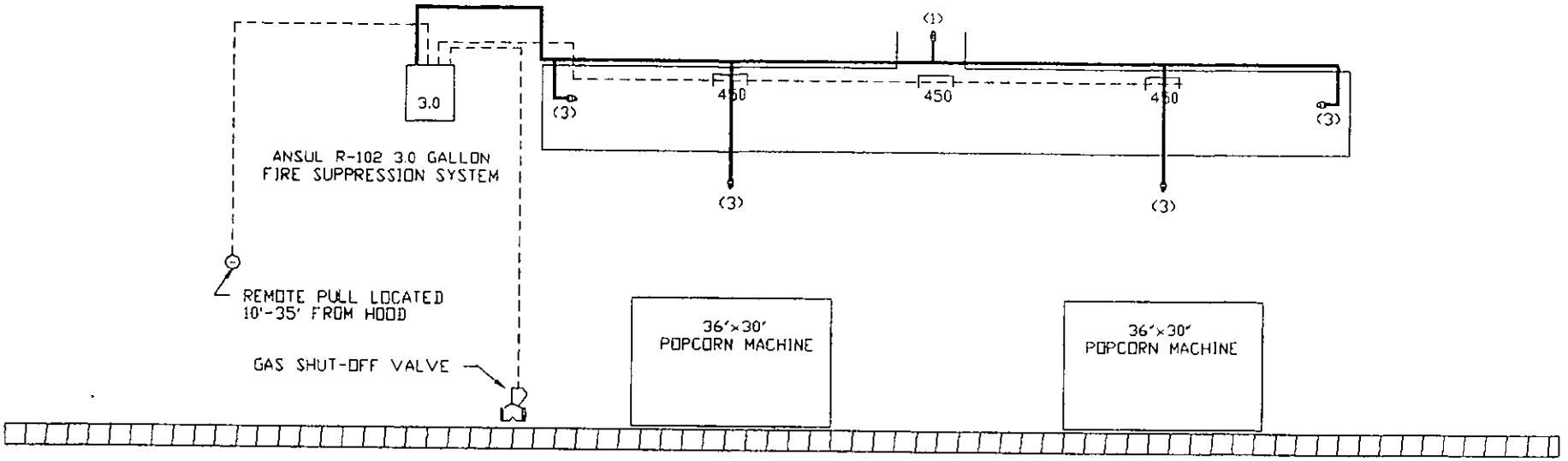
Let us know if add'l info. is needed.

Thank you.

Theresa

cc: Phil Davis
Manny Feldson

ANSUL R-102 3.0 GALLON FIRE SUPPRESSION SYSTEM
SYSTEM INSTALLED AS PER U.L. 300 STANDARDS



- SYSTEM TYPE - ANSUL
- MODEL # - R-102 3.0 GALLON
- U.L. EX. - 3470
- EXTINGUISHING AGENT - ANSULEX
- # OF FLOW POINTS - 6
- HOOD SIZE - (1) 9'-0"
- DUCT SIZE - (1) 12" DIA.
- SUPPLY PIPE SIZE - 3/8"
- BRANCH PIPE SIZE - 3/8"
- ALL PIPE SCHEDULE 40 BLACK PIPE
- ALL FITTINGS INSTALLED AS PER SPECS.
- ALL 1/2" CONDUIT

(1) P/N 56928 , T/N 2W
(2) P/N 56927 , T/N 1W
(3) P/N 56930 , T/N 1N
(4) P/N 56929 , T/N 1/2N
(5) P/N 418555 , T/N 1F
(6) P/N 418117 , T/N 230
(7) P/N 418118 , T/N 245
(8) P/N 418119 , T/N 260
(9) P/N 418120 , T/N 290
(10) P/N 418121 , T/N 2120
(11) P/N 76782 , T/N 3N

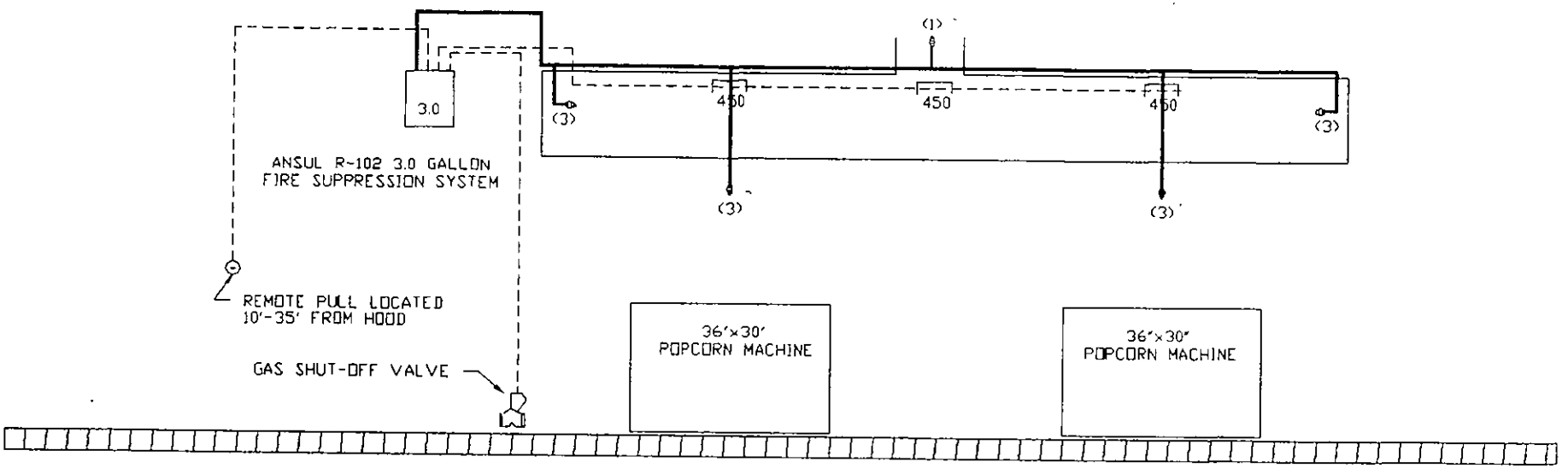
- THE INSTALLATION SHALL COMPLY WITH NFPA 96, THE MANUFACTURERS U.L. LISTING AND THE LOCAL AUTHORITY HAVING JURISDICTION
- EXHAUST HOOD SHALL CONTAIN APPROVED "BAFFLE TYPE" GREASE FILTERS
- FIRE SYSTEM SHALL SHUTDOWN FUEL TO APPLIANCES WHEN SYSTEM ACTUATES
- EXHAUST FAN SHALL REMAIN ON DURING FIRE SYSTEM ACTUATION
- REMOTE PULL STATION SHALL BE LOCATED 10'-35' FROM HOOD ON THE PATH OF EGRESS FROM THE PROTECTED AREA
- ANY CHANGE OF VENTILATION OR COOKING EQUIPMENT WILL VOID THE FIRE SYSTEM DESIGN AND WARRANTEES
- MAKE-UP AIR OR SUPPLY AIR SHOULD BE SHUT DOWN UPON FIRE SYSTEM ACTUATION
- ***THE FIRE SYSTEM INSTALLATION IS SUBJECT TO SEMI-ANNUAL INSPECTION BY THE AUTHORIZED INSTALLING CONTRACTOR TO OBTAIN WARRANTEE OF SYSTEM OPERATION AND PERFORMANCE AS REQUIRED BY LOCAL LAW***

LOWES THEATRES
BRICK PLAZA
BRICK, NJ

RELIABLE FIRE PROTECTION
123 WHITE OAK LANE - SUITE 225
OLD BRIDGE, NJ 08857
PHONE: 800-368-0024

DRAWN BY:	DATE:	REVISION DATE:
DMC	8/19/97	
DRAWING #:	DRAWING:	SCALE:
1697	1 OF 1	NOT TO SCALE

ANSUL R-102 3.0 GALLON FIRE SUPPRESSION SYSTEM
SYSTEM INSTALLED AS PER U.L. 300 STANDARDS



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LOWES THEATRES
BRICK PLAZA
BRICK, NJ

RELIABLE FIRE PROTECTION
123 WHITE OAK LANE - SUITE 225
OLD BRIDGE, NJ 08857
PHONE: 800-368-0024

DRAWN BY:	DATE:	REVISION DATE:
DMC	8/19/97	
DRAWING #:	DRAWING:	SCALE:
1697	1 OF 1	NOT TO SCALE

OCEAN COUNTY HEALTH DEPARTMENT
P.O. Box 2191
Toms River, N.J. 08754-2191
908-341-9700

Joseph J. Przywara
Public Health Coordinator

August 26, 1997

ATTN: CONSTRUCTION CODE OFFICIAL
Brick Township
401 Chambersbridge Road
Brick, NJ 08723

RE: PROPOSED FLOOR PLANS
Block Lot
Loew's Theaters
3 Brick Plaza
Brick, NJ 08723

Dear Sir,

I have reviewed the floor plans for the above referenced proposed food establishment and have found them to be in substantial compliance with Chapter XII, the New Jersey State Retail Food Code.

If you should have any questions, please feel free to contact me at this office.

Sincerely,

Joseph A. Caprio

Joseph A. Caprio
Sanitary Inspector

JAC:bd

CC: Brick Township Board of Health

Ocean County Health Department

OCEAN COUNTY HEALTH DEPARTMENT

No: _____

SANITARY INSPECTION REPORT

ESTABLISHMENT INFORMATION

PHONE # 262-1545

ESTABLISHMENT TRADING NAME: LOEW'S THEATERS

NUMBER AND STREET: 3 BRICK PLAZA

CITY OR MUNICIPALITY: BRICK | ZIP CODE: 08723

ESTABLISHMENT LICENSE NO. | COMMUN. CODE: 1506 | RISK: III

ESTABLISHMENT CODE: 26

GOODS
- ☐ DESTROYED
- ☐ EMBARGOED

EVALUATION
- ☒ SATISFACTORY
- ☐ CONDITIONALLY SATISFACTORY
- ☐ UNSATISFACTORY

WATER SUPPLY
- ☒ Public - Community
- ☐ Individual (Public - Non-Community)

OWNER INFORMATION
(Complete this section only if different from establishment information)

NAME OF OWNER(S), CORPORATION OR REGISTERED AGENT: LOEW'S THEATERS

NUMBER AND STREET: 711 5TH AVE

CITY OR MUNICIPALITY: NEW YORK | STATE: NY

ZIP CODE: 10022 | COMMUN. CODE:

TIME (2400 HOURS)

DATE	BEGIN	END
8-22-97	8:45	9:05

COMPLAINT NO. _____

COMPLAINT REC. _____

COMPLAINT INSPECTED _____

INSPECTION TYPE
- ☐ COMPLAINT
- ☐ INITIAL INSPECTION
- ☐ REINSPECTION
- ☒ PLAN REVIEW
- ☐ CONFERENCE

TYPE OF ESTABLISHMENT
- ☒ RETAIL
- ☐ WHOLESALE
- ☐ VENDING MACHINE NO. OF MACHINES _____
- ☐ FROZEN DESSERTS
- ☐ OTHER _____

Joseph J. Przywara
Health Officer
Sunset Avenue
P.O. Box 2191
Toms River, N.J. 08754-2191
Telephone No. 732-341-9700
609-978-9715

Tobacco O, V, NA.

NAME OF INSPECTING OFFICIAL (Print): JOSEPH A. CAPRIO

SIGNATURE OF INSPECTING OFFICIAL: Joseph A Caprio

PERMANENT REG. NO.: 20775

H.D.64

OCEAN COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES

DETAILED DATA SHEET

CONTINUATION SHEET

Establishment Trading Name	Establishment License No.	Date
LOEW'S THEATERS		8/22/97
Signature of Inspecting Official	**Municipality**	**Time - (2400 Hours)**
Joseph A. Caprio	BRICK	Begin 08:45

REG. NO.	REMARKS (Please specify area)
	The attached plans have been reviewed and approved. They are in substantial compliance with Chapter XII. The inspector has also conducted a walk-through food conference prior to observing the plans
	This office shall be contacted for an initial inspection prior to opening

(Attach additional sheets if necessary)

B. Sectional Control Valve(s):
   1. Manufacturer: East Jordan Iron Works Series A18; or equal.
   2. Gate valve with nonrising stem, mechanical joint 1 end and flanged joint opposite end.
   3. Provide three-section cast iron adjustable valve box and cover at grade.

C. Swing Check Valve(s):
   1. Manufacturer: Viking Models D-1 (2-1/2 inch), D-2 (4 inch), E-2 (8 inch); or equal.
   2. Bosses tapped:
      a. 1/2 inch for 2-1/2 inch through 4 inch sizes.
      b. 3/4 inch for 6 inch through 8 inch sizes.
   3. Rated to 175 psi water working pressure.
   4. Valve with ductile iron body, steel hand hole cover, stainless steel clapper, brass seat, rubber faced clapper.
   5. *Flanged or* groove end connections.

D. Detector Check Valve:
   1. Manufacturer: Viking Model F-1; or as required by local water authority.
   2. Rated to 175 psi water working pressure.
   3. Furnish with optional by-pass meter trim meter by others.
   4. Valve with ductile iron body, full-faced clapper rubber, fiber reinforced polycarbonate clapper ARMs, with air vent screw in cover.

E. Alarm check valve *(for wet pipe system)*:
   1. Manufacturer: Viking Model H-2; or equal.
   2. Rated to 175 psi water working pressure.
   3. Valve with ductile iron body, steel hand hole cover, stainless steel clapper, brass seat.
   4. Accessories to standard trim package meeting requirements of applicable rules and codes may include one or more of the following:
      a. Constant pressure trim package.
      b. Variable pressure trim package.
      c. Retarding chamber.
      d. Water *pressure gauges*.
      e. Alarm devices.
   5. Valve can be installed vertically or horizontally.

F. Retarding chamber (for wet pipe systems):
   1. Manufacturer: Viking Model C; or equal.
   2. Rated to 175 psi working pressure.
   3. 1/2-inch NPT inlet, 3/4-inch NPT outlet, 1-gallon capacity.
   4. Ductile iron body, self draining.
   5. Accessories include alarm test *shut-off valve, 1/8-inch drain* restriction:
      a. Other accessories may include circuit closer vent assembly (required when electric pressure switch is installed without water motor alarm).

G. Reduced Pressure Principle Backflow Preventor
   1. Confirm with local authority and include if required.

2.05 ALARMS:

A. Flow Switch(es):
   1. Viking Model VSR-F (2 inch to 8 inch); or equal.
   2. Paddle type, 120V-1 phase, two SPDT switches. Furnished and installed by Subcontractor. Wiring and connection to alarm bell and building alarm system by Electrical Subcontractor.

B. Alarm Bell:
   1. Viking Model BH-1003-10.
   2. 10-inch diameter, 120V-1 Phase, Backbox Kit, Guard.
   3. Wiring by electrical subcontractor.

8-7.2 Rocks shall not be placed in trenches. Frozen earth shall not be used for backfilling.

8-7.3 In trenches cut through rock, tamped backfill shall be used for at least 6 in. (152 mm) under and around the pipe and for at least 2 ft (0.6 m) above the pipe.

Chapter 9 Flushing and Testing

9-1 Flushing of Piping.

9-1.1 Private fire service mains and lead-in connections to system risers shall be flushed thoroughly before connection is made to system piping in order to remove foreign materials that might have entered the main during the course of the installation or that might have been present in existing piping. The minimum rate of flow shall be not less than the water demand rate of the system, which is determined by the system design, or not less than that necessary to provide a velocity of 10 ft/s (3 m/s), whichever is greater. For all systems, the flushing operations shall be continued for a sufficient time to ensure thorough cleaning. When planning the flushing operations, consideration shall be given to disposal of the water issuing from the test outlets.

Exception: When the flow rate as listed in Table 9-1.1 cannot be verified or met, supply piping shall be flushed at the maximum flow rate available to the system under fire conditions.

Table 9-1.1 Flow Required to Produce a Velocity of 10 Ft per Second (3 m/s) in Pipes

Nominal Pipe Size	Flow Rate	
(in.)	(gpm)	(L/min.)
4	390	1476
6	880	3331
8	1560	5905
10	2440	9235
12	3520	13323

9-2 Testing of Piping.

9-2.1* Before asking final approval of an installation by the authority having jurisdiction, the installing company shall furnish a Contractor's Material and Test Certificate countersigned by the property owner or representative.

A typical certificate is shown in Figure A-9-2.1.

9-2.2* The trench shall be backfilled between joints before testing to prevent movement of pipe. (*See A-9-2.2.*)

9-2.3 **Hydrostatic Test Requirements.**

9-2.3.1* All new private fire service mains shall be tested hydrostatically at not less than 200 psi (13.8 bars) pressure for two hours, or at 50 psi (3.4 bars) in excess of the maximum static pressure when the maximum static pressure is in excess of 150 psi (10.3 bars). (*See A-9-2.3.1.*)

9-2.3.2* The amount of leakage in buried piping shall be measured at the specified test pressure by pumping from a calibrated container. For new pipe, the amount of leakage at the joints shall not exceed two quarts per hour (1.89 L/h) per 100 gaskets or joints irrespective of pipe diameter. No visible leakage shall be allowed in aboveground piping.

9-2.3.3* The amount of allowable leakage specified in 9-2.3.2 shall be permitted to be increased by one fluid ounce per inch valve diameter per hour (30 ml/25 mm/h) for each metal seated valve isolating the test section. If dry barrel hydrants are tested with the main valve open, so the hydrants are under pressure, an additional five ounces per minute (150 ml/min) leakage is permitted for each hydrant.

9-2.3.4 Tests shall be made by the contractor in the presence of the authority having jurisdiction or the representative of the owner. The certificate shown in Figure A-9-2.1 is to be completed.

9-2.3.5 **Additives.** Additives, corrosive chemicals such as sodium silicate, brine, or other chemicals shall not be used while hydrostatically testing systems or for stopping leaks.

9-2.4 **Operating Test.**

9-2.4.1 Each hydrant shall be fully opened and closed under system water pressure and dry barrel hydrants checked for proper drainage. Where fire pumps are available, this shall be done with the pumps running.

9-2.4.2 All control valves shall be fully closed and opened under system water pressure to ensure proper operation.

Chapter 10 Referenced Publications

10-1 The following documents or portions thereof are referenced within this standard and shall be considered part of the requirements of this document. The edition indicated for each reference is the current edition as of the date of the NFPA issuance of this document.

10-1.1 **NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 1994 edition.

NFPA 20, *Standard for the Installation of Centrifugal Fire Pumps*, 1993 edition.

NFPA 22, *Standard for Water Tanks for Private Fire Protection*, 1993 edition.

NFPA 1961, *Standard for Fire Hose*, 1992 edition.

NFPA 1963, *Standard for Fire Hose Connections*, 1993 edition.

10-1.2 **AWWA Publications.** American Water Works Association, Inc., 666 West Quincy Avenue, Denver, CO 80235.

AWWA C104, *Cement Mortar Lining for Ductile Iron Pipe and Fittings for Water*, 1990.

AWWA C105, *Polyethylene Encasement for Ductile Iron Piping for Water and Other Liquids*, 1993.

AWWA C110, *Ductile Iron and Gray Iron Fittings, 3-in. Through 48-in., for Water and Other Liquids*, 1993.

AWWA C111, *Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings*, 1990.

AWWA C115, *Standard for Flanged Ductile Iron Pipe with Threaded Flanges*, 1988.

AWWA C150, *Thickness Design of Ductile Iron Pipe*, 1991.

fishbeck, thompson, carr & huber
engineers • scientists • architects

FILE COPY

SHOP DRAWING TRANSMITTAL

Mr. Andrew Garcia
C. Raimondo & Sons Construction Company
540 Bergen Boulevard
Fort Lee, NJ 07024

May 29, 1997
Project No. F96024CA
Re: Loews Theatres • Brick Plaza

Enclosed: _____ For Review ___√___ For Your Use _____ As Requested

Copies	Date	No.	Description	Action
	05/29/97	54	Section 15300 - Fire Protection System	
4			Fire Sprinkler Shop Drawings	2
4			Fire Sprinkler Catalog Cuts	1

Action:

1 Reviewed, no exceptions taken
2 Reviewed, with corrections noted
3 Rejected, resubmit

Comment:

Philip M. Davis, A.I.A.

bjn

By Federal Express

cc/enc: Mr. Walter Schaffer - Loews Theatres

J:\DOC96\C96024CA\SHOPTRAN.XXX

6090 East Fulton • Ada, Michigan 49301-0211 • 616/676-2666 • FAX 616/676-8173

Reliable®

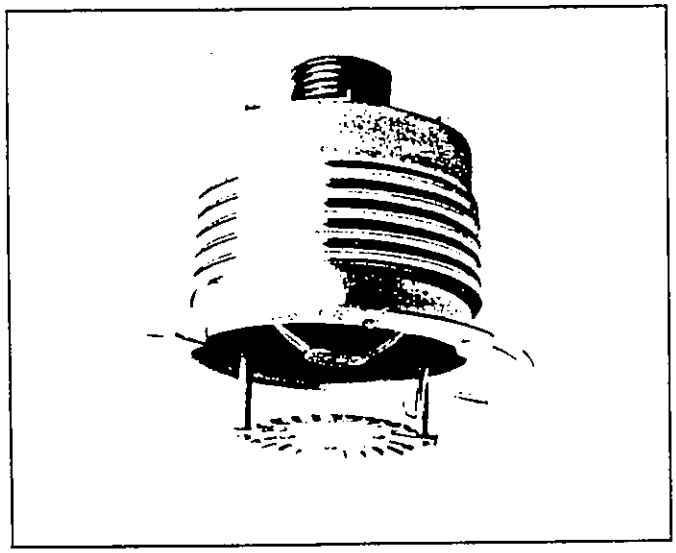
Model G4FR Concealed Automatic Sprinkler

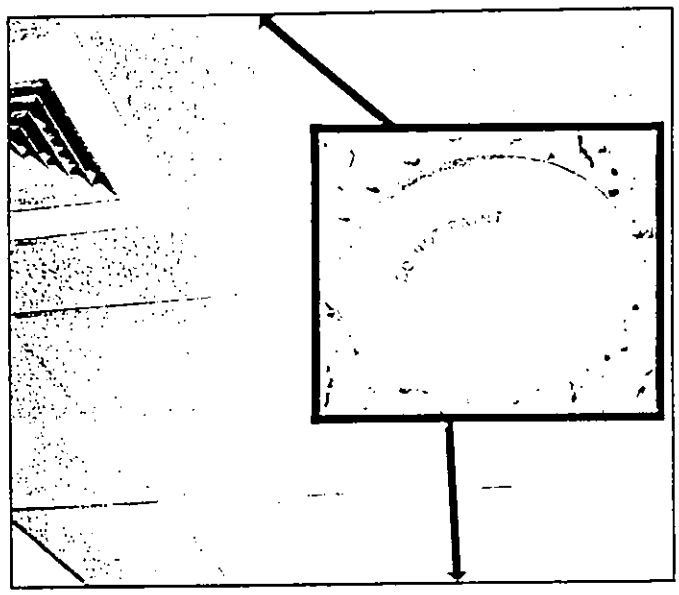
Bulletin 122A

The Adjustable Concealer
A Concealed Sprinkler
With ½" of Adjustment

Features

1. ½" Total cover plate adjustment.
2. Simple sturdy cover attachment.
3. Smooth aesthetic ceiling profile.
4. As heat sensitive as an exposed sprinkler.
5. Available in brass, chrome, and black plated or painted finishes.
6. Ordinary temperature rating.
7. Multiple orifices for design flexibility.
8. Installation does not require clips or springs.
9. Listed by Underwriters Laboratories Inc. & Underwriters' Laboratories of Canada. Approved by Factory Mutual Research Corp. NYC BS&A No. 587-75-SA. See Approvals Table for details.
10. Patent Pending.





Application

The Reliable Model G4FR Concealer is the most versatile concealed sprinkler available. It provides the best form of fire protection while offering an attractive appearance and ½ inch of cover adjustment for ease of installation. The small diameter cover plate is easily and positively attached and blends into the ceiling, concealing the most dependable fire protection available, an automatic sprinkler system.

The Model G4FR Concealer is designed for use where aesthetic appearance is important. Offices, hospitals, motels and restaurants are but a few of the applications where it can be used. It is available in different orifice sizes allowing the designer to optimize system performance, thereby achieving a most efficient installation.

Reliable's Concealer can eliminate the need for precise cutting of drop nipples. The threaded cover plate assembly can be adjusted without tools to fit accurately against the ceiling. The fire protection system need not be shut down to adjust or remove the cover plate assembly.

The Reliable Automatic Sprinkler Co., Inc., 525 North MacQuesten Parkway, Mount Vernon, New York 10552

Product Description

The Reliable Model G4FR Concealer uses a proven fusible element in a standard style sprinkler frame with a dropping deflector. This assembly is recessed into the ceiling and concealed by a flat cover plate. The cover plate and sprinkler cup assemblies are attached using a strong threaded engagement. This threaded engagement provides ½" of cover adjustment. The cover plate is attached to the skirt using 135°F ordinary temperature classification solder.

When the ceiling temperature rises, the solder holding the cover plate melts, allowing the release of this part and thus exposing the sprinkler inside to the rising ambient temperature.

Standard Temperatures

Classification	Sprinkler	Cover Plate	Max. Ceiling Temp.
Ordinary	165°F/74°C	135°F/57°C	100°F/38°C

Approvals

Adjustment	Nominal Orifice	K Factor U.S.	K Factor Metric	Thread	Approvals
½"	½"	5.62	81.0	½" NPT	1,2,3,4
½"	7/16"	4.24	61.0	½" NPT	1,2,3
½"	3/8"	2.82	40.6	½" NPT	1,2,3,4

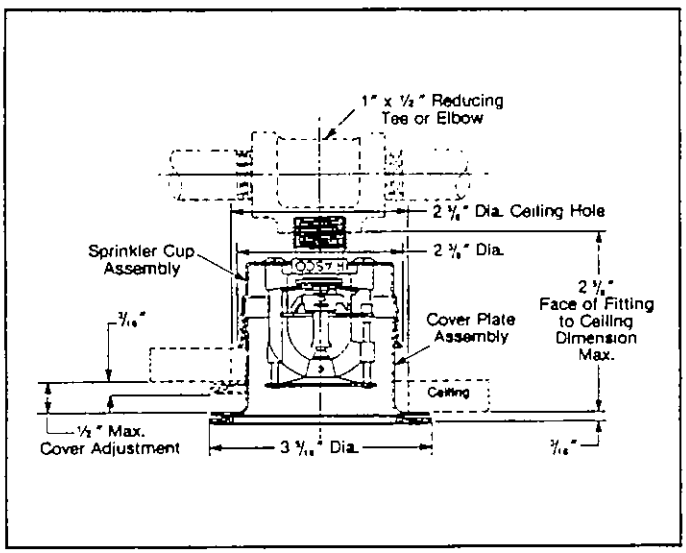
Installation

Do not install the Model G4FR Concealer in ceilings which have positive pressure in the space above.

After a 2⅝ inch diameter hole is cut in the ceiling, the sprinkler is to be easily installed with the Model G4 Wrench. The wrench has drive tangs which insert into cup slots. When installing a sprinkler the wrench is first positioned into the sprinkler/cup assembly until the wrench tangs engage drive slots in the top of the cup (there are two sets of mating drive slots in the cup). The sprinkler is then tightened into the pipe fitting. When inserting or removing the wrench from the sprinkler/cup assembly care should be taken to prevent damage to the sprinkler. DO NOT WRENCH ON ANY OTHER PART OF THE SPRINKLER/CUP ASSEMBLY. Final adjustment of each cover is made by hand turning the cover in the clockwise direction until it is tight against the ceiling.

*Approval Organizations

1. Underwriters Laboratories, Inc.
2. N.Y. City BS&A No. 587-75-SA
3. Underwriters' Laboratories of Canada
4. Factory Mutual Research Corp.
   - Light Hazard Occupancies—No Limitations
   - Ordinary Hazard Occupancies—Groups 1&2, Wet Systems Only



Note: Paint or any other coatings applied over the factory finish will void all approvals and warrantees.

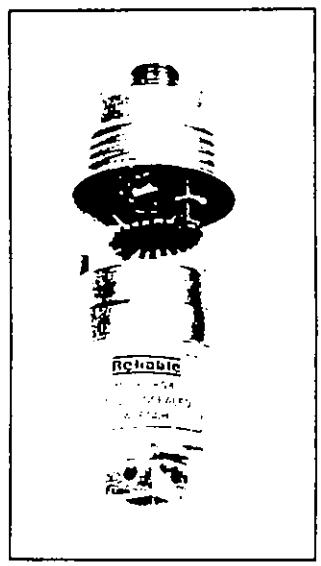
Note: Approvals are ordinary hazard, except for small orifice sprinklers which are limited to light hazard occupancies (unless otherwise noted).

Cover Plate Finishes

- Bronze
- Bright Brass Plated
- Bright Chrome Plated
- Satin Chrome Plated
- Black Plated
- White Paint

Ordering Information Specify

1. Sprinkler Model
2. Nominal Orifice
3. Cover Plate Finish



The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Reliable Sprinkler Devices, protecting life and property for over 70 years, are approved by all fire insurance and government agencies, and are installed and serviced by Reliable's chain of representatives.
Reliable representatives, located throughout the United States, Canada and foreign countries, have a life-time of experience and are as near as your telephone.

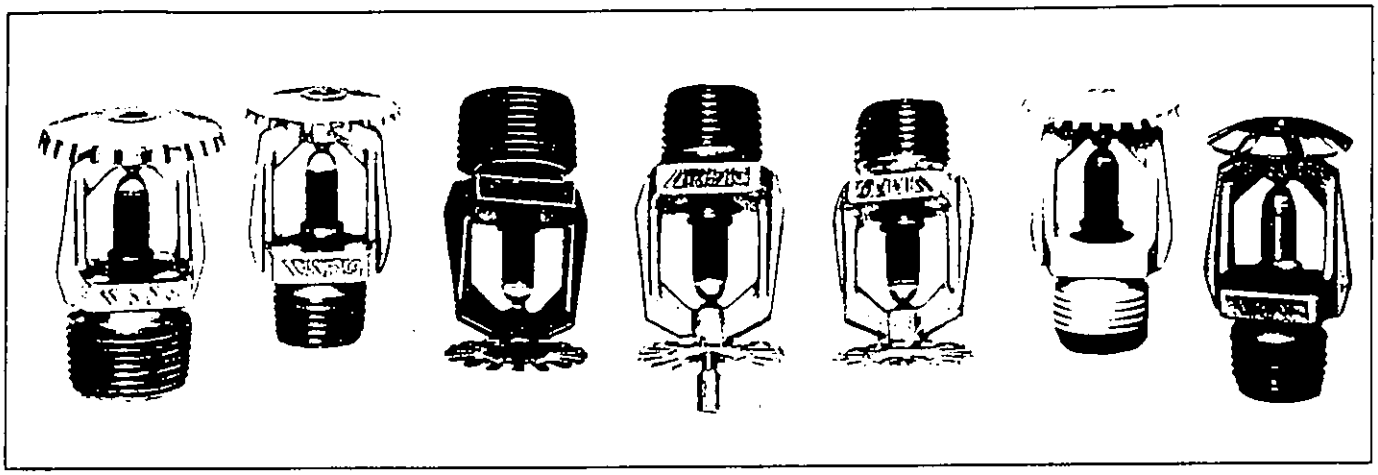
Manufactured by

Reliable

The Reliable Automatic Sprinkler Co., Inc.
525 North MacQuesten Parkway
Mount Vernon, New York 10552
(914) 668-3470 CORPORATE OFFICES
(914) 592-1414 SALES OFFICES

(S) PRINTED IN U.S.A. 9/90

VIKING **TECHNICAL DATA** MICROMATIC® SPRINKLER MODEL M



1. PRODUCT NAME

Viking Micromatic® Sprinkler
Model "M"
Style: Upright, Pendent and Conventional

2. MANUFACTURER

THE VIKING CORPORATION
210 N. Industrial Park Road
Hastings, Michigan 49058 U.S.A.
Fax Number: (616) 945-9599
Telephone: (616) 945-9501

3. PRODUCT DESCRIPTION

The Viking Micromatic® Sprinkler is a small, thermosensitive glass-bulb spray sprinkler. The sprinkler is available in several styles, finishes, temperature ratings and orifice sizes to meet design requirements. The small frame and rugged 8mm glass-bulb provide a pleasing aesthetic appearance. Used in conjunction with one of the various corrosion resistant coatings the unit provides protection against many corrosive environments. In addition, the special polyester or Teflon® coatings can also be used in decorative applications where the colors are desired. During fire conditions, the heat sensitive liquid in the glass-bulb expands, causing the bulb to shatter, releasing the pip cap and sealing spring assembly. The water flowing through the sprinkler orifice strikes the sprinkler deflector forming a uniform spray pattern to extinguish or control the fire. The sprinklers may be ordered and/or used as open sprinklers (glass-bulb and pip cap assembly removed) on deluge systems.

4. TECHNICAL DATA

See Charts (pages 13c and 13d) for list of approvals.
Glass Bulb Fluid Temperature rated to -65°F (-55°C)
Rated 175 PSI (1,207 kPa) water working pressure
Factory tested hydrostatically to 500 PSI (3,448 kPa)
Spring USA Patent No. 4,167,974
Materials:
Frame - Brass castings UNS-C84400
Deflector - Brass UNS-C26000
Bulb-Glass with Glycerin solution
Nominal 8mm diameter
Bushing-Brass UNS-C36000
Seal-Teflon® Tape
Spring-Nickel Alloy
Screw-Brass UNS-C36000.
Pip Cap - Copper UNS - C11000
Polyester Sprinklers:
Spring-Nickel Alloy Exposed
Screw-Brass UNS-C36000
Tin Plated
Pip Cap-Copper UNS-C11000
Tin Plated
Teflon® Sprinklers:
Spring-Nickel Alloy Exposed
Screw-Brass UNS-C36000
Tin Plated
Pip Cap-Copper UNS-C11000
Teflon® coated

5. AVAILABILITY AND SERVICE

Viking sprinklers are available through a network of Domestic, Canadian, and International Distributors, see the Yellow Pages of the telephone directory (listed under "Sprinklers Automatic Fire") or write to The Viking Corporation.

6. GUARANTEES

Viking agrees to repair or replace goods found to be defective in material and workmanship for a period of one year from the date of shipment. For details of warranty, refer to price list.

7. INSTALLATION

WARNING: Viking sprinklers are manufactured and tested to meet the rigid requirements of the approving agency. The sprinklers are designed to be installed in accordance with recognized installation standards. Deviation from the standards or any alteration to the sprinkler after it leaves the factory including, but not limited to, painting, plating, coating or modification, may render the sprinkler inoperative and will automatically nullify the approval and any guarantee made by The Viking Corporation.

A. Sprinklers are to be installed in accordance with the latest published standards of the National Fire Protection Association, Factory Mutual, Loss Prevention Council, Assemblee Pleniere, Verband der Sachversicherer or other similar organizations and also with the provisions of governmental codes, ordinances and standards whenever applicable.
B. The sprinklers must be installed after the piping is in place to prevent mechanical damage. Before installing, make sure the appropriate model, style, orifice size and temperature rating is used. Apply a small amount of pipe joint compound or tape to the external threads only, taking care not to allow a build up of compound in the sprinkler orifice. Install the sprinkler on the piping using the special sprinkler wrench only,

VIKING

TECHNICAL DATA

MICROMATIC® SPRINKLER MODEL M

Sprinkler Temperature Classification	Nominal Sprinkler Temperature Rating (Fusing Point)	Ceiling Temperature at Sprinkler		Bulb Color	Frame Paint Color
		Max. Ambient Temp. Allowed[1]	Max. Recommend. Ambient Temp.[2]		
Ordinary	135°F(57°C)	115°F(46°C)	100°F(38°C)	Orange	None
Ordinary	155°F(68°C)	135°F(57°C)	100°F(38°C)	Red	None
Intermediate	175°F(79°C)	155°F(68°C)	150°F(65°C)	Yellow	White
Intermediate	200°F(93°C)	180°F(82°C)	150°F(65°C)	Green	White
Intermediate	212°F(100°C)	192°F(88°C)	150°F(65°C)	Green	White
High	286°F(141°C)	266°F(130°C)	225°F(107°C)	Blue	Blue
Extra High	360°F(182°C)	340°F(171°C)	300°F(149°C)	Mauve	Red

Sprinkler Finishes: Brass, Bright Brass, Polished Chrome, White (Polyester), Black (Polyester), and Black Teflon®

Corrosion Resistant Coatings[3]: Polyester and Teflon® in all temperatures, Wax Coated brass, and Wax over Polyester in the following temperatures:

135°F (57°C) White Wax.
155°F (68°C) Light Brown Wax
175°F (79°C) Dark Brown Wax
200°F (93°C) Dark Brown Wax
212°F (100°C) Dark Brown Wax

1 Based on National Fire Prevention and Control Administration Contract No. 7-34860.

2 Based on NFPA-13. Other limits may apply depending on fire loading, sprinkler location and other authority having jurisdiction requirements. Refer to specific installation standards.

3 The Corrosion Resistant Coatings have passed the standard corrosion test required by the listed approving agencies. These tests cannot and do not represent all possible corrosive environments. Prior to install ing verify, through the end user, that the coatings are compatible or suitable for the proposed environment. The coatings indicated are applied to the exposed exterior surfaces only and therefore cannot be used as open sprinklers. Note that the spring is exposed on the teflon® and polyester sprinkler.

while taking care not to damage the sprinkler operating parts. (Any other type of wrench may damage the unit.) DO NOT use the sprinkler deflector to start or thread the sprinkler into a fitting.

C. Sprinklers must be handled with care. They must be stored in a cool, dry place in their original shipping container. Never install sprinklers that have been dropped, damaged or exposed to temperatures in excess of the maximum ambient temperature allowed. Never install any glass bulb sprinkler if the bulb is cracked or if there is a loss of liquid from the bulb. (These sprinklers should be destroyed immediately.) With the 8mm glass bulb sprinkler held horizontal, a small air bubble should be present. The diameter of the air bubble varies from approximately 1/16 inch for the 135°F (57°C) rating to 1/8 inch for the 286°F (141°C) rating and is approximately 3/16 inch diameter for the 360°F (182°C)rating.

D. Corrosion resistant sprinklers must be installed when subject to corrosive atmospheres. When installing corrosion resistant sprinklers, care must be taken not to damage the corrosion resistant coating. Use only the special sprinkler wrench and immediately replace any damaged units.

E. Sprinklers subject to mechanical damage must be protected with an approved sprinkler guard. Wet pipe systems must be provided with adequate heat. Pendent sprinklers in areas subject to freezing must be special dry pendent sprinklers.

F. After installation, the entire sprinkler system must be tested in accordance with the recognized installation standards. The test is applied after the sprinkler installation to insure no damage has occurred to the sprinkler during shipping and installation, and to make sure the unit has been properly tightened. If a thread leak should occur, normally the unit must be removed, new pipe joint compound or tape applied, and reinstalled. This is due to the fact that when the joint seal is damaged, the sealing compound or tape is washed out of the joint. In areas where leakage during testing must be prevented, sprinkler piping may be air tested prior to testing with water.

8. MAINTENANCE

NOTICE: The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the National Fire Protection Association Pamphlet that describes care and maintenance of sprinkler systems. In addition, the "Authority Having Jurisdiction" may have additional maintenance, testing and inspection requirements which must be followed.

A. The Sprinklers must be inspected on a regular basis for corrosion, mechanical damage, obstructions, paint, etc. The frequency of the inspections may vary due to corrosive atmospheres, water supplies and activity around the device.

B. Sprinklers that have been painted or mechanically damaged must be replaced immediately. Sprinklers showing signs of corrosion shall be tested and/or replaced immediately as required. Micromatic® Model M Sprinklers that are 50 years old shall be tested and/or replaced as required. Sprinklers that have operated cannot be reassembled or reused, but must be replaced. When replacing sprinklers, use only new sprinklers.

C. The sprinkler discharge pattern is critical for proper fire protection, therefore, nothing should be hung from, attached to, or otherwise obstruct the discharge pattern. All obstructions must be immediately removed or, if necessary, additional sprinklers installed.

D. When replacing existing sprinklers, the system must be removed from service. Refer to the appropriate system description and/or valve instructions. Prior to removing the system from service, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected area.
   1. Remove the system from service, draining all water and relieving all pressure on the piping.
   2. Using the special sprinkler wrench, remove the old sprinkler and install the new unit. Care must be taken to replace the sprinkler with the proper model, style, orifice size and temperature rating. A fully stocked spare sprinkler cabinet should be provided for this purpose.
   3. Place the system back in service and secure all valves, Check and repair all leaks.

E. Sprinkler systems that have been subject to a fire must be returned to service as soon as possible. The entire system must be inspected for damage and repaired or replaced as necessary. Sprinklers that have been exposed to corrosive products of combustion or high ambient temperatures, but have not operated, should be replaced. Refer to the Authority Having Jurisdiction for minimum replacement requirements.

VIKING

TECHNICAL DATA

MICROMATIC® SPRINKLER MODEL M

MICROMATIC MODEL M 8mm GLASS BULB STANDARD RESPONSE

KEY: See row A of Approved Temp. Chart → A3 ← See row 3 of Approved Finish Chart

STANDARD ORIFICE

Thread Size		Nominal Orifice		Deflector Style		Nominal K Factor		Overall Length		Approval [2]					
N.P.T.	B.S.P.	Inches	MM	Description	Base P/N[1]	U.S.	Metric	Inches	MM	UL	ULC	FM	NYC[3]	VDS	LPC (FOC)
1/2"	--	1/2	--	Upright	04802B	5.5	--	2.3	58	A3, B4, D7	A3, B4	F1, E5	A3, B4		
1/2"	15mm	1/2	15	Pendent[6]	04804B	5.5	79	2.3	58	A3, B4, D7	A3, B4	F1, E5	A3, B4	C1	A1, B6
--	15mm	--	15	Upright	05143B	--	79	--	58		-	F1, E5	-	C1	A1, B6

LARGE ORIFICE

3/4"	20mm	17/32	20	Upright	04824B	8.0	115	2.4	61	A3, B4, D7	A3, B4	F1, E5	A3, B4	C1	A1, B6
3/4"	20mm	17/32	20	Pendent[6]	04826B	8.0	115	2.4	61	A3, B4, D7	A3, B4	F1, E5	A3, B4	C1	A1, B6
1/2"	--	17/32	--	Pendent[5,6]	05067B	8.0	--	2.9	74	A3, B4, D7	A3, B4	F1, E5	A3, B4		
1/2"	--	17/32	--	Upright[5]	05065B	8.0	--	2.9	74	A3, B4, D7	A3, B4	F1, E5	A3, B4		

SMALL ORIFICE[7]

1/2"	--	3/8	--	Pendent[4,6]	04819B	2.7	--	2.7	69	A3, B4, D7	A3, B4	F1, E5	A3, B4	--	--
1/2"	--	3/8	--	Upright[4]	04818B	2.7	--	2.7	69	A3, B4, D7	A3, B4	F1, E5	A3, B4	--	--
1/2"	--	7/16	--	Upright[4]	04821B	4.0	--	2.7	69	A3, B4, D7	A3, B4	--	A3, B4	--	--
1/2"	--	7/16	--	Pendent[4,6]	04822B	4.0	--	2.7	69	A3, B4, D7	A3, B4	--	A3, B4	--	--
--	10mm	--	10	Upright	05069B	--	58	2.3	58	--	--	--	--	C1	A1, B6
--	10mm	--	10	Pendent[6]	05071B	--	58	2.3	58	--	--	--	--	C1	A1, B6

CONVENTIONAL

1/2"	15mm	1/2	15	Conventional	05063B	5.5	79	2.3	61	A3, B4, D7	--	--	--	A1	A1, B6
3/4"	20mm	--	--	Conventional	04828B	8.0	115	2.4	61	A3, B4, D7	--	--	--	A1	A1, B6

APPROVED TEMPERATURES

A- 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C)

B- 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C)

C- 155°F (68°C), 200°F (93°C), 286°F (141°C)

D- 286°F (141°C)

E- 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 212°F (100°C)

F - 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 212°F (100°C), 286°F (141°C), 360°F (182°C)

APPROVED FINISHES

1 - Brass, Bright Brass and Chrome.

2 - Brass, Bright Brass, Chrome White Polyester[8], and Black Polyester[8].

3 - Brass, Bright Brass, Chrome, Black Teflon®[8], White Polyester[8], and Black Polyester[8].

4 - Wax Coated Brass and Wax over Polyester. Corrosion Resistant.

5 - Wax Coated Brass. (For corrosion resistance).

6 - Wax Coated Brass, and White Polyester.

7 - 200°F (93°C) Wax coating. (For corrosion resistance.) Max. ambient temp. at ceiling = 150°F (65°C).

FOOTNOTES

[1]Base part number shown. For complete part number, see price list.
[2]This Chart shows the listings and approvals available at the time of printing. Other approvals are in process. Check with the manufacturer for any additional approvals.
[3]Approved by the New York City Board of Standards and Appeals under Calendar Number 219-76-SA.
[4]The sprinkler frame is identified with the nominal orifice size and the deflector has a protruding pintle. The sprinkler orifice is bushed.
[5]The sprinkler frame is identified with the nominal orifice size and the deflector has a protruding pintle.
[6]Refer to Sprinkler Accessories for approved escutcheons and other accessories.
[7]UL, ULC, FM, NYC approval is limited to light hazard, hydraulically calculated systems.
[8]UL, ULC & NYC approved as corrosion resistant sprinkler.

For listings and approvals for Recessed Pendent Installations, see chart on page 13d.

VIKING

TECHNICAL DATA

MICROMATIC® SPRINKLER MODEL M

MICROMATIC MODEL M 8mm GLASS BULB STANDARD RESPONSE

RECESSED WITH E-1 ESCUTCHEON [9]

KEY: See row A of Approved Temp. Chart → A3 ← See row 3 of Approved Finish Chart

Thread Size		Nominal Orifice		Deflector Style		Nominal K Factor		Overall Length		Approval [2]					
N.P.T.	B.S.P.	Inches	MM	Description	Base P/N[1]	U.S.	Metric	Inches	MM	UL	ULC	FM[10]	NYC[3]	VDS	LPC (FOC)
1/2"	15mm	1/2	15	Pendent [6]	04804B	5.5	79	2.3	58	B3	B3	E1	B3	C1	--
3/4"	20mm	17/32	20	Pendent [6]	04826B	8.0	115	2.4	61	B3	B3	E1	B3	C1	--
1/2"	--	17/32	--	Pendent [5,6]	05067B	8.0	--	2.9	74	B3	B3	E1	B3	--	--
1/2"	--	3/8	--	Pendent [4,6,7]	04819B	2.7	--	2.7	69	B3	B3	E1	B3	--	--
1/2"	--	7/16	--	Pendent [4,6,7]	04822B	4.0	--	2.7	69	B3	B3	--	B3	--	--
--	10mm	--	10	Pendent [6]	05071B	--	58	2.3	58	--	--	--	--	C1	--

INSTALLED WITH F-1 ADJUSTABLE ESCUTCHEON [9]

1/2"	15mm	1/2	15	Pendent [6]	04804B	5.5	79	2.3	58	B3	B3	--	B3	C1	--
3/4"	20mm	17/32	20	Pendent [6]	04826B	8.0	115	2.4	61	B3	B3	--	B3	C1	--
1/2"	--	17/32	--	Pendent [5,6]	05067B	8.0	--	2.9	74	B3	B3	--	B3	--	--
1/2"	--	3/8	--	Pendent [4,6,7]	04819B	2.7	--	2.7	69	B3	B3	--	B3	--	--
1/2"	--	7/16	--	Pendent [4,6,7]	04822B	4.0	--	2.7	69	B3	B3	--	B3	--	--
--	10mm	--	10	Pendent [6]	05071B	--	58	2.3	58	--	--	--	--	C1	--

APPROVED TEMPERATURES

A- 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C)

B- 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C)

C- 155°F (68°C), 200°F (93°C), 286°F (141°C)

D- 286°F (141°C)

E- 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C) 212°F (100°C)

APPROVED FINISHES

1 - Brass, Bright Brass and Chrome.

2 - Brass, Bright Brass, Chrome White Polyester[8], and Black Polyester[8].

3 - Brass, Bright Brass, Chrome, Black Teflon®[8], White Polyester[8], and Black Polyester[8].

4 - Wax Coated Brass and Wax over Polyester. Corrosion Resistant.

5 - Wax Coated Brass. (For corrosion resistance).

6 - Wax Coated Brass, and White Polyester.

7 - 200°F (93°C) Wax coating. (For corrosion resistance.) Max. ambient temp. at ceiling = 150°F (65°C).

FOOTNOTES

[1] Base part number shown. For complete part number, see price list.
[2] This Chart shows the listings and approvals available at the time of printing. Other approvals are in process. Check with the manufacturer for any additional approvals.
[3] Approved by the New York City Board of Standards and Appeals under Calendar Number 219-76-SA.
[4] The sprinkler frame is identified with the nominal orifice size and the deflector has a protruding pintle. The sprinkler orifice is bushed.
[5] The sprinkler frame is identified with the nominal orifice size and the deflector has a protruding pintle.
[6] Refer to Sprinkler Accessories for approved escutcheons and other accessories.
[7] UL, ULC, FM, NYC approval is limited to light hazard, hydraulically calculated systems.
[8] UL, ULC & NYC approved as corrosion resistant sprinkler.
[9] E-1 Recessed Escutcheons and F-1 Adjustable Escutcheons must be ordered separately.
[10] FM approval of Recessed Standard Orifice and Large Orifice Model M Pendent Sprinklers with the E-1 Escutcheon is limited to Wet Systems and Preaction Systems qualifying as Wet Systems, for hazard occupancies up to and including Ordinary Group II.
FM approval of recessed Small Orifice Model M Pendent Sprinklers installed with the E-1 Escutcheon is limited to Wet Systems and Preaction Systems qualifying as Wet Systems, for Light Hazard Occupancies only.

VIKING®

TECHNICAL DATA

MODEL M DRY HORIZONTAL SIDEWALL SPRINKLER

1. PRODUCT NAME

Viking Model M Dry Horizontal Sidewall Sprinklers
- Adjustable Recessed Dry Sidewall
- Adjustable Standard Dry Sidewall
- Plain Barrel Dry Sidewall

2. MANUFACTURER

THE VIKING CORPORATION
210 N. Industrial Park Road
Hastings, Michigan 49058 USA
Telephone: (616) 945-9501
(800) 968-9501
Fax No: (616) 945-9599
Outside the U.S.A.
Telephone: +1 (616) 945-9501
Fax No: +1 (616) 945-9599

3: PRODUCT DESCRIPTION

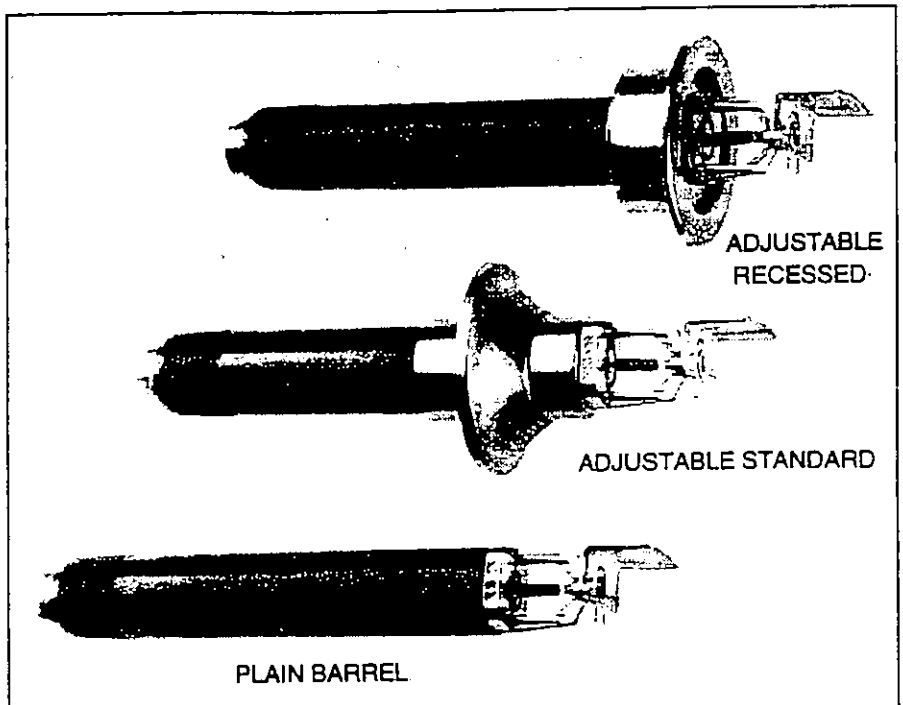
The Viking Model M Dry Sidewall Sprinkler is a thermosensitive glass bulb spray sprinkler, suitable for use in areas subject to freezing. It is designed for dry systems and preaction systems where it is necessary to prevent water or condensation from entering the supply nipple before the sprinkler operates. It may also be installed in spaces subject to freezing and supplied from a wet system in an adjacent heated area.

The assembly features a sealed brass inlet, and a durable threaded steel barrel with an Electrodeposited Epoxy Base coating. The sprinkler is of the Model M design with a rugged 5 mm glass bulb and horizontal sidewall deflector. The Model M Dry Horizontal Sidewall Sprinkler is available in several finishes and temperature ratings to meet design requirements.

The seal at the threaded end of the assembly is held in place by force transmitted from the compression screw, through the glass bulb and internal parts, onto a special sealing spring. During fire conditions, the heat sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the internal parts to open the waterway. The water flowing through the sprinkler orifice strikes the sprinkler deflector forming a uniform spray pattern to extinguish or control the fire.

The Model M Dry Horizontal Sidewall Sprinkler may be installed with the barrel exposed, or with one of two escutcheon styles. For recessed installations, a recessed style escutcheon, with up to 5/8" (15,8mm) adjustment (see Figure 1), is available. For standard installations, the sprinkler is available with an adjustable, surface mounted escutcheon, finished to allow up to 2" (50.8mm) of adjustment (see Figures 2 and 2a). Both escutcheon styles slide over the sprinkler deflector, allowing installation of the escutcheon after the wall finish is applied.

The Model M Dry Horizontal Sidewall Sprinklers may be ordered in lengths from 3" (76,2mm) to 48" (1 219,2mm) long*, and are available in 1/4" (6,35mm) increments for the recessed style, and in 1/2" increments for the "adjustable standard escutcheon" style, and the plain barrel style installed with no escutcheon.



Sprinkler Temperature Classification	Nominal Sprinkler Temperature Rating (Fusing Point)	Ceiling Temperature at Sprinkler		Bulb Color	Color Coding[3]
		Max. Ambient Temp. Allowed[1]	Max. Recommended Ambient Temp.[2]		
Ordinary	135°F (57°C)	115°F (46°C)	100°F (38°C)	Orange	None
Ordinary	155°F (68°C)	135°F (57°C)	100°F (38°C)	Red	None
Intermediate	175°F (79°C)	155°F (68°C)	150°F (65°C)	Yellow	White
Intermediate	200°F (93°C)	180°F (82°C)	150°F (65°C)	Green	White
High	286°F (141°C)	266°F (130°C)	225°F (107°C)	Blue	Blue

[1] Based on National Fire Prevention and Control Administration Contract No. 7-34860.

[2] Based on NFPA-13. Other limits may apply depending on fire loading, sprinkler location and other authority having jurisdiction requirements. Refer to specific installation standards.

[3] Frames of decorative sprinklers are not color coded. Temperature rating is stamped on deflector.

4. TECHNICAL DATA

See chart (Page 102 d) for list of approvals.
Approved to maximum length of 48" (1 219,2mm).
Glass Bulb Fluid Temperature rated to -65°F (-55°C)
Rated to 175 PSI (1207 kPa) water working pressure.
Thread Size: 1" NPT or 25 mm BSPT.
Orifice Size: Nominal 1/2" (15 mm).
Minimum operating pressure: 7 PSI (48,3 kPa)
K Factor: 5.5 U.S. (7,9 metric)**
(all approved lengths).
Factory tested pneumatically at 100 PSI (685 kPa).

* Lengths over 48" (1 219,2mm) are available, with no approvals, on a "made to order" basis. Contact manufacturer.

** Metric K Factor shown is for use when pressure is measured in kPa. When pressure is measured in BAR, multiply the metric K Factor shown by 10.0.

Note: Units of measure in parentheses may be approximations.

Replaces page 102 a-d dated prior to June 15,1993

Form No. F_073091

VIKING®

TECHNICAL DATA

MODEL M DRY HORIZONTAL SIDEWALL SPRINKLER

Spring: USA Patent No. 4,167,974
Deflector: USA Patent No.4,296,816
Bulb: USA Patent No. 4,796,710
SPRINKLER MATERIALS:
Frame: Brass Castings UNS-C84400
Deflector: Copper UNS-C19500
Bulb: Glass, Nominal 5mm diameter
Seal: Teflon Tape
Spring: Nickel Alloy
Screw: Brass UNS-C36000
Pip Cap: Brass UNS-C31600
Seat: Copper UNS-C21000
Orifice: Copper UNS-C21000
Washer: Stainless Steel UNS-S30400
Base: Brass UNS-C31400
Gasket: Buna N
Pin: Stainless Steel UNS S42000
Tube: JIC Hydraulic Steel Tube
Inlet: Brass UNS-C36000
Support (Internal): Steel UNS-G10080
Electrodeposited Epoxy Base finish
Barrel: Steel Pipe UNS-G10200
Electrodeposited Epoxy Base finish
ACCESSORIES:
Dry Sprinkler Wrench
Standard: PN 07297
AVAILABLE FINISHES:
Recessed: Chrome, or White
Standard Adjustable: Chrome
Plain Barrel: Chrome or Brass (sprinkler only)

ORDERING INFORMATION:

For proper shipment specify: model, finish, temperature rating, escutcheon type, and length ("A" Dimension). Dry Horizontal Sidewall Sprinklers are ordered in specific lengths noted as the "A" dimension (see Figures 1 through 3). The "A" dimension is the distance from the face of the fitting (tee) to the finished surface of the wall in which it is to be installed. The Dry Horizontal Sidewall Sprinkler must be ordered and manufactured specifically for one of three styles of installation; with the adjustable recessed escutcheon (see Figure 1), with the adjustable standard escutcheon (see Figures 2 and 2a), or the plain barrel (see Figure 3). For limits of adjustment for the recessed escutcheon see Figure 1. Details and limits of adjustment for the standard escutcheon style, with 2" (50,8mm) of adjustment, are shown in Figure 2.

5. AVAILABILITY AND SERVICE:

Viking Sprinklers are available through a network of domestic, Canadian, and International Distributors. See the Yellow Pages of the telephone directory (listed under "Sprinklers Automatic Fire") or contact The Viking Corporation.

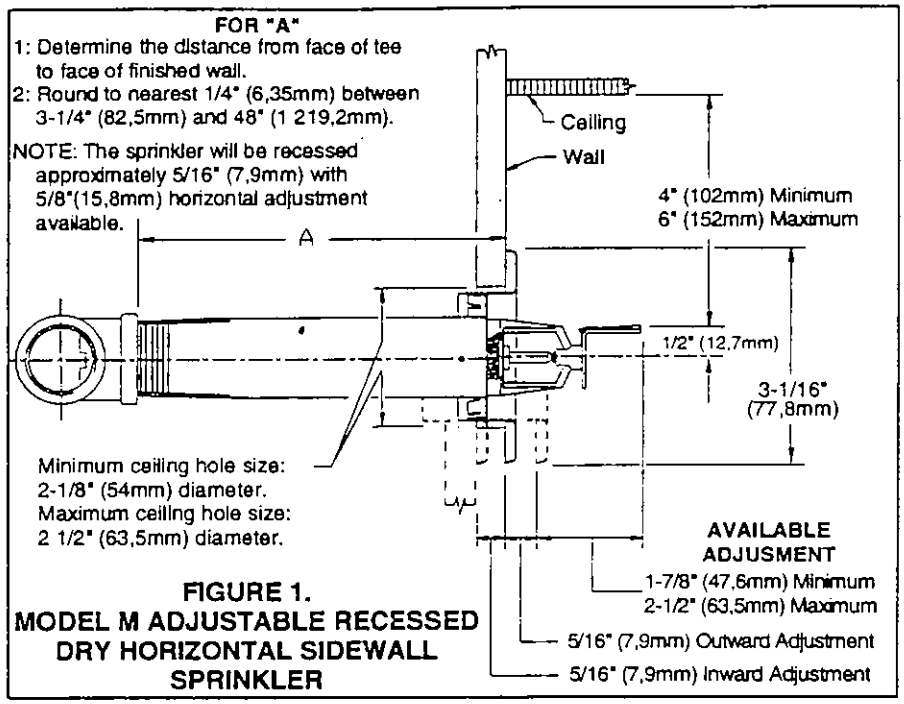


FIGURE 1.
MODEL M ADJUSTABLE RECESSED DRY HORIZONTAL SIDEWALL SPRINKLER

6. GUARANTEES

Viking agrees to repair or replace goods found to be defective in material and workmanship for a period of one year from the date of shipment. For details of warranty, refer to price list.

7. INSTALLATION

WARNING: Viking sprinklers are manufactured and tested to meet the rigid requirements of approving agencies. The sprinklers are designed to be installed in accordance with recognized installation standards. Deviation from the standards or any alteration to the sprinkler after it leaves the factory including, but not limited to, painting, plating, coating, or modification, may render the sprinkler inoperative and will automatically nullify the approval and any guarantee made by The Viking Corporation.

A. Sprinklers are to be installed in accordance with the latest published standards of the National Fire Protection Association, Factory Mutual, Loss Prevention Council, Assemblee Pleniere, Verband der Sachversicherer or other similar organizations, and also with provisions of governmental codes, ordinances, and standards whenever applicable. The use of Dry Horizontal Sidewall Sprinklers may be limited due to occupancy and hazard. Refer to the Authority Having Jurisdiction prior to installation.

B. Sprinklers must be handled with care. They must be stored in a cool, dry place in their original container. Never install sprinklers that have been dropped or damaged in any way. Never install any glass bulb sprinkler if the bulb is cracked or if there is a loss of liquid from the bulb. Never install sprinklers which have been exposed to temperatures in excess of the maximum ambient temperature allowed. Such sprinklers should be destroyed immediately.

C. Model M Dry Horizontal Sidewall Sprinklers are not intended for use in corrosive environments. Use only sprinklers listed for corrosive environments when subject to corrosive atmospheres.

WARNING: Dry Horizontal Sidewall Sprinklers MUST be installed into the 1" outlet of a cast iron or malleable iron tee fitting only. The threaded end of the Dry Sidewall Sprinkler is designed to allow the seal to penetrate and extend into the fitting to a predetermined depth.

1. **DO NOT** install the Dry Sidewall Sprinkler into a threaded elbow, coupling, or any other fitting that could interfere with thread penetration. Such installation will damage the brass seal.
2. **DO NOT** install the Dry Sidewall Sprinkler into a coupling or fitting that will allow condensation to accumulate above the seal, when lo-

VIKING®

TECHNICAL DATA

MODEL M DRY HORIZONTAL SIDEWALL SPRINKLER

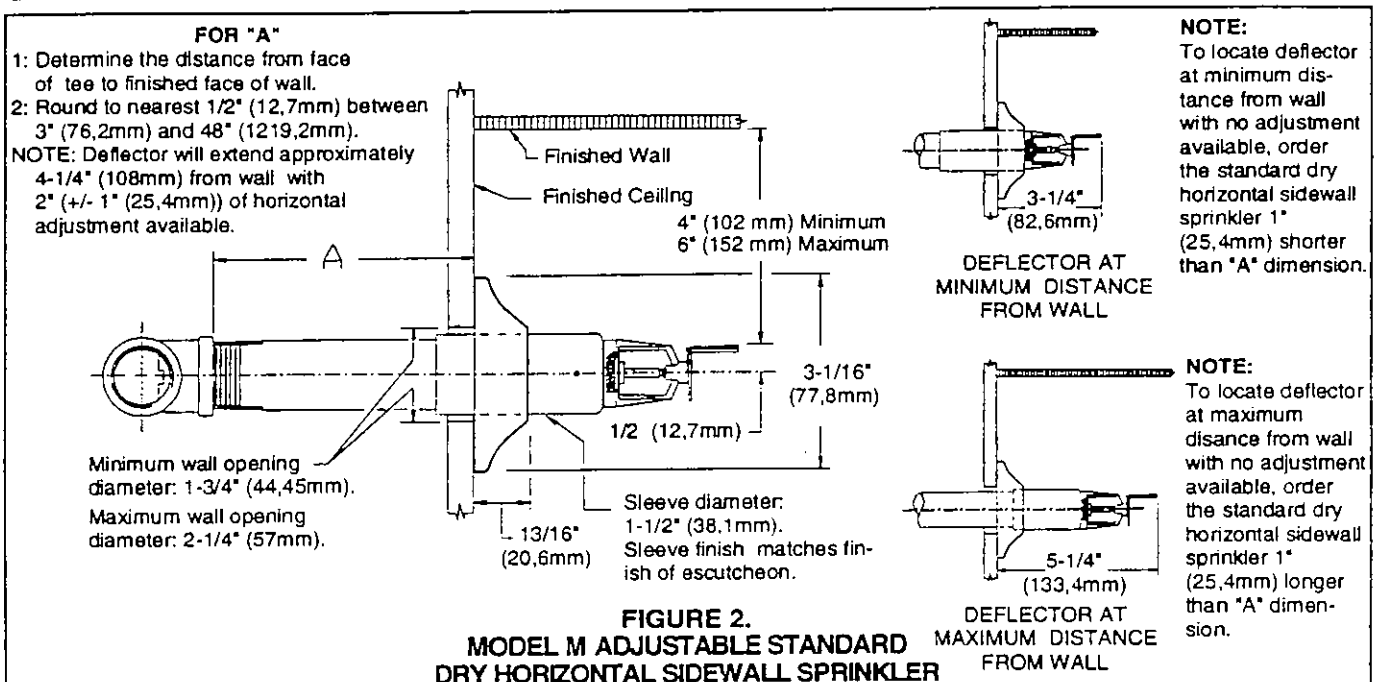
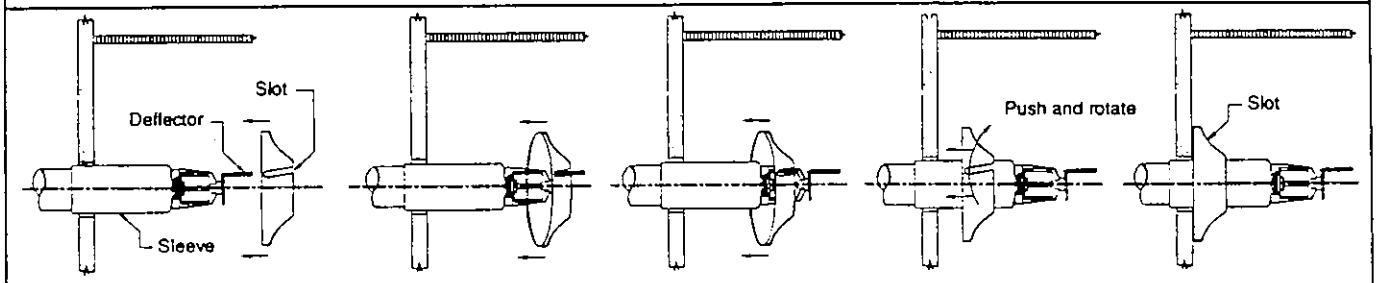


FIGURE 2.
MODEL M ADJUSTABLE STANDARD DRY HORIZONTAL SIDEWALL SPRINKLER



STEP 1: Align slot in escutcheon with the horizontal surface of deflector as shown.

STEP 2: Push rounded end of slot against the near edge of deflector. Push far side of escutcheon past the deflector toward the sleeve.

STEP 3: Pull escutcheon away from the near edge of deflector. Move near side of escutcheon over deflector.

STEP 4: Push and rotate the escutcheon onto the sleeve.

STEP 5: To minimize visibility of the slot in the escutcheon, position the slot at top of sprinkler sleeve.

FIGURE 2a
ADJUSTABLE STANDARD ESCUTCHEON INSTALLATION

cated in an area subject to freezing.

3. **NEVER** try to modify the Dry Horizontal Sidewall Sprinkler. The sprinklers are manufactured for specific "A" dimensions and cannot be modified.

D. The sprinkler must be installed after the piping is in place to prevent mechanical damage.
   1. Before installing, the sprinkler, make certain the "A" dimension is correct and the appropriate model, style, orifice size and temperature rating is used.
   2. Apply a small amount of pipe joint compound or tape to the male threads only, taking care not to allow a build up of compound over the brass inlet and seal.
   3. Install the Dry Sidewall Sprinkler on the piping using the special Dry Sprinkler Wrench only, while taking care not to damage the sprinkler. DO NOT use a pipe wrench on the barrel of the Dry Sidewall Sprinkler. A pipe wrench may damage the barrel finish.
   4. To install the escutcheon for the Adjustable Standard Style Dry Horizontal Sidewall Sprinkler, refer to Figure 2a.

E. After installation the entire sprinkler system must be tested in accordance with the recognized installation standards. The test is applied after sprinkler installation to insure no damage has occurred to the sprinkler during shipment and installation, and to make certain the unit has been properly tightened. If a thread leak should occur, normally the unit must be removed, new pipe joint compound or tape applied, and reinstalled. This is due to the fact that when the joint seal leaks, the sealing compound is washed out of the joint.

F. Wet pipe systems supplying Dry Horizontal Sidewall Sprinklers must be provided with adequate heat. Refer to appropriate installation standards.

8. MAINTENANCE

NOTICE: The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the National Fire Protection Association Pamphlet that describes care and mainte-

VIKING®

TECHNICAL DATA

MODEL M DRY HORIZONTAL SIDEWALL SPRINKLER

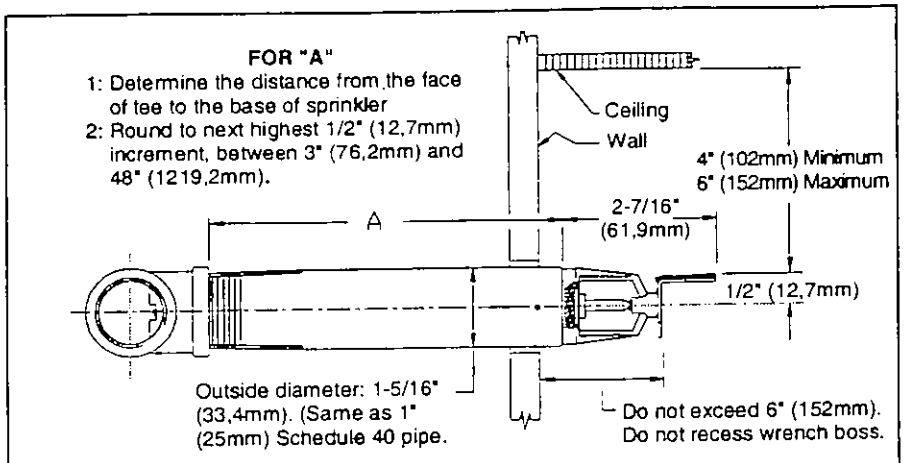


FIGURE 3.
MODEL M PLAIN BARRELDRY HORIZONTAL SIDEWALLSPRINKLER

nance of sprinkler systems. In addition, the "Authority Having Jurisdiction" may have additional maintenance, testing, and inspection requirements which must be followed.

A. The sprinklers must be inspected on a regular basis for signs of corrosion, mechanical damage, obstructions, paint, etc. The frequency of the inspections may vary due to corrosive atmospheres, water supplies and activity around the device.

B. Sprinklers that have been field painted, caulked, or mechanically damaged must be replaced immediately. Sprinklers showing signs of corrosion shall be tested and/or replaced immediately as required. Model M Dry Horizontal Sidewall Sprinklers that are 50 years old shall be tested and/or replaced immediately as required. Never attempt to repair or reassemble a Dry Horizontal Sidewall Sprinkler. Sprinklers that have operated cannot be reassembled or reused, but must be replaced. When replacing sprinklers, use only new sprinklers.

C. The sprinkler discharge pattern is critical for proper fire protection. Nothing should be hung from, attached to, or otherwise obstruct the discharge pattern. All obstructions must be immediately removed or, if necessary, additional sprinklers installed.

D. When replacing existing sprinklers, the system must be removed from service. Refer to the appropriate system description and/or valve instructions. Prior to removing the system from service, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the effected area.
   1. Remove the system from service, draining all water and relieving all pressure on the piping.
   2. Using the special Dry Sprinkler wrench, remove the old sprinkler and install the new unit. Care must be taken to replace the sprinkler with the proper model, style, "A" dimension, orifice size, and temperature rating.
   3. Place the system back in service and secure all valves. Check and repair all leaks.

E. Sprinkler systems that have been subjected to fire must be returned to service as soon as possible. The entire system must be inspected for damage and repaired or replaced as necessary. Sprinklers that have been exposed to corrosive products of combustion or high ambient temperatures, but have not operated, should be replaced. Refer to the Authority Having Jurisdiction for minimum replacement requirements.

MODEL M
DRY HORIZONTAL SIDEWALL SPRINKLER

Thread Size		Nominal Orifice		Dry Horizontal Sidewall Style		Nominal K Factor		Order Length[3] Increment		Approval[2]					
N.P.T.	B.S.P.	Inches	MM	Description	Base P/N[1]	U.S.	Metric[4]	Inches	MM	UL	ULC	FM	NYC[5]	VDS	(FOC)
1 inch	--	1/2	15	Adjustable	07857	5.5	7,9	1/2"	12,7	Yes	Yes	--	Yes	--	--
--	25mm	1/2	15	Standard	07860	5.5	7,9	1/2"	12,7	Yes	Yes	--	Yes	--	--
1 inch	--	1/2	15	Adjustable	07856	5.5	7,9	1/4"	6,35	Yes	Yes	--	Yes	--	--
--	25mm	1/2	15	Recessed	07859	5.5	7,9	1/4"	6,35	Yes	Yes	--	Yes	--	--
1 inch	--	1/2	15	Plain	07858	5.5	7,9	1/2"	12,7	Yes	Yes	--	Yes	--	--
--	25mm	1/2	15	Barrel	07861	5.5	7,9	1/2"	12,7	Yes	Yes	--	Yes	--	--

FOOTNOTES

[1] Base part number shown. For complete part number, see price list.

[2] This Chart shows the listings and approvals available at the time of printing. Other approvals are in process. Check with the manufacturer for any additional approvals.
Note: Viking Model M Dry Horizontal Sidewall Sprinklers are listed for installation in light hazard occupancies.
Viking Model M Dry Horizontal Sidewall Sprinklers must be positioned between 4" (102 mm) and 6" (152 mm) below smooth ceilings, and not less than 4" (102 mm) from walls other than the wall in which it is installed. Top of deflector must be parallel to the ceiling. Refer to appropriate Installation Guide.

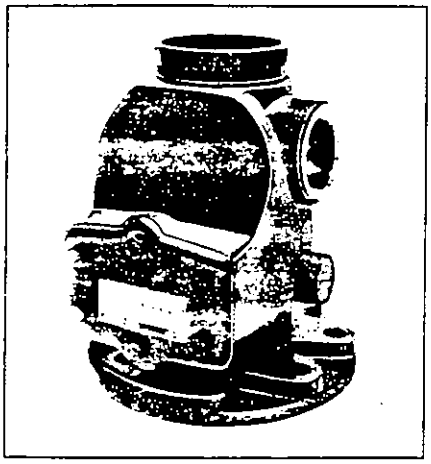
[3] Minimum standard (listed) length for Model M Quick Response Dry Horizontal Sidewall Sprinklers: ("A" Dimension) = 3 inches (76,2mm)
Maximum standard (listed) length for Model MQuick Response Dry Horizontal Sidewall Sprinklers:("A" Dimension) = 48 inches (1 219,2mm)

[4] K Factor applies for all lengths indicated in footnote 3.
Metric K Factor shown is for use when pressure is measured in kPa. When pressure is measured in BAR, multiply the metric K Factor shown by 10.0.

[5] Accepted for use. City of New York Department of Buildings MEA 89-92-E Vol. II.

VIKING® TECHNICAL DATA

EASY RISER™ SWING CHECK VALVE



1. PRODUCT NAME

VIKING EASY RISER™ CHECK VALVE
2-1/2" (65mm) Model E-1
Manufactured 1992-
3" (80mm), 4" (100mm), 6" (150mm), and 8" (200mm) Model F-1
Manufactured 1994-

2. MANUFACTURER

THE VIKING CORPORATION
210 N. Industrial Park Road
Hastings, Michigan 49058 U.S.A.
Telephone: (616) 945-9501
(800) 968-9501
Fax Number: (616) 945-9599
From outside U.S.A.
Telephone: +1 (616) 945-9501
Fax Number: +1 (616) 945-9599

3. PRODUCT DESCRIPTION

The Viking Easy Riser™ Check Valve is a general purpose rubber faced check valve approved for use in fire service systems. The Valve is for use in system risers, high rise buildings, and wherever a check valve with a drain connection and gauge connections can be utilized. When used with a flow switch, on wet pipe systems not requiring a mechanical alarm, the Easy Riser™ Check Valve may replace an alarm check valve.

The Easy Riser™ Check Valve is manufactured with a ductile iron body, brass seat, and a rubber faced clapper assembly hinged to a removable access cover for easy inspection and maintenance.

The valve may be installed vertically or horizontally. For availability of flanged-flanged, flanged-grooved and grooved-grooved options, refer to Table 1. Tapped openings are provided to connect a drain valve, inlet and outlet pressure gauges, and the necessary connections to make the Easy Riser™ suitable for use in preaction systems and Firecycle systems.

4. TECHNICAL DATA

Listings and Approvals
See Approval Chart
Rated to 175 PSI (1 207 kPa) water working pressure.
Factory tested hydrostatically to 350 PSI (2 413 kPa)
Standard flanged connections
ANSI B16.1
Standard Grooved connections
ANSI/AWWA C606
Tapped Bosses
2-1/2"(65mm) E-1 and 3"(80mm) F-1
Drain outlet: one 1-1/14" (32mm) NPT
Gauge: two 1/4" (8mm) NPT
Other: two 1/2" (15mm) NPT
4"(100mm) 6"(150mm) and 8" (200 mm) F-1
Drain outlet: one 2" (50mm) NPT
Gauge: two 1/4" (8mm) NPT
Other: two 1/2" (15mm) NPT
Material Standards:
Refer to Figure 1

Easy Riser™ Check Valves Approval Chart

UL[1]	ULC	FM	NYC[2]
Yes	Yes	Yes	--

[1] UL listed Guide No. HMER
[2] Acceptance by City of New York Department of Buildings is pending

5-A. FEATURES

1. Ductile iron body for less weight and extra strength.
2. Rubber faced clapper hinged to access cover for quick removal and easy servicing. All moving parts can be serviced without removing the valve from the installed position.
3. With the cover/clapper assembly removed, clapper rubber replacement requires removal of only one bolt.
4. Can be installed vertically or horizontally.
5. Valve housing tapped for inlet and outlet pressure gauges, and system main drain.

5-B. ACCESSORIES

Trim Packages (Order separately)Include:
a: All necessary nipples and fittings
b: Main Drain Angle Valve
c: Necessary gauges

6. AVAILABILITY & SERVICE

The Viking Easy Riser™ Check Valve and accessories are available through a network of Domestic, Canadian, and International Distributors. See the Yellow Pages of the telephone directory for your closest distributor (listed under "Sprinklers Automatic Fire") or contact: The Viking Corporation.

Table 1

Size Valve	Inlet Type	Outlet Type	Friction Loss*	Shipping Weight	Part No.
2-1/2" (65mm)	Groove	Groove	6 Ft. (1.8m)	16 lbs (7 kg)	07929
3" (80mm)	Flange	Flange	10 Ft. (3,1m)	35 lbs. (16 kg)	08505
3" (80mm)	Flange	Groove	10 Ft. (3,1m)	27 lbs. (12 kg)	08506
3" (80mm)	Groove	Groove	10 Ft. (3.1m)	20 lbs. (9 kg)	08507
4" (100mm)	Flange	Flange	13 Ft. (4m)	47 lbs. (21 kg)	08508
4" (100mm)	Flange	Groove	13 Ft. (4m)	37 lbs. (17 kg)	08509
4" (100mm)	Groove	Groove	13 Ft. (4m)	27 lbs. (12 kg)	08510
6" (150mm)	Flange	Flange	20 Ft. (6m)	75 lbs. (34 kg)	08511
6" (150mm)	Flange	Groove	20 Ft. (6 m)	64 lbs. (29 kg)	08512
6" (150mm)	Groove	Groove	20 Ft. (6 m)	51 lbs. (23 kg)	08513
8" (200mm)	Flange	Groove	23 Ft. (7 m)	119 lbs. (54 kg)	08515
8" (200mm)	Groove	Groove	23 Ft. (7 m)	106 lbs (48 kg)	08516

* Expressed in equivalent length of pipe based on Hazen & Williams formula: C=120.

The following Viking Easy Riser™ Check Valves are available outside of North America with flanges drilled according to European PN10 Specifications.**

Size Valve	Inlet Type	Outlet Type	Friction Loss***	Shipping Weight	Part No.
80mm (3")	Flange	Flange	3,1m (10 Ft.)	16 kg (35 lbs.)	08796
100mm (4")	Flange	Flange	4 m (13 Ft.)	21 kg (47 lbs.)	08797
150mm (6")	Flange	Flange	6 m (20 Ft.)	34 kg (75 lbs.)	08835

** Flange diameters and thickness are manufactured according to dimensions indicated on Figure 1.
*** Expressed in equivalent length of pipe based on Hazen & Williams formula: C=120.

7. GUARANTEES

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

Replaces page 815a-d dated November 10. 1994
(Added ULC listing)

VIKING®

TECHNICAL DATA

EASY RISER™
SWING CHECK VALVE

8. OPERATION (Refer to Figure 1)

Water flowing through the Viking Easy Riser™ Check Valve lifts rubber gasketed clapper (8, & 9) off seat (12) and flows into the sprinkler piping. When flow through the valve stops, the clapper (8) closes quickly. Rubber gasket (9) forms a tight seal against brass water seat (12) trapping pressurized water above the clapper and preventing reverse flow from sprinkler piping.

9: INSTALLATION

The Easy Riser™ Check Valve must be installed in an area not subject to freezing temperatures or physical damage. When corrosive atmospheres and/or contaminated water supplies are present, it is the owners responsibility to verify compatibility with the Easy Riser™ Check Valve, trim, and associated equipment.

Prior to installing the valve, thoroughly flush the water supply piping to verify that no foreign matter is present.

The Easy Riser™ Check Valve may be installed in the vertical position with direction of flow up or in the horizontal position with the access cover up.

1. Remove all plastic thread protectors from the openings of the Easy Riser™ Check Valve.
2. Apply a small amount of pipe joint compound or tape to the external threads of all pipe connections required. Take care not to allow any compound, tape, or other foreign matter inside any of the nipples or openings of the valve or trim components.
3. Viking Easy Riser™ Check Valve Trim Charts are provided with Trim Packages and in the Viking Engineering and Design Data book.

Hydrostatic Test:

The Easy Riser™ Check Valve is manufactured and listed for use at a maximum Water Working Pressure of 175 PSI (1 207 kPa). The valve is factory tested at 350 PSI (2 413 kPa). Easy Riser™ Check Valves may be hydrostatically tested at 200 PSI (1 380 kPa) and/or 50 PSI (345 kPa) above the normal Water Working Pressure, for limited periods of time (two hours), for the purpose of acceptance by the Authority Having Jurisdiction. If air testing is required, do not exceed 40 PSI (276 kPa) air pressure.

10. INSPECTIONS and TESTS

NOTICE: The owner is responsible for maintaining the fire protection system and devices in proper operating condition.

The Viking Easy Riser™ Check Valve and trim must be kept free of foreign matter, freezing conditions, corrosive atmospheres, contaminated water supplies, and any condition that could impair its operation or damage the device.

It is imperative that the system be inspected and tested on a regular basis. The frequency of the inspections may vary due to contaminated water supplies, corrosive water supplies, and corrosive atmospheres. For minimum maintenance and inspection requirements, refer to the National Fire Protection Association Pamphlet that describes care and maintenance of sprinkler systems. In addition, the Authority Having Jurisdiction may have additional maintenance, testing, and inspection requirements which must be followed.

WARNING: Any system maintenance which involves placing a control valve or detection system out of service may eliminate the fire protection capabilities of that system. Prior to proceeding, notify all the Authority Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected areas.

10-A Five Year Internal Inspection

Internal inspection of Check Valves is recommended every five years unless inspections and tests indicate more frequent inspections are required.

Refer to Figure 1.

1. Notify the Authority Having Jurisdiction, remote station alarm monitors, and those in the area affected that the system will be taken out of service. Consideration should be given to employment of a fire patrol in the affected areas.
2. Close the water supply Main Control Valve placing the system out of service.
3. Open the main drain. If necessary, open the system test valve to vent and completely drain the system.
4. Use the appropriate wrench to loosen and remove cover bolts (14), and remove cover/clapper assembly(2-11).
5. Inspect water seat (12). Wipe away all contaminants, dirt, and mineral deposits. Do not use solvents or abrasives.
6. Inspect cover/clapper assembly (2-11) and cover gasket (13). Test hinged clapper (8) for freedom of movement.

Renew or replace damaged or worn parts as required.

Caution: NEVER apply any lubricant to seats, gaskets, or any internal operating parts of the valve. Petroleum based grease or oil will damage rubber components and may prevent proper operation.

7. When Internal inspection of the Easy Riser™ Check Valve is complete, perform step 6 of paragraph 11: MAINTENANCE to re-install cover/clapper assembly (2-11).

11. EASY RISER™ VALVE MAINTENANCE

Refer to Figure 1.

1. Perform steps 1 through 5 of paragraph 10-A FIVE YEAR INTERNAL INSPECTION.

2. To Remove Clapper Rubber (9):

a: Use the appropriate wrenches to loosen and remove hex-head bolt (11), hex nut (6), washer (16), sealing washer (7), and rubber retainer (10).

b: Remove clapper rubber (9) for inspection. If the clapper rubber shows signs of wear such as cracking, cuts, or excessively deep grooves where the rubber contacts the water seat, replace the rubber.

3. To Re-install Clapper Rubber (9):

a: Place clapper rubber (9) over the center hub of rubber retainer (10).

b: Position retainer (10) (with rubber in place) against clapper (8) as shown in Figure 1.

c: Replace and tighten hex-head bolt (11), sealing washer (7), washer (16), and hex nut (6). Sealing washer (7) must be located on top side of clapper (8) as shown in Figure 1. Do not over tighten.

4. To Remove Clapper (8), and/or Hinge Pin (4).

a: Remove hinge pin retaining rings (5), to free hinge pin (4) for removal. After hinge pin (4) is removed, clapper (8) can be removed.

5. To Re-install Clapper (8), and/or Hinge Pin (4).

a: Verify that clapper rubber (9) is in good condition and properly installed.

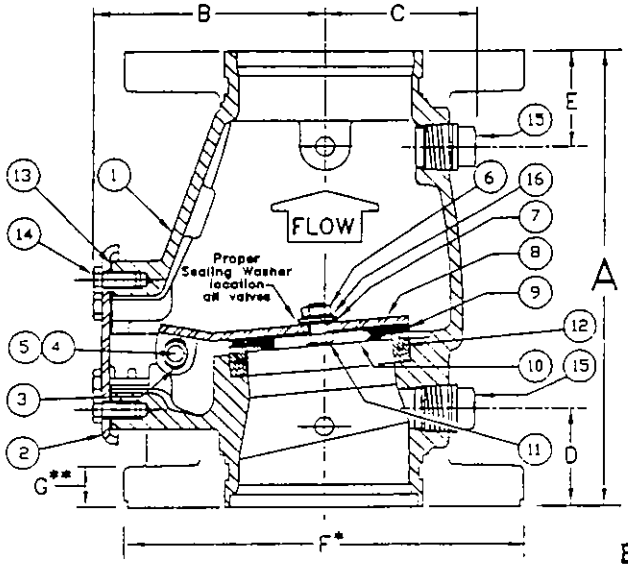
b: Position clapper (8) with the elongated hinge holes aligned between the holes of the hinge bracket welded inside cover (2). The system (top) side of clapper (8) must face the di-

Continued page 815 d

VIKING®

TECHNICAL DATA

EASY RISER™ SWING CHECK VALVE



SIZE	A	B	C	D	E	F*	G**
2-1/2" (65mm)	9" (228,6)	4-1/2" (114,3)	2-5/8" (66,7)	2" (50,8)	2" (50,8)	Flg/Flg & Flg/Grv Not Available	
3" (80mm)	10-1/8" (257)	4-3/4" (120,7)	2-3/4" (69,9)	2" (50,8)	2" (50,8)	7-1/2" (190,5)	3/4" (19,05)
4" (100mm)	10-5/8" (269,9)	5-3/16" (131,8)	3-3/8" (85,7)	2-1/8" (54,0)	2-1/4" (57,2)	9" (228,6)	15/16" (23,81)
6" (150mm)	13-5/8" (346,1)	6-3/4" (171,5)	4-3/8" (111,1)	2-1/4" (57,2)	2-1/4" (57,2)	11" (279,4)	1" (25,4)
8" (200mm)	17" (431,8)	8-3/4" (222,3)	5-3/8" 136,5)	2-1/2" (63,5)	2-7/8" (73,0)	13-1/2" (342,9)	1-1/8" (28,58)

Dimensions shown in parentheses are millimeter.

* For availability of Flg X Flg, Flg X Grv, or Grv X Grv options refer to Table 1.

** 4", 6", and 8" valves are manufactured with sculptured flanges. Dimension indicates thickness of flange at bolt holes.

Figure 1
Easy Riser Check Valve

Item No.	Part Numbers 2-1/2" (65mm)	3" (80mm)	4" (100mm)	6" (150mm)	8" (200mm)	Description	Material	No. Req'd 2-1/2"	3"	4"	6"	8"
1	--	--	--	--	--	Body	Ductile Iron, ASTM A536 (65-45-12)	1	1	1	1	1
2	07801	08526	08527	08528	08529	Cover Assembly	E-Coated HSLA Steel, A715 and Stainless Steel, UNS-S30400	1	1	1	1	1
3	•	•	•	•	None	Bushing	Lubricomp 189 Ryton	2	2	2	2	0
4	05355A	05355A	04900A	04991A	05334A	Clapper Hinge Pin	Stainless Steel, UNS-S30400	1	1	1	1	1
5	05445A	05445A	05445A	05445A	05369A	Hinge Pin Retaining Ring	Stainless Steel, UNS-S15700	2	2	2	2	2
6	•					Clapper Hex Jam Nut: #10-24 UNC	Stainless Steel UNS-S30400	1	0	0	0	0
		•	•			Clapper Hex Jam Nut: 3/8"-16 UNC	Stainless Steel, UNS-S30400	0	1	1	0	0
				•	•	Clapper Hex Jam Nut: 1/2"-13 UNC	Stainless Steel, UNS-S30400	0	0	0	1	1
7	•	•	•	•	•	Sealing Washer	EPDM and Stainless Steel	1	1	1	1	1
8	•	•	•	•	•	Clapper	Teflon Coated HR Stl., UNS-G1018	1	1	1	1	1
9	05360B	08070	08072	08073	08075	Clapper Rubber	EPDM, ASTM D2000	1	1	1	1	1
10	05361B	08071	07659	08074	08076	Clapper Rubber Retainer	Stainless Steel, UNS-S30400	1	1	1	1	1
11	•					H.H.C. Bolt #10-24 UNC X 1/2" (12,7mm) Lg.	Stainless Steel, UNS-S30400	1	0	0	0	0
		•	•			H.H.C. Bolt 3/8"-16 UNC X 3/4" (19.0 mm) Lg.	Stainless Steel, UNS-S30400	0	1	1	0	0
				•	•	H.H.C. Bolt 1/2"-13 UNC X 1" (25.4mm) Lg.	Stainless Steel, UNS-S30400	0	0	0	1	1
12	--	--	--	--		Seat	Brass, UNS-C84400	1	1	1	1	1
13	05354B	05354B	04649B	04992B	05339C	Cover Gasket	SBR Rubber	1	1	1	1	1
14	01517A	01517A	01517A			H.H.C. Bolt 3/8"-16 UNC X 3/4" (19.0mm) Lg.	Steel, Zinc Plated	4	4	6	0	0
				04993A		H.H.C. bolt 1/2"-13 UNC X 7.8" (22.2mm) Lg.	Steel, Zinc Plated	0	0	0	6	0
					01922A	H.H.C. bolt 5/8"-11 UNC X 1-1/4" (31,8mm) Lg.	Steel, Zinc Plated	0	0	0	0	6
15	--	--	--	--	--	1/2" (15mm) NPT Pipe Plug	Steel	2	2	2	2	2
16	None	•	•			Flat Washer	Stainless Steel	0	1	1	0	0
	None			•	•	Flat Washer	Stainless Steel	0	0	0	1	1

-- Indicates part is not available from The Viking Corporation

• Indicates part is available in a Sub-Assembly only. See Sub-Assembly list.

Item	2-1/2"	3"	4"	6"	8"	SUB-ASSEMBLIES AVAILABLE
2-11, 16	08820	08821	08822	08823	08824	Cover/Clapper Assembly
3,6-11, 16	05499B	08518	08519	08520	08521	Clapper Assembly
6,7, 9-11, 16	06343A	08522	08523	08524	08525	Clapper Rubber Kit
6,7,11	08819					Clapper bolt, Sealing Wasner, Nut Assembly
6,7,11, 16		08735	08735	08736	08736	Clapper bolt, Sealing Washer, Flat Washer, Nut Assembly

VIKING®

TECHNICAL DATA

EASY RISER™ SWING CHECK VALVE

rection indicated by the flow arrow stamped inside cover (2).

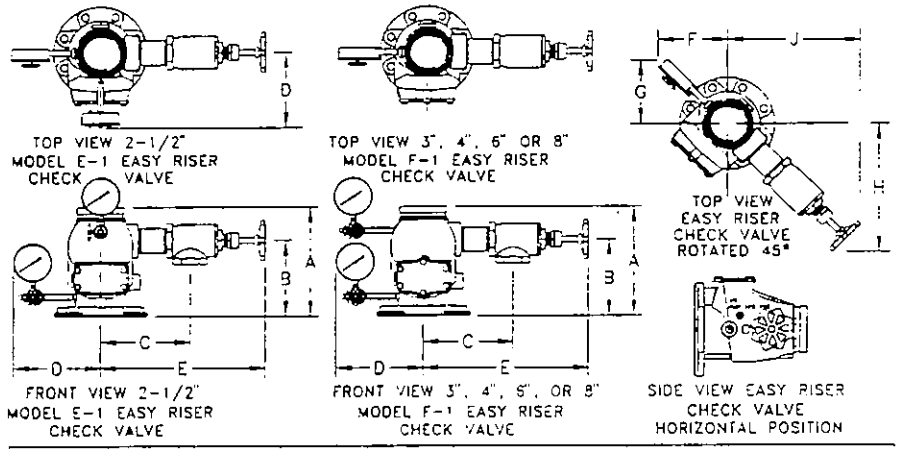
c: Insert hinge pin (4) through the holes at one end of the hinge assembly. Continue to push hinge pin (4) through the holes at the remaining end of the hinge assembly.d: Re-install hinge pin retaining rings (5).

6. To Re-install Cover/Clapper Assembly (2-11)

a: Verify that cover gasket (13) is in position and in good condition.

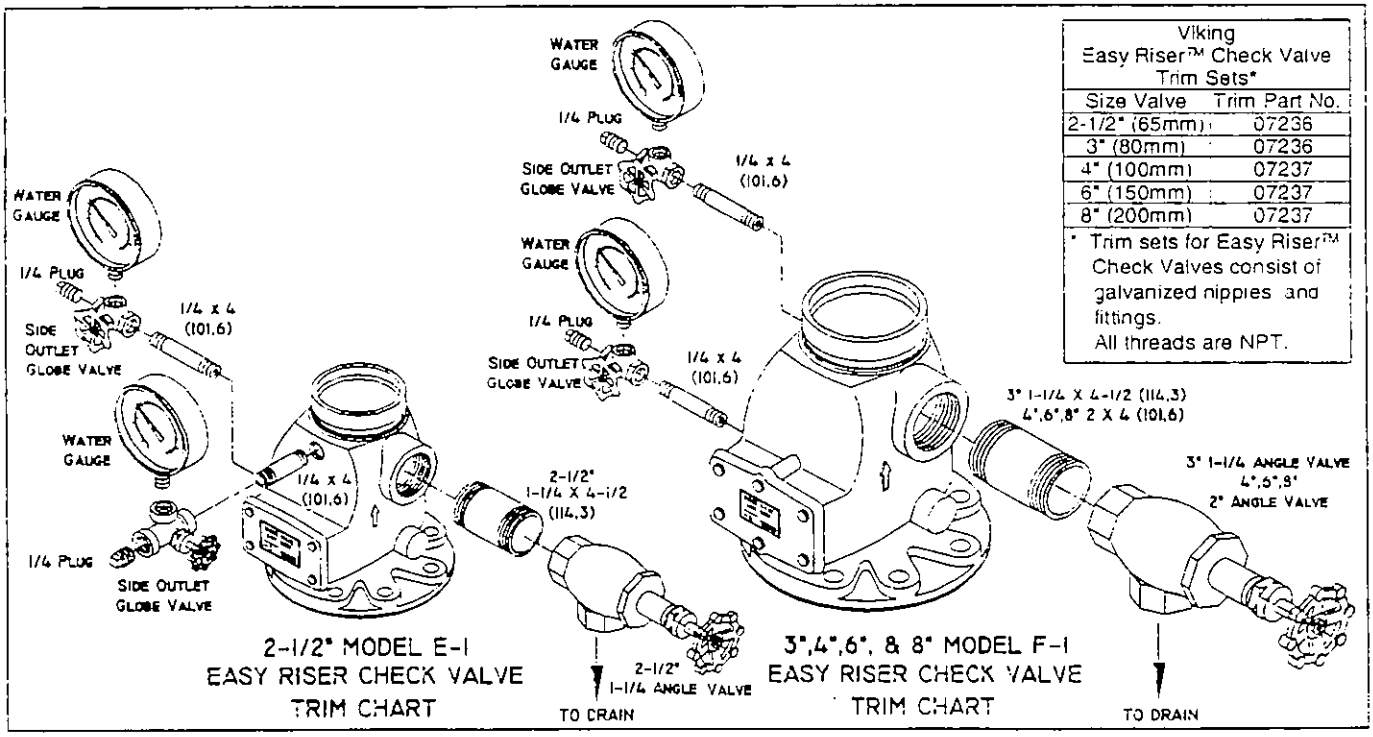
b: Slide cover/clapper assembly (2-11) into the Easy Riser™ Check Valve so clapper rubber (9) contacts water seat (12).

c: Replace cover bolts (14). Use the appropriate wrench to evenly tighten all bolts. Do not over tighten.



SIZE	A	B	C	D	E	F	G	H	J
2-1/2" (65mm)	9" (228.6)	4-1/8" (105)	8-3/4" (222)	8" (203)	15" (381)	5-1/2" (140)	5-1/2" (140)	11-1/4" (286)	11-1/4" (286)
3" (80mm)	10-1/8" (257)	7-1/4" (184)	8-3/4" (222)	8-1/2" (216)	15" (381)	6-3/4" (171)	6-3/4" (171)	11-1/4" (286)	11-1/4" (286)
4" (100mm)	10-5/8" (270)	7-3/8" (187)	9-1/4" (235)	8-3/4" (222)	6-1/2" (419)	6-3/4" (171)	6-3/4" (171)	13" (330)	13" (330)
6" (150mm)	13-3/8" (340)	10-1/8" (257)	9-3/4" (248)	9-3/4" (248)	17" (432)	7-1/2" (191)	7-1/2" (191)	13-1/2" (343)	13-1/2" (343)
8" (200mm)	17" (432)	13-1/8" (333)	11-1/2" (292)	10-3/4" (273)	19" (483)	8-1/4" (210)	8-1/4" (210)	14" (356)	14" (356)

Dimensions in parentheses are millimeter.



Viking Easy Riser™ Check Valve Trim Sets*	
Size Valve	Trim Part No.
2-1/2" (65mm)	07236
3" (80mm)	07236
4" (100mm)	07237
6" (150mm)	07237
8" (200mm)	07237

* Trim sets for Easy Riser™ Check Valves consist of galvanized nipples and fittings.
All threads are NPT.

KENNEDY IRON GATE VALVES. Outside-Screw-and-Yoke (OS&Y)

Underwriters'/Factory Mutual
Underwriters' Canada

Kennedy Outside-Screw-and-Yoke Gate Valves are designed for use in cold water fire line piping systems.

Bonnent markings "UL" and "FM" signify these valves are listed by Underwriters' Laboratories and approved by Factory Mutual Research Corp.

Working Pressures:
2½" through 12" Cold Water, Non-Shock 175 lbs.
14" Cold Water, Non-Shock 150 lbs.

Hydrostatic Test Pressures:
2½" through 12" Seat & Shell 350 psi.
14" Seat & Shell 300 psi.

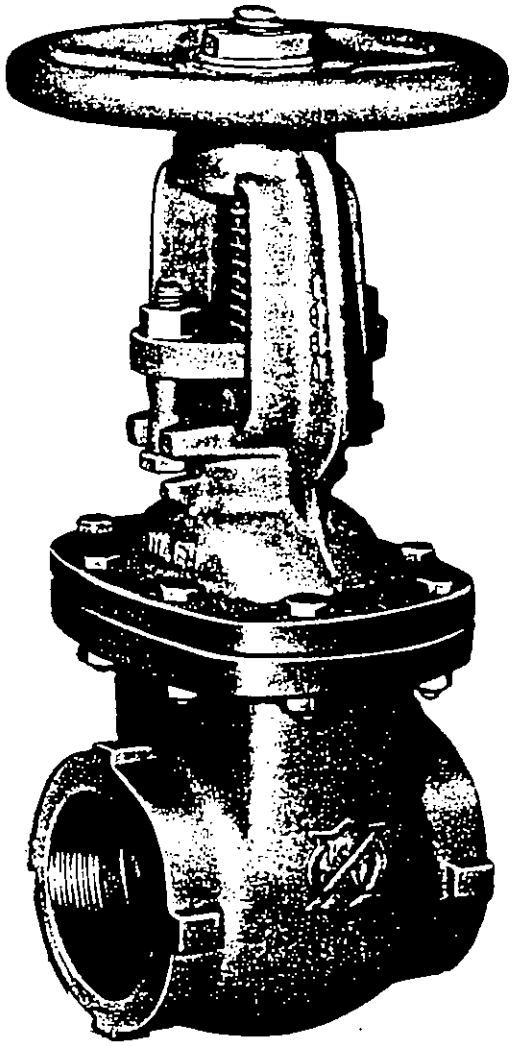
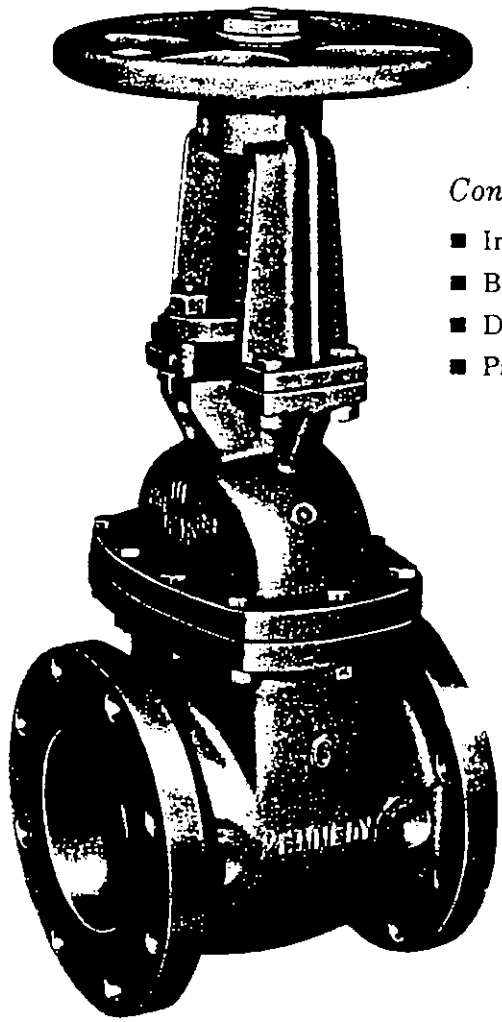


FIG. 67
SCREWED
SIZES: 2½" THRU 4"



Construction:

- Iron Body
- Bronze Mounted
- Double Disc
- Parallel Seats

FIG. 68
FLANGED
SIZES: 2½" THRU 14"

IRON GATE VALVES

Underwriters'/Factory Mutual
Underwriters' Canada

Working pressures:
2½"-12" Cold Water, Non-Shock 175 lbs.
14" — Cold Water, Non-Shock 150 lbs.

- Outside-Screw-and-Yoke
- Bronze Mounted
- Parallel Seats
- Double Disc
- 2½" through 14"

APPROVED BY N.Y.C. BOARD OF STDS.

HYDROSTATIC TEST PRESSURE: 2½" — 12" Seat & Shell — 350 psi.
14" Seat & Shell — 300 psi.

Part No.	DESCRIPTION	MATERIAL	A.S.T.M. SPEC.
1	Lock Nut	Bronze	B-62
2	Handwheel	Cast Iron	A-126 Class B
3	Washer	Bronze	B-62
4	Yoke Nut	Bronze	B-62
5	Stem	Bronze Rod	B-16
6	Yoke	Cast Iron	A-126 Class B
7	Hex Nuts	Bronze	B-16
8	Gland Follower	Cast Iron	A-126 Class B
9	Gland	Bronze	B-62
10	Hex Head Bolts	Steel (Rust Proof)	A-307 Grade B
11	Packing	Graphite	
***12	Bonnet Bushing	Bronze	B-135 Alloy 2*
13	Yoke to Bonnet Bolts & Nuts	Steel	A-307/A563
14	Bonnet	Cast Iron	A-126 Class B
15	Gasket	Composition	
16	Bonnet Bolts & Nuts	Steel	A-307/A563
17	Stem Head	Mang. Bronze	B-584 Alloy C86400
***18	Disc Rings	Bronze	B-62
** 19	Discs	CAST IRON (4"-14")	A-126 Class B
20	Seat Rings	Bronze	B-62
21	Wedge Pins	Bronze	B-62
22	Body	Cast Iron	A-126 Class B
23	Magnet	Ceramic	

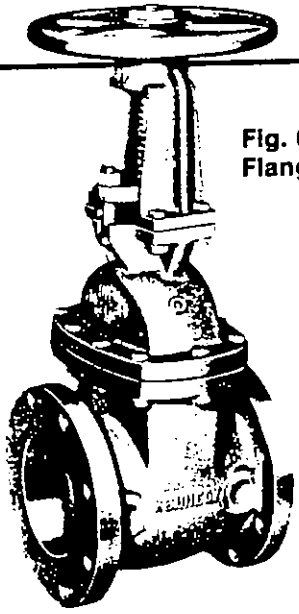
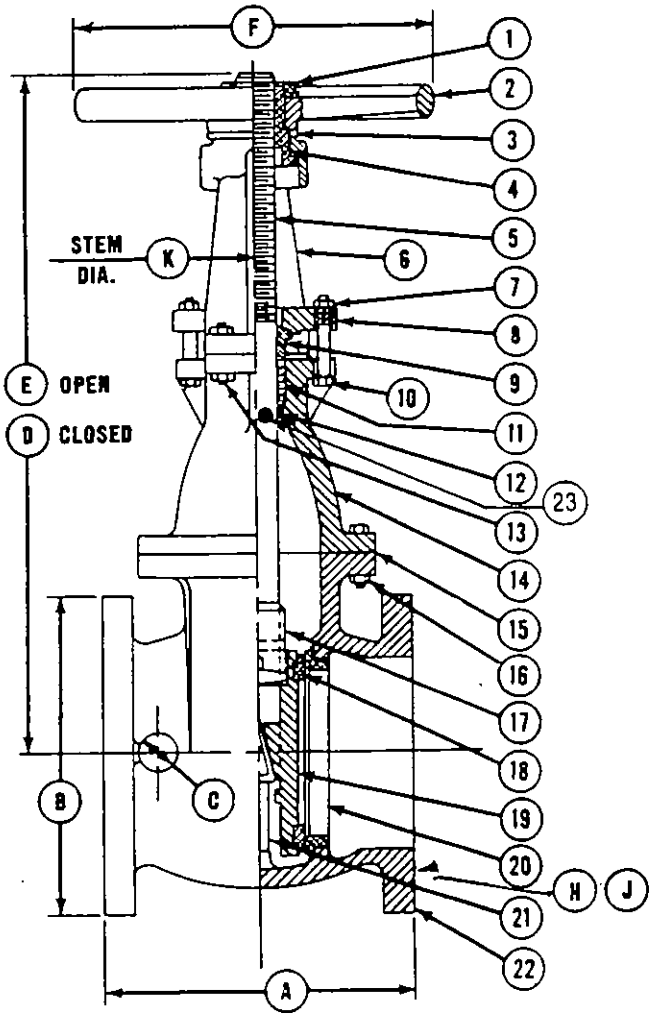


Fig. 68
Flanged Ends



*14" SIZE MATERIAL IS ASTM B-62
**2½-3" HAVE SOLID BRONZE DISCS (B-62)

***Can not be ordered as a separate part

SIZE	A	B	C	D	E	F	G	H	J	K
2½	7½	7	1¾	12⅞	15⅞	8	7	4	⅝	¾
3	8	7½	1¾	15⅞	19¼	10	10½	4	⅝	1⅛
3½	NOT AVAILABLE									
4	9	9	1¾	18¼	22¾	10	14	8	⅝	1⅛
5	10	10	2½	20¾	26⅜	10	17	8	¾	1⅛
6	10½	11	2¼	24⅜	30⅞	12	20	8	¾	1¼
8	11½	13½	2½	31½	40¼	14	26½	8	¾	1⅜
10	13	16	2¼	36¼	47 1/16	16	32½	12	⅞	1½
12	14	19	2½	42½	55 5/16	18	38	12	⅞	1⅝
14	15	21	2½	50⅜	65½	18	45	12	1	1¾

WEIGHTS — POUNDS

SIZE	2½	3	3½	4	5	6	8	10	12	14
FIG. 68	51	70	N/A	109	126	180	314	447	610	890

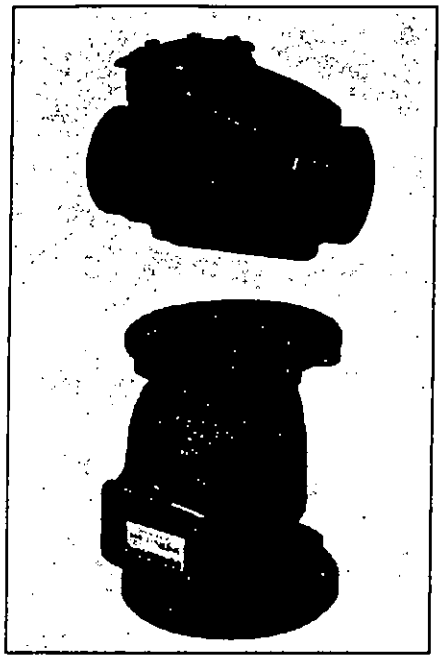
F = DIA. OF HANDWHEEL WHEN SPECIFIED
G = NUMBER OF TURNS TO OPEN
H = NO. OF FLANGE BOLTS
J = DIA. OF FLANGE BOLTS

BODY MARKING
SIZE
YEAR
KENNEDY

BONNET MARKING
UL
◀FM▶ 175

YOKES ARE BOLTED ON IN SIZES LARGER THAN 4 INCH; 4 INCH AND BELOW — THE YOKES ARE CAST INTEGRAL WITH BONNET.
125 LB. AMERICAN STANDARD END FLANGE DRILLING.

VIKING® TECHNICAL DATA — SWING CHECK VALVE



1. PRODUCT NAME

VIKING SWING CHECK VALVE
2-1/2" (65mm) Model D-1
Manufactured 1992 -
3" (80mm), 4" (100mm), 6" (150mm), and 8" (200mm) Model G-1
Manufactured 1994 -

2. MANUFACTURER

THE VIKING CORPORATION
210 N. Industrial Park Road
Hastings, Michigan 49058 U.S.A.
Telephone: (616) 945-9501
(800) 968-9501
Fax Number: (616) 945-9599
From outside U.S.A.
Telephone: +1 (616) 945-9501
Fax Number: +1 (616) 945-9599

3. PRODUCT DESCRIPTION

The Viking Swing Check Valve is a general purpose rubber faced check valve approved for use in fire service systems.
The Check Valve is manufactured with a ductile iron body, brass seat, and a rubber faced clapper assembly hinged to a removable access cover for easy inspection and maintenance.
The valve may be installed vertically or horizontally and is available flanged-flanged, flanged-grooved, or grooved-grooved. Tapped openings are provided in both the inlet and outlet.

4. TECHNICAL DATA

Listings and Approvals
See Approval Chart
Rated to 175 PSI (1 207 kPa) water working pressure.
Factory tested hydrostatically to 350 PSI (2 413 kPa)
Standard flanged connections
ANSI B16.1
Standard Grooved connections
ANSI/AWWA C606
Tapped Bosses:
2-1/2"(65mm) D-1 and 3"(80mm) and 4"(100mm) G-1:
two 1/2" (15mm) NPT
6"(150mm) and 8" (200 mm) G-1:
two 3/4" (20mm) NPT
Material Standards:
Refer to Figure 1

Viking Swing Check Valve Approval Chart

UL[1]	ULC[2]	FM	NYC[3]
Yes	--	Yes	--

[1] UL listed Guide No. HMER
[2] ULC is pending
[3] Acceptance by City of New York Deparent of Buildings is pending

5. AVAILABILITY & SERVICE

The Viking Check Valve and accessories are available through a network of Domestic, Canadian, and International Distributors. See the Yellow Pages of the telephone directory for your closest distributor (listed under "Sprinklers Automatic Fire") or contact The Viking Corporation.

6. GUARANTEES

Viking agrees to repair or replace goods found to be defective in material and workmanship for a period of one year from the date of shipment. For details of warranty, refer to price list.

7. OPERATION (Refer to Figure 1)

Flow through the Viking Swing Check Valve lifts rubber gasketed clapper (8, & 9) off seat (12) to enter the sprinkler piping. When flow through the valve stops, the clapper (8) closes quickly. Rubber gasket (9) forms a tight seal against brass water seat (12) trapping pressure above the clapper and preventing reverse flow from sprinkler piping.

9: INSTALLATION

The Swing Check Valve must be installed in an area not subject to physical damage. When corrosive atmospheres and/or contaminated water supplies are present, it is the owners responsibility to verify compatibility with the Check Valve and associated equipment.
Prior to installing the valve, thoroughly flush the water supply piping to verify that no foreign matter is present.
The Check Valve may be installed in the vertical position with direction of flow up or in the horizontal position with the access cover up.

Table 1

Size Valve	Inlet Type	Outlet Type	Friction Loss*	Shipping Weight	Part No.
2-1/2" (65mm)	Flange	Flange	6 Ft. (1,8m)	28 lbs (13 kg)	08087
2-1/2" (65mm)	Groove	Groove	6 Ft. (1,8m)	16 lbs (7 kg)	05497C
3" (80mm)	Flange	Flange	Not Available		
3" (80mm)	Groove	Groove	10 Ft. (3.1m)	20 lbs. (9 kg)	08536
4" (100mm)	Flange	Flange	13 Ft. (4m)	47 lbs. (21 kg)	08538
4" (100mm)	Groove	Groove	13 Ft. (4m)	27 lbs. (12 kg)	08539
6" (150mm)	Flange	Flange	20 Ft. (6m)	75 lbs. (34 kg)	08542
6" (150mm)	Groove	Groove	20 Ft. (6 m)	51 lbs. (23 kg)	08543
8" (200mm)	Flange	Flange	23 Ft. (7 m)	135 lbs. (61 kg)	08546
8" (200mm)	Groove	Groove	23 Ft. (7 m)	106 lbs (48 kg)	08547

* Expressed in equivalent length of pipe based on Hazen & Williams formula: C=120.

The following Viking Swing Check Valves are available outside of North America with flanges drilled according to European PN10 Specifications.**

Size Valve	Inlet Type	Outlet Type	Friction Loss***	Shipping Weight	Part No.
65mm (2-1/2")	Flange	Flange	1,8mm (6 Ft.)	13 kg (28 lbs)	08857
80mm (3")	Flange	Flange	Not Available		
100mm (4")	Flange	Flange	4 m (13 Ft.)	21 kg (47 lbs.)	08858
150mm (6")	Flange	Flange	6 m (20 Ft.)	34 kg (75 lbs.)	08542
200mm (8")	Flange	Flange	7 m (23 Ft.)	61 kg (135 lbs.)	08860

Outlets are tapped as follows:
65mm (2-1/2"), 80mm(3"), and 100mm(4") Model G-1:
two 1/2" (15mm) NPT
150mm(6"), and 200mm (8") Model G-1:
two 3/4" (20mm) NPT
** Flange diameters and thickness are manufactred according to dimensions indicated on Figure 1.
*** Expressed in equivalent length of pipe based on Hazen & Williams formula: C=120.

VIKING® TECHNICAL DATA SWING CHECK VALVE

Hydrostatic Test:
The Check Valve is manufactured and listed for use at a maximum Water Working Pressure of 175 PSI (1 207 kPa). The valve is factory tested at 350 PSI (2 413 kPa). Check Valves may be hydrostatically tested at 200 PSI (1 380 kPa) and/or 50 PSI (345 kPa) above the normal Water Working Pressure, for limited periods of time (two hours), for the purpose of acceptance by the Authority Having Jurisdiction. If air testing is required, do not exceed 40 PSI (276 kPa) air pressure.

10. INSPECTIONS and TESTS

NOTICE: The owner is responsible for maintaining the fire protection system and devices in proper operating condition.
The Viking Swing Check Valve must be kept free of foreign matter, freezing conditions (when used on wet systems), corrosive atmospheres, contaminated water supplies, and any condition that could impair its operation or damage the device.
It is imperative that the system be inspected and tested on a regular basis. The frequency of the inspections may vary due to contaminated water supplies, corrosive water supplies, and corrosive atmospheres. For minimum maintenance and inspection requirements, refer to the National Fire Protection Association Pamphlet that describes care and maintenance of sprinkler systems. In addition, the Authority Having Jurisdiction may have additional maintenance, testing, and inspection requirements which must be followed.
WARNING: Any system maintenance which involves placing a control valve or detection system out of service may eliminate the fire protection capabilities of that system. Prior to proceeding, notify all the Authority Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected areas.

10-A Five Year Internal Inspection

Internal inspection of Check Valves is recommended every five years unless inspections and tests indicate more frequent inspections are required.
Refer to Figure 1.

1. Notify the Authority Having Jurisdiction, remote station alarm monitors, and those in the area affected that the system will be taken out of service. Consideration should be given to employment of a fire patrol in the affected areas.
2. Close the water supply Main Control Valve placing the system out of service.
3. Open the main drain. If necessary, open the system test valve to vent and completely drain the system.
4. Use the appropriate wrench to loosen and remove cover bolts (14), and remove cover/clapper assembly(2-11).
5. Inspect water seat (12). Wipe away all contaminants, dirt, and mineral deposits. Do not use solvents or abrasives. .
6. Inspect cover/clapper assembly (2-11) and cover gasket (13). Test hinged clapper (8) for freedom of movement.

Renew or replace damaged or worn parts as required.
Caution: NEVER apply any lubricant to seats, gaskets, or any internal operating parts of the valve. Petroleum based grease or oil will damage rubber components and may prevent proper operation.

7. When Internal inspection of the Check Valve is complete, perform step 6 of paragraph 11: MAINTENANCE to re-install cover/clapper assembly (2-11).

11. VALVE MAINTENANCE

Refer to Figure 1.

1. Perform steps 1 through 5 of paragraph 10-A FIVE YEAR INTERNAL INSPECTION.

2. To Remove Clapper Rubber (9):

a: Use the appropriate wrenches to loosen and remove hex-head bolt (11), hex nut (6), sealing washer (7), and rubber retainer (10).
b: Remove clapper rubber (9) for inspection. If the clapper rubber shows signs of wear such as cracking, cuts, or excessively deep grooves where the rubber contacts the water seat, replace the rubber.

3. To Re-install Clapper Rubber (9):

a: Place clapper rubber (9) over the center hub of rubber retainer (10).
b: Position retainer (10) (with rubber in place) against clapper (8) as shown in Figure 1.
c: Replace and tighten hex-head bolt (11), hex nut (6), and sealing washer (7). Sealing washer (7) must be located on top side of clapper as shown in Figure 1. Do not over tighten.

4. To Remove Clapper (8), and/or Hinge Pin (4).

a: Remove hinge pin retaining rings (5), to free hinge pin (4) for removal. After hinge pin (4) is removed, clapper (8) can be removed.

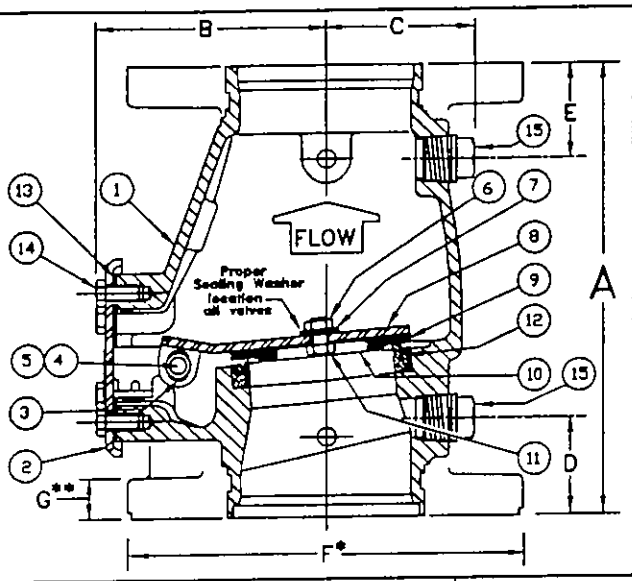
5. To Re-install Clapper (8), and/or Hinge Pin (4).

a: Verify that clapper rubber (9) is in good condition and properly installed.
b: Position clapper (8) with the elongated hinge holes aligned between the holes of the hinge bracket welded inside cover (2). The system (top) side of clapper (8) must face the direction indicated by the flow arrow stamped inside cover (2).
c: Insert hinge pin (4) through the holes at one end of the hinge assembly. Continue to push hinge pin (4) through the holes at the remaining end of the hinge assembly.d: Re-install hinge pin retaining rings (5).

6. To Re-install Cover/Clapper Assembly (2-11)

a: Verify that cover gasket (13) is in position and in good condition.
b: Slide cover/clapper assembly (2-11) into the Check Valve so clapper rubber (9) contacts water seat (12).
c: Replace cover bolts (14). Use the appropriate wrench to evenly tighten all bolts. Do not over tighten.

VIKING® TECHNICAL DATA — SWING CHECK VALVE



SIZE	A	B	C	D	E	F*	G**
2-1/2" (65mm)	9" (228,6)	4-1/2" (114,3)	2-5/8" (66,7)	2" (50,8)	2" (50,8)	7" (177,8)	11/16" (17,46)
3" (80mm)	9-1/2" (241,3)	4-3/4" (120,7)	2-3/4" (69,9)	2" (50,8)	2" (50,8)	Not Available	
4" (100mm)	10-5/8" (269,9)	5-3/16" (131,8)	3-3/8" (85,7)	2-1/8" (54,0)	2-1/4" (57,2)	9" (228,6)	15/16" (23,81)
6" (150mm)	13-5/8" (346,1)	6-3/4" (171,5)	4-3/8" (111,1)	2-1/4" (57,2)	2-1/4" (57,2)	11" (279,4)	1" (25,4)
8" (200mm)	17" (431,8)	8-3/4" (222,3)	5-3/8" 136,5)	2-1/2" (63,5)	2-7/8" (73,0)	13-1/2" (342,9)	1-1/8" (28,58)

Dimensions shown in parentheses are millimeter.

* Flanges are optional.
Flg X Flg or Grv X Grv Swing Check Valves available.

** 4", 6", and 8" valves are manufactured with sculptured flanges. Dimension indicates thickness of flange at bolt holes.

Figure 1
Viking Swing Check Valve

Item No.	Part Numbers 2-1/2" (65mm)	3" (80mm)	4" (100mm)	6" (150mm)	8" (200mm)	Description	Material	No. Req'd 2-1/2"	3"	4"	6"	8"
1	--	--	--	--	--	Body	Ductile Iron, AS A536 (65-45-12)	1	1	1	1	1
2	07797	08562	08563	08564	08565	Cover Assembly	E-Coated HSLA Steel, A715 and Stainless Steel, UNS-S30400	1	1	1	1	1
3	•	•	•	•	None	Bushing	Lubricomp 189 Ryton	2	2	2	2	0
4	05355A	05355A	04900A	04991A	05334A	Clapper Hinge Pin	Stainless Steel, UNS-S30400	1	1	1	1	1
5	05445A	05445A	05445A	05445A	05369A	Hinge Pin Retaining Ring	Stainless Steel, UNS-S15700	2	2	2	2	2
6	•					Clapper Hex Jam Nut#10-24 UNC	Stainless Steel UNS-S30400	1	0	0	0	0
		•	•			Clapper Hex Jam Nut 3/8"-16 UNC	Stainless Steel, UNS-S30400	0	1	1	0	0
				•	•	Clapper Hex Jam Nut 1/2"-13 UNC	Stainless Steel, UNS-S30400	0	0	0	1	1
7	•	•	•	•	•	Sealing Washer	EPDM and Stainless Steel	1	1	1	1	1
8	•	•	•	•	•	Clapper	Teflon Coated HR Stl., UNS-G1018	1	1	1	1	1
9	05360B	05348B	06109B	05801B	08075	Clapper Rubber	EPDM, AS D2000	1	1	1	1	1
10	05361B	08552	06110B	08553	08076	Clapper Rubber Retainer	Stainless Steel, UNS-S30400	1	1	1	1	1
11	•					H.H.C. Bolt #10-24 UNC X 1/2" (12,7mm) Lg.	Stainless Steel, UNS-S30400	1	0	0	0	0
		•	•			H.H.C. Bolt 3/8"-16 UNC X 5/8" (15,9 mm) Lg.	Stainless Steel, UNS-S30400	0	1	1	0	0
				•	•	H.H.C. Bolt 1/2"-13 UNC X 7/8" (22,2mm) Lg.	Stainless Steel, UNS-S30400	0	0	0	1	1
12	--	--	--	--	--	Seat	Brass, UNS-C84400	1	1	1	1	1
13	05354B	05354B	04649B	04992B	05339C	Cover Gasket	SBR Rubber	1	1	1	1	1
14	01517A	01517A	01517A			H.H.C. Bolt 3/8"-16 UNC X 3/4"(19,0mm) Lg.	Steel, Zinc Plated	4	4	6	0	0
				04993A		H.H.C. bolt 1/2"-13 UNC X 7/8" (22,2mm) Lg.	Steel, Zinc Plated	0	0	0	6	0
					01922A	H.H.C. bolt 5/8"-11 UNC X 1-1/4" (31,8mm) Lg.	Steel, Zinc Plated	0	0	0	0	6
15	--	--	--			1/2" (15mm) NPT Pipe Plug	Steel	2	2	2	0	0
				--	--	3/4" (20mm) NPT Pipe Plug	Steel	0	0	0	2	2

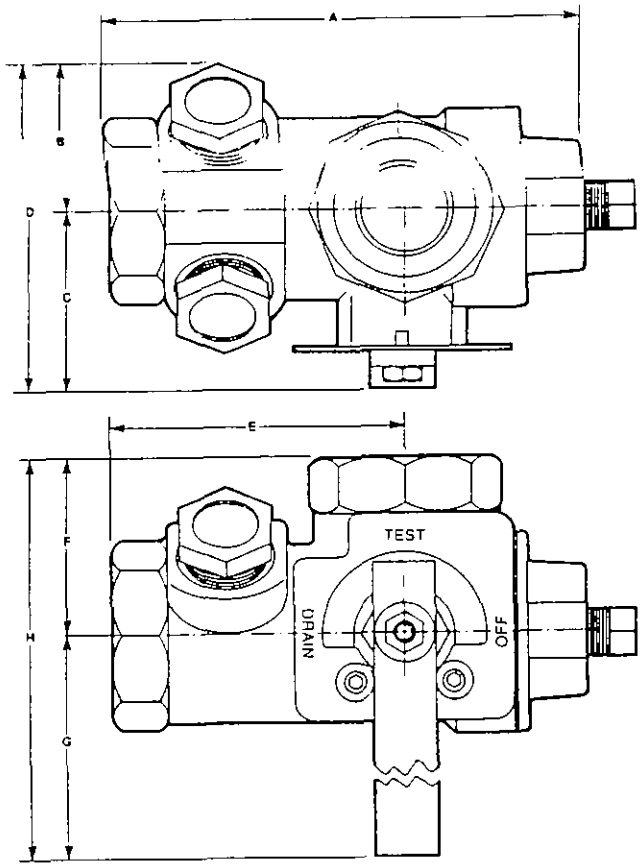
– Indicates part is not available from The Viking Corporation
• Indicates part is available in a Sub-Assembly only. See Sub-Assembly list.

Item	Sub-Assembly Part Number					SUB-ASSEMBLIES AVAILABLE
2-11	08825	08826	08827	08828	08829	Cover/Clapper Assembly
3,6-11	05499B	08554	08555	08556	08521	Clapper Assembly
6,7, 9-11	06343A	08558	08559	08560	08525	Clapper Rubber Kit
6,7,11	08819	08735	08735	08736	08736	Clapper bolt, Sealing Washer, Nut Assembly

TESTANDRAIN™

MODEL 1000

300 PSI



1. COMPLIES WITH NFPA-13 AND NFPA-13D.
2. POSITIVE SHUTOFF.
3. SINGLE HANDLE, SELF LOCKING OPERATION.
4. PERMANENTLY INSTALLED TAMPER RESISTANT ORIFICE.
5. ALL ORIFICE SIZES AVAILABLE.
6. ORIFICE SIZE NOTED ON INDICATOR PLATE.
7. TAPPED ¼" FOR PRESSURE GAUGE.
8. TAPPING AVAILABLE FOR RELIEF VALVE.
9. UL LISTED, FM APPROVED.
10. ULC LISTED.
11. NYC B.S.A.#720-87-SM.

MATERIAL LIST

PART	MATERIAL
HANDLE	STEEL
STEM	ROD BRASS
BALL	C.P. BRONZE
BODY	BRONZE
VALVE SEAT	GLASS IMP. TEFLON
INDICATOR PLATE	STEEL
HANDLE LOCK	SPRING STEEL
SIGHT GLASS (2)	FUSED TEMPERED GLASS

ORIFICE SIZE PROVIDED _____

DIMENSIONS — INCHES

SIZE	A	B	C	D	E	F	G	H
¾	5 1/16	1 3/4	2 3/8	4 1/8	3 3/8	1 3/4	4 9/16	6 5/16
1	5 1/16	1 3/4	2 3/8	4 1/8	3 3/8	1 3/4	4 9/16	6 5/16
1¼	5 7/16	1 3/4	2 7/8	4 5/8	3 5/16	1 15/16	5 1/2	7 7/16
1½	5 15/16	1 3/4	3 1/16	5 1/8	3 1/2	2 3/8	8 1/16	10 7/16
2	5 15/16	1 3/4	3 1/16	5 7/16	3 1/2	2 3/8	8 1/16	10 7/16

JOB NAME: _____

ARCHITECT: _____

ENGINEER: _____

CONTRACTOR: _____

PATENTS PENDING

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POTTER-ROEMER, INC.

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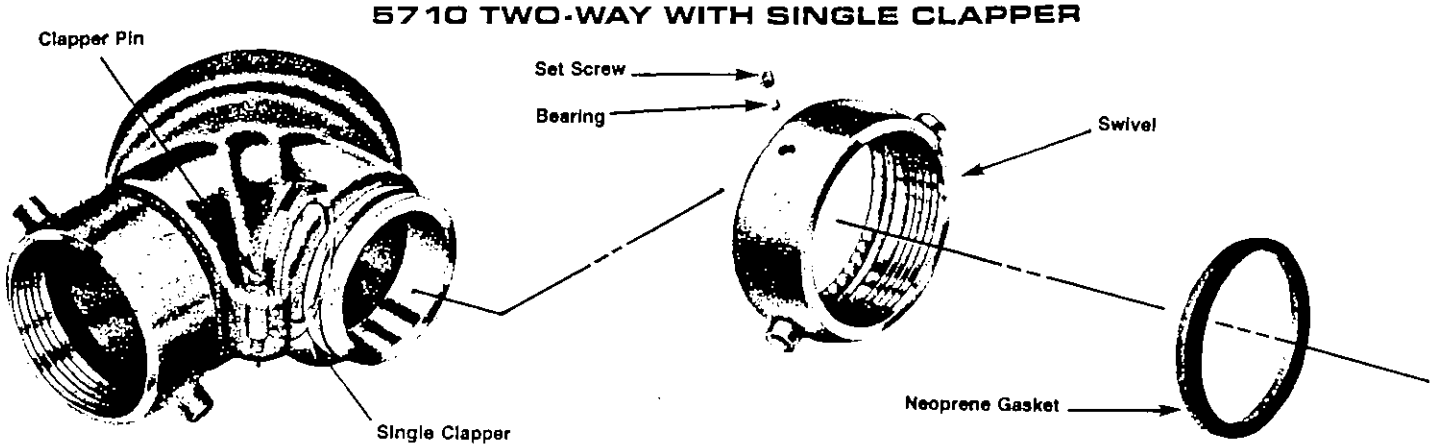
EXPOSED FIRE DEPT. INLET CONNECTIONS — CLAPPER TYPE

5710 TWO-WAY WITH SINGLE CLAPPER



FM

5710

FM

5715

TWO-WAY WITH SINGLE CLAPPER

FUNCTION: Used as an auxiliary inlet connection providing 500 G.P.M. minimum (Ref. NFPA No. 14) to supplement the fire protection water supply. Swing clapper provides unobstructed waterway. Exposed design is an economical method of satisfying fire dept. inlet requirements.

REGULARLY FURNISHED: Cast brass two-way inlet body, swing clapper and pin lug swivel. Back or angle outlet as selected by figure number. Lettering as selected. Size 4" × 2½" × 2½".

OPTIONAL FINISHES:
- **B** Polished Brass
- **C** Rough Chrome Plated
- **D** Polished Chrome Plated

LETTERING AVAILABLE:
AUTO. SPKR.
STANDPIPE

SPECIFY thread and lettering

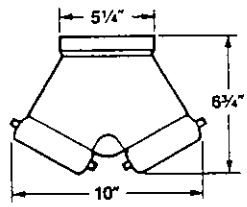


Fig. 5710 . . . Back Outlet

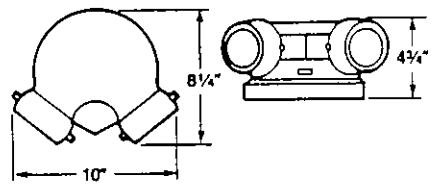
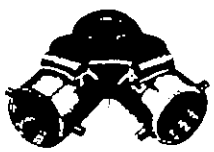


Fig. 5715 . . . Angle Outlet

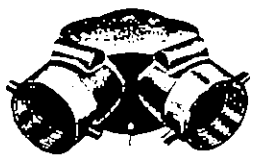
TWO-WAY WITH DOUBLE CLAPPERS

FUNCTION: Used as an auxiliary inlet connection providing 500 G.P.M. minimum (Ref. NFPA No. 14) to supplement the fire protection water supply. Drop clappers provide unobstructed waterway. Exposed design is an economical method of satisfying fire dept. inlet requirements.

REGULARLY FURNISHED: Cast brass two-way inlet body, drop clappers and pin lug swivels. Size and outlet as selected by figure number. Lettering as selected.



5720 SERIES



5730 SERIES

5735

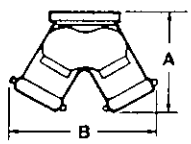


Fig. 5720 Series
Back Outlet

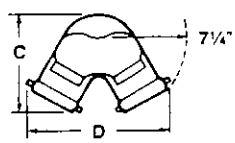


Fig. 5730 Series
90° Angle Outlet

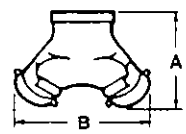


Fig. 5735
45° Angle Outlet

Outlet Locations Back Fig. No	Angle Fig. No.	Size	A	B	C	D
5721	5731	4½ x 2½ x 2½	7½	11½	8½	11¼
5722	5732	6 x 2½ x 2½	9½	10½	9	10¾
5723	5733	4 x 3 x 3	9½	11½	9½	11
5724	5734	6 x 3 x 3	10	11	10½	11
5735	45° Angle	4 x 2½ x 2½	8	11	—	—

ALL DIMENSIONS IN INCHES

OPTIONAL FINISHES:
- **B** Polished Brass
- **C** Rough Chrome Plated
- **D** Polished Chrome Plated

LETTERING AVAILABLE:
AUTO. SPKR.
STANDPIPE

SPECIFY thread and lettering

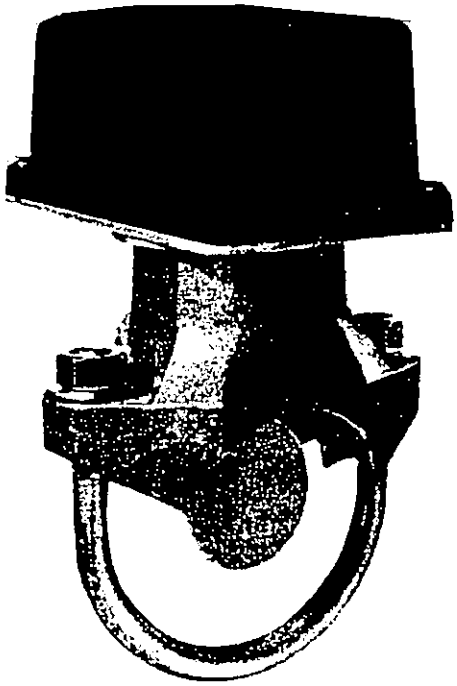
NOTE: ALWAYS INDICATE HOSE THREAD REQUIREMENTS

POTTER

VSR-F
VANE TYPE WATERFLOW SWITCH WITH RETARD

Potter Electric Signal Company
2081 Craig Rd.,/P. O. Box 28480
St.Louis, Mo. 63146
(314)878-4321 / (800)325-3936

Potter Electric Signal & Mfg. LTD
1967 Leslie Street
Don Mills, Ontario, Canada M3B2M3
(416) 441-1833



U.S. PAT. NO. 3921989
CANADIAN PAT. NO. 1009680
OTHERS PATENTS PENDING

U.L. LISTED & FM APPROVED

Service Pressure: Up to 450 PSI

Minimum Flow Rate for Alarm: 10 GPM

Maximum Surge: 18 FPS

Contact Ratings: Two sets of S.P.D.T. (Form C)
10.00 Amp. @ 125/250V. AC
2.00 Amp.@ 0-30V. DC Resistive

Conduit Entrances: Two openings for 1/2" conduit

Environmental Limitations: 40°F/120°F , 4.5°C/49°C

Caution: This device is not intended for applications in explosive environments

Sizes Available: For schedules 10 thru 40 sizes 2" thru 8"

Service Use:

Automatic Sprinkler	NFPA-13
One or two Family Dwelling	NFPA-13D
Residential Occupancies up to 4 Stories	NFPA-13R
Central Station	NFPA-71
Local	NFPA-72A
Auxiliary	NFPA-72B
Remote Station	NFPA-72C
Proprietary	NFPA-72D

Optional: Cover Tamper Switch Order Stk. No. 0090018

GENERAL INFORMATION

The Model VSR-F is a vane type waterflow switch for use on wet sprinkler systems. It is UL Listed and FM approved for use on steel pipe; schedules 10 through 40 sizes 2" thru 8".

The unit may also be used as a sectional waterflow detector on large systems.

The unit contains two single pole, double throw, snap action switches and an adjustable pneumatic retard. The switches are actuated when a flow of 10 gallons per minute or more occurs downstream of the device. The flow condition must exist for a period of time necessary to overcome the selected retard period.

ENCLOSURE: The unit is enclosed in a general purpose, cast aluminum housing. The cover is held in place with two tamper resistant screws which require a special key for removal. A field installable cover tamper switch is available as an option which may be used to indicate unauthorized removal of the cover. See Bulletin 763 for installation instructions of this switch.

INSTALLATION: See Fig.2
These devices may be mounted on a horizontal or vertical pipe. On horizontal pipe they should be installed on the top side of the pipe where they will be accessible. The units should not be installed within 6 inches of a fitting which changes the direction of the waterflow or within 24 inches of a valve or drain.

Drain the system and drill a hole in the pipe using a circular saw in a slow speed drill. The 2" and 2 1/2" devices require a hole with a min. dia. of 1 1/8" to a max. dia. of 1 5/16". All other sizes require a hole with a min. dia. of 1 7/8" to a max. dia. of 2 1/16".

Clean the inside pipe of all growth or other material for a distance equal to the pipe diameter on either side of the hole.

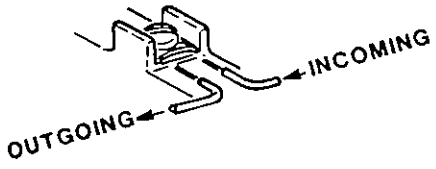
Roll the vane so that it may be inserted into the hole; do not bend or crease it. Insert the vanes so that the arrow on the saddle points in the direction of the waterflow. Install the saddle strap and tighten nuts alternately to an eventual 50 ft-lbs.of torque. See Fig. 2. The vane must not rub the inside of the pipe or bind in any way.

POTTER

VSR-F
VANE TYPE WATERFLOW SWITCH WITH RETARD

FIG. 1

SWITCH TERMINAL CONNECTIONS
CLAMPING PLATE TERMINAL



DWG #5400710-31

CAUTION

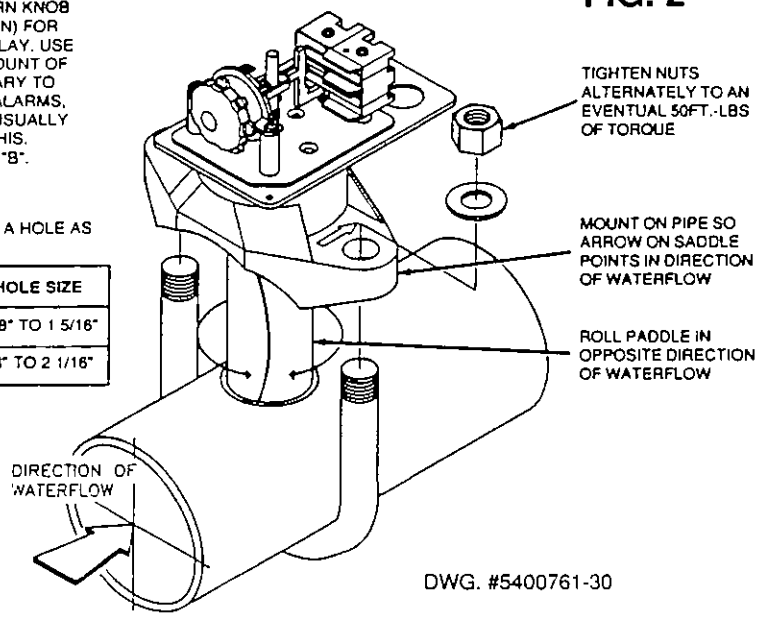
AN UNINSULATED SECTION OF A SINGLE CONDUCTOR IS NOT PERMITTED TO BE LOOPED AROUND THE TERMINAL AND SERVE AS TWO SEPARATE CONNECTIONS. THE WIRE MUST BE SEVERED TO SERVE AS TWO SEPARATE CONNECTIONS, THEREBY PROVIDING SUPERVISION OF THE CONNECTIONS IN THE EVENT THAT THE WIRE BECOMES DISLODGED FROM UNDER TERMINAL.

RETARD ADJUSTMENT: TO CHANGE TIME TURN KNOB (EITHER DIRECTION) FOR DESIRED TIME DELAY. USE THE MINIMUM AMOUNT OF RETARD NECESSARY TO PREVENT FALSE ALARMS. A "B" SETTING IS USUALLY ADEQUATE FOR THIS. FACTORY SET AT "B".

TO INSTALL, DRILL A HOLE AS INDICATED:

PIPE SIZE	HOLE SIZE
2" TO 2 1/2"	1 1/8" TO 1 5/16"
3" TO 8"	1 7/8" TO 2 1/16"

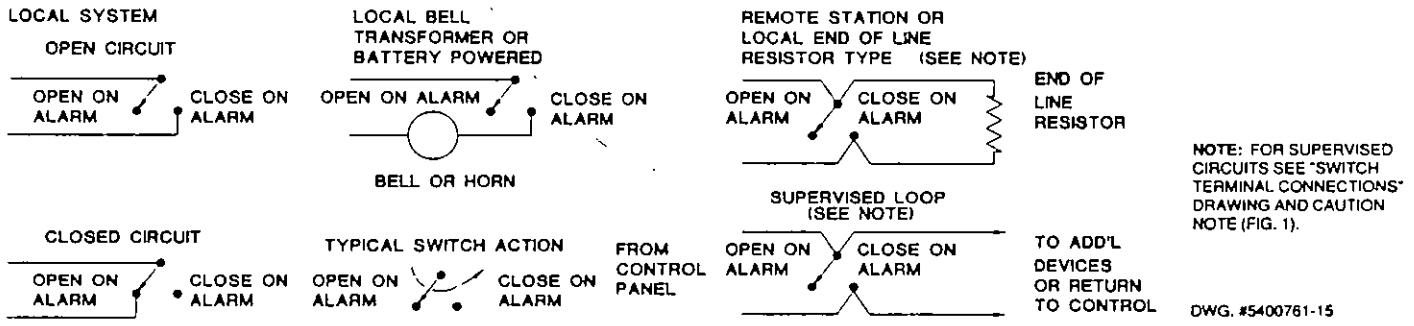
FIG. 2



DWG. #5400761-30

APPROX. RETARD SETTINGS (IN SEC.)					
0	A	B	C	D	E
0	10-25	20-40	35-55	50-70	60-90

FIG. 3 TYPICAL ELECTRICAL CONNECTIONS



DWG. #5400761-15

NOTE: The Model VSR-F has two switches, one can be used to operate a central station, proprietary or remote signaling unit, while the other contact is used to operate a local audible or visual annunciator.

TESTING

The frequency of testing for the model VSR-F and its associated protective monitoring system should be in accordance with applicable NFPA Standards and/or the authority having jurisdiction, but under no circumstances less than bi-monthly.

If provided, the "Inspectors Test" valve, that is usually located at the end of the most remote branch line, should always be used for Test purposes.
If there are no provisions for testing the operation of the flow detection device on the system, application of the VSR-F is not recommended or advisable.

A minimum flow of 10 gpm is required to activate this device.

IMPORTANT NOTICE
Please advise the person responsible for testing of the Fire Protection System that this system must be tested in accordance with the "Testing" Instructions.

PRINTED IN USA

The first Sch. 10 and Sch. 40 sprinkler pipe to be fully UL Listed and FM approved.

SPRINKLER PIPE

AMERICAN TUBE & PIPE™
COMPANY, INCORPORATED

1-800-877-8827

Sch. 10 and Sch. 40

Fully UL listed and FM approved sprinkler pipe

QUALITY ASSURANCE

American Tube & Pipe is the first manufacturer to offer UL listed, FM approved Sch. 10 and Sch. 40 sprinkler pipe. Although these products do not require separate approvals, American Tube & Pipe gives you the extra quality assurance you demand. Our Sch. 10 (1¼"-4") pipe and Sch. 40 (1"-2") pipe have passed the same thorough lab testing as our other listed pipe products, and receive periodic mill inspections from both UL and FM agents to ensure consistent quality.

AMERICAN MADE

Meets "Buy American" requirements and is available through distributors nationwide.

SPECIFICATIONS

American Tube & Pipe's Sch. 10 and Sch. 40 pipe are in compliance with the following:

ASTM A135 ASTM A795
NFPA 13

UL Listed

Factory Mutual System Approved

Both pipe products also meet the stringent requirements for the following tests:

- Welded Outlets
- Hydrostatic Pressure
- Side Wall Rupture
- Vibration Test

SUPERIOR COATING

Our exclusive "Diamond Coat" U.V. cured acrylic finish offers a clean, durable surface that outlasts typical lacquers. It is also paint-ready for custom color applications without special preparation.

GALVANIZED PIPE

American Tube & Pipe products can be "hot-dip" galvanized to meet FM requirements for dry systems in accordance with the zinc coating specifications of ASTM A795 or A53.

SPECIFICATIONS

NPS	O.D.		I.D.		NOM. WALL		WT/FT		PCS/LIFT
	INCH	MM.	INCH	MM.	INCH	MM.	LBS.	KG.	
SCHEDULE 10 PIPE									
1¼"	1.660	42.2	1.442	36.6	.109	2.77	1.81	.82	61
1½"	1.900	48.3	1.682	42.7	.109	2.77	2.08	.95	61
2"	2.375	60.3	2.157	54.8	.109	2.77	2.64	1.20	37
2½"	2.875	73.0	2.635	66.9	.120	3.05	3.53	1.61	19
3"	3.500	88.9	3.260	82.8	.120	3.05	4.33	1.97	19
4"	4.500	114.3	4.260	108.2	.120	3.05	5.61	2.55	19
*6"	6.625	168.3	6.357	161.5	.134	3.40	9.29	4.22	10
*8"	8.625	219.1	8.249	209.5	.188	4.80	16.94	7.69	7
SCHEDULE 40 PIPE									
1"	1.315	33.4	1.049	26.6	.133	3.38	1.68	.76	61
1¼"	1.660	42.2	1.380	35.1	.140	3.56	2.27	1.03	37
1½"	1.900	48.3	1.610	40.9	.145	3.68	2.72	1.24	37
2"	2.375	60.3	2.067	52.5	.154	3.91	3.65	1.66	19

*The 6" and 8" Schedule 10 pipe offered by American Tube & Pipe is sold under license from another domestic manufacturer and meets ASTM A135 and NFPA 13.

2525 N. 27th Ave.
Phoenix, AZ 85009

101 E. Broadway
Kokomo, IN 46901

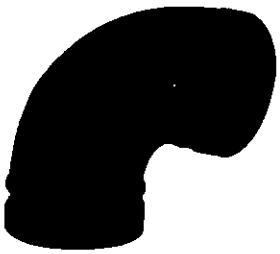
Customer Service
1-800-877-8823
1-602-272-6606
FAX 602-269-1324

AMERICAN TUBE & PIPE™
COMPANY, INCORPORATED

6.95 5.000

Grooved IPS Fittings

Victaulic fittings are designed specifically for use in grooved piping systems.



Victaulic offers a broad line of fittings in sizes through 24" (600 mm) in a variety of straight and reducing styles. Most standard fittings are cast of durable ductile iron to precise tolerances. Victaulic standard fittings pressure ratings conform to the ratings of Victaulic Style 77 couplings.

All fittings are supplied with grooves or shoulders to permit fast installation without field preparation. The grooved design permits flexibility for easy alignment. *These fittings are not intended for use with Victaulic couplings for plain end pipe (refer to page 55 for fittings available for plain end applications).*

Fittings are provided in various materials including malleable iron, ductile iron, steel or segmentally welded steel depending on styles and size. Fittings are painted orange enamel with galvanized optionally available, contact Victaulic for details.

Victaulic fittings are designed specifically for use in grooved piping systems. Fittings are provided grooved or with shoulders conforming to standard steel pipe outside diameters. When connecting wafer or lug-type butterfly valves directly to Victaulic fittings with 741 or 743 Vic-Flange® adapters, check disc clearance dimensions with I.D. dimension of fitting.

Request 07.01.

Alternate Materials

Stainless Steel – Grooved end fittings are available in Schedule 10 Type 316 stainless steel (Schedule 5, 40 and Type 304 optionally available) in various sizes. *Fitting center-to-end dimensions will vary depending upon type and schedule.*

Request 17.04 for details.

Aluminum – Grooved end fittings are available in aluminum alloy 356 T6, in sizes from 1 - 8" (25 - 200 mm). Request 21.03 or contact Victaulic for details.

Alternate Styles

EndSeal® "ES" Fittings – EndSeal fittings are available in 2 - 12" (50 - 300 mm) for use with "ES" grooved pipe and HP-70ES EndSeal or Fire-R™ couplings. "ES" fittings are painted green for easy identification. EndSeal (and standard) fittings may be easily internally coated (by others) for severe service requirements. Always specify "ES EndSeal fittings" when ordering.

Request 07.04 for information on EndSeal fittings.

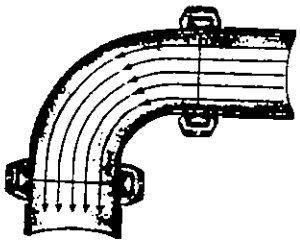
Fittings Machined for Rubber or Urethane Lining (MRL) – For severe abrasive services, Victaulic fittings may be rubber or urethane lined (by others). Lining may be inside diameter/end (abrasion resistance) or wrap-around (corrosion and/or abrasion) machined.

Request 25.03 or contact Victaulic for specific details.

Flow Data

Friction Resistance

The chart expresses the frictional resistance of various Victaulic fittings as equivalent feet of straight pipe. Fittings not listed can be estimated from the data given, for example, a 22½° elbow is approximately one-half the resistance of a 45° elbow. Values of mid-sizes can be interpolated.



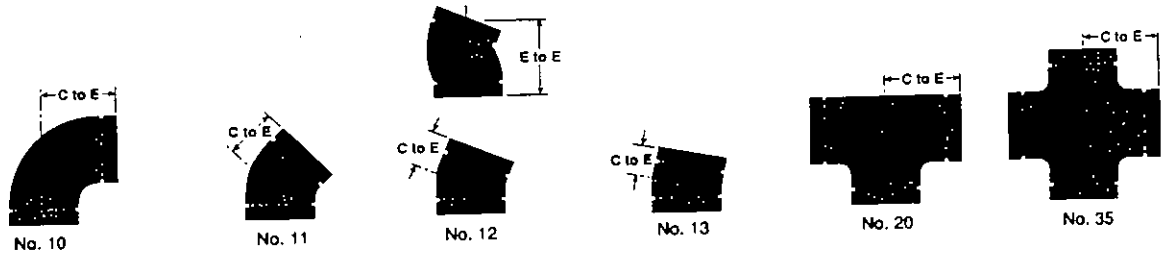
Pipe Inches/millimeters		Equivalent Feet/meters of Straight Pipe					
		Elbows				Tees	
		90° Elbows		45° Elbows			
Nominal Size	Actual Size	No. 10 Standard Radius	No. 100 1½ D Long Radius	No. 11 Standard Radius	No. 110 1½ D Long Radius	Branch	Run
1 25	1.315 33.7	1.7 0.5	– –	0.8 0.2	– –	4.2 1.3	1.7 0.5
2 50	2.375 60.3	3.5 1.1	2.5 0.8	1.8 0.5	1.1 0.3	8.5 2.6	3.5 1.1
3 80	3.500 88.9	5.0 1.5	3.8 1.2	2.6 0.8	1.6 0.5	13.0 4.0	5.0 1.5
4 100	4.500 114.3	6.8 2.1	5.0 1.5	3.4 1.0	2.1 0.6	16.0 4.9	6.8 2.1
5 125	5.563 141.3	8.5 2.6	– –	4.2 1.3	– –	21.0 6.4	8.5 2.6
6 150	6.625 168.3	10.0 3.0	7.5 2.3	5.0 1.5	3.0 0.9	25.0 7.6	10.0 3.0
8 200	8.625 219.1	13.0 4.0	9.8 3.0	6.5 2.0	4.0 1.2	33.0 10.1	13.0 4.0
10 250	10.750 273.0	17.0 5.2	12.0 3.7	8.3 2.5	5.0 1.5	41.0 12.5	17.0 5.2
12 300	12.750 323.9	20.0 6.1	14.5 4.4	10.0 3.0	6.0 1.8	50.0 15.2	20.0 6.1
14 350	14.000 355.6	# #	23.0 7.0	# #	18.0 5.5	60.0 18.3	17.0 5.2
16 400	16.000 406.4	# #	26.0 7.9	# #	20.0 6.1	70.0 21.3	20.0 6.1
18 450	18.000 457.0	# #	29.0 8.8	# #	23.0 7.0	80.0 24.4	23.0 7.0
20 500	20.000 508.0	# #	33.0 10.1	# #	26.0 7.9	90.0 27.4	25.0 7.6
24 600	24.000 610.0	# #	40.0 12.2	# #	30.0 9.1	30.5 9.3	34.0 10.4

Contact Victaulic for details.

IPS CARBON STEEL GROOVED FITTINGS

Fittings

(Ductile iron)



No. 10 No. 11 No. 12 No. 13 No. 20 No. 35

Nominal Size Inches mm	No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 20 Tee		No. 35 Cross (SW)	
	C to E Inches mm	Aprx. Wgt. Ea. Lbs. kg	C to E Inches mm	Aprx. Wgt. Ea. Lbs. kg	C to E Inches mm	Aprx. Wgt. Ea. Lbs. kg	C to E Inches mm	Aprx. Wgt. Ea. Lbs. kg	C to E Inches mm	Aprx. Wgt. Ea. Lbs. kg	C to E Inches mm	Aprx. Wgt. Ea. Lbs. kg
¾ 20	2.25 57	0.5 0.2	1.50 38	0.5 0.2	– –	– –	– –	– –	2.25 57	0.6 0.3	2.25 57	0.9 0.4
1 25	2.25 57	0.6 0.3	1.75 44	0.6 0.3	3.25● 83	0.6 0.3	1.38 35	0.3 sw 0.1	2.25 57	1.0 0.5	2.25 57	1.3 0.6
1¼ 32	2.75 70	1.0 0.5	1.75 44	0.9 0.4	1.75 44	0.8 sw 0.4	1.38 35	0.5 sw 0.2	2.75 70	1.5 0.7	2.75 1.0	2.1 1.0
1½ 40	2.75 70	1.1 0.5	1.75 44	0.9 0.4	1.75 44	0.8 sw 0.4	1.38 35	0.5 sw 0.2	2.75 70	2.0 0.9	2.75 70	2.5 1.1
2 50	3.25 83	2.0 0.9	2.00 51	1.8 0.8	3.75● 95	1.4 0.7	1.38 35	1.0 0.5	3.25 83	2.8 1.3	3.25 83	3.8 d 1.7
2½ 65	3.75 95	4.9 2.2	2.25 57	2.2 1.0	4.00● 102	1.5 0.7	1.50 38	1.5 sw 0.7	3.75 95	4.8 2.1	3.75 95	6.1 2.8
3 ‡	3.75 95	5.0 2.3	2.25 57	3.4 1.5	– –	– –	– –	– –	3.75 95	7.3 3.3	– –	– –
3 80	4.25 108	4.9 2.2	2.50 64	3.1 1.4	4.50● 114	3.1 1.4	1.50 38	2.1 1.0	4.25 108	6.1 2.8	4.25 108	10.5 4.8
3½ 90	4.50 114	5.0 2.6	2.75 70	4.3 2.0	2.50 64	4.0 sw 1.8	1.75 44	2.7 sw 1.2	4.50 114	7.9 3.6	4.50 114	11.5 5.2
4 100	5.00 127	8.5 3.9	3.00 76	5.6 2.5	2.88 73	5.6 2.5	1.75 44	3.6 1.6	5.00 127	12.6 5.7	5.00 127	15.8 7.2
4¼ ‡	5.00 127	8.5 3.9	3.00 76	5.6 2.5	– –	– –	– –	– –	5.00 127	12.6 5.7	– –	– –
4½ 120	5.25 133	10.0 sw 4.5	3.13 79	6.0 sw 2.7	3.50 89	6.6 3.0	1.88 48	4.2 sw 1.9	5.25 133	15.0 sw 6.8	5.25 133	18.5 8.4
5 125	5.50 140	11.4 5.2	3.25 83	8.3 3.8	2.88 73	7.8 sw 3.5	2.00 51	5.0 sw 2.2	5.50 140	17.8 8.1	5.50 140	20.0 9.1
5¼ ‡	5.50 140	11.4 5.2	3.25 83	8.3 3.8	– –	– –	– –	– –	5.50 140	17.8 8.1	– –	– –
5½ ‡	5.50 140	11.4 5.2	3.25 83	8.3 3.8	– –	– –	– –	– –	5.50 140	17.8 8.1	– –	– –
6 150	6.50 165	18.4 8.3	3.50 89	11.7 5.3	6.25● 159	12.2 5.5	2.00 51	7.0 3.2	6.50 165	27.3 12.4	6.50 165	28.0 12.7
6¼ ‡	6.50 165	18.6 8.4	3.50 89	11.7 5.3	– –	– –	– –	– –	6.50 165	27.1 12.3	– –	– –
6½ ‡	6.50 165	18.8 8.5	3.50 89	11.8 5.4	3.13 79	11.4 5.2	2.00 51	7.4 3.4	6.50 165	27.1 12.3	6.50 165	28.0 12.7
8 200	7.75 197	35.1 15.9	4.25 108	20.4 9.3	7.75● 197	20.0 9.1	2.00 51	10.1 4.6	7.75 197	47.6 21.6	7.75 197	48.0 21.6
10 250	9.00 229	50.0 22.7	4.75 121	37.5 17.0	4.38 111	30.0 sw 13.6	2.13 54	11.8 sw 3.4	9.00 229	73.0 33.1	9.00 229	121.5 55.1
12 300	10.00 254	74.0 33.6	5.25 133	66.7 30.3	4.88 124	40.0 sw 18.1	2.25 57	29.3 sw 13.3	10.00 254	99.0 44.9	10.00 254	110.0 49.9
14 350	# #	# #	# #	# #	5.00 127	46.0 sw 20.9	3.50 89	32.0 sw 14.5	11.00 279	151.0 sw 68.5	11.00 279	198.0 89.8
16 400	# #	# #	# #	# #	5.00 127	58.0 sw 26.3	4.00 102	42.0 sw 19.1	12.00 305	188.0 sw 85.3	12.00 305	250.0 113.4
18 450	# #	# #	# #	# #	5.50 140	65.0 sw 29.5	4.50 114	53.2 sw 24.1	15.50 394	263.0 sw 119.3	15.50 394	310.0 140.6
20 500	# #	# #	# #	# #	6.00 152	78.6 sw 36.0	5.00 127	65.0 sw 29.5	17.25 438	339.0 sw 153.8	17.25 438	452.0 205.0
24 600	# #	# #	# #	# #	7.00 178	140.0 sw 63.5	6.00 152	60.0 sw 27.2	20.00 508	473.0 sw 214.6	20.00 508	795.0 360.6

14", 16", 18", 20", 24" (350 - 600 mm) elbows (90°, 45°) are 1½-D long radius forged steel elbows No. 100 and No. 110.

See page 15 for 1D radius elbows.

Long radius 3D, 5D and 6D are available. Request 07.02.

(sw) Segmentally welded steel

(d) Ductile iron, all others segmentally welded steel

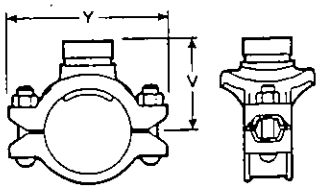
● Gooseneck design, end-to-end dimension

‡ O.D. Dimension.

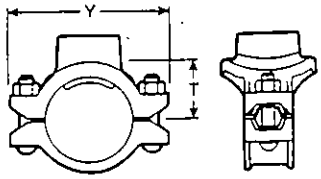
IPS CARBON STEEL HOLE CUT PRODUCTS

Styles 920 & 921

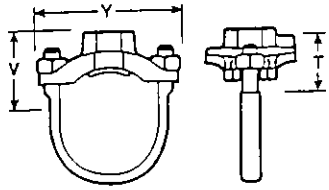
Mechanical-T®
Bolted Branch Outlet



Style 920
w/Grooved Outlet



Style 920
w/Female Grooved Outlet



Style 921

Nominal Size Run × Branch # Inches / mm	Max. Work. Press. PSI / kPa	Dimensions – Inches/mm: Hole Dia. +0.13 −0.00	T **	Fem. Thd. V§	Grv. V§	Y	Aprx. Wgt. Ea. Lbs / kg
2 × ½ / 50 × 15	300 / 2065	1.50 / 38.1	2.06 / 52	2.63 / 67	– / –	5.00 / 127	2.5 / 1.1
× ¾ / × 20	300 / 2065	1.50 / 38.1	2.06 / 52	2.63 / 67	– / –	5.00 / 127	2.2 / 1.0
× 1 / × 25	300 / 2065	1.50 / 38.1	1.94 / 49	2.63 / 67	– / –	5.00 / 127	2.4 / 1.1
× 1¼ / × 32	300 / 2065	1.75 / 44.5	2.06 / 52	2.75 / 70	3.25 / 83	5.00 / 127	3.2 / 1.5
× 1½ / × 40	300 / 2065	1.75 / 44.5	2.06 / 52	2.75 / 70	– / –	5.00 / 127	3.2 / 1.5
2½ × ½ / 65 × 15	300 / 2065	1.50 / 38.1	2.19 / 56	2.75 / 70	– / –	5.00 / 127	2.3 / 1.0
× ¾ / × 20	300 / 2065	1.50 / 38.1	2.19 / 56	2.75 / 70	– / –	5.00 / 127	2.3 / 1.0
× 1 / × 25	300 / 2065	1.50 / 38.1	2.06 / 52	2.75 / 70	– / –	5.00 / 127	2.1 / 1.0
× 1¼ / × 32	300 / 2065	2.00 / 50.8	2.31 / 59	3.00 / 76	– / –	5.50 / 140	3.0 / 1.4
× 1½ / × 40	300 / 2065	2.00 / 50.8	2.31 / 59	3.00 / 76	– / –	5.50 / 140	2.9 / 1.3
3 ‡ × ½ (a) / × 15	300 / 2065	1.50 / 38.1	2.44 / 62	3.00 / 76	– / –	4.88 / 124	2.1 / 1.0
× ¾ (a) / × 20	300 / 2065	1.50 / 38.1	2.44 / 62	3.00 / 76	– / –	4.88 / 124	2.3 / 1.0
× 1 (a) / × 25	300 / 2065	1.50 / 38.1	2.31 / 59	3.00 / 76	– / –	4.88 / 124	2.0 / 0.9
× 1¼ (a) / × 32	300 / 2065	2.00 / 50.8	2.69 / 68	3.38 / 86	3.50 / 89	6.25 / 159	4.7 / 2.1
× 1½ (a) / × 40	300 / 2065	2.00 / 50.8	2.69 / 68	3.38 / 86	3.38 / 86	6.25 / 159	4.4 / 2.0
3 × ½ (a) / × 15	300 / 2065	1.50 / 38.1	2.44 / 62	3.00 / 76	– / –	4.88 / 124	2.1 / 1.0
× ¾ (a) / × 20	300 / 2065	1.50 / 38.1	2.44 / 62	3.00 / 76	– / –	4.88 / 124	2.3 / 1.0
× 1 (a) / × 25	300 / 2065	1.50 / 38.1	2.31 / 59	3.00 / 76	– / –	4.88 / 124	2.0 / 0.9
× 1¼ (a) / × 32	300 / 2065	2.00 / 50.8	2.69 / 68	3.38 / 86	3.50 / 89	6.25 / 159	4.7 / 2.1
× 1½ (a) / × 40	300 / 2065	2.00 / 50.8	2.69 / 68	3.38 / 86	3.38 / 86	6.25 / 159	4.4 / 2.0
× 2 / × 50	300 / 2065	2.50 / 63.5	2.81 / 71	3.50 / 89	– / –	6.25 / 159	4.6 / 2.1
4 × ½ / 100 × 15	300 / 2065	1.50 / 38.1	2.94 / 75	3.50 / 89	– / –	6.00 / 152	2.6 / 1.2
× ¾ / × 20	300 / 2065	1.50 / 38.1	2.94 / 75	3.50 / 89	– / –	6.00 / 152	2.5 / 1.1
× 1 / × 25	300 / 2065	1.50 / 38.1	2.81 / 71	3.50 / 89	– / –	6.00 / 152	2.4 / 1.1
× 1¼ / × 32	500 / 3450	2.00 / 50.8	3.31 / 84	4.00 / 102	4.00 / 102	7.25 / 184	5.1 / 2.3
× 1½† / × 40	500 / 3450	2.00 / 50.8	3.31 / 84	4.00 / 102	4.00 / 102	7.25 / 184	5.0 / 2.3

‡ O.D. Dimension.

Nominal Size Run × Branch # Inches / mm	Max. Work. Press. PSI / kPa	Dimensions – Inches/mm: Hole Dia. +0.13 −0.00	T **	Fem. Thd. V§	Grv. V§	Y	Aprx. Wgt. Ea. Lbs / kg
4 × 2 † / 100 × 50	500 / 3450	2.50 / 63.5	3.31 / 84	4.00 / 102	4.00 / 102	7.63 / 194	5.8 / 2.6
× 2½ † / × 65	500 / 3450	2.75 / 69.9	3.06 / 78	4.00 / 102	4.00 / 102	7.63 / 194	5.8 / 2.6
× 3 ‡	500 / 3450	2.75 / 69.9	3.50 / 89	4.50 / 114	4.13 / 105	7.25 / 184	8.4 / 3.8
× 3 † / × 90	500 / 3450	3.50 / 88.9	3.50 / 89	4.50 / 114	4.13 / 105	7.25 / 184	8.4 / 3.8
5 × 1½ † / 125 × 40	500 / 3450	2.00 / 50.8	4.06 / 103	4.75 / 121	4.75 / 121	9.50 / 241	7.4 / 3.4
× 2 † / × 50	500 / 3450	2.50 / 63.5	4.06 / 103	4.75 / 121	4.75 / 121	9.50 / 241	8.2 / 3.7
× 2½ † / × 65	500 / 3450	2.75 / 69.9	3.81 / 97	4.75 / 121	4.75 / 121	9.50 / 241	8.3 / 3.8
× 3 ‡	500 / 3450	2.75 / 69.9	4.00 / 102	5.00 / 127	4.63 / 118	9.50 / 241	8.4 / 3.8
× 3 † / × 80	500 / 3450	3.50 / 88.9	4.00 / 102	5.00 / 127	4.63 / 118	9.50 / 241	8.4 / 3.8
6 × 1½ † / 150 × 40	500 / 3450	2.00 / 50.8	4.44 / 113	5.13 / 130	5.13 / 130	10.00 / 254	7.7 / 3.5
× 2 † / × 50	500 / 3450	2.50 / 63.5	4.44 / 113	5.13 / 130	5.13 / 130	10.00 / 254	7.8 / 3.5
× 2½ † / × 65	500 / 3450	2.75 / 69.9	4.19 / 106	5.13 / 130	5.13 / 130	10.00 / 254	8.3 / 3.8
× 3 ‡	500 / 3450	2.75 / 69.9	4.50 / 114	5.50 / 140	5.13 / 130	10.00 / 545	9.9 / 4.5
× 3 † / × 80	500 / 3450	3.50 / 88.9	4.50 / 114	5.50 / 140	5.13 / 130	10.00 / 545	9.9 / 4.5
× 4 † / × 100	500 / 3450	4.50 / 114.3	4.25 / 108	5.38 / 137	5.38 / 137	9.38 / 238	10.1 / 4.6
6½ ‡ × 1½ (a) / × 40	500 / 3450	2.00 / 50.8	4.44 / 113	5.13 / 130	5.13 / 130	10.00 / 254	7.9 / 3.6
× 2 / × 50	500 / 3450	2.50 / 63.5	4.44 / 113	5.13 / 130	5.13 / 130	10.00 / 254	8.0 / 3.6
× 2½ (a) / × 65	500 / 3450	2.75 / 88.9	4.19 / 106	5.13 / 130	5.13 / 130	10.00 / 254	8.6 / 3.9
× 3 ‡	500 / 3450	2.75 / 88.9	4.50 / 114	5.50 / 140	5.13 / 130	10.00 / 254	10.2 / 4.6
× 3 (a) / × 80	500 / 3450	3.50 / 59.9	4.50 / 114	5.50 / 140	5.13 / 130	10.00 / 254	10.2 / 4.6
× 4 / × 100	500 / 3450	4.50 / 114.3	4.25 / 108	5.38 / 137	5.38 / 137	9.38 / 238	10.5 / 4.8
8 × 2 / 200 × 50	500 / 3450	2.75 / 69.9	5.19 / 135	6.25 / 159	6.25 / 159	12.50 / 305	11.6 / 5.3
× 2½ † / × 65	500 / 3450	2.75 / 69.9	5.19 / 135	6.25 / 159	6.25 / 159	12.50 / 305	11.6 / 5.3
× 3 ‡	500 / 3450	2.75 / 69.9	5.50 / 140	6.50 / 165	6.50 / 165	12.50 / 318	12.6 / 5.7
× 3 † / × 80	500 / 3450	3.50 / 88.9	5.50 / 140	6.50 / 165	6.50 / 165	12.50 / 318	12.6 / 5.7
× 4 † / × 100	500 / 3450	4.50 / 114.3	5.31 / 135	6.38 / 162	6.38 / 162	12.00 / 318	15.3 / 6.9

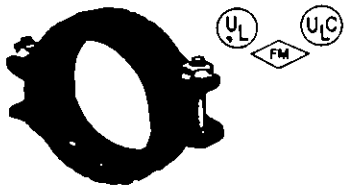
‡ O.D. Dimension.

NOTES

**Center of run to engaged pipe end, female threaded outlet only (Dimensions approx.).
● Require ½ × 3¼" bolt when used in a cross configuration.
(a) British Standard female pipe threaded outlet.
† Available with grooved or female threaded outlet. Specify choice on order.
§ Center of run to end of fitting.

Style 07

Zero-Flex® Rigid Coupling

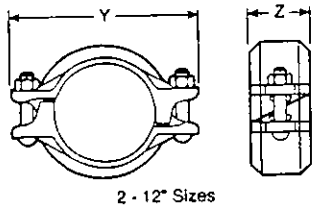


The unique angle-pad design of Zero-Flex® Style 07 adjusts to standard pipe and roll or cut groove tolerances, positively clamping the pipe to resist flexural and torsional loads. Wider key section fills more of the groove area.

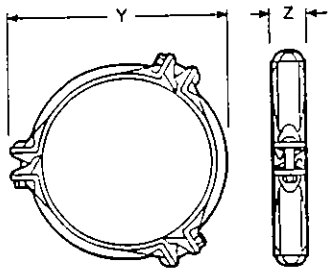
Request 06.02.

Nom. Size In. mm	Max. Work Press. PSI* kPa	Dimensions Inches/mm Y	Z	Aprx. Wgt. Each Lbs. kg
1 25	750 5175	4.13 105	1.88 48	1.6 0.7
1¼ 32	750 5175	4.00 102	1.88 48	1.6 0.7
1½ 40	750 5175	4.81 122	1.88 48	1.6 0.7
2 50	750 5175	5.44 141	1.88 48	2.3 1.0
2½ 65	750 5175	6.13 156	1.88 48	2.8 1.3
3 ‡	750 5175	5.75 146	1.86 47	3.6 1.6
3 80	750 5175	6.81 173	1.88 48	3.1 1.4
4 100	750 5175	8.25 210	2.06 52	4.8 2.2
4¼ ‡	750 5175	7.44 189	2.06 52	5.2 2.4
5 125	750 5175	9.75 248	2.06 52	7.1 3.2
5¼ ‡	700 4825	9.18 233	2.06 52	7.4 3.4
5½ ‡	700 4825	9.42 239	2.06 52	7.6 3.4
6 150	700 4825	10.75 273	2.06 52	8.7 3.4
6¼ ‡	700 4825	10.18 259	2.06 52	9.2 4.2
6½ ‡	700 4825	10.75 273	2.06 52	7.2 3.2
8 § 200	600 4130	13.50 343	2.50 64	14.9 6.8
10 § 250	500 3450	16.75 426	2.56 65	25.0 11.3
12 § 300	400 2750	18.50 470	2.56 65	28.2 12.8
14 350	300 2065	19.75 502	2.94 75	32.8 14.9
16 400	300 2065	21.75 553	2.94 75	41.2 18.7
18 450	300 2065	23.88 606	3.06 78	54.2 24.6
20 500	300 2065	27.38 695	3.06 78	67.2 30.5
24 600	250 1725	31.50 800	3.13 79	76.2 34.6

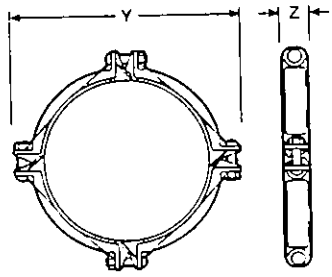
‡ O.D. Dimension.
* Refer to notes on page 7.
§ Available to J.I.S. dimension.



2 - 12" Sizes



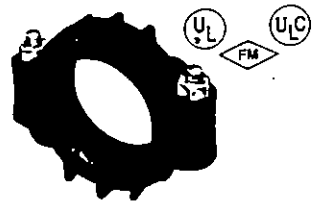
14 - 16" Sizes



18 - 24" Sizes

Style 77

Standard Flexible Coupling

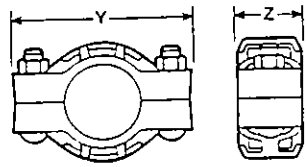


Style 77 couplings are designed with cross-ribbed construction to provide a strong component for pressure piping systems. Sizes ¾ -12" (20 - 300 mm) are two-piece housings. Sizes 14 - 22" (350 - 550 mm) are cast in four identical segments, with larger sizes cast in six segments.

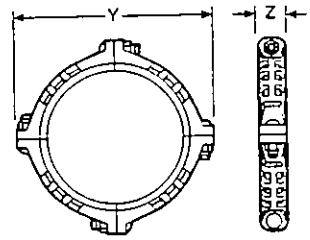
Request 06.04.

Nom. Size In. mm	Max. Work Press. PSI* kPa	Dimensions Inches/mm Y	Z	Aprx. Wgt. Each Lbs. kg
¾ 20	1,000 6900	3.63 92	1.75 44	1.1 0.5
1 25	1,000 6900	3.88 98	1.75 44	1.3 0.6
1¼ 32	1,000 6900	4.63 118	1.75 44	2.0 0.9
1½ 40	1,000 6900	5.00 127	1.75 44	2.1 1.0
2 50	1,000 6900	5.63 143	1.75 44	2.6 1.2
2½ 65	1,000 6900	6.25 159	1.75 44	3.1 1.4
3 ‡	1,000 6900	6.31 160	1.75 44	3.6 1.6
3 80	1,000 6900	7.00 178	1.75 44	3.5 1.6
3½ 90	1,000 6900	8.00 203	1.75 44	5.6 2.5
4 100	1,000 6900	8.50 216	2.00 51	6.6 3.0
4¼ ‡	1,000 6900	8.06 205	2.06 52	7.0 3.2
5 125	1,000 6900	10.25 260	2.00 51	10.6 4.8
5¼ ‡	1,000 6900	9.20 234	2.06 52	10.0 4.5
5½ ‡	1,000 6900	9.44 240	2.06 52	11.0 5.0
6 150	1,000 6900	11.50 292	2.00 51	11.8 5.4
6¼ ‡	1,000 6900	10.38 264	2.06 52	13.2 6.0
6½ ‡	1,000 6900	11.50 292	2.06 52	13.2 6.0
8 § 200	800 5500	14.50 368	2.38 60	20.1 9.1
10 § 250	800 5500	16.75 425	2.50 64	28.3 12.8
12 § 300	800 5500	19.00 483	2.50 64	34.2 15.5
14 350	300 2065	20.00 508	2.88 73	35.6 16.1
15 375	300 2065	21.25 540	2.88 73	48.8 22.1
16 400	300 2065	22.38 568	2.88 73	51.1 23.2
18 450	300 2065	24.38 619	3.13 79	64.4 29.2
20 500	300 2065	27.50 699	3.13 79	91.2 41.4
22 550	300 2065	30.00 762	3.13 79	92.0 41.7
24 600	250 1725	31.38 797	3.13 79	94.0 42.6

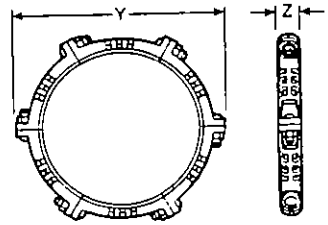
‡ O.D. Dimension.
* Refer to notes on page 7.
§ Available to J.I.S. dimension.



¾ - 12" Sizes



14 - 22" Sizes



24" Size

SPRINK-LINE

Ductile Iron Screwed Fittings

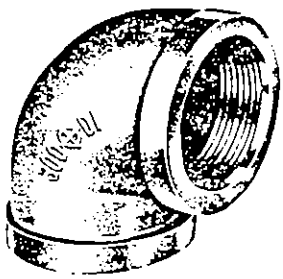
Ductile Iron

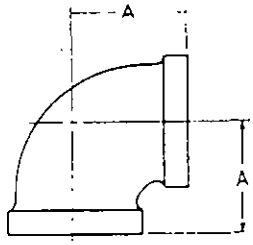
UL LISTED Factory Mutual System

SPRINK-LINE Ductile Iron screwed Fittings are 100% air-tested in a watersoluble oil solution for porosity, and thread-checked at the beginning and end of each tooling change.

Dimensions conform to ANSI B16.3; Material is to ASTM A536; Threading is to ANSI B2.1 NPT. Underwriters Laboratories LISTED and Factory Mutual APPROVED at 300 pounds working pressure.

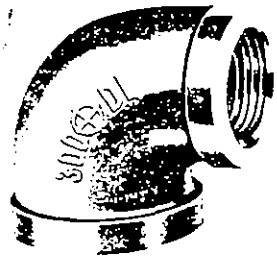
Fig. 811 Ductile Iron Elbows-90°

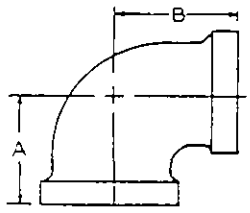




Size	A	Weight Lbs.	Box Q'ty
⅛	1⅛	.24	240
¼	1⅜₁₆	.40	120
1	1½	.64	70
1¼	1¾	95	40
1½	1¹⁵⁄₁₆	1.24	30
2	2¼	1.74	20
2½	2¹¹⁄₁₆	3.28	10

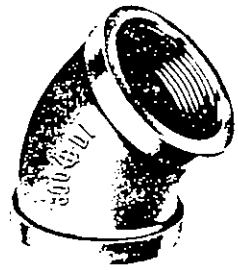
Fig. 812 Ductile Iron Elbows-90° Red.

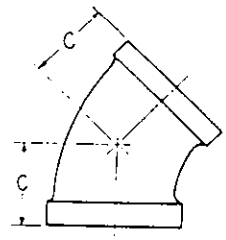




Size	A	B	Weight Lbs.	Box Q'ty
¾ x ⅜	1⅜₁₆	1¾₁₆	.33	160
1 x ¾	1⅝	1⅞₁₆	.53	90
1 x ½	1¼	1⅜	.44	110
1¼ x 1	1⅝₁₆	1¹¹⁄₁₆	.77	55
1¼ x ¾	1⅞₁₆	1⅜	.75	60
1¼ x ½	1⅜₁₆	1⅛	.64	75
1½ x 1¼	1¹³⁄₁₆	1⅞	1.14	35
1½ x 1	1¹¹⁄₁₆	1¹³⁄₁₆	.99	40
1½ x ¾	1⅝₁₆	1¾	.95	45
2 x 1½	2	2⅜₁₆	1.67	20
2 x 1	1¾	2⅛₁₆	1.58	25
2 x ¾	1⅜	1¹³⁄₁₆	1.39	30
2½ x 2	2⅛₁₆	2⅜	3.01	15

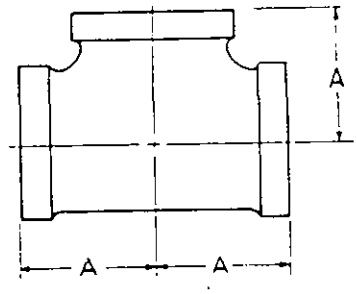
Fig. 813 Ductile Iron Elbows-45°





Size	C	Weight Lbs.	Box Q'ty
⅛	⅞	.22	250
¼	1	.33	150
1	1⅛	.48	90
1¼	1⅜₁₆	.73	50
1½	1⅞₁₆	.93	35
2	1¹¹⁄₁₆	1.55	18
2½	1¹³⁄₁₆	2.70	12

Fig. 814 Ductile Iron Tees



Size	A	Weight Lbs.	Box Q'ty
⅛	1⅛	.33	150
¼	1⅜₁₆	.50	90
1	1½	.85	60
1¼	1¾	1.30	35
1½	1¹³⁄₁₆	1.63	24
2	2¼	2.63	12
2½	2¹¹⁄₁₆	4.55	8

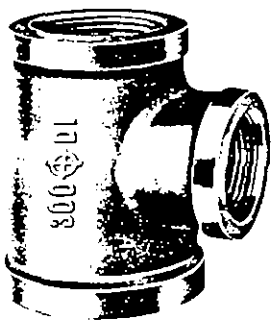
SPRINK-LINE

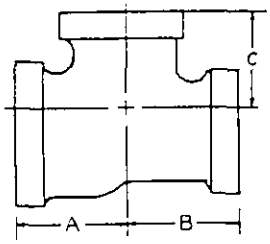
Ductile Iron Screwed Fittings

Ductile Iron

UL LISTED Factory Mutual System

Fig. 815
Ductile Iron Tees Reducing





Size			A	B	C	Weight Lbs.	Box Q'ty
¾	¾	½	1 3/16	1 3/16	1 1/32	.46	95
1	1	¾	1 3/8	1 3/8	1 7/16	.73	60
		½	1 1/4	1 1/4	1 3/8	.66	65
	¾	1	1 1/2	1 7/16	1 1/2	.77	55
		¾	1 3/8	1 7/16	1 7/16	.68	65
		½	1 1/4	1 1/4	1 3/8	.58	80
	½	1	1 1/2	1 3/8	1 1/2	.70	55
1 1/4	1 1/4	1	1 5/16	1 5/16	1 11/16	1.10	40
		¾	1 7/16	1 7/16	1 3/8	.96	45
		½	1 3/8	1 3/8	1 7/16	.87	45
	1	1 1/4	1 3/8	1 11/16	1 3/4	1.10	40
		1	1 5/16	1 1/2	1 11/16	1.03	45
		¾	1 7/16	1 3/8	1 3/8	.90	50
		½	1 3/4	1 1/4	1 7/16	.81	50
1	1	1 1/4	1 11/16	1 11/16	1 7/16	.97	45
1 1/2	1 1/2	1 1/4	1 13/16	1 13/16	1 7/8	1.50	30
		1	1 11/16	1 11/16	1 13/16	1.38	30
		¾	1 1/2	1 1/2	1 3/4	1.23	35
		½	1 7/16	1 7/16	1 11/16	1.14	35
	1 1/4	1	1 11/16	1 7/16	1 13/16	1.31	30
		¾	1 5/8	1 7/16	1 3/4	1.10	40
		½	1 7/16	1 5/8	1 11/16	1.03	40
	1	1 1/2	1 13/16	1 13/16	1 13/16	1.52	30
		1	1 11/16	1 1/2	1 13/16	1.14	30
		¾	1 1/2	1 7/16	1 3/4	1.14	40
		½	1 7/16	1 1/4	1 11/16	.97	40
1 1/4	1	1 1/2	1 5/8	1 13/16	1 13/16	1.43	30
1	1	1 1/2	1 13/16	1 13/16	1 13/16	1.14	35
1 1/4	1 1/4	1 1/2	1 5/8	1 5/8	1 13/16	1.52	30
2	2	1 1/2	2	2	2 3/16	2.11	15
		1 1/4	1 13/16	1 13/16	2 1/8	2.05	20
		1	1 3/4	1 3/4	2	1.91	20
		¾	1 5/8	1 5/8	2	1.67	20
		½	1 5/8	1 5/8	1 7/8	1.54	20
	1 1/2	2	2 1/4	2 3/16	2 1/4	2.37	15
		1 1/2	2 3/16	1 13/16	2 3/16	2.03	20
		1	1 3/4	1 11/16	2	1.65	20
		¾	1 5/8	1 1/2	2	1.61	25
		½	1 5/8	1 7/16	1 7/8	1.50	30
	1 1/4	2	2 1/4	2 1/4	2 1/4	2.31	15
	1	2	2 1/4	2	2 1/4	2.18	15
1 1/2	1 1/2	2	2 3/16	2 3/16	2	2.00	20
1 1/2	1 1/4	2	2 3/16	2 1/8	2	1.94	20
2 1/2	2	¾	1 3/4	1 3/4	2 3/16	2.22	15
2	2	2 1/2	2 3/8	2 3/8	2 3/4	3.67	10

SPRINK, INC.
A Division of All Points Traders, Inc.
Phone : (714) 999-0323
P. O. Box 3158 Fullerton, California 92634

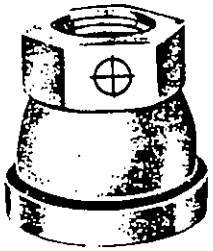
SPRINK-LINE

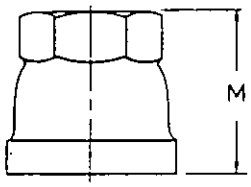
Ductile Iron Screwed Fittings

Ductile Iron

UL LISTED Factory Mutual System Approved

Fig. 816 Ductile Iron Reducing Couplings with hexagonal end

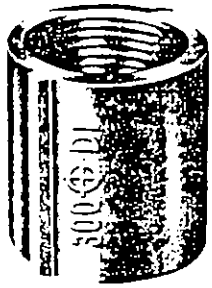


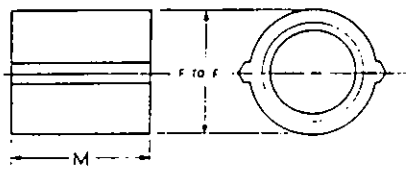


Size, in.	M	Wrench Size	Weight Lbs.	Box Q'ty
1 x ¾	1¾	1⅛	.53	120
1 x ½	1 11/16	1¼	.38	140

All hex. end reducing couplings are good for box wrench operation.

Fig. 818 Ductile Iron straight Couplings

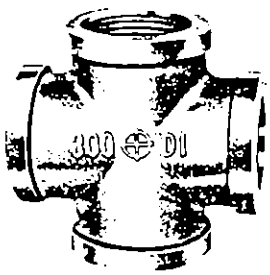


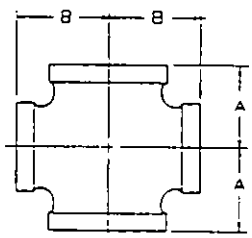


Size, in.	M	Wrench Size	Weight Lbs.	Box Q'ty
½	1⅜	1⅛	.18	360
¾	1⅜	1⅛	.26	200
1	1¾	1 11/16	.44	110
1¼	2	2	.54	75
1½	2 5/16	2¼	.71	60
2	2⅝	2¾	1.15	30
2½	3	3⅜	2.29	18

All straight couplings are good for box wrench operation.

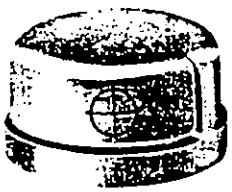
Fig. 817 Ductile Iron Crosses

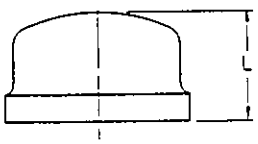




Size, in.	A	B	Weight Lbs.	Box Q'ty
1	1⅛	1⅛	.97	45
1¼	1⅜	1⅜	1.59	25
1½	1 5/16	1 5/16	1.89	20
2	2¼	2¼	2.93	10
Reducing				
1¼x1¼x1x1	1 11/16	1⅜	1.25	30
1½x1½x1x1	1 5/16	1⅝	1.48	24
2 x 2 x 1 x 1	2	1¾	2.64	10

Fig. 820 Ductile Iron Caps



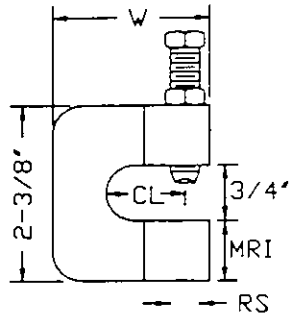


Size, in.	L		Weight Lbs.	Box Q'ty
⅜	⅞		.15	160
¾	1		.22	120
1	1 5/16		.33	85
1¼	1 5/16		.54	80
1½	1⅝		.68	70
2	1⅞		.96	50
2½	1¾		1.80	25

Model #200
Steel C-Clamp

SIZE RANGE: 3/8" and 1/2" rod sizes
MATERIAL: Carbon steel with hardened steel cup point set screw and lock nut
ALTERNATE MATERIAL OR FINISH: EG, SS, HDG
APPROVALS: Factory Mutual (**FM**)
LISTINGS: Underwriters Laboratories(**UL**)
CONFORMS WITH: Federal Specification **WW-H-171** (Type 23), Manufacturers Standardization Society **ANSI/MSS-SP-58** (Type 23); install in accordance with **ANSI/MSS-SP-69.**
SERVICE: Structural attachment to metal beams, purlins, channel or angle iron to support hanger rods. Provides no vertical adjustment.
ORDERING: Specify rod size, model number and name.
NOTE:

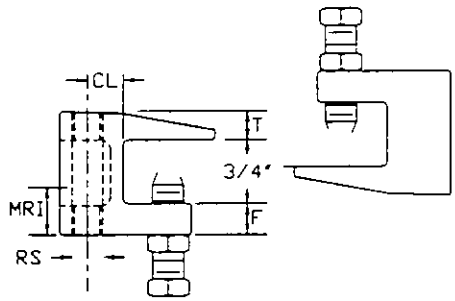
1. A hole is available at additional cost.
2. Set screw must be tightened onto sloped side of I-beam, channel or angle iron flange and torqued to 60 inch pounds for 3/8" rod size and 125 inch pounds for 1/2" rod size.
3. Locknut required to resist vibration.



RS	CL	MRI	W	Max. pipe size	Max. recom. load lbs.
3/8"	13/16"	13/16"	2-1/4"	4"	600
1/2"	11/16"	13/16"	2-1/8"	8"	1000

Model #300
Beam Clamp
Universal/Reversible
(Double Rod Hole)

SIZE RANGE: 3/8" thru 7/8" rod sizes (dimensions shown thru 1/2" only).
MATERIAL: Malleable iron casting with a hardened cup point set screw and locknut.
ALTERNATE MATERIAL OR FINISH: EG, HDG
APPROVAL: Factory Mutual (**FM**)
LISTING: Underwriters Laboratories(**UL**)
CONFORMS WITH: Federal Specification **WW-H-171** (Type 19 & 23), Manufacturers Standardization Society **ANSI/MSS-SP-58** (Type 19 & 23); install in accordance with **ANSI/MSS-SP-69.**
SERVICE: Structural attachment (with ***infinite adjustment***) to ***top or bottom*** of metal beams, purlins, channel or angle iron.
ORDERING: Specify rod size, model number and name.
NOTE: Set screw must be tightened onto the sloped side of the I-Beam, channel or angle iron flange and torqued to 60 inch pounds.



May be mounted in either position

RS	Max. pipe size	CL	MRI	F	T	Max. recom. load lbs.	
						Top	Bottom
3/8"	4"	7/16"	1/2"	3/8"	3/8"	500	250
1/2"	8"	9/16"	11/16"	17/32"	1/2"	950	760

FIG. 99
ALL THREAD ROD CUT TO LENGTH

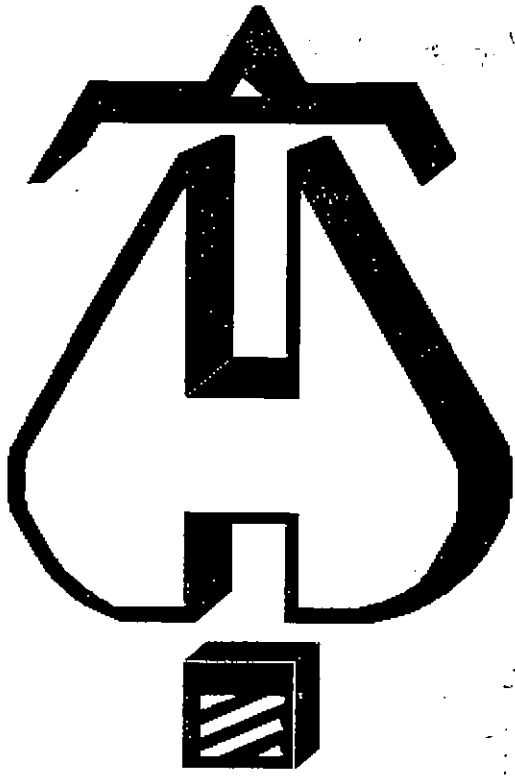
Size Range - 3/8 thru 7/8 inch rod in 1 inch increments.
Material - Carbon Steel
Maximum Temperature - 750°F
Finish - Plain, Electro-Galvanized, and Stainless Steel.
Order By - Figure number, rod diameter, rod length, and finish.

ROD SIZE	MAX. REC. LOAD LBS. FOR SERVICE TEMPS. 650°F	750°F
3/8	610	540
1/2	1130	1010
5/8	1810	1610
3/4	2710	2420
7/8	3770	3360

FIG. 100
ALL THREAD ROD FULL LENGTHS

Size Range - 1/4 thru 1-1/2 inch rod in 10'-0" lengths.
Material - Carbon Steel
Maximum Temperature - 750°F
Finish - Plain, Electro-Galvanized, and Stainless Steel.
Order By - Figure number, rod diameter, and finish.

ROD SIZE	MAX. REC. LOAD LBS. FOR SERVICE TEMPS 650°F	750°F	APPROX. WEIGHT PER 100 FT.
1/4	240	215	12
3/8	610	540	29
1/2	1130	1010	53
5/8	1810	1610	84
3/4	2710	2420	123
7/8	3770	3360	169
1	4960	4420	222
1-1/4	8000	7140	360
1-1/2	11630	10370	510



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DIV. OF INSPECTION

. . . Fire Protection by Computer Design

FRANCIS E. CONDREN, P.E.
Professional Engineer
New Hyde Park, N.Y. 11040
P.E. 23106

HIGGINS FIRE PROTECTION INC.
N.J BRANCH OFFICE
1120 CENTRAL AVE.
HILLSIDE N.J. 07205
908-352-3487

Job Name : LOEWS THEATRES
Building : All Areas
Location : Brick Plaza Brick NJ
System : 1
Contract : B97171
Data File : D1.WX1

Hydraulic Design Information Sheet

Name - LOEWS THEATRES Date - 051997
Location - Brick Plaza Brick NJ
Building - Auditorium Area System No. - 1
Contractor - C> Raimondo & Sons Contract No. - B97171
Calculated By - MK Drawing No. - 1
Construction: ( ) Combustible (X) Non-Combustible Ceiling Height - Varies
Occupancy - A-1 Assembly

SYSTEM

(X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other
Specific Ruling Made By Date

DESIGN

Area of Sprinkler Operation	- 1500	System Type	Sprinkler/Nozzle
Density	- 0.1	(X) Wet	Make RELIABLE
Area Per Sprinkler	- 168	( ) Dry	Model G4-FR
Elevation at Highest Outlet	- 22.8	( ) Deluge	Size 1/2
Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 5.6
Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.165
Hose Allowance - Outside	- 250		

Note

Calculation Summary: Flow Required - 449.69 Press Required - 46.145 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

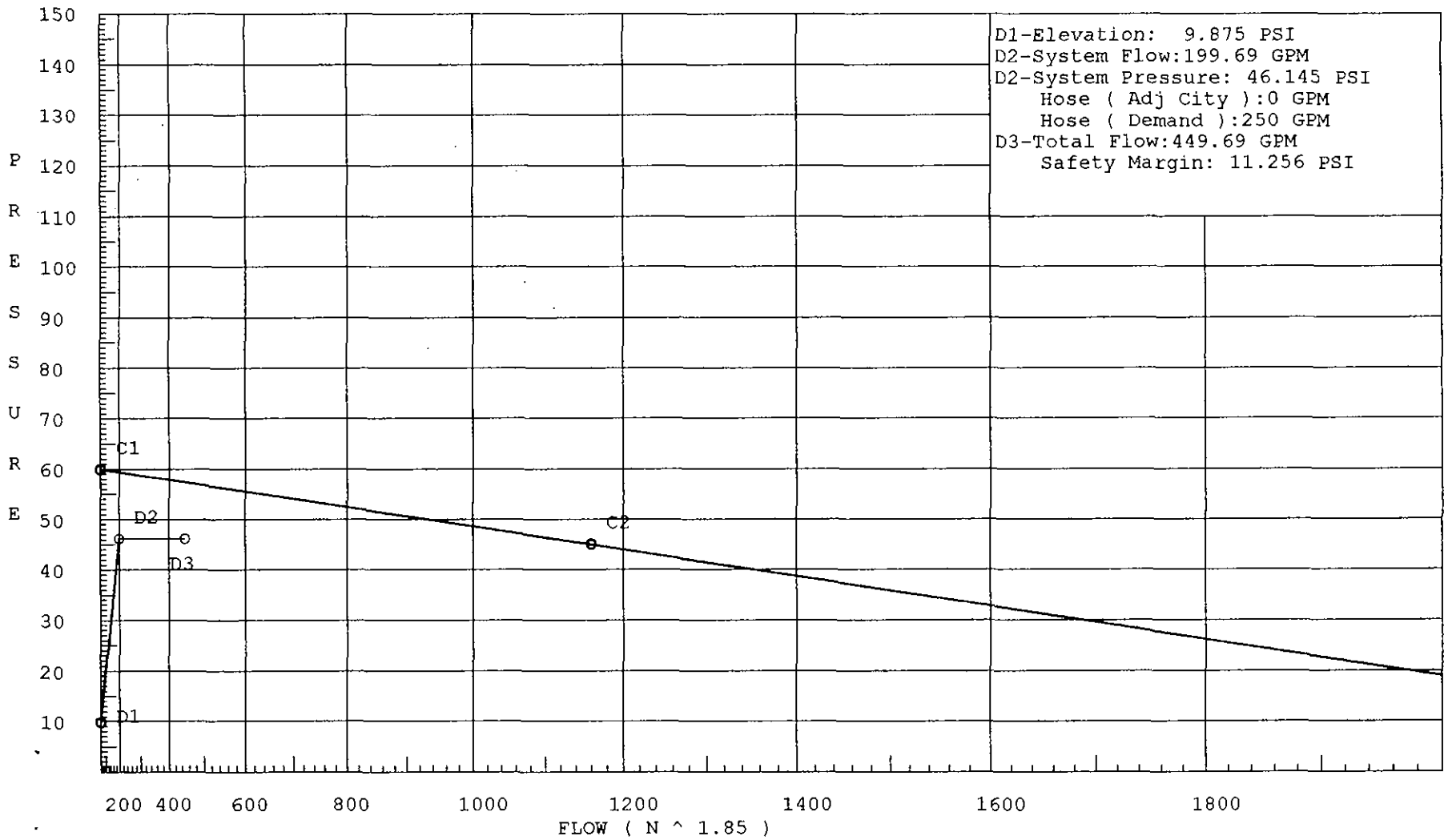
Water Flow Test:		Pump Data:		Tank or Reservoir:
Date of Test	- 4/28/97			Cap. -
Time of Test	- 10:00 AM	Rated Cap.-		Elev.-
Static Press	- 60	@ Press	-	
Residual Press	- 45	Elev.	- 0	Well
Flow	- 1160			Proof Flow
Elevation	- 0			

Location - 8" CITY MAIN 20ft FROM SPRINKLER VALVE ROOM

Source of Information - Flow Test by Higgins Fire Protection and Water Department.

City Water Supply:
C1-Static Pressure: 60 PSI
C2-Residual Pressure: 45 PSI
C2-Residual Flow: 1160 GPM

Pump Data:



Fitting Legend

Abbrev.	Name
A	Generic Alarm Va
B	Generic Butterfly Valve
C	Roll Groove Coupling
D	Dry Pipe Valve
E	90' Standard Elbow
F	45' Elbow
G	Gate Valve
K	Detector Check Valve
L	Long Turn Elbow
M	Medium Turn Elbow
Q	Deluge Valve
S	Swing Check Valve
T	90' Flow thru Tee
W	Wafer Check Valve
Z	Flow Switch

Unadjusted Fittings Table

	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A							7.7	21.5		17.0
B							7	10		12
C	1	1	1	1	1	1	1	1	1	1
D							9.5	17		28
E	2	2	2	3	4	5	6	7	8	10
F	1	1	1	1	2	2	3	3	3	4
G						1	1	1	1	2
K								14		14
L	1	1	2	2	2	3	4	5	5	6
M		2	2	3	3	4	5	6	6	8
Q						18		29		35
S	4	5	5	7	9	11	14	16	19	22
T	3	4	5	6	8	10	12	15	17	20
W										10.3
Z	2	2	2	3	4	5	6	7	8	10

	5	6	8	10	12	14	16	18	20	24
A	17	27	29							
B	9	10	12	19	21					
C	1	1	1	1	1	1	1	1	1	1
D		47								
E	12	14	18	22	27	35	40	45	50	61
F	5	7	9	11	13	17	19	21	24	28
G	2	3	4	5	6	7	8	10	11	13
K		36	55	45						
L	8	9	13	16	18	24	27	30	34	40
M	10	12	16	19	22					
Q		33								
S	27	32	45	55	65	76	87	98	109	130
T	25	30	35	50	60	71	81	91	101	121
W		13.1	31.8	35.8	27.4					
Z	12	14	18	22	27	35	40	45	50	61

Node No.	Elevation	K-Fact	Press Actual	Flow Added	Density Req.	Area	Press Req.
D001	22	5.6	9	16.8	.1000	168.00	7.000
D002	22	5.6	9	16.8	.1000	168.00	7.000
53	22.8	K = K @ EQ01	9.87	17.66			
51	22.8	K = K @ EQ02	11.07	18.41			
48	22.8	K = K @ EQ02	12.29	19.4			
50	22.8	K = K @ EQ02	15	21.43			
70	22.8		21.8				
49	22.8	K = K @ EQ01	22.09	26.41			
68	22.8		23.28				
69	22.8		23.61				
55	22.8	K = K @ EQ01	8.94	16.8			
54	22.8	K = K @ EQ02	10.4	17.84			
52	22.8	K = K @ EQ02	11.49	18.76			
47	22.8	K = K @ EQ02	14.02	20.72			
46	22.8	K = K @ EQ02	16.21	22.27			
64	22.8		19.76				
65	22.8		23.37				
66	22.8		23.48				
67	22.8		23.94				
11	22.8		29.35				
39	22.1		33.67				
12	13.3		39.79				
CONN	0		46.11				
TEST	0		46.15	250			

The maximum velocity is 15.19 and it occures in the pipe between nodes 46 and 64

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
D001	16.80	1.049	1E	2.000	1.000	9.000	9.000	K Factor = 5.6
to		120			2.000	-0.346		
EQ01	16.80	0.0943			3.000	0.283		Vel = 6.237
	16.80					8.937		K Factor = 5.62
D002	16.80	1.049	1T	5.000	1.000	9.000	9.000	K Factor = 5.6
to		120			5.000	-0.346		
EQ02	16.80	0.0943			6.000	0.566		Vel = 6.237
	16.80					9.220		K Factor = 5.53
53	17.66	1.049			11.580	9.871	9.871	K Factor @ node EQ01
to		120						
51	17.66	0.1034			11.580	1.197		Vel = 6.556
51	18.40	1.380			12.000	11.067	11.067	K Factor @ node EQ02
to		120						
48	36.06	0.1018			12.000	1.222		Vel = 7.735
48	19.40	1.38			12.000	12.290	12.290	K Factor @ node EQ02
to		120						
50	55.46	0.2258			12.000	2.710		Vel = 11.896
50	21.43	1.610	2E	4.000	26.830	15.000	15.000	K Factor @ node EQ02
to		120			8.000			
70	76.89	0.1951			34.830	6.796		Vel = 12.117
70		2.067	2E	5.000	9.080	21.795	21.795	
to		120	1T	10.000	20.000			
66	76.89	0.0578			29.080	1.680		Vel = 7.352
	76.89					23.475		K Factor = 15.87
49	26.41	1.049	1T	5.000	0.500	22.087	22.087	K Factor @ node EQ01
to		120			5.000			
68	26.41	0.2176			5.500	1.197		Vel = 9.804
68		1.610			12.000	23.284	23.284	
to		120						
69	26.41	0.0270			12.000	0.324		Vel = 4.162
69		2.067	2T	10.000	21.080	23.608	23.608	
to		120			20.000			
67	26.41	0.0080			41.080	0.329		Vel = 2.525
	26.41					23.937		K Factor = 5.40
55	16.80	1.049	1E	2.000	13.500	8.936	8.936	K Factor @ node EQ01
to		120			2.000			
54	16.80	0.0943			15.500	1.461		Vel = 6.237
54	17.84	1.380			11.580	10.397	10.397	K Factor @ node EQ02
to		120						
52	34.64	0.0946			11.580	1.095		Vel = 7.430

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
52	18.76	1.38			12.000	11.492	11.492	K Factor @ node EQ02
to		120						
47	53.40	0.2106			12.000	2.527		Vel = 11.454
47	20.72	1.610			12.000	14.019	14.019	K Factor @ node EQ02
to		120						
46	74.12	0.1823			12.000	2.188		Vel = 11.681
46	22.27	1.610			12.000	16.206	16.206	K Factor @ node EQ02
to		120						
64	96.39	0.2964			12.000	3.557		Vel = 15.190
64		2.067	2T	10.000	21.080	19.763	19.763	
to		120			20.000			
65	96.39	0.0878			41.080	3.606		Vel = 9.216
65		3.260			11.160	23.369	23.369	
to		120						
66	96.39	0.0096			11.160	0.107		Vel = 3.705
66	76.89	3.260			16.330	23.475	23.475	
to		120						
67	173.28	0.0282			16.330	0.461		Vel = 6.660
67	26.41	3.260	4E	9.408	89.580	23.937	23.937	
to		120	1T	20.159	57.790			
11	199.69	0.0367			147.370	5.412		Vel = 7.676
11		3.260	4E	9.408	51.660	29.349	29.349	
to		120	1T	20.159	57.790	0.303		
39	199.69	0.0367			109.450	4.019		Vel = 7.676
39		4.260	6E	13.167	125.410	33.671	33.671	
to		120	1T	26.334	105.336	3.811		
12	199.69	0.0100			230.746	2.303		Vel = 4.495
12		4.26	1E	13.167	18.000	39.785	39.785	
to		120	1A	22.384	38.184	5.760		
CONN	199.69	0.0100	1G	2.633	56.184	0.561		Vel = 4.495
CONN		7.98	1E	22.654	40.000	46.106	46.106	
to		140	1G	5.034	71.737			
TEST	199.69	0.0003	1T	44.049	111.737	0.039		Vel = 1.281
	250.00							Qa = 250.00
	449.69					46.145		K Factor = 66.20

Hydraulic Design Information Sheet

Name - LOEWS THEATRES Date - 051997
Location - Brick Plaza Brick NJ
Building - 2nd Floor Storage Area System No. - 1
Contractor - C. Raimondo & Sons Contract No. - B97171
Calculated By - MK Drawing No. - 1
Construction: ( ) Combustible (X) Non-Combustible Ceiling Height - Varies
Occupancy - A-1 Assembly

SYSTEM DESIGN

(X) NFPA 13 ( ) Lt. Haz. Ord.Haz.Gp. (X) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other

Specific Ruling	Made By	Date

Area of Sprinkler Operation	- 1500	System Type	Sprinkler/Nozzle
Density	- 0.15	(X) Wet	Make RELIABLE
Area Per Sprinkler	- 120	( ) Dry	Model G4-FR
Elevation at Highest Outlet	- 21.3	( ) Deluge	Size 1/2
Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 5.6
Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.165
Hose Allowance - Outside	- 250		

Note

Calculation Summary: Flow Required - 546.12 Press Required - 48.824 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

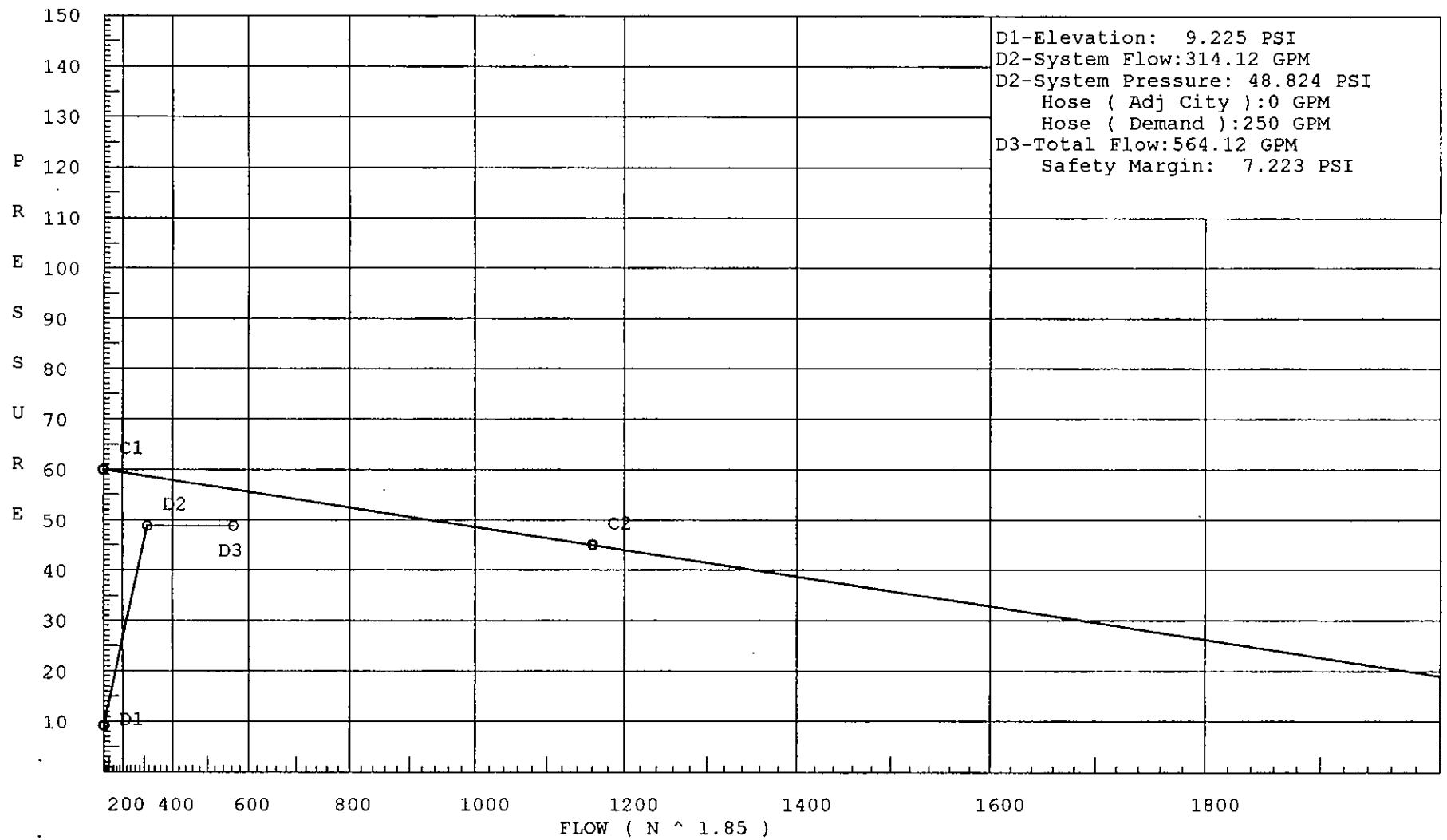
Water Flow Test:		Pump Data:		Tank or Reservoir:
Date of Test	- 4/28/97			Cap. -
Time of Test	- 10:00 AM	Rated Cap.-		Elev.-
Static Press	- 60	@ Press	-	
Residual Press	- 45	Elev.	- 0	Well
Flow	- 1160			Proof Flow
Elevation	- 0			

Location - 8" CITY MAIN 20ft FROM SPRINKLER VALVE ROOM

Source of Information - Flow Test by Higgins Fire Protection and Water Department.

City Water Supply:
C1-Static Pressure: 60 PSI
C2-Residual Pressure: 45 PSI
C2-Residual Flow: 1160 GPM

Pump Data:



Node No.	Elevation	K-Fact	Press Actual	Flow Added	Density Req.	Area	Press Req.
D001	20.83	5.6	10.33	18	.1500	120.00	7.000
38	21.3	K = K @ EQ01	10.45	18			
37	21.3	K = K @ EQ01	11.61	18.98			
36	21.3	K = K @ EQ01	12.61	19.77			
35	21.3	K = K @ EQ01	14.09	20.91			
21	21.3	K = K @ EQ01	10.71	18.23			
22	21.3		11.13				
23	21.3		12.36				
24	21.3		13.42				
25	21.3		14.99				
26	21.3		15.68				
34	21.3	K = K @ EQ01	11.33	18.74			
33	21.3	K = K @ EQ01	12.59	19.76			
32	21.3	K = K @ EQ01	13.67	20.59			
17	21.3	K = K @ EQ01	11.55	18.92			
18	21.3		11.97				
19	21.3		13.29				
20	21.3		14.43				
31	21.3	K = K @ EQ01	15.3	21.78			
13	21.3	K = K @ EQ01	16.17	22.39			
14	21.3		17.14				
15	21.3		17.2				
16	21.3		17.37				
30	21.3	K = K @ EQ01	10.51	18.05			
29	21.3	K = K @ EQ01	11.68	19.03			
28	21.3	K = K @ EQ01	12.69	19.83			
27	21.3	K = K @ EQ01	14.1	20.91			
1	21.3	K = K @ EQ01	10.71	18.22			
2	21.3		11.1				
3	21.3		12.33				
4	21.3		13.39				
5	21.3		14.88				
6	21.3		15.58				
7	21.3		16.95				
8	21.3		17.06				
9	21.3		17.28				
10	21.3		17.82				
43	20.3		22.08				
11	21.3		23.6				
39	22.1		32.54				
12	13.3		41.68				
CONN	0		48.73				
TEST	0		48.82	250			

The maximum velocity is 12.07 and it occures in the pipe between nodes 10 and 43

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv. Ln.		Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
D001	18.00	1.049	1E	2.000	1.000	10.332	10.332	K Factor = 5.6
to		120			2.000	-0.204		
EQ01	18.00	0.1070			3.000	0.321		Vel = 6.682
	18.00					10.449		K Factor = 5.57
38	18.00	1.049	1T	5.000	1.330	10.449	10.449	K Factor @ node EQ01
to		120			5.000			
22	18.00	0.1071			6.330	0.678		Vel = 6.682
	18.00					11.127		K Factor = 5.40
37	18.98	1.049	1T	5.000	1.330	11.612	11.612	K Factor @ node EQ01
to		120			5.000			
23	18.98	0.1182			6.330	0.748		Vel = 7.046
	18.98					12.360		K Factor = 5.40
36	19.77	1.049	1T	5.000	1.330	12.610	12.610	K Factor @ node EQ01
to		120			5.000			
24	19.77	0.1273			6.330	0.806		Vel = 7.339
	19.77					13.416		K Factor = 5.40
35	20.91	1.049	1T	5.000	1.330	14.094	14.094	K Factor @ node EQ01
to		120			5.000			
25	20.91	0.1412			6.330	0.894		Vel = 7.762
	20.91					14.988		K Factor = 5.40
21	18.23	1.38	1E	3.000	11.330	10.714	10.714	K Factor @ node EQ01
to		120			3.000			
22	18.23	0.0288			14.330	0.413		Vel = 3.910
22	18.00	1.38			12.000	11.127	11.127	
to		120						
23	36.23	0.1028			12.000	1.233		Vel = 7.771
23	18.97	1.61			10.000	12.360	12.360	
to		120						
24	55.20	0.1057			10.000	1.057		Vel = 8.699
24	19.78	2.067	2E	5.000	18.500	13.417	13.417	
to		120			10.000			
25	74.98	0.0552			28.500	1.572		Vel = 7.169
25	20.90	2.067			8.000	14.988	14.988	
to		120						
26	95.88	0.0869			8.000	0.695		Vel = 9.167
26		2.067	1T	10.000	5.790	15.684	15.684	
to		120			10.000			
8	95.88	0.0870			15.790	1.373		Vel = 9.167

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
	95.88					17.057		K Factor = 23.22
34	18.74	1.049	1T	5.000	0.500	11.331	11.331	K Factor @ node EQ01
to		120			5.000			
18	18.74	0.1155			5.500	0.635		Vel = 6.957
	18.74					11.966		K Factor = 5.42
33	19.76	1.049	1T	5.000	0.500	12.591	12.591	K Factor @ node EQ01
to		120			5.000			
19	19.76	0.1273			5.500	0.700		Vel = 7.335
	19.76					13.291		K Factor = 5.42
32	20.59	1.049	1T	5.000	0.500	13.672	13.672	K Factor @ node EQ01
to		120			5.000			
20	20.59	0.1373			5.500	0.755		Vel = 7.644
	20.59					14.427		K Factor = 5.42
17	18.92	1.38	1E	3.000	10.500	11.549	11.549	K Factor @ node EQ01
to		120			3.000			
18	18.92	0.0309			13.500	0.417		Vel = 4.058
18	18.75	1.38			12.000	11.966	11.966	
to		120						
19	37.67	0.1104			12.000	1.325		Vel = 8.080
19	19.76	1.61			10.000	13.290	13.290	
to		120						
20	57.43	0.1137			10.000	1.137		Vel = 9.051
20	20.58	2.067	2E	5.000	28.120	14.427	14.427	
to		120	1T	10.000	20.000			
9	78.01	0.0594			48.120	2.856		Vel = 7.459
	78.01					17.283		K Factor = 18.76
31	21.78	1.049	1E	2.000	5.500	15.299	15.299	K Factor @ node EQ01
to		120	1T	5.000	7.000			
15	21.78	0.1524			12.500	1.905		Vel = 8.085
	21.78					17.204		K Factor = 5.25
13	22.39	1.049	1T	5.000	1.000	16.175	16.175	K Factor @ node EQ01
to		120			5.000			
14	22.39	0.1603			6.000	0.962		Vel = 8.312
14		2.067			11.290	17.137	17.137	
to		120						
15	22.39	0.0059			11.290	0.067		Vel = 2.141
15	21.79	2.067			8.000	17.204	17.204	
to		120						
16	44.18	0.0208			8.000	0.166		Vel = 4.224

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
16		2.067	1E	5.000	6.870	17.370	17.370	
to		120	1T	10.000	15.000			
10	44.18	0.0207			21.870	0.453		Vel = 4.224
	44.18					17.823		K Factor = 10.46
30	18.05	1.049	1T	5.000	0.500	10.506	10.506	K Factor @ node EQ01
to		120			5.000			
2	18.05	0.1076			5.500	0.592		Vel = 6.701
	18.05					11.098		K Factor = 5.42
29	19.03	1.049	1T	5.000	0.500	11.680	11.680	K Factor @ node EQ01
to		120			5.000			
3	19.03	0.1187			5.500	0.653		Vel = 7.064
	19.03					12.333		K Factor = 5.42
28	19.83	1.049	1T	5.000	0.500	12.688	12.688	K Factor @ node EQ01
to		120			5.000			
4	19.83	0.1282			5.500	0.705		Vel = 7.361
	19.83					13.393		K Factor = 5.42
27	20.91	1.049	1T	5.000	0.500	14.102	14.102	K Factor @ node EQ01
to		120			5.000			
5	20.91	0.1413			5.500	0.777		Vel = 7.762
	20.91					14.879		K Factor = 5.42
1	18.22	1.38	1E	3.000	10.500	10.709	10.709	K Factor @ node EQ01
to		120			3.000			
2	18.22	0.0288			13.500	0.389		Vel = 3.908
2	18.05	1.38			12.000	11.098	11.098	
to		120						
3	36.27	0.1029			12.000	1.235		Vel = 7.780
3	19.03	1.61			10.000	12.333	12.333	
to		120						
4	55.30	0.1060			10.000	1.060		Vel = 8.715
4	19.84	2.067	2E	5.000	16.830	13.393	13.393	
to		120			10.000			
5	75.14	0.0554			26.830	1.486		Vel = 7.184
5	20.91	2.067			8.000	14.879	14.879	
to		120						
6	96.05	0.0872			8.000	0.698		Vel = 9.183
6		2.067	1T	10.000	5.790	15.576	15.576	
to		120			10.000			
7	96.05	0.0872			15.790	1.377		Vel = 9.183
7		3.26			10.870	16.953	16.953	
to		120						
8	96.05	0.0095			10.870	0.103		Vel = 3.692

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
8	95.88	3.26			6.660	17.056	17.056	
to		120						
9	191.93	0.0341			6.660	0.227		Vel = 7.377
9	78.01	3.26			8.410	17.284	17.284	
to		120						
10	269.94	0.0641			8.410	0.539		Vel = 10.376
10	44.18	3.26	3E	9.408	16.790	17.823	17.823	
to		120			28.223	0.433		
43	314.12	0.0849			45.013	3.822		Vel = 12.074
43		3.26	1T	20.159	2.830	22.078	22.078	
to		120			20.159	-0.433		
11	314.12	0.0849			22.989	1.952		Vel = 12.074
11		3.26	4E	9.408	51.660	23.596	23.596	
to		120	1T	20.159	57.790	-0.346		
39	314.12	0.0849			109.450	9.292		Vel = 12.074
39		4.26	6E	13.167	125.410	32.542	32.542	
to		120	1T	26.334	105.336	3.811		
12	314.12	0.0231			230.746	5.323		Vel = 7.071
12		4.26	1E	13.167	18.000	41.677	41.677	
to		120	1A	22.384	38.184	5.760		
CONN	314.12	0.0231	1G	2.633	56.184	1.296		Vel = 7.071
CONN		7.98	1E	22.654	40.000	48.733	48.733	
to		140	1G	5.034	71.737			
TEST	314.12	0.0008	1T	44.049	111.737	0.091		Vel = 2.015
	250.00							Qa = 250.00
	564.12					48.824		K Factor = 80.73

Hydraulic Design Information Sheet

Name - LOEWS THEATRES Date - 051997
Location - Brick Plaza Brick NJ
Building - Lobby Area System No. - 1
Contractor - C. Raimondo & Sons Contract No. - B97171
Calculated By - MK Drawing No. - 1 AREA 3
Construction: ( ) Combustible (X) Non-Combustible Ceiling Height - Varies
Occupancy - A-1 Assembly

SYSTEM DESIGN

(X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.
( ) NFPA 231 ( ) NFPA 231C ( ) Figure Curve
Other
Specific Ruling Made By Date

Area of Sprinkler Operation	- 1500	System Type	Sprinkler/Nozzle
Density	- 0.1	(X) Wet	Make VIKING
Area Per Sprinkler	- 168	( ) Dry	Model M EX. COV.
Elevation at Highest Outlet	- 26.3	( ) Deluge	Size 17/32
Hose Allowance - Inside	- 0	( ) Preaction	K-Factor 8.1
Rack Sprinkler Allowance	- 0	( ) Other	Temp.Rat.155
Hose Allowance - Outside	- 250		

Note

Calculation Summary: Flow Required - 461.57 Press Required - 31.056 At Test
C-Factor Used: 120 Overhead 140 Underground

WATER SUPPLY

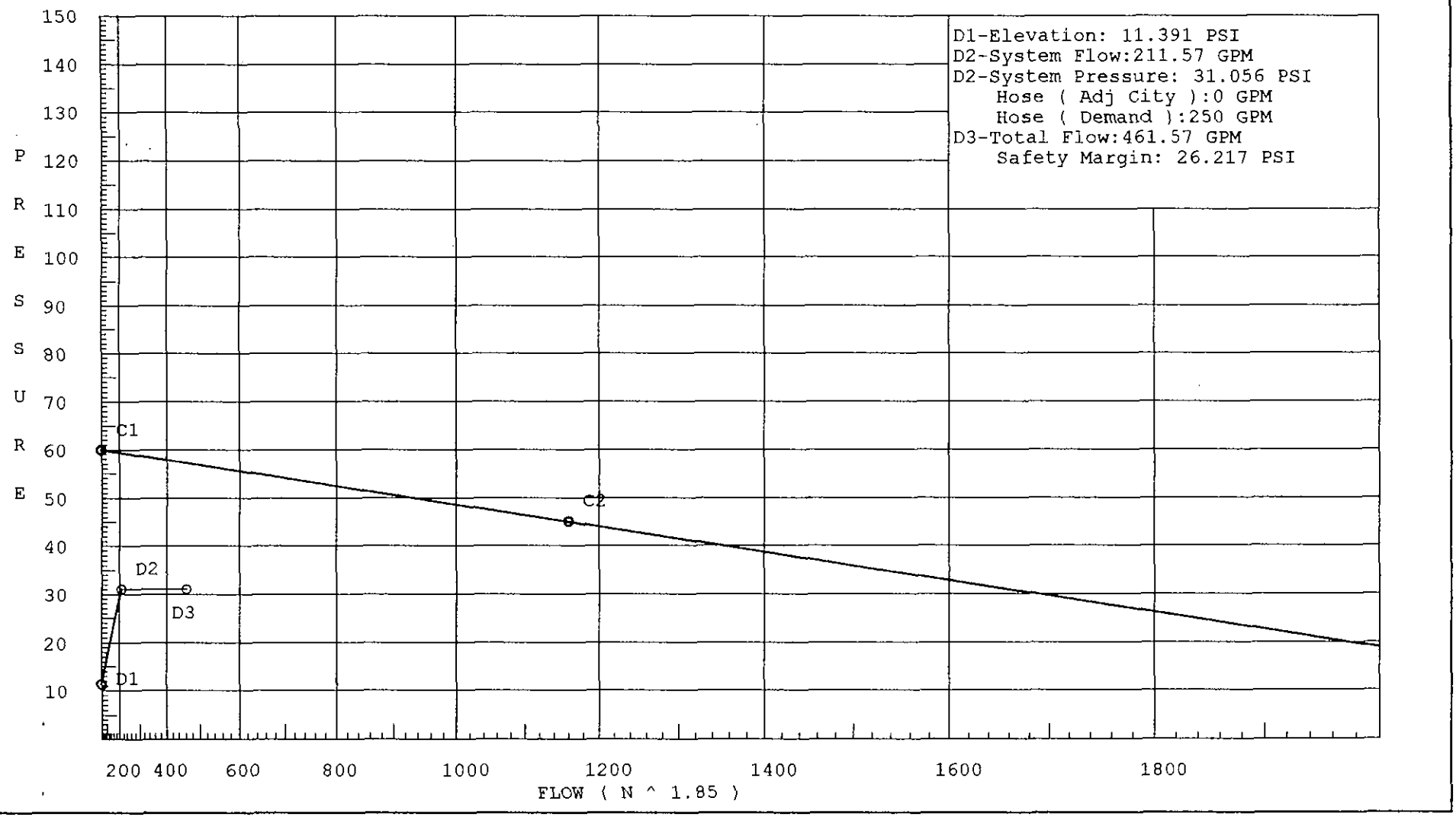
Water Flow Test:		Pump Data:		Tank or Reservoir:
Date of Test	- 4/28/97			Cap. -
Time of Test	- 10:00 AM	Rated Cap.-		Elev.-
Static Press	- 60	@ Press	-	
Residual Press	- 45	Elev.	- 0	Well
Flow	- 1160			Proof Flow
Elevation	- 0			

Location - 8" CITY MAIN 20ft FROM SPRINKLER VALVE ROOM

Source of Information - Flow Test by Higgins Fire Protection and Water Department.

City Water Supply:
C1-Static Pressure: 60 PSI
C2-Residual Pressure: 45 PSI
C2-Residual Flow: 1160 GPM

Pump Data:



Node No.	Elevation	K-Fact	Press Actual	Flow Added	Density Req.	Area	Press Req.
100	26.3	8.1	8.3	23.34	.1000	192.00	8.300
99	26.3		10.7				
95	26.3	K = K @ 95	11.03	23.34			
96	26.3	K = K @ 95	11.58	23.91			
97	26.3	K = K @ 95	12.53	24.87			
98	26.3	K = K @ 95	13.15	25.47			
89	26.3		18.01				
40	21.8		20.26				
91	26.3	K = K @ 95	15.91	28.02			
92	26.3	K = K @ 95	16.11	28.19			
93	26.3	K = K @ 95	16.49	28.53			
94	26.3	K = K @ 95	17.32	29.24			
39	22.1		20				
12	13.3		24.63				
CONN	0		31.01				
TEST	0		31.06	250			

The maximum velocity is 10.9 and it occures in the pipe between nodes 94 and 39

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
100	23.34	1.049	2E	2.000	4.870	8.300	8.300	K Factor = 8.1
to		120	1T	5.000	9.000			
99	23.34	0.1732			13.870	2.402		Vel = 8.664
99		1.380	1T	6.000	1.330	10.701	10.701	
to		120			6.000			
95	23.34	0.0456			7.330	0.334		Vel = 5.006
	23.34					11.035		K Factor = 7.03
95	23.34	1.38			12.000	11.035	11.035	K Factor @ node 95
to		120						
96	23.34	0.0456			12.000	0.547		Vel = 5.006
96	23.90	1.61			12.000	11.581	11.581	K Factor @ node 95
to		120						
97	47.24	0.0793			12.000	0.951		Vel = 7.445
97	24.87	2.067			12.000	12.532	12.532	K Factor @ node 95
to		120						
98	72.11	0.0513			12.000	0.616		Vel = 6.895
98	25.47	2.067	1E	5.000	29.120	13.148	13.148	K Factor @ node 95
to		120	2T	10.000	25.000			
89	97.58	0.0898			54.120	4.860		Vel = 9.330
89		4.260	2E	13.167	60.120	18.008	18.008	
to		120	1T	26.334	52.668	1.949		
40	97.58	0.0027			112.788	0.299		Vel = 2.196
40		4.260	9E	13.167	115.290	20.256	20.256	
to		120	1T	26.334	144.838	3.681		
12	97.58	0.0027			260.128	0.690		Vel = 2.196
	97.58					24.627		K Factor = 19.66
91	28.02	2.067	1T	10.000	12.000	15.909	15.909	K Factor @ node 95
to		120			10.000			
92	28.02	0.0089			22.000	0.196		Vel = 2.679
92	28.19	2.067			12.000	16.106	16.106	K Factor @ node 95
to		120						
93	56.21	0.0323			12.000	0.388		Vel = 5.374
93	28.53	2.067			12.000	16.494	16.494	K Factor @ node 95
to		120						
94	84.74	0.0692			12.000	0.830		Vel = 8.102
94	29.24	2.067			7.160	17.324	17.324	K Factor @ node 95
to		120				1.819		
39	113.98	0.1197			7.160	0.857		Vel = 10.898
39		4.260	6E	13.167	125.410	20.000	20.000	
to		120	1T	26.334	105.336	3.811		
12	113.98	0.0035			230.746	0.816		Vel = 2.566
12	97.59	4.26	1E	13.167	18.000	24.628	24.628	
to		120	1A	22.384	38.184	5.760		
CONN	211.57	0.0111	1G	2.633	56.184	0.624		Vel = 4.762

Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/UL	Fitting or Eqv. Ln.		Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	******* Notes ******
CONN		7.98	1E	22.654	40.000	31.012	31.012	
to		140	1G	5.034	71.737			
TEST	211.57	0.0004	1T	44.049	111.737	0.044		Vel = 1.357
	250.00							Qa = 250.00
	461.57					31.056		K Factor = 82.83

	BLOCK: 671 LOT: 8 PERMIT: 381-97
	LOWES "SONY THEATRE"
X (1)	SPRINKLER CERTIFICATION PAPERS
X (2)	FLUSH CERTIFICATION
X (3)	HVAC ROOF TOP EXHAST/INTAKE MIN.
Refer BLDG Insp (4)	CURTAIN . 35. SMOKE SPKLD
X (5)	DETECTOR 3' VENTS - MOVE
X (6)	FLUE -2HR EL STORAGE - MIN 1" CLEAR
X (7)	DETECTOR - PROJ. RM 4'-12" WALL
X (8)	EXIT SIGN - # 5 (TEMP) - REPLACE
X (9)	SEAL PENTRATIONS FLOOR AROUND DUCTS
X (10)	PROVIDE ADDITIONAL HEAD UNDER DUCTS
X (11)	TABED HEADS - REMOVE
X (12)	SIGN - FIRE SPRINKLER CONTROL VALVE
X (13)	SIGN - F.D. CONN. SERVES ENTIRE BLD
(14)	FIRE LANES + SIGNS
X (15)	RAISE HEADS WITHIN 12" CEILING - PROJ RM
X (16)	VALVE TAGS ON SPRINKLER SYSTEM
X (17)	HYDRAULIC PLATE ON RISER - SPRINKLER
	EAST - SEAL ABOVE LADDER RM
	- STAIR - SEAL PIPES
	- STAIR - DOOR HDR 4"
	- SEAL - FLOOR
8-28-97	FIRE PROTECTION INSPECTION

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Sony Loews Theater - Bricktown 8/27/97

==== Panel Sensitivity Report ====

Date: 08-27-1997
Time: 22:13:10
Panel Address: 01

Operational Level Table:

				----- Alarm Trip Level -----			
..Type.....	Trbl.....	Normal....	Alert...	Lev1....	Lev2....	Lev3....	Lev4
1. Photo....	0400....	520-1400...	1550....	1710....	1940....	2170....	2390
2. Ion.....	0400....	600-1200...	1650....	1810....	1910....	2010....	2110
3. Thermal..	0400....	500-1200....		2100			
4. Monitor..	0600....	750-1300....		1400			
5. Control..	0600....	750-1300....		1400			
6. ZA/B Zn..	0400....	610-1250....		1440			
7. RZB Zn...	0600....	750-1150...	1450....	2300			
8. AA Sec...	0960...	1120-1550....		1760			

note: **** indicates device failed communications.

Current Device or Zone Levels:

Address....	Type....	Trip Lev....	Present Lev...	Verf Counts
01	01	02	0810	00
02	01	02	0670	01
03	01	02	0790	00
04	01	02	0650	00
06	01	02	0830	00
07	01	02	0750	00
09	01	02	0770	00
10	01	02	0620	00
12	01	02	0820	00
13	01	02	0830	00
14	01	02	0840	00
15	01	02	0790	00
17	01	02	0740	00
18	01	02	0740	00
19	03	01	0940	00
20	03	01	0940	00
21	03	01	0980	00
22	03	01	0940	00
23	01	02	0840	00
24	01	02	0710	00
25	01	02	0780	00
26	01	02	0760	00
27	01	02	0740	00
28	01	02	0700	00
29	01	02	0820	00
30	01	02	0770	00

31	01	02	0640	00
32	01	02	0720	00
33	01	02	0730	00
34	01	02	0680	00
35	01	02	0720	00
36	01	02	0720	00
37	01	02	0730	00
38	01	02	0770	00
39	03	01	0660	00
40	01	02	0660	00
41	01	02	0770	00
42	01	02	0820	00
43	01	02	0830	00
44	01	02	0620	00
45	01	02	0720	00
46	01	02	0730	00
47	01	02	0670	00
48	01	02	0760	00
49	01	02	0790	00
50	01	02	0820	00
51	01	02	0720	00
52	01	02	0770	00
53	01	02	0850	00
54	01	02	0820	01
55	01	02	0840	00
56	01	02	0780	00
57	01	02	0710	00
58	01	02	0790	00
59	01	02	0810	00
60	01	02	0760	00
61	01	02	0830	00
62	01	02	0790	00
63	01	02	0610	00
64	01	02	0760	00
65	01	02	0810	00
66	01	02	0790	00
67	01	02	0800	00
68	01	02	0760	01
69	01	02	0710	00

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Sony Loews Theater - Bricktown 8/27/97

==== Panel Sensitivity Report ====

Date: 08-27-1997
Time: 22:13:36
Panel Address: 02

Operational Level Table:

				----- Alarm Trip Level -----			
..Type.....	Trbl.....	Normal....	Alert...	Lev1....	Lev2....	Lev3....	Lev4
1.Photo....	0400....	520-1400...	1550....	1710....	1940....	2170....	2390
2.Ion.....	0400....	600-1200...	1650....	1810....	1910....	2010....	2110
3.Thermal..	0400....	500-1200....		2100			

5. Control..0600....750-1300.....1400
6. ZA/B Zn..0400....610-1250.....1440
7. RZB Zn...0600....750-1150...1450....2300
8. AA Sec...0960...1120-1550.....1760
note: **** indicates device failed communications.

Current Device or Zone Levels:

Address	Type	Trip Lev	Present Lev	Verf Counts
02	04	01	1020	00
05	04	01	1070	00
08	04	01	1000	00
11	04	01	0970	00
12	04	01	1090	00
13	04	01	1130	00
14	04	01	1070	00
15	04	01	1080	00
16	04	01	1080	00
17	04	01	1070	00
19	04	01	1030	00

Sony Loews Theater - Bricktown 8/27/97

==== Panel Sensitivity Report ====

Date: 08-27-1997
Time: 22:13:59
Panel Address: 03

Operational Level Table:

				Alarm Trip Level			
Type	Trbl	Normal	Alert	Lev1	Lev2	Lev3	Lev4
1. Photo	0400	520-1400	1550	1710	1940	2170	2390
2. Ion	0400	600-1200	1650	1810	1910	2010	2110
3. Thermal	0400	500-1200		2100			
4. Monitor	0600	750-1300		1400			
5. Control	0600	750-1300		1400			
6. ZA/B Zn	0400	610-1250		1440			
7. RZB Zn	0600	750-1150	1450	2300			
8. AA Sec	0960	1120-1550		1760			

note: **** indicates device failed communications.

Current Device or Zone Levels:

Address	Type	Trip Lev	Present Lev	Verf Counts
01	01	02	0850	01
02	01	02	0740	00
03	01	02	0680	00
04	01	02	0830	00
05	01	02	0730	00
06	01	02	0710	00
07	01	02	0850	00
08	01	02	0640	00
09	01	02	0820	01
10	01	02	0740	00
11	01	02	0760	00
12	01	02	0760	00

27	01	02	0690	00
28	01	02	0740	00
29	01	02	0710	00
30	01	02	0710	00
31	01	02	0800	00
32	01	02	0740	00
33	01	02	0760	00
34	01	02	0690	00
35	01	02	0750	00
36	01	02	0780	00
37	01	02	0710	00
38	01	02	0710	00
39	01	02	0830	00
40	01	02	0690	00
41	01	02	0780	00
42	01	02	0790	00
43	01	02	0740	00

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Sony Loews Theater - Bricktown 8/27/97

==== Panel Sensitivity Report ====

Date: 08-27-1997
Time: 22:14:22
Panel Address: 04

Operational Level Table:

				Alarm Trip Level			
Type	Trbl	Normal	Alert	Lev1	Lev2	Lev3	Lev4
1. Photo	0400	520-1400	1550	1710	1940	2170	2390
2. Ion	0400	600-1200	1650	1810	1910	2010	2110
3. Thermal	0400	500-1200		2100			
4. Monitor	0600	750-1300		1400			
5. Control	0600	750-1300		1400			
6. ZA/B Zn	0400	610-1250		1440			
7. RZB Zn	0600	750-1150	1450	2300			
8. AA Sec	0960	1120-1550		1760			

note: **** indicates device failed communications.

Current Device or Zone Levels:

Address	Type	Trip Lev	Present Lev	Verf Counts
01	04	01	1130	00
02	04	01	1100	00
03	04	01	1050	00
04	04	01	1030	00
09	04	01	1130	00
10	04	01	0970	00
11	04	01	1130	00
12	04	01	1070	00
13	04	01	1090	00

17	04	01	1120	00
18	04	01	1090	00
73	05	01	0830	00
74	05	01	0830	00
75	05	01	0830	00
76	05	01	0830	00
77	05	01	0830	00
78	05	01	0840	00
80	05	01	0840	00
81	05	01	0840	00
84	05	01	0840	00
85	05	01	0830	00
86	05	01	0830	00
87	05	01	0830	00
88	05	01	0830	00
89	05	01	0830	00

90	05	01	0830	00
91	05	01	0830	00
92	05	01	0830	00
93	05	01	0830	00
94	05	01	0830	00
95	05	01	0830	00
96	05	01	0830	00

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Sony Loews Theater - Bricktown 8/27/97

==== System History Report ====

Date: 08-27-1997
Time: 22:14:57
History Priorities are as follows:
Fire Alarm => 1, Security => 2, Shorts => 3, Troubles => 4,
Maintenance Alerts => 5, Alarm Verifications => 6, CPU Watchdog
Failures => 7 and ALL Restorations => 8.
This Report on priority: 1

ALARM: Zone 0301 Date 08-27-97 Time 20:09
ALARM: Zone 0302 Date 08-27-97 Time 20:10
ALARM: Zone 0303 Date 08-27-97 Time 20:11
ALARM: Zone 0304 Date 08-27-97 Time 20:12
ALARM: Zone 0305 Date 08-27-97 Time 20:13
ALARM: Zone 0306 Date 08-27-97 Time 20:13
ALARM: Zone 0307 Date 08-27-97 Time 20:15
ALARM: Zone 0308 Date 08-27-97 Time 20:15
ALARM: Zone 0313 Date 08-27-97 Time 20:16
ALARM: Zone 0312 Date 08-27-97 Time 20:16
ALARM: Zone 0311 Date 08-27-97 Time 20:17
ALARM: Zone 0319 Date 08-27-97 Time 20:20
ALARM: Zone 0318 Date 08-27-97 Time 20:20
ALARM: Zone 0317 Date 08-27-97 Time 20:21
ALARM: Zone 0316 Date 08-27-97 Time 20:22
ALARM: Zone 0315 Date 08-27-97 Time 20:23
ALARM: Zone 0314 Date 08-27-97 Time 20:23
ALARM: Zone 0325 Date 08-27-97 Time 20:24
ALARM: Zone 0324 Date 08-27-97 Time 20:25
ALARM: Zone 0323 Date 08-27-97 Time 20:25
ALARM: Zone 0322 Date 08-27-97 Time 20:26
ALARM: Zone 0321 Date 08-27-97 Time 20:27
ALARM: Zone 0320 Date 08-27-97 Time 20:27
ALARM: Zone 0309 Date 08-27-97 Time 20:30
ALARM: Zone 0310 Date 08-27-97 Time 20:31
ALARM: Zone 0101 Date 08-27-97 Time 20:32
ALARM: Zone 0104 Date 08-27-97 Time 20:34
ALARM: Zone 0103 Date 08-27-97 Time 20:35
ALARM: Zone 0107 Date 08-27-97 Time 20:36
ALARM: Zone 0106 Date 08-27-97 Time 20:37
ALARM: Zone 0110 Date 08-27-97 Time 20:38
ALARM: Zone 0109 Date 08-27-97 Time 20:38
ALARM: Zone 0113 Date 08-27-97 Time 20:39
ALARM: Zone 0112 Date 08-27-97 Time 20:40
ALARM: Zone 0115 Date 08-27-97 Time 20:41
ALARM: Zone 0114 Date 08-27-97 Time 20:42

ALARM: Zone 0118 Date 08-27-97 Time 20:43
ALARM: Zone 0117 Date 08-27-97 Time 20:43
ALARM: Zone 0126 Date 08-27-97 Time 20:44
ALARM: Zone 0127 Date 08-27-97 Time 20:45
ALARM: Zone 0128 Date 08-27-97 Time 20:45
ALARM: Zone 0129 Date 08-27-97 Time 20:45
ALARM: Zone 0130 Date 08-27-97 Time 20:46
ALARM: Zone 0102 Date 08-27-97 Time 20:48
ALARM: Zone 0131 Date 08-27-97 Time 20:49
ALARM: Zone 0121 Date 08-27-97 Time 20:51
ALARM: Zone 0122 Date 08-27-97 Time 20:52
ALARM: Zone 0119 Date 08-27-97 Time 20:53
ALARM: Zone 0120 Date 08-27-97 Time 20:53
ALARM: Zone 0123 Date 08-27-97 Time 20:53
ALARM: Zone 0124 Date 08-27-97 Time 20:54
ALARM: Zone 0215 Date 08-27-97 Time 20:55
ALARM: Zone 0125 Date 08-27-97 Time 20:55
ALARM: Zone 0326 Date 08-27-97 Time 20:57
ALARM: Zone 0213 Date 08-27-97 Time 20:58
ALARM: Zone 0413 Date 08-27-97 Time 21:01
ALARM: Zone 0413 Date 08-27-97 Time 21:03
ALARM: Zone 0214 Date 08-27-97 Time 21:07
ALARM: Zone 0168 Date 08-27-97 Time 21:08
ALARM: Zone 0132 Date 08-27-97 Time 21:08
ALARM: Zone 0165 Date 08-27-97 Time 21:09
ALARM: Zone 0166 Date 08-27-97 Time 21:09
ALARM: Zone 0167 Date 08-27-97 Time 21:10
ALARM: Zone 0138 Date 08-27-97 Time 21:10
ALARM: Zone 0139 Date 08-27-97 Time 21:10
ALARM: Zone 0169 Date 08-27-97 Time 21:11
ALARM: Zone 0133 Date 08-27-97 Time 21:12
ALARM: Zone 0134 Date 08-27-97 Time 21:12
ALARM: Zone 0135 Date 08-27-97 Time 21:12
ALARM: Zone 0136 Date 08-27-97 Time 21:13
ALARM: Zone 0137 Date 08-27-97 Time 21:13
ALARM: Zone 0217 Date 08-27-97 Time 21:13
ALARM: Zone 0154 Date 08-27-97 Time 21:17
ALARM: Zone 0153 Date 08-27-97 Time 21:20
ALARM: Zone 0152 Date 08-27-97 Time 21:20
ALARM: Zone 0151 Date 08-27-97 Time 21:20
ALARM: Zone 0155 Date 08-27-97 Time 21:21
ALARM: Zone 0156 Date 08-27-97 Time 21:21
ALARM: Zone 0147 Date 08-27-97 Time 21:22
ALARM: Zone 0148 Date 08-27-97 Time 21:22
ALARM: Zone 0158 Date 08-27-97 Time 21:25
ALARM: Zone 0143 Date 08-27-97 Time 21:32
ALARM: Zone 0140 Date 08-27-97 Time 21:32
ALARM: Zone 0141 Date 08-27-97 Time 21:33
ALARM: Zone 0142 Date 08-27-97 Time 21:33
ALARM: Zone 0161 Date 08-27-97 Time 21:34
ALARM: Zone 0162 Date 08-27-97 Time 21:34
ALARM: Zone 0144 Date 08-27-97 Time 21:35
ALARM: Zone 0160 Date 08-27-97 Time 21:35
ALARM: Zone 0159 Date 08-27-97 Time 21:37
ALARM: Zone 0164 Date 08-27-97 Time 21:38
ALARM: Zone 0163 Date 08-27-97 Time 21:38
ALARM: Zone 0157 Date 08-27-97 Time 21:38

```
ALARM:    Zone 0168  Date 08-27-97  Time 21:46
ALARM:    Zone 0149  Date 08-27-97  Time 21:46
ALARM:    Zone 0150  Date 08-27-97  Time 21:47
ALARM:    Zone 0146  Date 08-27-97  Time 21:47
ALARM:    Zone 0145  Date 08-27-97  Time 21:47
ALARM:    Zone 0412  Date 08-27-97  Time 21:49
ALARM:    Zone 0327  Date 08-27-97  Time 21:50
ALARM:    Zone 0328  Date 08-27-97  Time 21:50
ALARM:    Zone 0329  Date 08-27-97  Time 21:51
ALARM:    Zone 0341  Date 08-27-97  Time 21:51
ALARM:    Zone 0340  Date 08-27-97  Time 21:52
ALARM:    Zone 0339  Date 08-27-97  Time 21:52
ALARM:    Zone 0338  Date 08-27-97  Time 21:52
ALARM:    Zone 0337  Date 08-27-97  Time 21:52
ALARM:    Zone 0336  Date 08-27-97  Time 21:53
ALARM:    Zone 0331  Date 08-27-97  Time 21:53
ALARM:    Zone 0330  Date 08-27-97  Time 21:53
ALARM:    Zone 0343  Date 08-27-97  Time 21:53
ALARM:    Zone 0342  Date 08-27-97  Time 21:53
ALARM:    Zone 0333  Date 08-27-97  Time 21:54
ALARM:    Zone 0332  Date 08-27-97  Time 21:54
ALARM:    Zone 0335  Date 08-27-97  Time 21:54
ALARM:    Zone 0334  Date 08-27-97  Time 21:54
ALARM:    Zone 0410  Date 08-27-97  Time 21:58
ALARM:    Zone 0410  Date 08-27-97  Time 22:01
 End of History Report
|~:


Sony Loews Theater - Bricktown 8/27/97

      ==== System History Report ====

    Date: 08-27-1997
    Time: 22:15:46
    History Priorities are as follows:
  Fire Alarm => 1, Security => 2, Shorts => 3, Troubles => 4,
  Maintenance Alerts => 5, Alarm Verifications => 6, CPU Watchdog
  Failures => 7 and ALL Restorations => 8.
    This Report on priority: 3
 End of History Report
|~:


Sony Loews Theater - Bricktown 8/27/97

      ==== System History Report ====

    Date: 08-27-1997
    Time: 22:15:57
    History Priorities are as follows:
  Fire Alarm => 1, Security => 2, Shorts => 3, Troubles => 4,
  Maintenance Alerts => 5, Alarm Verifications => 6, CPU Watchdog
  Failures => 7 and ALL Restorations => 8.
    This Report on priority: 8
Alarm Restored:   Zone 0301  Date 08-27-97  Time 20:18
```

Alarm Restored: Zone 0303 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0304 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0305 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0306 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0307 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0308 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0311 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0312 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0313 Date 08-27-97 Time 20:18
Alarm Restored: Zone 0314 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0315 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0316 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0317 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0318 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0319 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0320 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0321 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0322 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0323 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0324 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0325 Date 08-27-97 Time 20:28
Alarm Restored: Zone 0101 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0103 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0104 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0106 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0107 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0109 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0110 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0112 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0113 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0114 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0115 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0117 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0118 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0126 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0127 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0128 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0129 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0130 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0309 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0310 Date 08-27-97 Time 20:47
Alarm Restored: Zone 0102 Date 08-27-97 Time 20:49
Alarm Restored: Zone 0131 Date 08-27-97 Time 20:49
Alarm Restored: Zone 0119 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0120 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0121 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0122 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0123 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0124 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0125 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0326 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0213 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0215 Date 08-27-97 Time 20:59
Alarm Restored: Zone 0413 Date 08-27-97 Time 21:02
Alarm Restored: Zone 0413 Date 08-27-97 Time 21:04
Alarm Restored: Zone 0132 Date 08-27-97 Time 21:14

Alarm Restored:	Zone 0134	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0135	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0136	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0137	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0138	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0139	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0165	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0166	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0167	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0168	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0169	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0214	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0217	Date 08-27-97	Time 21:14
Alarm Restored:	Zone 0140	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0141	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0142	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0143	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0144	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0147	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0148	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0151	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0152	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0153	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0154	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0155	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0156	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0157	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0158	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0159	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0160	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0161	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0162	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0163	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0164	Date 08-27-97	Time 21:44
Alarm Restored:	Zone 0145	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0146	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0149	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0150	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0168	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0327	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0328	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0329	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0330	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0331	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0332	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0333	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0334	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0335	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0336	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0337	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0338	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0339	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0340	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0341	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0342	Date 08-27-97	Time 21:56
Alarm Restored:	Zone 0343	Date 08-27-97	Time 21:56

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Alarm Restored:    Zone 0410  Date 08-27-97  Time 21:59
Trouble Restored:    Zone 0485  Date 08-27-97  Time 22:01
Trouble Restored:    Zone 0486  Date 08-27-97  Time 22:01
Trouble Restored:    Zone 0487  Date 08-27-97  Time 22:01
Trouble Restored:    Zone 0489  Date 08-27-97  Time 22:01
Trouble Restored:    Zone 0488  Date 08-27-97  Time 22:01
Alarm Restored:    Zone 0410  Date 08-27-97  Time 22:02
Trouble Restored:    Zone 0477  Date 08-27-97  Time 22:02
Trouble Restored:    Zone 0473  Date 08-27-97  Time 22:02
Trouble Restored:    Zone 0474  Date 08-27-97  Time 22:02
Trouble Restored:    Zone 0475  Date 08-27-97  Time 22:02
Trouble Restored:    Zone 0476  Date 08-27-97  Time 22:02
Trouble Restored:    Zone 0131  Date 08-27-97  Time 22:04
 End of History Report
```

Reliable Fire Protection

123 WHITE OAK LANE · SUITE 225 • OLD BRIDGE, NEW JERSEY 08857
350 FIFTH AVENUE · SUITE 3304 • NEW YORK CITY, NEW YORK 10118
908-607-1500 OR 1-800-368-0024 • FAX 908-607-1515

CONTRACTORS MATERIAL & TEST CERTIFICATE SUPPRESSION SYSTEMS FOR COOKING OPERATIONS

Our Company, **RELIABLE FIRE PROTECTION, INC.** has completed the installation of :

TYPE OF SYSTEM: Ansul R-102 3.0 *FIRE SUPPRESSION SYSTEM*

INSTALLATION LOCATION:

Loews Theatres
Brick Plaza
Brick, NJ

This system is a U.L. approved fire suppression system for cooking operations. The system was installed according to manufacturers specifications and in accordance with *NFPA 17A Wet Chemical Systems*.

The system was tested on 8-28-97 and left in working order.

INSTALLERS SIGNATURE: _____

FIRE INSPECTORS SIGNATURE: _____

WITNESS SIGNATURE FOR PROPERTY OWNER: _____

NOZZLE PLACEMENT REQUIREMENTS (Continued)

Nozzle Application Chart

The following chart has been developed to assist in calculating the quantity and type of nozzle required to protect each duct, plenum, or appliance.

NOTICE

This chart is for general reference only. See complete details for each type of hazard.

Hazard	Maximum Hazard Dimensions	Nozzle Quantity	Nozzle Heights	Nozzle Part No.	Nozzle Tip Stamping – Flow No.
Duct or Transition (Single Nozzle)	Length – Unlimited Perimeter – 27 in. (67 cm) Diameter – 8.5 in. (22 cm)	1	–	56927/415567	1W/1WS
Duct or Transition (Single Nozzle)	Length – Unlimited Perimeter – 75 in. (190.5 cm) Diameter – 24 in. (61 cm)	1	–	56928/78078*	2W/2WH*
Duct or Transition (Dual Nozzle)	Length – Unlimited Perimeter – 150 in. (381 cm) Diameter – 48 in. (122 cm)	2	–	56928/78078*	2W/2WH*
Electrostatic Precipitator (At Base of Duct)	Individual Cell	1	–	56929	1/2N
Plenum (Horizontal Protection)	Length – 8 ft. (2.4 m) Filter Height – 20 in. (51 cm)	1	–	56930/415566/417332	1N/1NS/1NSS
Plenum (Vertical Protection)	Length – 4 ft. (1.2 m) Width – 4 ft. (1.2 m)	1	–	56927/415567/417333	1W/1WS/1WSS
Fryer/Split Vat Fryer**	Maximum Size (without drip board) 15 in. (38 cm) x 14 in. (36 cm) Area – 210 sq. in. (1355 sq. cm) Maximum				
	High Proximity	1	27 – 47 in.	418117	230
	Medium Proximity	1	20 – 27 in.	418118	245
	Maximum Size (with drip board) 21 in. (53 cm) x 14 in. (36 cm) Area – 294 sq. in. (1897 sq. cm) Maximum (Fry Pot must not exceed 15 in. x 14 in. (38 cm x 36 cm))				
	High Proximity	1	27 – 47 in.	418117	230
	Medium Proximity	1	20 – 27 in.	418118	245

*Use 2WH nozzle on 1.5 gallon, 6 flow, duct and plenum protection only.
**For multiple nozzle protection of single fryers, see detailed information on Pages 4-10.1 through 4-10.8

CALC BA.

CONTRACTOR'S MATERIAL & TEST CERTIFICATE FOR A BOVEGROUND PIPING

B97171

PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

PROPERTY NAME: LOEWS THEATRES

DATE:

PROPERTY ADDRESS: BRICK PLAZA BRICK N.J.

PLANS

ACCEPTED BY APPROVING AUTHORITIES (NAMES)

ADDRESS

INSTALLATION CONFORMS TO ACCEPTED PLANS — ☒ YES ☐ NO

EQUIPMENT USED IS APPROVED — ☒ YES ☐ NO

IF NO, EXPLAIN DEVIATIONS

INSTRUCTIONS

HAS PERSON IN CHARGE OF FIRE EQUIPMENT BEEN INSTRUCTED AS TO LOCATION OF CONTROL VALVES AND CARE AND MAINTENANCE OF THIS NEW EQUIPMENT — ☒ YES ☐ NO

IF NO, EXPLAIN

HAVE COPIES OF THE FOLLOWING BEEN LEFT ON THE PREMISES — ☒ YES ☐ NO

1. SYSTEM COMPONENTS INSTRUCTIONS — ☒ YES ☐ NO
2. CARE AND MAINTENANCE INSTRUCTIONS — ☒ YES ☐ NO
3. NFPA13A — ☒ YES ☐ NO

LOCATION OF SYSTEM

SUPPLIES BUILDINGS

ENTIRE BUILDING

SPRINKLERS

MAKE	MODEL	YEAR OF MANUFACTURER	ORIFICE SIZE	QUANTITY	TEMPERATURE RATING
VIKING Ex Cov.	M	1997	17/32	47	155°F
VIKING	M	1997	1/2	45	155°F
RELIABLE	G4FR	1997	1/2	351	165°F

PIPE AND FITTINGS

TYPE OF PIPE: SCHD 10 MAINS SCHD 40 LINES

TYPE OF FITTINGS: GRVD MAINS THD. LINES

ALARM VALVE OR FLOW INDICATOR

ALARM DEVICE			MAXIMUM TIME TO OPERATE THROUGH TEST CONNECTION	
TYPE	MAKE	MODEL	MIN.	SEC.
ELEC FLOW SW	POTTER ELEC	WFD	0	38

DRY PIPE OPERATING TEST

DRY VALVE			Q.O.D.		
MAKE	MODEL	SERIAL NO.	MAKE	MODEL	SERIAL NO.

	TIME TO TRIP* THROUGH TEST CONNECTION		WATER PRESSURE	AIR PRESSURE	TRIP POINT AIR PRESSURE	TIME WATER REACHED TEST OUTLET*		ALARM OPERATED PROPERLY	
	MIN.	SEC.	PSI	PSI	PSI	MIN.	SEC.	YES	NO
WITHOUT Q.O.D.									
WITH Q.O.D.									

IF NO, EXPLAIN

*MEASURED FROM THE TIME INSPECTOR'S TEST CONNECTION IS OPENED.

DELUGE & PREACTION VALVES

OPERATION ☐ PNEUMATIC ☐ ELECTRIC ☐ HYDRAULIC

PIPING SUPERVISED ☐ YES ☐ NO | DETECTING MEDIA SUPERVISED ☐ YES ☐ NO

DOES VALVE OPERATE FROM THE MANUAL TRIP AND/OR REMOTE CONTROL STATIONS ☐ YES ☐ NO

IS THERE AN ACCESSIBLE FACILITY IN EACH CIRCUIT FOR TESTING ☐ YES ☐ NO | IF NO, EXPLAIN

MAKE	MODEL	DOES EACH CIRCUIT OPERATE SUPERVISION LOSS ALARM		DOES EACH CIRCUIT OPERATE VALVE RELEASE		MAXIMUM TIME TO OPERATE RELEASE	
		YES	NO	YES	NO	MIN.	SEC.

TEST DESCRIPTION

HYDROSTATIC: Hydrostatic tests shall be made at not less than 200 psi (13.6 bars) for two hours or 50 psi (3.4 bars) above static pressure in excess of 150 psi (10.2 bars) for two hours. Differential dry-pipe valve clappers shall be left open during test to prevent damage. All aboveground piping leakage shall be stopped.

PNEUMATIC: Establish 40 psi (2.7 bars) air pressure and measure drop which shall not exceed 1½ psi (0.1 bars) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop which shall not exceed 1½ psi (0.1 bars) in 24 hours.

TESTS

ALL PIPING HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HRS. | IF NO, STATE REASON

DRY PIPING PNEUMATICALLY TESTED ☐ YES ☐ NO

EQUIPMENT OPERATES PROPERLY ☐ YES ☐ NO

DO YOU CERTIFY AS THE SPRINKLER CONTRACTOR THAT ADDITIVES AND CORROSIVE CHEMICALS, SODIUM SILICATE OR DERIVATIVES OF SODIUM SILICATE, BRINE, OR OTHER CORROSIVE CHEMICALS WERE NOT USED FOR TESTING SYSTEMS OR STOPPING LEAKS?
☐ YES ☐ NO

DRAIN TEST	READING OF GAGE LOCATED NEAR WATER SUPPLY TEST PIPE:	RESIDUAL PRESSURE WITH VALVE IN TEST PIPE OPEN WIDE
	STATIC PRESSURE 70 PSI	60 PSI

Underground mains and lead in connections to system risers flushed before connection made to sprinkler piping.

VERIFIED BY COPY OF THE U FORM NO. 85B ☐ YES ☐ NO | OTHER | EXPLAIN

FLUSHED BY INSTALLER OF UNDERGROUND SPRINKLER PIPING ☒ YES ☐ NO

BLANK TESTING GASKETS

NUMBER USED	LOCATIONS	NUMBER REMOVED
NONE		

WELDING

WELDED PIPING ☐ YES ☒ NO

IF YES...

DO YOU CERTIFY AS THE SPRINKLER CONTRACTOR THAT WELDING PROCEDURES COMPLY WITH THE REQUIREMENTS OF AT LEAST AWS D10.9, LEVEL AR-3 ☐ YES ☐ NO

DO YOU CERTIFY THAT THE WELDING WAS PERFORMED BY WELDERS QUALIFIED IN COMPLIANCE WITH THE REQUIREMENTS OF AT LEAST AWS D10.9, LEVEL AR-3 ☐ YES ☐ NO

DO YOU CERTIFY THAT WELDING WAS CARRIED OUT IN COMPLIANCE WITH A DOCUMENTED QUALITY CONTROL PROCEDURE TO INSURE THAT ALL DISCS ARE RETRIEVED, THAT OPENINGS IN PIPING ARE SMOOTH, THAT SLAG AND OTHER WELDING RESIDUE ARE REMOVED, AND THAT THE INTERNAL DIAMETERS OF PIPING ARE NOT PENETRATED ☐ YES ☐ NO

CUTOUTS (DISKS)

DO YOU CERTIFY THAT YOU HAVE A CONTROL FEATURE TO ENSURE THAT ALL CUTOUTS (DISKS) ARE RETRIEVED ☒ YES ☐ NO

HYDRAULIC DATA NAMEPLATE

NAMEPLATE PROVIDED ☒ YES ☐ NO | IF NO, EXPLAIN

REMARKS

DATE LEFT IN SERVICE WITH ALL CONTROL VALVES OPEN: 8/29/97

SIGNATURES

NAME OF SPRINKLER CONTRACTOR: HIGGINS FIRE PROTECTION, INC. | 1120 CENTRAL AVE HILLSIDE, NJ. 07205

TESTS WITNESSED BY

FOR PROPERTY OWNER (SIGNED)	TITLE	DATE
	SUPER	7-31-97
FOR SPRINKLER CONTRACTOR (SIGNED)	TITLE	DATE
	FOREMAN	7-31-97

ADDITIONAL EXPLANATION AND NOTES

Higgins Fire Protection, Inc.
1120 Central Avenue
Hillside, New Jersey 07205
Tele 908-352-3487
Fax 908-352-8033

September 3, 1997

Andy Garcia

C. Raimondo & Sons Const. Co., Inc
540 Bergen Blvd.
P.O. Box 1381
Fort Lee, N.J. 07024

Re: Loews Theatre
Bricktown, N.J.
Fire Sprinkler System

Dear Mr. Garcia:

This letter is to confirm that the fire sprinkler system installed at the Loews Theatre in Bricktown, NJ has been hydrostatically tested and flushed in accordance with NFPA 13.

Please call me if you have any questions.

Sincerely,

Michael Kulik

Michael Kulik
Higgins Fire Protection, Inc

FIRE ALARM INSPECTION & TESTING REPORT

Systems Sales Corporation
1345 Campus Parkway
Monmouth Shores Corporate Park
Neptune, NJ 07753-6815

(908) 751-0600

Date 8-27-97 No.

Type of Test
- ☐ PERIODIC
- ☒ ACCEPTANCE
- ☐ MAINTENANCE
- ☐ MONTHLY
- ☐ QUARTERLY
- ☐ SEMI ANNUAL
- ☐ ANNUAL

Customer Jordano Electric
Test Location LOEWS Theater
Address Brick Plaza
City Bricktown State NJ Zip

Control Panel Manufacturer: EST | Model Number: IRC-3

DEVICES TESTED	TOTAL QUAN.	QUAN. TEST	TEST STATUS	COMMENTS
Control Panel	1	1	ok	
Remote Annunciator	1	1	ok	
Manual Stations	18	18	ok	
Heat Detectors	5	5	ok	
Smoke Detectors	69	69	ok	
Beam Smoke Detectors	1	1	ok	Tested at Module and at Test Station
Duct Smoke Detectors	34	34	ok	
Audio/Visual Signals	38	38	ok	SPEAKER / Strobe Units - See Remarks
Visual Signals	—	—	—	
Waterflow Devices	1	1	ok	
Valve Tamper Devices	2	2	ok	
Door Holders	—	—	—	

IDC Initiation Zones	—	—	—	Fully Addressable	Style:
IDC Supervisory Zones	—	—	—		Style:
IAC Indicating Ckts	12	12	ok	(6) STROBE and (6) Speaker	Style:
SLC Signal Line Ckts	2	2	ok	All Addressable Devices - Test OK	Style:
Relay Control Ckts	11	11	ok	PROJECTION and Sound RACK Shut-Down Relays	
Battery Back-Up	1	1	ok		
Fan Shutdown	17	17	ok		
Elevator Recall	—	—	—		
Protective Signalling	N/A			Type: See Remarks - F.B.O.	

REMARKS: Note: Speaker/Strobe outside Fire Protection Room ONLY Activates on Waterflow Sw Alarm, per Specification. At Completion of Test Remote Monitoring F.B.O. Not yet operational. Tested Alarm and Trouble Contacts - Test OK.

CUSTOMER SIGNATURE _____ DATE 8/27/97

TECHNICIAN SIGNATURE George Court Prog Mgr. DATE 8/27/97

COMMERCIAL TESTING COMPANY

Standard Method of Test for
Surface Burning Characteristics of Building Materials
ASTM E 84-94a

Material Tested: *Custom Sony Expo - Unbacked Unadhered*

Report Number 108546

Test Number 2767-2904
November 6, 1996

Prepared for:
Mahram
Hauppauge, New York

Commercial Testing Company

Jonathan Jackson
President

INTRODUCTION

This report represents test results on a material submitted by Mahram of Hauppauge, New York. The test was conducted in accordance with the American Society for Test and Materials fire test response standard E 84–94a, *Surface Burning Characteristics of Building Materials*, also referred to as the Steiner tunnel test. This method is similar to NFPA No. 255 and UL No. 723. This method has been approved for use by agencies of the Department of Defense and for listing in the DoD *Index of Specifications and Standards*.

This standard should be used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions and should not be used to describe or appraise the fire–hazard or fire–risk of materials, products, or assemblies under actual fire conditions. However, results of the test may be used as elements of a fire–hazard assessment or a fire–risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard or fire risk of a particular end use.

PURPOSE

The purpose of the test is to determine the comparative surface burning behavior of a material by observing the flame spread along the surface of the specimen. It is intended to provide comparative measurements of surface flame spread and smoke development of materials with that of select grade red oak and inorganic fiber reinforced cement (GRC) board under specific fire exposure conditions. The test exposes a nominal 25-foot long by 18-inch wide test specimen to a controlled air flow and flaming fire adjusted to spread the flame along the entire length of a red oak specimen in 5.50 minutes. During the 10-minute test duration, flamespread over the specimen surface and density of the resulting smoke are measured and recorded. Test results are calculated relative to red oak, which has an arbitrary rating of 100, and GRC board, which has a rating of 0. The test results are expressed as Flamespread Index and Smoke Density. There is not necessarily a relationship between the two measurements.

The method does not provide for measurement of heat transmission through the surface tested, the effect of aggravated flame spread behavior of an assembly resulting from the proximity of combustible walls and ceilings, or classifying a material as noncombustible solely by means of a Flamespread Index.

The zero reference and other parameters critical to furnace operation were verified on the day of the test by conducting a 10–minute test using 1/4–inch GRC board. Periodic tests using NOFMA certified select grade red oak flooring provided data for the 100 reference. The material submitted was then tested in accordance with standard test method procedures.

TEST SAMPLE

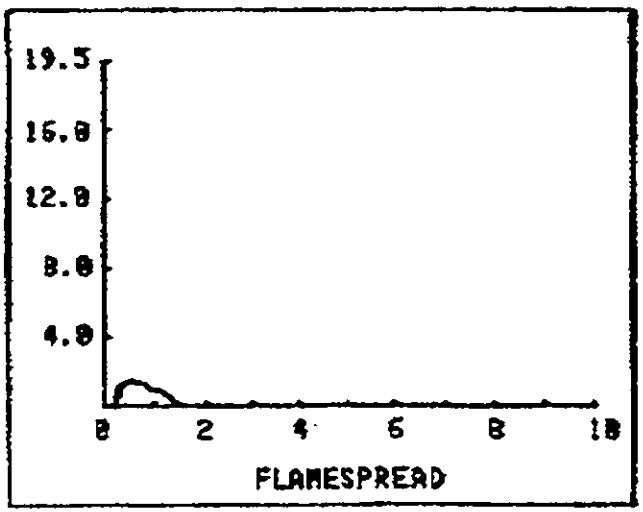
The test sample, selected by the client, was identified as Custom Sony Expo -- Unbacked Unadhered. The fabric was woven from 100% Trevira FR Polyester and had a total weight of 3.7

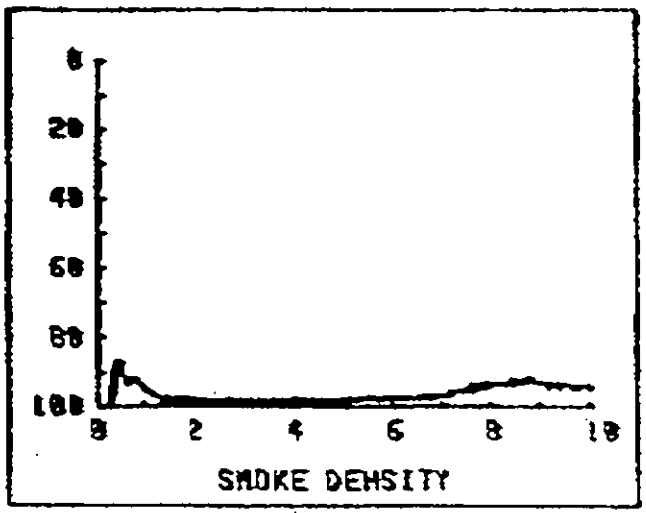
.....ASTM E 84 TEST DATA.....

CLIENT: MAHARAM
TEST NUMBER: 2767-2984
MATERIAL TESTED: CUSTOM SONY EXPO - UNBACKED, UNADHERED
DATE TESTED: NOVEMBER 6, 1996

TEST RESULTS:

TIME TO IGNITION =	0.16 minutes
MAXIMUM FLAMESPREAD DISTANCE =	1.45 feet
TIME MAXIMUM SPREAD =	0.36 minutes
FLAMESPREAD INDEX =	5
SMOKE DENSITY INDEX =	35





ounces per square yard. The fabric was conditioned to equilibrium in an atmosphere with the temperature maintained at 71 ± 2°F and the relative humidity at 50 ± 5 percent. For testing, the specimen was placed over a 2-inch hexagonal wire mesh supported by 1/4-inch diameter steel rods spanning the tunnel ledges at 24-inch intervals. This auxiliary support mechanism is described in Appendix X1 of the E 84 standard, Guide to Mounting Methods, Sections X1.1.6 and X1.1.7.

Test Result

Sample selection and identification were provided by the client. A sampling plan, if described in the referenced test procedure, was not necessarily followed. The test results presented in this report apply only to the individual specimens tested and are not necessarily indicative of apparent identical or similar materials.

This report is provided for the exclusive use of Mahram. It may be used in its *entirety* to gain product acceptance from duly constituted authorities. However, this report, or the name of Commercial Testing Company, shall not be used under any circumstances in advertising to the general public.

Test results, calculated on the basis of observed flame propagation and the integrated area under the recorded smoke density curve, are presented below. In recognition of possible variations due to limitations of the test method, the results are rounded to the nearest number divisible by five. generated graph at the end of the report.

Test Specimen	Flamespread Index	Smoke Density
GRC Board	0	0
Red Oak Flooring	100	100
Custom Sony Expo – Unbacked Unadhered	**5**	**35**

Observations

Specimen ignition over the burners occurred at 0.16 minutes. Flame spread was observed to advance a maximum distance of 1.45 feet beyond the zero point at 0.36 minutes. The maximum temperature recorded during the test was 532°F.

262-5431

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY
401 CHAMBERS BRIDGE ROAD, BRICK, N.J. 08723

Department of Administration & Finance
Division of Inspections
Code Enforcement Bureau
(908) 262-1033
Fax (908) 262-8954
http://gbshost.com/brick

BLK 671. Lot 8

9/2/97

To: Joe Curiazza

From: Frank Mizer

Subject: Sony Movie Theater

Joe, From the information obtained in the field, as well as indicated on the drawings submitted by the client, some of the confusion in the reports is due to the following.

The BOCA building code addresses (in section 412.0) stages and platforms. Under this heading the sub-chapter 412.3.5.1 alludes to trim, finish and decorative hangings. While the black (unattatched) curtins that surround the screen are free hanging. The side curtins may be attatched at top and bottom only, and cover the sound deading material on the side walls.

There is a conflict between the Commercial Testing Company's report and the one that was issued by Maharam. (copies of both enclosed) Until this conflict is resolved, I as the building subcode official will not sign off on the final inspection.

Sincerely
Frank Mizer

cc: file

Called 9-2-97 @ 11.00 To Maltaram.
Spoke To Bill H at FTC&H FM 9-4-97
9-2-97 @ 2:35 Dewey

|m|a|n|a|r|a|m|

PO Box 6900, Rasons Court
Hauppauge, NY 11788

516.582-3434
516.232-1026 Fax

FAX TRANSMITTAL

To: Joe Curiazza/Brick, NJ, Bldg.Inspection **From:** Theresa Farley

Subject: **Custom Sony Expo/Sony-Brick, NJ** **Date:** August 28, 1997

Dear Joe,

This is to confirm the conversation you had with Manny Feldson, wherein he advised that Custom Sony Expo is being installed on the wall, stapled to wood. This would be considered a wallcovering application, as per ASTM-E84-91, Chapter Xl.9 Paragraph 4 and, should be tested as outlined in Xll.4 (copies attached).

Wallcoverings are interior finish materials and, per the Life Safety Code, should be grouped in classes, in accordance with the Flame Spread and Smoke Development. Class A requires the Flame Spread of 0-25 and Smoke Development of 0-450 (copies attached).

Attached is a copy of the ASTM-E84 Unadhered Test performed on Custom Sony Expo. This fabric meets a Class A Rating.

Hope this information is helpful. Let us know if you have any questions.

Thank you.

Theresa

cc: Walt Schaeffer - Sony Loews
Manny Feldson - Maharam

Att
Ms. Sass

Att.
A. Garcia

TOWNSHIP OF BRICK

OCEAN COUNTY, NEW JERSEY
401 CHAMBERS BRIDGE ROAD, BRICK, N.J. 08723

Department of Administration & Finance
Division of Inspections
Joseph Curiazza
Construction Official
(732) 262-1024
Fax (732) 262-8954
http://www.gbshost.com/brick

Date: January 27, 1998

Name: Brick Plaza Cinemas, Inc
Bl 671 Lt 8
Address: 711 Fifth Ave. 10th Floor
New York, N.Y 10022

RECEIVED
JAN 30 1998
SECURITY/SAFETY DEPT.

To Whom It May Concern:

As of this date, your Temporary Certificate of Occupancy is out dated, therefore, you are in violation of the Uniform Construction Code.

Please contact this office as soon as possible to rectify this problem. A Temporary Certificate of Occupancy can be cancelled, causing a hardship for the owner. Please call 732-262-1024 or 262-1025 if additional information is needed.

Sincerely,

Joseph P Curiazza
Construction Official

732-262-8954

SONY THEATRE MANAGEMENT CORP., AS AGENT
EXECUTIVE OFFICES 711 FIFTH AVENUE
NEW YORK, N Y 10022

Citibank Delaware
A Subsidiary of Citicorp
One Penn's Way
New Castle, DE 19720

62-20
311

NO. 069323

EXACTLY [illegible]

DATE	CHECK NO.	AMOUNT
2/5/97	069323	$29,357.64

PAY TO THE ORDER OF Township of Brick

Robert E May

"069323" :031600209: 39108203"

To: Scott M. Pezarras, Chief Financial Officer

From: Carol A. Wolfe, Affordable Housing Administrator

Re: Affordable Housing Fees

Date: 2/10/97

Business/Development: Brick Plaza Cinemas Inc

Owner/Applicant: Sony Theater Management Corp

Property Address: 711 Fifth Ave., NY 10022

Block: 671 Lot: 8

DEPOSIT RECEIVED
Mandatory Development Fee
Commercial ✓
Residential
Inclusionary Development Fee

Check Number 69323
Estimated Fee 58,715.28

Deposit Amount $ 29,357.64

FINAL PAYMENT PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

Mandatory Development Fee
Commercial
Residential
Inclusionary Development Fee

Check No.: _____
Final Fee: _____
Less Deposit: _____

Final Payment $_____

FOR DEPOSIT ONLY-AFFORDABLE HOUSING TRUST ACCT # 4880071456

Collection of said fees as authorized by Township Ordinance 354-2C-93, is pursuant to N.J.S.A. 52:27d-301 et seq. and N.J.A.C. 5:92-18 et seq.

Received in Treasurer's Office by:

Jennifer Price
Signature

2/10/97
Date

Lori:

Please Have Gladys

Deliver This Application & Check To

The Brick Township Building Dept.

To Ms. Carol Sisto: & Have Him Pick Up The

Plumbing Permits

Directions Are Below

- N.J. Turnpike South To Exit #11 (G.S.P.-South)

Garden State Parkway South To Exit #88

@ end of Exit Make A Left On To Route 70 (East)

Go Approximately 2 Miles To Chambers Bridge Rd.

Shop Center - AP (R) - Shop Rite (L)

Make A Left, Go To #401 (on Right Side)

This is The Building Dept.

Pass Library

Stay R - 1st Entrance Tennis Ct.

(Downstairs.)

Thank You -

Andy Garcia

LOEWS THEATRE MANAGEMENT CORP.
AS AGENT
EXECUTIVE OFFICES 711 FIFTH AVENUE
NEW YORK, NY 10022

CITIBANK DELAWARE
A Subsidiary of CitiCorp
One Penn's Way
New Castle, DE 19720
62-20/311

033201

Vendor Number
0000007012

Date 08/04/97

Pay Amount $29,357.64***

Pay ****TWENTY-NINE THOUSAND THREE HUNDRED FIFTY-SEVEN AND 64/100 US DOLLAR****

To The Order Of TOWNSHIP OF BRICK
OFFICE OF MUNICIPAL CLERK
401 CHAMBERS BRIDGE ROAD
BRICK, NJ 08723

John J Walker

Authorized Signatures

[redacted]

To: Scott M. Pezarras, Chief Financial Officer

From: Carol A. Wolfe, Affordable Housing Administrator

Re: Affordable Housing Fees

Date: 8-11-97

Business/Development: Loews Theatre

Owner/Applicant: Same

Property Address: Back Blvd

Block: _____ Lot: _____

DEPOSIT RECEIVED
Mandatory Development Fee
Commercial
Residential
Inclusionary Development Fee

Check Number_____
Estimated Fee_____

Deposit Amount $_____

FINAL PAYMENT PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY

Mandatory Development Fee
(Commercial)
Residential
Inclusionary Development Fee

Check No.: 33201
Final Fee: 58715.32
Less Deposit: 29357.64

Final Payment $ 29357.64

FOR DEPOSIT ONLY-AFFORDABLE HOUSING TRUST ACCT # 4880071456

Collection of said fees as authorized by Township Ordinance 354-2C-93, is pursuant to N.J.S.A. 52:27d-301 et seq. and N.J.A.C. 5:92-18 et seq.

Received in Treasurer's Office by:

Signature

8, 11, 97
Date