Belsize Park

Scope of works: - TLL/NO45/M271/FIR/SCO/00001 (A)

Replacing Platform Hydrant System With a Dry (Damp) Dropper

General

The contractor shall be LPS 1048 approved and responsible for the Design, Installation, Testing & Commissioning of the works detailed below. All new works shall be fully co-ordinated with existing service installations and site conditions. Whilst every effort has been made to ensure that the information provided is accurate, the contractor shall be responsible for ensuring the completed installation meets the specified criteria and complies with all the relevant regulations & appropriate LU cat 1, TLL cat 2 and British Standards.

The Tube Lines Fire Reference Manual and all applicable LUL & TLL specifications shall be complied with at all times. The contractor shall bring any discrepancy in the design information to the attention of the Tubelines Project Fire Engineer, Construction Manager and attain clarification before any work commences.

Belsize Park is an English Heritage Grade 2 listed building under the Planning (listed buildings and conservation areas) Act 1990, for its special architectural interest. Tube Lines shall be responsible for the submission of planning applications where required, however the contractor shall verify that approval has been granted prior to any Builderswork being carried out. It shall be ensured that care is taken at all times whilst working on the station.

All applicable Tubelines Operational processes to be adhered to at all times.

Scope of Works

Provide a new four way 150mm diameter breaching inlet housed within the existing man hole, located inside the open air fenced area in front of the station.

From the location of the breeching inlet install an in-line pressure reducing valve immediately downstream.(PRV set to allow 5.5 bar running pressure at platform level outlets.

The 150mm supply shall continue into Staircase (2/631) where it is to connect into the existing cast iron drop pipe with a Viking Johnson coupling.

At the base of the staircase a new branch shall be taken from the existing 100mm main to supply a new outlet landing valve housed within a standard box and recessed into the existing structure as shown on the attached sketch.

2 new feeds shall be taken from the existing pipework within the platform invert to supply 1No additional outlet on each platform, one at the southern end of the southbound platform and one at the northern end of the northbound platform.

Existing pipework located in the platform invert to be checked for corrosion and details submitted to Tube Lines. Where corrosion is evident and it is deemed necessary, Tube Lines shall instruct the contractor to remove the corroded pipework and replace with a section of new pipework c/w adequate bracketry and connected with 2No Viking Johnson couplings.

Brackets on the existing pipe work in the platform inverts to be checked and additional anchor brackets to be provided if necessary.

An Automatic Air Valve (AAV) is to be installed at an appropriate position on the system.

The existing hydrant supply is to be isolated & blanked off within the existing man hole access outside the station. All redundant pipework, valves and bracketry is to be stripped out and disposed of by a suitably licenced contractor.

Water Supply

A water supply is to be connected to the new dry dropper main via a dedicated header tank and ball valve. Water levels within the tank shall be monitored by installation of a low level alarm switch; standard drawing number TLL-L001-FUNC-FIR-DRW-00302 refers. L/L alarm switch to be connected to the F/A system and all required message changes completed. The tank is to be installed at high level in (2/661) and a water supply taken from the existing town main supply.

Builderswork

The contractor shall allow for all required enabling works required to facilitate the installation of a new breeching inlet and pressure reducing valve within the existing man hole. A new man hole cover with the words 'Dry Dropper Inlet' shall be provided.

The Hydrant Landing Valve located at the base of Spiral Stair (2/631) is to be housed within a standard recessed outlet cabinet. The cabinet is to be recessed into the existing structure. All adaption and making good of the existing structure and all necessary support frames are to be included by the contractor.

All penetrations, lagging, fire stopping and cabinets are to be included by the contractor.

Tube Lines standard drawings showing the detail of all penetrations and fire stopping to be adhered to at all times.

Fire Alarm Interfaces

Each newly installed monitoring device is to be connected to the main station Fire alarm panel.

All required message changes shall be completed in accordance with Tube Lines Procedure WI-2560-A2.

Access

The contractor shall be responsible for the supply of all required access equipment; Equipment selected shall be suitable for the specific work activity being carried out in full compliance with the Working at Height Regulations 2005.

Signage

Where additional hydrant outlets are to be installed, new signage is to be fitted in accordance with the current issue of the London Underground signs manual.

All signage located at existing hydrant outlets will be altered to ensure compliance with the current manual.

Commissioning

Once all pipework, landing valves, and equipment, have been installed, and prior to any charging of the system with air or water, each pipe run, and all fixings, must be inspected for compliance with BS 9990, and good installation practice. The results of the inspection should be recorded.

Upon successful completion of the above inspection, all new pipework is to be tested hydraulically to a pressure of 10bar for 15 minutes and witnessed by a Tube Lines representative. Should any significant drop in pressure be recorded the above inspection should be repeated, any deficiencies rectified and the test repeated.

At such a time that all testing above is complete, all monitoring equipment installed shall be tested for correct function and witnessed by a Tube Lines representative. Fire Alarm panel print-outs shall be retained and submitted to the project.

The system shall be left in an operational condition.

Design

The contractor shall be responsible for the development of the indicative drawings provided by Tube lines into fully detailed design drawings. Allowance shall be made for the co-ordination of the installation with existing services and site conditions. Any site surveys required shall be carried out by the contractor.

The design of the installation shall be based upon BS9990 Code of Practice for Non automatic fire fighting systems in buildings and carried out in accordance with the standards and documents listed below.

Any changes to the indicative design drawings provided by Tubelines shall be conveyed to the Construction Manager, agreement obtained from the Tube Lines Fire Project Engineer and duly authorised via the Tube Lines design change process control.

The contractor shall submit fully detailed drawings of the proposed breeching inlet cabinet for the approval of Tube Lines prior to commencing works.

Applicable Standards & Documents

British Standards

BS 9990 Code of Practice for Non automatic fire fighting systems in buildings

LU Cat 1 Standards

LUL 1-080 Issue A1 The application of fire safety engineering principals to London Underground premises.
LUL 1-081 Issue A1 Design and installation of fire protection systems and compartmentation measures.
LUL 1-082 Issue A1 Active fire protection systems and portable fire equipment.
LUL 1-083 Issue A1 Passive fire protection systems.
LUL 1-084 Issue A1 Maintenance of fire protection systems and compartmentation measures.
LUL 1-085 Issue A2 Fire Safety Performance of Materials.
LUL Bb224Issue 03 Fire Safety Precautions – Compliance with fire precautions and process for change.
LUL 2-01014-004 Issue A1 Computer Aided Design Data

TL Cat 2 Standards

2-152 Fire engineering – Fire safety strategy
2-153 Fire engineering – Fire suppression and fire fighting equipment
2-154 Fire engineering – Fire compartmentation
2-155 Fire engineering – Fire detection and alarm systems

2-156 Fire engineering – Maintenance of fire protection systems and fire compartmentation
2-092 Temporary Works
TLL-PROJ-FUNC-IMG-INS-00016 – CAD File Generation & Numbering

Tube Lines NBS Specifications

TLL-PROJ-STAT-EMG-SPC-00003 Masonry
TLL-PROJ-STAT-EMG-SPC-00010 Building Fabric Sundries
TLL-PROJ-STAT-EMG-SPC-00019 Piping Supply Systems
TLL-PROJ-STAT-EMG-SPC-00014 Communications, Security, Safety and Protection Systems (Fire Detection)
TLL-PROJ-STAT-EMG-SPC-00016 General Engineering Services

Tube Lines Fire System Reference Manuals:

G7320, Providing For Fire Safety
G7321 Passive Fire Protection
G7322. Fire Suppression and Fire Fighting Systems
G7323 Fire Detection and Alarm Systems

Any deviations from above documents shall be agreed, in writing, by the Tube Lines Discipline Engineer.

Documentation

Inspection & Test Records

The contractor shall submit an Inspection and Test Plan for approval prior to works starting on site. Copies of all test result records and inspections shall be submitted at pre-determined points as the project progresses. All documents shall be countersigned by a Tube Lines representative.

Inspection & Test Plans to include but not be limited to, the following deliverables:

- All relevant TLL Quality Check Sheets
- Test Certificates
- Completion Certificate detailing LPS 1048 Registration No.

Record Drawings

Upon completion of installation works, as built drawings are to be provided detailing the route of all system pipework, existing and new, throughout the station.

As-built drawings are to be produced in Microstation V8 file format and are to comply in full with the Tube Lines CAD standard “TLL-PROJ-FUNC-IMG-INS-00016” & the LU CAT1 CAD standard 2-01014-004.

Within 14 days of completion of the works the contractor shall supply full operating and maintenance details of all equipment installed, which shall include all manufacturers recommendations.

Health & Safety

The contractor shall prepare site specific Method Statements and Risk Assessments for the approval of Tube Lines prior to works starting on site.

Attention is drawn to the requirement for working within platform inverts, whilst working within the inverts, the requirements of the confined space regulations 1997 shall be adhered to at all times.

Products & Materials

Pipework
Type: Heavy quality galvanised steel.
Standard: EN 10255

Pipework Identity banding
Type: Banding identifying flow direction and service name
Standard: BS1710

Pressure reducing valves
Type: Axion piston body pilot.
Standard: BS EN1567
Manufacturer: Red Dragon

Couplings

Type: Rigid, Grooved
Standard: LPCB approved
Manufacturer: Submit proposals

Valves
Type: Gear operated, Butterfly, grooved.
Standard: BSEN 593, WRAS & LPCB approved.
Manufacturer: Submit Proposals
(All valves to be secured in the locked position with leather straps and a padlock.)

Pipe fittings
Type: Galvanised malleable iron
Standard: BS EN10242-1995, British Standards Institute Kitemarked.
Manufacturer: Submit proposals

Pipe supports
Type: Galvanised steel.
Standard: LPCB approved
Manufacturer: Submit proposals

Drain/Test valves
Type: Brass Gate valve in accordance with BS5154.
Standard: BS5154
Manufacturer: Submit details

Breeching Inlet
Type: Four Way
Standard: BS5041-3
Manufacturer: Submit details

Inlet cabinets
Type: Recessed, Standard colour red.
Standard: BS5041-5
Manufacturer: Submit details.

Outlet cabinet (2/202)
Type: Bespoke manufacture
Standard: BS5041-4.

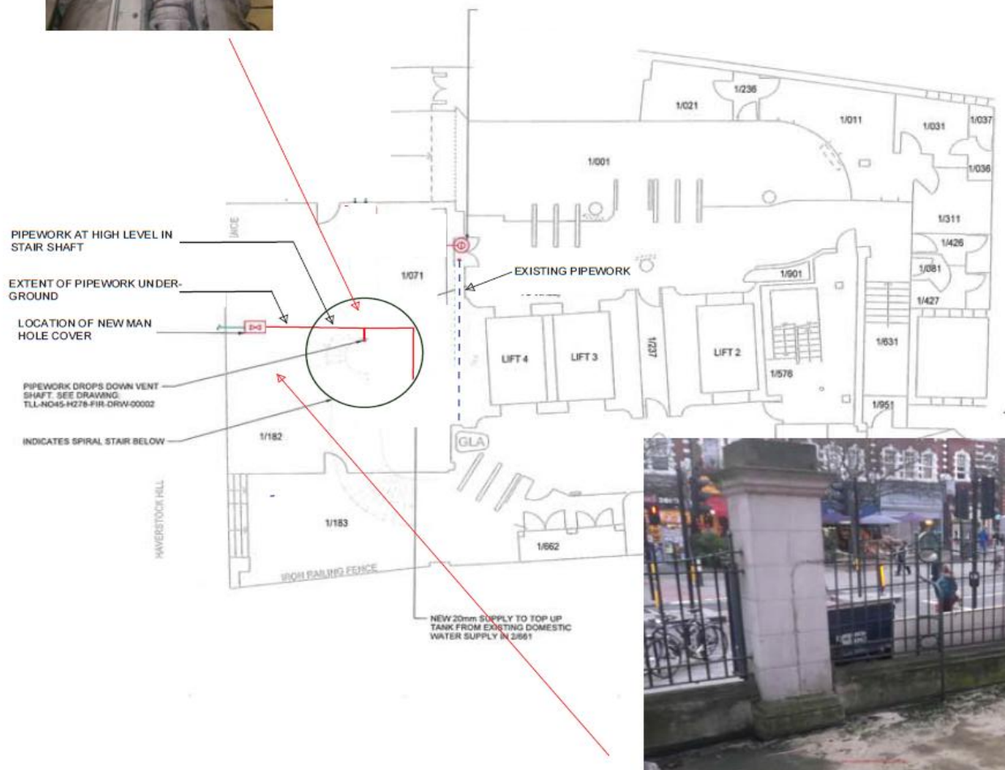
Landing Valves
Type: Dry Riser Gate Valve
Standard: BS 5041-2
Manufacturer: Submit details

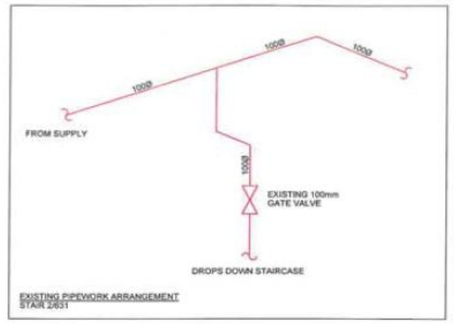
Header tanks
Type: As detailed on TLL drawing No. TLL-L001-FUNC-FIR-DRW--00302
Standards: Water Regulations Advisory Scheme (Adequate air gap to be achieved)
Manufacturer: Submit details

Attachments

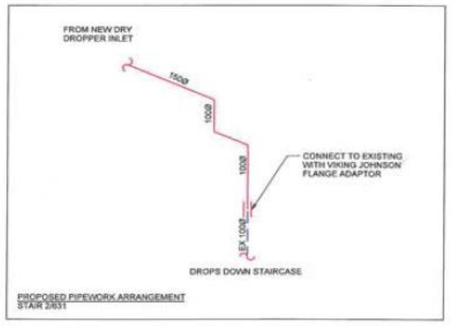
Drawings numbered:-
TLL-N045-H278-FIR-DRW-00001
TLL-N045-H278-FIR-DRW-00002
TLL-L001-FUNC-FIR-DRW-00300
TLL-L001-FUNC-FIR-DRW-00301
TLL-L001-FUNC-FIR-DRW-00302
TLL-L001-FUNC-FIR-DRW-00304

TLL-L001-FUNC-FIR-DRW-00014
TLL-L001-FUNC-FIR-DRW-00015
TLL-L001-FUNC-FIR-DRW-00070





EXISTING PIPEWORK ARRANGEMENT
STAIR 2/631



PROPOSED PIPEWORK ARRANGEMENT
STAIR 2/631

NOTES:

1) DO NOT SCALE FROM THIS DRAWING, ALL EXISTING DIMENSIONS & SETTING OUT TO BE CONFIRMED BY CONTRACTOR ON SITE.
2) ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
3) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION, ARCHITECTS & ALL OTHER RELEVANT DRAWINGS & DETAILS.

BLUE (EXISTING NO CHANGES)
RED (NEW INSTALLATION)
GREEN (EXISTING STRIPOUT)
FIRE MAIN (WET)
VALVE

CD1 GH FOR CONSTRUCTION LC LP SC 26/03/13

Tube Lines

CONSTRUCTION

FIRE (GENERAL)

NORTHERN N045

BELSIZE PARK SUBSTATION

WET HYDRANT SYSTEM
H278 CAPEX PROJECT

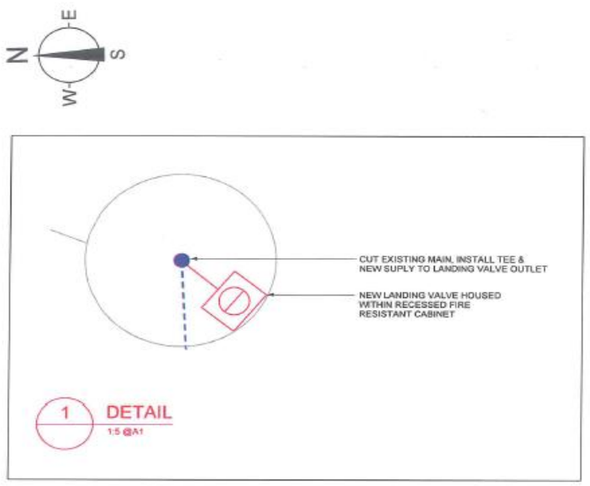
PROPOSED DAMP DROPPER
LAYOUT
TICKET HALL LEVEL

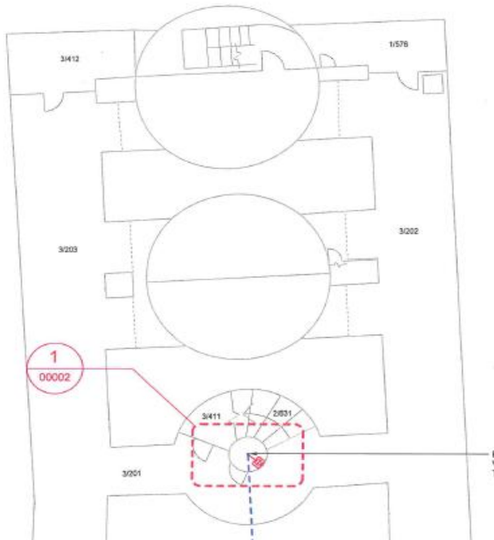
Drawn	G.HOLMES	Date	27/02/2013
Designed	L.CORBETT	Technical Approved	S.CORSTORPHINE
Technical Checked	L.PRESWELL	Project Approved	
Grid	N/A	RSI Cost Ref	H278
Project Document Code			
Scale	1:100 @A1	Sheet Number	of
Drawing No.	TLL-N045-H278-FIR-DRW-00001		Rev. C01

CAD DRAWING CHANGE ON CAD ONLY

A1 MICROFILM REF.

Plotted by: tcolm3810 (Glenn Holmes) on: 08/04/2013 08:52 CAD file: TLL-N045-H278-FIR-DRW-00001.dgn A1





NOTES:

1) DO NOT SCALE FROM THIS DRAWING, ALL EXISTING DIMENSIONS & SETTING OUT TO BE CONFIRMED BY CONTRACTOR ON SITE.
2) ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
3) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION, ARCHITECT'S & ALL OTHER RELEVANT DRAWINGS & DETAILS.

BLUE (EXISTING NO CHANGES)
RED (NEW INSTALLATION)
GREEN (EXISTING STRIPOUT)
FIRE MAIN (WET)
VALVE

Rev.	By	Revision	Desn	T Chkd	T Appd	Date
C01	GH	FOR CONSTRUCTION	LC	LP	SC	28/02/13

Tube Lines
16 Wakefield Street
Canary Wharf
London E14 4HG

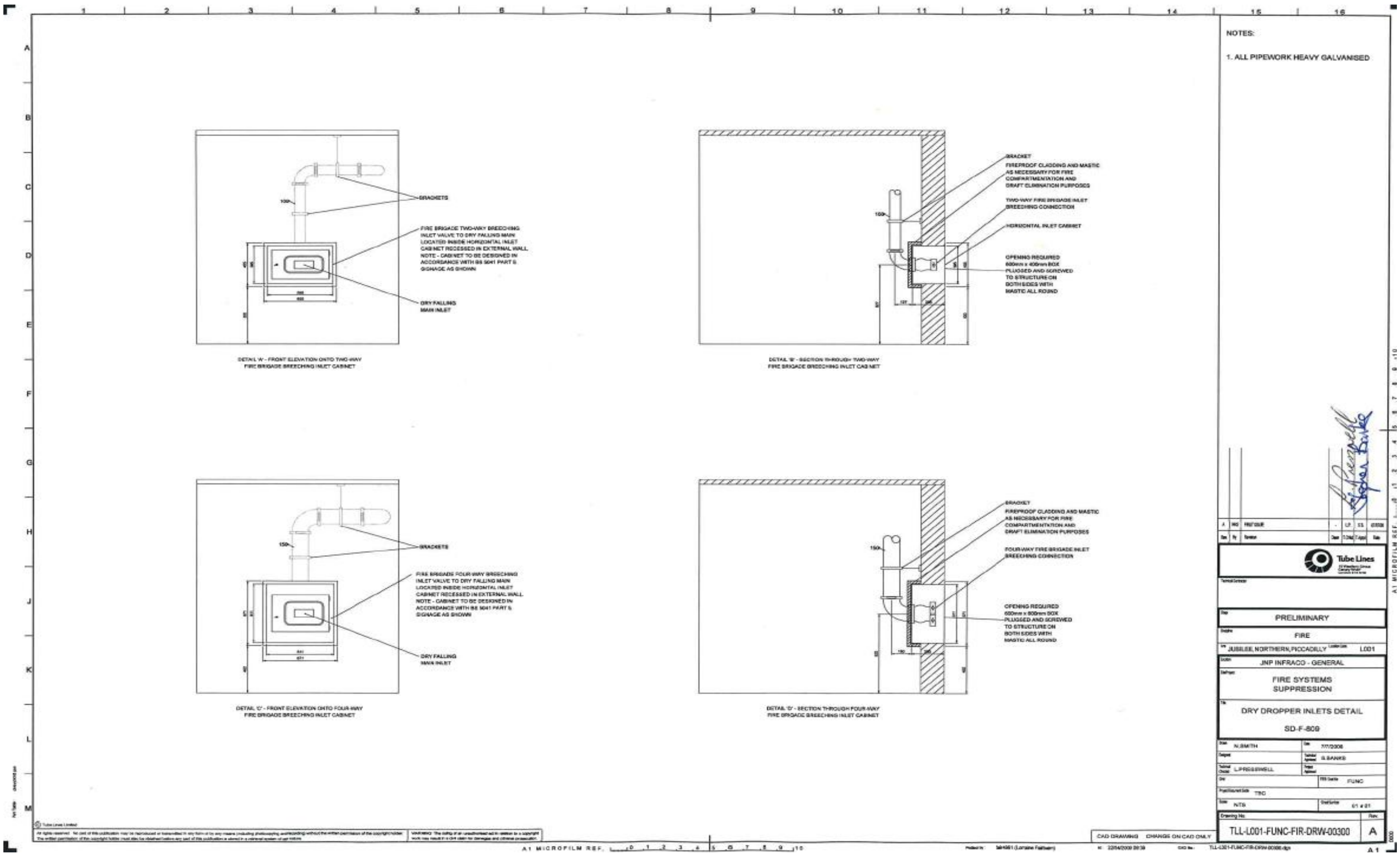
Stage: CONSTRUCTION
Discipline: FIRE (GENERAL)
Line: NORTHERN — Location Code: N045
Location: BELSIZE PARK SUBSTATION
Site/Project: WET HYDRANT SYSTEM H278 CAPEX PROJECT
Title: PROPOSED DAMP DROPPER LAYOUT PLATFORM LEVEL

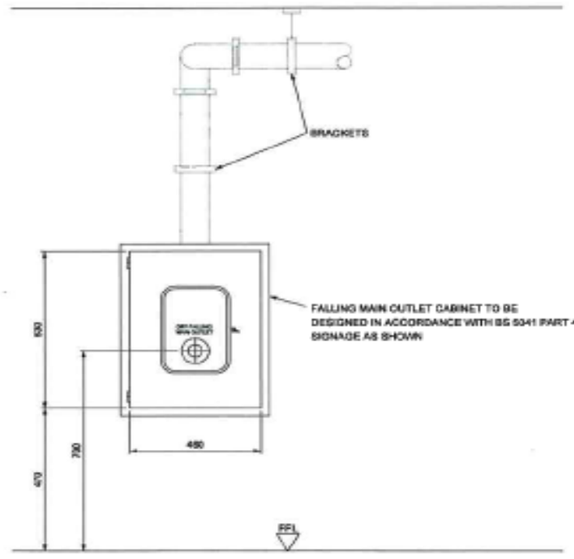
Drawn	G.HOLMES	Date	27/02/2013
Designed	L.CORBETT	Technical Approval	S.CORSTORPHINE
Technical Checked	L.PRESWELL	Project Approval	
Grid		PER / Dockfile	H278
Project Document Code			
Scales	1:100 @A1	Sheet Number	of
Drawing No.	TLL-N045-H278-FIR-DRW-00002	Rev.	C01

CAD DRAWING CHANGE ON CAD ONLY

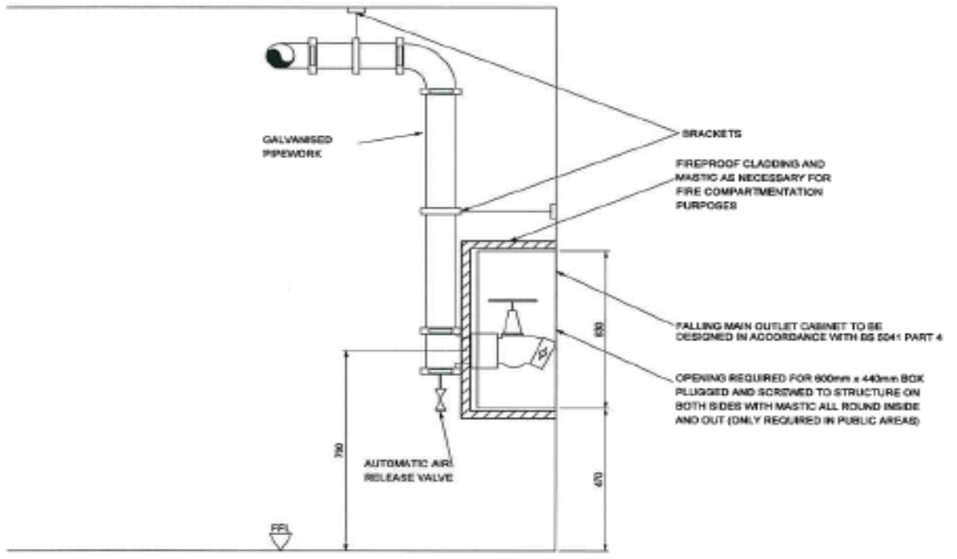
Plotted by: holm3810 (Glenn Holmes) at: 05/04/2013 10:14 CAD file: TLL-N045-H278-FIR-DRW-00002.dgn A1

A1 MICROFILM REF.


NOTES:
1. ALL PIPEWORK HEAVY GALVANISED
BRACKETS
FIRE BRIGADE TWO-WAY BREECHING INLET VALVE TO DRY FALLING MAIN LOCATED INSIDE HORIZONTAL INLET CABINET RECESSED IN EXTERNAL WALL. NOTE - CABINET TO BE DESIGNED IN ACCORDANCE WITH BS 5041 PART 5 SIGNAGE AS SHOWN
DRY FALLING MAIN INLET
DETAIL 'A' - FRONT ELEVATION ONTO TWO-WAY FIRE BRIGADE BREECHING INLET CABINET
BRACKET
FIREPROOF CLADDING AND MASTIC AS NECESSARY FOR FIRE COMPARTMENTATION AND DRAFT ELIMINATION PURPOSES
TWO-WAY FIRE BRIGADE INLET BREECHING CONNECTION
HORIZONTAL INLET CABINET
OPENING REQUIRED 600mm x 400mm BOX PLUGGED AND SCREWED TO STRUCTURE ON BOTH SIDES WITH MASTIC ALL ROUND
DETAIL 'B' - SECTION THROUGH TWO-WAY FIRE BRIGADE BREECHING INLET CABINET
BRACKETS
FIRE BRIGADE FOUR-WAY BREECHING INLET VALVE TO DRY FALLING MAIN LOCATED INSIDE HORIZONTAL INLET CABINET RECESSED IN EXTERNAL WALL. NOTE - CABINET TO BE DESIGNED IN ACCORDANCE WITH BS 5041 PART 5 SIGNAGE AS SHOWN
DRY FALLING MAIN INLET
DETAIL 'C' - FRONT ELEVATION ONTO FOUR-WAY FIRE BRIGADE BREECHING INLET CABINET
BRACKET
FIREPROOF CLADDING AND MASTIC AS NECESSARY FOR FIRE COMPARTMENTATION AND DRAFT ELIMINATION PURPOSES
FOUR-WAY FIRE BRIGADE INLET BREECHING CONNECTION
OPENING REQUIRED 650mm x 600mm BOX PLUGGED AND SCREWED TO STRUCTURE ON BOTH SIDES WITH MASTIC ALL ROUND
DETAIL 'D' - SECTION THROUGH FOUR-WAY FIRE BRIGADE BREECHING INLET CABINET
Tube Lines
PRELIMINARY
FIRE
JUBILEE, NORTHERN, PICCADILLY
L001
JNP INFRACO - GENERAL
FIRE SYSTEMS SUPPRESSION
DRY DROPPER INLETS DETAIL
SD-F-809
N.SMITH
7/7/2008
G.BANKS
L.PRESSWELL
FUNC
TBC
NTS
01 of 01
Drawing No.
TLL-L001-FUNC-FIR-DRW-00300
Rev.
A
CAD DRAWING CHANGE ON CAD ONLY
A1 MICROFILM REF.
A1



DETAIL 'A' - FRONT ELEVATION ONTO FALLING MAIN OUTLET CABINET



DETAIL 'B' - SECTION THROUGH FALLING MAIN OUTLET CABINET

A	HHD	FIRST ISSUE	-	13.
Rev	By	Revision	Desc	Date

Tube Lines

PRELIMINARY

FIRE

JUBILEE,NORTHERN,PICCADILLY — L001

JNP INFRACO - GENERAL

FIRE SYSTEMS SUPPRESSION

DRY DROPPER VALVE (PLATFORM HYDRANT) SD-F-810

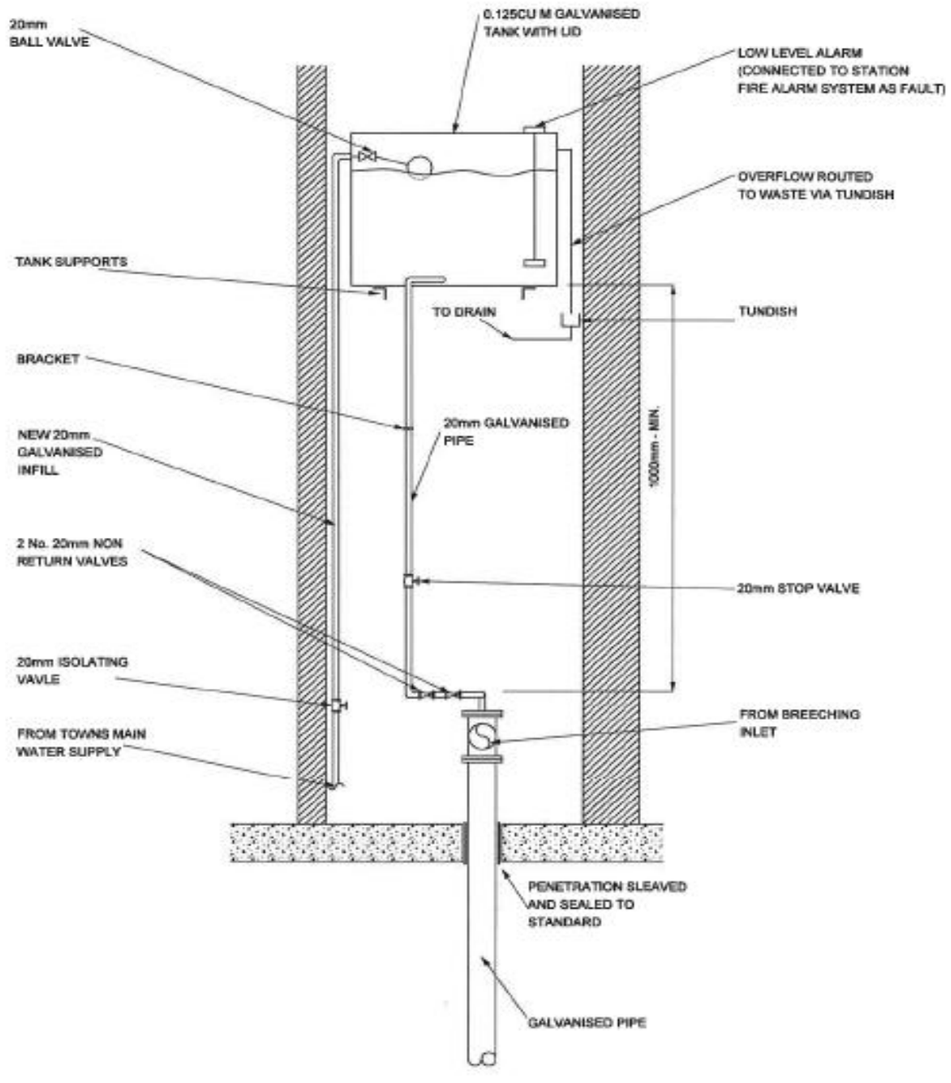
Drawn	N.SMITH	Date	7/10/2008
Designed		Technical Approved	S.BANKS
Technical Check	L.FRESSWELL	Project Approved	
Grid		For Use In	FUNC
Project Issue Date	TBC		
Scale	NTS	Sheet Number	01 of 01
Drawing No.			Rev.
TLL-L001-FUNC-FIR-DRW-00301			A

A1 MICROFILM REF.

CAD DRAWING - CHANGES ON CAD ONLY

TLL-L001-FUNC-FIR-DRW-00301.dgn

A1



PRELIMINARY

FIRE

JUBILEE,NORTHERN,PICCADILLY L001

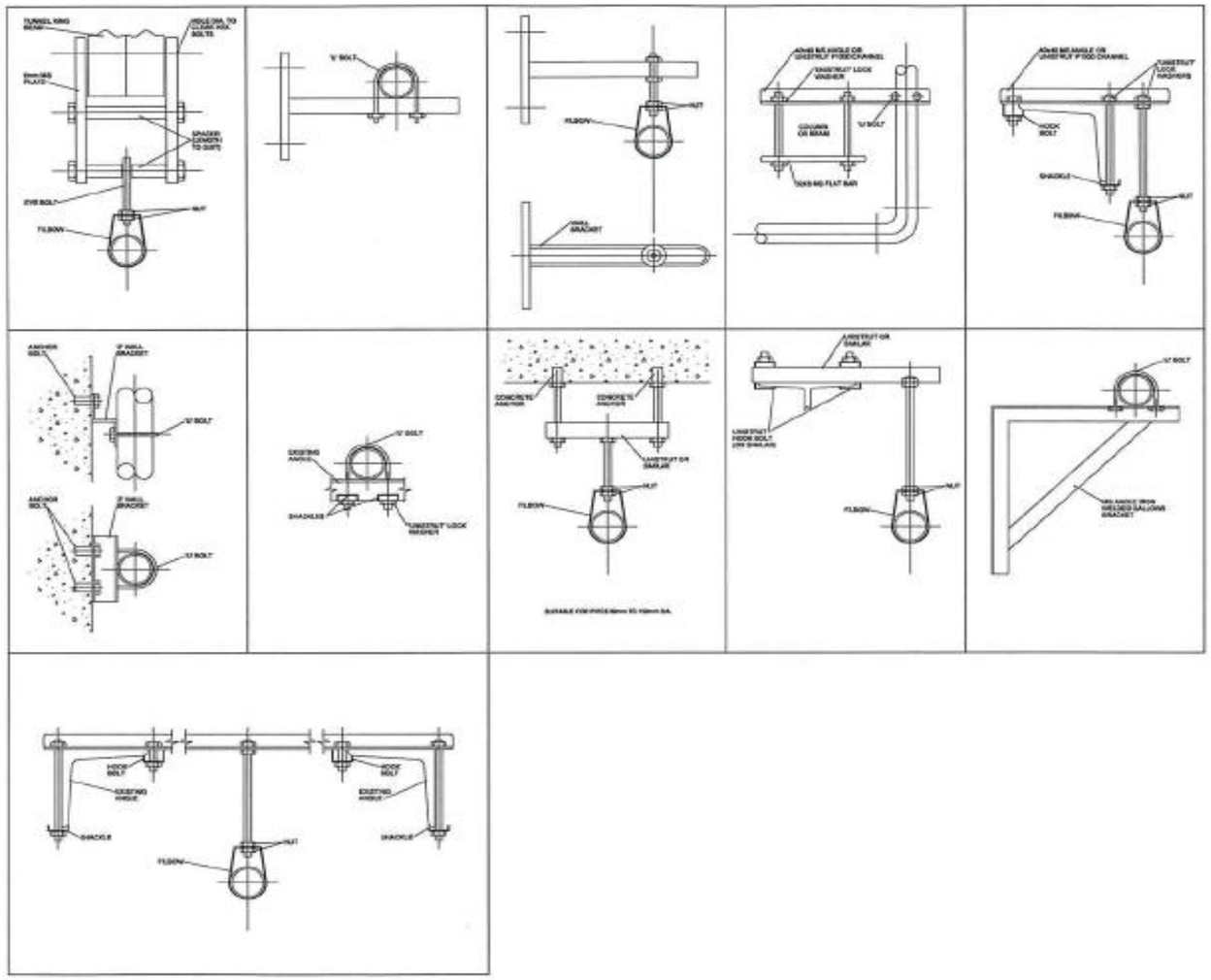
JNP INFRACO - GENERAL

FIRE SYSTEMS
SUPPRESSION

DAMP DRY DROPPER
TOP-UP TANK
DETAIL
SD-F-611

TLL-L001-FUNC-FIR-DRW-00302 A

A1



NOTES:

1. DROP RODS TO BE ALL THREADED PLATED TYPE.
2. UNLESS STATED OTHERWISE, ALL DROP RODS, EYE BOLTS AND HOOK BOLTS TO BE M12 DIA. FOR PIPES 66d.n. TO 156h.b.
3. ALL CORNERS ON BRACKETS TO BE ROUNDED OFF TO A MINIMUM RADIUS OF 10mm.
4. ALL BRACKETS TO BE FREE FROM SHARP EDGES AND BURRS.
5. NUTS TO BE ALL METAL SELF LOCKING SPLIT HEAD WITH LOCK WASHERS FITTED UNDER EACH NUT.
6. ANCHOR SIZES AND TYPES ARE TO SUITE SIZE OF PIPES, LOAD AND APPROVED BY A TLL CIVIL ENGINEER.
7. SINGLE FIXINGS FOR PIPE UP TO 65mm DIA. DOUBLE FIXINGS FOR PIPES 80 TO 150mm DIA.
8. BRACKETS TO BE POSITIONED IN ACCORDANCE WITH REQUIREMENTS OF BS 1306.

A	4/09	FIRST ISSUE	J.P.	S.B.
Rev	By	Revision	Date	Chkd

Tube Lines

PRELIMINARY

FIRE

JUBILEE,NORTHERN,PICCADILLY — Location Code: L001

JNP INFRACO - GENERAL

FIRE SYSTEMS SUPPRESSION

LARGE PIPE DIAMETERS
65 & 150MM DIAMETER
VARIOUS BRACKET DETAILS
SD-F-001

Drawn	L. FAIRBAIRN	Date	2/3/2009
Designed		Scheme replaced	S.BANKS
Technical Checked	L. PRESSWELL	Project replaced	
Unit		RSI Code	FUNC
Project Document Code	TBC		
Scale	NTS @ A1	Sheet Number	01 of 01
Drawing No.	TLL-L001-FUNC-FIR-DRW-00304	Rev.	A

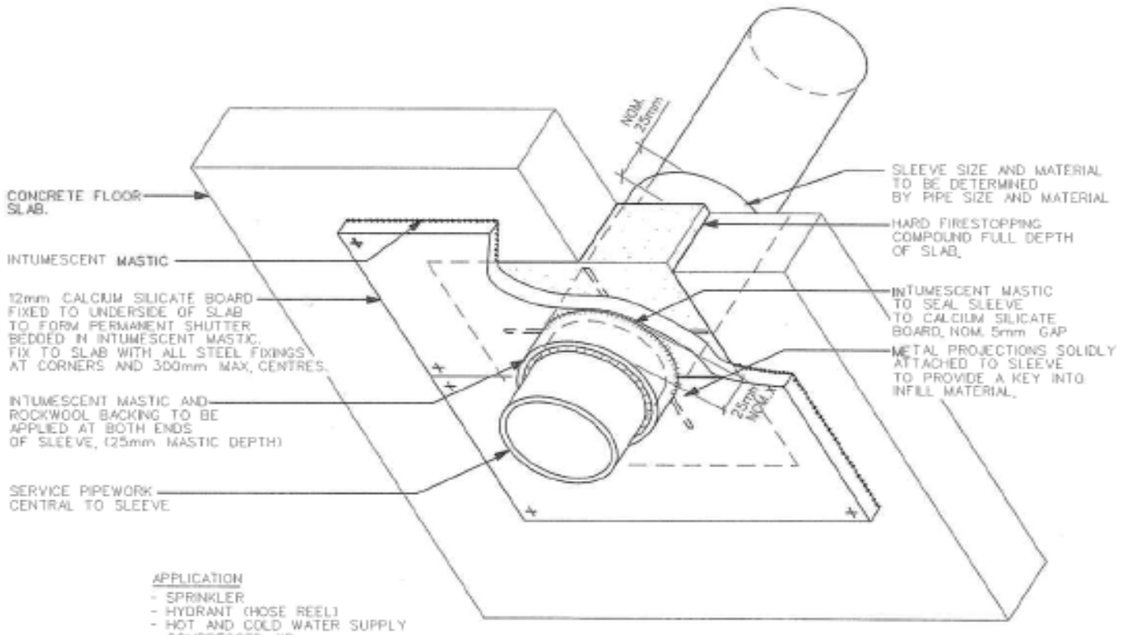
CAD DRAWING CHANGE ON CAD ONLY

A1 MICROFILM REF.

THIS DRAWING TO BE USED FOR GUIDANCE ON STANDARDS OF INSTALLATION ONLY.

ALL MATERIAL SHALL BE AS APPROVED FOR USE ON THE UNDERGROUND AND SUITABLE FOR THE APPLICATION.

7. SEE ALSO DRAWING:TLL-L001-FUNC-FIR-DRW-00015



APPLICATION
- SPRINKLER
- HYDRANT (HOSE REEL)
- HOT AND COLD WATER SUPPLY
- COMPRESSED AIR
- PRESSURISED DRAINAGE

(NO SLEEVE REQUIRED TO NON-PRESSURISED CAST IRON DRAINAGE)

Notes

1. WHERE FLOOR FINISHES ARE DISTIRBED IN EXPOSED PUBLIC/STAFF AREAS MAKE GOOD TO MATCH EXISTING TO PERIMETER OF SLEEVE.

2. SLEEVE MATERIAL TO MATCH THAT OF SERVICE PIPE (LIKE METAL & PROTECTION).

3. SLEEVES TO BE SIZED TO GIVE MIN. 5mm MAX. 25mm CLEARENACE ON PIPE WHEN FITTED CONCENTRIC TO PIPE.

4. FOR PIPE/SLEEVE GAP 5mm SEAL WITH FIRE MASTIC MIN. 25mm DEPTH.

5. FOR PIPE/SLEEVE GAP GREATER THAN 5mm TO MAX. 25mm PACK WITH SOFT MINERAL FIBRE (33KG/m^3) AND SEAL WITH FIRE MASTIC SEAL MIN. 25mm DEPTH. (SEALS TO BE APPLIED AT BOTH ENDS OF SLEEVE).

6. PIPEWORK SUPPORTED INDEPENDENTLY EACH SIDE OF SLAB/FIRE STOPPING SYSTEM.

		CN	By	Chkd	Apvd
		CN	By	Chkd	Apvd
		CN	By	Chkd	Apvd
A	16/01/07	CN	By NHS	Chkd DD	Apvd SB

FIRST ISSUE

Technical Contractor

Site: FIRE SYSTEMS - TYPICAL DETAILS

Title: SD-F-403 FIRE STOPPING: PIPES THROUGH FLOOR

Scale: NTS @ A3 Sheet 01of01

Tube Lines

Document Code			Rev No.
Job No.	Cost Code	Site Code	A
-	-	L001	
Drawing No. TLL-L001-FUNC-FIR-DRW-00014			

Client/Project Doc.Code: F024_01.DGN

CAD file : tll-l001-func-fir-drw-00014.dgn

Pen Table : standard.pen

Plotted by : smit8173 (Nic Smith) at : 21/09/2007 10:11

A3

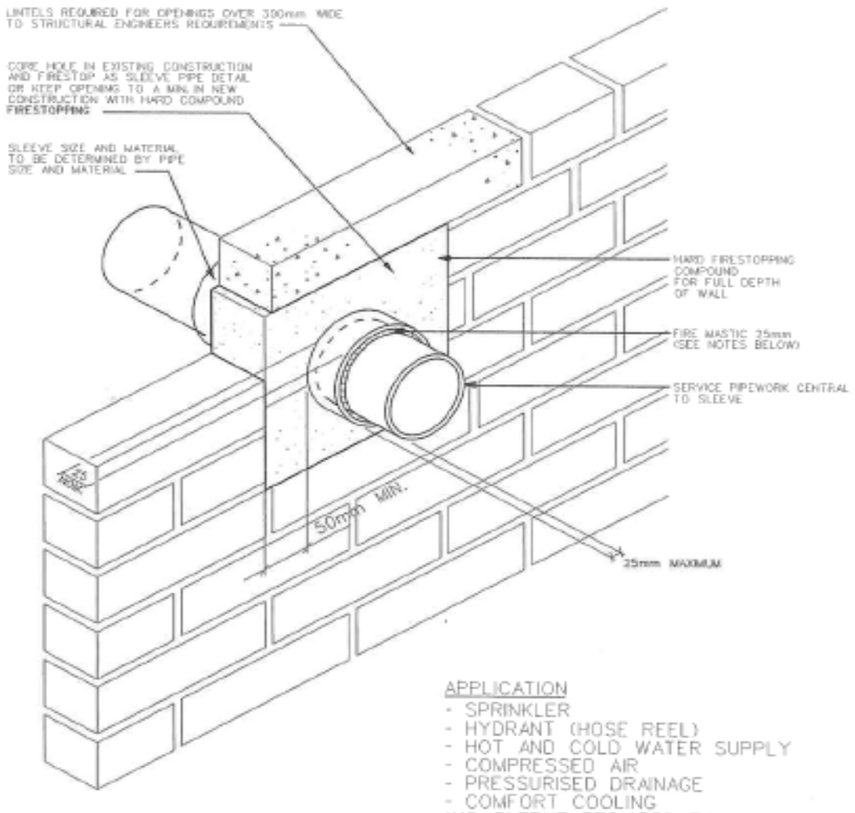
Microfilm ref

CAD DRAWING - CHANGE ON CAD ONLY

THIS DRAWING TO BE USED FOR GUIDANCE ON STANDARDS OF INSTALLATION ONLY.

ALL MATERIAL SHALL BE AS APPROVED FOR USE ON THE UNDERGROUND AND SUITABLE FOR THE APPLICATION.

7. SEE ALSO DRAWING:TLL-L001-FUNC-FIR-DRW-00014



APPLICATION
- SPRINKLER
- HYDRANT (HOSE REEL)
- HOT AND COLD WATER SUPPLY
- COMPRESSED AIR
- PRESSURISED DRAINAGE
- COMFORT COOLING

(NO SLEEVE REQUIRED TO NON-PRESSURISED CAST IRON DRAINAGE).

Notes

1. WHERE WALL FINISHES ARE DISTURBED IN EXPOSED PUBLIC/STAFF AREAS MAKE GOOD TO MATCH EXISTING TO PERIMETER OF SLEEVE.

2. SLEEVE MATERIAL TO MATCH THAT OF SERVICE PIPE (LIKE METAL & PROTECTION).

3. SLEEVES TO BE SIZED TO GIVE MIN. 5mm MAX. 25mm CLEARANCE ON PIPE WHEN FITTED CONCENTRIC TO PIPE.

4. FOR PIPES/SLEEVE GAP MIN. 5mm SEAL WITH FIRE MASTIC MIN. 25mm DEPTH.

5. FOR PIPE/SLEEVE GAP MIN. 5mm MAX. 25mm PACK WITH SOFT MINERAL FIBRE (33Kg/m^3) AND SEAL WITH FIRE MASTIC MIN. 25mm DEPTH. (SEAL TO BE APPLIED AT BOTH ENDS OF SLEEVE).

6. PIPEWORK SUPPORTED INDEPENDENTLY EACH SIDE OF WALL/FIRE STOPPING SYSTEM.

		CN	By	Chkd	Apvd
		CN	By	Chkd	Apvd
		CN	By	Chkd	Apvd
		CN	By	Chkd	Apvd
A	16/01/07	CN	By NHS	Chkd DD	Apvd SB

FIRST ISSUE

Technical Contractor

Site: FIRE SYSTEMS - TYPICAL DETAILS

Title: SD-F-404 FIRE STOPPING: METAL PIPES THROUGH WALL

Scale: NTS @ A3 Sheet 01of01

Tube Lines

Document Code			Rev No.
Job No.	Cost Code	Site Code	
-	-	L001	A
Drawing No. TLL-L001-FUNC-FIR-DRW-00015			

Client/Project Doc.Code: F023_01.DGN

CAD file : tll-l001-func-fir-drw-00015.dgn

CAD DRAWING - CHANGE ON CAD ONLY

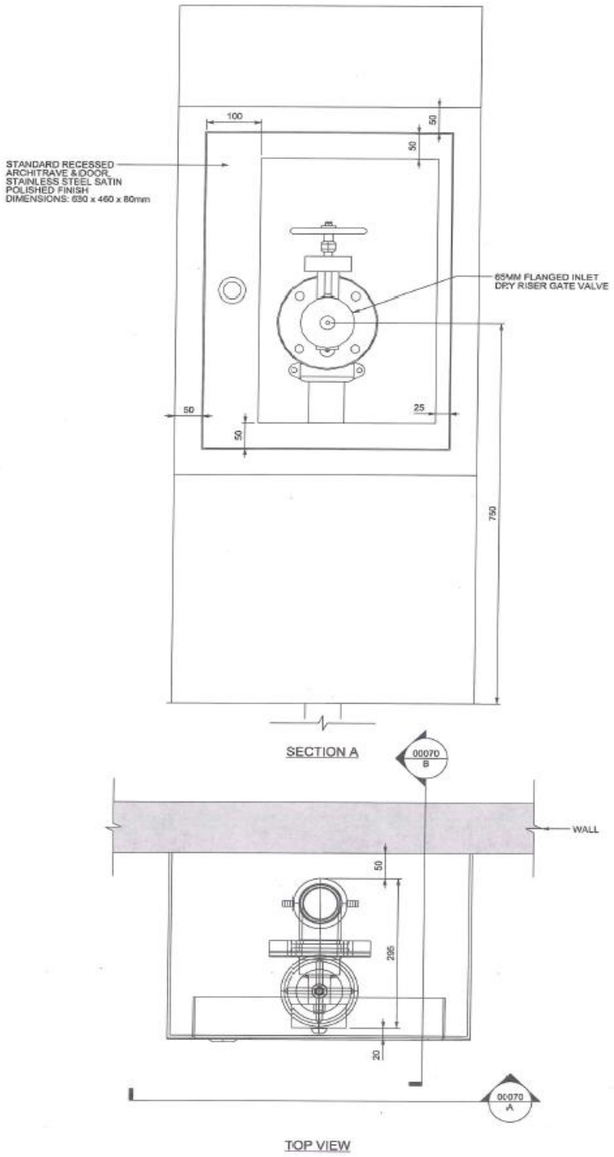
Plotted by : smit8173 (Nic Smith) at : 21/09/2007 10:11

A3

Microfilm ref

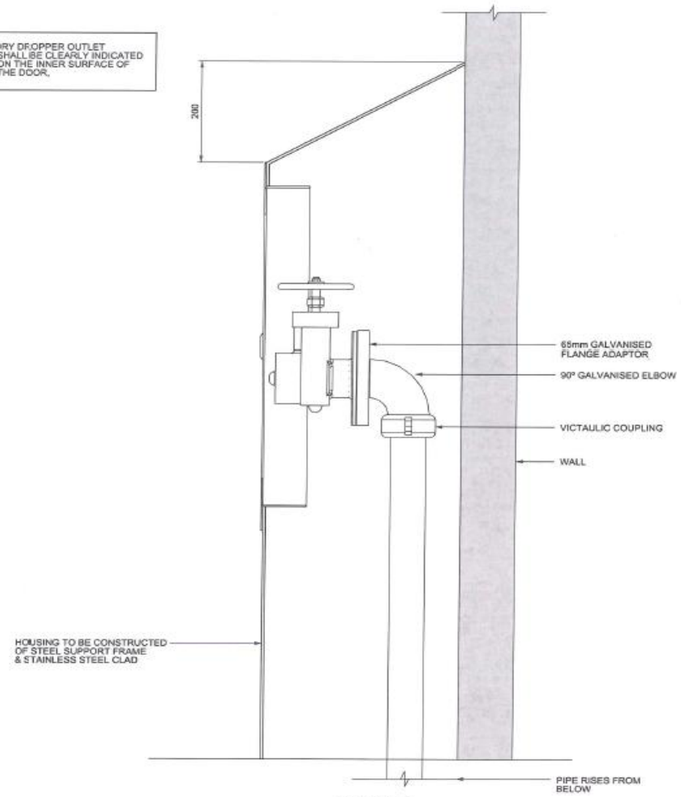
Pen Table : standard.pen

NOTE: DRY DROPPER OUTLET SHALL BE CLEARLY INDICATED ON THE INNER SURFACE OF THE DOOR.



SECTION A

TOP VIEW



SECTION B

NOTES:

1) DO NOT SCALE FROM THIS DRAWING.
2) ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
3) WHERE OUTLET IS TO BE SITED AGAINST A TUNNEL WALL THE CABINET IS TO BE FORMED TO FOLLOW THE CURVATURE OF THE WALL AGAINST WHICH IT IS POSITIONED.

FOR CONSTRUCTION

Rev.	By	Revision	Desn	T Chkd	T Appd	Date
C01	JP	ISSUED FOR CONSTRUCTION	LC	LP	SC	27.03.13

Tube Lines
55 Westferry Circus, Canary Wharf, London E14 4HD

Technical Contractor

Stage: CONSTRUCTION

Discipline: FIRE

Line: JUBILEE, NORTHERN, PICCADILLY — Location Code: L001

Location: JNP INFRACO - GENERAL

Title/Project: STANDARD DETAIL

Title: DRY DROPPER DETAIL

Drawn	J.PIPER	Date	21/02/2013
Designed	L.CORBETT	Technical Approved	S.CORSTORPHINE
Technical Checked	L.PRESSWELL	Project Approved	
Unit	N/A	PER / Cost No	
Project Document Code			
Scale	1:5 @ A1	Sheet Number	1 of 1

Drawing No.	Rev.
TLL-L001-FUNC-FIR-DRW-00070	C01

A1 MICROFILM REF

CAD DRAWING CHANGE ON CAD ONLY

Plotted by: pipa8889 (Jake Piper) at: 27/03/2013 10:10 CAD file: TLL-L001-FUNC-FIR-DRW-00070.dgn A1