PERMIT ISSUED

JAN 18 2011

City of Portland

Form # P 04

**DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK**

# CITY OF PORTLAND

## BU[illegible]TION PERMIT

Please Read Application And Notes, If Any, Attached

Permit Number: 101502

**This is to certify that** 501 DANFORTH LLC /Eastern[illegible] Proteo[illegible] Inc.

**has permission to** install a water-based fire suppres[illegible]n syster[illegible]

**AT** 501 DANFORTH ST CB[illegible]070 C002001

**provided that the person or persons, fi[illegible] or co[illegible]on ac[illegible]ting this permit shall comply with all of the provisions of the Statutes of Ma[illegible]e and of the O[illegible]nces of the City of Portland regulating the construction, maintenance and use[illegible] buildings and stru[illegible]res, and of the application on file in this department.**

Apply to Public Works for street line and grade if nature of work requires such information.

Noti[illegible]tion o[illegible]spectio[illegible]nust be give[illegible]d writte[illegible]ermissio[illegible]rocured befo[illegible]his bui[illegible]g or pa[illegible]ereof is lath[illegible]or oth[illegible]ed-in. 24 HOU[illegible]NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

**OTHER REQUIRED APPROVALS**

**Fire Dept.** CAPT. M. Gautreau

**Health Dept.** _____

**Appeal Board** _____

**Other** _____

Department Name

1/18-11

Director - Building & Inspection Services

**PENALTY FOR REMOVING THIS CARD**

**City of Portland, Maine - Building or Use Permit Application**
389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

| Permit No: | Issue Date: | CBL: |
|---|---|---|
| 10-1502 | | 070 C002001 |

| Location of Construction: | Owner Name: | Owner Address: | Phone: |
|---|---|---|---|
| 501 DANFORTH ST (535) | 501 DANFORTH LLC | 53 LISBON ST STE 2400 | |
| **Business Name:** | **Contractor Name:** | **Contractor Address:** | **Phone** |
| | Eastern Fire Protection Co., Inc. | 170 Kittyhawk Ave.,PO Box 1390 Au | 2077841507 |
| **Lessee/Buyer's Name** | **Phone:** | **Permit Type:** | **Zone:** |
| | | Fire Suppression System | B-7b |

| Past Use: | Proposed Use: | Permit Fee: | Cost of Work: | CEO District: |
|---|---|---|---|---|
| Commercial – construction permit $10-0114 new 60'x100' building | Commercial - install a water-based fire suppression system | $170.00 | $15,000.00 | 2 |

**FIRE DEPT:** ☑ Approved ☐ Denied
*See Conditions
Signature: KG

**INSPECTION:**
Use Group: S-1 Type: sprinkle NFPA
Signature:

**Proposed Project Description:**
install a water-based fire suppression system

**PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)**
Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied
Signature: Date:

| Permit Taken By: | Date Applied For: |
|---|---|
| ldobson | 12/08/2010 |

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

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JAN 18 2011
City of Portland

**Zoning Approval**

| Special Zone or Reviews | Zoning Appeal | Historic Preservation |
|---|---|---|
| ☐ Shoreland | ☐ Variance | ☐ Not in District or Landmark (YES) |
| ☐ Wetland | ☐ Miscellaneous | ☐ Does Not Require Review |
| ☐ Flood Zone | ☐ Conditional Use | ☐ Requires Review |
| ☐ Subdivision | ☐ Interpretation | ☐ Approved |
| ☐ Site Plan | ☐ Approved | ☐ Approved w/Conditions |
| Maj ☐ Minor ☐ MM ☐ | ☐ Denied | ☐ Denied |
| Ok w/ conditions Date: 12/16/10 AM | Date: | Any exterior work requires separate approval from historic preservation. Date: |

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

# BUILDING PERMIT INSPECTION PROCEDURES

## Please call 874-8703 or 874-8693 (ONLY )

**or email: buildinginspections@portlandmaine.gov**

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the City of Portland Inspection Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months, if the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue with construction.**

**__X__ Final inspection required at completion of work.**

**The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.**

**IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.**

# City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

| Permit No: | Date Applied For: | CBL: |
|---|---|---|
| 10-1502 | 12/08/2010 | 070 C002001 |

| Location of Construction: | Owner Name: | Owner Address: | Phone: |
|---|---|---|---|
| 501 DANFORTH ST | 501 DANFORTH LLC | 53 LISBON ST STE 2400 | |
| **Business Name:** | **Contractor Name:** | **Contractor Address:** | **Phone** |
| | Eastern Fire Protection Co., Inc. | 170 Kittyhawk Ave.,PO Box 1390 Au | (207) 784-1507 |
| **Lessee/Buyer's Name** | **Phone:** | **Permit Type:** | |
| | | Fire Suppression System | |

| Proposed Use: | Proposed Project Description: |
|---|---|
| Commercial - install a water-based fire suppression system | install a water-based fire suppression system |

**Dept:** Zoning **Status:** Approved with Conditions **Reviewer:** Ann Machado **Approval Date:** 12/08/2010

**Note:** **Ok to Issue:** ☑

1) ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.
2) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

**Dept:** Building **Status:** Approved with Conditions **Reviewer:** Nicholas Adams **Approval Date:** 01/18/2011

**Note:** **Ok to Issue:** ☑

1) Permit approved based on the plans submitted and reviewed w/owner/contractor, with additional information as agreed on and as noted on plans.
2) Separate permits are required for any electrical, plumbing, fire alarm HVAC systems, heating appliances, including pellet/wood stoves, commercial kitchen exhaust hood systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
3) ANY exterior work requires separate review and approval thru Historic Preservation
4) Sprinkler systems to be designed and installed per IBC 2003 standards Sec. 903.3.1

**Dept:** Fire **Status:** Approved with Conditions **Reviewer:** Capt Keith Gautreau **Approval Date:** 01/11/2011

**Note:** **Ok to Issue:** ☑

1) Sprinkler protection shall be maintained.
   Where the system is to be shut down for maintenance or repair, the system shall be checked at the end of each day to insure the system has been placed back in service.
2) The Fire alarm and Sprinkler systems shall be reviewed by a licensed contractor[s] for code compliance.
   Compliance letters are required.
3) Buildings with a Fire Alarm or sprinkler system require a Knox Box to be installed per city ordinance
4) The sprinkler system shall be installed in accordance with NFPA 13.
5) Application requires State Fire Marshal approval.
6) System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
7) The Fire Department will require knox locking caps on all Fire Department Connections on the exterior of the building.
8) Fire department connection type and location shall be approved in writing by fire prevention bureau.

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JAN 18 2011

City of Portland

| Location of Construction: | Owner Name: | Owner Address: | Phone: |
|---|---|---|---|
| 501 DANFORTH ST | 501 DANFORTH LLC | 53 LISBON ST STE 2400 | |
| **Business Name:** | **Contractor Name:** | **Contractor Address:** | **Phone** |
| | Eastern Fire Protection Co., Inc. | 170 Kittyhawk Ave.,PO Box 1390 Au | (207) 784-1507 |
| **Lessee/Buyer's Name** | **Phone:** | **Permit Type:** | |
| | | Fire Suppression System | |

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# Water-Based Fire Suppression System Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Installation address: 501 Danforth Street CBL: 47. A. 13

Exact location: (within structure) _____

Type of occupancy(s) (NFPA & ICC): Ordinary Hazard Group I

Building owner: _____

Managing Supervisor (RMS): William Flynt License No: 368

Supervisor phone: 207-784-1507 E-mail: flyntwa@teameastern.com

Installing contractor: Eastern Fire Protection License No: 101

Contractor phone: 207-784-1507 E-mail: dussaultgr@teameastern.com

The suppression work to be done will be: New: (●) Renovation: ( ) Addition to existing system: ( )

This is an amendment to an existing permit: Yes: ( ) NO ( ) Permit no: _____

NFPA Standard this system is designed to: NFPA13 Edition: 2010

*Non-NFPA systems are not approved for use within the City of Portland.

**Download a new copy of this document from www.portlandmaine.gov/fire for every submittal. Attach all working documents and complete approved submittals as may be required by the State Fire Marshal's Office on electronic PDF's in addition to full sized plans.**

**Contractor shall verify location and type of all FDCs shall be approved in writing by the Fire Prevention Bureau.**

**COST OF WORK:** $15,000

PERMIT FEE: $170.00

($10 PER $1,000 + $30 FOR THE FIRST $1,000)

**Submit all information to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.**

Prior to acceptance of any fire protection system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with NFPA and the Fire Department Technical Standard(s).

Applicant signature: _____ Date: 12-2-10

**EASTERN FIRE PROTECTION**
P.O. Box 1390
Kittyhawk Ave.
Auburn, ME 04210

PH # (207) 784-1507
FAX # (207) 782-0566

# LETTER OF TRANSMITTAL

| DATE 12-2-10 | JOB NO. AU-4649-10 |
|---|---|
| ATTENTION ~~BOBBY BARRETT~~ LANNIE | |
| RE: DOBSON | |
| 501 DANFORTH ST. | |

TO CITY OF PORTLAND
389 CONGRESS ST., RM 315
PORTLAND, ME 04101

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

☒ Shop drawings ☐ Descriptive data ☒ Hydraulic calculations
☐ Copy of letter ☐ Literature ☐ _____

| QUANTITY | DRAWING NO. | DATE | DESCRIPTION | STATUS |
|---|---|---|---|---|
| 1 | 1 OF 1 | 12-1 | FIRE SPRINKLER PLAN 30 x 42 | C |
| 1 | 1 OF 1 | 12-1 | " " 11 x 17 | C |
| | | | | |
| 1 | | | HYDRAULIC CALCULATIONS | C |
| | | | | |
| 1 | | | PERMIT APPLICATION | E |
| | | | | |
| 1 | | | CHECK FOR $170.00 | E |
| | | | | |
| | | | | |

Status code
A. Approved
B. Approved as noted
C. Submitted for approval
D. Corrected & resubmitted
E. For your files
F. Refer to remarks

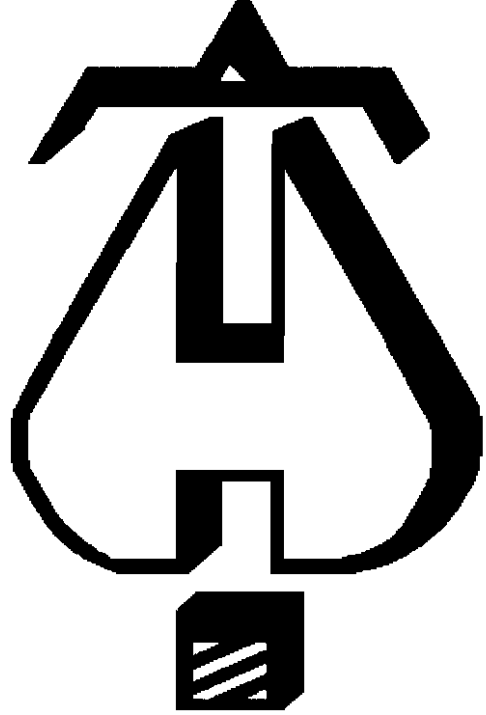
Please return 1 ~~copies each~~ indicating your approval and/or comments.

**REMARKS** PERMIT

**COPY TO** _____

**SIGNED** [signature]

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



. . . Fire Protection by Computer Design

EASTERN FIRE PROTECTION
170 KITTY HAWK AVE
AUBURN, ME 04210
207-784-1507

| | | |
|---|---|---|
| Job Name | : | AU-4649-10 501 DANFORTH ST PORTLAND ME |
| Drawing | : | 1 OF 1 |
| Location | : | PORTLAND, ME |
| Remote Area | : | AREA#1 |
| Contract | : | AU-4649-10 |
| Data File | : | AU-4649-10 501 DANFORTH ST PORTLAND ME AREA 1.wxf |

***HYDRAULIC CALCULATIONS***
***for***

***Project name:*** 501 DANFORTH ST
***Location:*** PORTLAND, ME
***Drawing no:*** 1 OF 1
***Date:*** 12-1-10

***Design***

***Remote area number:*** AREA#1
***Remote area location:*** VEHICLE STORAGE
***Occupancy classification:*** ORDINARY GROUP I
***Density:*** .15 - Gpm/SqFt
***Area of application:*** 2043 - SqFt
***Coverage per sprinkler:*** 130 - SqFt
***Type of sprinklers calculated:*** TYCO TY-B UPRIGHT K5.6
***No. of sprinklers calculated:*** 17
***In-rack demand:*** - GPM
***Hose streams:*** 250 - GPM
***Total water required (including hose streams):*** 670.62 - GPM @ 53.25 - Psi
***Type of system:***
***Volume of dry or preaction system:*** 118 - Gal

***Water supply information***

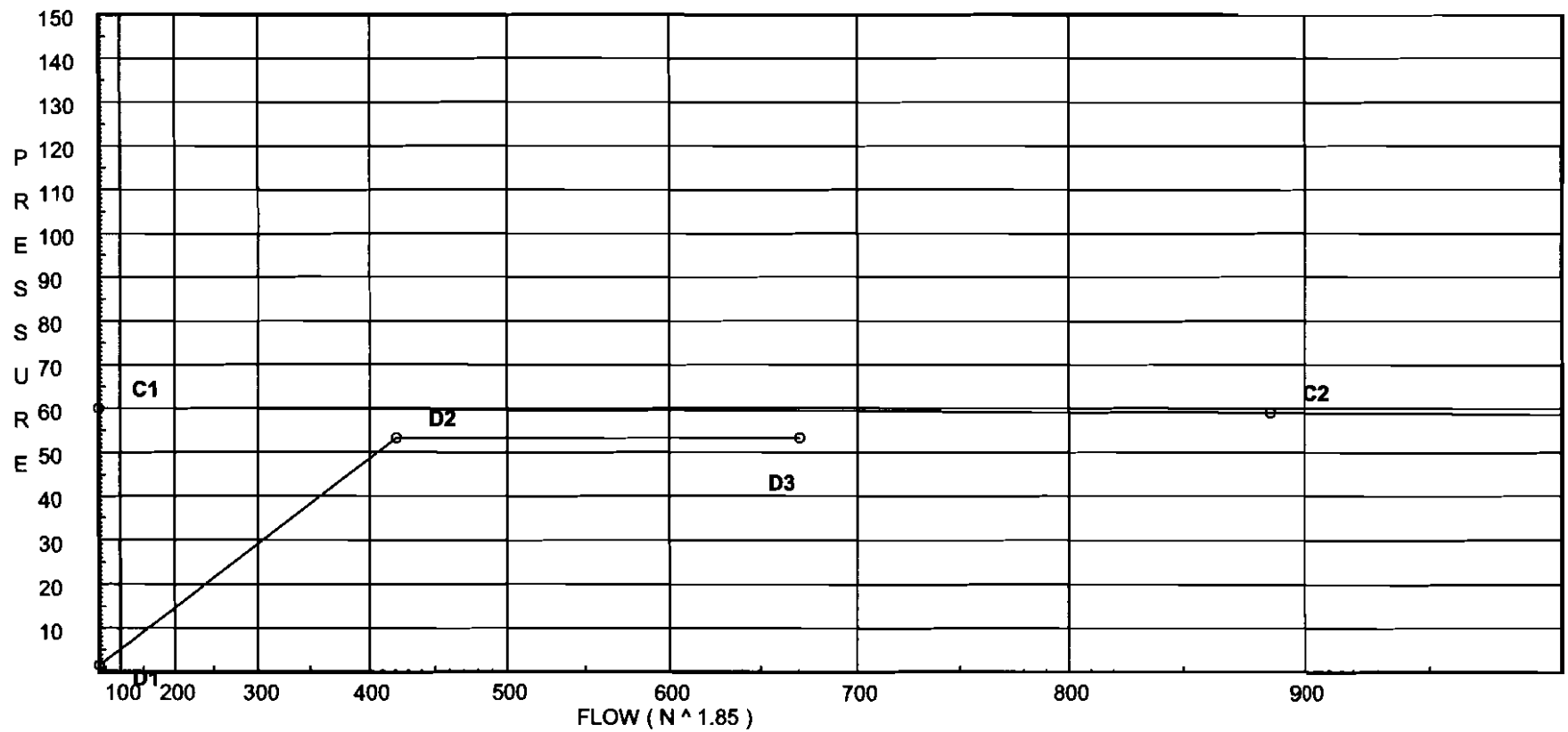
***Date:*** 8-6-2007
***Location:*** SEE PLOT PLAN
***Source:*** PORTLAND WATER DISTRICT

***Name of contractor:*** EASTERN FIRE PROTECTION
***Address:*** 170 KITTY HAWK AVE / / AUBURN, ME 04210
***Phone number:*** 207-784-1507
***Name of designer:*** GRD
***Authority having jurisdiction:*** STATE FIRE MARSHAL
***Notes: (Include peaking information or gridded systems here.)***

City Water Supply:
- C1 - Static Pressure : 60
- C2 - Residual Pressure: 59
- C2 - Residual Flow : 886

Demand:

| | | |
|---|---|---|
| D1 - Elevation | : | 1.516 |
| D2 - System Flow | : | 420.618 |
| D2 - System Pressure | : | 53.248 |
| Hose ( Demand ) | : | 250 |
| D3 - System Demand | : | 670.618 |
| Safety Margin | : | 6.155 |



## Fittings Used Summary



Fitting Legend

| Abbrev. | Name | ½ | ¾ | 1 | 1¼ | 1½ | 2 | 2½ | 3 | 3½ | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | NFPA 13 Butterfly Valve | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 10 | 0 | 12 | 9 | 10 | 12 | 19 | 21 | 0 | 0 | 0 | 0 | 0 |
| D | Dry Rel D | | | | | | | | | | 28 | | 47 | | | | | | | | |
| E | NFPA 13 90' Standard Elbow | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 12 | 14 | 18 | 22 | 27 | 35 | 40 | 45 | 50 | 61 |
| G | NFPA 13 Gate Valve | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 11 | 13 |
| I | 90' Grvd-Vic Elbow #10 | 0 | 0 | 2 | 3 | 4 | 3.5 | 6 | 5 | 8 | 7 | 8.5 | 10 | 13 | 17 | 20 | 23 | 25 | 33 | 36 | 40 |
| S | NFPA 13 Swing Check Valve | 4 | 5 | 5 | 7 | 9 | 11 | 14 | 16 | 19 | 22 | 27 | 32 | 45 | 55 | 65 | 76 | 87 | 98 | 109 | 130 |
| T | NFPA 13 90' Flow thru Tee | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 17 | 20 | 25 | 30 | 35 | 50 | 60 | 71 | 81 | 91 | 101 | 121 |

Units Summary

| | |
|---|---|
| Diameter Units | Inches |
| Length Units | Feet |
| Flow Units | US Gallons per Minute |
| Pressure Units | Pounds per Square Inch |

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

### SUPPLY ANALYSIS

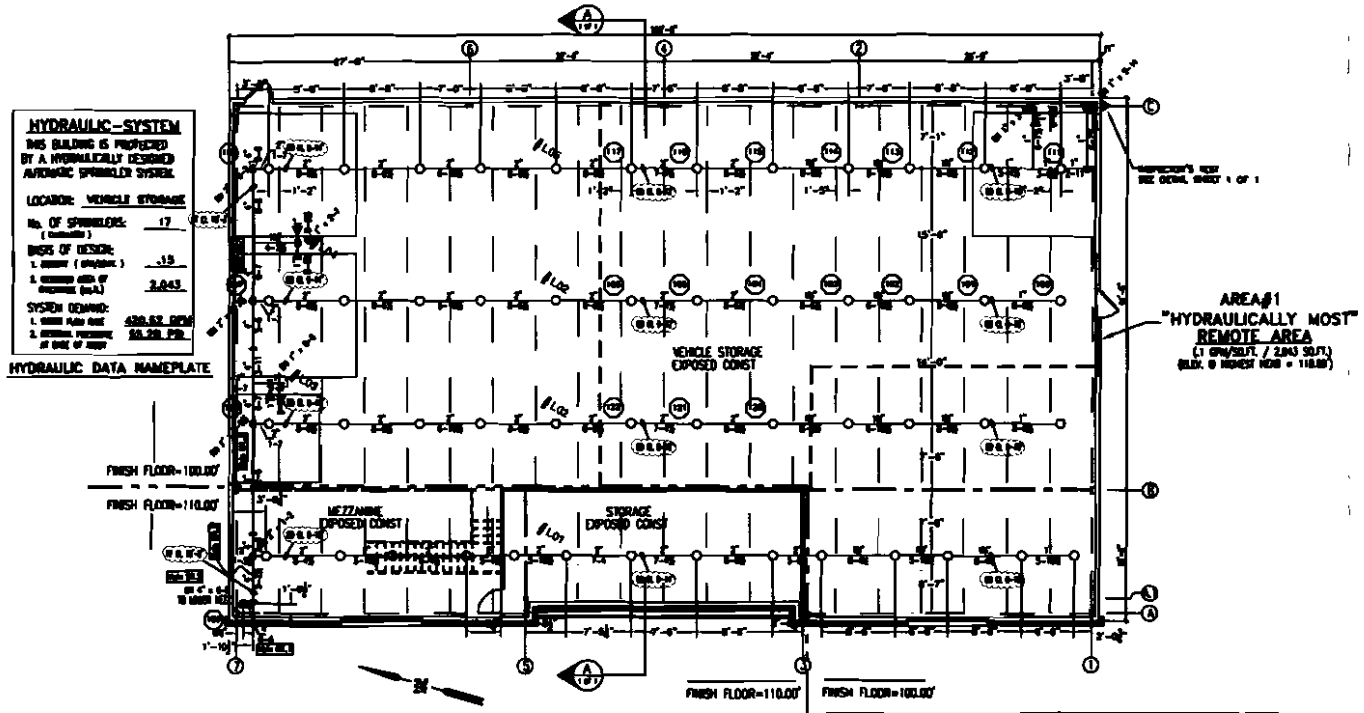
| Node at Source | Static Pressure | Residual Pressure | Flow | Available Pressure | Total Demand | Required Pressure |
|---|---|---|---|---|---|---|
| TEST | 60.0 | 59 | 886.0 | 59.403 | 670.62 | 53.248 |

### NODE ANALYSIS

| Node Tag | Elevation | Node Type | Pressure at Node | Discharge at Node | Notes |
|---|---|---|---|---|---|
| 100 | 117.5 | 5.6 | 12.13 | 19.5 | |
| 101 | 117.5 | 5.6 | 13.63 | 20.68 | |
| 102 | 117.5 | 5.6 | 15.14 | 21.79 | |
| 103 | 117.5 | 5.6 | 16.43 | 22.7 | |
| 104 | 117.5 | 5.6 | 19.26 | 24.58 | |
| 105 | 117.5 | 5.6 | 20.61 | 25.42 | |
| 106 | 117.5 | 5.6 | 22.32 | 26.46 | |
| 107 | 116.0 | | 40.64 | | |
| 108 | 116.0 | | 41.11 | | |
| 109 | 116.0 | | 42.3 | | |
| TOR | 108.0 | | 47.18 | | |
| DPV | 105.0 | | 48.64 | | |
| BASE | 100.0 | | 55.28 | | |
| UG1 | 100.0 | | 58.9 | 250.0 | |
| UG2 | 100.0 | | 59.0 | | |
| TEST | 114.0 | | 53.25 | | |
| 111 | 117.0 | 5.6 | 12.19 | 19.55 | |
| 112 | 117.0 | 5.6 | 13.7 | 20.73 | |
| 113 | 117.0 | 5.6 | 15.22 | 21.85 | |
| 114 | 117.0 | 5.6 | 16.51 | 22.76 | |
| 115 | 117.0 | 5.6 | 19.36 | 24.64 | |
| 116 | 117.0 | 5.6 | 20.71 | 25.48 | |
| 117 | 117.0 | 5.6 | 22.43 | 26.52 | |
| 118 | 117.0 | | 40.06 | | |
| 120 | 118.0 | 5.6 | 33.76 | 32.54 | |
| 121 | 118.0 | 5.6 | 33.9 | 32.61 | |
| 122 | 118.0 | 5.6 | 34.35 | 32.82 | |

| Node1 to Node2 | Elev1 Elev2 | K Fact | Qa Qt | Nom Act | Fitting or Eqv. | Ln. | Pipe Ftng's Total | CFact Pf/Ft | Pt Pe Pf | ******* | Notes | ****** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 117.500 | 5.60 | 19.50 | 1 | | 0.0 | 8.670 | 100 | 12.125 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 101 | 117.500 | | 19.5 | 1.049 | | 0.0 | 8.670 | 0.1740 | 1.509 | Vel = 7.24 | | |
| 101 | 117.500 | 5.60 | 20.68 | 1.25 | | 0.0 | 8.670 | 100 | 13.634 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 102 | 117.500 | | 40.18 | 1.38 | | 0.0 | 8.670 | 0.1743 | 1.511 | Vel = 8.62 | | |
| 102 | 117.500 | 5.60 | 21.79 | 1.5 | | 0.0 | 7.000 | 100 | 15.145 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 103 | 117.500 | | 61.97 | 1.61 | | 0.0 | 7.000 | 0.1834 | 1.284 | Vel = 9.77 | | |
| 103 | 117.500 | 5.60 | 22.70 | 1.5 | | 0.0 | 8.670 | 100 | 16.429 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 104 | 117.500 | | 84.67 | 1.61 | | 0.0 | 8.670 | 0.3268 | 2.833 | Vel = 13.34 | | |
| 104 | 117.500 | 5.60 | 24.58 | 2 | | 0.0 | 8.670 | 100 | 19.262 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 105 | 117.500 | | 109.25 | 2.067 | | 0.0 | 8.670 | 0.1550 | 1.344 | Vel = 10.45 | | |
| 105 | 117.500 | 5.60 | 25.42 | 2 | | 0.0 | 7.500 | 100 | 20.606 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 106 | 117.500 | | 134.67 | 2.067 | | 0.0 | 7.500 | 0.2283 | 1.712 | Vel = 12.88 | | |
| 106 | 117.500 | 5.60 | 26.45 | 2 | 1E | 3.568 | 44.833 | 100 | 22.318 | | | |
| to | | | | | 1T | 7.137 | 10.705 | | 0.650 | | | |
| 107 | 116 | | 161.12 | 2.067 | | 0.0 | 55.538 | 0.3182 | 17.671 | Vel = 15.40 | | |
| 107 | 116 | | 161.53 | 4 | | 0.0 | 14.000 | 100 | 40.639 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 108 | 116 | | 322.65 | 4.26 | | 0.0 | 14.000 | 0.0340 | 0.476 | Vel = 7.26 | | |
| 108 | 116 | | 0.0 | 4 | 2I | 13.156 | 21.625 | 100 | 41.115 | | | |
| to | | | | | | 0.0 | 13.157 | | 0.0 | | | |
| 109 | 116 | | 322.65 | 4.26 | | 0.0 | 34.782 | 0.0340 | 1.181 | Vel = 7.26 | | |
| 109 | 116 | | 97.97 | 4 | 2I | 13.156 | 12.333 | 100 | 42.296 | | | |
| to | | | | | | 0.0 | 13.157 | | 3.465 | | | |
| TOR | 108 | | 420.62 | 4.26 | | 0.0 | 25.490 | 0.0555 | 1.414 | Vel = 9.47 | | |
| TOR | 108 | | 0.0 | 4 | | 0.0 | 3.000 | 100 | 47.175 | | | |
| to | | | | | | 0.0 | 0.0 | | 1.299 | | | |
| DPV | 105 | | 420.62 | 4.26 | | 0.0 | 3.000 | 0.0557 | 0.167 | Vel = 9.47 | | |
| DPV | 105 | | 0.0 | 4 | 1D | 36.868 | 5.000 | 120 | 48.641 | | | |
| to | | | | | 2E | 26.334 | 107.970 | | 2.166 | | | |
| BASE | 100 | | 420.62 | 4.26 | 1S | 28.968 | 112.970 | 0.0396 | 4.472 | Vel = 9.47 | | |
| | | | | | 1B | 15.8 | | | | | | |
| BASE | 100 | | 0.0 | 4 | 2E | 29.067 | 40.000 | 140 | 55.279 | | | |
| to | | | | | 1T | 29.067 | 61.041 | | 0.0 | | | |
| UG1 | 100 | | 420.62 | 4.1 | 1G | 2.907 | 101.041 | 0.0359 | 3.625 | Vel = 10.22 | | |
| UG1 | 100 | H250 | 250.00 | 16 | 1T | 166.859 | 800.000 | 140 | 58.904 | | | |
| to | | | | | | 0.0 | 166.860 | | 0.0 | | | |
| UG2 | 100 | | 670.62 | 16.41 | | 0.0 | 966.860 | 0.0001 | 0.095 | Vel = 1.02 | | |
| UG2 | 100 | | 0.0 | 12 | 1E | 42.195 | 650.000 | 140 | 58.999 | | | |
| to | | | | | 1T | 93.767 | 135.962 | | -6.063 | | | |
| TEST | 114 | | 670.62 | 12.34 | | 0.0 | 785.962 | 0.0004 | 0.312 | Vel = 1.80 | | |
| | | | 0.0 | | | | | | | | | |
| TEST | | | 670.62 | | | | | | 53.248 | K Factor = 91.90 | | |

| Node1 to Node2 | Elev1 Elev2 | K Fact | Qa Qt | Nom Act | Fitting or Eqv. | Ln. | Pipe Ftng's Total | CFact Pf/Ft | Pt Pe Pf | ******* | Notes | ****** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 111 | 117 | 5.60 | 19.55 | 1 | | 0.0 | 8.670 | 100 | 12.188 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 112 | 117 | | 19.55 | 1.049 | | 0.0 | 8.670 | 0.1749 | 1.516 | Vel = 7.26 | | |
| 112 | 117 | 5.60 | 20.73 | 1.25 | | 0.0 | 8.670 | 100 | 13.704 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 113 | 117 | | 40.28 | 1.38 | | 0.0 | 8.670 | 0.1752 | 1.519 | Vel = 8.64 | | |
| 113 | 117 | 5.60 | 21.85 | 1.5 | | 0.0 | 7.000 | 100 | 15.223 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 114 | 117 | | 62.13 | 1.61 | | 0.0 | 7.000 | 0.1843 | 1.290 | Vel = 9.79 | | |
| 114 | 117 | 5.60 | 22.76 | 1.5 | | 0.0 | 8.670 | 100 | 16.513 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 115 | 117 | | 84.89 | 1.61 | | 0.0 | 8.670 | 0.3283 | 2.846 | Vel = 13.38 | | |
| 115 | 117 | 5.60 | 24.64 | 2 | | 0.0 | 8.670 | 100 | 19.359 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 116 | 117 | | 109.53 | 2.067 | | 0.0 | 8.670 | 0.1558 | 1.351 | Vel = 10.47 | | |
| 116 | 117 | 5.60 | 25.48 | 2 | | 0.0 | 7.500 | 100 | 20.710 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 117 | 117 | | 135.01 | 2.067 | | 0.0 | 7.500 | 0.2293 | 1.720 | Vel = 12.91 | | |
| 117 | 117 | 5.60 | 26.52 | 2 | 1E | 3.568 | 44.458 | 100 | 22.430 | | | |
| to | | | | | 1T | 7.137 | 10.705 | | 0.0 | | | |
| 118 | 117 | | 161.53 | 2.067 | | 0.0 | 55.163 | 0.3197 | 17.634 | Vel = 15.44 | | |
| 118 | 117 | | 0.0 | 4 | | 0.0 | 15.000 | 100 | 40.064 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.433 | | | |
| 107 | 116 | | 161.53 | 4.26 | | 0.0 | 15.000 | 0.0095 | 0.142 | Vel = 3.64 | | |
| | | | 0.0 | | | | | | | | | |
| 107 | | | 161.53 | | | | | | 40.639 | K Factor = 25.34 | | |
| 120 | 118 | 5.60 | 32.54 | 2 | | 0.0 | 8.670 | 100 | 33.759 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 121 | 118 | | 32.54 | 2.067 | | 0.0 | 8.670 | 0.0165 | 0.143 | Vel = 3.11 | | |
| 121 | 118 | 5.60 | 32.60 | 2 | | 0.0 | 7.500 | 100 | 33.902 | | | |
| to | | | | | | 0.0 | 0.0 | | 0.0 | | | |
| 122 | 118 | | 65.14 | 2.067 | | 0.0 | 7.500 | 0.0596 | 0.447 | Vel = 6.23 | | |
| 122 | 118 | 5.60 | 32.82 | 2 | 1T | 7.137 | 45.167 | 100 | 34.349 | | | |
| to | | | | | 1E | 3.568 | 10.705 | | 0.866 | | | |
| 109 | 116 | | 97.96 | 2.067 | | 0.0 | 55.872 | 0.1267 | 7.081 | Vel = 9.37 | | |
| | | | 0.0 | | | | | | | | | |
| 109 | | | 97.96 | | | | | | 42.296 | K Factor = 15.06 | | |




FIRE SPRINKLER PLAN – UPPER MEZZ / HIGHBAY

SCALE: 1/8"= 1'-0"

AREA PROTECTED: 5,737 SQ.FT.
FINISH FLOOR ELEVATION : 100.00' - 110.00'
COLOR CODE:

| Sprinkler Head Schedule | | | | | |
|---|---|---|---|---|---|
| Symbol | Count | Thread | K-Factor | Description | Note |
| ○ | 48 | 1/2" | 5.6 | TYCO TY-B BRASS UPRIGHT 155F TY3151 | ON LINE |
| ◁ | 4 | 1/2" | 5.6 | TYCO TY-B BRASS HORZ SIDEWALL 155F TY3351 | EXPOSED BELOW DOOR |

55 = Total Number of Heads this floor



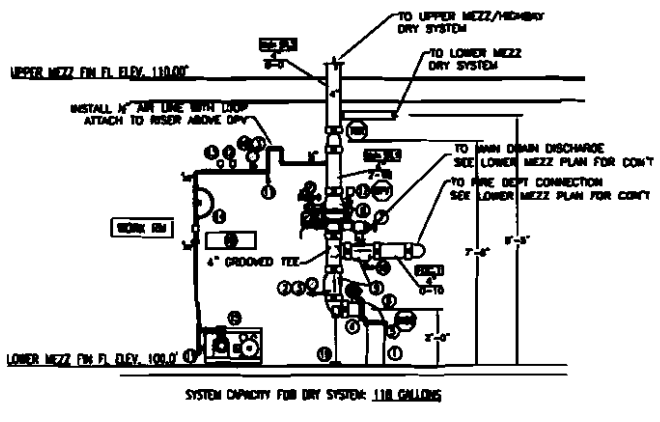

FIRE SPRINKLER PLAN – LOWER MEZZ

SCALE: 1/8"= 1'-0"

AREA PROTECTED: 889 SQ.FT.
FINISH FLOOR ELEVATION : 100.00'
COLOR CODE:

| Sprinkler Head Schedule | | | | | |
|---|---|---|---|---|---|
| Symbol | Count | Thread | K-Factor | Description | Note |
| ○ | 8 | 1/2" | 5.6 | TYCO TY-B BRASS UPRIGHT 155F TY3151 | ON LINE |
| ◁ | 1 | 1/2" | 5.6 | TYCO TY-B BRASS HORZ SIDEWALL 155F W/WHITE RECESSED ESC TY3331 | |
| ◀ | 1 | 1/2" | 5.6 | TYCO TY-B BRASS HORZ SIDEWALL 155F TY3351 | EXPOSED BELOW DOOR |

10 = Total Number of Heads this floor




SYSTEM CAPACITY FOR DRY SYSTEM: 118 GALLONS

SPRINKLER SYSTEM ENTRANCE SECTION "B"

NOT TO SCALE

NOTE: AS PER NFPA 13, 2010 EDITION SECTION 8.16.2.3.1
BRANCH LINE PIPING SHALL BE PITCHED AT LEAST 1/2" PER 10'-0"
MAIN PIPING SHALL BE PITCHED AT LEAST 1/4" PER 10'-0"

NOTE: AS PER NFPA 13, 2010 EDITION SECTION 8.16.2.3.1
BRANCH LINE PIPING SHALL BE PITCHED AT LEAST 1/2" PER 10'-0"
MAIN PIPING SHALL BE PITCHED AT LEAST 1/4" PER 10'-0"

0 1' 2' 3'
0 8' 16' 24'
1/8"=1'-0" GRAPHIC SCALE

## LEGEND

1. 4" DICL BY OTHERS
2. WATER PRESSURE GAUGE (0-300 PSI)
3. 1/4" 3-WAY VALVE
4. 4" TYCO BFV GROOVED BUTTERFLY VALVE W/ TAMPER SWITCH
5. 4" LINE-FLANGE
6. 4" FLANGED ELL 90°
7. 2" MAIN DRAIN VALVE
8. 4" TYCO DPV-1 DRY PIPE VALVE DxG
9. 4" TYCO CV-1F GROOVED CHECK VALVE
10. ½" BALL DRIP VALVE
11. ½" DRIP LEG W/VALVE
12. FURNAS AIR COMPRESSOR AUTOMATIC ON-OFF SWITCH (MOD.69BW48)
13. POTTER LOW AIR PRESSURE SWITCH (PS40-2)
14. DRY PIPE VALVE AIR LINE BY-PASS W/ LOAD GENIE
15. JENNY AIR COMPRESSOR MODEL F125-8S 1/2 HP, 115V SINGLE PHASE
16. AIR PRESSURE GAUGE
17. POTTER PS-10 PRESSURE SWITCH
18. HEAD BOX & SPARE HEADS AND HEAD WRENCH
19. PIPE STAND
20. ELECTRIC BELL (SEE LOWER MEZZ PLAN SHEET 1 OF 1)
21. 2" MAIN DRAIN DISCHARGE (SEE LOWER MEZZ PLAN SHEET 1 OF 1)
22. 5" STORZ CONNECTION W/ KNOX LOCKING CAP (SEE LOWER MEZZ PLAN SHE

## GENERAL NOTES

SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PAMPHLET #13, 2010 EDITION

OCCUPANCY DESCRIPTION AND CLASSIFICATION:
LIGHT HAZARD = BATH ROOM
ORDINARY HAZARD GROUP I = VEHICLE STORAGE, WORK ROOM, GARAGE, MEZZANINE, STORAGE RM

SCOPE OF WORK:
INSTALL NEW DRY SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA PAMPHLET #13, 2010 EDITION THROUGHOUT THE ENTIRE BUILDING.

ALL DIMENSIONS ARE SHOWN FOR GENERAL LOCATION OF SPRINKLER HEADS ; PIPING MAY WAY TO SUIT ACTUAL FIELD CONDITIONS.

SYSTEM CAPACITY FOR DRY SYSTEM: 118 GALLONS

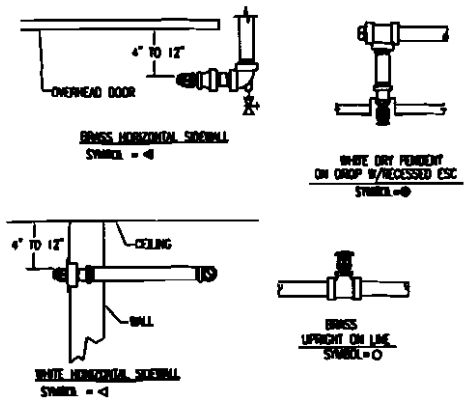
STORAGE OF MATERIAL SHALL NOT EXCEED 6'-0" IN HEIGHT.

ALL WIRING TO BE DONE BY OTHERS.

⬡ = HYDRAULIC REFERENCE POINTS.

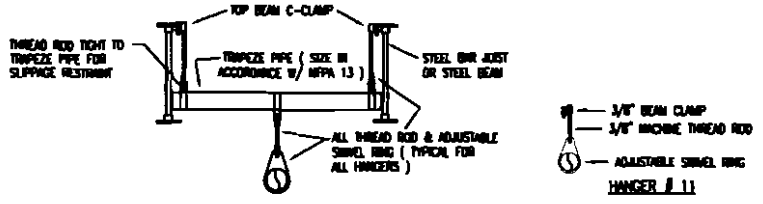
FF CL = FINISH FLOOR UP TO CENTERLINE OF PIPE.

BD CL = DECK DOWN TO CENTERLINE OF PIPE.




SPRINKLER HEAD DETAILS

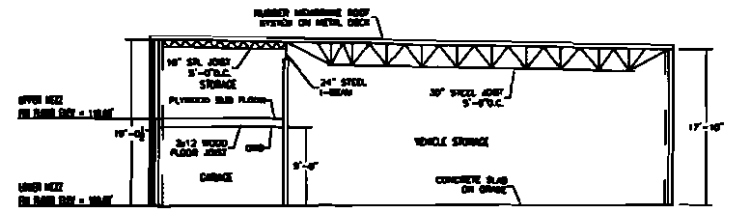
NOT TO SCALE




HANGER DETAILS

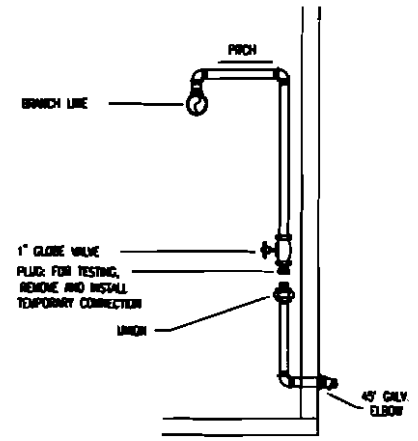
NOT TO SCALE

NOTE: ALL HANGERS TO BE PROVIDED AND INSTALLED AS PER NFPA # 13
3/8" A.T.ROD FOR 1" - 4" PIPE




BUILDING SECTION A-A

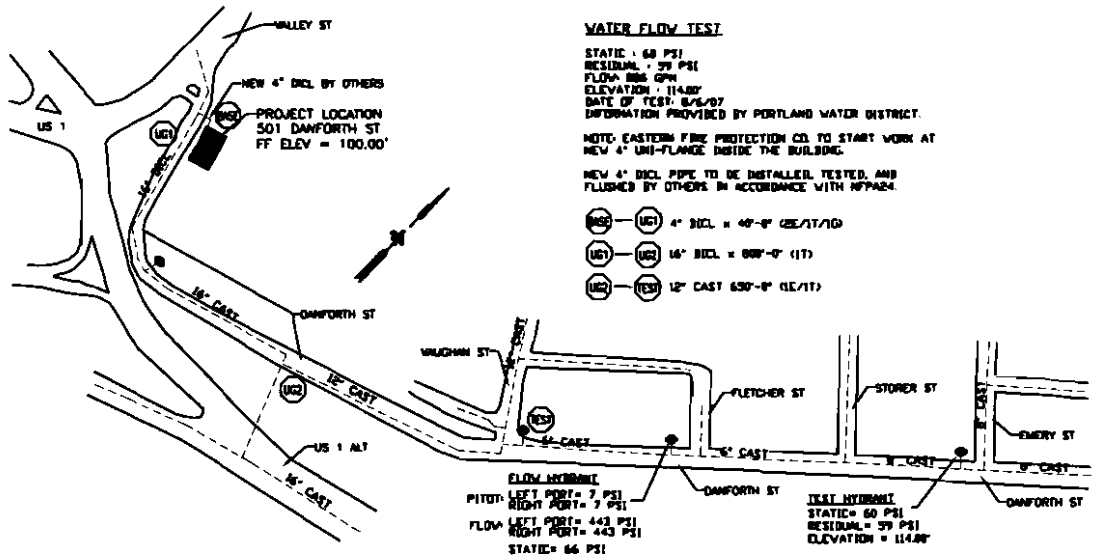
NOT TO SCALE




Note: To minimize condensation of water in the drop to the test connection, provide a nipple-up off the branch line.
DRY TEST CONNECTION (PER NFPA 13)

DRY INSPECTOR'S TEST DETAIL

NOT TO SCALE




WATER FLOW TEST

STATIC : 68 PSI
RESIDUAL : 59 PSI
FLOW: 1000 GPM
ELEVATION : 114.00'
DATE OF TEST: 8/6/07
INFORMATION PROVIDED BY PORTLAND WATER DISTRICT.

NOTE: EASTERN FIRE PROTECTION CO. TO START WORK AT NEW 4" UNI-FLANGE INSIDE THE BUILDING.

NEW 4" DICL PIPE TO BE INSTALLED, TESTED, AND FLUSHED BY OTHERS IN ACCORDANCE WITH NFPA#24.

BASE — UG1 4" DICL = 40'-0" (SE/ST/SD)
UG1 — UG2 16" DICL = 888'-0" (ST)
UG2 — TEST 12" CAST 630'-0" (SE/ST)

PLOT PLAN

NOT TO SCALE

| GENERAL NOTES | DATE | REVISIONS | REQUIRED APPROVALS |
|---|---|---|---|
| SPRINKLER SYSTEM INSTALLATION TO COMPLY WITH NFPA PAMPHLET #13, 2010 EDITION. | | | OWNER / ARCHITECT |
| BRANCH LINE PIPING 1" THRU 2" TO BE BLACK STEEL SCH'D 40 JOINED BY THREADED DUCTILE IRON FITTINGS. | | | STATE FIRE MARSHAL |
| MAIN PIPING 2½" AND LARGER TO BE BLACK STEEL SCH'D 10 W/ GROOVED ENDS & WELDED OUTLETS JOINED BY MECHANICAL COUPLINGS. | | | PORTLAND FIRE DEPT |
| OWNER TO PROVIDE SUFFICIENT HEAT AT MAIN ENTRANCE AND AREAS CONTAINING RETURN BENDS TO PREVENT FREEZING OF WATER FILLED SPRINKLER PIPING AND EQUIPMENT. (MIN. 40[ F) | | | DRAWN BY: GRD<br>HOSE LOAD: 0 CODE: 000280<br>CHECKED BY: GMC<br>HOSE LOAD: 0 CODE: 000474<br>CONTRACTOR LICENSE #<br>CONTRACTOR BMS # |

# 501 DANFORTH STREET
PORTLAND, ME.

CONTRACT WITH: DAVIS & HANCOCK

EASTERN FIRE PROTECTION
AUBURN/LEWISTON INDUSTRIAL AIRPARK, AUBURN, MAINE 04210

| | |
|---|---|
| FIRE SPRINKLER PLANS & DETAILS | |
| DWG. NO. | 1 OF 1 |
| JOB NUMBER | AU-4649-10 |
| SCALE | AS NOTED |
| DATE | 12/1/10 |