

FELLER, FINCH, & ASSOCIATES

METER PIT DETAIL

MASTER METER

~~6" OR 8" METER~~

6" OR 8" MASTER METER DETAIL

N-160 SR 108

**FAX TRANSMITTAL SHEET**

**FROM:**  
**S.L.C. METER SERVICE, INC.**  
**3059 DIXIE HWY.**  
**WATERFORD MI 48328**  
**VOICE # (248)673-3300 FAX#(248)673-65**

COPIES FOR  
FELLER, FINCH,  
& ASSOCIATES



DATE: 2-8-02  
TIME: \_\_\_\_\_ AM / PM

TO: Mark Schaffer Exc

SENDER: JIM TAYLOR

FAX: 419-663-0984

VOICE # (248) 673-3300 EXT 317

ATTN: Ted Mann

TOTAL PGS. SENT 5

RE: \_\_\_\_\_

RESPONSE REQUESTED: YES NO

MEMO:

Protestus Meter Specs

TO: CITY ENGINEER 2/8/02

JDE,  
REC. THIS TODAY FROM  
SCHAFER EXCAVATING.  
PLEASE ADVISE IF  
PROBLEM LST SCHAFER KNOW

LENNY  
CO. ENG'S. OFFICE

SIGNED: \_\_\_\_\_  
JIM TAYLOR

TITLE: GENERAL MANAGER

IF YOU DO NOT RECEIVE ENTIRE FAX PLEASE CONTACT SENDER AT ABOVE TELEPHONE.

FROM : SLC METER/LATION DIVISION

PHONE NO. : 2486732811

Feb. 08 2002 10:35AM P2

# Neptune<sup>®</sup> High Performance Protectus III Fire Service Meter

Sizes: 4", 6", 8", and 10"



The Schlumberger Neptune High Performance (HP) Protectus III Fire Service Meter is designed to measure both domestic and fire service water usage through a single water line. A typical application would be in a warehouse, hotel, or hospital, where one water line may supply any number of faucets or bathrooms, as well as an automatic sprinkler system.

The Neptune HP Protectus III Fire Service Meter measures extremely wide flow ranges at 100% ± 1.8% accuracy. All

Neptune HP Fire Service Meters meet or exceed AWWA C708 Standard and are Underwriters Laboratory (UL) Listed and Factory Manual (FM) Approved for fire service use.

#### Operation

At low flow rates, all flow is through the bypass meter. As flow increases, pressure loss through the bypass meter increases and the detector check valve automatically opens. This condition occurs, for example, when a fire sprinkler system goes into operation. This permits flow through the mainline turbine meter. As flow decreases, reduced pressure loss closes the detector check valve and flow is again directed through the bypass meter.

The combined readings of the mainline turbine and the bypass meter indicate total consumption through the Neptune HP Protectus III Meter.

#### Construction

- Epoxy-coated steel mainline body
- Integral detector check valve (stainless steel spring-loaded type)
- Epoxy-coated steel strainer body with stainless steel basket
- Neptune HP Turbine measuring element
- All bronze bypass assembly
- Ball valves used on bypass
- Check valve used on bypass
- Neptune 1" T-10 meter (on 4" size)
- Neptune 1½" T-10 or 1½" HP Turbine meter (on 6" size)
- Neptune 2" T-10 or 2" HP Turbine meter (on 8" and 10" sizes)

## Schlumberger

### Key Features

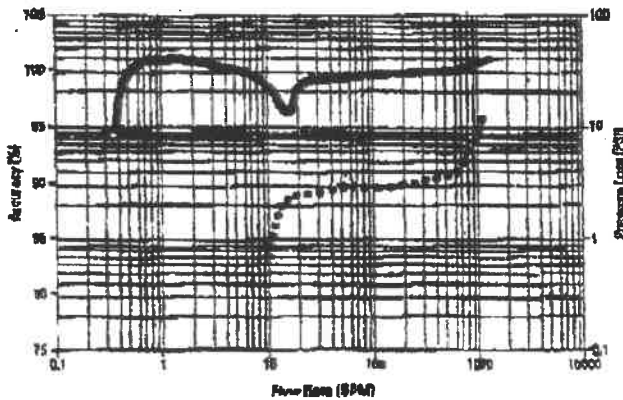
- **Compact Size**
  - Standard laying length fits existing installations
  - Lightweight
  - Lowers new installation and replacement costs
- **Wide Operating Range**
  - Measures extremely wide flow ranges at 98.5%–101.5% accuracy
  - Combines low-flow sensitivity of disc meter with high-flow capacity of turbine meter
  - Registers leaks or unauthorized use of water from fire service lines
- **Component Repair and Maintenance**
  - Owner maintenance easily accomplished by replacement of major components
  - Calibration vane allows in-field calibration of United Measuring Element (UME)
- **Roll Sealed Registers**
  - Eliminates leaking and fogging
  - In-line serviceability
  - Magnetic driven, low torque registration
  - Temperature proof seal design



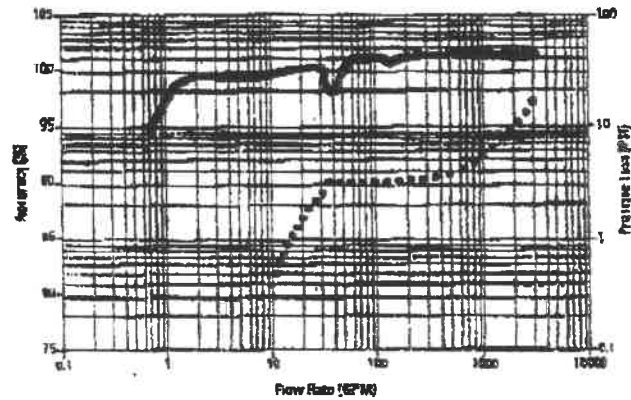
# Neptune® High Performance Protectus III Fire Service Meter with T-10 Bypass

Sizes: 4", 6", 8", and 10"

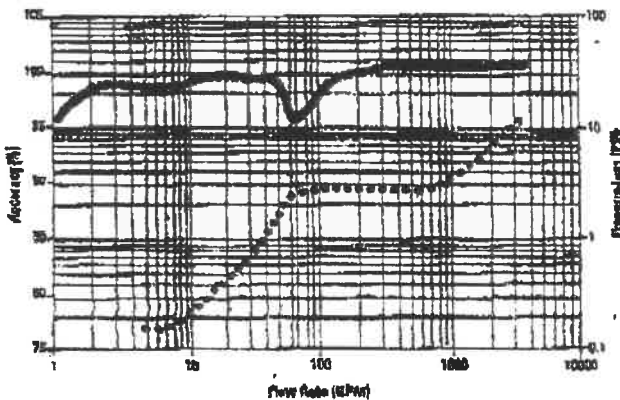
### 4" Accuracy



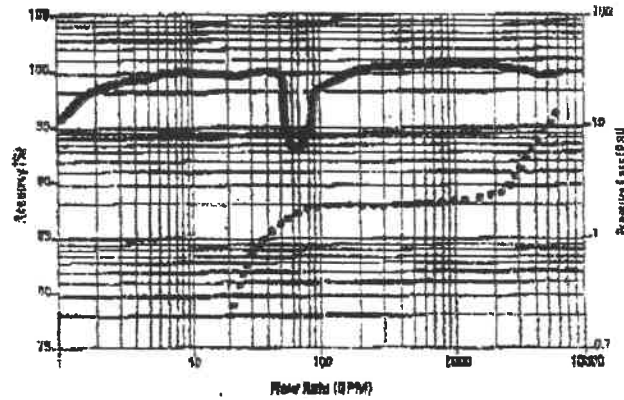
### 6" Accuracy



### 8" Accuracy



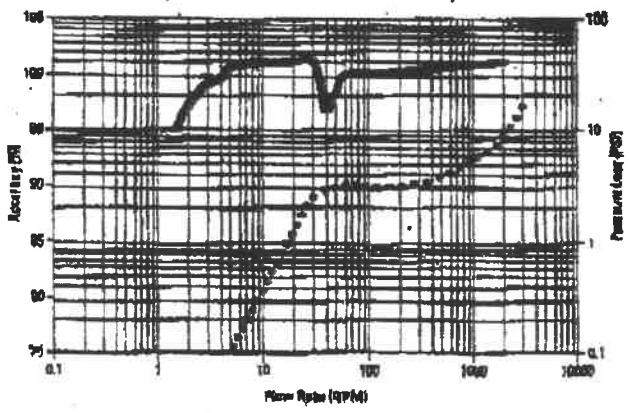
### 10" Accuracy



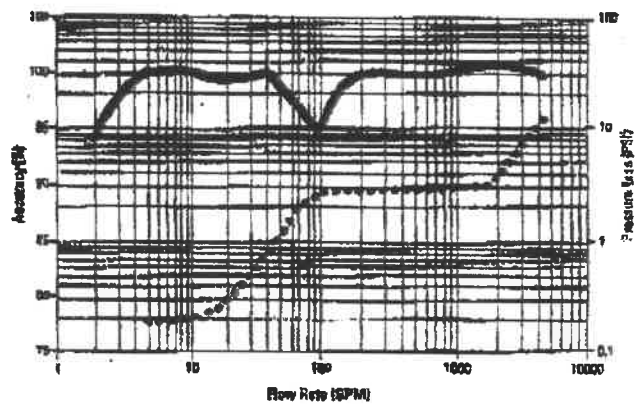
————— Accuracy  
 ..... Head Loss

# Neptune® High Performance Protectus III Fire Service Meter with Turbine Bypass Sizes: 6", 8", and 10"

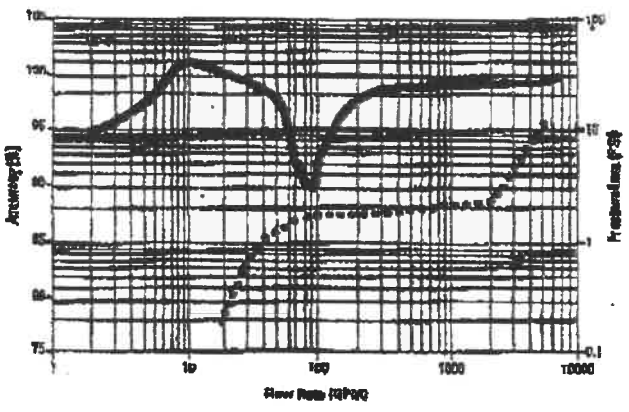
### 6" Accuracy



### 8" Accuracy



### 10" Accuracy



———— Accuracy  
 ..... Head Loss

*These charts show typical meter performance. Individual results may vary.*





Memo to: Joe Kleiner and Jeff Marihugh  
From: Ron Gallagher – Worline Engineers (voice 419.825.1103 or Fax 419.825.3800)  
Date: 20 July 2001  
Re: Meter Pit Preliminary Layout

Attached please find the preliminary layout of the meter pit from SLC Meter Service.  
Also please find the SLC quotation for this pit.

I will contact you in a few days for your comments/changes.

Thank you.

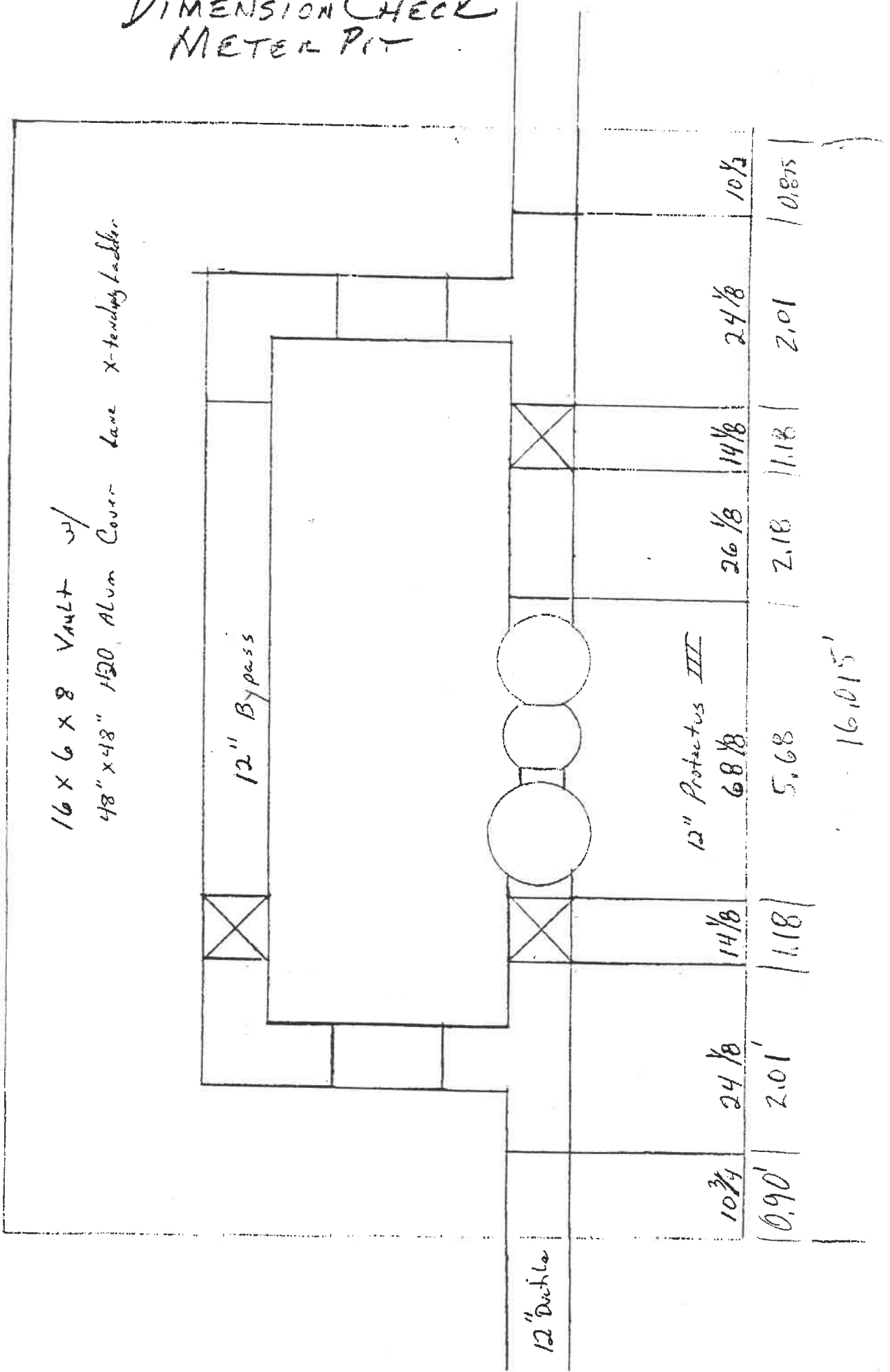
For Joe  
For your  
REVIEW &  
COMMENTS  
RON GALLAGHER



# DIMENSION CHECK METER PIT

Master Meter  
HENRY CO., OHIO  
*Bohannon, Ohio*

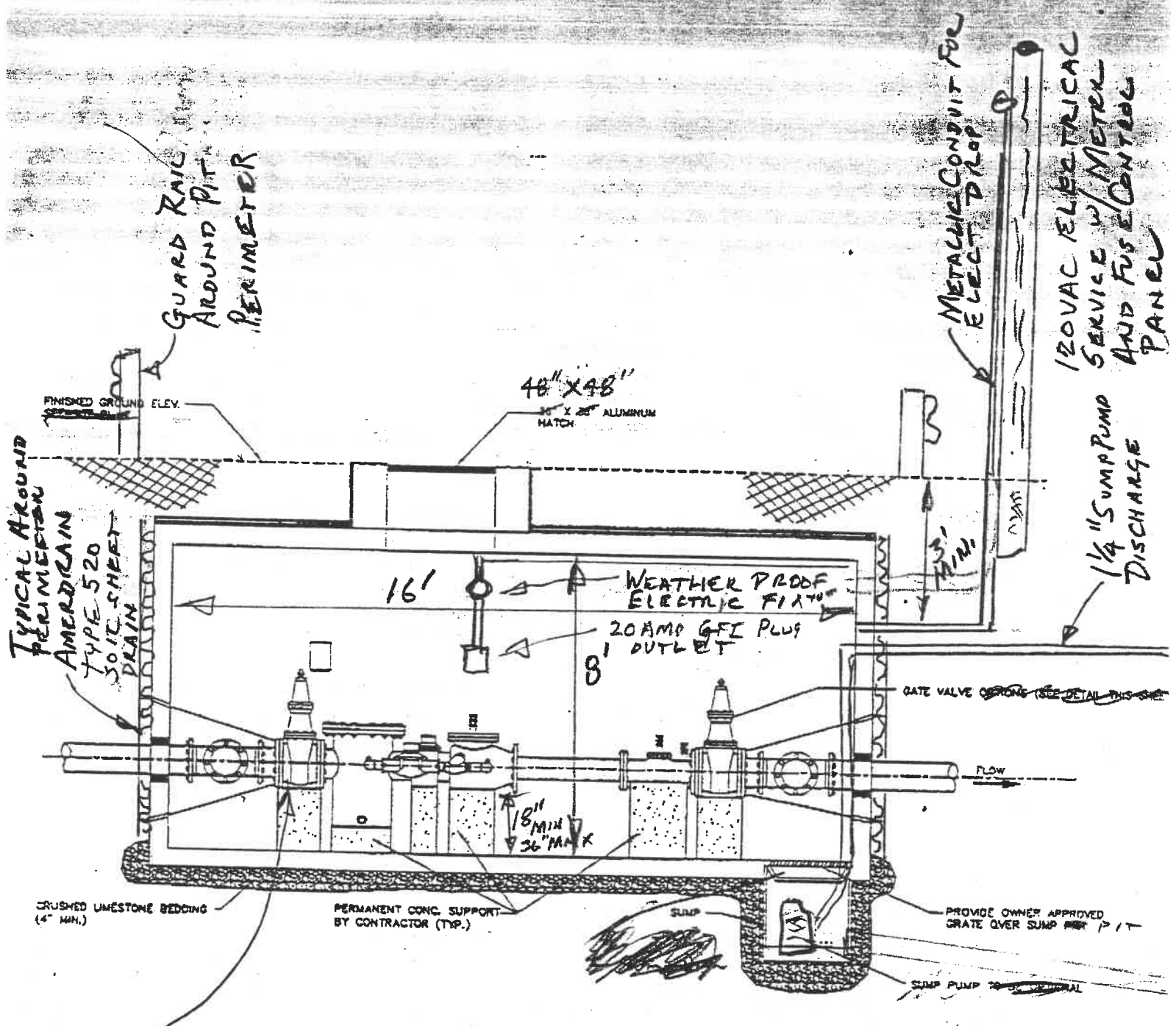
16 x 6 x 8 Vault w/  
48" x 48" H20 Alum Cover Lane X-tending Ladder



10 <sup>3</sup> / <sub>4</sub>	24 <sup>1</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>8</sub>	68 <sup>1</sup> / <sub>8</sub>	26 <sup>1</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>8</sub>	24 <sup>1</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>
0.90'	2.01'	1.18'	5.68	2.18	1.18	2.01	10.875

16.015'

12" Ductile



TYPICAL AROUND PERIMETER AMERICAN TYPE 520 SOIL SHEET DRAIN

GUARD RAIL AROUND PIT PERIMETER

48" X 48" 36" X 26" ALUMINUM MATCH

METALLIC CONDUIT FOR ELECT. DROP  
120VAC ELECTRICAL SERVICE W/ METER AND FUSE CONTROL PANEL

1/4" SUMP PUMP DISCHARGE

16'

8'

WEATHER PROOF ELECTRIC FIXTURE  
20 AMP GFI PLUG OUTLET

GATE VALVE OPER. (SEE DETAIL THIS SHEET)

FLOW

18" MIN X 36" MAX

CRUSHED LIMESTONE BEDDING (4" MIN.)

PERMANENT CONG. SUPPORT BY CONTRACTOR (TYP.)

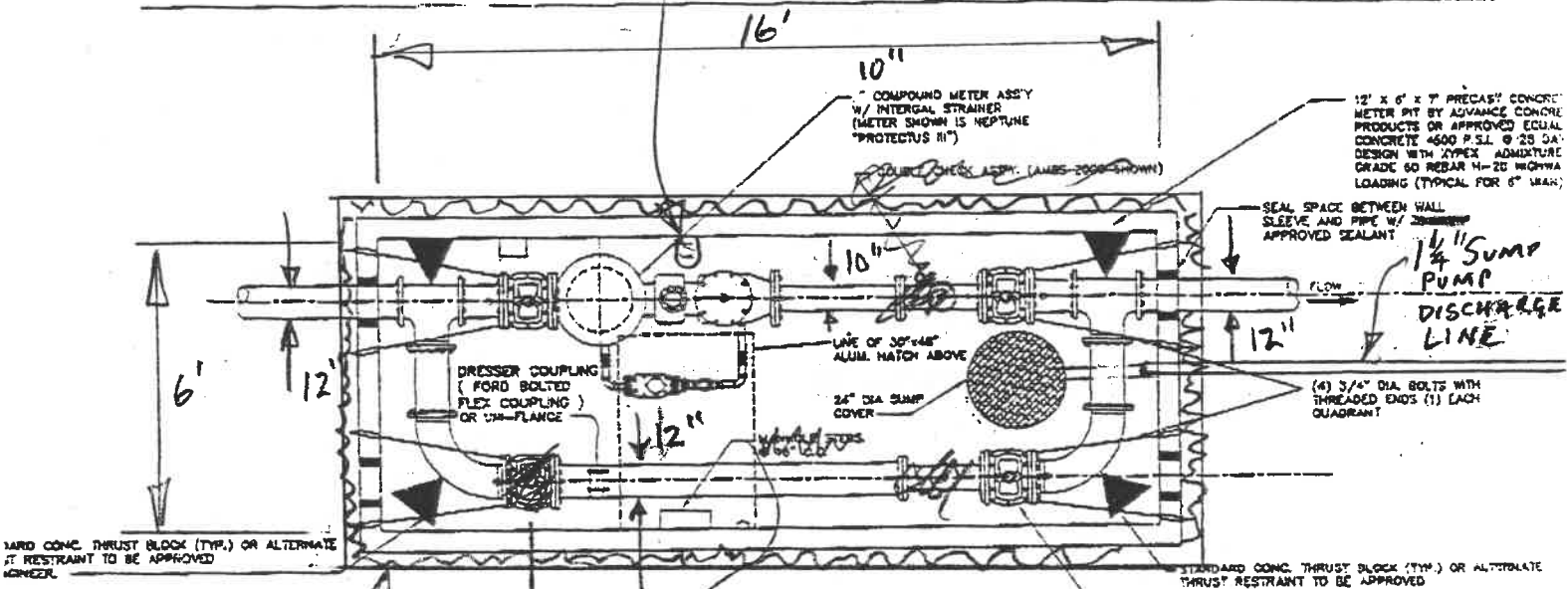
PROVIDE OWNER APPROVED GRATE OVER SUMP PER P 17

SUMP PUMP TO BE INSTALLED

12" GATE VALVE W/ RISING STEM RESILIENT WEDGE

METER PIT DETAIL WALL ELEVATION  
NOT TO SCALE

VAPORPROOF  
ELECTRIC LIGHT  
FIXTURE AND  
120VDC GFI  
OUTLET



WARD CONC. THRUST BLOCK (TYP.) OR ALTERNATE  
IT RESTRAINT TO BE APPROVED  
BY ENGINEER.

STANDARD CONC. THRUST BLOCK (TYP.) OR ALTERNATE  
THRUST RESTRAINT TO BE APPROVED  
BY ENGINEER.

AMERDRAIN  
SOIL SHEET  
DRAIN No 520

No  
VALVE

LANE PULL-UP  
HANDRAIL LADDER  
CAPPED  
METER PIT DETAIL.  
TOP VIEW

NOT TO SCALE

DATE VALVE W/ RISING STEM  
OR W/ 90° COUPLING  
OPERATING NOT (TYPICAL)  
RESILIENT  
WEDGE

- NOTES
1. BACKFLOW PREVENTER TO BE SINGLE OR DUAL CHECK AS REQUIRED BY LOCAL AUTHORITY.
  2. AN APPROVED RPZ BACKFLOW PREVENTER MAY BE SUBSTITUTED FOR A DOUBLE CHECK VALVE ASSEMBLY, WHEN SETTING IS ABOVE GROUND.

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND INSPECTIONS NOTIFY LOCAL AUTHORITY AND MISS DIG (1-800-482-7171) A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
2. ALL CONSTRUCTION MUST CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE LOCAL AUTHORITY.
3. ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ON SITE.
4. FLOW METER SHALL BE COMPOUND OR TURBINE METER ASSEMBLY WITH A WATERPROOF ELECTRONIC COMMUNICATION REGISTER ARB. CONTRACTOR ALSO TO PROVIDE A METER TRANSCEIVER UNIT WITH A BACKUP TOUCH PAD. AUTHORITY SHALL BE NOTIFIED AND MAY BE PRESENT DURING ALL CONSTRUCTION
5. ~~ALL PUBLIC WATER MAIN PIPE SHALL BE CLASS 54 DUCTILE IRON WITH DOUBLE CEMENT LINING.~~
6. THRUST BLOCKS ARE REQUIRED FOR ALL TEES AND BENDS OUTSIDE VAULT. JOINTS INSIDE THE METER VAULT SHALL BE 250 P.S.I. FLANGED JOINTS.
7. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 P.S.I. AND SHALL BE AIR-ENTRAINED.
8. EXCAVATION AREA FOR PRE-CAST METER PIT SHALL BE OVER EXCAVATED 6" AND BACK FILLED WITH 6" OF CRUSHED LIMESTONE ALL BACK FILL SHALL BE 95% COMPACTION.
9. ALL JOINTS BETWEEN PIPES AND WALL SLEEVES SHALL HAVE A WATERPROOF SEALANT.

10. THE ANCHOR RODS, EXTERIOR WASHERS, PLATES (4" X 4" X 1/2"), AND NUTS SHALL BE CADMIUM-PLATED. AFTER INSTALLATION OF ANCHOR RODS, ROD HOLES SHALL BE SEALED WITH A SILICONE BONDING SEALANT.
11. METER VAULT INCLUDES: STEPS, SUMP PAN, ~~18" X 18"~~ <sup>18" X 18"</sup> MANHOLE, 4 PIPE OPENINGS, ( 2 MAINLINES, 1 ELECTRIC, 1 DRAIN).
12. MANHOLE COVER WILL BE MINIMUM ~~36" X 36"~~ <sup>48" X 48"</sup> ALUMINUM *H-20 (No Impact)* TRAFFIC LOAD.

13. ~~MAXIMUM BACKFLOW PREVENTION ALLOWED UNDERGROUND IS A DUAL CHECK. VAULT SIZING IS DETERMINED BY THIS REQUIREMENT.~~ *out*

3. ~~THE METER VAULT CARRIES AN H-20 LOADING WITH A MINIMUM OF 18" OF BACKFILL COVERING IT. IT COMES AS A 2 PIECE UNIT, WITH DOUBLE SEALS AT ITS JOINT. HAVING THE MANHOLE COVER CAST IN TO IT DURING PRODUCTION AND USING LINK-SEALS AROUND PIPE PENETRATIONS MAKES IT NEARLY WATER PROOF.~~

4. ~~THE UNIT IS COMPLETELY SELF CONTAINED. NO EXTERIOR VALVES ONLY BLAIN PIPE ENDS ARE EXPOSED THAT CAN SIMPLY BE COUPLED TO YOUR EXISTING PIPELINE.~~

5. ~~BECAUSE UNIT IS COMPLETELY ASSEMBLED, CLEAN AND GALVANIZED, IF SERVICE HAS TO BE INTERRUPTED THE DOWN TIME IS MINIMAL.~~

5. ~~PRICING INCLUDES DELIVERY TO YOUR EXCAVATED LOCATION. DRIVER WILL SET UNIT IN HOLE. HE NEEDS TO BE WITHIN 15 FT. RADIUS. YOU MUST PROVIDE 2 LABORERS TO SIMPLY POSITION UNIT IN PLACE AND MAKE CONNECTIONS TO EXISTING PIPELINE. S.L.C. CAN BE CONTRACTED (1-800-433-4332) TO DO THIS IF NECESSARY. ALL THE PROPERTY OWNER OR MUNICIPALITY WOULD DO IS EXCAVATION. NOTE: CANNOT OPERATE WITHIN 10 FT. OF OVERHEAD WRES.~~

6. ~~UNIT IS TO BE INSTALLED IN EXISTING PIPE LINE ALL WE WOULD DO IS CUT OUT A SECTION CLOSE TO 16 FT. AND CRIBLE BACK TO PLAIN ENDS EXTENDING FROM EACH END OF STRUCTURE.~~

7. ~~TO ORDER UNIT WE SIMPLY NEED TO KNOW ELEVATION TO TOP OF YOUR PIPELINE FROM FINISH GRADE FROM THE MEASUREMENT WE DETERMINE THE HEIGHT FOR THE MANHOLE COVER TO KEEP IT WELL ABOVE GRADE.~~

8. ~~ALL EXTERIOR CONCRETE SURFACES CAN BE WATERPROOFED WITH MASTIC ASPHALT COATING (50 MIL THICKNESS).~~

17. ALL PIPE SHALL BE CL53 DUCTILE WITH FLANGED ENDS  
(COPPER AND BRASS BE ACCEPTABLE. SUBMIT FOR APPROVAL

18. ALL VALVES SHALL BE FLANGED END, HANDWHEEL OPERATED  
OS&Y GATE VALVES, RESILIENT WEDGE.

19. all exterior vertical walls are to be covered with Amerdrain  
number no. 520 soil sheet drain after the pit has been  
placed in hole.

20. ALL VALVES SHALL BE FLANGED END, HANDWHEEL OPERATED OS&Y GATE VALVES, RESILIENT

# ***Polypropylene Vault Ladder***

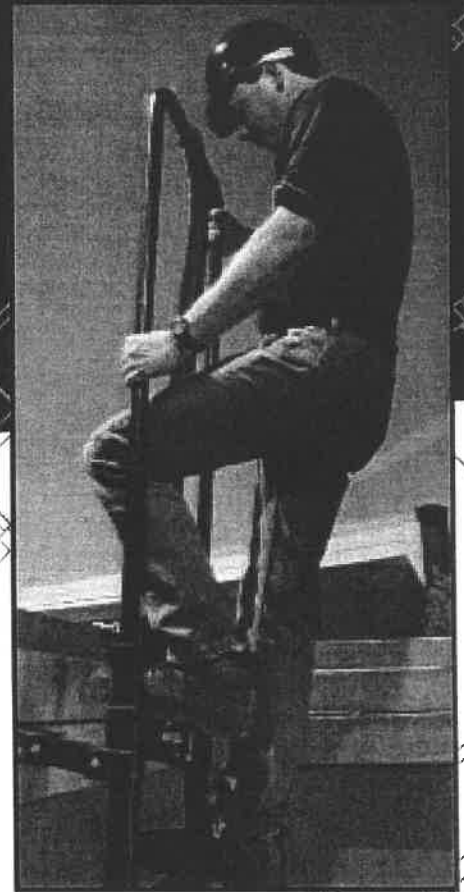


***INTERNATIONAL  
CORPORATION***



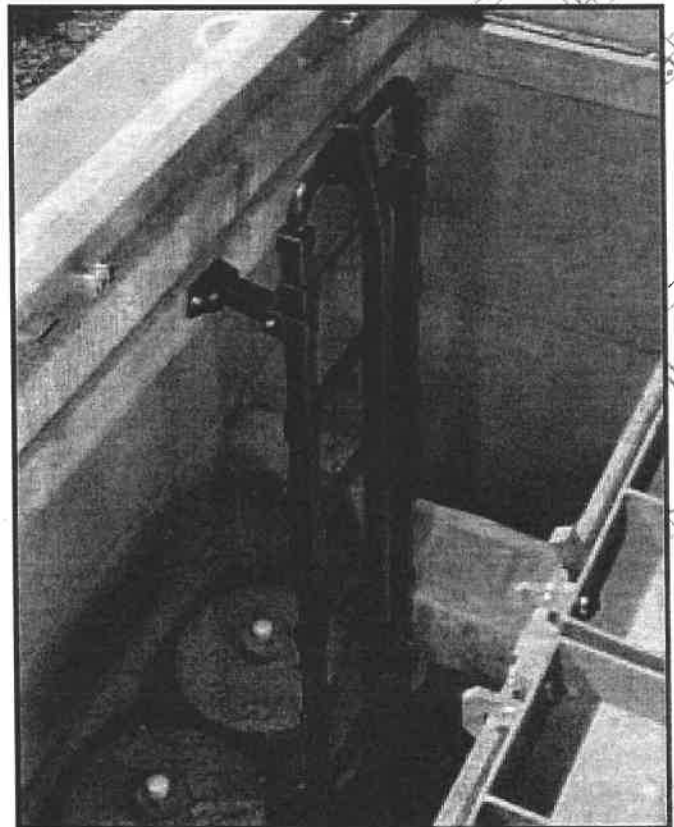


**The innovative Pull-Up Handrail extends to a full 42" OSHA approved height above the top of the vault.**



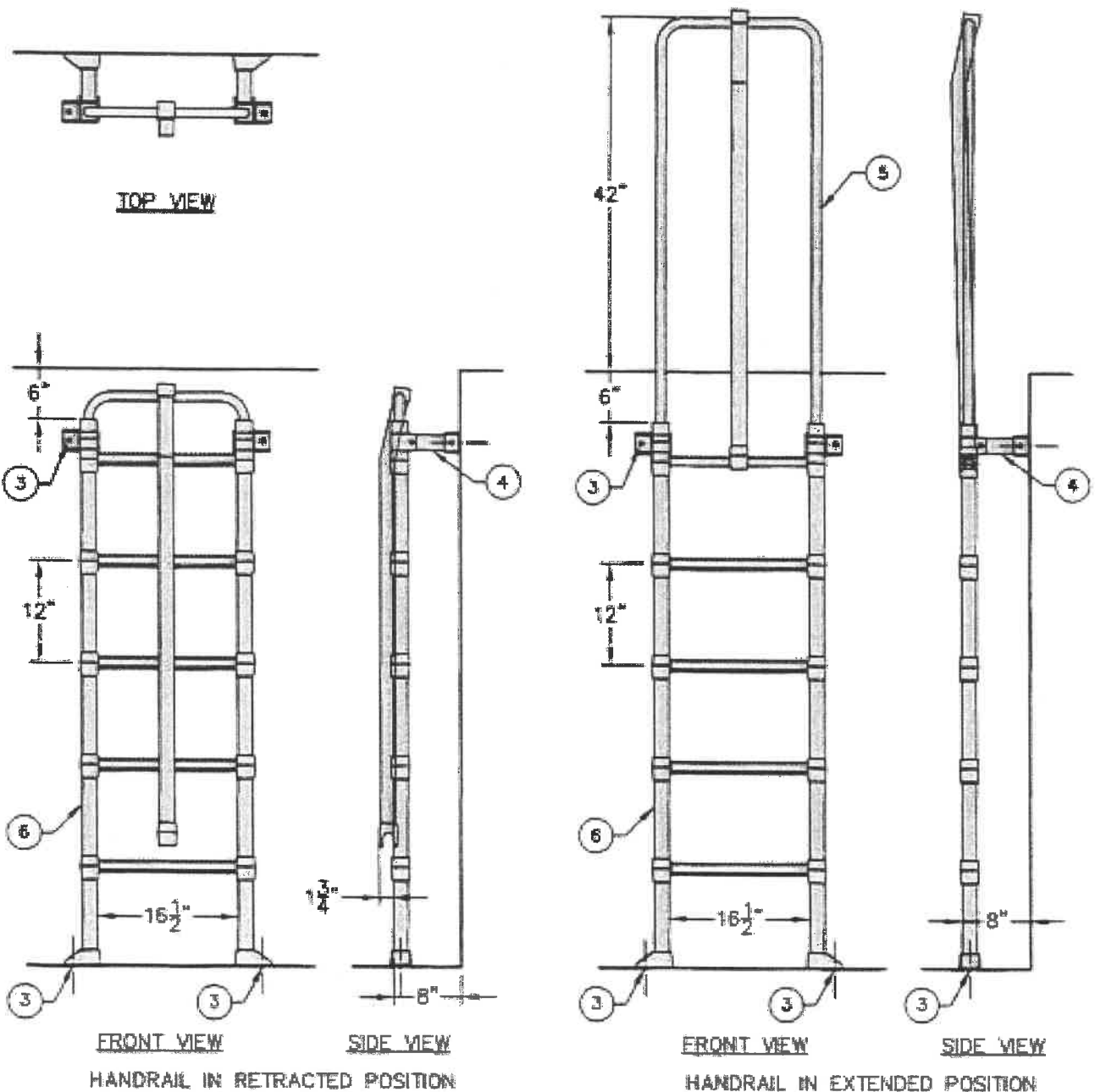
**Lane International Corporation** has been manufacturing a variety of products including Polypropylene Steps and Hanging Ladders, Galvanized Steel Steps and Lifting Hooks for the precast concrete industry for over 40 years.

**The Lane Polypropylene Vault Ladder** is the latest innovation that provides affordable, safe, and rust-free vault access especially in damp or corrosive environments. The ladder is available with or without a pull-up handrail extension. Made of Aluminum and Steel reinforced Copolymer Polypropylene, the Lane Vault Ladder offers the precaster a superior ladder solution.



***Over four decades of innovation, quality and service.***

# The Lane Polypropylene Vault Ladder



## NOTES:

1. LADDERS AVAILABLE IN 3 RUNG THROUGH 12 RUNG.
2. POLYPROPYLENE CONFORMS TO ASTM D-4101. LADDERS MEET ALL ASTM C-497 LOAD REQUIREMENTS.
3. FASTEN LADDER TO FLOOR AND WALL WITH 1/2" x 3-3/4" ANCHORS. ANCHORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
4. ATTACH ADJUSTABLE MOUNTING BRACKET WITH 1/4" S.S. FASTENERS.
5. ALUMINUM AND STEEL REINFORCED COPOLYMER POLYPROPYLENE PULL-UP HANDRAIL.
6. ALUMINUM AND STEEL REINFORCED COPOLYMER POLYPROPYLENE LADDER.



## Polypropylene Ladders

### Polypropylene Vault Ladder

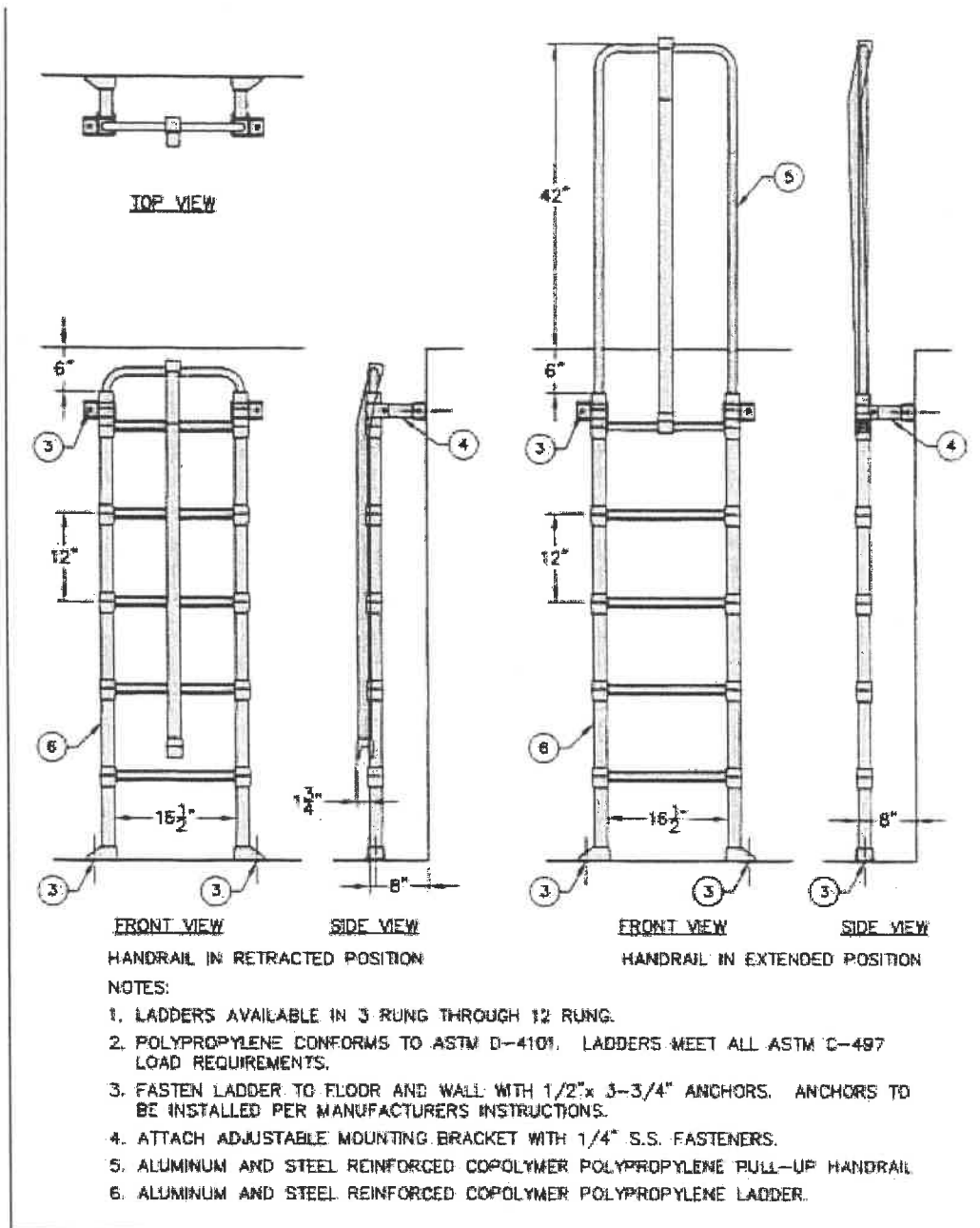
The Lane Polypropylene Vault Ladder is the latest innovation that provides affordable, safe, and rust-free vault access especially in damp or corrosive environments. The ladder is available with or without a pull-up handrail extension. Made of aluminum and steel-reinforced copolymer polypropylene, the Lane Vault Ladder offers the precaster a superior ladder solution.

To view a description of our **Manhole Hanging Ladder** [click here](#).



**The innovative Pull-Up Handrail extends to a full 42-inch OSHA-approved height above the top of the vault.**





To find out more download our handy product sheet in Adobe PDF format from our [Product Literature](#) page

[back to top](#)

## Products from Lane

### Added Safety Every Step of the Way!

#### POLYPROPYLENE STEPS

Polypropylene manhole steps available in several sizes and configurations.

#### POLYPROPYLENE LADDERS

Polypropylene ladders available in 2 foot through 12 foot lengths.

#### STAINLESS AND GALVANIZED STEEL STEPS

Stainless and galvanized steel manhole steps available in several sizes and configurations.

#### GALVANIZED STEEL LIFTING HOOKS

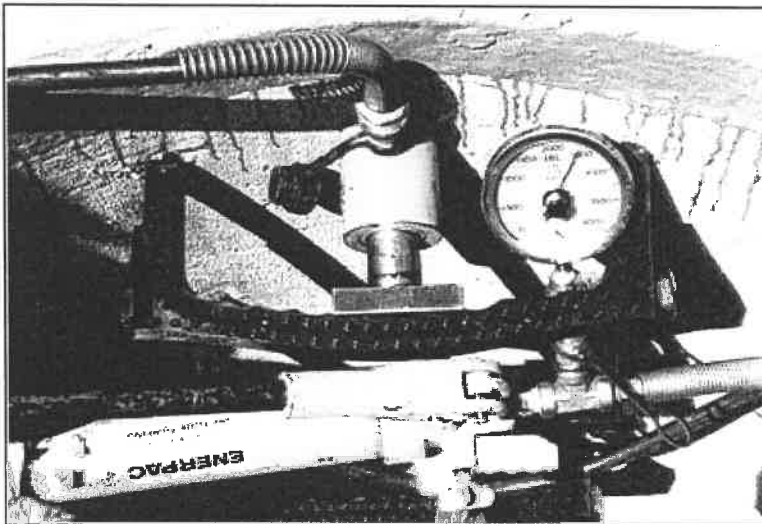
Lifting Hooks available in all shapes and sizes.

#### EZ LIFT PINS

Make moving manholes, catch basins, etc. a snap with the innovative EZ Lift Pins!

#### OTHER PRODUCTS

Median Barrier Loops, Connector Pins and Anchoring Pins, Wet Cast Hole Forming Pins, Dry Cast Sizing Pins.



*Pull test per ASTM C-497*

**All products are manufactured to our strict quality standards!**

## Features

- Ease of Installation
- Completely Rust Resistant
- May be Attached to a Flat Wall, Round Wall, or Installed at an Angle
- Stainless Steel Hardware (Anchor Bolts are Zinc Plated)
- Molded Finger-Grips on Rungs
- Safe, Sure-Footed Tread Design
- Adjustable Mounting Brackets Available in Different Lengths
- Mounting Brackets and all Hardware is Furnished



Installation is a snap – just attach the mounting brackets on the rail where the ladder will be fastened to the wall. **Note: The Mounting Brackets should be placed as close to the top of the ladder as possible.** Use the 1/2" anchor bolts (provided) to connect the ladder to the wall and floor.

## Specifications

Number of Steps	Standard Height Ladder		Standard Height Ladder	
	w/o Extension	Weight of Ladder w/o Extension	with Extension	Weight of Ladder with Extension
3	40.5"	10 lbs.	44.75"	28 lbs.
4	52.5"	14 lbs.	56.75"	35 lbs.
5	64.5"	18 lbs.	68.75"	42 lbs.
6	76.5"	22 lbs.	80.75"	46 lbs.
7	88.5"	26 lbs.	92.75"	50 lbs.
8	100.5"	30 lbs.	104.75"	54 lbs.
9	112.5"	34 lbs.	116.75"	58 lbs.
10	124.5"	38 lbs.	128.75"	62 lbs.
11	136.5"	42 lbs.	140.75"	66 lbs.
12	148.5"	46 lbs.	152.75"	70 lbs.

*Custom Lengths Available*

**INTERNATIONAL  
CORPORATION**

PO Box 925 • 18067 SW Lower Boones Ferry Road • Tualatin, OR 97062 • 503-684-0077 • 800-666-0076 • Fax: 503-684-0078

[www.laneinternational.com](http://www.laneinternational.com)

# QUOTATION

S.L.C. METER SERVICE, INC.  
 3059 DIXIE HIGHWAY  
 WATERFORD, MICHIGAN 48328  
 (248) 673-8619 673-8539  
 FAX (248) 673-6570

INQUIRY NO. \_\_\_\_\_

DATE 7-11-01

TERMS Net 30

TO: T.R. WorLine & Assoc. Inc.

PRICES QUOTED ARE:

F.O.B. \_\_\_\_\_

DELIVERY \_\_\_\_\_

ATTN: RON GALLAGHER

QTY.	DESCRIPTION	UNIT PRICE	TOTAL
1	16x6x8 Precast Concrete Vault w/ 48x48 H-20 cover, extending ladder, sump pit, light & outlet, Re-inforcing, 3-D-Boxes, Access sleeves, sleeves & Link seals for 12" ductile H2O Proofing exterior. Delivered -	—	10085. <sup>00</sup>
1	10x12 Protectus III		17200. <sup>00</sup>
1	12" Manifold Assy		6496. <sup>00</sup>
1	Labor - Manifold-Meter assy, pressure test and installation in Vault @ Jobsite.		3300. <sup>00</sup>
	TOTAL	—	37081. <sup>00</sup>

BY: Jim Taylor

FAX TRANSMITTAL SHEET

FROM:

S.L.C. METER SERVICE, INC.

3059 DIXIE HWY.

WATERFORD MI 48328

VOICE # (248)673-3300 FAX#(248)673-6570



DATE: 7-11-01  
TIME: \_\_\_\_\_ AM / PM

TO: T.R. Worline

SENDER: JIM TAYLOR

FAX: 419-825-3800

VOICE # (248) 673-3300 EXT 317

ATTN: Ron Gallagher

TOTAL PGS. SENT 2

RE: \_\_\_\_\_  
\_\_\_\_\_

RESPONSE REQUESTED: YES NO

MEMO:

12" Meter Pit Quote

SIGNED: \_\_\_\_\_  
JIM TAYLOR

TITLE: GENERAL MANAGER

IF YOU DO NOT RECEIVE ENTIRE FAX PLEASE CONTACT SENDER AT ABOVE TELEPHONE.