

**GENERAL NOTES:**

- SURVEY PROVIDED BY DUFRESNE & ASSOCIATES, P.C. JANUARY 2004 USING A NICOM TOTAL STATION PROCEDURE. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE BASED ON INFORMATION PROVIDED BY THE CITY OF BARRE. THIS IS NOT A BOUNDARY SURVEY. ELEVATIONS ARE BASED ON USGS MEAN SEA LEVEL DATUM.
- CONTRACTOR IS GIVEN THE OPTION TO CONSTRUCT THE WATER MAIN WHILE MAINTAINING WATER SERVICE THROUGH THE EXISTING WATER MAINS OR PROVIDING TEMPORARY WATER SERVICE. IF TEMPORARY WATER SERVICE IS USED, THE CONTRACTOR SHALL FURNISH AND INSTALL ISOLATION/CORPORATION STOPS AS NECESSARY TO ISOLATE THE TEMPORARY SERVICE FROM THE EXISTING MAIN FOR EACH BUILDING. WATER SERVICE SHALL NOT BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS. ALL CUSTOMERS THAT MAY BE TEMPORARILY OUT OF WATER SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO ACTIVITY BY THE CONTRACTOR. CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATION TO LOCATE EXISTING WATER MAINS.
- EXPLORATORY EXCAVATION IS REQUIRED TO LOCATE UNDERGROUND UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION TO PREVENT DAMAGE TO EXISTING UTILITIES. CONTRACTOR SHALL COORDINATE WITH DIG SAFE (1-888-DIG SAFE) A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION.
- LOCATION OF PROPOSED WATER MAIN IS INTENDED NOT TO DISTURB ROOT SYSTEMS OF EXISTING TREES OR SHRUBS. CONTRACTOR SHALL EXERCISE DUE CARE TO PREVENT DAMAGE THERETO. ALL DISTURBED AREAS SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS.
- ALL WORK IS TO BE DONE SHALL BE IN PUBLIC RIGHT-OF-WAY OR EASEMENT AREAS. INFORMATION PROVIDED BY CITY OF BARRE.
- LISTING OF ADAPTERS, FITTINGS, NIPPLES, ETC. IS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. ADDITIONAL MATERIAL MAY BE REQUIRED. SOLID SLEEVE COUPLINGS WILL BE REQUIRED FOR CONNECTION TO EXISTING MAINS.
- MINIMUM VERTICAL CLEARANCE BETWEEN NEW WATER MAINS AND ALL EXISTING UTILITIES, EXCEPT SEWERS AND STORM DRAINS TO BE SIX (6) INCHES AT CROSSING LOCATIONS. FOR SEWERS SEE NOTE ON DRAWING 4.
- ALL BURIED FITTINGS MUST BE BLOCKED. REFER TO THRUST BLOCK DETAILS, AND TRENCH DETAIL SHOWN ON DRAWING 5.
- MECHANICAL JOINT RESTRAINTS SHALL BE USED WHERE VALVES WILL BE SUBJECTED TO SERVICE PRESSURES ON ONE SIDE BEFORE BEING FULLY INCORPORATED INTO THE DISTRIBUTION SYSTEM.
- WATER MAINS TO HAVE 5.5 FEET MINIMUM COVER UNLESS OTHERWISE STATED OR SHOWN ON THE PROFILES. WHEN 5.5 FEET OF COVER CANNOT BE MAINTAINED 4" RIGID BOARD INSULATION SHALL BE USED. DEPTH OF COVER SHALL NOT BE LESS THAN 4 FEET EVEN WITH INSULATION. SEE MATERIAL SPECIFICATION SECTION 735.01.
- ALL MECHANICAL JOINT FITTINGS AND VALVES SHALL INCORPORATE A MEGA-LUG RETAINER GLAND INSTEAD OF THE COMMON FOLLOWER GLAND, AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING UNDERGROUND UTILITIES WERE LOCATED USING THE BEST AVAILABLE INFORMATION. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. ALL REPAIRS TO DAMAGED UTILITIES SHALL BE MADE BY THE CONTRACTOR USING MATERIALS APPROVED BY THE ENGINEER PRIOR TO INSTALLATION, AT THE CONTRACTORS EXPENSE.
- CONTRACTOR IS RESPONSIBLE FOR FLUSHING, PRESSURE TESTING AND DISINFECTING ALL NEW WATER MAIN. CHLORINE INJECTION POINTS SHALL BE INSTALLED WHERE REQUIRED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION AND REMOVED UPON COMPLETION OF TESTING.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL OVERHEAD AND UNDERGROUND ELECTRIC, CABLE AND TELEPHONE LINES AND TAKE NECESSARY PRECAUTIONS IN STRICT ACCORDANCE WITH OSHA STANDARDS DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT THE LOCAL POWER UTILITY AND TELEPHONE UTILITY REGARDING ANY NECESSARY SUPPORT OF ANY UTILITY POLES DURING CONSTRUCTION. LOCAL ELECTRIC UTILITY IS GREEN MOUNTAIN POWER COMPANY (888) 835-4672. LOCAL PHONE UTILITY IS VERIZON (802) 555-1515.
- GENERALLY HEAVY OR DARK LINE WORK OR NOTES REFER TO PROPOSED IMPROVEMENTS. LIGHT LINE WORK OR SCREENED GENERALLY DENOTES EXISTING FEATURES.
- TECHNICAL SPECIFICATIONS PROVIDE NECESSARY INFORMATION AND ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
- CONTRACTOR SHALL CONNECT WATER SERVICES TO IDENTIFIED WATER USERS UPON COMPLETION OF INSTALLATION OF WATER MAIN AND RECEIPT OF SUCCESSFUL BACTERIOLOGICAL TEST.

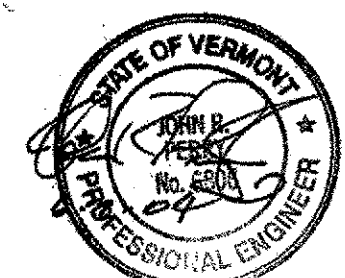
**LOCAL VALVE OPERATION**

- EXISTING AND PROPOSED MAIN LINE GATE VALVES SHALL OPEN RIGHT OR CLOCKWISE. OPERATION OF GATE VALVES WILL BE PERFORMED BY THE OWNER'S STAFF ONLY.
- ALL INTERCONNECTIONS TO THE EXISTING SYSTEM CAN ONLY BE MADE WITH THE WRITTEN PERMISSION OF THE CITY ENGINEER.

ABBREVIATIONS	
CI	CAST IRON PIPE
CMP	CORREGATED METAL PIPE
CPP	CORREGATED PLASTIC PIPE
CU	COPPER PIPE
DI	DUCTILE IRON PIPE
EL	ELEVATION
ER	EROSION
HYD	FIRE HYDRANT
INV	INVERT
IP	IRON PIPE
MJ	MECHANICAL JOINT
P	ELECTRICAL POWER
ROW	RIGHT OF WAY
STA	STATION
TBM	TEMPORARY BENCH MARK
TYP	TYPICAL
W	WATER MAIN
WSO	WATER SHUT OFF
WV	WATER VALVE

LEGEND	
<b>EXISTING:</b>	
	MAJOR CONTOURS
	MINOR CONTOURS
	EDGE OF ASPHALT
	EDGE OF GRAVEL
	TREE LINE
	WATERLINE
	STONEWALL
	POWERLINE
	FENCE
	GUARDRAIL
	SHRUB
	EVERGREEN TREE
	DICIDUOUS TREE
	STUMP
	UTILITY POLE
	GUY WIRE
	LIGHT
	MAILBOX
	WELL
	FIRE HYDRANT
	WATER SHUT OFF
	WATER VALVE
	STORM MANHOLE
	PROPERTY CORNER
	ROAD SIGN
	RIGHT-OF-WAY
<b>PROPOSED:</b>	
	WATERLINE
	FIRE HYDRANT
	WATER VALVE
	WATER SHUT OFF
	BORING LOCATION
	M.J. PIPE FITTINGS
	END CAP
	MANUAL AIR RELEASE
	SOLID SLEEVE

WORK ITEM AND MATERIAL SCHEDULE			
ITEM	DESCRIPTION	UNITS	QUANTITY
629.60	GALVANIZED STEEL BRIDGE SUPPORTS	LBS	3000
629.60	BRIDGE ROLLERS FOR PIPE	EA	9
629.60	INSULATED PIPE	LF	135
629.60	PIPE TERMINATIONS AT ABUTMENTS	EA	2
629.60	PIPE EXPANSION JOINT	EA	1
629.60	AIR RELEASES - INSULATED	EA	1
629.42	12" D.I. WATERMAIN	LF	300
629.42	8" D.I. WATERMAIN	LF	40
629.42	6" D.I. WATERMAIN	LF	50
629.42	FITTINGS	LBS	3000
629.42	12" BUTTERFLY VALVE WITH BOX	EA	2
629.42	8" R.S. VALVE WITH BOX	EA	1
629.42	6" R.S. VALVE WITH BOX	EA	1
629.42	3/4" MANUAL AIR RELEASE WITH BOXES	EA	4
629.42	LEDGE ROCK EXCAVATION	CY	10
629.42	BOULDER EXCAVATION	CY	40
629.42	EXPLORATORY EXCAVATION	CY	150
629.42	CRUSHED GRAVEL	CY	50
629.42	EXCAVATION BELOW GRADE WITH GRAVEL REFILL	CY	25
629.42	INTERCONNECTIONS TO EXISTING SYSTEMS	LS	1
629.42	TRENCH EXCAVATION	CY	300
629.42	TEMPORARY PAVING	SY	400
629.42	FULL WIDTH OVERLAY	TON	130
629.42	ELECTRICAL WORK FOR PIPE TRACING	LS	1
629.42	MISCELLANEOUS WORK AND CLEANUP	LS	1



**FOR WATER LINE CONSTRUCTION ONLY**



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 DESIGNED BY: J. PERRY CHECKED BY: R. DUFRESNE  
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