CIVIL GENERAL NOTES

1. THERE ARE NUMEROUS EXISTING BURIED UTILITIES IN THIS PROJECT AREA. THE LOCATION OF PIPES, DUCTS CONDUITS, AND OTHER UNDERGROUND STRUCTURES SHOWN HERE ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. THESE UTILITIES ARE SHOWN BASED ON BEST AVAILABLE FIELD EVIDENCE AND RECORDED DATA PROVIDED BY THE OWNER. ALL UNDERGROUND UTILITIES MUST BE LOCATED AND MARKED, BY THE CONTRACTOR, DURING THE PROJECT.
2. THE CONTRACTOR MUST CONSTRUCT THE WATER MAIN WHILE MAINTAINING WATER SERVICE THROUGH THE EXISTING WATER MAINS. 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.
3. THE CONTRACTOR MUST CONSTRUCT THE SANITARY SEWER MAIN WHILE MAINTAINING SEWER SERVICE THROUGH THE EXISTING COLLECTION SYSTEM OR A BY–PASS PUMPING SYSTEM. SEWER SERVICE SHALL NOT BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS. ALL CUSTOMERS THAT MAY BE TEMPORARILY OUT OF SEWER SERVICE SHALL BE NOTIFIED TWENTY–FOUR (24) HOURS PRIOR TO ACTIVITY BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATION TO VERIFY LOCATIONS AND SIZES OF EXISTING WATER, SEWER, STORM DRAIN SYSTEMS, AND SERVICES, PRIOR TO INSTALLATION OF ANY SEGMENT OF NEW UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION TO PREVENT DAMAGE TO EXISTING UTILITIES. 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, AT NO ADDITIONAL EXPENSE OF THE OWNER.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN THE CONSTRUCTION GENERAL PERMIT(3–9001) AND THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENTATION CONTROL.
6. WHEN REPLACING STRUCTURES AND/OR CONNECTING TO EXISTING PIPING SYSTEMS, CONFIRM EXISTING LOCATIONS, SIZES AND ELEVATIONS OF INVERTS PRIOR TO ORDERING PRE–CAST STRUCTURES.
7. CONTRACTOR TO USE EXTREME CAUTION WHEN EXCAVATING NEAR BUILDINGS AND OTHER STRUCTURES.
8. GENERALLY DARK OR HEAVY LINE WEIGHT REFERS TO PROPOSED IMPROVEMENTS. NORMAL FONT OR LIGHT LINE WORK REFERS TO EXISTING FACILITIES.
9. CONTRACTORS SHALL COORDINATE WITH DIG SAFE A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION.
10. REFER TO WATER DETAILS AND SEWER DETAILS FOR CONSTRUCTION DETAILS.
11. ALL WORK SHALL BE DONE ON LANDS OWNED BY CITY OF BARRE OR IN THE PUBLIC RIGHT–OF–WAY OR EASEMENT AREAS.
12. 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.
13. MINIMUM VERTICAL CLEARANCE BETWEEN NEW WATER MAINS AND ALL EXISTING UTILITIES, EXCEPT SEWERS AND STORM DRAINS TO BE SIX (6) INCHES AT CROSSING LOCATIONS. SEE WATER AND SEWER SEPARATION NOTES ON THIS SHEET FOR MINIMUM CLEARANCE FROM SEWERS AND STORM DRAINS.
14. ANY EXISTING WATER AND SEWER SERVICES WILL BE REPAIRED OR RELOCATED AS NECESSARY IN ORDER TO MAINTAIN SERVICE. THE UTILITY OWNER WILL ASSIST IN THE LOCATION AND MARKING OF THESE SERVICES BUT THE CONTRACTOR MAY BE REQUIRED TO CONDUCT EXPLORATORY EXCAVATION AS REQUIRED.
15. WHERE NEW MECHANICALLY RESTRAINED PIPE IS CONNECTED TO EXISTING PUSH ON JOINT PEIP THE CONTRACTOR MUST ADEQUATELY RESTRAIN EXISTING PUSH ON PIPE AS NECESSARY..
16. ALL WATER MAIN PIPE, VALVES, FITTINGS, AND HYDRANTS ARE TO BE MECHANICALLY RESTRAINED USING MECHANICAL JOINTS WITH WEDGE TYPE RETAINER GLANDS. CONTRACTOR MAY USE THRUST BLOCKS AT HIS DISCRETION.
17. WATER MAINS TO HAVE 6.0 FEET MINIMUM COVER UNLESS OTHERWISE STATED OR SHOWN ON THE PROFILES. WHEN 6.0 FEET OF COVER CANNOT BE MAINTAINED 4" RIGID BOARD INSULATION SHALL BE USED. DEPTH COVER SHALL NOT BE LESS THAN 4 FEET EVEN WITH INSULATION. SEWER MAIN SHALL HAVE A MINIMUM OF 6.0' OF COVER UNLESS OTHERWISE STATED OR SHOWN ON THE PROFILES.
18. ALL WATER MAIN ON THE PROJECT SHALL BE MECHANICAL JOINT AND SHALL INCORPORATE A WEDGE TYPE RETAINER GLAND INSTEAD OF THE COMMON FOLLOWER GLAND.
19. 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 TO DISCUSS PROCEDURES WITH ENGINEER PRIOR TO COMMENCEMENT OF TESTING.
20. 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. SEE THE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
21. CONTRACTOR TO PROVIDE CAPS FOR ALL ABANDONED PIPING AS REQUIRED. ALL TYPES OF PIPE CAPPING TO BE PAID FOR UNDER THE PIPE UNIT PRICE. ALL MAIN LINE UTILITIES TO BE ABANDONED SHALL BE FILLED WITH FLOWABLE FILL. ALL SERVICE LINES TO BE REMOVED.
22. CONTRACTOR SHALL MAKE EVERY EFFORT TO ALLOW ACCESS TO AND FROM DRIVEWAYS, RESIDENCES, AND BUSINESSES LOCATED ALONG THE ROUTE OF CONSTRUCTION.
23. TECHNICAL SPECIFICATIONS PROVIDE NECESSARY INFORMATION AND ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
24. ROOF DRAIN INFORMATION SHOWN HEREON RELY ON INFORMATION PROVIDED BY PLANS PRODUCED BY VANASSE HANGEN BRUSTLIN, INC. CONTRACTOR IS TO VERIFY STORMWATER STRUCTURE INVERT INFORMATION PRIOR TO COMMENCMENT OF CONSTRUCTION OF EACH ROOF DRAIN.
25. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO GAIN ACCESS TO BASEMENTS WHERE NECESSARY.
26. FLOWABLE FILL IS TO BE USED DIRECTLY UNDER EXISTING DUCT BANK WHEN MECHANICAL COMPACTION CANNOT ACHIEVE THE REQUIRED COMPACTION AT ALL UTILITY MAIN AND SERVICE CROSSINGS.
27. ALL WATER MAIN (INCLUDING INTERCONNECTION POINTS, SPRINKLER LINES, AND FUTURE STUBS) MUST BE FLUSHED PRIOR TO DISENFECTION. TEMPORARY FLUSHING CONNECTIONS AE REQUIRED IN MOST CASES. SEE DETAIL ON SHEET 154.

WATER AND SEWER SEPARATION

1. PARALLEL INSTALLATION: WATER MAINS AND WATER SERVICES SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER OR FIVE (5) FEET FROM ANY STORM SEWER. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
2. CROSSINGS: WATER MAINS OR WATER SERVICES CROSSING SEWER PIPES (SANITARY OR STORM) SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER PIPE. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS ABOVE OR BELOW THE SEWER PIPE. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IF THE SEWER MAIN IS OVER THE WATER MAIN, THE FIRST SEWER PIPE JOINTS ON EACH SIDE OF THE WATER MAIN MUST BE CONCRETE ENCASED. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

LOCAL VALVE OPERATION

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

LEGEND

EXISTING		PROPOSED	
	BUILDING	S	SANITARY SEWER
	CURB	S	SEWER SERVICE
	EDGE OF PAVEMENT	W	WATER MAIN
	EDGE OF SIDEWALK	HPW	HIGH PRESSURE WATER MAIN
	EDGE OF GRAVEL DRIVE	W	WATER SERVICE
W	WATER MAIN		ROOF DRAIN
S	SANITARY SEWER		SEWER MANHOLE
	STORM DRAIN		GATE VALVE
	SEWER MANHOLE		BUTTERFLY VALVE
	CATCH BASIN		FIRE HYDRANT
	DRAIN MANHOLE		CURB STOP
	TELEPHONE MANHOLE		MANUAL AIR RELEASE
	ELECTRIC MANHOLE		END CAP
	FIRE HYDRANT		PIPE FITTINGS
	GATE VALVE		SOLID SLEEVE
	CURB STOP		CATCH BASIN (BY OTHERS)
T	TELEPHONE		STORM MANHOLE (BY OTHERS)
GAS	GAS LINE		STORM DRAIN (BY OTHERS)
UE	UNDERGROUND ELECTRIC	T	TELEPHONE (BY OTHERS)
	UTILITY POLE	UE	UNDERGROUND ELECTRIC (BY OTHERS)
	GUY WIRE		LIGHT AND BASE (BY OTHERS)
	TREELINE		GFI RECEPTICAL (BY OTHERS)
	SIGN		TREE (BY OTHERS)
	LIGHT		UTILITIES TO BE ABANDONED
	CHAINLINK FENCE		FUTURE STUB
	MAIL BOX		SEWER VAULT
	RIGHT OF WAY		

INDEX OF SHEETS

ABBREVIATIONS

CPEP	CORRUGATED POLYETHYLENE PIPE
DI	DUCTILE IRON
FF	FINISHED FLOOR
ID	INSIDE DIAMETER
MJ	MECHANICAL JOINT
N/F	NOW OR FORMALLY
PP	PRESSURE PIPE
RD	ROOF DRAIN
ROW	RIGHT–OF–WAY
SMH	SEWER MANHOLE
SS	SEWER SERVICE
TYP	TYPICAL
WS	WATER SERVICE
MIN	MINIMUM
TBR	TO BE REMOVED
TBV	TO BE VERIFIED

STATE OF VERMONT ROBERT E. DUFRESNE NO. 3837 CIVIL REGISTERED PROFESSIONAL ENGINEER
12-22-10

DUFRESNE GROUP CONSULTING ENGINEERS
Dufresne Group is owned by Dufresne & Associates, PC

PROJECT NAME: BARRE CITY
PROJECT NUMBER: FEGC F 026–1(34) C/2

FILE NAME: 717014–SITE PLANS
PROJECT LEADER: R.E. DUFRESNE
DESIGNED BY: B.L. BAKER
LEGEND AND GENERAL NOTES

PLOT DATE: Mar. 22, 11
DRAWN BY: B.L. BAKER
CHECKED BY: C.L. WHITEHEAD
SHEET 133 OF 339