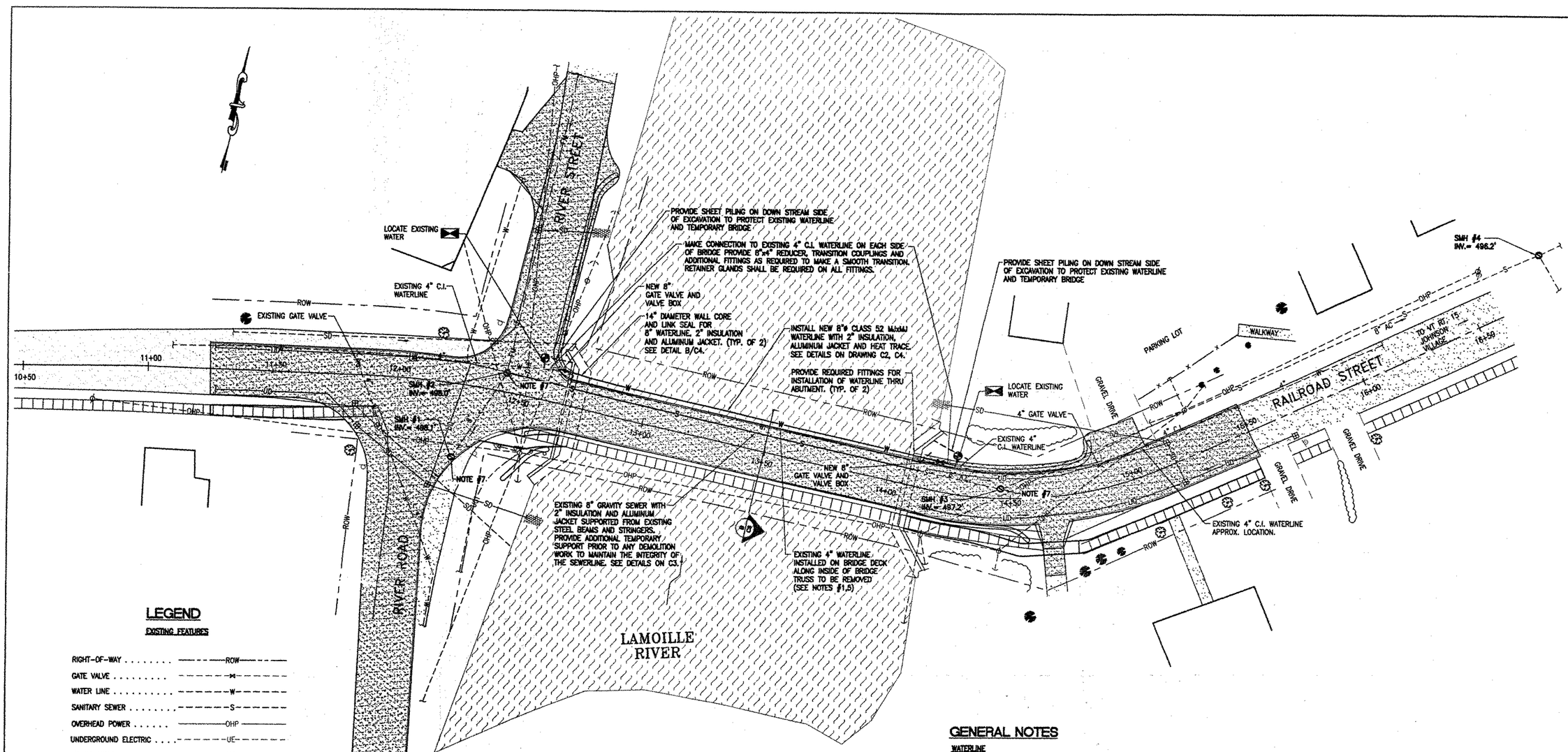

LEGEND

EXISTING FEATURES

- RIGHT-OF-WAY . . . . . ROW
- GATE VALVE . . . . . M
- WATER LINE . . . . . W
- SANITARY SEWER . . . . . S
- OVERHEAD POWER . . . . . OHP
- UNDERGROUND ELECTRIC . . . . UE
- STORM DRAIN . . . . . SD
- HYDRANT . . . . . ⋇
- POWER POLE . . . . . ϕ
- SANITARY MANHOLE . . . . . Ⓢ
- CATCH BASIN . . . . . ⊞

PROPOSED FEATURES

- CATCH BASIN. . . . . ⊞
- MANHOLE. . . . . ●
- GATE VALVE . . . . . ⋈
- STORM DRAIN . . . . . SD
- UNDER DRAIN . . . . . UD
- WATER . . . . . W
- SEWER . . . . . S

PLAN
SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

GENERAL NOTES

WATERLINE

1. FLOWS THROUGH THE EXISTING 4" WATERLINE INSTALLED ALONG BRIDGE MUST BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR UNTIL NEW 8" WATERLINE IS FULLY OPERATIONAL. CONTRACTOR SHALL MAINTAIN EXISTING WATERLINE OR SHALL INSTALL A TEMPORARY 4" WATERLINE AND MAINTAIN THAT SERVICE UNTIL THE NEW 8" WATERLINE IS INSTALLED AND OPERATIONAL. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOWS AND PROTECTING WATERLINE FROM FREEZING DURING WINTER MONTHS.

2. NEW WATERLINE SHALL BE FLUSHED AND DISINFECTED PRIOR TO ENERGIZING ACCORDING TO AWWA C651-92 (LATEST REVISION). THE CONTRACTOR SHALL PROVIDE FOR AND TAKE SAMPLES FOR BACTERIOLOGICAL TESTING AS REQUIRED BY THIS SPECIFICATION AND REFERENCE STANDARDS INCLUDED THEREIN. SAMPLES SHALL BE SUBMITTED TO THE STATE OF VERMONT, DEPARTMENT OF HEALTH LABORATORIES. COPIES OF ALL RESULTS SHALL BE FURNISHED IMMEDIATELY UPON RECEIPT TO THE ENGINEER.

3. PERFORM HYDROSTATIC AND LEAKAGE TESTS CONFORMING TO ALL PROVISIONS OF AWWA C600 (LATEST REVISION). PERFORMANCE CRITERIA:
   a. HYDROSTATIC AND LEAKAGE TESTS SHALL BE CONDUCTED CONCURRENTLY.
   b. THE SPECIFIED TEST PRESSURE SHALL BE APPLIED BY MEANS OF A PUMP CONNECTION TO THE PIPE IN A MANNER SATISFACTORY TO THE ENGINEER.
      1. THE SPECIFIED TEST PRESSURE SHALL NOT BE LESS THAN 1.5 TIME THE NORMAL WORKING PRESSURE OR 150 psi, WHICHEVER IS GREATER, AS MEASURED AT THE ELEVATION OF THE LOWEST POINT OF THE PIPELINE OR SECTION UNDER TEST, AND CORRECTED TO THE ELEVATION OF THE TEST GAUGE.
      2. PRESSURE DURING TEST SHALL NOT VARY BY MORE THAN 5± psi.
   c. DURATION OF TEST SHALL BE A MINIMUM OF 2 HOURS.
   d. LEAKAGE TO BE MEASURED IN MANNER SATISFACTORY TO THE ENGINEER.
      1. LEAKAGE IS DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, TO MAINTAIN THE PRESSURE WITHIN 5± psi OF THE SPECIFIED TEST PRESSURE FOR THE REQUIRED TEST DURATION.
   e. ALLOWABLE LEAKAGE
      1. FOR MECHANICAL OR PUSH-ON JOINTS:
         a. NO PIPELINE INSTALLATION, OR VALVED SECTION THEREOF WILL BE ACCEPTED IF THE LEAKAGE IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{S\,D\,(P)^{1/2}}{133{,}200}$$

L= ALLOWABLE LEAKAGE IN GALLONS PER HOUR
S= LENGTH OF SECTION BEING TESTED IN FEET
D= NOMINAL PIPE DIAMETER IN INCHES
P= AVERAGE TEST PRESSURE IN psi

         b. THE CONTRACTOR AND THE ENGINEER SHALL COMPUTE THE ALLOWABLE LEAKAGE FOR EACH SECTION TO BE TESTED AND AGREE ON THE ALLOWABLE AMOUNT PRIOR TO PERFORMING ANY TESTS.

4. ALL PERMANENT WATERLINE FITTINGS SHALL BE RESTRAINED BY RETAINER GLANDS (MEGA-LUG OR EQUAL).

5. AFTER NEW WATERLINE IS PLACED INTO SERVICE, COMPLETELY REMOVE EXISTING 4" C.I. WATERLINE BETWEEN STATIONS 12+50 AND 14+35.

SEWERLINE

6. THE EXISTING 8" GRAVITY SEWER IS INSTALLED AT MINIMUM SLOPE (0.40%) FROM SMH #2 TO SMH #3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SLOPE AND INTEGRITY OF THE SEWERLINE WITH ADDITIONAL BRACING AND SUPPORTS AS REQUIRED. THE FINAL BRACING AND SUPPORTS SHALL BE VERIFIED TO MAINTAIN A SLOPE OF (0.40%) FROM ABUTMENT TO ABUTMENT.

7. REMOVE EXISTING FRAME AND COVER AND INSTALL NEW FRAME AND SOLID COVER ON SMH #1, 2, & 3 (LEBARON NO. LC327 OR EQUAL.) COVER SHALL HAVE "SEWER" CAST INTO COVER. ADJUST MANHOLES ACCORDINGLY TO MATCH FINISH GRADE. ALL COSTS ASSOCIATED WITH ADJUSTING THE ELEVATIONS OF MANHOLE FRAMES AND COVERS WILL BE INCIDENTAL TO ITEM 604.56.

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STATE OF VERMONT — No. 0254 — REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JOHNSON
JOHNSON, VERMONT

RAILROAD STREET BRIDGE AND UTILITY IMPROVEMENTS

NO.	DATE	REVISION DESCRIPTION	CHECKED

PROPOSED PLAN-
WATERLINE AND SEWERLINE
IMPROVEMENTS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

SHEET 50 OF 73

DESIGNED	CGM
DRAWN	JRB
CHECKED	BFA
DATE	APR. 2002
PROJECT NO.	98013
DRAWING NO.	C1
SHEET	1 OF 4

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