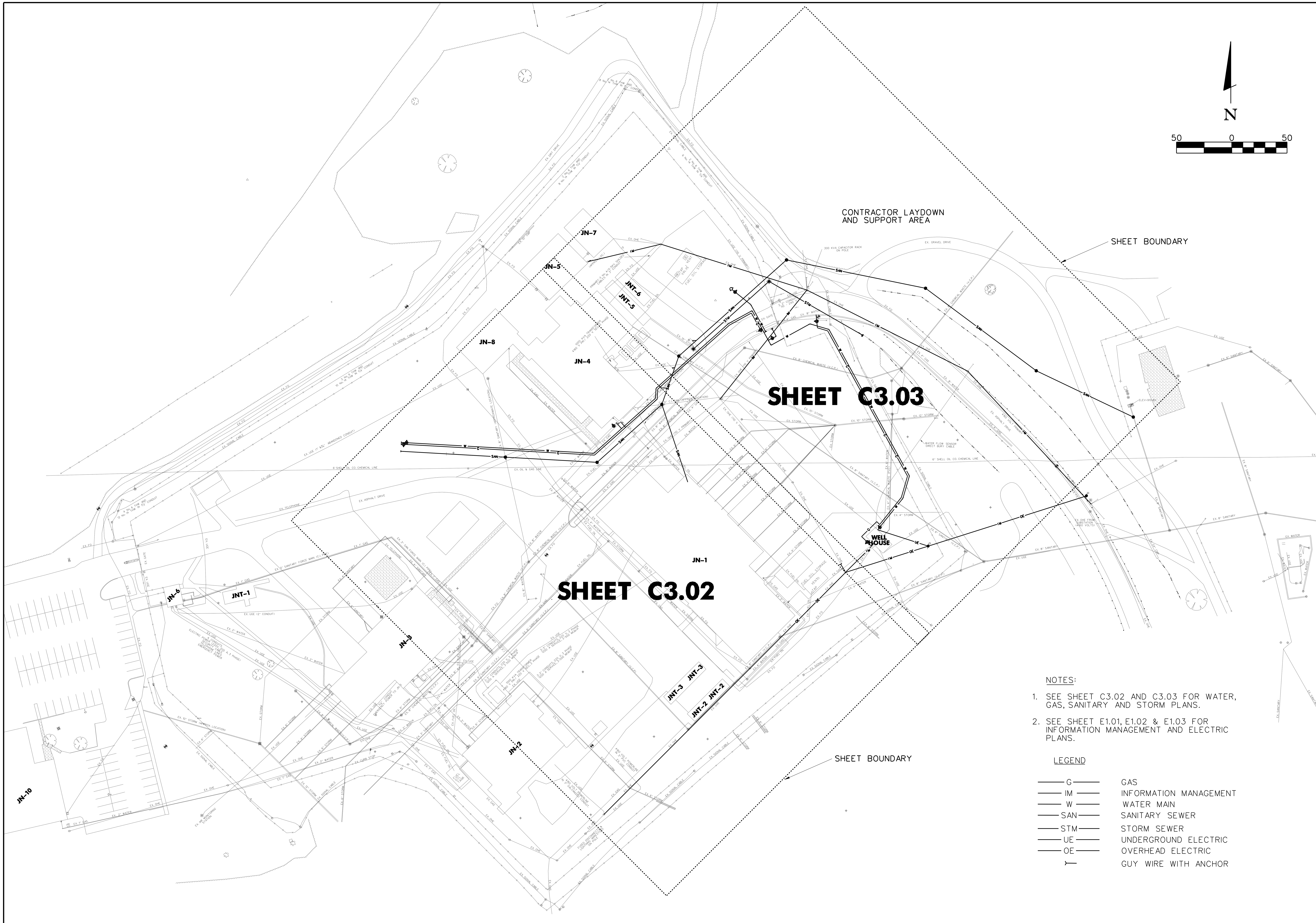

NOTES:

1. SEE SHEET C3.02 AND C3.03 FOR WATER, GAS, SANITARY AND STORM PLANS.
2. SEE SHEET E1.01, E1.02 & E1.03 FOR INFORMATION MANAGEMENT AND ELECTRIC PLANS.

LEGEND

Symbol	Description
—— G ——	GAS
—— IM ——	INFORMATION MANAGEMENT
—— W ——	WATER MAIN
—— SAN ——	SANITARY SEWER
—— STM ——	STORM SEWER
—— UE ——	UNDERGROUND ELECTRIC
—— OE ——	OVERHEAD ELECTRIC
⤚	GUY WIRE WITH ANCHOR

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UTILITY PLAN, OVERALL SITE

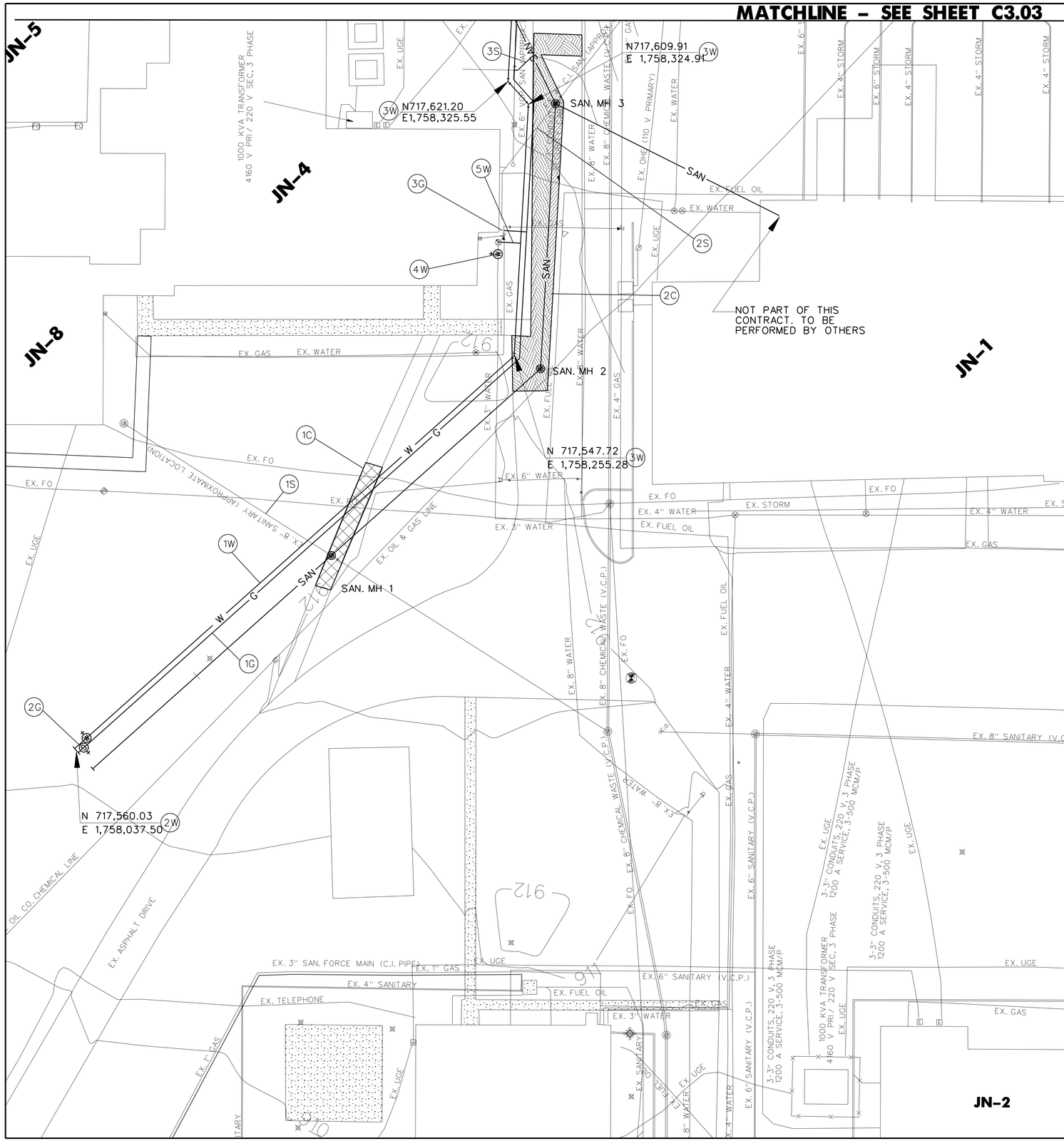
BATTELLE
JN-4 UTILITY ISOLATION

JEFFERSON TOWNSHIP
MADISON COUNTY, OHIO

	DR.	CHK.	DATE	DESCRIPTION
0	ELM	YSY	4/15/03	ISSUE FOR CONSTRUCTION

C3.01

JOB NO. 19481-00



NOTES:

1. SEE SHEET C1.01 FOR BENCHMARK INFORMATION.
2. SEE SHEET C6.01 FOR WATER LINE AND STORM SEWER DETAILS.
3. SEE SHEET C6.02 FOR SANITARY MANHOLE DETAILS.
4. SEE SHEET C6.03 FOR WALK AND PAVEMENT REPLACEMENT DETAILS.
5. SEE SHEET C2.01 FOR NOTES AND SPECIFICATIONS.
6. SEE SHEET C2.02 FOR MAINTENANCE OF TRAFFIC AND PERIMETER SECURITY NOTES.
7. SEE SHEET C4.01 FOR SANITARY SEWER PROFILES.

WATER LINE KEYED NOTES: (W)

1W. 4" WATER LINE, DUCTILE IRON PIPE AND FITTINGS ANSI CLASS 53, MECHANICAL JOINT AND FITTINGS. SEE SHEET C6.01 FOR DETAILS.

2W. PLACE 4" GATE VALVE AND VALVE BOX. PLACE 4" PLUG AT END OF LINE FOR FUTURE EXPANSION.

3W. 45 DEGREE BEND

4W. PLACE 3" GATE VALVE AND VALVE BOX. DO NOT REMOVE EXISTING 3" WATER LINE.

5W. CONNECT TO EXISTING 3" WATER LINE USING 3" COPPER SERVICE BRANCH. DO NOT REMOVE EXISTING VALVE AND VALVE BOX.

GAS LINE KEYED NOTES: (G)

1G. 4" STEEL GAS LINE, ASTM A53/A, GRADE A, TYPE E, SCHEDULE 40, BLACK.

2G. PLACE 4" GAS VALVE AND VALVE BOX. PLACE 4" PLUG AT END OF LINE FOR FUTURE EXPANSION.

3G. CONNECT 4" GAS LINE TO EXISTING SERVICE BRANCH JUST TO THE EAST OF EXISTING GAS VALVE. PLUG EXISTING GAS SERVICE BRANCH JUST PAST THE NEW CONNECTION.

CIVIL KEYED NOTES: (C)

1C. SAW CUT, REMOVE, AND REPLACE EXISTING ASPHALT WALK. SEE SHEET C6.03 FOR DETAILS.

2C. SAW CUT REMOVE AND REPLACE EXISTING ASPHALT PAVEMENT. SEE SHEET C6.03 FOR DETAILS.

SANITARY KEYED NOTES (S)

1S. FIELD VERIFY LOCATION AND DEPTH OF EXISTING 8" SANITARY LINE AND CONNECT TO MANHOLE 1. PLUG EXISTING 8" LINE 2 FEET DOWNSTREAM FROM MANHOLE 1.

2S. FIELD VERIFY LOCATION AND DEPTH OF EXISTING 4" C.I. SANITARY LINE AND CONNECT TO MANHOLE 3. PLUG EXISTING 4" C.I. LINE 2 FEET DOWNSTREAM FROM MANHOLE 3.

3S. FIELD VERIFY LOCATION AND DEPTH OF EXISTING 6" VCP SANITARY LATERAL AND CONNECT TO NEW 8" SANITARY LINE. PLUG EXISTING 6" VCP SANITARY LINE 12 INCHES FROM CONNECTION POINT. PIPE SHALL BE PVC PIPE MEETING THE SANITARY PIPE REQUIREMENTS OUTLINED ON SHEET C2.01.

LEGEND

—— G ——	GAS
—— IM ——	INFORMATION MANAGEMENT
—— W ——	WATER MAIN
—— SAN ——	SANITARY SEWER
—— STM ——	STORM SEWER
—— UE ——	UNDERGROUND ELECTRIC
—— OE ——	OVERHEAD ELECTRIC
	ASPHALT WALK REMOVED AND REPLACED
	ASPHALT PAVEMENT REMOVED AND REPLACED
	GRAVEL DRIVE REMOVED AND REPLACED

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UTILITY PLAN

BATTELLE
JN-4 UTILITY ISOLATION
JEFFERSON TOWNSHIP
MADISON COUNTY, OHIO

	DR.	CHK.	DATE	DESCRIPTION
0	ELM	YSY	4/15/03	ISSUE FOR CONSTRUCTION

C3.02

JOB NO. 19481-00

NOTES:

1. SEE SHEET C1.01 FOR BENCHMARK INFORMATION.
2. SEE SHEET C6.01 FOR WATER LINE AND STORM SEWER DETAILS.
3. SEE SHEET C6.02 FOR SANITARY MANHOLE DETAILS.
4. SEE SHEET C6.03 FOR WALK AND PAVEMENT REPLACEMENT DETAILS.
5. SEE SHEET C2.01 FOR NOTES AND SPECIFICATIONS.
6. SEE SHEET C2.02 FOR MAINTENANCE OF TRAFFIC AND PERIMETER SECURITY NOTES.
7. SEE SHEET C4.01 FOR SANITARY SEWER PROFILES.
8. SEE SHEET C5.01 FOR STORM SEWER PROFILES.

WATER LINE KEYED NOTES: (W)

1W. 4" WATER LINE, DUCTILE IRON PIPE AND FITTINGS ANSI CLASS 53, MECHANICAL JOINT AND FITTINGS. SEE SHEET C6.01 FOR DETAILS.

2W. CONNECT 4" WATER LINE TO EXISTING 8" LINE USING 8"x4"x4" TEE, MECHANICAL JOINT, AND 4"x4"x4" TEE MECHANICAL JOINT. PLACE 4" GATE VALVE AND VALVE BOX.

3W. CONNECT 4-INCH OVERFLOW WATER LINE TO WELL HOUSE; PLACE 4-INCH GATE VALVE AND VALVE BOX. PROVIDE NECCESSARY FITTINGS TO MAINTAIN EXISTING OUTFLOW SERVICE IN 4-INCH LINE. EXISTING 6-INCH LINE TO REMAIN.

4W. EXISTING 8" WATER LINE TO REMAIN.

5W. 90 DEGREE BEND

6W. 11 1/2 DEGREE BEND

7W. 22 1/2 DEGREE BEND

8W. 45 DEGREE BEND

9W. CONNECT NEW 6" WATER LINE TO EXISTING 8" LINE USING 8"X6"X6" TEE, MECHANICAL JOINT. PLACE 6" FIRE HYDRANT ASSEMBLY AS SHOWN ON SHEET C6.01.

GAS LINE KEYED NOTES: (G)

1G. 4" STEEL GAS LINE, ASTM A53/A, GRADE A, TYPE E, SCHEDULE 40, BLACK.

2G. TAP INTO EXISTING 4" GAS LINE. PLACE 4" GAS VALVE AND VALVE BOX.

3G. 1" STEEL GAS LINE, ASTM A53/A, GRADE A, TYPE E, SCHEDULE 40, BLACK.

4G. TAP INTO EXISTING 4" GAS LINE. PLACE 1" GAS VALVE AND VALVE BOX.

5G. CONNECT GAS LINE TO WELL HOUSE. PLACE 1" GAS VALVE AND VALVE BOX.

6G. EXISTING 4" GAS LINE TO REMAIN.

CIVIL KEYED NOTES: (C)

1C. SAW CUT, REMOVE, AND REPLACE EXISTING ASPHALT PAVEMENT. SEE SHEET C6.03 FOR DETAILS.

2C. SAW CUT, AND REMOVE EXISTING ASPHALT DRIVE. REPLACE WITH GRAVEL. SEE SHEET C6.03 FOR DETAILS.

3C. REMOVE AND REPLACE EXISTING GRAVEL DRIVE. SEE SHEET C6.03 FOR DETAILS.

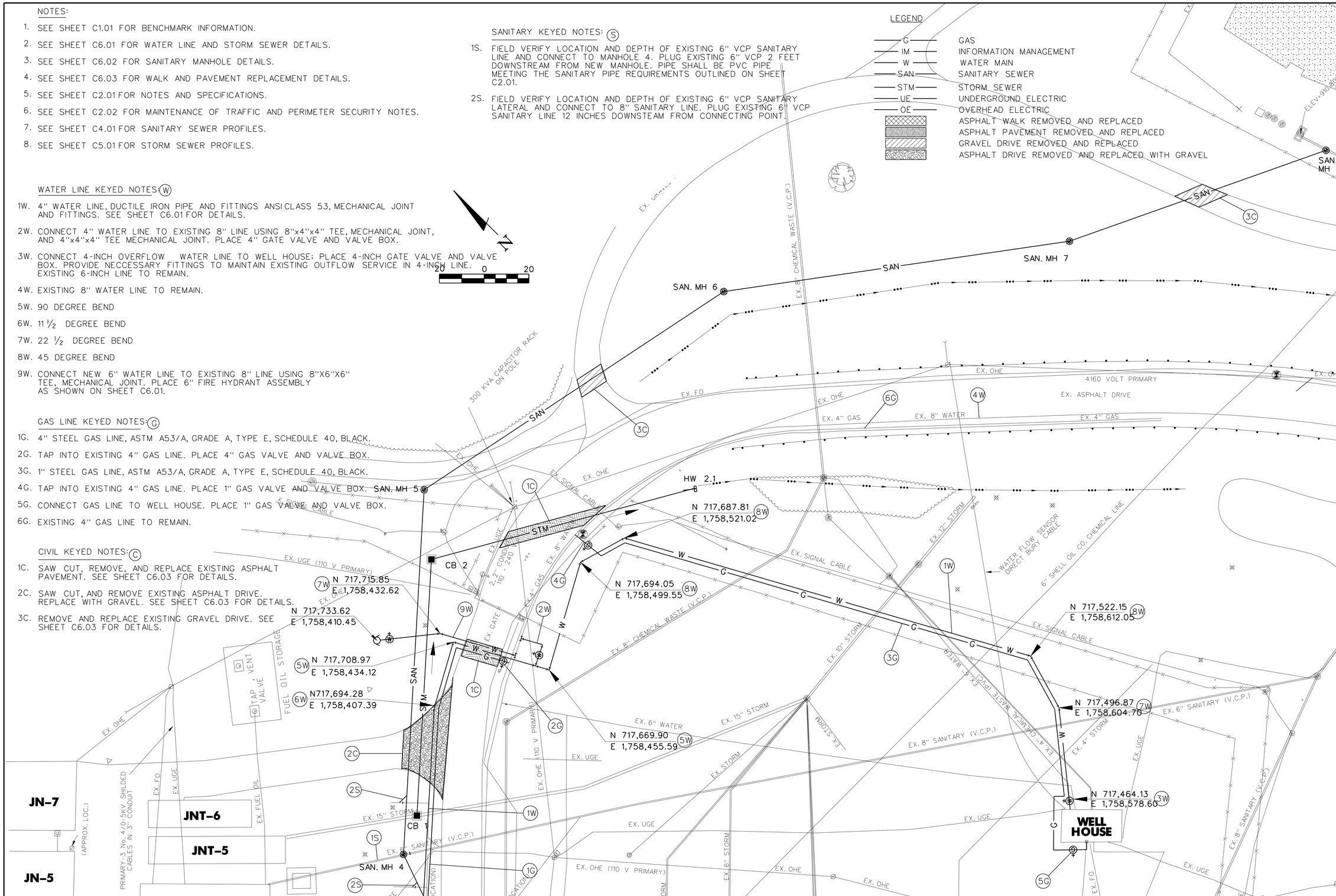
SANITARY KEYED NOTES: (S)

1S. FIELD VERIFY LOCATION AND DEPTH OF EXISTING 6" VCP SANITARY LINE AND CONNECT TO MANHOLE 4. PLUG EXISTING 6" VCP 2 FEET DOWNSTREAM FROM NEW MANHOLE. PIPE SHALL BE PVC PIPE MEETING THE SANITARY PIPE REQUIREMENTS OUTLINED ON SHEET C2.01.

2S. FIELD VERIFY LOCATION AND DEPTH OF EXISTING 6" VCP SANITARY LATERAL AND CONNECT TO 8" SANITARY LINE. PLUG EXISTING 6" VCP SANITARY LINE 12 INCHES DOWNSTEAM FROM CONNECTING POINT.

LEGEND

G	GAS
IM	INFORMATION MANAGEMENT
W	WATER MAIN
SAN	SANITARY SEWER
STM	STORM SEWER
UE	UNDERGROUND ELECTRIC
OE	OVERHEAD ELECTRIC
	ASPHALT WALK REMOVED AND REPLACED
	ASPHALT PAVEMENT REMOVED AND REPLACED
	GRAVEL DRIVE REMOVED AND REPLACED
	ASPHALT DRIVE REMOVED AND REPLACED WITH GRAVEL



MATCHLINE – SEE SHEET C3.02

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UTILITY PLAN

BATTELLE
JN-4 UTILITY ISOLATION
JEFFERSON TOWNSHIP
MADISON COUNTY, OHIO

	DR.	CHK.	DATE	DESCRIPTION
0	ELM	YSY	4/15/03	ISSUE FOR CONSTRUCTION

C3.03

JOB NO. 19481-00

NOTES:

1. PROVIDE CLASS 3, 35 FOOT WOOD POLE ADJACENT AND 10 FEET NORTH OF EXISTING POWER DISTRIBUTION POLE. USE 6 FEET EMBEDMENT. GUY AND ANCHOR POLE USING ⅜ INCH UTILITY GRADE GALVANIZED STEEL GUY WIRE, PORCELAIN GUY STRAIN INSULATOR AND POWER INSTALLED SCREW ANCHOR. GUY SHOULD MAKE APPROXIMATELY 45 DEGREES ANGLE TO THE POLE. POLE SHALL BE BEHIND THE EXISTING GUARD RAIL APPROXIMATELY 3 FEET TO CENTER OF POLE. PROVIDE 10 FEET WOOD CROSS ARMS AND PROVIDE A GROUND OPERATED HIGH VOLTAGE SECTIONALIZER GANGED DISCONNECT PER THE DETAIL ON SHEET E1.03. NEW POLE TO BE DESIGNATED P111. MAKE ELECTRICAL CONNECTIONS FROM EXISTING 4160V, 3 PHASE 4 WIRE PRIMARY LINE TO NEW SECTIONALIZER SWITCH ON POLE P111.

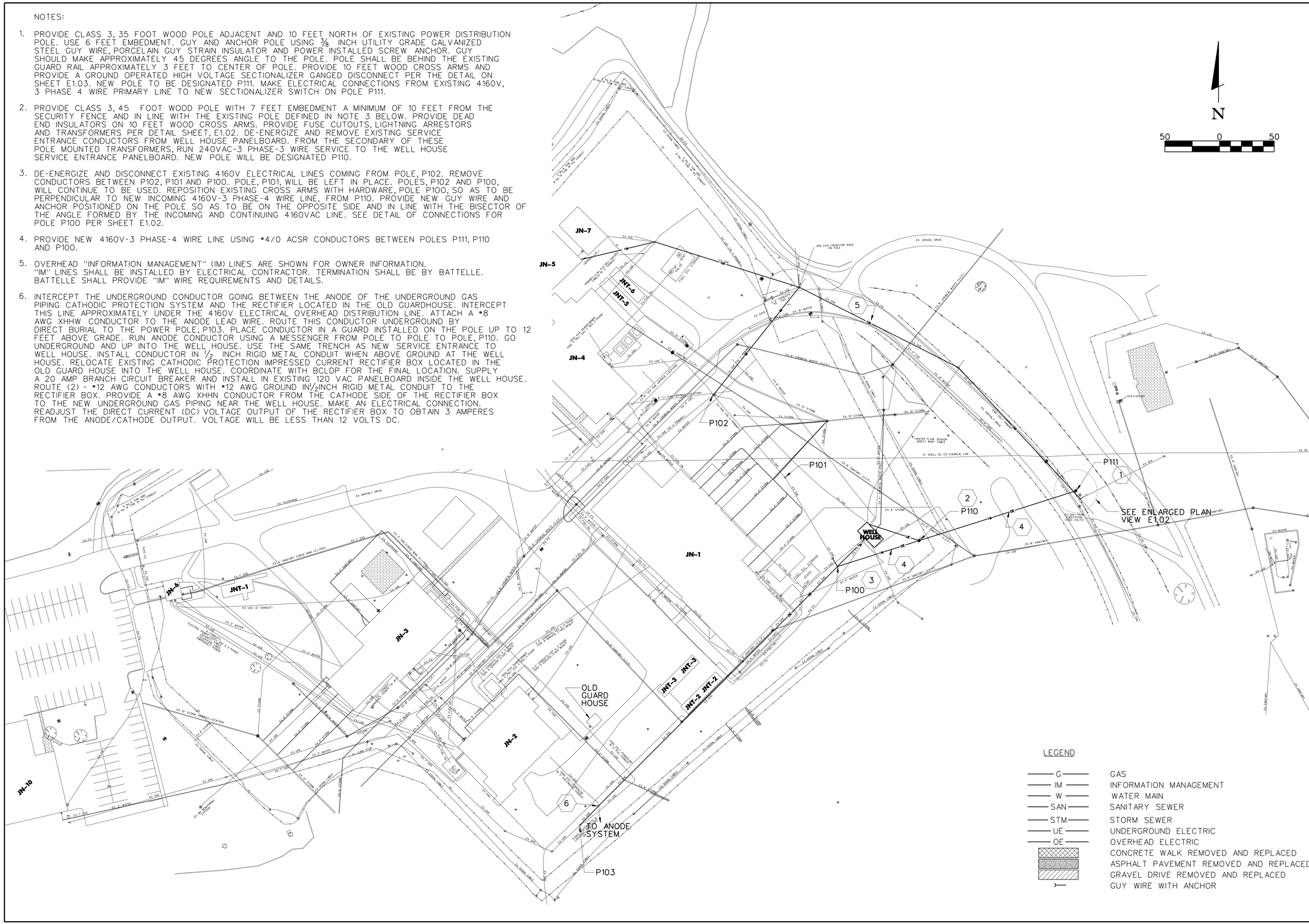
2. PROVIDE CLASS 3, 45 FOOT WOOD POLE WITH 7 FEET EMBEDMENT A MINIMUM OF 10 FEET FROM THE SECURITY FENCE AND IN LINE WITH THE EXISTING POLE DEFINED IN NOTE 3 BELOW. PROVIDE DEAD END INSULATORS ON 10 FEET WOOD CROSS ARMS. PROVIDE FUSE CUTOUTS, LIGHTNING ARRESTORS AND TRANSFORMERS PER DETAIL SHEET, E1.02. DE-ENERGIZE AND REMOVE EXISTING SERVICE ENTRANCE CONDUCTORS FROM WELL HOUSE PANELBOARD. FROM THE SECONDARY OF THESE POLE MOUNTED TRANSFORMERS, RUN 240VAC-3 PHASE-3 WIRE SERVICE TO THE WELL HOUSE SERVICE ENTRANCE PANELBOARD. NEW POLE WILL BE DESIGNATED P110.

3. DE-ENERGIZE AND DISCONNECT EXISTING 4160V ELECTRICAL LINES COMING FROM POLE, P102. REMOVE CONDUCTORS BETWEEN P102, P101 AND P100. POLE, P101, WILL BE LEFT IN PLACE. POLES, P102 AND P100, WILL CONTINUE TO BE USED. REPOSITION EXISTING CROSS ARMS WITH HARDWARE, POLE P100, SO AS TO BE PERPENDICULAR TO NEW INCOMING 4160V-3 PHASE-4 WIRE LINE, FROM P110. PROVIDE NEW GUY WIRE AND ANCHOR POSITIONED ON THE POLE SO AS TO BE ON THE OPPOSITE SIDE AND IN LINE WITH THE BISECTOR OF THE ANGLE FORMED BY THE INCOMING AND CONTINUING 4160VAC LINE. SEE DETAIL OF CONNECTIONS FOR POLE P100 PER SHEET E1.02.

4. PROVIDE NEW 4160V-3 PHASE-4 WIRE LINE USING #4/0 ACSR CONDUCTORS BETWEEN POLES P111, P110 AND P100.

5. OVERHEAD "INFORMATION MANAGEMENT" (IM) LINES ARE SHOWN FOR OWNER INFORMATION. "IM" LINES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. TERMINATION SHALL BE BY BATTELLE. BATTELLE SHALL PROVIDE "IM" WIRE REQUIREMENTS AND DETAILS.

6. INTERCEPT THE UNDERGROUND CONDUCTOR GOING BETWEEN THE ANODE OF THE UNDERGROUND GAS PIPING CATHODIC PROTECTION SYSTEM AND THE RECTIFIER LOCATED IN THE OLD GUARDHOUSE. INTERCEPT THIS LINE APPROXIMATELY UNDER THE 4160V ELECTRICAL OVERHEAD DISTRIBUTION LINE. ATTACH A #8 AWG XHHW CONDUCTOR TO THE ANODE LEAD WIRE. ROUTE THIS CONDUCTOR UNDERGROUND BY DIRECT BURIAL TO THE POWER POLE, P103. PLACE CONDUCTOR IN A GUARD INSTALLED ON THE POLE UP TO 12 FEET ABOVE GRADE. RUN ANODE CONDUCTOR USING A MESSENGER FROM POLE TO POLE TO POLE, P110. GO UNDERGROUND AND UP INTO THE WELL HOUSE. USE THE SAME TRENCH AS NEW SERVICE ENTRANCE TO WELL HOUSE. INSTALL CONDUCTOR IN ½ INCH RIGID METAL CONDUIT WHEN ABOVE GROUND AT THE WELL HOUSE. RELOCATE EXISTING CATHODIC PROTECTION IMPRESSED CURRENT RECTIFIER BOX LOCATED IN THE OLD GUARD HOUSE INTO THE WELL HOUSE. COORDINATE WITH BCLDP FOR THE FINAL LOCATION. SUPPLY A 20 AMP BRANCH CIRCUIT BREAKER AND INSTALL IN EXISTING 120 VAC PANELBOARD INSIDE THE WELL HOUSE. ROUTE (2) - #12 AWG CONDUCTORS WITH #12 AWG GROUND IN½INCH RIGID METAL CONDUIT TO THE RECTIFIER BOX. PROVIDE A #8 AWG XHHN CONDUCTOR FROM THE CATHODE SIDE OF THE RECTIFIER BOX TO THE NEW UNDERGROUND GAS PIPING NEAR THE WELL HOUSE. MAKE AN ELECTRICAL CONNECTION. READJUST THE DIRECT CURRENT (DC) VOLTAGE OUTPUT OF THE RECTIFIER BOX TO OBTAIN 3 AMPERES FROM THE ANODE/CATHODE OUTPUT. VOLTAGE WILL BE LESS THAN 12 VOLTS DC.



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UTILITY PLAN, ELECTRIC

BATTELLE
JN-4 UTILITY ISOLATION

JEFFERSON TOWNSHIP
MADISON COUNTY, OHIO

	DR.	CHK.	DATE	DESCRIPTION
0	ACM	DBB	4/15/03	ISSUE FOR CONSTRUCTION

E1.01

JOB NO. 19481-00