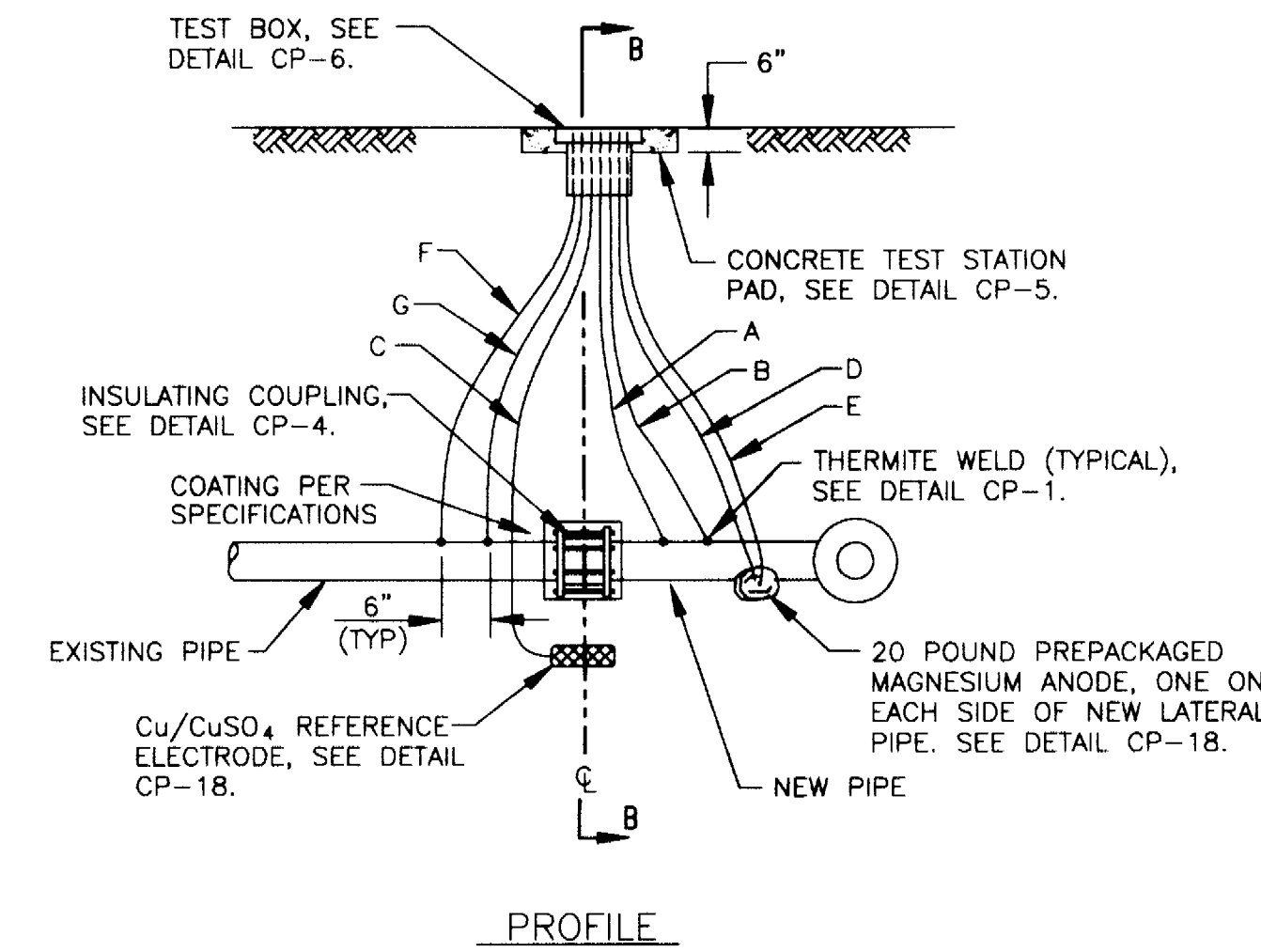
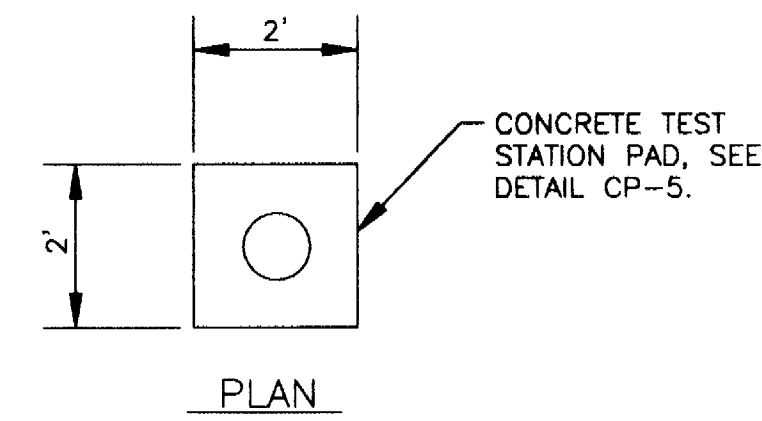


CP-7: CATHODIC PROTECTION TEST STATION

WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE INSULATION	COLOR INSULATION
NEW PIPE	A	1	#10	THWN	BLUE
	B	3	#10	THWN	BLUE
PERMANENT REFERENCE ELECTRODE	C	6	#14	HMWPE	BLACK
MAGNESIUM ANODE LEAD WIRE (2)	D	4	#12	TW	BLACK
	E	4	#12	TW	BLACK

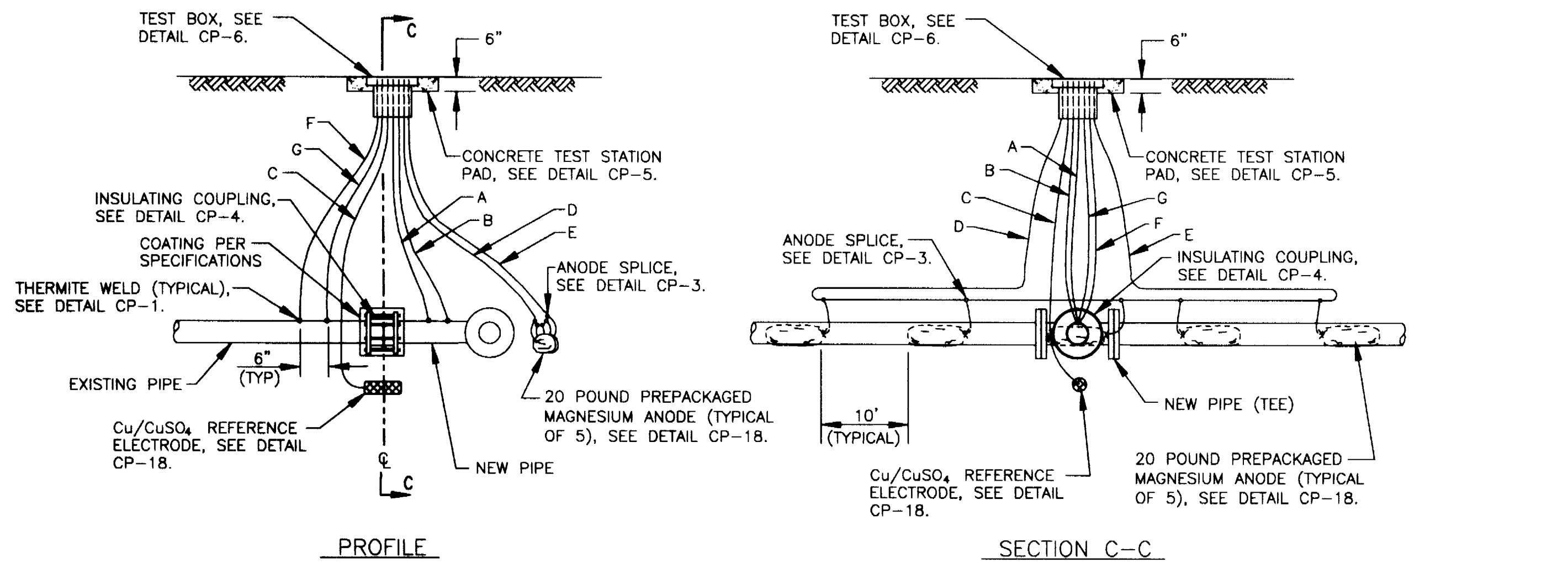
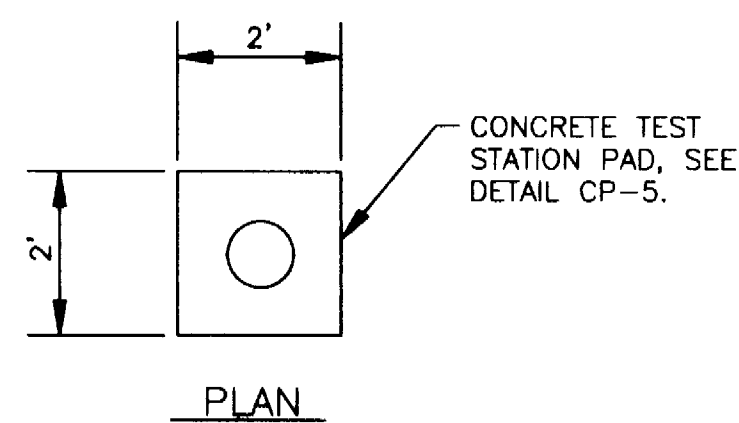
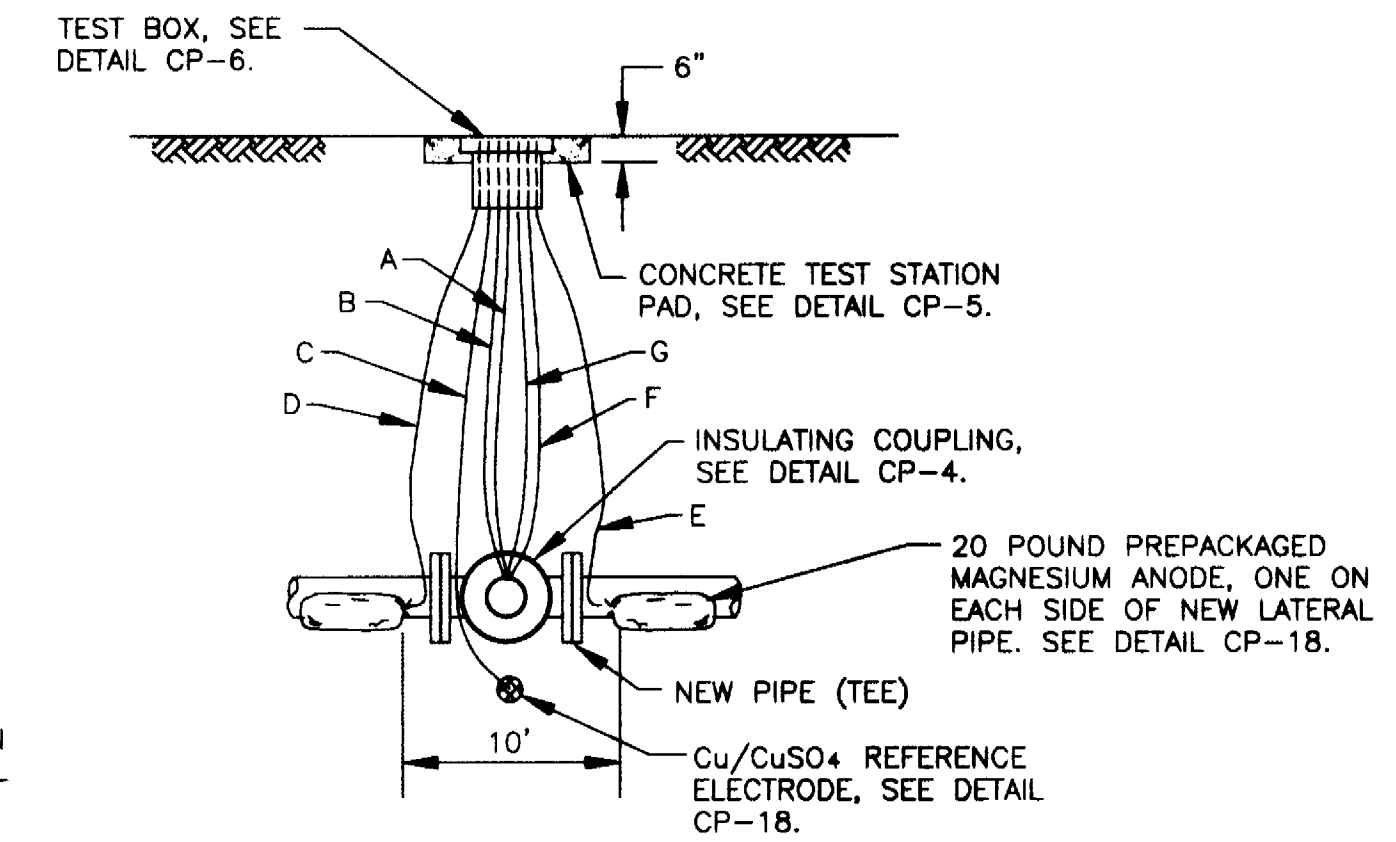
- NOTES:
- ANODES TO BE PLACED AT SAME DEPTH AS THE BOTTOM OF THE PIPE AND AT A MINIMUM OF 24" FROM EDGE OF PIPE. ANODES SHALL BE INSTALLED IN NATIVE EARTH AND NOT IN GRAVEL. SEE DETAIL CP-18 FOR PLACEMENT REQUIREMENTS.
  - DO NOT SET TEST STATION IN ROADWAY. PLACE TEST BOX IN NON-PAVED AREA NEXT TO ROADWAY. ROUTE ALL WIRES TO FINAL TEST BOX LOCATION. SEE DETAIL CP-17.
  - INSTALL 0.01 OHM/8 AMPERE SHUNT BETWEEN TERMINALS 1 AND 4.



CP-8: INSULATING COUPLING TEST STATION

WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE INSULATION	COLOR INSULATION
NEW PIPE	A	1	#10	THWN	BLUE
	B	3	#10	THWN	BLUE
PERMANENT REFERENCE ELECTRODE	C	6	#14	HMWPE	BLACK
MAGNESIUM ANODE LEAD WIRE (2)	D	4	#12	TW	BLACK
	E	4	#12	TW	BLACK
EXISTING PIPE	F	2	#10	THWN	WHITE
	G	5	#10	THWN	WHITE

- NOTES:
- ANODES TO BE PLACED AT SAME DEPTH AS THE BOTTOM OF THE PIPE AND AT A MINIMUM OF 24" FROM EDGE OF PIPE. ANODES SHALL BE INSTALLED IN NATIVE EARTH AND NOT IN GRAVEL. SEE DETAIL CP-18 FOR PLACEMENT REQUIREMENTS.
  - INSTALL ELECTRICAL ISOLATION ON ALL CONNECTIONS GREATER THAN 1-INCH DIAMETER TO DUCTILE IRON MAIN.
  - DO NOT SET TEST STATION IN ROADWAY. PLACE TEST BOX IN NON-PAVED AREA NEXT TO ROADWAY. ROUTE ALL WIRES TO FINAL TEST BOX LOCATION. SEE DETAIL CP-17.
  - INSTALL 0.01 OHM/8 AMPERE SHUNT BETWEEN TERMINALS 1 AND 4.



CP-9: INSULATING COUPLING AND STRAY CURRENT TEST STATION

WIRING SCHEDULE					
DESCRIPTION	WIRE	TEST STATION TERMINAL	AWG WIRE SIZE	TYPE INSULATION	COLOR INSULATION
NEW PIPE	A	1	#10	THWN	BLUE
	B	3	#10	THWN	BLUE
PERMANENT REFERENCE ELECTRODE	C	6	#14	HMWPE	BLACK
MAGNESIUM ANODE HEADER CABLE	D	4	#8	HMWPE	BLACK
	E	4	#8	HMWPE	BLACK
EXISTING PIPE	F	2	#10	THWN	WHITE
	G	5	#10	THWN	WHITE

- NOTES:
- ANODES TO BE PLACED AT SAME DEPTH AS THE BOTTOM OF THE PIPE AND AT A MINIMUM OF 24" FROM EDGE OF PIPE. ANODES SHALL BE INSTALLED IN NATIVE EARTH AND NOT IN GRAVEL. SEE DETAIL CP-18 FOR PLACEMENT REQUIREMENTS.
  - DO NOT SET TEST STATION IN ROADWAY. PLACE TEST BOX IN NON-PAVED AREA NEXT TO ROADWAY. ROUTE ALL WIRES TO FINAL TEST BOX LOCATION. SEE DETAIL CP-17.
  - INSTALL 0.01 OHM/8 AMPERE SHUNT BETWEEN TERMINALS 1 AND 4.

CATHODIC PROTECTION TEST STATION SCHEDULE U.S. ROUTE 1 PORT CAPITAL DRIVE TO MEADOWRIDGE ROAD		
STATION NUMBER	TEST STATION TYPE	DETAIL NUMBER
194+50	INSULATING COUPLING & STRAY CURRENT	CP-9
197+10	INSULATING COUPLING	CP-8
199+06	INSULATING COUPLING & STRAY CURRENT	CP-9
203+00	CATHODIC PROTECTION	CP-7
207+00	CATHODIC PROTECTION	CP-7
211+00	CATHODIC PROTECTION	CP-7
214+90	INSULATING COUPLING	CP-8
217+85	INSULATING COUPLING	CP-8
220+30	INSULATING COUPLING	CP-8
221+76	INSULATING COUPLING	CP-8
226+00	CATHODIC PROTECTION	CP-7
230+00	INSULATING COUPLING	CP-8
231+38	INSULATING COUPLING	CP-8
235+25	CATHODIC PROTECTION	CP-7
239+09	INSULATING COUPLING	CP-8
239+20	INSULATING COUPLING & STRAY CURRENT	CP-9
243+10	CATHODIC PROTECTION	CP-7
247+00	INSULATING COUPLING & STRAY CURRENT	CP-9

CP-10: TEST STATION SCHEDULE

AS BUILT PLAN - 03/02

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

11/8/95  
DIRECTOR OF PUBLIC WORKS

11/4/99  
CHIEF, BUREAU OF UTILITIES

11/3/99  
CHIEF, BUREAU OF ENGINEERING

11-2-99  
CHIEF, WATER & SEWER DIVISION

RUSSELL CORROSION CONSULTANTS, INC.  
5405 TWIN KNOLLS RD., SUITE 3  
COLUMBIA, MD 21045

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER

DES: MJS	HEC 1	AS-BUILT PLANS-WATER MAIN	B/02
DRN: DJD			
CHK: MJS			
DATE: 10/99	BY NO.	REVISION	NO.

CATHODIC PROTECTION DETAILS

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

U.S. ROUTE 1  
PORT CAPITAL DR. TO MEADOWRIDGE RD.  
12" WATER MAIN EXTENSION  
ELECTION DISTRICT NO. 1  
HOWARD COUNTY, MARYLAND  
CAPITAL PROJECT W-8204  
CONTRACT NO. 44-3805

SCALE: NONE

SHEET 9 OF 10