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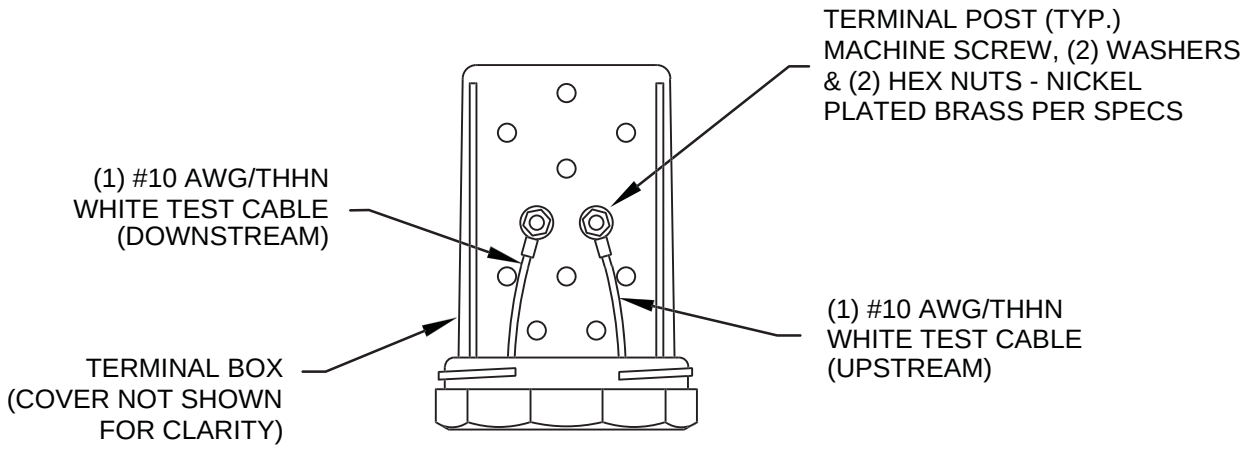
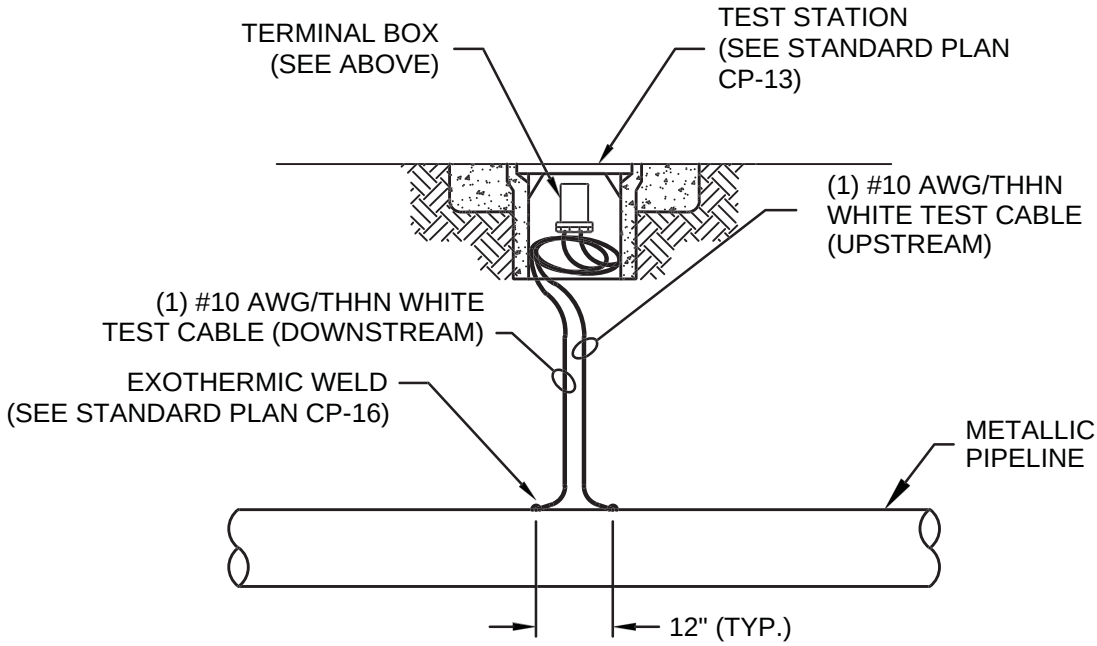
STANDARD DETAILS

CATHODIC PROTECTION (CP)



CTS TERMINAL BOX



NOTES:

1. IDENTIFY CABLES PER STANDARD PLAN CP-15.
2. LOCATION TO BE SHOWN ON THE PLANS OR AS DIRECTED BY THE CITY ENGINEER.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
BALWINDER S. GREWAL
C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

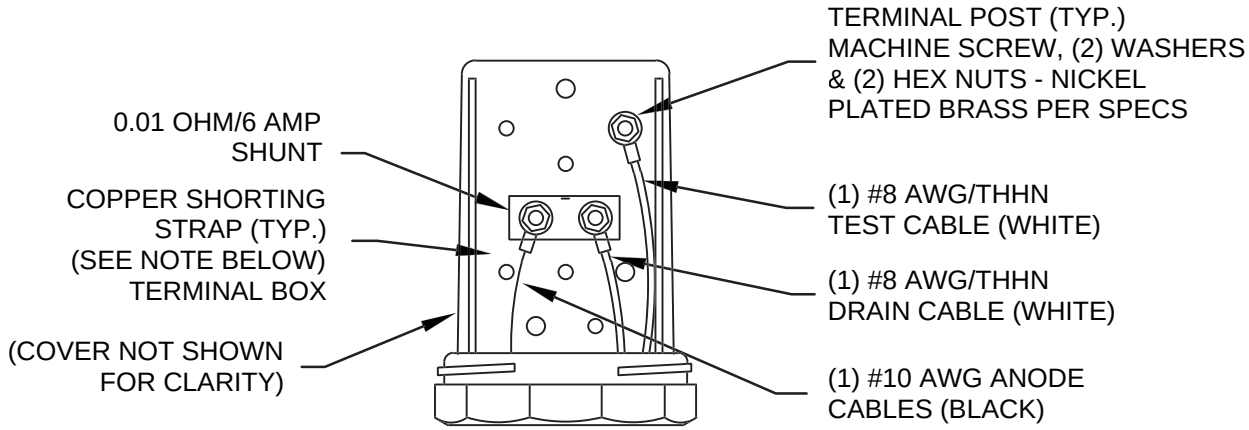
THE CITY OF BRENTWOOD

CORROSION TEST STATION (CTS)

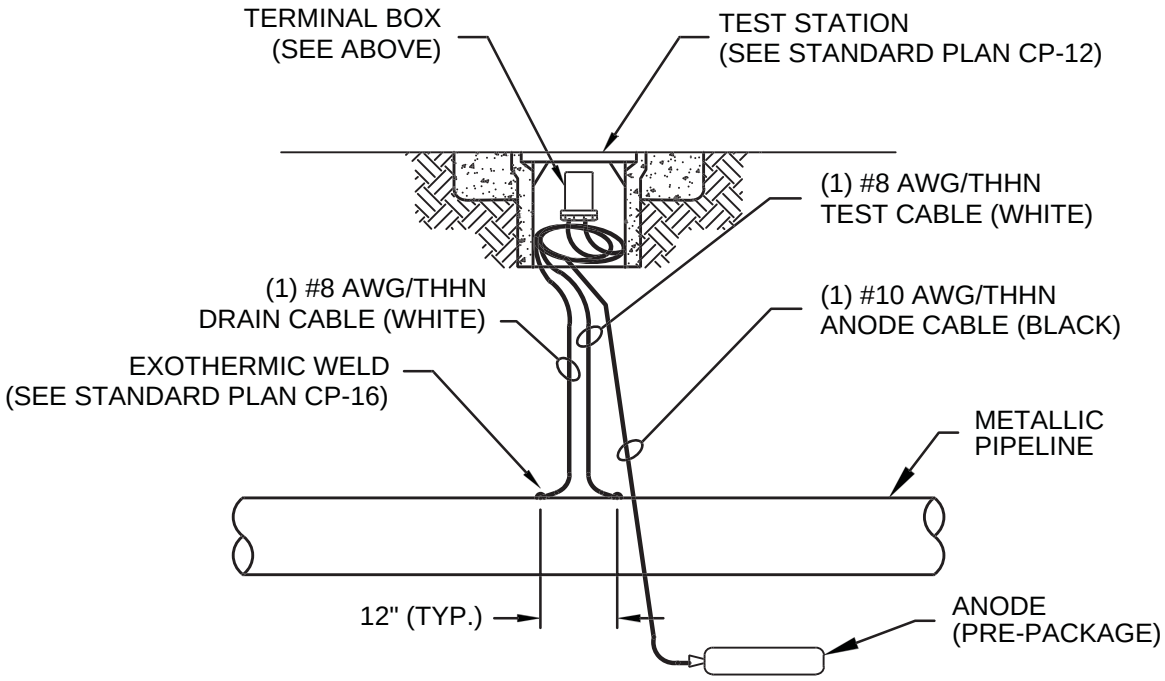
BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
CP-1



ATS TERMINAL BOX



NOTE:

IDENTIFY CABLES PER STANDARD PLAN CP-15.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
BALWINDER S. GREWAL
C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

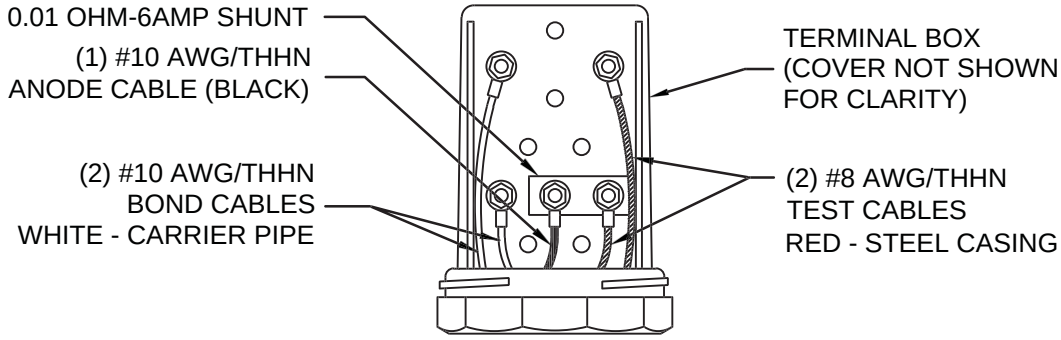
ANODE TEST STATION (ATS)

BALWINDER S. GREWAL CITY ENGINEER

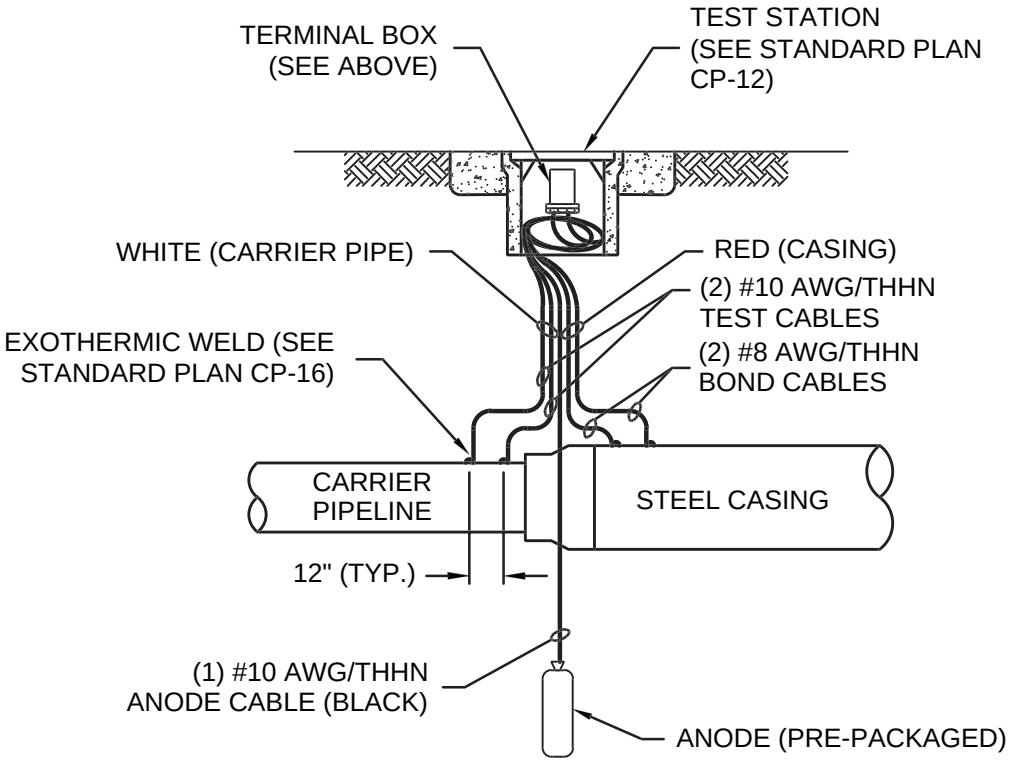
DATE: JUNE 15, 2003

REVISED: DEC. 31, 2013

SHEET No.
CP-2



CATS TERMINAL BOX



NOTES:

1. CARRIER PIPE & CASING SHALL BE ELECTRICALLY ISOLATED VIA CASING INSULATORS.
2. ON A NON-METALLIC CARRIER PIPE, DELETE WHITE CABLES AND EXOTHERMIC WELDS.
3. IDENTIFY CABLES PER STANDARD PLAN CP-15.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

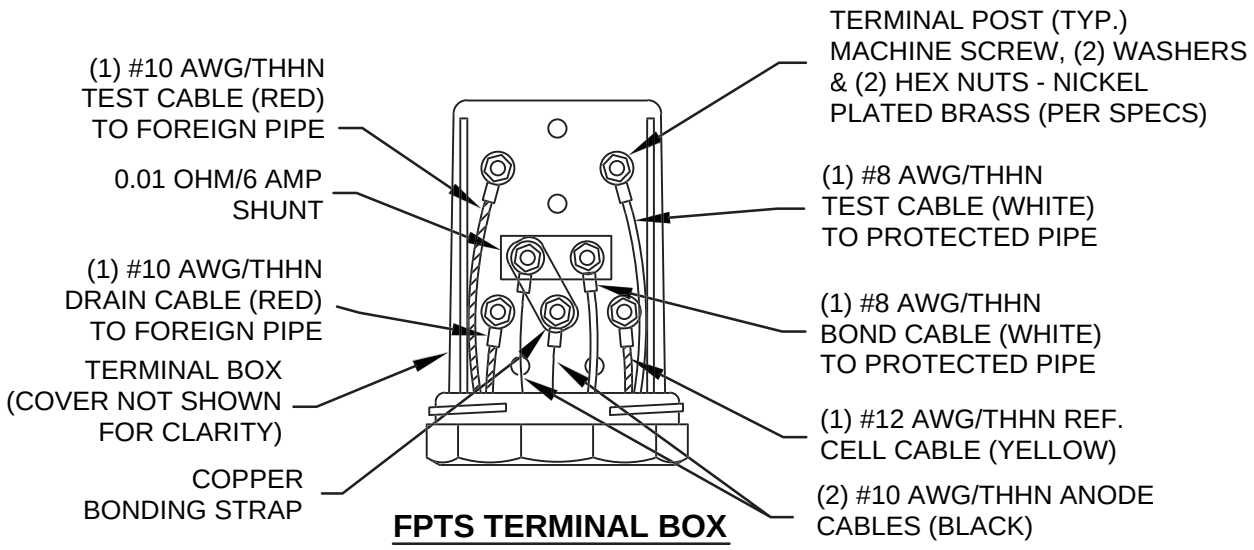
CASING TEST STATION - CATS

BALWINDER S. GREWAL CITY ENGINEER

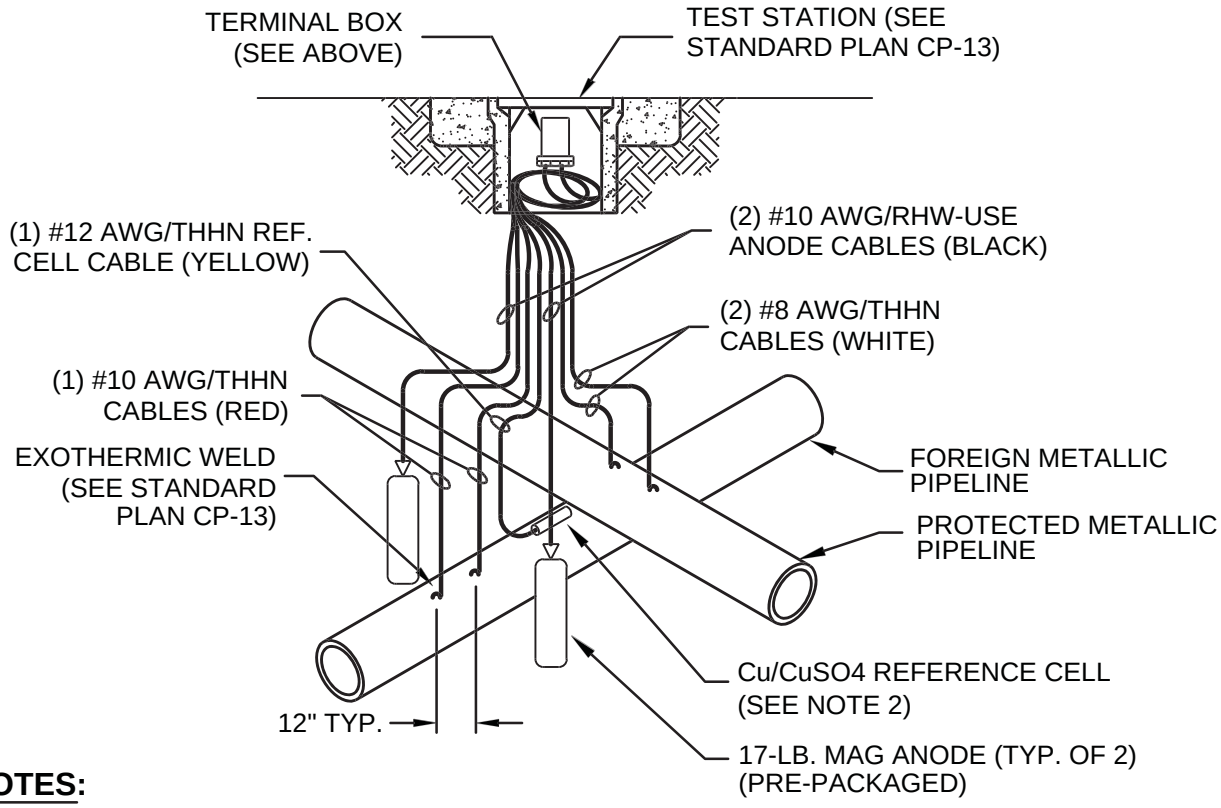
DATE: JUNE 20, 2003

REVISED: DEC. 31, 2013

SHEET No.
CP-3



FPTS TERMINAL BOX



NOTES:

1. IDENTIFY CABLES PER STANDARD PLAN CP-15.
2. THE REFERENCE CELL SHALL BE INSTALLED BETWEEN THE TWO PIPES.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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EXP. 9/30/14
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ENGINEERING DEPARTMENT

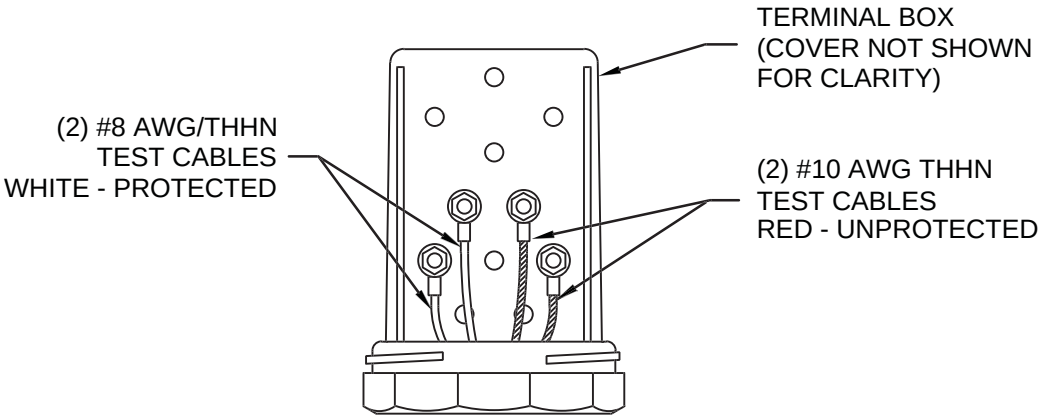
THE CITY OF BRENTWOOD

FOREIGN PIPELINE TEST STATION (FPTS)

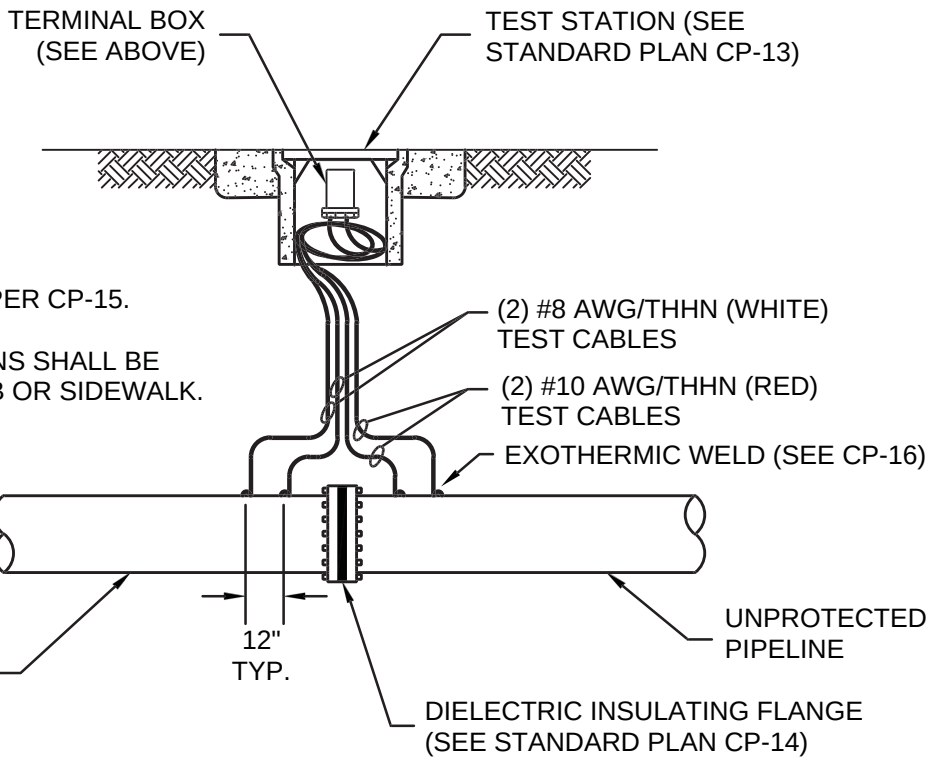
BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
CP-4



IJTS TERMINAL BOX



NOTES:

1. IDENTIFY CABLE PER CP-15.
2. ALL TEST STATIONS SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

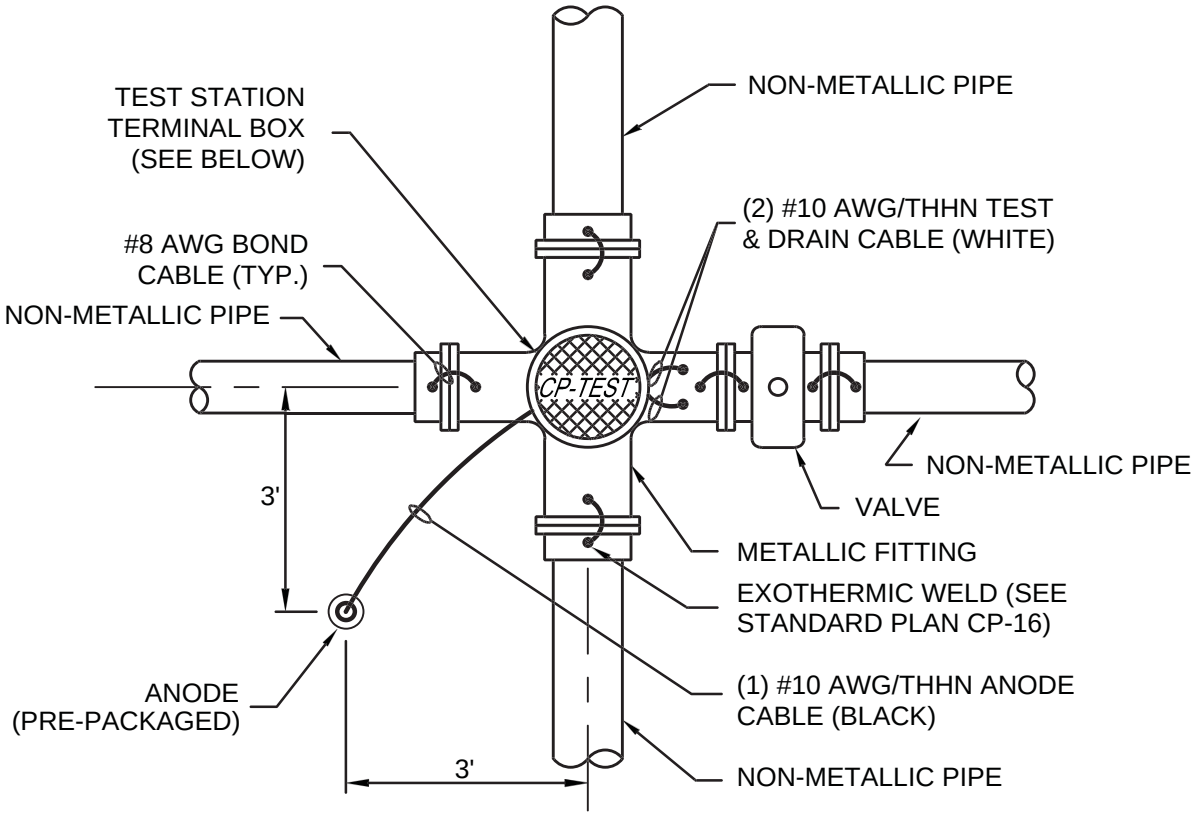
INSULATING JOINT TEST STATION (IJTS)

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003

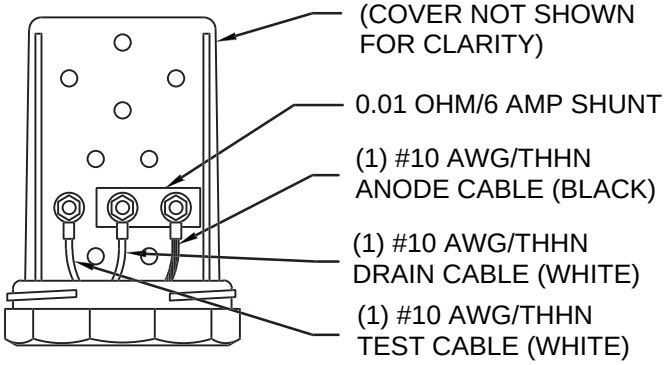
REVISED: DEC. 31, 2013

SHEET No.
CP-5



NOTES:

1. IDENTIFY CABLES PER CP-15.
2. TEST STATIONS MAY BE DELETED AT THE DISCRETION OF THE CITY ENGINEER. IF THE TEST STATION IS DELETED, CONNECT ANODE DIRECTLY TO THE FITTING PER CP-16.
3. TEST STATIONS SHALL BE SET BEHIND CURB OR SIDEWALK.



ATS TERMINAL BOX

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
BALWINDER S. GREWAL
C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

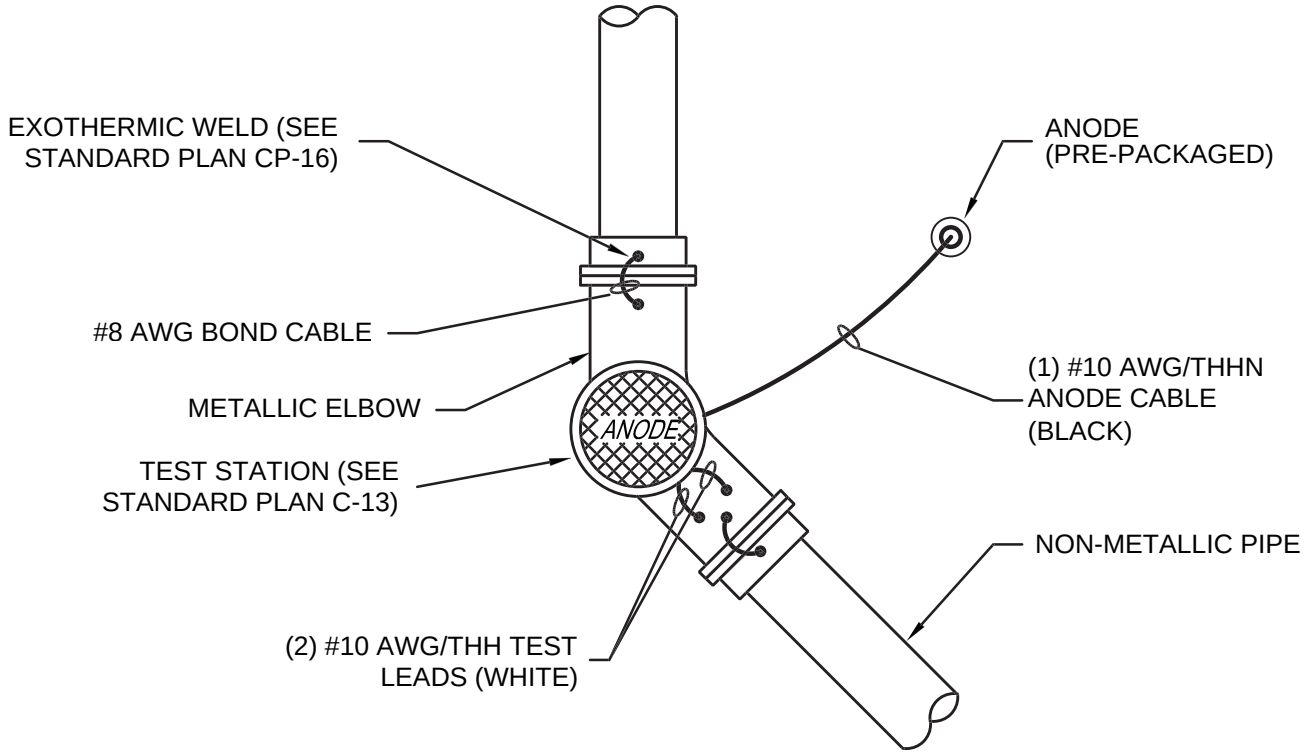
ANODE TEST STATION - CROSS

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003

REVISED: DEC. 31, 2013

SHEET No.
CP-6



PLAN

NOTES:

1. FOR TERMINAL BOX WIRING SEE STANDARD PLAN CP-6.
2. TEST STATION MAY BE DELETED AT THE DISCRETION OF THE CITY ENGINEER. IF THE TEST STATION IS DELETED, CONNECT THE ANODE LEAD DIRECTLY TO THE FITTING PER STANDARD PLAN CP-16.
3. ALL TEST STATIONS SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

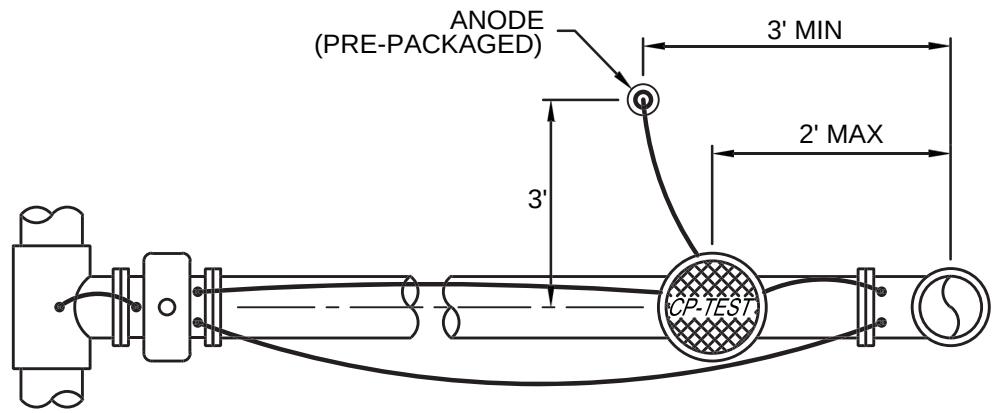
THE CITY OF BRENTWOOD

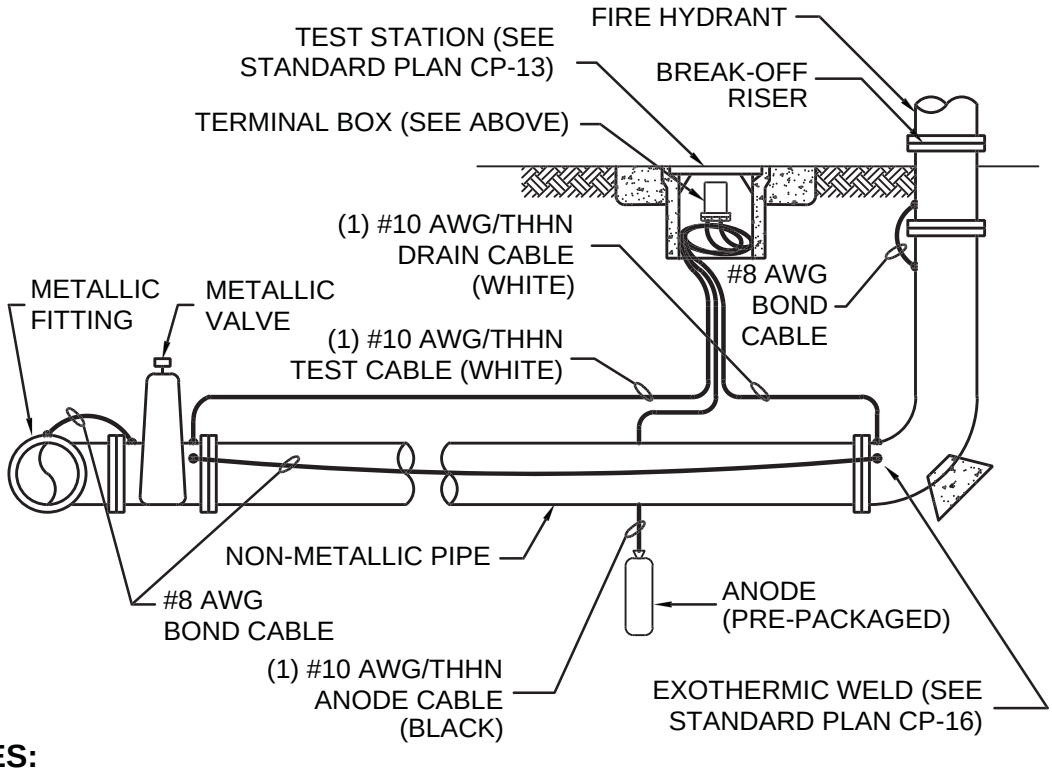
ANODE TEST STATION - ELBOW

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
CP-7





NOTES:

1. FOR TERMINAL BOX WIRING SEE STANDARDARD PLAN CP-6.
2. TEST STATION MAY BE DELETED AT THE DISCRETION OF THE CITY ENGINEER. IF THE TEST STATION IS DELETED, CONNECT THE ANODE LEAD DIRECTLY TO THE FITTING PER STANDARD PLAN CP-16.
3. ALL TEST STATIONS SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

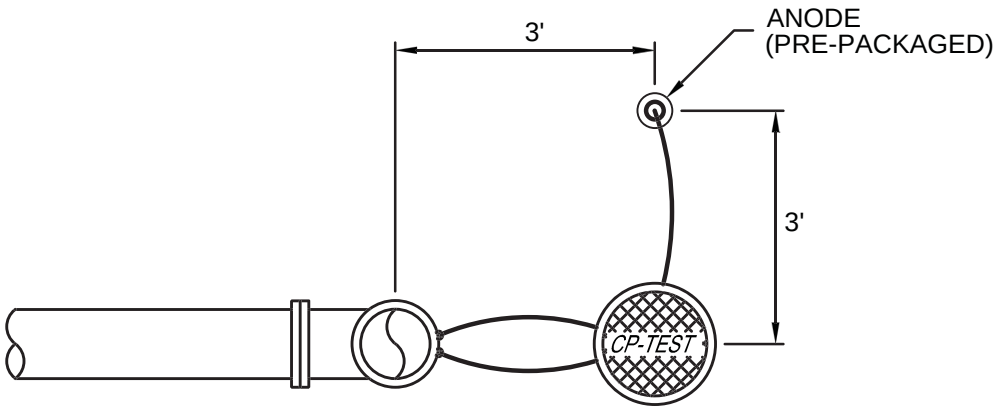
THE CITY OF BRENTWOOD

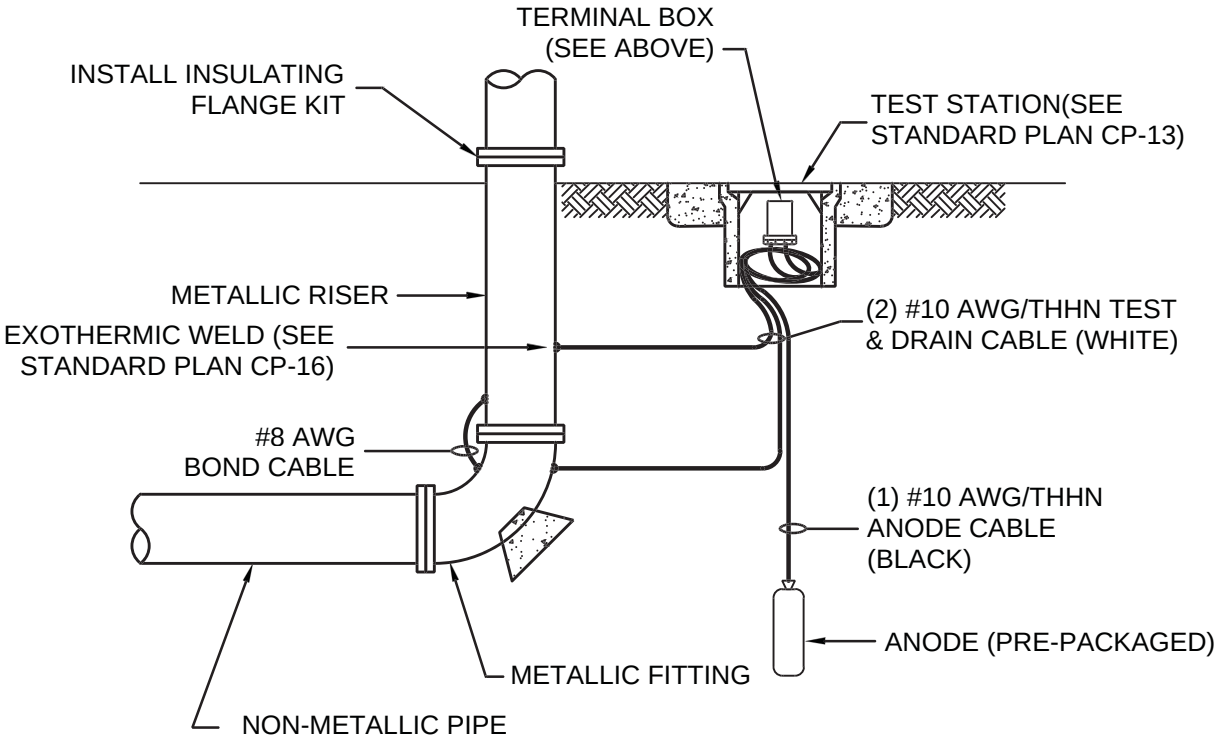
ANODE TEST STATION - FIRE HYDRANT

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
CP-8





NOTES:

1. FOR TERMINAL BOX WIRING SEE STANDARD PLAN CP-6.
2. TEST STATION MAY BE DELETED AT THE DISCRETION OF THE CITY ENGINEER. IF THE TEST STATION IS DELETED, CONNECT THE ANODE LEAD DIRECTLY TO THE FITTING PER STANDARD PLAN CP-16.
3. TEST STATIONS SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
BALWINDER S. GREWAL
C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

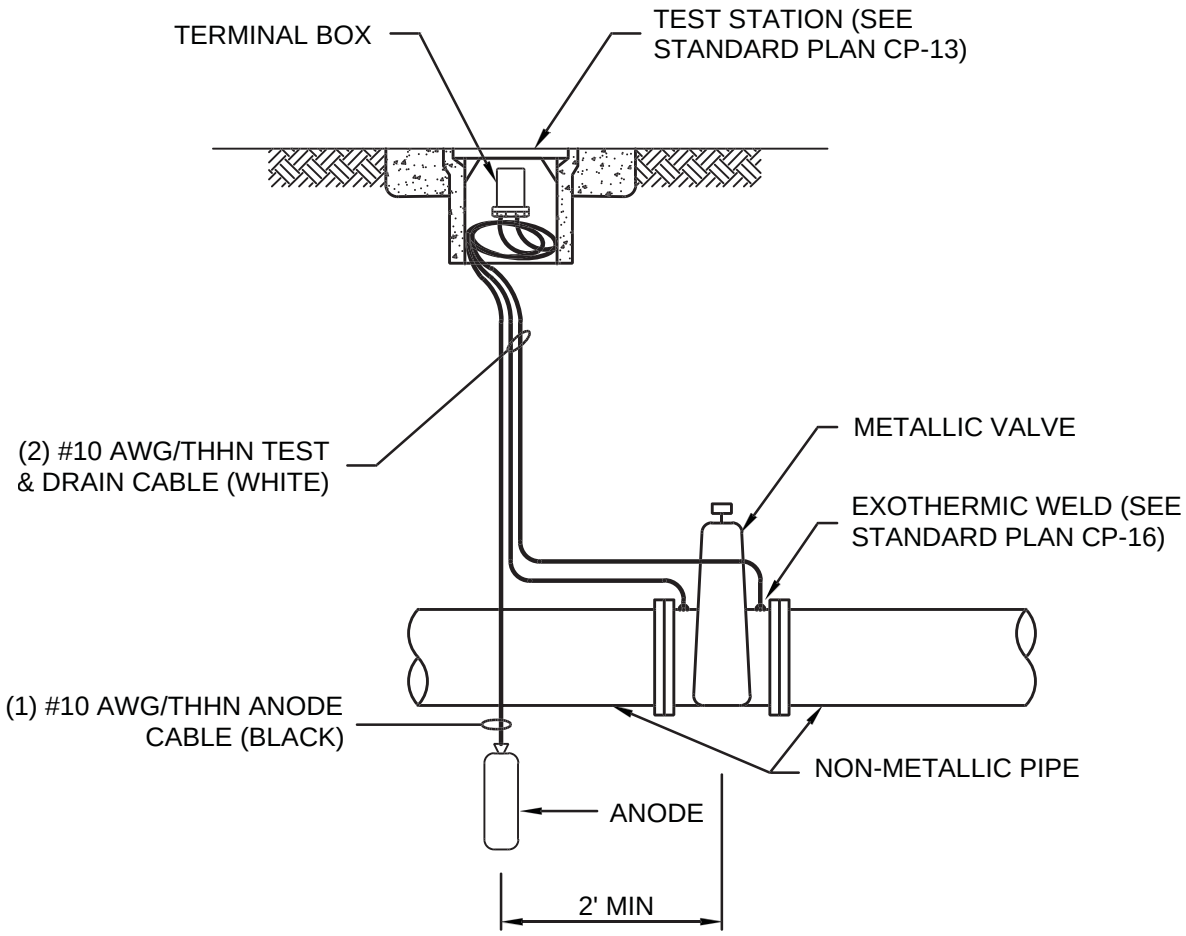
ANODE TEST STATION - RISER

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003

REVISED: DEC. 31, 2013

SHEET No.
CP-9



NOTES:

1. INSTALL ANODE A MINIMUM 2 FEET FROM VALVE.
2. FOR TERMINAL BOX WIRING SEE STANDARD PLAN CP-6.
3. TEST STATION SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

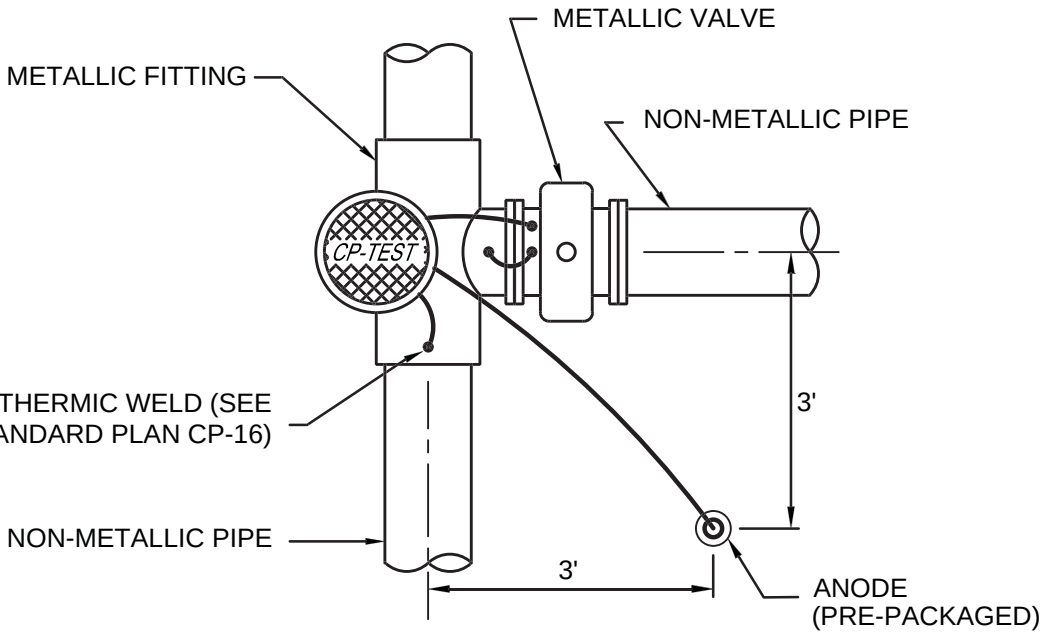
THE CITY OF BRENTWOOD

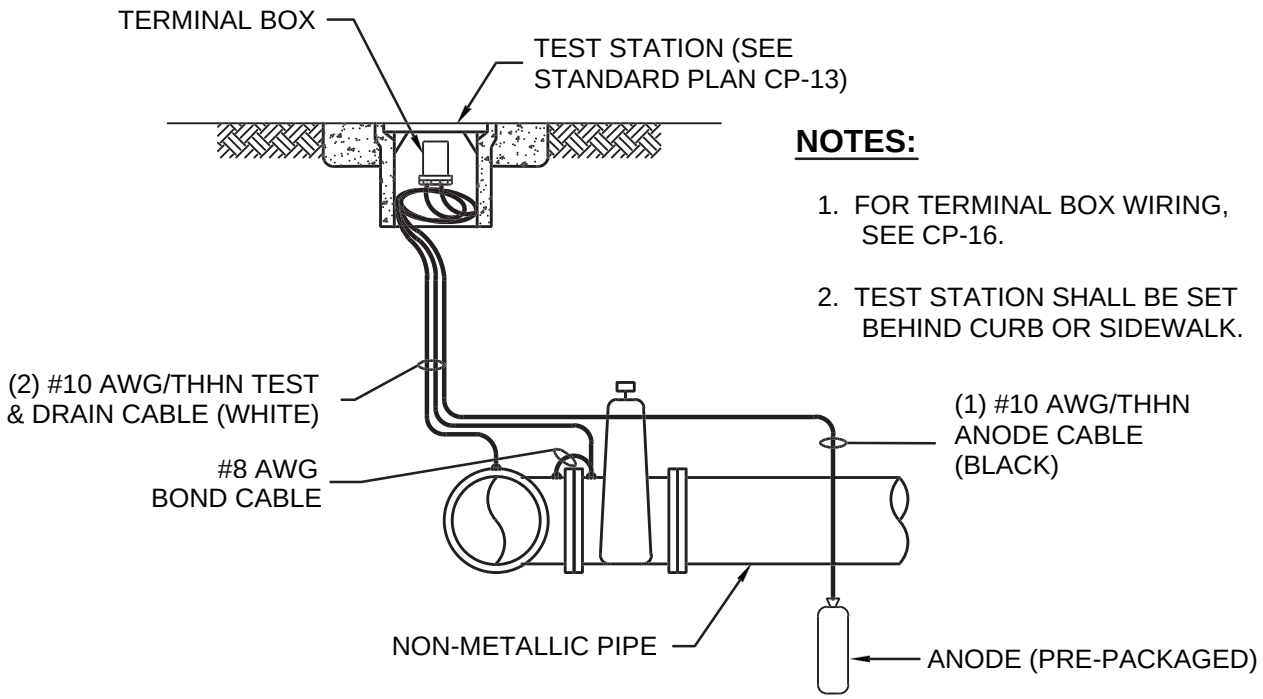
ANODE TEST STATION - VALVE

BALWINDER S. GREWAL CITY ENGINEER

DATE:	OCT. 31, 2000
REVISED:	DEC. 31, 2013

SHEET No.
CP-10





NOTES:

1. FOR TERMINAL BOX WIRING, SEE CP-16.
2. TEST STATION SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
BALWINDER S. GREWAL
C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

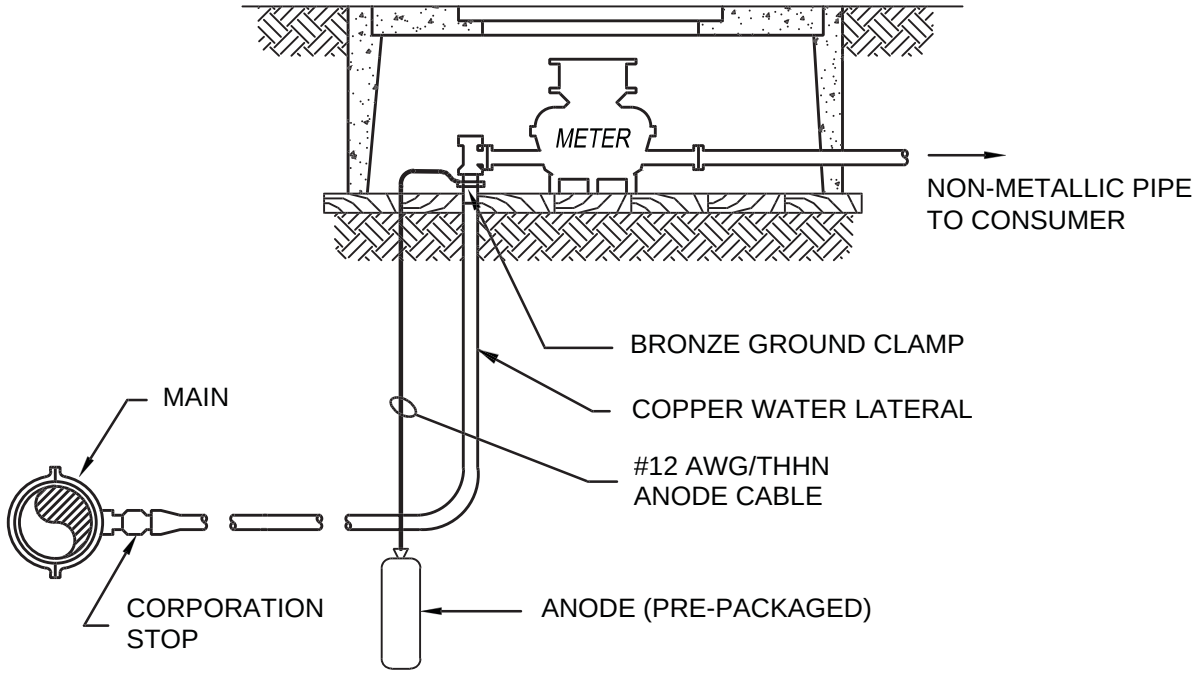
THE CITY OF BRENTWOOD

ANODE TEST STATION - VALVE AND TEE

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
CP-11



NOTES:

1. IF WATERMAIN IS METALLIC, PLACE INSULATING COUPLING BETWEEN COPPER WATER LATERAL AND WATERMAIN.
2. A MINIMUM CLEARANCE OF 2' SHALL BE MAINTAINED BETWEEN THE ANODE AND THE LATERAL.
3. TOP OF ANODE SHALL BE 5' MIN. FROM THE GROUND SURFACE.
4. TEST STATION SHALL BE SET BEHIND CURB OR SIDEWALK.

(Not To Scale)

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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

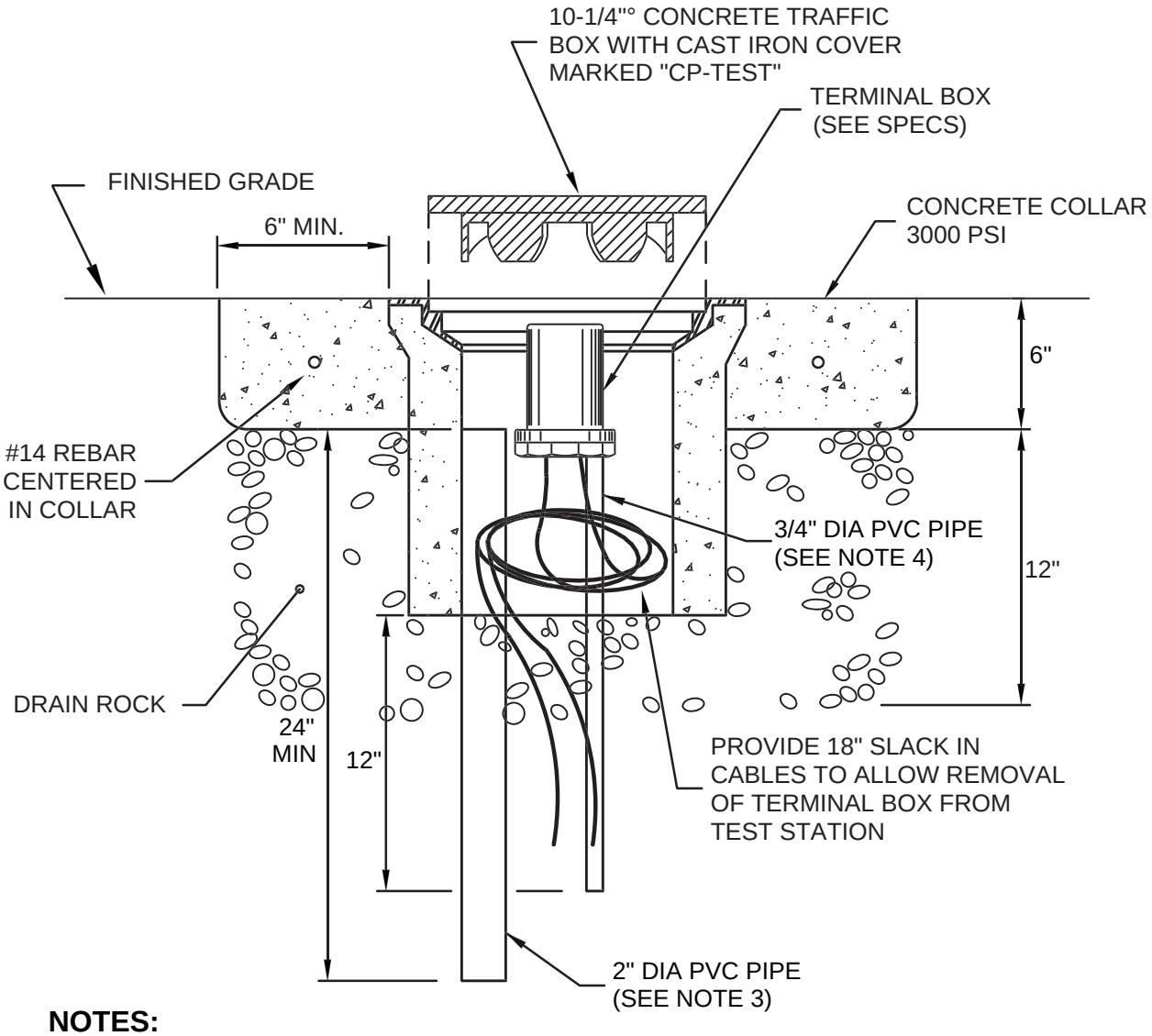
THE CITY OF BRENTWOOD

ANODE TEST STATION - LATERAL

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
CP-12



NOTES:

1. CONCRETE COLLAR IS REQUIRED FOR TEST STATIONS PLACED IN ROADWAYS AND UNPAVED AREAS.
2. TEST STATION SHALL BE SET BEHIND CURB OR SIDEWALK.
3. INSTALL 2" DIA. PVC PIPE IN CLEAN NATIVE SOIL. FILL PIPE WITH CLEAR SOIL, FREE FROM ROCKS AND DEBRIS.
4. INSTALL 18" LENGTH OF 3/4" DIA. PVC PIPE TO ENSURE THAT THE TERMINAL BOX WILL REMAIN IN THE UPRIGHT POSITION. POSITION THE PIPE SO THAT THE TERMINAL BOX WILL BE AS HIGH AS POSSIBLE WITH THE CAST IRON LID STILL CLOSING PROPERLY.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

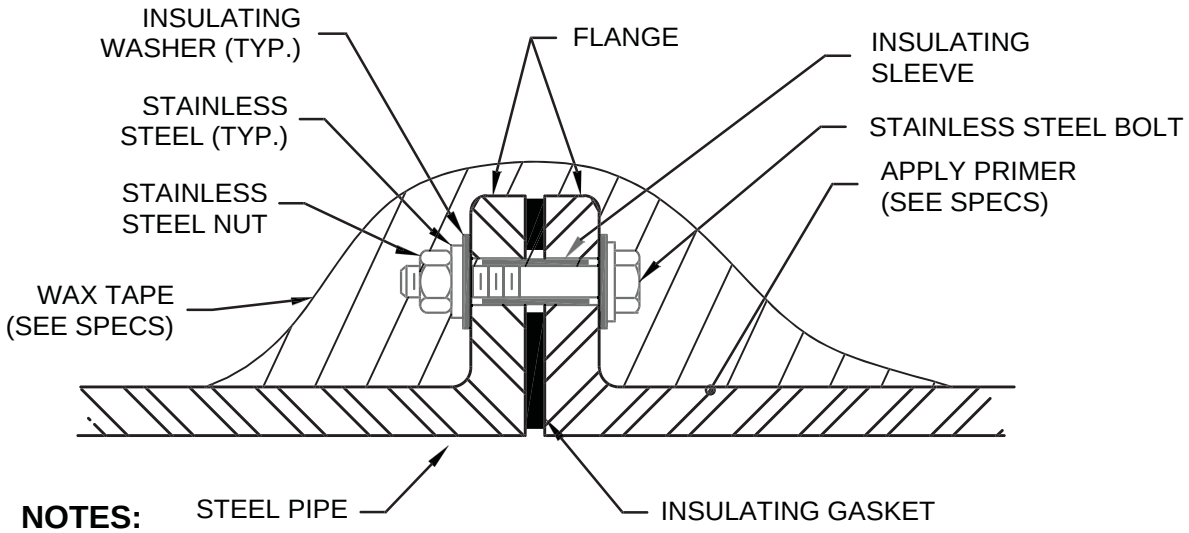
TEST STATION

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUL. 26, 2002
REVISED: DEC. 31, 2013

SHEET No.
CP-13

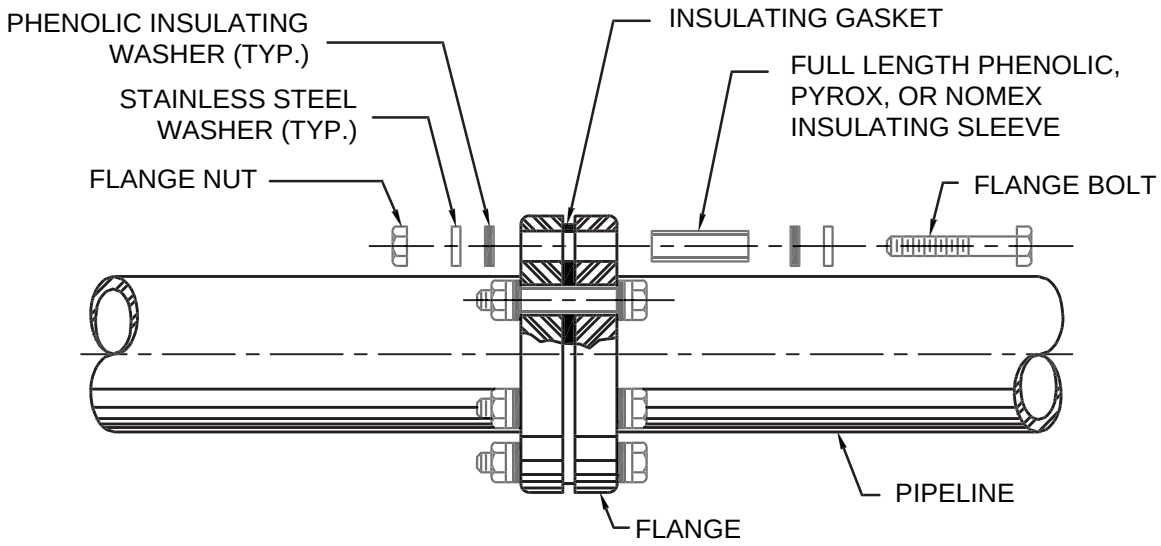
BELOW GRADE INSULATING JOINT COATING



NOTES:

1. GASKET SHALL BE FOR WATER SERVICE AND BE OF SAME PRESSURE RATING AS THE FLANGE.
2. DELETE COATING IF FLANGE IS ABOVE GRADE OR INSTALLED IN A VAULT.
3. ALL BOLTS, NUTS AND WASHERS SHALL BE 304 OR 316 STAINLESS STEEL.

EXPOSED INSULATING JOINT



NOTE: FOR BURIED INSULATING JOINTS APPLY COATING AS SHOWN ABOVE.

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

DIELECTRIC INSULATING JOINT

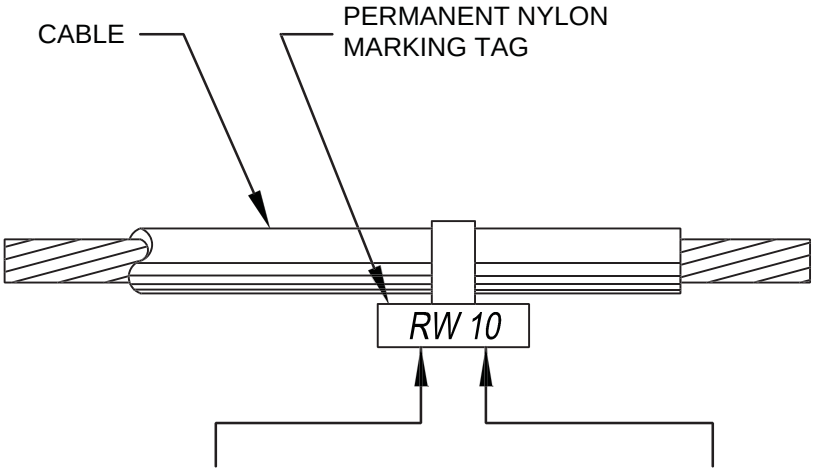
BALWINDER S. GREWAL CITY ENGINEER

DATE: JAN. 31, 1999

REVISED: DEC. 31, 2013

SHEET No.

CP-14



RW	—	RAW WATER
OF	—	OVERFLOW
DR	—	DRAIN
AN	—	ANODE
RE	—	REFERENCE ELECTRODE
FP	—	FOREIGN PIPELINE
CA	—	CASING
DW	—	DOMESTIC WATER
NPW	—	NON-POTABLE WATER

PIPE DIAMETER (INCHES)

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

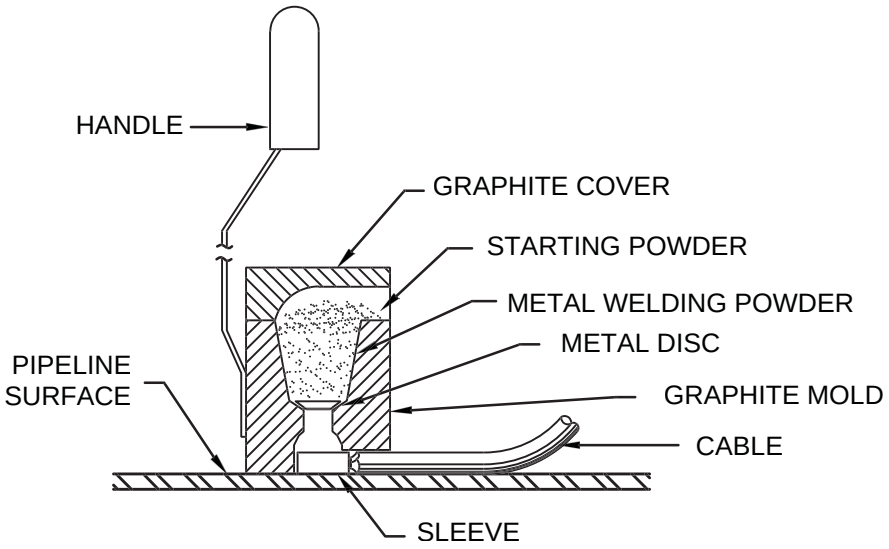
CABLE IDENTIFICATION

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003

REVISED: DEC. 31, 2013

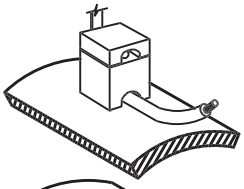
SHEET No. CP-15



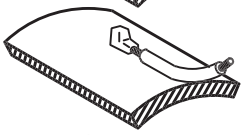
STEP 1. FILE STRUCTURE CONNECTION AREA TO BARE SHINING METAL AND CLEAN.

STEP 2. STRIP INSULATION FROM WIRE. ATTACH SLEEVE REQUIRED ON #6 AWG WIRE OR SMALLER.

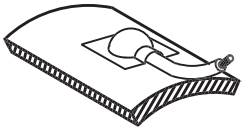
STEP 3. HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR AND IGNITE WITH FLINT GUN.



STEP 4. REMOVE SLAG FROM CONNECTION AND PEEN WELD FOR SOUNDNESS.



STEP 5. COVER CONNECTION AND EXPOSED STRUCTURE SURFACE WITH EPOXY COATING COMPOUND.



NOTE: PROCEDURE SHOWN ABOVE IS TO BE USED AS A GENERAL GUIDE ONLY. CONSULT MANUFACTURER'S LITERATURE FOR SPECIFIC INSTALLATION INSTRUCTIONS.

(Not To Scale)

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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

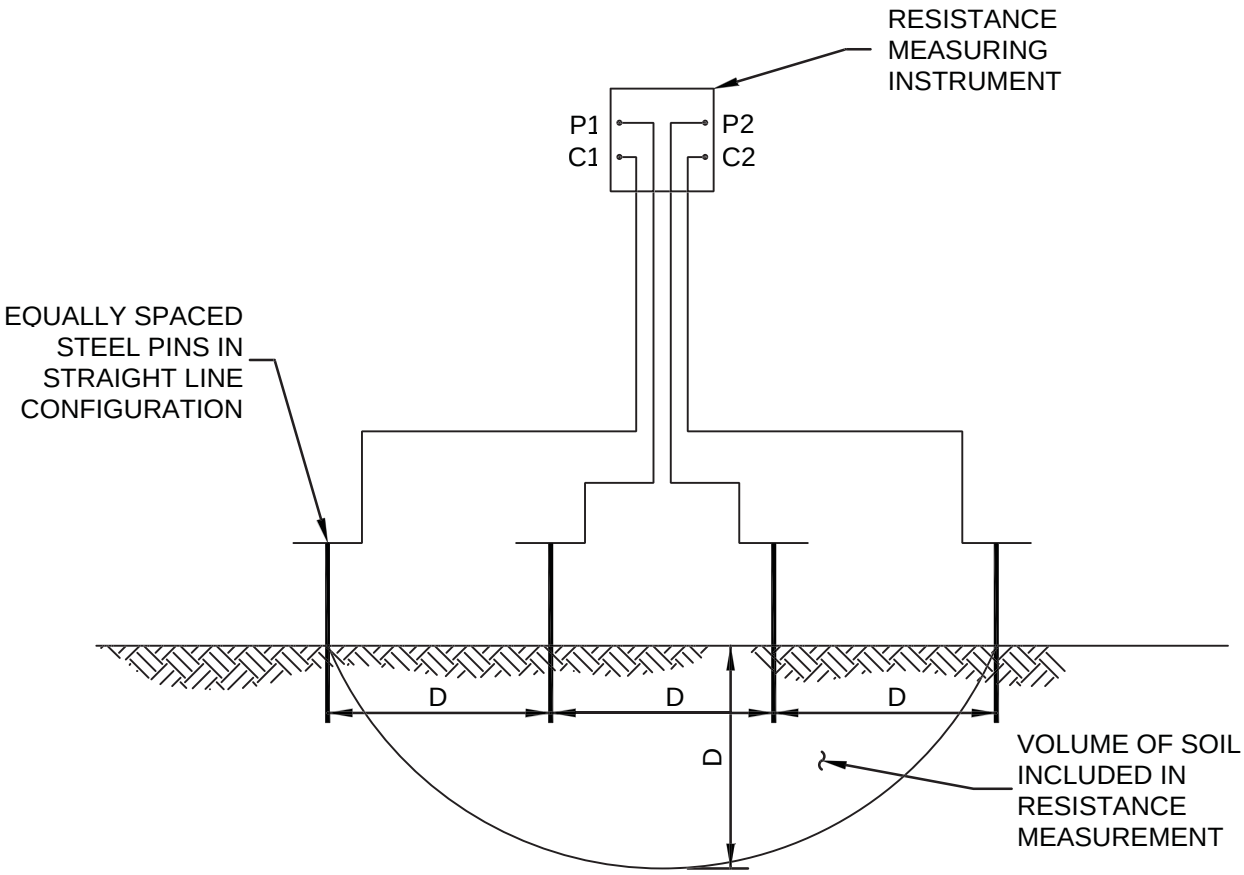
EXOTHERMIC WELD PROCESS

BALWINDER S. GREWAL CITY ENGINEER

DATE: JAN.31, 1999

REVISED: DEC. 31, 2013

SHEET No. **CP-16**



WHERE D = DEPTH TO BOTTOM OF PIPE

(Not To Scale)

REGISTERED PROFESSIONAL ENGINEER
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C 49122
EXP. 9/30/14
STATE OF CALIFORNIA

ENGINEERING DEPARTMENT

THE CITY OF BRENTWOOD

WENNER FOUR PIN RESISTIVITY TEST

BALWINDER S. GREWAL CITY ENGINEER

DATE: JAN. 31, 1999

REVISED: DEC. 31, 2013

SHEET No.
CP-17