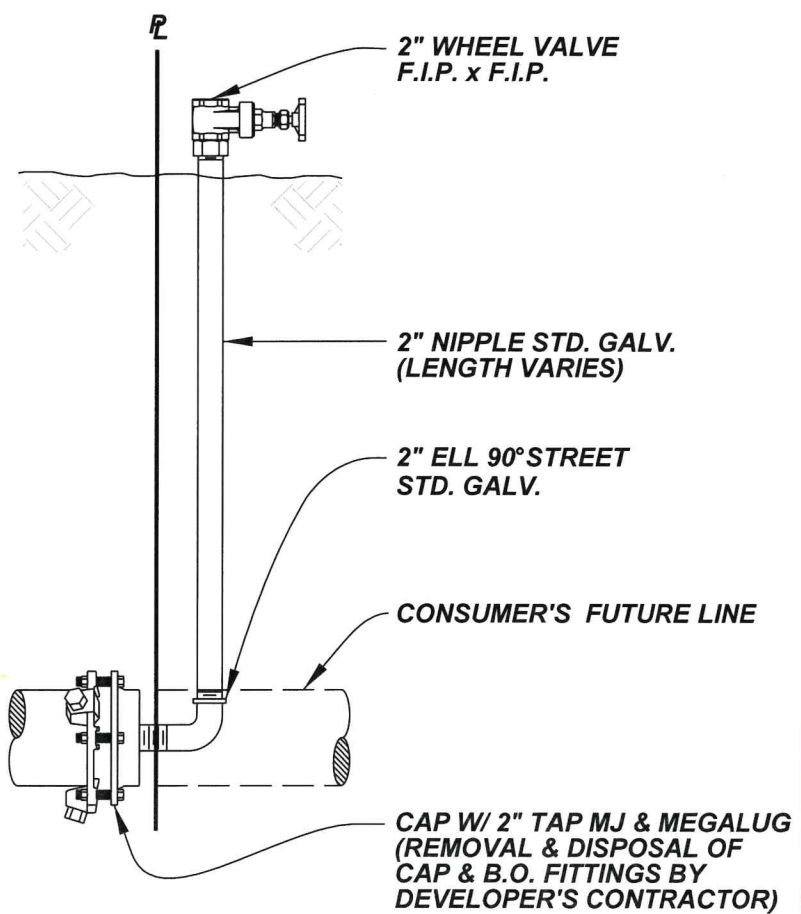
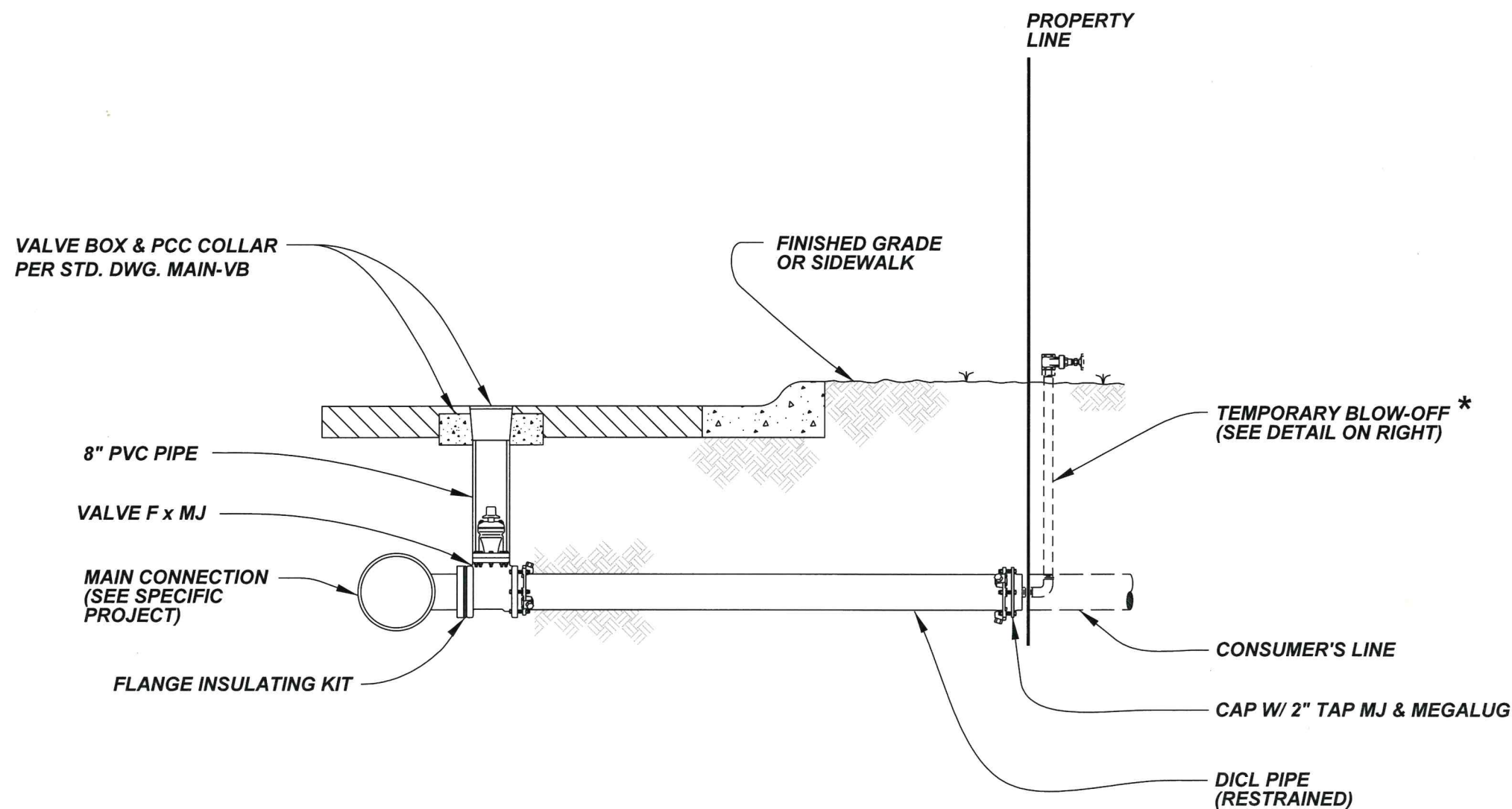


# Mains, Hydrants & Fire Services



**TEMPORARY BLOW-OFF DETAIL**

**\* SJWC'S CONTRACTOR IS RESPONSIBLE FOR FLUSHING THE FIRE SERVICE LINE IMMEDIATELY AFTER INSTALLATION.**

		AP	OPS
		CK	AP
		DATE	
SAN JOSE WATER COMPANY			
PRIVATE FIRE PROTECTION SERVICE			
BY	N. TRINH	<i>C. Smith</i> 10/8/18	REF. NOS.
DATE	9/30/2018	OPERATIONS	
CK	<i>E. Tran</i> NO	ENGINEERING	DWG. NO.
BY	SCALE NONE	<i>A. ...</i> 10/8/18	FS
		VICE PRESIDENT OF ENGINEERING	

3/8" ELL 90° STREET GALV

1/2" AIR VALVE, APCO #55

1/2" NIPPLE BRASS

3/4" X 1/2" RDCR BRASS

3/4" NIPPLE BRASS

3/4" ELL 90° GALV

PIPE SUPPORT

L/S AREA

4" X 26" X 26" CONC SLAB w/ 2" DIA. HOLE

2" PIPE PVC

AIR VALVE ENCLOSURE 20" X 20" X 20" (SEE CSJ STD DWG W-12 FOR BOX FABRICATION)

3/4" BALL LEVER VALVE FIP X FIP

3/4" X 2" NIPPLE, STD BRASS

3/4" ELL 90° GALV

3/4" CPLG, MIP X FLR

EXIST. CURB & GUTTER

LIP OF GUTTER

LIP OF GUTTER

3/4" COPPER PIPE (MIN. 2% SLOPE)

3/4" QUARTER BEND CPLG, FIP X FLR

\* 3/4" CORP STOP, CC X FLR

\*\* 3/4" CORP STOP, IP X FLR

PIPE CONNECTION (SEE TAPPING SCHEDULE)

SET CORP AT HIGH POINT OF PIPE

MAIN CROSS SECTION OF PIPE

**TAPPING SCHEDULE**

PIPE	PIPE CONNECTION	SIZE
STEEL	* SDL, SSCC, (THRU 10 3/4") ** WELD CPLG (ALL OTHERS)	NOM. DIA. X 3/4" 3/4"
AC	* SDL, SSCC, (4") * DIR TAP, STOP CORP (6" & OVER)	NOM. DIA. X 3/4" 3/4"
CI & DICL	* DIRECT TAP, STOP CORP	3/4"
PVC	** SDL, PVC	NOM. DIA. X 3/4"

**NOTE:**

CORP AND LEVER VALVE TO BE LEFT OPEN

CONCRETE CAP & SAND BACKFILL TO BE PLACED ONLY IF:

- A. DISTANCE FROM TOP OF PIPE TO SUBGRADE IS 18" OR LESS.
- B. DISTANCE FROM TOP OF PIPE TO FINISHED GRADE IS LESS THAN 3'.

BLOW OFF MAIN BEFORE INSTALLING AIR VALVE

SEE MAIN-AVpavt FOR INSTALLATION OF AIR VALVE IN PAVEMENT

REFER TO MATERIAL SPECIFICATIONS LIST FOR MAKES & MODEL NUMBERS

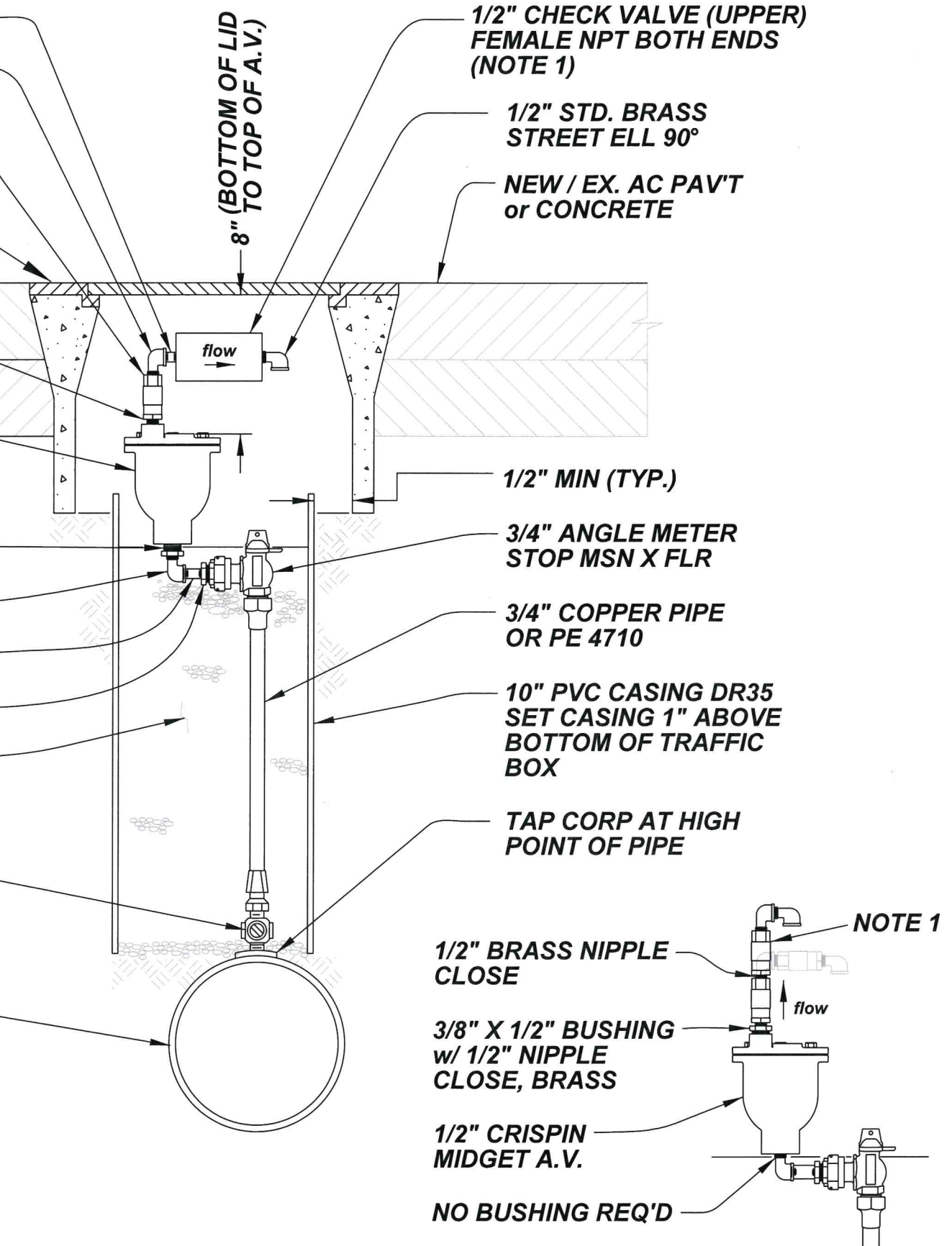
REVISION	DATE	CK	AP	OPS

SAN JOSE WATER COMPANY

STANDARD 1/2" AIR VALVE INSTALLATION (IN ENCLOSURE)

BY	DTFOLK'G	OPERATIONS	REF. NOS.
DATE	3/14/2013		
CK		ENGINEERING	DWG. NO.
BY	SCALE	CHIEF ENGINEER	MAIN-AVag

- 1/2" X 1/2" BRASS NIPPLE CLOSE
- 1/2" STD. BRASS STREET ELL 90°
- 1/2" CHECK VALVE (LOWER)  
FEMALE NPT BOTH ENDS
- 12" VALVE BOX w/  
TRAFFIC RATED LID
- 1/2" BRASS NIPPLE  
CLOSE
- 1/2" APCO #50  
AIR VALVE
- 1" X 1/2" BRASS BUSHING
- 1/2" BRASS STREET ELL 90°
- 1/2" X 2 1/2" BRASS NIPPLE
- 3/4" X 1/2" BRASS BUSHING
- PLACE #6 PEA GRAVEL  
FILL TO BOTTOM OF  
ANGLE METER STOP
- FOR PIPE CONNECTION  
(SEE STD DWG SER-1c)
- \* 3/4" CORP STOP; (FLR X CC) OR
- \*\* 3/4" CORP STOP; (FLR X IP)



TAPPING SCHEDULE		
PIPE	PIPE CONNECTION	SIZE
STEEL	* SDL, SSCC, (THRU 10 3/4") ** WELD CPLG (ALL OTHERS)	NOM. DIA. X 3/4" 3/4"
AC & CI	* SDL, SSCC, (4")	NOM. DIA. X 3/4"
DICL	* DIRECT TAP, CORP STOP	3/4"
PVC	** SDL, PVC	NOM. DIA. X 3/4"

AIR VALVE & CHECK VALVE MAKES		
A.V.	C.V. (LOWER)	C.V. (UPPER <sup>1</sup> )
APCO-50	KITZ WAFER or APOLLO BALL	KITZ WAFER, APOLLO BALL or TIDEFLEX DUCKBILL
CRISPIN MIDGET	KITZ WAFER or APOLLO BALL	KITZ WAFER, APOLLO BALL or TIDEFLEX DUCKBILL

**NOTES:**

- 1) KITZ WAFER C.V. MUST BE MOUNTED VERTICALLY
- 2) BLOW OFF MAIN BEFORE INSTALLING AIR VALVE
- 3) CORP AND ANGLE STOP TO BE LEFT OPEN
- 4) MSN = METER SWIVEL NUT
- 5) REFER TO MATERIAL SPECIFICATIONS LIST FOR COMPLETE LIST OF MAKE & MODEL NUMBERS.

**SAN JOSE WATER COMPANY**  
**STANDARD 1/2" AIR VALVE  
INSTALLATION (IN PAVEMENT)**

BY	DATE	CK	AP	OPS	REF. NOS.
N. TRINH	5/7/2019	APCO #50			
DATE	CK	AP	OPS		DWG. NO.
5/7/2019	APCO #50				MAIN-AV pvt
BY	SCALE	DATE			
NONE		5/7/19			

**CRISPIN MIDGET FITTINGS**

2" X 6" STD. GALV.  
NIPPLE TOE X POE

2" STD. GALV.  
STREET ELL 90°

B38 METER BOX  
(17-1/4" X 30")

2" APCO #145C AIR VALVE

2" STD. GALV. PIPE

2" STD. GALV. ELL 90°

2" STD. GATE VALVE

2" STD. GALV.  
STREET ELL 90°

2" X 6" STD. GALV.  
NIPPLE TBE

PIPE CONNECTION  
(SEE SER-2c)

MAIN

2" STD. BLTD CPLG.

2" STD. GALV. PIPE

22" X 22" X 22"  
VENTED METAL BOX

2" STD. GALV. ELL 90°  
2" STD. GALV. STREET  
ELL 90°

SCREEN - 1/8" MESH X  
16 GA. WIRE

2" STD. GALV. PIPE

2" STD. GALV. TEE

2" X 24" STD. GALV. NIPPLE

2" STD. GALV. CAP

12" X 24" CONC. FOOTING

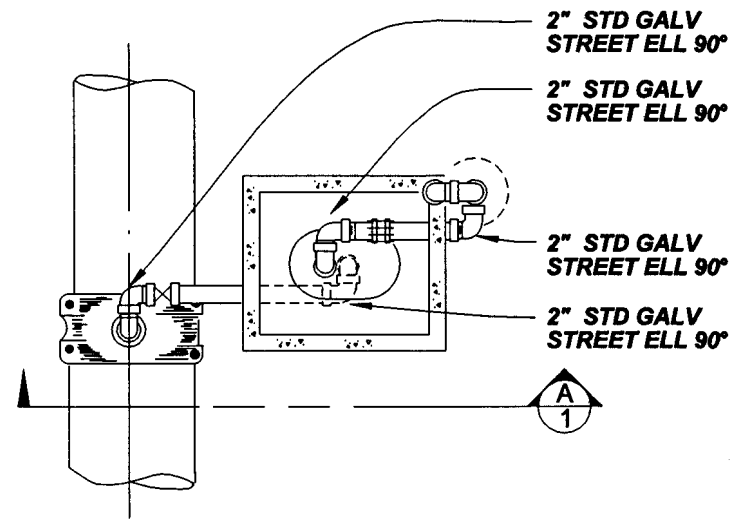
2" STD. GALV. PIPE SLOPE  
UP & AWAY FROM MAIN

12"  
MIN.

SECTION

NO SCALE

A  
1



PLAN VIEW

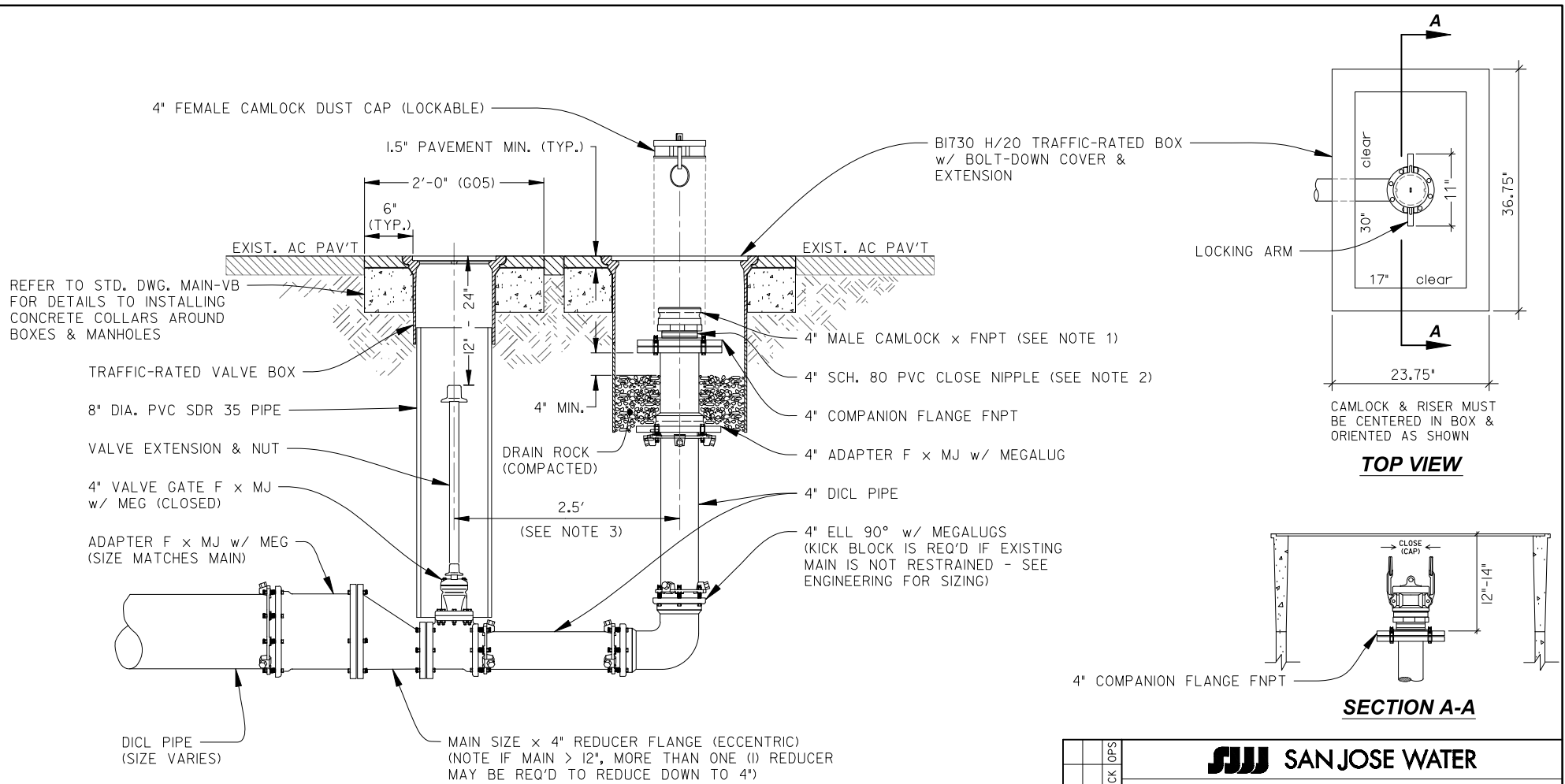
NO SCALE

NOTE:

WRAP ALL PIPE W/2 LAYERS  
PROTECTIVE WRAP

SEE MAIN-AVag FOR AIR VALVE  
ENCLOSURE BOX INSTALLATION

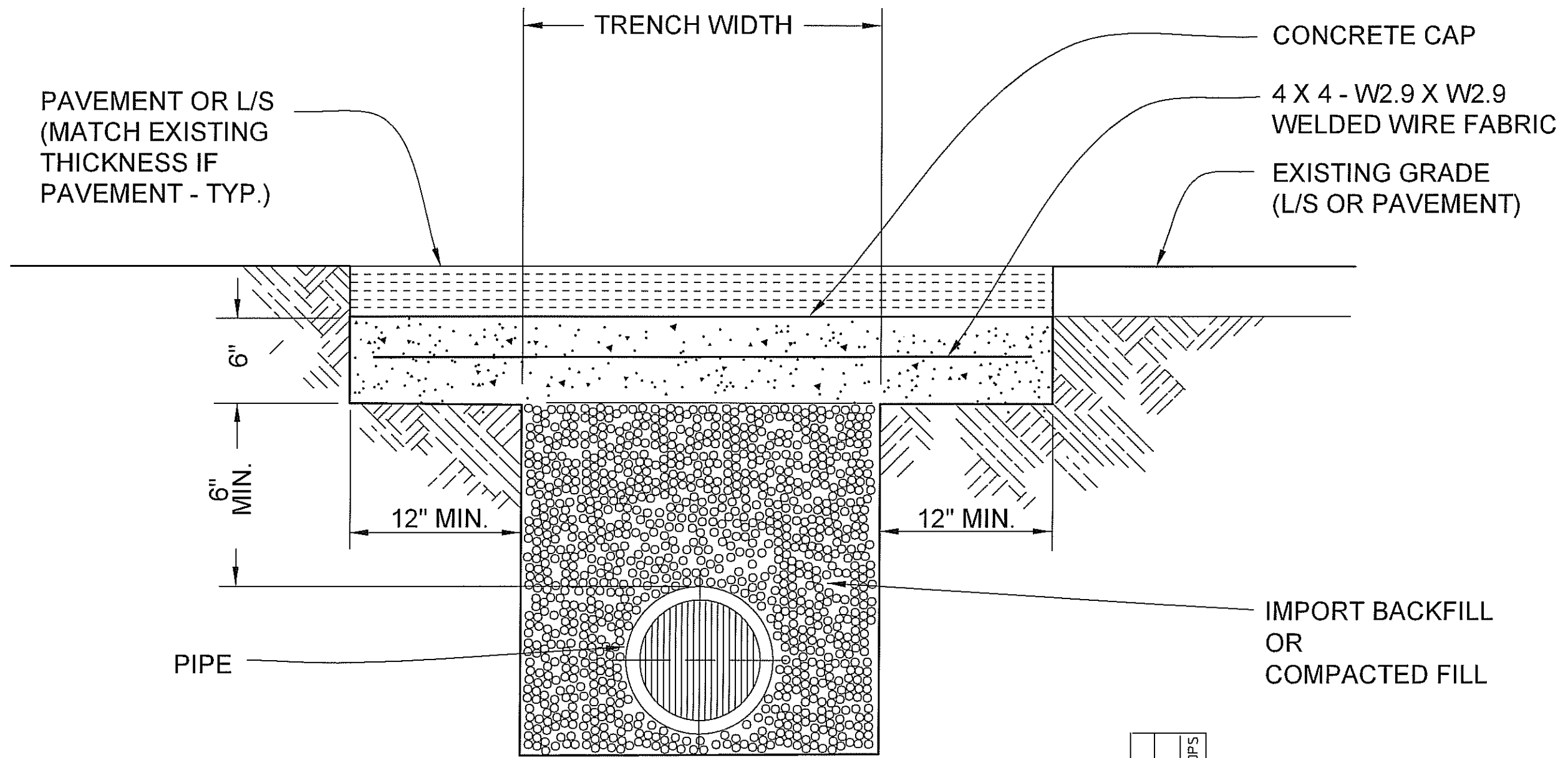
REVISION	DATE	CK	AP	OPS
SAN JOSE WATER COMPANY				
STANDARD 2" SINGLE AIR VALVE INSTALLATION				
BY	P. JOCHIM	<i>P. Jochim</i>	OPERATIONS	REF. NOS. A-16-139B-1
DATE	15 NOV '04	<i>[Signature]</i>	ENGINEERING	DWG. NO. MAIN-AV2
CK	<i>[Signature]</i>	<i>[Signature]</i>	CHIEF ENGINEER	
BY	SCALE	SHOWN		



**NOTES:**

- 01) CAMLOCK TO BE INSTALLED W/ NOTCHES PERPENDICULAR TO SHORT SIDE OF THE BOX.
- 02) PVC CLOSE NIPPLE SHALL ONLY BE USED WHERE PRESSURE IS LESS THAN 160 PSI. WHERE PRESSURE IS ≥ 160 PSI, USE STD. GALV. CLOSE NIPPLE, AND APPLY PETROLATUM WAX TAPE FROM ABOVE GRADE PIPING AND FITTINGS TO ANY EXPOSED PARTS OF THE CLOSE NIPPLE.
- 03) MINIMUM LENGTH TO AVOID TWO (2) CONCRETE COLLARS. LENGTH WILL VARY DEPENDING ON LOCATION OF 4" BLOWOFF.

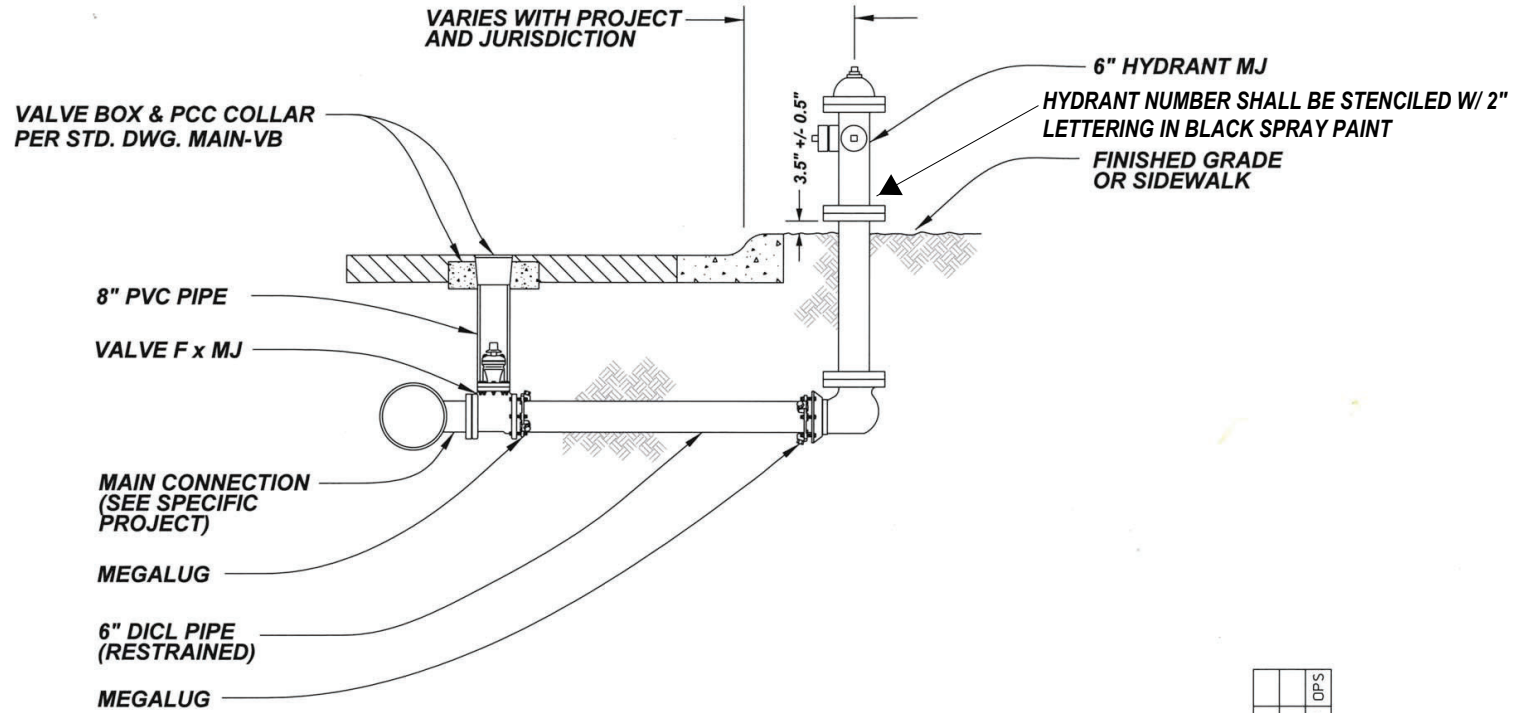
		<b>SJW SAN JOSE WATER</b>	
		<b>STANDARD 4" BLOWOFF INSTALLATION</b>	
DTF	BY	SCALE	NONE
REVISION	DATE	BY	DATE
1	04/15/2024	Rayer, Curt	04/15/2024
2		Folkner, Dean	
3		Tuttle, Bill	
CK	DATE	OPS	DATE
		REF. NOS.	
		DWG. NO.	<b>MAIN-4B0</b>



**SECTIONAL VIEW**

INSTALL CONCRETE CAP WHERE MAIN IS LESS THAN 30" COVER

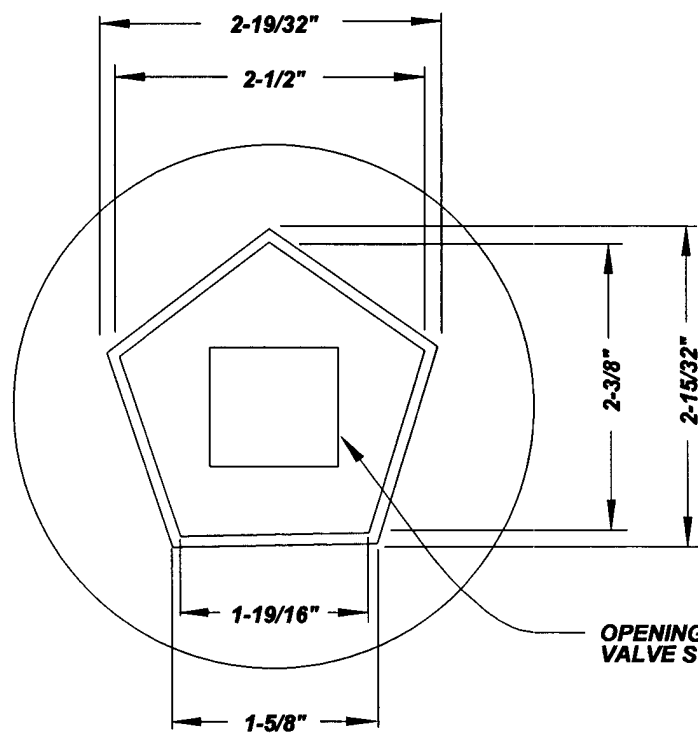
REVISION	DATE	BY	CK	AP	OPS
<b>SAN JOSE WATER COMPANY</b>					
<b>CONCRETE CAP ON SHALLOW MAINS</b>					
BY	P. JOCHIM	<i>[Signature]</i>			REF. NOS.
DATE	6/3/2013	OPERATIONS			
CK	<i>[Signature]</i>	ENGINEERING			DWG. NO.
SCALE	NONE	<i>[Signature]</i>			<b>MAIN-CC</b>
		VICE PRESIDENT OF ENGINEERING			



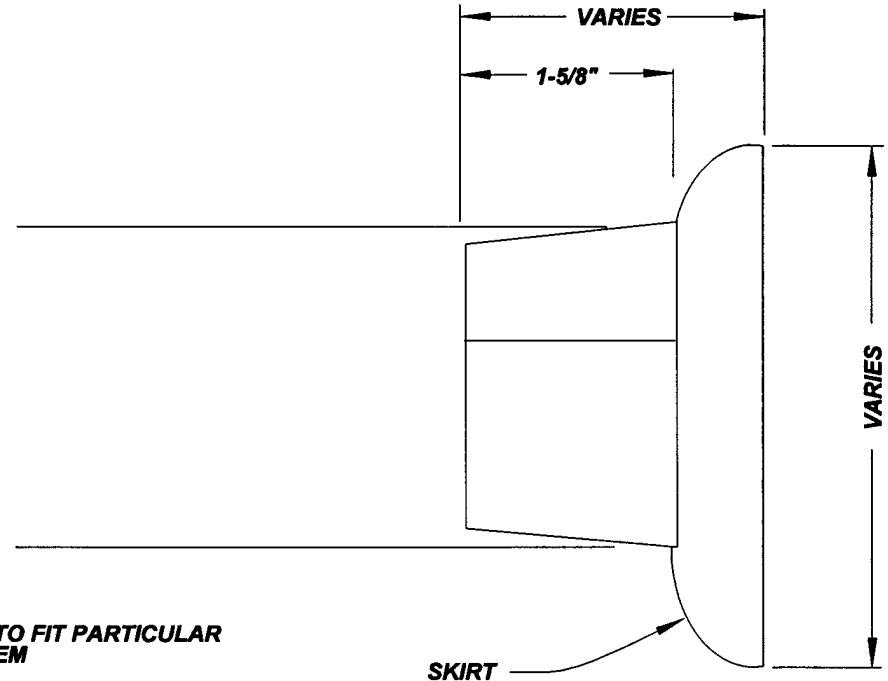
AP					
OPS					
CK					
DATE			SAN JOSE WATER COMPANY		
REVISION			STANDARD HYDRANT INSTALLATION		
BY	LJ DAVID		<i>[Signature]</i> 10/8/18		REF. NOS.
DATE	9/30/2018		OPERATIONS		DWG. NO.
CK	<i>[Signature]</i> ND		<i>[Signature]</i> 10/15/18		
SCALE	NONE		ENGINEERING		MAIN-HYD
			<i>[Signature]</i> 10/9/18		
			VICE PRESIDENT OF ENGINEERING		

Effective 3/7/2023





**TOP VIEW**



**SIDE VIEW**

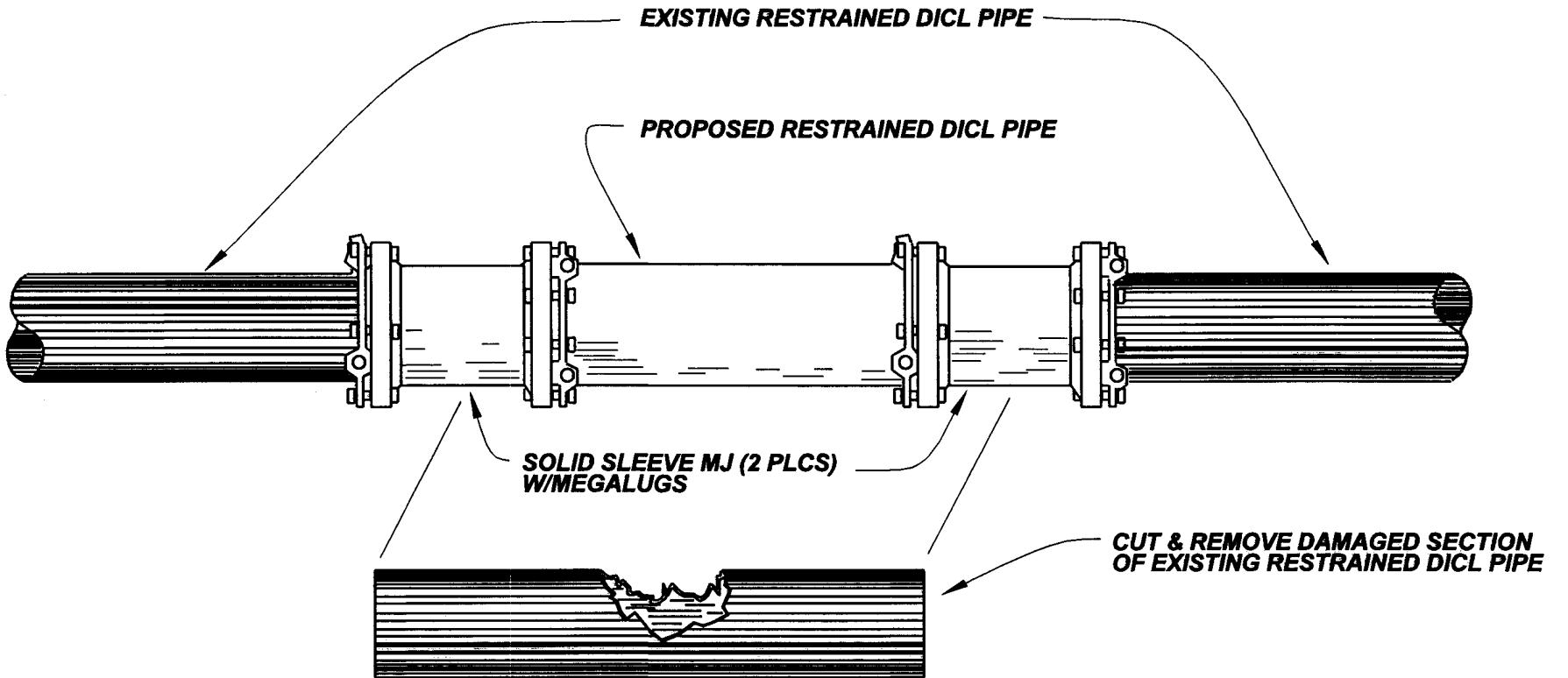
**NOTES:**

**DEPTH & DIAMETER OF SKIRT BELOW  
BASE OF NUT IS NOT CRITICAL**

**REMOVE SQUARE GATE VALVE WRENCH NUT FROM  
VALVE STEM AND REPLACE W/PENTAGON NUT.**

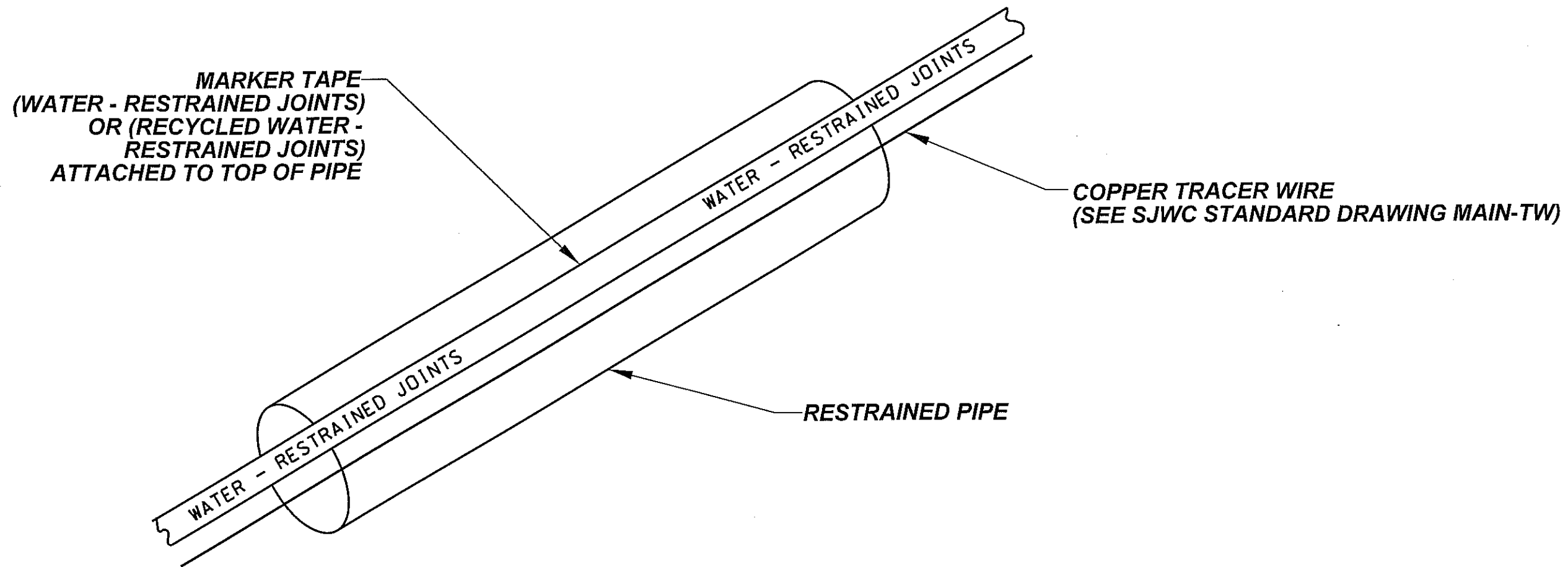
**MATERIAL: CAST IRON OR DUCTILE IRON**

				AP	DPS	<b>SAN JOSE WATER COMPANY</b>	<b>PENTAGON NUT FOR LEFT-HAND OPEN GATE VALVE</b>											
				CK														
				DATE														
				REVISION														
						BY P. JOCHIM												REF. NOS. A-12-154
						DATE 15NOV04												DWG. NO.
						CK EJM												<b>MAIN-PN</b>
						SCALE NONE												



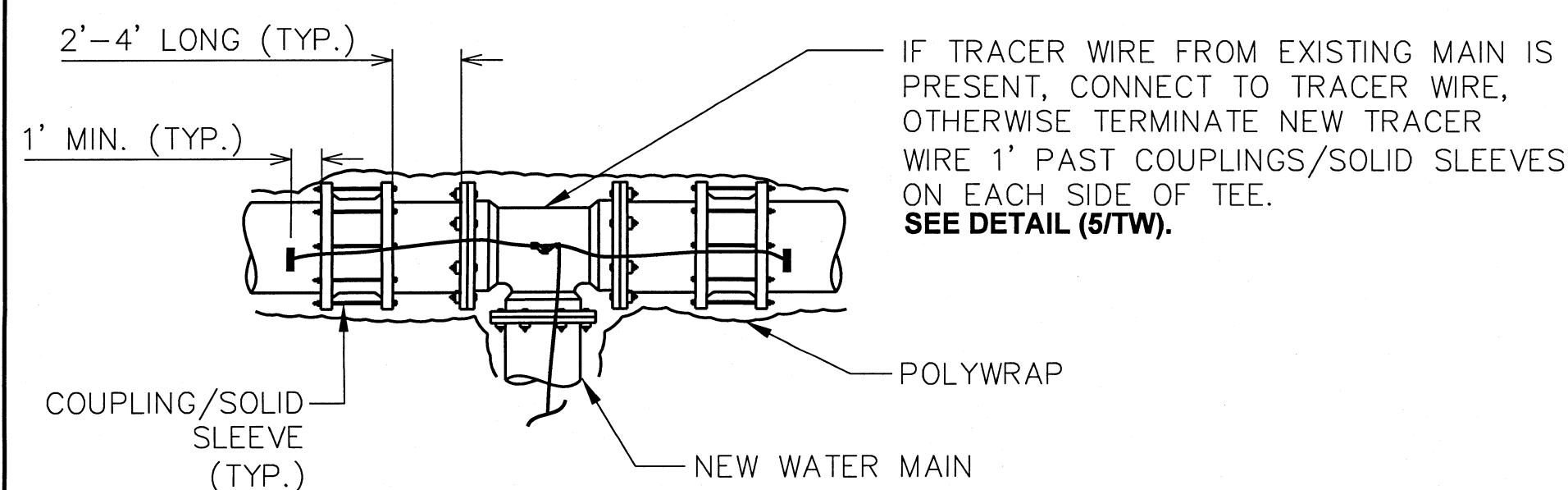
				OPS
			AP	
			CK	
			DATE	
				<b>SAN JOSE WATER COMPANY</b>
				<b>RESTRAINED PIPE REPAIR</b>
REVISION	BY			REF. NOS.
	P. JOCHIM			
	DATE	15 NOV '04		
	CK	ELM		
	SCALE	NONE		
				DWG. NO.
				<b>MAIN-RPR</b>

OPERATIONS  
ENGINEERING  
CHIEF ENGINEER

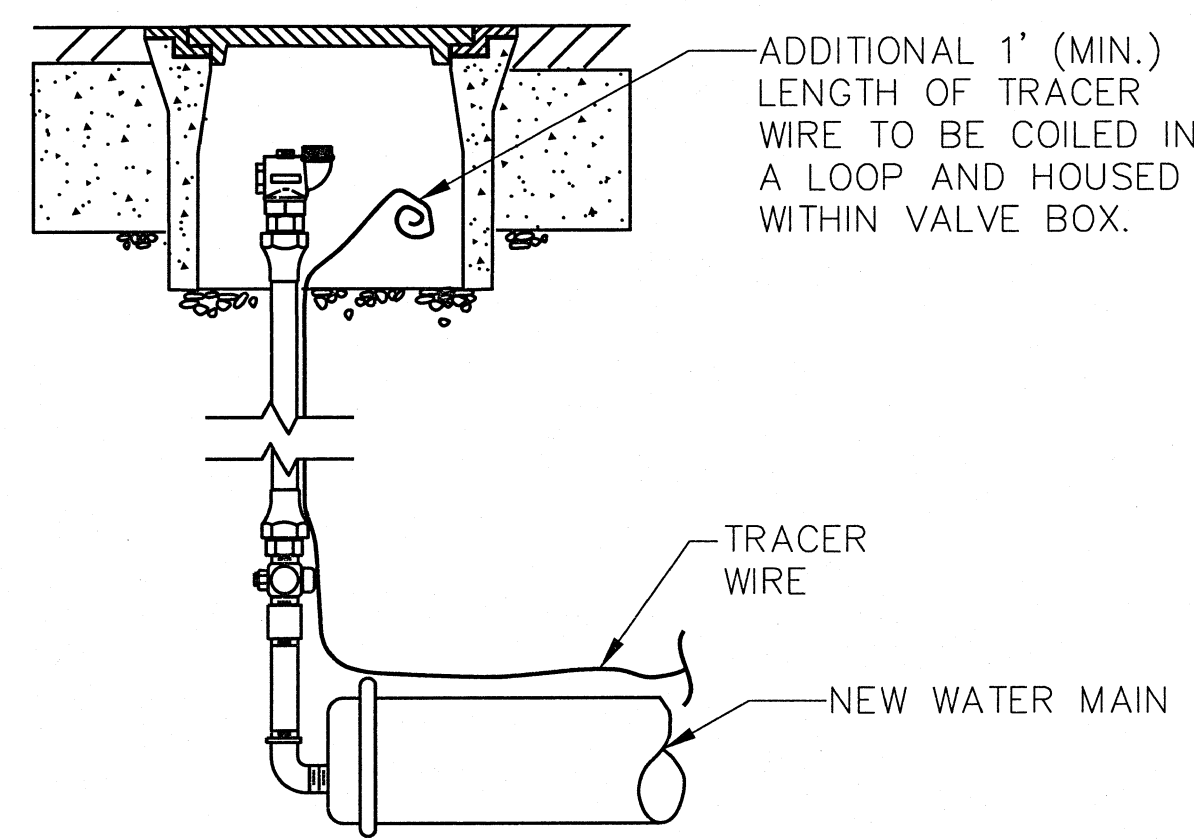


**RESTRAINED PIPE MARKER TAPE AND TRACER WIRE DETAIL**  
NTS

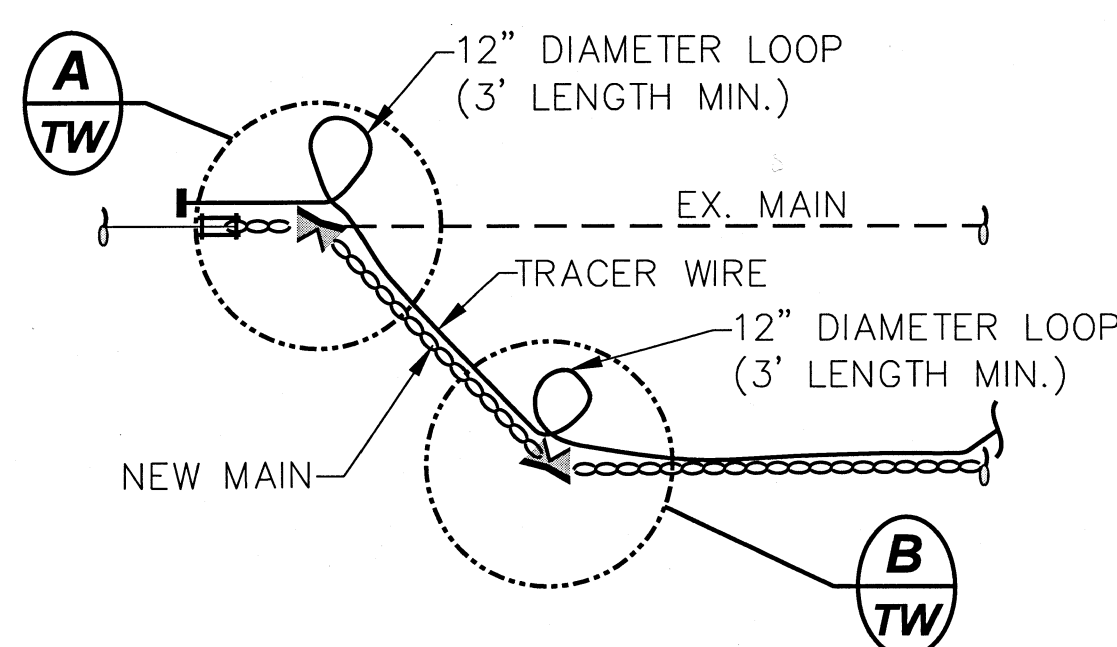
REVISION	DATE	CK	AP	DPS
SAN JOSE WATER COMPANY				
RESTRAINED PIPE MARKING				
BY	J. GUEVARA	<i>Juel Celis</i>	2/3/15	REF. NOS.
DATE	2/3/15			DISTRIBUTION SYSTEM / DATE
CK	TN 2/3/15	<i>TN</i>	2/3/15	ENGINEERING / DATE
BY	SCALE NONE	<i>[Signature]</i>	2/5/15	VICE PRESIDENT / OF ENGINEERING / DATE
				DWG. NO. MAIN-RPM



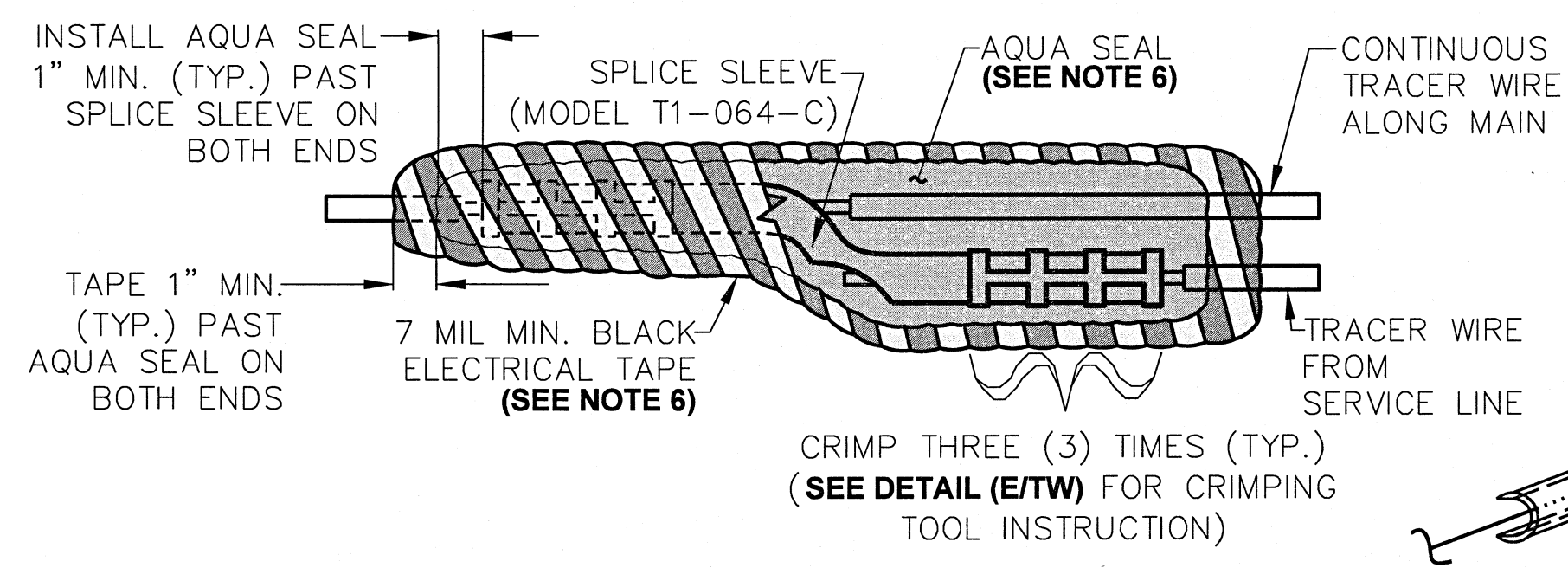
**TRACER WIRE WITH CUT IN TEE ON EXISTING MAIN** 1  
NTS TW



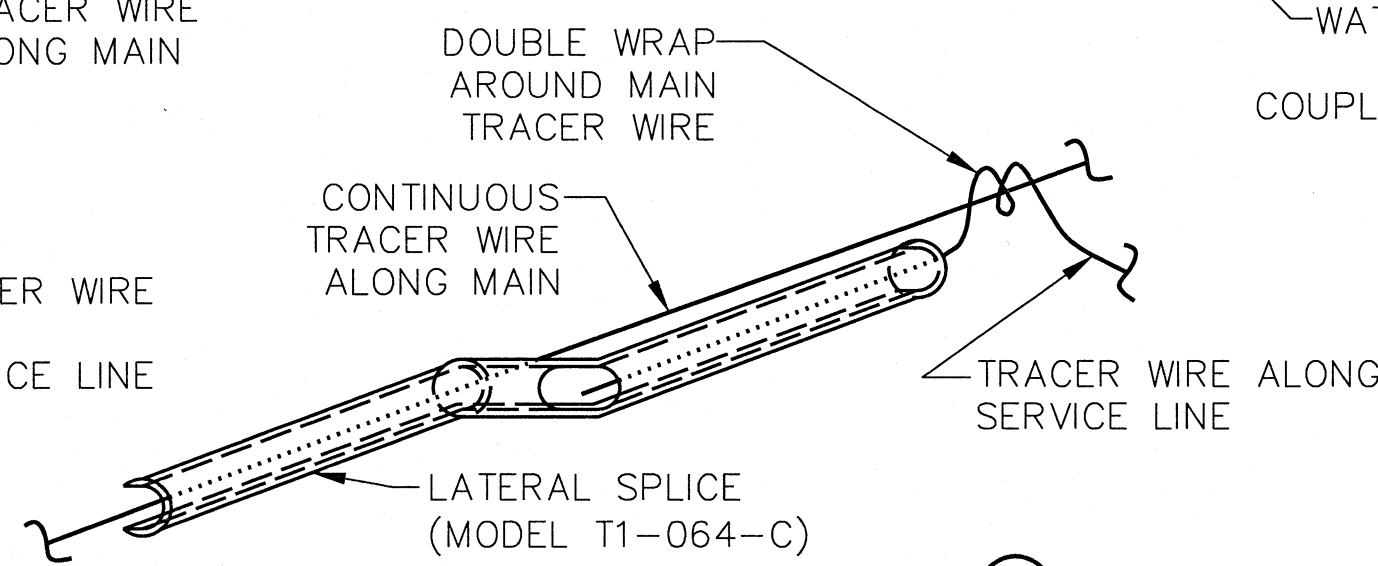
**TRACER WIRE WITH BLOWOFF INSTALLATION** 4  
NTS TW



**TRACER WIRE WITH MAIN INSTALLATION AT ELBOWS AND TIE-IN LOCATIONS** 2  
NTS TW

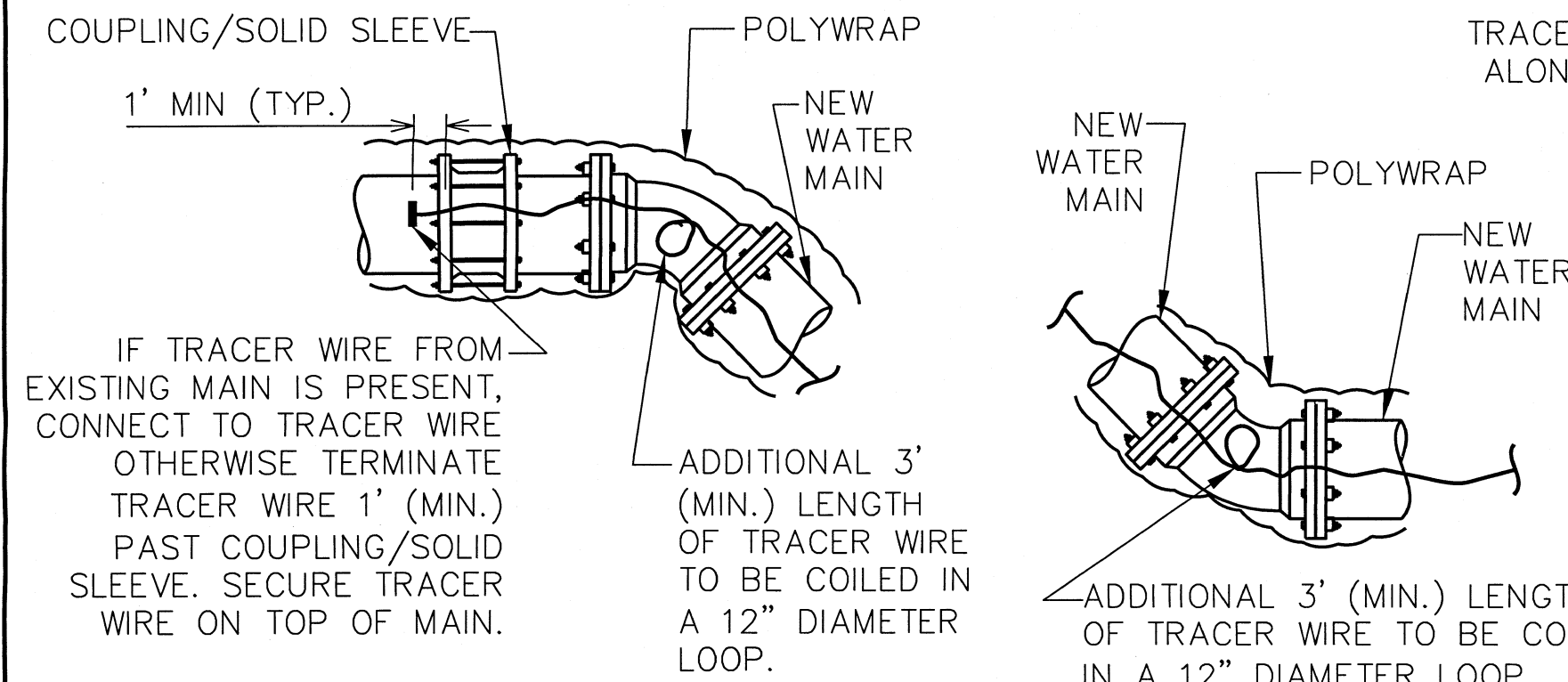


**LATERAL SPLICE CONNECTION**

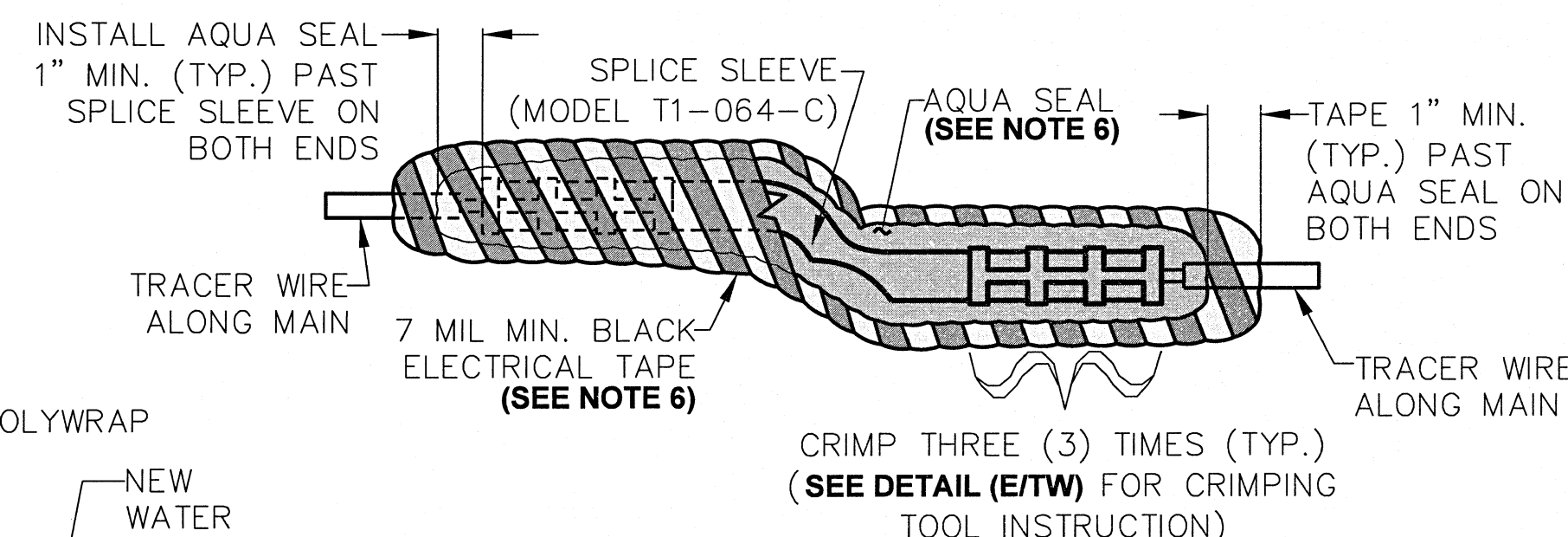


**TERMINAL END DETAIL** A TW

**ELBOW / DEFLECTION DETAIL** B TW



**TRACER WIRE AT A HYDRANT** 3  
NTS TW

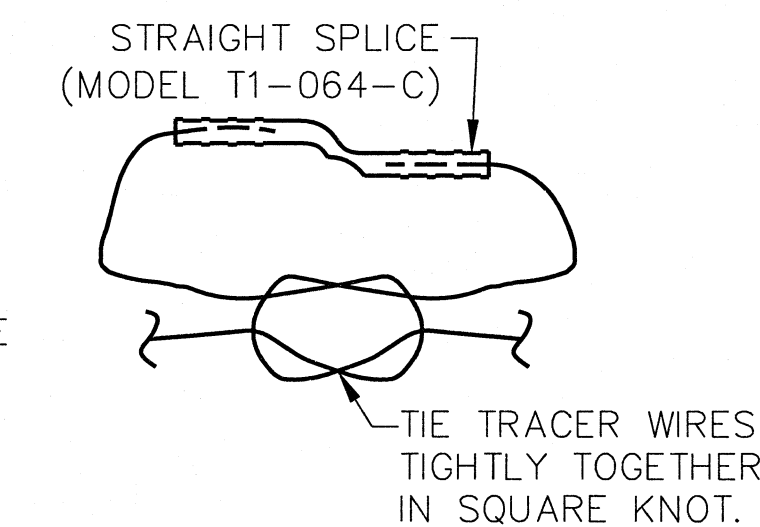


**STRAIGHT SPLICE CONNECTION**

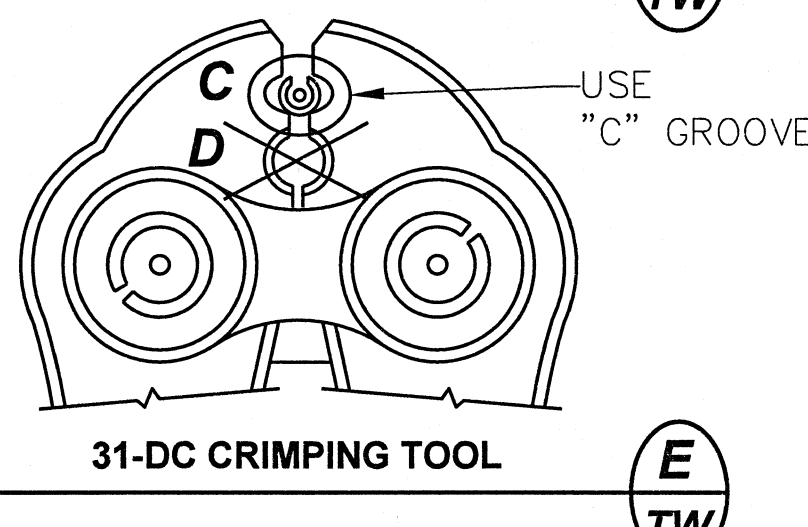
**TRACER SPLICE WIRE CONNECTION** 5  
NTS TW

**SPLICE CONNECTION NOTES:**

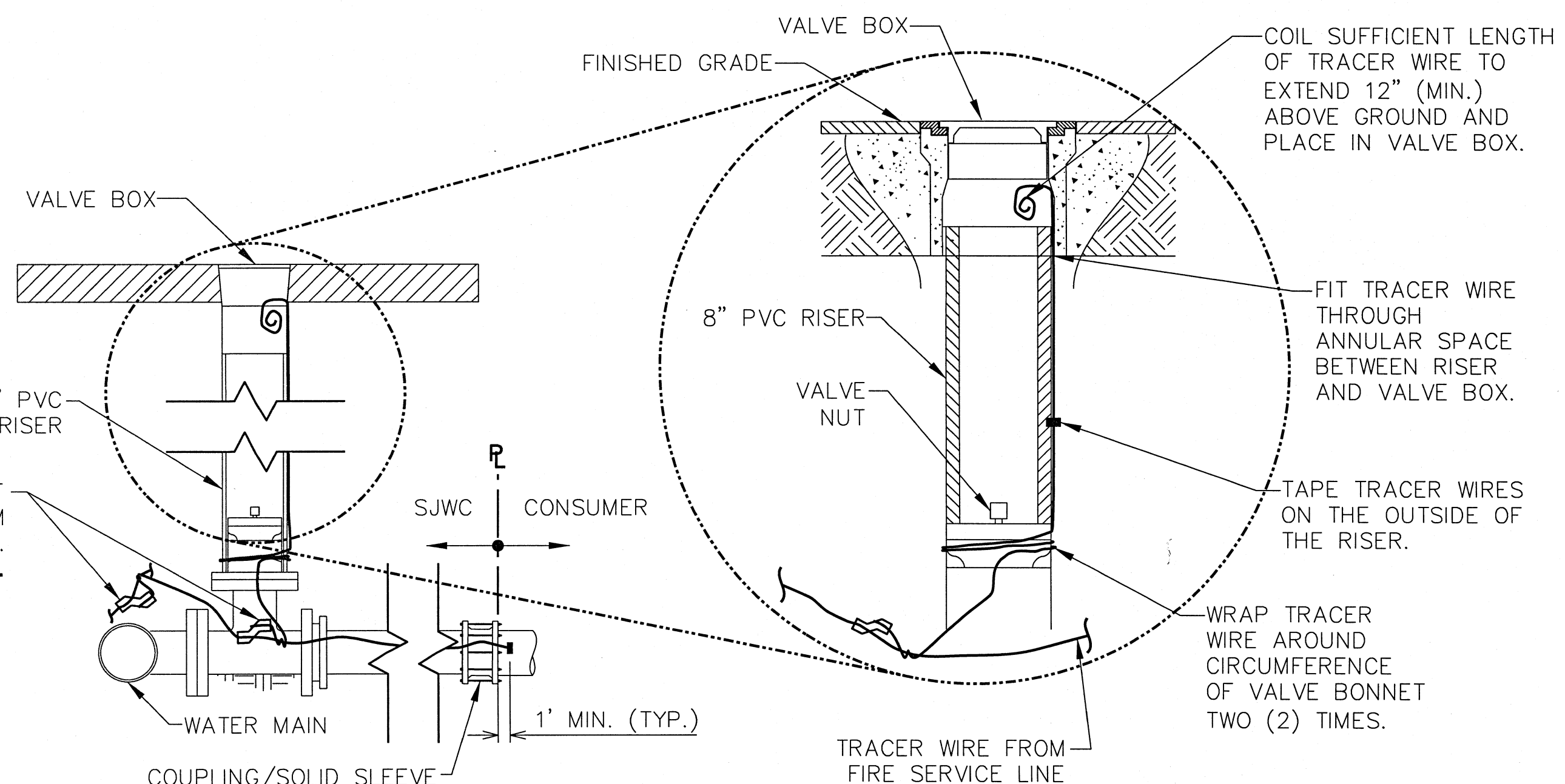
1. ALL CONNECTIONS ARE TO BE MADE WITH NICOTAP SPLICE SLEEVE T1-064-C MANUFACTURED BY NICOPRESS. THESE CONNECTIONS WILL BE INSTALLED USING NICOPRESS CRIMPING TOOL 31-DC IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. THE C-GROOVE SHALL BE USED. THE USE OF PLIERS OR TOOLS OTHER THAN SPECIFIED HEREIN IS UNACCEPTABLE. SEE DETAIL (E/TW).
2. WHEN IN USE, VERIFY PRESS DIAMETER OF CRIMPS WITH NICOPRESS TOOL GAUGE ON A DAILY BASIS. ADJUST CRIMPING TOOL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. ALL PORTIONS OF WIRE WITHIN SPLICE SLEEVE MUST BE STRIPPED (APPROXIMATELY 1-3/4"). AFTER COMPRESSION, THE SLEEVE AND THE WIRE INSULATION SHOULD BE SEPARATED BY APPROXIMATELY 1/8".
4. FOR ALL SERVICE CONNECTIONS, DOUBLE WRAP SERVICE TRACER WIRE AROUND MAIN TRACER WIRE THEN LEAD SERVICE TRACER WIRE ALONG SERVICE LINE. SEE DETAIL (C/TW).
5. AT END OF TRACER WIRE SPOOL LENGTH, CONNECT TO NEW SPOOL WITH STRAIGHT SPLICE SLEEVE AND APPLY A SQUARE KNOT. SEE DETAIL (D/TW).
6. APPLY AQUA SEAL TO FULL LENGTH OF CONNECTOR PLUS AN ADDITIONAL 1" MIN. PAST THE CONNECTOR IN BOTH DIRECTIONS ALONG TRACER WIRE. AFTER APPLICATION OF AQUA SEAL, HALF LAP AND DOUBLE WRAP FULL LENGTH OF SEALANT PLUS AN ADDITIONAL 1" MIN. IN BOTH DIRECTIONS ALONG TRACER WIRE WITH 7 MIL MIN. BLACK PVC ELECTRICAL TAPE.



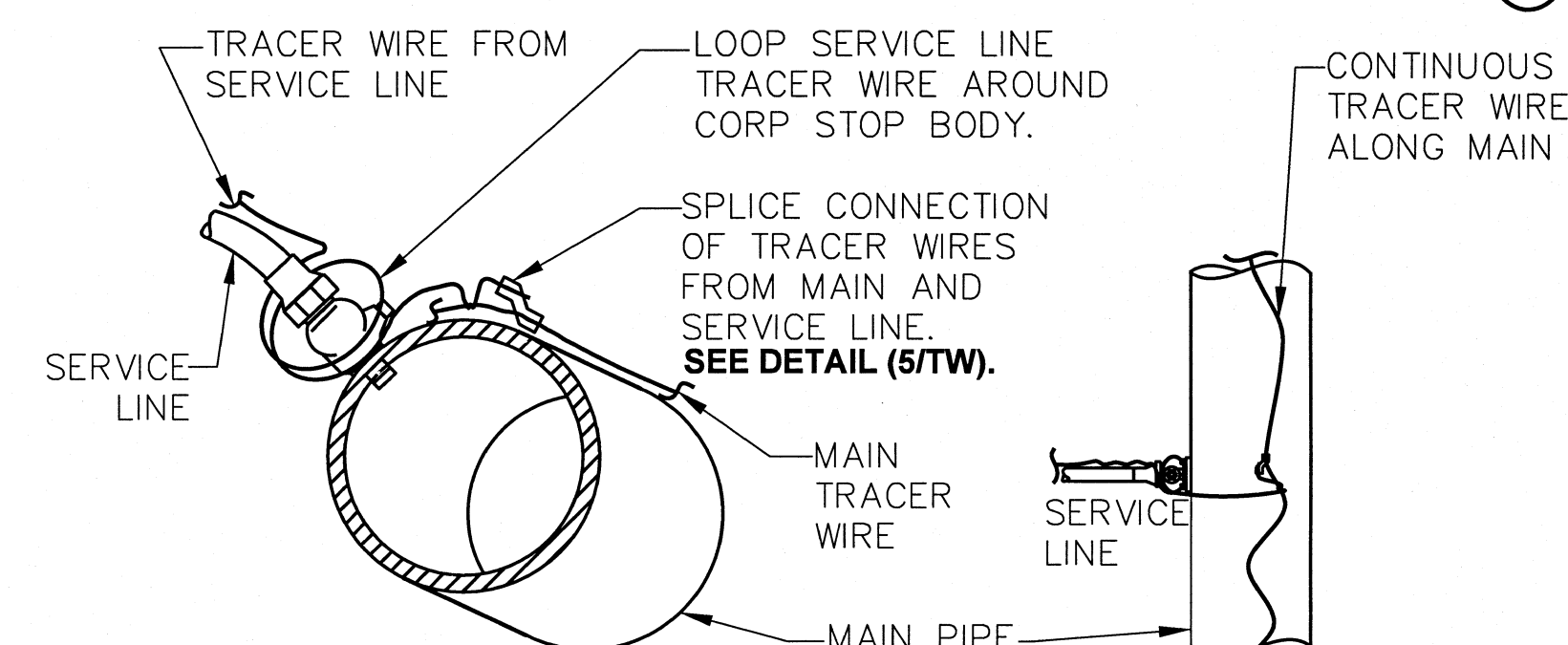
**END TO END CONNECTION** D TW



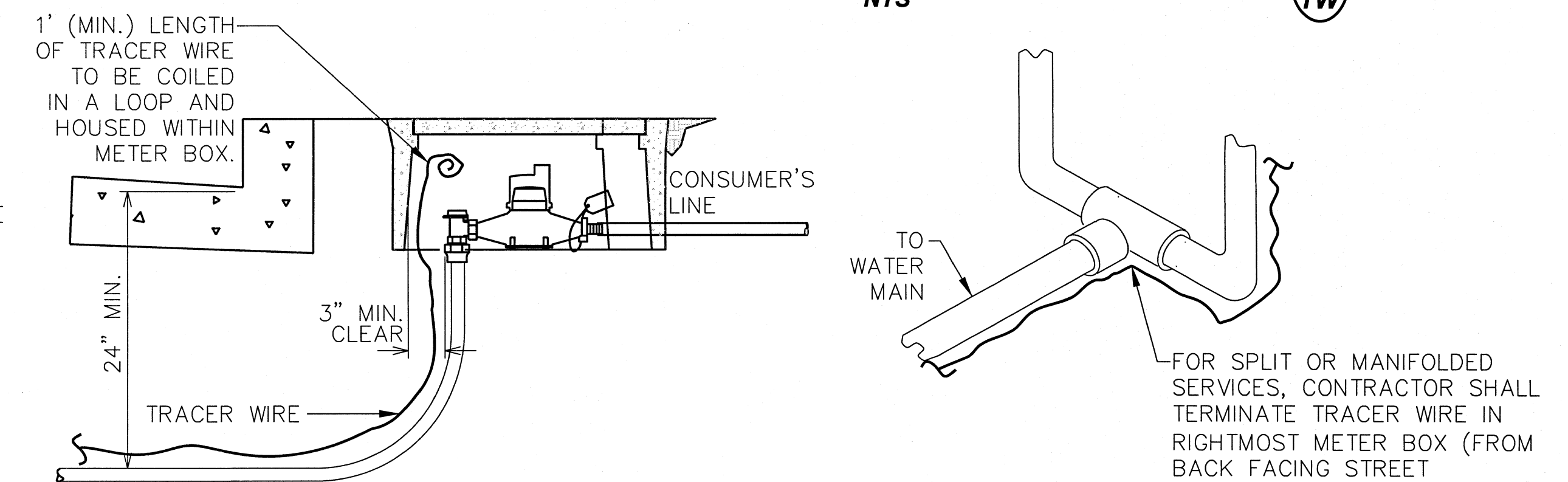
**31-DC CRIMPING TOOL** E TW



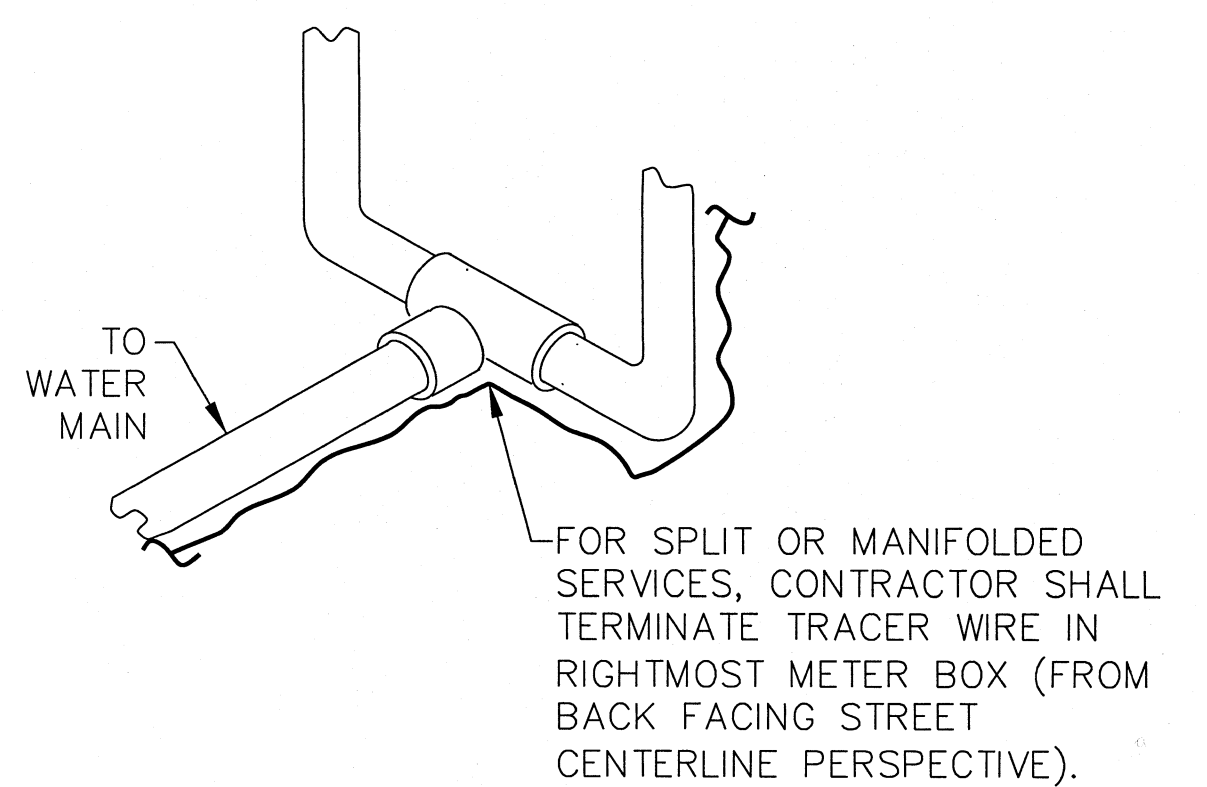
**TRACER WIRE WITH FIRE SERVICE INSTALLATION** 6  
NTS TW



**SERVICE LINE TRACER WIRE TIE-IN AT MAIN** 7  
NTS TW



**SERVICE TRACER WIRE AT WATER METER** 8  
NTS TW

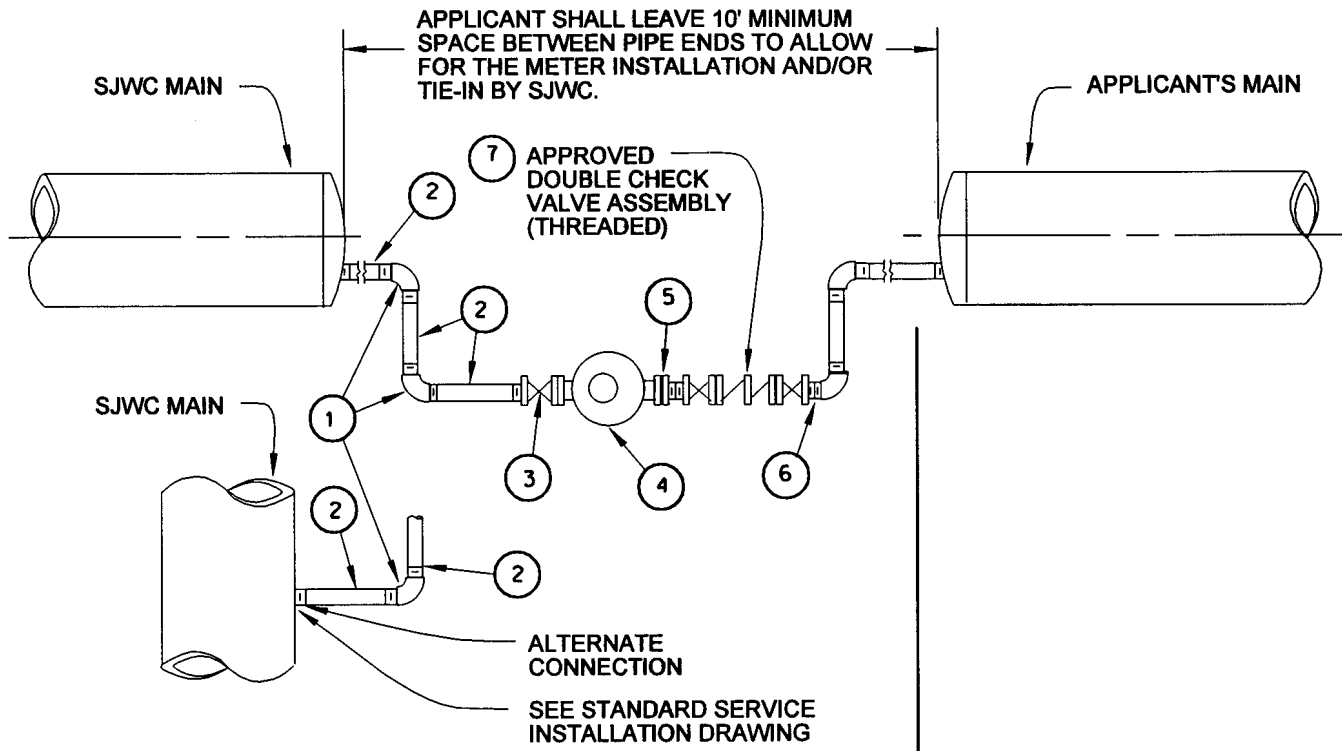


**SPLIT SERVICES** 9  
NTS TW

**GENERAL NOTES:**

1. ALL TRACER WIRES SHALL BE 12 AWG SOLID COPPER WIRE WITH 45 MIL HMW PE INSULATION (MIN.) RATED FOR DIRECT BURIAL AS MANUFACTURED BY AGAVE WIRE LTD.
2. TRACER WIRE SHALL BE INSTALLED ABOVE AND ALONG ALL WATER MAINS, SECURELY FASTENED TO TOP OF PIPELINE WITH TAPE.
3. TRACER WIRE SHALL TERMINATE IN LOCATIONS AS SHOWN AND AT METER BOXES, BLOWOFF BOXES, FIRE SERVICES, HYDRANTS, AND DEDICATED VALVE BOXES.
4. CONTRACTOR SHALL TEST TO CONFIRM CONTINUITY IN ALL TRACER WIRES. IF A SEGMENT OF TRACER WIRE IS FOUND TO BE DISCONTINUOUS, THE CONTRACTOR SHALL REPAIR OR REPLACE THE FAILED SEGMENT OF TRACER WIRE.
5. THE LOCATION OF THE TRACER WIRE AND LEADS SHALL BE MARKED ON THE RECORD DRAWINGS WITH THE LEAD LOCATION CLEARLY MARKED IN THE FIELD.

		<b>San Jose Water Company</b>	
<b>TRACER WIRE INSTALLATION</b>			
J. GUEVARA DATE: 2/20/2015 CHECK / DATE: TN 2/23/15 SCALE: AS SHOWN	 DATE: 2/23/15 DATE: 2/23/15 DATE: 2/23/15	REF. NOS. DWG. NO. <b>MAIN-TW</b>	SHEET 1 OF 1



FITTINGS FURNISHED & INSTALLED BY SJWC ←

← FITTINGS FURNISHED & INSTALLED BY APPLICANT

SOURCE OF WATER:  
 FOR CONNECTION TO A NEARBY FIRE HYDRANT, SJWC CONTRACTOR SHALL OBTAIN PORTABLE METER AND DOUBLE CHECK VALVE ASSEMBLY FROM SJWC STORES DEPARTMENT.

SJWC MATERIALS LIST	
#	DESCRIPTION
1	2" ELL 90° GALVANIZED
2	2" GALVANIZED PIPE
3	2" METER WHEEL VALVE, MODEL J-372-F
4	2" FLANGED METER (TURBO OR POSITIVE DISPLACEMENT)
5	2" METER FLANGE MALE
6	2" NIPPLE CLOSE BRASS
7	2" DOUBLE CHECK VALVE ASSEMBLY

FOR END CAP, SEE BLOCKING AND BLOW OFF DETAIL ON INSTALLATION DRAWING.

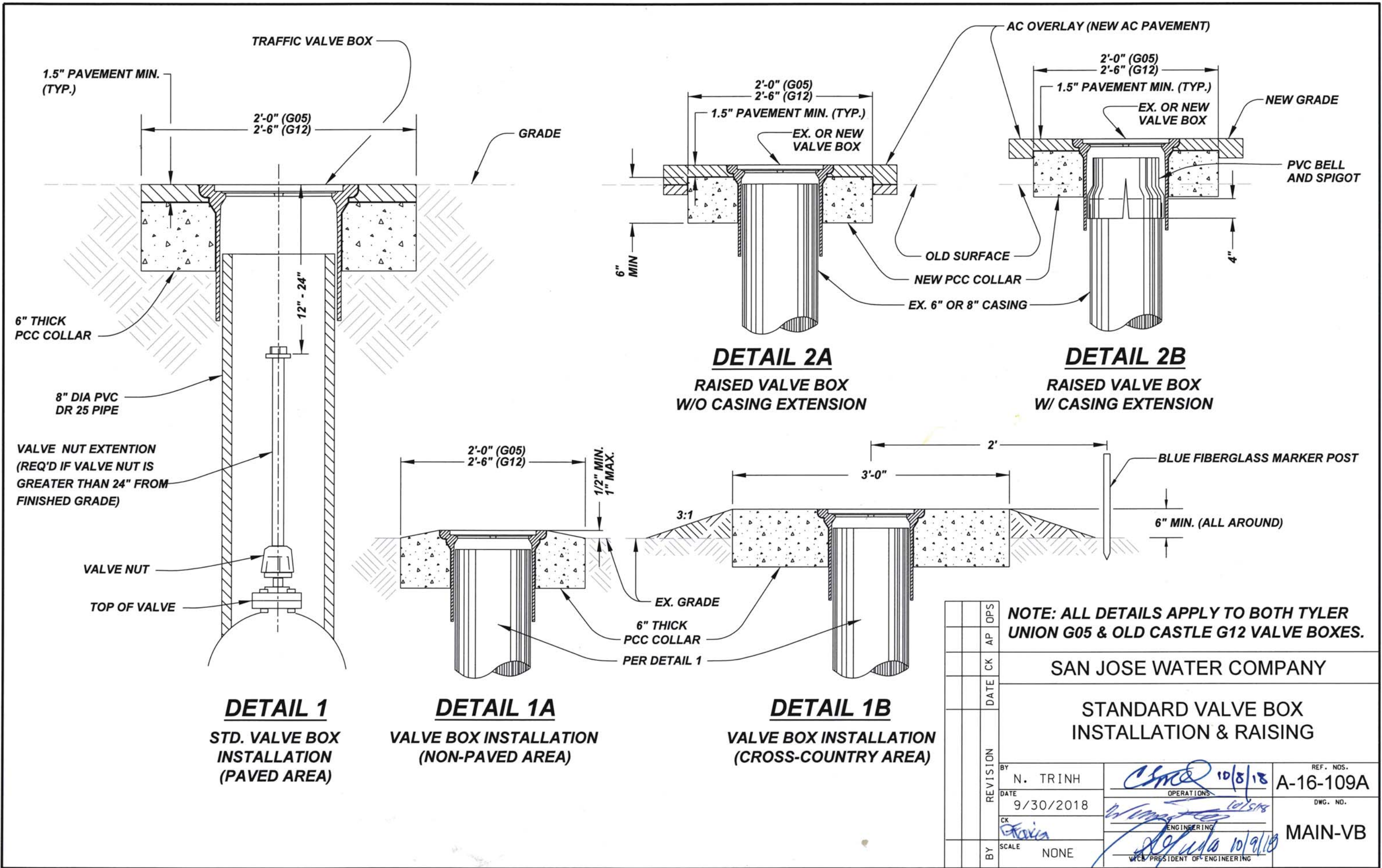
UPON ACCEPTANCE OF THE APPLICANT'S MAINS, SJWC WILL INSTALL THE FINAL CONNECTION BETWEEN THE APPLICANT'S MAIN AND SJWC MAIN.

					DPS
					AP
					CK
					DATE
					REVISION
					BY
					DATE
					CK
					BY
					SCALE

SAN JOSE WATER COMPANY

STANDARD TEMPORARY TIE-IN

BY	P. JOCHIM	<i>P. Victoria</i>	REF. NOS.	A-16-161
DATE	15 NOV '04	OPERATIONS		
CK	ELM	<i>William</i>	ENG. NO.	MAIN-TT
BY	SCALE NONE	<i>P. Victoria</i>		

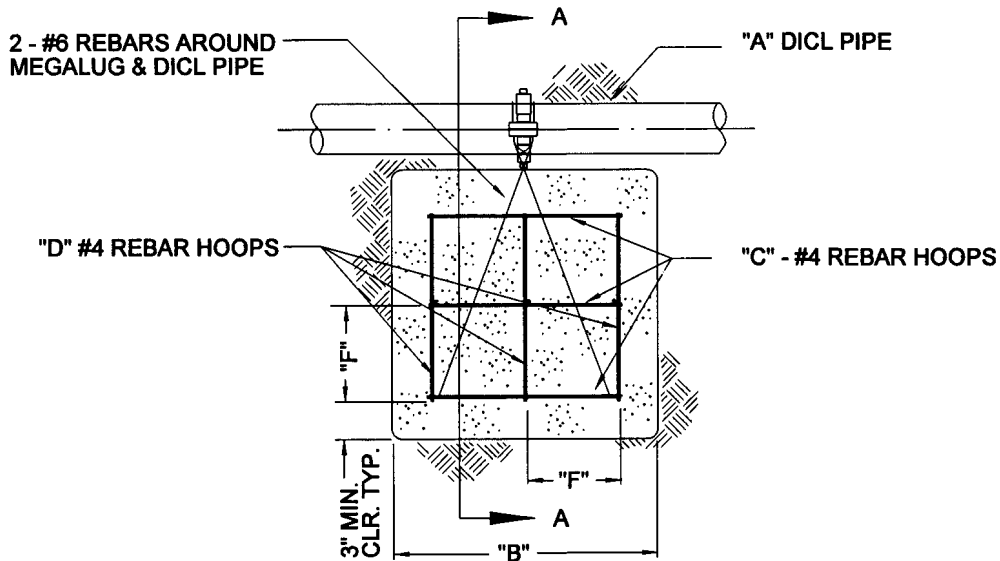


**NOTE: ALL DETAILS APPLY TO BOTH TYLER UNION G05 & OLD CASTLE G12 VALVE BOXES.**

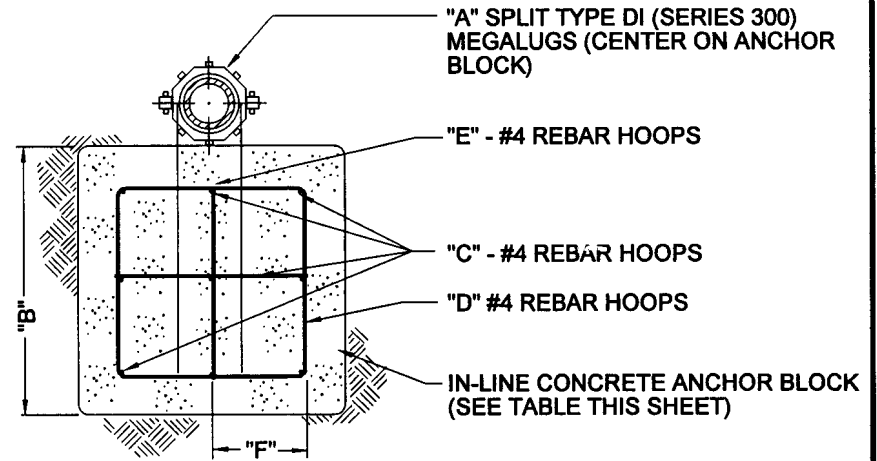
**SAN JOSE WATER COMPANY**

**STANDARD VALVE BOX  
INSTALLATION & RAISING**

REVISION	DATE	CK	AP	OPS	BY	SCALE	REF. NOS.
					N. TRINH	NONE	A-16-109A
	9/30/2018						DWG. NO.
							<b>MAIN-VB</b>
							WPC PRESIDENT OF ENGINEERING



**DETAIL**



**SECTION AA**

"A" NOMINAL SIZE (IN.)	"B" LENGTH OF ONE SIDE OF ANCHOR BLOCK (IN.)	"C" QUANTITY OF REBAR HOOPS -HORIZONTAL-	"D" QUANTITY OF REBAR HOOPS	"E" QUANTITY OF REBAR HOOPS -VERTICAL-	"F" APPROX. CENTER DISTANCE BETWEEN REBARS (IN.)
4"	30"	3	3	1	12"
6"	39"	4	4	2	11"
8"	45"	4	4	2	13"
10"	54"	5	5	3	12"
12"	60"	6	6	4	11"

**NOTES:**

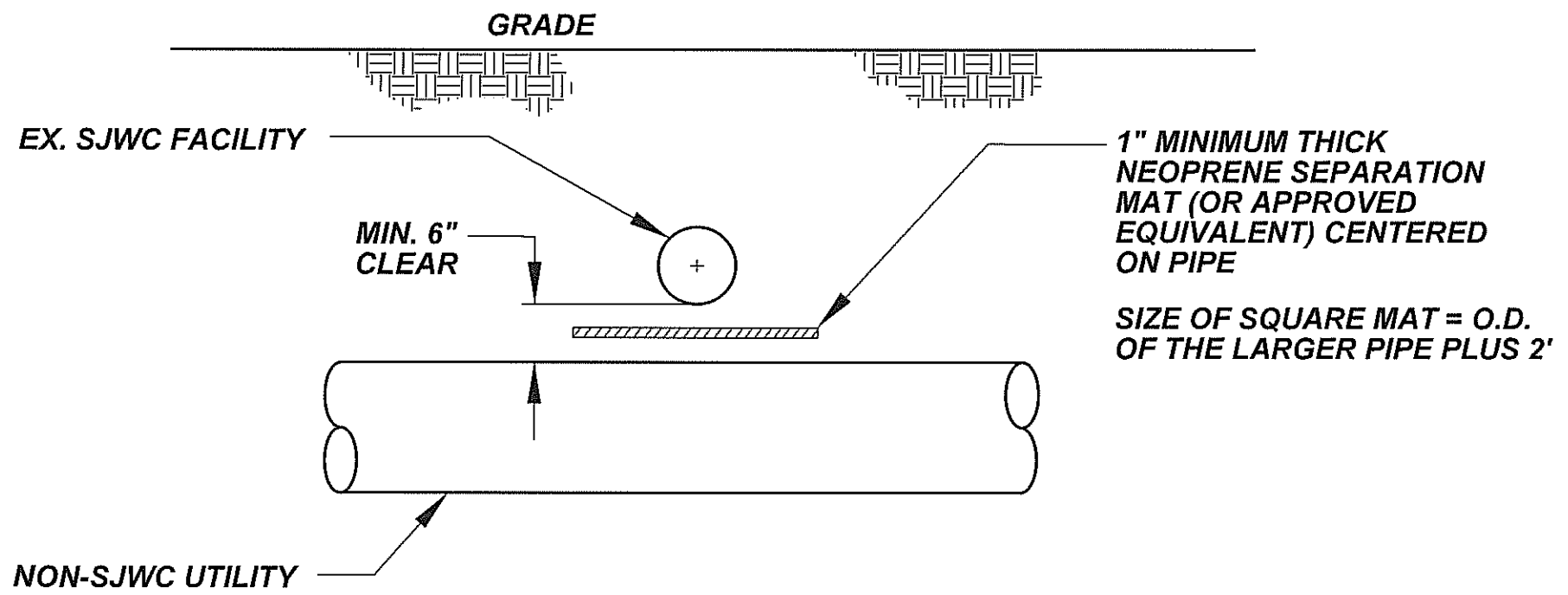
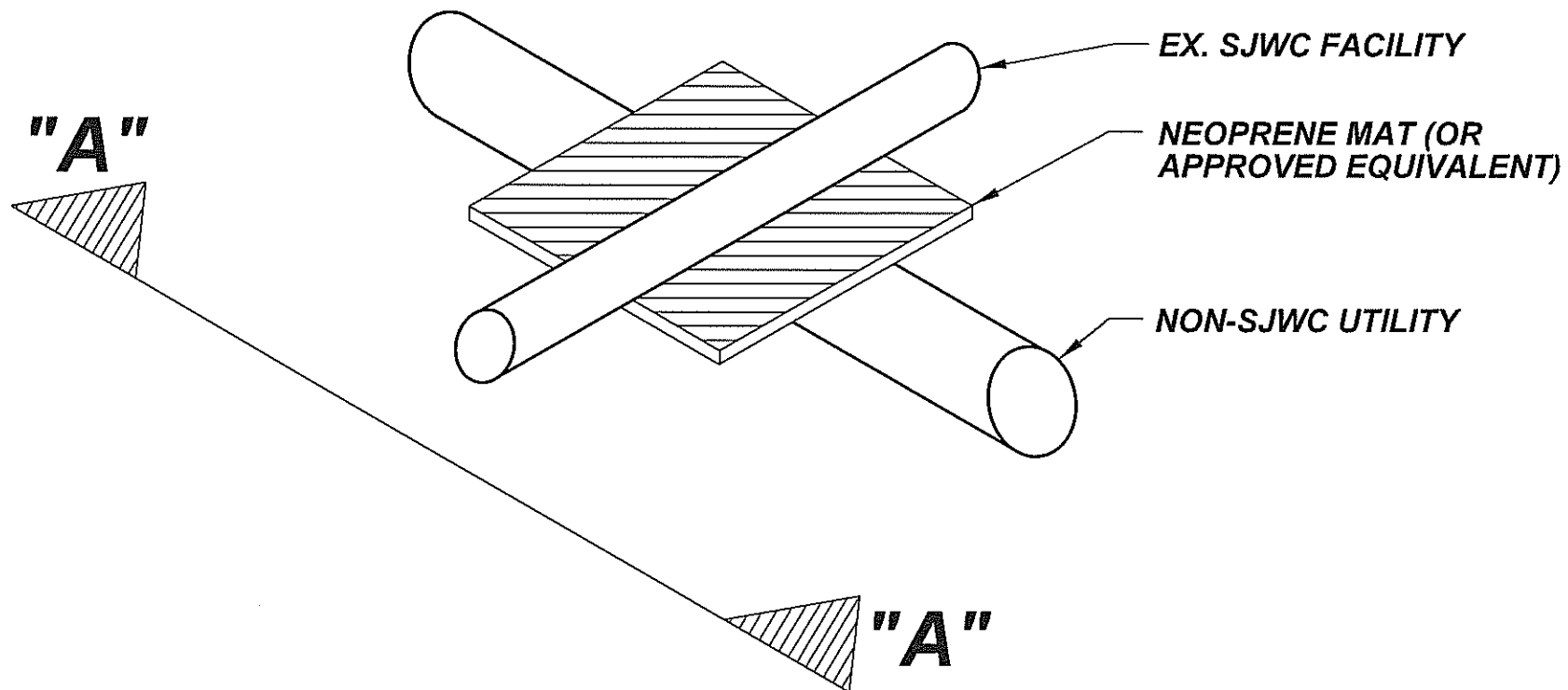
- 1.) IN-LINE ANCHOR BLOCK SHALL BE POURED AGAINST UNDISTURBED GROUND.
- 2.) APPLY TWO COATS OF SUPER TANK SOLUTION ON ALL METAL EXPOSED TO SOIL.
- 3.) ANCHOR BLOCK SIZES ARE BASED ON 150 PSI WORKING PRESSURE (SAFETY FACTOR OF 1.5) AND 2000 LBS./SQ. FT. BEARING SOIL.
- 4.) CONCRETE SHALL BE KEPT CLEAR OF FLANGES, NUTS, AND BOLTS.

REVISION	DATE	CK	AP	OPS	<b>SAN JOSE WATER COMPANY</b>	
						<b>IN-LINE ANCHOR BLOCK</b>
BY	P. JOCHIM					
DATE	15 NOV 04					DWG. NO.
CR	ELM				<b>MAIN-LAB</b>	
BY	SCALE NONE					

*Victoria* OPERATIONS  
*William* ENGINEERING  
*Debra* CHIEF ENGINEER







**SECTION A - A**

**NOTES:**

**BARRIER IS REQUIRED FOR ANY PROPOSED UTILITY CROSSING INVOLVING SJWC PIPING WHERE THE CLEARANCE BETWEEN THE 2 UTILITIES IS LESS THAN 12".**

**IF THE CLEARANCE IS LESS THAN 6", THEN THE PROPOSED CROSSING IS NOT ALLOWED; AN OFFSET MAY THEN BE REQUIRED IF AN ALTERNATE SOLUTION CAN'T BE FOUND.**

REVISION	DATE	CK	AP	DPS
SAN JOSE WATER COMPANY				
STANDARD SEPARATION BARRIER FOR UTILITIES < 12" CLEAR				
BY	DTFOLKENING			
DATE	7/31/2013			
CK	<i>[Signature]</i>			
SCALE	NONE			

*[Signature]*  
OPERATIONS

*[Signature]*  
ENGINEERING

*[Signature]*  
VICE PRESIDENT OF ENGINEERING

REF. NOS.

DWG. NO.

**SEP-BAR**