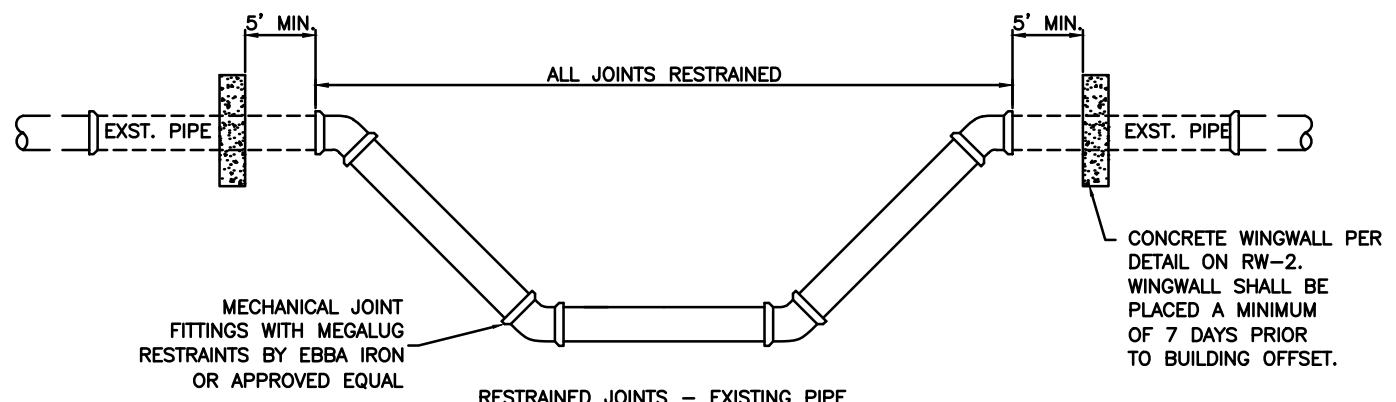
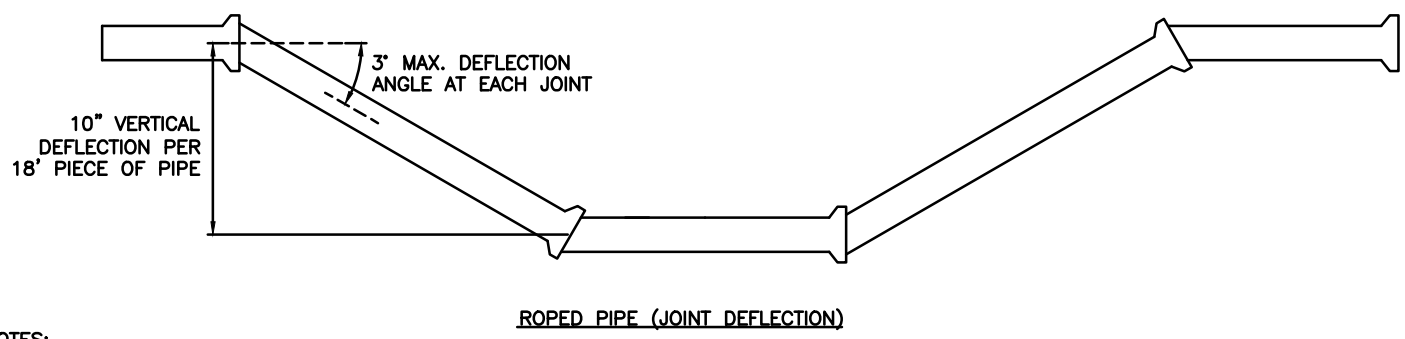


**RESTRAINED JOINTS - NEW INSTALLATION**



**RESTRAINED JOINTS - EXISTING PIPE**



**ROPED PIPE (JOINT DEFLECTION)**

**NOTES:**

1. ALL JOINTS WITHIN MINIMUM RESTRAINED LENGTH "L" SHALL BE RESTRAINED. FULL LENGTH PIPE SECTIONS SHALL BE USED. WHEN LENGTH "L" OCCURS WITHIN THE MID SECTION OF A PIPE, THE NEXT JOINT OUT SHALL BE RESTRAINED.
2. RESTRAINED JOINTS REQUIRE INSPECTION BY THE DISTRICT. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSPECTION IN ADVANCE AND LEAVING JOINTS EXPOSED FOR THE DISTRICT INSPECTOR.
3. MINIMUM RESTRAINED LENGTH SHALL BE CLEARLY SHOWN ON THE PROFILE OF ALL RECYCLED WATERLINE PLANS.
4. VERTICAL OFFSETS SHALL BE AVOIDED WHENEVER POSSIBLE BY DEFLECTING JOINTS (ROPING) TO ACHIEVE OFFSET.
5. MINIMUM RESTRAINED LENGTH SHALL BE RE-CALCULATED TO ACCOUNT FOR OTHER FITTINGS (VALVES, TEES, BENDS) WITHIN LENGTH "L".
6. RESTRAINED LENGTHS FOR PIPE SIZES LARGER THAN 12" SHALL BE DETERMINED BY THE ENGINEER AND APPROVED THE DISTRICT.
7. ALTERNATE MATERIALS MUST BE APPROVED BY THE DISTRICT PRIOR TO USE.
8. RECYCLED WATER MAINS SHALL BE ROPED OVER UTILITY CONFLICTS WHENEVER 2-FEET OF COVER AND 1-FOOT SEPARATION BETWEEN UTILITIES CAN BE MAINTAINED. PRIOR TO INSTALLATION IN THIS MANNER, CONFIRM WITH DISTRICT IF ARV(S) (RW-15, RW-16) WILL BE REQUIRED.

**NAPA SANITATION DISTRICT**

	TITLE	DATE: MAY 2012	DRAWING NO.	
	VERTICAL OFFSET	CHECKED BY: MW		RW-3
		APPROVED BY: TH		
		SCALE: NONE		