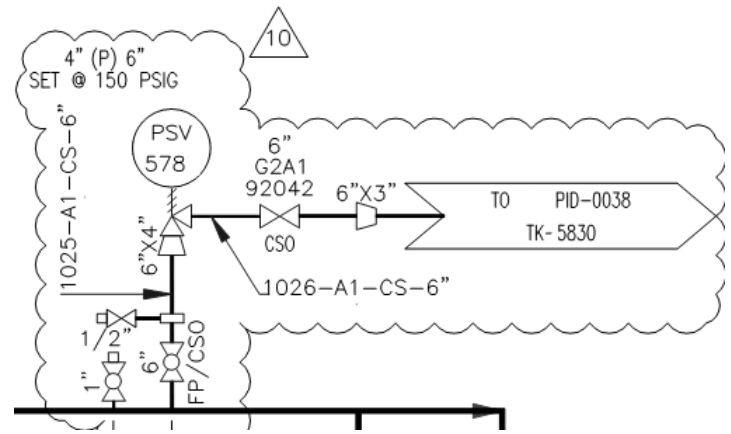
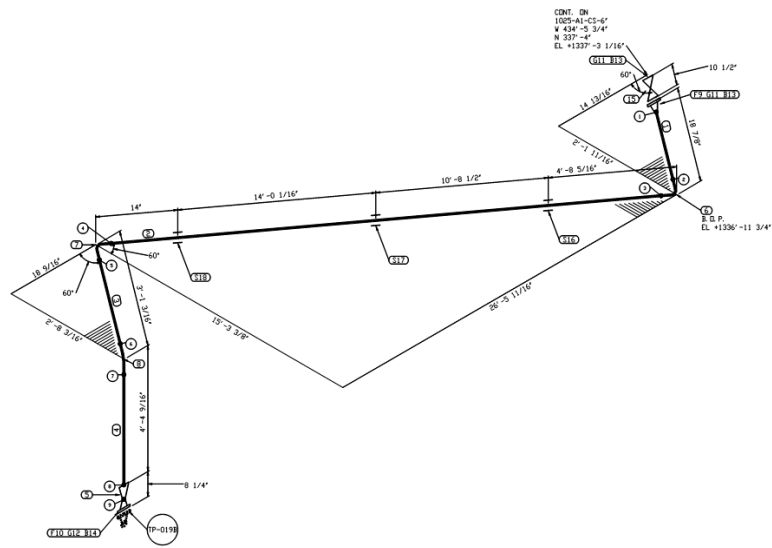
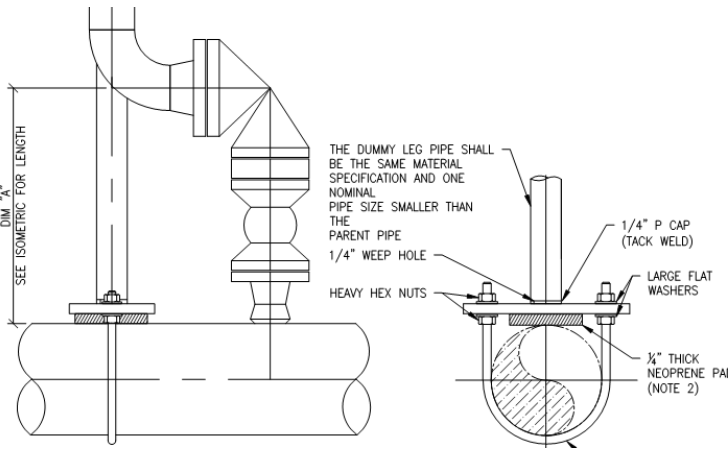


## RELIEF DEVICE DEFICIENCY

COST EFFECTIVE, COMPREHENSIVE, AND CONSTRUCTION  
READY PACKAGES TO RESOLVE RELIEF DEVICE DEFICIENCIES

# WHAT ARE RELIEF DEVICE DEFICIENCY MITIGATIONS?

When a relief study is conducted at a facility, a range of deficiencies can arise. Each of these issues must be addressed to bring the system into compliance. Relief device mitigations provide a solution that will bring a currently deficient relief device or system into compliance via a construction ready package.



# I HAVE COMPLETED A RELIEF/FLARE STUDY AND IDENTIFIED DEFICIENCIES IN MY RELIEF SYSTEM, NOW WHAT?

During the course of relief studies, a range of issues are identified. But additional engineering is typically required to bring systems into compliance with industry and company standards.

A preliminary solution may have been proposed during the study, but is it cost effective? Is it constructible? Will it require significant downtime? Have detailed PSV calculations been performed to ensure the proposed solution does not introduce additional issues?

For these reasons, ZAP offers a comprehensive mitigation approach. Our approach ensures that the mitigation:

- Addresses existing deficiencies and does not introduce new issues
- Is cost effective
- Minimizes downtime
- Provides construction friendly packages
- Updates all pertinent documentation
- Utilizes a collaborative design process with input from key stakeholders
- Can be implemented quickly to meet tight turnaround schedules



## **I HAVE ISSUES THAT NEED TO BE RESOLVED, WHAT NEXT?**

We'd be happy to discuss your specific requirements and assist you in determining next steps that make sense for your facility, including:

- Assisting in refining your project scope
- Estimating project costs
- Providing per device pricing for flexible project execution
- Risk ranking and prioritizing which devices need to be addressed first

**Contact us to start the discussion and move your action items towards closure today!**

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## **WHY CHOOSE ZAP FOR RELIEF DEVICE MITIGATIONS?**

With over 6700 relief devices sized in the past six years, ZAP has the experience and engineering expertise to:

- Identify the most cost effective mitigation with you and your team
- Provide easily constructible solutions with a complete set of IFC documentation
- Update relief device calculations to ensure compliance of the new system and keep your documentation up to date
- Leverage 3D scan technology to minimize contractor rework and change orders for complex and congested area work
- Produce PE stamped drawings for any civil/structural or electrical modifications required
- Provide Construction Management and EPC solutions, complete with turnaround management, for clients that require a "turnkey" solution.

