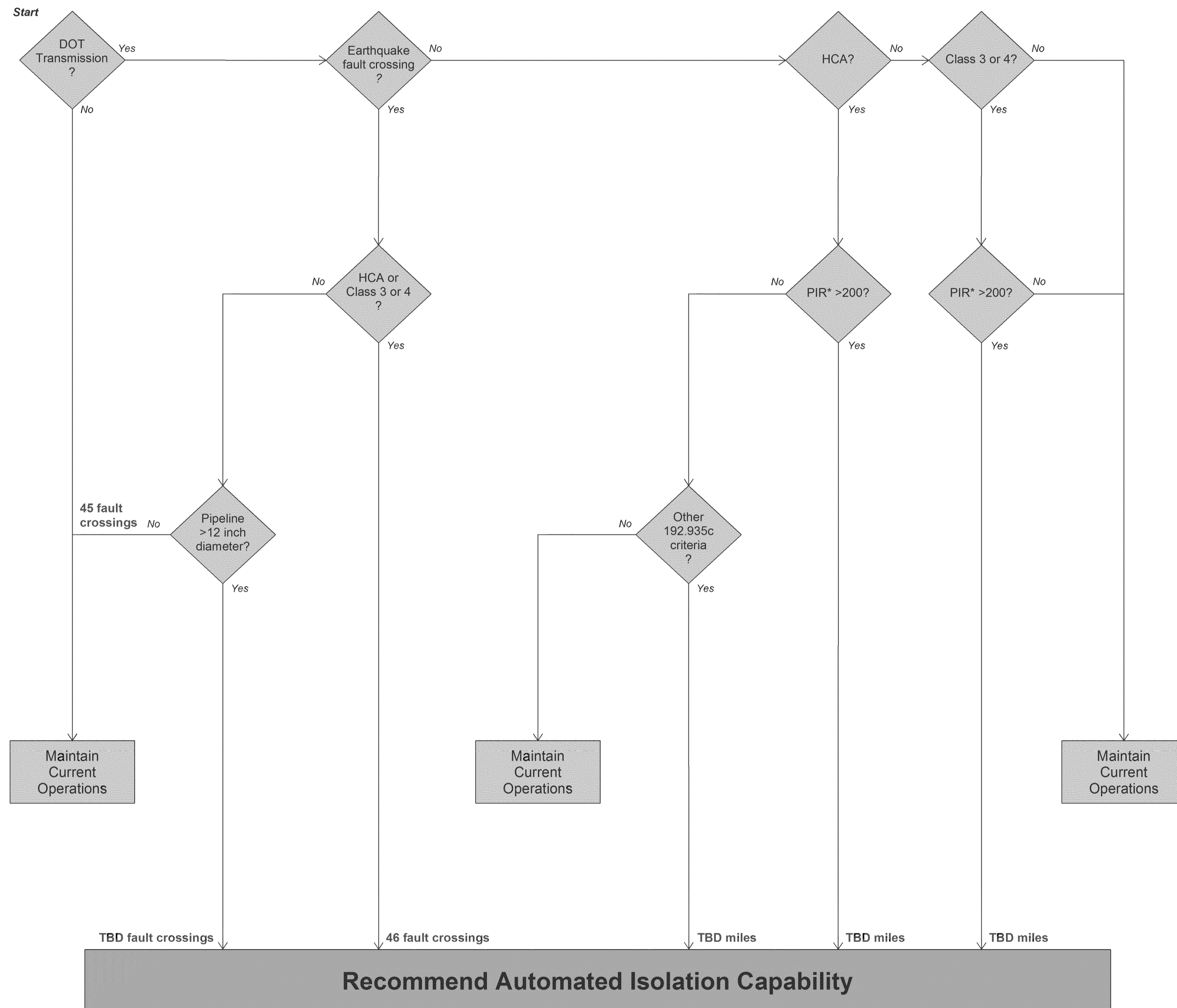




# Proposed Pipeline Candidates for Automated Isolation

The decision tree currently identifies earthquake fault crossings and pipeline segments as potential candidates for automated isolation

- Earthquake fault, Class 1 or 2, >12 inch = TBD
- Earthquake fault, HCA or Class 3 or 4 = 46 crossings
- HCA, PIR\* ≤200, Other 192.935c = TBD
- HCA, PIR\* >200 = TBD
- Non-HCA, Class 3 or 4, PIR\* > 300 = TBD

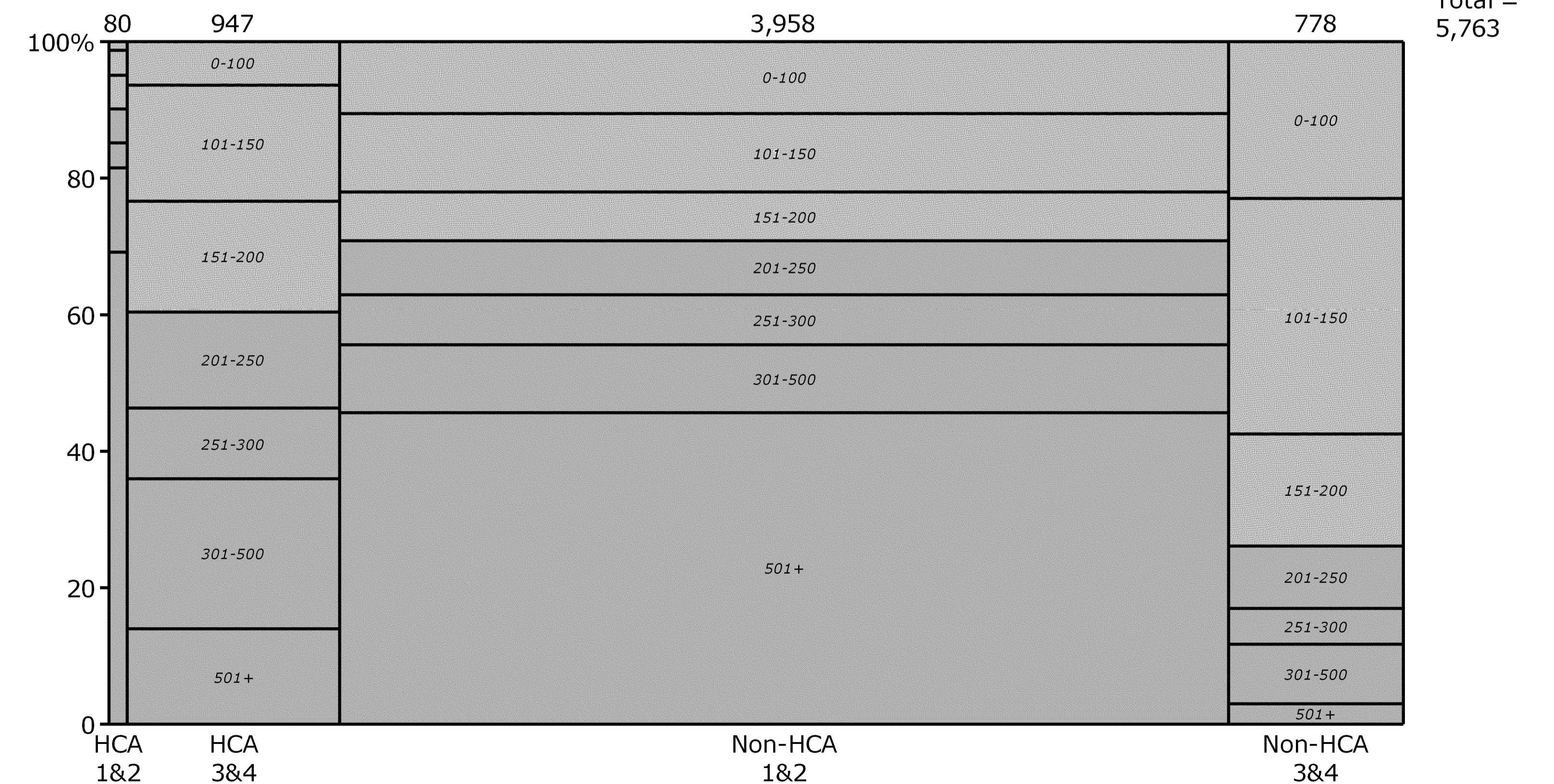


Miles of PG&E GT Pipeline, by PIR\* and HCA/class location

PIR	HCA Classes 1&2	HCA Classes 3&4	Non-HCA Classes 1&2	Non-HCA Classes 3&4	Total
0-100	1	60	418	179	658
101-150	3	161	453	268	886
151-200	4	153	284	128	569
201-250	4	133	313	71	521
251-300	3	98	289	41	431
301-500	10	208	394	68	680
501+	56	132	1,806	23	2,016
<b>Total</b>	<b>80</b>	<b>947</b>	<b>3,958</b>	<b>778</b>	<b>5,763</b>

Note: there are <4 miles of HCA Class 4 pipe in PG&E GT system and zero miles of Non-HCA Class 4

Miles of PG&E GT Pipeline, by PIR\* and HCA/class location



\*Note: PIR = 0.685 \* √(pd<sup>2</sup>)

Pipeline 2020 intends to address pipeline pedigree. Beyond Pipeline 2020, all pipe would be part of PG&E's integrity management program  
Decision Trees Do Not Imply Final Decisions. Should Always be Combined with Practical Judgment





DRAFT

# Pipeline 2020 Determine Specific Valve Automation Scope of Work

## FOR EACH IDENTIFIED PIPE SEGMENT

•Determine Valve Spacing for Pipe Segment

•Determine Pipe Segment Automation Work Scope

•Number, Type & Size of Automated Valves Required

- Automated MLV Valves
- Automated Tap Valves
- Automated Cross-tie Valves
- Check Valves

•Metering Required

•Regulator Station Backflow Prevention Controls Work Required

•Determine Valve Automation Work Scope for individual valves

•Determine if existing valves requiring automation can be utilized, or need replacement or replacement and relocation

•Specify any new valves required

•Determine design basis for each valve site

- Land and Permitting
- Site improvement
- Power and communication
- Piping work
- Instrumentation and controls work
- ILI upgrade requirements

