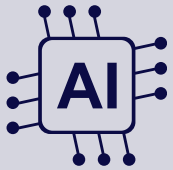# THE AI SOLUTION BUYER'S GUIDE

jt pipes™

CHOOSING THE RIGHT AI TOOL FOR SEWER CONDITION ASSESSMENT

AI

AI-assisted tools are transforming sewer inspections—streamlining workflows, enhancing accuracy, and enabling proactive infrastructure management. But with a growing number of solutions on the market, it's important to know what sets the best apart. This buyer's guide highlights key benefits, evaluation criteria, and common pitfalls to help you choose the right AI solution for pipe condition assessment.

WHY ADD AI-ASSISTED CODING TO YOUR CURRENT INSPECTION WORKFLOW?

FASTER TURNAROUND
AI can process inspections in hours, not days—dramatically cutting backlog and speeding up rehab planning.

CONSISTENT ACCURACY
AI-assisted coding ensures consistent application of NASSCO standards, reducing human variability.

PROACTIVE MAINTENANCE PLANNING
Some tools go beyond coding, offering decision-tree-based rehabilitation recommendations.

RESOURCE OPTIMIZATION
AI reduces manual effort, freeing up staff for higher-value tasks like QA, planning, and rehab coordination.

SCALABLE INSIGHTS
High-volume data processing allows cities and contractors to assess more footage with fewer delays.

PRO TIPS

Look for a hybrid solution: Automation should enhance—not replace—your team. Opt for AI with human-in-the-loop verification.

Demand Transparency: Understand the full workflow—from inspection upload to defect coding and final report delivery.

Require Metrics: A quality AI partner should track model performance and improvement KPIs

Ask About Look-Alike Defects: Cobwebs, cracks, and roots often appear similar. Ask how the model distinguishes between them and whether it's trained using human-validated examples to avoid overcoding.

CATEGORY	KEY QUESTIONS TO ASK
TURNAROUND TIME	How quickly can your platform return coded results? Can it keep pace with your inspection volume? What factors influence turnaround time?
SCOPE OF OUTPUT	What KPIs do you track to ascertain your model's effectiveness? Does it only code defects, or does it include rehabilitation recommendations, risk scoring, or prioritization tools?
HUMAN OVERSIGHT	How is QA/QC handled after being assessed by the model? Are all AI results reviewed and verified by qualified NASSCO-certified professionals?
CODING STANDARDS	Are outputs NASSCO PACP/MACP/LACP-compliant? Are custom reports or data exports available? What versions of NASSCO does it support?
ACCESSIBLITY	Do you need proprietary software to view results? Are reports and insights easily shareable in standard formats?
MODEL TRAINING	How much footage has been used to train your model? What does your model training process look like? How often is the model retrained to adapt to new data or defect types?
MODEL STRUCTURE	Are there any codes your model cannot read? How is overcoding or undercoding handled? Is your model tailored by pipe material, diameter, or video conditions or one-size fits all?
VIDEO INTEGRITY	Do you ever reject videos? If so, are you able to provide a clear specification for a good or bad video? Does your system alter the original video, like removing labels or reformatting?
DATA SECURITY	Where is your information being hosted? What is the level of security for that location?

THINGS TO WATCH OUT FOR

🚫 **OVERCODING OR UNDERCODING**
Inaccurate tagging can inflate rehab budgets or miss critical defects.

🚫 **INCOMPLETE QA/QC**
QA/QC should cover 100% of inspections. Partial checks risk missing critical issues.

🚫 **VIDEO TAMPERING**
Avoid tools that alter video overlays, distances, or aspect ratios—this compromises inspection integrity.

🚫 **MISLEADING CONFIDENCE SCORES**
AI "confidence scores" mean little without context. Focus on systems with human validation.

🚫 **LACK OF TRANSPARENCY**
If a provider is unwilling to explain their quality assurance process, it may indicate insufficient human oversight or a lack of continuous training for their AI model—both of which can compromise accuracy and reliability.

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