AI Reading Exercise: Class 5
From Digital to Physical Infrastructure
PLAN A6613: AI and the Future of Cities

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Tool & Process

I used Claude Opus 4.6 with extended thinking via the Antigravity IDE.[1] The AI generated an initial set of findings on the topic "AI managing physical infrastructure." I then directed over 50 iterative corrections, each logged with a timestamp: downloading vendor, government, and independent sources; cross-checking statistics across stakeholders; and rewriting every claim that lacked a citation or relied on a single account. The most productive step was comparing vendor-reported outcomes against city government data, which revealed discrepancies the AI had not flagged and that neither source had an incentive to disclose.

Key Findings

1. Curb Space: Automotus in Pittsburgh. Pittsburgh's Smart Loading Zone program is the closest I found to AI that actively manages a city asset. The city deployed Automotus computer vision cameras across 75 commercial loading zones, with cameras on streetlight poles reading license plates, enforcing tiered time limits, and automating payment without meters (Automotus, 2023). Automotus claims 40% higher zone turnover and 95% less double-parking (Automotus, 2023), but the City of Pittsburgh's own pilot data reports a 70% turnover increase and a 60% drop in average park duration (City of Pittsburgh DOMI, 2024). The discrepancy matters because both parties have reason to frame results favorably. Funded by a $3.8 million DOE grant (DOE VTO, 2021) and SaaS revenue from automated payments, what makes this case distinct is the closed operational loop: the AI observes, decides, and acts without a human in between.

2. Traffic Signals: Flow Labs in North Carolina. North Carolina's statewide traffic signal program shows what happens when AI monitors but does not control. NCDOT deployed Flow Labs AI across more than 2,500 intersections in July 2025, the largest such deployment in the United States (Nyczepir, 2024). The system ingests connected vehicle GPS data to identify signal timing problems without field studies or new hardware (Flow Labs, 2025). Flow Labs' own documentation clarifies that the system only recommends changes; a human engineer makes the final call (Flow Labs, 2025). Aaron Moody, NCDOT's assistant director of communica-

tions, confirmed that the platform "supports data-informed decisions while maintaining oversight by engineering staff" (Raths, 2025). Funded as a SaaS contract in existing operations budgets, the program scales without capital appropriation.

3. Power Grid: Google Tapestry & PJM. Google X's Tapestry partnership with PJM Interconnection is the most ambitious of the three, but also the least real. Tapestry uses DeepMind AI to model the grid topology of PJM's network, which serves 67 million people across 13 states and the District of Columbia (PJM, 2025), aiming to accelerate the years-long interconnection queue for new renewables. Unlike the first two examples, Tapestry has not yet been deployed: it is a multi-year development partnership where Google funds AI development and PJM provides grid data (X, 2025). Faster interconnection directly serves Google's own data center energy needs, and as Berreby (2024) documents in Yale Environment 360, AI data centers are themselves a major driver of the electricity demand straining the grid — meaning Google is partly solving a problem its own infrastructure creates.

Verification

- Automotus: Vendor and city statistics did not match. Automotus reports 40% turnover and 95% less double-parking (Automotus, 2023); the City of Pittsburgh reports 70% turnover and only 40% less double-parking (City of Pittsburgh DOMI, 2024). The AI did not flag this discrepancy, nor did it distinguish parking from commercial loading management, a difference that matters for how planners allocate curb space.

- Flow Labs: Three independent sources contradict the AI's claim that Flow Labs controls signals. Flow Labs' documentation (2025) says the system recommends changes. StateScoop (Nyczepir, 2024) describes it as a monitoring platform. NCDOT spokesperson Aaron Moody confirmed that "engineering staff retain oversight" (Raths, 2025). The human-in-the-loop distinction was entirely absent from the AI's output.

- Tapestry: The AI presented Tapestry as comparable to the first two deployed systems, but the X project page (2025) describes it as a multi-year development partnership that is not yet operational. Neither the AI nor Google's own materials acknowledged that faster interconnection directly benefits Google's data centers, a conflict of interest documented by Berreby (2024) in Yale Environment 360.

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[1] Verbatim prompt log, downloaded sources, annotations, and a claim-by-claim verification audit are archived at https://github.com/dhardestylewis/plan-a6613-ai-reading-class-3/tree/main/week5.

Critical Reflection

The most useful finding was in what the AI failed to distinguish. It treated all three systems as equivalent when they represent fundamentally different levels of autonomy and readiness. A planner reading the AI's output uncritically would overestimate how far AI-managed infrastructure has come. The tool is useful for assembling an initial inventory of who is doing what, but a human is needed for the harder question of how real is this, and must cross-check every statistic against multiple stakeholders' accounts.

References

[1] Automotus. (2023). Smart loading zones: Pittsburgh. Retrieved February 17, 2026, from https://automotus.co/pittsburgh

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[4] Flow Labs. (2025). NCDOT statewide AI traffic signal deployment. https://www.flowlabs.ai

[5] Nyczepir, D. (2024, July 16). NC deploys AI traffic signal software statewide. StateScoop. https://statescoop.com/north-carolina-ai-traffic-signals-flow-labs/

[6] PJM Interconnection. (2025). PJM, Google announce multi-year AI collaboration [Press release]. https://www.pjm.com/about-pjm/newsroom

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[8] Lazo, A. (2021, August 12). Pittsburgh gets $3.8 million from feds for smart loading zones. Pittsburgh Post-Gazette. https://www.post-gazette.com/business/development/2021/08/12/

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