SheetIntel

Riverside Commons — 3-Story Mixed-Use

Sample Full Review Report

42	7
SHEETS REVIEWED	TRADES

November 16, 2026

REVIEW DATE

Disclaimer: This report was generated by SheetIntel using AI-assisted analysis. All findings should be verified against the source construction drawings. This report does not constitute professional engineering advice.

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Sheet 1: A-1.01

Discipline: Architectural

Floor Plans — Level 1

Key Findings

- **Egress Width Conflict:** Corridor at grid B-4 dimensioned at 42" clear width, but door swing encroachment from Room 108 reduces effective width to approximately 36". IBC Section 1005.1 requires minimum 44" for occupant load > 49. **Recommend RFI to confirm occupant load calculation and corridor width.**
- **ADA Clearance Issue:** Restroom 105 door shows 18" latch-side clearance on pull side. ADA requires minimum 18" — dimension is at the absolute minimum with no tolerance. Verify field conditions allow compliant clearance after finishes.
- **Missing Finish Callout:** Room 112 (Break Room) has no floor finish indicated on the finish schedule. Adjacent rooms show VCT — confirm intent.

Cost Impact: Corridor widening at grid B-4, if required, would involve stud relocation and rework of MEP rough-ins in the wall — estimated $8,000–$12,000 if caught post-framing.

Sheet 2: A-1.02

Discipline: Architectural

Floor Plans — Level 2

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 3: A-1.03

Discipline: Architectural

Floor Plans — Level 3

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 4: A-2.01

Discipline: Architectural

Exterior Elevations

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 5: A-3.01

Discipline: Architectural

Building Sections

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 6: A-5.01

Discipline: Architectural

Wall Sections & Details

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Sheet 7: A-6.01

Discipline: Architectural

Door & Window Schedules

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 8: S-1.01

Discipline: Structural

Foundation Plan

Key Findings

- **Foundation Bearing Conflict:** Footing F-7 at column line C/3 is called out at 3,000 PSF allowable bearing pressure, but the geotech report (Section 4.2) recommends 2,500 PSF for the native clay soils at that depth. **RFI required to reconcile footing sizes or confirm soil improvement is specified.**
- **Rebar Lap Splice Ambiguity:** General Note 5 calls for #5 bar lap splices at 36 bar diameters, but Detail 3/S-3.01 shows 24" lap for the same condition. ACI 318 Section 25.5 governs — confirm which dimension controls.
- **Missing Dowel Callout:** Column C-4 pedestal has no dowel size or quantity indicated. Adjacent columns show (4) #6 dowels — likely an omission.

Cost Impact: If footing F-7 needs to be upsized by 25% to meet actual bearing capacity, concrete and excavation add approximately $3,500 per footing (4 similar footings = ~$14,000 total).

Sheet 9: S-2.01

Discipline: Structural

Framing Plan — Level 1

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 10: S-2.02

Discipline: Structural

Framing Plan — Level 2

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 11: S-2.03

Discipline: Structural

Roof Framing Plan

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 12: S-3.01

Discipline: Structural

Structural Details

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 13: S-4.01

Discipline: Structural

Structural Schedules

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Sheet 14: M-1.01

Discipline: Mechanical

HVAC Floor Plan — Level 1

Key Findings

- **Duct Routing Conflict:** 24"×12" supply duct at grid D-2 routes through structural beam W12×26 (shown on S-2.01 at same elevation). Bottom of beam is 9'-4" AFF, duct centerline is 9'-6" AFF — direct conflict. **Requires coordination with structural to confirm if beam can be penetrated or duct must be rerouted below.**
- **Outdoor Air Deficiency:** RTU-2 serving the second floor open office (occupancy ~60 people) is scheduled for 800 CFM outdoor air. ASHRAE 62.1 Table 6-1 requires 5 CFM/person + 0.06 CFM/SF × 4,200 SF = 552 CFM minimum. Current spec meets code, but margin is tight for the space.
- **Missing Return Air Path:** Rooms 201 and 203 show supply diffusers but no return grilles or transfer ducts. Ceiling plenum return requires transfer pathway above partition walls.

Cost Impact: Duct rerouting at grid D-2 around the beam adds approximately 12 linear feet of ductwork, additional fittings, and potential ceiling height reduction — estimated $6,000–$9,000.

Sheet 15: M-1.02

Discipline: Mechanical

HVAC Floor Plan — Level 2

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Sheet 16: M-1.03

Discipline: Mechanical

HVAC Floor Plan — Level 3

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Sheet 17: M-2.01

Discipline: Mechanical

Mechanical Details

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 18: M-3.01

Discipline: Mechanical

Mechanical Schedules

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Sheet 19: M-4.01

Discipline: Mechanical

Controls & Sequences

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 20: E-1.01

Discipline: Electrical

Power Plan — Level 1

Key Findings

- **Panel Capacity Concern:** Panel LP-1 (Lighting) shows 30 circuits on a 30-space panel with no spare breaker positions. NEC 408.36 recommends 20% spare capacity for commercial installations. **Recommend upsizing to 42-space panel.**
- **Voltage Discrepancy:** Motor disconnect for RTU-1 (shown on M-1.01) is labeled 208V, but the electrical riser on E-4.01 indicates the mechanical distribution is 480V/3-phase. Coordinate with mechanical engineer.
- **Missing Circuit Assignment:** Six recessed downlights in Lobby (Room 101) are not assigned to any circuit on the panel schedule. Lighting control zone LC-3 references these fixtures but panel LP-1 schedule has no corresponding circuit.

Cost Impact: Panel upsizing from 30-space to 42-space: ~$800 material + $1,200 labor. Voltage mismatch on RTU disconnect could result in $4,000+ rework if wrong equipment is ordered.

Sheet 21: E-1.02

Discipline: Electrical

Power Plan — Level 2

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 22: E-1.03

Discipline: Electrical

Power Plan — Level 3

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 23: E-2.01

Discipline: Electrical

Lighting Plan — Level 1

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 24: E-2.02

Discipline: Electrical

Lighting Plan — Level 2

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Sheet 25: E-3.01

Discipline: Electrical

Panel Schedules

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Sheet 26: E-4.01

Discipline: Electrical

Electrical Details & Riser

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Sheet 27: P-1.01

Discipline: Plumbing

Plumbing Floor Plan — Level 1

Key Findings

- **Hot Water Recirculation Missing:** Plumbing riser shows domestic hot water supply to 3rd floor fixtures (approx. 120 pipe-feet from heater), but no recirculation line is indicated. At this distance, wait times will exceed user expectations and may trigger complaints. IPC Appendix does not mandate recirc, but it is standard practice for commercial occupancy.
- **Floor Drain Conflict:** Floor drain FD-3 in Mechanical Room 102 is positioned directly under the AHU-1 unit base (cross-reference M-1.01). Access for cleaning and maintenance will be obstructed.
- **Pipe Size Discrepancy:** 2" domestic cold water branch to restroom group on Level 2 appears undersized for the fixture count (8 fixture units). WSFU calculation suggests 2½" minimum per IPC Table 604.3.

Cost Impact: Adding hot water recirculation (pump + piping): ~$4,500. Relocating floor drain FD-3 post-slab-pour: ~$2,500 including patch and waterproofing.

Sheet 28: P-1.02

Discipline: Plumbing

Plumbing Floor Plan — Level 2

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 29: P-2.01

Discipline: Plumbing

Plumbing Riser Diagram

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 30: P-3.01

Discipline: Plumbing

Plumbing Schedules

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 31: FP-1.01

Discipline: Fire Protection

Sprinkler Plan — Level 1

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Sheet 32: FP-1.02

Discipline: Fire Protection

Sprinkler Plan — Level 2

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 33: FP-1.03

Discipline: Fire Protection

Sprinkler Plan — Level 3

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 34: FP-2.01

Discipline: Fire Protection

Fire Protection Details

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 35: C-1.01

Discipline: Civil

Site Plan

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 36: C-2.01

Discipline: Civil

Grading & Drainage Plan

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 37: C-3.01

Discipline: Civil

Utility Plan

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Sheet 38: C-4.01

Discipline: Civil

Erosion Control Plan

Review content redacted for sample report. Full reviews include code compliance checks, coordination issues, constructability concerns, and cost impact analysis for every sheet.

Compiled RFIs (8 items)

#	Priority	Sheet(s)	Trade	Issue	Why It Matters
RFI-001	HIGH	A-1.01	Architectural	Corridor width at grid B-4 reduced to 36" by door swing — below IBC 44" minimum for occupant load > 49	Life-safety egress path — AHJ will flag at inspection
RFI-002	HIGH	S-1.01	Structural	Footing F-7 bearing pressure (3,000 PSF) exceeds geotech recommendation (2,500 PSF)	Foundation failure risk — 4 similar footings affected, ~$14K rework
RFI-003	HIGH	E-1.01, M-1.01	Electrical/ Mechanical	RTU-1 disconnect labeled 208V but riser shows 480V/3-phase distribution	Wrong equipment order = $4K+ rework and schedule delay
RFI-004	MEDIUM	M-1.01, S-2.01	Mechanical/ Structural	24"×12" supply duct conflicts with W12×26 beam at grid D-2	Field rework, potential ceiling height reduction, $6K–$9K impact
RFI-005	MEDIUM	E-1.01	Electrical	Panel LP-1 has zero spare breaker positions — NEC recommends 20% spare capacity	Any future circuit additions require new panel install
RFI-006	MEDIUM	P-1.01	Plumbing	2" domestic CW branch to Level 2 restroom group undersized for 8 fixture units	Low pressure complaints and potential code violation at final inspection
RFI-007	LOW	A-1.01	Architectural	Room 112 missing floor finish callout on finish schedule	Subcontractor pricing ambiguity — potential change order
RFI-008	LOW	P-1.01, M-1.01	Plumbing/ Mechanical	Floor drain FD-3 obstructed by AHU-1 unit base — no maintenance access	Ongoing maintenance issue, potential water damage if drain backs up

Compiled Cost-Impact Items (5 items)

Estimated total pre-bid exposure: **$35,000 – $45,500**

#	Sheet	Cost Impact
1	A-1.01	Corridor widening at grid B-4: stud relocation + MEP rework — $8,000–$12,000 post-framing
2	S-1.01	Footing F-7 upsizing (×4 similar): additional concrete + excavation — ~$14,000 total
3	E-1.01	Panel upsizing 30→42 space: ~$2,000. Voltage mismatch rework: ~$4,000
4	M-1.01	Duct rerouting at grid D-2: additional fittings + ceiling impact — $6,000–$9,000
5	P-1.01	Hot water recirculation addition: ~$4,500. Floor drain relocation: ~$2,500

Cross-Reference Summary

1. PROJECT OVERVIEW

Project: Riverside Commons — 3-Story Mixed-Use
Sheets Reviewed: 42 across 7 trades
AI Review Date: April 2026

This cross-reference analysis identifies coordination conflicts, code compliance gaps, and constructability risks across all disciplines. SheetIntel's AI reviewed every sheet and cross-referenced findings between trades to surface issues that single-discipline reviews miss.

2. CRITICAL COORDINATION ISSUES

Mechanical / Structural Conflict (Grid D-2)

The 24"×12" supply duct on M-1.01 routes directly through a W12×26 structural beam shown on S-2.01 at the same elevation. This is a hard clash that must be resolved before framing. Options: reroute duct below beam (reduces ceiling height) or coordinate beam penetration with structural engineer (requires calc confirmation).

Electrical / Mechanical Voltage Mismatch (RTU-1)

RTU-1 disconnect is labeled 208V on E-1.01, but the mechanical distribution riser on E-4.01 shows 480V/3-phase. If the wrong disconnect is ordered, equipment lead times mean a 3–4 week schedule impact in addition to material cost.

3. CODE COMPLIANCE FLAGS

- **IBC 1005.1 — Egress Width:** Corridor at grid B-4 (A-1.01) does not maintain 44" clear width when door swing from Room 108 is considered. This will be flagged by the Authority Having Jurisdiction.
- **ACI 318 — Foundation Bearing:** Footing F-7 (S-1.01) specifies bearing pressure exceeding the geotechnical report recommendation. Structural engineer must confirm adequacy or resize.
- **NEC 408.36 — Panel Capacity:** Panel LP-1 (E-1.01) has zero spare positions. While not a hard code violation, this fails best practice and will require panel replacement for any future tenant improvement.

4. CONSTRUCTABILITY OBSERVATIONS

- Fire protection routing on Level 3 (FP-1.03) runs parallel to the structural beam line. Field coordination should verify adequate clearance for sprinkler head placement and branch line drops.

- The civil grading plan (C-2.01) shows roof drainage leaders tying into the storm system at the southeast corner, but architectural roof plan (A-2.01) does not show leader locations. Coordinate before foundation work.
- Plumbing hot water recirculation is missing for 3rd floor fixtures (P-1.01). While not code-required, this is standard commercial practice and should be addressed before the plumbing rough-in to avoid post-occupancy complaints.

5. RISK SUMMARY

Risk Level	Count	Estimated Exposure
High (Pre-Bid Dealbreakers)	3	$18,000 – $26,000
Medium (Scope Gaps)	3	$12,000 – $15,500
Low (Coordination Items)	2	$5,000 – $4,000
Total	**8 RFIs**	**$35,000 – $45,500**

This is a redacted sample report. Actual SheetIntel reports include detailed findings for every sheet, structured findings JSON for programmatic use, and value engineering recommendations.