

Structural Narrative - Center of Excellence (Ole Main Renovation)

Executive Summary

This narrative summarizes the current understanding of the existing structure and the planned interior structural work for the historic high school renovation. The primary structure is a reinforced-concrete frame with concrete pan-joint floors. Interior partitions are non-load-bearing. Work focuses on decommissioning the auditorium balcony and ramps, introducing a new third-floor area, creating a new elevator and stair, and restoring diaphragm action where floor segments are removed. Exterior work is limited to re-opening original windows and localized masonry stabilization. Key construction constraints are light equipment on pan-joint slabs, anchoring to rib faces (not into the 2-inch slab between ribs), and careful demolition sequencing with temporary stability measures.

Project Intent

Renovate the original 1929 high school into the District's Center of Excellence. This is a historic structure; the exterior remains with interior renovations only, plus selective opening of some original window openings that were previously infilled.

1) Existing Structural System

- **Primary frame:** Reinforced-concrete columns and beams throughout. In some locations typical of the era, steel shapes are embedded in concrete members to augment strength.
- **Typical floors:** Concrete pan-joint construction—closely spaced concrete ribs (joists) supporting an approximately 2-inch slab between ribs.
- **Localized steel:** Steel framing is primarily limited to (a) the auditorium balcony framing carrying concrete seating/steps and (b) the main auditorium roof framing. Elsewhere, gravity framing is concrete.
- **Interior partitions:** Observed interior walls are non-load-bearing (commonly 3-inch gypsum block) and may be removed or reconfigured to suit the new plan.
- **Exterior masonry:** No structural changes other than re-opening original windows that were infilled; anticipate tuck-pointing and helical screw ties to stabilize localized veneer movement at corners attributed to freeze-thaw.

Construction note - pan-joints: Keep equipment and material stacks light and avoid point-loading the ~2-inch slab panels between ribs. Bridge loads across multiple ribs whenever practicable. For non-structural attachments (ceilings, MEP, partitions, rails),

anchor to rib faces; avoid anchors into the thin slab infill. A typical “anchor-zone” diagram will be provided during detailing.

2) Summary of Existing Condition

- Overall, the visible structure is in good condition and matches the 1928/1929 drawings where compared.
- Auditorium and balcony areas have limited interior access; demolition will require careful sequencing and light equipment.

3) Planned Structural Modifications

A. Balcony Decommissioning

- Remove the entire balcony structure (steel framing and integral concrete seating/steps).
- Retain designated columns below the balcony area for integration with the new third-floor framing.
- Remove the sloped auditorium floor/ramp segments and selected flat slab areas to suit the revised program.
- Where slab/ramp/balcony removals interrupt in-plane diaphragm action, install new steel diagonal bracing (sway bracing) within the openings to restore lateral load paths as needed.

B. New Third Floor (within former balcony volume)

- Add a new floor framed with steel beams and concrete slab on metal deck to create additional usable area; integrate with the retained columns noted above.

C. New Vertical Circulation (elevator and stairs)

- Form new openings through existing floors for a new elevator shaft and a new interior stair.
- Provide local edge stiffening (angles or edge beams, as applicable) at each opening and coordinate penetrations to maintain slab/rib integrity.

D. Targeted Slab Removals (Front Tower)

- At the fifth floor, remove selected 4-inch slab panels between concrete beams and install steel diagonal bracing between surrounding members to reinstate diaphragm strength/stiffness.
- At the fourth floor, where whole bays are removed, rebuild the bay with new concrete beams to match the fifth-floor opening rhythm and add steel bracing between new beams to match the fifth-floor precedent.

E. Exterior Masonry - Local, Non-Aesthetic Changes Only

- Re-open original window openings previously infilled (restoring original fenestration). Where supports are inadequate, add concealed steel lintels or equivalent discreet supports.
- Tuck-point deteriorated mortar joints and stabilize localized movement cracks at corners using helical screw ties.

4) Construction Considerations

- Floor loading: Submit proposed equipment (weights, wheel/tire loads) for review relative to pan-joist capacity; use lightweight demolition and bridge loads over ribs and primary beams.
- Temporary stability: Provide demolition sequencing and temporary bracing/shoring plans for auditorium/balcony removals until permanent steel bracing and new framing are in place.
- Anchorage coordination: Coordinate non-structural fixings so anchors bear on rib faces; avoid anchors in thin slab panels; we will provide allowable anchor types and edge distances during detailing.

5) Field Verification & Coordination Items

- Confirm pan-joist geometry (rib spacing, rib depth, slab thickness) at representative bays and where new openings/attachments occur.
- Spot-check concrete beams/columns (and any embedded steel) where new reactions or bracing connect.
- Façade survey at corners and at to-be-reopened window bays to finalize helical-tie locations, tuck-point scope, and any concealed lintel needs.
- Review demolition/sequencing plans for the auditorium and balcony zones to confirm temporary stability and compliant floor loadings.

6) Limitations

This narrative is based on the legacy drawings, internal markups, and a February 4, 2026 walk-through of accessible areas. Hidden conditions may differ. Interior walls identified as non-load-bearing will be verified during selective demolition. Heavy equipment use inside is constrained; the contractor is responsible for means and methods and temporary works, coordinated with our guidance and forthcoming details.

Appendix A - Figures

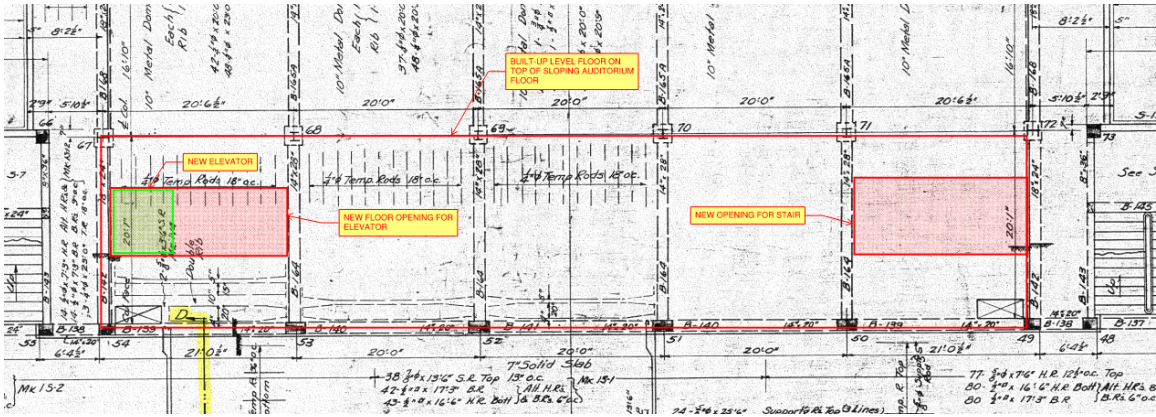


Figure 1 - 1ST FLOOR

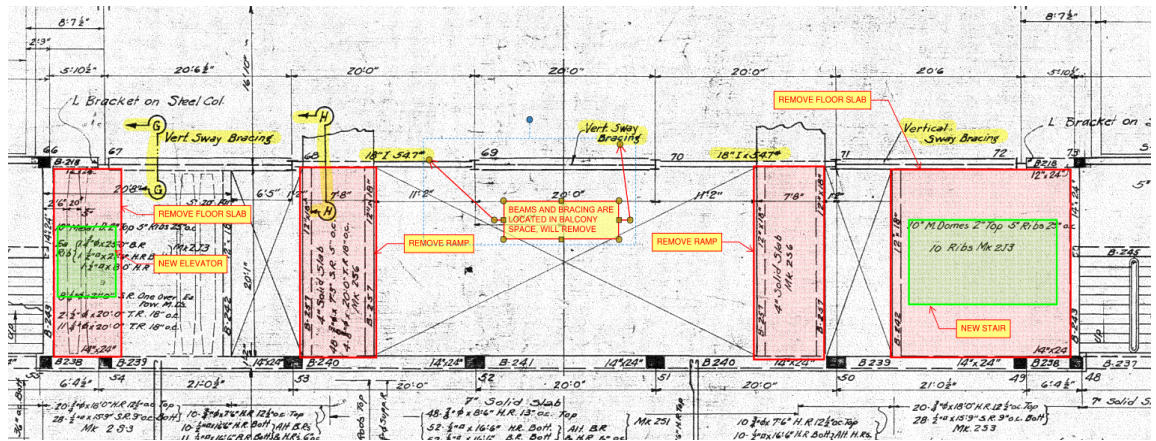


Figure 2 - 2ND FLOOR

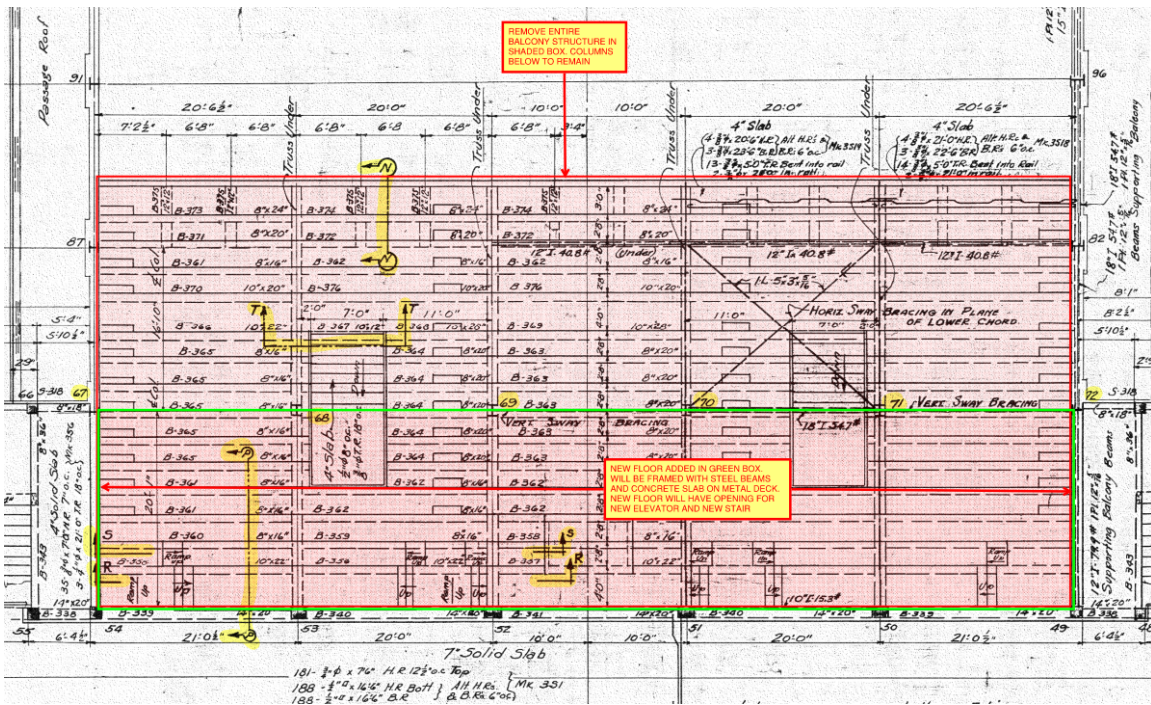


Figure 3 - 3RD FLOOR

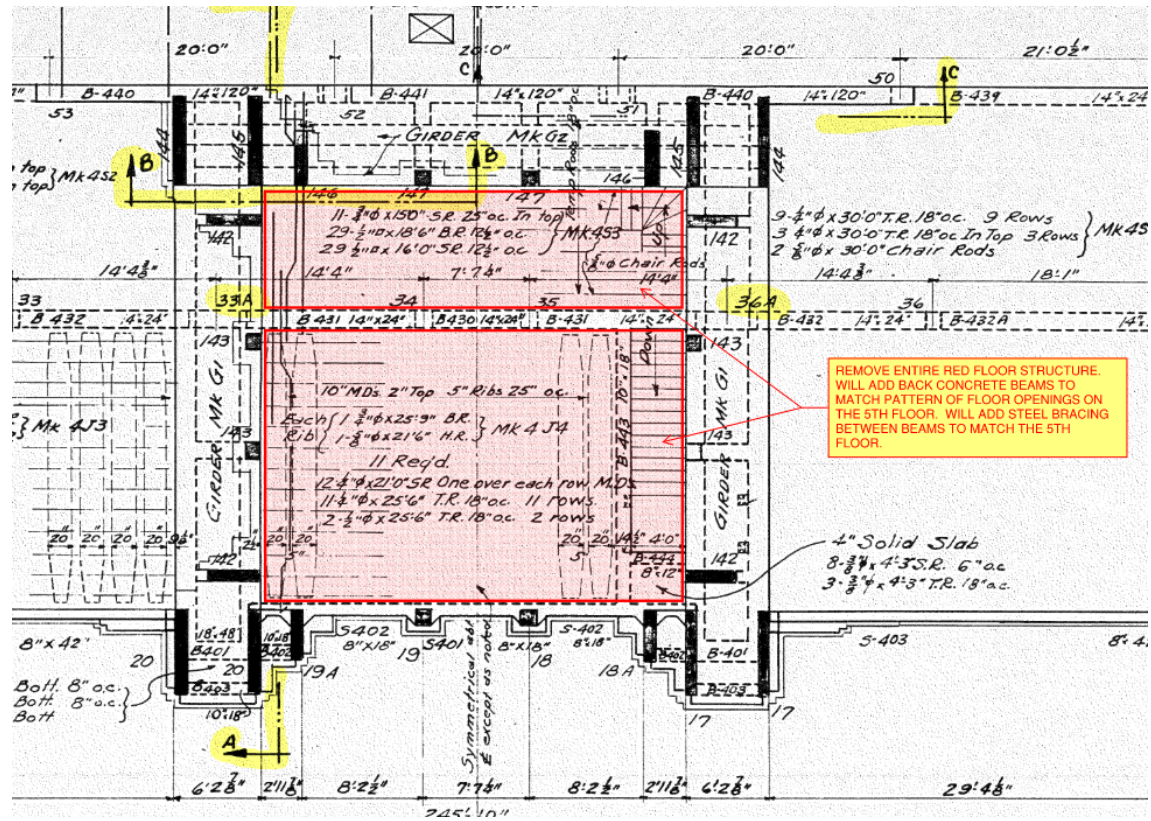


Figure 4 - 4TH FLOOR

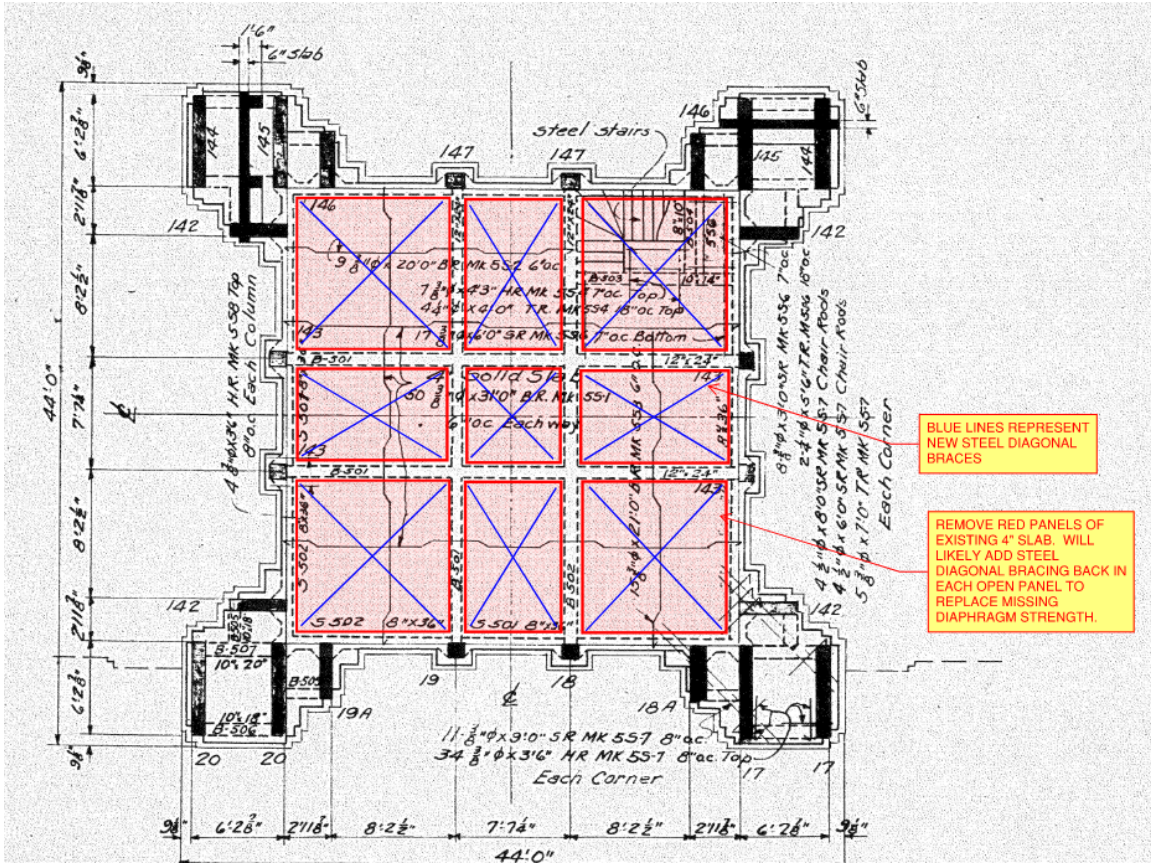


Figure 5 - 5TH FLOOR