# EXISTING CONDITIONS SUMMARY

INTERPRETATION OF THE EXISTING CONDITIONS REPORT ISSUED IN DECEMBER 2021 BY DORE + WHITTIER

# TONIGHT'S GOALS

- Simply interpret the report for those who are not regularly involved in projects of this kind
- Delineate what would be left of the existing building
- Identify “challenges” of a project this size with the building occupied
- High level cost/benefit/upsides and downsides

# OVERVIEW

- Existing building could potentially be worked with but will involve compromises

Questions:

At what financial cost?

At what educational cost”

At what cost to students, parents abutters, etc.?

And, what do we have at the end of the process?

# AREAS OF FOCUS TONIGHT

| | |
|---|---|
| **Plumbing** | Civil |
| **Mechanical** | Landscape |
| **Electrical** | Food Service Equipment |
| **Fire Protection** | Theatrical Equipment |
| **General Code Compliance** | Technology and Communications |
| **Architectural** | |
| | |

# LIFE SAFETY

- No fire suppression, sprinklers/controls, devices, entire system to be added
- Existing non-addressable would be replaced, wire, devices, panel
- Water feed, must be added for suppression
- Emergency Generator, too small for additional load
- Glass with wire to be removed – many places throughout the interior, vision panels, sidelights, stairwells, transoms

# CODE COMPLIANCE

- Must meet all seismic codes, foundation, walls and roof "…addition of reinforced masonry shear walls, with new reinforced concrete foundations, connecting the floor and roof diaphragms to the existing masonry walls." "all of the existing masonry walls would have to be adequately connected to the roof and floor structure."
- Toilet and shower rooms all need reconfiguring, slab cuts
- Toilet room fixtures, not code compliant, to be replaced
- Must install fire suppression system, including dedicated feed line
- Plumbing, all copper 60/40 vs 90/10 to be removed "(replace) all domestic water piping, valves, and accessories…do not meet NSF 61 and NSF 372 standards…"
- Doors and door hardware, "nearly all of it is non-compliant"
- Elevator, "does not meet elevator and accessibility codes"
- Stair handrails/guardrails do not meet building or accessibility codes

# PLUMBING/HVAC

- Boilers, replace entire heating system
- Piping, replace all heating hot water piping in mechanical spaces
- Pumps, replace pumps and associated equipment
- Heating Controls, pneumatics, BMC, replace all
- Gym/Cafeteria/Kitchen, “provide new HVAC equipment and associated controls”
- Classroom Heating Units, controls, noise, original – replace all
- Water main, separate has to be brought in & new line for fire
- Toilet partitions, most original, to be replaced
- Fixtures, toilets urinals, mirrors, paper towel holders, dispensers, to be replaced
- Shower and toilet room layouts, toilet room configurations, code, slab, drains, vents
- Underground/underslab piping, “consider replacing in its entirety” based on corrosion

# ELECTRICAL

- Some systems do not meet current codes
- Most systems not suited for expansion, compatibility of existing/new
- Switchboard and panels mostly original
- Lighting controls and fixtures, design, functionality, conservation
- Receptacles, more needed
- Public Address/Central Clock, cabling, speakers, and devices throughout
- Telephone System, total replacement
- Technology Upgrades, AV systems, networked computers/printers/data closets
- Access Control, Security, cameras

# CIVIL/GREEN SPACE/FIELDS

- Hydraulic Soil Group rating, C/D – slow filtration rates
- New or old building must meet MASS/DEP stormwater management guidelines
- New or old must meet EPA's National Pollution Discharge Elimination Standards
- Entrance curbs, cast in place concrete sidewalks in disrepair, will be damaged during construction and need to be replaced. Surface set curbs need to be replaced and discarded
- Bituminous materialscracked, patches, potholes to be replaced
- Courtyard "…space is unsafe, aged, likely inaccessible (per ADA standards)…" "all of the elements throughout courtyard will need to be removed"
- Playground equipment and engineered wood fibre mulch, noncompliant, have to go
- Bicycle racks, moveable tables/chairs, courtyard benches, baseball chain-link backstop, metal benches (on field), basketball hoops – all have to go

# GENERAL CONDITIONS ITEMS

- Existing floor tile, “has far exceeded its anticipated service life” As part of alteration “abate tile and mastic” – replace the tile
- Gym floor, “”good to fair condition”…”potential tripping hazards” “replace vented wall base” – R&R
- Gym wainscoting, “poor condition…face veneer is delaminating” - replace
- Shop floor, replace approximately 20% of floor area refinish all –R&R
- Ceilings, “replace ceiling tiles and grids”…repair plaster ceilings…repaint all exposed roof deck and exposed structure
- Lockers in many parts of the building need to be replaced
- Casegoods, countertops other built-ins, most original, to be replaced
- Partitions, between classroom to be replaced
- Doors, doors and hardware not compliant, to be replaced
- Chalkboards, replace all with markerboards
- Roof Drains and Overflow, replace rusted and overflow through parapet
- **NOTE**: Kitchen and theatrical omitted from this summary

# ROOF

- Insulation not to code
- Membrane failing
- Not sloped as needed
- Corrugated steel under the gypsum concrete is failing
- “replace roofing system”….”remove existing roof down to structural gypsum deck”
- Added parapet to cover required insulation, add 10 drains, provide overflow drains (cuts). Add metal cornice caps

# BUILDING EXTERIOR/MASONARY

- Brick has no air gap, vapor barrier or weeping holes, affixed to the block
- Tie backs could have failed, auditorium example
- Precast concrete elements, broken or failed
- Replace concrete cornice elements
- Demolish precast colonnade and new entry canopy
- Replace rotted wood trim, and sagging soffits (about 50% of total)
- Remove all sealant/replace around windows and doors
- Replace exterior louvers and sealants
- Non-structural masonary walls are not connected to the structure

# PROJECT OBSTACLES AND COST

## ALL NEW BUILDING

- Likely no disruption to the learning environment – construction occurring "out back"
- Construction phasing, mitigation, delays minimal impact of students and faculty
- No loss of functional spaces in the existing building
- Likely more space for parking, construction staging
- Significantly fewer unknowns
- Shorter project lifecycle
- Fewer unknows, blank slate
- No CM At Risk cost

Cost, more predictable, greater value, less labor cost

## ADDITION/RENOVATION

- Substantially disrupted learning environment, noise, mitigation – all happening around students
- Construction phasing, mitigation, delays substantial impact of students and faculty – all going on around them
- Repeated loss of functional spaces, util. routing, slab cutting, haz mat
- Reduced use of the site, construction operations
- More unknowns, existing condition
- Longer project lifecycle
- Increased cost, unknown conditions and scope changes
- Increased cost, CM At Risk

- Cost, less predictable, less labor cost and phasing

# WHAT DO WE END UP WITH…

## ALL NEW BUILDING

- Purposely designed spaces, meet program needs
- Straightforward project
- Blank slate, no restrictions of old structural elements
- Open feel of a contemporary school
- More green space, improved soil conditions
- Code compliance w/less cost and disruption
- All major building components and systems new less short and longer term maint. Cost
- Centralized equipment, efficient, less to maintain
- Fewer doors windows and access points, higher security
- Lower operating cost

## ADDITION/RENOVATION

- Program/Configuration compromises
- Cumbersome project
- Awkward sized and shaped spaces
- Low ceilings, reduced daylight and views
- Less green space and unimproved field
- Code compliance, great disruption and cost
- Mixed build, some new some old some saved…increased maint. cost
- Decentralized systems and more equipment to maintain
- More ground level windows, doors and access points, less secure
- Reduced thermal envelope – higher operating cost over time