



Engineering, Operations, & Technology Committee

Update on Water Quality Laboratory Upgrades

Item 7a

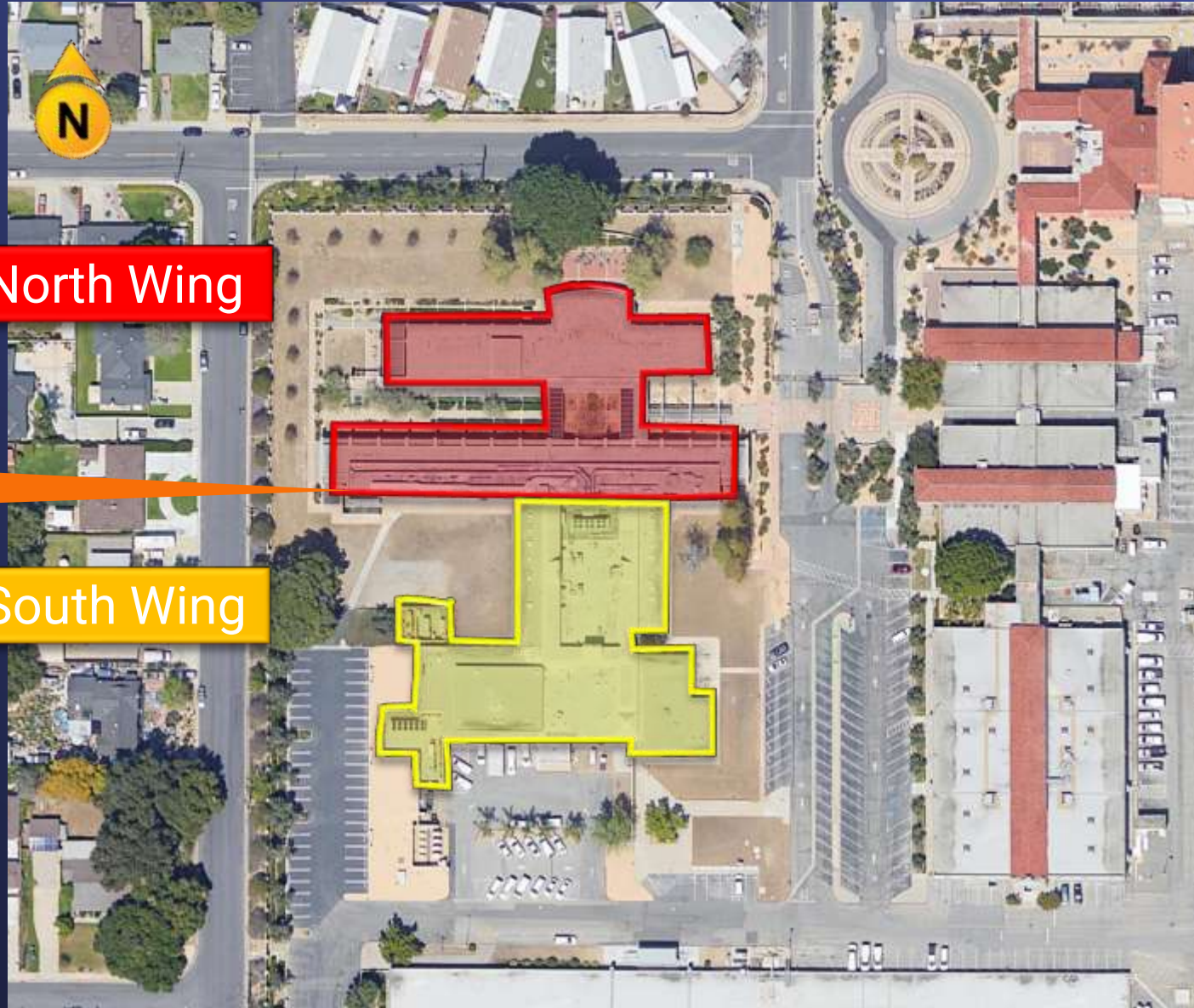
July 10, 2023

Water Quality Laboratory Upgrades

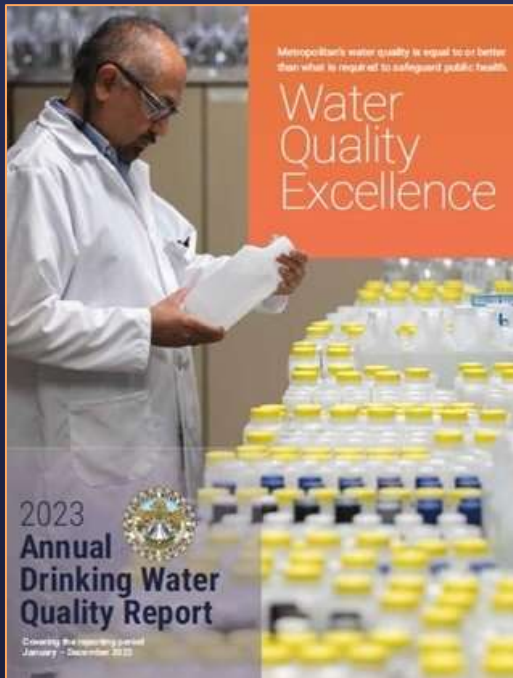
Project Update Agenda

- Background
- Design Update
- Interim Cost Update
- Schedule

Project Location at the Weymouth Facility



Water Quality Laboratory An Essential Facility



Water Quality At-A-Glance

- Regulatory compliance monitoring & testing
 - ~70,000 samples per year
 - >250,000 analytical results
- Source water monitoring & management
- Distribution system integrity
- Shutdowns & repairs/maintenance
- Customer satisfaction (T&O)
- Applied research
 - PWSC, emerging contaminants, treatment processes, analytical methods, alternative source waters

Laboratory No Longer Meets Requirements

- Laboratory requirements
 - Maintain regulatory compliance
 - New regulations, emerging issues and contaminants
- Need dedicated spaces and equipment for reuse research, PFAS, and microplastics, etc.
 - Clean rooms, pathogen containment, specialized instruments
- Workflow improvements within the building
 - Redesign lab spaces to accommodate expanded functions
 - Need better separation between lab and office areas
 - Improved records and document storage



Storage room converted into microplastics lab



Repurposing Available Space

Water Quality Laboratory Building Limitations



Microscope room and sample bottle storage



Lab supplies stored in office cubicles



Documents and printer in lab hallway

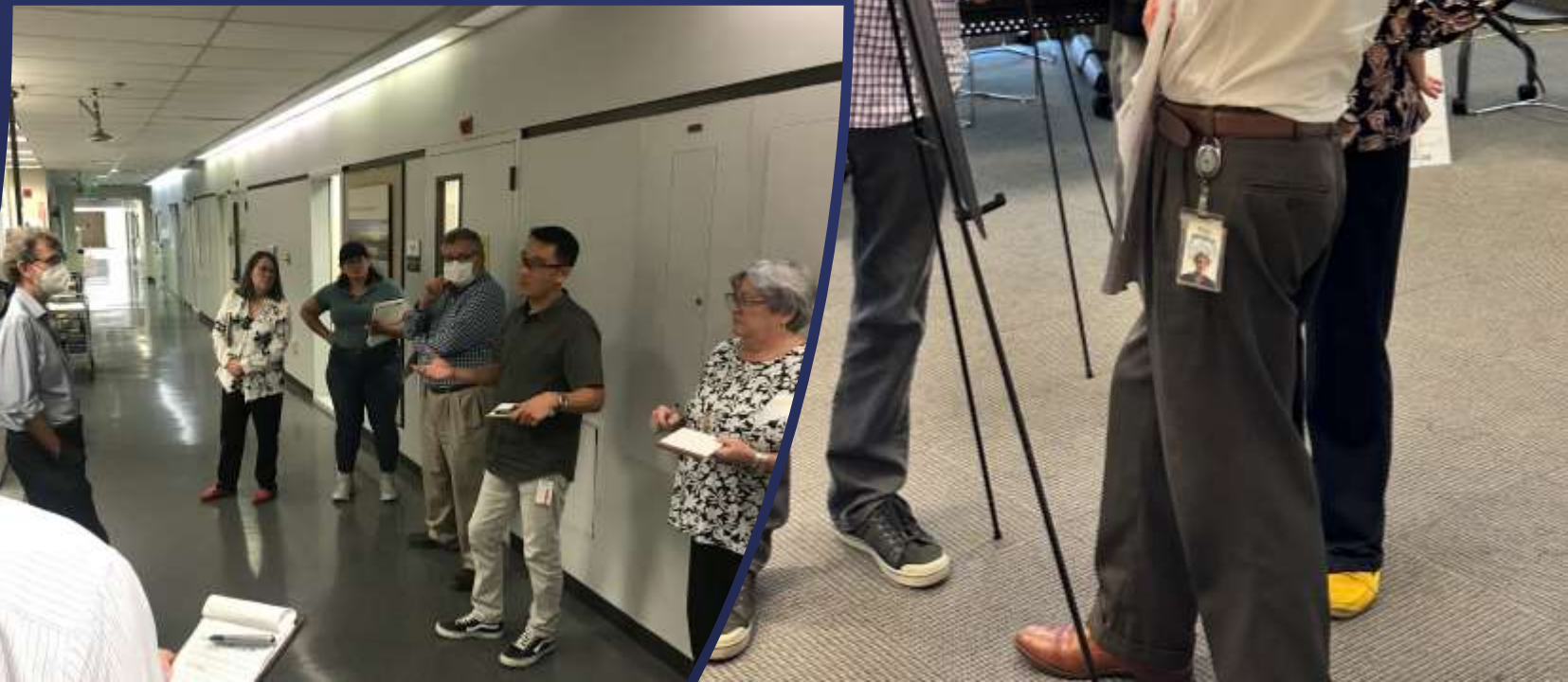


Office cubicle and documents in hallway

Background – Activity Timeline



Design Update



July 10, 2023

Site Visits and Workshops to Inform Design Decisions



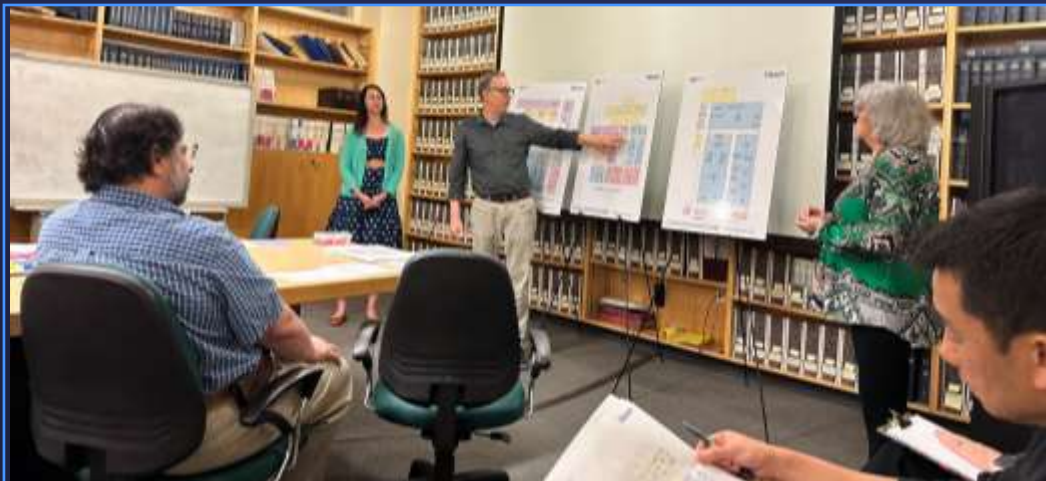
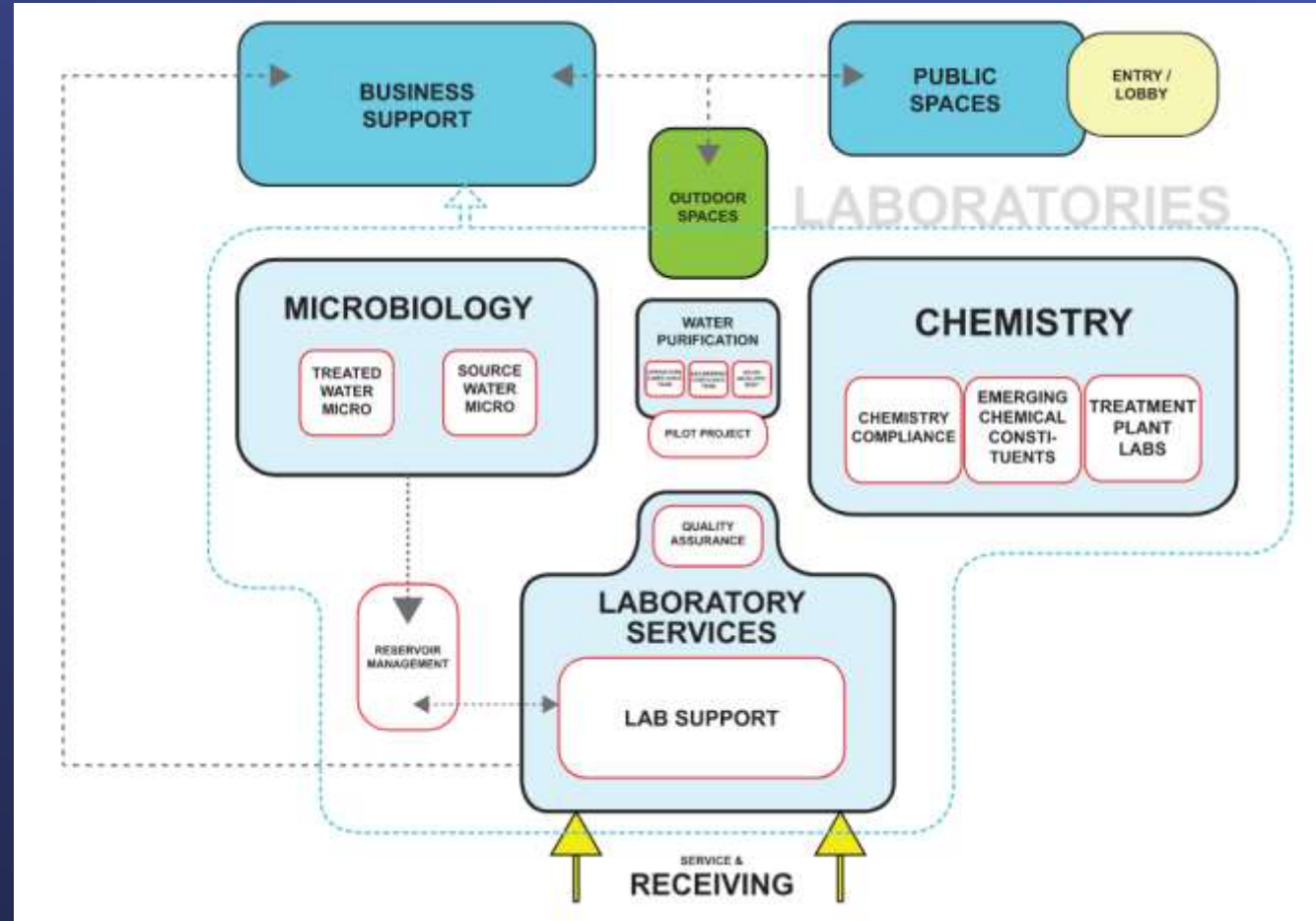
WRD Albert Robles Center



Santa Monica City Hall Annex

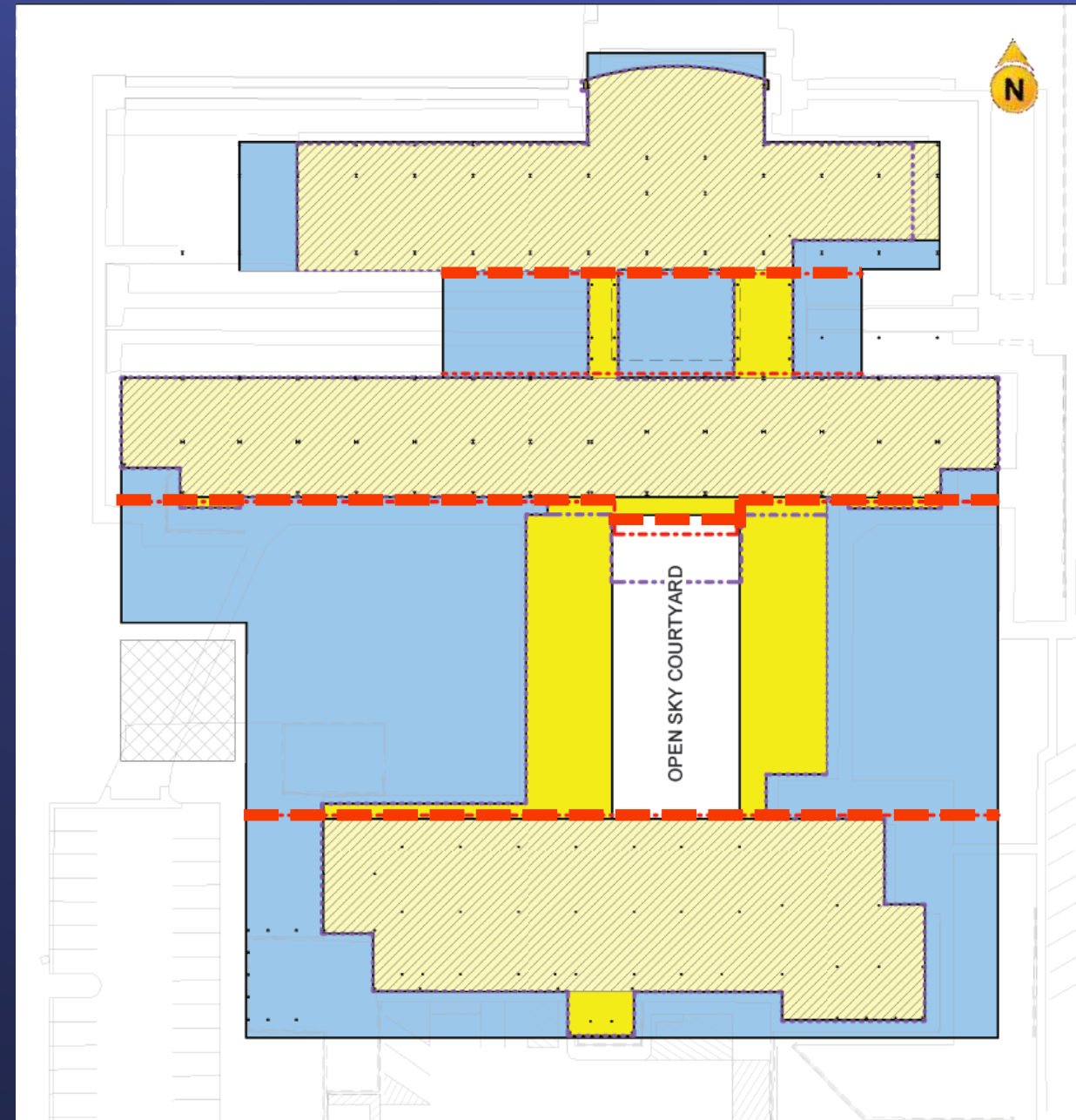
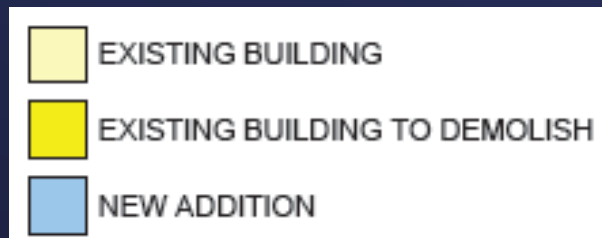
Space Planning Development

- Laboratory needs analysis
 - Overall laboratory flow & interaction
 - Considerations for sample handling, waste pathways & material delivery



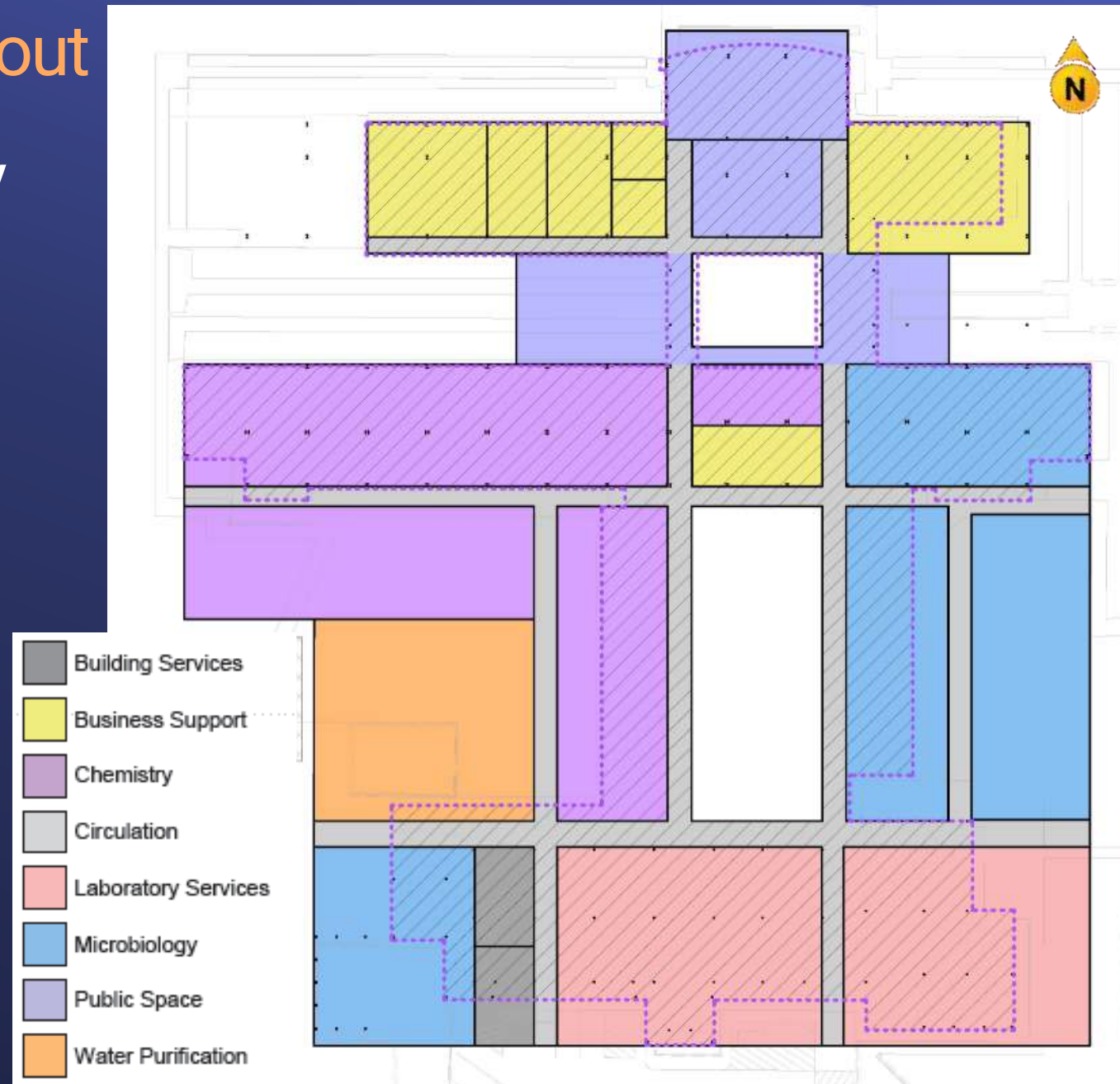
Key Design Criteria – Footprint

- 30,000 SF addition established
- Expanded entrance with improved traffic management
- Improved access to parking & staff entrance locations
- Strategy established to integrate structural improvements between existing & new structures



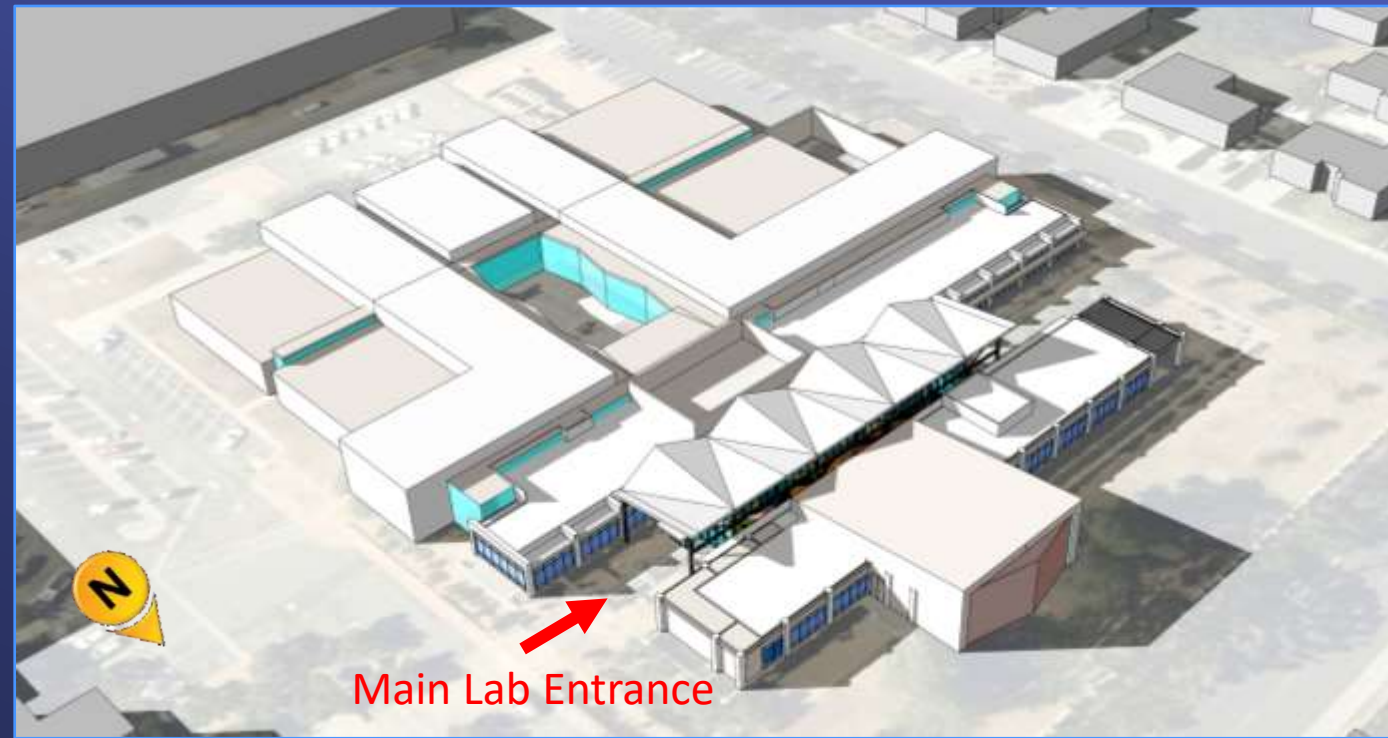
Key Design Criteria – New Layout

- Dedicated, modular laboratory space with clear separation
- Reconfigured laboratory adjacency for improved workflow
- Improved sample handling, waste management, public access, common areas & meeting spaces



Integration into La Verne Site

- La Verne 10-Year Master Plan
 - Maximize use of available space
- Repurpose foundation and key structural members to reduce building cost



New Proposed Water Quality Lab

Existing Water Quality Lab



Initial Concept Renderings

- New entrance and lobby maximizes public interaction and improves building traffic management and security
 - Lab Tours
 - Board
 - Industry
 - Public
 - Staff access
 - Deliveries



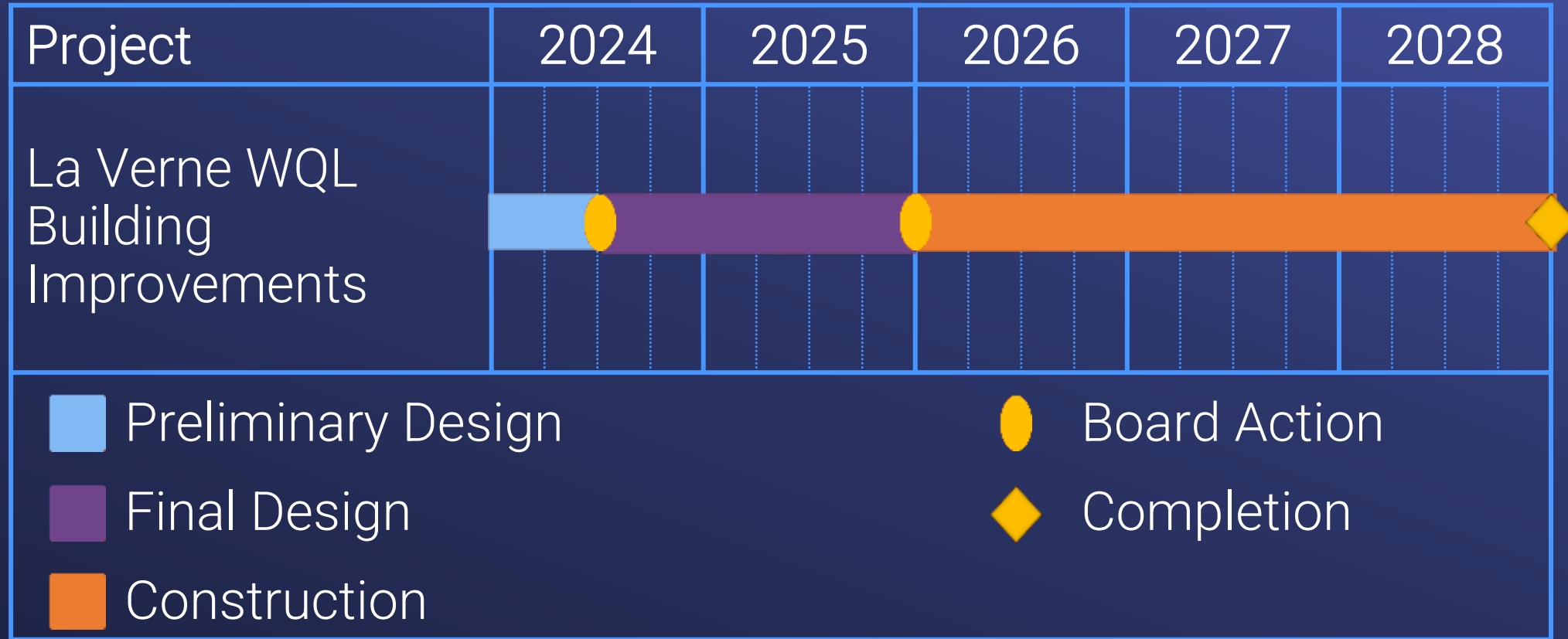
Laboratory Lobby/Entrance

Update on Water Quality Laboratory Upgrades

Interim Cost Update

- Construction Contract: \$100M to \$130M
- Cost contributors requiring further development
 - Escalation and Inflation
 - Structural design for essential facility
 - HVAC requirements
- Other Construction Costs:
 - Laboratory Equipment
 - Staff Relocation and Support

Project Schedule



PFAS
Microplastics
Manganese
DBPs
Nitrification
Low alkalinity
PWSC
DPR
Cyanotoxins
T&O
Lake anoxia
Quagga mussels
New
contaminants

A Water Quality Lab for the Future

- 2024 – Water Quality will celebrate 50 years
- Metropolitan needs a state-of-the-art facility to meet all current and future requirements
- Need an upgraded lab to last another 50 years



