

McCordsville WWTP Value Engineering

Original construction cost range (July 2018): \$4.8 – \$5.2 Million

Current construction cost range (January 2020): \$5.7 – \$6.7 Million

Cost increases are due to:

- Additional effluent, air, sludge, water and storm piping (\$225K – \$300K)
- Equipment (130K – \$300K)
- Larger, more complex buildings and increased building construction costs (\$550K – \$900K)

Staff directed Whitaker to determine ways to reduce construction costs. These options were reviewed with staff and could save between \$570K and \$950K.

Items eliminated (Potential Savings \$250K - \$450K): Value Engineering and design fee \$9,500.

- UV System
- Fine Screen Building
- Reducing number of valves and adding gates
- Changes in pipe materials
- Other minor components

Bid Alternatives (Potential Savings \$120K - \$175K): Design fee \$14,500 to \$19,500 to achieve savings.

- Addition of the 4th sludge dumpster bay that was originally planned
- Addition of digester VFD's back into the project

Process Building (Potential Savings \$150K - \$275K): Design fee \$20,500 to \$25,500 to achieve savings.

- Reduce UV and storage area footprint
- Decreasing building height on UV/Chemical side by 24"
- Decrease sophistication of crane

Lab Building (Potential Savings \$50K): Design Fee of \$8,500.

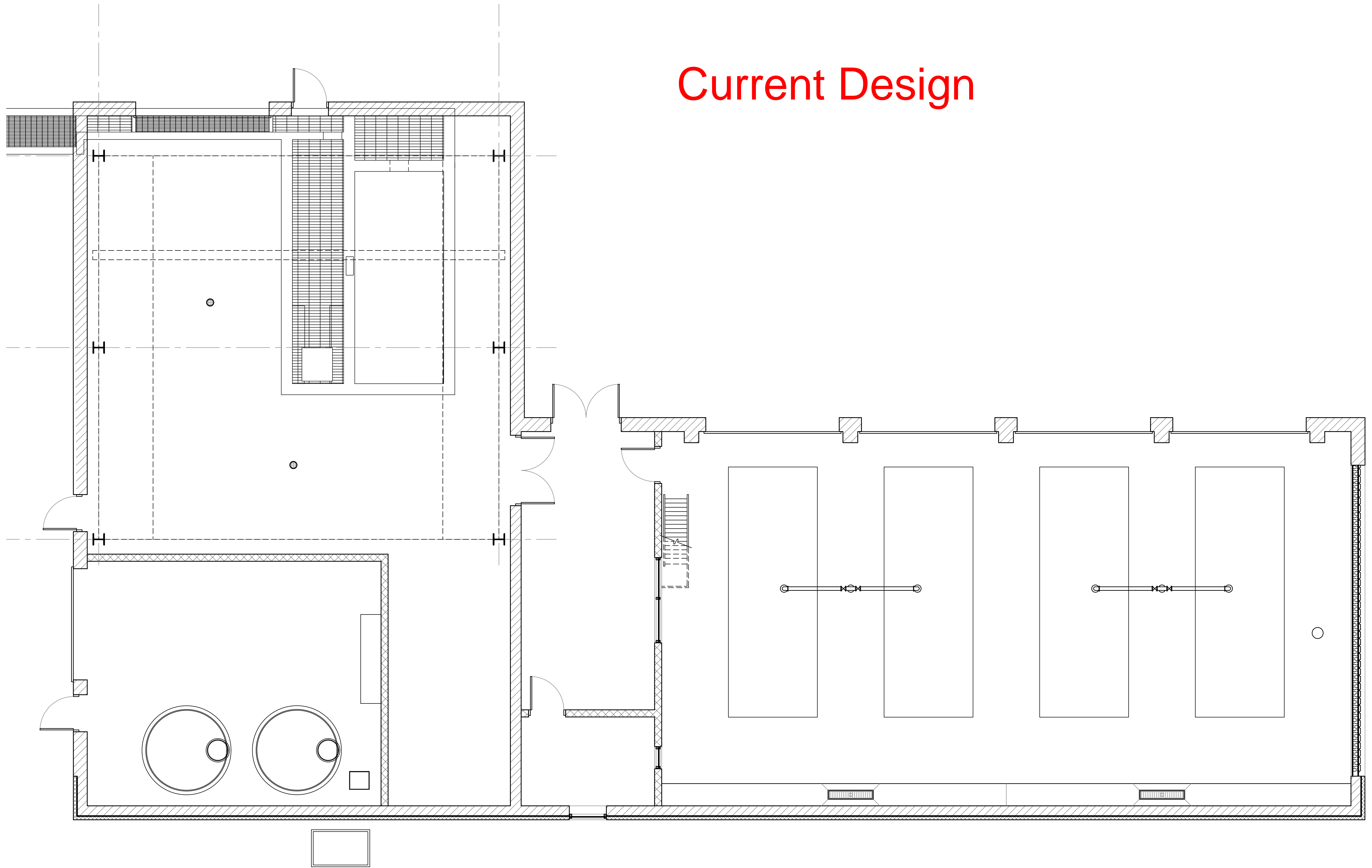
- Eliminates 2 offices and a conference room/office.
- Not recommended by staff. All offices will be utilized immediately except for conference room

Other Options:

- Eliminate asphalt drive and parking and use stone instead. Board of Works does not want to deviate from Town standard. (Up to \$50K saved)

If all of the options are implemented except the lab building and changing to a stone drive and adding in the professional fees the construction cost range decreases to: \$5.22 – \$5.84 Million

Current Design



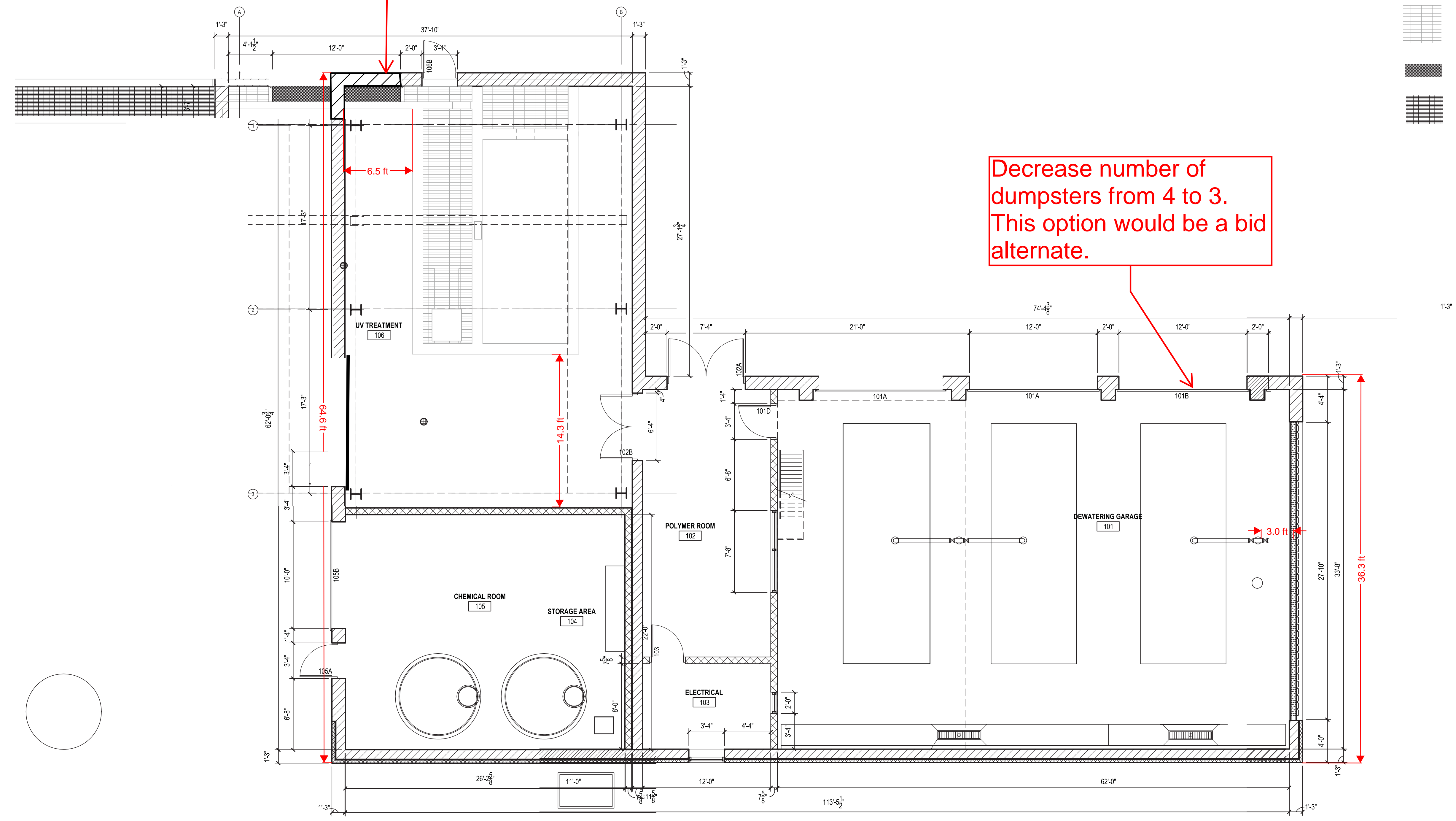
Value Engineering Process Building Options

- GENERAL NOTES:**
1. THESE DRAWINGS ARE INTENDED TO OUTLINE THE GENERAL SCOPE OF THE WORK. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING ANY WORK. CONTRACTORS SHALL ALSO BE RESPONSIBLE FOR ADHERING TO ALL APPLICABLE CODES AND GENERALLY ACCEPTED TRADE PRACTICES.
 2. ALL DIMENSIONS ARE FROM FACE OF MASONRY, UNLESS NOTED OTHERWISE.
 3. ALL DOOR FRAME OPENINGS SHALL BE 6" FROM ADJACENT WALLS UNLESS NOTED OTHERWISE.
 4. REFER TO DOOR SCHEDULE ON SHEET A2.1 FOR SIZE, TYPE, AND FINISH OF ALL NEW DOORS & FRAMES.

- WALL LEGEND**
- NEW INTERIOR PARTITION - SEE WALL TYPES
 - NEW DOOR AND FRAME
 - FIRE EXTINGUISHER CABINET
 - EXISTING ALUMINUM FLOOR GRATING TO REMAIN
 - HINGED GALVANIZED STEEL PLATE COVER SYSTEM
 - HEAVY DUTY ALUMINUM FLOOR GRATING

Decreases building width by 11ft. Building height would also decrease. Crane would be simplified.

Decrease number of dumpsters from 4 to 3. This option would be a bid alternate.



REVISIONS:

SHEET TITLE:
PROCESS BUILDING FLOOR PLAN & DETAILS

PROJECT TITLE:
TOWN OF McCORDSVILLE WWTP IMGD EXPANSION

HALSTEADarchitects

1139 SHELBY STREET INDIANAPOLIS, IN 46203
123 EAST THIRD STREET MARION, IN 46852
317.684.1431 765.662.9372
www.halstead-architects.com

DRAFT - NOT FOR CONSTRUCTION

CERTIFIED BY:
THIS DRAWING AND THE IDEAS, DESIGNS AND CONCEPTS CONTAINED HEREIN ARE THE EXCLUSIVE INTELLECTUAL PROPERTY OF WHITAKER ENGINEERING, P.C. AND ARE NOT TO BE USED OR REPRODUCED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF WHITAKER ENGINEERING, P.C. © COPYRIGHTED BY WHITAKER ENGINEERING, P.C. 2019



OWNER INFORMATION:
TOWN OF McCORDSVILLE
6280 W 800
McCORDSVILLE, IN 46055

SHEET LABEL: A2.1P	SHEET No. X	OF: X
CHECKED BY: MLW	PROJECT No. 1850	
DRAWN BY: XXX	DATE: XX/XX/2019	

PROCESS BUILDING
FLOOR PLAN
SCALE: 3/16" = 1'-0"
NORTH

GENERAL DEMOLITION NOTES:

1. THESE DRAWINGS ARE INTENDED TO OUTLINE THE GENERAL SCOPE OF THE WORK. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING DIMENSIONS BEFORE STARTING WORK. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR ADHERING TO ALL APPLICABLE CODES AND GENERALLY ACCEPTED TRADE PRACTICES.
2. EACH CONTRACTOR SHALL VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR OMISSIONS THAT OCCUR TO THE ARCHITECT.
3. THE REMOVAL OF ANY AND ALL GYPSUM BOARD WILL INCLUDE THE REMOVAL OF ALL NAILS AND/OR SCREWS USED THROUGHOUT INSTALLATION.
4. ALL REMOVED EXTERIOR DOORS AND/OR WINDOW OPENINGS SHALL BE TEMPORARILY, BUT SECURELY, INFILLED WITH WOOD FRAMING AND EXTERIOR PLYWOOD SHEATHING, WITH 4 MIL POLYETHYLENE FOR MOISTURE PROTECTION.
5. EXISTING FLOOR FINISHES ARE TO REMAIN. CONTRACTOR SHALL TAKE NECESSARY MEASURES TO PROTECT EXISTING FLOORS DURING DEMOLITION AND CONSTRUCTION.
6. EXISTING LIGHT FIXTURES SHALL REMAIN UNLESS OTHERWISE NOTED.

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING DOOR AND FRAME TO REMAIN
- EXISTING DOOR AND FRAME TO BE REMOVED

FLOOR PLAN GENERAL NOTES:

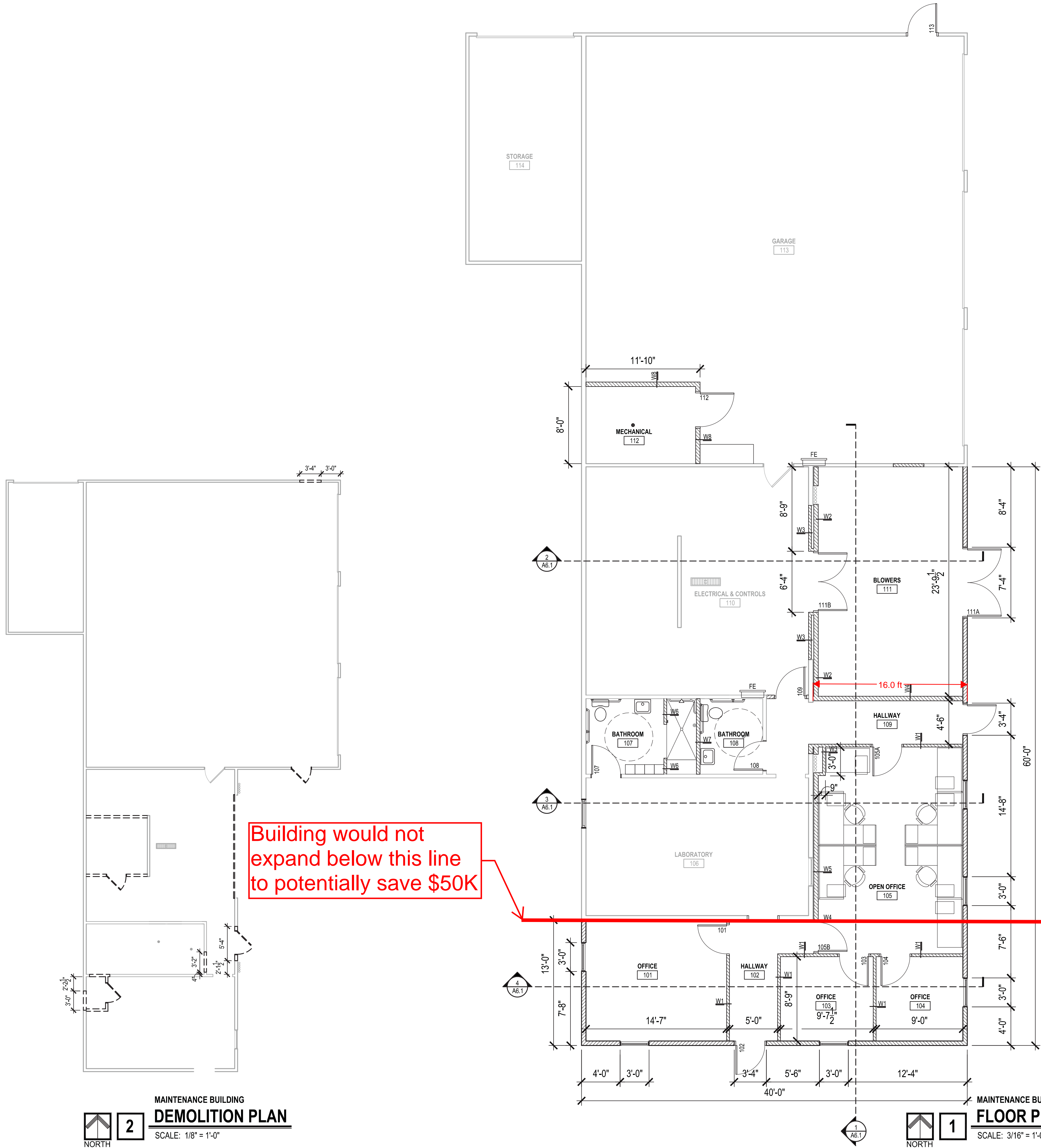
1. THESE DRAWINGS ARE INTENDED TO OUTLINE THE GENERAL SCOPE OF THE WORK. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING ANY WORK. CONTRACTORS SHALL ALSO BE RESPONSIBLE FOR ADHERING TO ALL APPLICABLE CODES AND GENERALLY ACCEPTED TRADE PRACTICES.
2. ALL DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD, MASONRY, OR EXISTING WALL SURFACE, UNLESS NOTED OTHERWISE.
3. ALL DOOR FRAME OPENINGS SHALL BE 6" FROM ADJACENT WALLS UNLESS NOTED OTHERWISE.
4. PROVIDE NECESSARY BLOCKING (FIRE TREATED), CONCEALED WITHIN THE CONSTRUCTION, AS REQUIRED FOR ANY AND ALL ITEMS THAT MUST BE SECURED TO THE WALL. VERIFY LOCATIONS WITH OWNER.
5. REFER TO DOOR SCHEDULE ON SHEET A2.X FOR SIZE, TYPE, AND FINISH OF ALL NEW DOORS & FRAMES.
6. REFER TO PLUMBING PLANS FOR ALL PLUMBING FIXTURE LOCATIONS, SPECIFICATIONS, AND FIXTURE COUNTS. THE ARCHITECTURAL FLOOR PLANS ARE FOR DESIGN INTENT ONLY.

FLOOR PLAN WALL LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- NEW INTERIOR PARTITION - SEE WALL TYPES
- NEW DOOR AND FRAME
- EXISTING DOOR AND FRAME TO REMAIN
- FIRE EXTINGUISHER CABINET

FLOOR PLAN WALL TYPES

- W1 2x4 WOOD STUDS @ 16" O.C. WITH 3/2" BATT INSULATION WITH 5/8" GYP. BOARD ON BOTH SIDES WITH TO STRUCTURE ABOVE
- W2 2x6 WOOD STUDS @ 16" O.C. WITH BATT INSUL. AND 5/8" GYP. BOARD ON ONE SIDE TO STRUCTURE ABOVE
- W3 2x4 WOOD STUDS @ 16" O.C. W/ 5/8" GYP. BOARD ONE SIDE TO STRUCTURE ABOVE
- W4 2x6 WOOD STUDS @ 16" O.C. WITH BATT INSUL. AND 5/8" GYP. BOARD BOTH SIDES TO STRUCTURE ABOVE
- W5 2x6 WOOD STUDS @ 16" O.C. W/ 5/8" GYP. BOARD ONE SIDE TO STRUCTURE ABOVE
- W6 2x4 WOOD STUDS @ 16" O.C. WITH 1/2" GYP. BOARD ON ONE SIDE AND 1/2" CEMENTITIOUS BACKER BOARD TO STRUCTURE ABOVE
- W7 2x6 WOOD STUDS @ 16" O.C. WITH BATT INSUL. AND 1/2" CEMENTITIOUS BACKER BOARD BOTH SIDES TO STRUCTURE ABOVE
- W8 2x6 WOOD STUDS @ 16" O.C. WITH 1/2" GYP. BOARD BOTH SIDES TO 10'-0" A.F.F.



MAINTENANCE BUILDING
DEMOLITION PLAN
 SCALE: 1/8" = 1'-0"
 NORTH

MAINTENANCE BUILDING
FLOOR PLAN
 SCALE: 3/16" = 1'-0"
 NORTH

REVISIONS:

MAINTENANCE BUILDING
 FLOOR PLAN & DETAILS

TOWN OF McCORDSVILLE
 WWTP IMGD EXPANSION

SHEET TITLE:

PROJECT TITLE:

HALSTEADarchitects
 1139 SHELBY STREET INDIANAPOLIS, IN 46203
 123 EAST THIRD STREET MARION, IN 46852
 317.684.1431 765.662.9372
 www.halstead-architects.com

DRAFT - NOT FOR CONSTRUCTION

CERTIFIED BY:
 THE DRAWING AND THE IDEAS, DESIGNS AND CONCEPTS CONTAINED HEREIN ARE THE EXCLUSIVE INTELLECTUAL PROPERTY OF WHITAKER ENGINEERING, P.C. AND ARE NOT TO BE USED OR REPRODUCED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF WHITAKER ENGINEERING, P.C. © COPYRIGHTED BY WHITAKER ENGINEERING, P.C. 2019

WHITAKER ENGINEERING

OWNER INFORMATION:
 TOWN OF McCORDSVILLE
 6280 W 800
 McCORDSVILLE, IN 46055

SHEET LABEL: A2.1M	SHEET No. X	OF: X
CHECKED BY: MLW	PROJECT No. 1850	
DRAWN BY: XXX	DATE: XX/XX/2019	