

1101 E. Washington Ave Construction and Design Update

Board of Public Works, October 2nd 2019

Jon Evans, PE, City Engineering Project Manager



Agenda

- ▶ Project Overview
- ▶ Phase 1 and Phase 2 Details
- ▶ Phase 1 Construction Pictures
- ▶ Phasing and Budget
- ▶ Satellite Facility



Project Overview

Metro Bus Barn

- 200+ Buses
- 24/7/365 Operations
- Aged building infrastructure
- 6 Renovation Phases

Phase 1 (2018/2019)

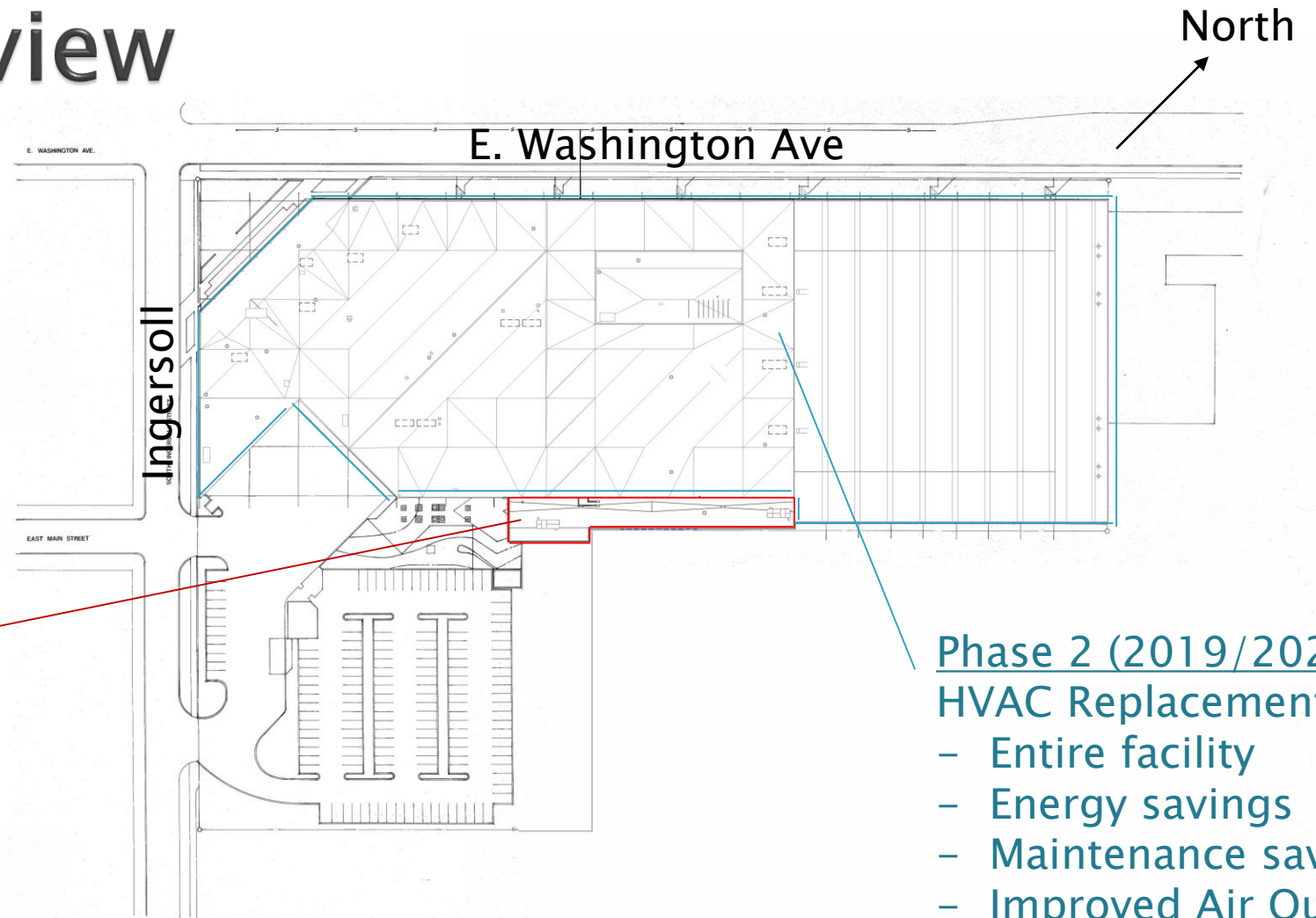
Service Lane Addition

- 10,000 sq. ft.
- Fueling, Vaulting, Cleaning
- Setup for future Phases
- Setup for E-Buses (2020)

Phase 2 (2019/2020)

HVAC Replacement

- Entire facility
- Energy savings
- Maintenance savings
- Improved Air Quality



(McPike Park)

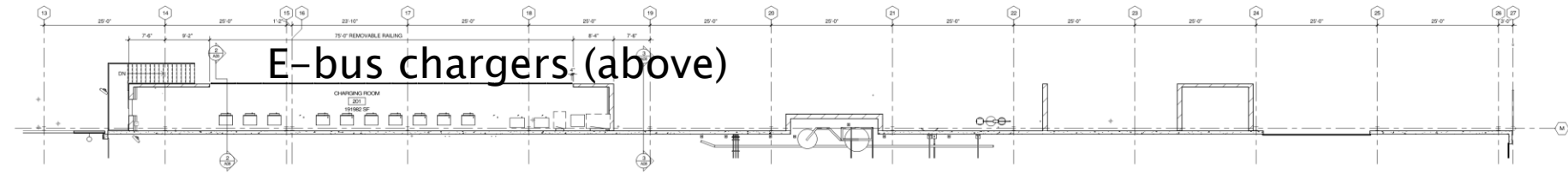


CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION
PROPOSED SITE
03 OCTOBER 2018

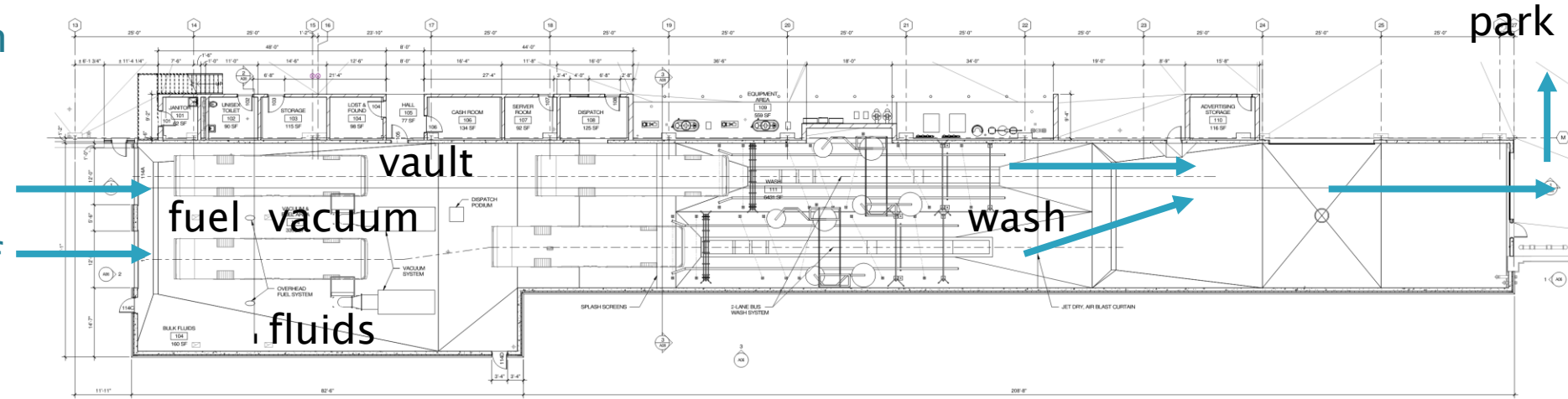


Phase 1 Details

- Mostly 2nd/3rd Shift
- Each bus, each day
- Improves Worker health and safety
- Improves Worker productivity
- Improves cleanliness of buses for customers
- Complete March 2020!



TRUE PLAN NORTH/SOUTH
3 EQUIPMENT PLATFORM PLAN
1/8" = 1'-0"



TRUE PLAN NORTH/SOUTH
1 FIRST FLOOR PLAN - AREA A & B
1/8" = 1'-0"

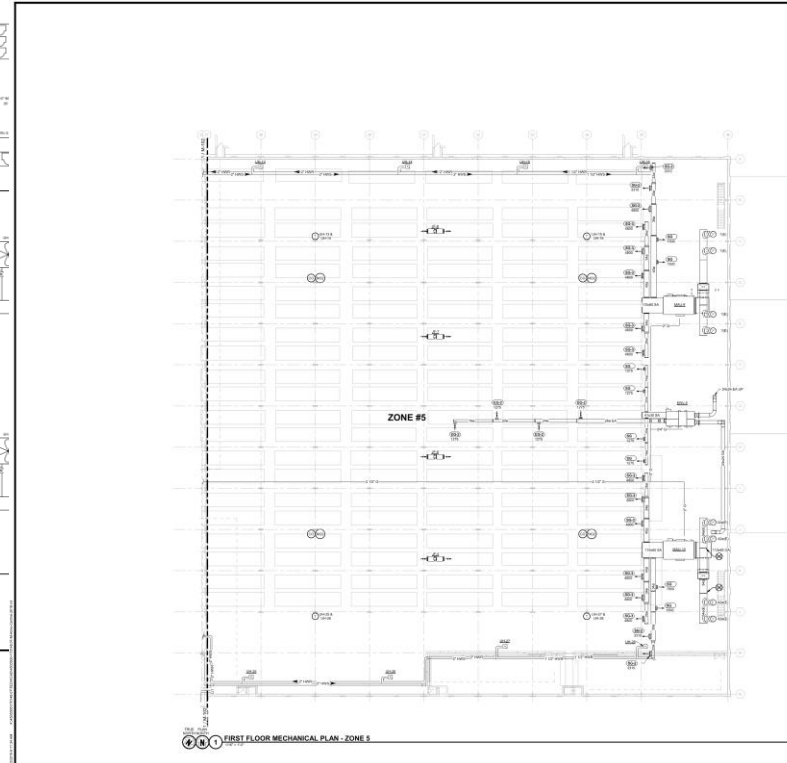
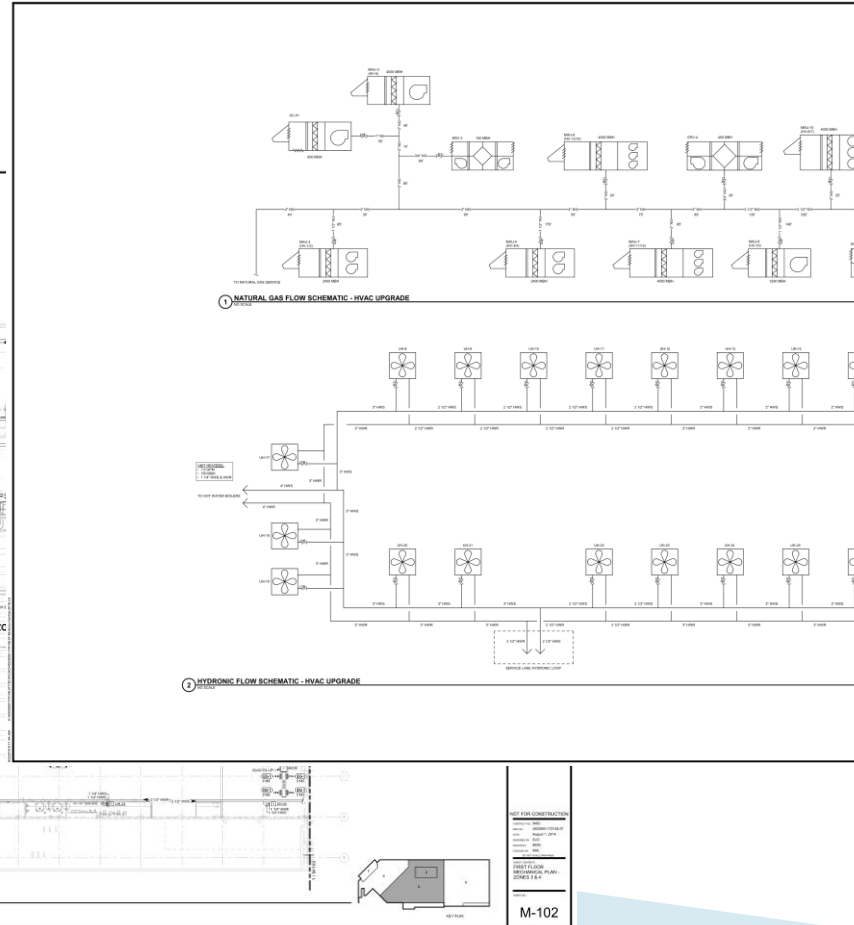
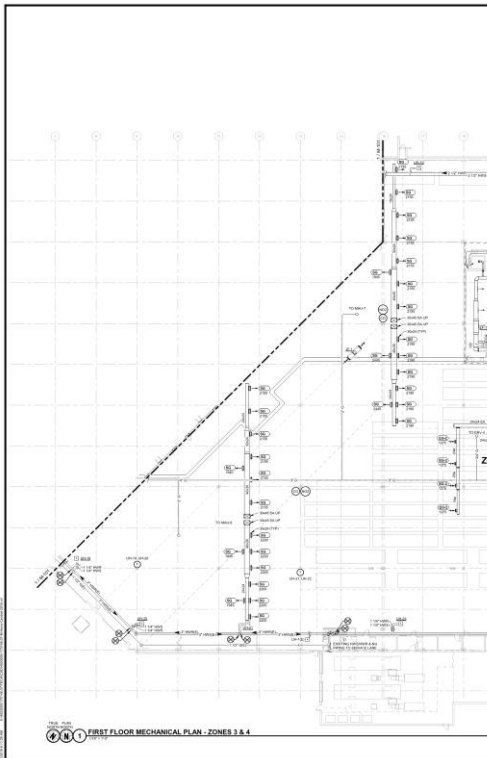


CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION
PROPOSED FLOOR PLANS - AREA A & B
03 OCTOBER 2018



Phase 2 Details

- Design Complete October 2019
- Bidding Nov and Dec 2019
- Construction starting early 2020



| AIR-TO-AIR HEAT EXCHANGER (BTU) SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------|--------------|------|------------|------|-----------|-----------|------------|------|-----------|-----------|----------------|------|-----------|-----------|-----------|------|-----------|-----------|----------|---------|-----|--|
| NAME | MANUFACTURER | MODEL NUMBER | SIZE | SUPPLY AIR | | | | RETURN AIR | | | | HEAT EXCHANGER | | | | EQUIPMENT | | | | LOCATION | REMARKS | | |
| | | | | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | | | | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |

| MAKE-UP AIR UNIT (MAU) SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--------------|--------------|------|------------|------|-----------|-----------|------------|------|-----------|-----------|-----------|------|-----------|-----------|----------|---------|-----|-----|-----|-----|-----|--|
| NAME | MANUFACTURER | MODEL NUMBER | SIZE | SUPPLY AIR | | | | RETURN AIR | | | | EQUIPMENT | | | | LOCATION | REMARKS | | | | | | |
| | | | | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | | | | | | | | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |

| EXHAUST FAN (EF) SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--------------|--------------|------|------------|------|-----------|-----------|------------|------|-----------|-----------|-----------|------|-----------|-----------|----------|---------|-----|-----|-----|-----|-----|--|
| NAME | MANUFACTURER | MODEL NUMBER | SIZE | SUPPLY AIR | | | | RETURN AIR | | | | EQUIPMENT | | | | LOCATION | REMARKS | | | | | | |
| | | | | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | | | | | | | | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |

| VARIABLE FREQUENCY DRIVE (VFD) SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------|--------------|------|------------|------|-----------|-----------|------------|------|-----------|-----------|-----------|------|-----------|-----------|----------|---------|-----|-----|-----|-----|-----|--|
| NAME | MANUFACTURER | MODEL NUMBER | SIZE | SUPPLY AIR | | | | RETURN AIR | | | | EQUIPMENT | | | | LOCATION | REMARKS | | | | | | |
| | | | | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | TYPE | AREA | PERIMETER | PERIMETER | | | | | | | | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |

GENERAL HVAC NOTES:

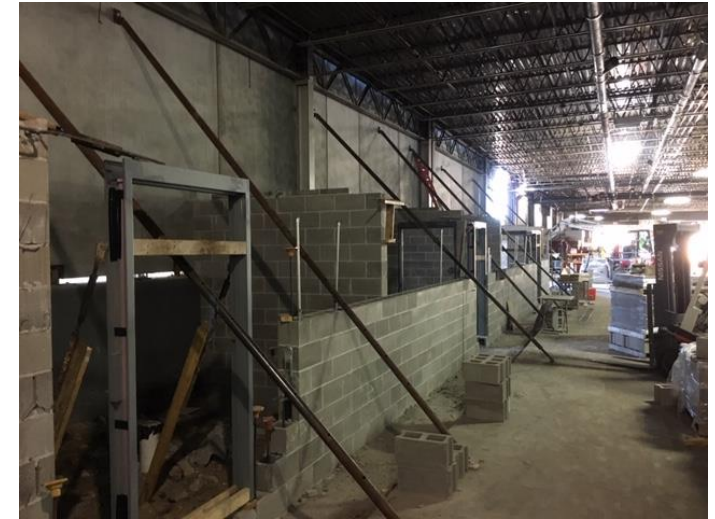
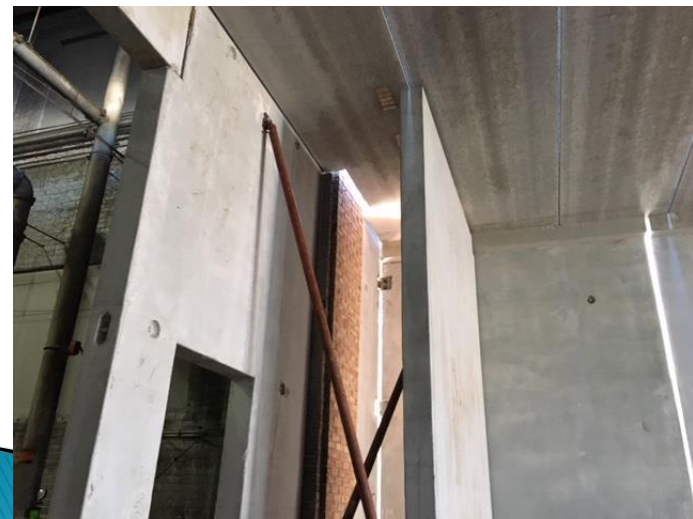
1. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON MECHANICAL CODE.
3. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON ELECTRICAL CODE.
4. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON PLUMBING CODE.
5. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON GAS CODE.
6. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON FIRE CODE.
7. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON BUILDING CODE.
8. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON ENVIRONMENTAL CODE.
9. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON HEALTH AND SAFETY CODE.
10. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON LABOR CODE.
11. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON OCCUPATIONAL SAFETY AND HEALTH CODE.
12. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON AMERICAN WITH DISABILITIES ACT.
13. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON NATIONAL FIRE PROTECTION ASSOCIATION CODE.
14. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON INTERNATIONAL ASSOCIATION OF PLUMBERS AND PIPEFITTERS CODE.
15. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION CODE.
16. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON INTERNATIONAL BROTHERHOOD OF PLUMBERS AND PIPEFITTERS CODE.
17. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON NATIONAL ASSOCIATION OF MECHANICAL ENGINEERS CODE.
18. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON NATIONAL SOCIETY OF MECHANICAL ENGINEERS CODE.
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23. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON SOCIETY OF MECHANICAL ENGINEERS CODE.
24. ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE.

GENERAL PIPING NOTES:

1. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MADISON MECHANICAL CODE.
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KEYED NOTES:

Construction Progress Photos



Overall Planning, Phasing and Budgets

| | <u>*Phase</u> | <u>Year</u> | <u>*2020 CIP</u> | <u>*Budget</u> |
|-------------|--------------------------------|---|------------------|----------------|
| | Phase 0 – New Roof | Design 2018, Construction 2018 | – | *** |
| 2017 RFP | Phase 1 – Service Lane / E-Bus | Design 2018, Construction 2019 | – | *** |
| | Phase 2 – HVAC Systems | Design 2018/19 , Construction 2020 | 2020 | \$8.4M |
| 2019 RFP | Phase 3A – Maintenance Bays | Design 2020, Construction 2021 | 2021 | \$10.8M |
| | Phase 3B – Admin/Dispatch | Design 2021, Construction 2022 | 2022 | \$10.0M |
| | Phase 3C – Bus Storage | Horizon | **Horizon | \$TBD |
| | Phase 4 – Exterior | Horizon | **Horizon | \$TBD |
| | | | TOTAL | \$29.2M |

* Budget and (Phasing) above based on 2018 Facility Study and 2020 Executive Capital Budget (****)

** “Horizon” means project is not included in 5 year CIP, but planning is occurring

*** Phase 0 budget was \$1.5M. Phase 1 budget was \$7.6M

****2020 Executive Capital Budget also has ~\$12M in 2020 and ~\$16M in 2021 for Satellite Facility

Phase 2 Construction Budget and Schedule

| <u>Task</u> | <u>\$</u> | <u>CIP</u> |
|---------------------------|--------------------|------------|
| 2019 Phase 2 Design | \$387,000 | 2019 |
| 2020 Phase 2 Construction | \$5,750,000 | 2020 |
| BPW 8% Contingency | \$460,000 | |
| 1% for Art | \$62,000 | |
| Escalation to Bid Date | \$250,000 | |
| Electric Bus Upgrades | \$500,000 | |
| Soft Costs | \$50,000 | |
| TOTAL | \$7,459,000 | |
| 2020 Design (Phase 3) | \$959,000 | 2020 |

Satellite Facility

- Northern portion of Former Oscar Meyer Site
- ~15 acres (two buildings and land)
- Owned by a developer

- “Building 43” would be for BRT
 - (30) 60’ Articulated Buses
 - Completed only with Federal match

- “Building 50” would be for Bus Storage
 - 40–56 buses
 - 4 maintenance bays
 - Service lane/running repair (future)
 - Completed with GO Borrowing (2021)

- Land to build a future building
 - 10 maintenance bays
 - 75 buses

