MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
110 S. Paterson Street, Madison, WI
Contract No. 7529, Project No. 10442

Madison Water Utility
Quality and Reliability since 1882
www.madisonwater.org

Mead & Hunt
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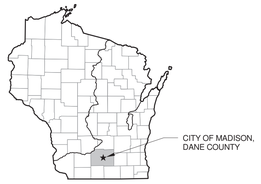
STATE MAP:



STATE OF WISCONSIN

VICINITY MAP:

SITE MAP
1" = 80'-0"

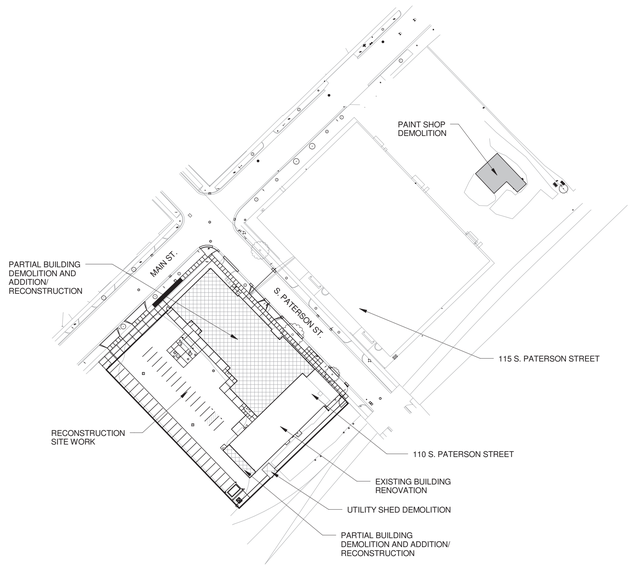


IMAGE FOR REFERENCE ONLY (NOT PART OF CONSTRUCTION DOCUMENTS)

SHEET INDEX

GENERAL
G-001 COVER SHEET
G-002 CODE ANALYSIS FIRST FLOOR PLAN AND SCHEDULES
G-003 CODE ANALYSIS SECOND AND BASEMENT PLANS
G-004 SITE PHASING & ACCESS PLAN
G-005 SITE PHASING & ACCESS PLAN
G-101 PHASE 1 & 2 - PLANS
G-102 PHASE 2 & 3 - PLANS
G-103 PHASE 3 - PLANS
G-104 TEMPORARY LAYOUT PLANS

CIVIL
C-021 EXISTING SITE PLAN
C-041 SITE REMOVALS PLAN
C-101 SITE IMPROVEMENTS PLAN
C-121 EROSION CONTROL PLAN
C-131 GRADING PLAN
C-141 SITE UTILITY PLAN
C-501 SITE IMPROVEMENT DETAILS
C-502 SITE IMPROVEMENT DETAILS
C-503 SITE IMPROVEMENT DETAILS
C-504 SITE IMPROVEMENT DETAILS
C-505 STORM WATER TREATMENT DETAILS

LANDSCAPING
L-200 LANDSCAPE PLAN
L-300 SITE DETAILS
L-301 SITE DETAILS

STRUCTURAL
S-001 GENERAL INFORMATION
S-002 GENERAL NOTES
S-004 GENERAL FOUNDATION DETAILS
S-005 GENERAL STEEL FRAMING DETAILS
S-006 GENERAL ROOF DECK DETAILS
S-007 GENERAL MASONRY DETAILS
S-101 FOUNDATION PLAN
S-102 EXISTING BUILDING FOUNDATION PLAN
S-103 SECOND FLOOR FRAMING PLAN
S-104 EXISTING BUILDING SECOND FLOOR FRAMING PLAN
S-110 LOW ROOF FRAMING PLAN
S-111 HIGH ROOF FRAMING PLAN
S-112 EXISTING BUILDING ROOF FRAMING PLAN
S-501 FOUNDATION DETAILS
S-502 FOUNDATION DETAILS
S-521 PRECAST DETAILS
S-531 ROOF DECK DETAILS
S-601 SCHEDULES
S-602 STEEL COLUMN SCHEDULE
S-608 MASONRY SCHEDULES

ARCHITECTURAL
A-001 NOTES & SYMBOLS
AD100 BASEMENT FLOOR DEMOLITION PLAN
AD101 FIRST FLOOR DEMOLITION PLAN
AD102 SECOND FLOOR DEMOLITION PLAN
AD103 ROOF DEMOLITION PLAN
A-100 BASEMENT FLOOR PLAN
A-101 FIRST FLOOR PLAN
A-102 SECOND FLOOR PLAN
A-103 ROOF PLAN
A-141 PARTITION TYPES
A-201 EXTERIOR ELEVATIONS
A-301 BUILDING SECTIONS
A-302 BUILDING SECTIONS
A-311 WALL SECTIONS
A-312 WALL SECTIONS
A-313 WALL SECTIONS
A-401 ENLARGED INTERIOR PLANS
A-402 ENLARGED INTERIOR PLANS
A-403 ENLARGED STAIR PLANS AND SECTIONS
A-404 ENLARGED STAIR PLANS AND SECTIONS
A-405 ENLARGED STAIR PLANS AND SECTIONS
A-501 EXTERIOR PLAN DETAILS
A-502 EXTERIOR SECTION DETAILS
A-503 EXTERIOR SECTION DETAILS
A-504 ENLARGED FLASHING DETAILS
A-505 ROOF DETAILS
A-601 ARCHITECTURAL SCHEDULES
A-602 DOOR SCHEDULE
A-603 WINDOW TYPES
A-604 WINDOW TYPES
A-621 DOOR DETAILS
A-623 WINDOW DETAILS
A-721 FIRST FLOOR CEILING PLAN
A-722 SECOND FLOOR CEILING PLAN
A-801 SIGNAGE
A-802 EQUIPMENT AND FURNITURE LAYOUT PLANS (FOR REFERENCE ONLY)

FIRE PROTECTION
F-001 FIRE PROTECTION NOTES & SYMBOLS
F-100 BASEMENT FLOOR PLAN - FIRE PROTECTION
F-101 FIRST FLOOR PLAN - FIRE PROTECTION
F-102 SECOND FLOOR PLAN - FIRE PROTECTION

PLUMBING
P-001 PLUMBING NOTES & SYMBOLS
PD-100 PLUMBING DEMOLITION - DWV
PD-131 PLUMBING DEMOLITION - SUPPLY
P-100 BELOW GRADE PLAN - DWV
P-101 FIRST FLOOR PLAN - DWV
P-102 SECOND FLOOR PLAN - DWV
P-103 ROOF FLOOR PLAN - STORM DRAIN
P-131 FIRST FLOOR PLAN - SUPPLY
P-132 SECOND FLOOR PLAN - SUPPLY
P-501 PLUMBING DETAILS
P-502 PLUMBING DETAILS
P-601 PLUMBING SCHEDULES
P-901 PLUMBING ISOMETRIC - DWV
P-902 PLUMBING ISOMETRIC - SUPPLY

MECHANICAL
M-001 MECHANICAL NOTES & SYMBOLS
MD100 MECHANICAL DEMOLITION PLAN - BASEMENT FLOOR PLAN
MD101 MECHANICAL DEMOLITION PLAN - FIRST FLOOR
MD102 MECHANICAL DEMOLITION PLAN - SECOND FLOOR
MD103 MECHANICAL DEMOLITION PLAN - ROOF PLAN
M-100 BASEMENT HVAC PLAN
M-101 FIRST FLOOR - HVAC PLAN
M-102 SECOND FLOOR- HVAC PLAN
M-103 ROOF - HVAC AND PIPING PLAN
M-130 BASEMENT - MECHANICAL PIPING PLAN
M-131 FIRST FLOOR - MECHANICAL PIPING PLAN
M-132 SECOND FLOOR - MECHANICAL PIPING PLAN
M-501 HVAC DETAILS
M-502 HVAC DETAILS
M-531 MECHANICAL DETAILS
M-601 MECHANICAL SCHEDULES
M-602 MECHANICAL SCHEDULES
M-603 MECHANICAL SCHEDULES
M-604 MECHANICAL SCHEDULES
M-701 MECHANICAL SCHEMATICS

ELECTRICAL
E-001 NOTES, SYMBOLS & ABBREVIATIONS
ED011 ELECTRICAL DEMOLITION SITE PLAN
ED100 BASEMENT FLOOR PLAN - DEMOLITION
ED101 FIRST FLOOR PLAN - DEMOLITION
ED102 SECOND FLOOR PLAN - DEMOLITION
E-011 ELECTRICAL SITE PLAN
E-100 BASEMENT FLOOR PLAN - LIGHTING
E-101 FIRST FLOOR PLAN - LIGHTING
E-102 SECOND FLOOR PLAN - LIGHTING
E-130 BASEMENT FLOOR PLAN - POWER
E-131 FIRST FLOOR PLAN - POWER
E-132 SECOND FLOOR PLAN - POWER
E-133 ROOF PLAN - POWER
E-160 BASEMENT FLOOR PLAN - FIRE ALARM
E-161 FIRST FLOOR PLAN - FIRE ALARM
E-162 SECOND FLOOR PLAN - FIRE ALARM
E-401 ENLARGED PLANS
E-501 DETAILS
E-502 DETAILS
E-601 SCHEDULES
E-602 SCHEDULES
E-603 SCHEDULES
E-604 SCHEDULES
E-701 ONE-LINE DIAGRAM

TECHNOLOGY
T-001 NOTES, SYMBOLS & ABBREVIATIONS
TD100 BASEMENT FLOOR PLAN - DEMOLITION
TD101 FIRST FLOOR PLAN - DEMOLITION
TD102 SECOND FLOOR PLAN - DEMOLITION
T-100 BASEMENT FLOOR PLAN - TECHNOLOGY
T-101 FIRST FLOOR PLAN - TECHNOLOGY
T-102 SECOND FLOOR PLAN - TECHNOLOGY
T-401 ENLARGED PLANS - TECHNOLOGY
T-501 TECHNOLOGY DETAILS
T-502 TECHNOLOGY DETAILS
T-503 TECHNOLOGY DETAILS
T-601 TECHNOLOGY SCHEDULES
T-701 TECHNOLOGY ONE-LINE DIAGRAMS

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M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
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SHEET CONTENTS
COVER SHEET

SHEET NO.:
G-001

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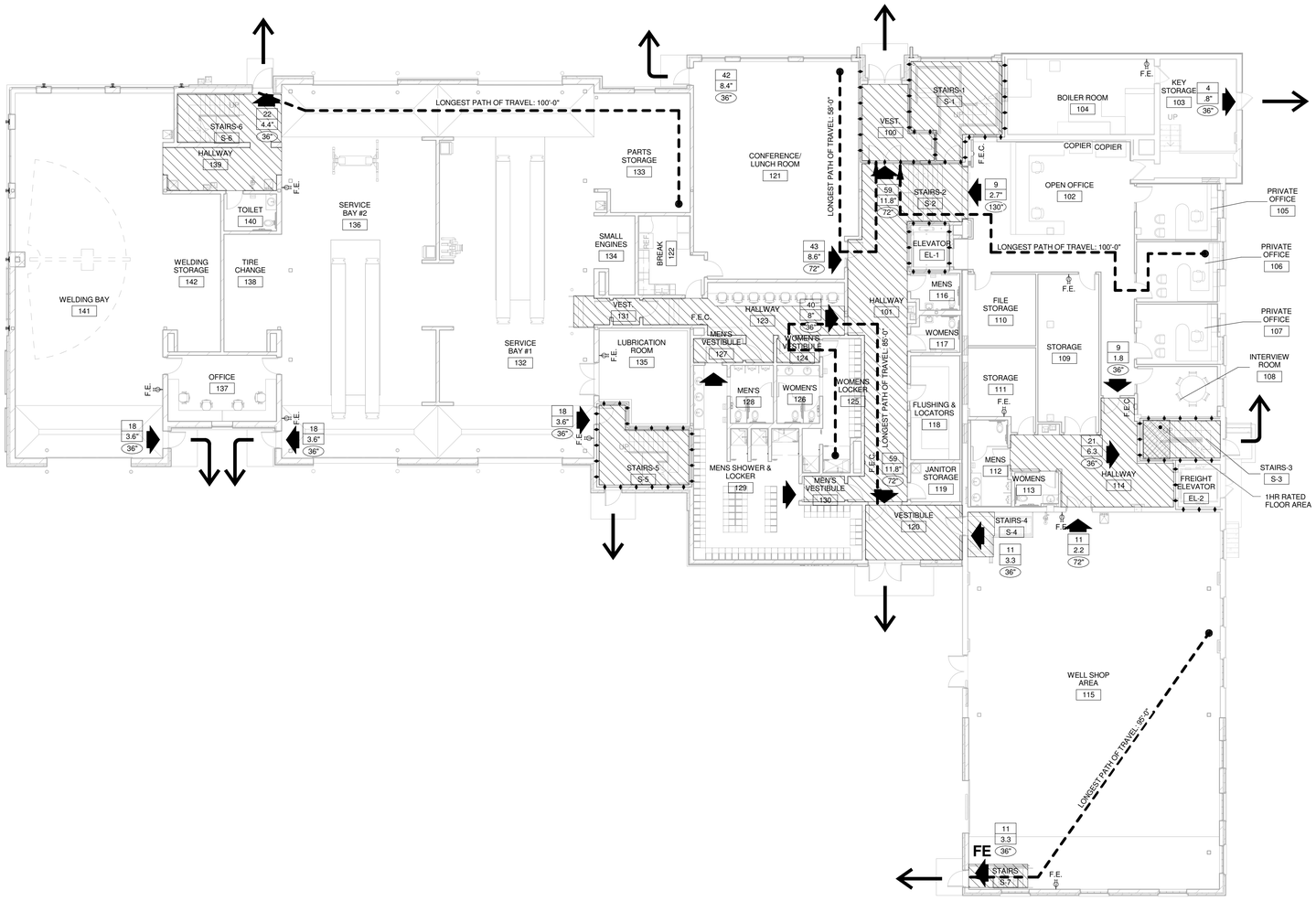

TRUE NORTH PLAN NORTH

FIRST FLOOR CODE PLAN

3/32" = 1'-0"

0 8 16 24

CODE PLAN LEGEND:

- OCCUPANT LOAD (OR MAX. CAPACITY)
- OCCUPANT LOAD FACTOR REQ'D WIDTH
- PROVIDED WIDTH
- EXIT DISCHARGE
- 1 HR RATED WALL
- F.E. — FIRE EXTINGUISHER - WALL MOUNTED
- F.E.C. — FIRE EXTINGUISHER - CABINET
- AREA EXIT
- EXIT PATHWAYS
- 1 HR RATED FLOOR SYSTEM

APPLICABLE CODES AND DESIGN CRITERIA

Project Name and Location:

Madison Water Utility
Reconstruction of the Madison Water Utility Operations Center
110 S. Paterson Street
Madison, WI

Applicable Design Criteria and Codes:

Building Code / Structural Code: International Building Code (IBC 2009)
Wisconsin Administrative Code, Chapter SPS 362

Existing Structure: International Existing Building Code (2009)
Wisconsin Administrative Code, Chapter SPS 366

Plumbing Code: Wisconsin Administrative Code, Chapters SPS 381 - SPS 384

Mechanical Code: International Mechanical Code (IMC 2009)
Wisconsin Administrative Code, Chapter SPS 364

Electrical Code: National Electric Code (NEC 2008)
Wisconsin Administrative Code, Chapter SPS 316

Fire/Life Safety Code: National Fire Protection Association, Chapter 1 (NFPA-1, 2009)
Wisconsin Administrative Code, Chapters SPS 14 &SPS 30

Accessibility Code: International Building Code, Chapter 11 (IBC 2009)
Wisconsin Administrative Code, Chapter SPS 369

Energy Code: International Energy Conservation Code, (IEEC 2009)
Wisconsin Administrative Code, Chapter SPS 363

Gas Code: International Fuel Gas Code, (IFGC 2009)
Wisconsin Administrative Code, Chapter SPS 365

Boiler Code: Wisconsin Administrative Code, Chapter SPS 341

FIRE PROTECTION AND LIFE SAFETY ANALYSIS

Building Occupancy Classifications
IBC Section 304.1: Business Group B (Professional services)
IBC Section 311.2: Moderate-hazard Storage, Group S-1

Construction Type
IBC Table 601
Type IIB
Sprinklered: Yes

Building Area
IBC Table 503:
Group B / IIB = 23,000 s.f. per story
Group S-1 / IIB = 17,500 s.f. per story

Allowable Area Increase
IBC Section 506.3: Automatic sprinkler system increase. (Is = 3)
IBC Section 506.2.1: Width limits. (W = 30)
IBC Section 506.2: Frontage increase
If = [790/790 -0.25]30/30 = 1
IBC Section 506.1: General - Total allowable area increase
Aa = [23,000 s.f. + [23,000 x 1] + [23,000 x 3]] = 115,000 s.f.
Aa = [17,500 s.f. + [17,500 x 1] + [17,500 x 3]] = 87,500 s.f.

	Allowable Area (S.F.) with Increase	Actual Area (S.F.)
Group B Total Allowable Area and Actual Area	115,000	22,510
Group S-1 Total Allowable Area and Actual Area	87,500	22,510

Allowable Building Height and Number of Stories
IBC Table 503:
Group B / IIB = 3 Stories & 55 Feet High
Group S-1 / IIB = 2 Stories & 55 Feet High

Automatic Sprinkler Value Increase to Height and Number of Stories
IBC Section 504.2: Maximum building height increase: 20 feet
IBC Section 504.2: Maximum number of stories increase: 1-story

	Maximum Allowed		Actual	
	Height	Stories	Height	Stories
Group B	75	4	35	2
Group S-1	75	3	35	2

Mixed Use and Occupancy: Separated Occupancies
IBC Table 508.4:
Group B / Group S-1 (Sprinkled) = N (No Separation Requirement)

Fire Resistive Requirements for Building Elements
IBC Table 601: Type IIB

Structural Frame:	0 hr
Bearing Walls	
Exterior:	0 hr
Interior:	0 hr
Interior Nonbearing Walls and Partitions:	0 hr
Floor Construction:	0 hr
Roof construction and secondary framing:	0 hr

Fire Resistive Requirements for Exterior Walls Based on Separation Distance
IBC Table 602
Exterior Nonbearing Walls and Partitions where "x" is distance from fire separation

	Group B	Group S-1
X ≥ 30 ft	0 hr	0 hr

Interior Finishes:
IBC Table 803.9 (Building fully sprinklered)
Interior Wall and Ceiling Finish for Exit Enclosures and Exit Passageways: Class B (Minimum)
Interior Wall and Ceiling Finish for Corridors: Class C (Minimum)
Interior Wall and Ceiling Finish for Rooms and Enclosed Spaces: Class C (Minimum)
Interior Floor Finish for All Floor Coverings: Class II

Occupant Load
IBC Table 1004.1.1
Business Occupancy: 1 occupant / 100 gsf
Assembly w/out Fixed Seats Unconcentrated Occupancy: 1 occupant / 15 net. sf
Industrial Occupancy: 1 occupant / 100 gsf
Accessory Storage, Mech. Equip Rm. Occupancy: 1 occupant / 300 gsf

Function / Floor	Area	Occupants
Basement - Accessory Storage	6,729	23
1st Floor - Business/Industrial	18,733	188
1st Floor - Assembly	1,277	86
1st Floor - Accessory Storage/Mech	2,500	9
2nd Floor - Business/Industrial	7,942	80
2nd Floor - Accessory Storage/Mech	3,463	12
Total Occupants:	40,644	398

Capacity of Means of Egress

IBC Section 1005	Stairs 0.3 inches	Other 0.2 inches	# of Exits
Basement Stair	6.9"		/1 Exit
First Floor Exit Width		56.6"	/2 Exits
Second Floor Exit Width		18.4"	/2 Exits
Second Floor Stairs	27.6"		/3 Exits

Common Path of Travel
IBC Section 1014.3

Business & Storage Occupancy, Fully Sprinklered	100 feet
Assembly Occupancy, Fully Sprinklered	75 feet

Exit Access Travel Distance
IBC Table 1016.1

Assembly, S-1 Occupancy, Fully Sprinklered	100 feet
Business Occupancy, Fully Sprinklered	300 feet

Corridors
IBC Section 1018.2, minimum width 44 inches
IBC Section 1018.4

B & S Occupancy, Fully Sprinklered	50 feet
IBC Section 1018.1 Fire Resistive Rating	
A, B, & S > 30 Occupants, fully sprinklered	0 hour

Exit Enclosures
IBC Section 1022.1, Interior exit stairways and Interior Exit Ramps shall be enclosed with fire barriers of a fire-resistive rating of not less than 1 hour where connecting less than four stories.

Exit Discharge
IBC Section 1027.1, Exits shall discharge directly to the exteior of the building
Exception 2: A maximum of 50% of the number and capacity of the exit enclosure is permitted to egress through a vestibule provided the following:
1) The entire area of the vestibule is separated with a fire-resistance rating.
2) The depth from the exterior is not greater than 10 ft and the length is not greater than 30 feet.
3) The area is separated from the remainder of the the level of exit discharge by construction providing protection of at least the equivalent of approved wire glass in steel frames.
4) The area is used only for a means of egress and exits directly to the outside.

Fire Extinguishers, General
NFPA 10

Accessibility Requirements
The design for this project incorporates the accessibility requirements of IBC Chapter 11 and ICC A117.1-2009.

Plumbing Fixtures
IBC Table 2902.1
Minimum Number of Plumbing Fixtures Classification

Fixture Calculation per 2902.1: To determine the occupant load for each sex the total occupant shall be divided in half. 398 total occupants	Water Closets		Lavatories	
	Males	Females	Males	Females
Business Occupancy	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	
158	3	3	2	2
S & Industrial Occupancies	1 per 100		1 per 100	
154	1	1	1	1
Assembly A-3	1 per 125	1 per 65	1 per 200	
86	1	1	1	1
Total Provided	5 + 5 Urinals	5	7	5
	1 Unisex		1 Unisex	

Urinal substitution for water closets per IPC 419.2: Urinals shall not be substituted for more than 50 percent of the required water closets in EACH toilet room for Business occupancy.
Drinking Fountains: 1 per 100 for Business occupancy; 1 per 1,000 for Storage Occupancy;
1 per 500 per Assembly Occupancy: 4 required, 4 provided
Service Sinks: 1 service sink per floor.

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SHEET CONTENTS
CODE ANALYSIS
FIRST FLOOR PLAN
AND SCHEDULES

SHEET NO.:
G-002

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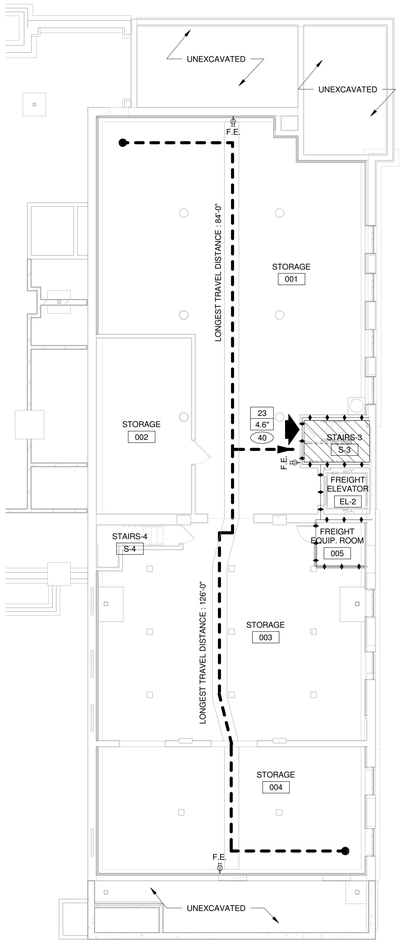
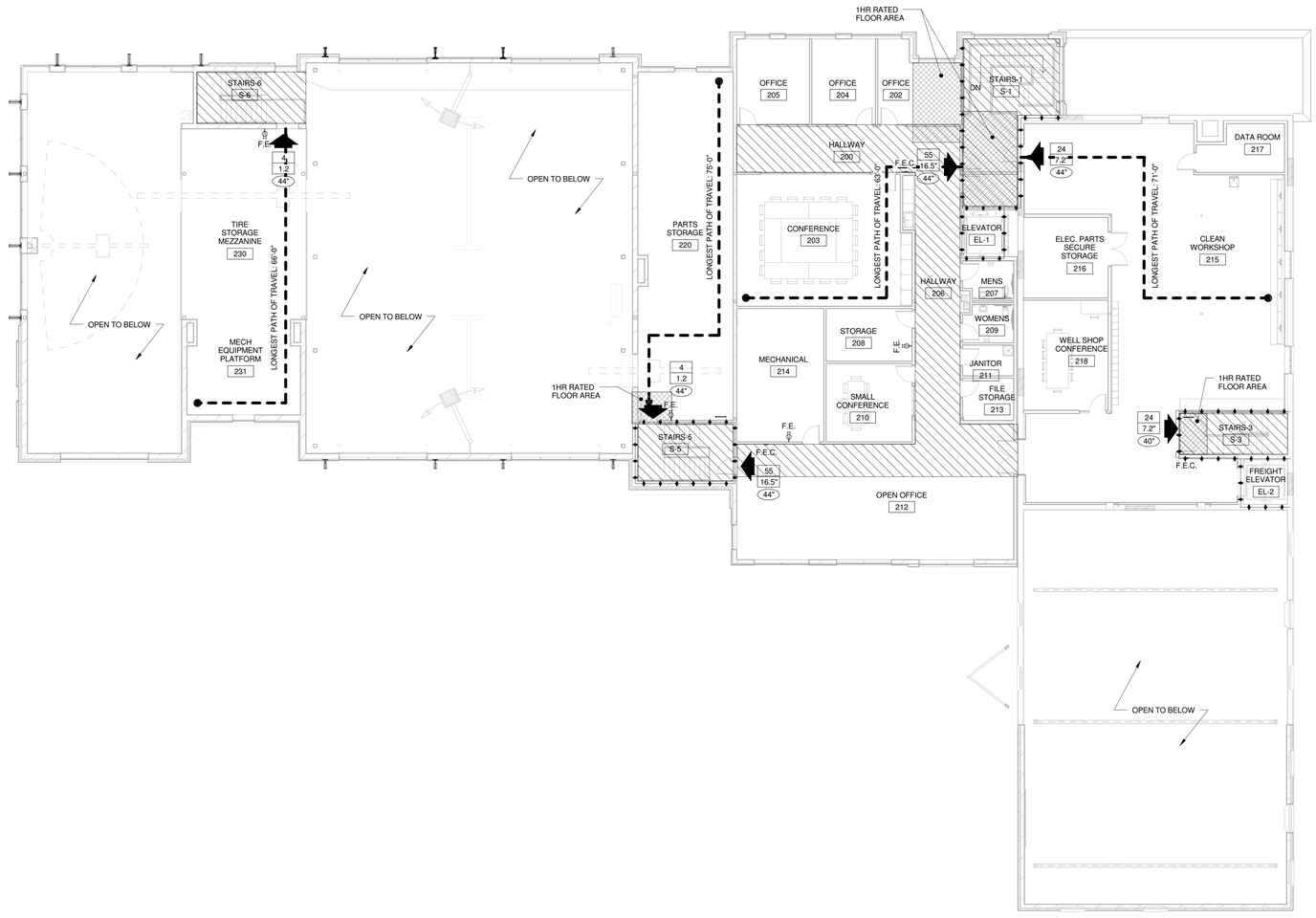


TRUE NORTH PLAN NORTH

2 BASEMENT CODE PLAN

3/32" = 1'-0"

0 8 16 24



TRUE NORTH PLAN NORTH

1 SECOND FLOOR CODE PLAN

3/32" = 1'-0"

0 8 16 24

CODE PLAN LEGEND:

- 6 — OCCUPANT LOAD (OR MAX. CAPACITY)
- XX" — OCCUPANT LOAD FACTOR REQ'D WIDTH
- XX" — PROVIDED WIDTH
- EXIT DISCHARGE
- 1 HR RATED WALL
- F.E. — FIRE EXTINGUISHER - WALL MOUNTED
- F.E.C. — FIRE EXTINGUISHER - CABINET
- AREA EXIT
- EXIT PATHWAYS
- 1 HR RATED FLOOR SYSTEM

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SHEET CONTENTS
CODE ANALYSIS
SECOND AND
BASEMENT PLANS

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G-003

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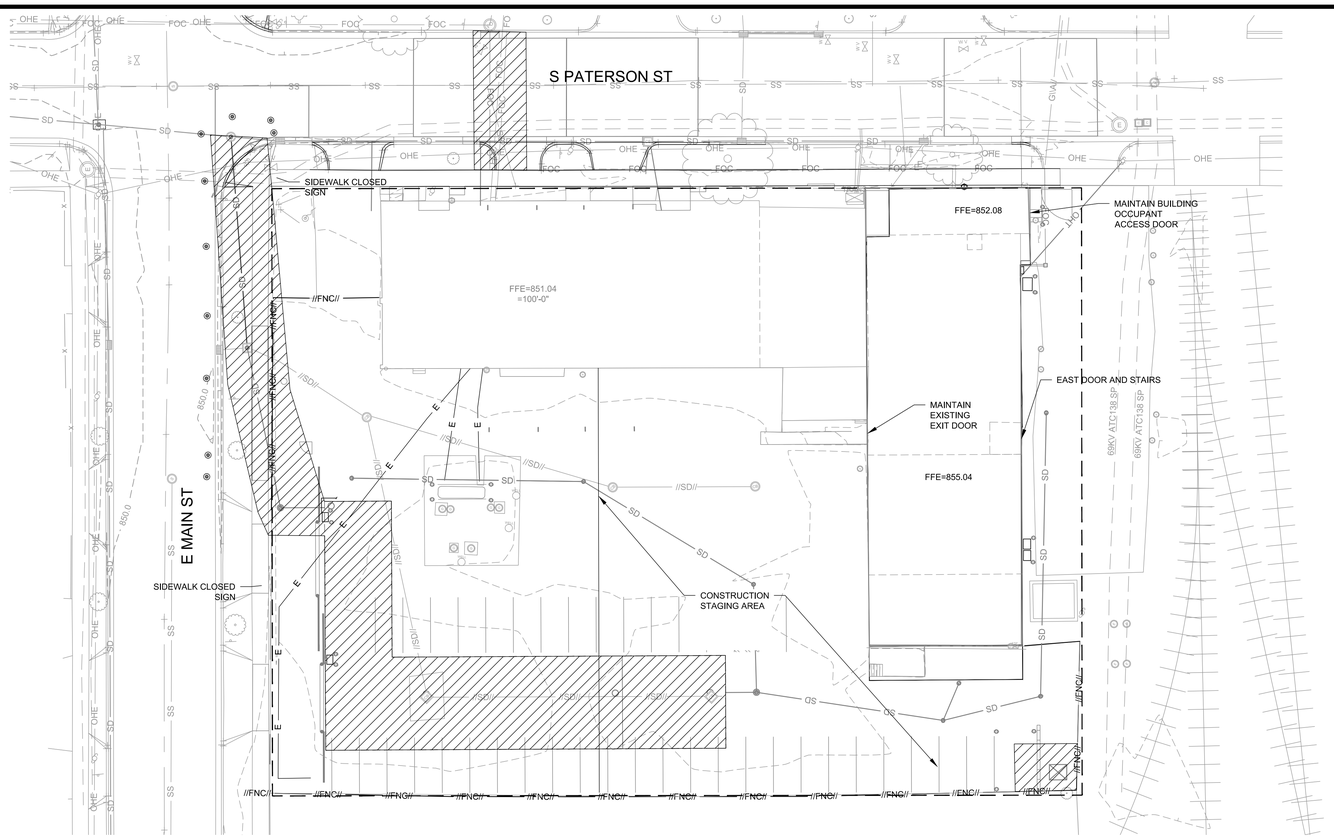
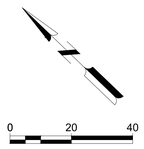
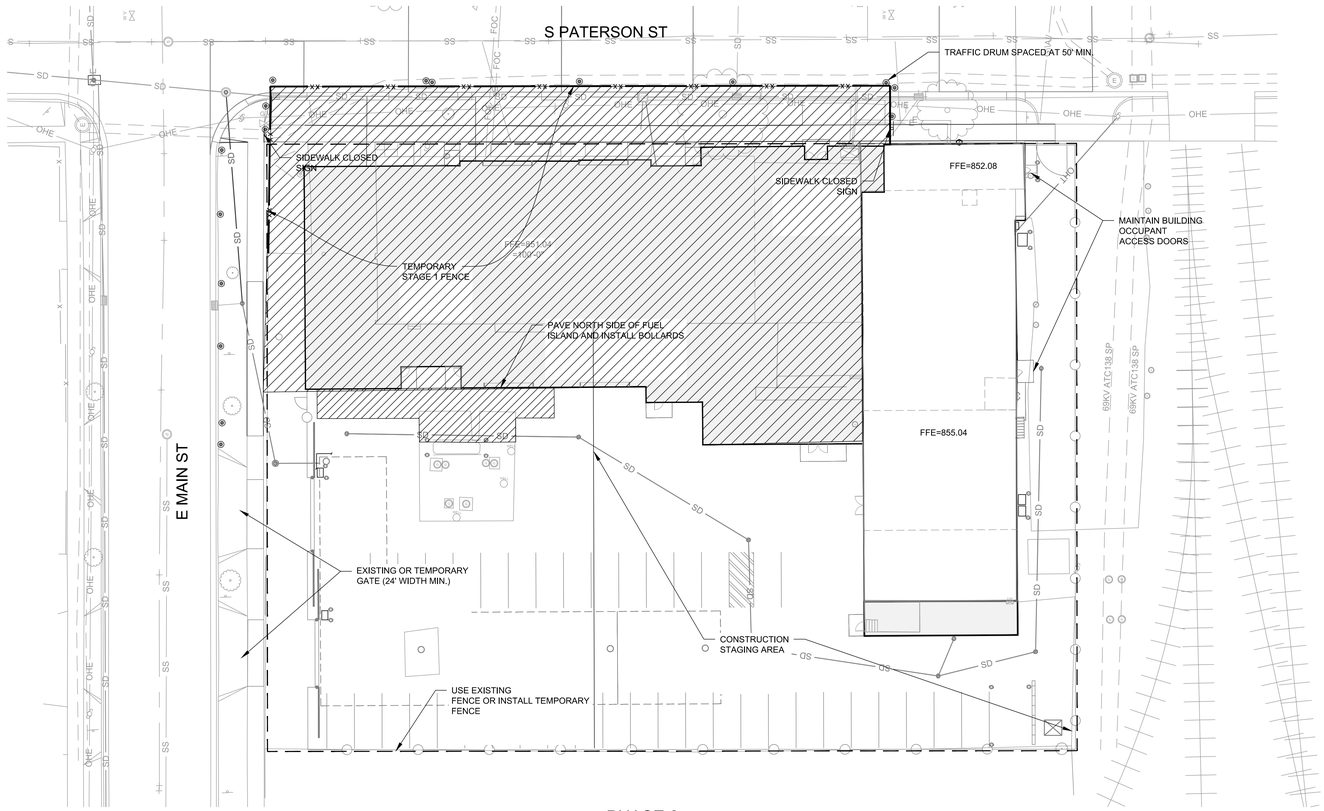
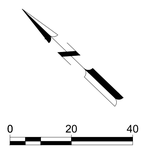




PHASE 1





PHASE 2

PHASING AND ACCESS PLAN NOTES:

1. CONTRACTOR SHALL PROVIDE ACCESS FOR STAFF TO ENTER EXISTING BUILDING THAT IS NOT SCHEDULED FOR DEMOLITION.
2. CONTRACTOR SHALL KEEP FUEL ISLAND OPEN ON ONE SIDE AT ALL TIMES. ACCESS SHALL BE PROVIDED SO VEHICLES CAN ENTER FROM E. MAIN STREET, FUEL AND TURN AROUND AND THEN EXIT.
3. CONTRACTOR SHALL ENCLOSE THE SITE IN FENCE AT ALL TIMES AND COORDINATE ACCESS WITH OWNER DAILY. SITE FENCE SHALL BE LOCKED AT THE COMPLETION OF EACH WORK DAY.
4. TEMPORARY CHAINLINK FENCE SHALL BE PROVIDED TO ENCLOSE THE WORK ZONE WHERE THE EXISTING FENCE IS NOT AVAILABLE OR UTILIZED.
5. THE UTILITY CONNECTIONS IN THE STREET SHALL BE SIGNED ACCORDING TO MUTCD STANDARDS. TEMPORARY FENCE IS NOT REQUIRED FOR UTILITY TRENCHING WORK COMPLETED IN ONE DAY.

PHASES:

PHASE 1:
1) INSTALL NEW STORM SEWER CONNECTION AT THE CORNER OF S. PATERSON STREET AND E. MAIN STREET. INSTALL A TEMPORARY CONNECTION TO THE EXISTING STORM SEWER OR COMPLETE THE NEW STORM SEWER INSTALLATION.
2) INSTALL UNDERGROUND STORM WATER DETENTION VAULT.
3) EAST STAIRS AND DOOR WORK. (SEE ARCHITECTURAL SHEETS FOR DETAILS.)
4) FIBER OPTIC CABLE ACROSS S. PATERSON STREET AND AS SHOWN ON E SHEETS. (SEE ELECTRICAL AND TECHNOLOGY SHEETS.)

PHASE 2:
5) REPLACE SIDEWALK ALONG E. MAIN STREET FOLLOWING STORM SEWER CONNECTION WORK.
6) REMOVE BUILDING SCHEDULED FOR DEMOLITION ACCORDING TO THE ARCHITECTURAL PLANS.
7) REMOVE DRIVEWAY APRONS ALONG S. PATERSON STREET IN FRONT OF BUILDING ADDITION. KEEP SIDEWALK IN FRONT OF BUILDING AND PRESERVE SIDEWALK PATH TO EXISTING BUILDING ALONG S. PATERSON STREET.
8) CONSTRUCT BUILDING ADDITION
9) PAVE NORTH SIDE OF FUEL ISLAND
10) PAVE SIDEWALK AND DRIVEWAY APRONS ON S. PATERSON STREET

PHASE 3:
1) PARKING LOT RECONSTRUCTION
2) REMAINING STORM SEWER
3) INSTALL FIRE LINE TO S PATERSON STREET.
4) COMPLETE PARKING LOT GRADING AND BASE COURSE
5) PAVE SOUTH SIDE OF FUEL ISLAND, NEW FENCE WALL, FENCE INSTALLATION, LIGHT POLES, ELECTRICAL CONDUITS AND CONNECTIONS.
6) PAVE SIDEWALK AND DRIVEWAY APRONS ALONG E. MAIN STREET
7) TEST AND INSPECTION OF UNDERGROUND PIPING
8) PAVE PARKING LOT
9) LANDSCAPING

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Madison Water Utility
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

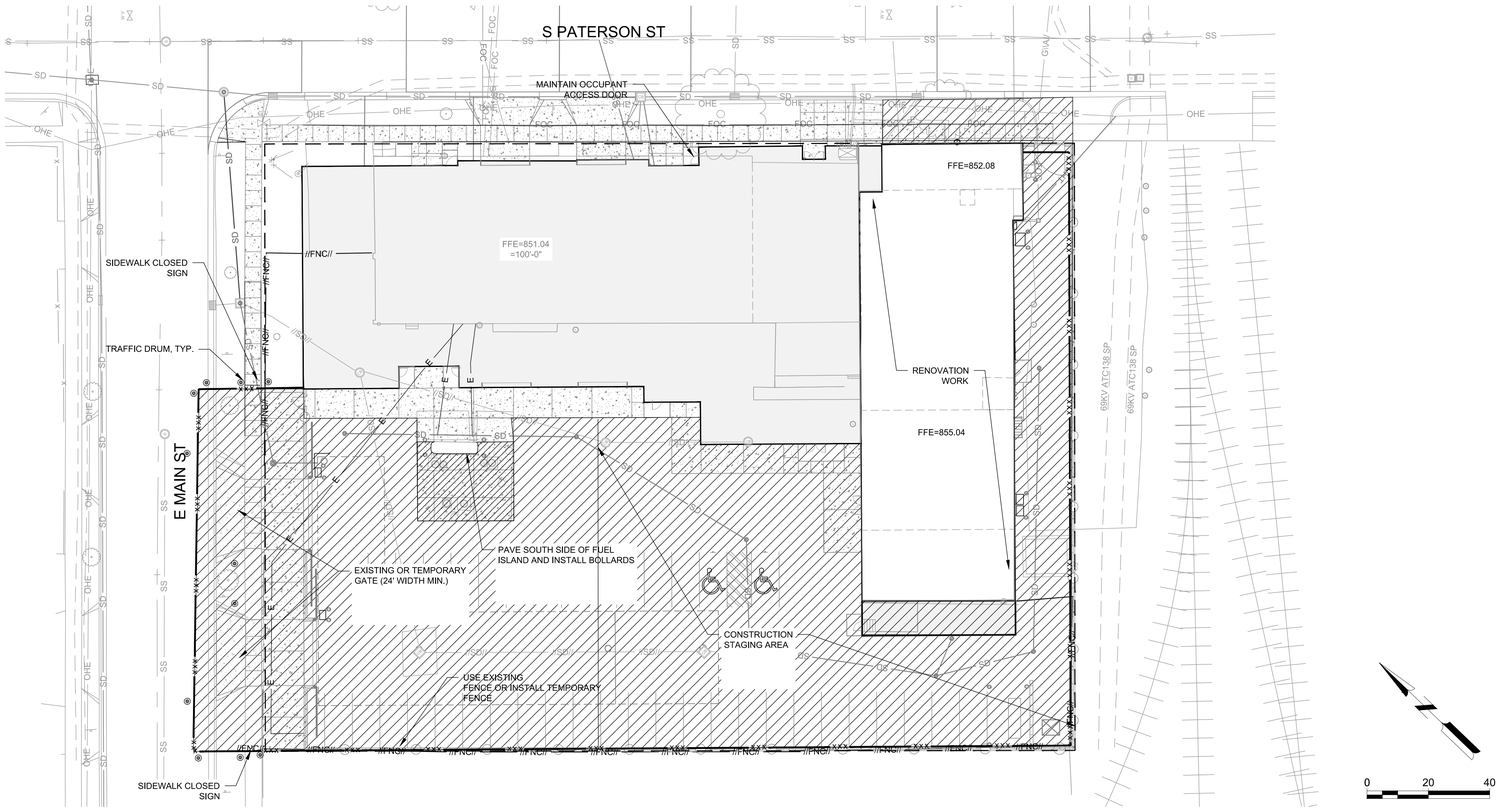
ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: LJN
DRAWN BY: LJN
CHECKED BY: ACA
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SITE PHASING & ACCESS PLAN

SHEET NO.
G-004

X:\3235300\131021.03\TECH\CAD\C-011.DWG
6/11/2015 3:50:44 PM



PHASE 3

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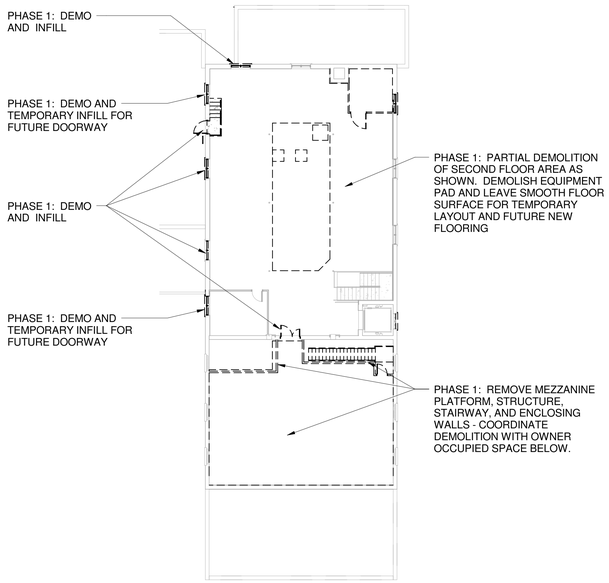
SITE PHASING AND ACCESS PLAN

SHEET NO.
G-005

X:\3235300\131021.03\TECH\CAD\C-011.DWG
6/11/2015 3:50:48 PM

PHASE 1: ENTIRE SECOND FLOOR - OWNER ABANDONED

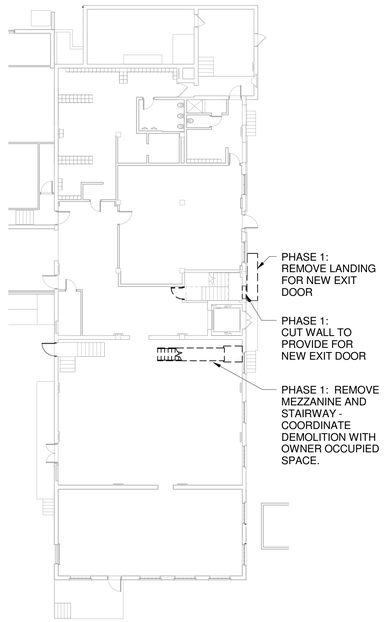


TRUE NORTH PLAN NORTH

2 PHASE 1 DEMO - SECOND FLOOR PLAN

1/16" = 1'-0"

PHASE 1: OWNER OCCUPIED, ENTIRE FIRST FLOOR AND BASEMENT



TRUE NORTH PLAN NORTH

1 PHASE 1 DEMO - FIRST FLOOR PLAN

1/16" = 1'-0"

GENERAL PHASING NOTES:

1. REFERENCE DEMO AD-100'S AND PLAN A-100'S SHEETS FOR ACTUAL WORK TO BE PERFORMED. THESE PHASING PLANS ARE DIAGRAMMATIC TO SHOW OWNER OCCUPIED/ABANDONED AREAS AND EXTENT OF WORK TO BE PERFORMED IN EACH PHASE.

2. ALL WORK SHALL BE COORDINATED BETWEEN THE TRADES: SITEWORK, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND TECHNOLOGY TO MAINTAIN SERVICE TO OWNER OCCUPIED AREAS.

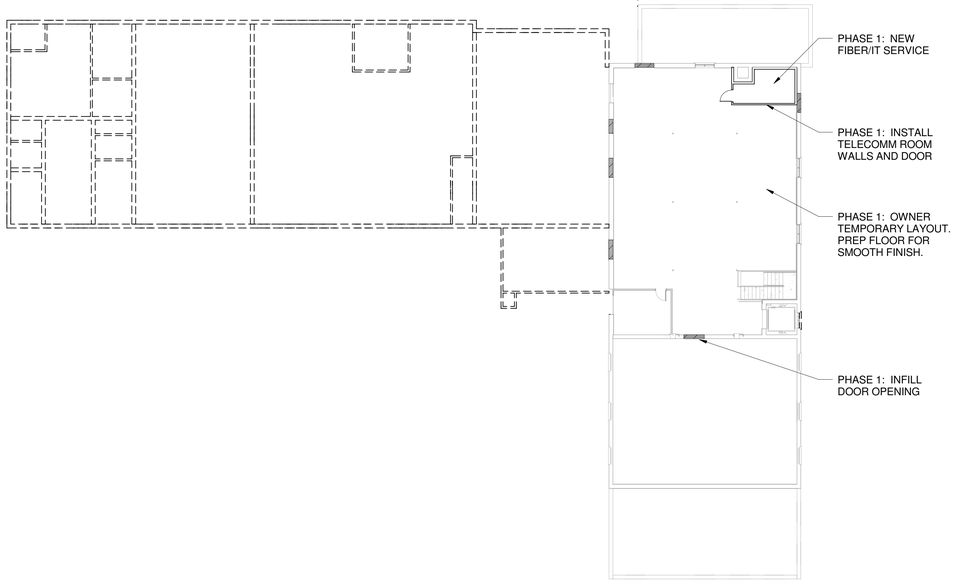
3. ELECTRICAL SERVICE AND TELECOMMUNICATION SERVICE SHALL BE INSTALLED AS PART OF PHASE I, TO PROVIDE SERVICE DURING TEMPORARY AND FINAL OCCUPANCY. ONCE INSTALLED, IT IS INTENDED TO REMAIN IN ITS FINAL LOCATION.

4. TEMPORARY SHUT DOWN, CONNECTIONS, AND ROUTING THROUGH OCCUPIED SPACE SHALL BE COORDINATED WITH OWNER. THESE CONNECTION PERIODS ARE DESIRED TO BE IN THE SPRING AND FALL SEASONS WHEN THE WATER UTILITY'S WORK LOAD IS NOT AS INTENSE.

5. BOILER CHANGEOVER SHALL TAKE PLACE DURING SUMMER MONTHS WHEN NOT USE.

PHASE 2 DEMOLITION: OWNER ABANDONED | PHASE 1 CONSTRUCTION: OWNER ABANDONED

PHASE 2: OWNER OCCUPIED

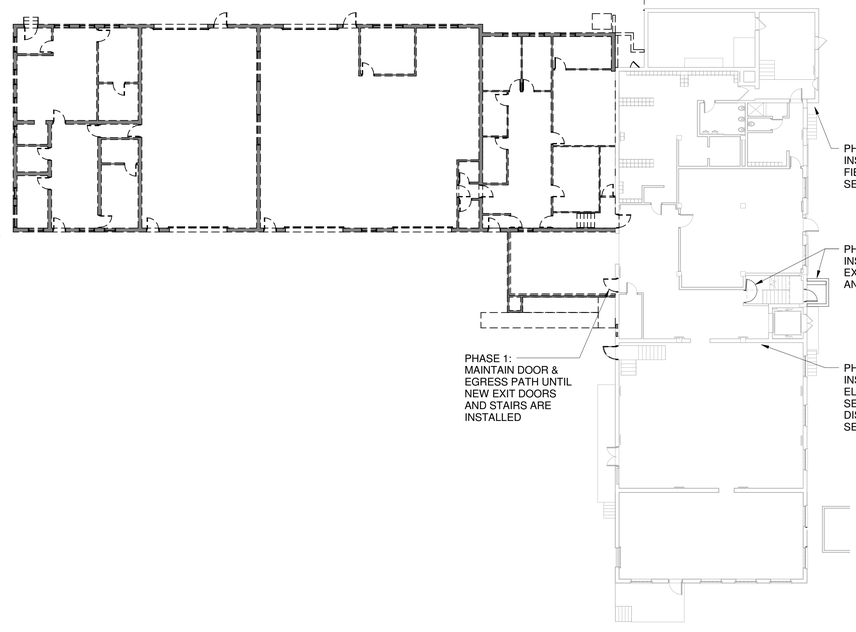


TRUE NORTH PLAN NORTH

5 PHASE 1 CONSTRUCTION/PHASE 2 DEMOLITION - SECOND FLOOR PLAN

1/16" = 1'-0"

PHASE 2 DEMOLITION: OWNER ABANDONED | PHASE 1 & 2: OWNER OCCUPIED, ENTIRE FIRST FLOOR AND BASEMENT

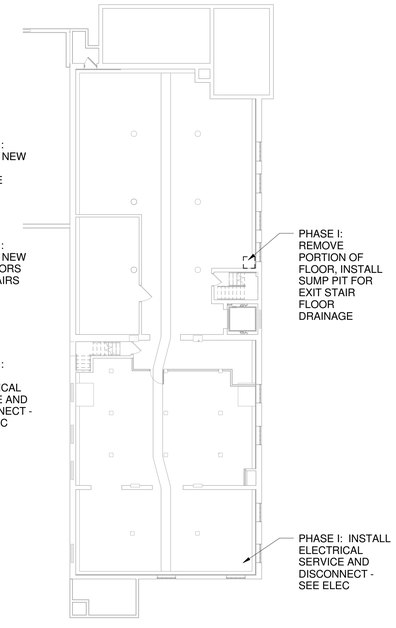


TRUE NORTH PLAN NORTH

4 PHASE 1 CONSTRUCTION/ PHASE 2 DEMOLITION- FIRST FLOOR PLAN

1/16" = 1'-0"

PHASE 1: OWNER OCCUPIED, ENTIRE FIRST FLOOR AND BASEMENT



TRUE NORTH PLAN NORTH

3 PHASE 1 - BASEMENT PLAN

1/16" = 1'-0"

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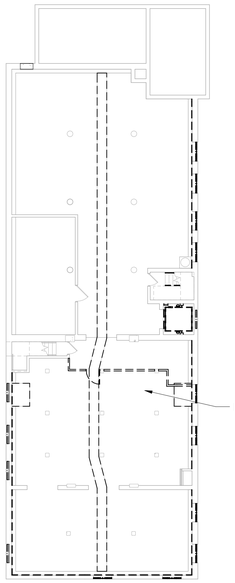
SHEET CONTENTS
PHASE 1 & 2 - PLANS

SHEET NO.:
G-101

6/12/2015 2:10:28 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt

PHASE 3 DEMOLTION:
OWNER ABANDONED

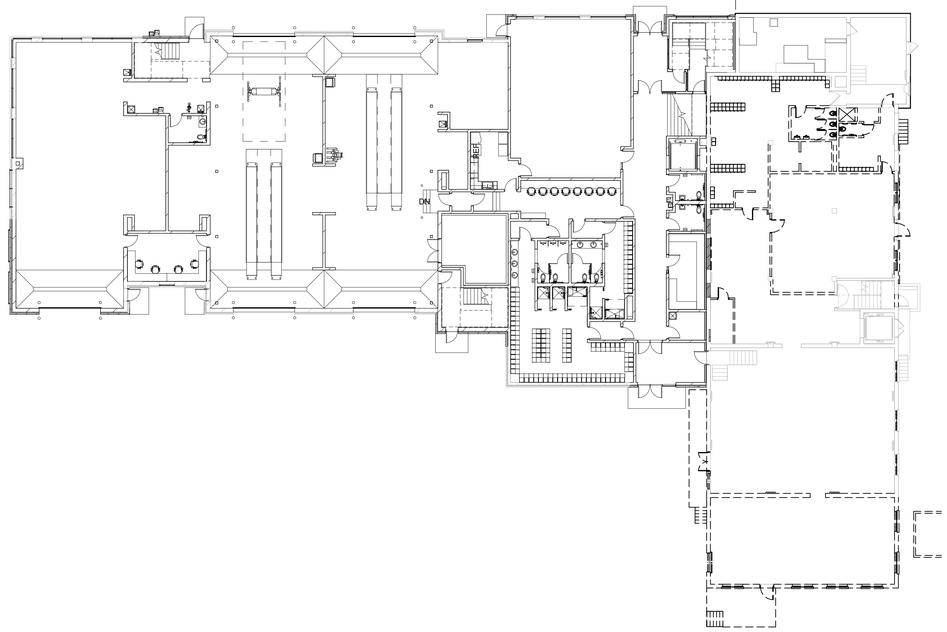


TRUE NORTH PLAN NORTH

3 PHASE 3 DEMOLITION - BASEMENT PLAN
1/16" = 1'-0"

PHASE 2 CONSTRUCTION:
PHASE 3:
OWNER OCCUPIED

PHASE 3 DEMOLITION:
OWNER ABANDONED

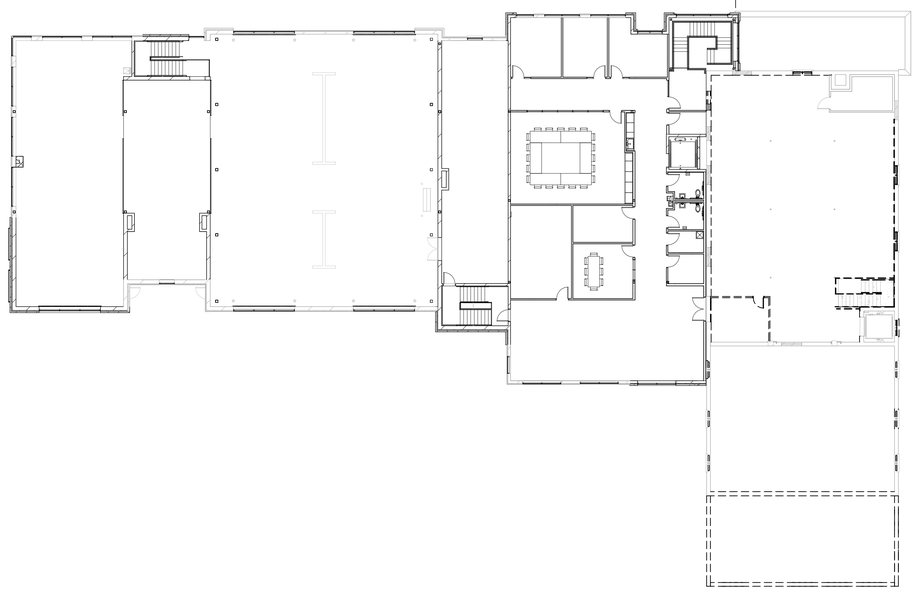


TRUE NORTH PLAN NORTH

1 PHASE 2 CONSTRUCTION/PHASE 3 DEMOLITION - FIRST FLOOR PLAN
1/16" = 1'-0"

PHASE 2 CONSTRUCTION:
PHASE 3:
OWNER OCCUPIED

PHASE 3: DEMOLITION:
OWNER ABANDONED



TRUE NORTH PLAN NORTH

2 PHASE 2 CONSTRUCTION/PHASE 3 DEMOLITION - SECOND FLOOR PLAN
1/16" = 1'-0"

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SHEET CONTENTS
PHASE 2 & 3 - PLANS

SHEET NO.:
G-102

6/12/2015 2:11:37 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt

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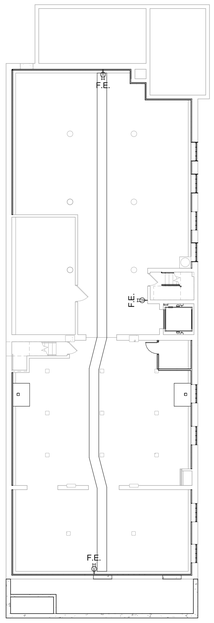
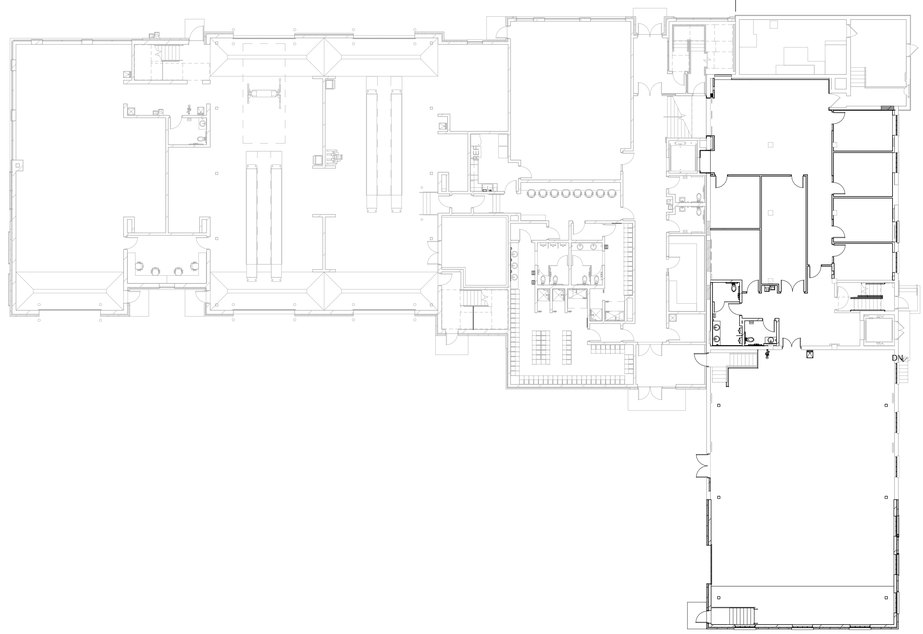


TRUE NORTH PLAN NORTH

3 PHASE 3 CONSTRUCTION - BASEMENT PLAN
1/16" = 1'-0"

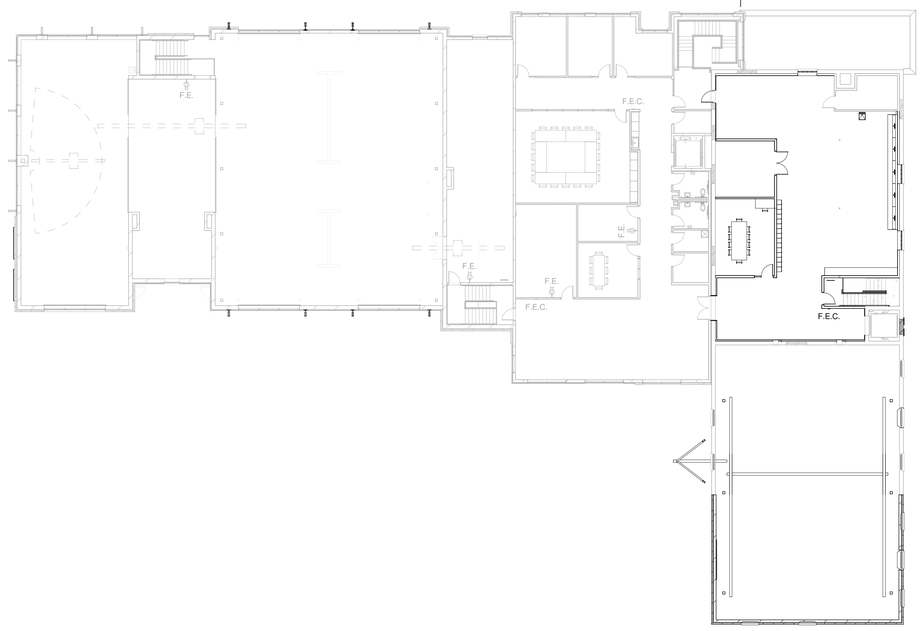
PHASE 3: OWNER OCCUPIED | PHASE 3: CONSTRUCTION



TRUE NORTH PLAN NORTH

1 PHASE 3 CONSTRUCTION - FIRST FLOOR PLAN
1/16" = 1'-0"

PHASE 3: OWNER OCCUPIED | PHASE 3: CONSTRUCTION



TRUE NORTH PLAN NORTH

2 PHASE 3 CONSTRUCTION - SECOND FLOOR PLAN
1/16" = 1'-0"

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SHEET CONTENTS
PHASE 3 - PLANS

SHEET NO.:
G-103

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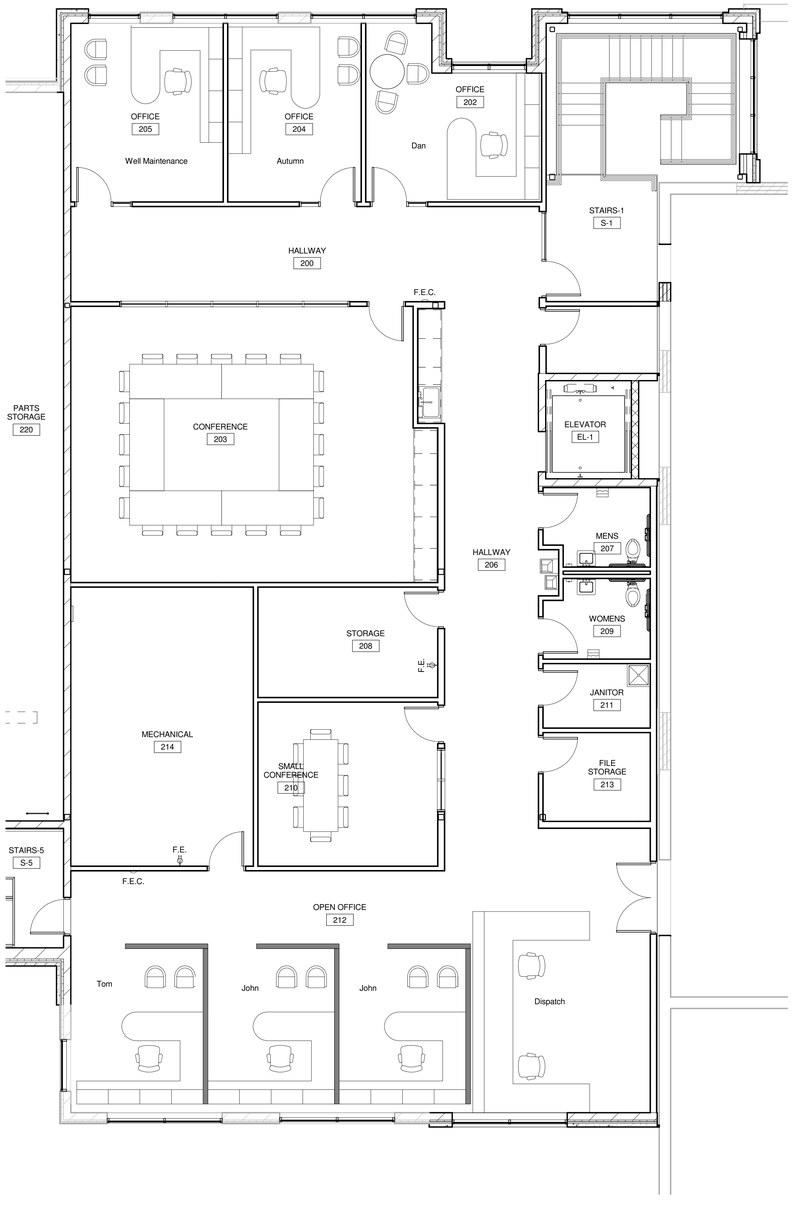
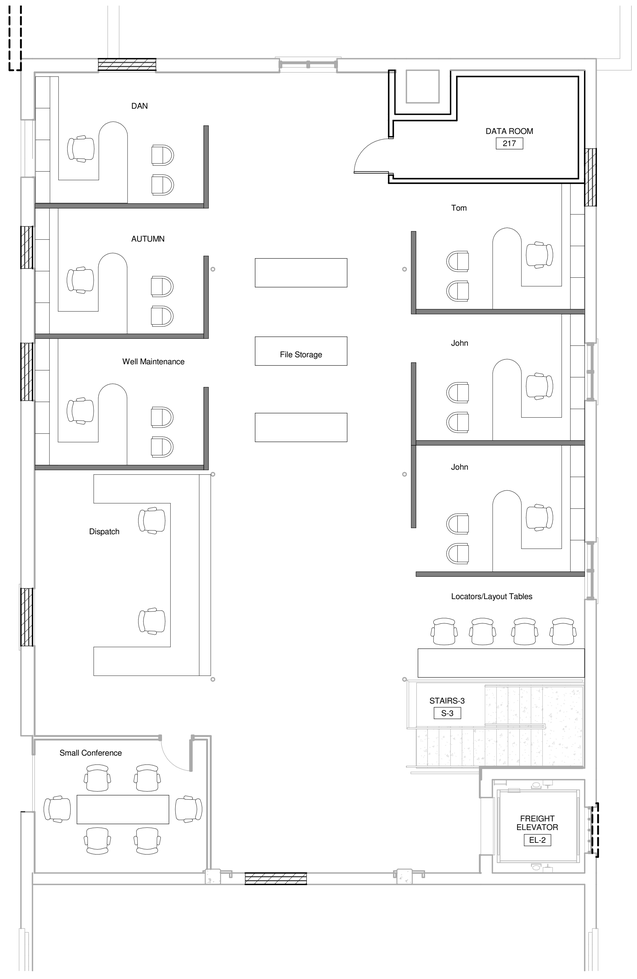


TRUE NORTH PLAN NORTH

2 **PHASE 3 TEMPORARY LAYOUT - SECOND FLOOR PLAN**

3/16" = 1'-0"



TRUE NORTH PLAN NORTH

1 **PHASE 2 TEMPORARY LAYOUT - SECOND FLOOR PLAN**

3/16" = 1'-0"

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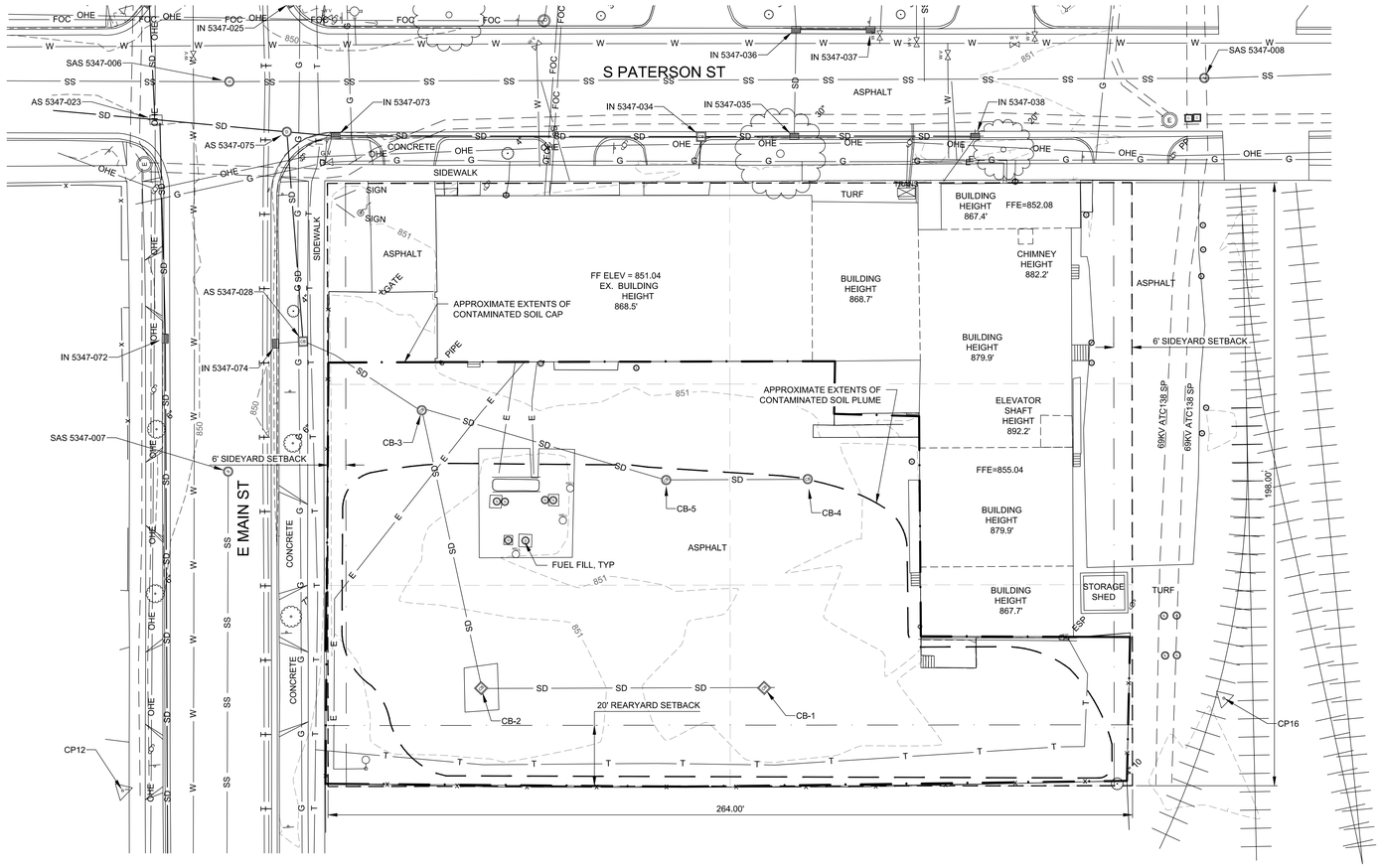
SHEET CONTENTS
TEMPORARY LAYOUT PLANS

SHEET NO.:
G-104

6/12/2015 2:13:03 PM C:\Revit Local\3235300-131021-03-A-Central-2015_13070mab.rvt



SITE SURVEY PLAN NOTES:

1. CONTOUR INTERVALS SHOWN ARE 1.0'.
2. PRIVATE SUBSURFACE UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON GROUND MARKINGS PLACED BY CLIENT REPRESENTATIVE. MARKINGS MAY NOT BE BY BENEFIT OF SUBSURFACE DETECTING INSTRUMENTS AS SOME WERE MARKED PER PERSONNEL BEST RECOLLECTION.
3. PUBLIC SUBSURFACE UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON GROUND MARKINGS PLACED BY DIGGERS HOTLINE. DIGGERS HOTLINE DOES NOT GUARANTEE THE PRECISION OF THEIR MARKINGS. IN ACCORDANCE WITH WISCONSIN LAW, SUBSURFACE UTILITIES MUST BE EXPOSED VIA HAND DIGGING BEFORE MACHINE DIGGING IS PERMISSABLE. UTILITY LOCATION MARKINGS ARE VALID FOR ONLY 10 DAYS. CONTRACTOR MUST ORDER NEW UTILITY LOCATE PRIOR TO ANY EXCAVATION.
4. SANITARY SEWER AND STORM SEWER LOCATIONS HAVE BEEN DETERMINED BY OBSERVABLE SURFACE STRUCTURES AND RESPECTIVE FEATURES. INTERMEDIATE PIPE LOCATIONS ARE APPROXIMATE AS ACCURATE LOCATIONS WERE NOT AVAILABLE AT TIME OF SURVEY.
5. CONTROL POINTS AND BENCHMARKS SHOWN HEREON ARE FOR REFERENCE PURPOSES ONLY. PRIOR TO STAKING, THE CONTROL MUST BE INDEPENDENTLY VERIFIED AS UNDISTURBED. NO WARRANTY IS MADE WITH RESPECT TO THE ACCURACY OF CONTROL SHOWN HEREON AS THEY ARE SUBJECT TO POTENTIAL DISTURBANCE.
6. LOT LINES ARE NOT MEASURED OR FIELD VERIFIED AND ARE SHOWN AS RECORDED ON THE ORIGINAL PLAT OF THE CITY OF MADISON. ALL TOPOGRAPHIC DATA IS REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM.
7. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT ARCHITECT / ENGINEER BEFORE PROCEEDING WITH THE WORK.

LEGEND:

- BOLLARD
- CONTROL POINT
- DOWNSPOUT
- ELECTRICAL TRANSFORMER BOX
- ELECTRICAL SERVICE PANEL
- ELECTRICAL HANDHOLE/PULLBOX
- FIRE HYDRANT
- FLAGPOLE
- FUEL FILL
- GAS METER
- GAS VALVE
- INLET, CURB
- INLET, ROUND
- INLET, SQUARE
- IRON PIN
- LIGHT POLE (SINGLE)
- MANHOLE, ELECTRIC
- MANHOLE, SANITARY SEWER
- MANHOLE, STORM SEWER
- MANHOLE, TELECOMMUNICATIONS
- MARKER, CABLE
- POWER POLE
- SIGN (SINGLE POST)
- SOIL BORING
- TREE, DECIDUOUS
- WATER VALVE
- WATER METER
- WATER SHUTOFF
- MONITORING WELL
- G — GAS
- OHE — ELECTRIC, OVERHEAD
- E — ELECTRIC, UNDERGROUND
- XXX.X — XXX.X — EXISTING CONTOUR LINES
- X — FENCE
- o — HANDRAIL
- SS — SANITARY SEWER
- SD — STORM SEWER / CULVERT
- T — TELEPHONE
- TV — TV CABLE
- W — WATER
- RAILROAD TRACKS

SURVEY DATA:

SURVEY DATE(S)	DECEMBER 2014
COORDINATE SYSTEM	WCCS DANE COUNTY
VERTICAL DATUM	GEOID 12A-WI
CONTROL SOURCE	WISCORS
SURVEY UNITS	US SURVEY FOOT

SURVEY CONTROL DATA

POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
CP12	CHISELED X	851.30	485159.539	824158.651
CP16	RR SPIKE	851.12	484919.820	824430.828

SANITARY SEWER STRUCTURE REPORT

STRUCTURE#		DEPTH	ELEV	SIZE	TYPE	BUILD	ID (FT)	TOP TYPE	OFFSET	RINGS	STREET
SAS 5347-007	RIM		850.27			PRECAST	4	CONE	NORTHEAST	1x4" CONC	E MAIN ST
	INV SW	4.45	845.82	8	PVC						
SAS 5347-006	RIM		850.74			BRICK	4	CONE	CENTER	-	E MAIN ST AT S PATERSON ST
	INV NW	9.40	841.34	10	PVC						
	INV SE	9.38	841.36	10	VP						
	INV E	8.72	842.02	8	STUB						
SAS-5347-008	RIM		851.51			POURED	5x5	FLAT TOP	NORTHWEST	4x8" CONC	S PATERSON ST
	INV NW	9.30	842.21	10	PVC						
	INV SE	9.10	842.41	10	PVC						

STORM SEWER STRUCTURE REPORT

STRUCTURE #	STRUCTURE TYPE		DEPTH	ELEVATION	SIZE	TYPE	STREET
CB-1	SQUARE INLET	RIM F/L		850.30			WU PARKING LOT
		INV NW	1.90	848.40	12	RCP	
		INV SE	1.45	848.85	4	CAST	
CB-2	SQUARE INLET	RIM F/L		850.47			WU PARKING LOT
		INV NE	2.60	847.87	12	RCP	
		INV SE	2.50	847.97	12	RCP	
CB-3	SQUARE INLET	RIM F/L		850.36			WU PARKING LOT
		INV N	3.20	847.16	12	RCP	
		INV SE	3.05	847.31	12	RCP	
		INV SW	3.10	847.26	12	RCP	
CB-4	ROUND INLET	RIM F/L		850.49			WU PARKING LOT
		INV NW	1.90	848.59	12	RCP	
CB-5	ROUND INLET	RIM F/L		850.31			WU PARKING LOT
		INV NW	1.95	848.36	12	RCP	
		INV SE	1.95	848.36	12	RCP	
AS 5347-028	SQUARE INLET STRUCTURE	RIM F/L		850.78			E MAIN ST
		INV NW	2.50	848.28	2 - 6"	PVC	
		INV NE	-	-	12	RCP	
		INV SE	-	-	6	RCP	
		INV STR	5.20	845.58			
IN 5347-074	CURB INLET	RIM F/L		849.66			E MAIN ST
		INV SE	1.40	848.26	2 - 6"	PVC	
AS 5347-075	ACCESS STRUCTURE RECTANGULAR	RIM		850.14			E MAIN ST AT S PATERSON ST
		INV NW	3.30	846.84	18	RCP	
		INV W	3.15	846.99	12	RCP	
		INV SE	5.00	845.14	18	RCP	
IN 5347-073	CURB INLET	RIM F/L		849.70			E MAIN ST AT S PATERSON ST
		INV NW	3.50	846.59	18	RCP	
		INV SE	3.35	846.35	18	RCP	
AS 5347-023	VAULT RECTANGULAR	RIM		850.09			E MAIN ST AT S PATERSON ST
		INV NW	3.80	846.29	19x30	HERCP	
		INV NE	3.90	846.19	15	RCP	
		INV SE	3.50	846.59	18	RCP	
		INV SW	3.60	846.49	15	RCP	
		SUMP	5.90	844.19			
IN 5347-025	CURB INLET	RIM F/L		849.43			E MAIN ST AT S PATERSON ST
		INV NW	2.10	847.99	12	PVC	
		INV E	1.30	848.13	10	PVC	
IN 5347-024	CURB INLET	RIM F/L		849.39			E MAIN ST AT S PATERSON ST
		INV NE	2.40	846.99	6	PVC	
		INV SE	2.50	846.89	12	PVC	
		INV SW	2.55	846.84	15	PVC	
IN 5347-038	CURB INLET	RIM F/L		850.31			S PATERSON ST
		INV NE	1.90	848.41	2	PVC	
		INV SE	2.85	847.46	6	PVC	
		INV SW	2.84	847.47	6	CI	
		INV NW	2.92	847.39	18	RCP	
IN 5347-035	CURB INLET	RIM F/L		849.86			S PATERSON ST
		INV NE	2.81	847.05	15	RCP	
		INV SE	2.75	847.11	18	RCP	
		INV NW	3.14	846.72	18	RCP	
IN 5347-034	RECTANGULAR INLET	RIM F/L		850.21			S PATERSON ST
		INV NW	3.08	847.13	18	RCP	
		INV SE	2.98	847.23	18	RCP	
		INV SW	1.75	848.46	6	CI	
IN 5347-037	CURB INLET	RIM F/L		850.00			S PATERSON ST
		INV NW	2.35	847.65	12	RCP	
IN 5347-036	CURB INLET	RIM F/L		849.90			S PATERSON ST
		INV NE	2.55	847.35	15	RCP	
		INV SE	2.55	847.35	12	RCP	
		INV SW	2.79	847.11	15	RCP	

* STR = STRUCTURE

0 20 40

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY:
DRAWN BY: LJN
CHECKED BY: ACA
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SHEET CONTENTS
EXISTING SITE PLAN

SHEET NO.
C-021

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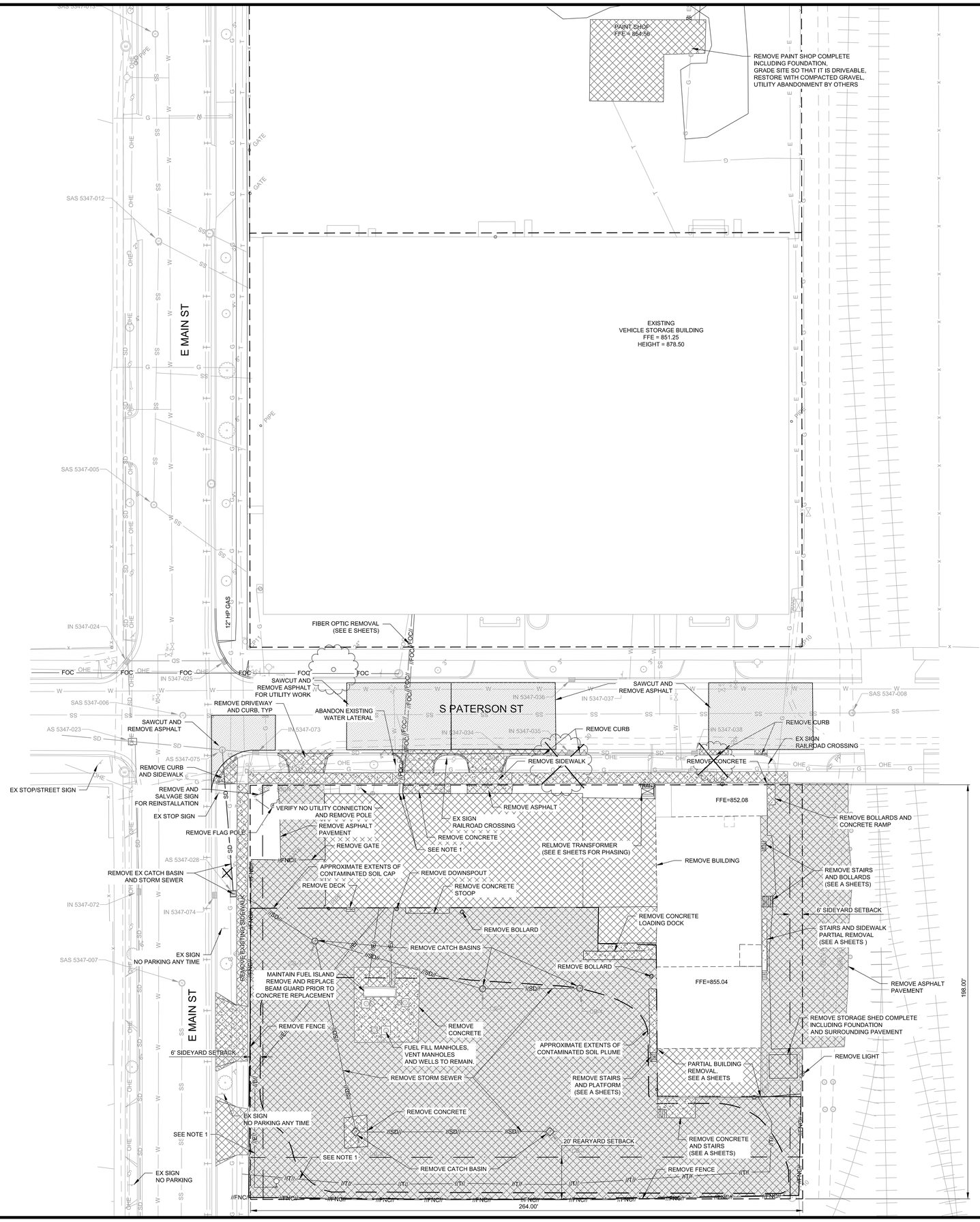

SITE DEMOLITION PLAN NOTES:

1. FOR ELECTRICAL AND TECHNOLOGY REMOVALS, SEE ED011.
2. CONTRACTOR SHALL PROTECT ALL PAVEMENT NOT SCHEDULED FOR REMOVAL. ALL DAMAGE TO PAVEMENT NOT SCHEDULED FOR REMOVAL SHALL BE REPLACED BY CONTRACTOR, INCLUDING BUT NOT LIMITED TO DRIVEWAY APRONS, SIDEWALKS AND CURBS.
3. FULL DEPTH PERPENDICULAR SAW CUT CONCRETE SIDEWALKS, CONCRETE CURB AND GUTTERS, AND ASPHALT PAVEMENT AT LIMITS OF REMOVALS. SIDEWALK LIMITS OF REMOVAL SHOULD BE EXTENDED TO NEAREST JOINT AND CLEANLY SAW CUT.
4. CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE FOR UTILITY LOCATIONS PRIOR TO COMMENCEMENT OF WORK.
5. COORDINATE WITH CITY OF MADISON FOR TRAFFIC CONTROL AND OBTAIN ANY REQUIRED PERMIT FOR WORK IN RIGHT-OF-WAY.
6. SEE LANDSCAPE PLAN SHEET L200 FOR TREE PROTECTION REQUIREMENTS

LEGEND:

\\A//	ABANDON
CON\\A//	ABANDON CONDUIT
E\\A//	ABANDON ELECTRIC, UNDERGROUND
G\\A//	ABANDON GAS, UNDERGROUND
SS\\A//	ABANDON SANITARY SEWER
SD\\A//	ABANDON STORM SEWER
T\\A//	ABANDON TELEPHONE
W\\A//	ABANDON WATER
	REMOVE
	REMOVE
//CON//	REMOVE CONDUIT
//E//	REMOVE ELECTRIC, UNDERGROUND
//OHE//	REMOVE ELECTRIC, OVERHEAD
//FNC//	REMOVE FENCE
//FOC//	REMOVE FIBER OPTIC CABLE
//G//	REMOVE GAS LINE
//SS//	REMOVE SANITARY SEWER
//SD//	REMOVE STORM SEWER
//T//	REMOVE TELEPHONE
//W//	REMOVE WATER LINE
xxxxxxxxxxxxxxxxxxxx	SAW CUT PAVEMENT
	ASPHALT REMOVAL
	CONCRETE REMOVAL
	REMOVAL PATTERN

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SHEET CONTENTS
SITE REMOVALS PLAN

SHEET NO.
C-041

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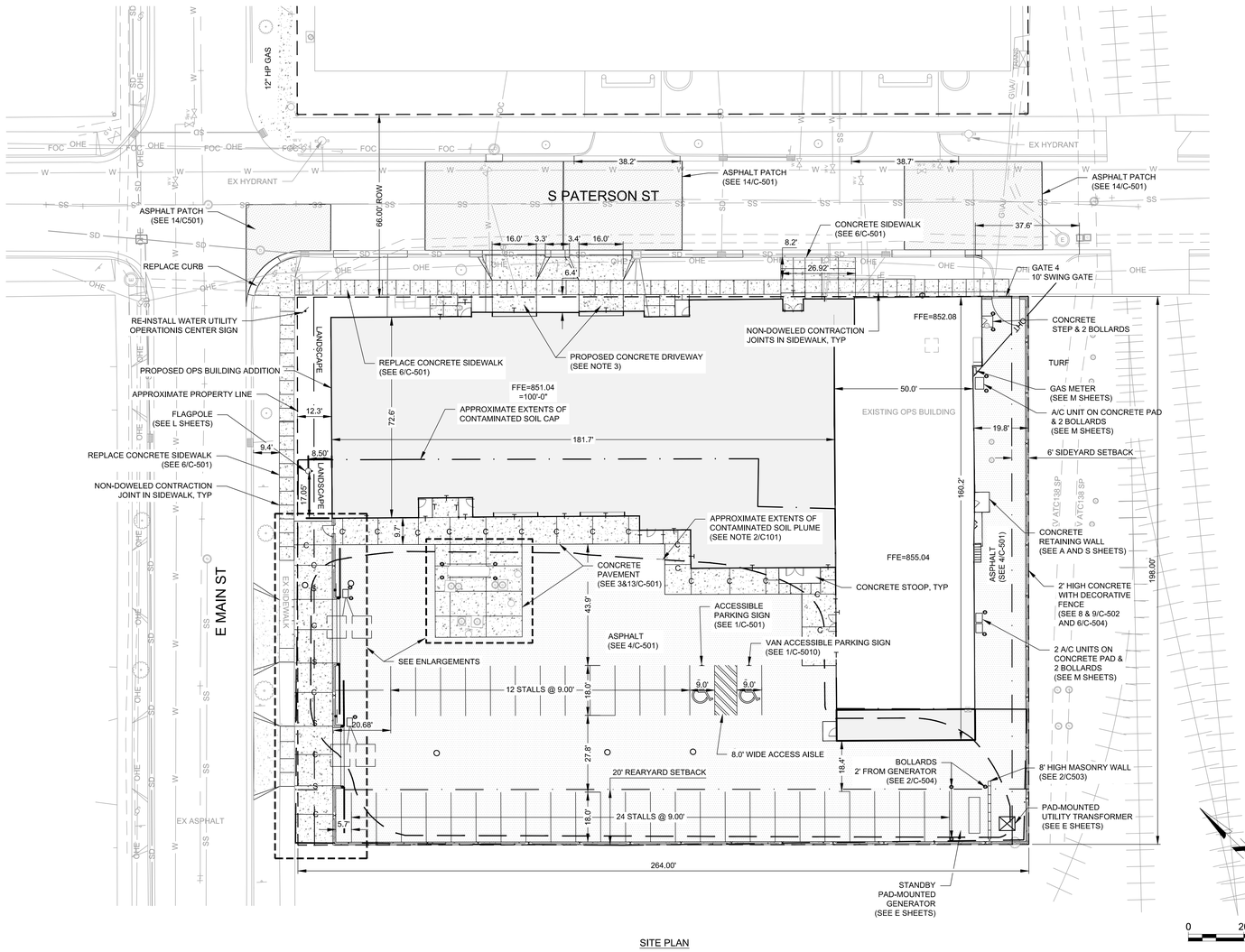
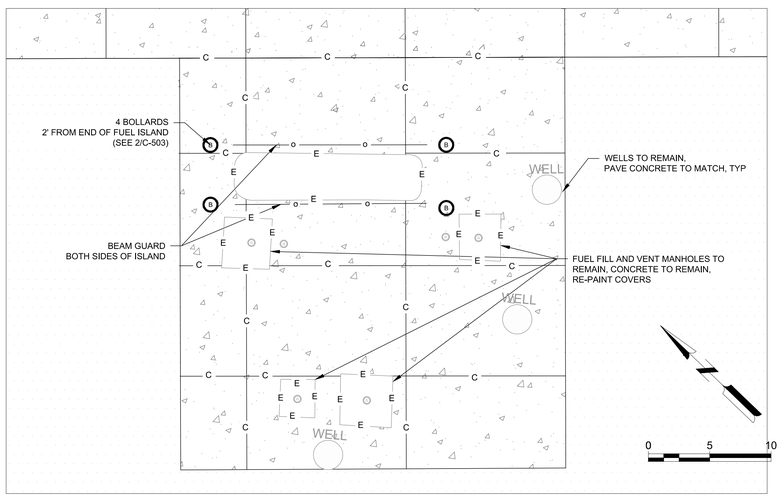


SITE PLAN



FUEL ISLAND JOINTING ENLARGEMENT

LEGEND:

- ESTIMATED EXTENTS OF SOIL CONTAMINATION, SEE NOTE 4.
- APPROXIMATED PROPERTY LINE
- SIGN (SINGLE POST)
- STORM INLET, CURB
- STORM INLET, ROUND
- STORM INLET, SQUARE
- STORM SEWER MANHOLE
- TRAFFIC FLOW DIRECTION
- G — GAS
- OHE — ELECTRIC, OVERHEAD
- E — ELECTRIC, UNDERGROUND
- X — FENCE
- O — HANDRAIL
- PROPERTY LINE
- SS — SANITARY SEWER
- S — SIGNAL CABLE, UNDERGROUND
- SD — STORM SEWER / CULVERT
- T — TELEPHONE, UNDERGROUND
- TV — TV CABLE
- W — WATER
- ASPHALT
- CONCRETE

PARKING LOT PLAN SITE INFORMATION BLOCK

SITE ADDRESS: 110 S PATERSON ST.
SITE ACREAGE (TOTAL): 1.2 ACRE
NUMBER OF BUILDING STORIES: 2 STORIES
BUILDING HEIGHT: 35 FEET
DILHR TYPE OF CONSTRUCTION: NEW ADDITION
TOTAL SQUARE FOOTAGE OF BUILDING: 40,644 SF (22,510 SF FOOTPRINT)
USE OF PROPERTY: B - BUSINESS AND S-1 - STORAGE OCCUPANCIES GROSS SQUARE FEET OF OFFICE: 14,972 SF
NUMBER OF EMPLOYEES IN MAINTENANCE: 57 EMPLOYEES
NUMBER OF EMPLOYEES IN OFFICE: 8 EMPLOYEES
NUMBER OF BICYCLE STALLS SHOWN: 8 (SEE LANDSCAPE PLANS) NUMBER OF PARKING STALLS SHOWN: 38
SMALL CAR: 0
LARGE CAR: 36
ACCESSIBLE: 2

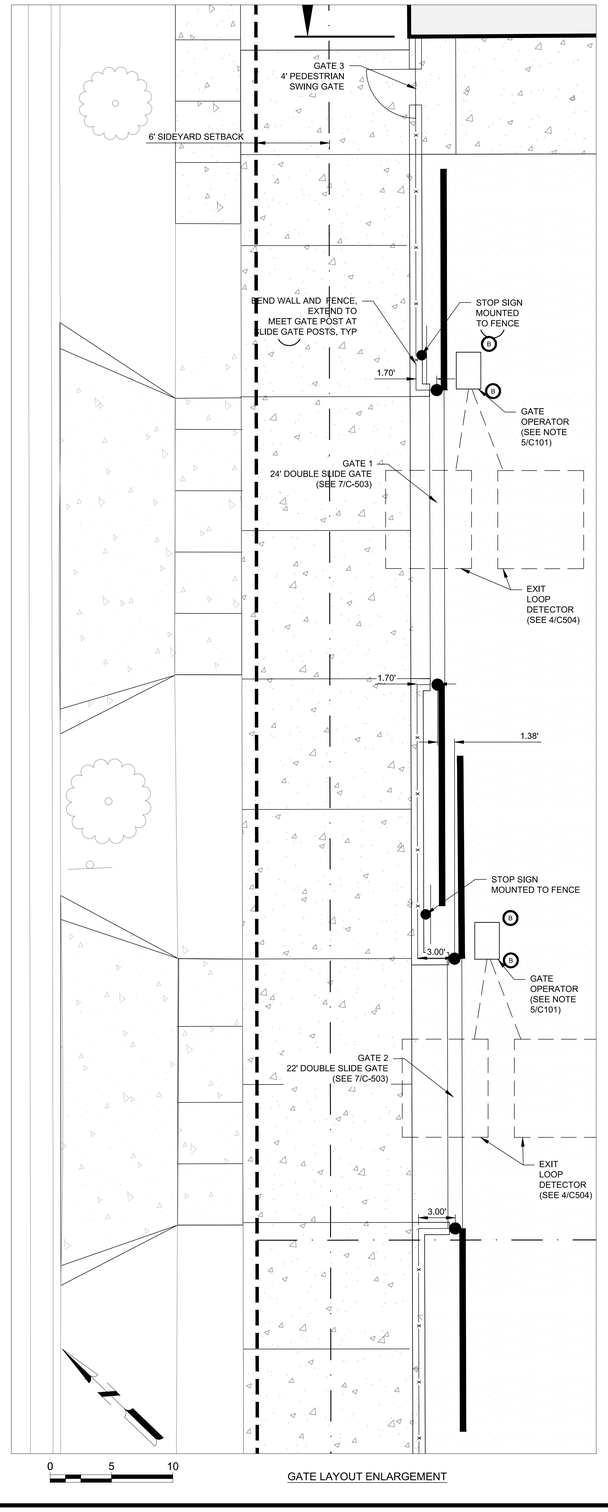
NUMBER OF TREES: 8 (SEE LANDSCAPE PLANS)

SITE IMPROVEMENTS PLAN NOTES:

1. LOT LINES ARE NOT MEASURED OR FIELD VERIFIED AND ARE SHOWN AS RECORDED ON THE ORIGINAL PLAT OF THE CITY OF MADISON. ALL TOPOGRAPHIC DATA IS REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM.
2. ESTIMATED EXTENT OF CONTAMINATED SOIL EXCEEDING NR 720 GENERIC RCLs FROM DEED RESTRICTION, ATTACHMENT A DATED 7/2/2003, DOCUMENT # 3770078.
3. FOR ALL CONCRETE IN DRIVEWAY INCLUDING SIDEWALK SECTION IN DRIVEWAY, CONSTRUCT ACCORDING TO DETAILS #3 AND #13, SHEET C-501 AND CITY OF MADISON STANDARD DRIVEWAY APRON DETAIL.
4. ANY PAVEMENT DAMAGED DURING CONSTRUCTION MUST BE REPLACED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.
5. GATE OPERATOR SHALL BE INSTALLED PER THE SPECIFICATIONS. FOUNDATION SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. SEE ELECTRICAL SITE SHEETS FOR POWER AND TECHNOLOGY DETAILS.

JOINTING PLAN LEGEND:

C= CONTRACTION JOINT (SEE 8/C-501)
CONSTRUCTION JOINT BETWEEN POURS (SEE 10/C-501)
T= THICKENED EDGE (SEE 7/C-501)
E= EXPANSION JOINT (SEE 12/C-501)
S= SIDEWALK TRANSITION DETAIL (SEE 3/C-503)



GATE LAYOUT ENLARGEMENT

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SHEET CONTENTS
SITE IMPROVEMENTS PLAN

SHEET NO.
C-101

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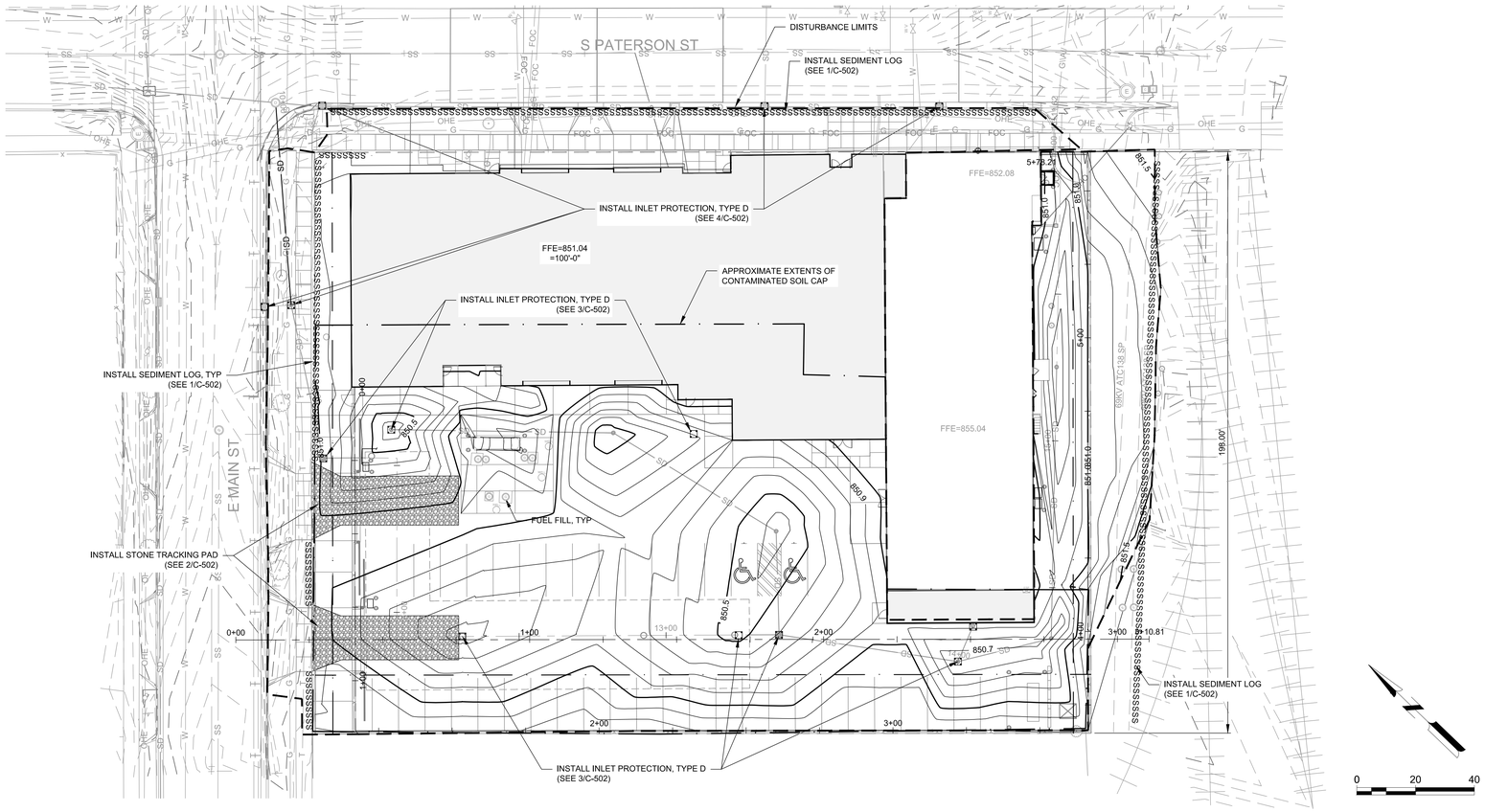

EROSION AND SEDIMENT CONTROL NOTES

1. CONSTRUCTION SITE DEWATERING WATER SHALL BE TESTED FOR CONTAMINATION AND DISPOSED OF PROPERLY BASED ON TEST RESULTS.
2. IF HIGH CAPACITY DEWATERING WELLS ARE REQUIRED, OBTAIN PERMIT FROM WDNR ACCORDING TO NR812.09
3. CONTRACTOR IS RESPONSIBLE FOR PROPER DISPOSAL OF WASTE FROM CONSTRUCTION SITE.
4. IF A SPILL OF OIL OR OTHER HAZARDOUS SUBSTANCE TAKES PLACE ON-SITE, IT SHALL BE CONTAINED ON-SITE AND CLEANED UP IF THERE IS AN IMPACT TO THE ENVIRONMENT OR HUMAN HEALTH. ANY RELEASE OFF-SITE SHALL BE REPORTED TO THE CITY AND WDNR HOTLINE 1-800-943-0003.
5. CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF MADISON & WDNR .
6. THE CONTRACTOR SHALL KEEP THE STORMWATER MANAGEMENT REPORT & EROSION CONTROL PLAN ON SITE DURING THE CONSTRUCTION FOR REFERENCE.
7. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
8. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS NEEDED.
9. EROSION AND SEDIMENT CONTROL SHALL BE INSPECTED WEEKLY AND AFTER 0.5 INCHES OF RAIN. A LOG OF ALL INSPECTIONS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT LEAVING PROPERTY. EROSION CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
11. SEDIMENT LOGS, TRACKING PAD AND INLET PROTECTION SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
12. EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE SITE IS FULLY STABILIZED.
13. THE CONTRACTOR SHALL ALLOW FREE AND UNLIMITED ACCESS TO THE PROJECT SITE AT ANY TIME TO ANY REGULATORY AGENCY EMPLOYEE INSPECTING THE EROSION CONTROL MEASURES.
14. AFTER STABILIZATION, CONTRACTOR SHALL REMOVE INLET PROTECTION AND SEDIMENT LOG.
15. MULCH SHALL BE STRAW MULCH AND SHALL BE APPLIED AT 1.5 TONS PER ACRE, THE SEED MIX SHALL BE WisDOT SEED MIX #40 SHALL BE APPLIED AT 3 POUNDS PER 1,000 SF, THE FERTILIZER SHALL BE WisDOT TYPE A AND APPLIED AT A RATE OF 7 POUNDS PER 1,000 SF.
16. CONCRETE WASHOUT PLAN SHALL CONFORM TO SHEET C-506 DETAIL.
17. SEED RATE = 4 POUNDS PER 1,000 SF FERTILIZER RATE = 7 POUNDS PER 1,000 SF

EROSION CONTROL SEQUENCE

1. INSTALL GRAVEL TRACKING PAD
2. INSTALL INLET PROTECTION
3. INSTALL SEDIMENT LOGS
4. INSTALL STORM SEWER
5. ROUGH GRADE SITE
6. CONSTRUCT BUILDING AND SITE APPURTENANCES
7. STABILIZE SITE WITHIN 2 DAYS OF GRADING COMPLETION
8. LANDSCAPE AFTER SITE IS GRADED & STABILIZED & PARKING LOT HAS BASE COURSE IN PLACE
9. REMOVE AND DISPOSE OF SEDIMENT LOGS AND TRACKING PAD
10. RESTORE AREAS AROUND REMOVED SEDIMENT LOGS AND TRACKING PAD

LEGEND:

734.97" M	EXISTING SPOT ELEVATION
738.76	FINISHED / PROPOSED SPOT ELEVATION
3:1	FINISHED / PROPOSED SLOPE
2%	
	INLET PROTECTION
SSSSSSSSSSSSSSS	SEDIMENT LOG

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SHEET CONTENTS
EROSION CONTROL PLAN

SHEET NO.
C-121

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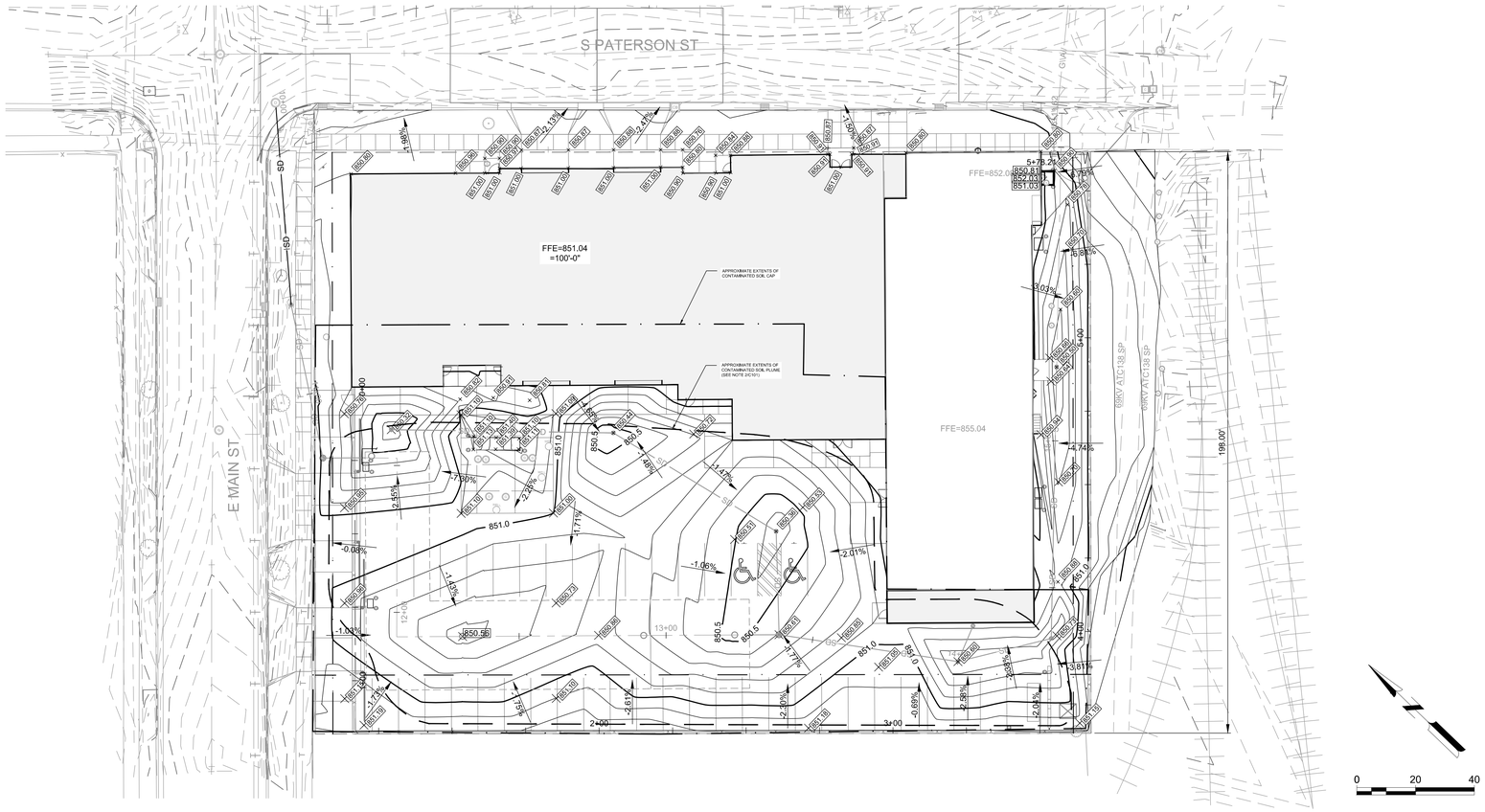
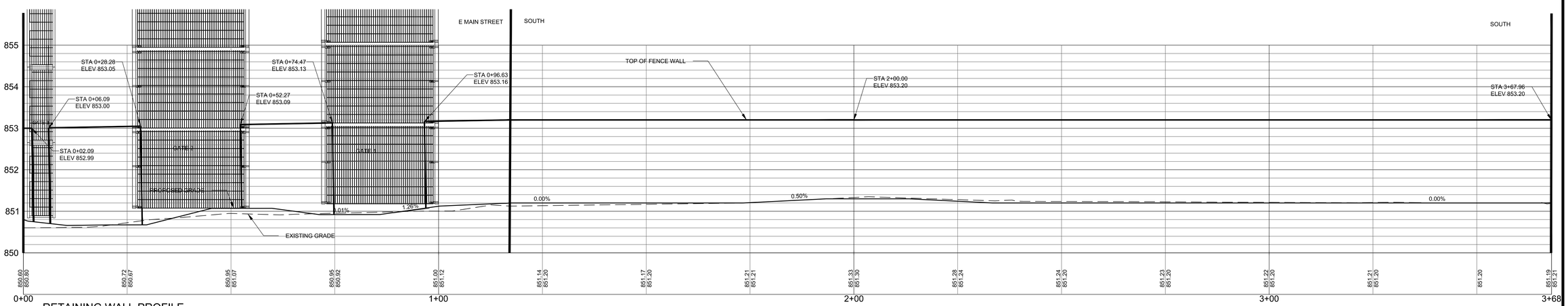
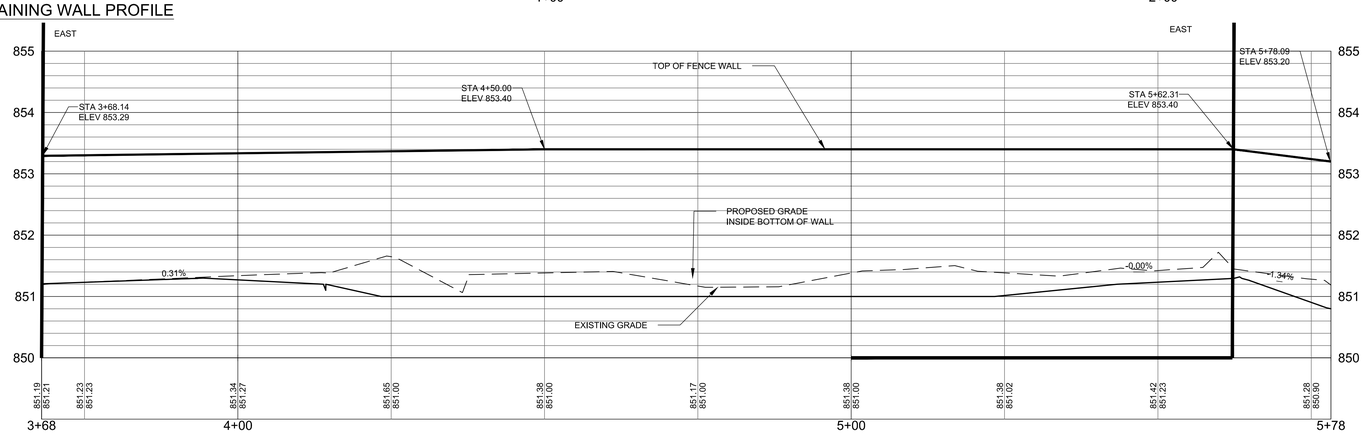


SITE GRADING PLAN NOTES:

1. ROUGH GRADE PARKING LOT TO SUBGRADE ELEVATIONS.
2. CONTAMINATED SOIL REMOVAL SHALL BE COORDINATED WITH ENVIRONMENTAL PROFESSIONAL
3. OVEREXCAVATED POOR SUBGRADE SOILS IN PAVEMENT AREAS WHERE PEAT IS ENCOUNTERED OR COMPACTION OF SUBGRADE CANNOT BE ACHIEVED DUE TO UNSATISFACTORY SOILS.
4. CONTAMINATED SOIL REMOVAL SHALL BE COORDINATED WITH SECTION 312000 EARTH MOVING-SITE AND MATERIAL MANAGEMENT PLAN. CUT SOILS ON THE SITE THAT ARE CONTAMINATED SHALL BE DISPOSED OF ACCORDING TO THE MATERIAL MANAGEMENT PLAN.
5. CONTAMINATED SOILS NOT PLANNED FOR EXCAVATION WITHIN THE CAP AREA CAN REMAIN ON-SITE PROVIDED THEY ARE CAPPED WITH PAVEMENT OR THE BUILDING FOUNDATION AT THE COMPLETION OF THE PROJECT ACCORDING TO THE PROPERTY DEED.



RETAINING WALL PROFILE



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SHEET CONTENTS
GRADING PLAN

SHEET NO.
C-131

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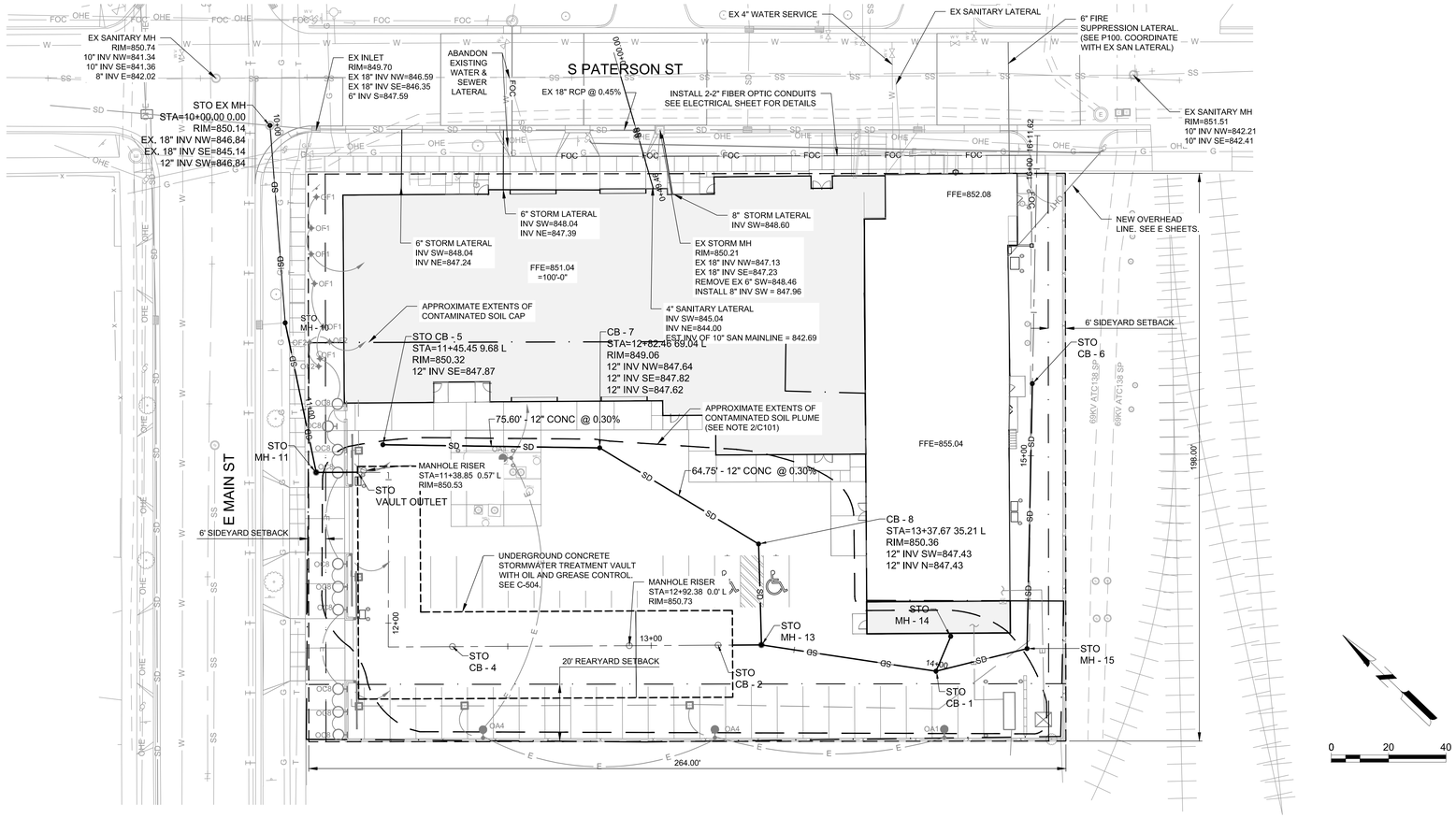

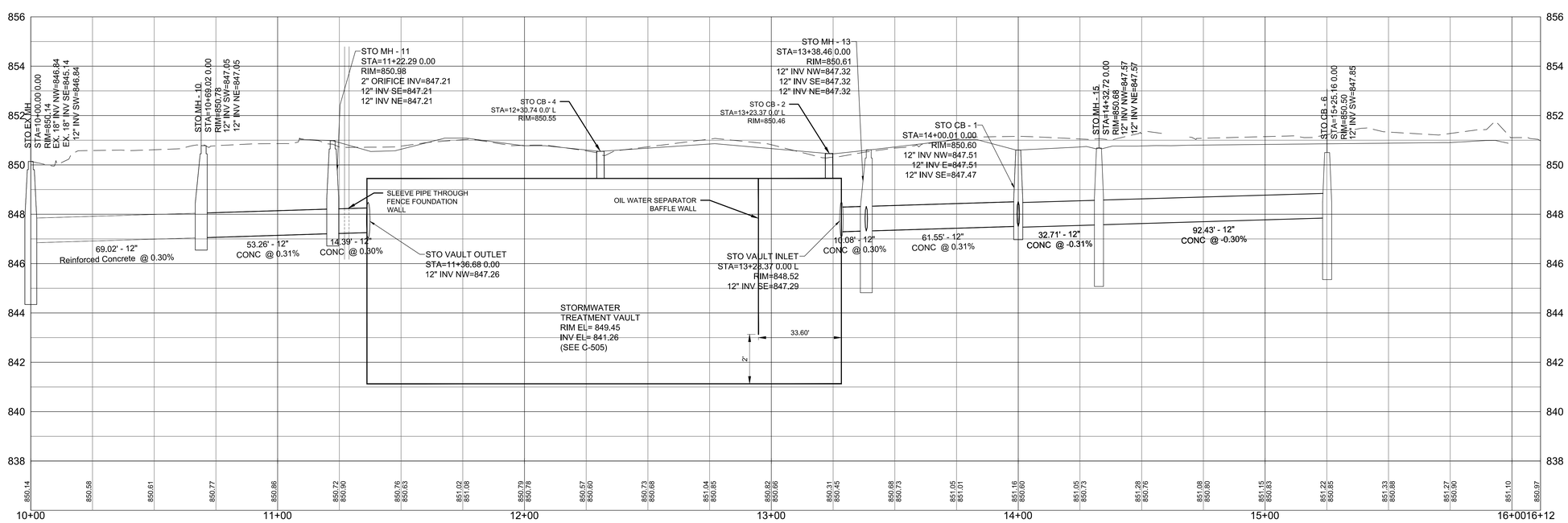

SITE UTILITY PLAN NOTES:

1. COORDINATE WATER LATERAL CONNECTION WITH WATER UTILITY/OWNER.
2. COORDINATE SANITARY LATERAL AND STORM LATERAL CONNECTION WITH CITY OF MADISON.
3. MAINTAIN A MINIMUM CLEAR SEPARATION BETWEEN WATER MAINS OF 6-INCHES OVER AND 18-INCHES UNDER ANY STORM SEWERS OR SANITARY SEWER.
4. ALL UTILITIES SHOWN ARE BASED ON INFORMATION PROVIDED AS PART OF THE SITE SURVEY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE; ITS ACCURACY IS NEITHER GUARANTEED NOR CERTIFIED. CONTRACTOR MUST FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
5. SEE ELECTRICAL SITE PLAN FOR SITE ELECTRICAL. ELECTRICAL AND TECHNOLOGY SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY.
6. NEW FUEL TANK ACCESS PORTS AND VENT LIDS TO BE PROVIDED BY OWNER'S FUEL SYSTEM EQUIPMENT SUPPLIER. CONTRACTOR SHALL COORDINATE EQUIPMENT INSTALLATION WITH NEW CONCRETE PAVING. RE-PAINT MARKINGS.

LEGEND:

- STORM INLET, ROUND
- STORM SEWER MANHOLE

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SHEET CONTENTS
SITE UTILITY PLAN

SHEET NO.
C-141

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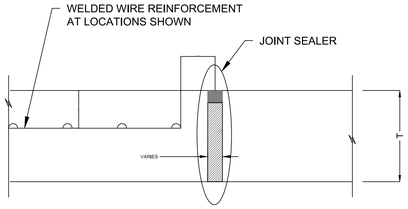
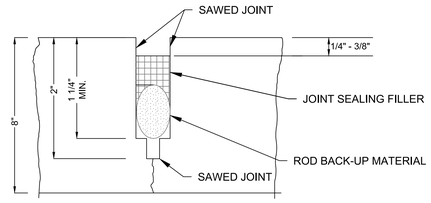


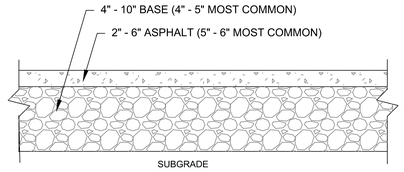
12 TYPICAL EXPANSION JOINT DETAIL (E)
NOT TO SCALE



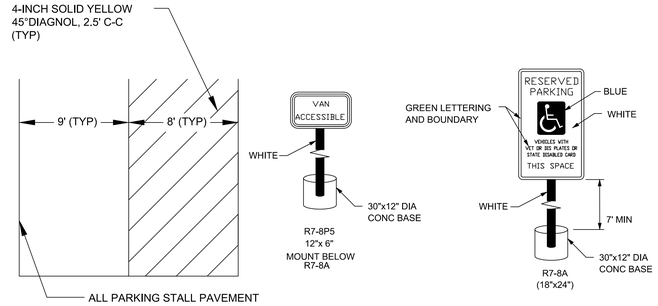
NOTES:

1. SEALANT RESERVOIR SIZED TO PROVIDE PROPOSER SHAPE FACTOR W/D AS RECOMMENDED BY THE SEALANT MANUFACTURER FOR OPTIMUM PERFORMANCE.
2. ROD BACKUP MATERIAL SHALL BE COMPATIBLE WITH THE TYPE OF SEALANT USED AND SIZED TO PROVIDE THE ADEQUATE SHAPE FACTOR.
3. FOR SIDEWALK AND CURB USE NON-DOWELED CONTRACTION JOINTS AT 5' INTERVALS FOR SIDEWALK AND 10' INTERVALS FOR CURB.

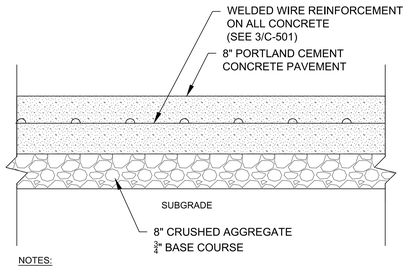
9 TYPICAL CONTRACTION JOINT MATERIAL DETAIL
NOT TO SCALE



5 EXISTING ASPHALT SECTION DETAIL
NOT TO SCALE



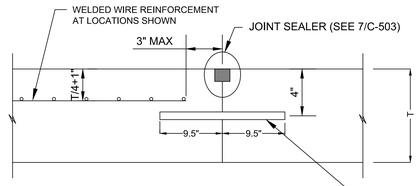
1 PARKING STALL MARKING & SIGN DETAIL
NOT TO SCALE



NOTES:

1. PLACE EXPANSION JOINTS AT BUILDING EDGE.
2. PLACE CONTRACTION JOINTS AT APPROXIMATELY 10' X 10' TO 12' X 12' SQUARES

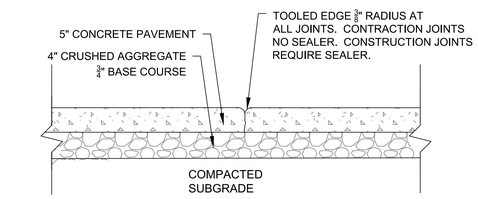
13 TYPICAL CONCRETE PAVEMENT SECTION DETAIL
NOT TO SCALE



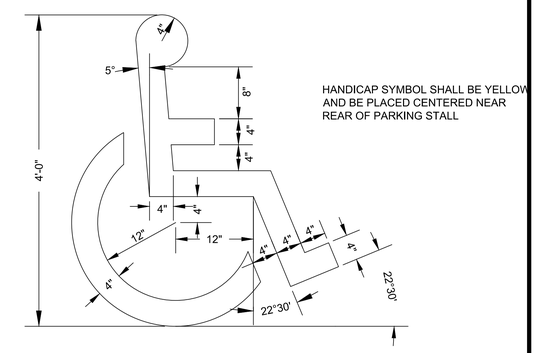
DOWELS TO BE DRILLED INTO EXISTING CONCRETE WITH HOLE BLOWN CLEAN & DOWEL EPOXIED. ALSO PLACE AT EXISTING PAVEMENTS WHERE INDICATED & AT CONTINUATION OF NEXT DAY POURS.

EPOXY-COATED SMOOTH STEEL DOWELS, 1" IN DIAMETER, 19" IN LENGTH, SPACED AT 12", IN BOTH DIRECTIONS, PAINTED AND OILED CAN BE SUBSTITUTED FOR EPOXY COATED

10 DOWELED CONSTRUCTION JOINT DETAIL
NOT TO SCALE

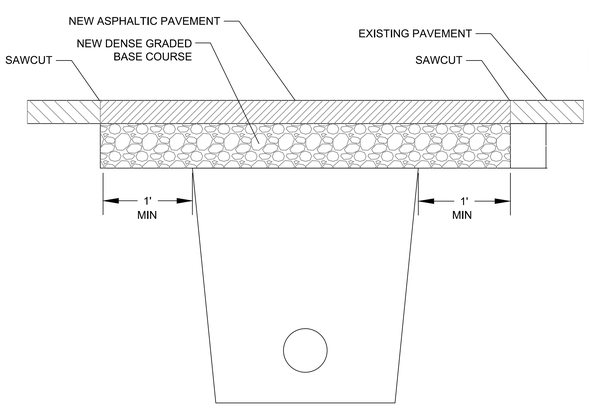


6 CONCRETE SIDEWALK DETAIL
NOT TO SCALE



HANDICAP SYMBOL SHALL BE YELLOW AND BE PLACED CENTERED NEAR REAR OF PARKING STALL

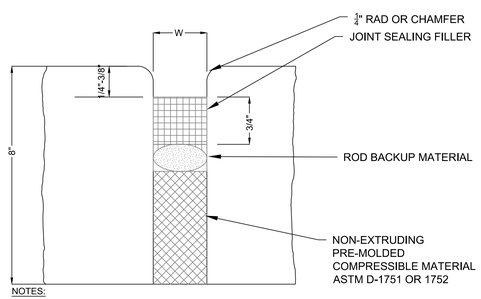
2 HANDICAP MARKING DETAIL
NOT TO SCALE



NOTES:

1. THE PATCH SHALL BE CRUSHED STONE BASE COURSE, GRADATION NO. 2 OVERLAID WITH ASPHALT UPPER LAYER EQUAL IN THICKNESS TO THE EXISTING ASPHALTIC PAVEMENT, WITH A MINIMUM THICKNESS OF 3" AND A MAXIMUM THICKNESS OF 5¼" UNLESS OTHERWISE SPECIFIED AND LAID IN ONE OR MORE COURSES AS DIRECTED BY THE ENGINEER.
2. THE PAVEMENT SAWCUT, FULL DEPTH. THE EDGES OF THE EXISTING ASPHALTIC PAVEMENT SHALL BE FREE OF LOOSE STONES OR PAVEMENT MATERIAL.
3. THE CRUSHED STONE BASE COURSE SHALL BE INSTALLED IN TWO LIFTS. THE LOWER LIFT SHALL BE THOROUGHLY MECHANICALLY COMPACTED PRIOR TO PLACING THE UPPER LIFT.
4. THE ASPHALT UPPER LAYER SHALL BE LAID IN TWO LIFTS. WHERE THE ASPHALTIC UPPER LAYER IS MACHINE LAID AND IS NOT MORE THAN 3" IN THICKNESS, THE ASPHALT SURFACE COURSE MAY BE IN ONE LIFT.
5. PRIOR TO PLACING THE ASPHALT UPPER LAYER, THE EDGES OF THE PATCH AND THE SURFACE OF THE CRUSHED STONE VASE SHALL BE TACKED AND PRIMED WITH LIQUID ASPHALT.
6. THE TYPICAL PAVEMENT PATCH SECTION RELATES TO THE CITY OF MADISON ENGINEERING DIVISION STANDARD DETAIL DRAWING 5.2.4.

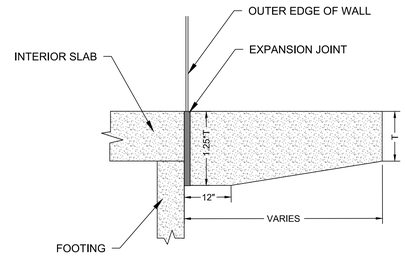
14 TYPE III UTILITY TRENCH PATCH DETAIL
NOT TO SCALE



NOTES:

1. FOR JOINTS ABUTTING BUILDINGS USE W=1".
2. FOR JOINTS ABUTTING SIDEWALKS, USE W=1/2".
3. PLACE IN CURB AT 200' MINIMUM INTERVALS, BETWEEN POURS, THE BEGINING AND END OF ALL CURB RADII AND AROUND STRUCTURES.
4. PLACE IN SIDEWALK ABUTTING EXISTING PAVEMENT AND AT A MINIMUM OF 200'.

11 TYPICAL EXPANSION JOINT MATERIAL DETAIL (E)
NOT TO SCALE



NOTES:

1. T=THICKNESS OF CONCRETE PAVEMENT.

7 TYPICAL THICKENED CONCRETE PAVEMENT EDGE AT BUILDING DETAIL (T)
NOT TO SCALE

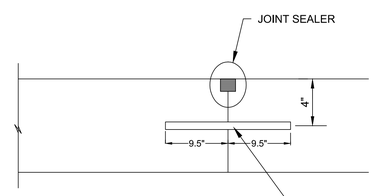
ACCEPTABLE ALTERNATIVE COLD DRAWN STEEL FABRIC SIZES ARE:

W8 @ 10" C-C- EACH WAY
W6.5 @ 8"C-C EACH WAY
W5 @ 6" C-C EACH WAY
W4 @ 4" C-C EACH WAY

(MESH DEPTH TO BE PLACED AT T/4 + 1" IN AREAS SHOWN)
T = PAVEMENT THICKNESS

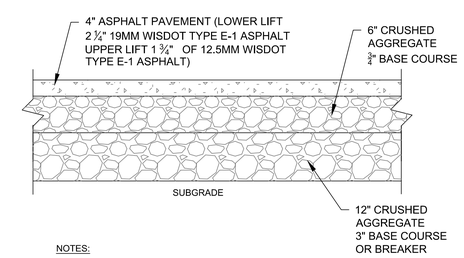
FABRIC TO BE PLACED ON STANDS

3 WELDED WIRE REINFORCEMENT
NOT TO SCALE



EPOXY-COATED & OILED SMOOTH 1" DIA. STEEL DOWELS, SPACED AT 12" ON CENTER, IN BOTH DIRECTIONS, PAINTED AND OILED CAN SUBSTITUTE FOR EPOXY COATED AND OILED

8 TYPICAL CONTRACTION JOINT DETAIL (C)
NOT TO SCALE



NOTES:

1. SUBGRADE SOILS SHALL BE PROFF-ROLLED. IF RUTTING OCCURS DURING PROOF-ROLLING, SOILS SHALL BE UNDERCUT AND STABILIZED WITH BREAKER.
2. CRUSHED AGGREGATE BASE COURSE SHALL BE COMPACTED ACCORDING TO WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY & STRUCTURE CONSTRUCTION, SECTION 301.3.4.2.

4 TYPICAL ASPHALT PAVEMENT SECTION DETAIL
NOT TO SCALE

Mead & Hunt
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Minneapolis, MN 55439
phone: 952-941-5619
meadhunt.com

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MADISON WATER UTILITY
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Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

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06/12/15 BID SET

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DATE: June 12, 2015
DESIGNED BY: LJN
DRAWN BY: LJN
CHECKED BY: ACA
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SITE IMPROVEMENT DETAILS

SHEET NO.
C-501

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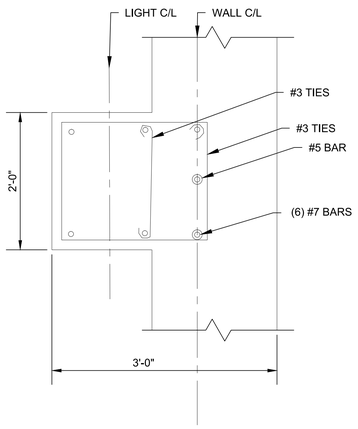
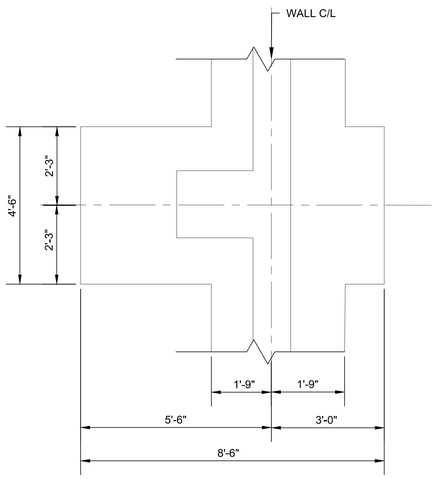
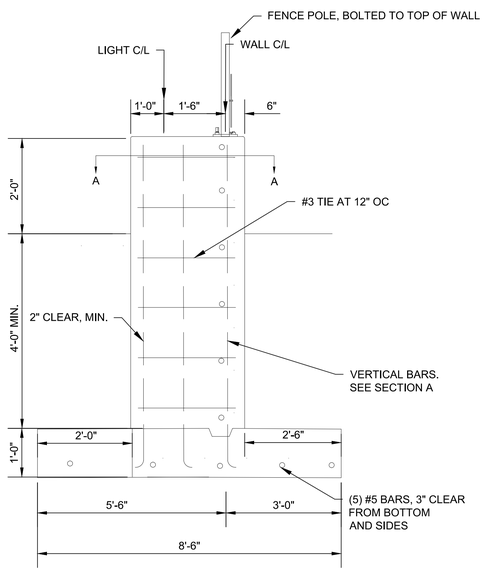
6/11/2015 3:53:02 PM



SECTION A

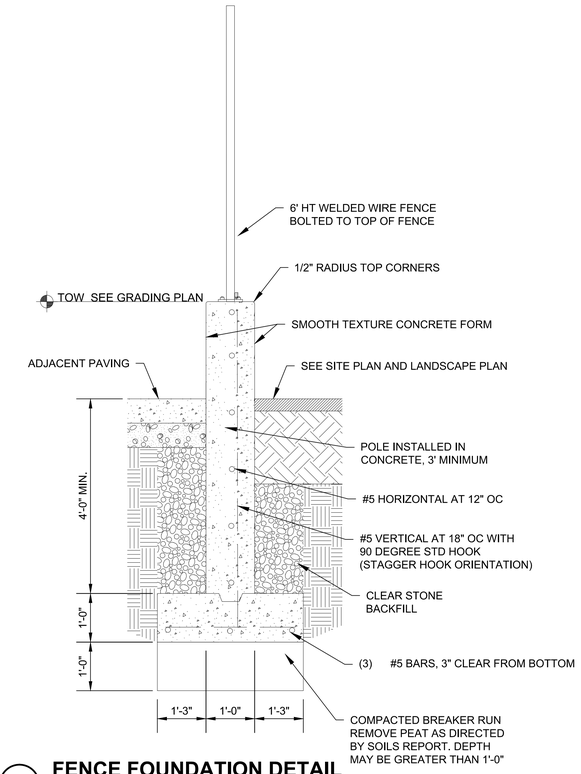


FOOTING PLAN



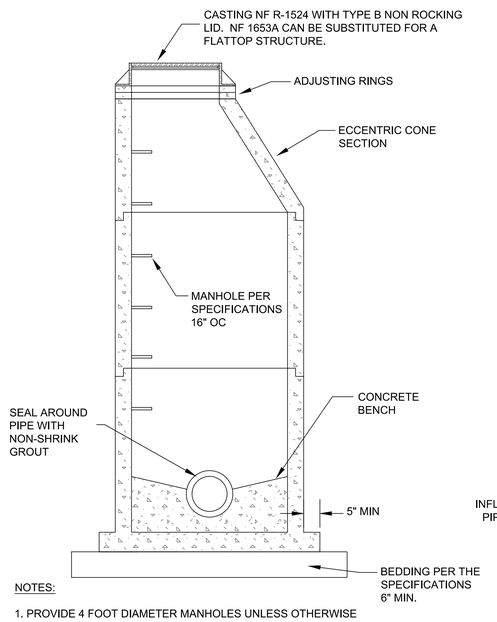
9 DECORATIVE FENCE & LIGHT FOUNDATION DETAIL

NOT TO SCALE



8 FENCE FOUNDATION DETAIL

NOT TO SCALE

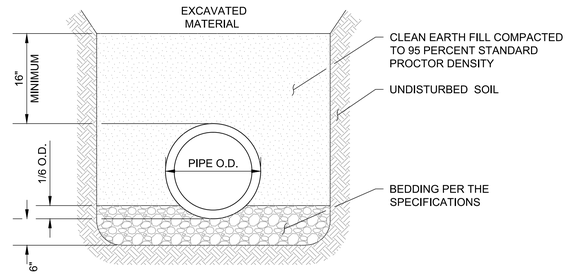


NOTES:

1. PROVIDE 4 FOOT DIAMETER MANHOLES UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2. MANHOLE BASE SHALL BE CAST MONOLITHICALLY WITH THE BARREL SECTION. BOTTOM BARREL SECTION SAHLL BE A MINIMUM OF 28 INCHES HIGH.
3. PROVIDE A MINIMUM OF 4 INCHES OF RING ADJUSTMENT.
4. WHEN ADDITIONAL ADJUSTMENT IS REQUIRED, IT SHALL BE DONE WITH A COMBINATION OF RINGS THICKER THAN 2 INCHES.

6 STORM MANHOLE DETAIL

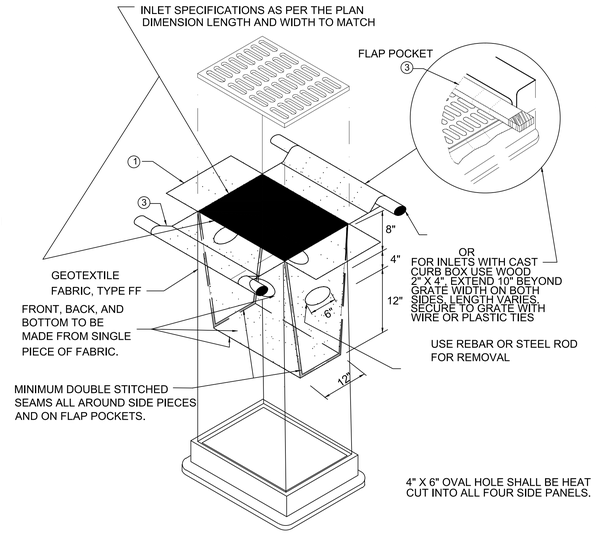
NOT TO SCALE



NOTE:
BOTTOM OF TRENCH SHALL BE THE PIPE O.D. PLUS 16-INCHES

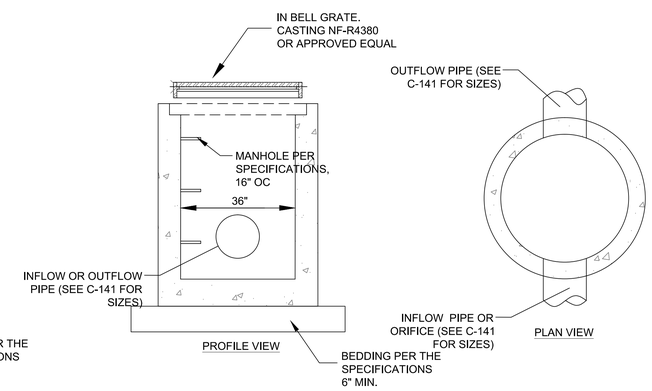
3 CONCETE PIPE TRENCH DETAIL

NOT TO SCALE



4 INLET PROTECTION DETAIL, TYPE D

NOT TO SCALE



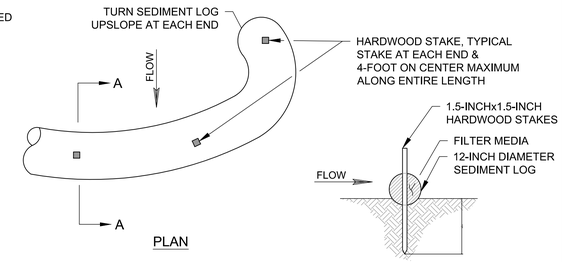
NOTES:

1. PRECAST INLET IN ACCORDANCE WITH THE SPECIFICATIONS.
2. BASE SHALL BE MONOLITHIC WITH THE RISER SECTION BOTTOM A MINIMUM OF 24 INCHES HIGH.

*ROUND, NEENAH FOUNDRY TYPE R4380 OR EQUAL.

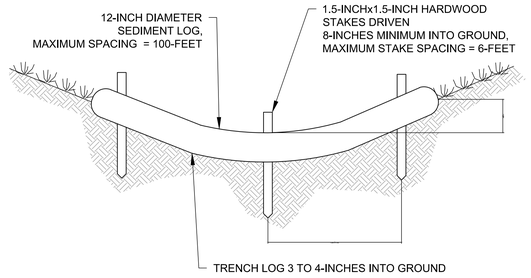
5 36-INCH CATCH BASIN DETAIL

NOT TO SCALE



PLAN

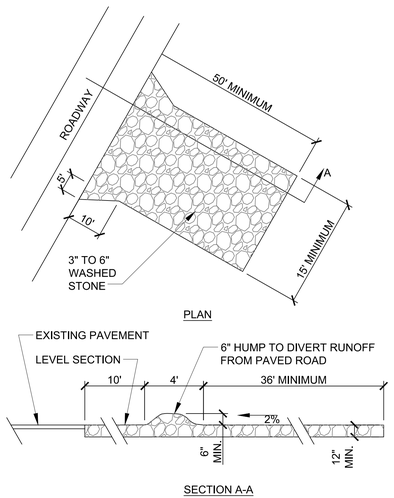
SECTION A-A



ELEVATION

1 SEDIMENT LOG INSTALLATION DETAIL

NOT TO SCALE



PLAN

SECTION A-A

MAINTAIN THE TRACKING PAD IN A CONDITION TO PREVENT SEDIMENT FROM LEAVING THE SITE. SHOULD MUD BE TRACKED OR WASHED ONTO EXISTING PAVEMENT, IT MUST BE REMOVED IMMEDIATELY.

2 TRACKING PAD DETAIL

NOT TO SCALE

Mead & Hunt
7900 West 78th Street,
Suite 370
Minneapolis, MN 55439
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meadhunt.com

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: LJN
DRAWN BY: LJN
CHECKED BY: ACA
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SHEET CONTENTS
SITE IMPROVEMENT DETAILS

SHEET NO.
C-502

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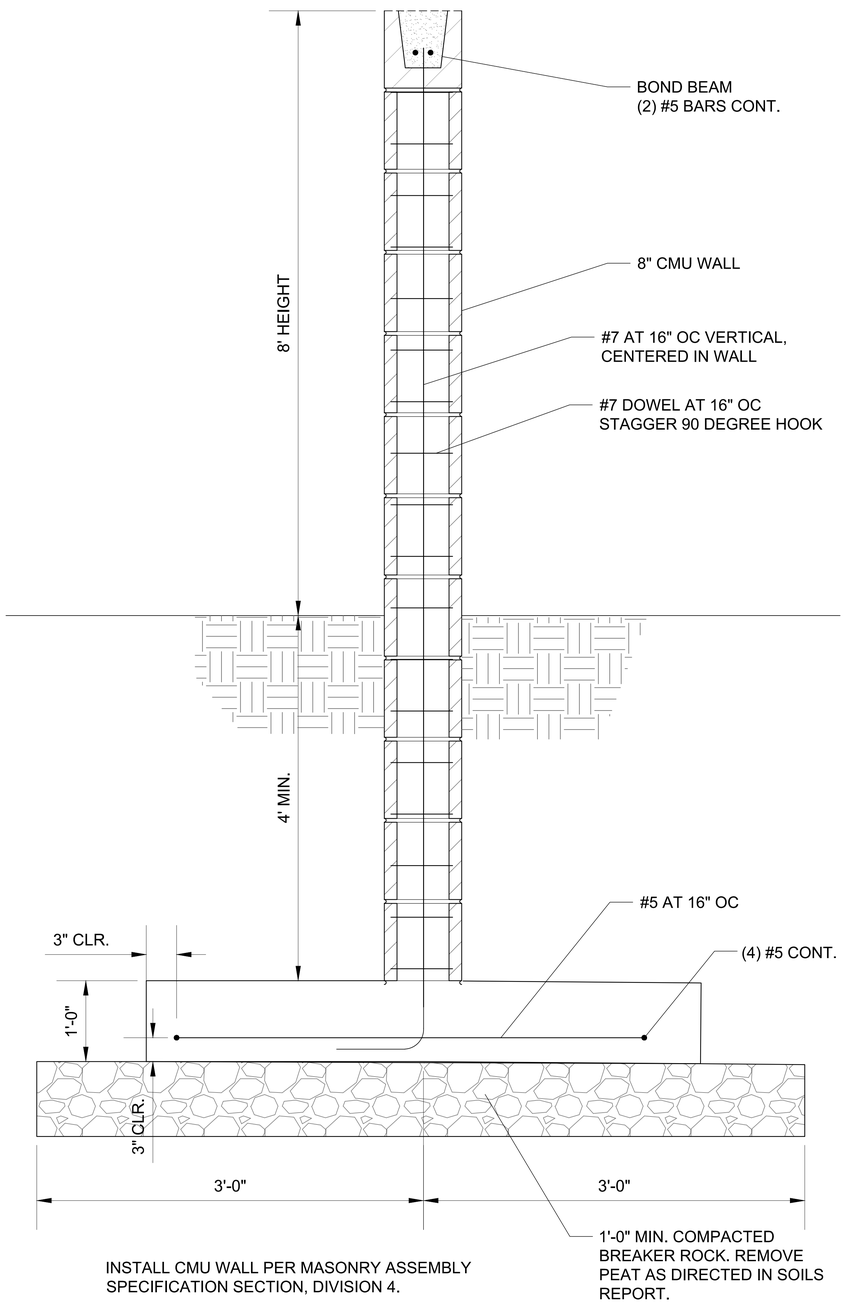
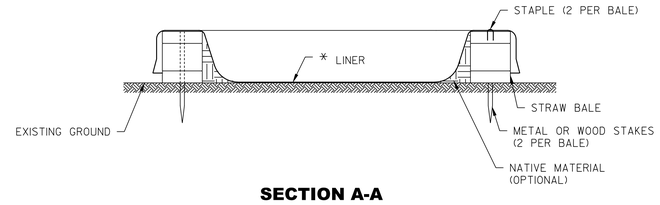
6/11/2015 3:53:10 PM



INSTALL CMU WALL PER MASONRY ASSEMBLY SPECIFICATION SECTION, DIVISION 4.

2 **SCREEN WALL**
NOT TO SCALE



SECTION A-A
ABOVE GROUND WASHOUT

GENERAL NOTES

WASHOUT LOCATION SHALL BE MARKED WITH A SIGN.

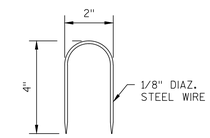
IF PROJECT SITE WARRANTS, ADDITIONAL SIGNAGE MAY BE REQUIRED TO DIRECT CONCRETE WASHOUT ACTIVITIES TO THE WASHOUT LOCATION(S).

WASHOUT SHALL BE INSPECTED DAILY FOR LEAKS AND REPAIRED AS NECESSARY.

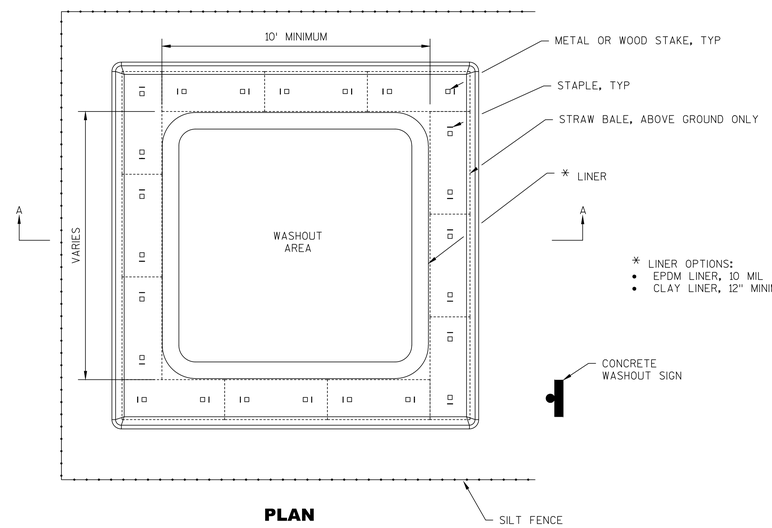
PUMPING OF WASH WATER MAY BE REQUIRED IF ADEQUATE SPACE IS NOT AVAILABLE FOR NEXT CONCRETE POUR.

REPLACEMENT WASHOUT, SHALL BE CONSIDERED INCIDENTAL.

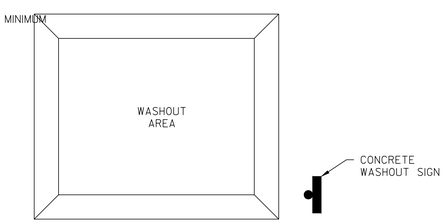
PORTABLE CONTAINERS SHALL BE IMPERMEABLE AND EASILY MOVED WITHOUT OVERFLOW.



STAPLE DETAIL



PLAN



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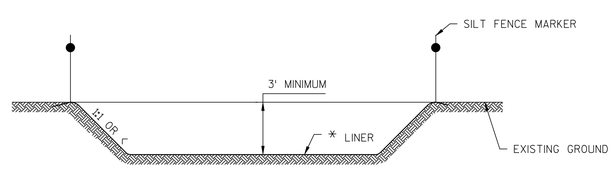
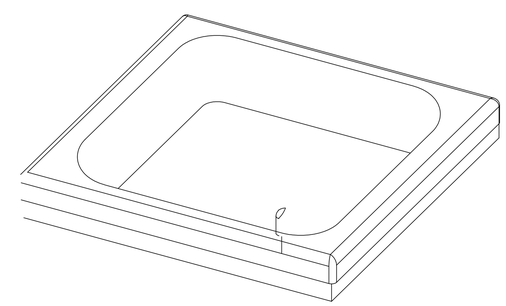


SECTION A-A
BELOW GROUND WASHOUT



PORTABLE CONTAINER
(LAYOUT MAY VARY)

1 **CONCRETE WASHOUT DETAIL**
NOT TO SCALE

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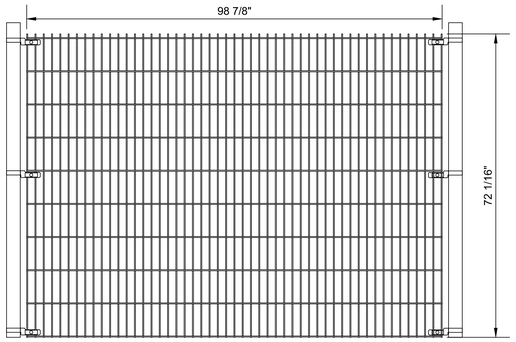
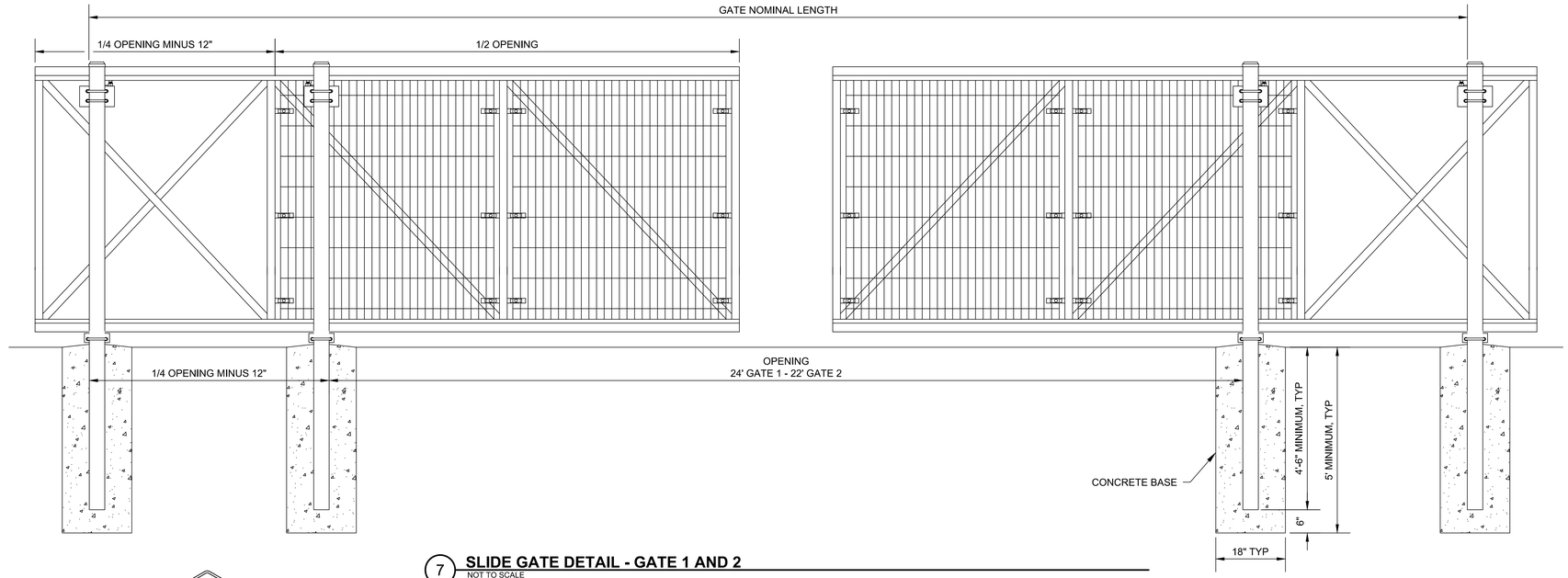
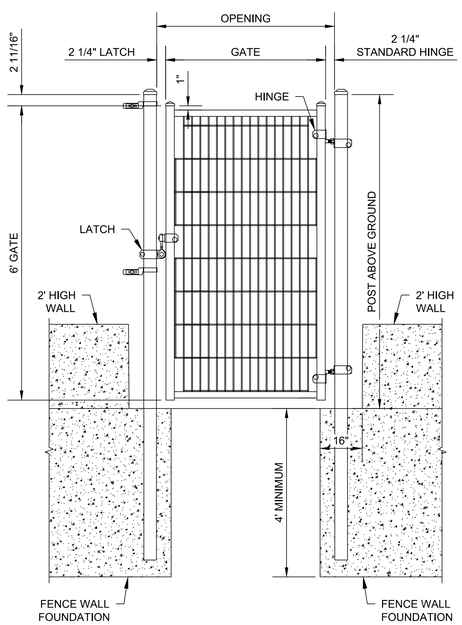


6 FENCE PANEL DETAIL (6' HIGH FENCE)
NOT TO SCALE

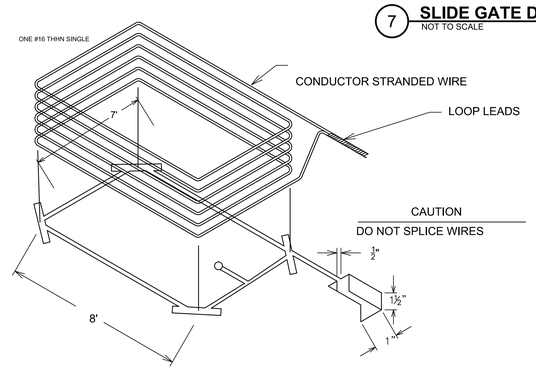
GATE POST DIMENSIONS		
PANEL (H)	OPENING	POSTS
8'	3' TO 7'	3"X3" 11GA
8'	10' TO 26'	6"X6" 3/16"



7 SLIDE GATE DETAIL - GATE 1 AND 2
NOT TO SCALE



5 SWING GATE DETAIL - GATES 3 AND 4
NOT TO SCALE



PERSPECTIVE VIEW OF DETECTOR LOOP

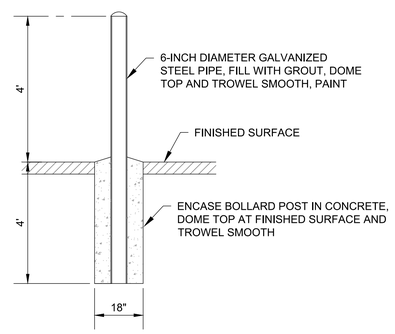
DO NOT FRACTURE WIRE INSULATION, LOOPS SHORTED TO GROUND WILL CAUSE DETECTOR MALFUNCTION. WHEN PLACING WIRE IN THE SLOT, DO NOT USE SCREWDRIVER OR OTHER SHARP TOOLS

TYPICAL LAYOUT FOR LOOP

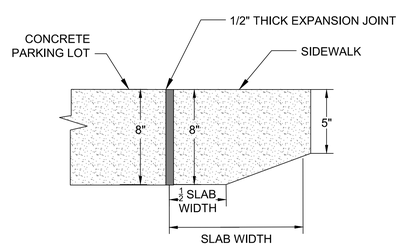
SAW SLOT IN EXISTING CONCRETE 3/16"X1/2" DEEP, MAKE RECTANGULAR SHAPE TO SPECIFIED LOOP DIMENSIONS PLUS A SLOT FOR LEAD CONDUIT. SEAL WITH LOOP DETECTOR SEALANT 271, A PRODUCT OF CRAFCO INC., OR ENGINEER APPROVED EQUIVALENT. (EXAMPLE: DE WITT'S NO. 99 BLACK MASTIC CAULK) SELECTED SEALANT SHALL NOT BE A WATER BASED PRODUCT. FOLLOW MANUFACTURER RECOMMENDATIONS FOR PRODUCT INSTALLATION.

NOTES:
1. LOOP LEADS ARE LIMITED TO 100 FEET.
2. LOOP LEADS MUST HAVE FOUR (4) TWIST PER FOOT.
3. LOOP & LOOP LEADS MUST BE LOCATED AT LEAST 18' FROM ANY ELECTRICAL POWER SERVICE OR RUNS.
4. LOOP LEADS MUST BE IN SEPARATE CONDUIT BETWEEN LOOP AND DETECTOR. THEY MUST NOT SHARE CONDUIT WITH OTHER WIRING OR LEADS FROM OTHER LOOPS.
5. USE #16 THHN SINGLE CONDUCTOR STRANDED WIRE.
6. ALL WIRE TO BE CONTINUOUS WITHOUT SPLICING.
7. CORNERS OF LOOPS TO BE ON ANGLE TO MINIMIZE STRESS ON WIRES.
8. LOOP MUST PASS THE FOLLOWING TESTS:
   A. TOTAL RESISTANCE LESS THAN 4.0 OHMS.
   B. RESISTANCE TO EARTH MEASURED BY 500V MEGGER GREATER THAN 100 MEGAOHMS.
9. CONFIRM ALL DIMENSIONS AND REQUIREMENTS WITH OPERATOR MANUFACTURER.

4 SLIDE GATE EXIT LOOP DETECTOR
NOT TO SCALE



2 BOLLARD POST DETAIL
NOT TO SCALE



3 SIDEWALK TRANSITION DETAIL (S)
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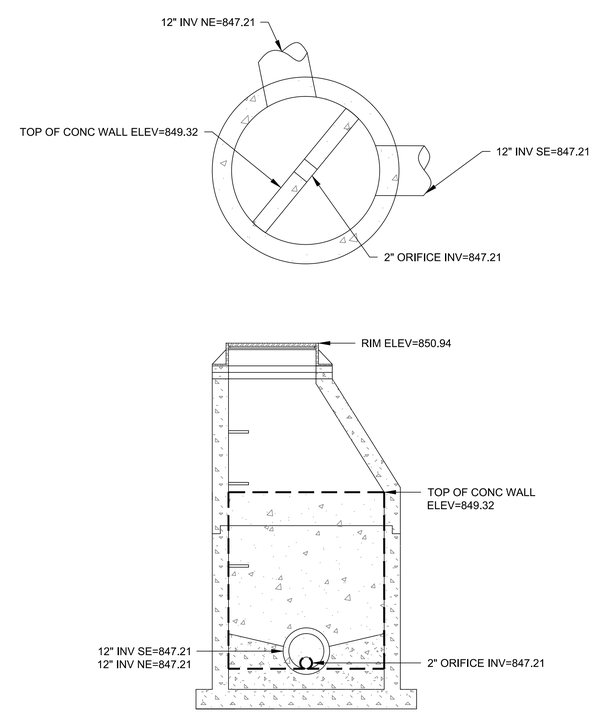

1 MH 3 DETAIL
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: LJN
DRAWN BY: LJN
CHECKED BY: ACA
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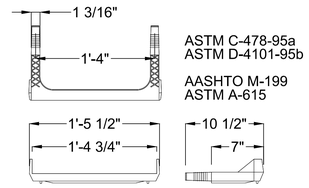
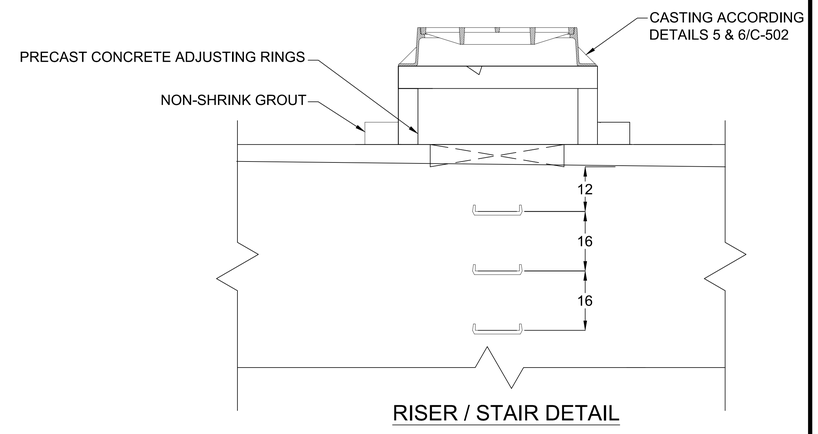
SHEET CONTENTS
SITE IMPROVEMENT DETAILS

SHEET NO.
C-504

X:\3235300\131021.03\TECH\CAD\C-501.DWG
6/11/2015 3:53:17 PM



3 **STAIR DETAIL**
NOT TO SCALE



2 **RISER/STAIR DETAIL**
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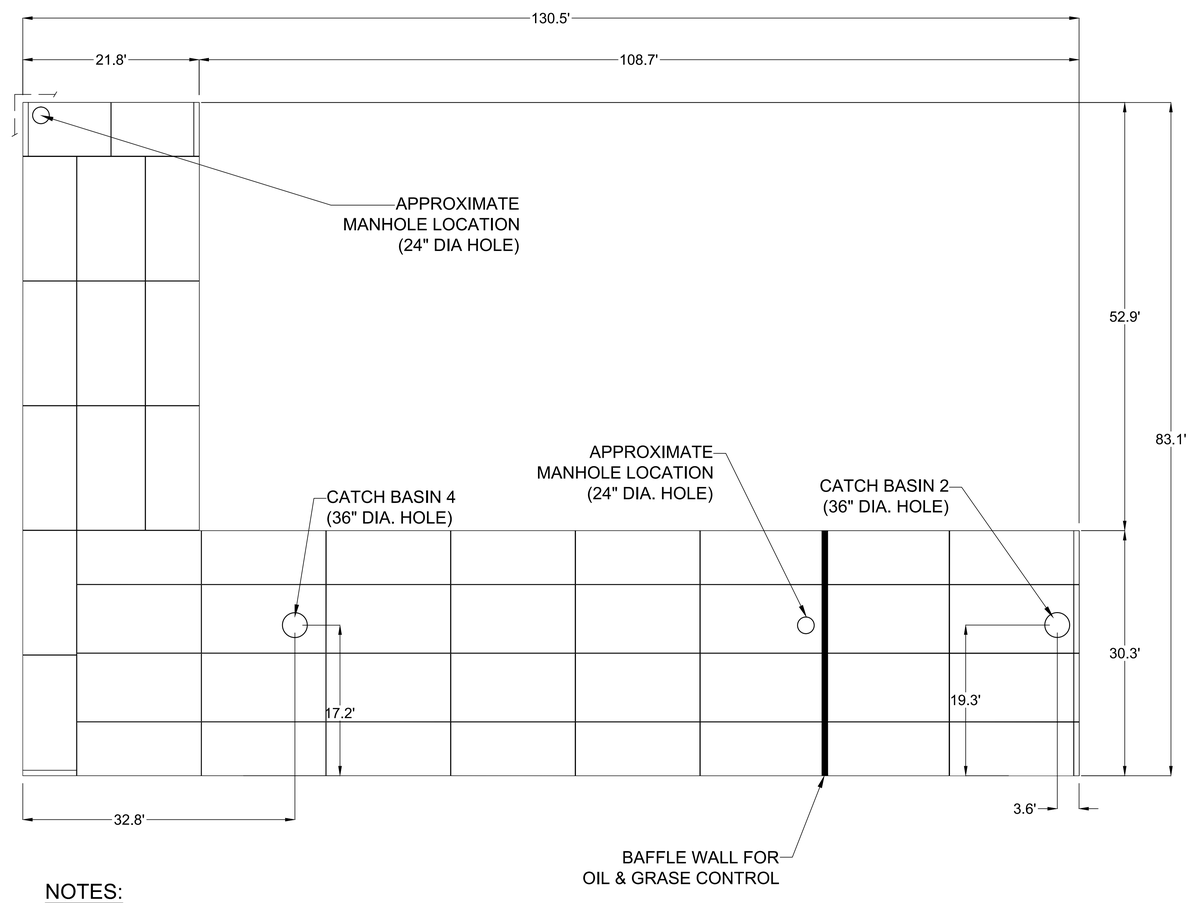

NOTES:

ALL DIMINSIONS OF THE VAULT SHOWN ARE OUTSIDE TO OUTSIDE

LOADING: AASHTO HS-20 HIGHWAY LOADING
SURFACE AREA : 4,571.00 SQUARE FEET
WATER STORAGE : 31,998.97 CUBIC FEET

1 **STORMWATER VAULT LAYOUT DETAIL**
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SHEET CONTENTS
STORM WATER
TREATMENT DETAILS

SHEET NO.
C-505

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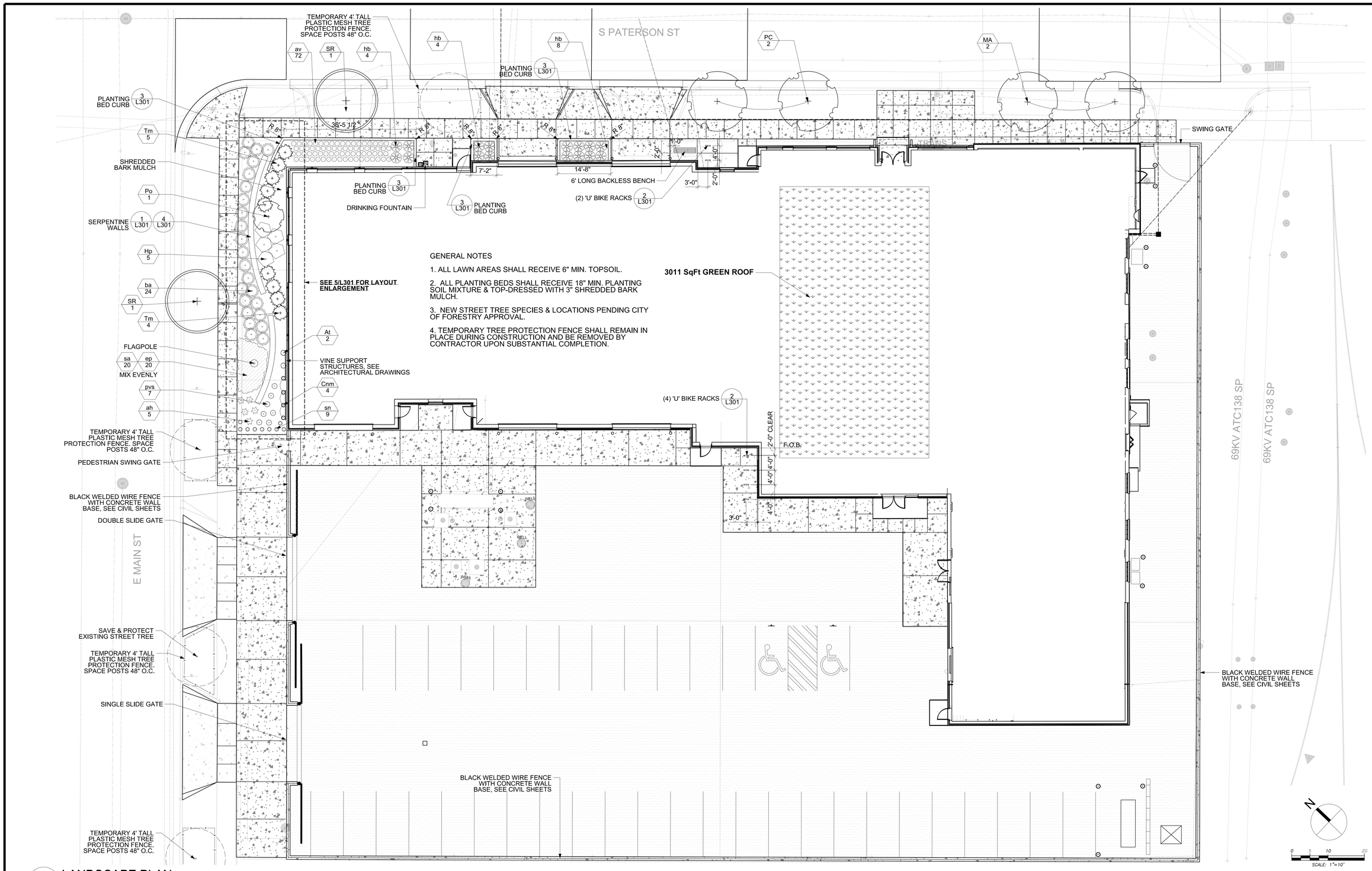

GENERAL NOTES

1. ALL LAWN AREAS SHALL RECEIVE 6" MIN. TOPSOIL.

2. ALL PLANTING BEDS SHALL RECEIVE 18" MIN. PLANTING SOIL MIXTURE & TOP-DRESSED WITH 3" SHREDDED BARK MULCH.

3. NEW STREET TREE SPECIES & LOCATIONS PENDING CITY OF FORESTRY APPROVAL.

4. TEMPORARY TREE PROTECTION FENCE SHALL REMAIN IN PLACE DURING CONSTRUCTION AND BE REMOVED BY CONTRACTOR UPON SUBSTANTIAL COMPLETION.

1 L200 LANDSCAPE PLAN

Plant List

Key	Botanical Name	Common Name	Quantity	Size	Spec	Comments	Mature Size
	Deciduous Trees						
MA	*Maackia amurensis 'Starburst'*	Starburst Amur Maackia	2	2" Cal.	B&B	Single, straight leader; match specimens; branching shall start at 5'-0" min.	20' ht x 20' sp.
PC	*Pyrus calleryana 'Cleveland Select'*	Cleveland Select Pear	2	2" Cal.	B&B	Single, straight leader; match specimens; branching shall start at 5'-0" min.	35' ht x 15' sp.
SR	*Syringa reticulata 'Williamette'*	Ivory Pillar Tree Lilac	2	2" Cal.	B&B	Single, straight leader; match specimens; branching shall start at 5'-0" min.	20-25' ht x 10-15' sp.
	Evergreen Shrubs						
Tm	*Taxus x media 'Taunton'*	Taunton Yew	9	24" Ht.	B&B	Single, straight leader; match specimens	2-3' ht x 4-5' sp
	Deciduous Shrubs						
Hp	*Hydrangea paniculata 'Jane'*	Little Lime Hydrangea	5	36" Ht.	B&B	Space 4'-0" o.c.	4-5'ht x 4-5' sp
Po	*Physocarpus opulifolius 'Center Glow'*	Center Glow Ninebark	1	5 gal.	Cont.		8-10' ht x 8-10' sp
	Perennials & Ornamental Grasses						
ah	*Amsonia hubrichtii 'Halfway to Arkansas'*	Halfway to Arkansas Narrow Leaf Blue Star	5	1 gal.	Cont.	Space 3'-0" o.c.	3' ht x 2.5-3' sp
av	*Alchemilla vulgaris*	Lady's Mantle	72	1 gal.	Cont.	Space 1'-6" o.c.	.5-1.5' ht x 1-1.5' sp
ba	*Baptisia australis*	Blue False Indigo	24	1 gal.	Cont.	Space 3'-0" o.c.	3' ht x 2.5-3' sp
ep	*Echinacea x 'Pixie Meadowbrite'*	Pixie Meadowbrite Coneflower	20	1 gal.	Cont.	Space 1'-6" o.c.	1.5-2' ht x 1.5-2' sp
hb	*Hosta 'Blue Angel'*	Blue Angel Hosta	16	2 gal.	Cont.	Space 3'-6" o.c.	2.5'ht x 4' sp
pvs	*Panicum virgatum 'Shenandoah'*	Shenandoah Switchgrass	7	1 gal.	Cont.	Space 3'-0" o.c.	3.5' ht x 2.5-3' sp
sa	*Sesleria autumnalis*	Autumn Moor Grass	20	1 gal.	Cont.	Space 1'-6" o.c.	1.5' ht x 1.5' sp
sn	*Salvia nemorosa 'Cardonna'*	Cardonna Sage	9	1 gal.	Cont.	Space 2'-0" o.c.	2' ht x 1.5-2' sp
	Vines						
At	*Aristolochia tomentosa*	Dutchman's Pipe	2	1 gal.	Cont.	Space 3'-6" o.c. Train onto vine structure.	8'-12' ht.
Cnm	*Clematis x 'Nelly Moser'*	Nelly Moser Clematis	4	1 gal.	Cont.	Space 3'-6" o.c. Train onto vine structure.	20'-30' ht.

Green Roof Pre-Grown Tile Species

Species Name	Flower Time	Flower Color	Winter Interest	Zone	Min. Soil Depth	Mature Height	Width
Sedum album 'Coral Carpet'	Mid Summer	White	Yes	4 to 8	3-4"	.5-1"	6-8"
Sedum cauticolum	Mid Summer	Pink	No	3 to 7	3-4"	3-6"	10-12"
Sedum ellacombianum	Early Summer	Yellow	No	3 to 7	3-4"	3-5"	10-12"
Sedum hybridum 'Czar's Gold'	Mid Summer	Yellow	Yes	4 to 7	3-4"	5-6"	6-8"
Sedum kamtschaticum	Early Summer	Yellow	Yes	4 to 7	3-4"	5-6"	6-8"
Sedum middendorffianum diffusum	Mid Summer	Yellow	Yes	5 to 8	3-4"	3-4"	6-8"
Sedum rupestre	Mid Summer	Yellow	Yes	4 to 7	3-4"	4-6"	8-12"
Sedum sexangulare	Mid Summer	Yellow	Yes	4 to 7	3-4"	3-4"	6-8"
Sedum spurium sp	Mid Summer	Pink	Yes	4 to 7	3-4"	4-6"	6-8"
Sedum spurium 'Roseum'	Early Summer	Pink	Yes	4 to 8	3-4"	4-6"	6-8"
Sedum spurium 'Voodoo'	Summer thru Fall	Rose	Yes	4 to 7	3-4"	4-6"	6-8"
Sedum stefco	Late Summer	White	Yes	5 to 8	3-4"	1-2"	6-8"

City of Madison - Landscape Worksheet

MWU Paterson St. Operations Center						
		Points Req.				
Total Sq. Footage of Developed Area	29,425 sf					
Total No. of Landscape Points Req.	5 per 300 sf developed area	491				
Plant Type/ Element	**Minimum Size at Installation**	**Points**	**Credit/ Existing Landscaping**		**New/ Proposed Landscaping**	
			Quantity	Points Achieved	Quantity	Points Achieved
Overstory deciduous tree	2½ inch caliper (dbh)	35			0	0
Tall evergreen tree (i.e. pine, spruce)	5-8 feet tall	35			0	0
Ornamental tree	1 1/2 inch caliper	15			0	0
Upright evergreen shrub (i.e. arborvitae)	3-4 feet tall	10			0	0
Shrub, deciduous	#3 gallon container size, Min. 12"-24"	3			6	18
Shrub, evergreen	#3 gallon container size, Min. 12"-24"	4			9	36
Ornamental grasses/ perennials	#1 gallon container size, Min. 8"-18"	2			173	346
Ornamental/decorative fencing or wall	n/a	4 per 10 lin ft			582 lf	232
Existing significant specimen tree	min. 2-1/2" cal.	14 per inch dbh			0	0
Landscape furniture for public seating and/or transit connections	publicly accessible	5 per seat			1	5
					TOTAL POINTS	637

NOTE: This project has submitted a variance application to the Zoning Board of Appeals for the Interior Parking Lot Landscape requirements due to deed restrictions mandating protection of capped soils from impervious conditions.

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KEN SAIKI DESIGN INC
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MADISON, WI 53703
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www.ksdi-la.com

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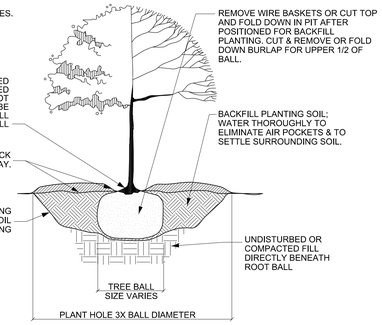
SHEET CONTENTS
LANDSCAPE PLAN

SHEET NO.
L-200

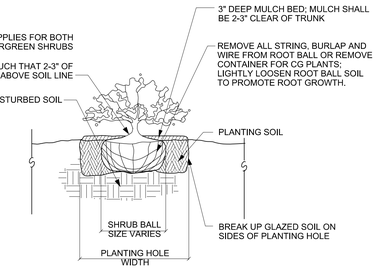
NOTE:
1. STREET TREE PLANTING IN THE CITY R.O.W. SHALL CONFORM TO CITY OF MADISON STANDARDS. SEE STD. DETAIL 2.01.

2. CUT & REMOVE ALL POLY TIES.

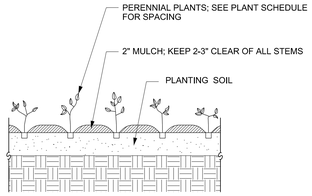


1 L300 TREE PLANTING 1/2" = 1'-0"

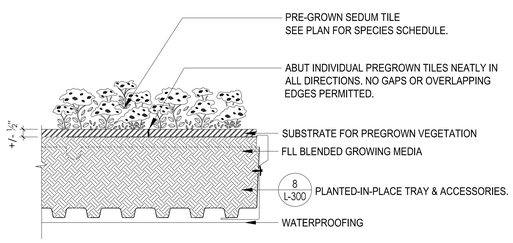
NOTE: THIS DETAIL APPLIES FOR BOTH DECIDUOUS & EVERGREEN SHRUBS



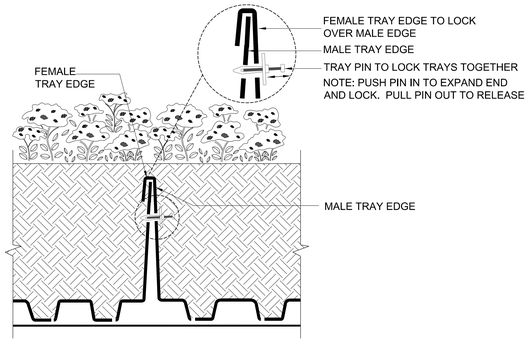
2 L300 SHRUB PLANTING 1/2" = 1'-0"



3 L300 PERENNIAL/ GROUNDCOVER PLANTING 1/2" = 1'-0"

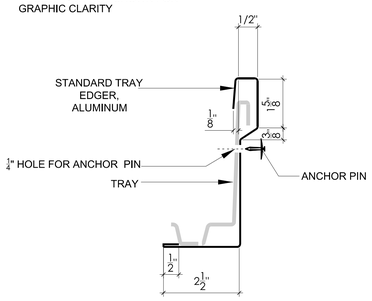


4 L300 PLANTING METHOD: PREGROWN TILE OR MAT 3" = 1'-0"

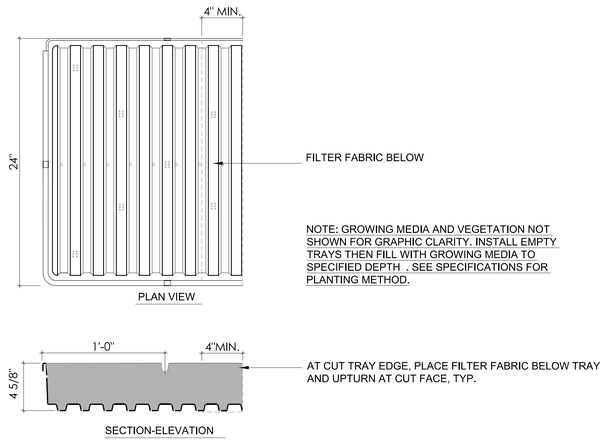


5 L300 TRAY CONNECTION 6" = 1'-0"

NOTE: GROWING MEDIA AND VEGETATION NOT SHOWN FOR GRAPHIC CLARITY

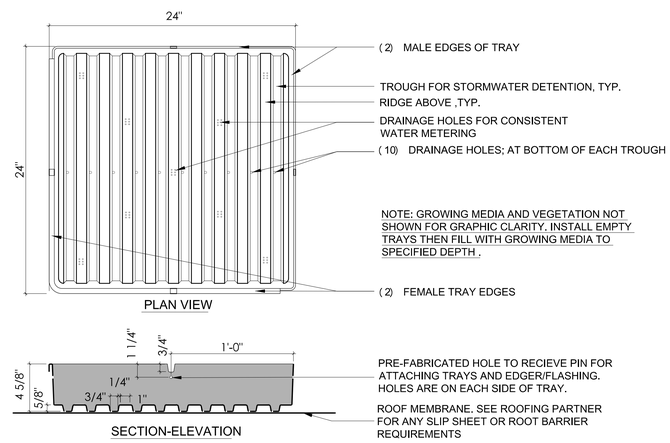


6 L300 TRAY EDGING - STANDARD 6" = 1'-0"



NOTE: GROWING MEDIA AND VEGETATION NOT SHOWN FOR GRAPHIC CLARITY. INSTALL EMPTY TRAYS THEN FILL WITH GROWING MEDIA TO SPECIFIED DEPTH . SEE SPECIFICATIONS FOR PLANTING METHOD.

7 L300 CUT TRAY 2" = 1'-0"



NOTE: GROWING MEDIA AND VEGETATION NOT SHOWN FOR GRAPHIC CLARITY. INSTALL EMPTY TRAYS THEN FILL WITH GROWING MEDIA TO SPECIFIED DEPTH .

8 L300 TRAY 1/2" = 1'-0"

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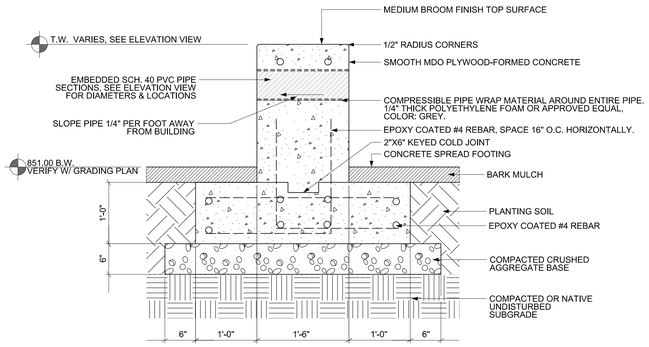
SHEET CONTENTS
SITE DETAILS

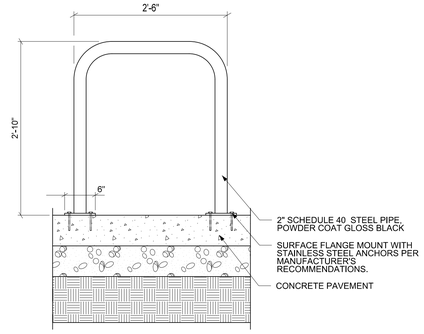
SHEET NO.
L300

NOTE:
1. PROVIDE VERTICAL CONTROL JOINTS AS SHOWN ON ELEVATION VIEW.

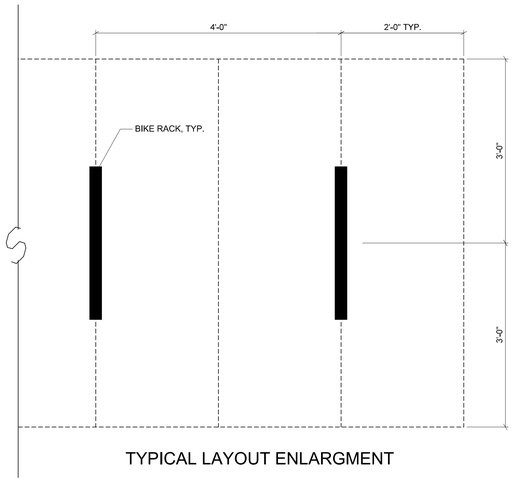
2. REBAR SHALL MAINTAIN 2" MIN. CLEAR OF EXPOSED EDGES AND PVC PIPES.



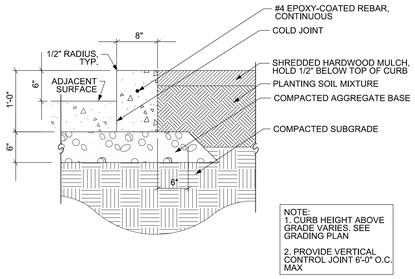
1 / L301 SERPENTINE SITE WALL SECTION
1" = 1'-0"



2 / L301 TYPICAL BIKE RACK DETAIL
1" = 1'-0"



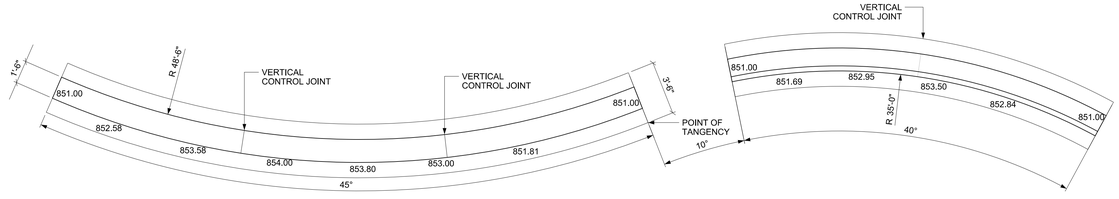
TYPICAL LAYOUT ENLARGMENT



NOTE:
1. CURB HEIGHT ABOVE GRADE VARIES. SEE GRADING PLAN

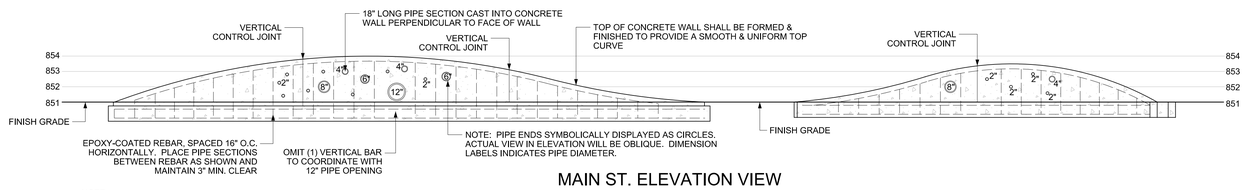
2. PROVIDE VERTICAL CONTROL JOINT 6'-0" O.C. MAX

3 / L301 LANDSCAPE CURB
1" = 1'-0"



TOP OF WALL ELEVATIONS EVERY 5' ALONG WALL

PLAN VIEW

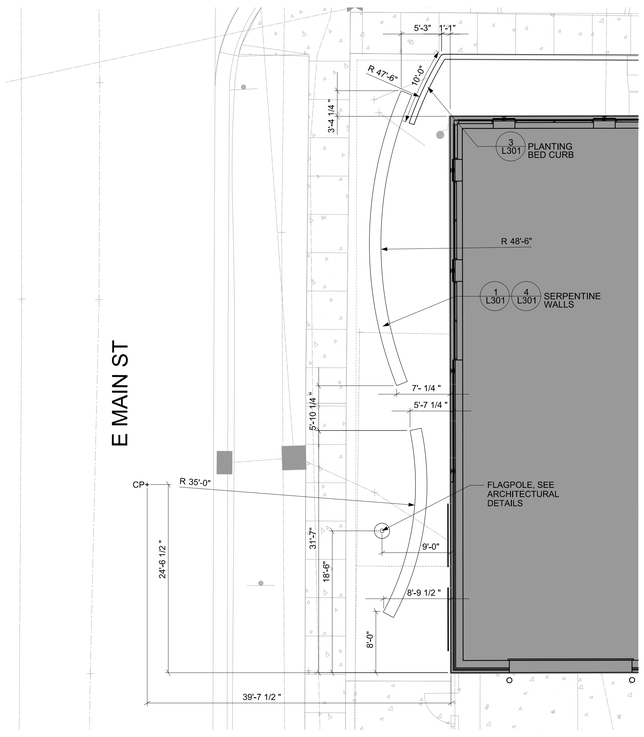


MAIN ST. ELEVATION VIEW

NOTE:
1. PIPE SECTIONS SHALL MAINTAIN 6"MIN. CLEAR FROM ALL CONCRETE EDGES, VERTICAL CONTROL JOINTS, AND EACH OTHER.

2. ENDS OF PIPES SHALL BE FLUSH WITH THE FACE OF WALL.

4 / L301 SERPENTINE SITE WALL
1/4" = 1'-0"



5 / L301 SITE LAYOUT ENLARGEMENT
1/8" = 1'-0"

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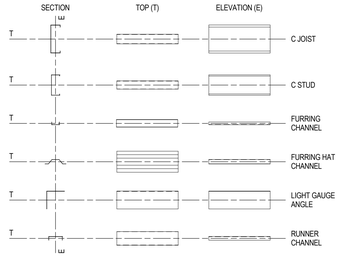
SHEET CONTENTS
SITE DETAILS

SHEET NO.
L301

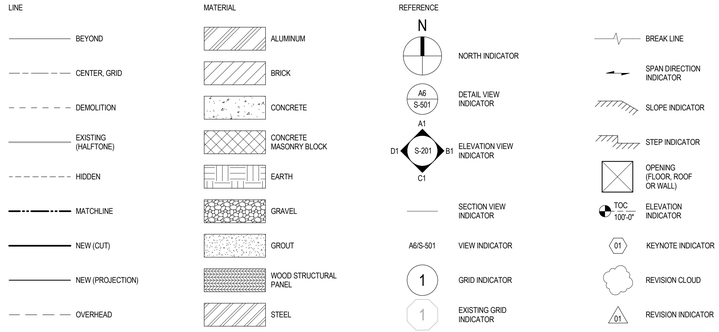
SHEET INDEX

S-001	GENERAL INFORMATION
S-002	GENERAL NOTES
S-004	GENERAL FOUNDATION DETAILS
S-005	GENERAL STEEL FRAMING DETAILS
S-006	GENERAL ROOF DECK DETAILS
S-007	GENERAL MASONRY DETAILS
S-101	FOUNDATION PLAN
S-102	EXISTING BUILDING FOUNDATION PLAN
S-103	SECOND FLOOR FRAMING PLAN
S-104	EXISTING BUILDING SECOND FLOOR FRAMING PLAN
S-110	LOW ROOF FRAMING PLAN
S-111	HIGH ROOF FRAMING PLAN
S-112	EXISTING BUILDING ROOF FRAMING PLAN
S-501	FOUNDATION DETAILS
S-502	FOUNDATION DETAILS
S-521	PRECAST DETAILS
S-531	ROOF DECK DETAILS
S-601	SCHEDULES
S-602	STEEL COLUMN SCHEDULE
S-608	MASONRY SCHEDULES

COLD-FORMED SHAPES LEGEND



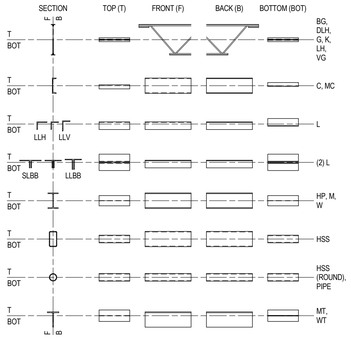
SYMBOL LEGEND



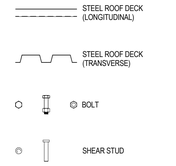
ABBREVIATIONS

1WAY	ONE-WAY
AB	ANCHOR BOLT
ADDL	ADDITIONAL
ADDM	ADDENDUM
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
APPROX	APPROXIMATE
AR	AS REQUIRED
ARCH	ARCHITECT
B PL	BASE PLATE
B/B	BACK TO BACK
BC	BOTTOM CHORD
BF	BOTH FACES
BF	BOTTOM FACE
BM	BEAM
BO	BOTTOM OF __ (REFER TO TOP OF __)
BOT	BOTTOM
BRDG	BRIDGING
BRG PL	BEARING PLATE
BS	BOTH SIDES
BSMT	BASEMENT
BW	BOTH WAYS
C	CHANNEL
C TO C	CENTER TO CENTER
CANTIL	CANTILEVER
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CJ	CONTROL JOINT
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONSTR	CONSTRUCTION
CONT	CONTINUE/CONTINUOUS
CONTR	CONTRACTOR
CPRS	COMPRESSIBLE
CTRL	CONTROL
CU	CUBIC
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CU YD	CUBIC YARD
D	DEEP
D	DEPTH
DBE	DECK BEARING ELEVATION
DBL	DOUBLE
DEG	DEGREE
DET	DETAIL
DEMO	DEMOLITION
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIR	DIRECTION
DL	DEAD LOAD
DWG	DRAWING
E	EAST
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
ENGR	ENGINEER
EOD	EDGE OF DECK
EOG	EDGE OF GRATING
EOS	EDGE OF SLAB
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EXC	EXCAVATE
EXIST, (E)	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXT	EXTERIOR
FDTN	FOUNDATION
FF	FAR FACE
FLR	FLOOR
FR	FRAME
FS	FAR SIDE
FSTNR	FASTENER
FT	FEET
FTG	FOOTING
FUT	FUTURE
GA	GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLU LAM	GLUE LAMINATED WOOD
GR BM	GRADE BEAM
GRTG	GRATING
H	HIGH
HDR	HEADER
HGR	HANGER
HORIZ, H	HORIZONTAL
HS	HIGH STRENGTH
HSKPG	HOUSEKEEPING
HT	HEIGHT
I	MOMENT OF INERTIA
ID	INSIDE DIAMETER
IF	INSIDE FACE
INFO	INFORMATION
INT	INTERIOR
JST	JOIST
JST BRG	JOIST BEARING
K	KIP
KB	KNEE BRACE
KIP	THOUSAND POUNDS
KLF	KIPS PER LINEAR FOOT
KOP	KNOCK OUT PANEL
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
KWY	KEYWAY
L	ANGLE
LATL	LATERAL
LB	POUND
LD BRG	LOAD-BEARING
LDH	LONG DIMENSION HORIZONTAL
LDV	LONG DIMENSION VERTICAL
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVR	LOUVER
M	MOMENT
MAX	MAXIMUM
MBR	MEMBER
MC	MOMENT CONNECTION
MD	METAL DECK
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MONOLITHIC
MO	MASONRY OPENING
MTL	METAL
MULT	MULTIPLE
N	NORTH
NF	NEAR FACE
NIC	NOT IN CONTRACT
NLB	NONLOADBEARING
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPH	OPPOSITE HAND
OPP	OPPOSITE
OPT	OPTIONAL
O/O	OUT TO OUT
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PRCST	PRECAST
PRELIM	PRELIMINARY
PS CONC	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PT	PRESSURE TREATED
PT CONC	POST-TENSIONED CONCRETE
QTY	QUANTITY
R	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE
REQD	REQUIRED
REV	REVISION
RTU	ROOF TOP UNIT
S	SOUTH
SCHED	SCHEDULE
SCHEM	SCHEMATIC
SE	STRUCTURAL ENGINEER
SECT	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SL	SLAB
SLBB	SHORT LEG BACK TO BACK
SP	SUMP PIT
SPCL	SPECIAL
SPEC	SPECIFICATION
SQ	SQUARE
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
STD	STANDARD
STIF	STIFFENER
STL JST	STEEL JOIST
STRUC	STRUCTURAL
SYMM	SYMMETRICAL
T&B	TOP AND BOTTOM
TB	THROUGH BOLT
TC	TOP CHORD
TEMJ	TOP ELEVATION MATCHES JOIST
TEMP	TEMPORARY
THK	THICKNESS
THRU	THROUGH
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOF	TOP OF FOUNDATION
TOP	TOP OF PIER
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAR	VARIES
VERT, V	VERTICAL
VIF	VERIFY IN FIELD
W	WEST
W	WIDE
W/	WITH
W/O	WITHOUT
WBL	WOOD BLOCKING
WD	WOOD
WF	WIDE FLANGE
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
YD	YARD

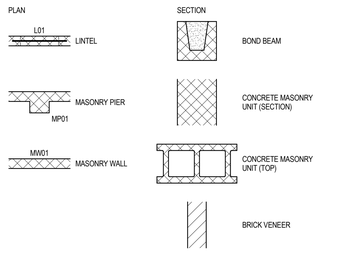
STEEL SHAPES LEGEND



STEEL LEGEND



CONCRETE MASONRY LEGEND



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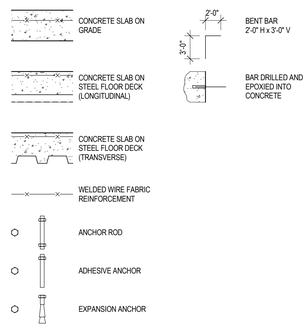
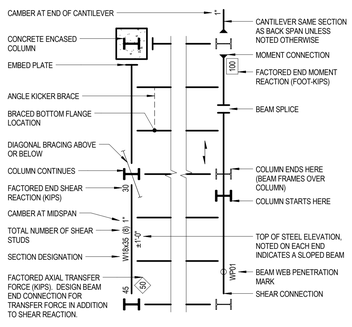
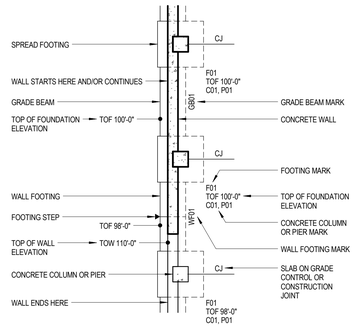


PRECAST CONCRETE LEGEND

STEEL FRAMING PLAN LEGEND



FOUNDATION PLAN LEGEND



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Madison Water Utility
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
CHECKED BY: EMF
DO NOT SCALE DRAWINGS

SHEET CONTENTS
GENERAL INFORMATION

SHEET NO.:
S-001

6/12/2015 2:13:45 PM C:\Users\1846\Documents\20135030.2000_S15_1846.rvt

DESIGN SPECIFICATIONS

- DESIGN IS IN ACCORDANCE WITH THE STATE OF WISCONSIN AND THE 2009 INTERNATIONAL BUILDING CODE.
- MINIMUM 28 DAY CONCRETE CYLINDER STRENGTH SHALL BE:

FOOTINGS	3000 PSI
FOUNDATION WALLS	4000 PSI
SLABS ON GROUND	4000 PSI
TOPPING SLABS	3000 PSI

- REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
- CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 TYPE II NORMAL WEIGHT UNITS.
- CONCRETE MASONRY BRICK SHALL CONFORM TO ASTM C55 GRADE NW.
- MORTAR SHALL CONFORM TO ASTM C270 TYPE S.
- MASONRY GROUT SHALL CONFORM TO ASTM C476. MINIMUM COMPRESSIVE STRENGTH SHALL BE f'c = 3000 PSI.
- MINIMUM COMPRESSIVE STRENGTH OF UNREINFORCED CONCRETE MASONRY CONSTRUCTION SHALL BE f'm = 2000 PSI.
- MINIMUM COMPRESSIVE STRENGTH OF REINFORCED CONCRETE MASONRY CONSTRUCTION SHALL BE f'm = 2000 PSI.
- STRUCTURAL STEEL W-SHAPES SHALL CONFORM TO ASTM A992 GRADE 50.
- STRUCTURAL STEEL PLATES, ANGLES, CHANNELS, AND OTHER ROLLED MEMBERS SHALL CONFORM TO ASTM A36].
- RECTANGULAR OR SQUARE HSS MEMBERS SHALL CONFORM TO ASTM A500 GRADE B.
- ROUND HSS MEMBERS SHALL CONFORM TO ASTM A500 GRADE B.
- STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B.
- STATED ASSUMED BEARING CAPACITY FOR SPREAD FOOTINGS IS 3000 PSF, BASED UPON SOILS REPORT DATED DECEMBER 5, 2005, AND ADDENDUM DATED FEBRUARY 20, 2006, AS PREPARED BY CGC.
- CGC BEARING CAPACITY BASED ON FULL REMOVAL OF THE MISCELLANEOUS FILL/SOFT CLAY AT EACH FOOTING. ONCE REMOVED, COMPACT NATIVE SOIL WITH A 6" LAYER OF BREAKER ROCK. BACKFILL AREAS WITH COMPACTED GRAVEL. FLOOR SLABS REQUIRE REMOVAL AND REPLACEMENT OF 18" EXISTING FILL WITH COMPACTED GRAVEL. CGC REPORT ALSO NOTES THE PRESENCE OF CONTAMINATED SOILS.
- DESIGN LOADS:

FLOOR LIVE LOADS (IBC 2009)

OFFICES	50 PSF
STAIRWAYS	100 PSF
LOBBIES	100 PSF
CORRIDORS (ON "AT GRADE" LEVELS)	100 PSF
CORRIDORS (ON OTHER LEVELS)	80 PSF
PARTITIONS	15 PSF
MECHANICAL ROOMS	150 PSF
TIRE STORAGE	250 PSF
MEZZANINE	250 PSF
SERVICE/WELD BAY	250 PSF

LIVE LOAD REDUCTION PER IBC 2009 SECTION 1607.9 IS INCLUDED

ROOF SNOW LOAD (ASCE 7-05)

OCCUPANCY CATEGORY	II
IMPORTANCE FACTOR	Is = 1.0
GROUND SNOW LOAD	Pg = 35 PSF
FLAT ROOF SNOW LOAD	Pf = 25 PSF
EXPOSURE FACTOR	Ce = 1.0
THERMAL FACTOR	Ct = 1.0
SNOW LOAD MAP	REFER TO TABLE SHEET S-002

WIND LOAD (ASCE 7-05)

OCCUPANCY CATEGORY	II
IMPORTANCE FACTOR	Iw = 1.0
BASIC WIND SPEED	V = 90 MPH
EXPOSURE	B
INTERNAL PRESSURE COEFFICIENT	GCpi = +/- 0.18
COMPONENTS AND CLADDING	REFER TO TABLE SHEET S-00

SEISMIC LOAD (IBC 2009)

OCCUPANCY CATEGORY	II
IMPORTANCE FACTOR	Ie = 1.0
SPECTRAL RESPONSE ACCELERATIONS	SS = 0.105 g S1 = 0.044 g
SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.112 g SD1 = 0.070 g
SEISMIC RESPONSE COEFFICIENT	Cs = 0.056
RESPONSE MODIFICATION FACTOR	R = 2
SOIL SITE CLASS	D
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC FORCE RESISITING SYSTEM	ORDINARY REINFORCED MASONRY SHEAR WALLS
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
DESIGN BASE SHEAR	92.4 KIPS

- RESISTANCE TO LATERAL LOADS ON STRUCTURE IS PROVIDED BY MASONRY SHEAR WALLS AND ROOF DIAPHRAGMS. CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY BRACING UNTIL ALL LATERAL SUPPORT SYSTEMS ARE IN PLACE AND FUNCTIONAL.
- ALL STRUCTURAL FRAMING AND CONNECTIONS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE STRUCTURAL FRAMING AND CONNECTIONS FOR ADEQUACY DURING THE ERECTION AND CONSTRUCTION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND JOB SITE SAFETY.

GENERAL NOTES

EARTHWORK

- FOOTINGS SHALL BE CAST ON UNDISTURBED SUBSOIL. IF DESIGN CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN, FOOTINGS MUST BE LOWERED. CONSULT ARCHITECT AND ENGINEER BEFORE PROCEEDING.
- NO HOLES, TRENCHES OR DISTURBANCES OF THE SOIL SHALL BE ALLOWED WITHIN THE VOLUME DESCRIBED BY 45 DEGREE LINES SLOPING FROM THE BOTTOM EDGE OF THE FOOTING. IF SUCH ARE REQUIRED, FOOTINGS MUST BE LOWERED.
- BACKFILL EVENLY ON EACH SIDE OF FOUNDATION WALLS AND RETAINING WALLS.
- DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL FLOOR SYSTEM IS IN PLACE AND FASTENED OR UNTIL WALLS ARE ADEQUATELY BRACED. BRACING SHALL BE DESIGNED BY THE CONTRACTOR.
- TOPSOIL AND FILL BELOW SLABS ON GROUND SHALL BE REMOVED. AGGREGATE BASE COURSE UNDER SLABS ON GROUND SHALL BE BANKRUN GRAVEL COMPACTED TO 6-INCH LAYERS (EXCEPT WHERE LOOSE FILL IS INDICATED ON PLANS).
- BACKFILL AGAINST INTERIOR FOUNDATION WALLS SHALL BE BANKRUN GRAVEL COMPACTED TO MAXIMUM 6-INCH LAYERS.
- BACKFILL AGAINST EXTERIOR FOUNDATION WALLS SHALL BE BANKRUN GRAVEL COMPACTED TO MAXIMUM 6-INCH LAYERS.
- PROVIDE MINIMUM 24 INCHES OF FREE DRAINING AGGREGATE OVER ALL DRAIN TILES AND 4 INCHES BELOW.

CONCRETE

- FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION.
- REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION, UNLESS OTHERWISE NOTED.
- LAP ALL WALL BARS 30 DIAMETERS WITH CLASS B SPLICES UNLESS OTHERWISE DETAILED. LAP WELDED WIRE MESH 6 INCHES.
- PROVIDE COLUMN AND WALL DOWELS OF THE SAME SIZE AND NUMBER AS THE RESPECTIVE COLUMN AND WALL REINFORCING UNLESS OTHERWISE DETAILED.
- PROVIDE TWO #4 BARS AS STIRRUP CARRY BARS WHERE NO TOP STEEL IS AVAILABLE TO HOLD STIRRUPS.
- WHEREVER AN APPROVED PIPE OR CONDUIT EXTENDS THROUGH A BEAM, PROVIDE ONE ADDITIONAL STIRRUP ON EACH SIDE OF THE OPENING.
- CONCRETE PROTECTION FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-08.
- SLABS ON GRADE SHALL BE CAST ALLOWING A SUFFICIENT NUMBER OF JOINTS TO ADEQUATELY CONTROL SHRINKAGE CRACKING. SAWCUTTING SHALL BE DONE AS SOON AS SAWCUT WILL NOT RAVEL CONCRETE OR WITHIN 24 HOURS MAXIMUM OF INITIAL POURING OPERATION. MAXIMUM SIZE OF PANELS SHALL BE A MAXIMUM OF 36 TIMES THE SLAB THICKNESS. GENERALLY, JOINTS SHALL OCCUR ON COLUMN CENTERLINES. CONTRACTOR TO SUBMIT PROPOSED CONSTRUCTION JOINT PLAN.
- ALLOW AT LEAST 24 HOURS BEFORE POURING ADJACENT WALL SECTIONS BETWEEN CONSTRUCTION JOINTS. MAXIMUM LENGTH OF POUR TO BE 40 FEET, UNLESS CRACK INDUCERS ARE USED AS DETAILED ON THE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE ARCHITECT AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.
- CONSTRUCTION JOINTS IN BEAMS, JOISTS OR SLABS TO BE LOCATED BETWEEN THE 1/4 POINT AND CENTERLINE OF SPAN, OR AS DIRECTED BY THE ENGINEER.
- DO NOT PLACE OR CUT HOLES IN CONCRETE SLABS, BEAMS, WALLS OR COLUMNS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- EXTERIOR EXPOSED CONCRETE SHALL BE AIR-ENTRAINED. AIR CONTENT SHALL BE 6 PERCENT (+/- 1 1/2 PERCENT).
- PIPES AND CONDUITS EMBEDDED IN OR PASSING THROUGH STRUCTURAL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER. PIPE AND CONDUITS EMBEDDED IN CONCRETE SHALL NOT BE LARGER THAN 2 INCHES IN OUTSIDE DIAMETER AT THEIR WIDEST POINT OR FITTING OR 1/3 OF THE THICKNESS OF THE SLAB, BEAM OR WALL.
- ELECTRICAL CONDUIT OR PIPES EMBEDDED IN OR PASSING THROUGH SLABS, BEAMS OR WALLS SHALL BE LOCATED AND PLACED SO THAT:
  1. THEY ARE NOT CLOSER THAN THREE DIAMETERS ON CENTER.
  2. THE CONCRETE COVER IS NOT LESS THAN 2 INCHES.
  3. THEY RUN BETWEEN REINFORCING AND DO NOT DISPLACE IT IN ANY MANNER.
- ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE.
- CHAMFER ALL EXPOSED CONCRETE CORNERS. SEE ARCHITECTURAL/STRUCTURAL DRAWINGS FOR REQUIREMENTS.
- CONCRETE SHALL BE TESTED BY THE OWNER'S TESTING LAB. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
- PROPER CURING PROCEDURES SHALL BE USED FOR SLAB ON GRADE TO PREVENT CURLING.
- CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE MIXES.
- PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS BELOW THE WATER TABLE AND AS SHOWN ON DRAWINGS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CONCRETE MASONRY

- PRODUCTION AND CONSTRUCTION OF CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", ACI 530-08, AND THE NCMA "TEK MANUAL FOR CONCRETE MASONRY DESIGN AND CONSTRUCTION", LATEST EDITION.
- HOT AND COLD WEATHER CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE IMIAC (INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL) "RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR HOT AND COLD WEATHER MASONRY AND CONSTRUCTION".
- CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.
- MASONRY WALLS SHALL BE ADEQUATELY BRACED TO RESIST WIND FORCES UNTIL PERMANENT DESIGN SUPPORTS ARE IN PLACE AND FUNCTIONAL. BRACING SHALL BE DESIGNED BY THE CONTRACTOR.
- PROVIDE DOWELS INTO FOUNDATION THE SAME SIZE AND NUMBER AS WALL REINFORCING.
- LAP REINFORCING BARS 48 DIAMETERS.
- CONCRETE MASONRY WALLS SHALL BE REINFORCED AT EVERY OTHER BED JOINT WITH 9 GAGE LADDER TYPE JOINT REINFORCEMENT.
- VERTICAL BARS SHOWN ON THE DESIGN DRAWINGS SHALL BE PLACED IN A CONTINUOUS UNOBSTRUCTED CELL OF NOT LESS THAN 3 INCHES BY 4 INCHES.
- ALL BOND BEAMS AND PILASTERS SHALL BE REINFORCED AS SHOWN ON THE DESIGN DRAWINGS AND FILLED WITH GROUT.
- ALL DOOR AND WINDOW JAMBS SHALL BE GROUTED SOLID 8 INCHES WIDE UNLESS SHOWN OTHERWISE.
- WHERE NOT SHOWN OTHERWISE, MINIMUM SOLID GROUTED MASONRY BELOW BEAM REACTIONS SHALL BE 16 INCHES DEEP BY 32 INCHES LONG.
- WHERE NOT SHOWN OTHERWISE, MINIMUM SOLID GROUTED MASONRY BELOW LINTEL REACTIONS SHALL BE 16 INCHES DEEP BY 16 INCHES LONG.

PRECAST CONCRETE

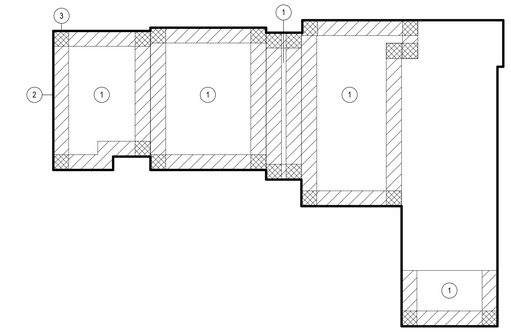
- PRECAST CONCRETE MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-08.
- PRECAST CONCRETE SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION, AND THE AFOREMENTIONED CONCRETE PROVISIONS.
- PRECAST CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DESIGN AND REINFORCING OF PRECAST CONCRETE FOR HANDLING AND ERECTION STRESSES.
- PRECAST MEMBERS SHALL BE ATTACHED AND SUPPORTED BY THE STRUCTURE AS INDICATED ON THE DRAWINGS. DEVIATION FROM THESE LOCATIONS WILL CONSTITUTE MEANS FOR REJECTION OF MEMBERS.
- PRECAST MEMBERS SHALL BE DESIGNED AND REINFORCED FOR SELF-WEIGHT AND ALL SUPERIMPOSED LOADS SHOWN ON THE DRAWINGS.
- PRECAST MEMBERS SHALL BE CAPABLE OF SAFELY SUPPORTING ANY CONCENTRATED LOADS INDICATED BY THE STRUCTURAL, MECHANICAL, AND ARCHITECTURAL DRAWINGS.
- PRECAST CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS (HANGERS, CLIPS, PLATES, HEADERS, ANCHORAGES, ETC.) WHICH MUST BE PRECAST INTO THE CONCRETE UNLESS OTHERWISE NOTED OR REQUIRED FOR CONNECTION OF PRECAST TO STRUCTURE.
- CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL HOLES OR OPENINGS WITH RESPECTIVE TRADES BEFORE FABRICATION. ANY DEVIATION FROM THESE LOCATIONS OR ADDITIONAL OPENINGS MUST BE APPROVED BY THE FABRICATOR.
- MAXIMUM ALLOWABLE CAMBER SHALL BE 1-1/2 INCH.
- FIRE RATING OF PRECAST FLOOR PLANK SHALL BE AS NOTED ON ARCHITECTURAL DRAWINGS.
- GROUT IN PRECAST MEMBER KEYWAYS SHALL BE SAND-CEMENT GROUT. MINIMUM COMPRESSIVE STRENGTH SHALL BE 4000 PSI.
- WALL PANEL JOINTS SHALL BE FILLED WITH APPROVED FIRE STOP MATERIAL AND POLYURETHANE JOINT SEALANT.

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION, AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", MARCH 18, 2005 EDITION.
- WHERE INDICATED ON DRAWINGS, STRUCTURAL AND MISCELLANEOUS STEEL WHICH SHALL REMAIN EXPOSED TO VIEW SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL", LATEST EDITION, WITHOUT GAPS OR OPEN JOINTS.
- STEEL JOIST FABRICATION AND ERECTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE. JOISTS SHALL BE MANUFACTURED WITH HOT-ROLLED TOP AND BOTTOM CHORD MEMBERS.
- STEEL DECK FABRICATION AND ERECTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STEEL DECK INSTITUTE.
- ALL WELDING SHALL COMPLY WITH AWS D1.1 USING E70XX ELECTRODES. ALL WELDING TO BE DONE BY AWS PREQUALIFIED WELDERS, CERTIFIED FOR WELDS MADE. PROVIDE CONTINUOUS MINIMUM SIZED WELDS PER AISC REQUIREMENTS, UNLESS NOTED OTHERWISE.
- THE MINIMUM SIZE OF FILLET WELDS SHALL BE AS SPECIFIED IN TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL".
- MINIMUM STRENGTH OF WELDED CONNECTIONS: UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL SHOP AND FIELD WELDS SHALL DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER OF ELEMENT JOINED. ALL MEMBERS WITH MOMENT CONNECTIONS, NOTED ON THE DRAWINGS, SHALL BE WELDED TO DEVELOP THE FULL FLEXURAL CAPACITY OF THE MEMBER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A325 HIGH STRENGTH BOLTS (MINIMUM 3/4-INCH DIAMETER). CONNECTIONS SHALL SUPPORT, AT A MINIMUM, ONE-HALF THE TOTAL FACTORED UNIFORM LOAD CAPACITY SHOWN IN THE AISC TABLES OF UNIFORM LOAD CONSTANTS FOR THE GIVEN BEAM, SPAN, AND STEEL SPECIFIED, UNLESS OTHERWISE DETAILED. BEAM-TO-BEAM AND BEAM-TO-COLUMN FRAMING CONNECTIONS SHALL BE MADE WITH DOUBLE ANGLES UNLESS OTHERWISE DETAILED.
- PROVIDE CONNECTION DESIGN BASED ON END SHEAR REACTIONS INDICATED ON THE DRAWINGS. END SHEAR REACTIONS SHOWN ON THE DRAWINGS ARE FACTORED LOADS.
- IF END SHEAR REACTION IS SHOWN ONLY ON ONE END OF BEAM, DESIGN CONNECTIONS ON BOTH ENDS OF BEAM FOR THE REACTION SHOWN.
- MINIMUM NUMBER OF BOLTS FOR END SHEAR REACTIONS ARE AS FOLLOWS:
  1. W8, W10 OR W12: 2 3. W21 OR W24: 4 5. W33, W36 OR W40: 6
  2. W14, W16 OR W18: 3 4. W27 OR W30: 5 6. W44: 7
- ALL STRUTS, HANGERS, AND BRACES SHALL HAVE CONNECTIONS DESIGNED TO DEVELOP THE FULL ALLOWABLE TENSILE STRENGTH OF THE MEMBER UNLESS THE DESIGN FORCE IS INDICATED ON THE DRAWINGS, IN WHICH CASE THE CONNECTIONS SHALL BE DESIGNED FOR THE FORCE INDICATED.
- COLUMN BASE PLATES SHALL HAVE OVERSIZED HOLES WITH PLATE WASHERS (MINIMUM 3/8-INCH THICK) PROVIDED WITH ANCHOR RODS.
- GROUT UNDER BASE PLATES IN ACCORDANCE WITH THE "AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", MARCH 18, 2005 EDITION.
- WHERE BEAMS SUPPORT JOISTS FROM ONLY ONE SIDE, JOIST SEAT SHALL EXTEND 1-INCH BEYOND BEAM CENTERLINE.
- JOISTS SHALL BE DESIGNED FOR NET UPLIFT INDICATED ON THIS SHEET. JOIST SUPPLIER SHALL PROVIDE ALL ADDITIONAL BRIDGING AND BRACING AS REQUIRED BY THE STEEL JOIST INSTITUTE.
- STEEL ROOF DECK SHALL BE WIDE RIB PROFILE, 1 1/2-INCHES DEEP AND 20 GAGE THICKNESS UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- STEEL ROOF DECK SHALL BE SECURELY FASTENED TO ALL STRUCTURAL SUPPORTS BY WELDING IN THE 1ST, 3RD, 5TH, AND 7TH RIBS OF 36-INCH WIDE DECK (36/4 WELD PATTERN) UNLESS SHOWN OTHERWISE ON THE DRAWINGS. WELDS SHALL BE MADE WITH 5/8-INCH DIAMETER PUDDLE WELDS. IN NO CASE SHALL WELDS BE SPACED GREATER THAN 12 INCHES ON CENTER.
- STEEL ROOF DECK SIDELAPS TO BE SCREWED AT 24 INCHES ON CENTER MAXIMUM AT MIDSPAN UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- DECK END LAPS SHALL BE 2-INCH MINIMUM AND SHALL OCCUR AT SUPPORTS. LOCATE AT VALLEYS AND RIDGES.
- WHERE CONTINUOUS DIAPHRAGM CHORD ANGLES ARE INDICATED, PROVIDE A FULL PENETRATION WELD AT THE SPLICE LOCATIONS.
- CLEAN, PREPARE, AND SHOP PRIME EXTERIOR EXPOSED STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH SSPC STANDARDS SP-1 AND SP-6.
- CLEAN, PREPARE, AND SHOP PRIME INTERIOR EXPOSED STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH SSPC STANDARDS SP-1 AND SP-3.
- WHILE THE DESIGN DOCUMENTS MAY REFERENCE OSHA, THEY ARE NOT INTENDED TO SPECIFICALLY IDENTIFY ALL APPLICABLE OSHA REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS.
- ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING MASONRY SHELF ANGLES, SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123, UNLESS OTHERWISE NOTED.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISCELLANEOUS STEEL.

MISCELLANEOUS

- DIMENSIONS OF EXISTING CONSTRUCTION OR CONSTRUCTION IN PROGRESS SHALL BE VERIFIED AND COORDINATED PRIOR TO FABRICATION OF STRUCTURAL COMPONENTS.
- VERIFY AND COORDINATE, WITH ALL CONTRACTORS, THE LOCATION OF ALL ARCHITECTURAL AND MECHANICAL APPURTENANCES AND OPENINGS.
- EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ.
- ADHESIVE ANCHORS SHALL BE HILTI HIT-HY 200 FOR CONCRETE AND HITLI HIT-HY 70 FOR MASONRY.
- SLEEVE ANCHORS SHALL BE HILTI HLC.



4 WIND PRESSURE DIAGRAM
1/4" = 1'-0"

ROOF PRESSURE TABLE (PSF)						
TRIBUTARY AREA (SF)	INTERIOR ZONE 1 (PSF)		EDGE ZONE 2 (PSF)		CORNER ZONE 3 (PSF)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10	10.0	15.0	10.0	25.1	10.0	37.8
50	10.0	14.1	10.0	18.9	10.0	22.7
>100	10.0	13.7	10.0	16.2	10.0	16.2

OVERHANGS, CANOPIES, AWNINGS PRESSURE TABLE (PSF)				
TRIBUTARY AREA (SF)	ZONES 1 & 2 (PSF)		ZONE 3 (PSF)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10		21.6		35.5
50		20.7		17.8
>100		20.3		10.2

WALL PRESSURE TABLE (PSF)				
TRIBUTARY AREA (SF)	INTERIOR ZONE 4 (PSF)		EDGE ZONE 5 (PSF)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
10	13.7	14.8	13.7	18.3
100	11.7	12.8	11.7	14.2
>500	10.3	11.4	10.3	11.4

= **INTERIOR ZONES**
ROOF - ZONES 1
WALLS - ZONE 4

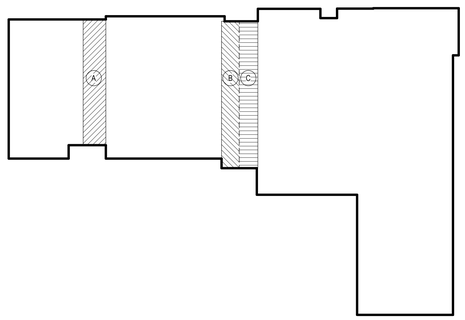
= **END ZONES**
ROOF - ZONES 2
WALLS - ZONE 5

= **CORNER ZONES**
ROOF - ZONES 3

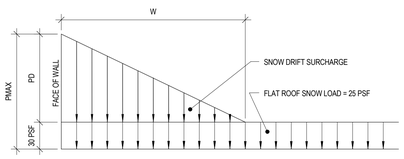
NOTES:

1. POSITIVE AND NEGATIVE VALUES INDICATE WIND PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACES, RESPECTIVELY.
2. TRIBUTARY AREA IS THE PRODUCT OF SPAN LENGTH MULTIPLIED BY THE TRIBUTARY WIDTH OF THE ELEMENT UNDER CONSIDERATION THE TRIBUTARY WIDTH IS THE SMALLER OF ONE THIRD OF THE SPAN OR THE ACTUAL WIDTH OF THE DOOR/WINDOW/WALL.

3 WIND PRESSURE LOADS
1/2" = 1'-0"



2 SNOW DRIFT LOAD DIAGRAM
1/4" = 1'-0"



SNOW DRIFT	PD	PMAX	W
A	29 PSF	54 PSF	7.45 FT
B	41 PSF	56 PSF	11.5 FT
C	47 PSF	72 PSF	10.2 FT

1 SNOW DRIFT LOADS
1/4" = 1'-0"

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
CHECKED BY: EMF
DO NOT SCALE DRAWINGS

SHEET CONTENTS
GENERAL NOTES

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S-002

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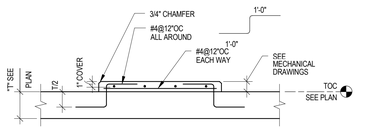
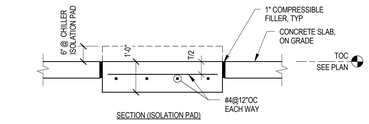


SECTION (EQUIPMENT PAD)



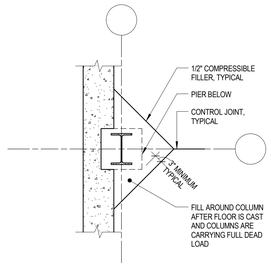
SECTION (ISOLATION PAD)

NOTES: ALL LOCATIONS AND DIMENSIONS SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR.

SEE MECHANICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF PADS.

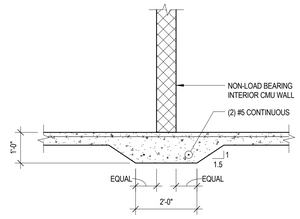
14 TYPICAL PAD SECTIONS

1/2" = 1'-0"



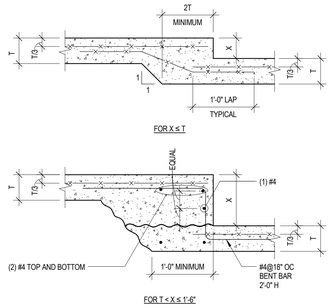
11 EXTERIOR COLUMN ISOLATION JOINT

1/2" = 1'-0"



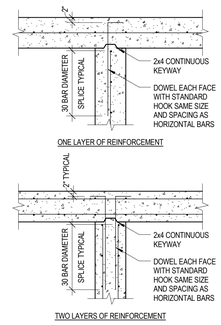
8 CMU WALL ON SLAB ON GRADE

1/2" = 1'-0"



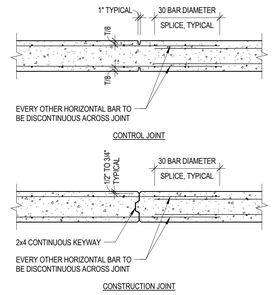
7 SLAB ON GRADE DEPRESSION

1" = 1'-0"



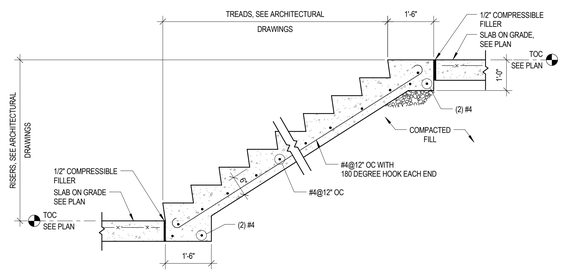
4 WALL INTERSECTION

1/2" = 1'-0"



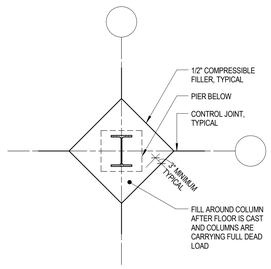
3 WALL CONTROL AND CONSTRUCTION JOINT

1/2" = 1'-0"



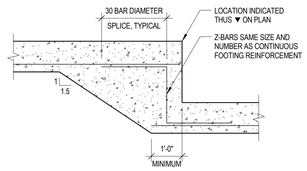
18 SECTION

1/2" = 1'-0"



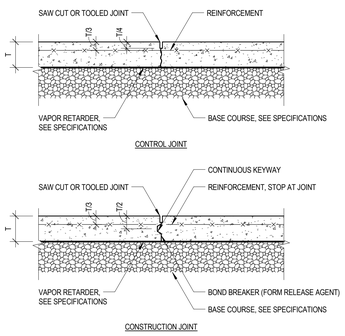
10 INTERIOR COLUMN ISOLATION JOINT

1/2" = 1'-0"



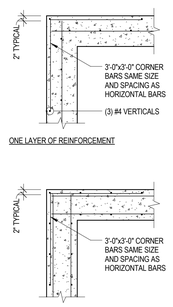
6 FOOTING STEP

1/2" = 1'-0"



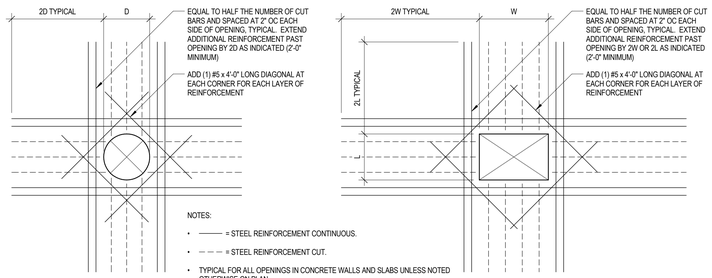
2 SLAB ON GRADE CONTROL AND CONSTRUCTION JOINT

1" = 1'-0"



9 WALL CORNER

1/2" = 1'-0"



NOTES:

- ——— = STEEL REINFORCEMENT CONTINUOUS.
- – – – = STEEL REINFORCEMENT CUT.
- TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS UNLESS NOTED OTHERWISE ON PLAN.
- DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
- FOR OPENINGS 1'-0" ROUND/SQUARE OR LESS THE WALL STEEL CAN BE REPLACED WITHOUT ADDITIONAL REINFORCEMENT

5 OPENING REINFORCEMENT

1/2" = 1'-0"

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
CHECKED BY: EMF

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SHEET CONTENTS
GENERAL FOUNDATION DETAILS

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S-004

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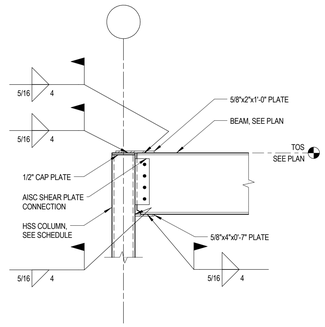
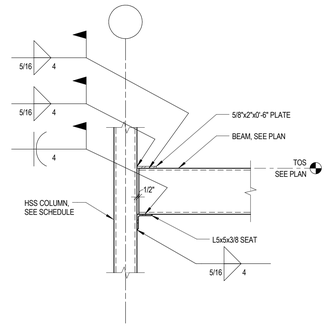


PLAN VIEW

4 MOMENT CONNECTION

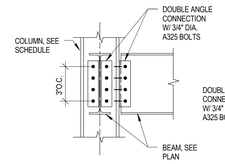
3/4" = 1'-0"



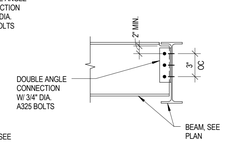
PLAN VIEW

3 MOMENT CONNECTION

3/4" = 1'-0"



BEAM TO COLUMN



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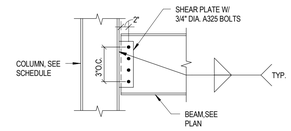
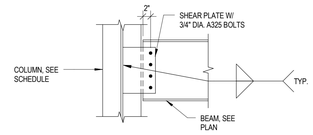
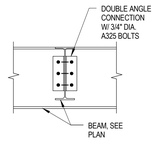


BEAM TO COLUMN FLANGE



BEAM TO COLUMN WEB EXTENDED CONNECTION



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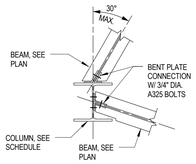
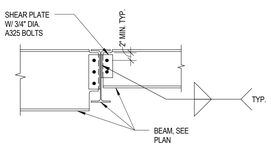


SKEWED BEAM TO COLUMN



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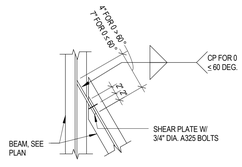
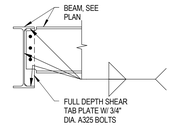


SKEWED BEAM TO BEAM



BEAM TO BEAM ONE SIDED CONNECTION

NOTES:

A. CONTRACTOR MAY SUBSTITUTE WELDS IN LIEU OF BOLTS.

B. CONTRACTOR MAY SUBSTITUTE SINGLE ANGLE IN LIEU OF DOUBLE ANGLE CONNECTIONS. DESIGN SHALL BE BASED ON LATEST AISC MANUAL OF STEEL CONSTRUCTION.

2 TYPICAL SHEAR CONNECTIONS

3/4" = 1'-0"

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SHEET CONTENTS
GENERAL STEEL FRAMING DETAILS

SHEET NO.:
S-005

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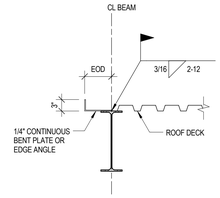
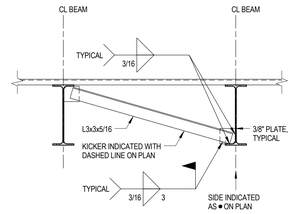
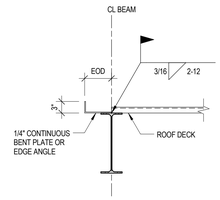


8 DETAIL
3/4" = 1'-0"

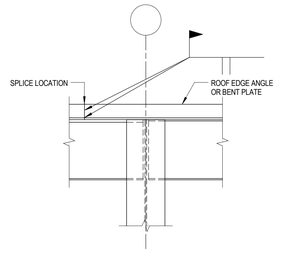


4 ANGLE KICKER BRACE
3/4" = 1'-0"



7 DETAIL
3/4" = 1'-0"

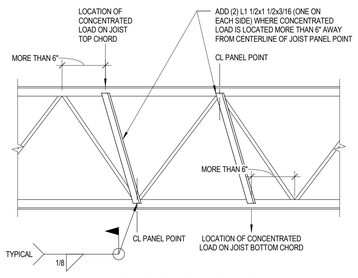
AT ROOF EDGE ANGLE OR BENT PLATE DIRECTLY ON TOP OF BEAM TOP FLANGE



NOTES:

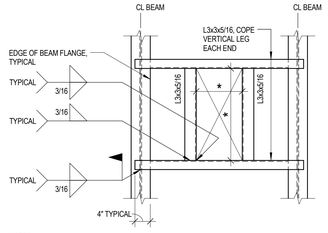
1. WELD ALL ROOF EDGE ANGLE OR BENT PLATE SEGMENTS TOGETHER WITH BUTT WELD, BOTH LEGS.
2. SEE SECTIONS FOR WELD OF ROOF EDGE ANGLE OR BENT PLATE TO BEAM.

3 ROOF PERIMETER EDGE ANGLE OR BENT PLATE SPLICE
3/4" = 1'-0"



NOTE: ROOF DECK NOT SHOWN FOR CLARITY.

6 VERTICAL CONCENTRATED LOAD ON JOIST
3/4" = 1'-0"

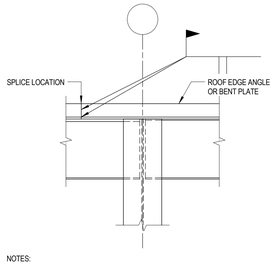


NOTES:

1. ✶ = DIMENSION BY MECHANICAL CONTRACTOR.
2. DECK SUPPLIER TO PROVIDE 1 1/2" HIGH, 20 GAGE CHANNEL CLOSURE ALONG NON-BEARING SIDES OF DECK.
3. FASTEN DECK TO ANGLES WITH PUDDLE WELD AT 6" OC ALONG EACH SIDE OF OPENING.

2 MECHANICAL SUBFRAME
3/4" = 1'-0"

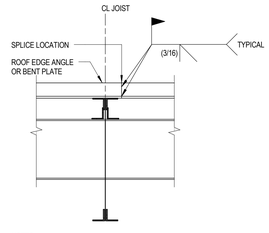
AT ROOF EDGE ANGLE OR BENT PLATE DIRECTLY ON TOP OF BEAM TOP FLANGE



NOTES:

1. WELD ALL ROOF EDGE ANGLE OR BENT PLATE SEGMENTS TOGETHER WITH BUTT WELD, BOTH LEGS.
2. SEE SECTIONS FOR WELD OF ROOF EDGE ANGLE OR BENT PLATE TO BEAM.

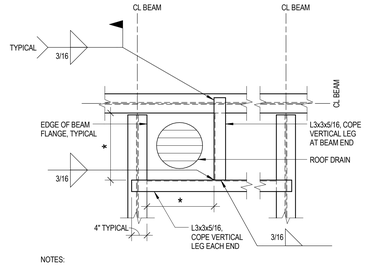
AT ROOF EDGE ANGLE / BENT PLATE ON TOP OF JOIST TOP CHORD



NOTES:

1. WELD ALL ROOF EDGE ANGLE OR BENT PLATE SEGMENTS TOGETHER WITH PARTIAL PENETRATION GROOVE WELD, BOTH LEGS.
2. SEE SECTIONS FOR WELD OF ROOF EDGE ANGLE OR BENT PLATE TO JOISTS AND SHEAR COLLECTORS.

9 ROOF PERIMETER EDGE ANGLE OR BENT PLATE SPLICE
3/4" = 1'-0"



NOTES:

1. ✶ = DIMENSION BY MECHANICAL CONTRACTOR.
2. FASTEN DECK TO ANGLES WITH PUDDLE WELD AT 6" OC ALONG EACH SIDE OF OPENING.

1 ROOF DRAIN SUBFRAME
3/4" = 1'-0"

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
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SHEET CONTENTS
GENERAL ROOF DECK DETAILS

SHEET NO.:
S-006

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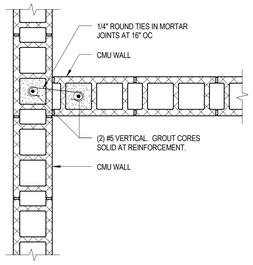
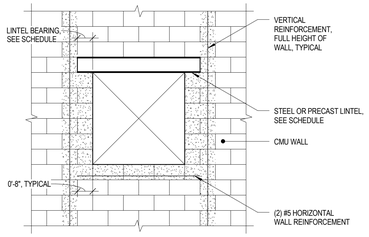
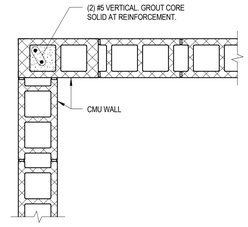


8 CMU WALL INTERSECTION
1" = 1'-0"

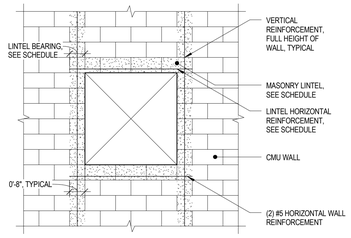


NOTE: GROUT ALL CELLS SOLID CONTAINING REINFORCEMENT

4 CMU WALL PUNCHED OPENING
3/8" = 1'-0"

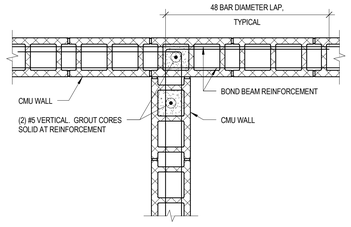


7 CMU WALL CORNER
1" = 1'-0"

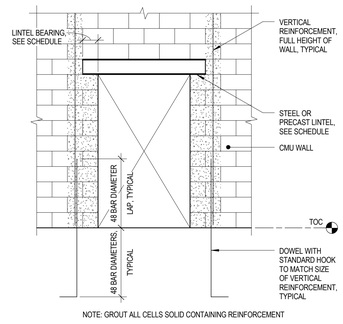


NOTE: GROUT ALL CELLS SOLID CONTAINING REINFORCEMENT

3 CMU WALL PUNCHED OPENING
3/8" = 1'-0"

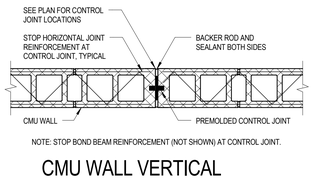


6 BOND BEAM INTERSECTION
1" = 1'-0"



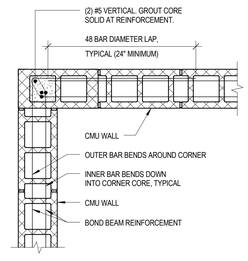
NOTE: GROUT ALL CELLS SOLID CONTAINING REINFORCEMENT

2 CMU WALL DOOR OPENING
3/8" = 1'-0"

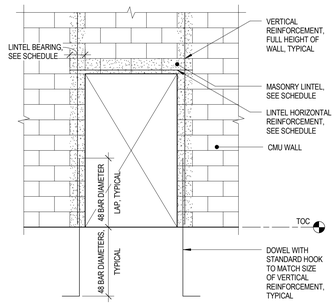


NOTE: STOP BOND BEAM REINFORCEMENT (NOT SHOWN) AT CONTROL JOINT.

9 CMU WALL VERTICAL CONTROL JOINT
1" = 1'-0"



5 BOND BEAM CORNER
1" = 1'-0"



NOTE: GROUT ALL CELLS SOLID CONTAINING REINFORCEMENT

1 CMU WALL DOOR OPENING
3/8" = 1'-0"

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SHEET CONTENTS
GENERAL MASONRY DETAILS

SHEET NO.:
S-007

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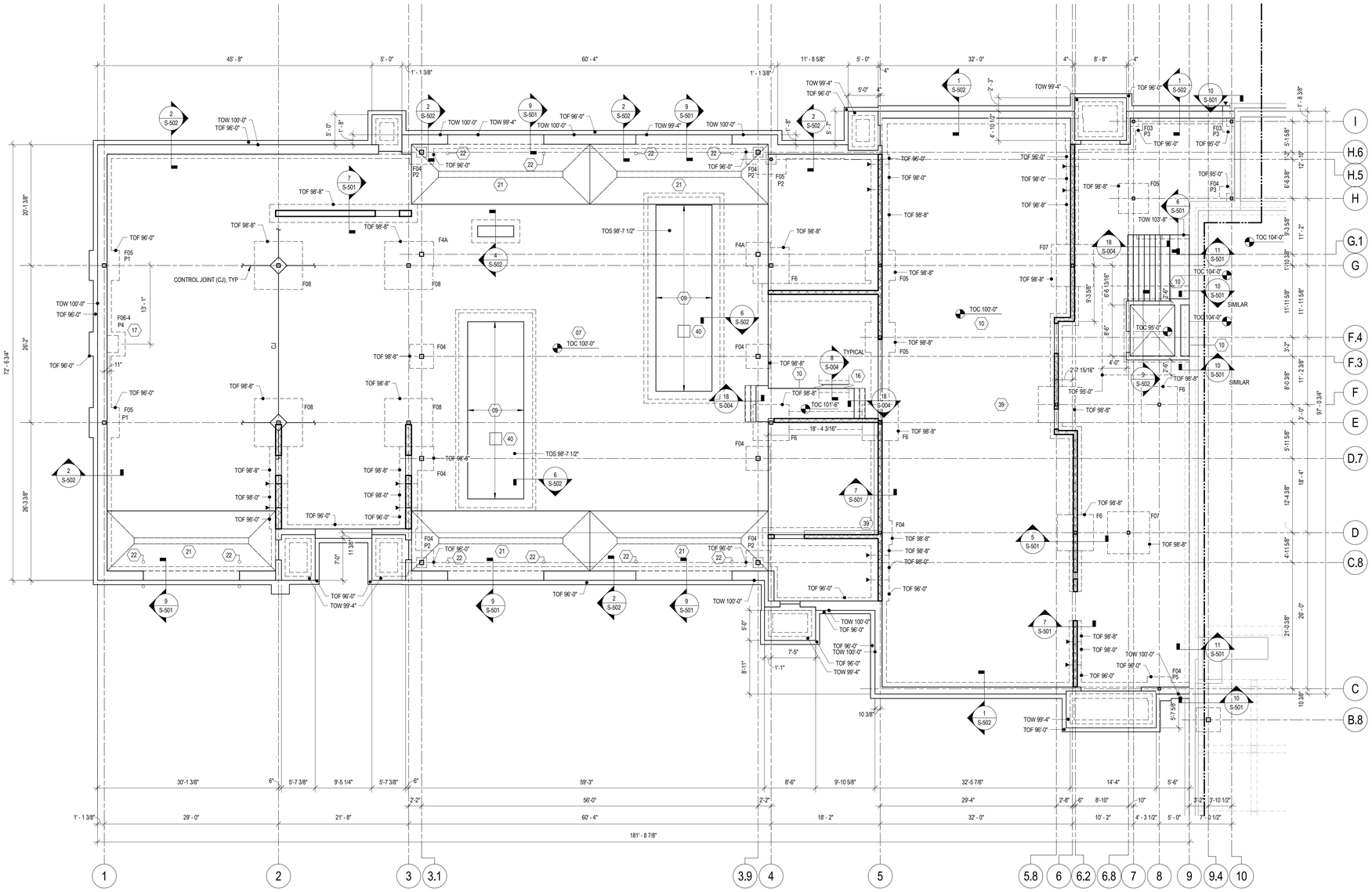

1 FOUNDATION PLAN

1/8" = 1'-0"

FOUNDATION PLAN NOTES

- FOR GENERAL NOTES AND DESIGN SPECIFICATIONS REFER TO SHEET S-002.
- FOR COLUMN SIZES REFER TO SCHEDULE ON SHEET S-602.
- F# = FOOTING MARK. REFER TO SCHEDULE ON SHEET S-601.
- P# = PIER MARK. REFER TO SCHEDULE ON SHEET S-601.
- TOP OF FOUNDATION (TOF) ELEVATION NOTED ON PLAN.
- TOP OF WALL (TOW) ELEVATION NOTED ON PLAN.
- TYPICAL FLOOR = 5" CONCRETE SLAB ON GRADE REINFORCED WITH 3.5 LB/CU YARD W.R. GRACE STRUX 90/40 FIBER REINFORCEMENT OR AS AN ALTERNATE 6x6-W2.1xW2.1 WWF. TOP OF CONCRETE (TOC) SLAB ELEVATION = 100'-0" UNLESS NOTED OTHERWISE ON PLAN.
- FOR VAPOR RETARDER LOCATION AND TYPICAL SUBGRADE REQUIREMENTS REFER TO DETAIL 2/S-004.
- CJ = SLAB ON GRADE CONTROL JOINT OR CONSTRUCTION JOINT, REFER TO DETAIL 2/S-004.
- FOR TYPICAL WALL CONTROL JOINT AND CONSTRUCTION JOINT REFER TO DETAIL 3/S-004.
- FOR TYPICAL WALL CORNER REFER TO DETAIL 9/S-004.
- FOR TYPICAL WALL INTERSECTION REFER TO DETAIL 4/S-004.
- FOR TYPICAL OPENING REINFORCEMENT REFER TO DETAIL 5/S-004.
- ▸ ▸ = FOOTING STEP, REFER TO DETAIL 6/S-004.
- FOR TYPICAL INTERIOR AND EXTERIOR COLUMN ISOLATION JOINTS REFER TO DETAILS 10, 11, 12, AND 13/S-004.
- SEE ARCHITECTURAL PLANS FOR LOCATIONS OF NON-LOAD BEARING CMU WALLS.
- NOTE A = PIPE SLEEVE FOR UTILITY PENETRATION THROUGH WALL. COORDINATE SIZE, LOCATION AND ELEVATION WITH MECHANICAL/ELECTRICAL/PLUMBING DRAWINGS.
- NOTE B = VERIFY SLAB DEPRESSION LOCATIONS WITH ARCHITECTURAL DRAWINGS.
- NOTE C = (2) #4 x 5'-0" LONG LOCATED 1" BELOW TOP OF SLAB ON GRADE. PROVIDE AT ALL SLAB ON GRADE RE-ENTRANT CORNERS. ALL LOCATIONS NOT SHOWN ON PLAN.
- NOTE D = CMU WALL ON SLAB ON GRADE. COORDINATE WALL SIZES AND LOCATIONS WITH ARCHITECTURAL DRAWINGS. ALL LOCATIONS NOT SHOWN ON PLAN.

KEYNOTES

07	8" SLAB ON GRADE REINFORCED WITH #4@12" OC EW, CENTERED IN SLAB.
09	12" MAT SLAB FOR HYDRAULIC LIFT, COORDINATE WITH LIFT SUPPLIER FOR SPECIAL TRENCH AND SLAB CONSIDERATIONS.
10	4" SLAB ON GRADE REINFORCED WITH SYNTHETIC MACRO FIBERS, 5LB/CU YD FIBER REINFORCEMENT.
16	SEE ARCHITECTURAL PLANS FOR CMU INTERIOR PARTITION WALLS.
17	JIB CRANE, 2 TON CAPACITY WITH 20 FOOT REACH. WALL BRACKET CONNECTION BY SUPPLIER.
21	TRENCH DRAIN, SEE ARCHITECTURAL AND PLUMBING DRAWINGS.
22	ROUND BOLLARDS, SEE ARCHITECTURAL DRAWINGS.
39	PERIMETER TRENCH DRAIN, SEE ARCHITECTURAL AND PLUMBING DRAWINGS.
40	24"x24"x24" SUMP PIT, SIM TO DETAIL 7/s502, SEE ARCHITECTURAL AND PLUMBING DRAWINGS.

KEY PLAN

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SHEET CONTENTS
FOUNDATION PLAN

SHEET NO.:
S-101

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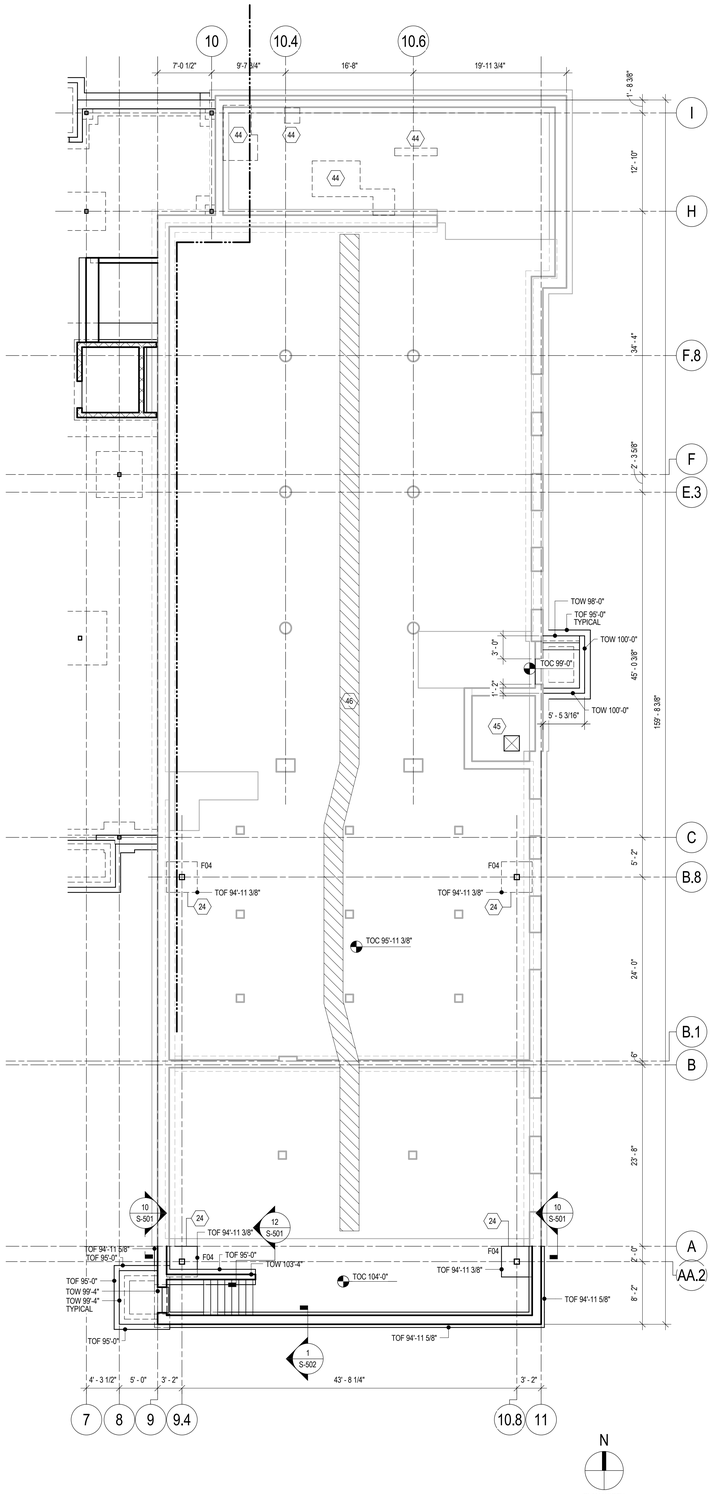

1 FOUNDATION PLAN

1/8" = 1'-0"

KEYNOTES	
24	MATCH TOP OF CONCRETE ELEVATION WITH EXISTING EXTERIOR WALL FOOTING.
44	HOUSEKEEPING PAD. SEE DETAIL 14/S-004.
45	CONSTRUCT NEW ELEVATOR SUMP PIT PER DETAIL 10/S-502. COORDINATE DEPTH, SIZE, AND LOCATION WITH PLUMBING DRAWINGS.
46	REMOVE EXISTING TRENCH DRAIN. BACKFILL AND COMPACT EXISTING TRENCH. PROVIDE DOWELS BETWEEN NEW AND EXISTING SLAB PER DETAIL 15/S501. MATCH EXISTING SLAB THICKNESS WITH A 5 LB/CU YD FIRBER REINFORCED SLAB.

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SHEET CONTENTS
EXISTING BUILDING FOUNDATION PLAN

SHEET NO.:
S-102

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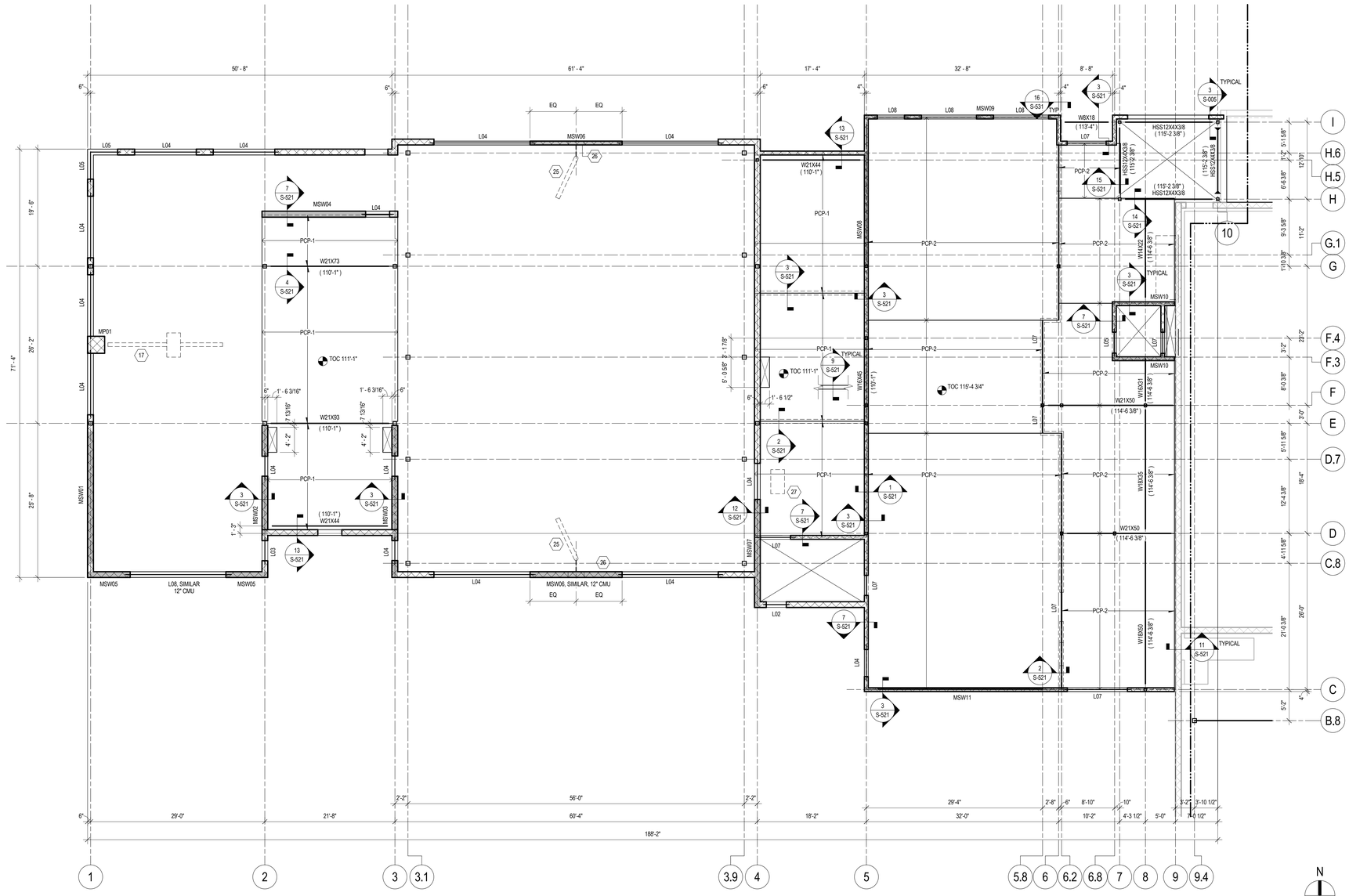

1 SECOND FLOOR FRAMING PLAN

1/8" = 1'-0"

FLOOR FRAMING PLAN NOTES

- FOR GENERAL NOTES AND DESIGN SPECIFICATIONS REFER TO SHEET S-002.
- FOR COLUMN SIZES REFER TO SCHEDULE ON SHEET S-602.
- = DIRECTION IN WHICH METAL DECK SPANS.
- FOR EDGE CONDITION AT ALL SLAB OPENINGS AND SLAB EDGES REFER TO DETAILS 5/S-005 UNLESS NOTED OTHERWISE.
- FOR SLAB OPENINGS REFER TO DETAIL 3/S-005 UNLESS NOTED OTHERWISE.
- FOR TYPICAL WELDED WIRE FABRIC PLACEMENT REFER TO DETAIL 14/S-005.
- FOR SLAB CONSTRUCTION JOINT REFER TO DETAIL 4/S-005.
- FOR ADDITIONAL SLAB REINFORCEMENT AT GIRDERS REFER TO DETAIL 6/S-005.
- FOR DECK SUPPORT AT INTERIOR COLUMNS REFER TO DETAIL 11/S-005.
- FOR DECK SUPPORT AT EXTERIOR COLUMNS REFER TO DETAIL 12/S-005.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF NON-LOAD BEARING CMU WALLS.
- SEE ARCHITECTURAL DRAWINGS FOR CMU WALL OPENINGS.
- NOTE A = (2) #5 x 5'-0" LONG LOCATED 1" BELOW TOP OF SLAB. PROVIDE AT ALL SLAB RE-ENTRANT CORNERS. ALL LOCATIONS NOT SHOWN ON PLAN.

KEYNOTES

17	JIB CRANE, 2 TON CAPACITY WITH 20 FOOT REACH. WALL BRACKET CONNECTION BY SUPPLIER.
25	250 LB. FUME EXTRACTOR, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS. ATTACHMENT BY CONTRACTOR.
26	PROVIDE (2) GROUTED CORES WITH (2) #6 BARS, FULL HEIGHT OF WALL.
27	2000 LB. FLOOR MOUNTED AIR HANDLING UNIT, SEE MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.

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SHEET CONTENTS
SECOND FLOOR FRAMING PLAN

SHEET NO.:
S-103

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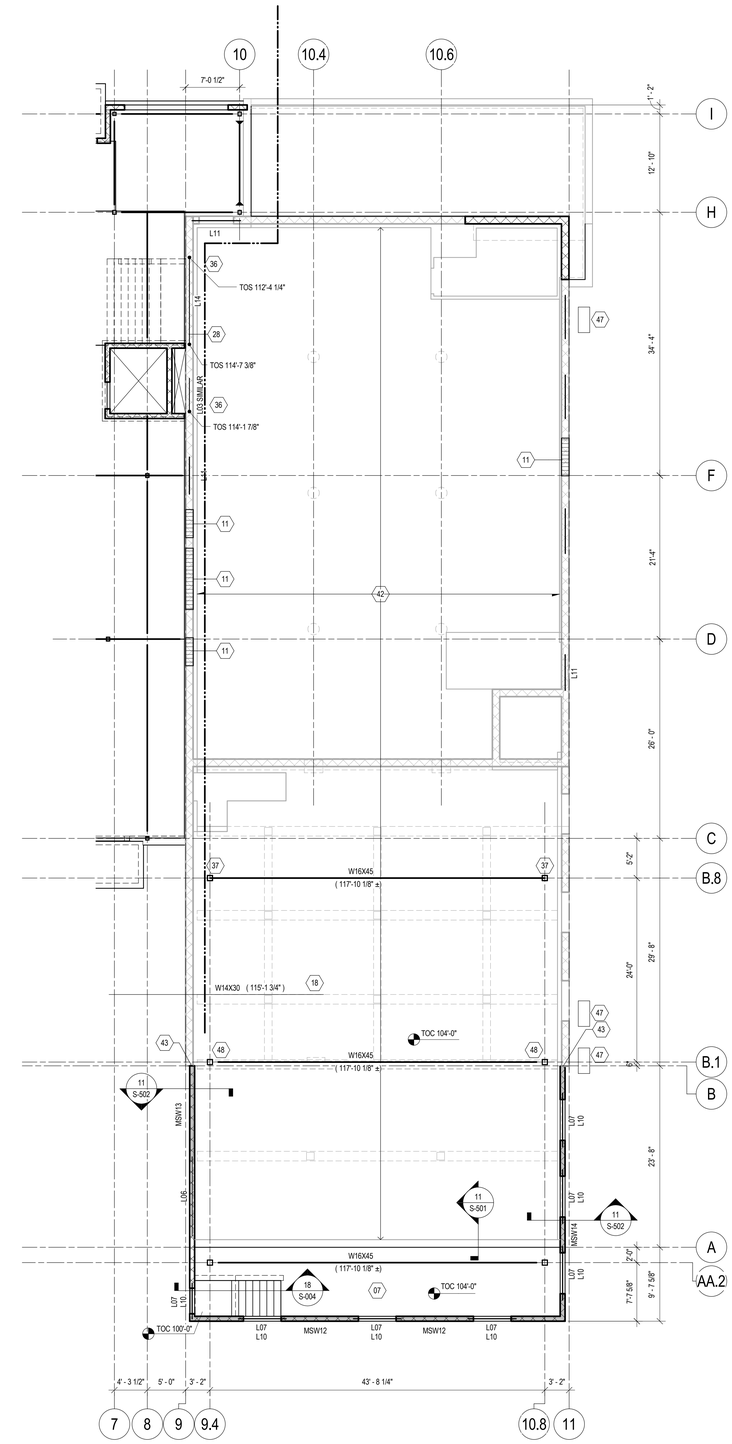
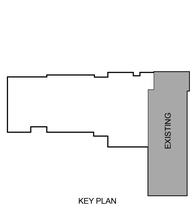


1 SECOND FLOOR FRAMING PLAN

1/8" = 1'-0"

KEYNOTES

07	8" SLAB ON GRADE REINFORCED WITH #4@12" OC EW, CENTERED IN SLAB.
11	FILL IN EXISTING OPENING WITH CMU, SEE ARCHITECTURAL PLANS.
12	NEW WIDE FLANGE BEAM HEADER.
18	2 TON CAPACITY MONORAIL CRANE SYSTEM PROVIDED BY MANUFACTURER. CONNECTION TO JOIST BY SUPPLIER.
28	PROVIDE (2) 18" OPENINGS, CONTRACTOR TO COORDINATE WEB OPENING IN STEEL BEAM WITH MECHANICAL AND PLUMBING DRAWINGS.
36	SHORING FOR EXISTING BEARING TO BE DESIGNED AND DETAILED BY CONTRACTOR.
37	PRIOR TO BASEPLATE FABRICATION AND DRILLING THRU BOLT HOLES, CONTRACTOR SHALL VERIFY NO EXISTING REINFORCMENT WILL BE DAMAGED.
42	EXISTING STRUCTURAL SLAB.
43	PROVIDE SOFT JOINT BETWEEN WALLS.
47	4" CONCRETE PADS OVER 4" OF GRANULAR BACKFILL FOR AIR COOLED CONDENSING UNITS BY MECHANICAL CONTRACTOR, SEE MECHANICAL DRAWINGS.
48	LOCATE NEW COLUMNS OVER THE CENTERLINE OF THE EXISTING CONCRETE WALL.



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SHEET CONTENTS
EXISTING BUILDING
SECOND FLOOR
FRAMING PLAN

SHEET NO.:
S-104

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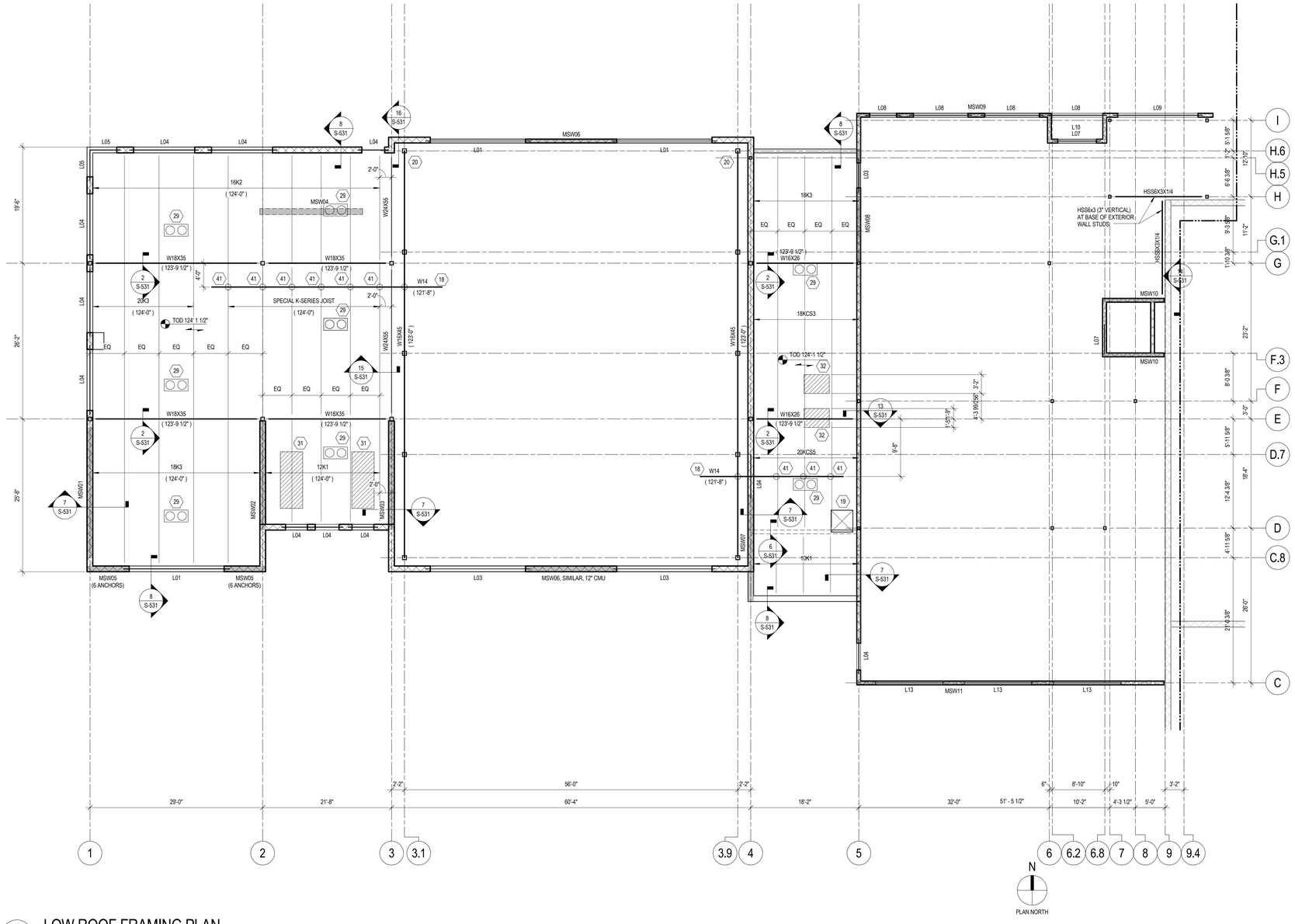

1 LOW ROOF FRAMING PLAN
1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

- FOR GENERAL NOTES AND DESIGN SPECIFICATIONS REFER TO SHEET S-002.
- FOR COLUMN SIZES REFER TO SCHEDULE ON SHEET S-602.
- TYPICAL METAL DECK = 1 1/2" x 20 GAGE WIDE RIB METAL ROOF DECK.
- = DIRECTION IN WHICH METAL DECK SPANS.
- REFER TO PLUMBING DRAWINGS FOR ROOF DRAIN LOCATIONS. REFER TO DETAIL 1/S-006 FOR ROOF DRAIN SUBFRAME.
- PROVIDE MECHANICAL SUBFRAME FOR ALL DUCT PENETRATIONS THROUGH ROOF. COORDINATE SIZE AND LOCATION WITH MECHANICAL CONTRACTOR. RFER TO SUBFRAME DETAIL 2/S-006.
- REFER TO DETAIL 3/S-006 FOR ROOF EDGE ANGLE / BENT PLATE SPLICES AT DECK PERIMETER.
- FOR EDGE CONDITION AT ALL DECK OPENINGS AND DECK EDGES REFER TO DETAIL 7 AND 8/S-006 UNLESS NOTED OTHERWISE.
- TYPICAL HSS BEAM TO HSS COLUMN CONNECTION, SEE DETAIL 12/S-531.

KEYNOTES

18	2 TON CAPACITY MONORAIL CRANE SYSTEM PROVIDED BY MANUFACTURER. CONNECTION TO JOIST BY SUPPLIER.
19	ROOF HATCH, SEE ARCHITECTURAL DRAWINGS. PROVIDE FRAME PER 2/S-006.
20	OVERHEAD CRANE, 5 TON CAPACITY.
29	ROOF DRAIN, SEE ARCHITECTURAL AND PLUMBING DRAWINGS.
31	1600 LB. SUSPENDED MAKE UP AIR UNIT, SEE MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
32	500 LB. AIR COOLED CONDENSING UNIT, SEE MECHNICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
41	8 KIP CONCENTRATED JOIST LOAD ON JOISTS SHALL BE DESIGNED BY JOIST MANUFACTURER.

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
CHECKED BY: EMF

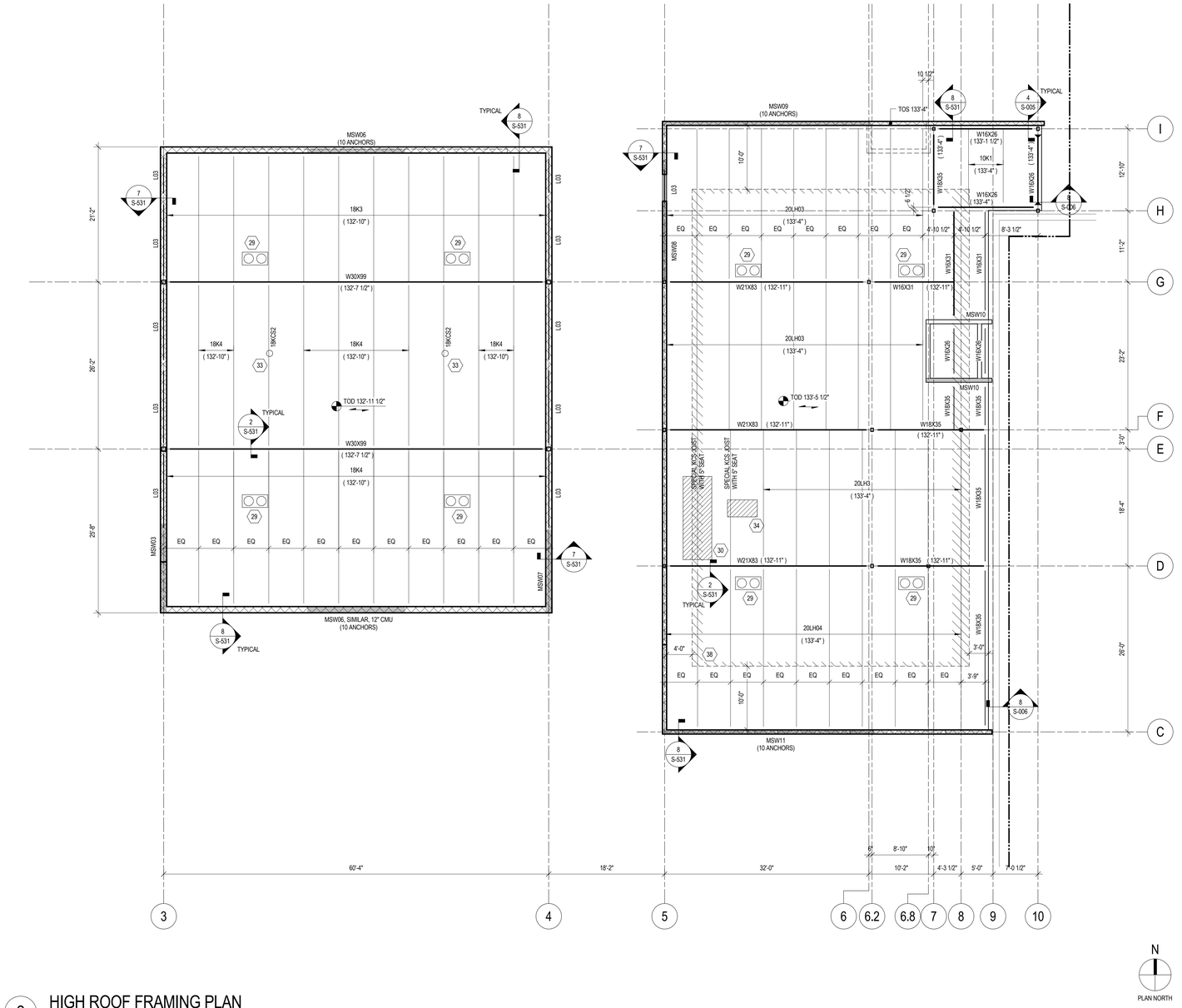
DO NOT SCALE DRAWINGS

SHEET CONTENTS
LOW ROOF FRAMING PLAN

SHEET NO.:
S-110

KEY PLAN

6/12/2015 2:14:09 PM C:\Users\18846\Documents\20135030 2000_S15_1846.rvt



2 HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF FRAMING PLAN NOTES

- FOR GENERAL NOTES AND DESIGN SPECIFICATIONS REFER TO SHEET S-002.
- FOR COLUMN SIZES REFER TO SCHEDULE ON SHEET S-602.
- TYPICAL METAL DECK = 1 1/2" x 20 GAGE WIDE RIB METAL ROOF DECK.
- = DIRECTION IN WHICH METAL DECK SPANS.
- REFER TO PLUMBING DRAWINGS FOR ROOF DRAIN LOCATIONS. REFER TO DETAIL 1/S-006 FOR ROOF DRAIN SUBFRAME.
- PROVIDE MECHANICAL SUBFRAME FOR ALL DUCT PENETRATIONS THROUGH ROOF. COORDINATE SIZE AND LOCATION WITH MECHANICAL CONTRACTOR. RFER TO SUBFRAME DETAIL 2/S-006.
- REFER TO DETAIL 3/S-006 FOR ROOF EDGE ANGLE / BENT PLATE SPLICES AT DECK PERIMETER.
- FOR EDGE CONDITION AT ALL DECK OPENINGS AND DECK EDGES REFER TO DETAIL 7 AND 8/S-006 UNLESS NOTED OTHERWISE.
- TYPICAL HSS BEAM TO HSS COLUMN CONNECTION, SEE DETAIL 12/S-531.
- TYPICAL W-SHAPE BEAM TO CMU WALL CONNECTION, SEE DETAIL 13/S-531.

KEYNOTES

29	ROOF DRAIN. SEE ARCHITECTURAL AND PLUMBING DRAWINGS.
30	2000 LB. SUSPENDED AIR HANDLING UNIT, SEE MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
33	175 LB. CEILING FAN, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
34	INTAKE/RELIEF HOOD, SEE MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
38	SPECIAL TRAY SYSTEM GREEN ROOF DEAD LOAD AREA: 105 PSF.

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SHEET CONTENTS
HIGH ROOF FRAMING PLAN

KEY PLAN

SHEET NO.:

S-111

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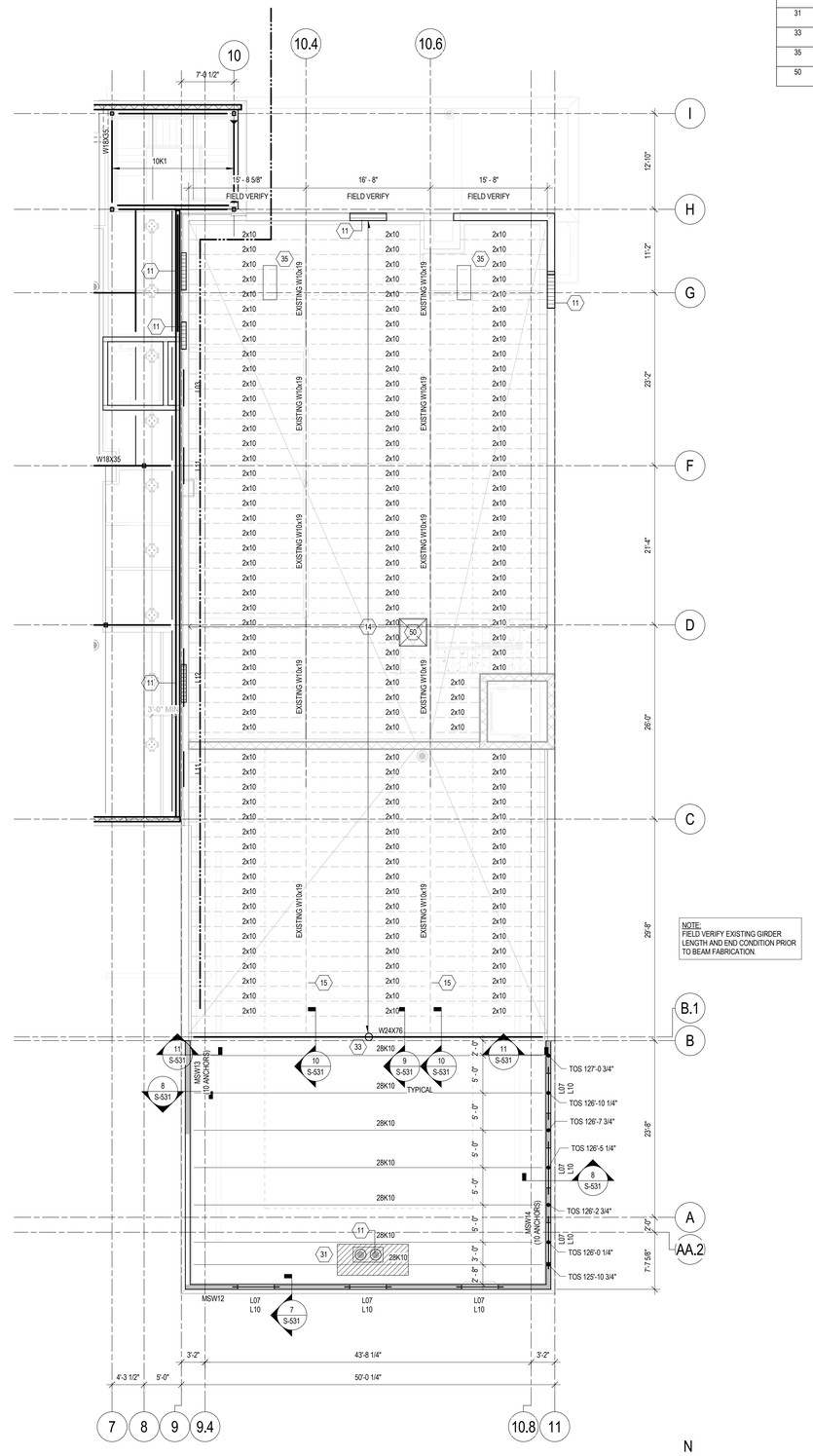
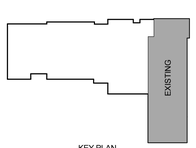
KEYNOTES	
11	FILL IN EXISTING OPENING WITH CMU. SEE ARCHITECTURAL PLANS.
14	EXISTING 2x10 WOOD JOISTS AT 2'-0" +/- OC.
15	SHORE EXISTING STEEL GIRDERS TO REMOVE EXISTING CMU BEARING WALL AND INSTALL NEW W SHAPE BEAM. SHORING PLAN TO BE SUBMITTED FOR REVIEW BY ENGINEER OF RECORD.
31	1600 LB. SUSPENDED MAKE UP AIR UNIT, SEE MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
33	175 LB. CEILING FAN, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
35	150 LB. AIR COOLED CONDENSING UNIT, SEE MECHANICAL DRAWINGS. SUPPORT PROVIDED AND DESIGNED BY CONTRACTOR.
50	NEW ROOF HATCH. SHORE EXISTING MEMBERS, DOUBLE UP ADJACENT 2X10 WITH 2X10 HEADERS.



1 ROOF FRAMING PLAN

1/8" = 1'-0"



KEY PLAN

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110 S. Paterson Street, Madison, WI

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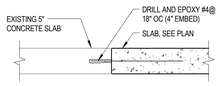
SHEET CONTENTS
EXISTING BUILDING ROOF FRAMING PLAN

SHEET NO.:
S-112

6/12/2015 2:14:14 PM C:\Users\1846\Documents\20135030.2000_S15_1846.rvt



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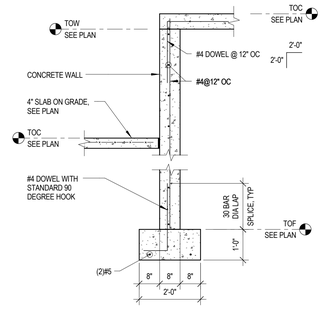

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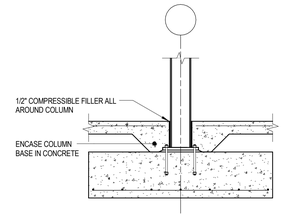

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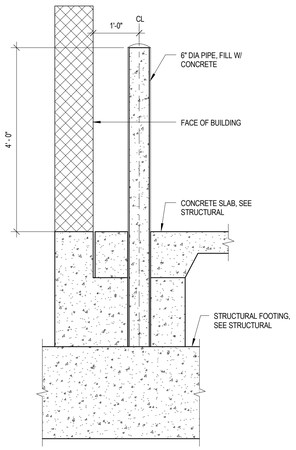

14 INTERIOR BOLLARD DETAIL
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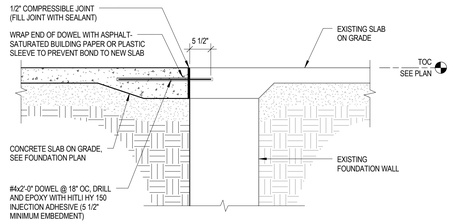

11 SLAB ON GRADE TO EXISTING SLAB
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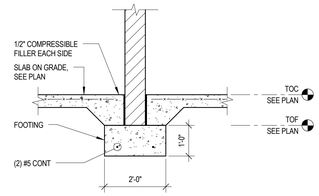

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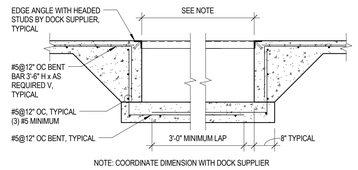

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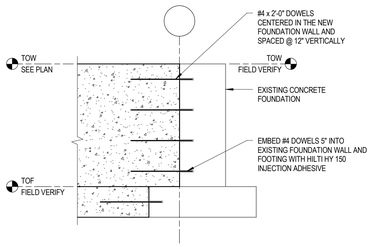
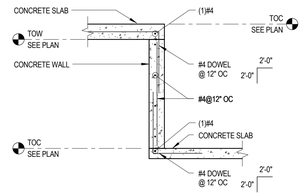


10 NEW FOUNDATION WALL AT EXISTING FOUNDATION
1/2" = 1'-0"



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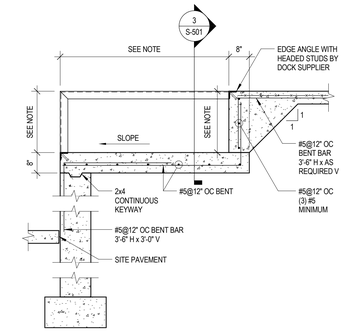

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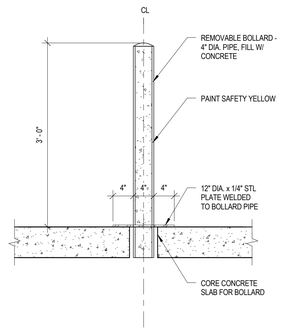
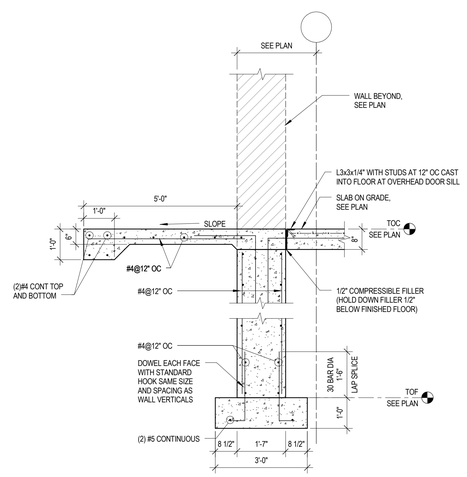


13 EQUIPMENT BOLLARD DETAIL
1" = 1'-0"



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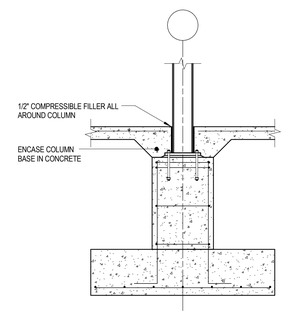

5 DETAIL
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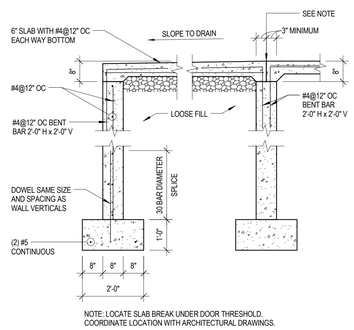

1 DETAIL
1/2" = 1'-0"

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SHEET CONTENTS
FOUNDATION DETAILS

SHEET NO.:
S-501

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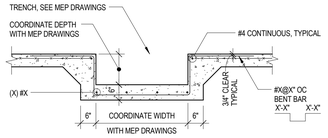
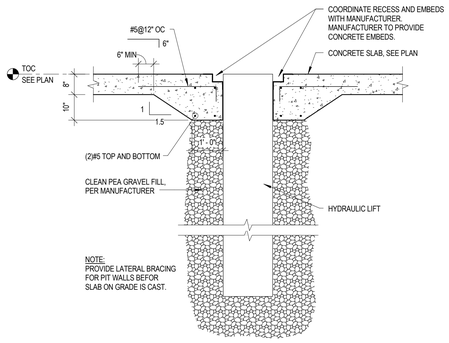


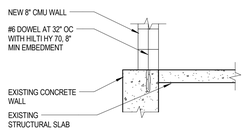
8 DETAIL
1/2" = 1'-0"

NOTE:
DIMENSIONS OF SUPPORTS AND OPENINGS TO BE COORDINATED AND VERIFIED BY SUPPLIER.



NOTE:
PROVIDE LATERAL BRACING FOR PIT WALLS BEFOR SLAB ON GRADE IS CAST.

4 SECTION
1/2" = 1'-0"



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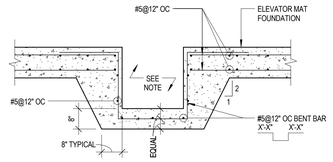
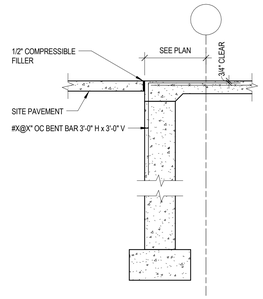


NOTE: SUMP PIT. COORDINATE DEPTH, SIZE AND LOCATION WITH PLUMBING DRAWINGS.

7 DETAIL
1/2" = 1'-0"



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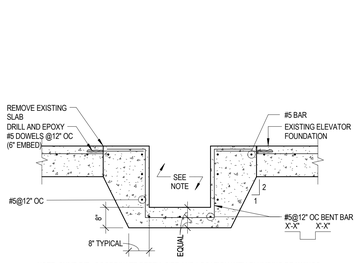
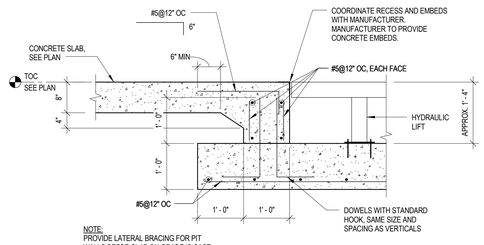


NOTE: SUMP PIT. COORDINATE DEPTH, SIZE AND LOCATION WITH PLUMBING DRAWINGS.

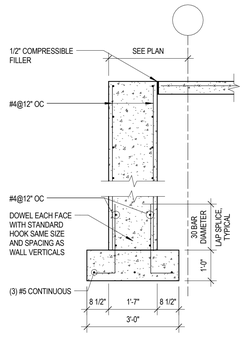
10 DETAIL
1/2" = 1'-0"

NOTE:
DIMENSIONS OF SUPPORTS AND OPENINGS TO BE COORDINATED AND VERIFIED BY SUPPLIER.



NOTE:
PROVIDE LATERAL BRACING FOR PIT WALLS BEFOR SLAB ON GRADE IS CAST.

6 SECTION
3/4" = 1'-0"



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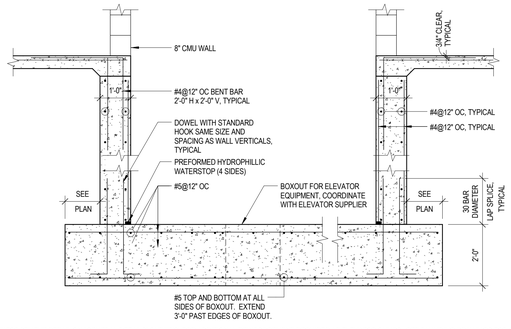
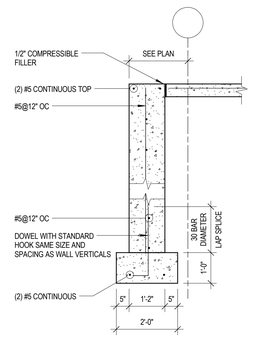


NOTE: SEE OPENING REINFORCEMENT DETAIL ON "GENERAL DETAILS" SHEET(S) FOR ADDITIONAL REINFORCEMENT REQUIRED AT ELEVATOR SUMPS. SEE PLUMBING DRAWINGS FOR SIZES AND LOCATIONS. SEE DETAIL 6/S-502 FOR SUMP PUMP CONSTRUCTION.

9 DETAIL
1/2" = 1'-0"



1 DETAIL
1/2" = 1'-0"

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SHEET CONTENTS
FOUNDATION DETAILS

SHEET NO.:
S-502

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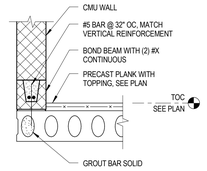
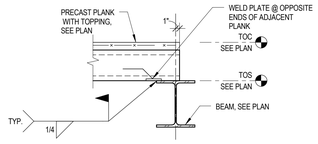


12 SECTION
3/4" = 1'-0"



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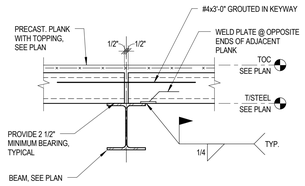
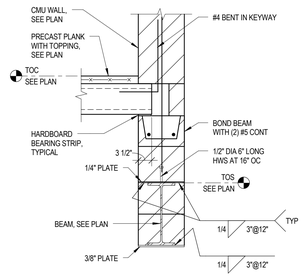


4 SECTION
3/4" = 1'-0"



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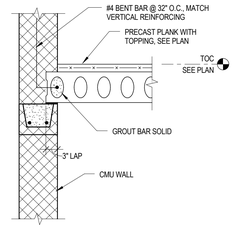
3/4" = 1'-0"



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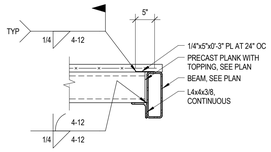

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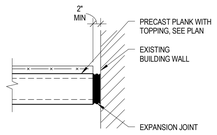

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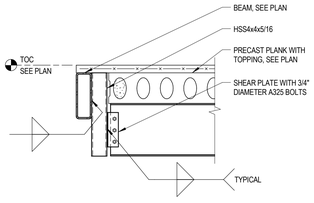

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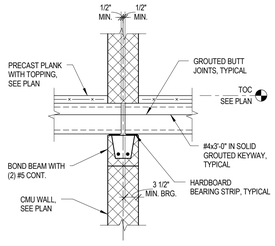

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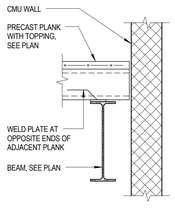

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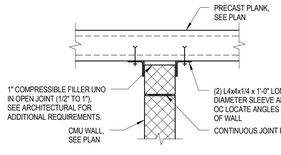

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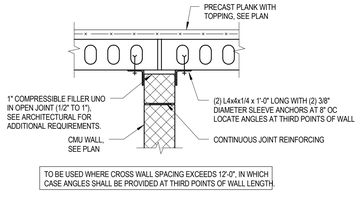

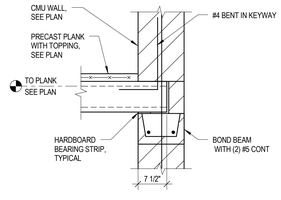

1 SECTION
3/4" = 1'-0"

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

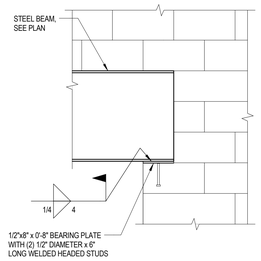
ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
CHECKED BY: EMF
DO NOT SCALE DRAWINGS

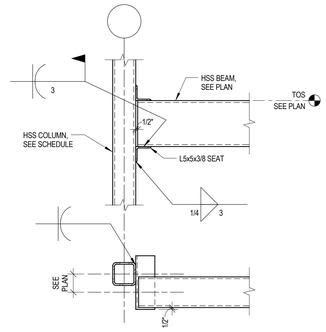
SHEET CONTENTS
PRECAST DETAILS

SHEET NO.:
S-521

6/12/2015 2:14:20 PM C:\Users\1846\Documents\20135030.2000_S15_1846.rvt

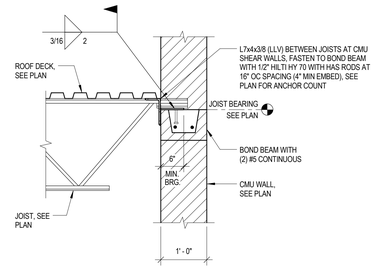


16 SECTION
3/4" = 1'-0"

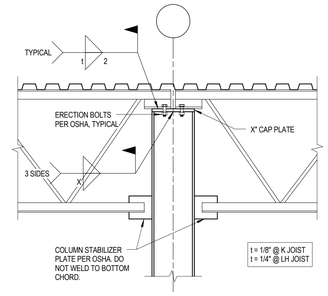


PLAN VIEW

12 TYPICAL HSS BEAM TO HSS COLUMN
3/4" = 1'-0"

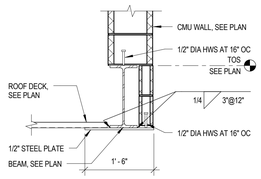


8 SECTION
3/4" = 1'-0"

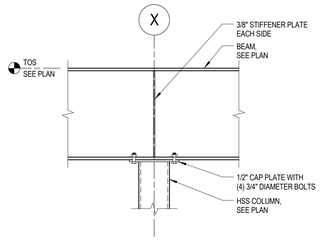


NOTE: INTERSECTING BEAM NOT SHOWN FOR CLARITY.

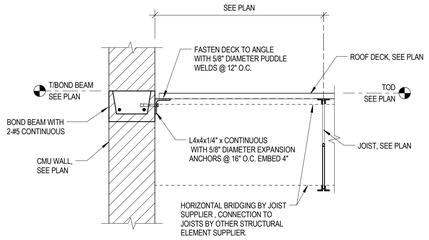
4 DETAIL
3/4" = 1'-0"



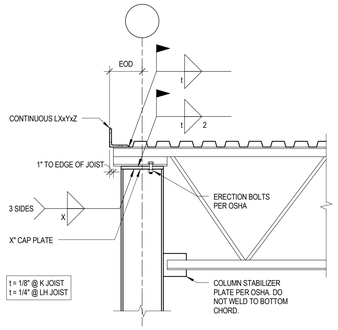
15 LINTEL DETAIL
3/4" = 1'-0"



11 SECTION
3/4" = 1'-0"

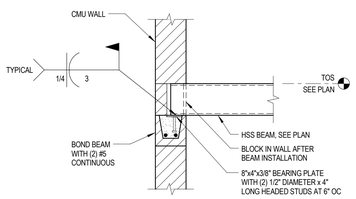


7 SECTION
3/4" = 1'-0"



NOTE: INTERSECTING BEAM NOT SHOWN FOR CLARITY.

3 DETAIL
3/4" = 1'-0"



14 SECTION
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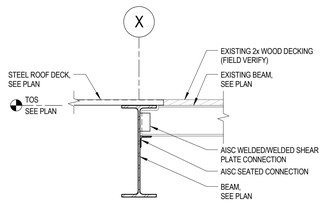

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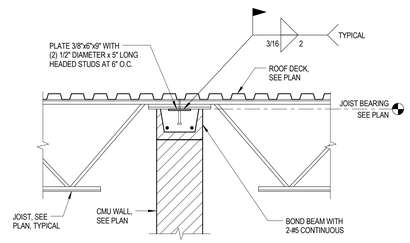

6 SECTION
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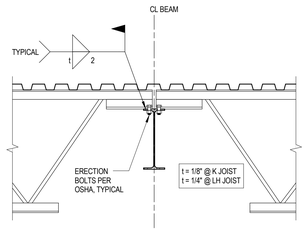
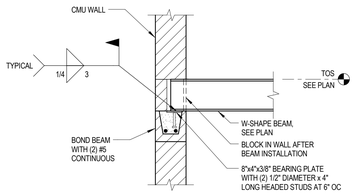
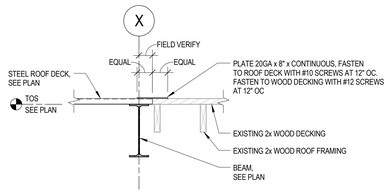


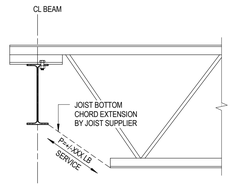
2 DETAIL
3/4" = 1'-0"



13 SECTION
3/4" = 1'-0"

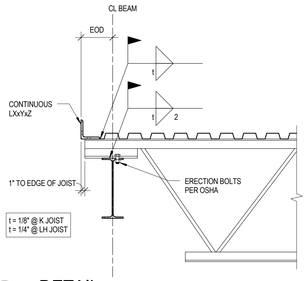


9 SECTION
3/4" = 1'-0"



NOTE: ROOF DECK NOT SHOWN FOR CLARITY.

5 DETAIL
3/4" = 1'-0"



1 DETAIL
3/4" = 1'-0"

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DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
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SHEET CONTENTS
ROOF DECK DETAILS

SHEET NO.:
S-531

6/12/2015 2:14:28 PM C:\Users\18946\Documents\20135030_2000_S15_18946.rvt

PRECAST HOLLOW CORE PLANK SCHEDULE

MARK	THICKNESS	TOPPING (TOC)	LIVE LOAD	DEAD LOAD
PCP-1	10"	2"	250 PSF	25 PSF
PCP-2	8"	2"	81 PSF	25 PSF

CONCRETE FOOTING SCHEDULE

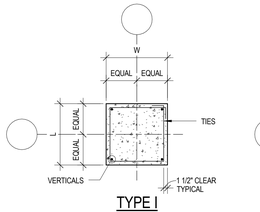
FOOTING MARK	SIZE			REINFORCEMENT		REMARKS
	LENGTH	WIDTH	DEPTH	BOTTOM	TOP	
F03	3'-0"	3'-0"	1'-0"	NONE	NONE	
F04	4'-0"	4'-0"	1'-0"	(6)#4 BARS EACH WAY	NONE	
F4A	4'-0"	4'-0"	1'-3"	(6)#4 BARS EACH WAY	NONE	
F05	5'-0"	5'-0"	1'-0"	(5)#5 BARS EACH WAY	NONE	
F6	6'-0"	6'-0"	1'-3"	(6)#5 BARS EACH WAY	NONE	
F06-4	6'-0"	4'-0"	1'-0"	(5) #5 WITH 90 DEGREE HOOKS LONGITUDINAL (4) #5 WITH 90 DEGREE HOOKS TRANSVERSE	NONE	
F07	7'-0"	7'-0"	1'-3"	(6)#6 BARS EACH WAY	NONE	
F08	8'-0"	8'-0"	1'-3"	(8)#6 BARS EACH WAY	NONE	

CONCRETE PIER SCHEDULE

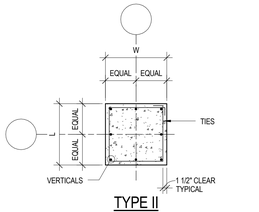
MARK	TOP OF PIER ELEVATION	TYPE	SIZE			REINFORCEMENT		REMARKS
			WIDTH, W	LENGTH, L	DIAMETER, D	VERTICALS	TIES	
P1	100'-0"	I	19"	19"	N/A	(4) #7	#3@12" OC	
P2	98'-8"	III	20"	20"	N/A	(8) #6	#3@12" OC	
P3	99'-4"	I	16"	16"	N/A	(4) #6	#3@12" OC	
P4	100'-0"	IV	34"	34"	N/A	(12) #7	#3@12" OC	
P5	100'-0"	I	14"	14"	N/A	(4) #6	#3@12" OC	

CONCRETE PIER SCHEDULE NOTES:

1. SEE TYPICAL PIER DIAGRAM FOR INFORMATION PERTAINING TO PIER SCHEDULE.
2. FOR PIERS THAT OVERLAP A FOUNDATION WALL CONTINUE WALL HORIZONTAL REINFORCEMENT THROUGH PIER, SEE TYPICAL PIER DIAGRAM.
3. FOR PIERS POURED INTEGRAL WITH FOUNDATION WALLS REFER TO TYPICAL DETAILS BELOW FOR ADDITIONAL REINFORCEMENT.



TYPE I



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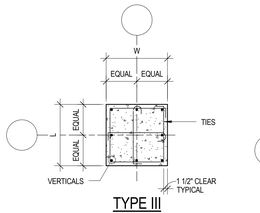
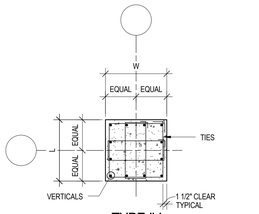


TYPE III



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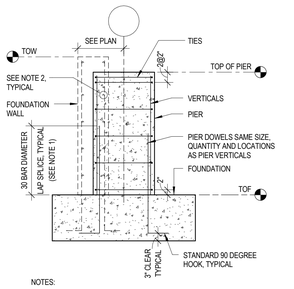
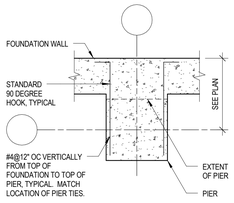


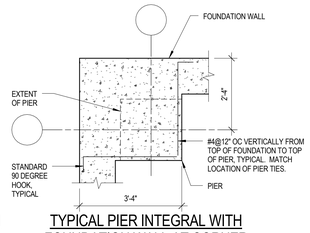
NOTES:

1. CONTRACTOR OPTION TO ELIMINATE SPLICE AND PROVIDE CONTINUOUS VERTICALS FOR SHORT PIERS.
2. CONTINUE FOUNDATION WALL HORIZONTAL REINFORCEMENT THROUGH PIER.

TYPICAL PIER DIAGRAM



TYPICAL PIER INTEGRAL WITH FOUNDATION WALL



TYPICAL PIER INTEGRAL WITH FOUNDATION WALL AT CORNER

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SHEET CONTENTS
SCHEDULES

SHEET NO.:
S-601

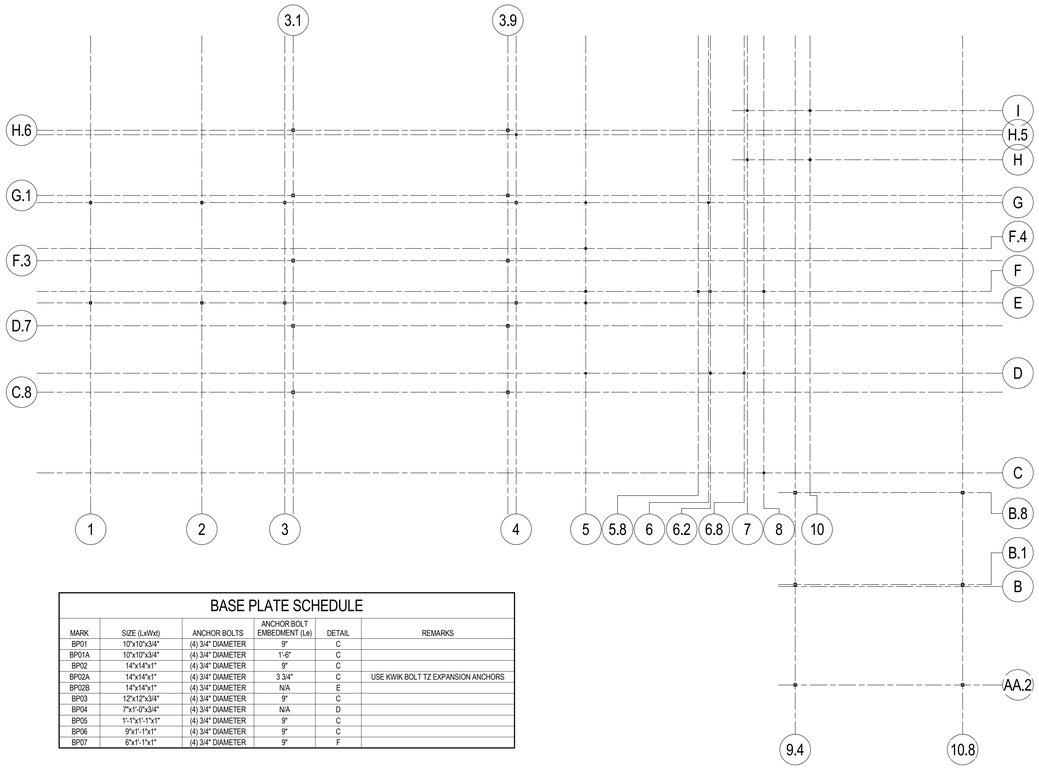
6/12/2015 2:14:33 PM C:\Users\1846\Documents\201535\0.2000_S15_1846.rvt

STEEL COLUMN SCHEDULE

ROOF FRAMING - OFFICE					TOS 132'-11"	TOS 132'-11"							TOS 132'-11"	TOS 132'-11"	TOS 133'-4"	TOS 133'-4"		TOS 133'-4"		ROOF FRAMING - OFFICE
133'-4" ROOF FRAMING - WELDING ROOF							TOS 131'-5"			TOS 132'-7 1/2"										133'-4" ROOF FRAMING - WELDING ROOF
124'-0" TO STEEL 02	TOS 116'-6"	TOS 116'-6"	TOS 114'-6 3/8"	TOS 121'-8"	HSS5X5X3/8	HSS8X8X1/2	HSS6X6X1/2		TOS 124'-0"	TOS 124'-0"	HSS7X7X1/2		HSS6X6X1/2		HSS6X6X1/2	HSS8X8X1/2	TOS 123'-9 1/2"		TOS 116'-6"	124'-0" TO STEEL 02
114'-6 3/8" TO PRECAST/MEZZ							BP04							TOS 114'-6 3/8"	BP04					114'-6 3/8" TO PRECAST/MEZZ
111'-1" Existing First Floor	HSS8X8X3/8	HSS8X8X3/8	HSS5X5X3/8	HSS8X8X1/2			HSS8X8X1/2	HSS7X7X1/2	HSS7X7X1/2			TOS 110'-1" HSS8X8X1/2	BP04	HSS5X5X1/2			HSS5X5X3/8	HSS5X5X3/8	HSS8X8X3/8	111'-1" Existing First Floor
104'-0" TOC 00	BP02A	BP02B TOS 103'-4 5/8"																		104'-0" TOC 00
100'-0" TOF		HSS8X8X3/8	BP07	BP02	BP01	BP03	BP03	BP06	BP05	BP05		BP03		BP03	BP03	BP01A	BP01	BP01		100'-0" TOF
96'-0"		BP02																	BP02	96'-0"
Column Locations	B.1-9.4, B.1-10.8	B.8-9.4, B.8-10.8	C-8	C.8-3.1, C.8-3.9, D.7-3.1, D.7-3.9, F.3-3.1, F.3-3.9, G.1-3.1, G.1-3.9, H.6-3.1, H.6-3.9	D-5, G-5	D-6.2, G-6	D-6.8, F-8	E-1, G-1	E-2, G-2	E-3, E-4, G-3, G-4	E-5, F.4-5	F-5	F-5.8	F-6.2	H-7	H-10, I-10	H.5-4	I-7	AA.2-9.4, AA.2-10.8	

STEEL COLUMN SCHEDULE NOTES:

- BP-X = BASE PLATE. SEE BASE PLATE SCHEDULE ON THIS SHEET.
- ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 UNLESS NOTED OTHERWISE.

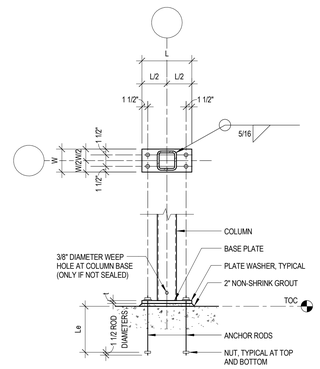


COLUMN KEY PLAN

1/16" = 1'-0"

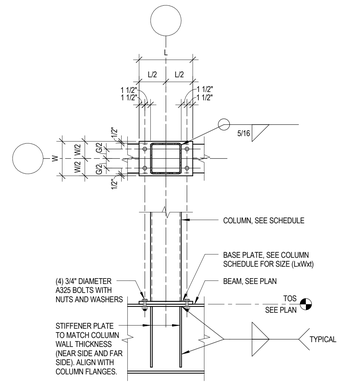
BASE PLATE SCHEDULE

MARK	SIZE (LxWxt)	ANCHOR BOLTS	ANCHOR BOLT EMBEDMENT (Le)	DETAIL	REMARKS
BP01	10"x10"x3/4"	(4) 3/4" DIAMETER	9"	C	
BP01A	10"x10"x3/4"	(4) 3/4" DIAMETER	1'-6"	C	
BP02	14"x14"x1"	(4) 3/4" DIAMETER	9"	C	
BP02A	14"x14"x1"	(4) 3/4" DIAMETER	3 3/4"	C	USE KWIK BOLT TZ EXPANSION ANCHORS
BP02B	14"x14"x1"	(4) 3/4" DIAMETER	N/A	E	
BP03	12"x12"x3/4"	(4) 3/4" DIAMETER	9"	C	
BP04	7"x1'-0"x3/4"	(4) 3/4" DIAMETER	N/A	D	
BP05	1'-1"x1'-1"x1"	(4) 3/4" DIAMETER	9"	C	
BP06	9"x1'-1"x1"	(4) 3/4" DIAMETER	9"	C	
BP07	6"x1'-1"x1"	(4) 3/4" DIAMETER	9"	F	



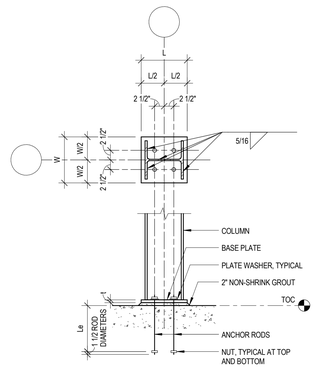
F BASE PLATE

3/4" = 1'-0"



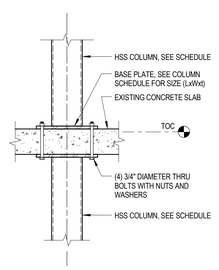
D COLUMN BEARING ON BEAM

3/4" = 1'-0"



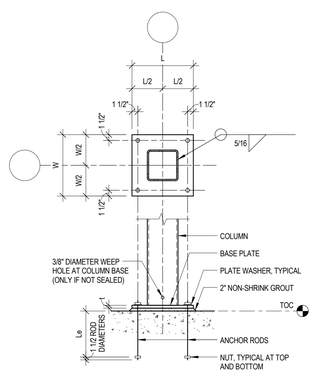
B BASE PLATE

3/4" = 1'-0"



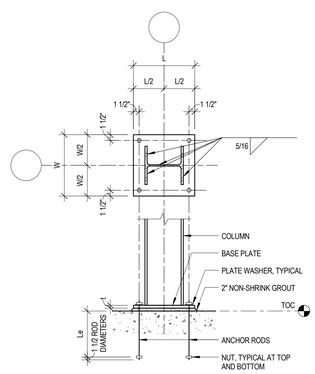
E BASE PLATE

3/4" = 1'-0"



C BASE PLATE

3/4" = 1'-0"



A BASE PLATE

3/4" = 1'-0"

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No.10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: EMF
DRAWN BY: KRN
CHECKED BY: EMF

DO NOT SCALE DRAWINGS

SHEET CONTENTS
STEEL COLUMN SCHEDULE

SHEET NO.:
S-602

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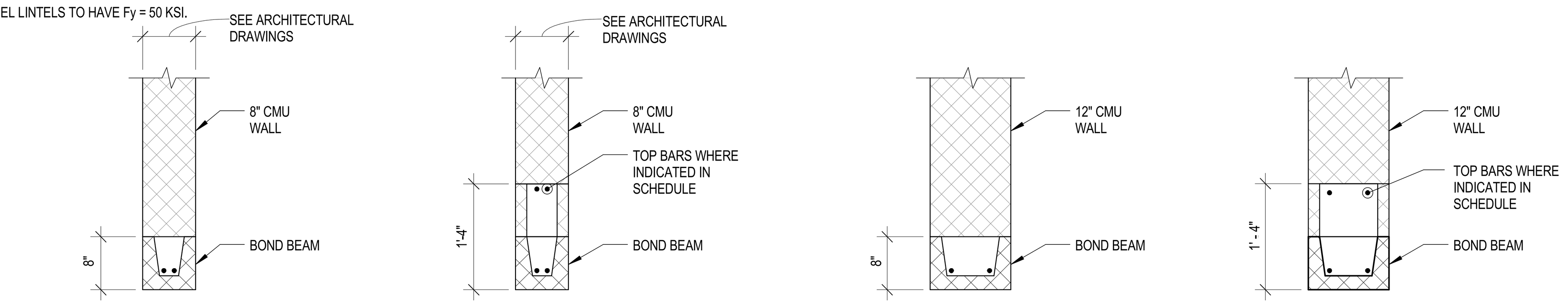
MASONRY LINTEL SCHEDULE

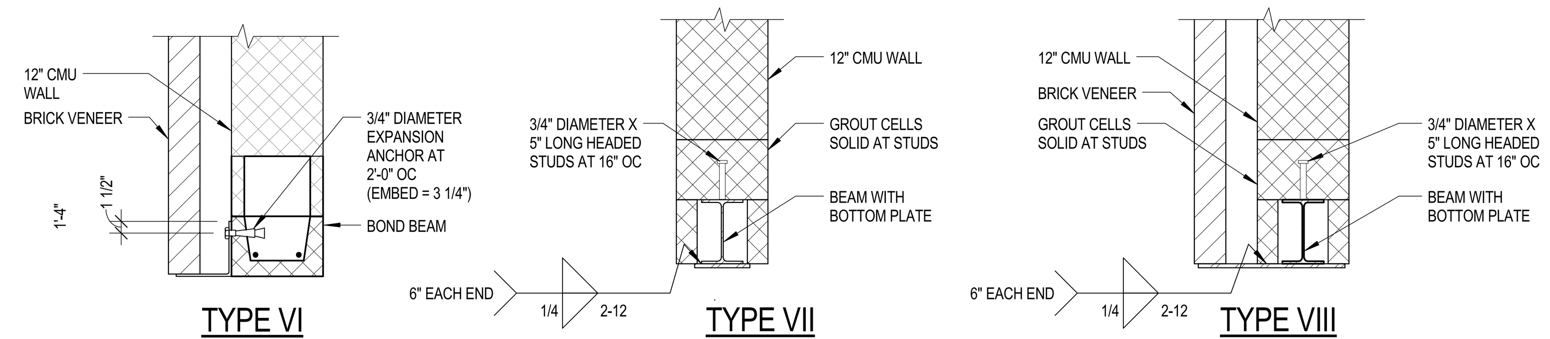
MARK	TYPE	SIZE	BEARING LENGTH	REMARKS
L01	VIII	W16x31 WITH 3/8" x 1'-6" BOTTOM PLATE	8"	SEE DETAIL A
L02	VI	16" BOND BEAM WITH (2) #6 BOTTOM AND 3/8"x6 1/2"x 5 1/2" BENT PLATE	8"	SEE DETAIL A
L03	VII	W16x31 WITH 3/8"x11" BOTTOM PLATE	8"	SEE DETAIL B
L04	IV	16" BOND BEAM WITH (2) #6 BOTTOM	8"	SEE DETAIL B
L05	II	16" BOND BEAM WITH (2) #6 TOP AND BOTTOM	8"	SEE DETAIL B
L06	X	W16x31 WITH 3/8"x7" BOTTOM PLATE	8"	SEE DETAIL A
L07	II	16" BOND BEAM WITH (2) #6 BOTTOM	8"	SEE DETAIL B
L08	IX	24" BOND BEAM WITH (1) #6 BOT AND TOP WITH 3/8"x6 1/2"x 5 1/2" BENT PLATE	8"	SEE DETAIL B
L09	XI	W16x26 WITH 3/8"x11 1/2" BOTTOM PLATE	8"	SEE DETAIL A
L10	XII	L6x6x3/8	8"	SEE DETAIL A
L11	XIII	(3) L3 1/2x3 1/2x5/16	8"	SEE DETAIL A
L12	X	W8x18 WITH 3/8"x11" BOTTOM PLATE	8"	SEE DETAIL A
L13	IX	24" BOND BEAM WITH (1) #6 BOTTOM AND TOP, #4 STIRRUPS@24" OC, AND 3/8"x6 1/2"x 5 1/2" BENT PLATE	8"	SEE DETAIL A
L14	VI	W27x102 WITH 3/8"x11" BOTTOM PLATE	8"	SEE DETAIL A

LINTEL SCHEDULE NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.
2. COORDINATE BOTTOM OF LINTEL ELEVATION WITH ARCHITECTURAL DRAWINGS.
3. ALL DIMENSIONS ARE NOMINAL MASONRY DIMENSIONS UNLESS NOTED OTHERWISE.
4. PROVIDE MINIMUM 6" BEARING EACH END UNLESS NOTED OTHERWISE.
5. FOR PRECAST CONCRETE LINTELS, WIDTH OF LINTEL = NOMINAL MASONRY WALL THICKNESS - 3/8".
6. FOR CMU LINTELS, CONTRACTOR TO PROVIDE TEMPORARY SHORING UNTIL MASONRY HAS PROPERLY SET (3 DAYS MINIMUM).
7. FOR STEEL LINTELS, PROVIDE 1/4" BOTTOM PLATE UNLESS NOTED OTHERWISE. WIDTH OF PLATE = NOMINAL MASONRY THICKNESS (INCLUDING VENEER) - 1" EXTEND PLATE FULL LENGTH OF LINTEL UNLESS NOTED OTHERWISE.
8. FOR STEEL LINTELS GREATER THAN OR EQUAL TO 12'-0" LONG, PROVIDE 1/2" DIAMETER x 4" LONG HEADED WELDED STUDS AT 32" OC ON TOP FLANGE. STEEL LINTELS LESS THAN 10'-0" LONG MAY BE PLACED LOOSE WITHOUT ANCHOR BOLTS OR BEARING PLATES, UNLESS NOTED OTHERWISE.
9. ALL STEEL LINTELS TO HAVE Fy = 50 KSI.



TYPE I TYPE II TYPE III TYPE IV



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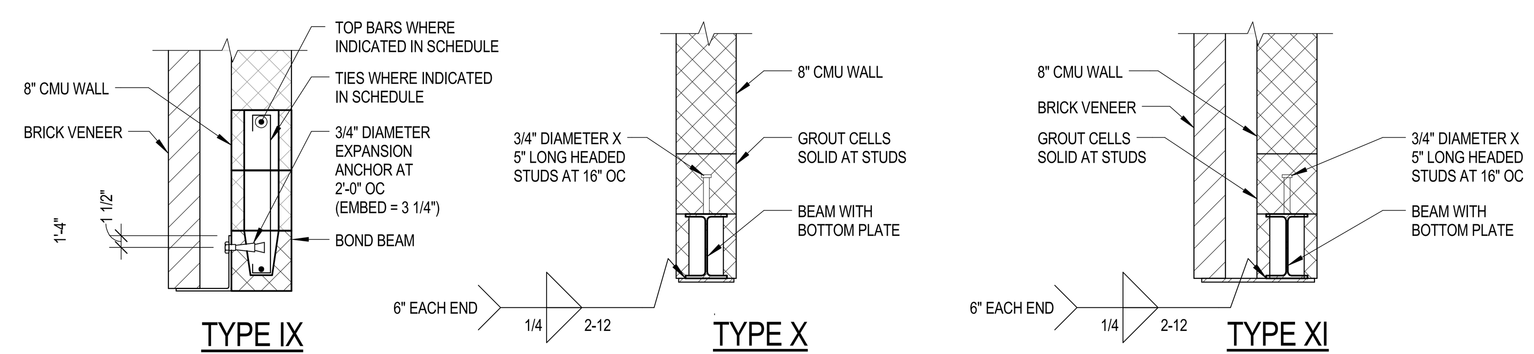

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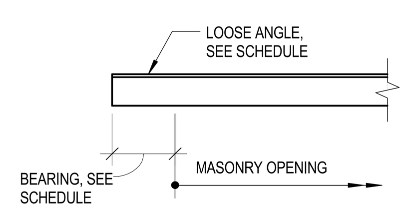

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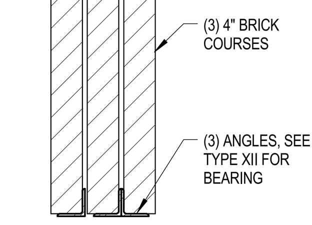

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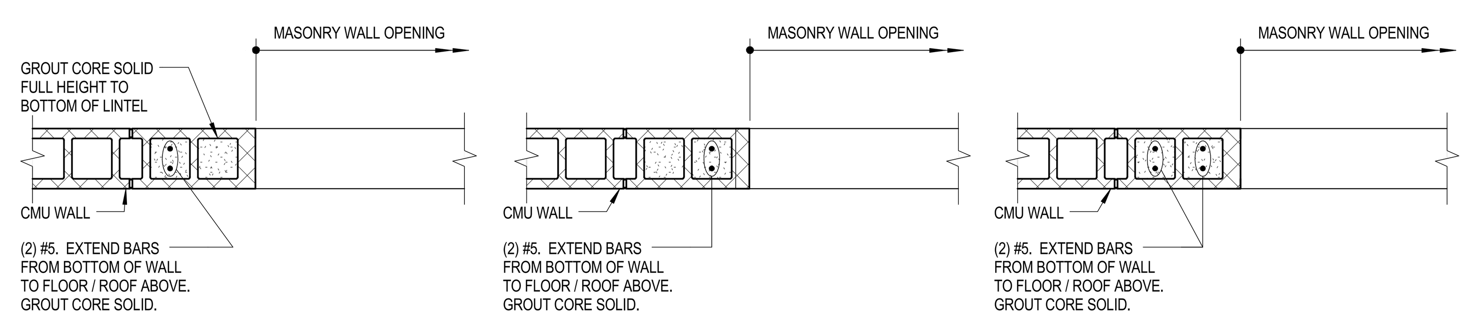
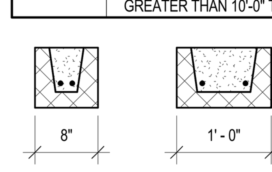


DETAIL A DETAIL B DETAIL C

MISCELLANEOUS LINTEL SCHEDULE

USE AT ALL NON-LOAD BEARING MASONRY WALLS, SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS

WALL THICKNESS	SPAN	STEEL LINTEL (HOLLOW OR SOLID WALLS)		CMU LINTEL (HOLLOW WALLS)		CMU LINTEL (SOLID WALLS)		CMU LINTEL TYPE
		SIZE	TYPE	DEPTH	REINFORCEMENT	DEPTH	REINFORCEMENT	
8"	6'-0" OR LESS	-	-	8"	(2) #5	8"	(2) #5	A
	6'-0" TO 8'-0"	-	-	8"	(2) #5	16"	(2) #5	A
	8'-0" TO 10'-0"	-	-	16"	(2) #5	16"	(2) #5	A
12"	6'-0" OR LESS	-	-	8"	(2) #5	8"	(2) #5	B
	6'-0" TO 8'-0"	-	-	8"	(2) #5	16"	(2) #5	B
	8'-0" TO 10'-0"	-	-	16"	(2) #5	16"	(2) #6	B
	GREATER THAN 10'-0" TO 12'-0"	-	-	16"	(2) #5	16"	(2) #8	B



TYPE A TYPE B

MISCELLANEOUS LINTEL SCHEDULE NOTES:

GENERAL NOTES:

1. UNLESS OTHERWISE INDICATED ON THE PLANS AND SECTIONS, CONTRACTOR OPTION TO USE EITHER STEEL OR CMU LINTELS IN NON-LOAD BEARING WALLS.
2. FOR LINTELS IN BEARING WALLS SEE PLANS.

STEEL LINTEL NOTES:

1. STEEL LINTELS SHALL BEAR A MINIMUM OF 4" EACH END UNLESS NOTED OTHERWISE.

CONCRETE MASONRY LINTEL NOTES:

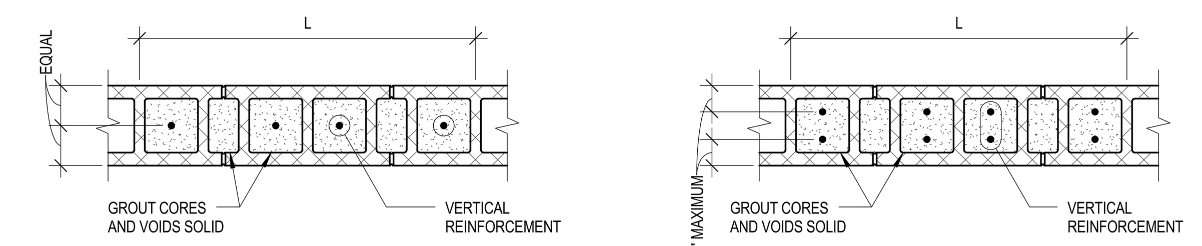
1. "HOLLOW" WALLS ARE THOSE CONSTRUCTED OF HOLLOW CONCRETE MASONRY UNITS.
2. "SOLID" WALLS ARE THOSE CONSTRUCTED OF SOLID CONCRETE MASONRY UNITS.
3. CMU LINTEL DEPTH IN SCHEDULE REFERS TO OVERALL DEPTH OF LINTEL BLOCK UNIT.
4. REINFORCEMENT IN CMU LINTEL IS TO BE PROVIDED IN ONE LAYER IN THE BOTTOM OF THE UNIT UNLESS NOTED OTHERWISE.
5. CMU LINTEL WIDTH SHALL BE THE SAME AS THE WALL SUPPORTED.
6. CMU LINTELS SHALL BEAR A MINIMUM OF 8" EACH END UNLESS NOTED OTHERWISE.
7. FILL CMU LINTELS SOLID WITH GROUT CONFORMING TO ASTM SPECIFICATION C470.

MASONRY PIER SCHEDULE

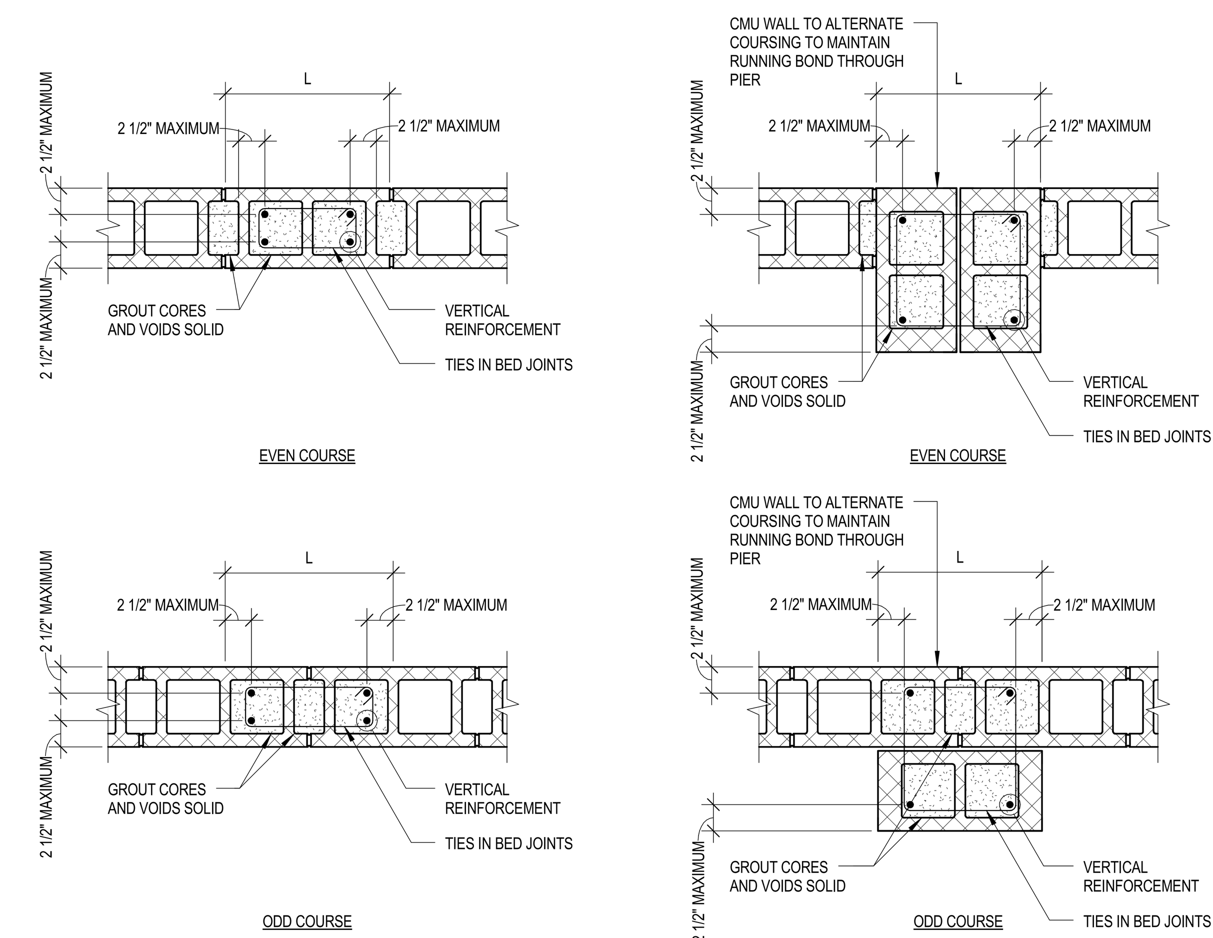
MARK	TYPE	SIZE (L)	VERTICAL REINFORCEMENT	TIES	REMARKS
MP01	D	2'-10"	(4) #8	#3@12"	

MASONRY PIER SCHEDULE NOTES:

1. FOR WALL THICKNESS SEE MASONRY WALL SCHEDULE.
2. PROVIDE DOWELS EQUAL IN SIZE AND NUMBER AS VERTICALS INTO FOUNDATION WALLS, PIERS OR FOOTINGS BELOW PER DETAILS.
3. CONTINUE WALL BOND BEAM AND HORIZONTAL JOINT REINFORCEMENT THROUGH MASONRY PIER.
4. EXTEND VERTICAL REINFORCEMENT FULL HEIGHT OF WALL.
5. PROVIDE LAP SPLICE LENGTH PER SPECIFICATIONS. STAGGER LAPS.
6. BED FACE SHELLS AND WEBS WITH MORTAR AT FILLED CORES.



TYPE A TYPE B



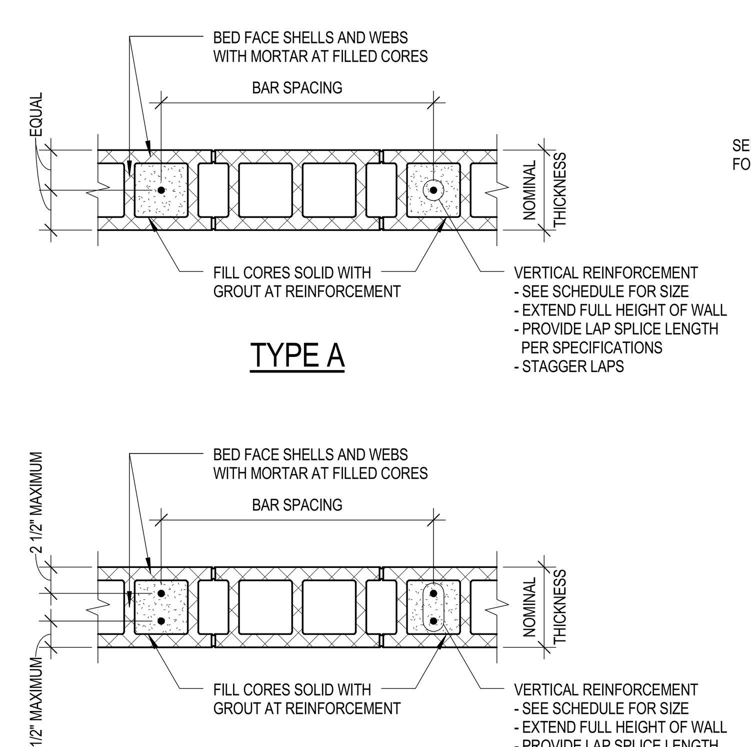
TYPE C TYPE D

MASONRY WALL SCHEDULE

MARK	NOMINAL THICKNESS	TYPE	VERTICAL REINFORCEMENT	REMARKS
MW1	X"	A	#X@X" OC	
MW2	X"	B	(2) #X@X" OC	

MASONRY WALL SCHEDULE NOTES:

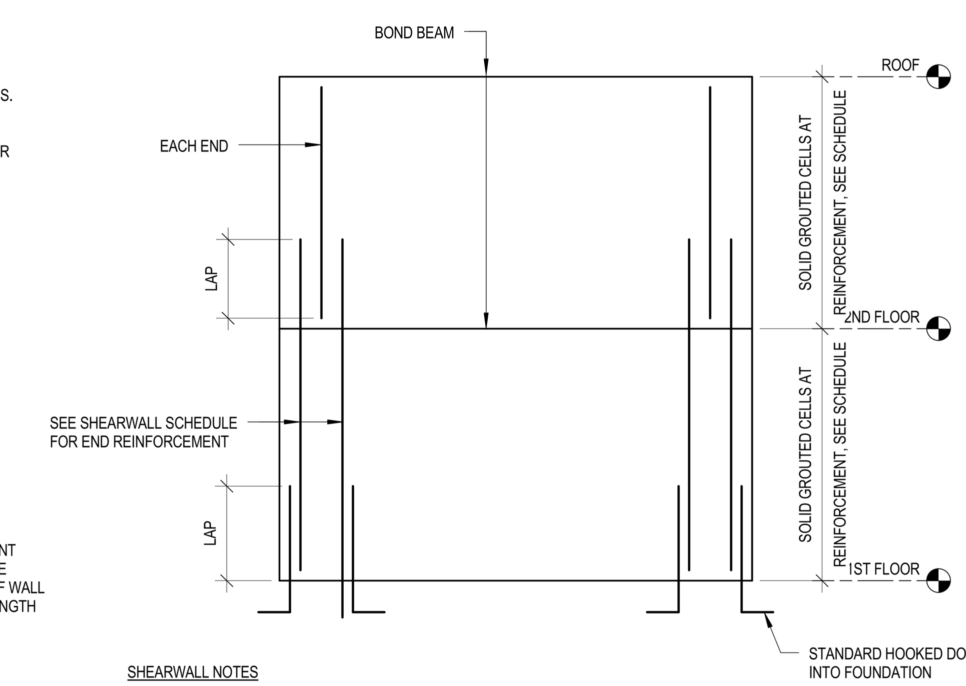
1. PROVIDE TYPICAL VERTICAL REINFORCEMENT AT WALL ENDS AND EACH SIDE OF CONTROL JOINTS. REINFORCE FIRST TWO CELLS EACH SIDE OF OPENINGS FULL HEIGHT OF WALL. WHERE THE USE OF STEEL OR PRECAST LINTELS INTERRUPTS VERTICAL CONTINUITY OF WALL REINFORCEMENT, SHIFT REINFORCED CELLS PAST LINTEL BEARING AND GROUT WALL SOLID BELOW END OF LINTELS.
2. PROVIDE DOWELS FOR VERTICAL REINFORCEMENT INTO FOUNDATION WALLS AND FOOTINGS BELOW PER DETAILS.
3. SEE GENERAL NOTES AND DETAILS FOR HORIZONTAL JOINT REINFORCEMENT AND BOND BEAM REQUIREMENTS.
4. UNLESS DETAILED OR OTHERWISE CALLED OUT, PROVIDE CMU LINTELS PER LINTEL SCHEDULE OVER OPENINGS IN MASONRY WALLS.
5. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT IN ALL WALLS AS PER SPECIFICATIONS.
6. OPENINGS IN WALLS PROVIDED FOR MECHANICAL DUCTWORK SHALL BE CENTERED IN BETWEEN BEAM BEARING LOCATIONS OR POSITIONED WITH THE NEAREST EDGE NO CLOSER THAN 24" EITHER SIDE OF BEAM BEARING LOCATIONS.
7. SEE PLAN AND DETAILS FOR ADDITIONAL WALL REINFORCEMENT AND GROUTING REQUIREMENTS NOT COVERED IN THIS SCHEDULE.



TYPE A TYPE B

MASONRY SHEARWALL SCHEDULE

MARK	FLOOR LEVEL	END GROUT	END REINFORCEMENT	INNER REINFORCEMENT	APPROXIMATE LENGTH
MSW01	FULL HEIGHT		(1) #5 IN END CORE	#5@32" OC	23'-0"
MSW02	1ST AND 2ND		(1) #5 IN 3 END CORES	#5@32" OC	18'-4"
MSW03	1ST AND 2ND CLERESTORY		(2) #5 IN 2 END CORES (2) #5 IN 2 END CORES	#5@32" OC	24'-4" 14'-0"
MSW04	1ST AND 2ND		(1) #5 IN 3 END CORES	#5@32" OC	16'-0"
MSW05	FULL HEIGHT		(1) #5 IN 2 END CORES	#5@32" OC	7'-1"
MSW06	FULL HEIGHT		(1) #5 IN 2 END CORES	#5@32" OC	15'-4"
MSW07	1ST AND 2ND CLERESTORY		(2) #5 IN 2 END CORES	#5@32" OC	12'-0" 7'-4"
MSW08	1ST AND 2ND		(2) #5 IN 2 END CORES	#5@32" OC GROUT SOLID	18'-8"
MSW09	1ST AND 2ND		(2) #5 IN 2 END CORES	#5@32" OC	32'-8"
MSW10	1ST AND 2ND		(2) #7 IN 4 END CORES	#5@32" OC GROUT SOLID	10'-0"
MSW11	1ST AND 2ND		(2) #5 IN 2 END CORES	#5@32" OC	39'-9"
MSW12	FULL HEIGHT		(1) #5 IN 2 END CORES	#5@32" OC	48'-0"
MSW13	FULL HEIGHT		(2) #5 IN 2 END CORES	#5@32" OC	11'-8"
MSW14	FULL HEIGHT		(2) #5 IN 2 END CORES	#5@32" OC	33'-0"



SHEARWALL NOTES

A. SCHEDULE AND PLAN INDICATE ONLY THOSE WALLS WHICH REQUIRE VERTICAL REINFORCEMENT. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WALLS.

B. SCHEDULE INDICATES WALL TYPE AND VERTICAL REINFORCEMENT TO BE PROVIDED AT EACH END OF WALL EXTENDING FULL STORY HEIGHT WHERE INDICATED. SEE MASONRY WALL SCHEDULE FOR WALL TYPE DESCRIPTIONS.

C. LAP VERTICAL REINFORCEMENT AS REQUIRED TO PROVIDE CONTINUOUS REINFORCEMENT WITHIN THE STORY HEIGHT. MINIMUM LAPS TO BE AS FOLLOWS:
- #3 24" LAP
- #4 30" LAP
- #5 40" LAP
- #6 60" LAP

D. WHERE REINFORCEMENT EXTENDS THROUGH BOTH FLOORS LAPS MUST BE PROVIDED FOR FULL HEIGHT.

E. AT CHANGES IN BAR SIZE PROVIDE LAP FOR SMALLER BAR SIZE.

F. PROVIDE ONE DOWEL FOR EACH WALL VERTICAL BAR EMBEDDED 2'-8" INTO FOUNDATION WALL. DOWELS SHALL BE SAME SIZE AS WALL BAR AND TO LAP WITH WALL BAR AS NOTED ABOVE.

G. AT CONCRETE MASONRY WALLS GROUT REINFORCEMENT IN BLOCK CORE.

H. AT COMPOSITE BRICK AND BLOCK WALLS GROUT REINFORCEMENT INTO COLLAR JOINT BETWEEN BRICK AND BLOCK. EXTEND GROUT 2" BEYOND REINFORCEMENT ON EACH SIDE OF BAR.

I. REINFORCEMENT SHALL BE LOCATED AS NEAR TO THE END OF THE WALL AS POSSIBLE.

J. WHERE TWO WALLS INTERSECT AT A COMMON CORNER PROVIDE REINFORCEMENT BASED UPON THE LARGER AREA OF STEEL FOR THE TWO WALLS.

K. PROVIDE REINFORCEMENT AT EACH END AND AT 1/3 POINTS OF ARC AS SHOWN ON PLAN.

N. NO EXPANSION JOINTS ALLOWED IN CMU SHEAR WALL LENGTHS.

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Reconstruction of the Madison Water Utility Operations Center

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DRAWN BY: KRN
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SHEET CONTENTS
MASONRY SCHEDULES

SHEET NO.:
S-608

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ABBREVIATIONS

∠	ANGLE
@	AT
AB	ANCHOR BOLT
AC	ACOUSTIC
ACC	ACCESS
ACT	ACOUSTIC CEILING TILE
ACP	ACOUSTIC CEILING PANEL
AD	AREA DRAIN
ADD	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
BB	BOND BEAM
BD	BOARD
BF	BOTH FACES
BFC	BELOW FINISH CEILING
BG	BUMPER GUARD
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BLKT	BLANKET
BM	BEAM/BENCH MARK
BLK	BLOCK
BOT	BOTTOM
BRG	BEARING
BRKR	BREAKER
BRK	BRICK
BRKT	BRACKET
BS	BACK SPLASH
BSMT	BASEMENT
BTWN	BETWEEN
⊔	CHANNEL
CAB	CABINET
CER	CERAMIC
CFCI	CONTRACTOR FURNISHED, CONTRATOR INSTALLED
CG	CORNER GUARD
CH	COAT HOOK
CIP	CAST IN PLACE
CJ	CONTROL JOINT/CONSTRUCTION JOINT
CLG	CEILING
CLO	CLOSET/CLOSURE
CLR	CLEAR
COL	COLUMN
COMB	COMBINATION
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION/CONNECT
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CPT	CARPET
CR	COAT RACK/CURTAIN ROD
CSG	CASING
CT	CERAMIC TILE
CTR	CENTER/COUNTER
CTSK	COUNTERSUNK
CUH	CABINET UNIT HEATER
CW	COLD WATER
D	DEPTH
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIR	DIRECTION
DIV	DIVISION
DM	DEMOUNTABLE PARTITION
DN	DOWN
DO	DITTO
DR	DOOR
DRWR	DRAWER
DS	DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
DWS	DEFORMED WELDED STUD
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EH	ELECTRICAL HEATER/EXHAUST HOOD
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR/ELEVATION
EMBED	EMBEDDED
EMER	EMERGENCY
ENT	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ESR	ELASTOMERIC SHEET ROOFING
ETR	EXISTING TO REMAIN
EVC	ELASTIC VINYL COATING
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATE
EXP	EXPANSION
EXPD	EXPOSED
EXPF	EXPLOSION PROOF
EXT	EXTERIOR
FA	FIELD ADJUSTABLE
FV	FIELD VERIFY
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FIX	FIXTURE
FLEX	FLEXIBLE
FLR	FLOOR
FLRG	FLOORING
FP	FIREPROOF/FIRE PROTECTION
FR	FIRE RETARDANT
FS	FULL SIZE/FULL SCALE
FT	FEET
FTG	FOOTING
FURG	FURRING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GMU	GLAZED MASONRY UNIT
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	HEIGHT
HDBD	HARDBOARD
HDCP	HANDICAPPED
HDWD	HARDWOOD
HDWE	HARDWARE
HK	HOOK
HM	HOLLOW METAL
HP	HIGH POINT
HR	HANDRAIL
HT	HEIGHT
HVAC	HEATING VENTILATION AND AIR CONDITIONING
HWS	HEAD WELDED STUDS
ID	INSIDE DIAMETER
IMP	INSULATED METAL PANEL
IN	INCHES
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IPW	INSULATED PLENUM WALL
IRF	INSULATED ROOF FILL
JAN	JANITOR
JS	JANITOR SINK
JST	JOIST
JT	JOINT
KD	KNOCKED DOWN
KO	KNOCK-OUT / KNEE OPENING
L	LENGTH
LAB	LABORATORY
LAM	LAMINATED
LB	POUND
LBS	POUNDS
LD	LINEAR DIFFUSER
LDG	LANDING
LF	LINEAR FOOT
LG	LONG
LGT	LIGHT
LKR	LOCKER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
LSH	LONG SLOTTED HOLE
LTG	LIGHTING
LVR	LOUVER
LWC	LIGHTWEIGHT CONCRETE
MACH	MACHINE
MAN	MANUAL
MAR	MARBLE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBW	MASONRY BEARING WALL
MC	MECHANICAL CONTRACTOR
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MK	MARK
ML	METAL LATH
MLDG	MOLDING
MO	MASONRY OPENING
MP	METAL PARTITION
MS	MACHINE SCREW
MTD	MOUNTED
MTG	MOUNTING
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NS	NONSHRINK
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER/OVERFLOW DRAIN
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
OZ	OUNCE
PART	PARTITION
PC	PIECE
PCC	PRECAST CONCRETE
PCPL	PORTLAND CEMENT PLASTER
PDWR	PAPER TOWEL DISPENSER & WASTE RECEPTACLE
PH	PHILLIPS HEAD/PHASE
PL	PLASTIC LAMINATE/PLATE/PROPERTY LINE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PM	PROTECTED METAL
PNL	PANEL
PNLG	PANELING
POL	POLISHED
PR	PAIR
PRE FAB	PREFABRICATED
PRE FIN	PRE-FINISHED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT/PAINT
PTM	PAINT TO MATCH
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTY	QUANTITY
RAD	RADIUS
RAH	ROOFTOP AIR HANDLING UNIT
RB	RUBBER BASE
RC	REINFORCED CONCRETE
RCP	RADIANT CEILING PANEL / REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESSED
REF	REFERENCE
REINF	REINFORCING
REL	RELOCATE
REM	REMAINDER
REQD	REQUIRED
RES	RESILIENT
RET	RETURN
RI	ROUGH IN
RM	ROOM
RO	ROUGH OPENING
RT	RUBBER TILE
RUB	RUBBER
SAT	STANDARD AGGREGATE TOPPING
SB	SOIL BEARING
SC	SEAMLESS COATING
SCF	SPECIAL CONCRETE FINISH
SCHD	SCHEDULE
SD	SOAP DISPENSER
SE	SHELF EDGE
SECT	SECTION
SF	SAND FLOAT
SG	SUPPLY AIR GRILLE
SGL	SINGLE
SH	SHELF
SHD	SHOWER DOOR
SHT	SHEET
SIM	SIMILAR
SJ	STEEL JOIST
SLV	SHORT LEG VERTICAL
SM	SMOOTH
SND	SANITARY NAPKIN DISPENSER
SNV	SANITARY NAPKIN VENDER
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SPR	SPRINKLER
SQ	SQUARE
SR	SHOWER ROD
SS	STAINLESS STEEL
ST	STREET
STD	STANDARD
STL	STEEL
STO	STORAGE
STRU	STRUCTURAL/STRUCTURE
SUSP	SUSPENDED
SV	SHEET VINYL
SYM	SYMMETRICAL
T & B	TOP AND BOTTOM
TB	TACKBOARD/TOWEL BAR
TBR	TO BE REMOVED
TCP	THIN COAT PLASTER
TD	TOWEL DISPENSER
TDW	TOWEL DISPENSER AND WASTE
TEMP	TEMPERATURE/TEMPERED
TER	TERRAZZO
TEX	TEXTURE
TFC	TROWELED FLOOR COVERING
T & G	TONGUE AND GROOVE
THK	THICK
TOB	TOP OF BEAM
TOC	TOP OF CURB/TOP OF CONCRETE
TOD	TOP OF DECK/TOP OF DUCT ELEVATION
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOP	TOP OF PIPE ELEVATION
TOS	TOP OF SLAB/TOP OF STEEL
TOW	TOP OF WALL
TPG	TOPPING
TPH	TOILET PAPER HOLDER
TRAN	TRANSOM
TRANS	TRANSVERSE
TS	TUBE STEEL
TWS	THREADED WELDED STUD
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VINYL
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VOL	VOLUME
VWC	VINYL WALL COVERING
W	WIDE FLANGE STEEL BEAM
W/	WITH
WAF	WELDED ANGLE FRAME
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WG	WIRE GLASS
W/O	WITHOUT
WP	WEATHERPROOF
WPFG	WATERPROOFING
WR	WASTE RECEPTACLE
WSCT	WAINSCOT
WSTP	WEATHERSTRIP
WTR	WATER
WWF	WELDED WIRE FABRIC
X	EXISTING

ABBREVIATIONS ABOVE ARE FOR ARCHITECTURAL SHEETS ONLY.

HATCH SYMBOLS

EARTHWORK	PLYWOOD
GRAVEL	FINISH LUMBER
PLASTER, SAND, GROUT	WOOD STUDS, BLOCKING
CONCRETE	STEEL STUDS
CONCRETE MASONRY	GYPSUM WALLBOARD
CLAY MASONRY	ACOUSTICAL TILE
PRECAST CONCRETE	BATT INSULATION
METAL	RIGID INSULATION

LEGEND - PLAN SYMBOLS

1 / A-311	BUILDING SECTION SYMBOL
1 / A-311	WALL SECTION SYMBOL
1 / A-501	DETAIL SYMBOL
1 / A-501	ENLARGED PLAN SYMBOL
A-201 1	EXTERIOR ELEVATION SYMBOL
A-211 1	INTERIOR ELEVATION SYMBOL
1	KEYED NOTE IDENTIFICATION
ROOM NAME / 000	ROOM NAME AND NUMBER
XXX / X	WALL TYPE IDENTIFICATION
W1	WINDOW IDENTIFICATION
100A	DOOR IDENTIFICATION
	1 HOUR FIRE RATED WALL
F.E.	FIRE EXTINGUISHER - SURFACE MOUNT
F.E.C.	FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER - SEMI-RECESSED
FD	FLOOR DRAIN
0	NEW CONSTRUCTION GRID LINE IDENTIFICATION
0	EXISTING CONSTRUCTION GRID LINE IDENTIFICATION
1	REVISION IDENTIFICATION
XXX / X' - X"	SPOT ELEVATION; TSL = TO OF SLAB

DEMOLITION LEGEND:

	EXISTING CONSTRUCTION TO REMAIN
	CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
	EXISTING DOOR TO REMAIN
	DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

GENERAL NOTES:

1. CONTRACTOR SHALL CONSTRUCT IN CONFORMANCE WITH THE CITY OF MADISON GUIDELINES, STATE AND LOCAL CODES, ORDINANCES AND PROCEDURES, UNDER THE JURISDICTION OF HAVING AUTHORITY.
2. ALL CONTRACTORS SHALL BE LICENSED TO PERFORM WORK WITHIN THE CITY OF MADISON, WI.
3. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ARCHITECTURAL AND STRUCTURAL WITH ALL OTHER BUILDING TRADES THAT SHALL CORRELATE TO SUCH WORK IN ORDER TO ENSURE THAT THE WORK DESIGNATED IS COMPLETED ON SCHEDULE. GENERAL CONTRACTOR SHALL COORDINATE ALL FIRE PROTECTION, PLUMBING, HVAC, TECHNOLOGY, AND ELECTRICAL FLOOR, ROOF, AND WALL SLEEVES AND ALL MECHANICAL SHAFTS WITH ALL OTHER TRADES' DRAWINGS.
4. DRAWINGS AND MANUFACTURERS' TEMPLATE DRAWINGS FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, BOLT SETTING TEMPLATES, ISOLATIONS, ISOLATION SPRINGS, ETC.
5. ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE CONTRACT DOCUMENTS. CONTRACTORS SHALL CAREFULLY STUDY AND COMPARE ALL DRAWINGS DURING THE BIDDING PERIOD AND BEFORE INSTALLATION OF THEIR WORK. ANY INCONSISTENCIES IN THE DRAWINGS SHALL BE REPORTED PROMPTLY TO THE ARCHITECT / ENGINEER FOR CLARIFICATION.
6. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT ARCHITECT / ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. THE EXISTING BUILDING INFORMATION, INCLUDING BUT NOT LIMITED TO, ARCHITECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING, ELECTRICAL, AND TECHNOLOGY DEPICTED IN THESE CONSTRUCTION DOCUMENTS ARE BASED UPON EXISTING BUILDING DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION. THE ARCHITECT / ENGINEER MAKES NO WARRANTY OR REPRESENTATION WITH REFERENCE TO THE ACCURACY AND COMPLETENESS OF THE ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THE ACCURACY OF THE EXISTING CONDITIONS.
8. PROTECT THE BUILDING FABRIC AND INTERIOR FROM INCLEMENT WEATHER, AS IT RELATES TO THE WORK OUTLINED IN THESE DOCUMENTS.
9. CONTRACTOR SHALL SECURE BUILDING AREAS OF WORK AT END OF EACH WORK DAY. PROVIDE ENCLOSURES AT EXTERIOR PENETRATIONS AND OBTAIN OWNER REPRESENTATIVE APPROVAL ON METHOD OF SECURING PENETRATIONS. EXTERIOR EQUIPMENT SHALL BE SECURED AT END OF EACH WORK DAY.
10. CONTRACTOR MAY UTILIZE SPACE DELINEATED BY CONSTRUCTION LIMITS. THE CONTRACTOR IS RESPONSIBLE TO REPAIR, RESTORE OR REPLACE ALL SITE ELEMENTS DAMAGED DURING CONSTRUCTION. THE SITE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO GRASS, CONCRETE SIDEWALKS, CURBS, ASPHALT, MARKINGS, SIGNAGE, MANHOLES AND ELECTRICAL APPARATUS.
11. COORDINATE LOCATION OF GARBAGE RECEPTACLES AND CONTRACTOR WASTE AREA WITH OWNER'S REPRESENTATIVE.
12. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.
13. REFER TO THE PROJECT MANUAL FOR ALL RELATED SPECIFICATIONS.
14. WHERE ANY CUTTING IS NECESSARY FOR RENOVATED LAYOUT OR INSTALLATION OF MEP WORK, REFERENCE SPECIFICATION SECTION "SELECTIVE DEMOLITION"
15. ALL INTACT BUILDING MATERIALS DESIGNATED FOR REMOVAL SHALL BE PRESENTED TO THE OWNER FOR FIRST OPTION TO SALVAGE MATERIALS. RECYCLE THE REMAINING DEMOLISHED MATERIALS PER THE REQUIREMENTS OF THE CITY OF MADISON.

Mead & Hunt

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Madison Water Utility
Quality and Reliability since 1872
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
NOTES & SYMBOLS

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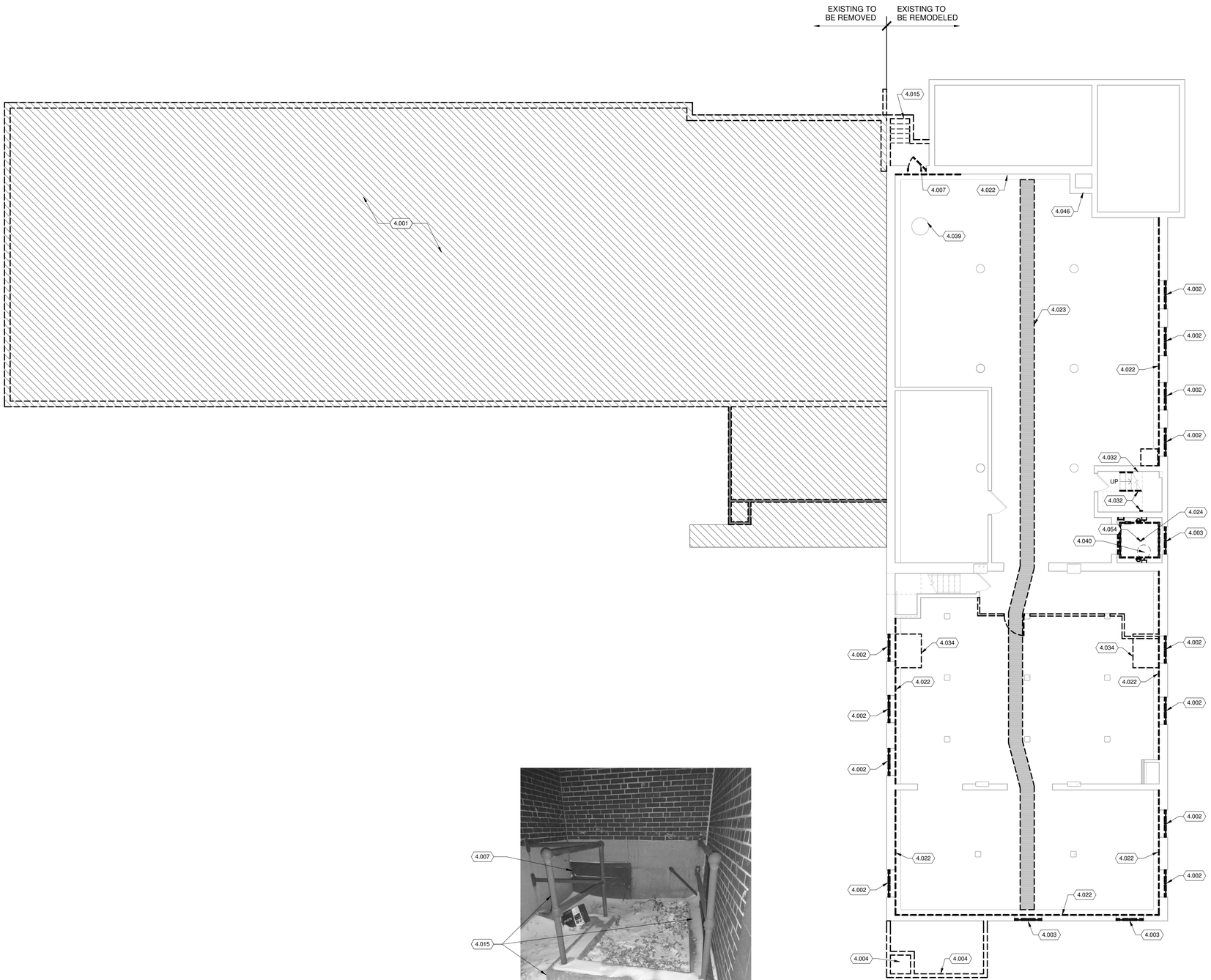

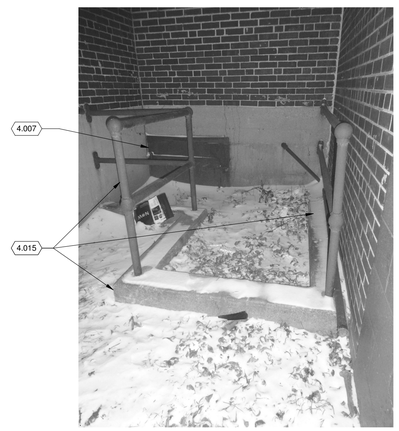

2 **EXISTING CONCRETE WALL/GUARDRAILS**
NO SCALE

TRUE NORTH PLAN NORTH

1 **DEMOLITION PLAN - BASEMENT**
1/8" = 1'-0"

0 4 8 16

ARCHITECTURAL DEMOLITION PLAN GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL BUILDING AND SITE CONDITIONS AND REPORT ANY DISCREPENCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY SCHEDULED DEMOLITION WORK.
2. THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING WORK AND ALL SUBCONTRACTORS FOR DEMOLITION AND REPAIR WORK.
3. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE THE REMOVAL OF ALL ITEMS WHICH INTERFERE WITH THE FINAL CONSTRUCTION AS SHOWN ON THE FLOOR PLANS, ELEVATIONS, DETAILS, AND SCHEDULES. ALL FLOOR FINISHES, BASE, ABANDONED FURNITURE, WINDOW TREATMENTS, SHELVING, SIGNAGE, AND ROOFING MATERIALS SHALL BE DEMOLISHED IN THEIR ENTIRETY.
4. REMOVE ALL ITEMS OF DEMOLITION WORK FROM THE PROJECT DAILY AND DISPOSE OF PROPERLY.
5. REFERENCE PHASING PLANS G-101 THROUGH G-103 FOR SEQUENCING OF CONSTRUCTION REQUIREMENTS. MAINTAIN EXISTING OR PROVIDE TEMPORARY SERVICES TO ENSURE THE CONTINUED OPERATION OF OCCUPIED AREAS.
6. DEMOLISH 100% OF THE EXISTING MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING ITEMS AND/OR SYSTEMS, AND GAS, WATER AND ELECTRICAL METERS. REF: MEP FOR ALL ITEMS TO BE REUSED TYP. ALL ITEMS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY, BACK TO THE ORIGINAL SOURCE. SURROUNDING MATERIALS WHICH ARE DISTURBED OR DEMOLISHED THAT ARE SCHEDULED TO REMAIN SHALL BE PATCHED WITH LIKE SURROUNDING MATERIALS, TYPICAL.
7. DEMOLISH CONCRETE FLOOR SLABS AS REQUIRED TO INSTALL NEW PLUMBING SYSTEMS AND FLOOR DRAINS, REF: PLUMBING DEMOLITION AND PLUMBING DRAWINGS.
8. PROTECT EXISTING SURFACES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
9. EXISTING CONCRETE STRUCTURE TO REMAIN, TYP. PROTECT COLUMNS, PILASTERS, BEAMS, AND SLABS.
10. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
- EXISTING DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

KEYED NOTES

4.001 DEMOLISH PORTION OF BUILDING (HATCHED AREA) IN ITS ENTIRETY INCLUDING FOUNDATIONS AND UP TO ROOF.

4.002 REMOVE WINDOW FOR REPLACEMENT

4.003 REMOVE WINDOW AND SILL, COMPLETE

4.004 REMOVE CONCRETE STAIRS, PLATFORM, AND ASSOCIATED RAILINGS COMPLETE.

4.007 REMOVE DOOR AND FRAME FROM EXISTING WALL TO REMAIN.

4.015 EXCAVATE GRADE AND REMOVE CONCRETE STAIRS, WALLS, FOOTINGS, AND GUARDRAILS. SEE PHOTO 2/AD100. STAIRS ASSUMED TO EXIST BELOW GRADE.

4.022 REMOVE FURRING ON EXTERIOR CONCRETE FOUNDATION WALLS - MOLD PRESENT - REMOVE AND DISPOSE OF IN ITS ENTIRETY

4.023 REMOVE GRATING AND INFILL TRENCH WITH CONCRETE

4.024 REMOVE FREIGHT ELEVATOR AND EQUIPMENT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO CAR, RAILS, EQUIPMENT, DOORS, DOOR FRAMES, AND RELATED STRUCTURE.

4.032 REMOVE EXISTING RAILINGS COMPLETE.

4.034 REMOVE PORTION OF CONCRETE FLOOR FOR BRIDGE CRANE COLUMN AND FOOTING - REF STRUCTURAL

4.039 EXISTING SUMP PUMP CROCK TO REMAIN - COVER AND PROTECT THROUGH CONSTRUCTION

4.040 CUT FLOOR FOR NEW SUMP PUMP CROCK - COORDINATE W/ ELEV MFR FOR FINAL LOCATION

4.046 EXISTING CHIMNEY AND CONCRETE CAP TO REMAIN

4.054 REMOVE PORTION OF CONCRETE FLOOR FOR SUMP PIT.

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
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ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
BASEMENT FLOOR DEMOLITION PLAN

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AD100

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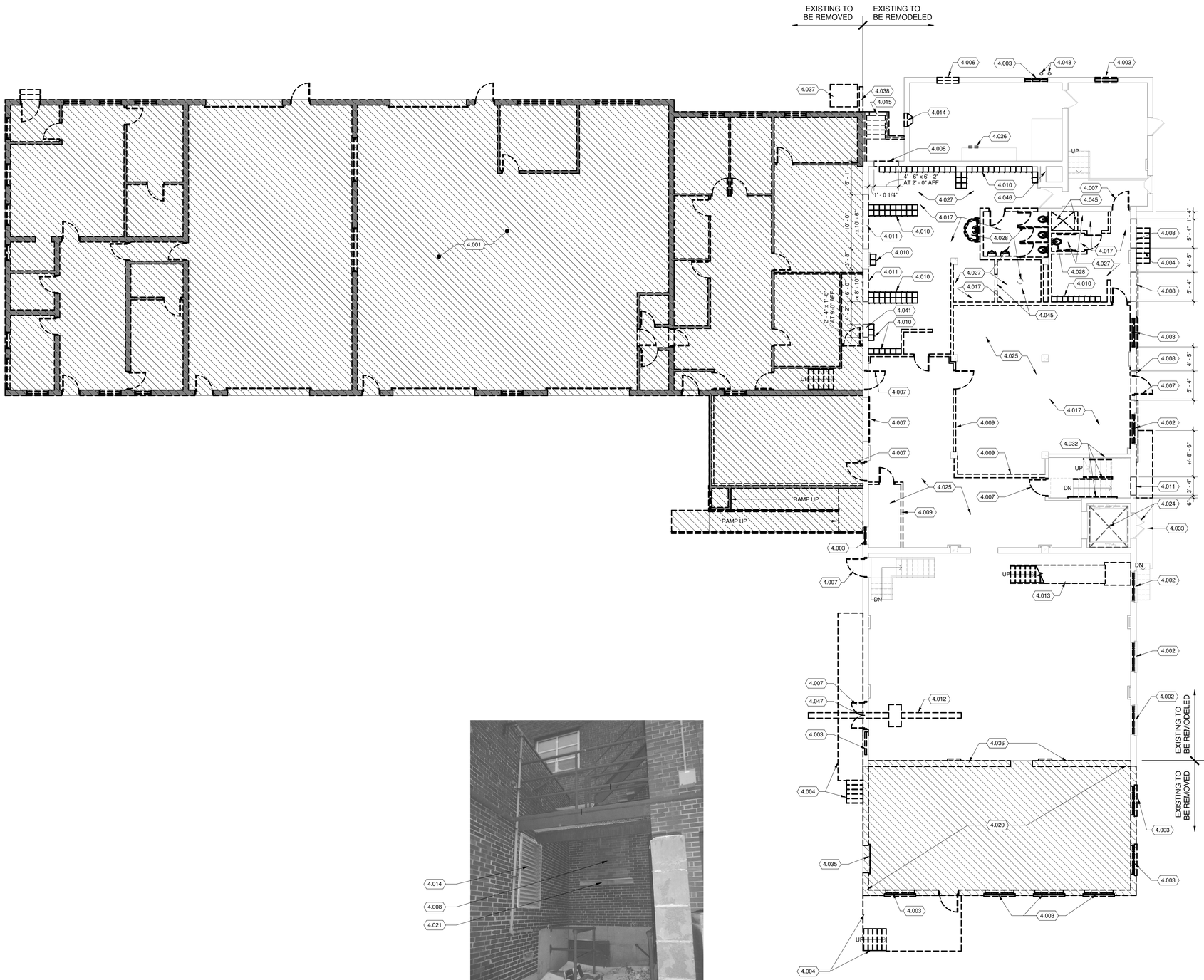

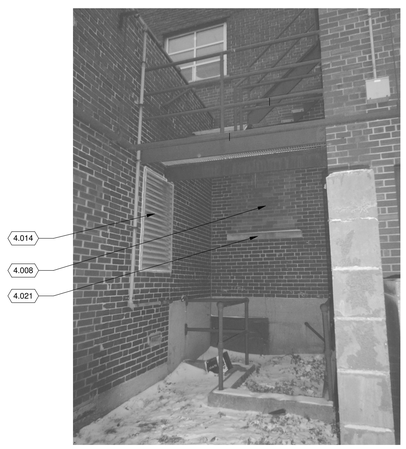

2 **EXISTING LOUVER / DOOR**

TRUE NORTH PLAN NORTH

1 **DEMOLITION PLAN - FIRST FLOOR**

1/8" = 1'-0"

0 4 8 16

ARCHITECTURAL DEMOLITION PLAN GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL BUILDING AND SITE CONDITIONS AND REPORT ANY DISCREPENCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY SCHEDULED DEMOLITION WORK.
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3. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE THE REMOVAL OF ALL ITEMS WHICH INTERFERE WITH THE FINAL CONSTRUCTION AS SHOWN ON THE FLOOR PLANS, ELEVATIONS, DETAILS, AND SCHEDULES. ALL FLOOR FINISHES, BASE, ABANDONED FURNITURE, WINDOW TREATMENTS, SHELVING, SIGNAGE, AND ROOFING MATERIALS SHALL BE DEMOLISHED IN THEIR ENTIRETY.
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7. DEMOLISH CONCRETE FLOOR SLABS AS REQUIRED TO INSTALL NEW PLUMBING SYSTEMS AND FLOOR DRAINS, REF: PLUMBING DEMOLITION AND PLUMBING DRAWINGS.
8. PROTECT EXISTING SURFACES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
9. EXISTING CONCRETE STRUCTURE TO REMAIN, TYP. PROTECT COLUMNS, PILASTERS, BEAMS, AND SLABS.
10. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
- EXISTING DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

KEYED NOTES

4.001 DEMOLISH PORTION OF BUILDING (HATCHED AREA) IN ITS ENTIRETY INCLUDING FOUNDATIONS AND UP TO ROOF.

4.002 REMOVE WINDOW FOR REPLACEMENT

4.003 REMOVE WINDOW AND SILL, COMPLETE

4.004 REMOVE CONCRETE STAIRS, PLATFORM, AND ASSOCIATED RAILINGS COMPLETE.

4.006 REMOVE LOUVER AND PORTION OF WALL FOR REPLACEMENT

4.007 REMOVE DOOR AND FRAME FROM EXISTING WALL TO REMAIN.

4.008 REMOVE PORTION OF WALL FOR NEW WINDOW

4.009 REMOVE WALL FLOOR TO STRUCTURE ABOVE, TYP

4.010 REMOVE FULL HEIGHT LOCKERS AND ADJACENT FLOOR MOUNTED BENCHES

4.011 REMOVE PORTION OF WALL FOR NEW OPENING

4.012 REMOVE MONORAIL CRANE SYSTEM, IN ITS ENTIRETY.

4.013 REMOVE STAIRS AND MEZZANINE SYSTEM IN ITS ENTIRETY.

4.014 REMOVE LOUVER

4.015 EXCAVATE GRADE AND REMOVE CONCRETE STAIRS, WALLS, FOOTINGS, AND GUARDRAILS. SEE PHOTO 2/AD100. STAIRS ASSUMED TO EXIST BELOW GRADE.

4.017 REMOVE ACOUSTIC CEILING - ENTIRE ROOM, TYP

4.020 REMOVE EXISTING 1 STORY PORTION OF BUILDING INCLUDING WALLS, ROOF, AND ASSOCIATED ELEMENTS - FLOOR SLAB AND BASEMENT TO REMAIN.

4.021 REMOVE CONCRETE SILL. SEE PHOTO 2/AD101.

4.024 REMOVE FREIGHT ELEVATOR AND EQUIPMENT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO CAR, RAILS, EQUIPMENT, DOORS, DOOR FRAMES, AND RELATED STRUCTURE.

4.025 FLOORING ABATED BY OWNER - REMOVE ANY FLOORING ACCESSORIES AND BASE FOR NEW FLOOR FINISH

4.026 REMOVE FLOOR MOUNTED CHANNEL SUPPORT

4.027 REMOVE CERAMIC TILE FLOORING AND BASE - ENTIRE ROOM.

4.028 REMOVE TOILET/SHOWER ACCESSORIES COMPLETE, INCLUDING BUT NOT LIMITED TO PARTITIONS, GRAB BARS, SOAP DISPENSERS, PAPER TOWEL DISPENSERS, ETC.

4.032 REMOVE EXISTING RAILINGS COMPLETE.

4.033 EXISTING CONCRETE PLATFORM TO REMAIN - REMOVE AREA MARKED FOR DEMOLITION IN ITS ENTIRETY

4.035 REMOVE COILING OVERHEAD DOOR, RAILS, AND COMPONENTS IN THEIR ENTIRETY

4.036 REMOVE LOAD BEARING MASONRY WALL COMPLETE DOWN TO FLOOR STRUCTURE. PROVIDE SHORING TO PREVENT DAMAGE TO EXISTING ADJACENT STRUCTURE TO REMAIN.

4.037 REMOVE CONCRETE PAD AND TRANSFORMER - REF ELECTRICAL

4.038 REMOVE CMU PARTIAL HEIGHT WALL AND FOOTINGS.

4.041 REMOVE PORTION OF WALL FOR DUCT PENENTRATION - VERIFY FINAL LOCATION AND SIZE W/ MECH

4.045 REMOVE SLOPED FLOOR AND CURBS AT BUILT-IN PLACE TILE SHOWER - PROVIDE LEVEL FLOOR FOR FUTURE FLOOR FINISH

4.046 EXISTING CHIMNEY AND CONCRETE CAP TO REMAIN

4.047 DEMOLISH ADDITIONAL PORTION OF WALL ABOVE FOR NEW DOORWAY AND HOIST BEAM

4.048 REMOVE BOLLARDS COMPLETE

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
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SHEET CONTENTS
FIRST FLOOR DEMOLITION PLAN

SHEET NO.:
AD101

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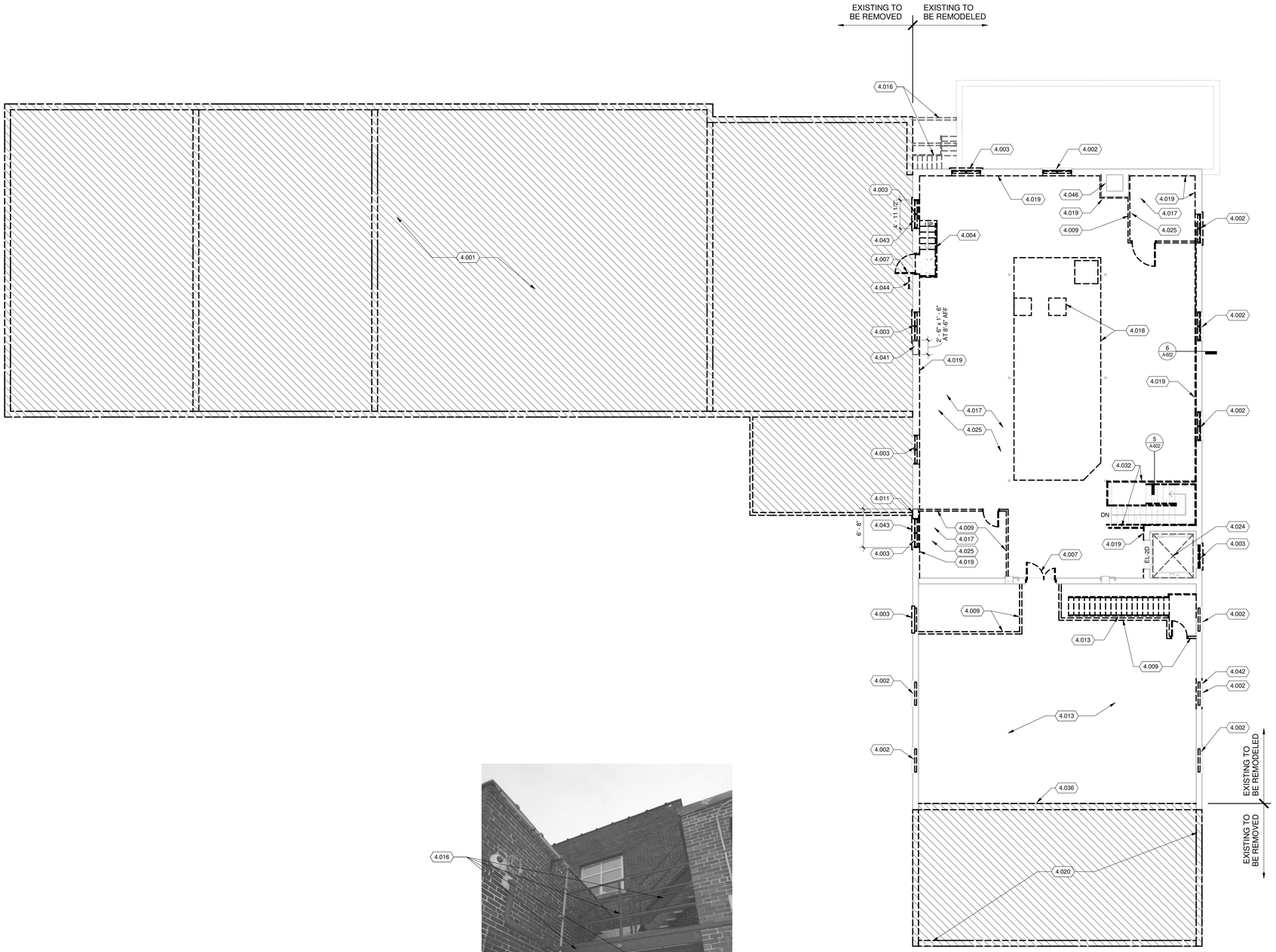

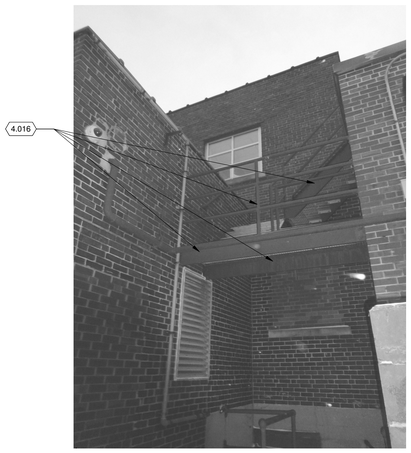

2 **EXISTING 2ND FLOOR PLATFORM / STAIRS**

TRUE NORTH PLAN NORTH

1 **PROPOSED SECOND FLOOR PLAN**

1/8" = 1'-0"

0 4 8 16

ARCHITECTURAL DEMOLITION PLAN GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL BUILDING AND SITE CONDITIONS AND REPORT ANY DISCREPENCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY SCHEDULED DEMOLITION WORK.
2. THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING WORK AND ALL SUBCONTRACTORS FOR DEMOLITION AND REPAIR WORK.
3. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE THE REMOVAL OF ALL ITEMS WHICH INTERFERE WITH THE FINAL CONSTRUCTION AS SHOWN ON THE FLOOR PLANS, ELEVATIONS, DETAILS, AND SCHEDULES. ALL FLOOR FINISHES, BASE, ABANDONED FURNITURE, WINDOW TREATMENTS, SHELVING, SIGNAGE, AND ROOFING MATERIALS SHALL BE DEMOLISHED IN THEIR ENTIRETY.
4. REMOVE ALL ITEMS OF DEMOLITION WORK FROM THE PROJECT DAILY AND DISPOSE OF PROPERLY.
5. REFERENCE PHASING PLANS G-101 THROUGH G-103 FOR SEQUENCING OF CONSTRUCTION REQUIREMENTS. MAINTAIN EXISTING OR PROVIDE TEMPORARY SERVICES TO ENSURE THE CONTINUED OPERATION OF OCCUPIED AREAS.
6. DEMOLISH 100% OF THE EXISTING MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING ITEMS AND/OR SYSTEMS, AND GAS, WATER AND ELECTRICAL METERS. REF: MEP FOR ALL ITEMS TO BE REUSED TYP. ALL ITEMS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY, BACK TO THE ORIGINAL SOURCE. SURROUNDING MATERIALS WHICH ARE DISTURBED OR DEMOLISHED THAT ARE SCHEDULED TO REMAIN SHALL BE PATCHED WITH LIKE SURROUNDING MATERIALS, TYPICAL.
7. DEMOLISH CONCRETE FLOOR SLABS AS REQUIRED TO INSTALL NEW PLUMBING SYSTEMS AND FLOOR DRAINS, REF: PLUMBING DEMOLITION AND PLUMBING DRAWINGS.
8. PROTECT EXISTING SURFACES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
9. EXISTING CONCRETE STRUCTURE TO REMAIN, TYP. PROTECT COLUMNS, PILASTERS, BEAMS, AND SLABS.
10. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
- EXISTING DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

KEYED NOTES

4.001 DEMOLISH PORTION OF BUILDING (HATCHED AREA) IN ITS ENTIRETY INCLUDING FOUNDATIONS AND UP TO ROOF.

4.002 REMOVE WINDOW FOR REPLACEMENT

4.003 REMOVE WINDOW AND SILL, COMPLETE

4.004 REMOVE CONCRETE STAIRS, PLATFORM, AND ASSOCIATED RAILINGS COMPLETE.

4.007 REMOVE DOOR AND FRAME FROM EXISTING WALL TO REMAIN.

4.009 REMOVE WALL FLOOR TO STRUCTURE ABOVE, TYP

4.011 REMOVE PORTION OF WALL FOR NEW OPENING

4.013 REMOVE STAIRS AND MEZZANINE SYSTEM IN ITS ENTIRETY.

4.016 REMOVE STEEL GRATE PLATFORM, STEEL BEAM SUPPORTS, STEEL STAIR SYSTEM AND STEEL GUARDRAILS. SEE PHOTO 2/AD102.

4.017 REMOVE ACOUSTIC CEILING - ENTIRE ROOM, TYP

4.018 DEMOLISH 4" CONCRETE HOUSEKEEPING/MECHANICAL PADS DOWN TO MATCH ADJACENT FLOOR SURFACE. PROVIDE SMOOTH SURFACE FOR TEMPORARY EXPOSED FLOOR AND TO RECEIVE FINAL FLOOR FINISH.

4.019 REMOVE GYPSUM BOARD AND METAL FURRING, TYP

4.020 REMOVE EXISTING 1 STORY PORTION OF BUILDING INCLUDING WALLS, ROOF, AND ASSOCIATED ELEMENTS - FLOOR SLAB AND BASEMENT TO REMAIN.

4.024 REMOVE FREIGHT ELEVATOR AND EQUIPMENT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO CAR, RAILS, EQUIPMENT, DOORS, DOOR FRAMES, AND RELATED STRUCTURE.

4.025 FLOORING ABATED BY OWNER - REMOVE ANY FLOORING ACCESSORIES AND BASE FOR NEW FLOOR FINISH

4.032 REMOVE EXISTING RAILINGS COMPLETE.

4.036 REMOVE LOAD BEARING MASONRY WALL COMPLETE DOWN TO FLOOR STRUCTURE. PROVIDE SHORING TO PREVENT DAMAGE TO EXISTING ADJACENT STRUCTURE TO REMAIN.

4.041 REMOVE PORTION OF WALL FOR DUCT PENENTRATION - VERIFY FINAL LOCATION AND SIZE W/ MECH

4.042 REMOVE PORTION OF WALL FOR LOUVER BELOW WINDOW - REF MECH AND EAST EXTERIOR ELEVATIONS FOR LOCATION

4.043 REMOVE PORTION OF WALL BELOW WINDOW FOR NEW DOORWAY

4.044 REMOVE ROOF ACCESS LADDER

4.046 EXISTING CHIMNEY AND CONCRETE CAP TO REMAIN

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SHEET CONTENTS
SECOND FLOOR DEMOLITION PLAN

SHEET NO.:
AD102

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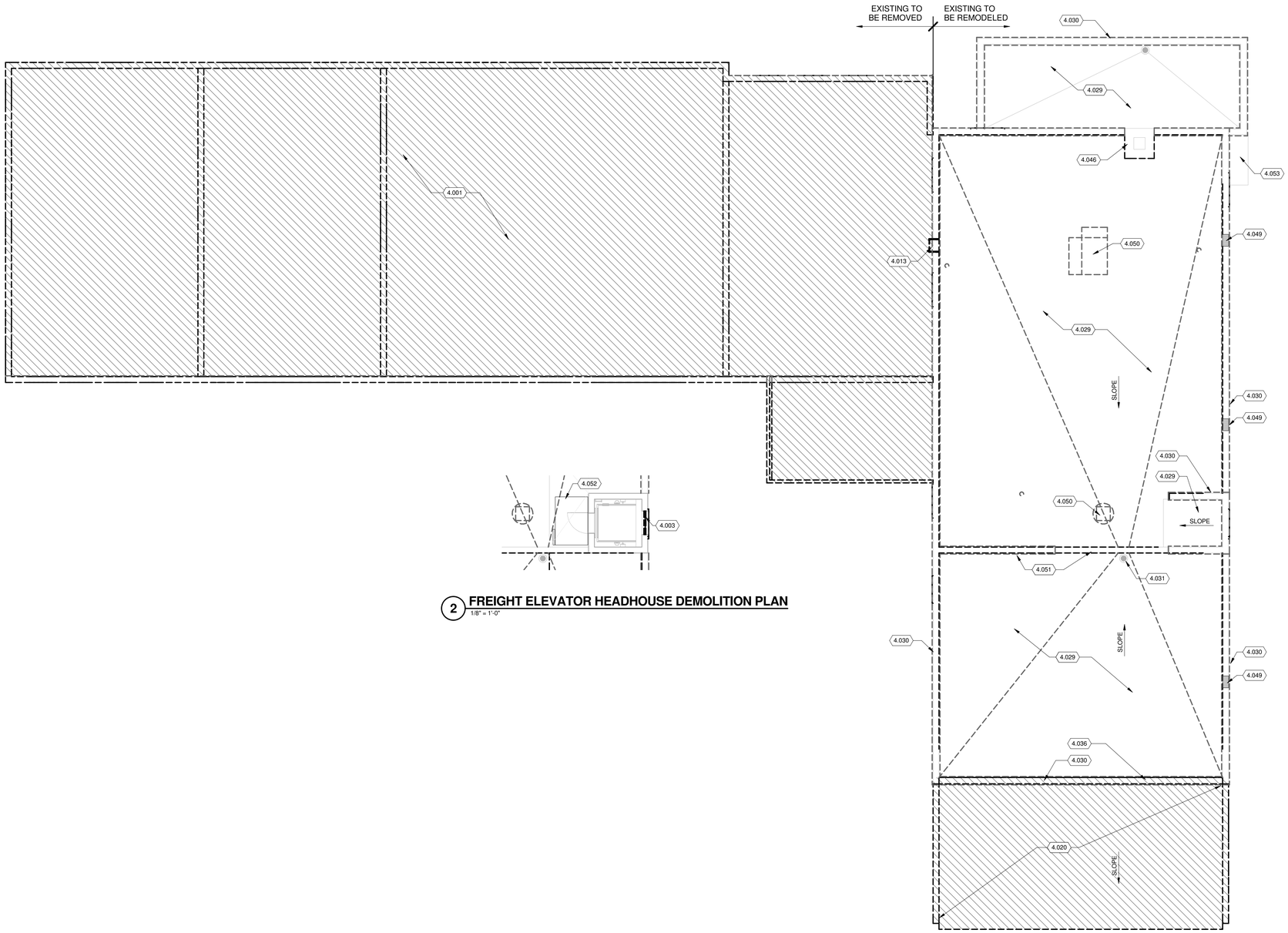

2 **FREIGHT ELEVATOR HEADHOUSE DEMOLITION PLAN**
1/8" = 1'-0"

TRUE NORTH PLAN NORTH

1 **ROOF DEMOLITION PLAN**
1/8" = 1'-0"

0 4 8 16

ARCHITECTURAL DEMOLITION PLAN GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL BUILDING AND SITE CONDITIONS AND REPORT ANY DISCREPENCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY SCHEDULED DEMOLITION WORK.
2. THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING WORK AND ALL SUBCONTRACTORS FOR DEMOLITION AND REPAIR WORK.
3. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE THE REMOVAL OF ALL ITEMS WHICH INTERFERE WITH THE FINAL CONSTRUCTION AS SHOWN ON THE FLOOR PLANS, ELEVATIONS, DETAILS, AND SCHEDULES. ALL FLOOR FINISHES, BASE, ABANDONED FURNITURE, WINDOW TREATMENTS, SHELVING, SIGNAGE, AND ROOFING MATERIALS SHALL BE DEMOLISHED IN THEIR ENTIRETY.
4. REMOVE ALL ITEMS OF DEMOLITION WORK FROM THE PROJECT DAILY AND DISPOSE OF PROPERLY.
5. REFERENCE PHASING PLANS G-101 THROUGH G-103 FOR SEQUENCING OF CONSTRUCTION REQUIREMENTS. MAINTAIN EXISTING OR PROVIDE TEMPORARY SERVICES TO ENSURE THE CONTINUED OPERATION OF OCCUPIED AREAS.
6. DEMOLISH 100% OF THE EXISTING MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING ITEMS AND/OR SYSTEMS, AND GAS, WATER AND ELECTRICAL METERS. REF: MEP FOR ALL ITEMS TO BE REUSED TYP. ALL ITEMS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY, BACK TO THE ORIGINAL SOURCE. SURROUNDING MATERIALS WHICH ARE DISTURBED OR DEMOLISHED THAT ARE SCHEDULED TO REMAIN SHALL BE PATCHED WITH LIKE SURROUNDING MATERIALS, TYPICAL.
7. DEMOLISH CONCRETE FLOOR SLABS AS REQUIRED TO INSTALL NEW PLUMBING SYSTEMS AND FLOOR DRAINS, REF: PLUMBING DEMOLITION AND PLUMBING DRAWINGS.
8. PROTECT EXISTING SURFACES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
9. EXISTING CONCRETE STRUCTURE TO REMAIN, TYP. PROTECT COLUMNS, PILASTERS, BEAMS, AND SLABS.
10. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
- EXISTING DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

KEYED NOTES

4.001 DEMOLISH PORTION OF BUILDING (HATCHED AREA) IN ITS ENTIRETY INCLUDING FOUNDATIONS AND UP TO ROOF.

4.003 REMOVE WINDOW AND SILL, COMPLETE

4.013 REMOVE STAIRS AND MEZZANINE SYSTEM IN ITS ENTIRETY.

4.020 REMOVE EXISTING 1 STORY PORTION OF BUILDING INCLUDING WALLS, ROOF, AND ASSOCIATED ELEMENTS - FLOOR SLAB AND BASEMENT TO REMAIN.

4.029 REMOVE EXISTING ROOF MEMBRANE AND BALLAST COMPLETE DOWN TO SUBSTRATE TO REMAIN.

4.030 REMOVE EXISTING TERRA COTTA PARAPET CAP - ASBESTOS MASTIC REMOVED BY OTHERS, TYP

4.031 REMOVE EXISTING ROOF DRAIN CAP AND SALVAGE FOR REINSTALLATION IN SAME LOCATION.

4.036 REMOVE LOAD BEARING MASONRY WALL COMPLETE DOWN TO FLOOR STRUCTURE. PROVIDE SHORING TO PREVENT DAMAGE TO EXISTING ADJACENT STRUCTURE TO REMAIN.

4.046 EXISTING CHIMNEY AND CONCRETE CAP TO REMAIN

4.049 REMOVE PORTION OF MASONRY WALL FOR SCUPPERS

4.050 REMOVE ROOF MECH EQUIPMENT COMPLETE

4.051 REMOVE ALUMINUM COPING

4.052 EXISTING MAINTENANCE PLATFORM DETACHED FROM WALL - REMOVE AND REPAIR FOR REINSTALLATION

4.053 EXISTING CONCRETE CAP TO REMAIN

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DESIGNED BY: SZK
DRAWN BY: NJD
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SHEET CONTENTS
ROOF DEMOLITION PLAN

SHEET NO.:
AD103

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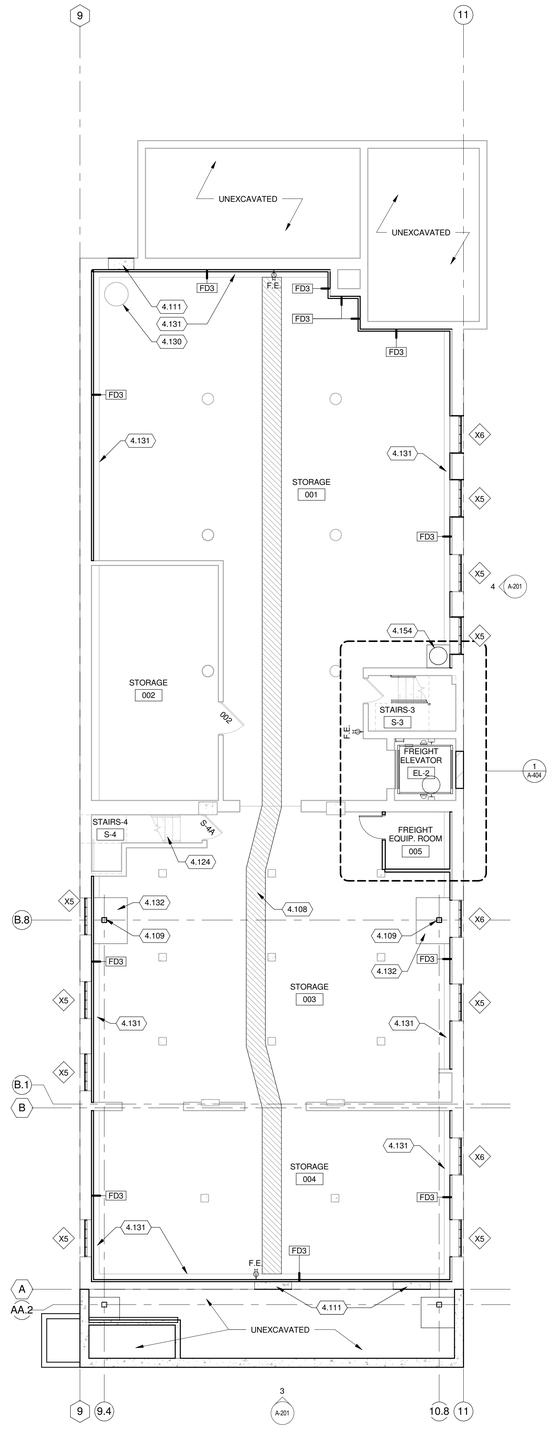

TRUE NORTH PLAN NORTH

1 **BASEMENT PLAN**

1/8" = 1'-0"

0 4 8 16

ARCHITECTURAL PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL EXTERIOR DIMENSIONS ARE FROM FINISH FACE OF CMU BACKUP, UNLESS NOTED OTHERWISE.
3. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
3. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
4. REFERENCE SHEET G-002 AND G-003 FOR ALL CODE, FIRE RATING, AND SEPARATION REQUIREMENTS.
5. GENERAL CONTRACTOR SHALL PATCH AND REPAIR EXISTING CONSTRUCTION (WALLS, DOORS, CEILINGS, FLOORS, ETC.) AS REQUIRED FROM DEMOLITION OR CONSTRUCTION TO ALLOW FOR THE PREP WORK AND NEW OR COMPLETION OF EXISTING FINISHES. REPAIRS OR REPLACEMENTS MUST BE DURABLE, SEAMLESS, AND MATCH THE EXISTING MATERIAL.
5. GENERAL CONTRACTOR SHALL PATCH ALL FLOOR AND WALL PENETRATIONS CAUSED BY DEMOLITION OF MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING, INCLUDING BUT NOT LIMITED TO PIPING ANDCONDUIT RUNS, IN A MANNER THAT IS CONSISTENT WITH THE EXISTING FLOOR AND WALL CONSTRUCTION AND FINISH. ALL PENETRATIONS SHALL MEET REQUIRED FIRE RATINGS.
6. COORDINATE THE INSTALLATION OF ALL OWNER-SUPPLIED APPLIANCES AND EQUIPMENT. REFERENCE PLANS, SPECS, AND INTERIOR ELEVATIONS FOR SPECIFIC EQUIPMENT AND ITS INSTALLATION REQUIREMENTS.
7. GENERAL CONTRACTOR SHALL PROVIDE BLOCKING, STIFFENERS, BRACINGS, BACKING PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE PROPER INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, TOILET PARTITIONS AND MISCELLANEOUS EQUIPMENT.
8. EXISTING AND INFILL CONCRETE SUB-FLOOR SHALL BE MADE LEVEL, PLUMB AND IN SOUND CONDITION AS REQUIRED FOR THE INSTALLATION OF FINAL FLOOR FINISHES, TYPICAL. PROVIDE ARDEX OR EQUAL LEVELING CONCRETE TO PROVIDE A SMOWALKABLE AREA. PREP OF EXISTING FLOORS SHALL BE PROVIDED AS PART OF PHASE 1 WORK FOR TEMPORARY OCCUPIED AREAS THROUGH PHASE 2.
9. ALL RECESSED CABINETS, PANELS, BOXES, ETC. LOCATED IN FIRE-RATED PARTITIONS SHALL BE INSTALLED IN A MANNER WHICH MAINTAINS THE FIRE-RATED CONSTRUCTION.
10. SEE ENLARGED PLANS FOR NOTES, DIMENSIONS, AND WALL TYPES WITHIN THE DETAIL CALLOUT BOUNDARIES.
11. REFERENCE PHASING PLANS G-101 THROUGH G-104 FOR SEQUENCING OF CONSTRUCTION REQUIREMENTS. MAINTAIN EXISTING OR PROVIDE TEMPORARY SERVICES TO ENSURE THE CONTINUED OPERATION OF OCCUPIED AREAS.
12. REFERERNCE SHEET A-141 FOR INTERIOR PARTITION TYPES, INTERIOR PARTITION TAGS NOTED ENCOMPASS THE ENTIRE LENGTH OF WALL SHOWN TO CORNERS OF ROOM, OVER AND AROUND DOORWAYS SHOWN.

KEYED NOTES

4.108 INFILL EXISTING TRENCH WITH CONCRETE - DOWEL REBAR 24" O.C. INTO EXISTING, TYP

4.109 BRIDGE CRANE SUPPORT COLUMNS - PATCH AND INFILL FLOOR AT PENETRATIONS THROUGH FLOOR SLAB - PROVIDE EXPANSION FILL BETWEEN SLAB AND COLUMN - REF STRUCTURAL

4.111 CMU INFILL AT REMOVED OPENING - PARGE WITH CONCRETE AT EXPOSED EXTERIOR LOCATIONS

4.124 PROVIDE HAND AND GUARD RAIL REPLACEMENT TO MATCH CURRENT CODE REQUIREMENTS - PATCH AND REPAIR WALL WHERE DEMOLISHED RAILINGS WERE REMOVED FOR SECURE ATTACHMENT OF NEW RAIL.

4.130 EXISTING SUMP PUMP TO REMAIN

4.131 EXISTING TRENCH DRAIN TO REMAIN, TYP

4.132 INFILL CONC FLOOR AT NEW FOOTINGS - REF STRUCTURAL

4.154 PROVIDE SUMP PIT, SEE PLUMBING

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SHEET CONTENTS
BASEMENT FLOOR PLAN

SHEET NO.:
A-100

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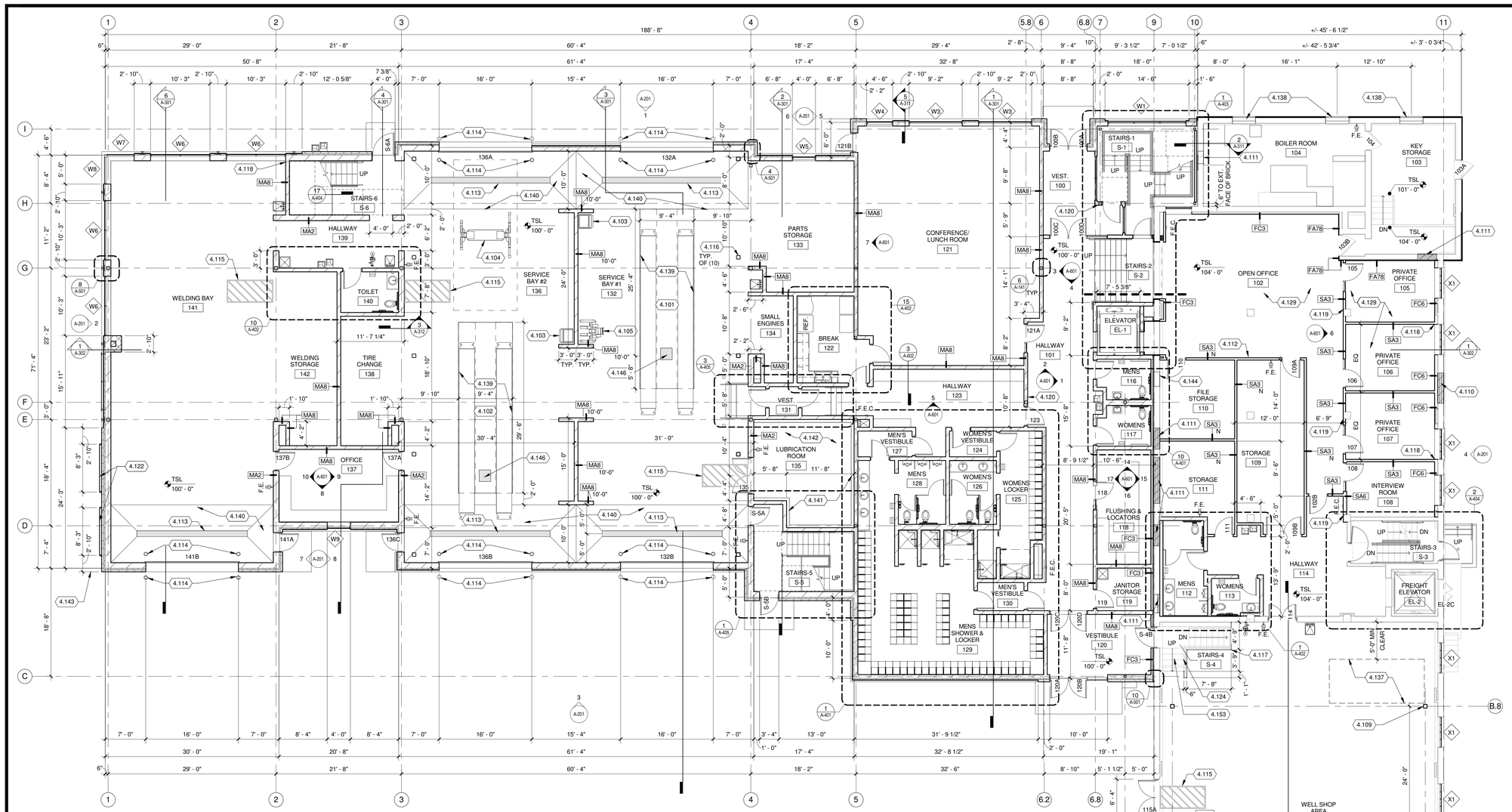

NORTH

1 FIRST FLOOR PLAN

1/8" = 1'-0"

0 4 8 16

ARCHITECTURAL PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL EXTERIOR DIMENSIONS ARE FROM FINISH FACE OF CMU BACKUP, UNLESS NOTED OTHERWISE.
3. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
3. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
4. REFERENCE SHEET G-002 AND G-003 FOR ALL CODE, FIRE RATING, AND SEPARATION REQUIREMENTS.
5. GENERAL CONTRACTOR SHALL PATCH AND REPAIR EXISTING CONSTRUCTION (WALLS, DOORS, CEILINGS, FLOORS, ETC.) AS REQUIRED FROM DEMOLITION OR CONSTRUCTION TO ALLOW FOR THE PREP WORK AND NEW OR COMPLETION OF EXISTING FINISHES. REPAIRS OR REPLACEMENTS MUST BE DURABLE, SEAMLESS, AND MATCH THE EXISTING MATERIAL.
5. GENERAL CONTRACTOR SHALL PATCH ALL FLOOR AND WALL PENETRATIONS CAUSED BY DEMOLITION OF MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING, INCLUDING BUT NOT LIMITED TO PIPING ANCONDUIT RUNS, IN A MANNER THAT IS CONSISTENT WITH THE EXISTING FLOOR AND WALL CONSTRUCTION AND FINISH. ALL PENETRATIONS SHALL MEET REQUIRED FIRE RATINGS.
6. COORDINATE THE INSTALLATION OF ALL OWNER-SUPPLIED APPLIANCES AND EQUIPMENT. REFERENCE PLANS, SPECS, AND INTERIOR ELEVATIONS FOR SPECIFIC EQUIPMENT AND ITS INSTALLATION REQUIREMENTS.
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8. EXISTING AND INFILL CONCRETE SUB-FLOOR SHALL BE MADE LEVEL, PLUMB AND IN SOUND CONDITION AS REQUIRED FOR THE INSTALLATION OF FINAL FLOOR FINISHES, TYPICAL. PROVIDE ARDEX OR EQUAL LEVELING CONCRETE TO PROVIDE A SMOWALKABLE AREA. PREP OF EXISTING FLOORS SHALL BE PROVIDED AS PART OF PHASE 1 WORK FOR TEMPORARY OCCUPIED AREAS THROUGH PHASE 2.
9. ALL RECESSED CABINETS, PANELS, BOXES, ETC. LOCATED IN FIRE-RATED PARTITIONS SHALL BE INSTALLED IN A MANNER WHICH MAINTAINS THE FIRE-RATED CONSTRUCTION.
10. SEE ENLARGED PLANS FOR NOTES, DIMENSIONS, AND WALL TYPES WITHIN THE DETAIL CALLOUT BOUNDARIES.
11. REFERENCE PHASING PLANS G-101 THROUGH G-104 FOR SEQUENCING OF CONSTRUCTION REQUIREMENTS. MAINTAIN EXISTING OR PROVIDE TEMPORARY SERVICES TO ENSURE THE CONTINUED OPERATION OF OCCUPIED AREAS.
12. REFERERNCE SHEET A-141 FOR INTERIOR PARTITION TYPES. INTERIOR PARTITION TAGS NOTED ENCOMPASS THE ENTIRE LENGTH OF WALL SHOWN TO CORNERS OF ROOM, OVER AND AROUND DOORWAYS SHOWN.

KEYED NOTES

4.101 OFCI PARALLELLOGRAM LIFT, FLUSH MOUNTED, 75,000LB CAPACITY WITH 30'-0" RUNWAY LENGTH (ALT #1 CFCI)

4.102 OFCI PARALLELLOGRAM LIFT, FLUSH MOUNTED, 50,000LB CAPACITY WITH 28'-0" RUNWAY LENGHT (ALT #1 CFCI)

4.103 OFCI PARALLELLOGRAM LIFT CONTROL UNIT (ALT #1 CFCI)

4.104 OFCI HYDRAULIC LIFT, 12,000LB CAPACITY (ALT #1 CFCI)

4.105 OFCI TIRE LIFT JACK SYSTEM (ALT #1 CFCI)

4.109 BRIDGE CRANE SUPPORT COLUMNS - PATCH AND INFILL FLOOR AT PENETRATIONS THROUGH FLOOR SLAB - PROVIDE EXPANSION FILL BETWEEN SLAB AND COLUMN - REF STRUCTURAL

4.110 SOLID BRICK INFILL AT REMOVED OPENING - TOOTH INTO EXISTING

4.111 CMU INFILL AT REMOVED OPENING - PARGE WITH CONCRETE AT EXPOSED EXTERIOR LOCATIONS

4.112 FUEL SYSTEM MONITORING PANEL - COORDINATE WITH FUEL SYSTEM PROVIDER/INSTALLER AND OWNER

4.113 TRENCH DRAIN

4.114 8" ROUND BOLLARDS

4.115 OVERHEAD MONORAIL CRANE WARNING STRIPING, 4' WIDE x CRANE LENGTH - COORDINATE FINAL LOCATION W/ CRANE

4.116 BRIDGE CRANE SUPPORT COLUMNS BEARING ON CONCRETE SLAB/LOAD BEARING WALL - REF STRUCTURAL

4.117 PROVIDE MAINTENANCE GUARD RAIL FLUSH MOUNTED TO SLAB

4.118 ALIGN WALL WITH EDGE OF WINDOW

4.119 ALIGN STUDS WITH EDGE OF COLUMN

4.120 ALIGN WALL CENTERED ON COLUMN / GRID LINE

4.122 GREEN WALL; PROVIDE TWO 8'-0" AND ONE 6'-0" HIGH FENCE SECTIONS TO MATCH LANDSCAPING FENCE. ATTACH FENCE TO SUPPORT STRUCTURE WITH FENCE MANUFACTURERS DETAILS. SUPPORT STRUCTURE SHALL BE HSS4x2x1/8 WITH CAPPED ENDS, FASTENED BACK TO CMU WITH 1/2" BOLTS.

4.124 PROVIDE HAND AND GUARD RAIL REPLACEMENT TO MATCH CURRENT CODE REQUIREMENTS - PATCH AND REPAIR WALL WHERE DEMOLISHED RAILINGS WERE REMOVED FOR SECURE ATTACHMENT OF NEW RAIL.

4.129 PROVIDE FLOOR LEVELING AT REMOVED TOILET/SHOWERS OR EQUIPMENT PADS TO PROVIDE SMOOTH SURFACE FOR FINAL FLOOR FINISHES- WHOLE ROOM, TYP

4.136 BRIDGE CRANE SUPPORT COLUMNS - PROVIDE EXPANSION FILL BETWEEN SLAB AND COLUMN FOR THRU-FLR CONDITION - REF STRUCTURAL

4.137 OFCI FULLY ENCLOSED PAINT BOOTH - MARATHON CSB-080820-3L OR EQUAL (ALT #1 CFCI)

4.138 LOUVER - REF MECH

4.139 DEPRESSED CONCRETE SLAB FOR PARALLELOGRAM LIFT, TYP - REF STRUCTURAL

4.140 SLOPE TO DRAIN, TYP

4.141 8" WIDE EVAPORATION TRENCH AT ROOM PERIMETER, TYP

4.142 OFCI - BULK FLUID SYSTEM LUBRICATION ROOM EQUIPMENT TO BE PROCURED FROM PERKINS OIL - CONTACT STEVE WESLEY - 608-221-4736 (ALT #1 CFCI)

4.143 DIMENSION TAKEN TO EDGE OF BRICK

4.144 DUCT PENETRATION - COORDINATE W/ MECH AND STRUCTURAL

4.146 24"x24"x24" SUMP PIT W/ GRATE

4.153 PROVIDE STAIR FINISHES PER ROOM FINISH SCHEDULE ON SHEET A-601.

Mead & Hunt

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Madison Water Utility
Quality and Reliability since 1872
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
FIRST FLOOR PLAN

SHEET NO.:
A-101

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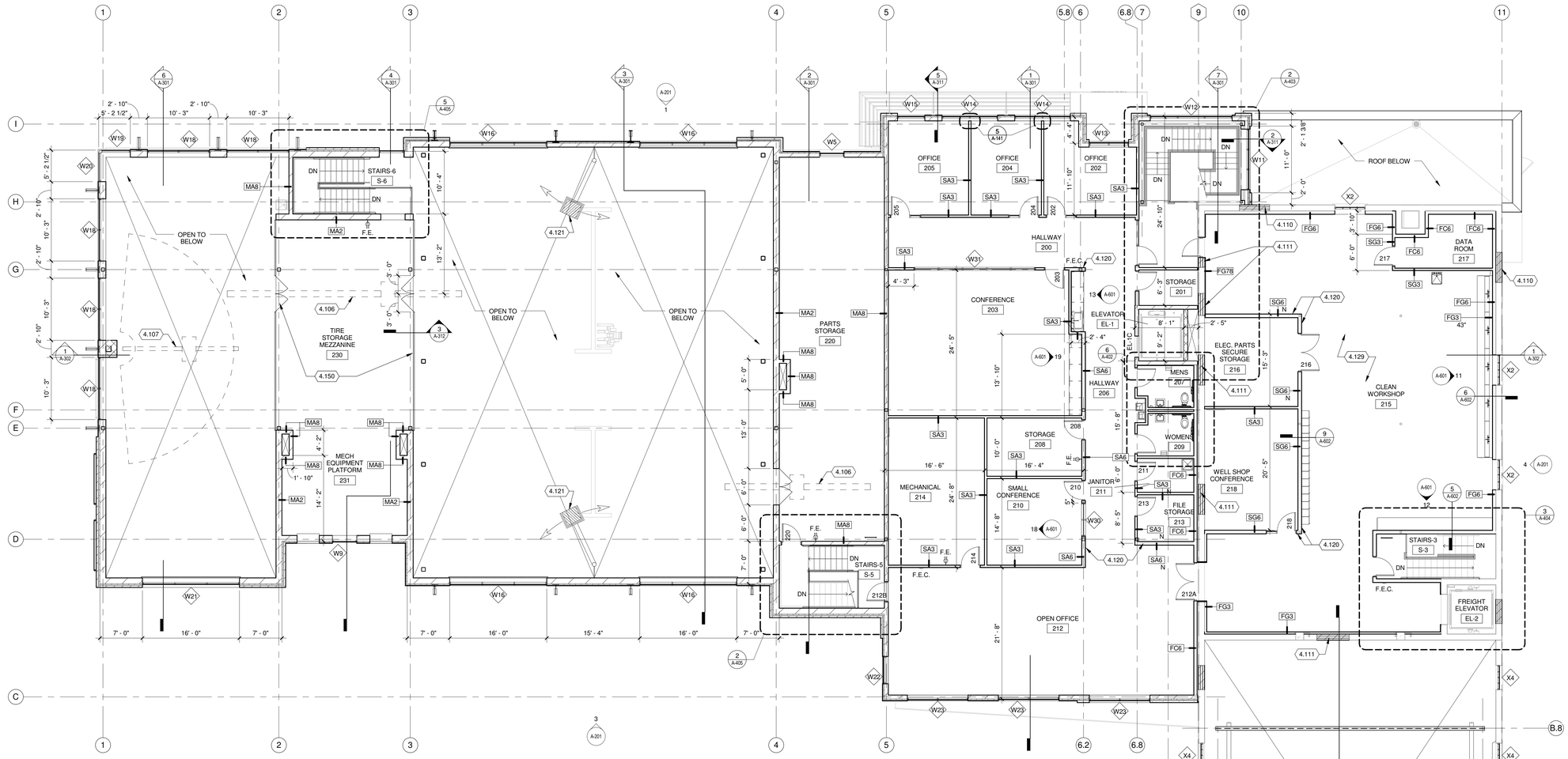


ARCHITECTURAL PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL EXTERIOR DIMENSIONS ARE FROM FINISH FACE OF CMU BACKUP, UNLESS NOTED OTHERWISE.
3. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
3. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
4. REFERENCE SHEET G-002 AND G-003 FOR ALL CODE, FIRE RATING, AND SEPARATION REQUIREMENTS.
5. GENERAL CONTRACTOR SHALL PATCH AND REPAIR EXISTING CONSTRUCTION (WALLS, DOORS, CEILINGS, FLOORS, ETC.) AS REQUIRED FROM DEMOLITION OR CONSTRUCTION TO ALLOW FOR THE PREP WORK AND NEW OR COMPLETION OF EXISTING FINISHES. REPAIRS OR REPLACEMENTS MUST BE DURABLE, SEAMLESS, AND MATCH THE EXISTING MATERIAL.
5. GENERAL CONTRACTOR SHALL PATCH ALL FLOOR AND WALL PENETRATIONS CAUSED BY DEMOLITION OF MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING, INCLUDING BUT NOT LIMITED TO PIPING AND CONDUIT RUNS, IN A MANNER THAT IS CONSISTENT WITH THE EXISTING FLOOR AND WALL CONSTRUCTION AND FINISH. ALL PENETRATIONS SHALL MEET REQUIRED FIRE RATINGS.
6. COORDINATE THE INSTALLATION OF ALL OWNER-SUPPLIED APPLIANCES AND EQUIPMENT. REFERENCE PLANS, SPECS, AND INTERIOR ELEVATIONS FOR SPECIFIC EQUIPMENT AND ITS INSTALLATION REQUIREMENTS.
7. GENERAL CONTRACTOR SHALL PROVIDE BLOCKING, STIFFENERS, BRACINGS, BACKING PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE PROPER INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, TOILET PARTITIONS AND MISCELLANEOUS EQUIPMENT.
8. EXISTING AND INFILL CONCRETE SUB-FLOOR SHALL BE MADE LEVEL, PLUMB AND IN SOUND CONDITION AS REQUIRED FOR THE INSTALLATION OF FINAL FLOOR FINISHES, TYPICAL. PROVIDE ARDEX OR EQUAL LEVELING CONCRETE TO PROVIDE A SMOWALKABLE AREA. PREP OF EXISTING FLOORS SHALL BE PROVIDED AS PART OF PHASE 1 WORK FOR TEMPORARY OCCUPIED AREAS THROUGH PHASE 2.
9. ALL RECESSED CABINETS, PANELS, BOXES, ETC. LOCATED IN FIRE-RATED PARTITIONS SHALL BE INSTALLED IN A MANNER WHICH MAINTAINS THE FIRE-RATED CONSTRUCTION.
10. SEE ENLARGED PLANS FOR NOTES, DIMENSIONS, AND WALL TYPES WITHIN THE DETAIL CALLOUT BOUNDARIES.
11. REFERENCE PHASING PLANS G-101 THROUGH G-104 FOR SEQUENCING OF CONSTRUCTION REQUIREMENTS. MAINTAIN EXISTING OR PROVIDE TEMPORARY SERVICES TO ENSURE THE CONTINUED OPERATION OF OCCUPIED AREAS.
12. REFERERNCE SHEET A-141 FOR INTERIOR PARTITION TYPES. INTERIOR PARTITION TAGS NOTED ENCOMPASS THE ENTIRE LENGTH OF WALL SHOWN TO CORNERS OF ROOM, OVER AND AROUND DOORWAYS SHOWN.

KEYED NOTES

4.106 OFCI MONORAIL CRANE SYSTEM, 2 TON CAPACITY (ALT #1 CFCI)

4.107 OFCI JIB CRANE SYSTEM, 2 TON CAPACITY WITH 20 FT REACH (ALT #1 CFCI)

4.110 SOLID BRICK INFILL AT REMOVED OPENING - TOOTH INTO EXISTING

4.111 CMU INFILL AT REMOVED OPENING - PARGE WITH CONCRETE AT EXPOSED EXTERIOR LOCATIONS

4.120 ALIGN WALL CENTERED ON COLUMN / GRID LINE

4.121 EXHAUST REEL ON MOVING BOOM ARM

4.129 PROVIDE FLOOR LEVELING AT REMOVED TOILET/SHOWERS OR EQUIPMENT PADS TO PROVIDE SMOOTH SURFACE FOR FINAL FLOOR FINISHES- WHOLE ROOM, TYP

4.138 LOUVER - REF MECH

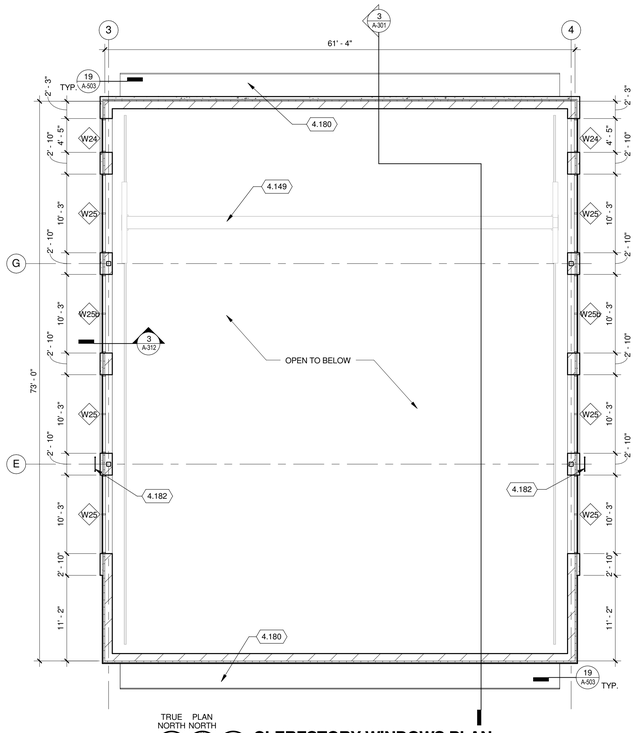
4.148 OFCI TRANSFER BRIDGE CRANE SYSTEM, 2 TON CAPACITY (ALT #1 CFCI)

4.149 OFCI BRIDGE CRANE SYSTEM, 5 TON CAPACITY (ALT #1 CFCI)

4.150 MAINTENANCE GUARD RAIL W/ RETRACTING SWING GATE - COORDINATE FINAL LOCATION OF GATE W/ MONORAIL INSTALLATION

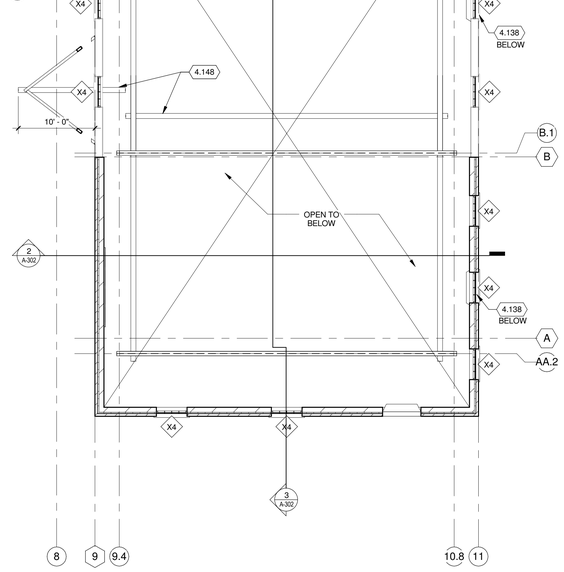
4.180 CANOPY BELOW

4.182 LADDER, SEE DETAIL 11/A-505 AND 12/A-505.



TRUE NORTH PLAN NORTH

2 CLERESTORY WINDOWS PLAN
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

1 SECOND FLOOR PLAN
1/8" = 1'-0"

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DRAWN BY: NJD
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SHEET CONTENTS
SECOND FLOOR PLAN

SHEET NO.:
A-102

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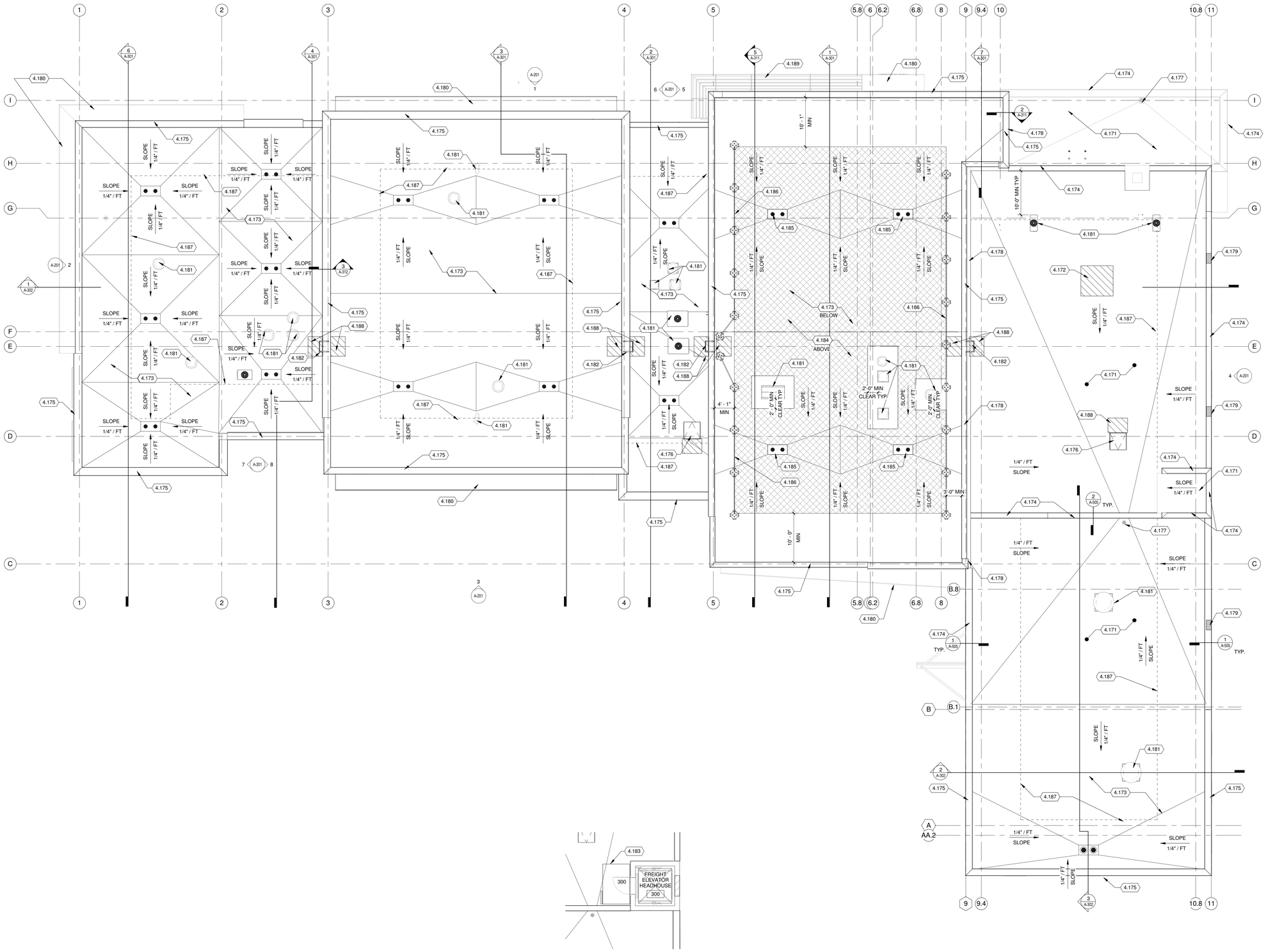

TRUE NORTH PLAN NORTH

FREIGHT ELEVATOR HEADHOUSE PLAN (2)
1/8" = 1'-0"

TRUE NORTH PLAN NORTH

OVERALL ROOF PLANS (1)
1/8" = 1'-0"

0 4 8 16

ROOF PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY ALL EXISTING ROOF CONDITIONS.
3. SEE MECHANICAL, PLUMBING, TECHNOLOGY, AND ELECTRICAL DRAWINGS FOR ADDITIONAL ROOF PENETRATIONS NOT SHOWN.
4. PROVIDE TAPERED ROOF INSULATION SYSTEM AS SHOWN TO MEET THE SPECIFIED R-VALUE. MINIMUM SLOPE = 1/4" PER FOOT.
6. REFER TO BUILDING/WALL SECTIONS FOR ROOF EDGE CONDITIONS, UNLESS NOTED OTHERWISE.
7. PROVIDE MECHANICAL EQUIPMENT CURBS AT ALL MECHANICAL EQUIPMENT IF REQUIRED, DUE TO VARIED INSULATION HEIGHTS, PROVIDE 10" MIN. CLEAR ABOVE ROOF MEMBRANE.
8. REFERENCE DETAIL 10/A-505 FOR ALL ROOF CURB CONDITIONS.
9. REFERENCE DETAIL 16/A-505 FOR ALL PIPE PENTRATION CONDITIONS.
10. REFERENCE DETAIL 6/A-505 FOR ALL VENT STACK CONDITIONS.
11. PROVIDE CONCRETE PAVERS FOR ROOFTOP USE OVER A SECOND LAYER OF PROTECTION MEMBRANE AROUND ALL POWERED ROOFTOP EQUIPMENT AND ROOF HATCHES. REF SPEC SECTION

KEYED NOTES

4.171 RE-ROOF EXISTING AREA. PROVIDE EPDM ROOF SYSTEM W/ RIGID INSULATION OVER 3/4" EXTERIOR GRADE PLYWOOD DECK OVER EXISITNG STRUCTURE, TYP

4.172 EXISTING MEP ROOF PENETRATION TO BE INFILLED - REF STRUCTURAL

4.173 PROVIDE EPDM ROOF SYSTEM W/ SLOPED RIGID INSULATION OVER METAL DECK ROOF STRUCTURE - SLOPE AS RECOMMENDED BY ROOF MFR, TYP

4.174 PROVIDE REPLACEMENT SHEET METAL COPING, TYP

4.175 PROVIDE SHEET METAL COPING

4.176 ROOF HATCH - REF SPECIFICATIONS FOR REQUIREMENTS COORDINATE WITH SECOND FLOOR WALL BELOW

4.177 REINSTALL ROOF DRAIN COVER IN EXISITNG LOCATION

4.178 ROOF EXPANSION JOINT LOCATION

4.179 24" WIDE SCUPPER AT FASCIA TOP

4.180 CANOPY BELOW

4.181 MEP ROOF PENETRATIONS - COORDINATE FINAL LOCATIONS WITH MEP AND STRUCTURAL - PROVIDE CRICKETS AS REQUIRED TO SHED WATER , TYP

4.182 LADDER, SEE DETAIL 11/A-505 AND 12/A-505.

4.183 REINSTALL EXISTING MECHANICAL PLATFORM AND LADDER - PATCH AND REPAIR ANCHOR POINTS AT THE HEADHOUSE FOR PROPER REATTACHMENT

4.184 MODULAR VEGETATIVE ROOF SYSTEM - REF L300 FOR TYPICAL DETAILS

4.185 PROVIDE MODULAR VEGETATIVE ROOF SYSTEM, TYP

4.186 8'-0" L x 42"H PORTABLE ROOFTOP GUARD RAIL SYSTEM, TYP

4.187 ROOF STRIPING TAPE AT ENTIRE ROOF PERIMETER - 10'-0" FROM EDGE, TYP

4.188 EPDM ROOF SYSTEM WALKWAY PAD AT ALL LADDER ACCESS POINTS (TOP & BOTTOM), TYP

4.189 EXTERIOR SUN CONTROL DEVICES INTEGRATED WITH CANOPY, TYP

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SHEET CONTENTS
ROOF PLAN

SHEET NO.:
A-103

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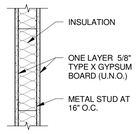
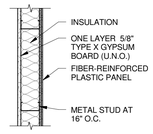


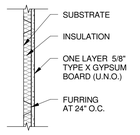
"SA" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
SA2	2 1/2"	3 3/4"	
SA3	3 5/8"	4 7/8"	
SA4	4"	5 1/4"	
SA6	6"	7 1/4"	
SA8	8"	9 1/4"	
SAX	?"	?"	-



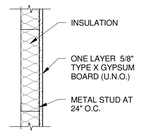
"SG" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
SG2	2 1/2"	3 3/4"	
SG3	3 5/8"	4 7/8"	
SG4	4"	5 1/4"	
SG6	6"	7 1/4"	
SG8	8"	9 1/4"	
SGX	?"	?"	-



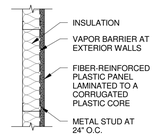
"FA" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
FA78	7/8"	1 1/2"	HAT CHANNEL
FA1	1"	1 5/8"	Z-FURRING
FA15	1 1/2"	2 1/8"	Z-FURRING
FA2	2"	2 5/8"	Z-FURRING
FA3	3"	3 5/8"	Z-FURRING
FAX	?"	?"	-



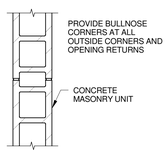
"FC" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
FC1	1 5/8"	2 1/4"	
FC2	2 1/2"	3 1/8"	
FC3	3 5/8"	4 1/4"	
FC4	4"	4 5/8"	
FC6	6"	6 5/8"	
FC8	8"	8 5/8"	
FCX	?"	?"	-



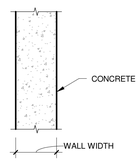
"FG" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
FG1	1 5/8"	2 1/4"	
FG2	2 1/2"	3 1/8"	
FG3	3 5/8"	4 1/4"	
FG4	4"	4 5/8"	
FG6	6"	6 5/8"	R-19 INSULATION
FG8	8"	8 5/8"	
FGX	?"	?"	-



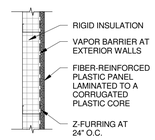
"MA" SERIES

PTN TYPE	CMU WIDTH	WALL WIDTH	NOTES
MA4	3 5/8"	4"	
MA6	5 5/8"	6"	
MA8	7 5/8"	8"	
MA0	9 5/8"	10"	
MA2	11 5/8"	12"	
MA14	13 5/8"	14"	
MA16	15 5/8"	16"	
MAX	?"	?"	-



"CA" SERIES

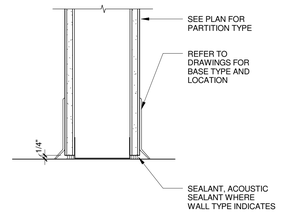
PTN TYPE	WALL WIDTH	NOTES
CA4	4"	
CA6	6"	
CA8	8"	
CA0	10"	
CA2	12"	
CAX	?"	-



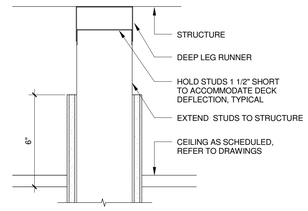
"FD" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
FD1	1"	1 5/8"	
FD2	2"	2 5/8"	
FD3	3"	3 5/8"	
FD4	4"	4 5/8"	
FD6	6"	6 5/8"	
FD8	8"	8 5/8"	
FDX	?"	?"	-

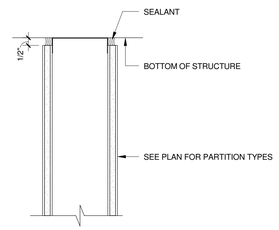
PARTITION TYPES
1" = 1'-0"



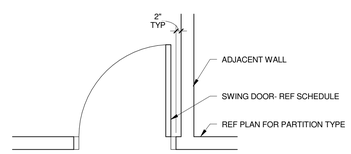
1 GYP WALL BASE
3" = 1'-0"



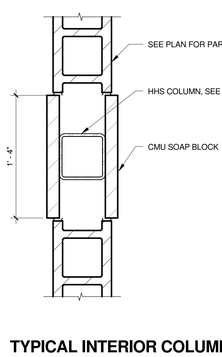
2 PARTITION HEAD
3" = 1'-0"



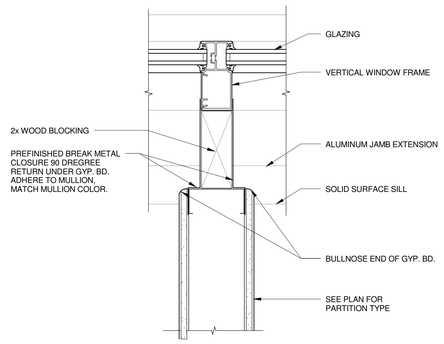
3 PARTITION HEAD
3" = 1'-0"



4 TYPICAL DOOR/FRAME LOCATION (U.N.O.)
1/2" = 1'-0"



6 TYPICAL INTERIOR COLUMN FURRING AT CMU WALLS
1 1/2" = 1'-0"



5 PARTITION CLOSURE AT MULLION
3" = 1'-0"

PARTITION GENERAL NOTES:

A. PARTITIONS SHALL BE TYPE "SA3" UNLESS NOTED OTHERWISE.

B. REFER TO "INTERIOR PARTITION TYPE MODIFIERS" FOR SYMBOLS USED TO IDENTIFY ADDITIONAL REQUIREMENTS OR MODIFICATIONS TO BASIC PARTITION TYPES.

C. PARTITION TYPES DESCRIBE GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO PRODUCT MANUFACTURERS' SPECIFICATIONS AND REQUIREMENTS FOR APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION.

D. PARTITION REQUIREMENTS SHOWN ARE CONSIDERED MINIMUM STANDARDS. WHERE CONDITIONS OF THE WORK CAUSE PARTITION(S) TO EXCEED LIMITS RECOMMENDED BY MANUFACTURER, REINFORCE PARTITION(S).

E. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.

G. REFER TO STRUCTURAL DRAWINGS FOR EXTENT AND DESCRIPTION OF INTERIOR STRUCTURAL WALLS NOT IDENTIFIED BY PARTITION TYPES.

H. INSTALL BLOCKING OR BACKER MATERIAL FOR ATTACHMENT/MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.

I. FIRE RATED PARTITIONS: GA AND UL TEST NUMBERS MAY VARY DEPENDING ON THE MANUFACTURER OF COMPONENTS ACTUALLY USED.

J. PROVIDE 5/8" TYPE "X", ABUSE RESISTANT GYPSUM BOARD (UNLESS NOTED OTHERWISE).

K. PROVIDE WATER RESISTANT TYPE GYPSUM BOARD WET AREAS OR THOSE REQUIRED BY CODE TO RECEIVE IT.

N. PROVIDE TILE BACKER BOARD AT SHOWER AREAS AND AT OTHER WET AREAS THAT ARE SCHEDULED IN ROOM FINISH SCHEDULE TO RECEIVE CERAMIC TILE FINISH.

O. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS. REFERENCE CODE PLANS G-002 & G-003 FOR FIRE RATED WALL LOCATIONS.

P. AT GYPSUM BOARD PARTITIONS SCHEDULED TO EXTEND TO ROOF OR FLOOR DECK ABOVE, NEATLY CUT GYPSUM BOARD AROUND STRUCTURAL STEEL PENEATRATIONS. TAPE AND FINISH JOINTS PER SPECIFICATIONS. CONFIRM DEFLECTION RQUIREMENTS WITH ARCHITECT.

Q. AT CONCRETE MASONRY UNIT PARTITIONS SCHEDULED TO EXTEND TO ROOF OR FLOOR DECK ABOVE, NEATLY CUT CMU AT STRUCTURAL STEEL PENETRATIONS. INFILL REMAINING POCKET WITH SOAPS AT EXPOSED CONDITION AND/OR GROUT AT CONCEALED LOCATIONS. CONFIRM DEFLECTION REQUIREMENTS WITH ARCHITECT.

R. PROVIDE BULLNOSE CORNERS AT ALL OUTSIDE CORNERS AND ALL OPENING RETURNS, TYP.

HOUR RATINGS "MA" SERIES

PTN TYPE	CMU WIDTH	AVAILABLE FIRE RESISTANCE	NOTES
MA4	3 5/8"	1 HOUR (SOLID BLOCK ONLY)	
MA6	5 5/8"	1 HOUR	
MA6	5 5/8"	2 HOUR	
MA6	5 5/8"	3 HOUR (SOLID BLOCK ONLY)	
MA8	7 5/8"	1 HOUR	
MA8	7 5/8"	2 HOUR	
MA8	7 5/8"	3 HOUR (SOLID BLOCK ONLY)	
MA8	7 5/8"	4 HOUR (SOLID BLOCK ONLY)	
MA0	9 5/8"	2 HOUR	
MA2	11 5/8"	2 HOUR	
MA2	11 5/8"	3 HOUR	
MA2	11 5/8"	4 HOUR	
MA14	13 5/8"	4 HOUR	
MA16	15 5/8"	4 HOUR	

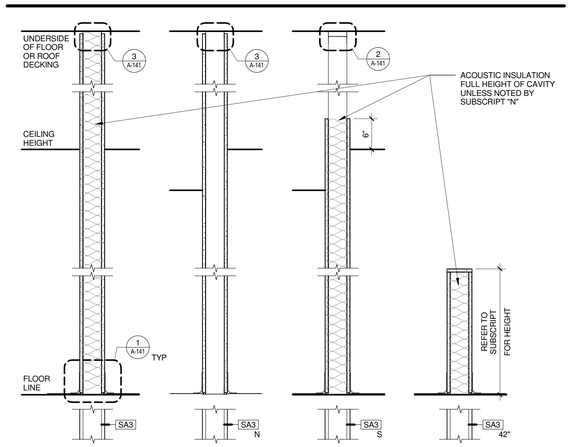
AVAILABLE 1 HOUR "SA" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	CONSTRUCTION TESTS	NOTES
SA2	1 1/2"	3 3/4"	GA FILE NO WP1070 UL DES NO U448	1 HOUR REQD 1 1/2" MIN. OF 3 PSF INSUL.
			UL DES NO U494	1 HR REQD 2 1/2" MIN
SA3	3 5/8"	4 7/8"	GA FILE NO WP1072 GA FILE NO WP1200 UL DES NO U465	-
SA4	4"	5 1/4"	GA FILE NO WP1072 GA FILE NO WP1200 UL DES NO U465	-
SA6	6"	7 1/4"	GA FILE NO WP1072 GA FILE NO WP1200 UL DES NO U465	-
SA8	8"	9 1/4"	GA FILE NO WP1072 GA FILE NO WP1200 UL DES NO U465	-

AVAILABLE 2 HOUR "SC" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	CONSTRUCTION TESTS	NOTES
SC2	1 1/2"	5"	GA FILE NO WP1530 UL DES NO U412	1 1/2" INSUL.
SC3	3 5/8"	6 1/8"	GA FILE NO WP1615 GA FILE NO WP1549 UL DES NO U411	2 1/2" INSUL.
SC4	4"	6 1/2"	GA FILE NO WP1615 GA FILE NO WP1549 UL DES NO U411	-
SC6	6"	8 1/2"	GA FILE NO WP1615 GA FILE NO WP1549 UL DES NO U411	-
SC8	8"	10 1/2"	GA FILE NO WP1615 GA FILE NO WP1549 UL DES NO U411	-

PARTITION TYPE SYMBOL AND SUBSCRIPT DEFINITIONS:



NO SUBSCRIPT
EXTEND TOTAL PARTITION TO STRUCTURE

SUBSCRIPT (N)
NO ACOUSTIC INSULATION

SUBSCRIPT (S)
STUDS TO STRUCTURE, GYP BD TO 6" ABOVE HIGHEST ADJC. CEILING

SUBSCRIPT (XX")
PARTITION HEIGHT IN INCHES AS NOTED, SEE ABOVE DETAIL FOR OTHER REQUIREMENTS

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
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SHEET CONTENTS
PARTITION TYPES

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A-141

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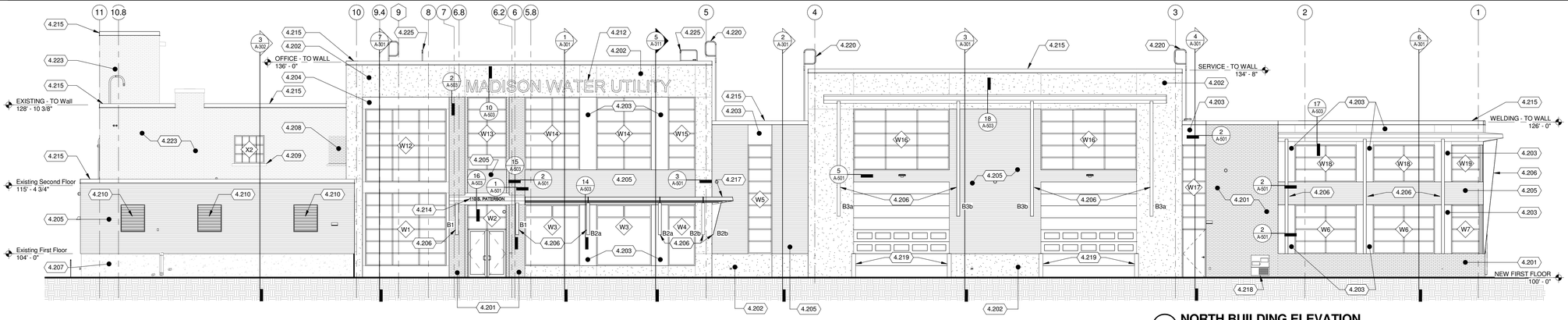
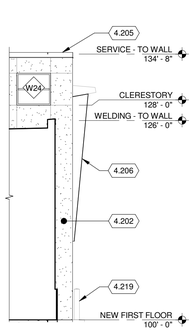
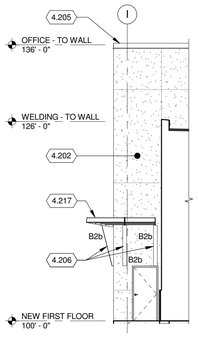


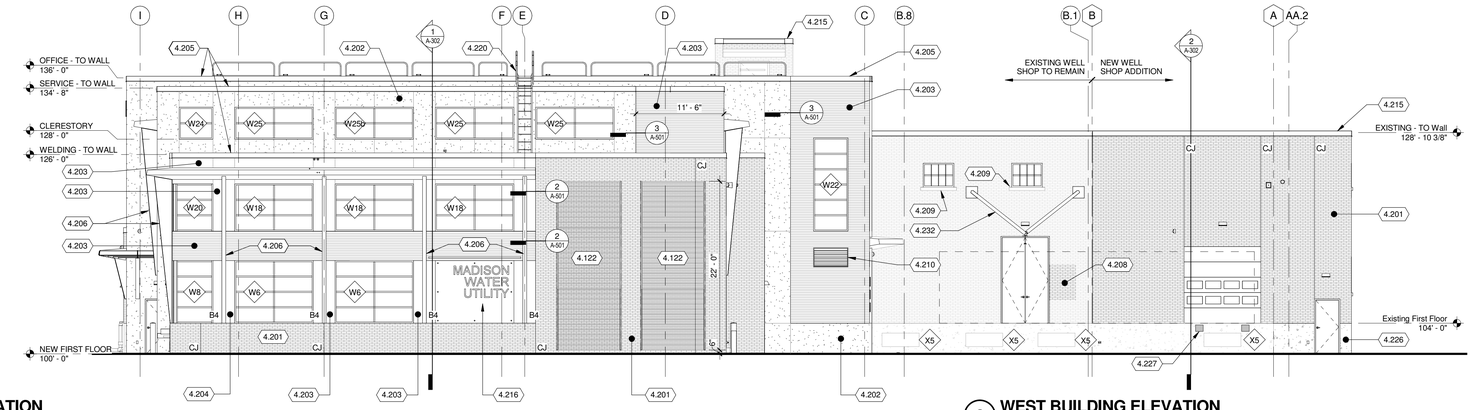
1 NORTH BUILDING ELEVATION
1/8" = 1'-0"



6 PARTIAL WEST ELEVATION
1/8" = 1'-0"



5 PARTIAL EAST ELEVATION
1/8" = 1'-0"



2 WEST BUILDING ELEVATION
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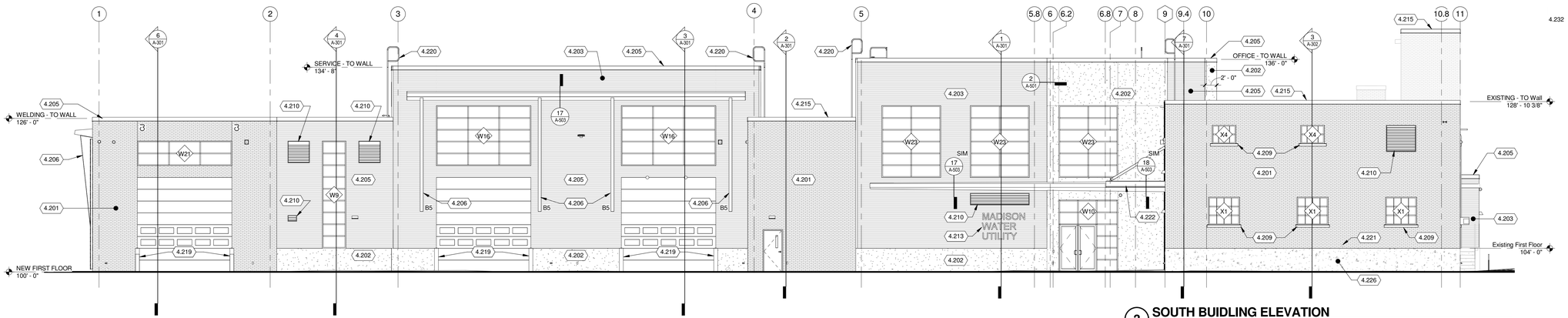
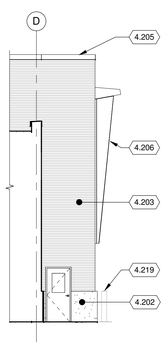


3 SOUTH BUIDLING ELEVATION
1/8" = 1'-0"



8 PARTIAL EAST ELEVATION
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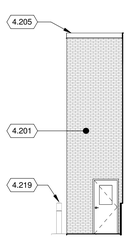
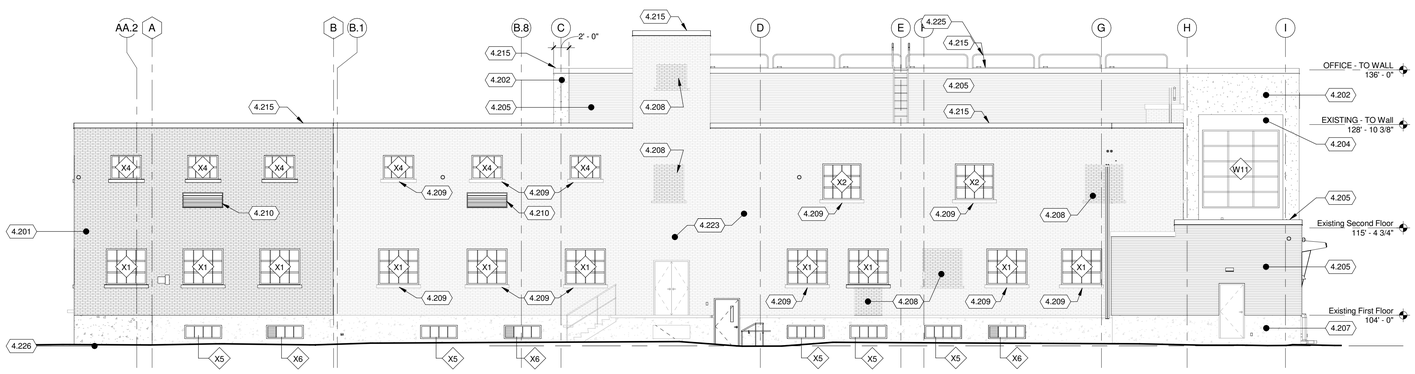


7 PARTIAL WEST ELEVATION
1/8" = 1'-0"



4 EAST BUILDING ELEVATION
1/8" = 1'-0"

ELEVATION GENERAL NOTES:

1. SEE ALSO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON ELEVATIONS.
2. SEE ALSO BUILDING SECTIONS FOR PARTIAL ELEVATIONS NOT SHOWN ON THIS SHEET.

KEYED NOTES

4.122 GREEN WALL; PROVIDE TWO 8'-0" AND ONE 6'-0" HIGH FENCE SECTIONS TO MATCH LANDSCAPING FENCE. ATTACH FENCE TO SUPPORT STRUCTURE WITH FENCE MANUFACTURER'S DETAILS. SUPPORT STRUCTURE SHALL BE HSS4x2x1/8 WITH CAPPED ENDS, FASTENED BACK TO CMU WITH 1/2" BOLTS.

4.201 BRICK VENEER

4.202 PRECAST CONCRETE PANEL

4.203 METAL PANEL (MP1)

4.204 METAL PANEL (MP2)

4.205 METAL PANEL (MP3)

4.206 BRACKETS, SEE DETAIL 15/A-503 FOR DIMENSIONS

4.207 EXISTING CONCRETE WALL TO REMAIN

4.208 BRICK WALL INFILL AT OPENING

4.209 REMOVE EXISTING PAINT, RESTORE TO NATURAL FINISH.

4.210 LOUVER; SEE MECH. DWGS

4.211 MECHANICAL EQUIPMENT, SEE MECH. DWGS

4.212 24" HIGH CAST ALUMINUM EXTERIOR BUILDING SIGNAGE AS SHOWN. REFERENCE SPECIFICATION SECTION DIMENSIONAL LETTER SIGNAGE FOR REQUIREMENTS.

4.213 14" HIGH CAST ALUMINUM EXTERIOR BUILDING SIGNAGE AS SHOWN. REFERENCE SPECIFICATION SECTION DIMENSIONAL LETTER SIGNAGE FOR REQUIREMENTS.

4.214 6" HIGH CAST ALUMINUM EXTERIOR BUILDING SIGNAGE AS SHOWN. REFERENCE SPECIFICATION SECTION DIMENSIONAL LETTER SIGNAGE FOR REQUIREMENTS.

4.215 PREFINISHED ALUMINUM METAL COPING TRIM

4.216 STEEL PLATE SIGN SEE DETAIL 11/A-501.

4.217 SUNSHADE, SEE DETAIL 14/A-503

4.218 EXTERIOR RATED DRINKING FOUNTAIN WITH BOTTLE FILLER

4.219 8" ROUND BOLLARDS

4.220 STEEL LADDER, HOT DIPPED GALVANIZED

4.221 STORM OVERFLOW DOWNSPOUT NOSSLE (DSN)

4.222 TRANSFER CRANE BEAM

4.223 WASH EXISTING BRICK - SEE SPECIFICATIONS AND TUCKPOINT WHERE DETERIORATED - ASSUME 50% OF WALL AREA.

4.225 FREE STANDING SAFETY RAILING, SEE SPECIFICATIONS

4.226 CONCRETE FOUNDATION WALL - BRUSHED FINISH MATCH ADJACENT WALL.

4.227 LOADING DOCK BUMPERS, SEE SPECIFICATIONS ATTACH PER MANUFACTURER'S REQUIREMENTS.

4.232 STEEL BRACES FOR TRANSFER CRANE, SEE STRUCTURAL

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SHEET CONTENTS
EXTERIOR ELEVATIONS

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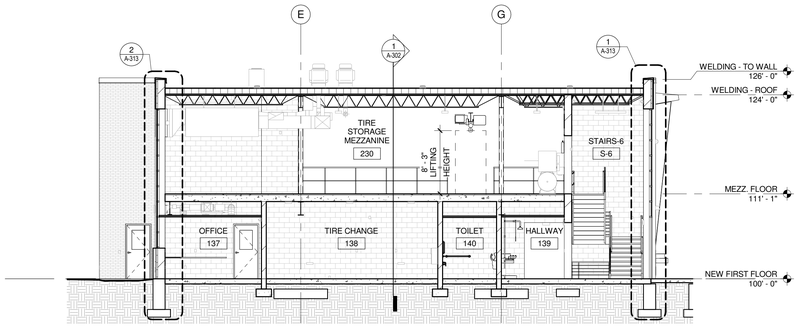
A-201

6/12/2015 1:51:47 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt



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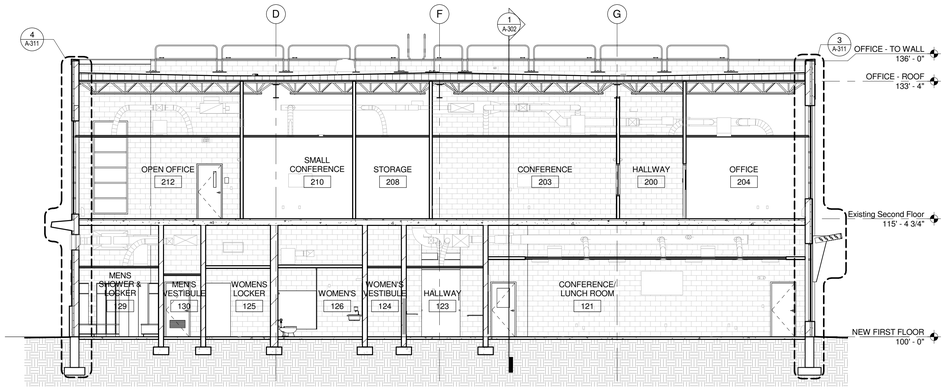
1/8" = 1'-0"



1 BUILDING SECTION
1/8" = 1'-0"

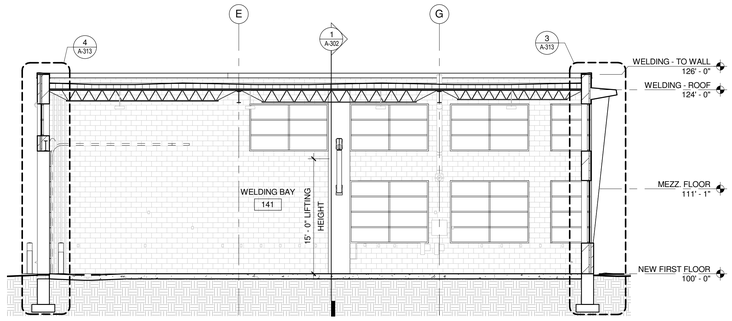
KEYED NOTES

4.202 PRECAST CONCRETE PANEL

4.205 METAL PANEL (MP3)

4.215 PREFINISHED ALUMINUM METAL COPING TRIM

4.220 STEEL LADDER, HOT DIPPED GALVANIZED



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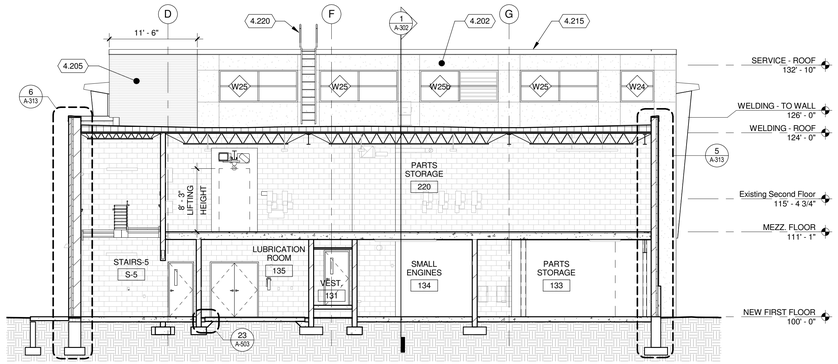

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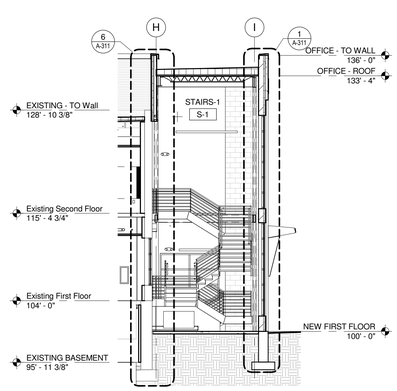
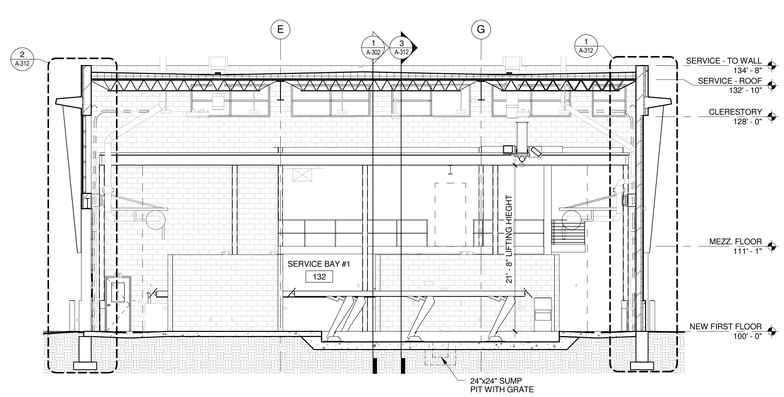
1/8" = 1'-0"



7 BUILDING SECTION
1/8" = 1'-0"



3 BUILDING SECTION
1/8" = 1'-0"

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SHEET CONTENTS
BUILDING SECTIONS

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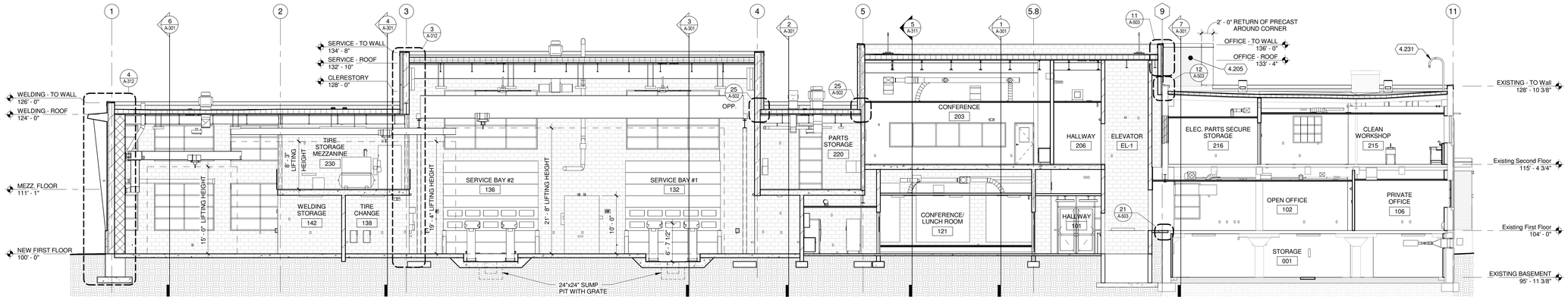
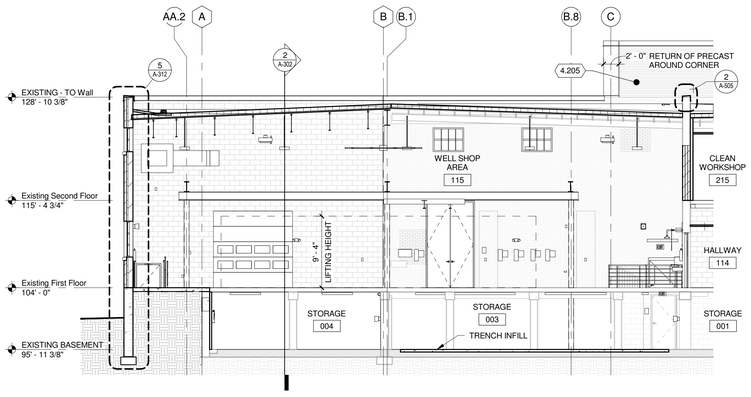


1 BUILDING SECTION
1/8" = 1'-0"



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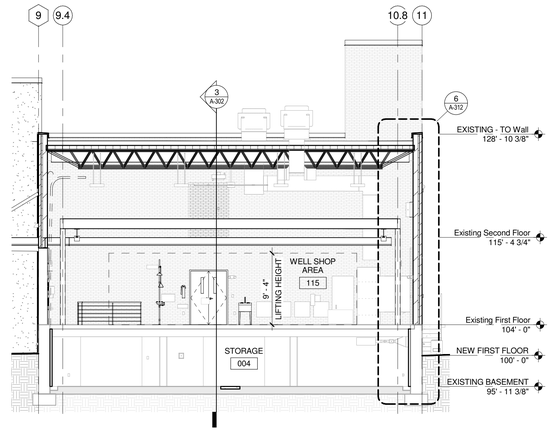

2 BUILDING SECTION
1/8" = 1'-0"

KEYED NOTES

4.205 METAL PANEL (MP3)

4.231 NEW ANTENNA CONDUIT, SEE TECHNOLOGY DRAWINGS

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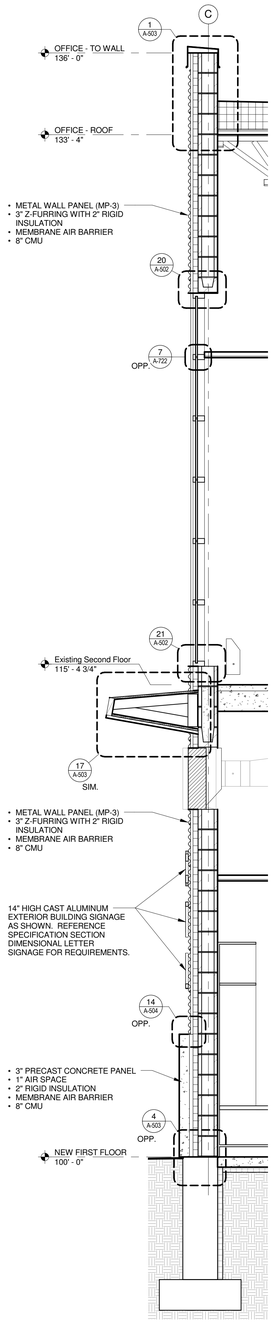
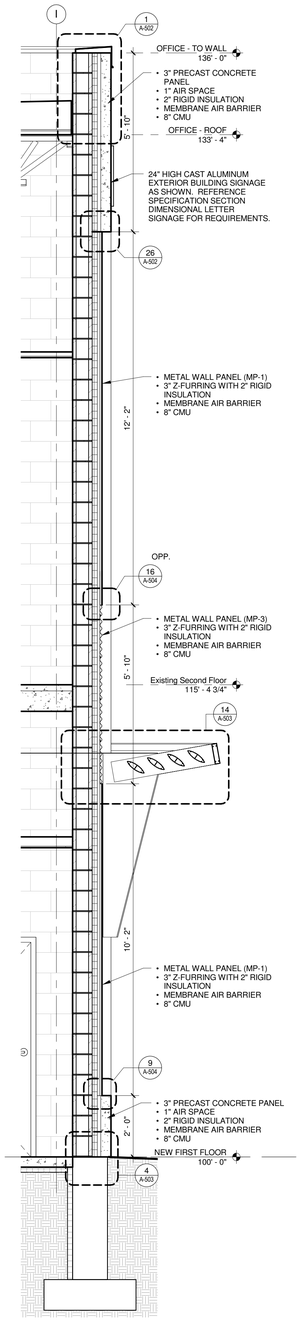


4 WALL SECTION
1/2" = 1'-0"



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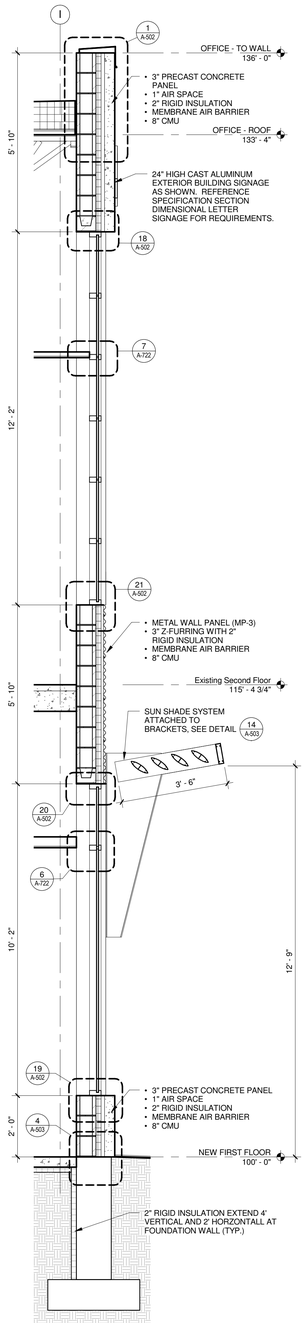

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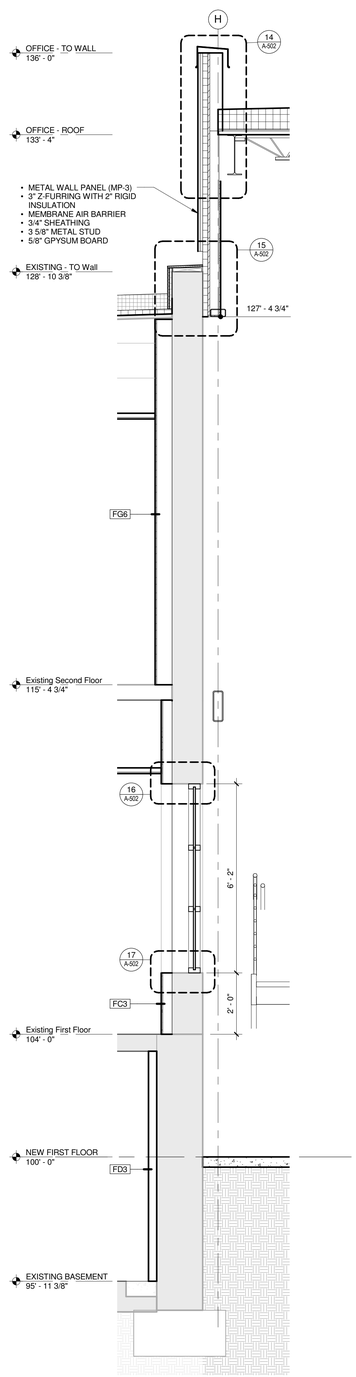

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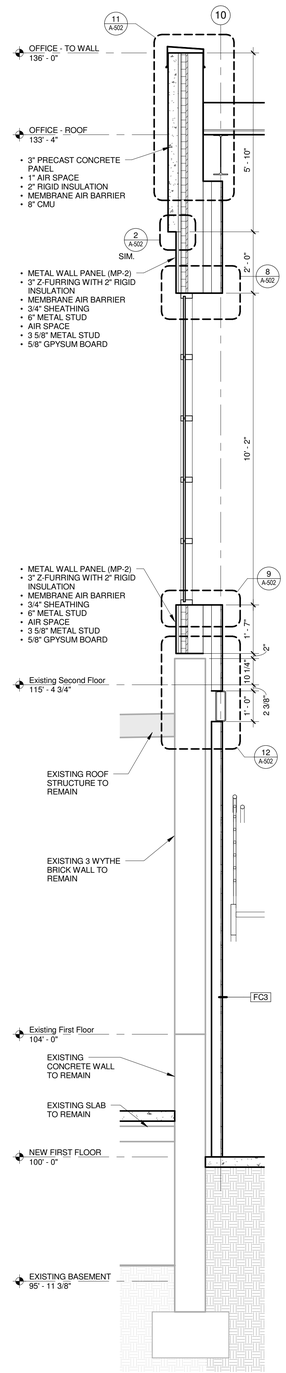

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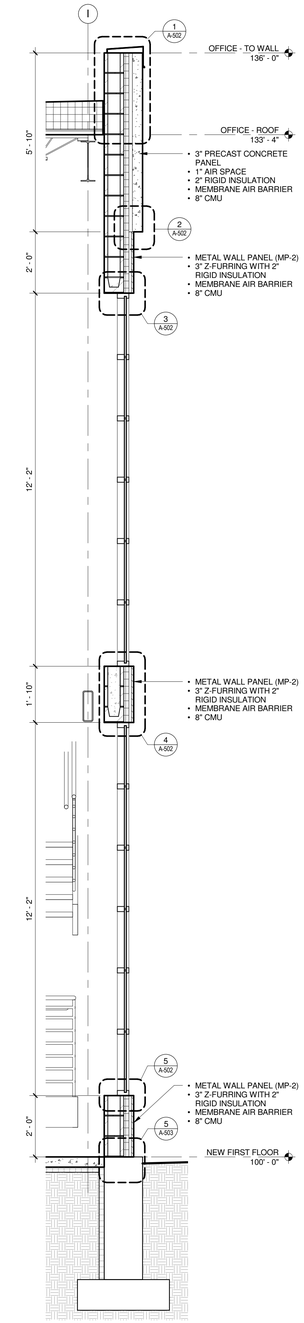

1 WALL SECTION
1/2" = 1'-0"

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SHEET CONTENTS
WALL SECTIONS

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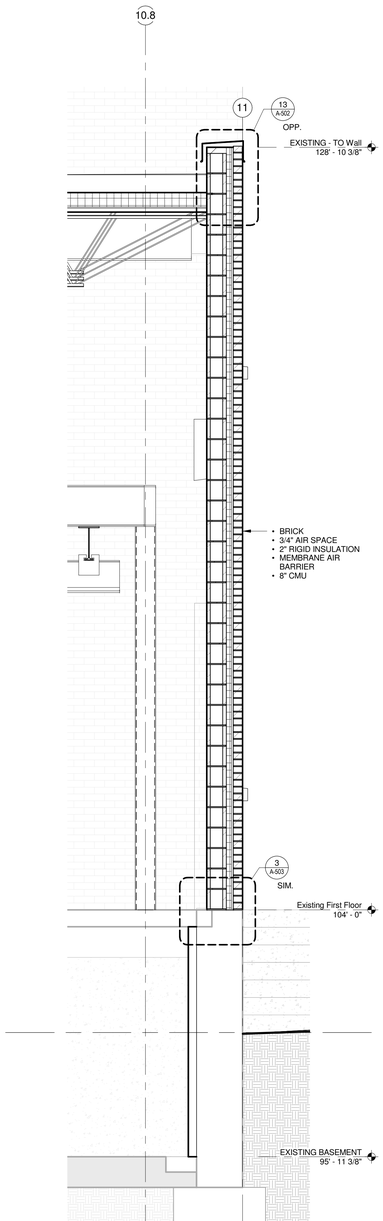

6 WALL SECTION
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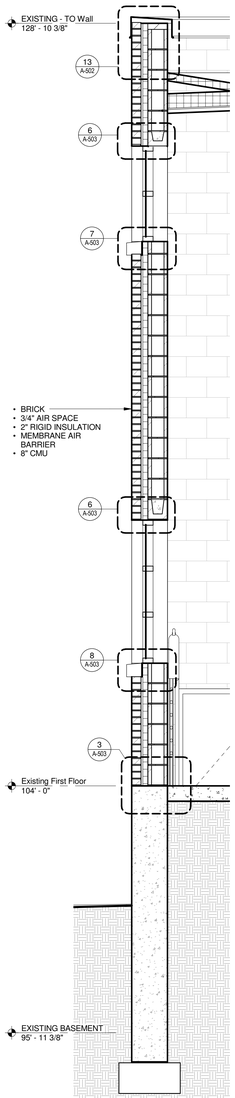

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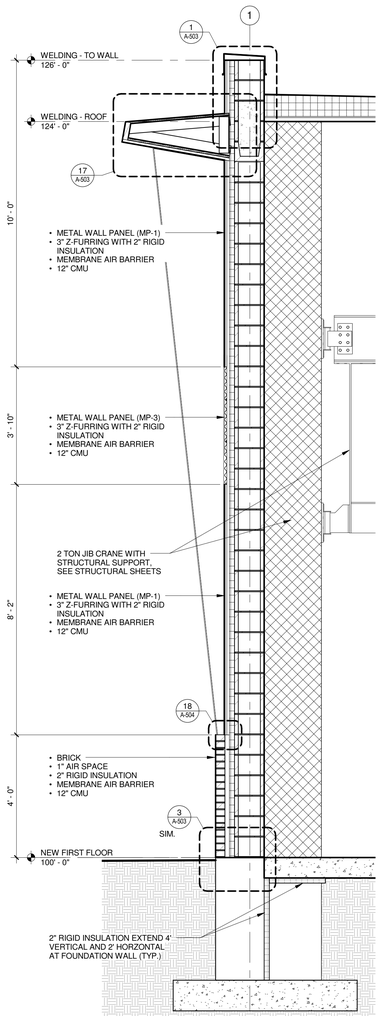

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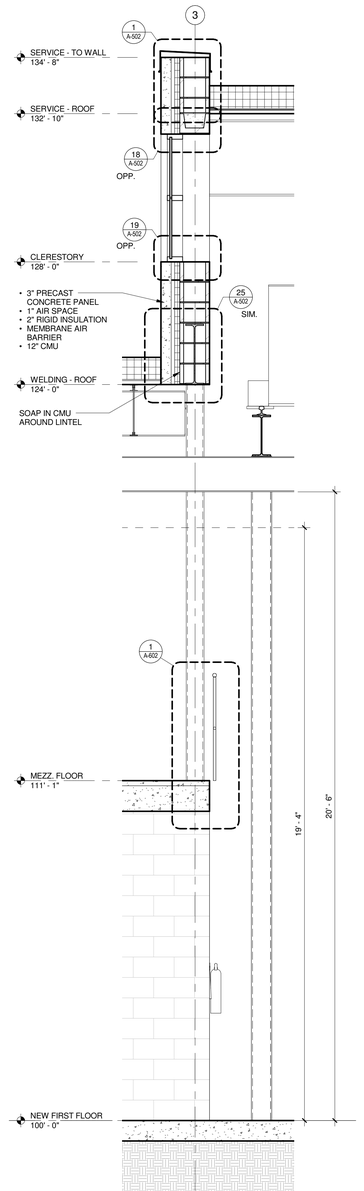

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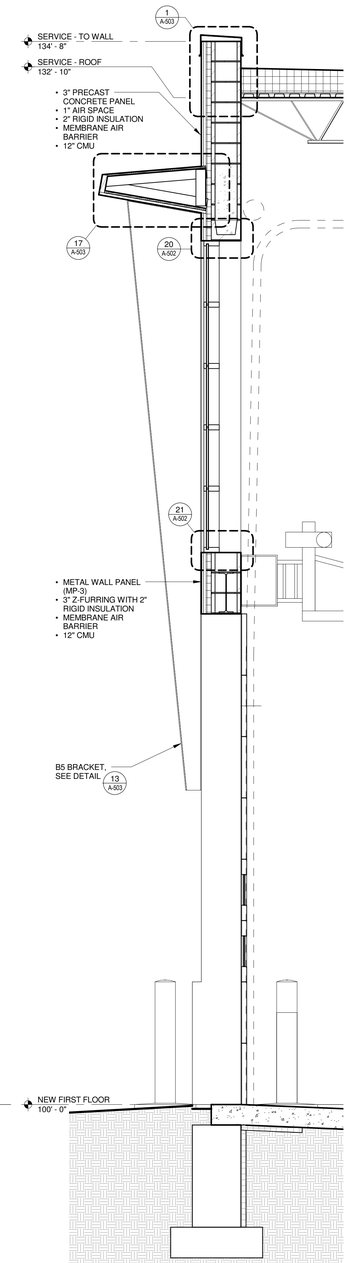

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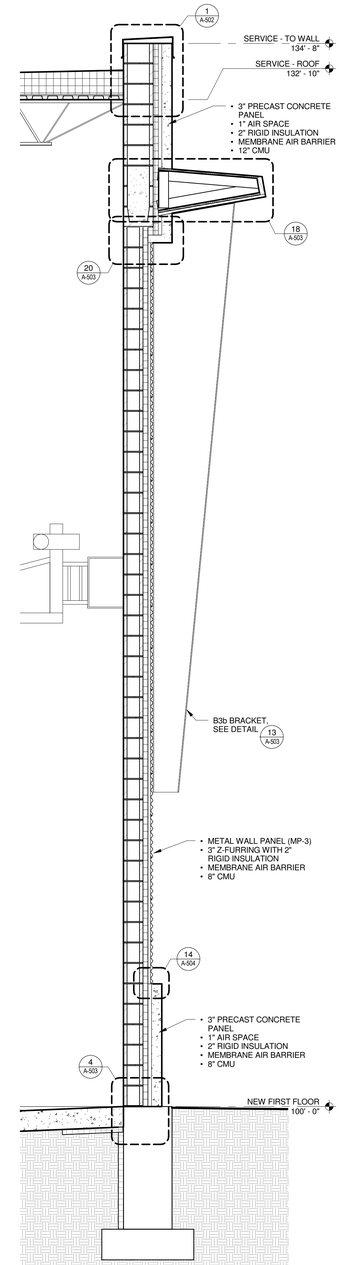

1 WALL SECTION
1/2" = 1'-0"

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DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
WALL SECTIONS

SHEET NO.:
A-312

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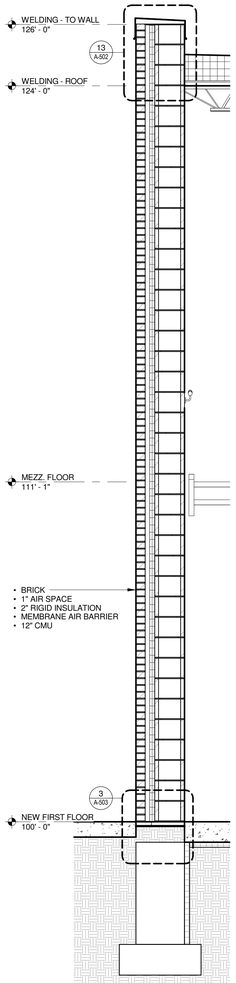
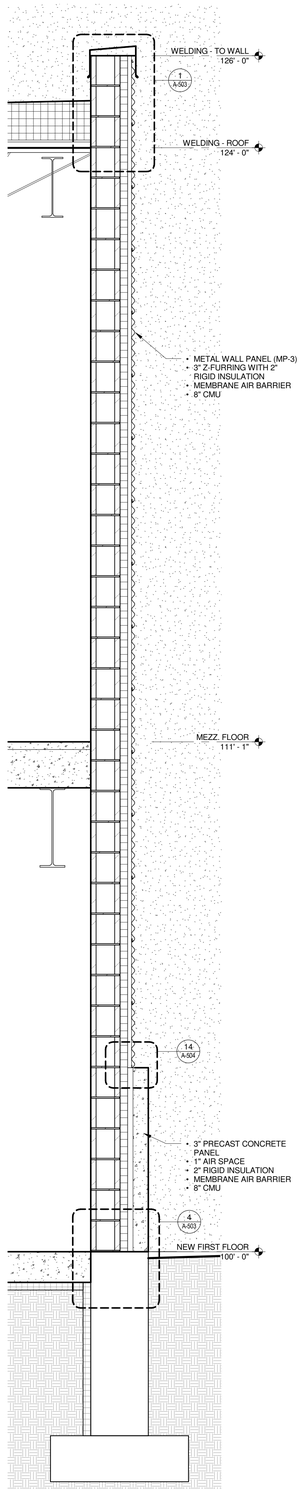
6/12/2015 1:52:17 PM



6 **WALL SECTION**
1/2" = 1'-0"



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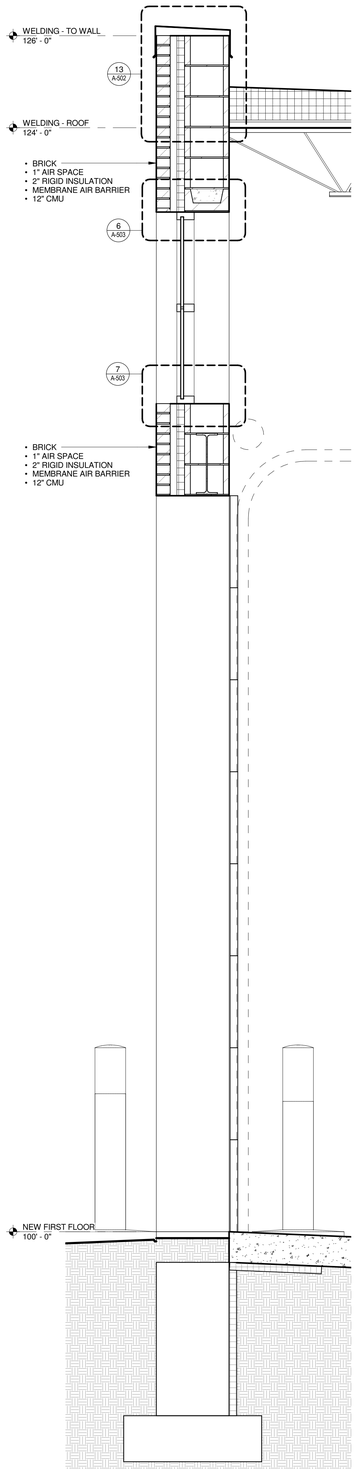

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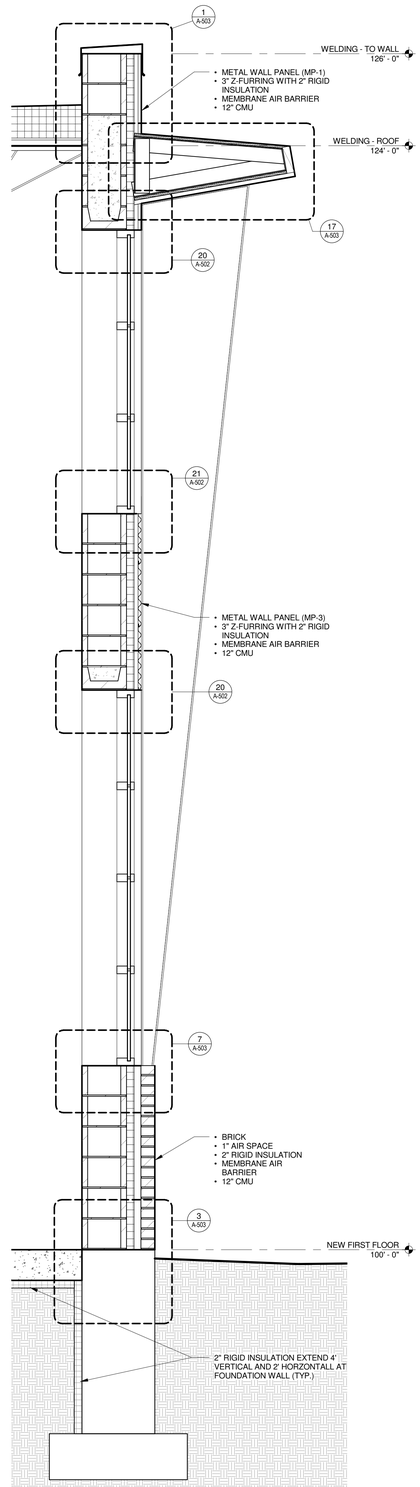
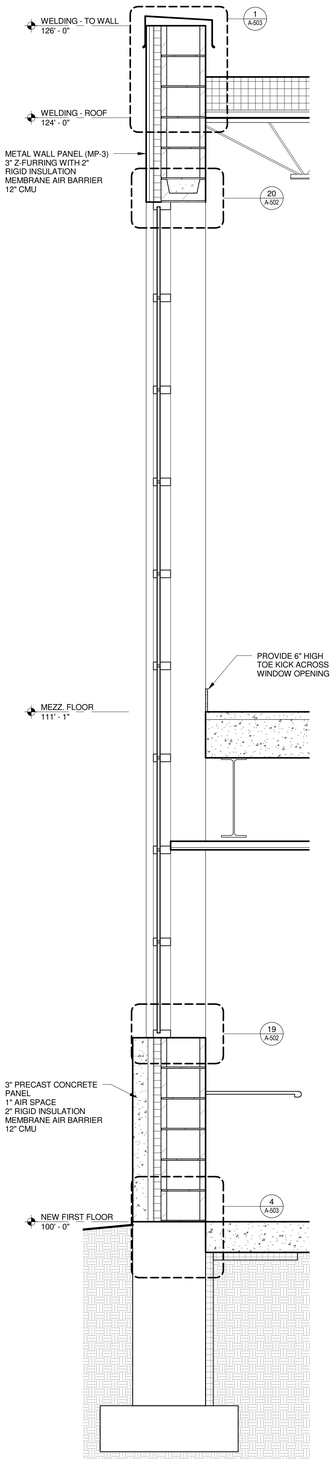
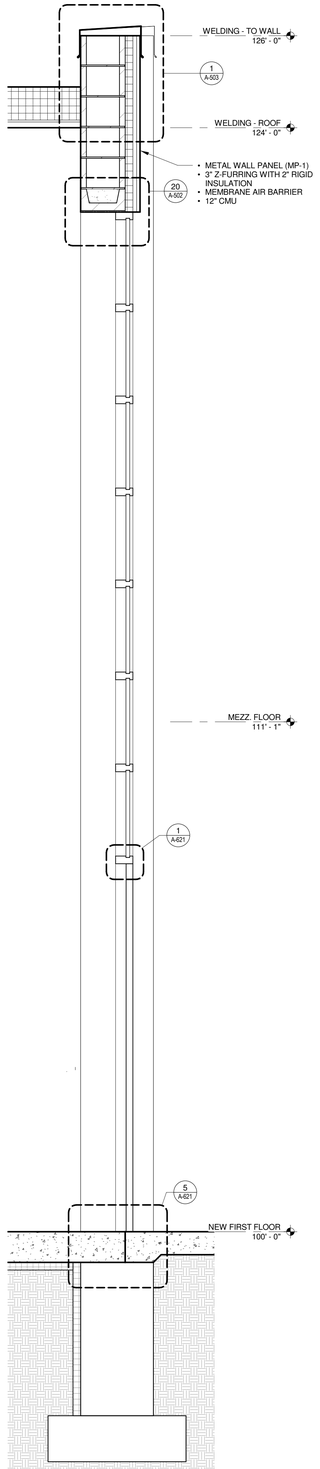
3/4" = 1'-0"



3 **WALL SECTION**
3/4" = 1'-0"



2 **WALL SECTION**
3/4" = 1'-0"



1 **WALL SECTION**
3/4" = 1'-0"

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
WALL SECTIONS

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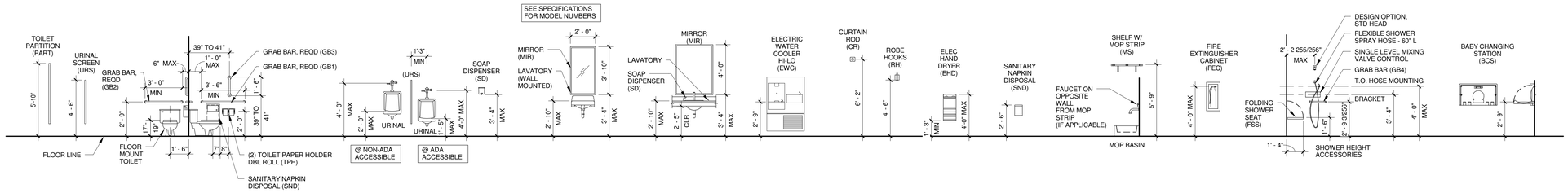
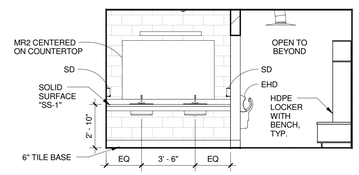
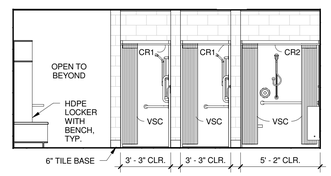


13 ACCESSORY MOUNTING HEIGHTS
1/4" = 1'-0"



6 INTERIOR ELEVATION
1/4" = 1'-0"



2 INTERIOR ELEVATION
1/4" = 1'-0"

TOILET ROOM ACCESSORY GENERAL NOTES:

1. LAVATORIES IN TOILET ROOM ARE SOLID SURFACE COUNTERTOPS w/ UNDERCOUNTER MOUNTED BOWLS, BACKSPLASH SHALL BE INTEGRAL WITH COUNTERTOP. UNLESS NOTED OTHERWISE - SEE PLUMBING DRAWINGS.
2. PROVIDE BLOCKING IN WALLS FOR ALL WALL MOUNTED ACCESSORIES.
3. ALL DOORS AND DRAWERS IN CASEWORK TO HAVE LOCKS AND KEYS.
4. ALL EXPOSED SURFACES OF MILLWORK TO BE P. LAMINATE ON 3/4" PART. BD., TYPICAL, UNLESS NOTED OTHERWISE.
5. PROVIDE WATER RESISTANT GYPSUM WALLBOARD AT ALL WET AREAS AND/OR AREAS TO RECEIVE WALL TILE.
6. SEE ROOM FINISH SCHEDULE FOR FINISHES.
7. SEE DETAIL 13/A-401 FOR ALL TOILET ACCESSORY MOUNTING HEIGHTS.

TOILET ACCESSORY KEY

FD	= FLOOR DRAIN (PITCH FLOOR TO DRAIN)
CR1	= CURTAIN ROD (39" OPENING)
CR2	= CURTAIN ROD (62" OPENING)
BCS	= BABY CHANGING STATION
EWC	= ELECTRIC WATER COOLER
EHD	= ELECTRIC HAND DRYER
FSS	= FOLDING SHOWER SEAT
GB1	= GRAB BAR (42" L)
GB2	= GRAB BAR (36" L)
GB3	= GRAB BAR (18" L. VERT.)
SD	= LIQUID SOAP DISPENSER (OWNER FURNISHED, CONTRACTOR INSTALLED)
MS	= MOP STRIP
MR1	= MIRROR (2'-6"w. x 3'-8"h.)
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MR4	= MIRROR (5'-0"w. x 3'-8"h.)
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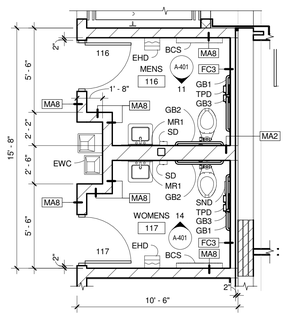
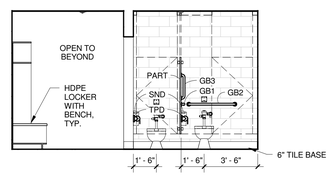
SND	= RECESSED SANITARY NAPKIN RECEPTACLE
TPD	= TOILET PAPER DISPENSER - (2 ROLL)
VSC	= VINYL SHOWER CURTAIN
URS	= URINAL SCREEN

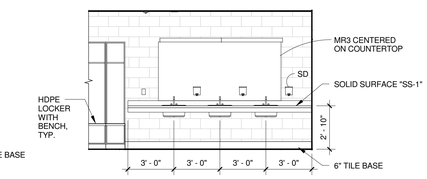


TRUE NORTH PLAN NORTH

10 ENLARGED MEN'S & WOMEN'S PLAN
1/4" = 1'-0"



7 INTERIOR ELEVATION
1/4" = 1'-0"



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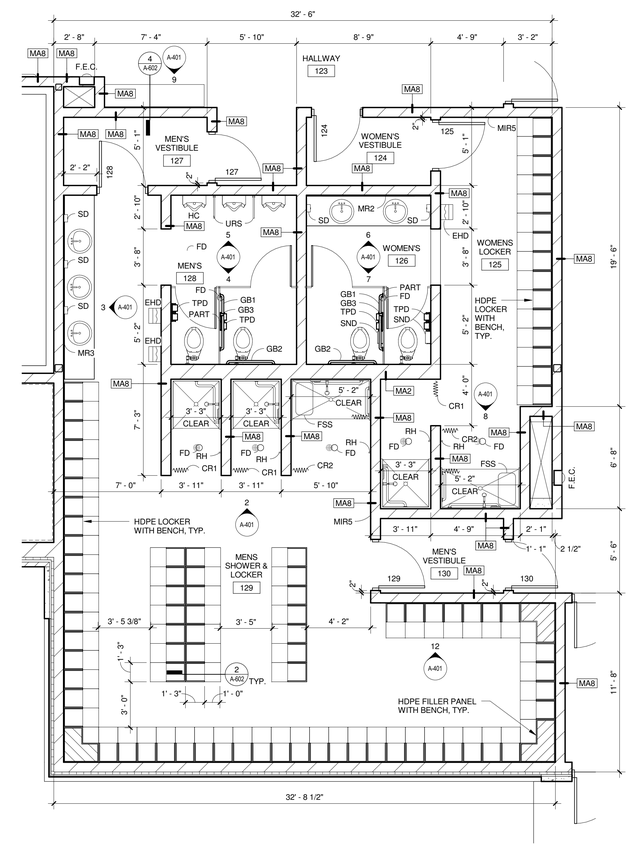
1/4" = 1'-0"



TRUE NORTH PLAN NORTH

1 ENLARGED MEN'S & WOMEN'S LOCKERS
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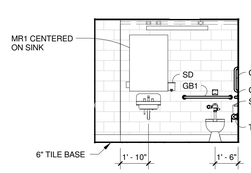

14 INTERIOR ELEVATION
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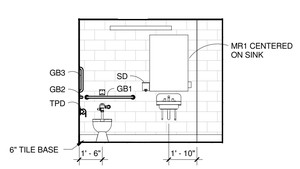

11 INTERIOR ELEVATION
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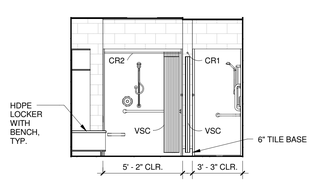

8 INTERIOR ELEVATION
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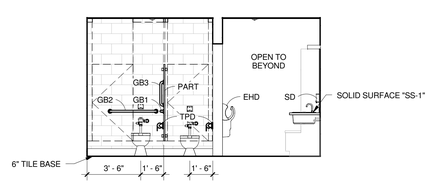

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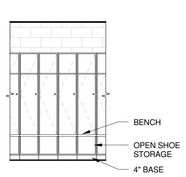
1/4" = 1'-0"



12 TYPICAL LOCKER ELEVATION
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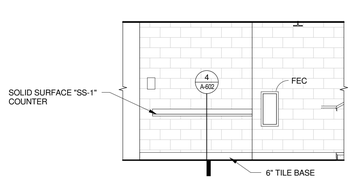
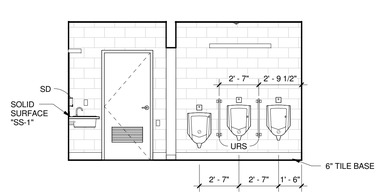


9 INTERIOR ELEVATION
1/4" = 1'-0"



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Mead & Hunt
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2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
ENLARGED INTERIOR PLANS

SHEET NO.:
A-401

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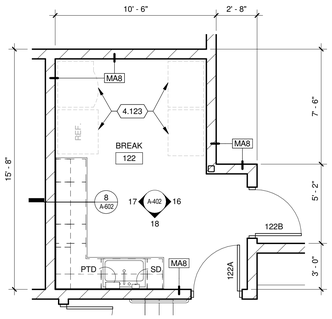

TRUE NORTH PLAN NORTH

15 ENLARGED KITCHEN PLAN
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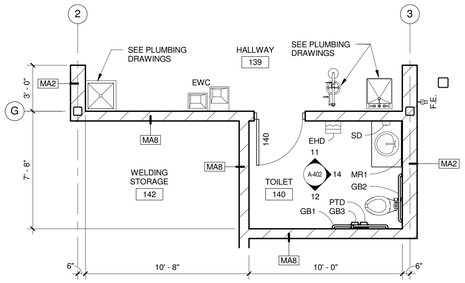

TRUE NORTH PLAN NORTH

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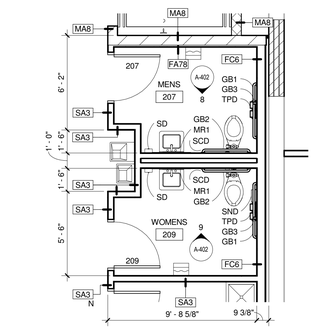
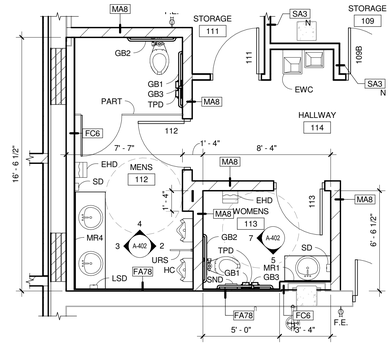


TRUE NORTH PLAN NORTH

6 ENLARGED TOILETS PLAN
1/4" = 1'-0"



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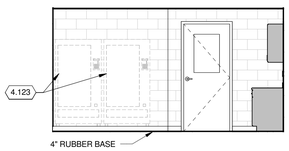
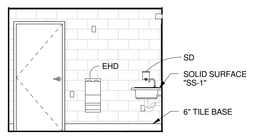
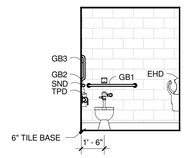


16 INTERIOR ELEVATION
1/4" = 1'-0"



11 INTERIOR ELEVATION
1/4" = 1'-0"



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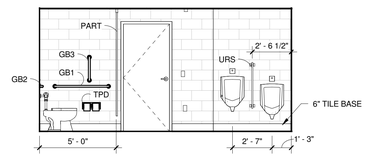
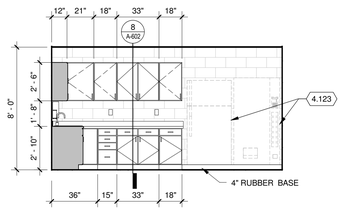
1/4" = 1'-0"



2 INTERIOR ELEVATION
1/4" = 1'-0"

KEYED NOTES

4.123 VENDING MACHINES AND REFRIGERATOR, OWNER FUNISHED, OWNER INSTALLED



17 INTERIOR ELEVATION
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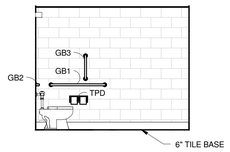
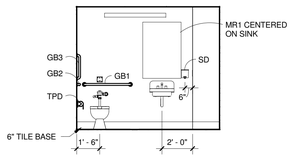
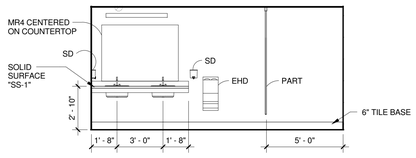


12 INTERIOR ELEVATION
1/4" = 1'-0"



8 INTERIOR ELEVATION
1/4" = 1'-0"



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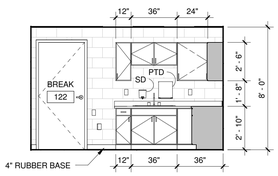

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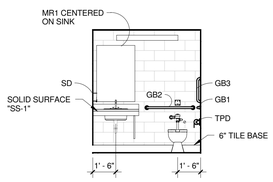

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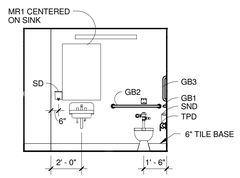
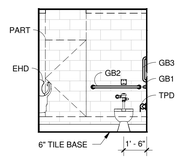


9 INTERIOR ELEVATION
1/4" = 1'-0"



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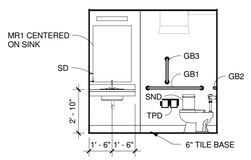
1/4" = 1'-0"



5 INTERIOR ELEVATION
1/4" = 1'-0"

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
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SHEET CONTENTS
ENLARGED INTERIOR PLANS

SHEET NO.:
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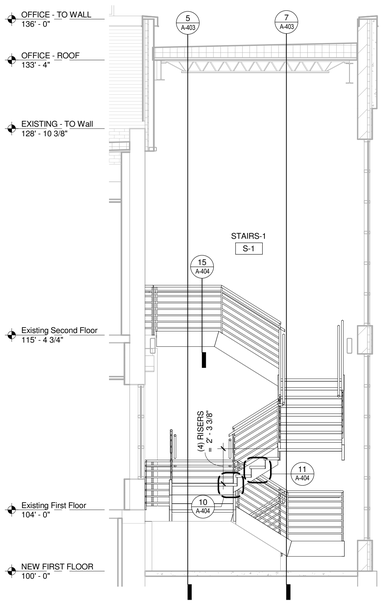
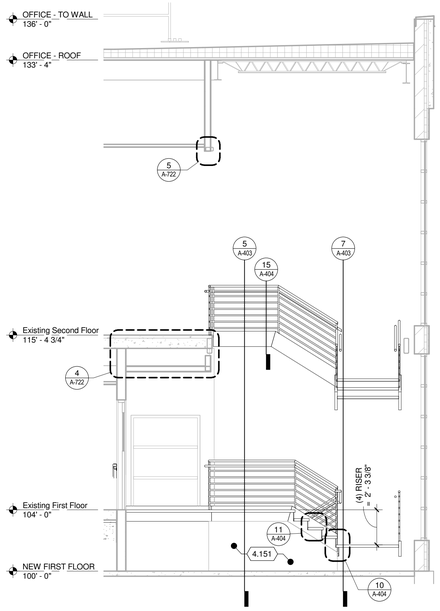


8 STAIR SECTION
1/4" = 1'-0"



6 STAIR SECTION
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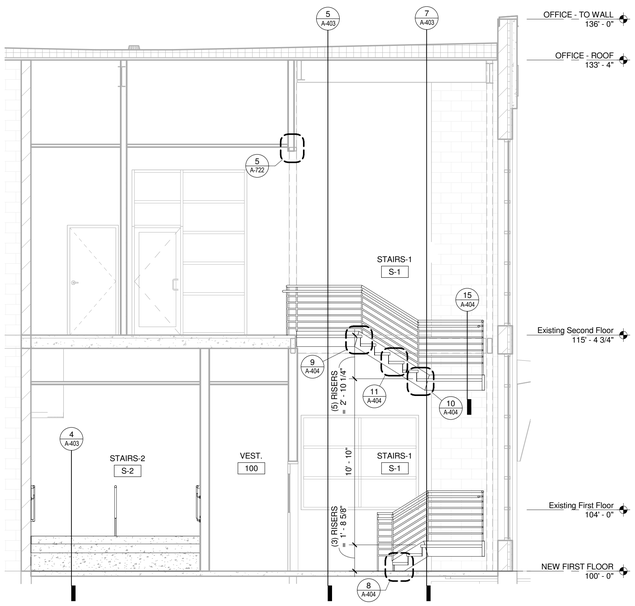

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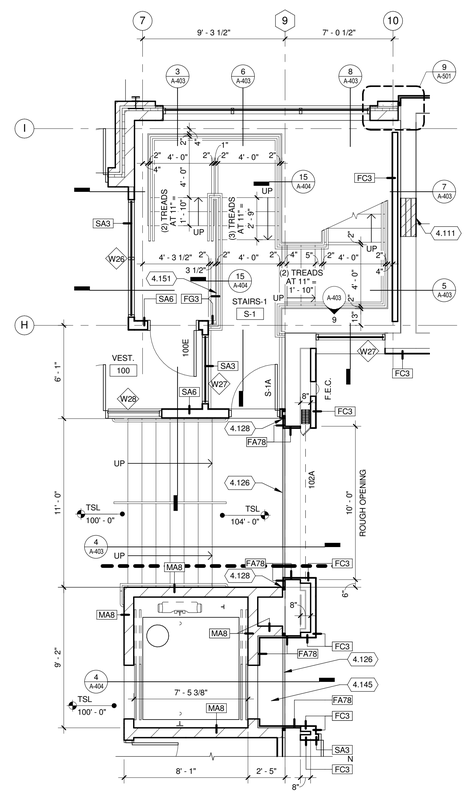
1/4" = 1'-0"



1 ENLARGED STAIR S-1 AT FIRST FLOOR
1/4" = 1'-0"

0 2 4 8

KEYED NOTES

4.111 CMU INFILL AT REMOVED OPENING - PARGE WITH CONCRETE AT EXPOSED EXTERIOR LOCATIONS

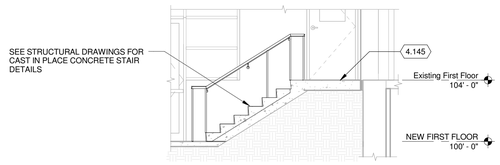
4.126 2" FLOOR EXPANSION JOINT, SEE SPECIFICATIONS

4.128 PROVIDE GYPSUM BOARD TRIM 1/8" FROM EXPANSION JOINT MATERIAL, PROVIDE EXPANDABLE SEALANT.

4.135 SUMP PUMP CROCK - COORDINATE WITH ELEVATOR MFR FOR FINAL LOCATION REQUIRMENTS.

4.145 FLOOR INFILL - REF STRUCTURAL

4.151 GYPSUM FURRING WALL FC3 UNDER STAIRS, ALIGN FACE OF WALL 1" OFF EDGE OF STRINGER.



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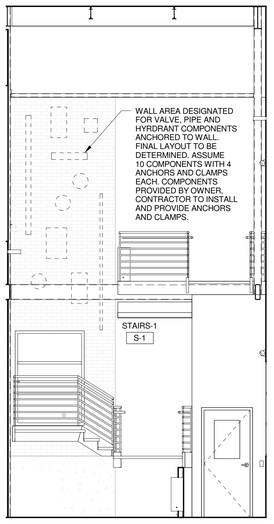
1/4" = 1'-0"



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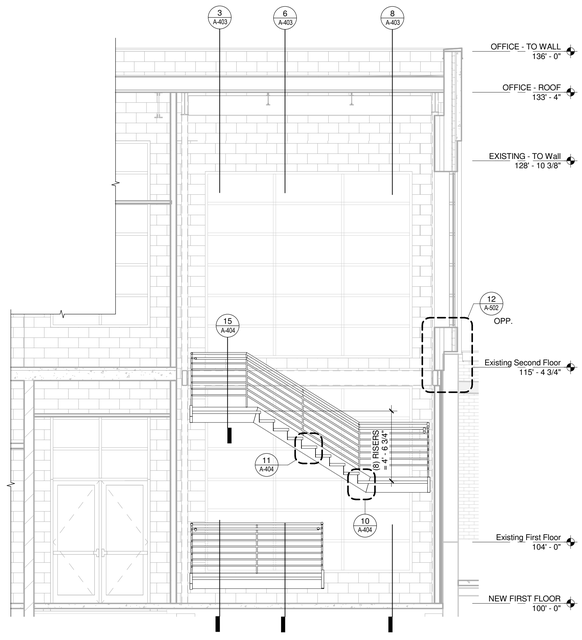
1/4" = 1'-0"



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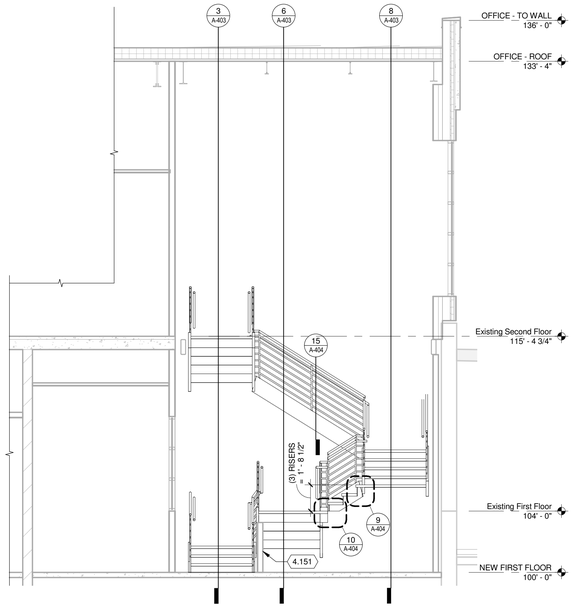
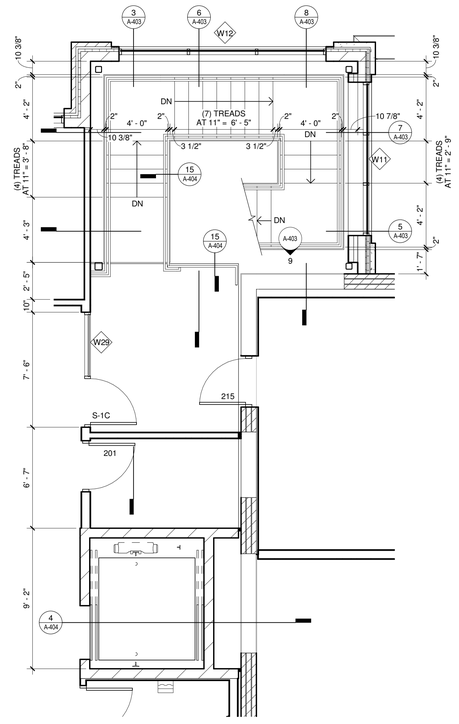


5 STAIR SECTION
1/4" = 1'-0"



2 ENLARGED STAIR S-1 AT SECOND FLOOR
1/4" = 1'-0"

0 2 4 8

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SHEET CONTENTS
ENLARGED STAIR PLANS AND SECTIONS

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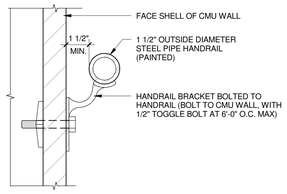
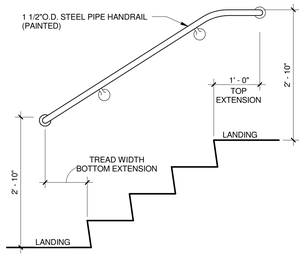


12 HANDRAIL DETAIL, TYP.
3" = 1'-0"



13 TYPICAL HANDRAIL EXTENSION, TYP.
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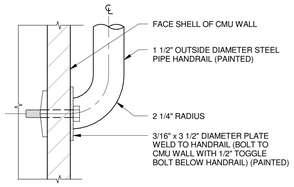

14 HANDRAIL RETURN DETAIL, TYP.
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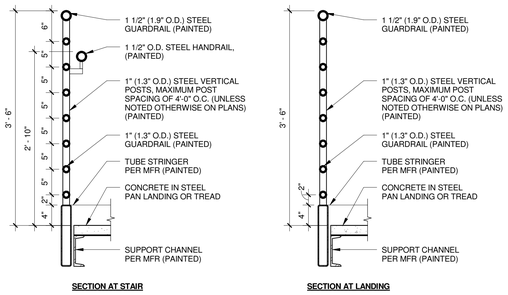
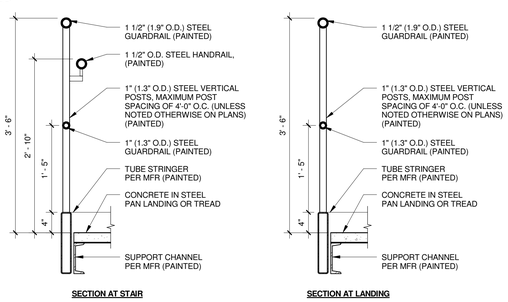


15 STAIR GUARDRAIL
1" = 1'-0"



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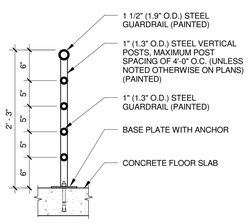
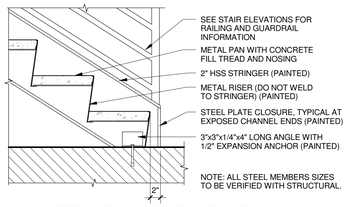
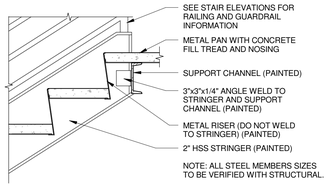


17 UNDER STAIR GUARDRAIL
1" = 1'-0"



8 METAL PAN STAIR - BASE
1" = 1'-0"



9 METAL PAN STAIR - FLOOR
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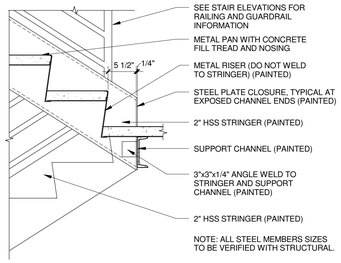

10 METAL PAN STAIR - LANDING
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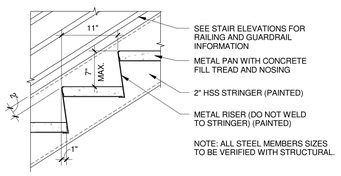
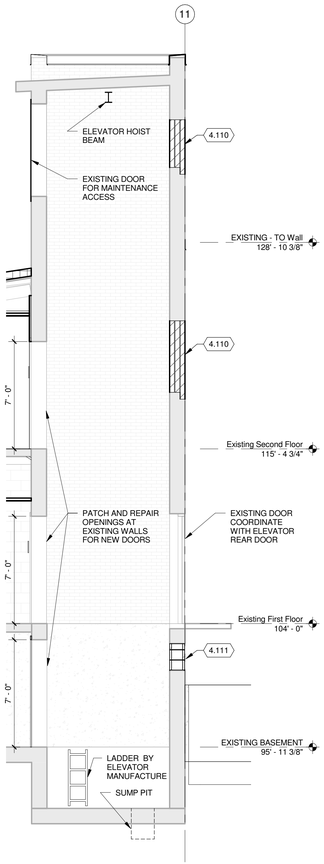
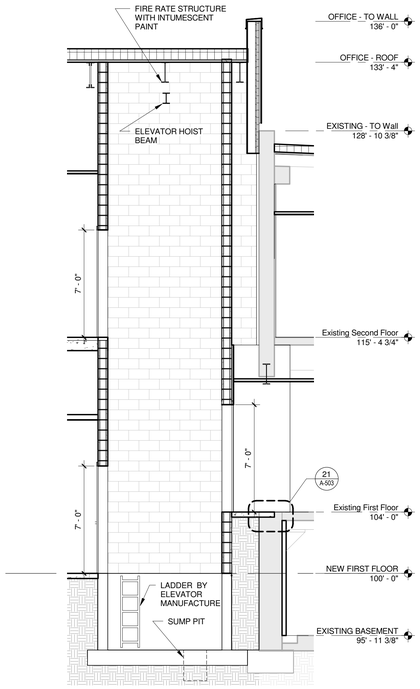


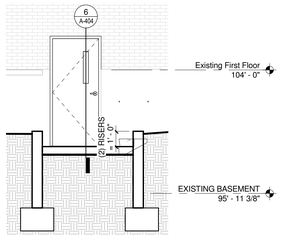
11 METAL PAN STAIR - TREAD
1" = 1'-0"



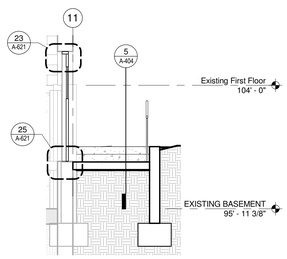
7 ELEVATOR SECTION - FRIEGHT
1/4" = 1'-0"



4 ELEVATOR SECTION - PASSENGER
1/4" = 1'-0"



5 STAIR SECTION
1/4" = 1'-0"



6 STAIR SECTION
1/4" = 1'-0"

KEYED NOTES

4.110 SOLID BRICK INFILL AT REMOVED OPENING - TOOTH INTO EXISTING

4.111 CMU INFILL AT REMOVED OPENING - PARGE WITH CONCRETE AT EXPOSED EXTERIOR LOCATIONS

4.119 ALIGN STUDS WITH EDGE OF COLUMN

4.120 ALIGN WALL CENTERED ON COLUMN / GRID LINE

4.124 PROVIDE HAND AND GUARD RAIL REPLACEMENT TO MATCH CURRENT CODE REQUIREMENTS - PATCH AND REPAIR WALL WHERE DEMOLISHED RAILINGS WERE REMOVED FOR SECURE ATTACHMENT OF NEW RAIL.

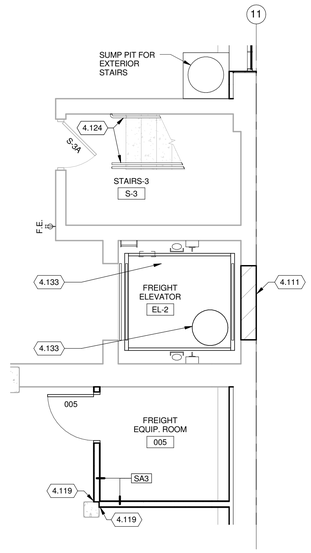
4.133 PROVIDE REPLACEMENT FREIGHT ELEVATOR

4.134 PATCH AND REPAIR EXISTING FREIGHT ELEVATOR OPENING HEAD/JAMB/SILLS FOR INSTALLATION OF NEW FREIGHT ELEVATOR OPENING.

4.147 POURED CONCRETE STAIRWELL W/ FLOOR DRAIN CONNECT TO INTERIOR STORM DRAINS - REF PLUMBING

4.152 LADDER TO ROOF ACCESS HATCH, SEE DETAIL 13/A-505

4.153 PROVIDE STAIR FINISHES PER ROOM FINISH SCHEDULE ON SHEET A-601.



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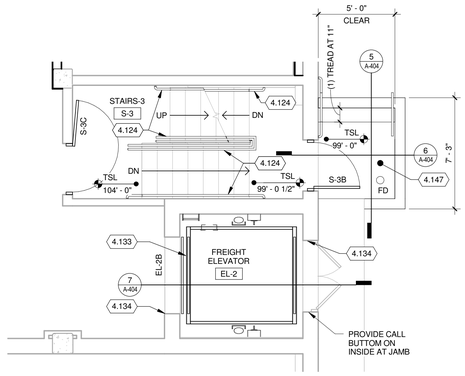
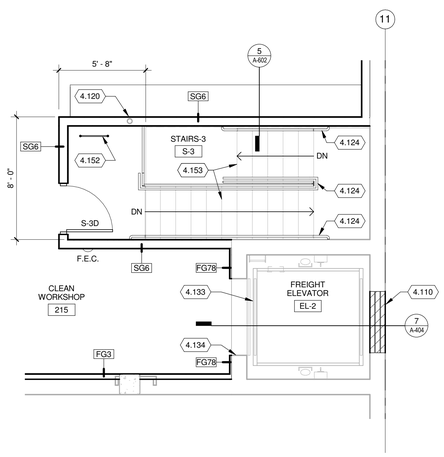
1/4" = 1'-0"



2 ENLARGED STAIR S-3 AT FIRST FLOOR
1/4" = 1'-0"



3 ENLARGED STAIR S-3 AT SECOND FLOOR
1/4" = 1'-0"

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DESIGNED BY: Designer
DRAWN BY: Author
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SHEET CONTENTS
ENLARGED STAIR PLANS AND SECTIONS

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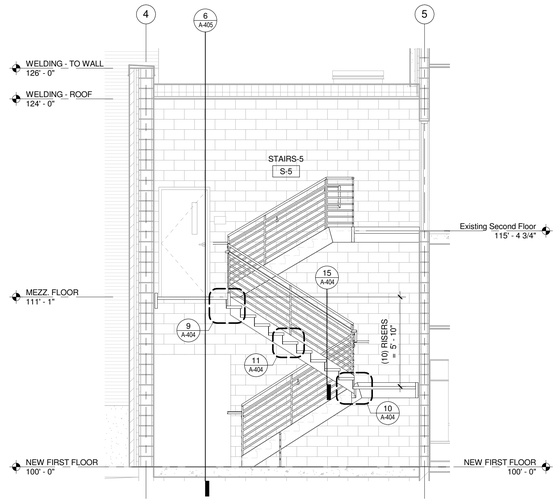
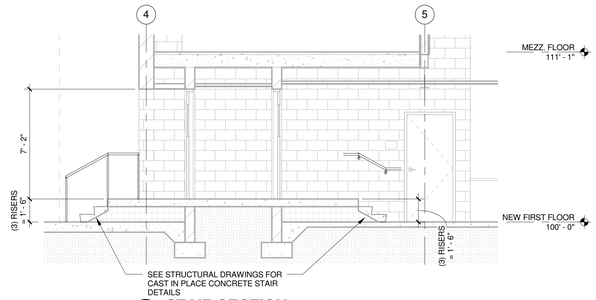


8 **STAIR SECTION**
1/4" = 1'-0"



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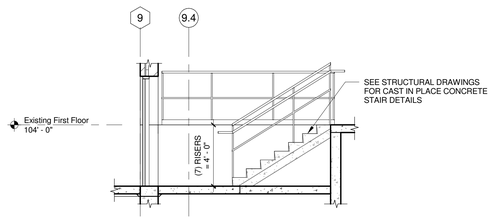

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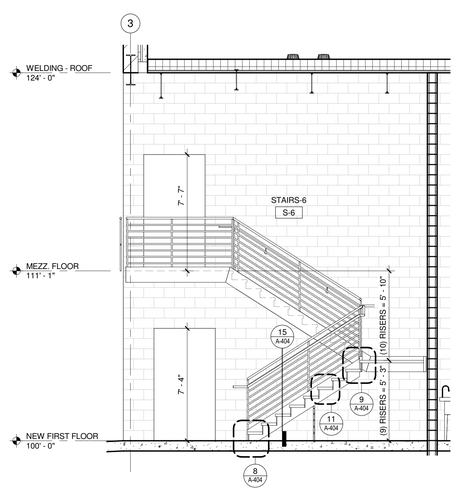
1/4" = 1'-0"



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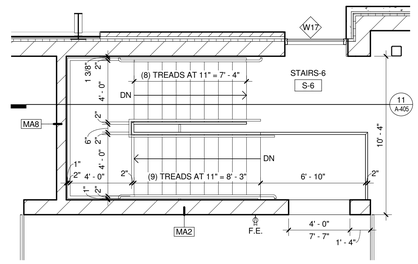
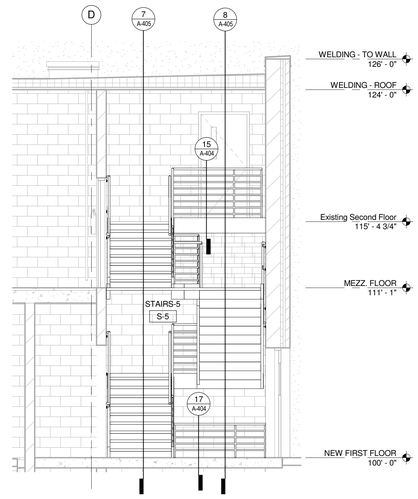


5 **ENLARGED STAIR S-6 AT SECOND FLOOR**
1/4" = 1'-0"



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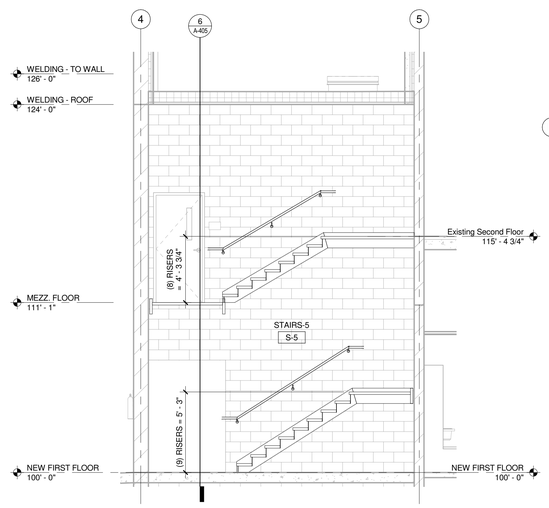
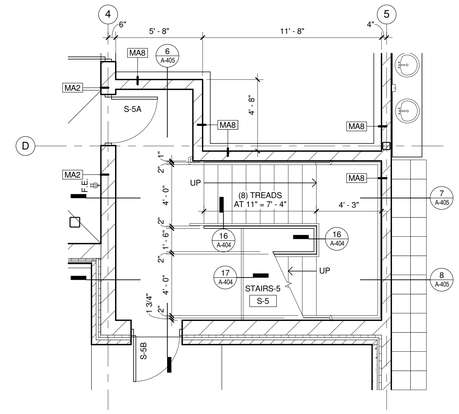
1/4" = 1'-0"



7 **STAIR SECTION**
1/4" = 1'-0"



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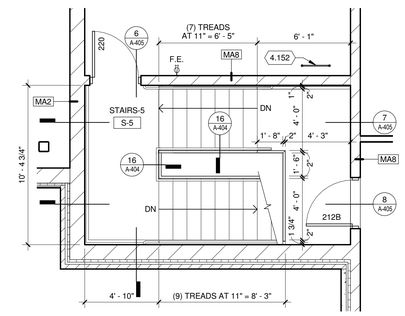
1/4" = 1'-0"



2 **ENLARGED STAIR S-5 AT SECOND FLOOR**
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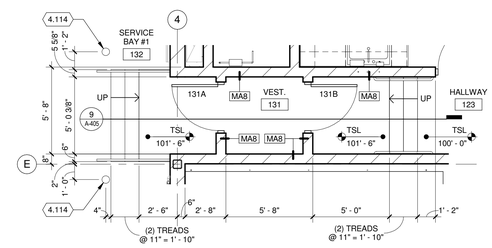
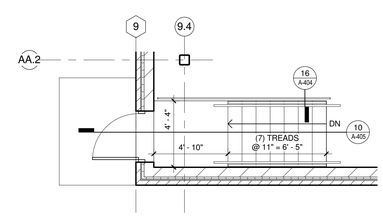


3 **ENLARGED STAIRS AT VEST. 131**
1/4" = 1'-0"



4 **ENLARGED STAIR S-7 AT FIRST FLOOR**
1/4" = 1'-0"

KEYED NOTES

4.114 8" ROUND BOLLARDS

4.152 LADDER TO ROOF ACCESS HATCH, SEE DETAIL 13/A-505

Mead & Hunt

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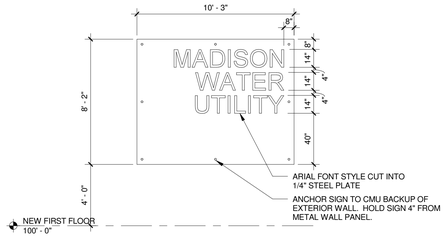
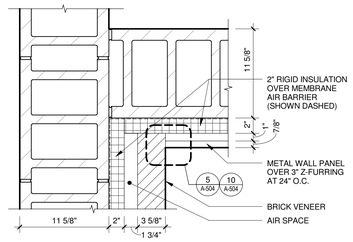
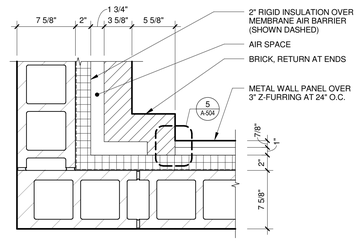


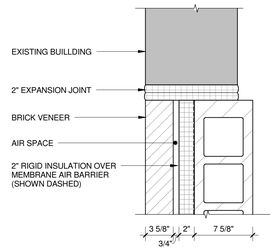
11 STEEL PLATE SIGN
1/4" = 1'-0"



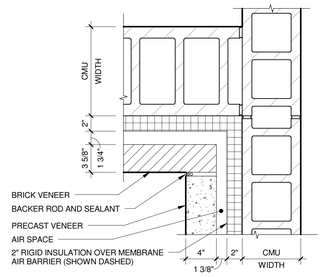
6 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"



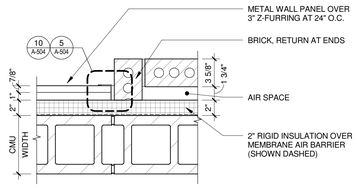
1 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"



12 EXPANSION JOINT DETAIL
1 1/2" = 1'-0"



7 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"



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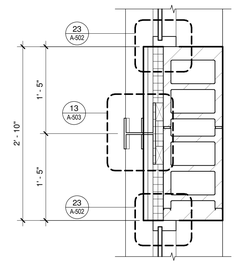
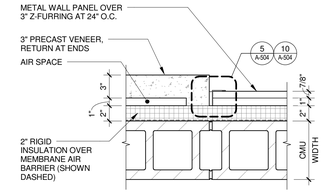
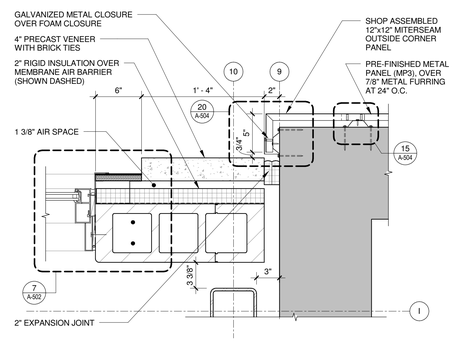
1 1/2" = 1'-0"



8 ENLARGED PLAN DETAIL
1" = 1'-0"



3 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"



9 EXPANSION JOINT DETAIL
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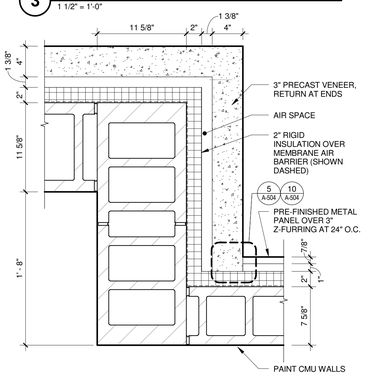
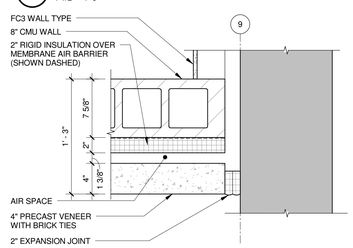
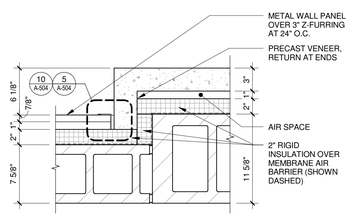


4 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"



10 EXPANSION JOINT DETAIL
1 1/2" = 1'-0"



5 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
EXTERIOR PLAN DETAILS

SHEET NO.:
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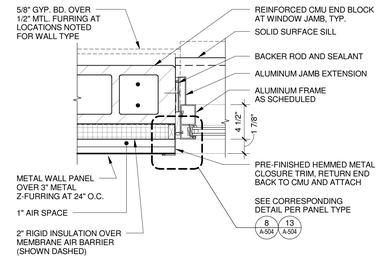
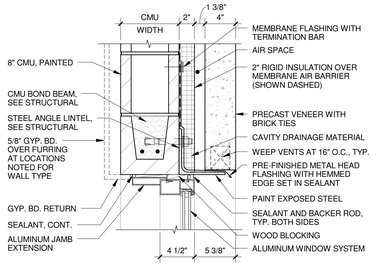
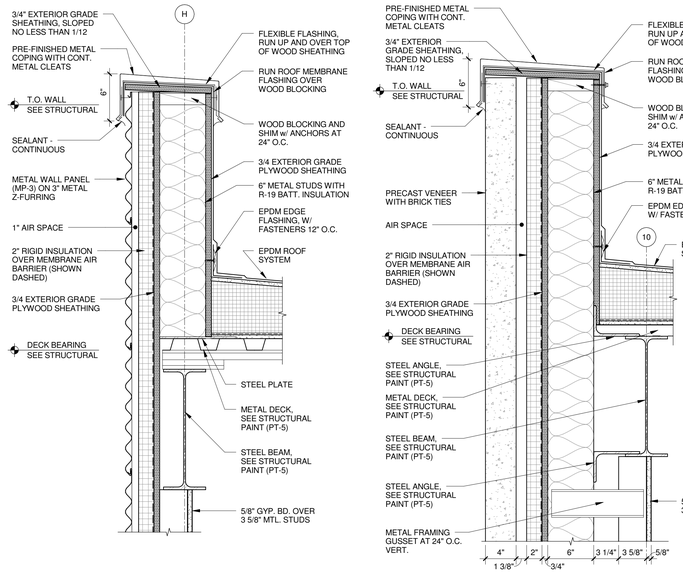


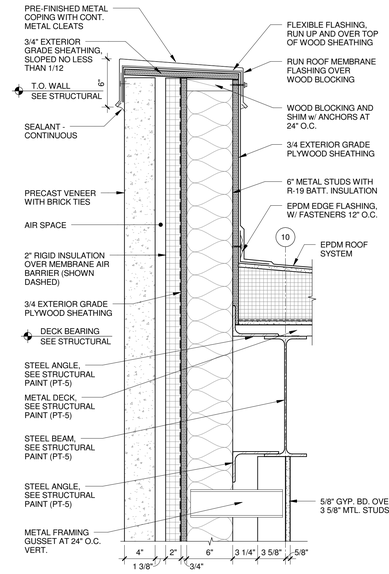
23 WINDOW JAMB DETAIL
1 1/2" = 1'-0"



18 WINDOW HEAD DETAIL
1 1/2" = 1'-0"



14 PARAPET CAP AT GRID LINE "H"
1 1/2" = 1'-0"



11 PARAPET CAP AT GRID LINE "10"
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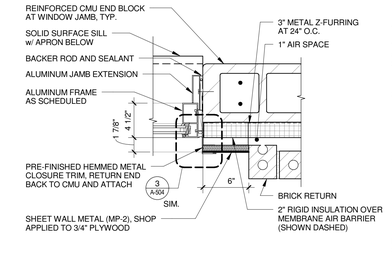
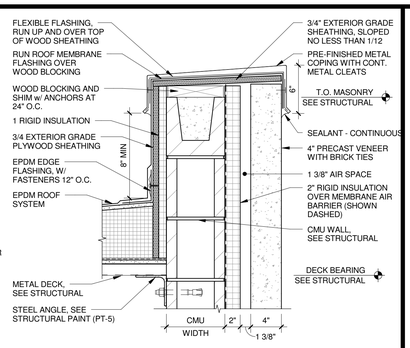
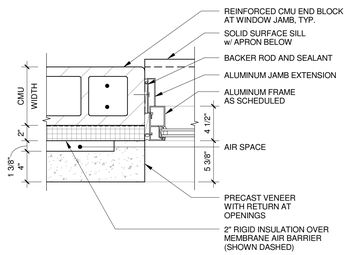


6 WINDOW JAMB DETAIL
1 1/2" = 1'-0"



1 PARAPET CAP - PRECAST VENEER
1 1/2" = 1'-0"



24 WINDOW JAMB DETAIL
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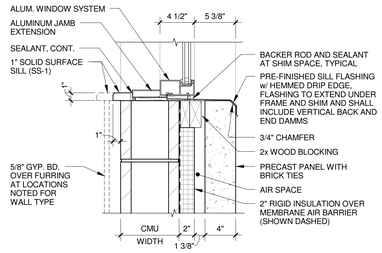
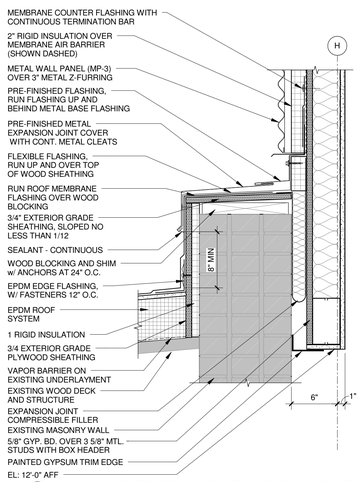
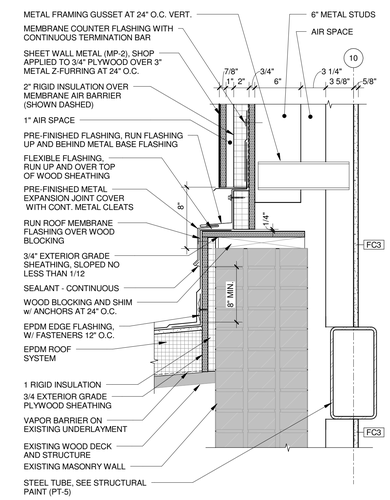


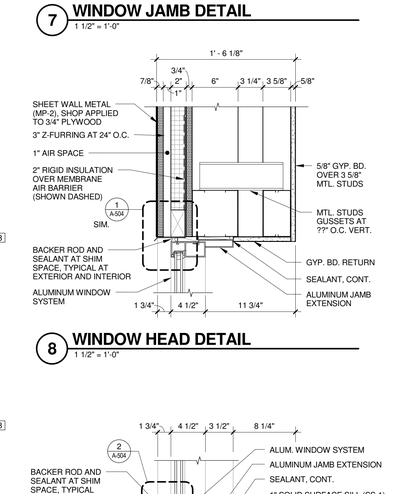
19 WINDOW SILL DETAIL
1 1/2" = 1'-0"



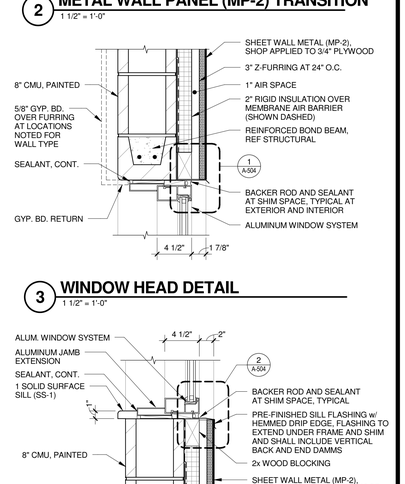
15 WALL TO ROOF AT EXPANSION JOINT
1 1/2" = 1'-0"



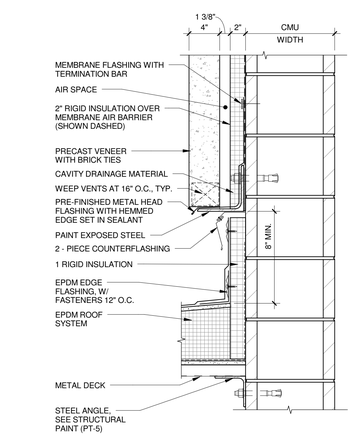
12 WALL TO ROOF AT EXPANSION JOINT
1 1/2" = 1'-0"



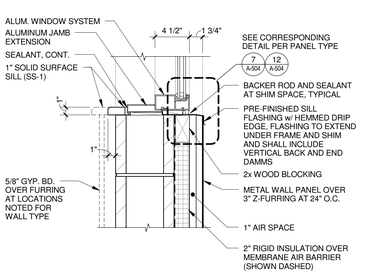
8 WINDOW HEAD DETAIL
1 1/2" = 1'-0"



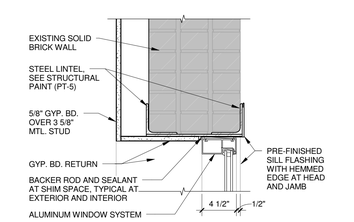
3 WINDOW HEAD DETAIL
1 1/2" = 1'-0"



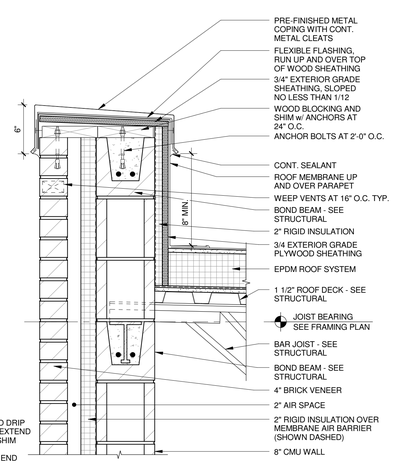
25 ROOF TO WALL AT PRECAST
1 1/2" = 1'-0"



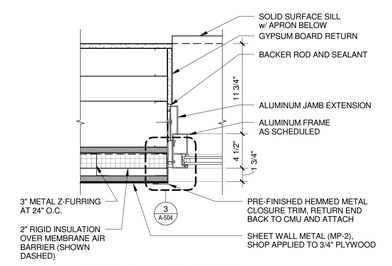
21 WINDOW SILL DETAIL
1 1/2" = 1'-0"



16 WINDOW HEAD DETAIL, JAMB SIM.
1 1/2" = 1'-0"



13 PARAPET CAP - VENEER ON CMU
1 1/2" = 1'-0"



10 WINDOW JAMB DETAIL
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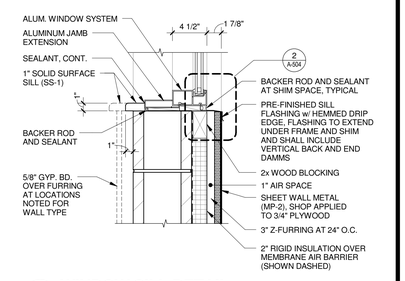
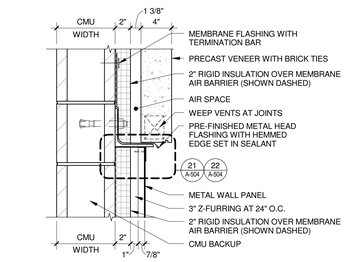
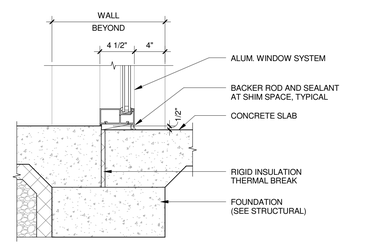


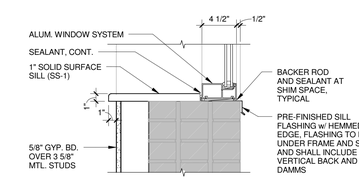
5 WINDOW SILL DETAIL
1 1/2" = 1'-0"



PRECAST TO METAL PANEL 1 & 3 TRANSITION
1 1/2" = 1'-0"



22 WINDOW SILL DETAIL
1 1/2" = 1'-0"



17 WINDOW SILL DETAIL
1 1/2" = 1'-0"

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Middleton, WI 53562
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meadhunt.com

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
EXTERIOR SECTION DETAILS

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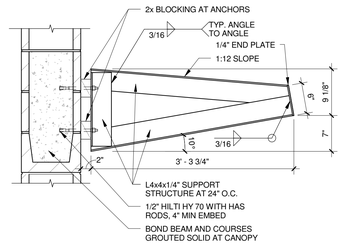
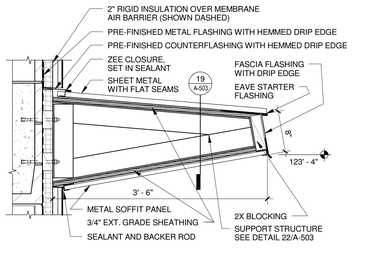
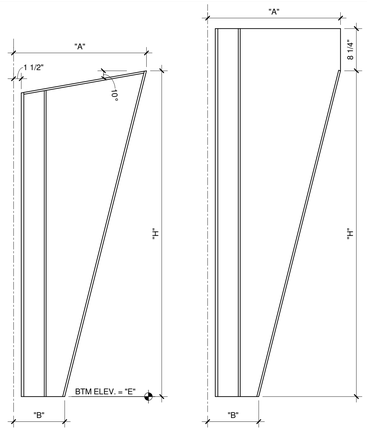


22 CANOPY STRUCTURE DETAIL
1" = 1'-0"

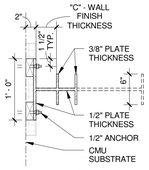


17 CANOPY AT METAL WALL PANEL
1" = 1'-0"



SECTION

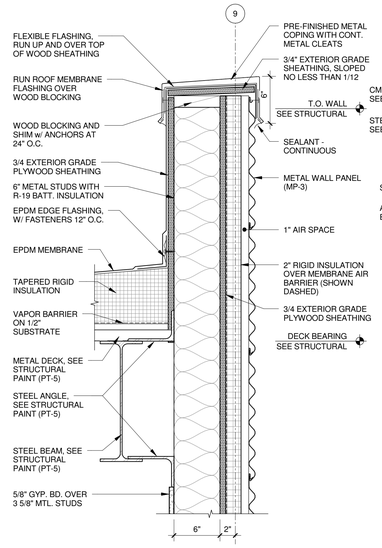
SECTION "B2a" & "B2b" ONLLY



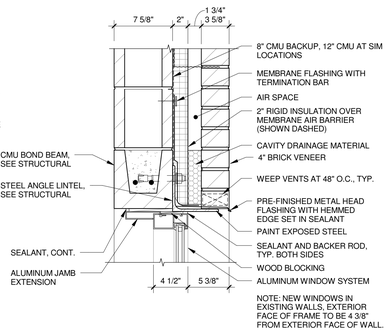
PLAN

BRACKET SCHEDULE						
MARK	"A"	"B"	"C"	"H"	"E"	
B1	2' - 2"	10"	5 3/8"	5' - 3 3/4"	7' - 2"	
B2a	2' - 2"	10"	4"	5' - 3 3/4"	7' - 2"	
B2b	2' - 2"	10"	1 7/8"	5' - 3 3/4"	7' - 2"	
B3a	2' - 8"	10"	4"	19' - 2 7/8"	10' - 3"	
B3b	3' - 0"	1' - 2"	1 7/8"	19' - 2 7/8"	10' - 3"	
B4	2' - 8"	7"	1 7/8"	19' - 1 7/8"	4' - 0"	
B5	2' - 9"	10"	1 7/8"	19' - 3"	10' - 3"	

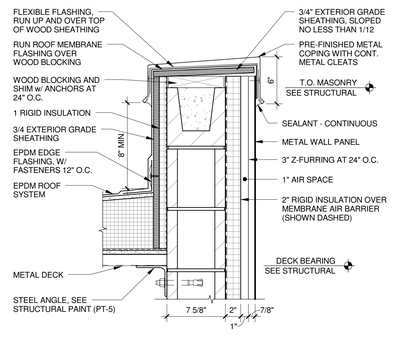
13 BRACKET PROFILES
1" = 1'-0"



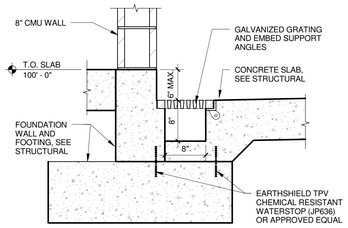
11 PARAPET CAP AT GRID "9"
1 1/2" = 1'-0"



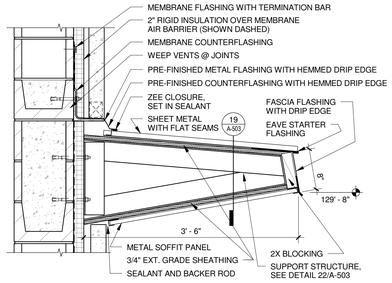
6 WINDOW HEAD AT BRICK
1 1/2" = 1'-0"



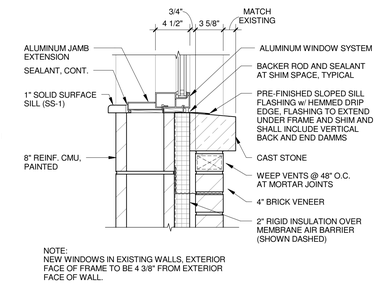
1 PARAPET CAP - METAL PANELS
1 1/2" = 1'-0"



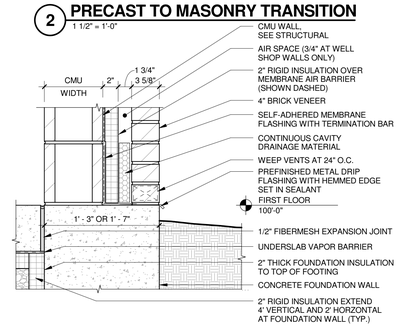
23 LUBRICATION ROOM TRENCH
1" = 1'-0"



18 CANOPY AT PRECAST
1" = 1'-0"



7 WINDOW SILL AT BRICK
1 1/2" = 1'-0"



2 PRECAST TO MASONRY TRANSITION
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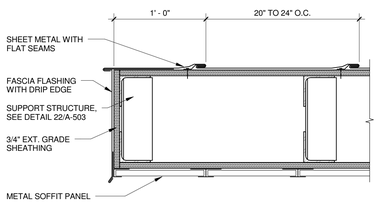
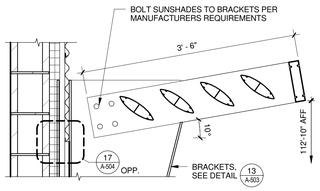
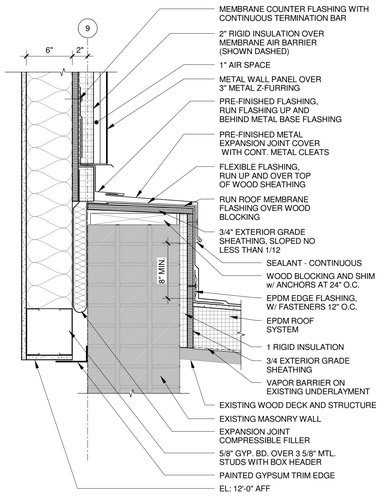


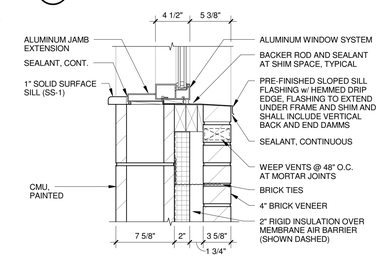
19 CANOPY END DETAIL
1 1/2" = 1'-0"



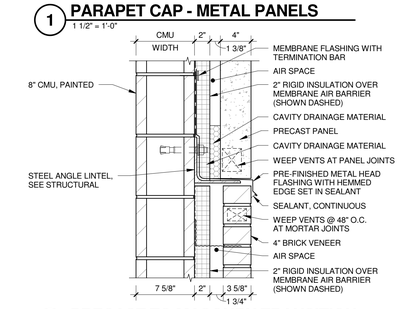
14 EXTERNAL SUN CONTROL DEVICE
1" = 1'-0"



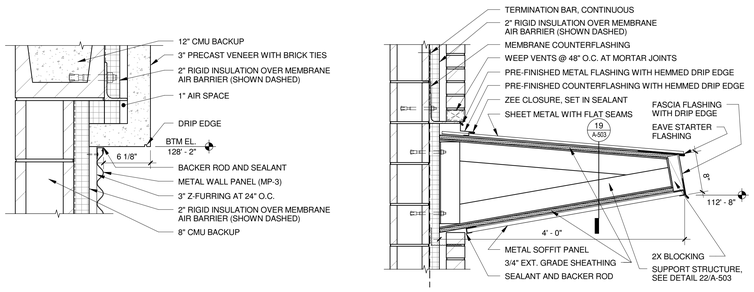
12 WALL TO ROOF AT EXPANSION JOINT
1 1/2" = 1'-0"



9 WINDOW JAMB DETAIL
1 1/2" = 1'-0"

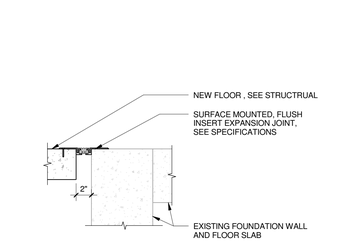


4 BASE DETAIL - PRECAST VENEER
1 1/2" = 1'-0"

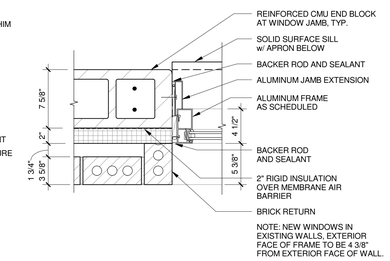


15 CANOPY AT BRICK
1" = 1'-0"

3 BASE DETAIL - MASONRY VENEER
1 1/2" = 1'-0"



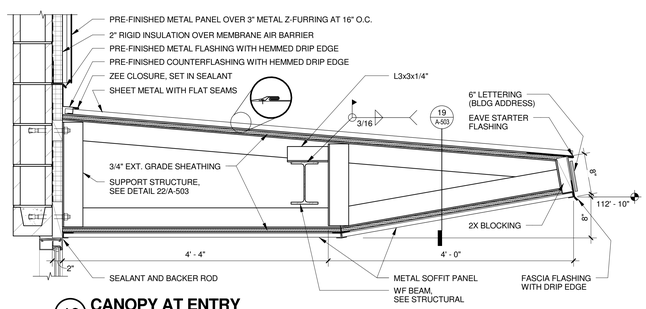
20 PRECAST RETURN DETAIL
1 1/2" = 1'-0"



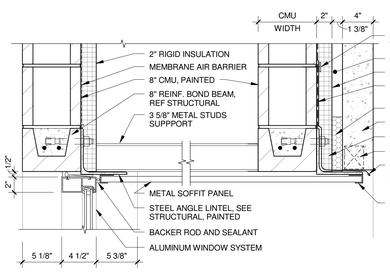
9 WINDOW JAMB DETAIL
1 1/2" = 1'-0"

5 BASE DETAIL - METAL PANEL (MP-2)
1 1/2" = 1'-0"

21 FLOOR EXPANSION JOINT
1 1/2" = 1'-0"



16 CANOPY AT ENTRY
1" = 1'-0"



10 WINDOW HEAD AT SOFFIT
1 1/2" = 1'-0"

Mead & Hunt

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
EXTERIOR SECTION DETAILS

SHEET NO.:
A-503

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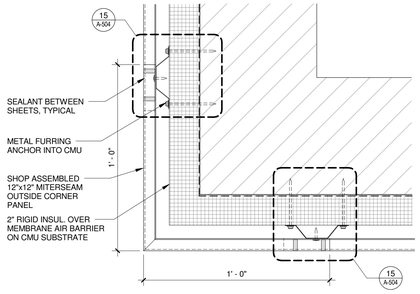
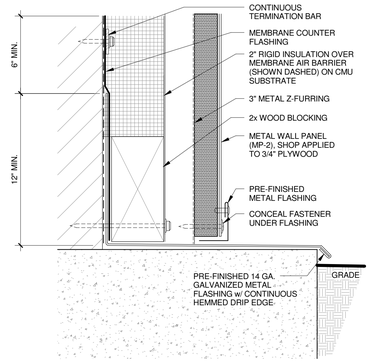
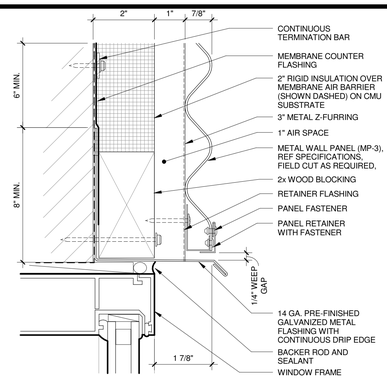


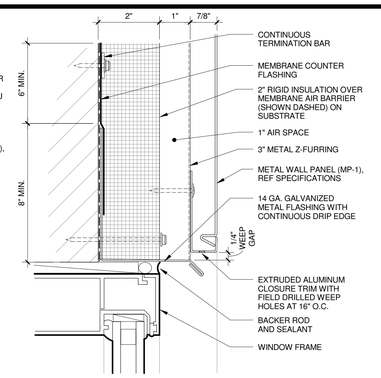
20 OUTSIDE CORNER METAL WALL PANEL (MP-3)
3" = 1'-0"



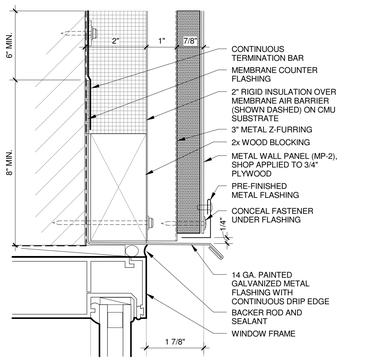
19 METAL WALL PANEL (MP-2) WALL BASE FLASHING
6" = 1'-0"



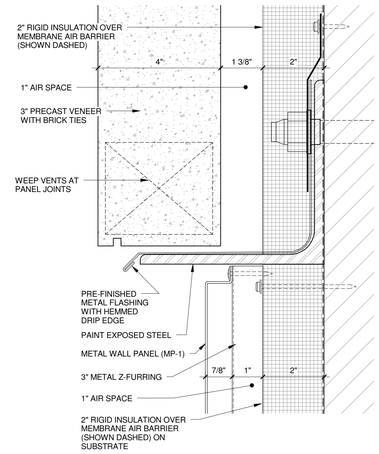
11 METAL WALL PANEL (MP-3) TRANSITION WINDOW HEAD FLASHING
6" = 1'-0"



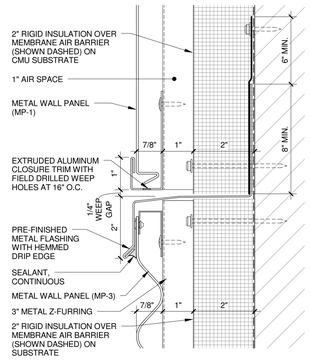
6 METAL WALL PANEL (MP-1) TRANSITION WINDOW HEAD FLASHING
6" = 1'-0"



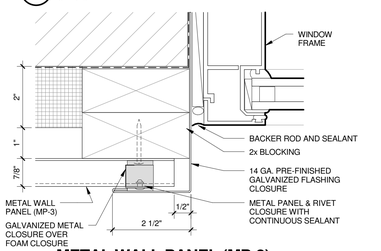
1 METAL WALL PANEL (MP-2) TRANSITION WINDOW HEAD FLASHING
6" = 1'-0"



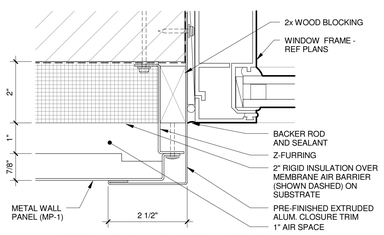
21 PRECAST TO PANEL TRANSITION
6" = 1'-0"



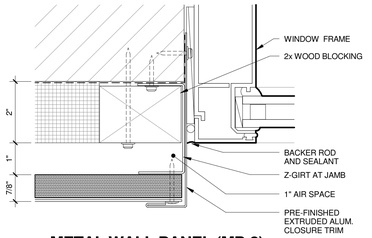
16 PANEL TO PANEL TRANSITION
6" = 1'-0"



13 METAL WALL PANEL (MP-3) TRANSITION WINDOW JAMB FLASHING
6" = 1'-0"



8 METAL WALL PANEL (MP-1) TRANSITION WINDOW JAMB FLASHING
6" = 1'-0"



3 METAL WALL PANEL (MP-2) TRANSITION WINDOW JAMB FLASHING
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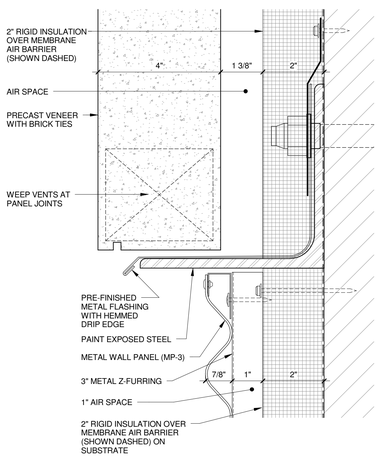
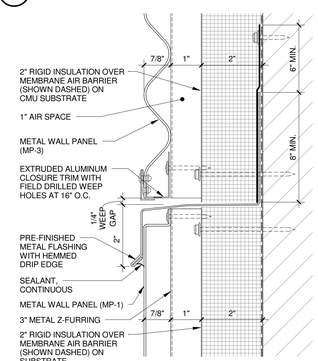
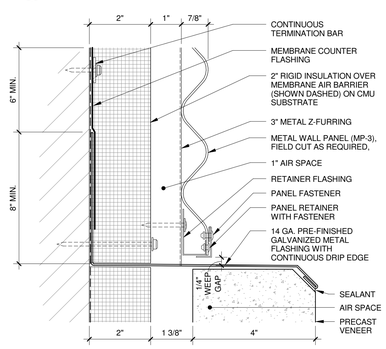


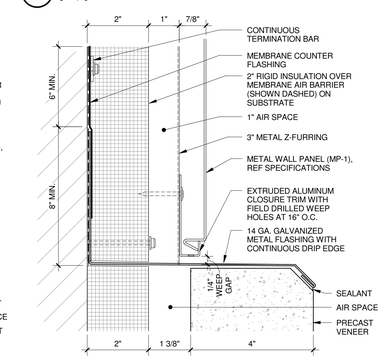
22 PRECAST TO PANEL TRANSITION
6" = 1'-0"



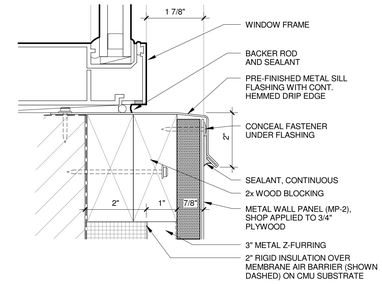
17 PANEL TO PANEL TRANSITION
6" = 1'-0"



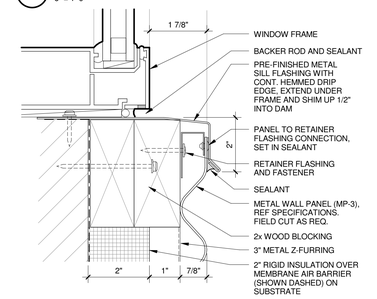
14 METAL WALL PANEL (MP-3) TRANSITION TO PRECAST FLASHING
6" = 1'-0"



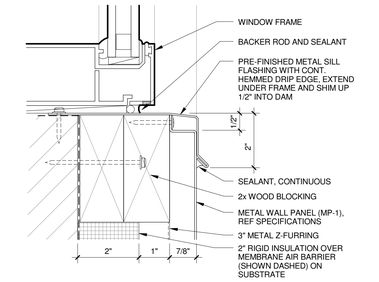
9 METAL WALL PANEL (MP-1) TRANSITION TO PRECAST FLASHING
6" = 1'-0"



4 METAL WALL PANEL (MP-3) HORIZONTAL SEAM
6" = 1'-0"

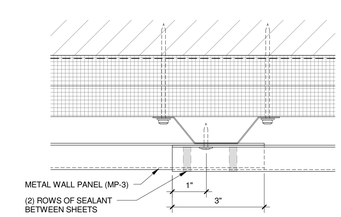


12 METAL WALL PANEL (MP-3) TRANSITION WINDOW SILL FLASHING
6" = 1'-0"

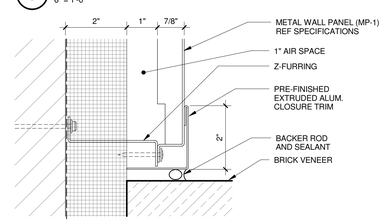


7 METAL WALL PANEL (MP-1) TRANSITION WINDOW SILL FLASHING
6" = 1'-0"

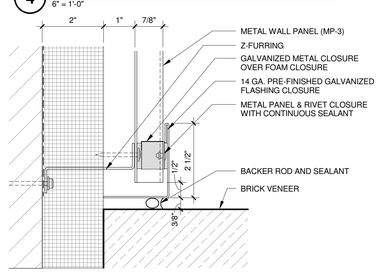
2 METAL WALL PANEL (MP-2) TRANSITION WINDOW SILL FLASHING
6" = 1'-0"



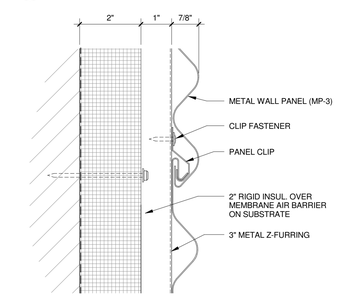
15 METAL WALL PANEL (MP-3) LAP DETAIL
6" = 1'-0"



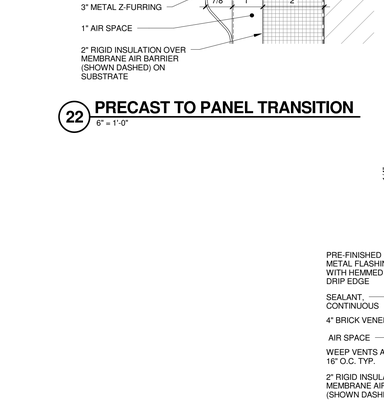
10 METAL WALL PANEL (MP-1) END PANEL DETAIL
6" = 1'-0"



5 METAL WALL PANEL (MP-3) END PANEL DETAIL
6" = 1'-0"



4 METAL WALL PANEL (MP-3) HORIZONTAL SEAM
6" = 1'-0"



18 PANEL TO BRICK TRANSITION
6" = 1'-0"

Mead & Hunt

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
ENLARGED FLASHING DETAILS

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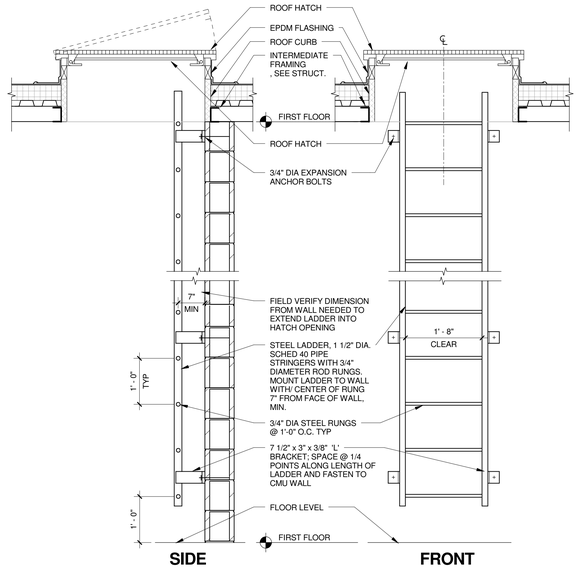
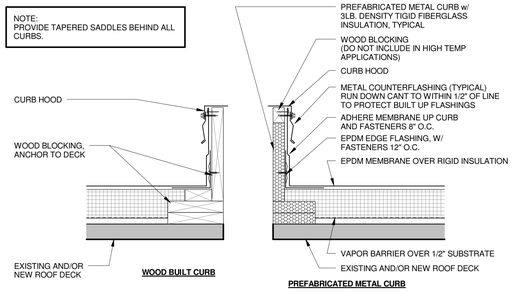
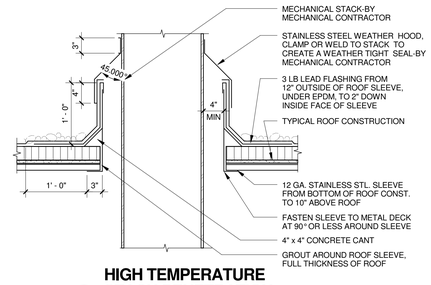


13 LADDER AT ROOF HATCH
3/4" = 1'-0"

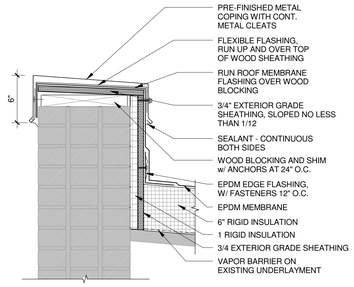
NOTE:
PROVIDE TAPERED SADDLES BEHIND ALL CURBS.



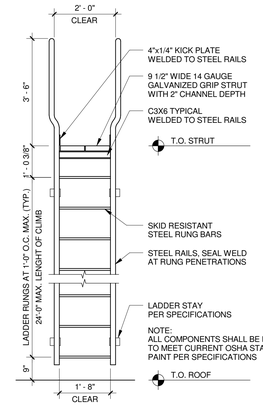
10 ROOF CURB DETAIL
1 1/2" = 1'-0"



6 HIGH TEMPERATURE STACK PENETRATION
1" = 1'-0"

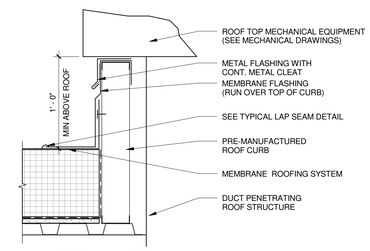


1 PARAPET CAP AT EXISTING
1 1/2" = 1'-0"

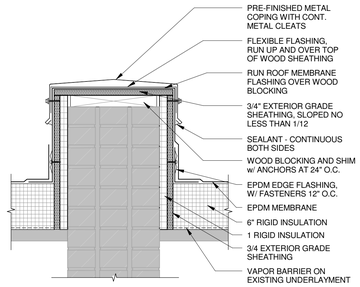


NOTE: ALL MATERIAL SHALL BE GALVANIZED

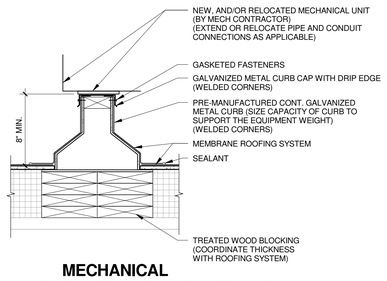
11 LADDER AT ROOF ACCESS
1/2" = 1'-0"



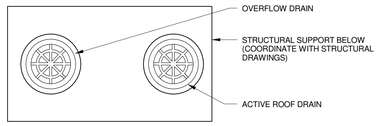
7 MECHANICAL DUCT PENTRATION CURB
1 1/2" = 1'-0"



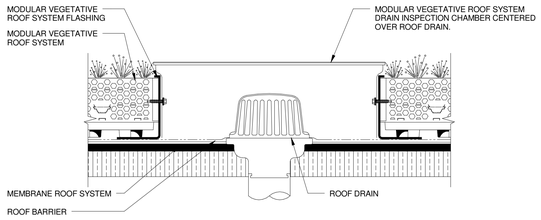
2 PARAPET CAP AT EXISTING
1 1/2" = 1'-0"



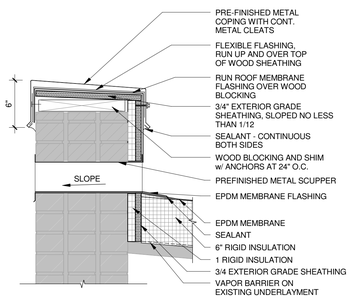
8 MECHANICAL EQUIPMENT SUPPORT CURB
1 1/2" = 1'-0"



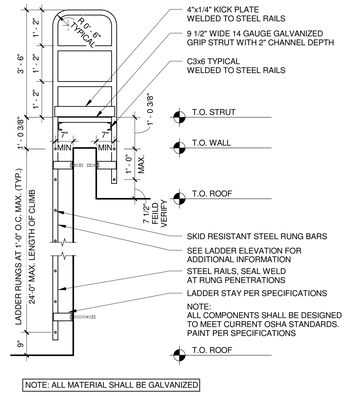
3 ROOF DRAIN - PLAN
1" = 1'-0"



14 ROOF DRAIN INSPECTION CHAMBER
1 1/2" = 1'-0"

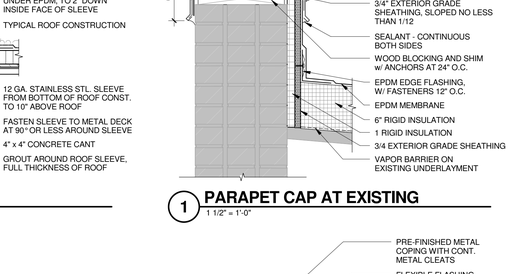


15 WALL SCUPPER AT EXISTING
1 1/2" = 1'-0"



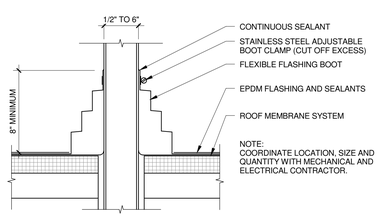
NOTE: ALL MATERIAL SHALL BE GALVANIZED

12 LADDER AT ROOF ACCESS
1/2" = 1'-0"

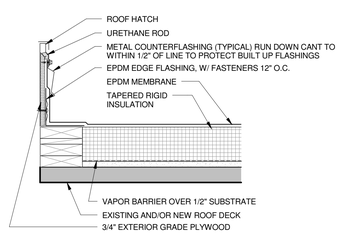


NOTE:
HOLE IN MEMBRANE SHOULD EXTEND A MINIMUM OF 1/2" BEYOND CLAMPING RING AND SHOULD NOT BE SMALLER THAN THE DIAMETER OF THE LEADER PIPE.

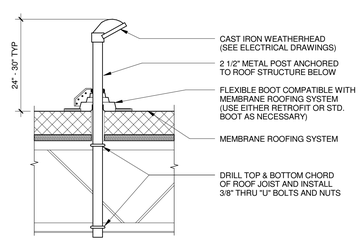
4 ROOF DRAIN - SECTION
1 1/2" = 1'-0"



16 PIPE PENTRATION - EPDM
1 : 1



9 ROOF HATCH DETAIL
1 1/2" = 1'-0"



5 076500 - WEATHER HEAD (W.H.)
1 1/2" = 1'-0"

Mead & Hunt

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
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meadhunt.com

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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

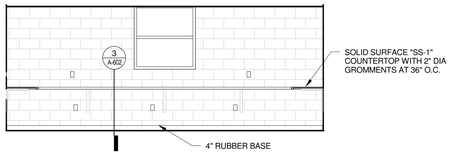
ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

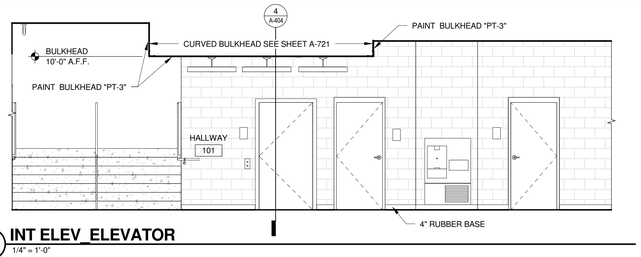
SHEET CONTENTS
ROOF DETAILS

SHEET NO.:
A-505

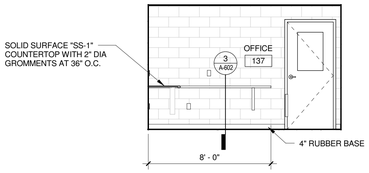
6/12/2015 1:53:11 PM C:\Revit Local\3235300-131021-03-A-Central-2015_13070mab.rvt



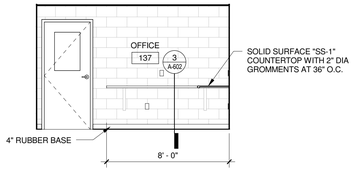
8 INT ELEV_ OFFICE 137 SOUTH
1/4" = 1'-0"



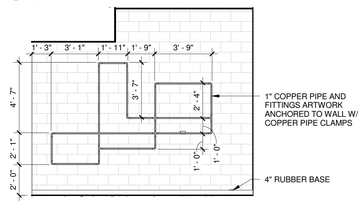
1 INT ELEV_ELEVATOR
1/4" = 1'-0"



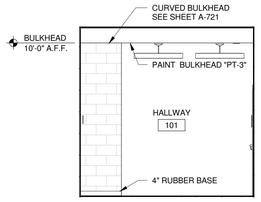
10 INT ELEV_ OFFICE 137 WEST
1/4" = 1'-0"



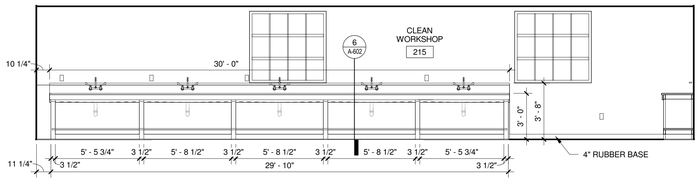
9 INT ELEV_ OFFICE 137 EAST
1/4" = 1'-0"



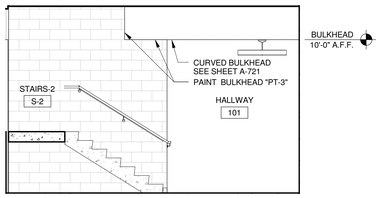
3 INT ELEV_HALLWAY 101 - WEST
1/4" = 1'-0"



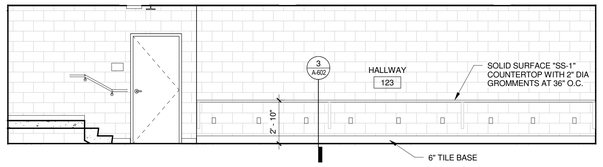
2 INT ELEV_HALLWAY 101
1/4" = 1'-0"



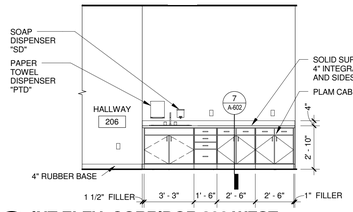
11 INT ELEV_CLEAN WORSHOP 213
1/4" = 1'-0"



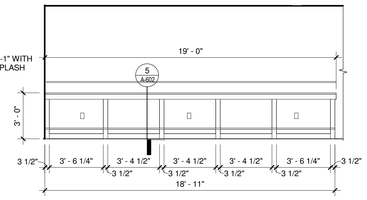
4 INT ELEV_STAIRS 2
1/4" = 1'-0"



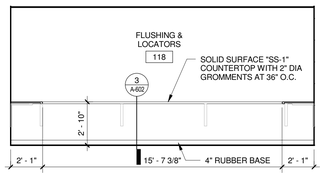
5 INT ELEV_HALLWAY 123
1/4" = 1'-0"



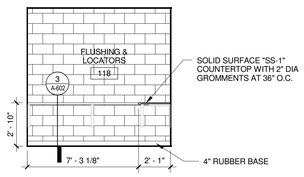
13 INT ELEV_CORRIDOR 206 WEST
1/4" = 1'-0"



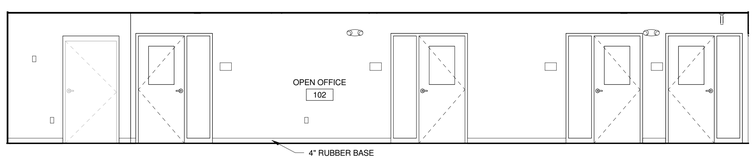
12 INT ELEV_CLEAN WORSHOP SOUTH
1/4" = 1'-0"



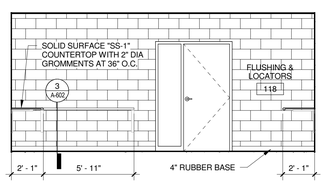
15 INT ELEV_FLUSHING & LOCATORS 118 EAST
1/4" = 1'-0"



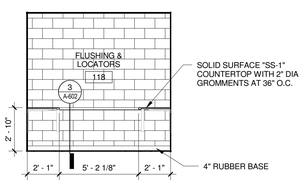
14 INT ELEV _ FLUSHING & LOCATORS 118 NORTH
1/4" = 1'-0"



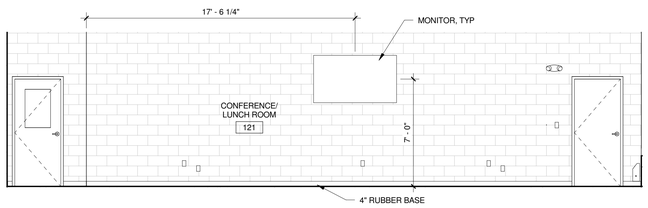
6 INT ELEV_OPEN OFFICE 102
1/4" = 1'-0"



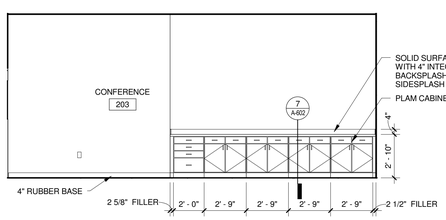
17 INT ELEV_FLUSHING & LOCATORS 118 WEST
1/4" = 1'-0"



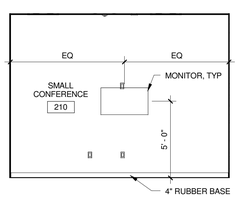
16 INT ELEV_FLUSHING & LOCATORS 118 SOUTH
1/4" = 1'-0"



7 INT ELEV_CONFERENCE / LUNCHROOM 121
1/4" = 1'-0"



19 INT ELEV_CONFERENCE 203
1/4" = 1'-0"



18 INT ELEV_SMALL CONFERENCE 210 WEST
1/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MTL	CEILING HEIGHT	REMARKS
001	STORAGE	SC	-	FRP	FRP	PT-4	FRP	ETR	7' - 6"	
002	STORAGE	SC	-	PT-4	PT-4	PT-4	PT-4	ETR	7' - 6"	
003	STORAGE	SC	-	PT-4	FRP	PT-4	FRP	ETR	7' - 6"	
004	STORAGE	SC	-	PT-4	FRP	FRP	FRP	ETR	7' - 6"	
005	FREIGHT EQUIP. ROOM	SC	-	PT-4	PT-4	PT-4	PT-4	ETR	7' - 6"	
100	VEST.	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	12' - 2"	
101	HALLWAY	LVT-1/2	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	11' - 0"	1, 2,
102	OPEN OFFICE	LVT-1	RB-1	PT-3	PT-3	PT-1	PT-1	ACT-1	8' - 6"	
103	KEY STORAGE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP	±12' - 4"	
104	BOILER ROOM	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	EXP	±9' - 10"	
105	PRIVATE OFFICE	LVT-1	RB-1	PT-1	PT-1	PT-2	PT-1	ACT-1	8' - 8"	
106	PRIVATE OFFICE	LVT-1	RB-1	PT-1	PT-1	PT-2	PT-1	ACT-1	8' - 8"	
107	PRIVATE OFFICE	LVT-1	RB-1	PT-1	PT-1	PT-2	PT-1	ACT-1	8' - 8"	
108	INTERVIEW ROOM	LVT-1	RB-1	PT-1	PT-1	PT-2	PT-1	ACT-1	8' - 8"	
109	STORAGE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	7' - 6"	
110	FILE STORAGE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	7' - 6"	
111	STORAGE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	7' - 6"	
112	MENS	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	PT-1	8' - 0"	
113	WOMENS	CT-2	CTB-2	PT-1	PT-1	PT-1	PT-1	PT-1	8' - 0"	
114	HALLWAY	LVT-1	RB-1	PT-1	PT-1	PT-3	PT-1	ACT-1	8' - 0"	
115	WELL SHOP AREA	SC	-	PT-4	PT-4	PT-4	PT-4	EXP/PT-5	±22' - 10"	
116	MENS	CT-2	CTB-2	PT-1	PT-1	PT-1	PT-1	ACT-2	8' - 0"	
117	WOMENS	CT-1	CT-2	PT-1	PT-1	PT-1	PT-1	ACT-2	8' - 0"	
118	FLUSHING & LOCATORS	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	9' - 0"	
119	JANITOR STORAGE	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	ACT-2	9' - 0"	
120	VESTIBULE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	12' - 2"	
121	CONFERENCE/ LUNCH ROOM	LVT-1	RB-1	PT-1	PT-1	PT-3	PT-3	ACT-1	10' - 2"	
122	BREAK	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	8' - 0"	
123	HALLWAY	CT-1	CTB-1	PT-2	PT-1	PT-1	PT-1	ACT-2	9' - 0"	
124	WOMEN'S VESTIBULE	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	ACT-2	9' - 0"	
125	WOMENS LOCKER	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-2	ACT-2	9' - 0"	3
126	WOMENS	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	PT-1	9' - 0"	
127	MEN'S VESTIBULE	CT-2	CTB-2	PT-1	PT-1	PT-1	PT-1	ACT-2	9' - 0"	
128	MEN'S	CT-2	CTB-2	PT-1	PT-1	PT-1	PT-1	PT-1	9' - 0"	
129	MENS SHOWER & LOCKER	CT-2	CTB-2	PT-1	PT-2	PT-1	PT-1	ACT-2	9' - 0"	3
130	MEN'S VESTIBULE	CT-2	CTB-2	PT-1	PT-1	PT-1	PT-1	ACT-2	8' - 0"	
131	VEST.	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	7' - 4"	
132	SERVICE BAY #1	SC	-	PT-4	PT-4	PT-4	PT-4	EXP/PT-5	32' - 10"	
133	PARTS STORAGE	SC	-	PT-4	PT-4	PT-4	-	EXP	10' - 1"	
134	SMALL ENGINES	SC	-	PT-4	PT-4	PT-4	-	EXP	10' - 1"	
135	LUBRICATION ROOM	SC	-	PT-4	PT-4	PT-4	PT-4	EXP	10' - 1"	
136	SERVICE BAY #2	SC	-	PT-4	PT-4	PT-4	PT-4	EXP/PT-5	32' - 10"	
137	OFFICE	SC	RB-1	PT-4	PT-4	PT-4	PT-4	ACT-1	8' - 0"	
138	TIRE CHANGE	SC	-	PT-4	-	PT-4	PT-4	EXP	10' - 1"	
139	HALLWAY	SC	-	PT-4	-	PT-1	-	EXP	8' - 1"	
140	TOILET	CT-1	CTB-1	PT-4	PT-4	PT-4	PT-4	ACT-2	8' - 0"	
141	WELDING BAY	SC	-	PT-4	PT-4	PT-4	PT-4	EXP/PT-5	24' - 0"	
142	WELDING STORAGE	SC	-	PT-4	PT-4	PT-4	-	EXP/PT-5	10' - 1"	
200	HALLWAY	LVT-1/2	RB-1	PT-1	PT-1	PT-2	PT-1	ACT-1	10' - 8"	1
201	STORAGE	SC	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	12' - 3"	
202	OFFICE	LVT-1	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	10' - 8"	
203	CONFERENCE	LVT-1	RB-1	PT-1	PT-3	PT-3	PT-1	ACT-1	10' - 8"	
204	OFFICE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	10' - 8"	
205	OFFICE	LVT-1	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	10' - 8"	
206	HALLWAY	LVT-1/2	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	10' - 8"	1
207	MENS	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	PT-1	8' - 0"	
208	STORAGE	SC	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	10' - 8"	
209	WOMENS	CT-2	CTB-2	PT-1	PT-1	PT-1	PT-1	PT-1	8' - 0"	
210	SMALL CONFERENCE	LVT-1	RB-1	PT-1	PT-1	PT-3	PT-3	ACT-1	10' - 8"	
211	JANITOR	CT-1	CTB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	9' - 0"	
212	OPEN OFFICE	LVT-1	RB-1	PT-2	PT-1	PT-1	PT-1	ACT-1	10' - 8"	
213	FILE STORAGE	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	9' - 0"	
214	MECHANICAL	SC	-	PT-1	PT-1	PT-1	PT-1	EXP	16' - 3"	
215	CLEAN WORKSHOP	RBF-1	RB-1	FRP	FRP	FRP	FRP	ACT-1	8' - 8"	3
216	ELEC. PARTS SECURE STORAGE	RBF-1	RB-1	PT-4	PT-4	PT-4	PT-4	ACT-1	8' - 0"	
217	DATA ROOM	SC	RB-1	PT-1	PT-1	PT-1	PT-1	EXP	±11' - 7"	
218	WELL SHOP CONFERENCE	RBF-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	8' - 8"	
220	PARTS STORAGE	SC	-	PT-4	PT-4	PT-4	PT-4	EXP/PT-5	12' - 11"	
230	TIRE STORAGE MEZZANINE	SC	-	PT-4	-	-	-	EXP/PT-5	12' - 11"	
231	MECH EQUIPMENT PLATFORM	SC	-	-	PT-4	PT-4	PT-4	EXP/PT-5	12' - 11"	
300	FREIGHT ELEVATOR HEADHOUSE	-	-	-	-	-	-	-	-	
EL-1	ELEVATOR	LVT	SSTL	PLAM	PLAM	PLAM	PLAM	WHITE	-	4
EL-2	FREIGHT ELEVATOR	PT-5	-	PT-5	PT-5	PT-5	PT-5	-	-	4
S-1	STAIRS-1	LVT	RB-1	PT-1	PT-1	PT-1	PT-1	PT-1	-	5
S-2	STAIRS-2	LVT	RB-1	PT-1	PT-1	PT-1	PT-1	PT-3	-	5
S-3	STAIRS-3	LVT	RB-1	PT-4	PT-4	PT-4	PT-4	PT-5	-	5
S-4	STAIRS-4	SC	-	PT-4	PT-4	PT-4	PT-4	-	-	5
S-5	STAIRS-5	SC	-	PT-4	PT-4	PT-4	PT-4	EXP/PT-5	-	5
S-6	STAIRS-6	SC	-	PT-4	-	PT-4	PT-4	EXP/PT-5	-	5
S-7	STAIRS	SC	-	PT-4	-	PT-4	PT-4	-	-	5

ROOM FINISH SCHEDULE REMARKS:

1. FLOOR PATTERN SHALL HAVE AN 18" PERIMETER BORDER OF LVT-1, WITH LVT-2 AS THE FIELD.
2. SOFFIT SHALL BE PAINTED PT-3, SEE INTERIOR ELEVATIONS.
3. LOCKERS SHALL HAVE PLASTIC LAMINATE FINISH AS SELECTED FROM MANUFACTURER'S FULL RANGE.
4. REFER TO HOLELESS HYDRAULIC ELVATOR SPECS FOR ELEVATOR FINISHES FROM MANUFACTURER'S FULL RANGE.
5. STAIR TREADS SHALL BE COVERED WITH RB-TREAD.

ARCHITECTURAL FINISHES SCHEDULE

FINISH NUMBER	FINISH DESCRIPTION	PRODUCT DESCRIPTION: MANUFACTURER	MODEL NUMBER	STYLE	COLOR	SIZE	REMARKS
ACT-1	ACOUSTIC CEILING TILE - TYPE 1	ARMSTRONG	584	CIRRUS	WHITE	24x24	ANGLED TEGULAR
ACT-1 GRID	ACOUSTIC CEILING TILE - TYPE 1 GRID	ARMSTRONG	7300	PRELUDE XL	WHITE	15/16"	EXPOSED TEE
ACT-2	ACOUSTIC CEILING TILE - TYPE 2	ARMSTRONG	607	CERAMAGUARD FINE FISSURED	WHITE	24x24	WET LOCATION, SQUARE LAY-IN
ACT-2 GRID	ACOUSTIC CEILING TILE - TYPE 2 GRID	ARMSTRONG	AL7200	PRELUDE PLUS XL	WHITE	15/16"	EXPOSED TEE
CT-1	CERAMIC TILE - TYPE 1	CROSSVILLE	CM107	BACK BAY	GRAPHITE	12x12	
CT-2	CERAMIC TILE - TYPE 2	CROSSVILLE	CM106	BACK BAY	TRUFFLE	12x12	
CTB-1	CERAMIC TILE BASE - TYPE 1	CROSSVILLE	CM107	BACK BAY	GRAPHITE	6x12	COVE BASE
CTB-2	CERAMIC TILE BASE - TYPE 2	CROSSVILLE	CM106	BACK BAY	TRUFFLE	6x12	COVE BASE
ETR	EXISTING TO REMAIN	-	-	-	-	-	-
EXP	EXPOSED STRUCTURE	-	-	-	-	-	-
FRP	FIBER REINFORCED PANELS	NUDO	F3C400	FIBERCORR WALL PANELS	PEARL GRAY	4'x8'	
GR-1	GROUT COLOR FOR CT-1	BOSTIK	H142	EPOXY GROUT	FRENCH GRAY	1/8"	
GR-2	GROUT COLOR FOR CT-2	BOSTIK	H145	EPOXY GROUT	MOBE PEARL	1/8"	
LVT-1	LUXURY VINYL FLOOR TILE - TYPE 1	MANNINGTON	12322	NATURE'S PATH DISSOLVE	RENDER	18x18	
LVT-2	LUXURY VINYL FLOOR TILE - TYPE 2	MANNINGTON		NATURE'S PATH VIA	PASSO	4x36	
PLAM-1	PLASTIC LAMINATE - TYPE 1	PIONITE	AE021		GRAPHITE SPEKTRUM		
PT-1	PAINT COLOR - TYPE 1	SHERWIN-WILLIAMS	SW-7101		FUTON		
PT-2	PAINT COLOR - TYPE 2	SHERWIN-WILLIAMS	SW-6080		UTTERLY BEIGE		
PT-3	PAINT COLOR - TYPE 3	SHERWIN-WILLIAMS	SW-6242		BRACING BLUE		
PT-4	PAINT COLOR - TYPE 4	SHERWIN-WILLIAMS	SW-7073		NETWORK GRAY		
PT-5	PAINT COLOR - TYPE 5	SHERWIN-WILLIAMS	SW-7075		WEB GRAY		
RB-1	RUBBER WALL BASE - TYPE 1	MANNINGTON	908	TP	IRON	4"	COVE BASE
RB-TREAD	RUBBER TREADS	MANNINGTON	904	COLORSCAPE ROUND	BARK		
RBF-1	RUBBER FLOOR TILE-TYPE 1	MANNINGTON	824	RESET	BEIGE TONES	24x24	
SC	SEALED CONCRETE	-	-	-	-	-	-
SS-1	SOLID SURFACE - TYPE 1	CORIAN			BLUE PEBBLE		

GENERAL FINISH NOTES:

1. PREP ALL EXISTING AND/OR NEW WORK AREAS AS REQUIRED TO ACCOMMODATE SCHEDULED FINISHES.
2. ALL INSTALLATION BASED ON MANUFACTURER'S GUIDELINES, TYP.
3. FLOOR PREP BY INSTALLER FOR FLUSH TRANSITIONS.
4. ALL GROUT TO BE EPOXY TYPE.
5. FLOOR LEVELING SHALL BE 1/8" TOLERANCE FOR GENERAL FLOORING.
6. GWB CONTROL JOINTS TO BE LOCATED A MAXIMUM OF 30 FT. COORDINATE LOCATIONS WITH ARCHITECT.
7. CONTRACTOR TO CAULK AROUND ALL WINDOW FRAMES. CAULK TO MATCH ALUMINUM FRAME COLOR.
8. ALL WALLS PAINTED PT-1, U.N.O.
9. ALL PAINTED WALLS/CEILINGS SHALL BE PAINTED IN EGGSHELL SHEEN, U.N.O. GYPSUM BOARD SUBSTRATE SHALL HAVE LIGHT ORANGE PEEL TEXTURE.
10. ALL INTERIOR HM DOOR FRAME FINISHES TO BE PAINTED PT-5.
11. ALL METAL LINEAR DIFFUSERS, SHOP PRIMED ACCESS PANELS, ELECTRICAL PANELS, EXPOSED CONDUIT, MECH PIPING, AND SPRINKLER PIPING SHALL BE PAINTED TO MATCH ADJACENT SURFACE, TYPICAL U.N.O.
12. ALL EXPOSED MECHANICAL DUCTS SHALL BE GALVANIZED METAL, TYPICAL.
13. ALL EXPOSED CONCRETE AND CMU NOT SCHEDULED TO RECEIVE A FINISH SHALL BE SEALED, U.N.O.
14. ALL COLUMNS SHALL RECEIVE PAINT, WITH COLOR SIMILAR TO TYPICAL ROOM COLOR, AND RB-1, U.N.O.
15. ALL FLOORING TRANSITIONS SHALL BE CENTERED UNDER DOOR IN CLOSED POSITION U.N.O.
16. VERIFY THAT ALL TRANSITION STRIP AND METAL EDGE PRODUCTS COORDINATE WITH FLOOR FINISH HEIGHTS PRIOR TO PROCUREMENT.
17. ALL PAINT TRANSITIONS ARE INTENDED TO MEET INSIDE CORNERS, TYP. COORDINATE W/ ARCHITECT ANY DISCREPANCIES WITH ARCHITECT.
18. ALL CMU OUTSIDE CORNERS SHALL BE BULLNOSE.
19. WHERE TILE TURNS CORNERS, ALIGN GROUT LINES.
20. REFERENCE INTERIOR ELVATIONS FOR MOUNTING HEIGHTS.
21. REFERENCE A-720 THROUGH A-722 FOR CEILING FINISH COORDINATION.

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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

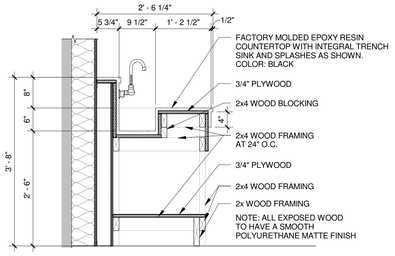
ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

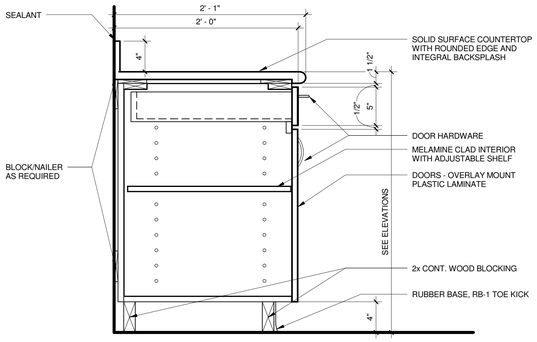
SHEET CONTENTS
ARCHITECTURAL SCHEDULES

SHEET NO.:
A-601

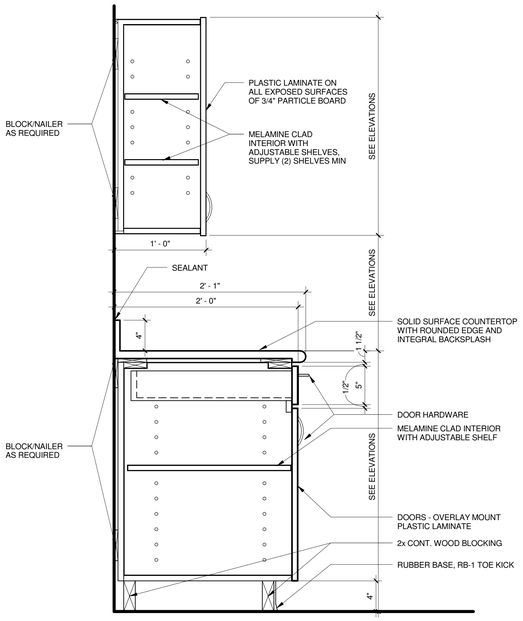
6/12/2015 1:53:19 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt



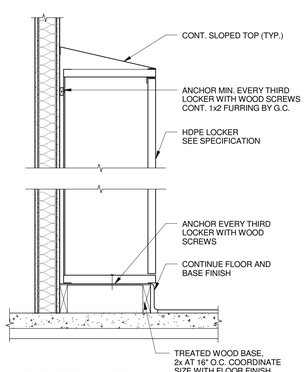
6 CLEAN WORKSHOP SINK
3/4" = 1'-0"



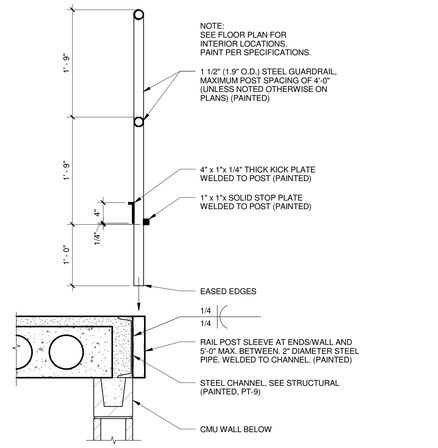
7 CABINETRY SECTION
1 1/2" = 1'-0"



8 CABINETRY SECTION
1 1/2" = 1'-0"



9 LOCKER BASE
1" = 1'-0"



1 REMOVABLE GUARDRAIL SECTION
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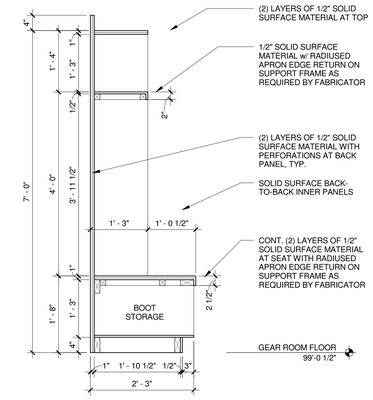

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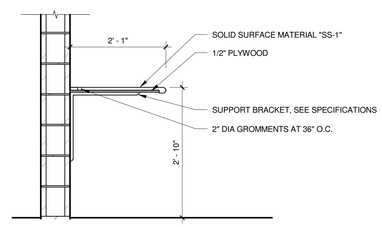
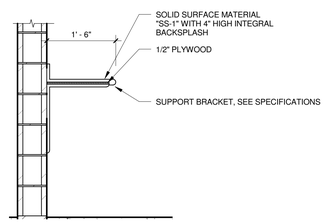


3 COUNTERTOP SUPPORT
3/4" = 1'-0"



4 COUNTERTOP SUPPORT
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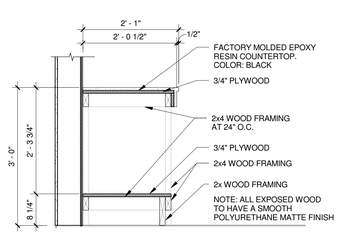

5 CLEAN WORKSHOP BENCH
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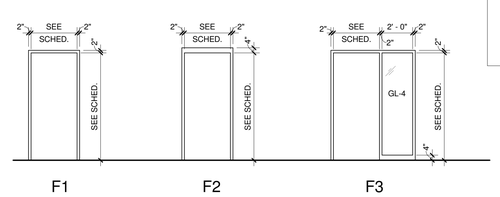
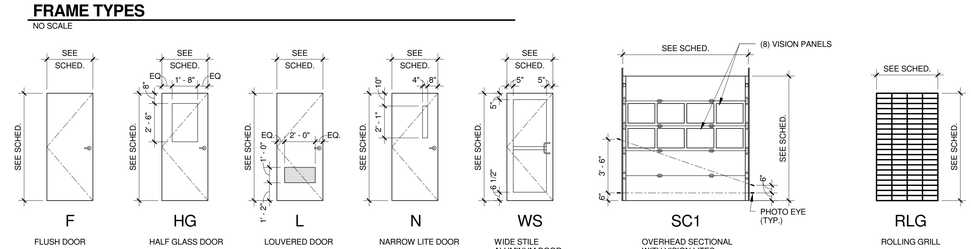


FRAME TYPES
NO SCALE



DOOR TYPES
NO SCALE

DOOR AND HARDWARE SCHEDULE

	DOOR							FRAME						MISCELLANEOUS			
	LEAF SIZE					GLAZING				DETAILS							
[	QTY.	WIDTH	HEIGHT	TYPE	MAT'L	TYPE	FINISH	TYPE	MAT'L	HEAD	JAMB	OTHER	FINISH	LABEL	HDWR SET	LINTEL	REMARKS
002	(1)	4' - 0"	7' - 0"	F	EXIST	-	PT-5	EXIST	EXIST	-	-	-	PT	-	1.0		
005	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F1	HM	19/A-621	22/A-621	-	PT	45 min	15.0		
100A	(1)	3' - 0"	8' - 0"	MS	AL	GL-2	ANN	W2	AL	1/A-621	3/A-621	5/A-621	ANN	-	4.0		
100B	(1)	3' - 0"	8' - 0"	MS	AL	GL-2	ANN	W2	AL	1/A-621	3/A-621	5/A-621	ANN	-	3.0		
100C	(1)	3' - 0"	8' - 0"	MS	AL	GL-6	ANN	W28	AL	21/A-621	22/A-621	-	ANN	1hr	25.1		
100D	(1)	3' - 0"	8' - 0"	MS	AL	GL-6	ANN	W28	AL	21/A-621	22/A-621	-	ANN	1hr	24.1		
100E	(1)	3' - 0"	7' - 0"	HG	WD	GL-6	ST	F1	HM	19/A-621	20/A-621	-	PT	1hr	12.0		
102A	-	10' - 0"	8' - 0"	RLG	AL	-	ANN	-	AL	27/A-621	-	-	ANN	-	1.0		
102B	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F2	HM	19/A-621	20/A-621	-	PT	-	16.0		
103A	(1)	3' - 0"	7' - 0"	F	EXIST	-	PT-5	EXIST	EXIST	-	-	-	PT	-	4.1		
103B	(1)	3' - 4"	6' - 8"	F	EXIST	-	PT-5	EXIST	EXIST	-	-	-	PT	-	19.0		
104	(1)	3' - 0"	7' - 0"	F	EXIST	-	PT-5	EXIST	EXIST	-	-	-	PT	-	15.0		
105	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
106	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
107	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
108	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
109A	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
109B	(2)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	6.0		
110	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
111	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
112	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F1	HM	17/A-621	18/A-621	-	PT	-	22.0		
113	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F1	HM	17/A-621	18/A-621	-	PT	-	21.0		
114	(2)	2' - 4"	7' - 0"	N	FRP	GL-4	-	F2	HM	26/A-621	27/A-621	-	PT	-	9.0		
115A	(2)	3' - 0"	11' - 2"	F	HM	-	PT-5	**	HM	23/A-621 SIM.	24/A-621 SIM.	25/A-621 SIM.	PT	-	5.0		3
115B	-	10' - 0"	10' - 0"	SG1	STL	-	-	-	STL	11/A-621 SIM.	12/A-621 SIM.	-	-	-	26.0		2
115C	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F2	AL	6/A-621	7/A-621	-	ANN	-	4.0		
116	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F2	HM	17/A-621	18/A-621	-	PT	-	20.0		
117	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F2	HM	17/A-621	18/A-621	-	PT	-	20.0		
118	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F3	HM	17/A-621	18/A-621	-	PT	-	14.0		
119	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F2	HM	17/A-621	18/A-621	-	PT	-	14.0		
120A	(1)	3' - 0"	8' - 0"	MS	AL	GL-2	ANN	W10	AL	1/A-621	2&4/A-621	-	ANN	-	3.0		
120B	(1)	3' - 0"	8' - 0"	MS	AL	GL-2	ANN	W10	AL	1/A-621	2/A-621	-	ANN	-	4.0		
120C	(1)	3' - 0"	8' - 0"	MS	AL	GL-2	ANN	W10	AL	1/A-621	16/A-621	-	ANN	-	25.0		
120D	(1)	3' - 0"	8' - 0"	MS	AL	GL-2	ANN	W10	AL	1/A-621	16/A-621	-	ANN	-	24.0		
121A	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	17/A-621	18/A-621	-	PT	-	11.1		
121B	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F2	AL	1/A-621	4/A-621	5/A-621	ANN	-	4.0		
122A	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F2	HM	17/A-621	18/A-621	-	PT	-	14.0		
122B	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F2	HM	17/A-621	18/A-621	-	PT	-	23.0		
123	(1)	3' - 0"	7' - 0"	N	FRP	GL-4	-	F2	HM	17/A-621	18/A-621	-	PT	-	12.0		
124	(1)	3' - 0"	7' - 0"	L	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
125	(1)	3' - 0"	7' - 0"	L	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
127	(1)	3' - 0"	7' - 0"	L	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
128	(1)	3' - 0"	7' - 0"	L	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
129	(1)	3' - 0"	7' - 0"	L	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
130	(1)	3' - 0"	7' - 0"	L	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	10.0		
131A	(1)	3' - 0"	7' - 0"	N	FRP	GL-4	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
131B	(1)	3' - 0"	7' - 0"	N	FRP	GL-4	-	F2	HM	17/A-621	18/A-621	-	PT	-	22.0		
132A	-	16' - 0"	16' - 0"	SC1	STL	-	-	-	STL	13/A-621	14&15/A-621	-	-	-	26.0		2
132B	-	16' - 0"	16' - 0"	SC1	STL	-	-	-	STL	13/A-621	14&15/A-621	-	-	-	26.0		2
135	(2)	3' - 0"	7' - 0"	F	FRP	-	-	F2	HM	17/A-621	18/A-621	-	PT	-	8.0		
136A	-	16' - 0"	16' - 0"	SC1	STL	-	-	-	STL	13/A-621	14&15/A-621	-	-	-	26.0		2
136B	-	16' - 0"	16' - 0"	SC1	STL	-	-	-	STL	13/A-621	14&15/A-621	-	-	-	26.0		2
136C	(1)	3' - 0"	7' - 0"	HG	FRP	GL-2	-	F2	AL	8/A-621	9&10/A-621	5/A-621 SIM.	ANN	-	2.0		
137A	(1)	3' - 0"	7' - 0"	HG	FRP	GL-4	-	F2	HM	17/A-621	18/A-621	-	PT	-	17.0		
137B	(1)	3' - 0"	7' - 0"	HG	FRP	GL-4	-	F2	HM	17/A-621	18/A-621	-	PT	-	17.0		
140	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F2	HM	13/A-621	18/A-621	-	PT	-	21.0		
141A	(1)	3' - 0"	7' - 0"	HG	FRP	GL-2	-	F2	AL	6/A-621	7/A-621	5/A-621 SIM.	ANN	-	2.0		
141B	-	16' - 0"	16' - 0"	SC1	STL	-	-	-	STL	11/A-621	12/A-621	-	-	-	26.0		1
201	(1)	3' - 0"	7' - 0"	F	WD	-	-	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
202	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
203	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F1	HM	19/A-621	20/A-621	-	PT	-	18.0		
204	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
205	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F3	HM	19/A-621	20/A-621	-	PT	-	18.0		
207	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	20.0		
208	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
209	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	20.0		
210	(1)	3' - 0"	7' - 0"	HG	WD	GL-4	ST	F1	HM	19/A-621	20/A-621	-	PT	-	18.0		
211	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
212A	(2)	3' - 0"	7' - 0"	N	FRP	GL-4	-	F2	HM	19/A-621 SIM.	20/A-621 SIM.	-	PT	-	8.0		
212B	(1)	3' - 0"	7' - 0"	N	FRP	GL-4	-	F2	HM	17/A-621	18/A-621	-	PT	1hr	11.1		
213	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
214	(1)	3' - 0"	7' - 0"	F	WD	-	ST	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
215	(1)	3' - 0"	7' - 0"	N	FRP	GL-6	-	F2	HM	26/A-621	27/A-621	-	PT	1hr	11.1		
216	(2)	3' - 0"	7' - 0"	F	FRP	-	-	F1	HM	19/A-621	20/A-621	-	PT	-	7.0		
217	(1)	3' - 0"	7' - 0"	F	FRP	-	-	F1	HM	19/A-621	20/A-621	-	PT	-	14.0		
218	(1)	3' - 0"	7' - 0"	HG	FRP	GL-4	-	F3	HM	19/A-621	20/A-621	-	PT	-	19.0		
220	(1)	3' - 0"	7' - 0"	N	FRP	GL-6	-	F2	HM	17/A-621	18/A-621	-	PT	1hr	15.0		
300	(1)	3' - 4"	6' - 0"	EXIST	EX	-	PT-5	EXIST	HM	-	-	-	PT	-	1.0		
S-1A	(1)	3' - 0"	7' - 0"	HG	WD	GL-6	-	F1	HM	19/A-621	20/A-621	-	PT	1hr	4.0		
S-1C	(1)	3' - 0"	7' - 0"	MS	AL	GL-6	ANN	W29	AL	1/A-621	2/A-621	-	ANN	1hr	11.0		
S-3A	(1)	3' - 0"	7' - 0"	F	EXIST	-	PT-5	EXIST	-	-	-	-	PT	-	11.1		
S-3B	(1)	3' - 0"	7' - 0"	N	FRP	GL-2	-	F2	AL	23/A-621	24/A-621	25/A-621	ANN	-	4.0		
S-3C	(1)	3' - 0"	7' - 0"	N	FRP	GL-6	-	F2	HM	17/A-621	18/A-621	-	PT	1hr	11.1		
S-3D	(1)	3' - 0"	7' - 0"	N	FRP	GL-6	-	F1	HM	19/A-621	20/A-621	-	PT	1hr	11.1		
S-4A	(1)	3' - 0"	7' - 0"	F	EX	-	PT-5	EXIST	EXIST	-	-	-	PT	-	16.0		
S-4B	(1)	3' - 4"	6' - 8"	HG	FRP	GL-4	-	F2	HM	-	-	-	ANN	-	14.0		
S-5A	(1)	3' - 0"	7' - 0"	N	FRP	GL-6	-	F2	HM	17/A-621	18/A-621	-	PT	1hr	11.1		
S-5B	(1)	3' - 0"	7' - 0"	N	FRP	GL-2	-	F2	AL	6/A-621	7/A-621	5/A-621 SIM.	ANN	-	4.0		
S-6A	(1)	3' - 8"	8' - 0"	F	FRP	-	-	W17	AL	1/A-621	3&4/A-621 SIM.	5/A-621	ANN	-	4.0		

DOOR AND HARDWARE SCHEDULE ABBREVIATIONS

DOOR/FRAME MATERIALS
- AL = ALUMINUM
- ANN = ANODIZED
- EX = EXISTING OVERHEAD
- FR = FABRIC ROLL-UP
- FRP = FIBERGLASS REINFORCED PLASTIC
- G = GALVANIZED
- HM = HOLLOW METAL
- PL = PLASTIC ROLL-UP
- R = RUBBER ROLL-UP
- SS = STAINLESS STEEL
- ST = STEEL
- WD = WOOD

DOOR AND HARDWARE SCHEDULE REMARKS

1. STANDARD LIFT OVERHEAD DOOR TRACK
2. HIGH LIFT OVERHEAD DOOR TRACK
3. CUSTOM DOOR AND FRAME - PREP FOR CRANE RAIL INTERSECTION - SEE DETAIL 26/A-621 FOR DOOR LEAF AT CRANE RAIL- PROVIDE ADDITIONAL PEMKO S88 GASKETING TO PROVIDE SEAL AROUND CRANE

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Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
DOOR SCHEDULE

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A-602

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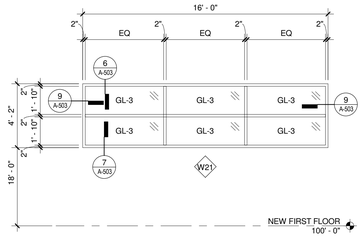

21 Window - W21
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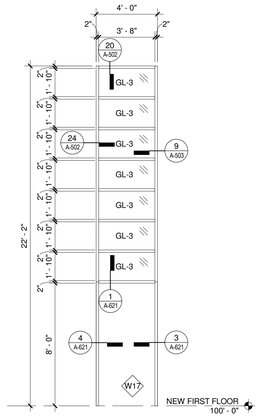

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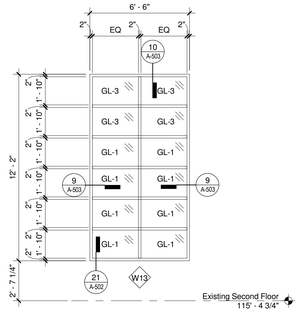

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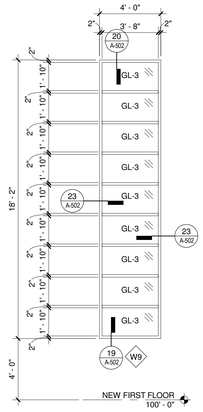

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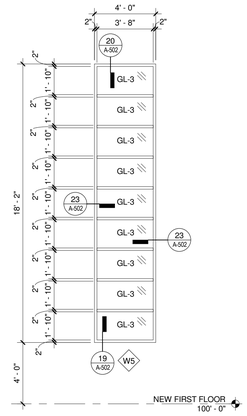

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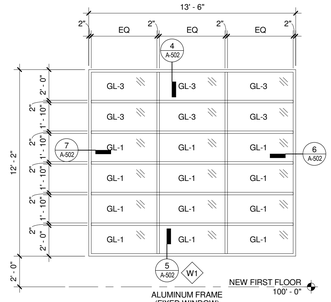

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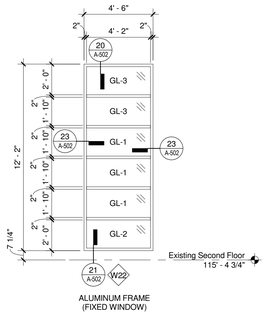

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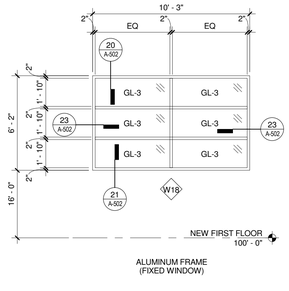

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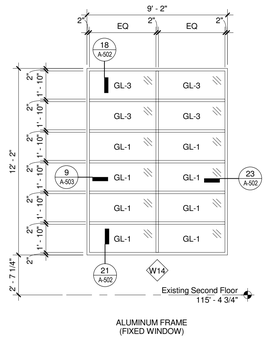

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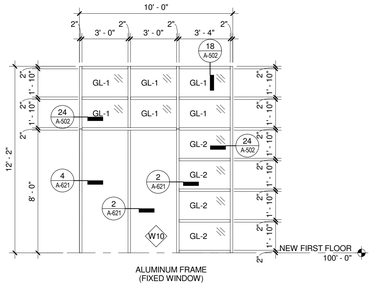

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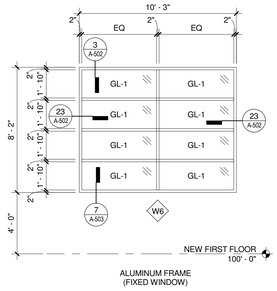

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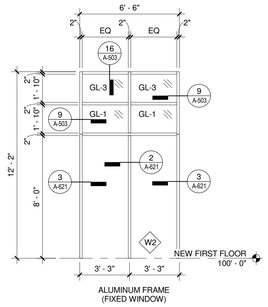

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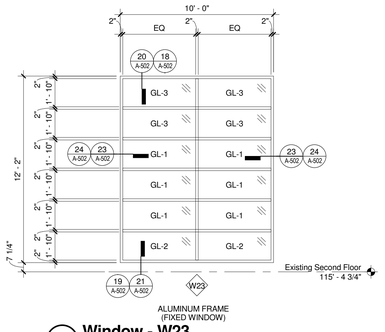

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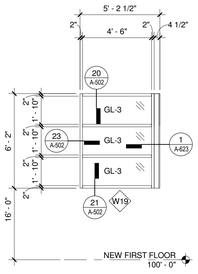

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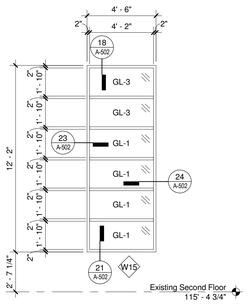

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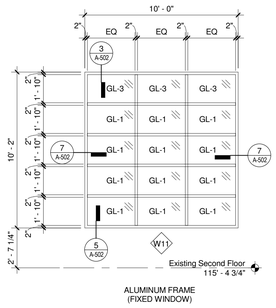

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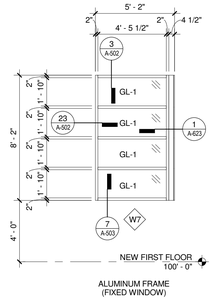

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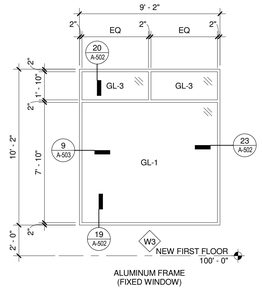

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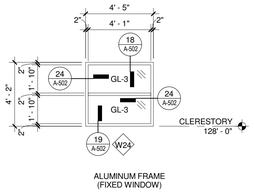

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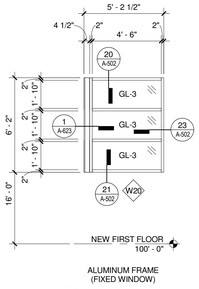

20 Window - W20
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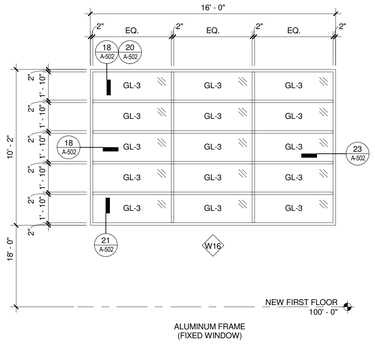

16 Window - W16
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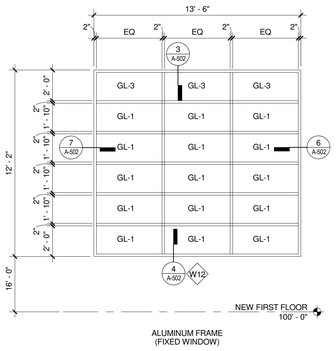

12 Window - W12
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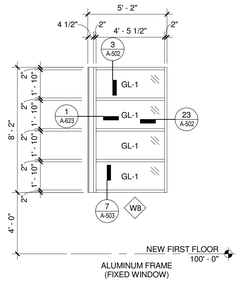

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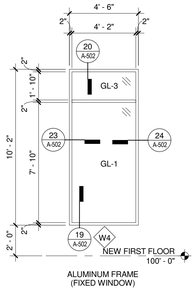

4 Window - W4
1/4" = 1'-0"

Mead & Hunt

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110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

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SHEET CONTENTS
WINDOW TYPES

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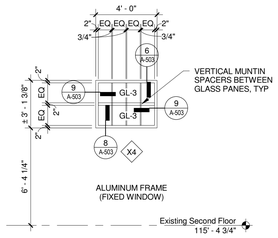
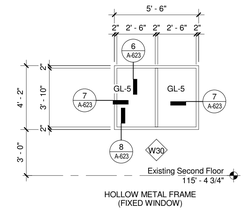


11 Window - X4
1/4" = 1'-0"



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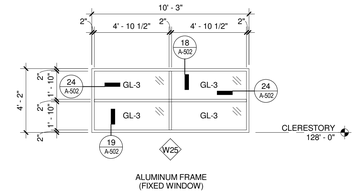

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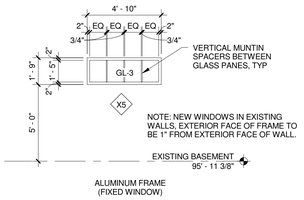

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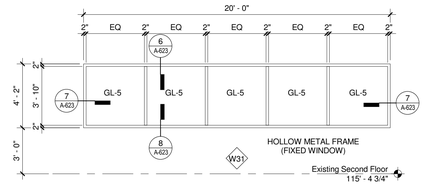

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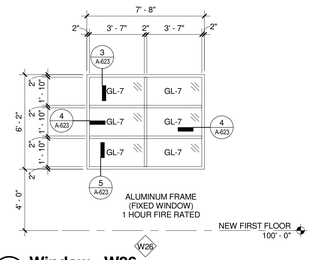

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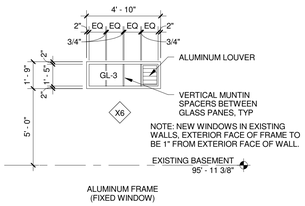

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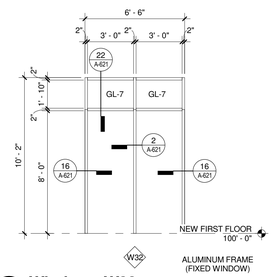

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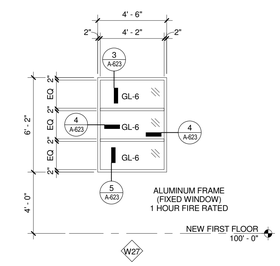

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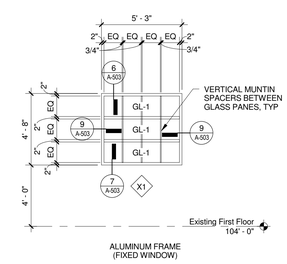

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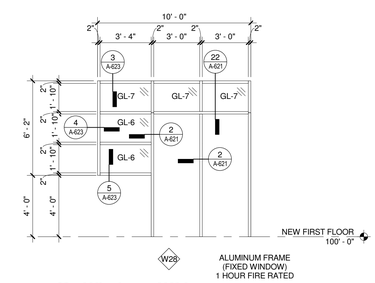

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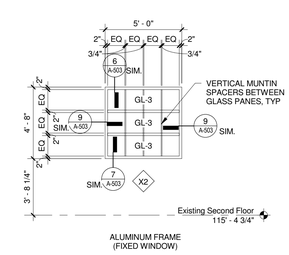

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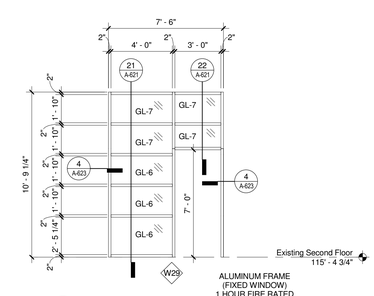

5 Window - W29
1/4" = 1'-0"

Mead & Hunt

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DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
WINDOW TYPES

SHEET NO.:
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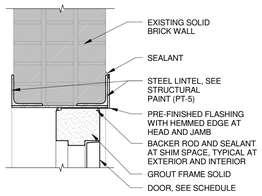
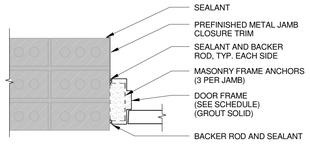
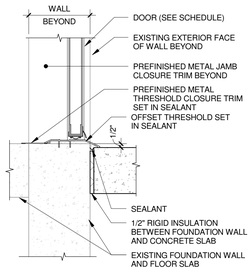
6/12/2015 1:53:31 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt



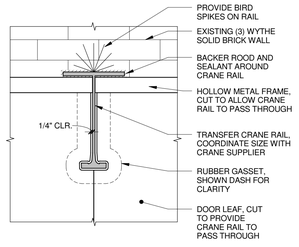
23 HM DOOR HEAD DETAIL
1 1/2" = 1'-0"



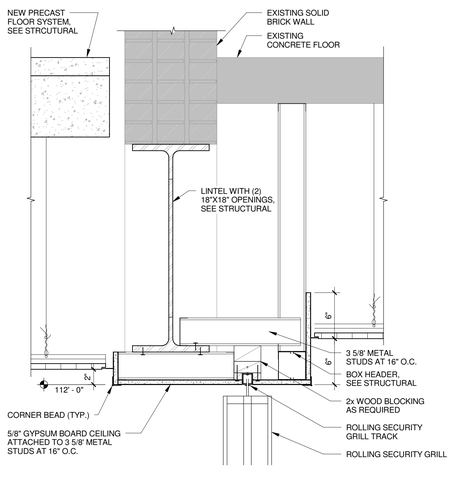
24 HM DOOR JAMB DETAIL
1 1/2" = 1'-0"



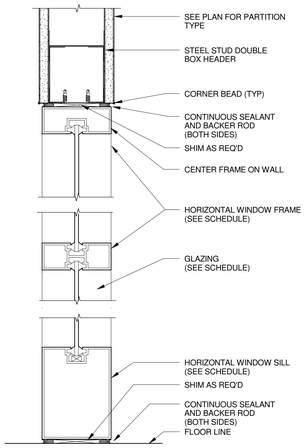
25 DOOR THRESHOLD DETAIL
1 1/2" = 1'-0"



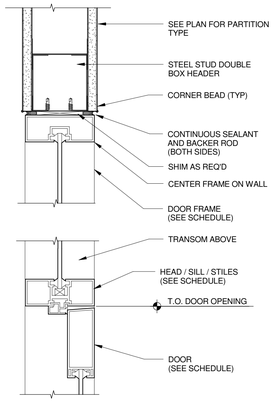
26 DOOR HEAD AT CRANE RAIL
1 1/2" = 1'-0"



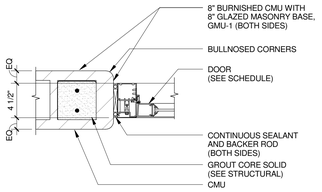
27 ROLLING SECURITY GRILL HEAD DETAIL
1 1/2" = 1'-0"



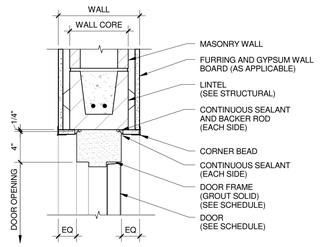
21 ALUM DOOR SIDELIGHT
3" = 1'-0"



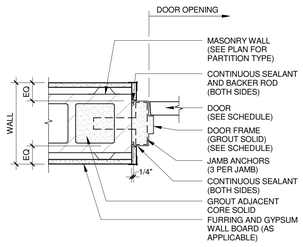
22 ALUMINUM DOOR HEAD
3" = 1'-0"



16 INTERIOR ALUMINUM DOOR JAMB
1 1/2" = 1'-0"



17 HOLLOW METAL DOOR HEAD DETAIL
1 1/2" = 1'-0"



18 HOLLOW METAL DOOR JAMB DETAIL
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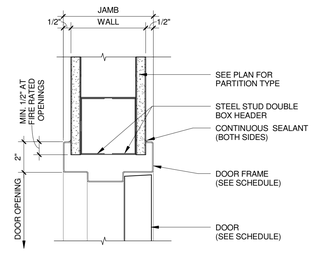
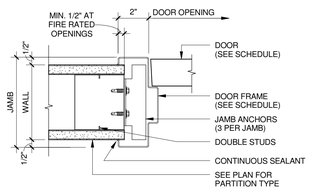
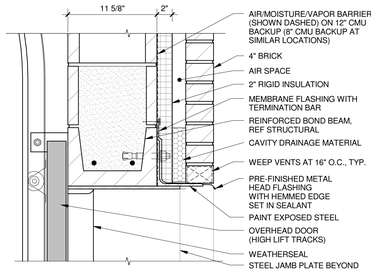


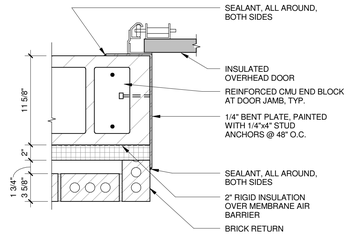
19 HOLLOW METAL DOOR HEAD DETAIL
3" = 1'-0"



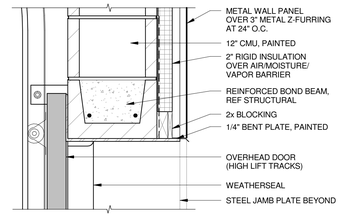
20 HOLLOW METAL DOOR JAMB DETAIL
3" = 1'-0"



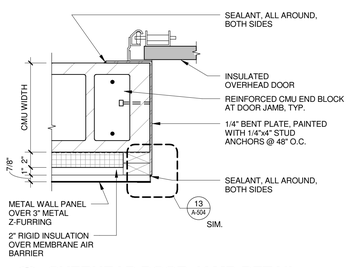
11 HM DOOR HEAD DETAIL
1 1/2" = 1'-0"



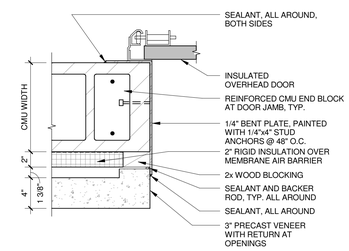
12 HM DOOR JAMB DETAIL
1 1/2" = 1'-0"



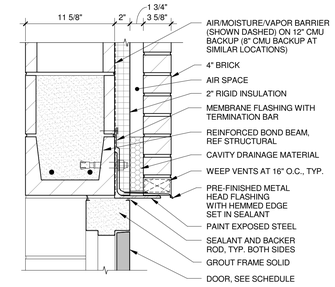
13 OVERHEAD DOOR HEAD DETAIL
1 1/2" = 1'-0"



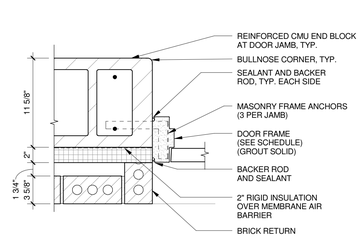
14 OVERHEAD DOOR JAMB DETAIL
1 1/2" = 1'-0"



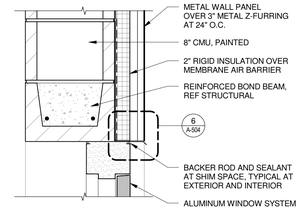
15 OVERHEAD DOOR JAMB DETAIL
1 1/2" = 1'-0"



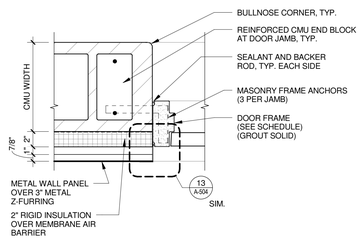
6 HM DOOR HEAD DETAIL
1 1/2" = 1'-0"



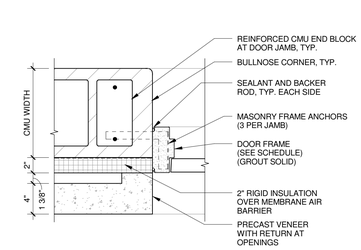
7 HM DOOR JAMB DETAIL
1 1/2" = 1'-0"



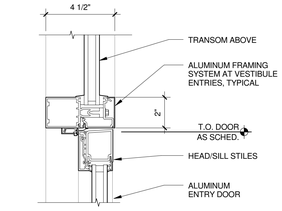
8 HM DOOR HEAD DETAIL
1 1/2" = 1'-0"



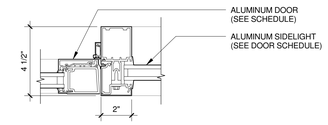
9 WINDOW JAMB DETAIL
1 1/2" = 1'-0"



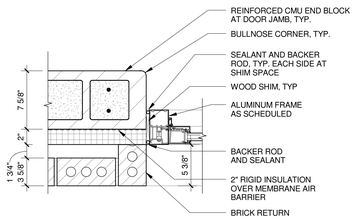
10 WINDOW JAMB DETAIL
1 1/2" = 1'-0"



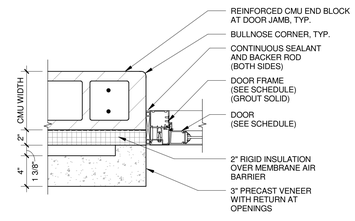
1 ALUMINUM DOOR HEAD
3" = 1'-0"



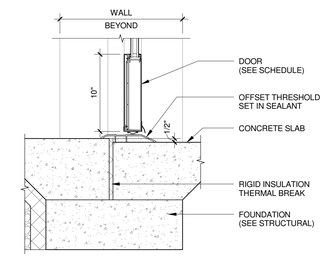
2 ALUM DOOR JAMB DETAIL
3" = 1'-0"



3 ALUM DOOR JAMB DETAIL
1 1/2" = 1'-0"



4 ALUM DOOR JAMB DETAIL
1 1/2" = 1'-0"



5 DOOR THRESHOLD DETAIL
1 1/2" = 1'-0"

Mead & Hunt

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2440 Deming Way
Middleton, WI 53562
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

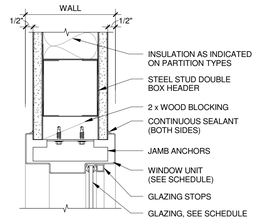
ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

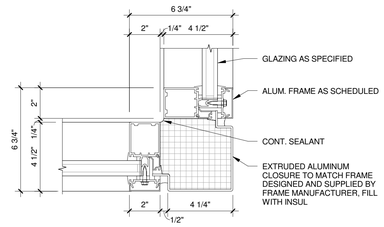
SHEET CONTENTS
DOOR DETAILS

SHEET NO.:
A-621

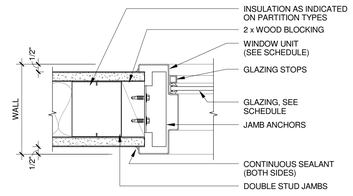
6/12/2015 1:53:35 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt



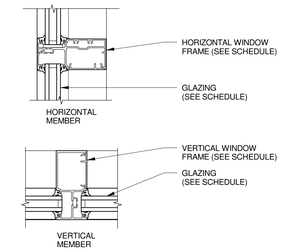
6 INTERIOR HOLLOW METAL WINDOW HEAD DETAIL
3" = 1'-0"

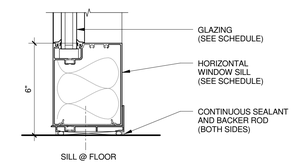


1 ALUM. WINDOW CORNER JAMB DETAIL
3" = 1'-0"

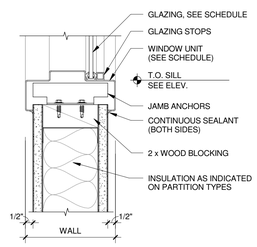


7 INTERIOR HOLLOW METAL WINDOW JAMB DETAIL
3" = 1'-0"

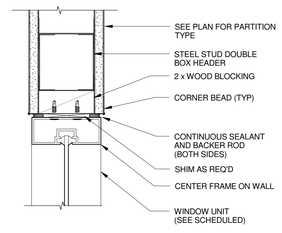




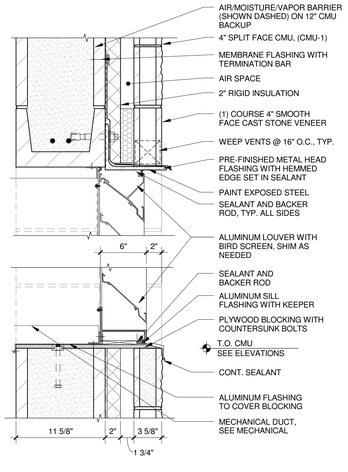
2 TYP. ALUM. MULLION DETAILS
3" = 1'-0"



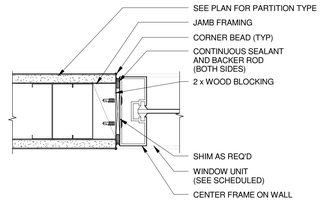
8 INTERIOR HOLLOW METAL WINDOW SILL DETAIL
3" = 1'-0"



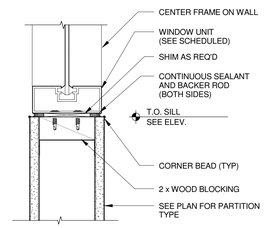
3 INTERIOR ALUMINUM WINDOW HEAD
3" = 1'-0"



9 LOUVER HEAD/SILL AT BRICK
1 1/2" = 1'-0"



4 INTERIOR ALUMINUM WINDOW JAMB
3" = 1'-0"



5 INTERIOR ALUMINUM WINDOW SILL
3" = 1'-0"

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SHEET CONTENTS
WINDOW DETAILS

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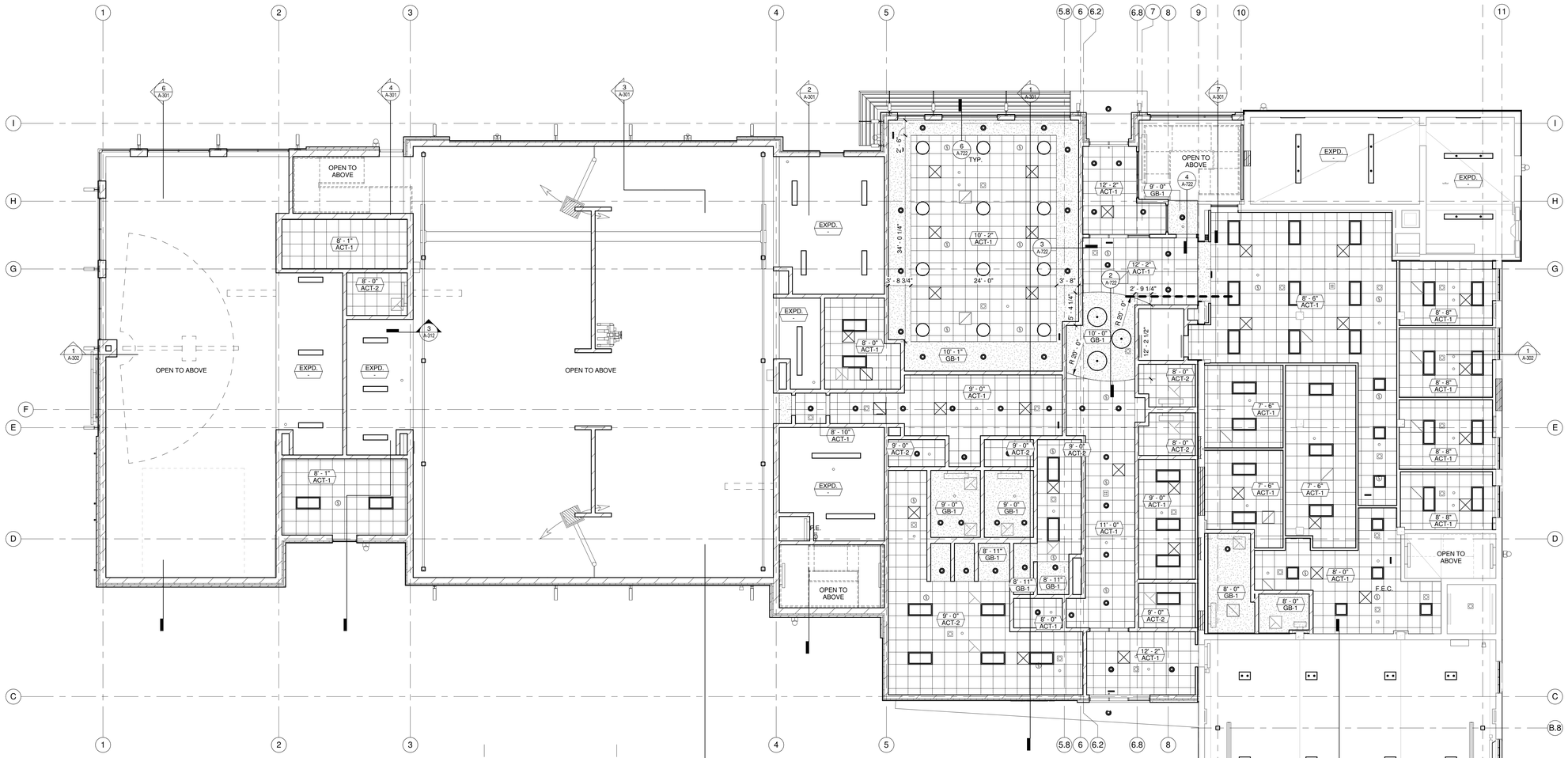

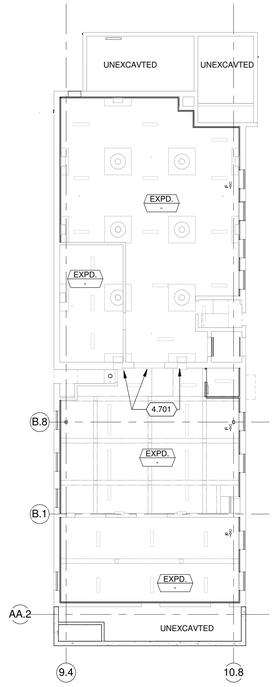

TRUE NORTH PLAN NORTH

2 BASEMENT REFLECTED CEILING PLAN

1/16" = 1'-0"

0 8 16 32

TRUE NORTH PLAN NORTH

1 FIRST FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

0 4 8 16

CEILING PLAN GENERAL NOTES:

1. SEE ROOM FINISH SCHEDULE FOR FLOOR, WALL AND CEILING FINISHES AND ROOM HEIGHTS.
2. FIELD VERIFY ALL DIMESIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT FOR FINAL DECISION.
3. ALL RECESSED LIGHTS, SPRINKLERS, FIRE DETECTION EQUIPMENT, OCCUPANCY SENSORS, ETC. SHALL BE CENTERED IN THE TILES UNLESS NOTED OTHERWISE.
4. CENTER ALL CEILING GRIDS IN SPACE UNLESS NOTED OTHERWISE.
5. ALL METAL LINEAR DIFFUSERS SHALL BE PAINTED TO MATCH SURROUNDING WALL OR CEILING CURFACE.

KEYED NOTES

4.701 PATCH AND REPAIR CONCRETE CRACK AND WATER DAMAGE

CEILING LEGEND:

SEE ELECTRICAL FOR EXACT FIXTURE MODEL

- 2' x 2' SUSPENDED CEILING GRID
- GYPSUM BOARD CEILING/ PORTLAND CEMENT PLASTER (PAINTED)
- LIGHT FIXTURE (RECESSED MOUNTED)
- LIGHT FIXTURE (RECESSED MOUNTED 4" WIDE OR LESS)
- OR LIGHT FIXTURE (RECESSED MOUNTED)
- 6" 8" LIGHT FIXTURE (RECESSED CAN)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SUSPENDED)
- OR LIGHT FIXTURE (SUSPENDED)
- CEILING RECEPTACLES
- CEILING OCCUPANCY SENSOR
- CEILING FIRE ALARM DEVICES
- CEILING MASS NOTIFICATION DEVICE
- CEILING SPEAKER
- CEILING SECURITY STRODE
- CEILING CAMERA
- SPRINKLER HEADS
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER / EXHAUST GRILL
- EXHAUST FAN

Mead & Hunt

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SHEET CONTENTS
FIRST FLOOR CEILING PLAN

SHEET NO.:
A-721

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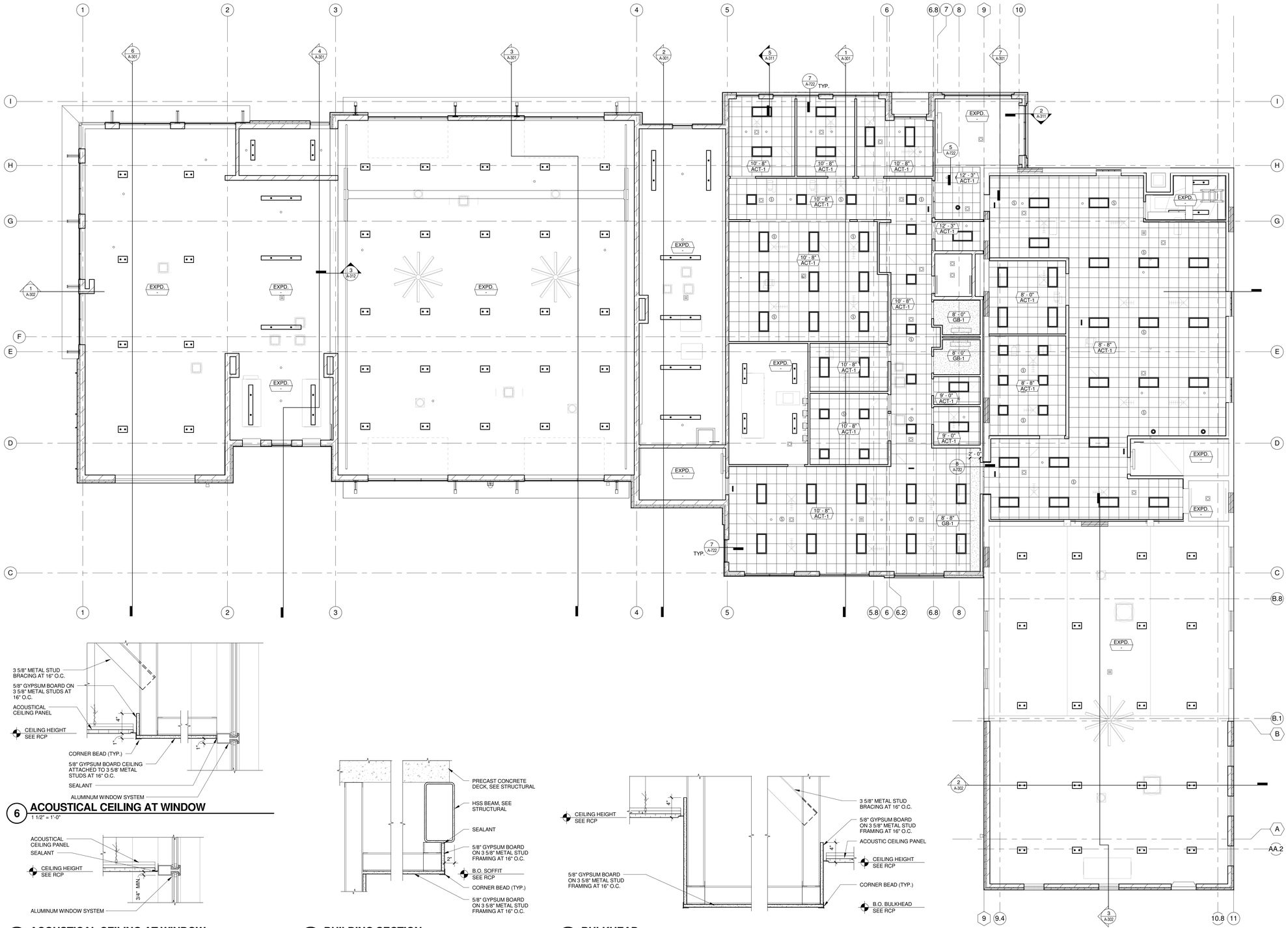

CEILING PLAN GENERAL NOTES:

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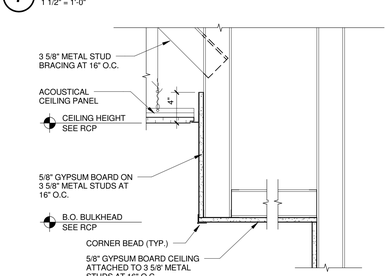
- 2' x 2' SUSPENDED CEILING GRID
- GYPSUM BOARD CEILING/ PORTLAND CEMENT PLASTER (PAINTED)
- LIGHT FIXTURE (RECESSED MOUNTED)
- LIGHT FIXTURE (RECESSED MOUNTED 4" WIDE OR LESS)
- OR LIGHT FIXTURE (RECESSED MOUNTED)
- 6" 8" LIGHT FIXTURE (RECESSED CAN)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SUSPENDED)
- OR LIGHT FIXTURE (SUSPENDED)
- CEILING RECEPTACLES
- CEILING OCCUPANCY SENSOR
- CEILING FIRE ALARM DEVICES
- CEILING MASS NOTIFICATION DEVICE
- CEILING SPEAKER
- CEILING SECURITY STRODE
- CEILING CAMERA
- SPRINKLER HEADS
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER / EXHAUST GRILL
- EXHAUST FAN

6 ACOUSTICAL CEILING AT WINDOW
1 1/2" = 1'-0"

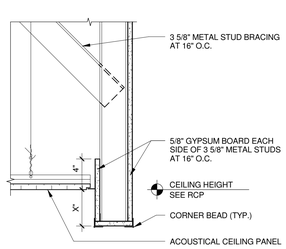
7 ACOUSTICAL CEILING AT WINDOW
1 1/2" = 1'-0"

4 BUILDING SECTION
1 1/2" = 1'-0"

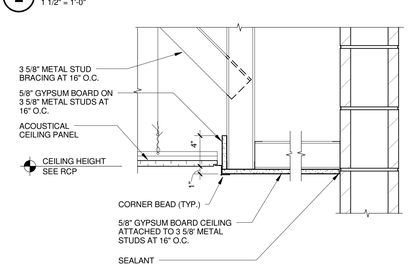
2 BULKHEAD
1 1/2" = 1'-0"



8 BULKHEAD
1 1/2" = 1'-0"



5 BULKHEAD
1 1/2" = 1'-0"



3 BULKHEAD
1 1/2" = 1'-0"

TRUE NORTH PLAN NORTH

1 SECOND FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"

0 4 8 16

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL

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SHEET CONTENTS
SECOND FLOOR CEILING PLAN

SHEET NO.:
A-722

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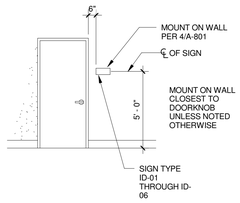
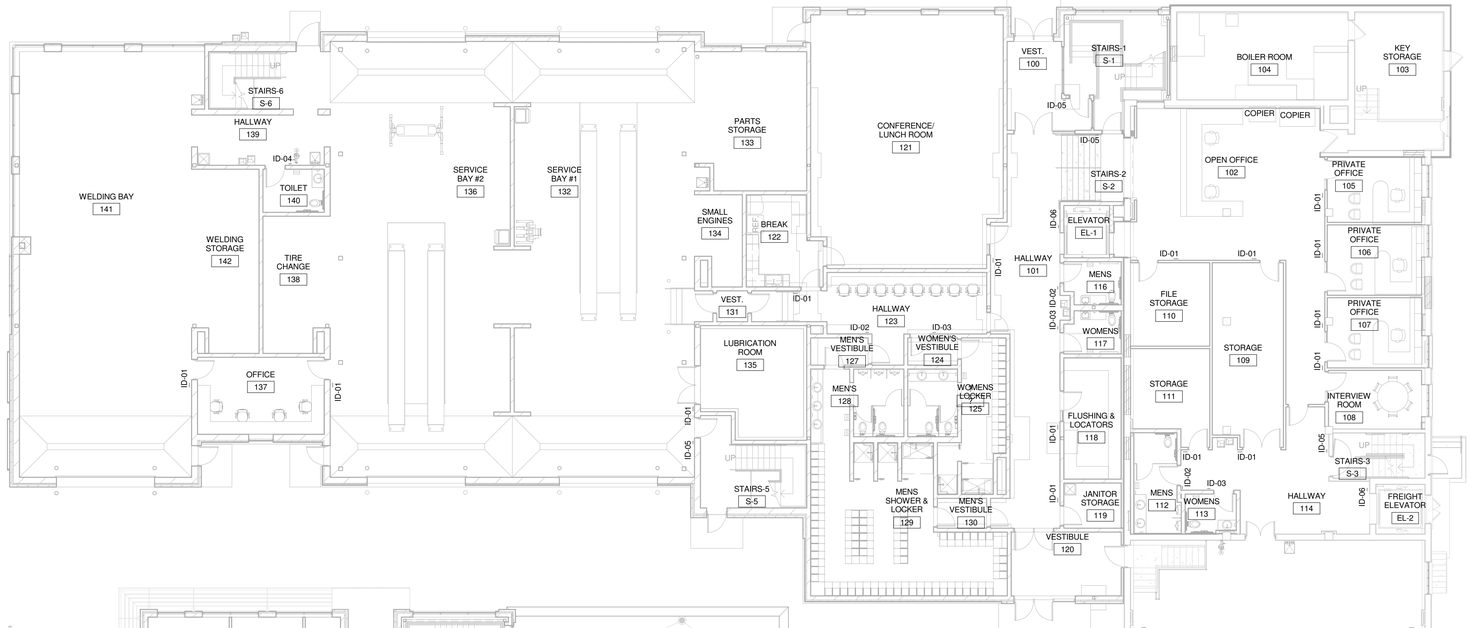
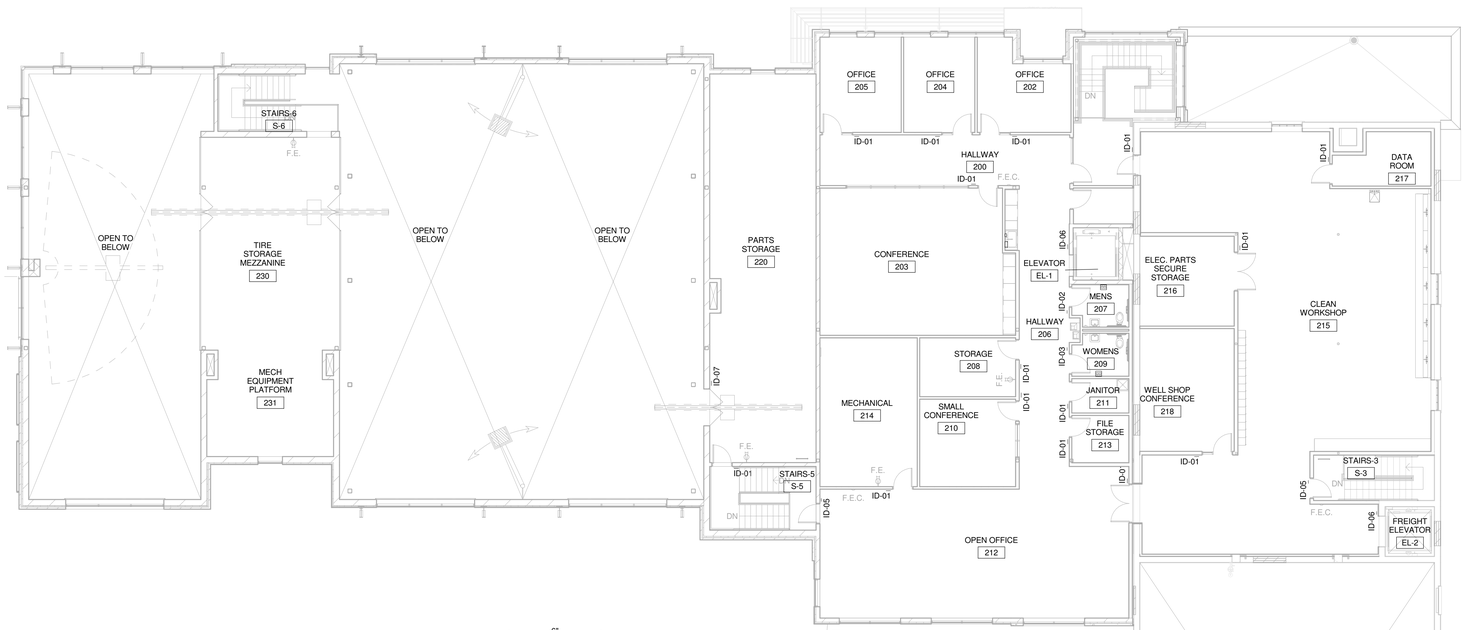


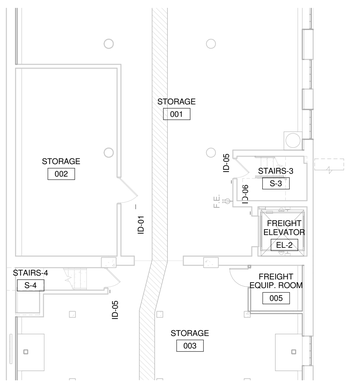
5 SIGNAGE MOUNTING
1/4" = 1'-0"



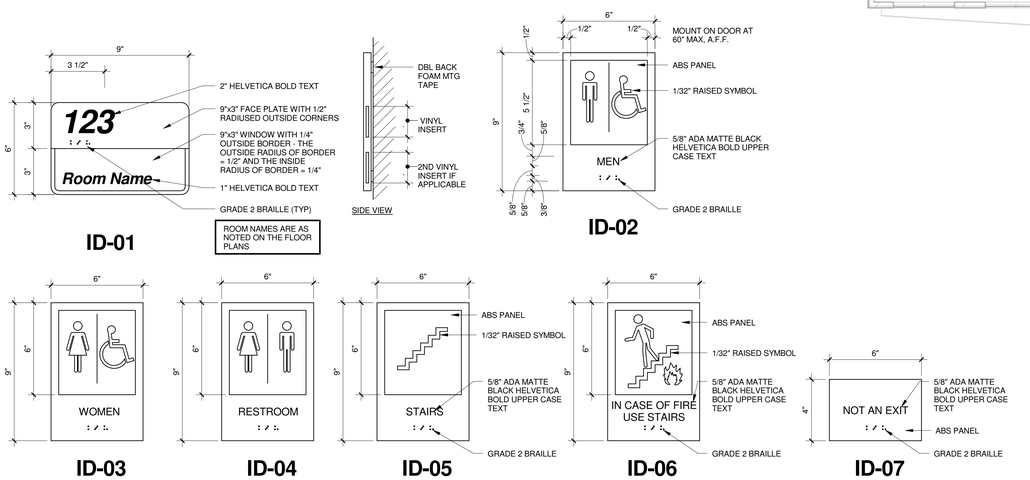


3 SECOND FLOOR SIGNAGE PLAN
1" = 10'-0"

1 FIRST FLOOR SIGNAGE PLAN
1" = 10'-0"



2 PARTIAL BASEMENT SIGNAGE PLAN
1" = 10'-0"



4 SIGNAGE DETAILS
3" = 1'-0"

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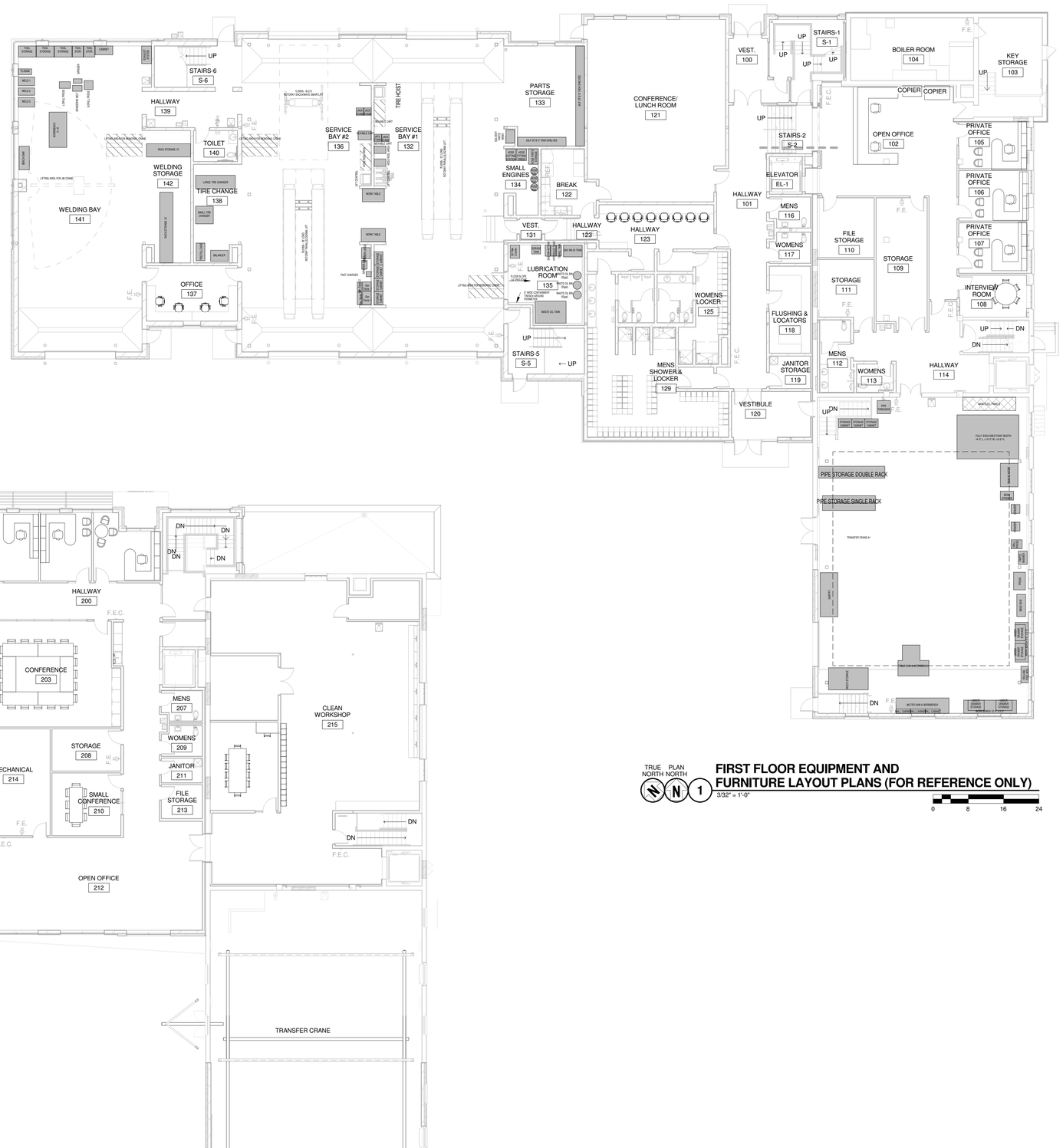
SHEET CONTENTS
SIGNAGE

SHEET NO.:
A-801

6/12/2015 1:53:54 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt

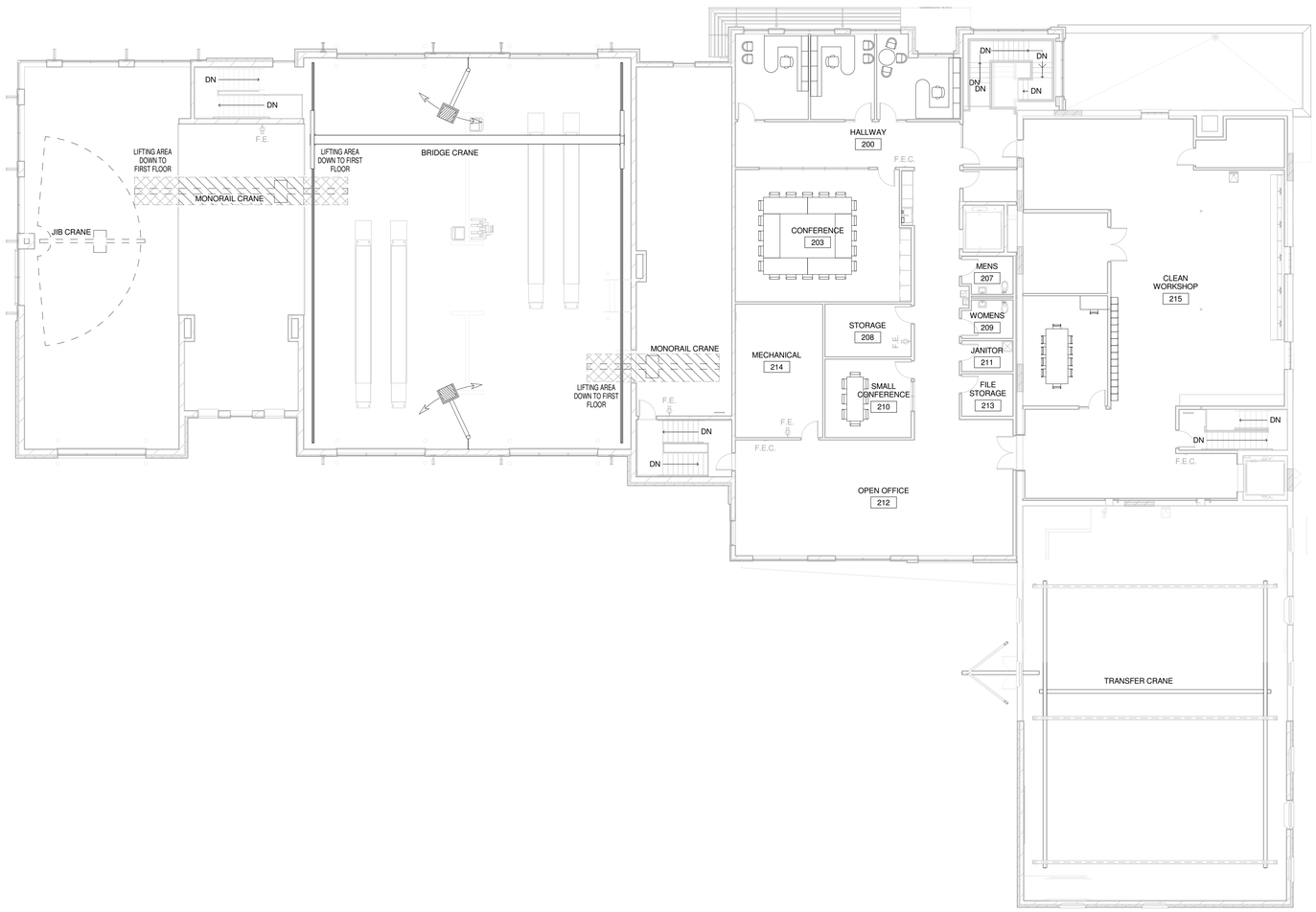


TRUE NORTH PLAN NORTH 1

FIRST FLOOR EQUIPMENT AND FURNITURE LAYOUT PLANS (FOR REFERENCE ONLY)

3/32" = 1'-0"

0 8 16 24



TRUE NORTH PLAN NORTH 2

SECOND FLOOR EQUIPMENT AND FURNITURE LAYOUT PLANS (FOR REFERENCE ONLY)

3/32" = 1'-0"

0 8 16 24

EQUIPMENT SHOWN FOR REFERENCE ONLY.

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ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker

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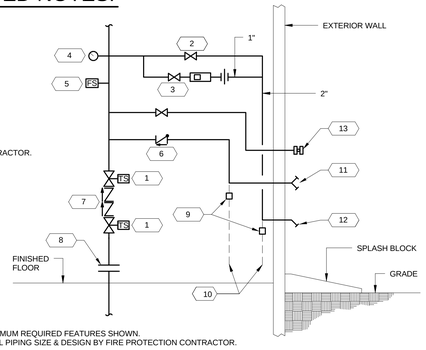
SHEET CONTENTS
EQUIPMENT AND FURNITURE LAYOUT PLANS (FOR REFERENCE ONLY)

SHEET NO.:
A-802

6/12/2015 1:54:01 PM C:\Revit Local\3235300-131021-03-A-Central-2015_1307mab.rvt

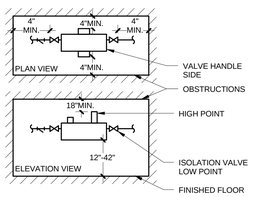
RISER SCHEMATIC KEYED NOTES:

1. SUPERVISED INDICATING VALVE.
2. MAIN DRAIN SHUT-OFF VALVE.
3. ALARM TEST.
4. PRESSURE GAUGE.
5. FLOW SWITCH.
6. CHECK VALVE.
7. DOUBLE CHECK ASSEMBLY.
8. CONNECTION FLANGE BY FIRE PROTECTION CONTRACTOR.
9. BALL DRIP VALVES - ROUTE TO DRAIN.
10. TERMINATE 6" AFF.
11. FIRE DEPT. CONNECTION @ 36" AFG.
12. 2" MAIN DRAIN & TEST OUTLET, 18" AFG.
13. FORWARD FLOW TEST CONNECTION @ 48" AFG.

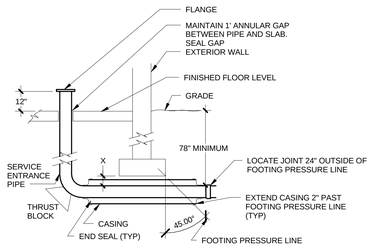


NOTES:
1. MINIMUM REQUIRED FEATURES SHOWN. FINAL PIPING SIZE & DESIGN BY FIRE PROTECTION CONTRACTOR.
2. IF ANY SPRINKLER PIPING DOWNSTREAM OF FLANGED ENTRY TEE IS 6" OR LARGER,USE WELDED, FLANGED OR THREADED CONNECTIONS ON ALL PIPING BETWEEN FLANGED ENTRY TEE AND ALARM VALVES.

1 WET PIPE SPRINKLER RISER SCHEMATIC
NO SCALE



2 DCVA BPD
NO SCALE



IF DIMENSION "X" IS LESS THAN 12", INSTALL DI OR RCP CASING. MAINTAIN AT LEAST 2" ANNULAR GAP BETWEEN PIPE AND CASING. APPLY CASING END SEALS.

3 WATER SERVICE ENTRANCE
NO SCALE

FIRE PROTECTION ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BPD	BACKFLOW PREVENTION DEVICE
CW	COLD WATER
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DI	DUCTILE IRON
FDC	FIRE DEPARTMENT CONNECTION
FPE	PROFESSIONAL FIRE PROTECTION
SP	ENGINEER SPRINKLER MAIN
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW

FIRE PROTECTION SYMBOLS:

- FIRE DEPARTMENT CONNECTION
- ORIFICE
- FLOW SWITCH
- ALARM BELL
- ISOLATION VALVE
- GATE VALVE
- PRESSURE GAUGE
- CHECK VALVE
- VALVE SUPERVISION/TAMPER SWITCH
- STRAINER
- PIPE DROP
- PIPE RISE

FIRE PROTECTION NOTES:

1. PROVIDE A HYDRAULICALLY DESIGNED WET SPRINKLER SYSTEM AT CRITERIA FOR HAZARD CLASSIFICATION SHOWN IN CONFORMANCE WITH THE FOLLOWING CODES AND STANDARDS:
   A. WISCONSIN BUILDING CODE.
   B. NFPA - 13, (LATEST PREVAILING EDITION)
2. DESIGN REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

   USE AREA/DENSITY METHOD TO DETERMINE WATER DEMAND REQUIREMENTS.

   PROVIDE VALVED OUTLETS TO DRAIN ALL PIPING. EXTEND DRAIN PIPING TO EXTERIOR.

   PROVIDE SUPERVISORY SWITCHES ON ALL ISOLATION VALVES INSTALLED IN CIRCUITS TO ANY SPRINKLER.

   PROVIDE IDENTIFICATION TAGS ON SPECIFIC COMPONENTS.

   PAINT EXPOSED PIPE. SHOW FLOW DIRECTION AND PIPE IDENTIFICATION.

   PROVIDE SPLASH BLOCKS FOR DRAINS.

   INSTALL EXTENDED SLEEVES AT ALL WALL PENETRATIONS.

   FPE STAMP ON ALL SUBMITTALS.

   PROVIDE TAMPER SWITCHES ON ALL ISOLATION VALVES INSTALLED IN CIRCUITS TO ANY SPRINKLER.

FIRE PROTECTION HATCH PATTERN LEGEND:

- LIGHT HAZARD
- ORDINARY HAZARD GROUP 1
- ORDINARY HAZARD GROUP 2
- EXTRA HAZARD GROUP 1

NOTE TO BIDDERS:

QUALIFIED CONTRACTORS SHALL INSTALL BOTH FIRE SUPPRESSION AND FIRE DETECTION AS AN ALL INCLUSIVE SYSTEM

WATER SUPPLY FLOW BASIS FOR BID:

NOTES:
BASIS FOR BID SHOWN. NOT FOR DESIGN.
FIRE SPRINKLER DESIGN/INSTALLATION CONTRACTOR SHALL CONDUCT WATER FLOW TEST AND USE RESULTS IN HYDRAULIC CALCULATIONS.

PRELIMINARY FIRE TEST FLOW:	
LOCATION:	115 S. PATERSON STREET
LOCATION ELAVATION:	24" ABOVE GRADE
STATIC PRESSURE:	86 PSI
RESIDUAL PRESSURE:	80 PSI
FLOWING:	1405 GPM
FLOWING PRESSURE:	66 PSI
TEST DATE:	03/11/2015 @ 12:00 PM
MAIN SIZE:	12"

FIRE PROTECTION GENERAL NOTES:

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC. THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT AND PIPING IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERENCES. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT AND PIPING FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.
3. ELEVATION OF PIPING INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
4. ACCURATE AND LEGIBLE RECORD DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE AND BE SUBMITTED PRIOR TO FINAL PAYMENT.
5. ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
6. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.
7. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OWNER PRIOR TO INSTALLATION.
8. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH OWNER & EXISTING OPERATIONS.
9. ALL SPRINKLERS IN ACOUSTICAL CEILINGS SHALL BE LOCATION IN CENTER OF TILE.
10. PROVIDE CONCEALED SPRINKLER HEADS IN ALL FINISHED AREAS.
11. COORDINATE WITH ARCHITECTURAL PLANS FOR CEILINGS TYPES AND HEIGHTS.
12. VISIT THE BUILDING SITE & BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING WORKING.
13. IT IS THE INTENT OF THESE DRAWINGS A COMPLETE WORKING SYSTEN PROPERTY DESIGNED & TESTED BY THIS CONTRACTOR AND BE APPROVED BY AHJ & OPERATIONAL UPON COMPLETION OF INSTALLATION.

NFPA-13 HYDRAULIC CALCULATION STANDARD				
HAZARD CLASS	DENSITY GPM/SQ.FT.	AREA OF SPRINKLER OPERATION SQ. FT.	TOTAL HOSE STREAM GPM	DURATION MINIMUM
LIGHT HAZARD	0.10	1500	100	60
ORDINARY GROUP 1	0.15	1500	250	60-90
ORDINARY HAZARD GROUP 2	.20	1500	250	60-90
EXTRA HAZARD GOUP1	.30	2500	500	90-120

* THE MOST HYDRAULICALLY REMOTE LOCATIONS MUST MEET THE ABOVE REQUIREMENTS.

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06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MFP
DRAWN BY: SSV
CHECKED BY: RMM
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SHEET CONTENTS
FIRE PROTECTION NOTES & SYMBOLS

SHEET NO.:
F-001

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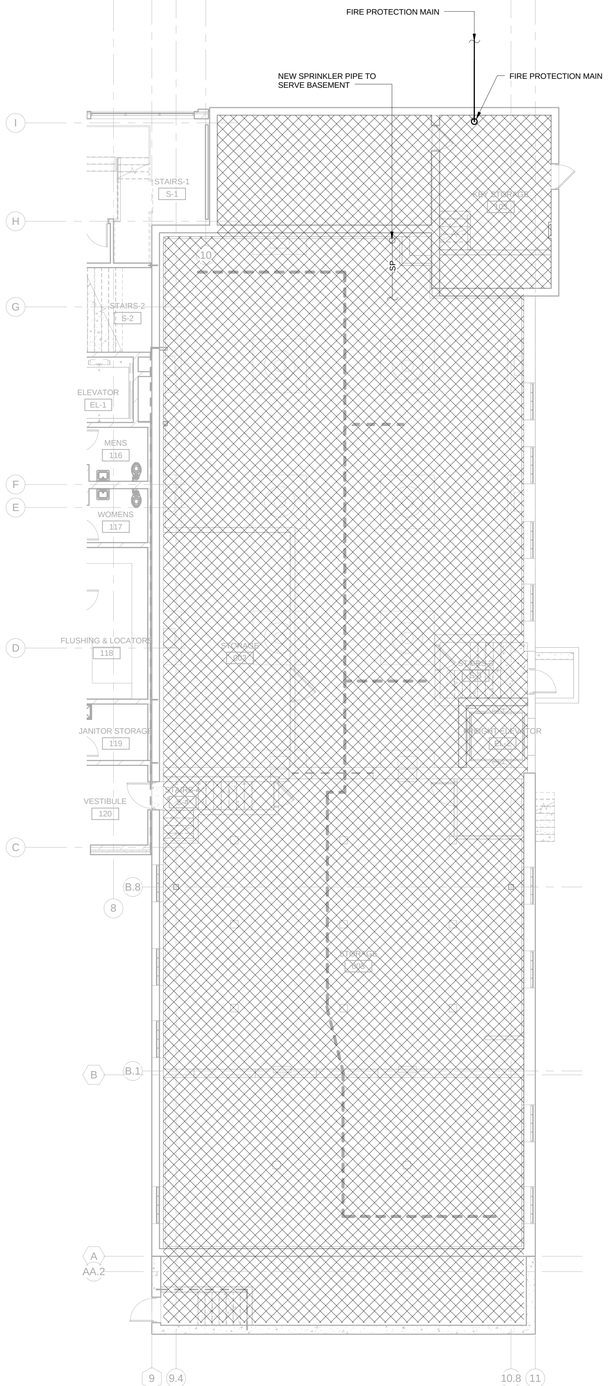

TRUE NORTH PLAN NORTH

1 **PARTIAL BASEMENT PLAN - FIRE PROTECTION**

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
BASEMENT FLOOR PLAN - FIRE PROTECTION

SHEET NO.:
F-100

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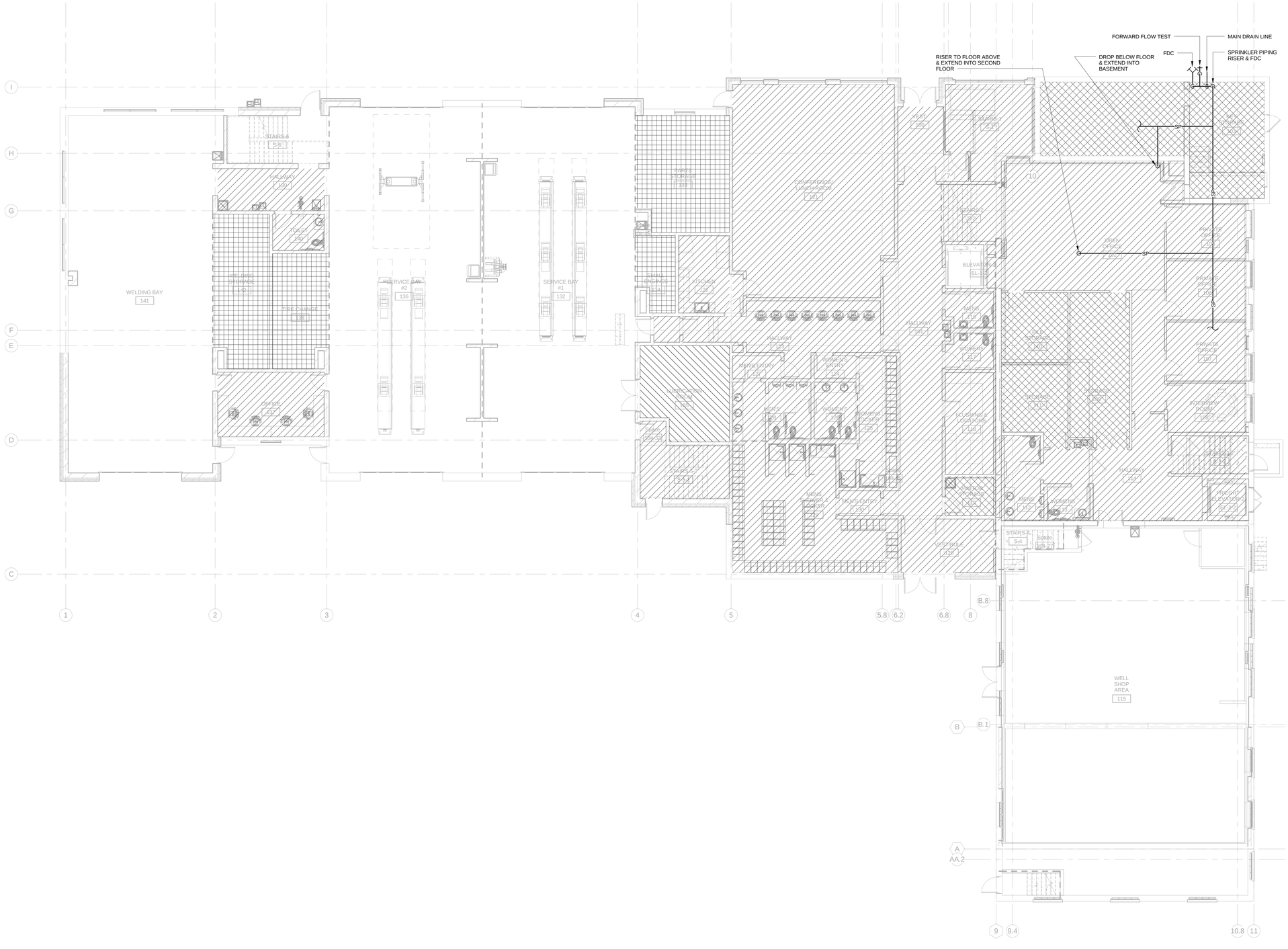

TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
FIRST FLOOR PLAN - FIRE PROTECTION

SHEET NO.:
F-101

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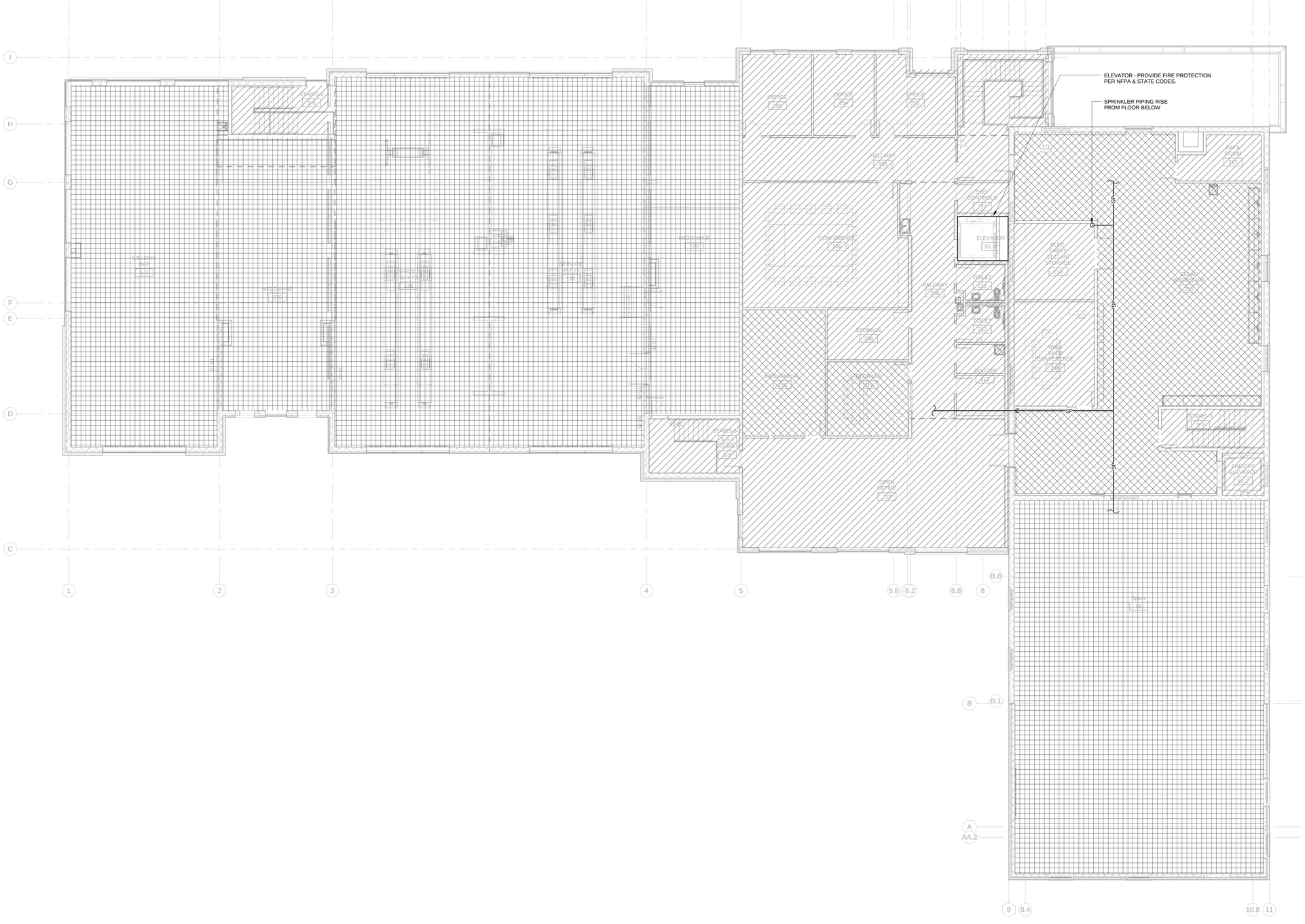

TRUE NORTH PLAN NORTH

1 **SECOND FLOOR PLAN - FIRE PROTECTION**

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
SECOND FLOOR PLAN - FIRE PROTECTION

SHEET NO.:
F-102

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GENERAL ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
AG	ABOVE GROUND
AST	ABOVE GROUND STORAGE TANK
BHP	BRAKE HORSE POWER
BJH	BETWEEN JOIST ABOVE
BOB	BOTTOM OF BEAM
BOJ	BOTTOM OF JOIST
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
CL	CENTERLINE
CTB	CLOSE TO BEAM
CTC	CLOSE TO COLUMN
CTJ	CLOSE TO JOIST
CTW	CLOSE TO WALL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
EL	ELEVATION
ETR	EXISTING TO REMAIN
FC	FLEXIBLE CONNECTION
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FLA	FULL LOAD AMPERES
FLR	FLOOR
FPS	FEET PER SECOND
FT	FEET
GAL	GALLON
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD (FEET)
HP	HORSEPOWER
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IN	INCH
INV	INVERT
IWS	IN WALL SPACE
KW	KILOWATT
LB	POUNDS
MFR	MANUFACTURER
MTD	MOUNTED
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT I N CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
PD	PRESSURE DROP
PH	PHASE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH-ABSOLUTE
PSID	POUNDS PER SQUARE INCH-DIFFERENTIAL
PSIG	POUNDS PER SQUARE INCH-GAUGE
RPM	REVOLUTIONS PER MINUTE
SHT	SHEET
STD	STANDARD
STL	STEEL
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TJA	THRU JOIST ABOVE
TOB	TOP OF BEAM
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TYP	TYPICAL
UST	UNDERGROUND STORAGE TANK
V	VOLTS
VOL	VOLUME
VTR	VENT THRU ROOF
VTW	VENT THRU WALL
WG	WATER GAUGE
WTR	WATER

PLUMBING ABBREVIATIONS

BPD	BACKFLOW PREVENTION DEVICE
CB	CATCH BASIN
CI	CAST IRON
CO	CLEAN OUT
CP	CIRCULATING PUMP
CS	CIRCUIT SETTER
DFU	DRAINAGE FIXTURE UNIT
DMW	DOMESTIC WATER METER
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GI	GREASE INTERCEPTOR
HC	HOSE CONNECTION
HD	HUB DRAIN
IE	INVERT ELEVATION
INT	INTERCEPTOR
L	LAVATORY
LCO	LINE CLEANOUT
MH	MAN HOLE
P	PUMP
PVC	POLYVINYL CHLORIDE
RD	ROOF DRAIN
SCO	STACK CLEANOUT
SH	SHOWER
SK	SINK
SR	SERVICE RECEPTOR
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
UR	URINAL
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
WIV	WATER INLET VALVE
WMV	WATER MIXING VALVE
WS	WATER SOFTENER
WSFU	WATER SUPPLY FIXTURE UNIT
YCO	YARD CLEANOUT
YH	YARD HYDRANT

SYMBOLS

- AUTOMATIC CONTROL VALVE (2-WAY)
- BALANCING VALVE
- CHECK VALVE
- WATER METER
- PRESSURE REDUCING VALVE
- SHUTOFF/ISOLATION VALVE
- SOLENOID VALVE ONE-WAY (ELECTRIC)
- STRAINER
- PIPE TURNED TOWARD
- PIPE TURNED AWAY
- P-TRAP
- BRANCH BOTTOM CONNECTION
- BRANCH TOP CONNECTION
- RELIEF VALVE
- DRAIN VALVE
- FLEXIBLE CONNECTOR
- UNION
- BLIND FLANGE
- REDUCER (CONCENTRIC)
- HOSE CONNECTION
- PIPE CAP
- PRESSURE GAUGE WITH COCK
- TEMPERATURE GAUGE WITH COCK
- FLUID FLOW DIRECTION
- WATER HAMMER ARRESTER
- EXIITING TO BE REMOVED
- NEW
- COLD WATER
- HOT WATER
- HOT WATER RETURN

GENERAL NOTES

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENT, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, PIPING AND DUCTWORK SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERE. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, PIPING, AND DUCTWORK FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.
3. ELEVATION OF PIPING AND DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORSEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
4. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING UTILITIES, IS AN EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
5. ACCURATE AND LEGIBLE RECORD (AS-BUILT) DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT.
6. ALL NEW ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
7. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.
8. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OWNER PRIOR TO INSTALLATION.
9. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH EXISTING OPERATIONS.
10. ALL ELEVATIONS SHOWN ARE RELATIVE TO FIRST FLOOR SLAB ELEVATIONS OF 100'-0".
11. ALL NEW PLASTIC PIPING WITH-IN AN AIR PLENUM CEILING, EXCEPT AS REQUIRED BY IMC SECTIONS 602.2.1.1 THROUGH 602.2.1.5 MATERIALS WITH-IN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723 COMBUSTIBLE MATERIALS SHALL BE FULLY ENCLOSED WITH-IN A CONTINUOUS NON-COMBUSTIBLE ENCLOSER WITH MATERIALS LISTED AND LABELED OR SUCH APPLICATIONS.
12. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMIND, CONSULT ARCHET / ENGINEER BEFORE PROCEEDING WITH THE WORK.
13. THE EXISTING BUILDING INFORMATION, INCLUDING BUT NOT LIMITED TO, ARCHECTECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING AND ELECTRICAL, DEPICTED IN THESE CONSTRUCTION DOCUMENTS ARE BASED UPON EXISTING BUILDING DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION. THE ARCHECY / ENGINEER MAKE NO WARRANTY OR REPRESENTATION WITH REFERENCE TO THE ACCURACY AND COMPLETENESS OF THE ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THE ACCURACY OF THE EXISTING CONDITIONS.

PLUMBING SCHEDULES GENERAL NOTES

1. SCHEDULES APPLY UNLESS OTHERWISE NOTED ON DRAWINGS.
2. SEE REMARKS FOR ITEMS SHOWN IN PARENTHESIS.

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Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

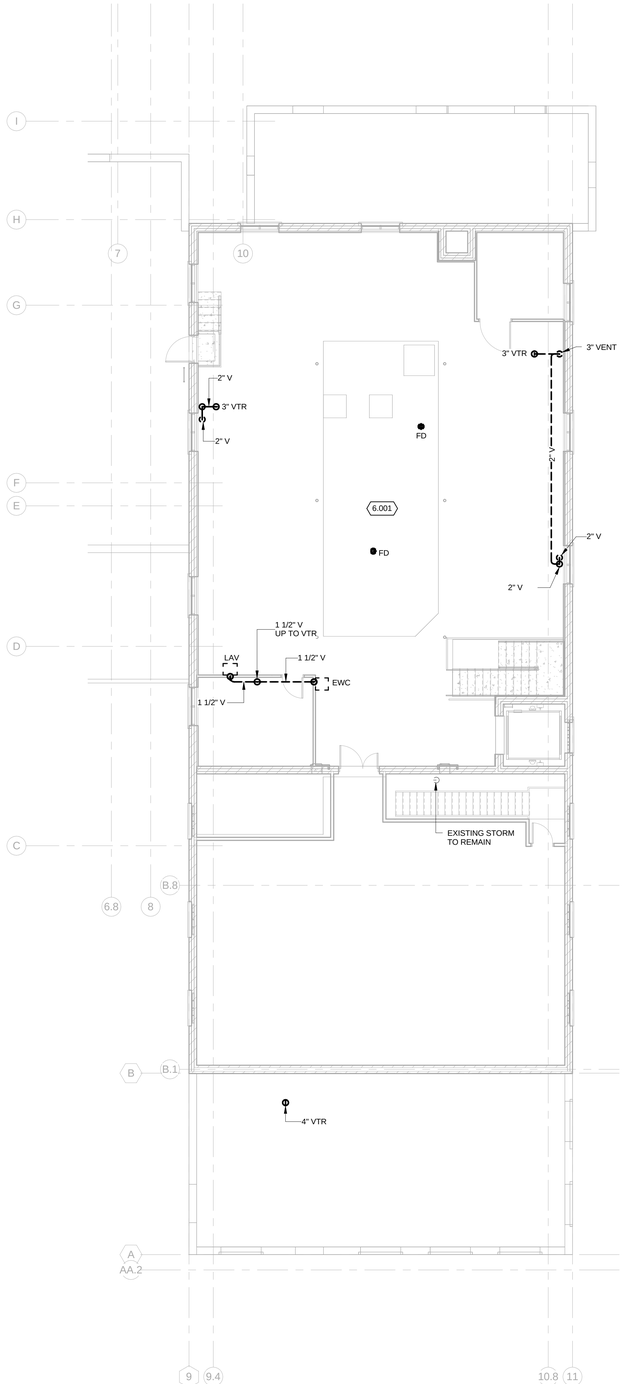
M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MFP
DRAWN BY: SSV
CHECKED BY: RMM

DO NOT SCALE DRAWINGS

SHEET CONTENTS
PLUMBING NOTES & SYMBOLS

SHEET NO.:
P-001

6/12/2015 2:33:20 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdw.rvt

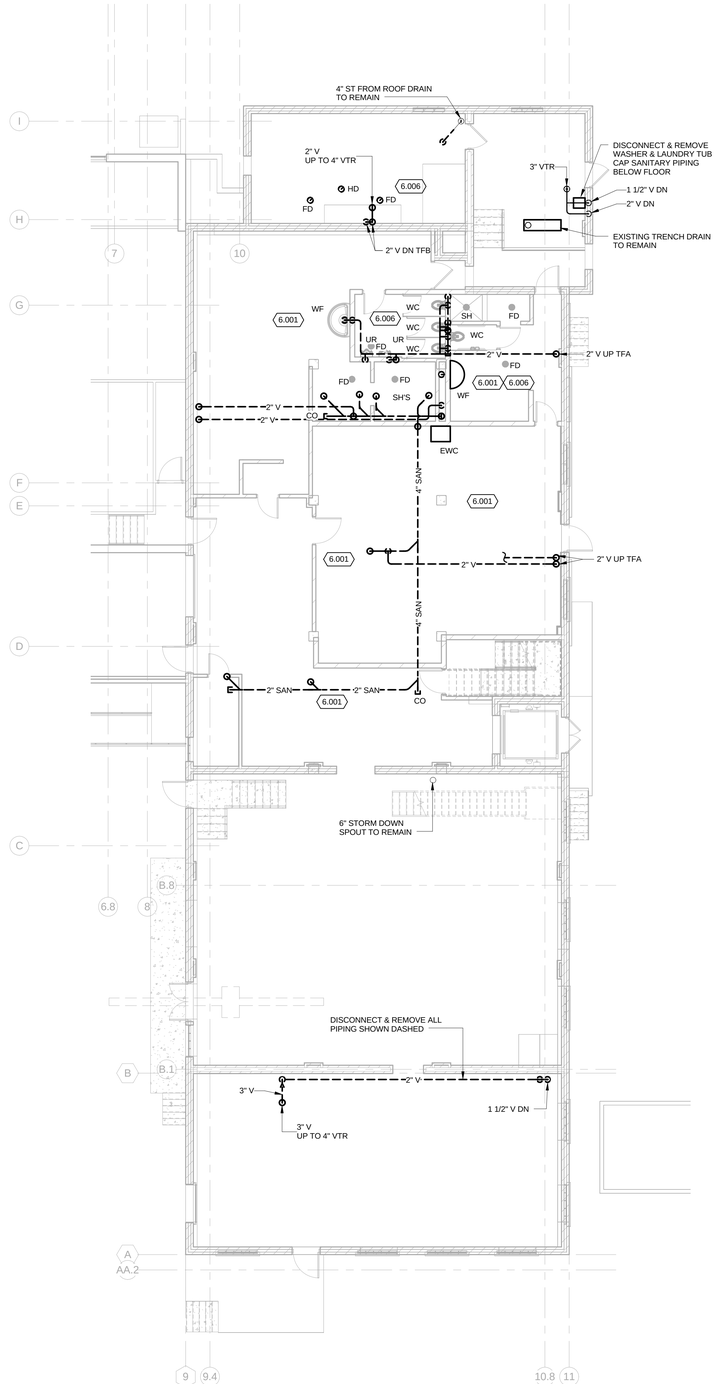


TRUE NORTH PLAN NORTH

3 PARTIAL ROOF PLAN - DWV

1/8" = 1'-0"

0 4 8 16

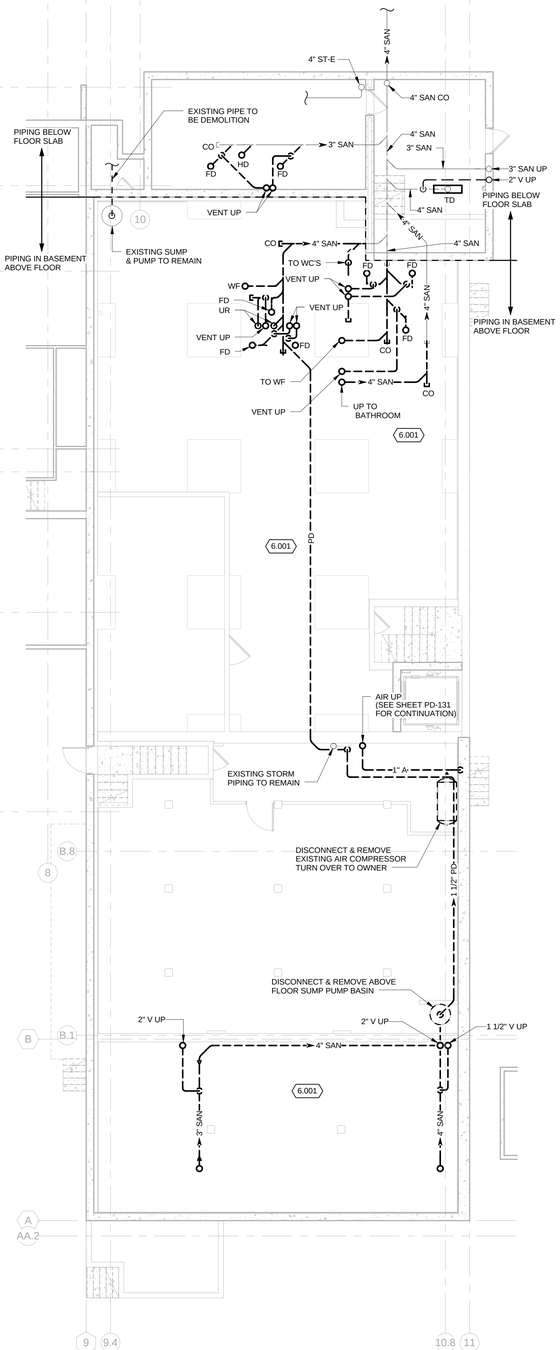


TRUE NORTH PLAN NORTH

2 PARTIAL FIRST FLOOR PLAN - DWV

1/8" = 1'-0"

0 4 8 16



TRUE NORTH PLAN NORTH

1 PARTIAL BASEMENT ABOVE FLOOR PLAN - DWV

1/8" = 1'-0"

0 4 8 16

KEYED NOTES

6.001 DISCONNECT & REMOVE ALL FIXTURES AND PIPING SERVING FIXTURES, INCLUDING BUT NOT LIMITED TO WATER CLOSETS, FLUSHOMETERS, URINALS, LAVATORIES, SINKS, WASH FOUNTAINS, WATER COOLERS, LAUNDRY SINK, CLOTH WASHER CONNECTIONS, SERVICE SINKS & FITTINGS, FLOOR DRAINS & HUB DRAINS. COORDINATE PHASING OF WORK WITH ARCHITECTURAL PHASING PLANS.

6.006 COORDINATE PHASING OF DEMOLITION WORK WITH PHASING OF NEW CONSTRUCTION EXISTING EAST PORTION OF BUILDING TO REMAIN IN SERVICE AND OCCUPIED UNTIL WEST ADDITION IS FINISHED.

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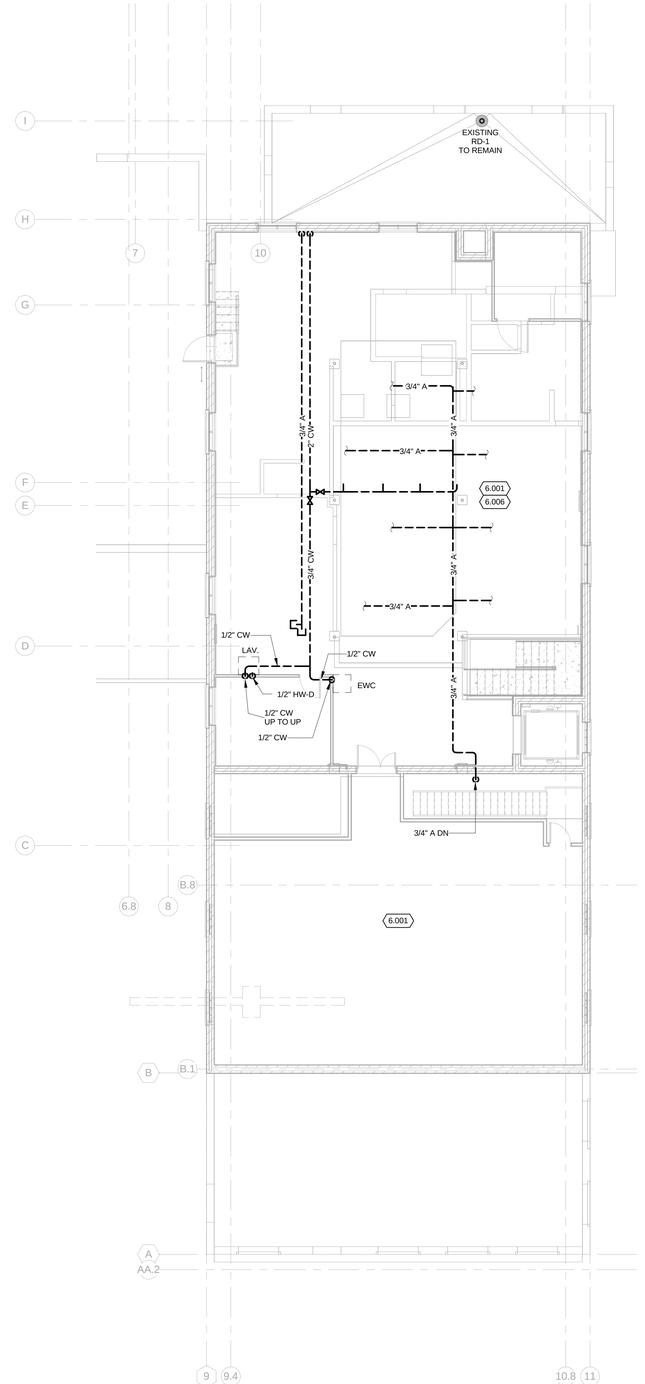
SHEET CONTENTS
PLUMBING
DEMOLITION - DWV

SHEET NO.:
PD-100

6/12/2015 2:36:56 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdv.rvt



TRUE NORTH PLAN NORTH

2 PARTIAL SECOND FLOOR PLAN - SUPPLY

1/8" = 1'-0"

0 4 8 16

KEYED NOTES

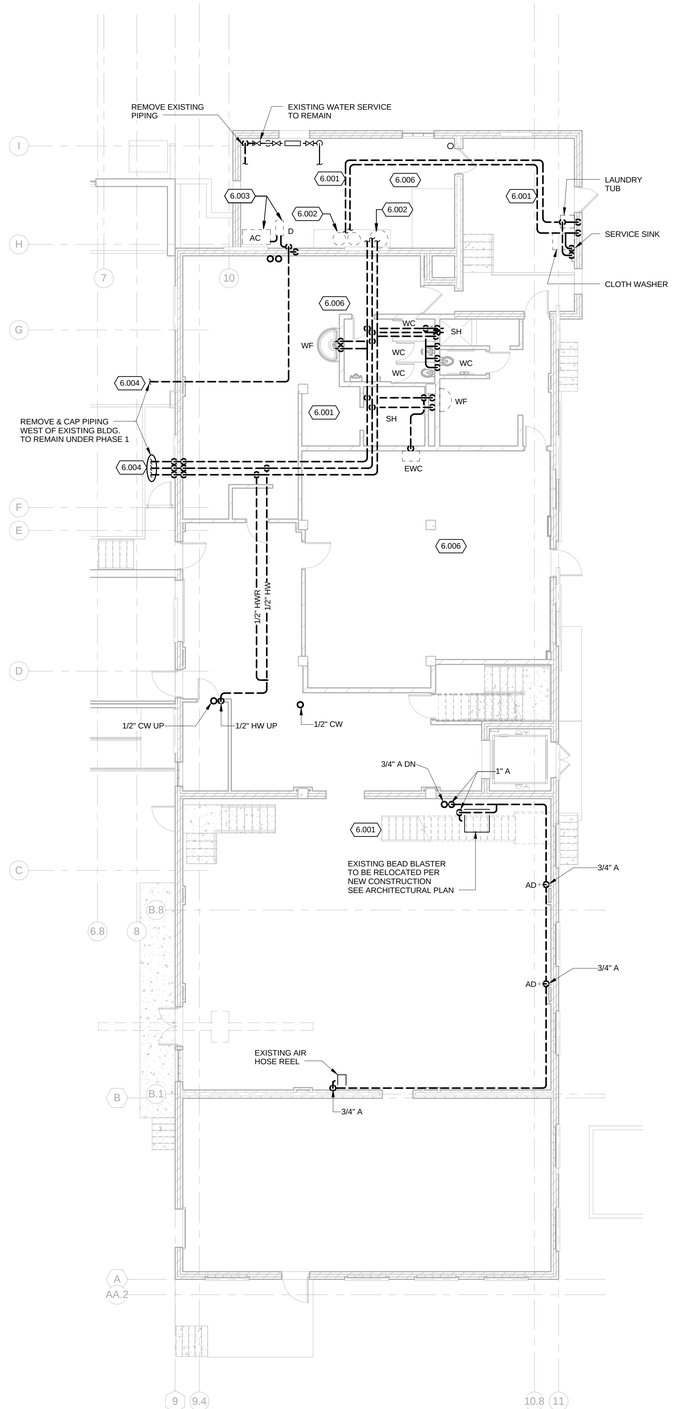
6.001 DISCONNECT & REMOVE ALL FIXTURES AND PIPING SERVING FIXTURES. INCLUDING BUT NOT LIMITED TO WATER CLOSETS, FLUSHOMETERS, URINALS, LAVATORIES, SINKS, WASH FOUNTAINS, WATER COOLERS, LAUNDRY SINK, CLOTH WASHER CONNECTIONS, SERVICE SINKS & FITTINGS, FLOOR DRAINS & HUB DRAINS. COORDINATE PHASING OF WORK WITH ARCHITECTURAL PHASING PLANS.

6.002 DISCONNECT & REMOVE EXISTING WATER HEATER & WATER SOFTENER.

6.003 RELOCATE EXISTING AIR COMPRESSOR & AIR DRY PER NEW CONSTRUCTION.

6.004 DISCONNECT AND CAP EXISTING DOMESTIC WATER PIPING SERVICE VEHICLE MAINTAINCE AREA.

6.006 COORDINATE PHASING OF DEMOLITION WORK WITH PHASING OF NEW CONSTRUCTION EXISTING EAST PORTION OF BUILDING TO REMAIN IN SERVICE AND OCCUPIED UNTIL WEST ADDITION IS FINISHED.



TRUE NORTH PLAN NORTH

1 PARTIAL FIRST FLOOR PLAN - SUPPLY

1/8" = 1'-0"

0 4 8 16

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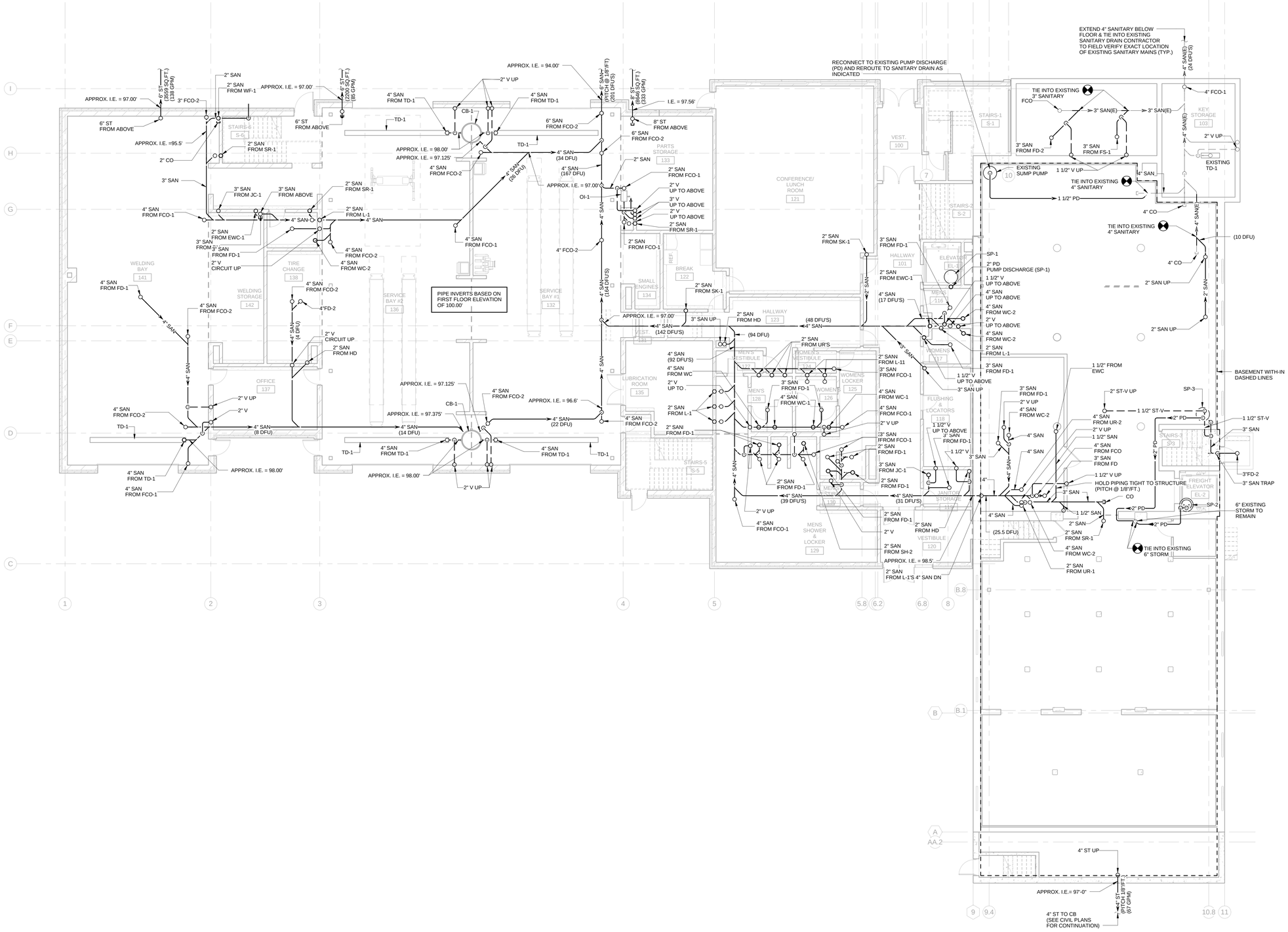
SHEET CONTENTS
PLUMBING
DEMOLITION -
SUPPLY

SHEET NO.:
PD-131

6/12/2015 2:27:12 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdv.rvt



TRUE NORTH PLAN NORTH

1 **NEW BASEMENT FLOOR PLAN & BELOW GRADE PIPING - DWV**

1/8" = 1'-0"

0 4 8 16

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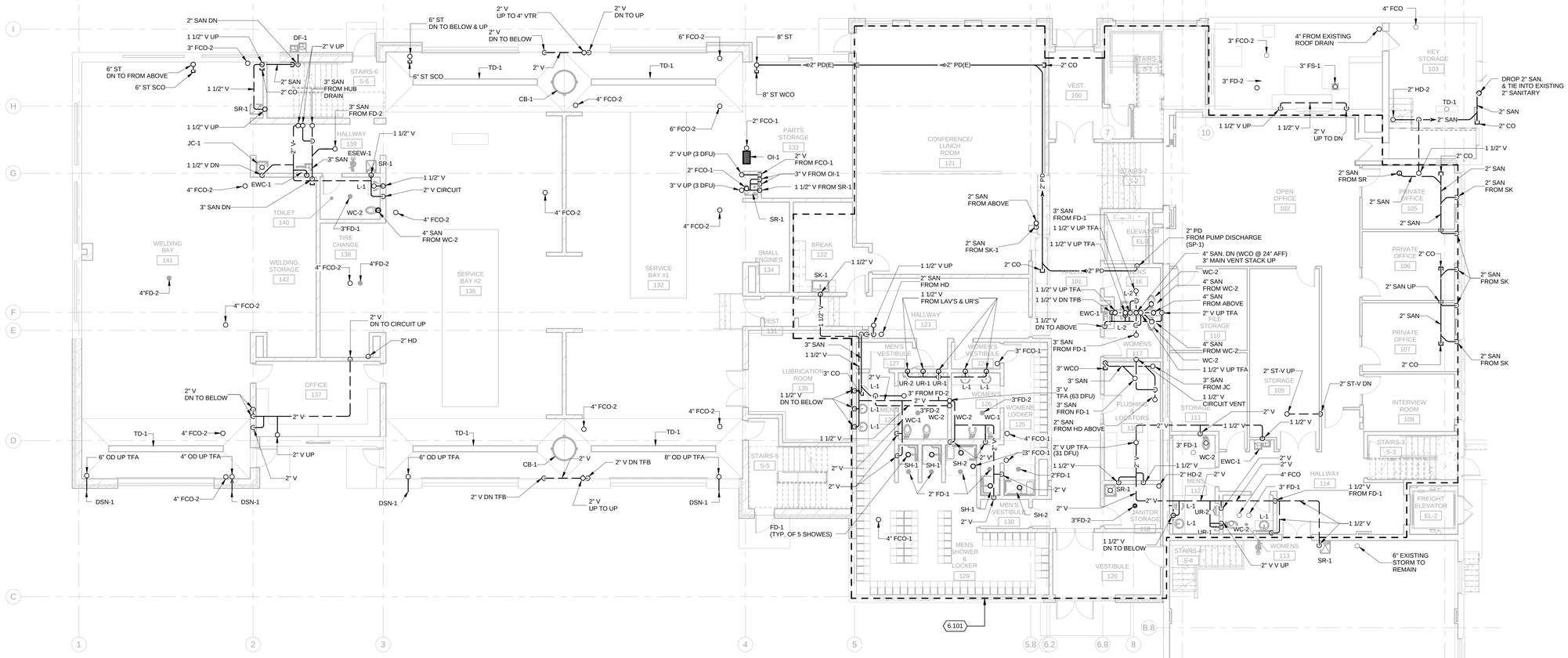
SHEET CONTENTS
BELOW GRADE PLAN - DWV

SHEET NO.:
P-100

6/12/2015 2:33:34 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdw.rvt

KEYED NOTES

6.101 AREA WITH-IN DASHED BOARDER WILL BE A PLENUM CEILING AREA. ALL PLASTIC PIPING WITH-IN THIS AREA WILL REQUIRE FIRE WRAP PER GENERAL NOTE #1 ON SHEET P.001. PLENUM PIPE WRAP TO BE EQUAL TO MORGAN THERM CERAMICS "FIREMASTER" PIPE WRAP OR USE CAST IRON PIPE.



TRUE NORTH PLAN NORTH

1 **NEW FIRST FLOOR PLAN - DWV**

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
FIRST FLOOR PLAN - DWV

SHEET NO.:
P-101

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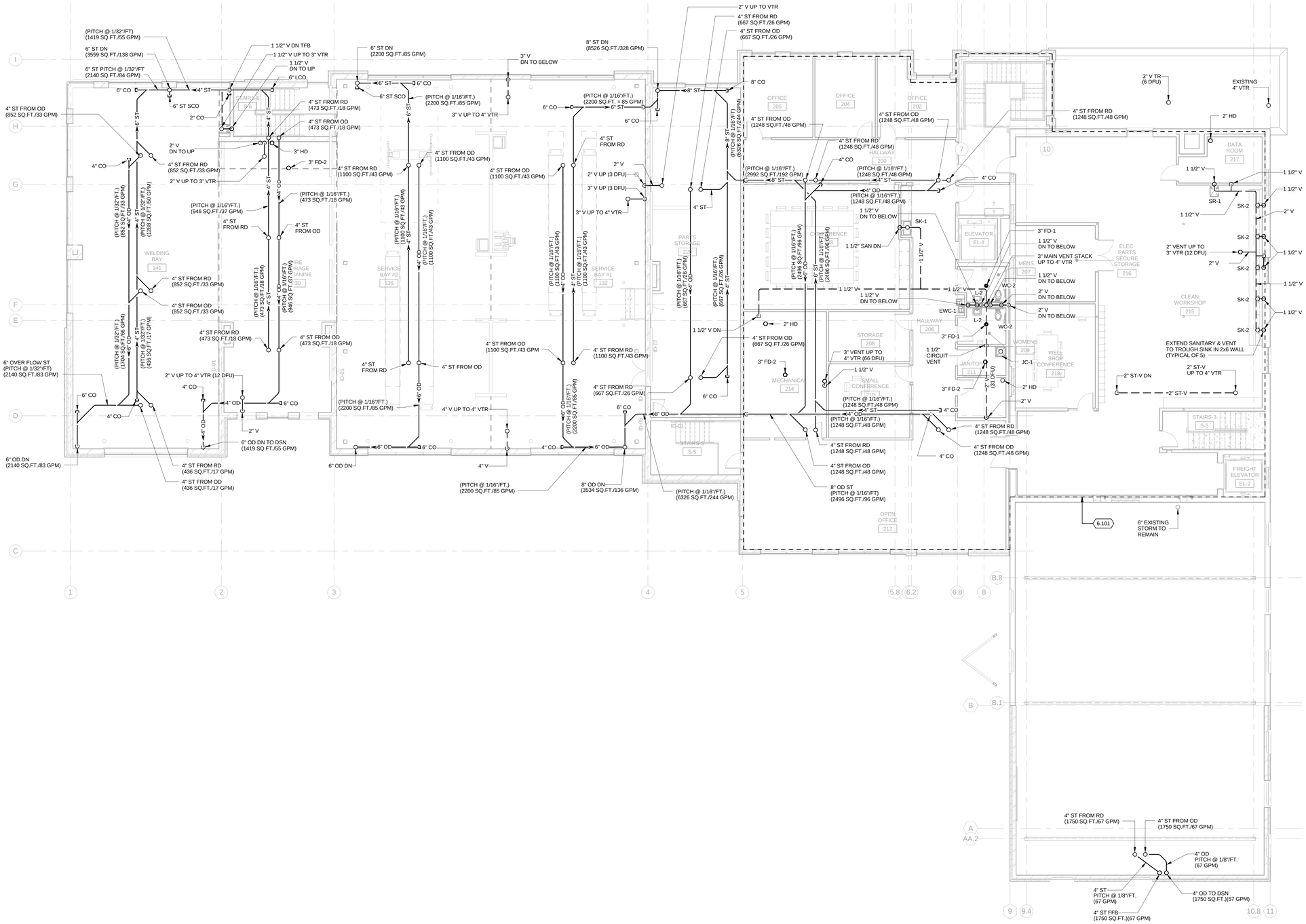

TRUE NORTH PLAN NORTH

NEW SECOND FLOOR PLAN -DWV

1/8" = 1'-0"

0 4 8 16

KEYED NOTES

6.101 AREA WITH-IN DASHED BOARDER WILL BE A PLENUM CEILING AREA. ALL PLASTIC PIPING WITH-IN THIS AREA WILL REQUIRE FIRE WRAP PER GENERAL NOTE #1 ON SHEET P.001. PLENUM PIPE WRAP TO BE EQUAL TO MORGAN THERM CERAMICS "FIREMASTER" PIPE WRAP OR USE CAST IRON PIPE.

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SHEET CONTENTS
SECOND FLOOR PLAN - DWV

SHEET NO.:
P-102

6/12/2015 2:34:19 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdv.rvt

TRUE NORTH PLAN NORTH

1 ROOF PLAN - STROM DRAIN

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
ROOF FLOOR PLAN - STORM DRAIN

SHEET NO.:
P-103

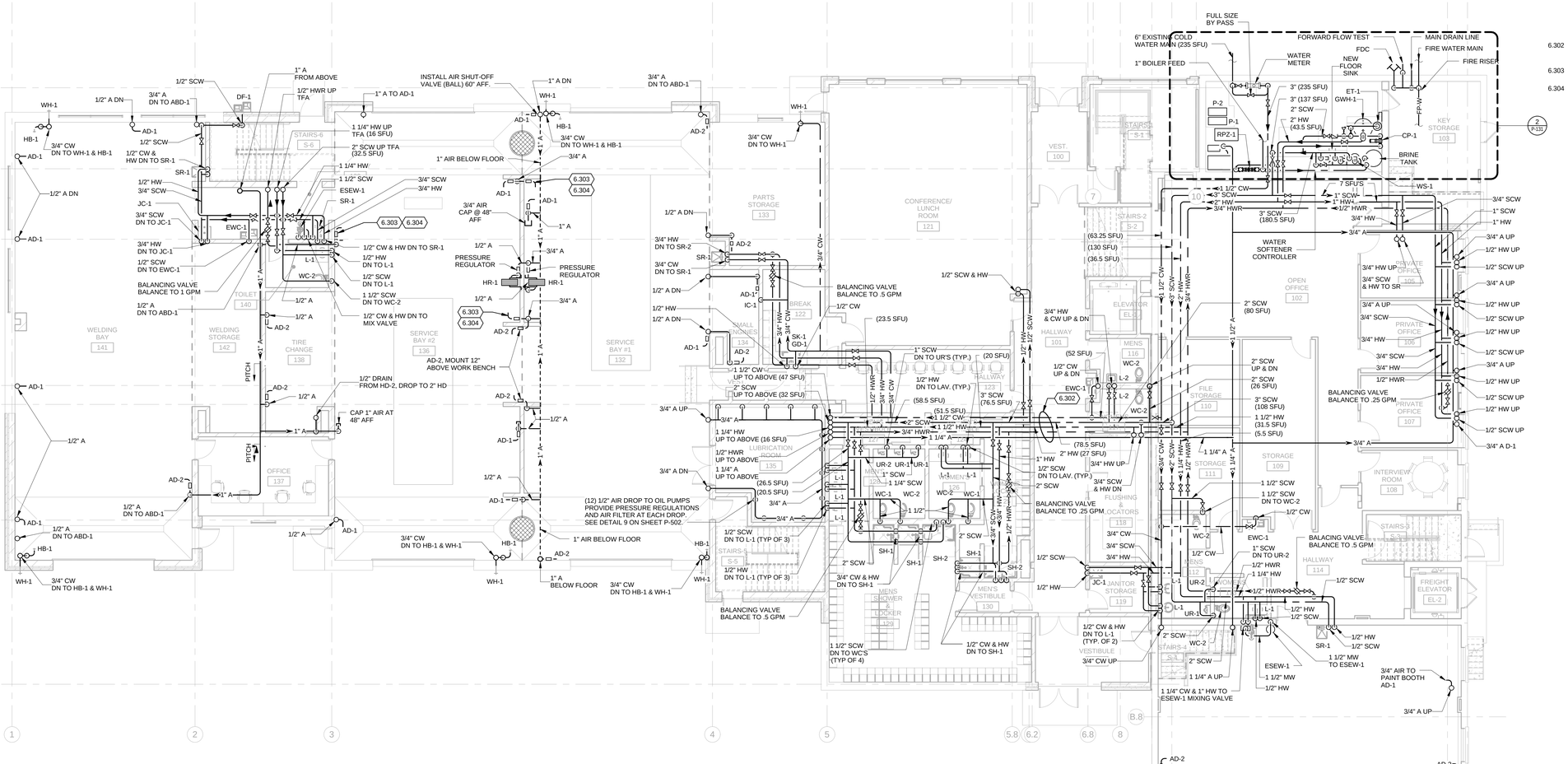
6/12/2015 2:34:35 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdw.rvt

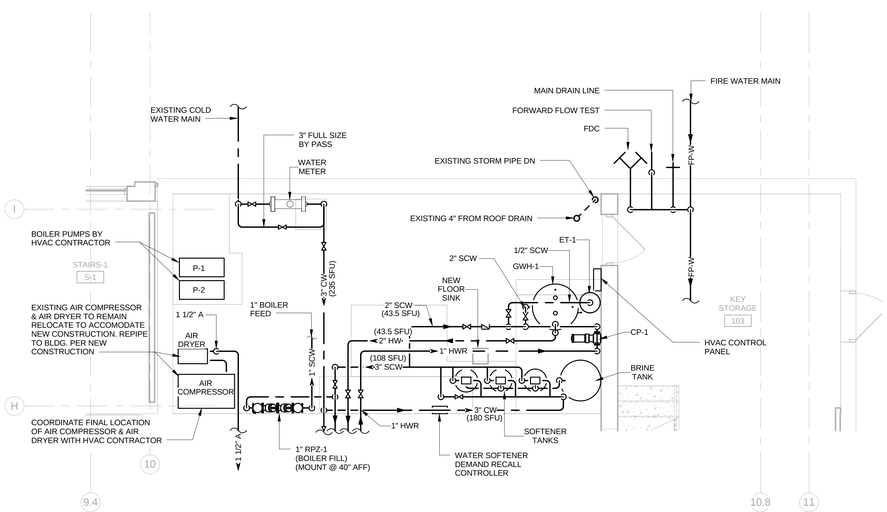
KEYED NOTES

6.302 CONTRACTOR TO COORDINATE CLOSELY WITH ALL TRADES WHEN INSTALLING PIPING FOR FIT & ACCESS TO VALVES.

6.303 LIFT OPERATORS

6.304 AD-1 AIR OUTLET, CONNECT TO LIFT OPERATOR PER LIFT SUPPLIERS INSTRUCTIONS





TRUE NORTH PLAN NORTH

2 ENLARGED PARTIAL FIRST FLOOR PLAN - SUPPLY BOILER ROOM

1/4" = 1'-0"

TRUE NORTH PLAN NORTH

1 NEW FIRST FLOOR PLAN - SUPPLY & COMPRESSOR AIR

1/8" = 1'-0"

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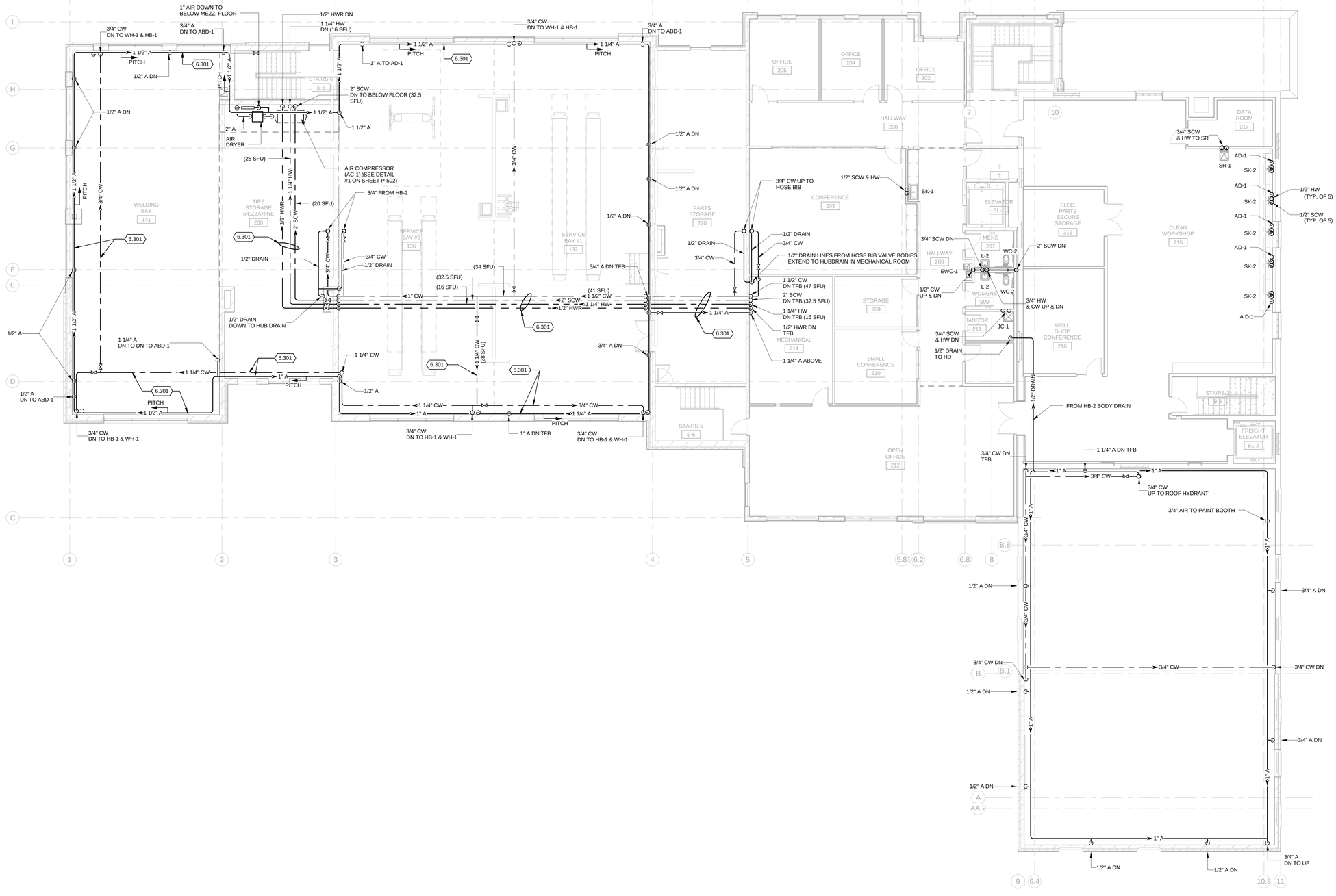
SHEET CONTENTS
FIRST FLOOR PLAN - SUPPLY

SHEET NO.:
P-131

6/12/2015 2:35:08 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdw.rvt

KEYED NOTES

6.301 HOLD PIPING TIGHT TO STRUCTURE ABOVE CRANE.



TRUE NORTH PLAN NORTH

1 **NEW SECOND FLOOR PLAN -SUPPLY & COMPRESSOR AIR**

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
SECOND FLOOR PLAN - SUPPLY

SHEET NO.:
P-132

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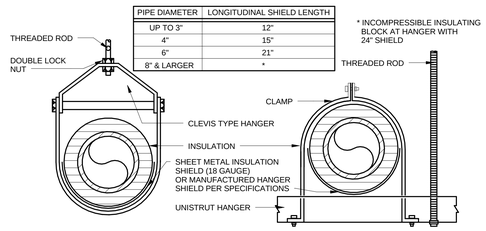
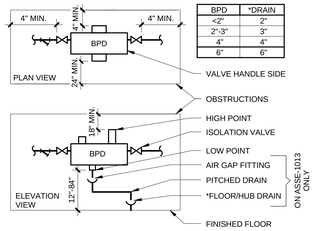


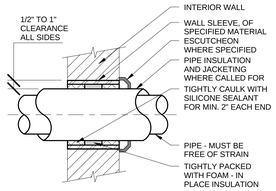
PIPE DIAMETER	LONGITUDINAL SHIELD LENGTH
UP TO 3"	12"
4"	15"
6"	21"
8" & LARGER	*

22 INSULATED PIPE SUPPORTS
NO SCALE

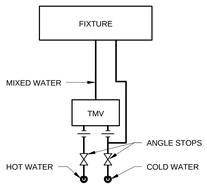


BPD	*DRAIN
<2"	2"
2"-3"	3"
4"	4"
6"	6"

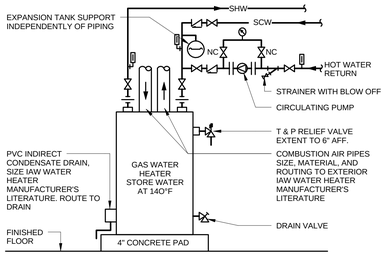
23 ASSE-1013 AND ASSE-1015 BPD
NO SCALE



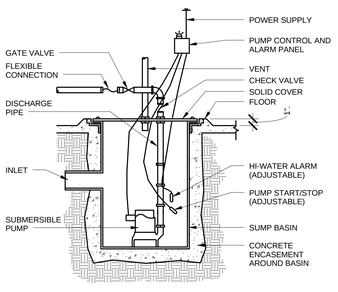
24 INTERIOR WALL PIPE SLEEVE
NO SCALE



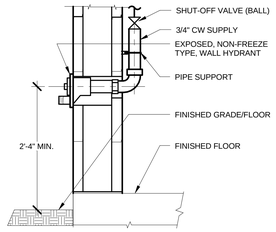
25 SINGLE FIXTURE THERMOSTATIC MIXING VALVE
NO SCALE



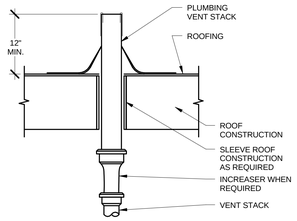
26 SEALED COMBUSTION GAS WATER HEATER - TANK TYPE
NO SCALE



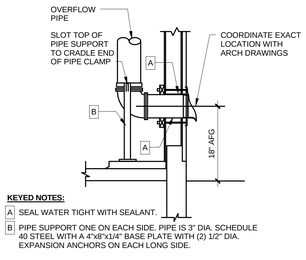
27 SUMP PUMP (STORM OR CLEAR WATER) (SP-3)
1" = 1'-0"



17 WALL HYDRANT (WH-1)
NO SCALE



18 VENT THRU ROOF (VTR)
NO SCALE

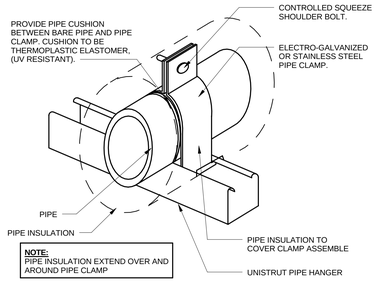


KEYED NOTES:

A SEAL WATER TIGHT WITH SEALANT.

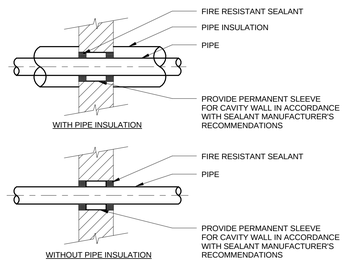
B PIPE SUPPORT ONE ON EACH SIDE, PIPE IS 3" DIA. SCHEDULE 40 STEEL WITH A 4"x8"x1/4" BASE PLATE WITH (2) 1/2" DIA. EXPANSION ANCHORS ON EACH LONG SIDE.

19 STORM OVERFLOW DOWNSPOUT (DSN)
NO SCALE

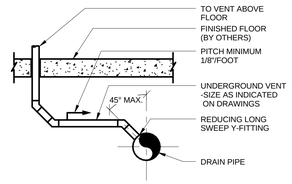


NOTE:
PIPE INSULATION EXTEND OVER AND AROUND PIPE CLAMP

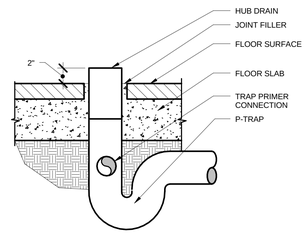
20 UNISTRUT - PIPE SUPPORT
NO SCALE



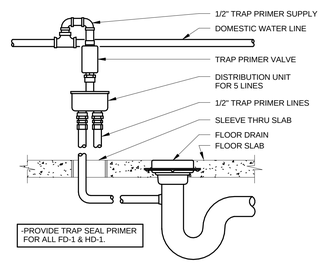
21 PIPE THRU FIRE RATED INTERIOR WALL
NO SCALE



12 UNDERGROUND VENT SECTION
NO SCALE

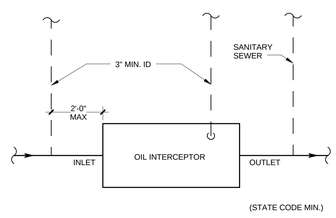


13 HUB DRAIN (HD)
NO SCALE

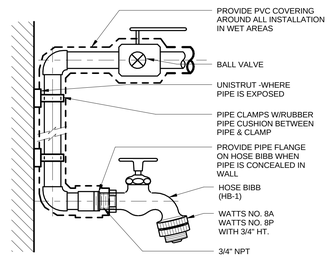


14 TRAP SEAL PRIMER
NO SCALE

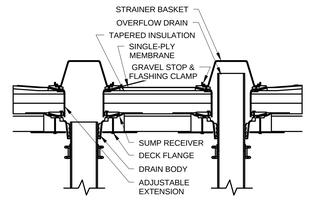
NOTE:
1. VENTS SHOWN MUST TERMINATE INDEPENDENTLY/ CODE.
2. VENT PER STATE CODES & MANUFACTURERS REQUIREMENTS



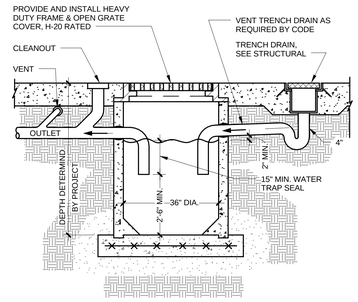
15 OIL INTERCEPTOR (OI-1)
NO SCALE



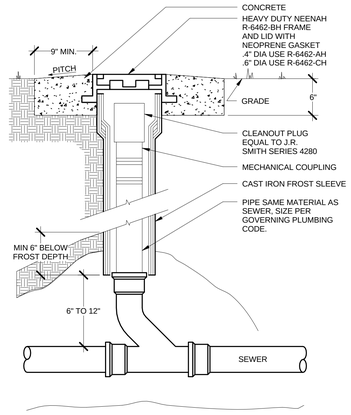
16 HOSE BIBB (HB-1)
NO SCALE



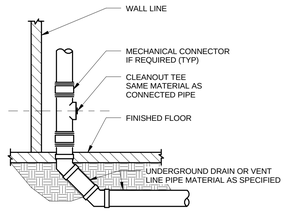
7 COMBINATION ROOF/OVERFLOW DRAIN
NO SCALE



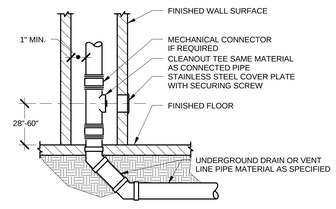
8 GARAGE CATCH BASIN (CB-1)
NO SCALE



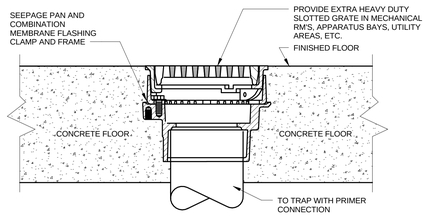
9 YARD CLEANOUT (YCO)
NO SCALE



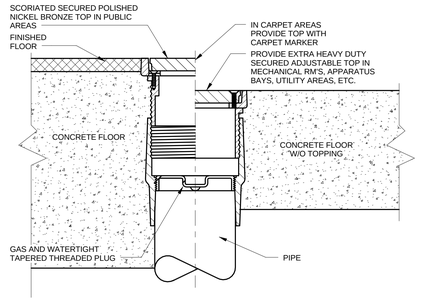
10 STACK CLEANOUT (SCO)
NO SCALE



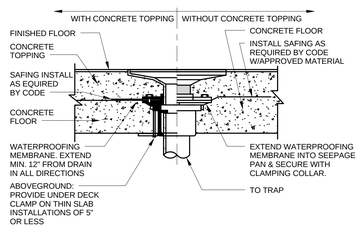
11 WALL CLEANOUT (WCO)
NO SCALE



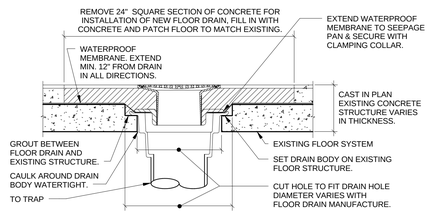
1 FLOOR DRAIN (FD-2)
NO SCALE



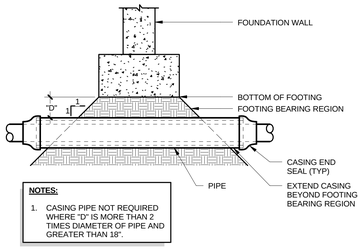
2 FLOOR CLEANOUT (FCO)
NO SCALE



3 FLOOR DRAIN - CAST IN PLACE (FD-1)
NO SCALE



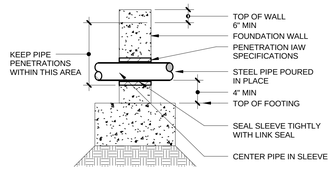
4 NEW FLOOR DRAIN IN EXISTING FLOOR
NO SCALE



NOTES:

1. CASING PIPE NOT REQUIRED WHERE "D" IS MORE THAN 2 TIMES DIAMETER OF PIPE AND GREATER THAN 18".

5 PIPE UNDER FOOTING
NO SCALE



6 PIPE THROUGH FOUNDATION WALL
NO SCALE

Mead & Hunt

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Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MFP
DRAWN BY: SSV
CHECKED BY: RMM

DO NOT SCALE DRAWINGS

SHEET CONTENTS
PLUMBING DETAILS

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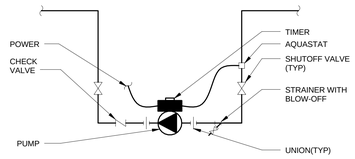
P-501

6/12/2015 2:35:34 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdw.rvt



6 CIRCULATION PUMP
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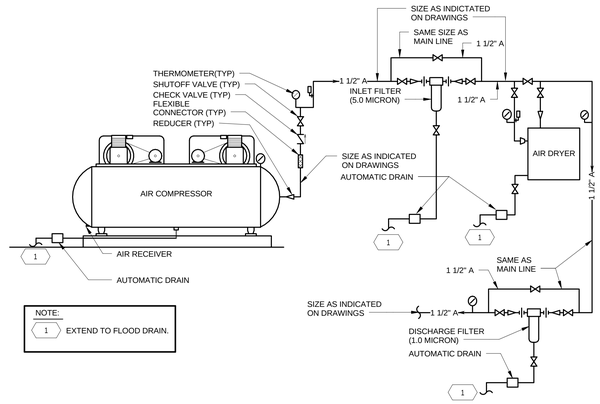
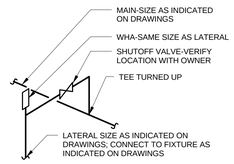
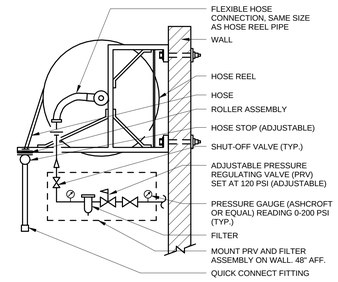


NOTE:
1 EXTEND TO FLOOD DRAIN.

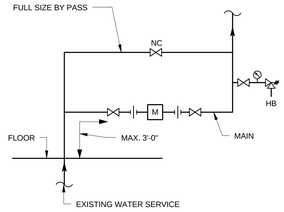
1 AIR COMPRESSOR SYSTEM PIPING SCHEMATIC
NO SCALE



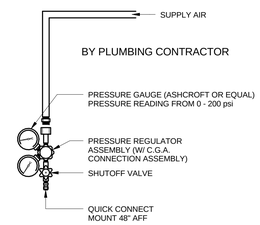
7 WATER LATERAL FIXTURE DROP
NO SCALE



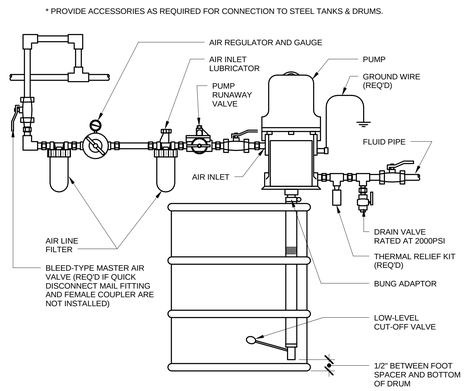
2 AIR HOSE REEL - WALL MOUNTED
NO SCALE



8 WATER METER PIPING
NO SCALE

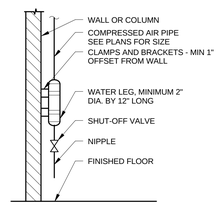


3 COMPRESSED AIR - AD-2
NO SCALE

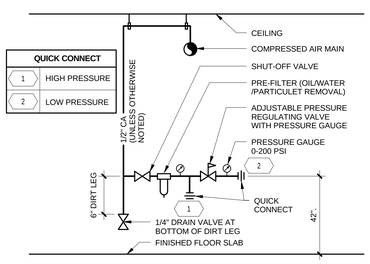


9 SECTION KIT CONNECTION AT OIL DRUM
NO SCALE

(LUBRICATION ROOM # 135)



4 AIR BLOWDOWN (ABD-1)
NO SCALE



5 COMPRESSED AIR DROP #1 (AD-1)
NO SCALE

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meadhunt.com

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MFP
DRAWN BY: SSV
CHECKED BY: RMM

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SHEET CONTENTS
PLUMBING DETAILS

SHEET NO.:
P-502

6/12/2015 2:35:49 PM C:\Revit Local\3235300-131021-03-P-Central-2015_1760mdw.rvt

WATER HAMMER ARRESTOR SCHEDULE

PIPE SIZE	FIXTURE UNIT	CROSS REFERENCE (PDI)
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C
1 1/4"	60-113	D
1 1/2"	114-154	E
2"	155-330	F
2 1/2"	331-554	G

PIPING ROUTING SCHEDULE (1)

LOCATION			
ORIENTATION	ROOMS	SERVICE	ROUTING
VERTICAL	ALL EXCEPT MECHANICAL.	ALL	CONCEALED INSIDE WALL SPACE
	MECHANICAL	ALL	EXPOSED CLOSE TO WALL
HORIZONTAL	WITH SUSPENDED CEILINGS	ALL	CONCEALED ABOVE SUSPENDED CEILING
	WITHOUT SUSPENDED CEILINGS	ALL	EXPOSED CLOSE TO CEILING

DRAIN AND VENT PITCH

SIZE	MINIMUM PITCH
2" AND SMALLER	1/4" PER FOOT
LARGER THAN 2"	1/8" PER FOOT

REMARKS:
(1) SEE PLUMBING SCHEDULES GENERAL NOTES ON P-001

PIPE SIZE SCHEDULE (1)

SUPPLY, DRAIN, AND VENT PIPE SIZES FOR SINGLE FIXTURES (INCHES) (4) (5)

FIXTURE	CW		HW		DRAIN		VENT
	PIPE SIZE (IN)	SFU	PIPE SIZE (IN)	SFU	PIPE SIZE (IN)	DFU	PIPE SIZE (IN)
EWC / DF	0.5"	.5	N/A	N/A	1.5" (2)	.5	1.5"
2" FD/HD/TD	N/A	N/A	N/A	N/A	2"	2	1.5"
3" FD/HD/TD	N/A	N/A	N/A	N/A	3"	3	1.5"
4" FD/HD/TD	N/A	N/A	N/A	N/A	4"	4	2"
L	0.5"	.5	0.5"	.5	1.5" (2)	1	1.5"
SK	0.5"	2.0	0.5"	2.0	1.5" (2)	2	1.5"
SR / JC	0.75"	2.0	0.75"	2.0	3"	3	1.5"
UR	0.75"	4.0	N/A	N/A	2"	2	1.5"
WC	1.5"	6.5	N/A	N/A	4"	6	2"
HB	0.5"	3.0	N/A	N/A	N/A	N/A	N/A
WH	0.75"	4.0	N/A	N/A	N/A	N/A	N/A

MINIMUM PIPE SIZES FOR CIRCUITS

SERVICE	MINIMUM PIPE SIZE (INCHES)
STORM DRAIN	3"
SANITARY DRAIN	1.5" (2)
VENT	1.5"
VTR	4" UNLESS OTHERWISE INDICATED
CW / HW	0.75" UNLESS OTHERWISE INDICATED

PIPE SIZE CHANGES

SUPPLY PIPE SIZE SHALL NEVER DIMINISH IN UPSTREAM DIRECTION.
DRAIN PIPE SIZE SHALL NEVER DIMINISH IN DOWNSTREAM DIRECTION.
VENT PIPE SIZE SHALL NEVER DIMINISH IN DIRECTION AWAY FROM DRAIN CONNECTION.

REMARKS:
(1) SEE PLUMBING SCHEDULES GENERAL NOTES ON P-001
(2) 2" MINIMUM UNDERGROUND
(3) MATCH FIXTURE PIPE SIZE
(4) CONNECT EACH FIXTURE WITH PIPE SIZE INDICATED
(5) UNLESS NOTED OTHERWISE, PROVIDE TRAPS ON ALL FIXTURES WITH DRAINS

ABOVEGROUND PIPE INSULATION SCHEDULE

SERVICE		PIPE SIZE	INSULATION MATERIAL: TYPE	THICKNESS (INCHES)	JACKET-STRIGHT PIPE	JACKET-FITTING	REMARKS
COLD WATER	SUPPLY	2" AND SMALLER	(4)	0.5	ASJ (5)	PVC	(1,5)
		2.5" AND LAGRGER	(4)	1.5	ASJ (5)	PVC	(1,5)
HOT WATER SUPPLY	SUPPLY	2" AND SMALLER	(4)	1	ASJ (5)	PVC	(1,5)
		2.5" AND LARGER	(4)	1.5	ASJ (5)	PVC	(1,5)
HOT WATER RECIRCULATED	SUPPLY	2" AND SMALLER	(4)	1	ASJ (5)	PVC	(1,5)
		2.5" - 4"	(4)	1.5	ASJ (5)	PVC	(1,5)
STORM	DRAIN	2" AND SMALLER	(4)	0.5	ASJ (5)	PVC	(1,3)
		2.5" AND LARGER	(4)	0.5	ASJ (5)	PVC	(1,3)
NON-POTABLE WATER	SUPPLY	2" AND SMAALER	(4)	0.5	ASJ (5)	PVC	(1)
		2.5" AND LARGER	(4)	1	ASJ(5)	PVC	(1)
CONDENSATE DRAIN	DRAIN	2" AND SMAALER	(4)	0.5	ASJ (5)	PVC	(1,5)
		2.5" AND LARGER	(4)	1	ASJ(5)	PVC	(1,5)

REMARKS:
(1) SEE GENERAL NOTES P-001.
(2) INSULATE ALL PIPE EXCEPT FINAL VERTICAL DROP TO UNDERGROUND.
(3) INSULATE ALL HORIZONTAL AND VERTICAL STORM PIPING AND 1" INSUL. ON ROOF DRAIN BODIES.
(4) MINERAL FIBER.
(5) ALL EXPOSED PIPING IN MECHANICAL ROOM'S, JANITORS ROOMS TO HAVE PVC JACKETING.

PIPE IDENTIFICATION TABLE (1)

ABBREVIATION	SERVICE (2)	PIPE LABEL: TEXT	COLORS
CW	COLD DOMESTIC WATER	CW	(3)
HW	HOT DOMESTIC WATER	HW	(3)
HWR	HOT DOMESTIC WATER RETURN	HWR	(3)
SCW	SOFT COLD DOMESTIC WATER	SCW	(3)
NPCW	NON-POTABLE COLD WATER	NPCW	(4)
SAN	SANITARY DRAIN	SAN	(4)
V	VENT FOR SANITARY DRAIN	V	(4)

REMARKS:
(1) SEE PLUMBING SCHEDULES GENERAL NOTES
(2) NOT ALL SERVICES USED
(3) GREEN BACKGROUND, WHITE TEXT
(4) YELLOW BACKGROUND, BLACK TEXT
(5) PURPLE BACKGROUND, WHITE TEXT

GAS WATER HEATER (GWH) SCHEDULE (1)

MARK	MANUFACTURER, MODEL NUMBER	TYPE	STORAGE CAPACITY (GAL)	FUEL	INPUT (BTUH)	THERMO EFFICIENCY (%)	ELECTRIC (VOLT/PH)	ELECTRIC (FLA)	EMPTY WEIGHT (LBS)	OPERATOR WEIGHT (LBS)	DEGREE RISE (FAHRENHEIT)	RECOVERY (GAL/HOUR)	WATER OUTLET TEMP (FAHRENHEIT)	PIPE SIZE (IN) CW	PIPE SIZE (IN) HW	FLUE SIZE (IN) INTAKE	FLUE SIZE (IN) EXHAUST	LOCATION	REMARKS
GWH-1	A.O SMITH, BTH-300A	S	119	NG	300,000	98	120	1	855	1850	100	349	140	1 1/2	1 1/2	4	4	EXISTING BOILER ROOM	(1)(2)

TYPE		VENT TYPE		FUEL STYLE	
TANK	STORAGE TANK	G	GRAVITY VENT	NG	NATURAL GAS
INST	INSTANTANEOUS	P	POWER VENT	PROP	PROPANE
		S	SEALED COMBUSTION	ELEC	ELECTRIC

REMARKS:
(1) SEE GENERAL NOTES P-001.
(2) FLUE LENGTH AND SIZE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.

SUMP PUMP SCHEDULE (1)

MARK	MANUFACTURER, MODEL NUMBER	TYPE	FLOW RATE (GPM)	TDH (FT)	MOTOR POWER (HP)	MOTOR SPEED (RPM)	MOTOR VOLTS/ PHASE	IMPELLER DIA. (IN)	DISCH. SIZE (IN)	ALTERNATING CONTROLS	DRAW DOWN CAPACITY (GALLONS)	BASIN SIZE DIAMETER (IN)	BASIN SIZE DEPTH (IN)	COVER RATING	CONTROL	CONTROL PANEL MODEL #	RAIL SYSTEM	LOCATION	REMARKS
SP-1	WEIL, 1413	CL	50	30	1.00	1,750	208/1	N/A	2	NO	30	24	42	FT	SIM	WEIL	NO	ELEVATOR	(4,5)
SP-2	WEIL, 1413	CL	50	18	0.75	1,750	208/1	N/A	2	NO	30	24	42	FT	SIM	WEIL	NO	Fraight elev.	(4,5)
SP-3	WEIL, 1412	CL	30	16	0.20	1,750	208/1	N/A	1.5	NO	30	24	36	FT	SIM	WEIL	NO	Basement	(3,)

COVER RATING TYPE		CONTROL TYPE		SYSTEM TYPE	
FT	FOOT TRAFFIC	SIM	SIMPLEX	CL	CLEARWATER
HD	HEAVY DUTY	DULP	DUPLEX	SE	SEWAGE EJECTOR
				GR	GRINDER PUMP
				SL	SLICER PUMP

REMARKS:
(1). SEE GENERAL NOTES ON P-001.
(2). CHARACTERISTICS LISTED ARE FOR EACH PUMP.
(3). SOLID TOP FOR FOOT TRAFIC
(4). PROVIDE GRATE TOP RATED FOR FOOT TRAFIC
(5). PROVIDE AND INSTALL "OIL WATER SENSOR AND ALARM DEVICES AND CONTROL PANEL" TO SHUT OFF PUMP AND ALARM IF OIL IS DETECTED IN WATER.

PUMP (P) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	SYSTEM SERVED	FLOW RATE (GPM)	TDH (FT)	MOTOR POWER (HP)	MOTOR WATTS	MOTOR RPM	MOTOR VOLTS/ PHASE	MOTOR F.L. AMPS	PUMP EFF. (%)	MAX. FLUID TEMP. (F)	FLANGE SIZE SUCTION (IN)	FLANGE SIZE DISCHARGE (IN)	AUTO PUMP CONTROL	WEIGHT (LBS)	LOCATION	REMARKS
CP-1	BELL & GOSSETT, NBF-10S/LW	IC	GWH-1	3	9	N/A	52	2,800	115/1	0.5	N/A	140	1	1	YES	9.3	EXISTING BOILER ROOM	(2, 3,,5)

TYPE			
IC	IN-LINE CIRCULATOR	SS	SUBMERSIBLE PUMP
VT	VERTICAL TURBINE	VS	VERTICAL SUBMERSIBLE
CCES	CLOSE COUPLED END SUCTION	ES	EFFLUENT SUMP
FMES	FRAME MOUNTED END SUCTION	SE	SEWAGE EJECTOR
DS	DOUBLE SUCTION	WRC	WET ROTOR CIRCULATOR

REMARKS:
(1) SEE GENERAL NOTES P-001.
(2) LEAD-FREE BRONZE OR STAINLESS STEEL BODY.
(3) PROVIDE THERMOSTATIC PUMP CONTROL.
(4) SET UP TO COME ON IF CIRCULATING WATER DROPS BELOW 112 DEEGREE FAHRENHEIT PUMP OFF AT 120 DEEGREE FAHRENHEIT.
(5) PROVIDE 24/7 ADJUSTABLE TIMER AND AQUA STAT TO CONTROL PUMP ON/OFF.

PLUMBING SPECIALTIES SCHEDULE (1)

MARK	MANUFACTURER, MODEL NUMBER	UPSTREAM PIPE SIZE (IN)	DOWNSTREAM PIPE SIZE (IN)	DEVICE SIZE (IN)	PEAK FLOW RATE (GPM)	MIN. FLOW RATE (GPM)	MAX. ALLOWABLE PRESSURE LOSS (PSI)	MAX. OPERATING TEMP (F)	LOCATION	REMARKS
RPZ-1	WATTS, LF909-QTS.	1	1	1	20	0	10 PSID AT 20 GPM	140	BOILER FEED	(1)

DEVICE			
A	WATER HAMMER ARRESTOR	D	MIXING VALVE
B	BACKFLOW PREVENTER	E	WATER METER
C	WATER FILTER		

REMARKS:
(1) SEE GENERAL NOTES P-001.
(2) SET AT 120 F, COMPLETE WITH STAINLESS STEEL PISTON LIMER, VOLUME CONTROL, SHUT-OFF VALVE, DIAL THERMOMETER WALL MOUNTING BRACKET.
UNION END STOP AND CHECK VALVE WITH REMOVABLE STRAINER ON EACH INLET, INSTALL WITH 27" HEAT TRAP.
(3) SET AT 106 DEGREE FAHRENHEIT.

EXPANSION TANK (ET) SCHEDULE (1)

MARK	MANUFACTURER, MODEL NUMBER	SYSTEM	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL.)	DIMENSION DIA. (IN)	DIMENSION LENGTH (IN)	DIMENSION SYSTEM CONNECTION (IN)	AIR CHARGE PRESSURE (PSIG)	EMPTY WEIGHT (LBS)	OPER. WEIGHT (LBS)	LOCATION	REMARKS
ET-1	WATTS, DETA-20	GWH-1	8	3.1	12	20	1"	40	34	95	EXISTING BOILER ROOM	

REMARKS:
(1) SEE GENERAL NOTES P-001.

WATER CALCULATION WORKSHEET

Paterson Street Ops.

Information Needed for Water Sizing.

1. **87.0** gpm. Demand of building in gallons per minute.
2. **80.0** psi. Low pressure at main in street (or at external pressure tank). pressure taken after water meter at hose bibb.
3. **8.0** ft. Difference in elevation from main to meter (or external pressure tank to building control...
4. **2.0** in. Size of water meter (if applicable).
5. **75.0** ft. Developed length from main to meter (or external pressure tank to building control...

You Must First Find the Available Pressure After the Water...
(or at building control valve). To obtain this pressure, you must:

6. **0.10** psi. Find pressure loss due to friction in **4.0** inch water service. **0.3** ft./100ft.
7. **3.47** psi. Find pressure loss due to elevation, main to meter (or external pressure tank to building control valve). (difference in elevation) **8.0** x .434 psi/ft.
8. **5.00** psi. Find pressure loss due to meter. (from manufacturer or AWWA).
9. **71.4** psi. Subtract the loss due to friction (step 6), loss due to elevation (step 7), and loss due to meter (step 8) from the low main pressure (or low pressure at external pressure tank). This calculation is the available pressure after the water meter (or at the building control valve). This answer is entered in Line B, below.

Information Needed for Water Distribution Sizing

Using the following formula, find the pressure available for uniform loss (psi / 100' of pipe).

$$A = \frac{B - (C + D + E)}{F} \times 100$$

WHERE:

A. **6.78** psi. Pressure available for uniform loss (psi / 100 ft. of pipe).
B. **71.43** psi. Available pressure after water meter (at the building control valve or low pressure at internal pressure tank). (see item 9, above).
C. **25.0** psi. Pressure needed at controlling fixture.
D. **6.08** psi. Difference in elevation between water meter (building control valve or... pressure tank) and controlling fixture in feet **14** ft.
E. **20.0** psi. Pressure loss due to water softeners, water treatment devices, instantaneous water heaters and backflow preventers. Conventional water heaters usually do not have a pressure loss.
F. **300.0** ft. Developed length from water meter (building control valve or internal pressure tank) to controlling fixture in feet **200.0** x 1.5.

PLUMBING FIXTURE / EQUIPMENT SCHEDULE (1)

MARK	EQUIPMENT TYPE	MANUFACTURER, MODEL NUMBER	DESCRIPTION SUMMARY	ELECTRICAL (VOLT / PH)	ELECTRICAL (FLA)	REMARKS
WC-1	WATER CLOSET (FLOOR MOUNTED)	KOHLER WELLWORTH K-4406	1.28 GPF, FLOOR MOUNTED, BOTTOM OUTLET, WHITE, ELONGATED, VITREOUS CHINA, SIPHON JET, 1-1/2" TOP SPUD, 2-1/4" PASSAGE WAY. ALL TRIM TO BE VANDAL RESISTANT. PROVIDE ALL COMPONENTS AS REQUIRED FOR COMPLETE OPERATION.	N/A	N/A	
	SEAT	BEMIS 1655-SS/C	ELONGATED OPEN FRONT SEAT WITH ANTI-MICROBIAL AGENT AND WITHOUT COVER.	N/A	N/A	
	FLUSHOMETER	SLOAN ROYAL, WES-111	1.6/1.1 GPF. EXPOSED,MANUAL DUAL FLUSHOMETER WITH 1.5" TOP SPUD COUPLING.	N/A	N/A	(5)
WC-2 (ADA)	WATER CLOSET (FLOOR MOUNTED)	KOHLER HIGHCREST K-4302	1.28 GPF, FLOOR MOUNTED, BOTTOM OUTLET, WHITE, ELONGATED, VITREOUS CHINA, SIPHON JET, 1-1/2" TOP SPUD, 2-1/4" PASSAGE WAY. ALL TRIM TO BE VANDAL RESISTANT. PROVIDE ALL COMPONENTS AS REQUIRED FOR COMPLETE OPERATION. INSTALL WATER CLOSET TO COMPLY WITH ADA REQUIREMENTS.	N/A	N/A	(6)
	SEAT	BEMIS 1655-SS/C	ELONGATED OPEN FRONT SEAT WITH ANTI-MICROBIAL AGENT AND WITHOUT COVER.	N/A	N/A	(6)
	FLUSHOMETER	SLOAN ROYAL, WES-111	1.6/1.1 GPF. EXPOSED,MANUAL DUAL FLUSHOMETER WITH 1.5" TOP SPUD COUPLING.	N/A	N/A	(5),(6)
UR-1	URINAL (WALL MOUNTED)	KOHLER BARDON K-4904-ET	0.5 GPF, WALL MOUNTED, WHITE, VITREOUS CHINA URINAL WITH 3/4" TOP SPUD, AND 2" WASTE OUTLET. PROVIDE COMMERCIAL ADJUSTABLE FLOOR STANDING CARRIER AND ALL ACCESSORIES FOR COMPLETE INSTALLATION.	N/A	N/A	
	URINAL FLUSHOMETER	SLOAN ROYAL ECOS, 8186-0.25	0.5 GPF, EXPOSED BATTERY OPERATED FLUSHOMETER FOR 3/4" TOP SPUD, 3/4" SCREWDRIVER BAK-CHEK ANGLE STOP, CHROME PLATED, AND ADJUSTABLE TAILPIECE.	N/A	N/A	(5)
UR-2 (ADA)	URINAL (WALL MOUNTED)	KOHLER BARDON K-4904-ET	0.5 GPF, WALL MOUNTED, WHITE, VITREOUS CHINA URINAL WITH 3/4" TOP SPUD, AND 2" WASTE OUTLET. PROVIDE COMMERCIAL ADJUSTABLE FLOOR STANDING CARRIER AND ALL ACCESSORIES FOR COMPLETE INSTALLATION. INSTALL TO MEET ADA REQUIREMENTS.	N/A	N/A	(6)
	URINAL FLUSHOMETER	SLOAN ROYAL ECOS, 8186-0.25	0.5 GPF, EXPOSED BATTERY OPERATED FLUSHOMETER FOR 3/4" TOP SPUD, 3/4" SCREWDRIVER BAK-CHEK ANGLE STOP, CHROME PLATED, AND ADJUSTABLE TAILPIECE. INSTALL PER ADA REQUIREMENTS.	N/A	N/A	(5),(6)
L-1 (ADA)	LAVATORY BOWL	INTEGRAL WITH COUNTER TOP	SEE ARCH PLANS & SPEC'S. PROVIDE AND INSTALL CHROME PLATED CAST BRASS "P" TRAP WITH OFFSET TAILPIECE AND GRID STRAINER, LOOSE KEY ANGLE STOPS, SUPPLIES AND ESCUTCHEON PLATES AROUND ALL PIPE PENETRATIONS. PROVIDE TRAP WRAP ON ALL EXPOSED SUPPLY & DRAIN PIPING BELOW SINK.	N/A	N/A	(5),(6)
	LAVATORY FAUCET	MOEN (COMMERCIAL) MODEL 8413F0.5	ADA SINGLE LEVER SOLID BRASS CONSTRUCTION, CHROME LAVATORY FAUCET, 0.5 GPM FLOW AERATOR, TEMPERATURE LIMIT STOP, CERAMIC DISC CARTRIDGE, OFFSET GRID STRAINER DRAIN LESS POP UP, ANGLE STOPS AND SUPPLYS, PROVIDE ALL COMPONENTS FOR COMPLETE AND PROPER OPERATION OF FIXTURE.	N/A	N/A	(5),(6),(8),(10)
L-2 (ADA)	LAVATORY BOWL (WALL HUNG)	KOHLER KINGSTON K-2005	WALL MOUNTED LAV. PROVIDE AND INSTALL FLOOR MOUNTED CONSEALED ARM CARRIER, CHROME PLATED CAST BRASS "P" TRAP WITH OFFSET TAILPIECE AND GRID STRAINER, LOOSE KEY ANGLE STOPS, SUPPLIES AND ESCUTCHEON PLATES AROUND ALL PIPE PENETRATIONS. PROVIDE TRAP WRAP ON ALL EXPOSED SUPPLY & DRAIN PIPING BELOW SINK.	N/A	N/A	(5),(6)
	LAVATORY FAUCET	MOEN (COMMERCIAL) MODEL 8413F0.5	ADA SINGLE LEVER SOLID BRASS CONSTRUCTION, CHROME LAVATORY FAUCET, 0.5 GPM FLOW AERATOR, TEMPERATURE LIMIT STOP, CERAMIC DISC CARTRIDGE, OFFSET GRID STRAINER DRAIN LESS POP UP, ANGLE STOPS AND SUPPLYS, PROVIDE ALL COMPONENTS FOR COMPLETE AND PROPER OPERATION OF FIXTURE.	N/A	N/A	(5),(6),(8),(10)
SK-1	SINK, SINGLE COMPARTMENT (BREAK ROOM)	ELKAY DLR-3122-10PD	SINGLE BASIN, 18 GAUGE TYPE 304 S/S, COUNTER MOUNT, 10 INCH DEEP. PROVIDE AND INSTALL CHROME PLATED CAST BRASS "P" TRAP, LOOSE KEY ANGLE STOPS WITH SHIELD CAPS, SUPPLIES AND ESCUTCHEON PLATES ON SUPPLIES AND DRAIN PIPES.	N/A	N/A	(5)
	SINK FAUCET	MOEN: M-DURA, MODEL 8225SMF15	DECK MOUNTED, ADA COMPLIANT, CHROME PLATED, HEAVY DUTY RIGID/SWING GOOSENECK SPOUT KITCHEN FAUCET WITH WRIST BLADE INDEXED HANDLES AND 1.5 GPM AERATOR.	N/A	N/A	(5),(6),(9),(10)
SK-2	SINK, TROUGH	REFER TO ARCHITECTUAL DRAWINGS, (2ND FLOOR CLEAN ROOM)	18 GAUGE TYPE 302 S/S, COUNTER MOUNT. PROVIDE AND INSTALL CHROME PLATED CAST BRASS "P" TRAPS, LOOSE KEY ANGLE STOPS WITH SHIELD CAPS, SUPPLIES AND ESCUTCHEON PLATES ON SUPPLIES AND DRAIN PIPES.	N/A	N/A	(5)
	SINK FAUCET	CHICAGO FAUCETS: 631-209801 LAB FAUCET.	WALL MOUNTED, CHROME PLATED, LAB FAUCET WITH GN1BFCJKABCP SPOUT,E7JKCP SERRATED NOZZLE, OFFSET INLET SUPPLY ARMS I/INTERGAL CHECK, E22JKCP IN-LINE ATMOSPHERIC VACUUM BREAKER AND LEVER HANDLES,	N/A	N/A	(5)
SH-1	SHOWER	COMFORT DESIGNS MODEL - 3682BF	SOLID SURFACE, WITH WALL RIENFORCEMENT , CURTAIN ROD, DRAIN ASSEMBLY, ANTIMICROBIAL COATING, COLOR SELECTION BY ARCHITECT.	N/A	N/A	
	SHOWER MIXING VALVE	CHICAGO, 2500 VOCCP	THERMOSTATIC/PRESSURE BALANCING SHOWER VALVE WITH INTEGRAL CHECK/SERVICE STOPS, AND ALL COMPONENTS FOR COMPLETE OPERATION.	N/A	N/A	(5)
	SHOWER HEAD	SPEAKMAN S-2253E15	SHOWER HEAD, WITH BALL JOINT SPRAY HEAD AT 1.5 GPM. S-2520 SHOWER ARM.	N/A	N/A	(5)
SH-2 (ADA)	SHOWER (ADA)	COMFORT DESIGNS MODEL - 6233BF L-BAR	SOLID SURFACE, WITH WALL RIENFORCEMENT , CURTAIN ROD, DRAIN ASSEMBLY, ANTIMICROBIAL COATING, L-BAR CONFIGURATION, AND L-SHAPE FOLD UP SEAT, INSTALL TO MEET ADA REQUIREMENTS, COLOR SELECTION BY ARCHITECT.	N/A	N/A	(6)
	SHOWER MIXING VALVE	CHICAGO, 2500 VOCCP	THERMOSTATIC/PRESSURE BALANCING SHOWER VALVE WITH INTEGRAL CHECK/SERVICE STOPS, AND ALL COMPONENTS FOR COMPLETE OPERATION.	N/A	N/A	(5),(6)
	SHOWER HEAD	SPEAKMAN S-2253E15	SHOWER HEAD, WITH BALL JOINT SPRAY HEAD AT 1.5 GPM. S-2520 SHOWER ARM.	N/A	N/A	(5),(6)
	HAND HELD SHOWER	CHICAGO 151-CP	ADJUSTABLE HOOK WITH 24" WALL SLIDE BAR, 60" HOSE WITH 1/2" NPSM FEMALE CONNECTION, HAND SPRAY, ALL CHROME PLATED.	N/A	N/A	(5),(6)
	HAND HELD SHOWER DIVERTER VALVE	POWERS - 141-600F	WATER DIVERTER VALVE FOR FIXED HEAD SHOWER AND HAND HELD SHOWER,	N/A	N/A	(5),(6)
SR-1	SERVICE RECEPTOR SINK	ELKAY WELDBUILT - MODEL #WNSF8124	SINGLE COMPARTMENT, 14 GAUGE TYPE 304 (18-8) S/S, SCULLERY SINK. SINK IS SUPPORTED ON 4 STAILESS STEEL 1-5/8" O.D. TUBULAR LEGS, 16 GAUGE WALL THICKNESS . PROVIDE AND INSTALL CHROME PLATED CAST BRASS "P" TRAP, LOOSE KEY ANGLE STOPS WITH SHIELD CAPS, SUPPLIES AND ESCUTCHEON PLATES ON SUPPLIES AND DRAIN PIPES.	N/A	N/A	
	SINK FAUCET	CHICAGO FAUCETS - 305-XKCP.	BACK MOUNTED FAUCET, SHORT SPOUT WITH VACUUM BREAKER AND PAIL HOOK, ADJUSTABLE SUPPLY ARMS WITH STOP CHECKS, VANDAL PROOF LEVER HANDLES, AND 3/4" MALE HOSE THREAD OUTLET.	N/A	N/A	(5)
JC-1	JANITORS CLOSET	STERN WILLIAMS - HL-1800	FLOOR MOUNTED TERRAZZO MOP SINK. 24"X 24"X 12" WITH 3" DRAIN HOLE, STAINLESS STEEL STRAINER, STAINLESS STEEL BACK PLATES AND RIM GUARD.	N/A	N/A	
	SERVICE RECEPTOR FAUCET	CHICAGO FAUCETS - 911-IS WITH ELEVATED VACUUM BREAKER.	SERVICE SINK FAUCET WITH WALL BRACE, VACUUM BREAKER. AND PAIL HOOK ON SPOUT.	N/A	N/A	(5)
EWC-1 ADA	ELECTRIC WATER COOLER	ELKAY LVRCGRNTL8WSK	WALL MOUNTED DUEL LEVEL WATER COOLER WITH EWF3000 WATER FILTER SYSTEM AND BOTTLE FILLER, 8 GPH OF 50°F WATER AT 90 F AMBIENT AND 80 F INLET WATER,PROVIDE FLOOR MOUNTED CARRIER, PROVIDE ALL COMPONENTS REQUIRED FOR COMPLETE INSTALLATION.	115 / 1, 260 WATTS	3.8 AMPS.	(6)(5)(3)
DF-1 ADA	DRINKING FOUNTAIN W/ BOTTLE FILLER (ADA)	ACORN: CUSTOM A152FGW32 W/BF&-FRA	FREEZELESS EXTERIOR DRINKING FOUNTAIN WITH BOTTLE FILLER	N/A	N/A	(6)
GD-1	SINK DISPOSER	INSINKERATOR EVOLUTION	FOOD WASTE DISPOSER WITH 1-1/2" DRAIN CONNECTION, SOUND REDUCING TECHNOLOGY, STAINLESS STEEL GRIND CHAMBER, AND MANUAL RESET MOTOR OVERLOAD PROTECTION.	120 / 1	8.1	(3)
WH-1	WALL HYDRANT	WOODFORD, MODEL 65	AUTOMATIC DRAINING WITH ANTI-SIPHON ASSE 1019 VACUUM BREAKER. 3/4" INLET	N/A	N/A	
HB-1	HOSE BIBB	WOODFORD MODEL 24	STANDARD CHROME FINISH, WITH ASSE 1019 VACUUM BREAKER	N/A	N/A	
HB-2	FREEZELESS ROOF HYDRANT	WOODFORD MODEL RHY2	FREEEZELESS ROOF HYDRANT, PROVIDE ALL MOUNTING HARDWARE FOR PROPER INSTALLATION ON ROOF. COORDINATE WITH ROOFING CONTRACTOR FOR PROPER FLASHING REQUIRED TO MAINTAIN ROOF WARRANTEE.	N/A	N/A	
ESEW-1	ENERGENCY SHOWER AND EYE WASH	HAWS MODEL: 8300-8309	ENERGENCY SHOWER EYE WASH WITH MODEL TWBS.SHE MIXING VALVE, ALARM HORN AND...	120	N/A	(10)
BV	BALANCING VALVE (CIRCUIT SETTER)	B&G - WITH MEMORY STOP	SEE DRAWINGS FOR LOCATIONS AND FLOWS	N/A	N/A	
IC-1	WALL BOX (REF. ICE MAKER)	GUY GREY, BIM875QTS	ICE MACHINE CONNECTION WALL BOX WITH INTEGRAL WATER HAMMER ARRESTER.	N/A	N/A	
FD-1	FLOOR DRAIN (PUBLIC AND STAFF AREA'S)	ZURN Z-415-B-VP	CAST IRON BODY, COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE COLLAR WITH HEEL PROOF POLISHED NICKEL BRONZE STRAINER VANDAL PROOF TOP.	N/A	N/A	
FD-2	FLOOR DRAIN (MECH. AND MAINT. AREA'S)	ZURN Z-556-Y-VP	CAST IRON BODY, 9" DIAMETER TOP DRAIN, COMBINATION MEMBRANE FLASHING CLAMP AND FRAME FOR HEAVY DUTY CAST IRON DEEP FLANGE, SLOTTED GRATE AND SEDIMENT BUCKET.	N/A	N/A	
FD-3	AREA DRAIN EXTERIOR STAIR WELL	ZURN Z-543-G-VP	CAST IRON BODY, 16" DIAMETER TOP DRAIN, HEAVY DUTY SLOTTED GRATE AND SEDIMENT BUCKET.	N/A	N/A	
FS-1	FLOOR SINK	ZURN MODEL Z-1900-ZS-2-34	12"X 12"X 6" DEEP STAINLLESS STEEL FLOOR SINK, PROVIDE FLANGE WITH SEEPAGE HOLES AND CLAMPING COLLAR AS REQUIRED FOR PROPER INSTALLATION. INSTALL PER STATE CODE.	N/A	N/A	
TP-1	TRAP PRIMERS	PPP - PRIME-RITE	INSTALL ON FLOOR DRAINS IN REST ROOMS, JANITORS CLOSETS, AND MECHANICAL ROOMS,	N/A	N/A	
TD-1	TRENCH DRAIN	INTEGRAL WITH FLOOR	SEE STRUCTURAL DRAWINGS	N/A	N/A	
FCO-1	FLOOR CLEANOUT (PUBLIC AREAS)	JR SMITH, 4020	CAST IRON, MEDIUM DUTY NICKEL-BRONZE COVER	N/A	N/A	
FCO-2	FLOOR CLEANOUT (MECHANICAL, UTILITY RMS. ETC)	JR SMITH, 4263	CAST IRON WITH ANCHOR FLANGE, HEAVY DUTY CAST IRON COVER	N/A	N/A	
RD-1	ROOF DRAIN / OVERFLOW DRAIN ASSEMBLY	ZURN Z164	12" DIA. ROOF DRAIN AND OVERFLOW DRAIN, CAST IRON BODIES WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, DOUBLE TOP SET CHECK PLATES, AND LOW SILHOUETTE CAST IRON DOMES, AND EXTENSION COLLARS. COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLANS.	N/A	N/A	
DSN-1	DOWN SPOUT NOZZLE	ZURN, Z199	NICKEL BRONZE DOWNSPOUT NOZZLE WITH THREADED INLET.	N/A	N/A	
HR-1	HOSE REEL, AIR	REELCRAFT, DP7850 OLP	300 PSI, HEAVY DUTY WITH 50 FT. OF 1/2" AIR HOSE, INCLUDE BALL STOP, INLET HOSE KIT, SHUTOFF VALVE, QUICK CONNECT COUPLER, AND ALL ACCESSORIES FOR COMPLETE OPERATION. PROVIDE BRACKETS AS REQUIRED TO MOUNT HOSE REEL FROM STRUCTURE. COORDINATE COUPLER STYLE WITH COR.	N/A	N/A	
OI-1	OIL INTERCEPTOR	ROCKFORD - OST-5628-50 DW	ROCKFORD DOUBLE WALL OIL/WATER SEPARATOR, ALL WELDED A36 1/4" STEEL, 35 GPM INTERMITTENT FLOW, 64 GALLON STATIC CAPACITY WITH 50 GALLON WASTE OIL STORAGE 3" INLET AND OUTLET. PROVIDE ALL ACCESSORIES AS REQUIRED FOR COMPLETE OPERATION. PROVIDE HS-20 COVER.	N/A	N/A	
AD-1	AIR OUTLET	ARROW-TRI-STAR - WITH PRESSURE GAUGES, FILTER/REGULATOR/LUBRICATOR	SEE DETAIL SHEET FOR CONFIGURATION	N/A	N/A	
AD-2	AIR OUTLET	ARROW-TRI-STAR PRESSURE REGULATOR AND PRESSURE GAUGE.	SEE DETAIL SHEET FOR CONFIGURATION	N/A	N/A	
AC-1	AIR COMPRESSOR (VEHICLE MAINT. AREA)	QUINCY QR-25 MODEL FF340 / QPHT-50 DRYER	DUPLEX TANK MOUNTED AIR COMPRESSOR WITH TWO 7.5 HP MOTORS, 26 ACFM @ 175 PSI, 52 ACFM TOTAL,120 GAL. TANK, (AIR DRYER-115V.1PH. 1/4HP), PREFILTER-DCNT60 AND CSNT60...	208/3PH		(3)
WS-1	WATER SOFTENER	HELLENBARAND MODEL H151-60 TRI-PLEX SYSTEMMATE PROGRESSIVE FLOW SYSTEM	FULLY AUTOMATIC, TRI-PLEX PROGRESSIVE UNIT, PROVIDE ALL CONTROLS, 1 BRINE TANK, & 3 MINERAL TANKS, ELECTRONIC METERS AS REQUIRED FOR COMPLETE INSTALLATION AND OPERATION. SYSTEM FLOW RATE: One Unit - 35 gpm @ 15 psi, Two Units - 70 gpm @ 15 psi, Three Units - 87 gpm @ 10 psi CAPACITY PER TANK: Low Salting: 38,000 grains @ 12 lbs salt, Medium Salting: 56,000 grains @ 20 lbs salt, High Salting: 64,000 grains @ 30 lbs. salt	120/1	N/A	(3)

(1) SEE GENERAL NOTES P-001
(2) DISCONNECT INCLUDED
(3) EXTERNAL DISCONNECT REQUIRED.
(4) OWNER FURNISHED, CONTRACTOR INSTALLED
(5) EXPOSED PIPING TO BE CHROME PLATED
(6) INSTALL TO MEET ADA REQUIREMENTS.
(7) PROVIDE AND INSTALL WATTS, LFMMV, LEAD FREEMIXING VALVE . ASSE 1070
(8) SET MIXING VALVES AT TO MAX. TEMP OF 104°F
(9) SET MIXING VALVE AT 120 °F AT BREAK ROOM SINK
(10) INSTALL MIXING VALVE WITH BALL VALVES ON COLD AND HOT WATER INLETS TO VALVE.

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Madison Water Utility
Quality and Reliability since 1882
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MFP
DRAWN BY: SSV
CHECKED BY: RMM
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SHEET CONTENTS
PLUMBING SCHEDULES

SHEET NO.:
P-601

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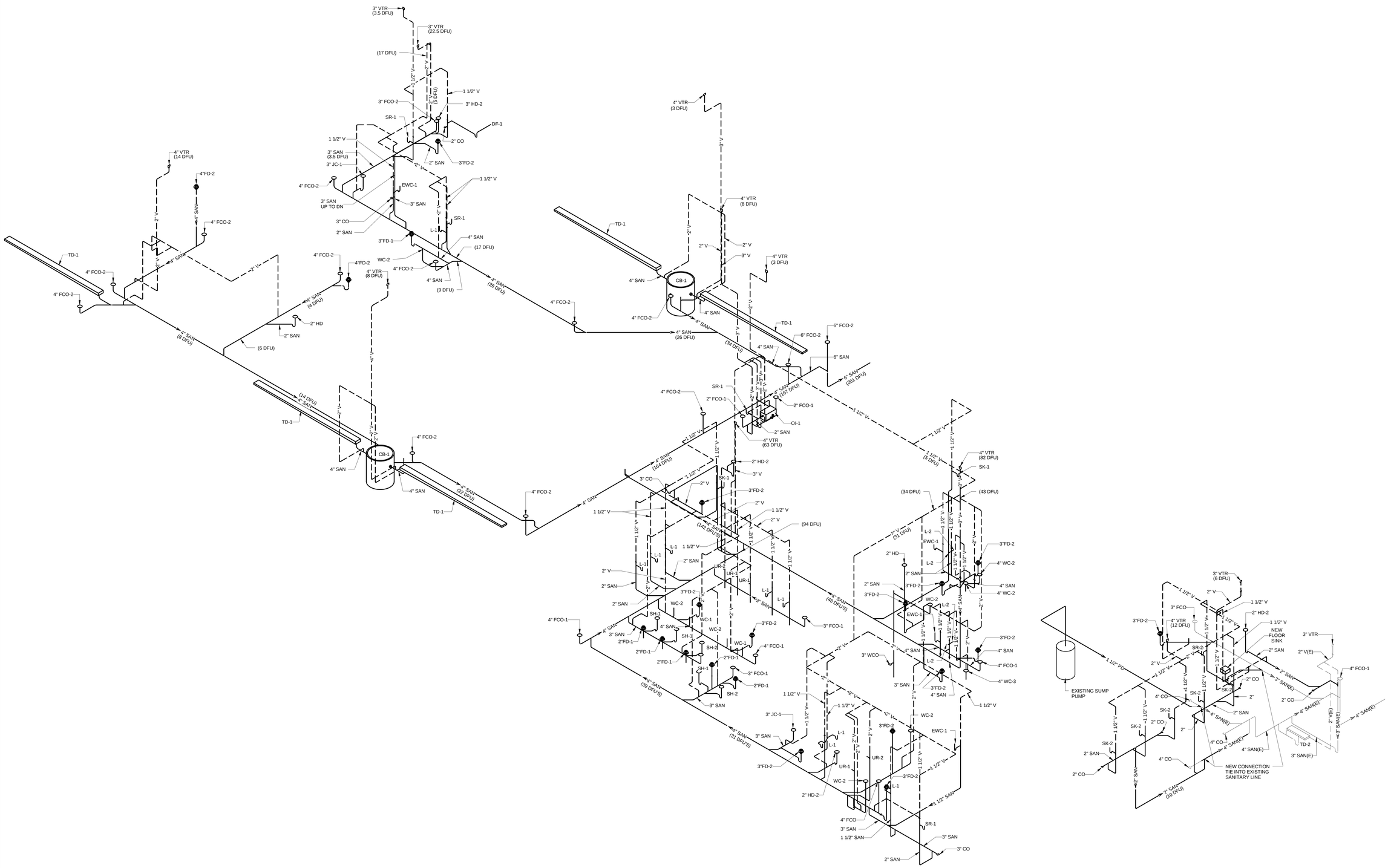

1 **DRAIN WASTE & VENT ISOMETRIC PIPING**
NO SCALE

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SHEET CONTENTS
PLUMBING
ISOMETRIC - DWV

SHEET NO.:
P-901

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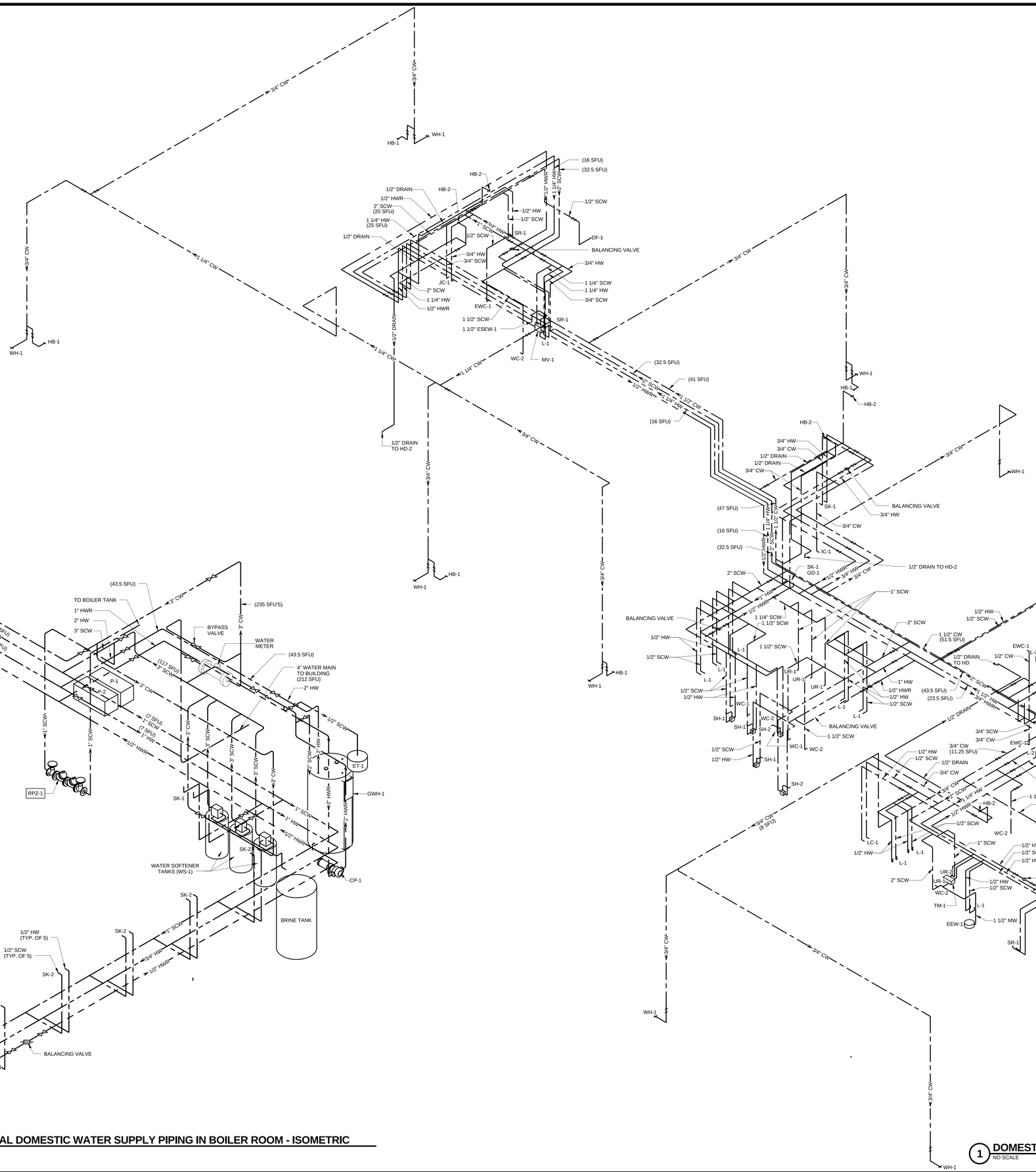

2 ENLARGED PARTIAL DOMESTIC WATER SUPPLY PIPING IN BOILER ROOM - ISOMETRIC

NO SCALE

1 DOMESTIC WATER SUPPLY PIPING - ISOMETRIC

NO SCALE

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SHEET CONTENTS
PLUMBING
ISOMETRIC - SUPPLY

SHEET NO.:
P-902

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SYMBOLS

- STRAINER
- PIPE TURNED TOWARD
- PIPE TURNED AWAY
- PIPE TURNED AWAY
- FLEXIBLE CONNECTOR
- UNION
- FLANGES
- REDUCER (CONCENTRIC)
- REDUCER (ECCENTRIC)
- PIPE CAP
- FLUID FLOW DIRECTION
- PG — PIPE GUIDE
- PA — PIPE ANCHOR
- PITCH — PIPE PITCH DIRECTION
- NEW CONNECTION TO EXISTING
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- NEW
- AUTOMATIC CONTROL VALVE (2-WAY)
- AUTOMATIC CONTROL VALVE (3-WAY)
- MANUAL VALVE
- BALL VALVE
- PRESSURE REGULATING VALVE
- CHECK VALVE
- THROTTLING VALVE
- BALANCING VALVE
- FLOW MEASUREMENT STATION
- RELIEF VALVE
- HMV — AIR VENT (MANUAL)
- AV — AIR VENT (AUTOMATIC)
- VB — VACUUM BREAKER
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- WATER HAMMER ARRESTOR
- FS — FLOW SENSOR
- LS — LEVEL SENSOR
- PS — PRESSURE SENSOR
- TS — TEMPERATURE SENSOR

MECHANICAL PIPING:

A	COMPRESSED AIR
BFW	BOILER FEED WATER
BSD	BOILER SURFACE BLOW DOWN
BBD	BOILER BOTTOM BLOW DOWN
CF	CHEMICAL FEED
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CTS	COOLING TOWER WATER SUPPLY
CTR	COOLING TOWER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CD	CONDENSATE DRAIN
GWS	GLYCOL WATER SUPPLY
GWR	GLYCOL WATER RETURN
HPCR	HIGH PRESSURE CONDENSATE RETURN (PRESSURE)
HPS	HIGH PRESSURE STEAM (PRESSURE)
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
IWS	ICE WATER SUPPLY
IWR	ICE WATER RETURN
LP	LIQUID PETROLEUM
LPS	LOW PRESSURE STEAM
LPCR	LOW PRESSURE CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM
MPCR	MEDIUM PRESSURE CONDENSATE RETURN
G	NATURAL GAS
PCR	PUMPED CONDENSATE RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
SRV	STEAM RELIEF VENT
VAC	VACUUM

MECHANICAL SYMBOLS:

- AIRFLOW (SUPPLY)
- AIRFLOW (RETURN)
- DG — AIRFLOW (DOOR GRILLE)
- SUPPLY OR OUTDOOR AIR
- RETURN
- EXHAUST
- DUCT TURNED AWAY
- SUPPLY DUCT TURNED TOWARD
- 12x12 — DUCT SIZE (FIRST FIGURE IS SIDE SHOWN)
- FLEXIBLE CONNECTION
- DUCT (RIGID ROUND)
- DUCT (FLEXIBLE ROUND)
- TURNING VANES
- TRANSITION (SQUARE-TO-ROUND)
- BACKDRAFT DAMPER
- BD — VOLUME DAMPER
- VD
- FIRE DAMPER & ACCESS DOOR
- AD, FD — MOTOR OPERATED DAMPER
- MOD
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- CO — CARBON MONOXIDE (CO) SENSOR
- NO — NITROGEN DIOXIDE (NO2) SENSOR
- RS — ROOM SENSOR
- SP — STATIC PRESSURE SENSOR
- H — HUMIDISTAT
- TS — TEMPERATURE SENSOR
- T — THERMOSTAT
- T — INSULATED BASE THERMOSTAT
- S — SMOKE DETECTOR
- A — AIR OUTLET/INLET TYPE
- 100 (CFM)
- 47 (L/S)

GENERAL NOTES:

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, PIPING AND DUCTWORK SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERENCES. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, PIPING, AND DUCTWORK FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.
3. ELEVATION OF PIPING AND DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
4. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING STRUCTURES, UTILITIES, AND MECHANICAL SYSTEMS, IS AS EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE, FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
5. ACCURATE AND LEGIBLE RECORD (AS-BUILT) DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT.
6. ALL NEW AND EXISTING ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
7. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.
8. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OWNER PRIOR TO INSTALLATION.
9. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH EXISTING OPERATIONS.

ABBREVIATIONS

ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERING
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BHF	BUTT HEAT FUSION
BHP	BOILER HORSEPOWER
BO	BID OPTION
BPD	BACKFLOW PREVENTION DEVICE
BPVC	ASME BOILER & PRESSURE VESSEL CODE
BR	BRAZE
BRS	BRASS
BRZ	BRONZE
BS	BLACK (MILD) STEEL
BTU	BRITISH THERMAL UNIT
BTW	BOOTWASH
BW	BUTTWELD
BZ	BRONZE
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CISPI	CAST IRON SOIL PIPE INSTITUTE
CL	CENTERLINE
COMP	COMPRESSOR
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CRA	CONCRETE REACTION ANCHOR
CS	CARBON STEEL
CTCLG	CLOSE TO CEILING
CTCLM	CLOSE TO COLUMN
CTW	CLOSE TO WALL
CU	COPPER
DBA	DECIBELS, BAND A
DCVA	DOUBLE CHECK VALVE ASSEMBLY BPD
DEG	DEGREE
DEMO	DEMOLISH
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DWG	DRAWING
DWV	DRAIN, WASTE, AND VENT
E	EXISTING
EAT	ENTERING AIR TEMPERATURE
EEW	EMERGENCY EYE/FACE WASH
EFF	EFFICIENCY
EFT	ENTERING FLUID TEMPERATURE
EG	ETHYLENE GLYCOL
EL	ELEVATION
ELEC	ELECTRIC
ESEW	EMERGENCY SHOWER AND EYE/FACE WASH
ESFR	EARLY SUPPRESSION FAST RESPONSE
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FLOW	FLOW OR FLOWRATE
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FTWC	FEET WATER COLUMN PRESSURE
GAL	GALLON
GAL	GAUGE
GBS	GASKETED BELL AND SPIGOT
GPM	GALLONS PER MINUTE
GR	GROOVED
GS	GALVANIZED STEEL
H	HEIGHT
HC	HOSE CONNECTION
HDB	HYDROSTATIC DESIGN BASIS
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HX	HEAT EXCHANGER
HZ	HERTZ
IAW	IN ACCORDANCE WITH
IBNLT	INCLUDING BUT NOT LIMITED TO
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INHG	INCHES MERCURY PRESSURE
INWC	INCHES WATER COLUMN PRESSURE
IPC	INTERNATIONAL PLUMBING CODE
L	LENGTH OR LAVATORY
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LCO	LINE CLEANOUT
LFT	LEAVING FLUID TEMPERATURE
LIN	LINEAR
LPG	LIQUIFIED PETROLEUM GAS
LPM	LITERS PER MINUTE
LWT	LEAVING WATER TEMPERATURE
MADP	MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE
MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL COUPLING
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MMBH	MILLION BTU PER HOUR
MOCP	MINIMUM OVER CURRENT PROTECTION
MSS	MANUFACTURERS STANDARDIZATION SOCIETY
MTL	MATERIAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NH	NO-HUB
NHC	NO-HUB COUPLING
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NPSHA	NPSH AVAILABLE
NPSHR	NPSH REQUIRED
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PCN	PLANT CONTROL NETWORK
P	PRESSURE
PD	PRESSURE DROP/DIFFERENTIAL
PDI	PLUMBING DEVELOPMENT INSTITUTE
PE	POLYETHYLENE
PG	PROPYLENE GLYCOL
PH	PHASE
PL	PLACES
PP	POLYPROPYLENE
PPH	POUND PER HOUR
PREDV	PRESSURE REDUCING VALVE
PROP	PROPELLER
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSID	PSI DIFFERENTIAL
PSIG	PSI GAGE
PVC	POLYVINYL CHLORIDE
QRAS	QUICK RESPONSE AUTOMATIC SPRINKLER
QTY	QUANTITY
RCP	REINFORCED CONCRETE PIPE
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE BPD
RTD	RESISTIVE THERMAL DEVICE
SCFM	STANDARD CFM
SCH	SCHEDULE
SCO	STACK CLEANOUT
SD	SOLDER
SDR	STANDARD DIMENSION RATIO
SH	SHOWER
SHF	SOCKET HEAT FUSION
TCC	TEMPERATURE CONTROL CONTRACTOR

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DRAWN BY: MDW
CHECKED BY: DVL

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SHEET CONTENTS
MECHANICAL NOTES & SYMBOLS

SHEET NO.:
M-001

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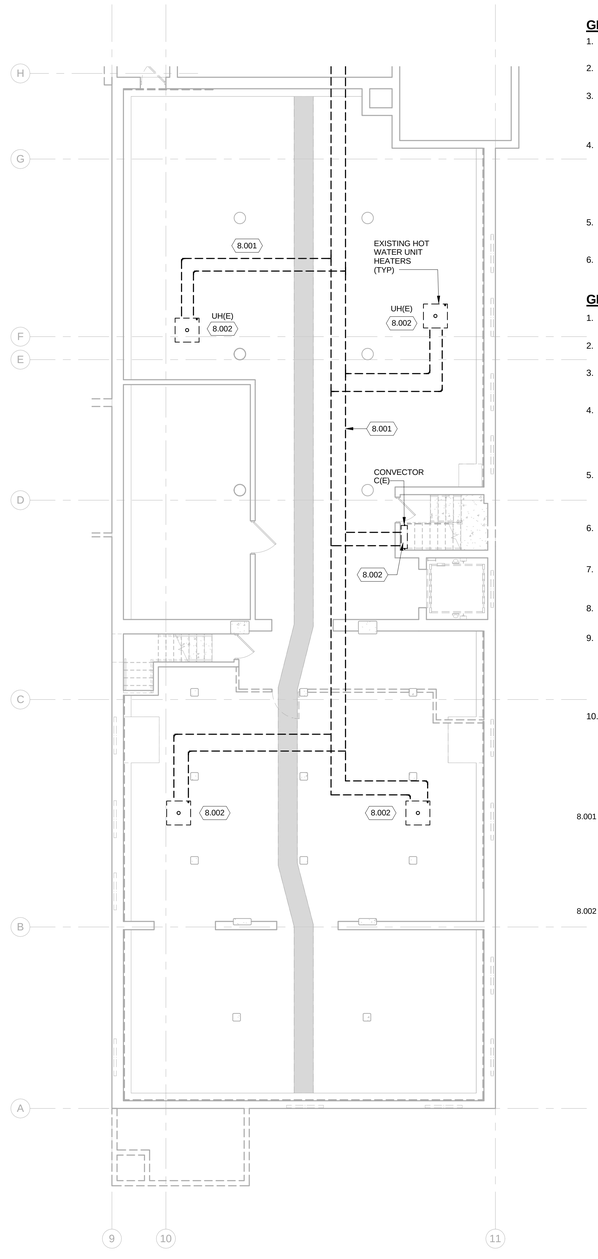

GENERAL HVAC DEMOLITION NOTES:

1. DUCTWORK AND EQUIPMENT TO BE DEMOLISHED IS SHOWN DRAWN WITH BOLD DASHED LINE.
2. DELIVER REMOVED EQUIPMENT TO OWNERS DESIGNATED STORAGE SPACE ON SITE.
3. REINSTALL REMOVED EQUIPMENT, SAME AS NEW WORK IN NEW LOCATION INDICATED. COMPLETELY CLEAN AND RESTORE EQUIPMENT TO GOOD OPERATING CONDITION PER SATISFACTION OF OWNER.
4. INSTALL TEMPORARY COVER OVER OPENING CREATED BY REMOVED EQUIPMENT/PIPING. COVER SHALL BE WATER TIGHT AND MEET OSHA AND OWNER REQUIREMENTS. COMPLETELY REMOVE TEMPORARY COVER WHEN OPENING IS PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
5. DEMOLITION WORK TO BE COMPLETED DURING MULTIPLE PHASES OF THE CONSTRUCTION. REFER TO SHEETS G101 THRU G103 FOR PROJECT PHASING PLAN.
6. AHU'S, PUMPS, PIPING TO REMAIN IN OPERATION DURING CONSTRUCTION UNTIL NEW MECHANICAL SYSTEM ARE INSTALLED & OPERATIONAL.

GENERAL MECHANICAL DEMOLITION NOTES:

1. PIPING & EQUIPMENT TO BE DEMOLISHED IS SHOWN DRAWN WITH BOLD DASHED LINE.
2. DELIVER REMOVED EQUIPMENT TO OWNERS DESIGNATED STORAGE SPACE ON SITE.
3. WHERE PIPES ARE REMOVED, ALSO REMOVE ALL VALVES, INSULATION, HANGERS, SUPPORTS, AND OTHER ASSOCIATED COMPONENTS.
4. WHERE PIPES ARE ROUTED INSIDE CMU WALLS, PIPE MAY BE ABANDONED IN PLACE. REMOVE PIPE TO 1" INSIDE WALL ON BOTH ENDS OF PIPE. DETERMINE WHERE PIPE EMERGES FROM CMU WALL AND PIPE BACK TO NEXT BRANCH THAT IS TO REMAIN.
5. WHERE PIPES PASS THROUGH FLOOR SLABS, SAW-CUT SLAB AND REMOVE CONCRETE TO MINIMUM EXTENT NECESSARY TO GAIN ACCESS BELOW SLAB. REMOVE PIPE DOWN TO HORIZONTAL PIPING BELOW FLOOR.
6. PATCH EXISTING ROOFS, WALLS, AND FLOORS DISTURBED BY DEMOLITION. RESTORE TO MATCH CONDITION OF ORIGINAL SURROUNDING SURFACES PER SATISFACTION OF OWNER.
7. AHU'S, PUMPS, PIPING TO REMAIN IN OPERATION DURING CONSTRUCTION UNTIL NEW MECHANICAL SYSTEMS ARE INSTALLED & OPERATIONAL.
8. WHERE FIXTURES AND EQUIPMENT ARE REMOVED, ALSO REMOVE ALL ASSOCIATED ROUGH-IN PIPING.
9. INSTALL TEMPORARY COVER OVER OPENING CREATED BY REMOVED EQUIPMENT/PIPING. COVER SHALL BE WATER TIGHT AND MEET OSHA AND OWNER REQUIREMENTS. COMPLETELY REMOVE TEMPORARY COVER WHEN OPENING IS PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
10. DEMOLITION WORK TO BE COMPLETED DURING MULTIPLE PHASES OF THE CONSTRUCTION. REFER TO SHEETS G101 THRU G103 FOR PROJECT PHASING PLAN.

KEYED NOTES

8.001 COMPLETELY REMOVE EXISTING PIPING, INCLUDING ALL UNNEEDED ACCESSORIES, INSULATION, HANGER SUPPORTS, ETC. FOR REMAINING PIPING SYSTEM PLUG OR CAP ALL OPENINGS CREATED BY PIPING DEMOLITION. TEST PIPING SYSTEMS AS SPECIFIED AND INSULATE OR PAINT SAME AS NEW WORK. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION PER SATISFACTION OF OWNER. DUCT DEMOLITION SHALL INCLUDE ALL BOLD/DASHED DISPLAYED PIPING INDICATED ON DRAWINGS.

8.002 COMPLETELY REMOVE EXISTING EQUIPMENT, INCLUDING ALL UNNEEDED PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, BASES, CONTROLS, ETC. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION PER SATISFACTION OF OWNER.

1 **MD100 - EXISTING/DEMOLITION PLAN**
1/8" = 1'-0"

0 4 8 16

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DRAWN BY: MDW
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SHEET CONTENTS
MECHANICAL DEMOLITION PLAN - BASEMENT FLOOR PLAN

SHEET NO.:
MD100

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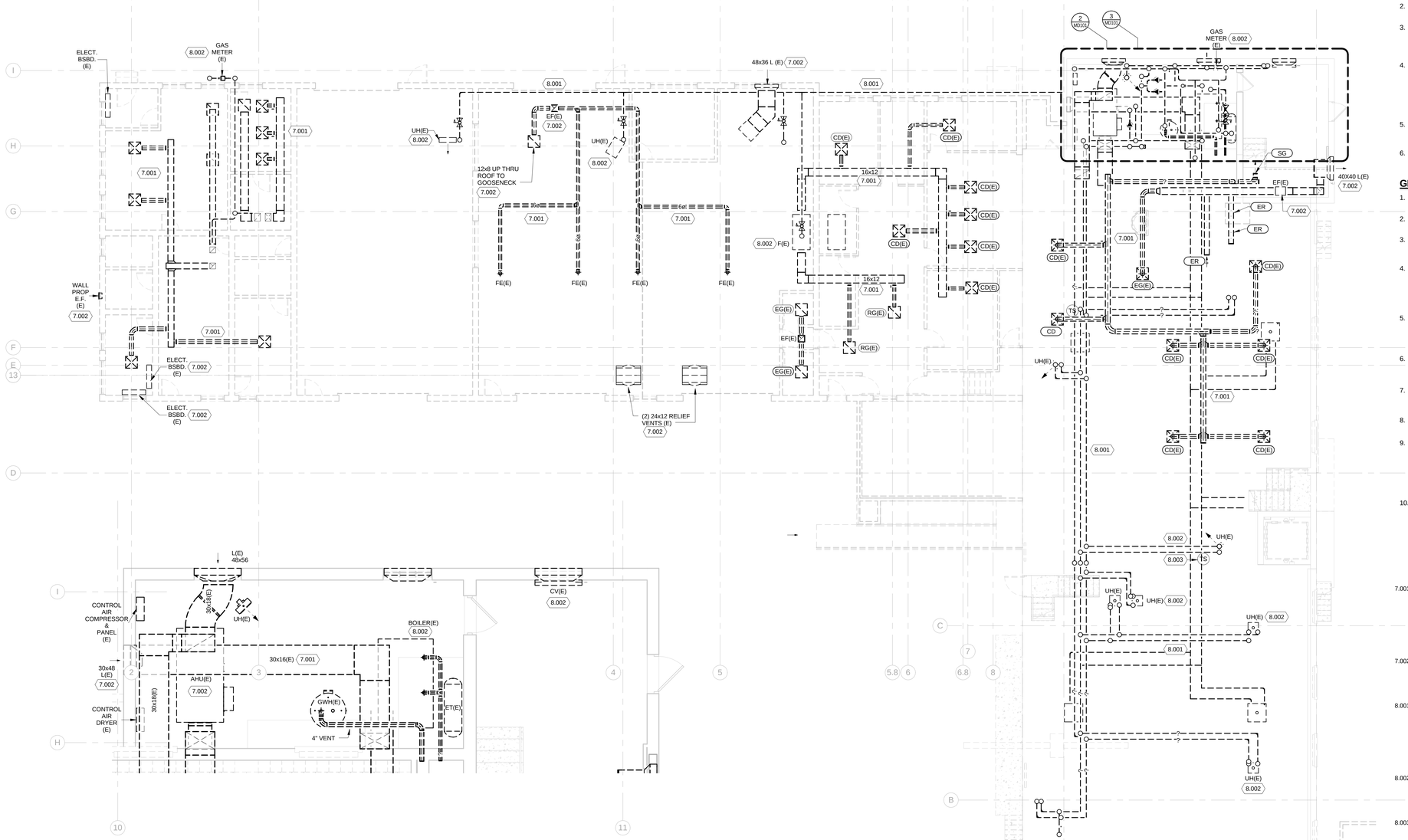
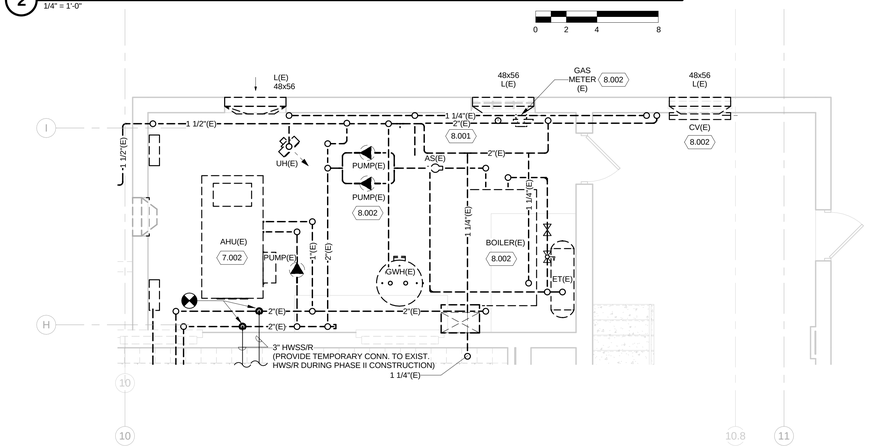


2 MD101-EXISTING/DEMOLITION PLAN - MECHANICAL ROOM ENLARGED HVAC PLAN

1/4" = 1'-0"



3 MD101-EXISTING/DEMOLITION PLAN - MECHANICAL ROOM ENLARGED PIPING PLAN

1/4" = 1'-0"

1 MD101-EXISITNG/DEMOLITION PLAN

1/8" = 1'-0"

GENERAL HVAC DEMOLITION NOTES:

1. DUCTWORK AND EQUIPMENT TO BE DEMOLISHED IS SHOWN DRAWN WITH BOLD DASHED LINE.
2. DELIVER REMOVED EQUIPMENT TO OWNERS DESIGNATED STORAGE SPACE ON SITE.
3. REINSTALL REMOVED EQUIPMENT, SAME AS NEW WORK IN NEW LOCATION INDICATED. COMPLETELY CLEAN AND RESTORE EQUIPMENT TO GOOD OPERATING CONDITION PER SATISFACTION OF OWNER.
4. INSTALL TEMPORARY COVER OVER OPENING CREATED BY REMOVED EQUIPMENT/PIPING. COVER SHALL BE WATER TIGHT, AND MEET OSHA AND OWNER REQUIREMENTS. COMPLETELY REMOVE TEMPORARY COVER WHEN OPENING IS PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
5. DEMOLITION WORK TO BE COMPLETED DURING MULTIPLE PHASES OF THE CONSTRUCTION. REFER TO SHEETS G101 THRU G103 FOR PROJECT PHASING PLAN.
6. AHU'S, PUMPS, PIPING TO REMAIN IN OPERATION DURING CONSTRUCTION UNTIL NEW MECHANICAL SYSTEM ARE INSTALLED & OPERATIONAL.

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7. AHU'S, PUMPS, PIPING TO REMAIN IN OPERATION DURING CONSTRUCTION UNTIL NEW MECHANICAL SYSTEMS ARE INSTALLED & OPERATIONAL.
8. WHERE FIXTURES AND EQUIPMENT ARE REMOVED, ALSO REMOVE ALL ASSOCIATED ROUGH-IN PIPING.
9. INSTALL TEMPORARY COVER OVER OPENING CREATED BY REMOVED EQUIPMENT/PIPING. COVER SHALL BE WATER TIGHT, AND MEET OSHA AND OWNER REQUIREMENTS. COMPLETELY REMOVE TEMPORARY COVER WHEN OPENING IS PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
10. DEMOLITION WORK TO BE COMPLETED DURING MULTIPLE PHASES OF THE CONSTRUCTION. REFER TO SHEETS G101 THRU G103 FOR PROJECT PHASING PLAN.

KEYED NOTES

7.001 COMPLETELY REMOVE EXISTING DUCTWORK, INCLUDING ALL UNNEEDED ACCESSORIES, INSULATION, HANGER SUPPORTS, ETC. FOR REMAINING DUCT SYSTEM PLUG OR CAP ALL OPENINGS CREATED BY DUCT DEMOLITION. TEST DUCTWORK AS SPECIFIED AND INSULATE OR PAINT SAME NEW WORK. PATCH EXISTING WALL, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION PER SATISFACTION OF OWNER. DUCT DEMOLITION SHALL INCLUDE ALL BOLD/DASHED DISPLAYED DUCT INDICATED ON DRAWINGS.

7.002 COMPLETELY REMOVE EXISTING EQUIPMENT, INCLUDING ALL UNNEEDED DUCTWORK, INSULATION, HANGERS, SUPPORTS, BASES, CONTROLS, ETC. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION PER SATISFACTION OF OWNER.

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8.002 COMPLETELY REMOVE EXISTING EQUIPMENT, INCLUDING ALL UNNEEDED PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, BASES, CONTROLS, ETC. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION PER SATISFACTION OF OWNER.

8.003 ALL EXISTING THERMOSTATS TO BE REMOVED AND REPLACED WITH NEW ROOM SENSORS.

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL

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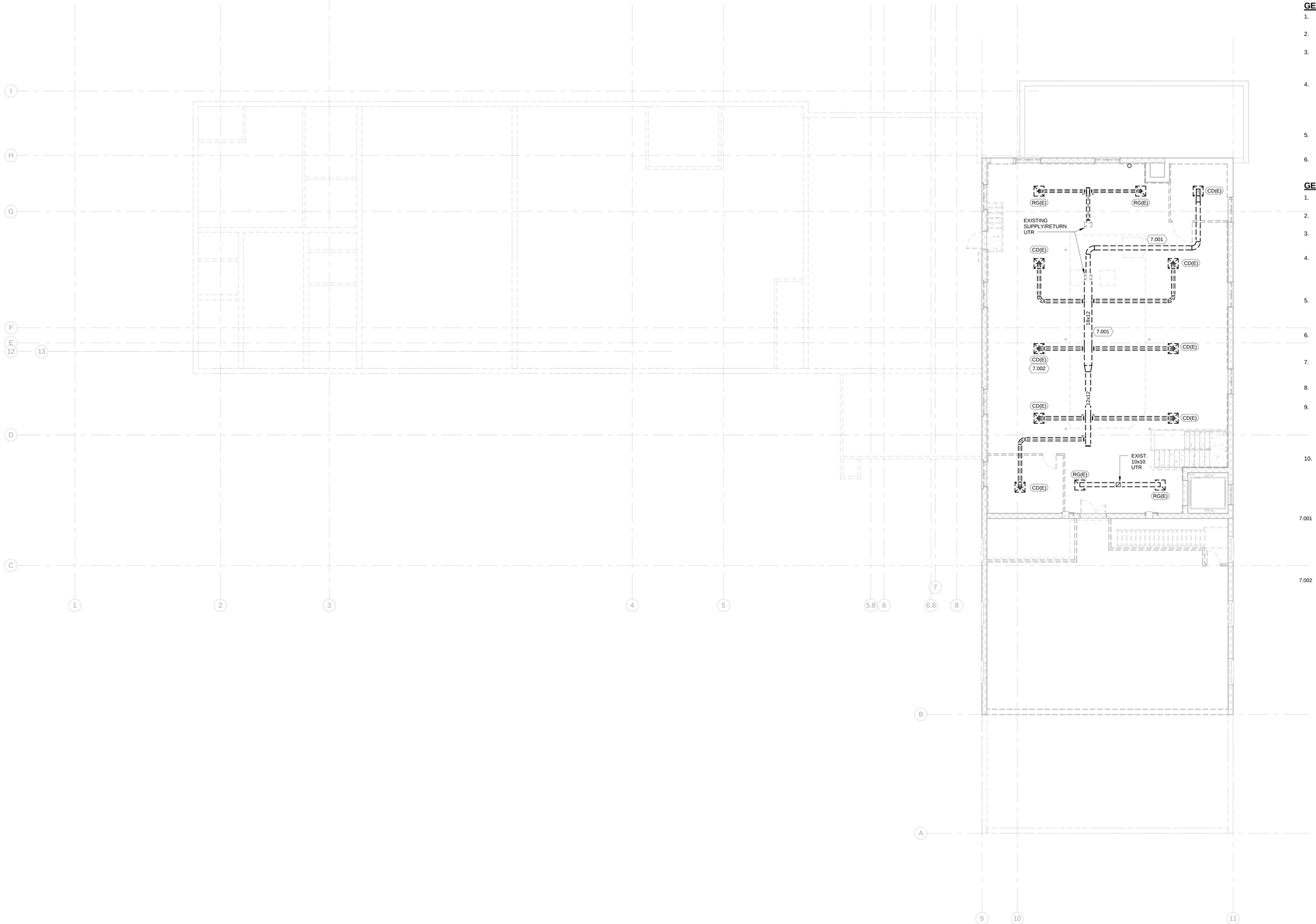
SHEET CONTENTS
MECHANICAL DEMOLITION PLAN - FIRST FLOOR

SHEET NO.:
MD101

6/12/2015 2:13:13 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1766mdw.rvt



1 **MD102 - EXISTING/DEMOLITION PLAN**
1/8" = 1'-0"

0 4 8 16

GENERAL HVAC DEMOLITION NOTES:

1. DUCTWORK AND EQUIPMENT TO BE DEMOLISHED IS SHOWN DRAWN WITH BOLD DASHED LINE.
2. DELIVER REMOVED EQUIPMENT TO OWNERS DESIGNATED STORAGE SPACE ON SITE.
3. REINSTALL REMOVED EQUIPMENT, SAME AS NEW WORK IN NEW LOCATION INDICATED. COMPLETELY CLEAN AND RESTORE EQUIPMENT TO GOOD OPERATING CONDITION PER SATISFACTION OF OWNER.
4. INSTALL TEMPORARY COVER OVER OPENING CREATED BY REMOVED EQUIPMENT/PIPING. COVER SHALL BE WATER TIGHT, AND MEET OSHA AND OWNER REQUIREMENTS. COMPLETELY REMOVE TEMPORARY COVER WHEN OPENING IS PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
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6. AHU'S, PUMPS, PIPING TO REMAIN IN OPERATION DURING CONSTRUCTION UNTIL NEW MECHANICAL SYSTEM ARE INSTALLED & OPERATIONAL.

GENERAL MECHANICAL DEMOLITION NOTES:

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5. WHERE PIPES PASS THROUGH FLOOR SLABS, SAW-CUT SLAB AND REMOVE CONCRETE TO MINIMUM EXTENT NECESSARY TO GAIN ACCESS BELOW SLAB. REMOVE PIPE DOWN TO HORIZONTAL PIPING BELOW FLOOR.
6. PATCH EXISTING ROOFS, WALLS, AND FLOORS DISTURBED BY DEMOLITION. RESTORE TO MATCH CONDITION OF ORIGINAL SURROUNDING SURFACES PER SATISFACTION OF OWNER.
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KEYED NOTES

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06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
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SHEET CONTENTS
MECHANICAL DEMOLITION PLAN - SECOND FLOOR

SHEET NO.:
MD102

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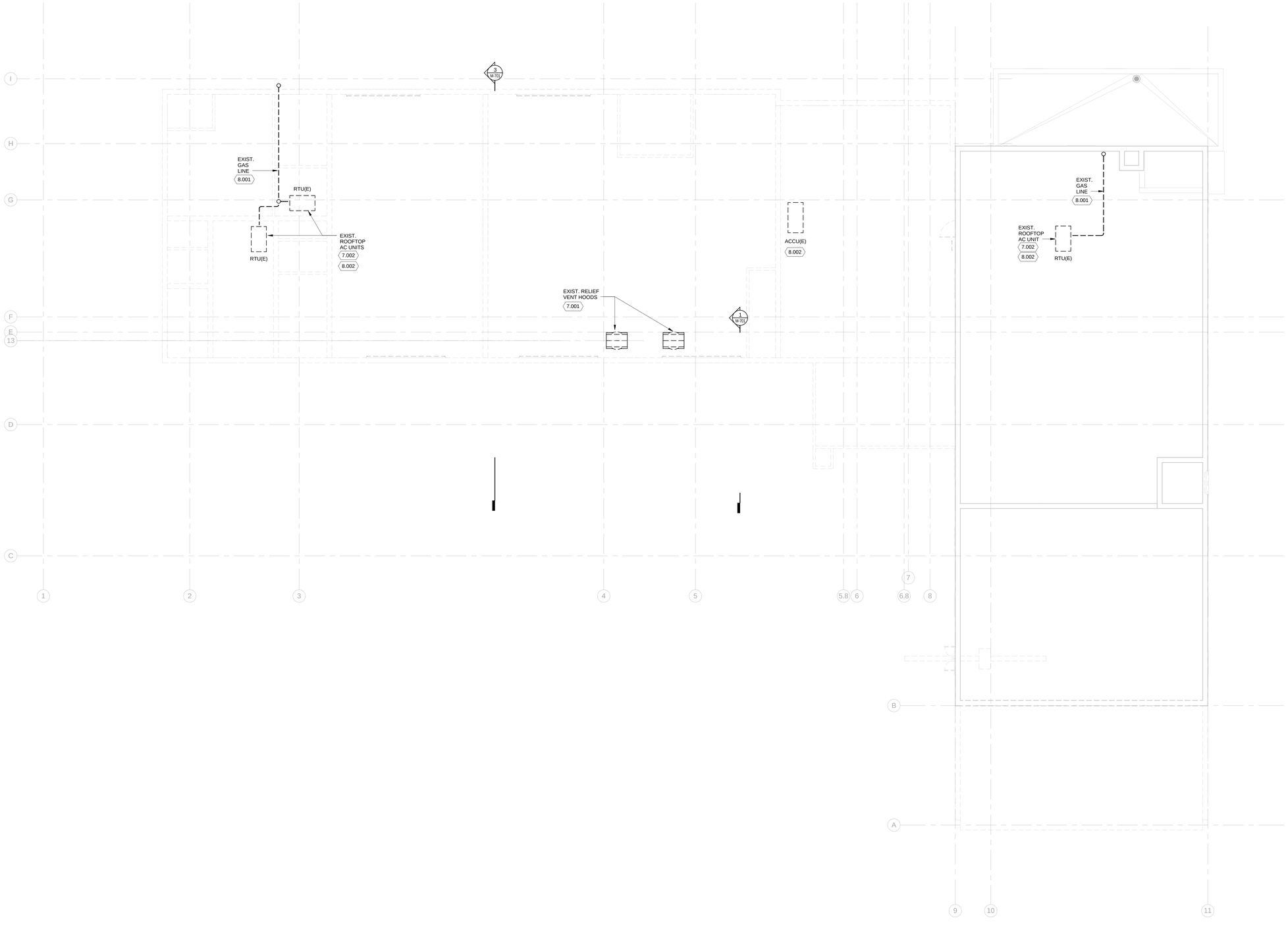

1 MD103 - EXISTING/DEMOLITION PLAN

1/8" = 1'-0"

0 4 8 16

GENERAL HVAC DEMOLITION NOTES:

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KEYED NOTES

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M&H NO.: 3235300-131021.03
DATE: June 12, 2015
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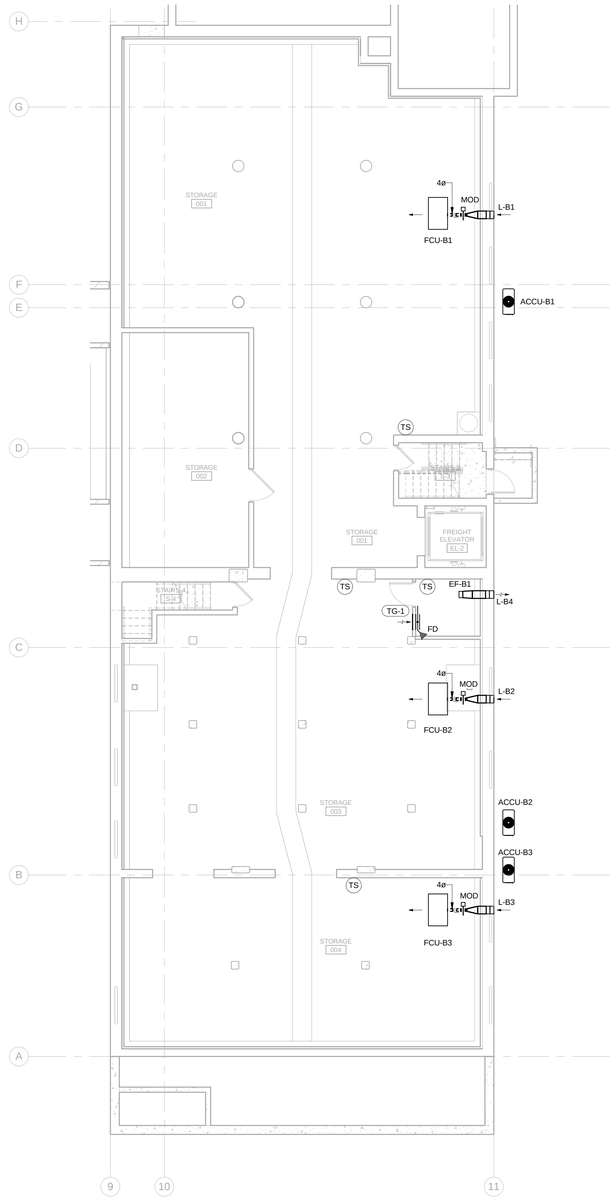
SHEET CONTENTS
MECHANICAL DEMOLITION PLAN - ROOF PLAN

SHEET NO.:
MD103

6/12/2015 2:13:53 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



TRUE NORTH PLAN NORTH

1 BASEMENT - HVAC

1/8" = 1'-0"

0 4 8 16

GENERAL HVAC NOTES:

1. REFER TO SHEET M-001 FOR NOTES, SYMBOLS, AND ABBREVIATIONS PERTAINING TO THIS SHEET.
2. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN EACH AIR HANDLING UNIT RETURN DUCT MAIN.
3. PROVIDE DUCT LINER ON SUPPLY AND RETURN AIR DUCTWORK MINIMUM 12'-0" UPSTREAM AND DOWNSTREAM OF AIR HANDLING UNITS.
4. PROVIDE PLENUM RATED PIPING, INSULATION, AND WIRING IN RETURN AIR CEILING PLENUMS. MATERIALS WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.
5. DUCTWORK DOWNSTREAM OF AT'S TO BE INTERNALLY LINED FOR MINIMUM OF 6'-0" FOR SOUND ATTENUATION. DUCT SIZES TO MATCH AT OUTLET SIZE UNLESS NOTED OTHERWISE.
6. SIZE RUNOUT ONE EVEN INCREMENT SIZE LARGER (MINIMUM 2" LARGER) UNLESS NOTED OTHERWISE TO WITHIN 2 FT OF BOX BEFORE REDUCING TO BOX INLET SIZE.
7. ALL AIR TERMINAL BOXES ("AT" BOXES) SHALL HAVE STRAIGHT LENGTH EQUALING 3 DUCT DIAMETERS OF THE "AT" INLET SIZE TO THE BOX. IE, 8"Ø BOX INLET SHALL HAVE 24" OF 8"Ø DUCT BETWEEN TRANSITION AND BOX.
8. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES TO SHALL BE SAME AS NECK SIZE UNLESS NOTED OTHERWISE.
9. COORDINATE DIFFUSER, REGISTER, AND GRILLES LOCATIONS WITH REFLECTED CEILING PLAN.
10. COORDINATE ALL ROOM SENSOR LOCATIONS WITH OWNER BEFORE INSTALATION.
11. PROVIDE MANUAL BALANCING DAMPERS AT EACH DIFFUSER, GRILLE, AND BRANCH TAKE-OFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK EXCEPT KITCHEN GREASE EXHAUST DUCT. LOCATE BALANCING DAMPERS AS CLOSE TO BRANCH TAKE-ODD AS POSSIBLE.
12. PROVIDE FLEXIBLE DUCTWORK FOR ALL FINAL CONNECTIONS TO SUPPLY AIR DIFFUSERS, AND GRILLES UNLESS NOTED OTHERWISE IN SPECIFICATIONS. FLEXIBLE DUCT SIZE SHALL BE SAME AS NECK SIZE OF DIFFUSER OR GRILLE. REFER TO SPECIFICATIONS AND DETAILS FOR FLEXIBLE DUXT REQUIREMENTS.
13. ALL ROOF MOUNTED EQUIPMENT LOCATIONS TO BE COORDINATED WITH STRUCTURAL DRAWINGS. REFER TO ROOF FRAMING PLANS.
14. REFER TO PHASING PLAN SHEETS G-101 THRU G-104 FOR SEQUENCING OF WORK.

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SHEET CONTENTS
BASEMENT HVAC PLAN

SHEET NO.:
M-100

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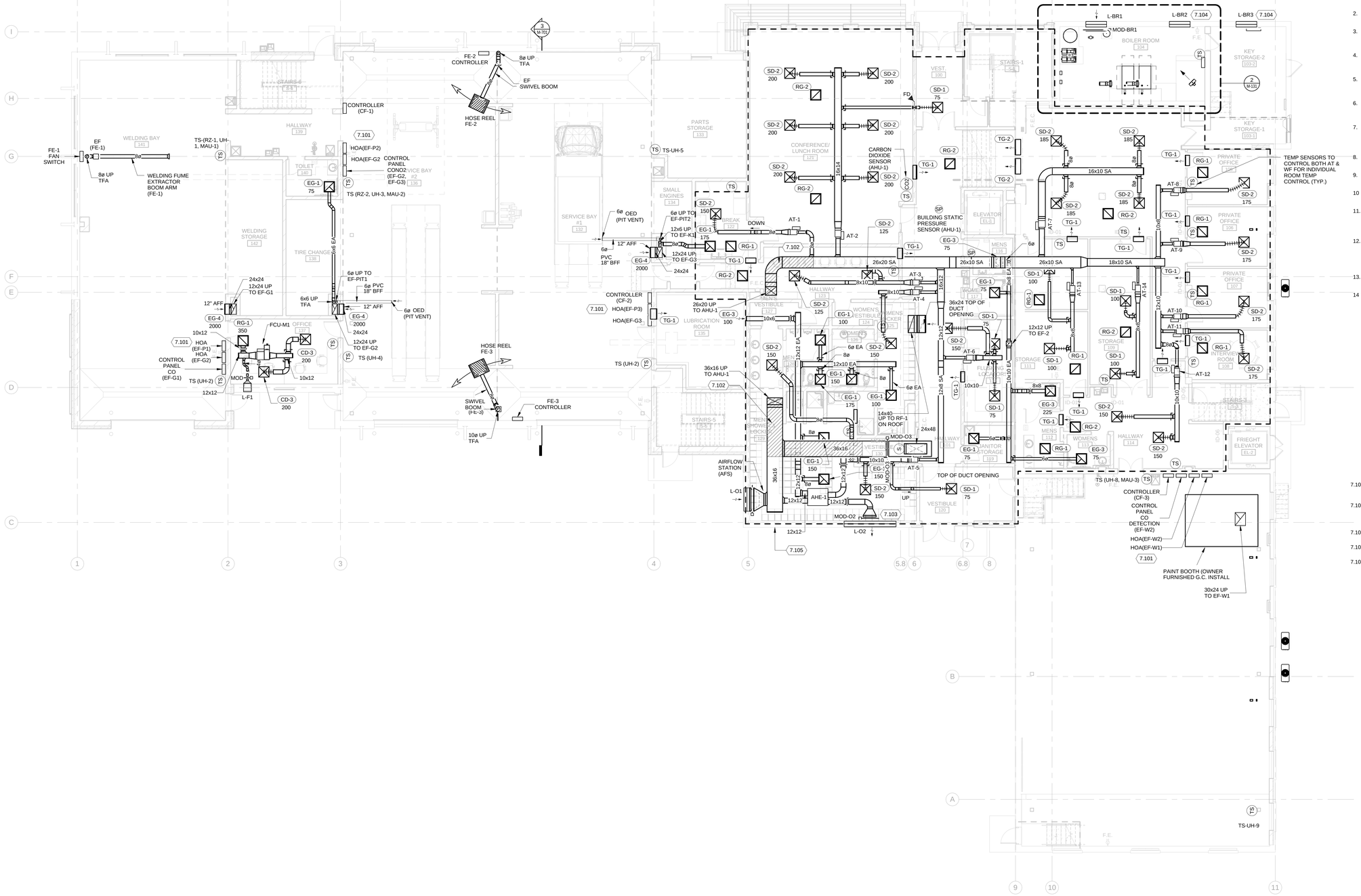

TRUE NORTH PLAN NORTH

1 FIRST FLOOR - HVAC PLAN

1/8" = 1'-0"

0 4 8 16

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KEYED NOTES

7.101	H.O.A. SWITCHES INTEGRAL WITH MOTOR STARTERS (BY E.C.).
7.102	CROSS HATCHED INDICATES DUCT LINER. INCREASE DUCT SIZE 4" EACH DIMENSION TO MAINTAIN NET FREE AREA.
7.103	30/10 LOUVER CONNECTION. BLANK OFF UNUSED.
7.104	BLANK OFF LOUVERS WITH 2" INSULATED PANEL.
7.105	AREA WITH-IN DASHED BORDER INDICATES PLENUM CEILING AREA.

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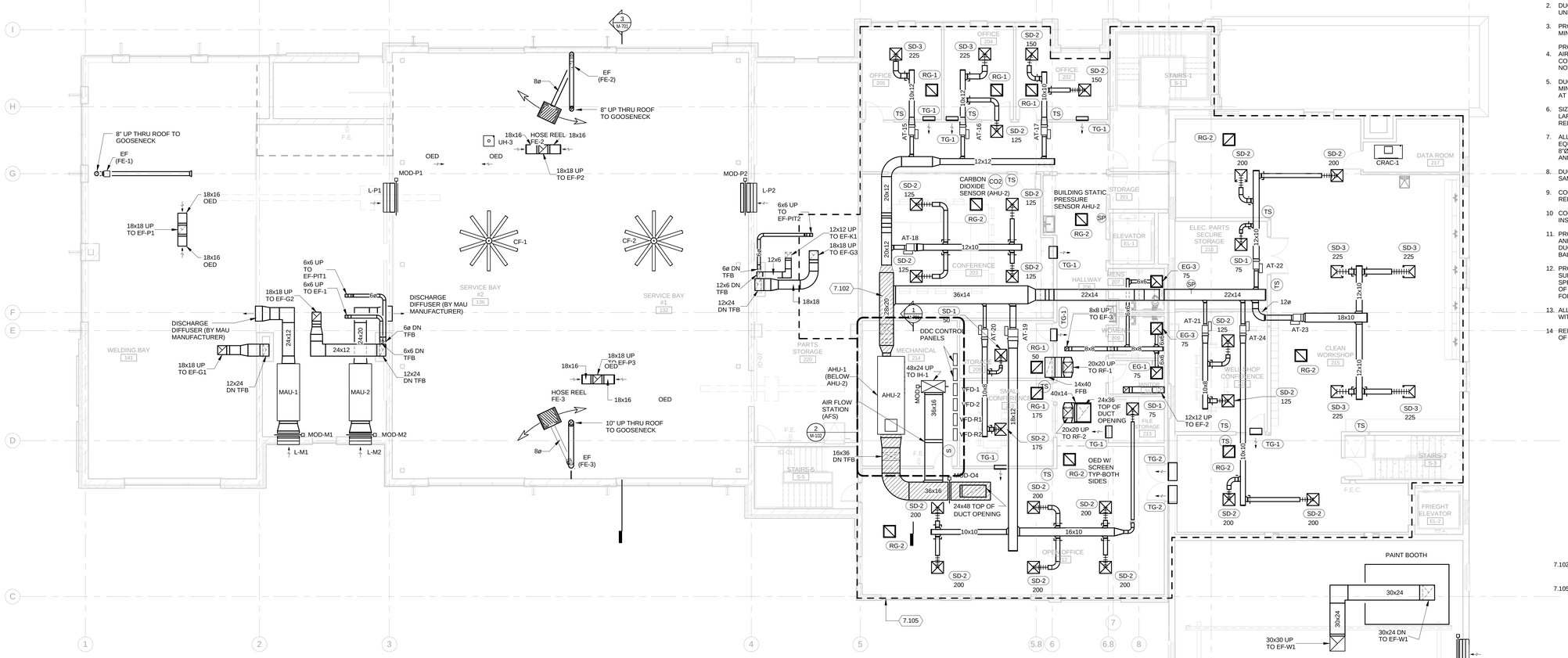
SHEET CONTENTS
FIRST FLOOR - HVAC PLAN

SHEET NO.:
M-101

6/12/2015 2:01:19 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



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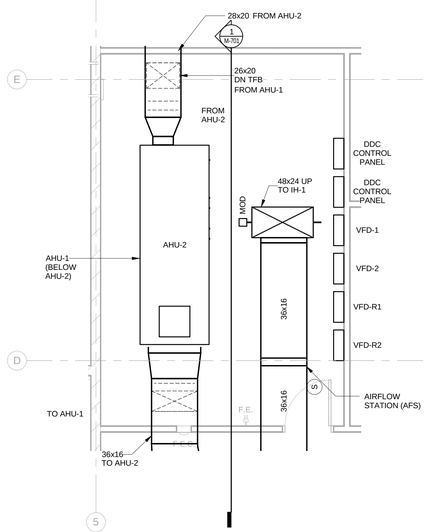
13. ALL ROOF MOUNTED EQUIPMENT LOCATIONS TO BE COORDINATED WITH STRUCTURAL DRAWINGS. REFER TO ROOF FRAMING PLANS.
14. REFER TO PHASING PLAN SHEETS G-101 THRU G-104 FOR SEQUENCING OF WORK.

KEYED NOTES

7.102 CROSS HATCHED INDICATES DUCT LINER. INCREASE DUCT SIZE 4" EACH DIMENSION TO MAINTAIN NET FREE AREA.

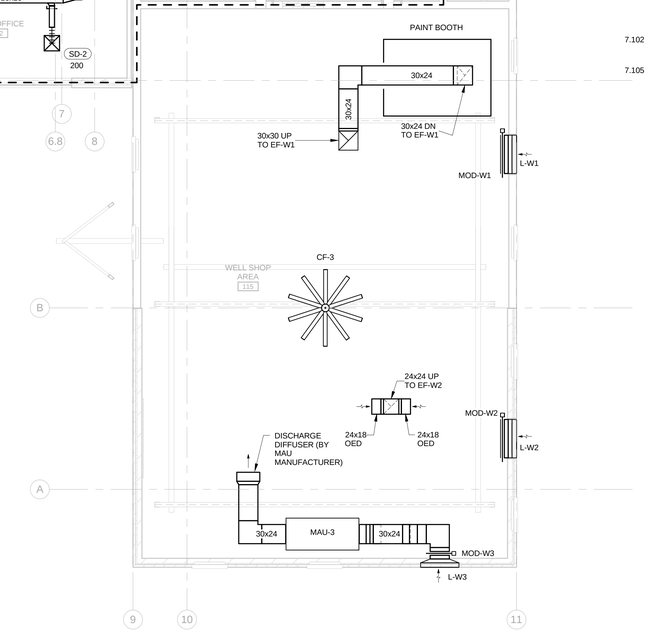
7.105 AREA WITH-IN DASHED BORDER INDICATES PLENUM CEILING AREA.



2 ENLARGED SCALE MECHANICAL ROOM HVAC PLAN

1/4" = 1'-0"

0 2 4 8



TRUE NORTH PLAN NORTH

1 SECOND FLOOR - HVAC PLAN

1/8" = 1'-0"

0 4 8 16

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL

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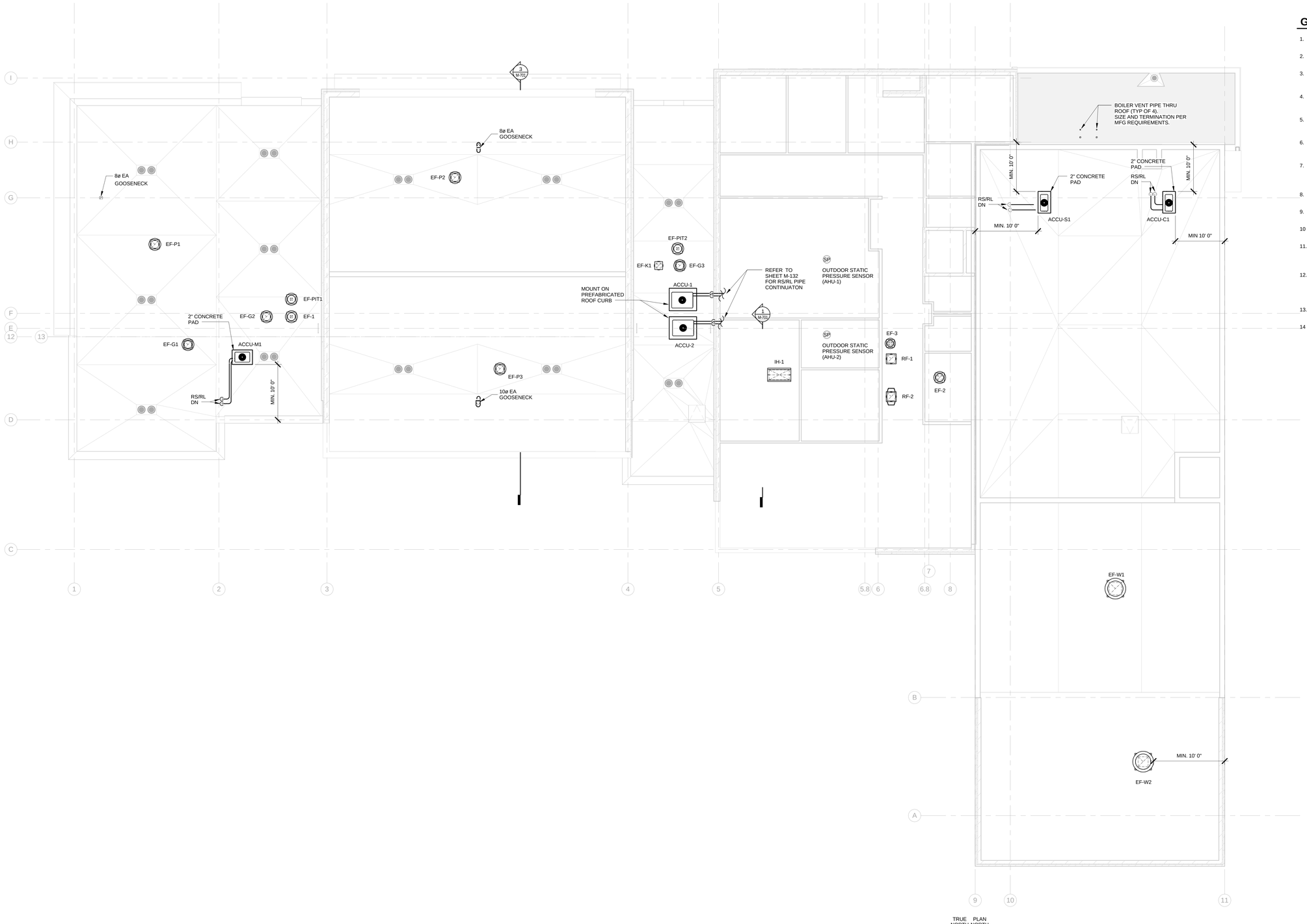
SHEET CONTENTS
SECOND FLOOR-HVAC PLAN

SHEET NO.:
M-102

6/12/2015 2:01:35 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



TRUE NORTH PLAN NORTH

1 ROOF - HVAC AND PIPING PLAN

1/8" = 1'-0"

0 4 8 16

GENERAL HVAC NOTES:

1. REFER TO SHEET M-001 FOR NOTES, SYMBOLS, AND ABBREVIATIONS PERTAINING TO THIS SHEET.
2. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN EACH AIR HANDLING UNIT RETURN DUCT MAIN.
3. PROVIDE DUCT LINER ON SUPPLY AND RETURN AIR DUCTWORK MINIMUM 12'-0" UPSTREAM AND DOWNSTREAM OF AIR HANDLING UNITS.
4. PROVIDE PLENUM RATED PIPING, INSULATION, AND WIRING IN RETURN AIR CEILING PLENUMS. MATERIALS WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.
5. DUCTWORK DOWNSTREAM OF AT'S TO BE INTERNALLY LINED FOR MINIMUM OF 6'-0" FOR SOUND ATTENUATION. DUCT SIZES TO MATCH AT OUTLET SIZE UNLESS NOTED OTHERWISE.
6. SIZE RUNOUT ONE EVEN INCREMENT SIZE LARGER (MINIMUM 2" LARGER) UNLESS NOTED OTHERWISE TO WITHIN 2 FT OF BOX BEFORE REDUCING TO BOX INLET SIZE.
7. ALL AIR TERMINAL BOXES ("AT" BOXES) SHALL HAVE STRAIGHT LENGTH EQUALING 3 DUCT DIAMETERS OF THE "AT" INLET SIZE TO THE BOX, IE, 8"Ø BOX INLET SHALL HAVE 24" OF 8"Ø DUCT BETWEEN TRANSITION AND BOX.
8. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES TO SHALL BE SAME AS NECK SIZE UNLESS NOTED OTHERWISE.
9. COORDINATE DIFFUSER, REGISTER, AND GRILLES LOCATIONS WITH REFLECTED CEILING PLAN.
10. COORDINATE ALL ROOM SENSOR LOCATIONS WITH OWNER BEFORE INSTALATION.
11. PROVIDE MANUAL BALANCING DAMPERS AT EACH DIFFUSER, GRILLE, AND BRANCH TAKE-OFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK EXCEPT KITCHEN GREASE EXHAUST DUCT. LOCATE BALANCING DAMPERS AS CLOSE TO BRANCH TAKE-ODD AS POSSIBLE.
12. PROVIDE FLEXIBLE DUCTWORK FOR ALL FINAL CONNECTIONS TO SUPPLY AIR DIFFUSERS, AND GRILLES UNLESS NOTED OTHERWISE IN SPECIFICATIONS. FLEXIBLE DUCT SIZE SHALL BE SAME AS NECK SIZE OF DIFFUSER OR GRILLE. REFER TO SPECIFICATIONS AND DETAILS FOR FLEXIBLE DUXT REQUIREMENTS.
13. ALL ROOF MOUNTED EQUIPMENT LOCATIONS TO BE COORDINATED WITH STRUCTURAL DRAWINGS. REFER TO ROOF FRAMING PLANS.
14. REFER TO PHASING PLAN SHEETS G-101 THRU G-104 FOR SEQUENCING OF WORK.

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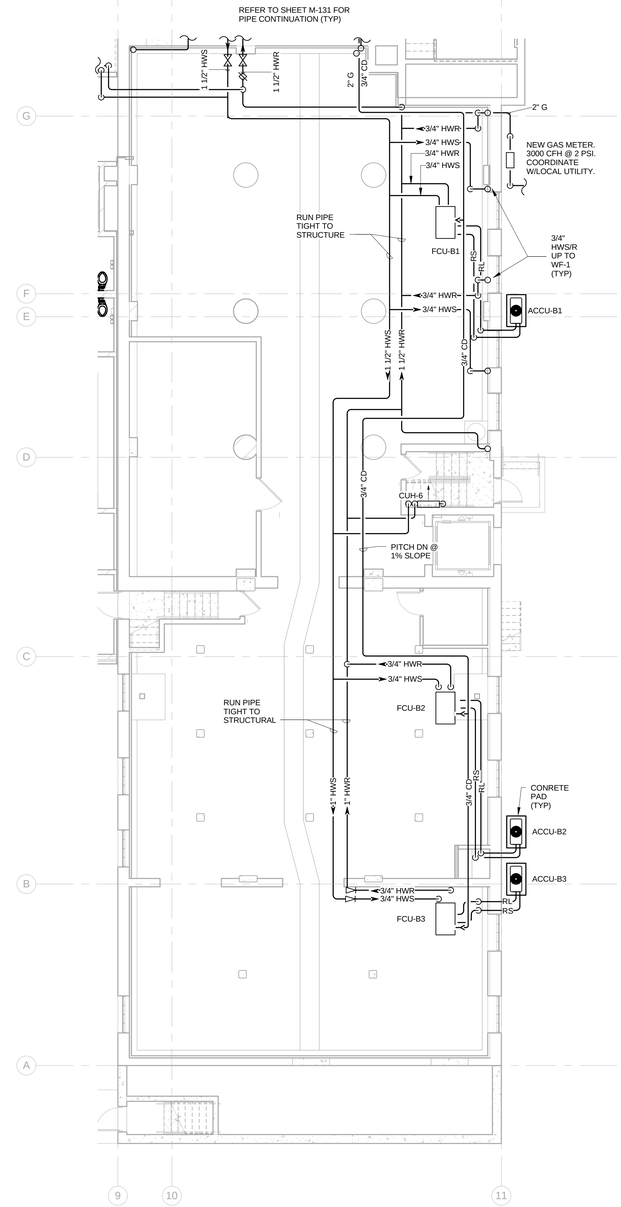
SHEET CONTENTS
ROOF - HVAC AND PIPING PLAN

SHEET NO.:
M-103

6/12/2015 2:01:55 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



1 BASEMENT - PIPING PLAN

1/8" = 1'-0"

0 4 8 16

GENERAL MECHANICAL NOTES:

1. REFER TO SHEET M-001 FOR NOTES, SYMBOLS, AND ABBREVIATIONS PERTAINING TO THIS SHEET.
2. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN EACH AIR HANDLING UNIT RETURN DUCT MAIN.
3. PROVIDE PLENUM RATED PIPING, INSULATION, AND WIRING IN RETURN AIR CEILING PLENUMS. MATERIALS WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. RUNOUTS TO ALL EQUIPMENT (HWS/R) TO BE 3/4" UNLESS NOTED OTHERWISE.
5. ALL EXISTING HWS/R PIPING TO REMAIN IS TO BE REINSULATED. ALL EXPOSED PIPING IN MECHANICAL ROOMS TO HAVE PVC JACKETING.
6. REFER TO PHASING PLAN SHEETS G101 THRU G103 FOR SEQUENCING OF WORK.
7. PROVIDE INDIVIDUAL MODULATING HW CONTROL VALVES FOR EACH WALL FIN (WF) SECTION.

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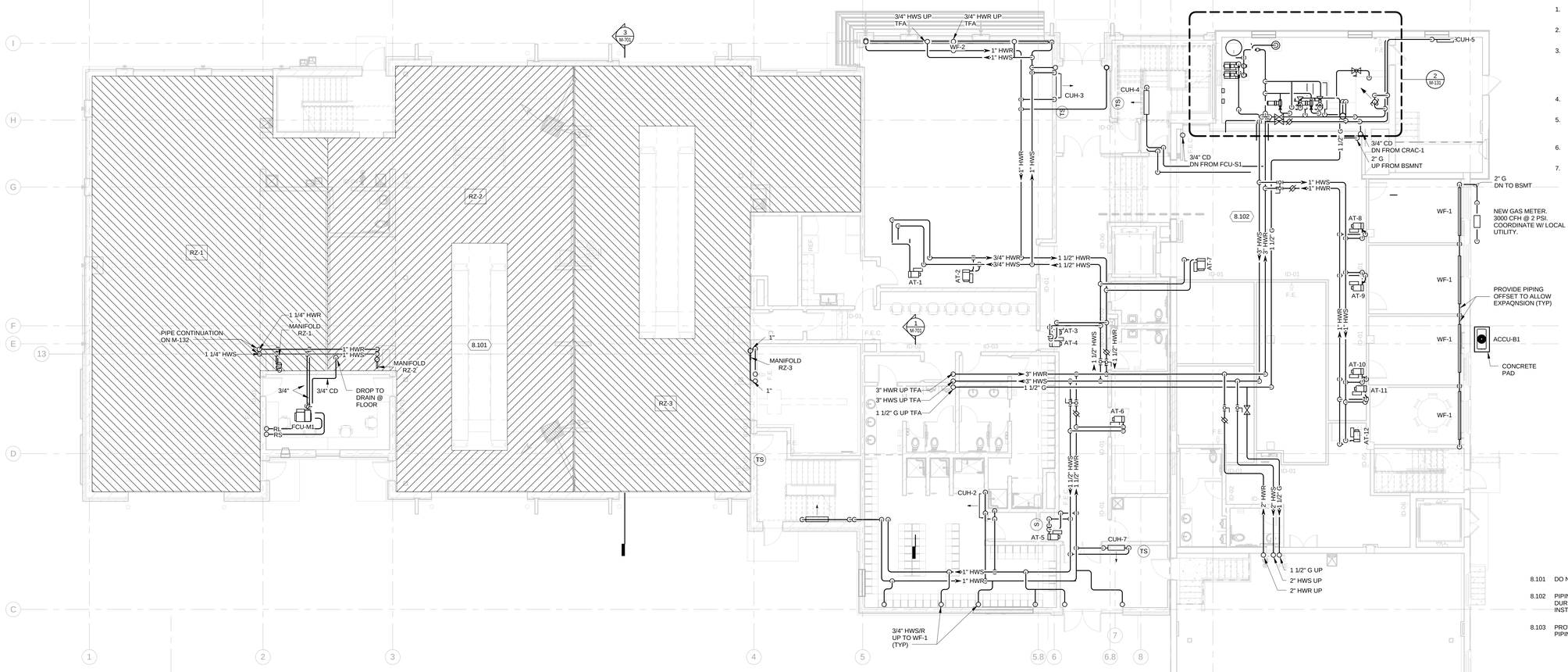
SHEET CONTENTS
BASEMENT - MECHANICAL PIPING PLAN

SHEET NO.:
M-130

6/12/2015 2:02:07 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



GENERAL MECHANICAL NOTES:

1. REFER TO SHEET M-001 FOR NOTES, SYMBOLS, AND ABBREVIATIONS PERTAINING TO THIS SHEET.
2. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN EACH AIR HANDLING UNIT RETURN DUCT MAIN.
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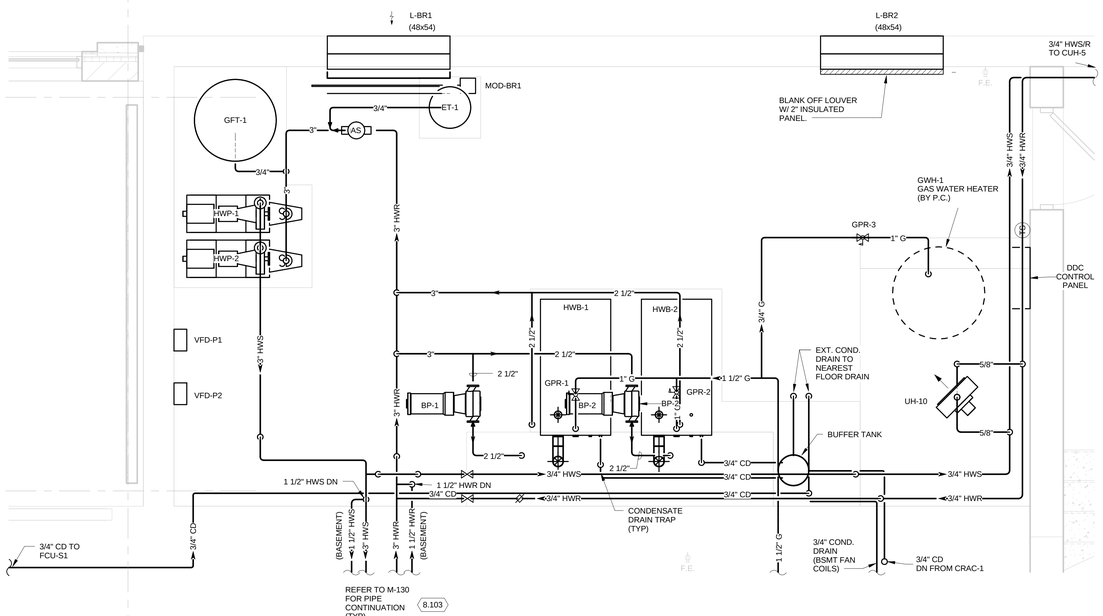
6. REFER TO PHASING PLAN SHEETS G101 THRU G103 FOR SEQUENCING OF WORK.
7. PROVIDE INDIVIDUAL MODULATING HW CONTROL VALVES FOR EACH WALL FIN (WF) SECTION.

KEYED NOTES

8.101 DO NOT INSTALL RADIANT TUBING BELOW SERVICE BAY PITS.

8.102 PIPING TO BE INSTALLED THROUGH OWNER OCCUPIED AREAS DURING PHASE 2 CONSTRUCTION. COORDINATE INSTALLATION WITH OWNER REQUIREMENTS.

8.103 PROVIDE TEMPORARY CONNECTION TO EXISTING HWS/R PIPING DURING PHASE 2 CONSTRUCTION IN BOILER ROOM.

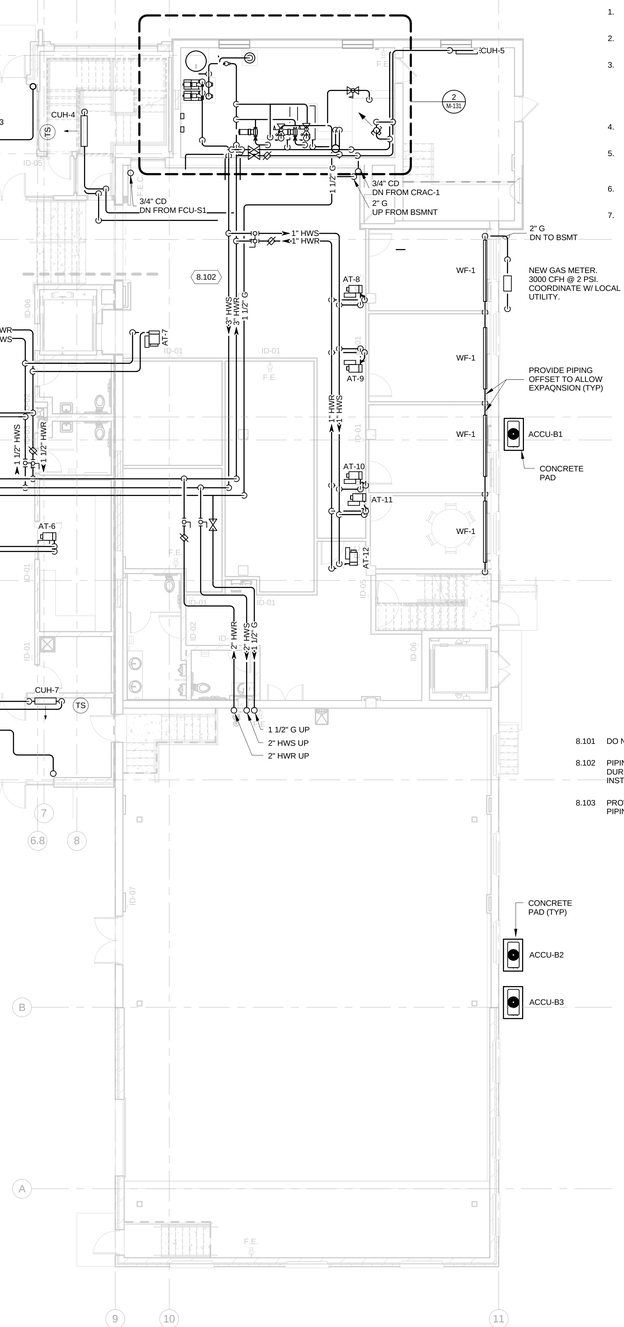


TRUE NORTH PLAN NORTH

2 FIRST FLOOR - ENLARGED PIPING PLAN

1/2" = 1'-0"

0 1 2 4



TRUE NORTH PLAN NORTH

1 FIRST FLOOR - PIPING PLAN

1/8" = 1'-0"

0 4 8 16

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SHEET CONTENTS
FIRST FLOOR - MECHANICAL PIPING PLAN

SHEET NO.:
M-131

6/12/2015 2:02:26 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt

GENERAL MECHANICAL NOTES:

1. REFER TO SHEET M-001 FOR NOTES, SYMBOLS, AND ABBREVIATIONS PERTAINING TO THIS SHEET.
2. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN EACH AIR HANDLING UNIT RETURN DUCT MAIN.
3. PROVIDE PLENUM RATED PIPING, INSULATION, AND WIRING IN RETURN AIR CEILING PLENUMS. MATERIALS WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME AND SMOKE SPREAD INDEX OF NOT MORE THAN 25/50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.
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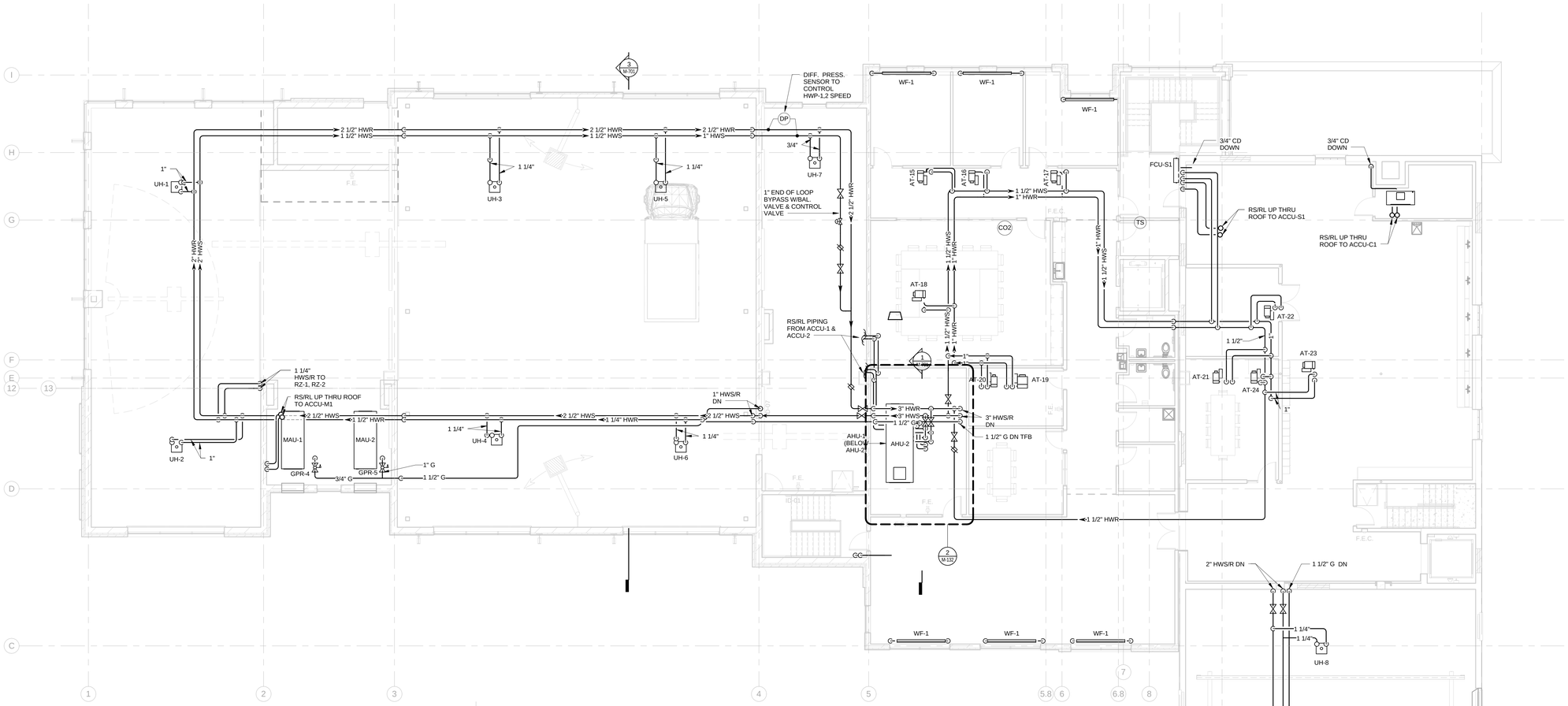

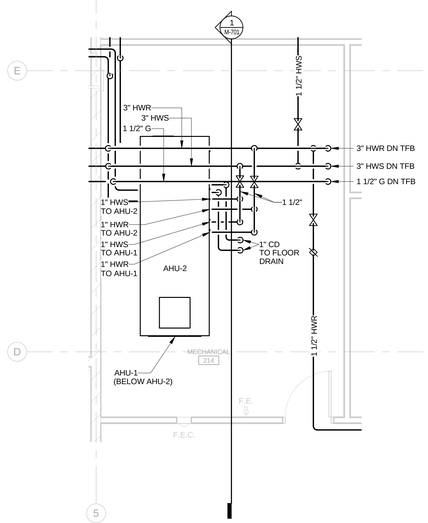

2 ENLARGED SCALE MECHANICAL ROOM PIPING PLAN
1/4" = 1'-0"

TRUE NORTH PLAN NORTH

1 SECOND FLOOR - PIPING PLAN
1/8" = 1'-0"

0 4 8 16

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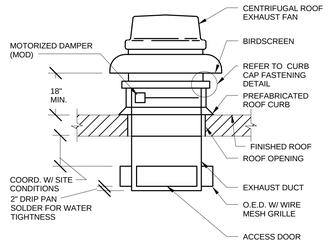
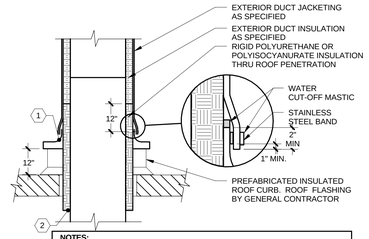
SHEET CONTENTS
SECOND FLOOR - MECHANICAL PIPING PLAN

SHEET NO.:
M-132

6/12/2015 2:09:06 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



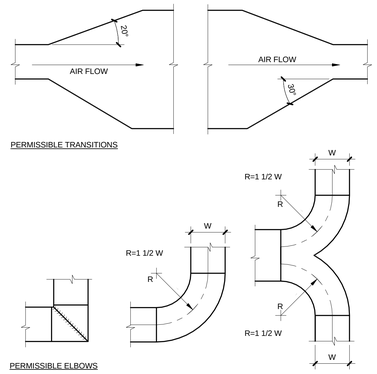
9 CENTRIFUGAL ROOF EXHAUST FAN W/DRIP PAN
NO SCALE



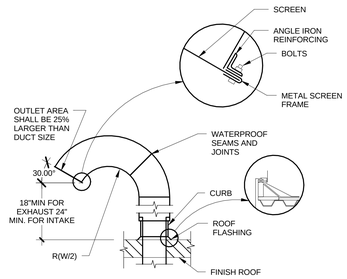
NOTES:

1. CURB CAP SIZED TO FIT CURB AND DUCT SHALL BE PROVIDED BY ROOF CURB MANUFACTURER.
2. FOR UNINSULATED DUCTWORK IN INTERIOR SPACES, TERMINATE INSULATION AT ROOF LINE.

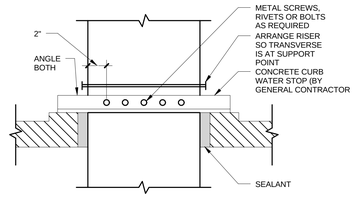
5 ROOF DUCT PENETRATION
NO SCALE



1 TYPICAL DUCT TRANSITIONS
NO SCALE



10 GOOSENECK ROOF TERMINATION
NO SCALE

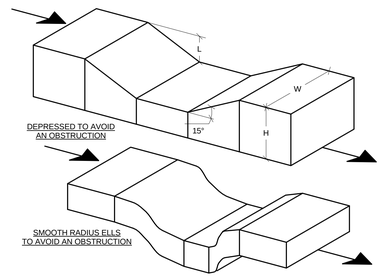


ANGLE IRON DIMENSIONS	
MAX. DUCT DIMENSION	MIN. ANGLE SIZE
0" - 48"	1-1/2"x1-1/2"x1/8"
49" - 60"	1-1/2"x1-1/2"x1/4"
OVER - 60"	INCREASE SIZE AS REQ'D

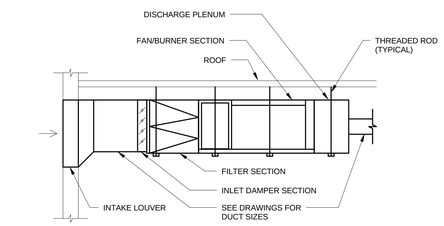
LOCATE A FASTENER WITHIN 2" OF DUCT EDGES
LOCATE OTHERS AT EVENLY SPACED INTERVALS

MINIMUM NUMBER OF FASTENERS OF EACH OF TWO SUPPORT BARS	
LARGEST DUCT DIMENSION	MIN. NUMBER OF FASTENERS
0" - 16"	2
17" - 24"	3
OVER - 24"	LARGEST DUCT DIMENSIONS DIVIDED BY 8

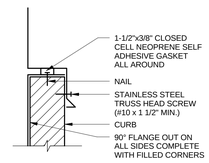
6 DUCT THRU FLOOR
NO SCALE



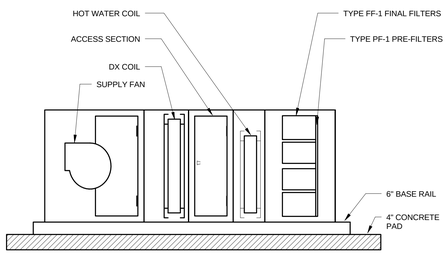
2 TYPICAL DUCT OFFSET
NO SCALE



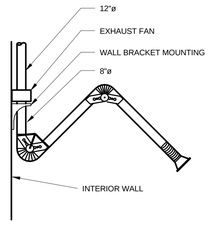
14 MAKE-UP AIR UNIT (MAU)
NO SCALE



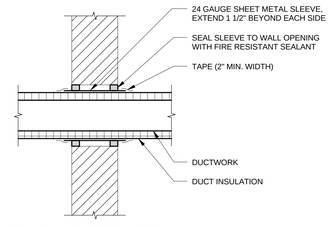
11 CURB CAP FASTENING
NO SCALE



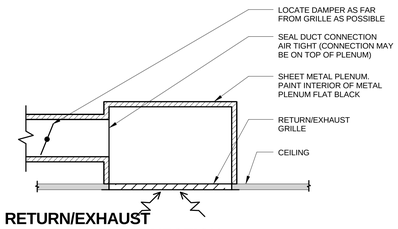
15 AHU SCHEMATIC ELEVATION (FLOOR MTD)
NO SCALE



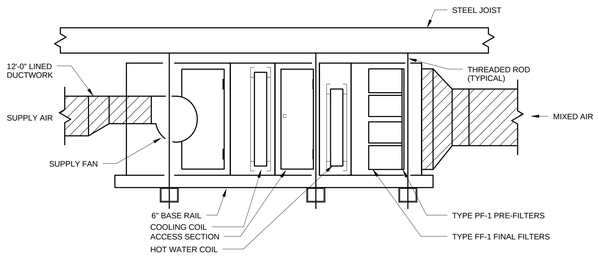
12 ADJUSTABLE ARM WELDING EXHAUST
NO SCALE



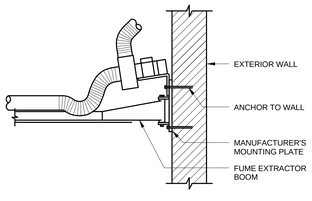
7 DUCT PENETRATION THRU INTERIOR WALL
NO SCALE



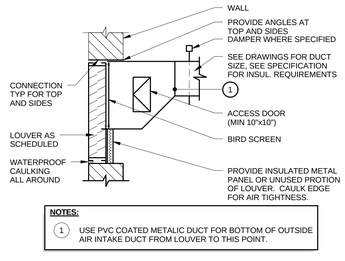
3 RETURN/EXHAUST GRILLE DUCT CONNECTION
NO SCALE



16 AHU SCHEMATIC ELEVATION (SUSPENDED)
12" = 1'-0"



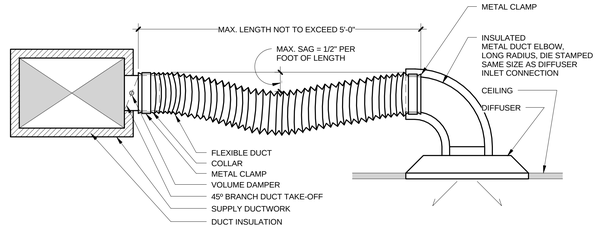
13 FUME EXTRACTOR MOUNTING
NO SCALE



NOTES:

1. USE PVC COATED METALIC DUCT FOR BOTTOM OF OUTSIDE AIR INTAKE DUCT FROM LOUVER TO THIS POINT.

8 DUCT CONNECTION TO LOUVER
NO SCALE



4 FLEXIBLE DUCT TO CEILING DIFFUSER
NO SCALE

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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

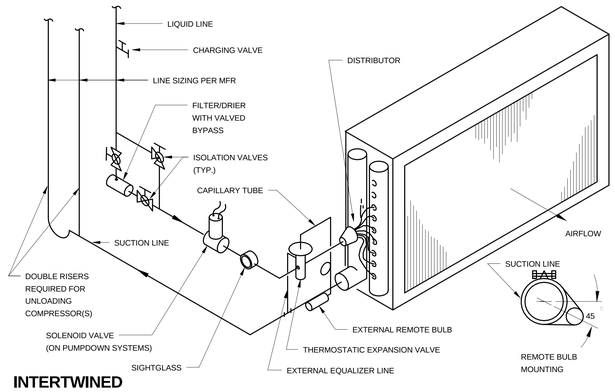
M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL

DO NOT SCALE DRAWINGS

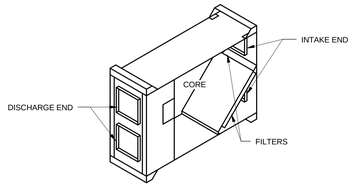
SHEET CONTENTS
HVAC DETAILS

SHEET NO.:
M-501

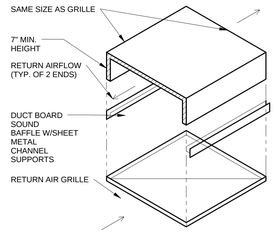
6/12/2015 2:09:25 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



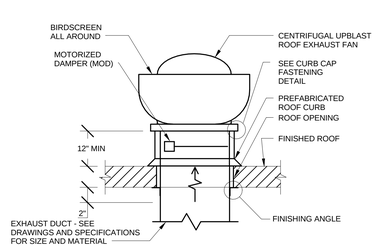
11 INTERTWINED REFRIGERANT COIL PIPING
NO SCALE



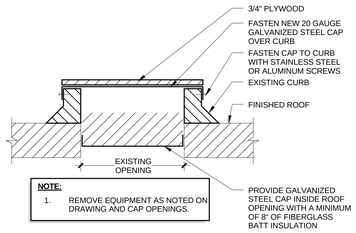
12 AIR TO AIR HEAT EXCHANGER
NO SCALE



6 PLENUM RETURN GRILLE DUCT CAP
NO SCALE

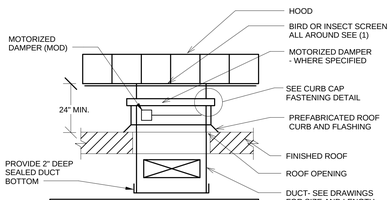


7 UPBLAST ROOF EXHAUST FAN
NO SCALE



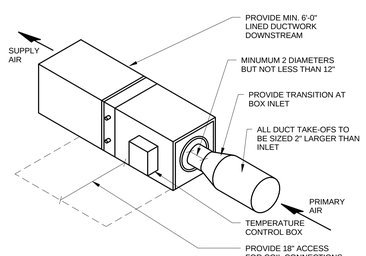
NOTE:
1. REMOVE EQUIPMENT AS NOTED ON DRAWING AND CAP OPENINGS.

8 CURB CAP DETAIL
NO SCALE

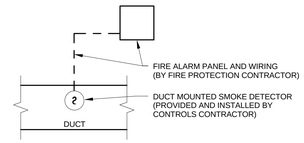


NOTES:
1. PROVIDE BIRD SCREEN WHERE FILTER IS SPECIFIED. PROVIDE INSECT SCREEN WHERE NO FILTER IS SPECIFIED.

9 INTAKE/RELIEF HOOD
NO SCALE

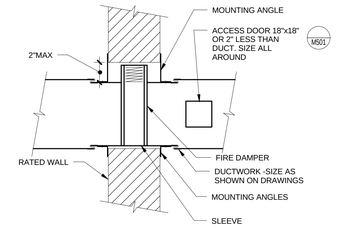


10 REHEAT COIL AND AIR TERMINAL
NO SCALE

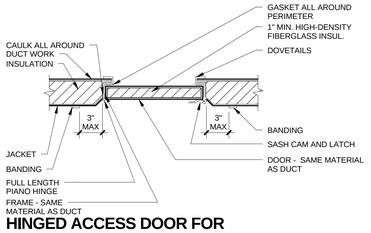


1 DUCT MOUNTED SMOKE DETECTOR CONTROL DIAGRAM (TYPICAL)
NO SCALE

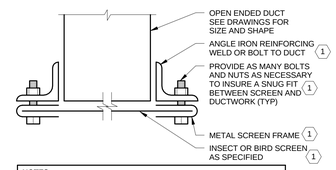
NOTE: INSTALL FIRE DAMPER ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS.



2 VERTICAL FIRE DAMPER
NO SCALE

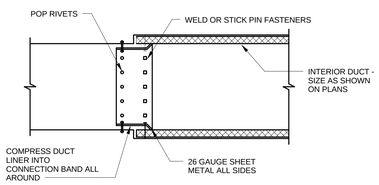


3 HINGED ACCESS DOOR FOR INSULATED RECTANGULAR DUCT
NO SCALE



NOTES:
1. MATERIALS OF CONSTRUCTION SHALL BE SIMILAR TO OPEN ENDED DUCT (IE STAINLESS STEEL COMPONENTS FOR STAINLESS STEEL DUCT).

4 OPEN ENDED DUCT SCREEN TERMINATION
NO SCALE



5 DUCT SOUND LINING TERMINATION
NO SCALE

Mead & Hunt
Mead & Hunt, Inc.
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phone: 608-273-6380
meadhunt.com

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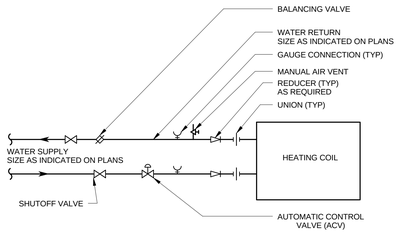
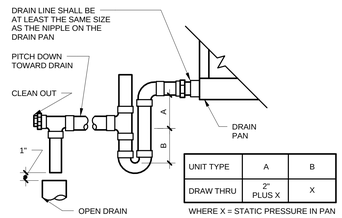
6/12/2015 2:09:37 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



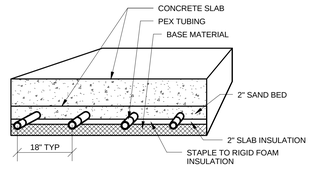
19 TERMINAL UNIT COIL PIPING (AT)
NO SCALE



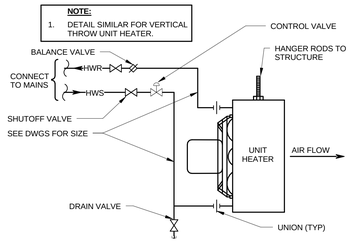
UNIT TYPE	A	B
DRAW THRU	2" PLUS X	X

WHERE X = STATIC PRESSURE IN PAN

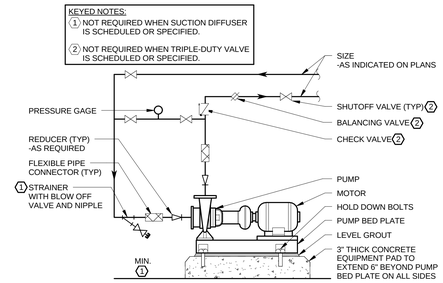
16 CONDENSATE DRAIN TRAP
NO SCALE



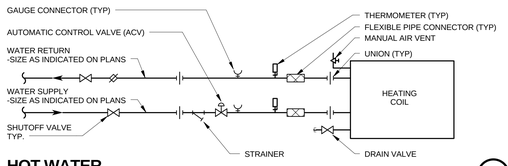
11 RADIANT FLOOR PIPING BELOW SLAB
NO SCALE



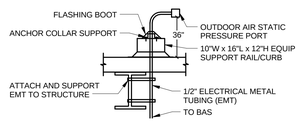
6 HW UNIT HEATER
NO SCALE



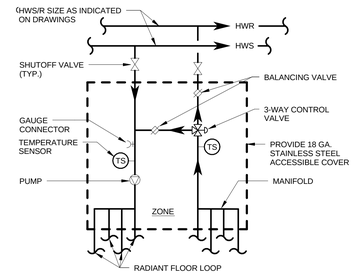
1 END SUCTION PUMP PIPING
NO SCALE



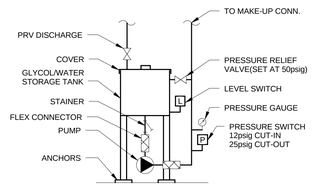
20 HOT WATER HEATING COIL PIPING (AHU)
NO SCALE



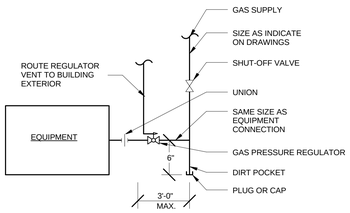
17 ROOF MOUNTED STATIC PRESSURE
NO SCALE



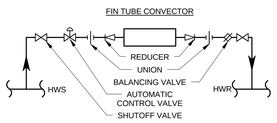
12 RADIANT MANIFOLD
NO SCALE



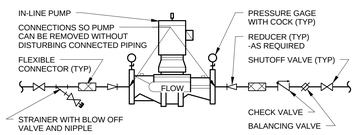
7 GLYCOL-WATER MAKE-UP
NO SCALE



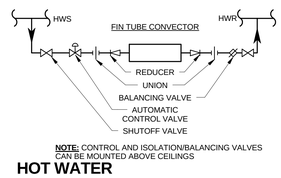
2 EQUIPMENT GAS CONNECTION (TYP)
NO SCALE



HOT WATER FIN TUBE CONVECTION PIPING FED FROM BELOW
18
NO SCALE

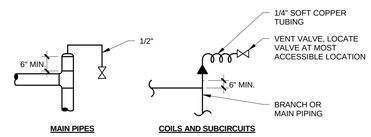


13 IN-LINE PUMP PIPING
NO SCALE



NOTE: CONTROL AND ISOLATION/BALANCING VALVES CAN BE MOUNTED ABOVE CEILINGS

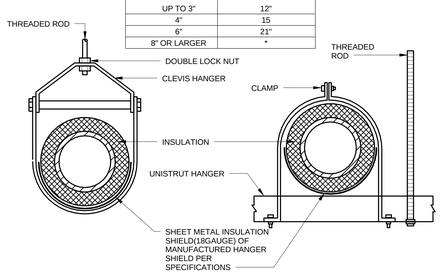
HOT WATER FIN TUBE CONVECTION PIPING
8
NO SCALE



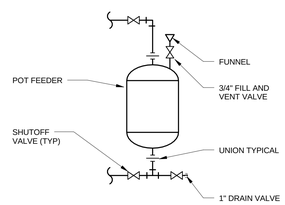
3 AIR VENT PIPING
NO SCALE

* INCOMPRESSIBLE INSULATING BLOCK AT HANGER WITH 24" SHIELD.

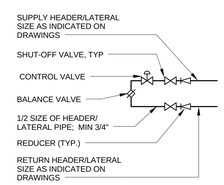
PIPE DIAMETER	LONGITUDINAL SHEILD LENGTH
UP TO 3"	12"
4"	15
6"	21"
8" OR LARGER	*



21 INSULATED PIPE SUPPORTS
NO SCALE



14 CHEMICAL POT FEEDER
NO SCALE



9 END OF LOOP BYPASS
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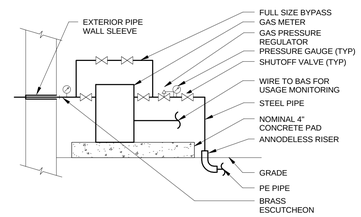
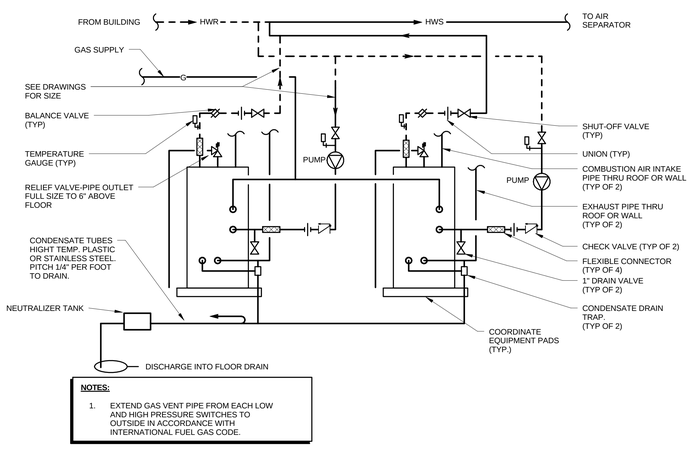


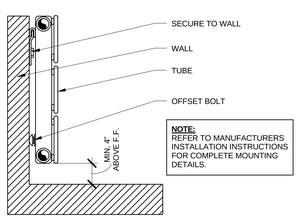
4 NATURAL GAS SERVICE ENTRANCE (COORD. W/ MG&E)
NO SCALE



NOTES:

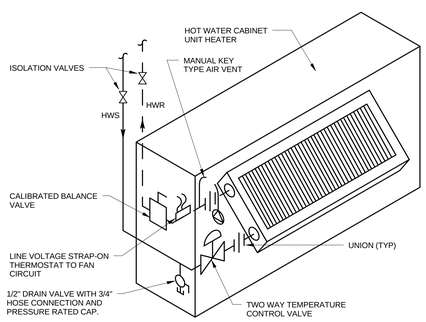
1. EXTEND GAS VENT PIPE FROM EACH LOW AND HIGH PRESSURE SWITCHES TO OUTSIDE IN ACCORDANCE WITH INTERNATIONAL FUEL GAS CODE.

22 DOUBLE HWB PIPING SCHEMATIC
NO SCALE

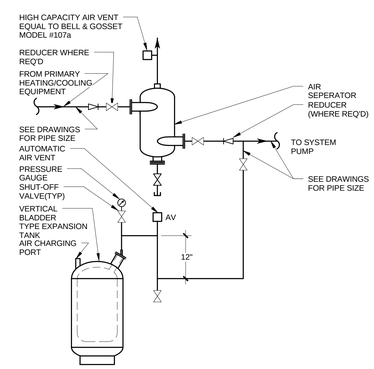


NOTE:
REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS FOR COMPLETE MOUNTING DETAILS.

15 WALL FIN RADIATION MOUNTING
NO SCALE



10 HOT WATER CABINET UNIT HEATER DETAIL
NO SCALE



EXPANSION TANK WITH AIR SEPARATOR PIPING
5
NO SCALE

Mead & Hunt

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SHEET CONTENTS
MECHANICAL DETAILS

SHEET NO.:
M-531

6/12/2015 2:10:01 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt

DAMPER SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	SIZE (INxIN)	AIR FLOW (CFM)	MAX. PD (IN WC)	CONTROL TYPE	ACTUATOR TYPE	CONSTRUCTION MATERIAL	(1) INTERLOCK WITH	SERVING	LOCATION	REMARKS
MOD-O1	TAMPCO 9000	M-PB	54x24	4600	0.1	TP	EL	ALUMINUM	AHU-1	L-O1	LOCKER 129	
MOD-O2	TAMPCO 9000	M-PB	30x10	800	0.05	TP	EL	ALUMINUM	AHE-1	L-O2	LOCKER 129	
MOD-O3	RUSKIN, CD60	M-PB	36x16	4600	0.1	TP	EL	ALUMINUM	AHU-1	AHU-1 RETURN	LOCKER 129	
MOD-O4	RUSKIN, CD60	M-PB	36x16	4600	0.1	TP	EL	ALUMINUM	AHU-2	AHU-2 RETURN	OFFICE 212	
MOD-BR1	TAMPCO 9000	M-PB	48x54	1000	0.05	TP	EL	ALUMINUM	RA-STAT	L-BR1	BOILER RM	
MOD-M1	TAMPCO 9000	M-PB	44x38	2000	0.05	TP	EL	ALUMINUM	MUA-1	L-M1	MEZZ	
MOD-M2	TAMPCO 9000	M-PB	44x38	4000	0.1	TP	EL	ALUMINUM	MUA-2	L-M2	MEZZ	
MOD-P1	TAMPCO 9000	M-PB	58x46	2000	0.05	TP	EL	ALUMINUM	EF-P1	L-P1	SERVICE BAY	
MOD-P2	TAMPCO 9000	M-PB	58x46	2000	0.05	TP	EL	ALUMINUM	EF-P2,P3	L-P2	SERVICE BAY	
MOD-W1	TAMPCO 9000	M-PB	60x22	4000	0.1	TP	EL	ALUMINUM	EF-W1,W2	L-W1	WELL SHOP	
MOD-W2	TAMPCO 9000	M-PB	60x22	4000	0.1	TP	EL	ALUMINUM	EF-W1	L-W2	WELL SHOP	
MOD-W3	TAMPCO 9000	M-PB	60x48	8000	0.1	TP	EL	ALUMINUM	EF-W1	L-W3	WELL SHOP	

TYPE		CONTROL TYPE		ACTUATOR TYPE	
M-PB	MOTOR OPERATED PARALLEL BLADE	MOD	MODULATING	PN	PNEUMATIC
M-OB	MOTOR OPERATED OPPOSED BLADE	TP	2-POSITION	EL	ELECTRIC
G-PB	GRAVITY OPERATED PARALLEL BLADE				
M-BF	MOTOR OPERATED BUTTERFLY				

REMARKS:

(1) SEE SPECIFICATION SECTION 230993 -HVAC SEQUENCE OF OPERATIONS.

AIR FILTER (F) SCHEDULE

MARK	TYPE	CFM	PRESS. DROP ("WG") INITIAL	PRESS. DROP ("WG") FINAL	MIN. EFF. (%)	MERV RATING	MEDIA LENGTH (IN)	SERVED	LOCATION	REMARKS
F-1	PRE	4,600	0.3	0.9	30	7	2	AHU-1 & 2	MECH 213	
F-2	FINAL	4,600	0.5	1.3	80	13	12	AHU-1 & 2	MECH 213	

EXHAUST FAN (EF) AND RELIEF FAN (RF) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	FAN TYPE	AIR FLOW RATE (CFM)	E.S.P. (IN WC)	MOTOR (HP)	MOTOR TYPE	FAN SPEED (RPM)	DRIVE TYPE	ELECTRICAL (VOLTS/PH)	(2) MTG. HEIGHT (FT)	MAXIMUM SOUND (3) DBA	MAXIMUM SOUND (4) SONES	INSTALL. TYPE	(1) INTERLOCK WITH	ACCESSORIES	OPENING L (IN)	OPENING W (IN)	WEIGHT (LB)	LOCATION	REMARKS
EF-1	GREENHECK G-65	6	75	0.30	1/10	ECM	1500	DIR	115/1	ROOF			B	OCC. SENSOR	2,9,20	10	10	25	SEE PLANS	5,6,7
EF-2	GREENHECK G-100	6	525	0.40	1/4	ECM	1100	DIR	115/1	ROOF			B	AHU-1	2,9,20	14	14	25	SEE PLANS	5,6,7
EF-3	GREENHECK G-85	6	250	0.30	1/10	ECM	1300	DIR	115/1	ROOF			B	AHU-2	2,9,20	12	12	25	SEE PLANS	5,6,7
RF-1	GREENHECK, CUBE-180	5	3,000	0.50	3/4	ODP	950	BELT	208/3	ROOF			B	AHU-1	2,9,20	20	20	75	SEE PLANS	5,6,7,8 (VFD- R1)
RF-2	GREENHECK, CUBE-180	5	3,000	0.40	3/4	ODP	950	BELT	208/3	ROOF			B	AHU-2	2,9,20	20	20	75	SEE PLANS	5,6,7,8 (VFD- R2)
EF-G1	GREENHECK, CUBE-160	5	2,000	0.50	1/2	ODP	950	CUE	208/3	ROOF			B	MAU-1	2,9,20	18	18	75	SEE PLANS	5,6,7
EF-G2	GREENHECK, CUBE-160	5	2,000	0.50	1/2	ODP	950	CUE	208/3	ROOF			B	MAU-2	2,9,20	18	18	75	SEE PLANS	5,6,7
EF-G3	GREENHECK, CUBE-160	5	2,000	0.50	1/2	ODP	950	CUE	208/3	ROOF			B	MAU-2	2,9,20	18	18	75	SEE PLANS	5,6,7
EF-P1	GREENHECK, CUBE-160	5	2,000	0.40	1/2	ODP	950	CUE	208/3	ROOF			B	MOD-P1	2,9,20	18	18	75	SEE PLANS	5,6,7
EF-P2	GREENHECK, CUBE-160	5	2,000	0.40	1/2	ODP	950	CUE	208/3	ROOF			B	MOD-P2	2,9,20	18	18	75	SEE PLANS	5,6,7
EF-P3	GREENHECK, CUBE-160	5	2,000	0.40	1/2	ODP	950	CUE	208/3	ROOF			B	MOD-P2	2,9,20	18	18	75	SEE PLANS	5,6,7
EF-W1	GREENHECK, CUBE-300	5	8,000	0.75	3	ODP	650	BELT	208/3	ROOF			B	MAU-3	2,9,20	32.5	32.5	245	SEE PLANS	5,6,7,9
EF-W2	GREENHECK, CUBE-180	5	2,500	0.40	1/2	ODP	1100	BELT	208/3	ROOF			B	MOD-W1	2,9,20	20	20	75	SEE PLANS	5,6,7
EF-PIT1	GREENHECK G-65	6	75	0.30	1/10	ECM	1500	DIR	115/1	ROOF			B	WALL SW	2,9,20	10	10	25	SEE PLANS	5,6,7
EF-PIT2	GREENHECK G-65	6	75	0.30	1/10	ECM	1500	DIR	115/1	ROOF			B	WALL SW	2,9,20	10	10	25	SEE PLANS	5,6,7
EF-B1	GREENHECK SE-1	9	100	0.30	1/25	ECM	1500	DIR	115/1	SIDEWALL			A	R.A. STAT	2,4,9,10	10	10	25	ELEV. EQUIP	5,6
EF-K1	GREENHECK G-80	6	175	0.40	1/20	ECM	1300	DIR	115/1	ROOF			B	WALL SW	2,9,20	12	12	25	SEE PLANS	5,6,7

FAN TYPE			
CENTRIFUGAL		AXIAL	
1	SIDEWALL	8	ROOFTOP DOWNBLAST
2	INLINE	9	SIDEWALL PROPELLER
3	UTILITY	10	TUBE AXIAL
4	CABINET	11	VANE AXIAL
5	ROOFTOP UPBLAST	12	ROOFTOP UPBLAST
6	ROOFTOP HOODED	13	ROOFTOP FRP UPBLAST
7	ROOFTOP FILTERED SUPPLY	14	ROOFTOP HOODED

MOTOR TYPE	
ODP	OPEN DRIP PROOF
TEFC	TOTALLY ENCLOSED FAN COOLED
XPL	EXPLOSION PROOF
INV	INVERTER DUTY
TEAO	TOTALLY ENCLOSED AIR OVER
ECM	ELECTRONICALLY COMMUTATED MOTOR

INSTALLATION TYPE	
A	FREE INLET, FREE OUTLET
B	DUCTED INLET, FREE OUTLET

ACCESSORIES					
1	GRAVITY BACKDRAFT DAMPER	11	OUTLET WIRE GUARD	21	HOODED WALL CAP
2	MOTORIZED BACKDRAFT DAMPER	12	INLET FILTER GUARD	22	HOODED ROOF CAP
3	WEATHERHOOD	13	MOTOR COVER	23	HINGED ROOF CURB
4	WALL COLLAR	14	HOUSING INSULATION	24	INLET GRILLE
5	MOTOR WIRE GUARD	15	BELT (OSHA) WIRE GUARD	25	BASE MTD VIBRATION ISOLATORS
6	MOTOR (OSHA) WIRE GUARD	16	INLET BELL	26	DUCT ADAPTOR
7	SHUTTER GUARD	17	INLET/OUTLET FLANGES	27	HANGING SPRING ISOLATORS
8	FAN SPEED CONTROLLER	18	INLET VANE DAMPER	28	HANGING NEOPRENE ISOLATORS
9	NON-FUSED DISCONNECT SWITCH	19	EXTENDED LUBE LINES	29	FACTORY INSULATED ANGLED FILTER BOX
10	INLET WIRE GUARD	20	MFR'S STANDARD ROOF CURB		

REMARKS:

(1) SEE SPECIFICATION SECTION 230993 - HVAC SEQUENCE OF OPERATION.
(2) MOUNTING HEIGHT IS FROM FINISHED FLOOR LEVEL OF INDICATED ROOM, TO TOP OF FAN OR WALL OPENING.
(3) SOUND POWER LEVEL RATING PER AMCA 301.
(4) LOUDNESS VALUES AT 5FT IN A HEMISPHERICAL FREE FIELD PER AMCA 301.
(5) SINGLE SPEED FAN.
(6) PROVIDE MOTORIZED BACKDRAFT DAMPERS EQUAL TO RUSKIN CD-60 (VOLTAGE TO MATCH FAN MOTOR).
(7) PROVIDE 18" CURB, HINGED SUBBASE, AND FLEXIBLE WEATHERPROOF ELECTRICAL CABLE FOR ROOF MOUNTED FANS.
(8) PROVIDE VFD RATED MOTORS FOR FANS.
(9) PROVIDE EXPLOSIN PROOF MOTOR AND NON SPARKING BLADES TO SERVE PAINT BOOTH.

FAN COIL UNIT (FCU) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	SUPPLY AIR FLOW (CFM)	OUTSIDE AIR FLOW (CFM)	(2) E.S.P. (IN WC)	FAN MOTOR (3) HP	FAN MOTOR (3) VOLTS/PH	COOLING CAPACITY EAT DB (°F)	COOLING CAPACITY EAT WB (°F)	COOLING CAPACITY CAPACITY (MBH) TOTAL	COOLING CAPACITY CAPACITY (MBH) SENS.	COIL ROWS TYPE	HEATING CAPACITY EAT (°F)	HEATING CAPACITY CAPACITY (MBH)	HEATING CAPACITY COIL ROWS TYPE	HEATING CAPACITY MEDIA TYPE	MEDIA... GPM	EMT (°F)	LMT (°F)	ACCESSORIES	WEIGHT (LB)	LOCATION	REMARKS
FCU-B1	JOHNSON CONTROLS FHX 30	H-CAB	400	50	0.1	1/10 ECM	115/1	80	67	10	7	3 - DX	65	20	2-HW	30% EG	1.5	160	130	1,6,7	150	BSMT	
FCU-B2	JOHNSON CONTROLS FHX 30	H-CAB	400	50	0.1	1/10 ECM	115/1	80	67	10	7	3 - DX	65	20	2-HW	30% EG	1.5	160	130	1,6,7	150	BSMT	
FCU-B3	JOHNSON CONTROLS FHX 30	H-CAB	400	50	0.1	1/10 ECM	115/1	80	67	10	7	3 - DX	65	20	2-HW	30% EG	1.5	160	130	1,6,7	150	BSMT	
FCU-S1	JOHNSON CONTROLS FWI 04	V-CAB	400	0	0.1	1/10 ECM	115/1	80	67	12	8	3 - DX	65	20	2-HW	30% EG	1.5	160	130	1,7	150	STAIR	
FCU-M1	JOHNSON CONTROLS FHP 30	H-D	400	50	0.3	1/10 ECM	115/1	80	67	10	7	3 - DX	65	20	2-HW	30% EG	1.5	160	130	1,6,7	150	OFFICE 137	

TYPE			
V	VERTICAL	R	RECESSSED
H	HORIZONTAL	A	ANGLE TOP
L	LOW PROFILE	S	SEMI-RECESSED
C	CONCEALED	CAB	EXPOSED CABINET
D	DUCTED		

ACCESSORIES			
1	DISCONNECT SWITCH	6	FRESH AIR DAMPER
2	TAMPER PROOF ACCESS DOOR FASTENERS	7	CONDENSATE PUMP
3	LEVELING FEET	8	FACTORY MOUNTED PIPING PACKAGE
4	SUB-BASE (FOR SPECIFIED MOUNTING HEIGHT)	9	MANUAL 3- SPEED FAN CONTROL SWITCH
5	FALSE BACK	10	1/2" WIRE MESH SCREEN ON INLET & OUTLET

REMARKS:

(1) SEE SPECIFICATION SECTION 238219 FOR ANY ADDITIONAL ACCESSORIES.
(2) DOES NOT INCLUDE PRESSURE DROP FOR INTERNAL COMPONENTS.
(3) CONDENSATE PUMPS TO BE EQUAL TO LITTLE GIANT EC-1; 120V-1.

AHU HEATING/COOLING COIL (HC/CC) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	NOMINAL AIR FLOW (CFM)	PD (IN WC)	COIL FACE VEL. (FPM)	COIL FACE AREA (FT²)	COIL ROWS	COIL FPI	CAPACITY TOTAL (MBH)	CAPACITY SENS. (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	MEDIA TYPE	MEDIA (GPM)	MEDIA (TON)	PRESSURE ENTER (PSI)	PRESSURE DROP (FT)	EMT (°F)	LMT (°F)	EQUIPMENT SERVED	LOCATION	REMARKS
CC-1	TRANE	UF	4,600	0.75	500	9.00	6	10	180	120	80	67	55	55	R-410		15					AHU-1	MECH 213	1
CC-2	TRANE	UF	4,600	0.75	500	9.00	6	10	180	120	80	67	55	55	R-410		15					AHU-2	MECH 213	1
HC-1	TRANE	5W	4,600	0.20	500	9.00	1	8	120		40		65		30% EG	6			5.0	160	120	AHU-1	MECH 213	1
HC-2	TRANE	5W	4,600	0.20	500	9.00	1	8	120		40		65		30% EG	6			5.0	160	120	AHU-2	MECH 213	1

REMARKS:

(1) BY SAME MANUFACTURER OF AIR HANDLING UNIT.

AIR HANDLING UNIT (AHU) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	SUPPLY AIRFLOW (CFM)	OA MIN. (CFM)	SUPPLY FAN TYPE	SUPPLY FAN E.S.P. (IN WC)	SUPPLY FAN T.S.P. (IN WC)	SUPPLY FAN POWER (BHP)	SUPPLY FAN POWER (HP)	SUPPLY FAN SPEED (RPM)	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	HTG COIL MARK	CLG COIL MARK	FILTER MARK	MTG HEIGHT MARK	WEIGHT (LBS)	ACCESSORIES	UNIT SECTIONS IN DIRECTION OF AIRFLOW
AHU-1	TRANE, CSAA 10	I,CS, H	4,600	1,000	AF	2.25	4.50	6.0	7.5	1750	208	3	HC-1	CC-1	F-1,2	10'-0"	2,000	5	F, HC, A, CC, SF
AHU-2	TRANE, CSAA 10	I,CS, H	4,600	750	AF	2.25	4.50	6.0	7.5	1750	208	3	HC-1	CC-1	F-1,2	0'-12"	2,000	5	F, HC, A, CC, SF

TYPE			
CS	CENTRAL STATION	I	INDOOR
PRT	PACKAGED ROOFTOP	O	OUTDOOR
CU	CUSTOM	D	DOWNFLOW
IF	INDIRECT FIRED	H	HORIZONTAL
DF	DIRECT FIRED	U	UPFLOW

ACCESSORIES	
1	INTAKE HOOD
2	INLET DAMPER
3	DISCHARGE DAMPER
4	ROOF CURB
5	DOUBLE WALL
6	COIL GUARDS

SECTION TYPES					
RF	RETURN FAN	HC	HEATING COIL	SF	SUPPLY FAN
EC	ECONOMIZER	A	ACCESS	P	DISCHARGE PLENUM
M	MIXING BOX	H	HUMIDIFIER	WH	WEATHER HOOD
AB	AIR BLENDER	CC	COOLING COIL	D	DAMPER
BL	BLANK	E	MOISTURE ELIMINATOR	B	BURNER
F	FILTER	ER	ENERGY RECOVERY		

FAN TYPE	
AF	AIR FOIL
BI	BACKWARD INCLINED
FC	FORWARD CURVED
P	PLENUM/PLUG

REMARKS:

(1) SEE SPECIFICATIONS FOR ANY ADDITIONAL ACCESSORIES.
(2) MOUNTING HEIGHT SHALL BE FROM ABOVE FINISHED FLOOR (AFF) TO BOTTOM OF UNIT.
(3) PROVIDE VFD RATED MOTORS FOR FANS.
(3) PROVIDE FLAT (PRE/FINAL) FILTER SECTION. REFER TO AIR FILTER (AF) SCHEDULE.

AIR COOLED CONDENSING UNIT (ACCU) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	NOM. CAP. (TONS)	MIN. EER	REFRIG. TYPE	SST (°F)	AMBIENT AIR TEMPERATURE MIN. (°F)	AMBIENT AIR TEMPERATURE MAX. (°F)	COMPRESSORS QTY.	COMPRESSORS TYPE	ELECTRICAL VOLTS	ELECTRICAL PHASE	ELECTRICAL MCA	ELECTRICAL MOPD	(2) MAX. SOUND (DBA)	MATCHING EQUIPMENT COOLING COIL	WEIGHT (lb)	LOCATION	REMARKS
ACCU-1	TRANE TTA 150	12.5	11.0	R-410A	45	25	100	2	SCR	208	3	56	70	70	AHU-1/ CC-1	500	ROOF	1,3,5
ACCU-2	TRANE TTA 150	12.5	11.0	R-410A	45	25	100	2	SCR	208	3	56	70	70	AHU-2/ CC-2	500	ROOF	1,3,5
ACCU-B1	JOHNSON CONTROLS	1.0	13.0	R-410A		45	100	1	SCR	208	1	13	15	65	FCU-B1	100	GRADE	1,3,6
ACCU-B2	JOHNSON CONTROLS	1.0	13.0	R-410A		45	100	1	SCR	208	1	13	15	65	FCU-B2	100	GRADE	1,3,6
ACCU-B3	JOHNSON CONTROLS	1.0	13.0	R-410A		45	100	1	SCR	208	1	13	15	65	FCU-B3	100	GRADE	1,3,6
ACCU-S1	JOHNSON CONTROLS	1.0	13.0	R-410A		45	100	1	SCR	208	1	13	15	65	FCU-S1	100	ROOF	1,3,6
ACCU-M1	JOHNSON CONTROLS	1.0	13.0	R-410A		45	100	1	SCR	208	1	13	15	65	FCU-M1	100	GRADE	1,3,6
ACCU-C1	LIEBERT, PFH 020	1.5	11.0	R-407C	35	-20	100	1	SCR	208	1	15	25	60	CRAC-1	150	ROOF	1,4,6

COMPRESSOR TYPE	
RCP	RECIPROCATING
SCR	SCROLL
SCW	SCREW

REMAR...

(1) MANUFACTURER SHALL SIZE REFRIGERANT PIPING, VALVES, AND ACCESSORIES FOR PROPER OPERATION OF...
(2) PER ARI STANDARD "SOUND RATING OF LARGE OUTDOOR REFRIGERATING AND AIR-CONDITIONING EQUIPMENT".
(3) PROVIDE LOW AMBIENT CONTROL TO 25 F AND APR VALVE FOR CAPACITY CONTROL
(4) PROVIDE LOW AMBIENT CONTROL KIT TO (-) 20 F.
(5) PROVIDE PATE ES-5 EQUIPMENT SUPPORTS FOR ROOF MOUNTED CONDENSING UNITS. .

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Quality and Reliability since 1882
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
MECHANICAL SCHEDULES

SHEET NO.:
M-601

6/12/2015 2:10:17 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt

LOUVERS (L) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	APPLICATION	LOUVER TYPE	MTG. SYSTEM	MAX. INLET VELOCITY (FPM)	CAPACITY AIR FLOW (CFM)	CAPACITY P.D. (IN WC)	DAMPER	WIDTH (IN)	HEIGHT (IN)	FINISH	MATERIAL	(1) APPROX. MTG. HEIGHT (FT)	ACCESSORIES	LOCATION	REMARKS
L-B1	GREENHECK, ESJ-401	INTAKE	4	6	200	50	0.05	4" MOD...	12	18	K	ALUMINUM	BSMT WINDOW	1	WINDOW	COORD. W/ WINDOW...
L-B2	GREENHECK, ESJ-401	INTAKE	4	6	200	50	0.05	4" MOD...	12	18	K	ALUMINUM	BSMT WINDOW	1	WINDOW	COORD. W/ WINDOW...
L-B3	GREENHECK, ESJ-401	INTAKE	4	6	200	50	0.05	4" MOD...	12	18	K	ALUMINUM	BSMT WINDOW	1	WINDOW	COORD. W/ WINDOW...
L-B4	GREENHECK, ESJ-401	EXHAUST	4	6	400	100	0.1	4" MOD...	12	18	K	ALUMINUM		1,3	SEE PLANS	
L-BR1	GREENHECK, ESJ-602	INTAKE	4	1	100	1000	0.05	MOD-BR1	48	54	K	ALUMINUM		1,3	SEE PLANS	EXIST OPENING
L-BR2	GREENHECK, ESJ-602	INTAKE	4	1	-	-	-	-	48	54	K	ALUMINUM		1,3	SEE PLANS	EXIST OPENING
L-BR3	GREENHECK, ESJ-602	INTAKE	4	1	-	-	-	-	48	54	K	ALUMINUM		1,3	SEE PLANS	EXIST OPENING
L-O1	GREENHECK, ESJ-602	INTAKE	4	3	800	4600	0.1	MOD-01	54	30	K	ALUMINUM		1,3	SEE PLANS	
L-O2	GREENHECK, ESJ-602	EXHAUST	4	3	200	800	0.05	MOD-02	120	24	K	ALUMINUM		1,3	SEE PLANS	
L-F1	GREENHECK, ESJ-401	INTAKE	4	3	200	50	0.05	4" MOD...	18	12	K	ALUMINUM		1,3	SEE PLANS	
L-M1	GREENHECK, ESJ-602	INTAKE	4	3	300	2000	0.05	MOD-M1	44	44	K	ALUMINUM		1,3	SEE PLANS	
L-M2	GREENHECK, ESJ-602	INTAKE	4	3	600	4000	0.1	MOD-M2	44	44	K	ALUMINUM		1,3	SEE PLANS	
L-P1	GREENHECK, ESJ-401	INTAKE	4	6	200	2000	0.05	MOD-P1	58	46	K	ALUMINUM	MEZZ WINDOW	1	WINDOW	COORD. W/ WINDOW...
L-P2	GREENHECK, ESJ-401	INTAKE	4	6	200	2000	0.05	MOD-P2	58	46	K	ALUMINUM	MEZZ WINDOW	1	WINDOW	COORD. W/ WINDOW...
L-W1	GREENHECK, ESJ-602	INTAKE	4	1	250	1250	0.1	MOD-W1	60	22	K	ALUMINUM		1,3	SEE PLANS	
L-W2	GREENHECK, ESJ-602	INTAKE	4	1	250	1250	0.1	MOD-W2	60	22	K	ALUMINUM		1,3	SEE PLANS	
L-W3	GREENHECK, ESJ-602	INTAKE	4	1	800	8000	0.1	MOD-W3	60	54	K	ALUMINUM		1,3	SEE PLANS	

APPLICATION		LOUVER TYPE		MOUNTING SYSTEM		DAMPER		FINISH		ACCESSORIES	
1	INTAKE	1	BRICK VENT	1	PLASTER/MASONRY WALL	N	NONE	M	MILL	1	BIRD SCREEN
2	EXHAUST	2	THIN LINE EXTRUDED	2	EXPOSED DUCTWORK	B	BUTTERFLY	W	MANUFACTURER STANDARD WHITE	2	INSECT SCREEN
3	RELIEF	3	DRAINABLE BLADE	3	METAL PANEL WALL	G	GRAVITY	S	MANUFACTURER SPECIAL COLOR	3	FLANGED FRAME
		4	STATIONARY EXTRUDED	4	ROOF	MP	MOTORIZED-PNEUM.	K	70% KYNAR	4	SILL EXTENSIONS
		5	ADJUSTABLE EXTRUDED	5	EXTERIOR STUD WALL	ME	MOTORIZED-ELECT...	A	ANODIZED ALUMINUM	5	FILTER RACK
		6	WIND-DRIVEN RAIN	6	WINDOW INSERT	OB	OPPOSED BLADE	P	FACTORY PRIMED FOR FIELD PAINTING		
						PB	PARALLEL BLADE				
						LL	LOW-LEAKAGE,...				

REMARKS:

(1) SEE ARCHITECTURAL ELEVATION PLANS FOR EXACT MOUNTING HEIGHT AND LOCATION.

(2) PROVIDE BLANK-OFF PANELS FOR UNUSED PORTIONS OF LOUVER, SEE PLANS FOR DUCT CONNECTIONS, INSULATE SAME AS OUTDOOR AIR DUCTWORK.

(3) LOUVER COLOR SELECTION BY ARCHITECT.

AIR TERMINAL (AT) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	AIR FLOW MIN. (CFM)	AIR FLOW MAX. (CFM)	AIR FLOW HEATING (CFM)	(1) MAX. PRESS. DROP (IN WC)	(2) HOT WATER REHEAT COIL CAP. (MBH)	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	FLOW (GPM)	MAX WPD (FT WC)	NO. OF ROWS	INLET SIZE (IN)	OUTLET WIDTH (IN)	OUTLET DEPTH (IN)	WEIGHT (LB)	LOCATION	ACCESSORIES	REMARKS
AT-1	TITUS, DESV	1, 3	60	150	60	0.50	2.0	55	85	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-2	TITUS, DESV	1, 3	500	1275	500	0.50	25.0	55	100	160	140	2.5	0.2	2	12	14	12	30	SEE PLANS		3,4
AT-3	TITUS, DESV	1, 3	100	250	100	0.50	3.0	55	82	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-4	TITUS, DESV	1, 3	100	150	100	0.50	3.0	55	82	160	140	0.3	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-5	TITUS, DESV	1, 3	200	375	200	0.50	7.5	55	89	160	140	0.8	0.2	2	8	12	10	30	SEE PLANS		3,4
AT-6	TITUS, DESV	1, 3	100	300	100	0.50	3.0	55	82	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-7	TITUS, DESV	1, 3	300	740	300	0.50	8.5	55	81	160	140	0.9	0.2	2	10	12	10	30	SEE PLANS		3,4
AT-8	TITUS, DESV	1, 3	75	175	75	0.50	4.0	55	103	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-9	TITUS, DESV	1, 3	75	175	75	0.50	4.0	55	103	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-10	TITUS, DESV	1, 3	75	175	75	0.50	4.0	55	103	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-11	TITUS, DESV	1, 3	75	175	75	0.50	4.0	55	103	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-12	TITUS, DESV	1, 3	125	300	125	0.50	3.5	55	80	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-13	TITUS, DESV	1, 3	75	200	75	0.50	2.5	55	85	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-14	TITUS, DESV	1, 3	75	200	75	0.50	2.5	55	85	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-15	TITUS, DESV	1, 3	100	225	125	0.50	6.5	55	102	160	140	0.7	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-16	TITUS, DESV	1, 3	125	350	125	0.50	7.5	55	110	160	140	0.8	0.2	2	8	12	10	30	SEE PLANS		3,4
AT-17	TITUS, DESV	1, 3	100	300	150	0.50	8.5	55	107	160	140	0.9	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-18	TITUS, DESV	1, 3	250	500	250	0.50	8.5	55	86	160	140	0.9	0.2	2	8	12	10	30	SEE PLANS		3,4
AT-19	TITUS, DESV	1, 3	500	1275	500	0.50	30.0	55	110	160	140	3.0	0.2	2	12	14	12	30	SEE PLANS		3,4
AT-20	TITUS, DESV	1, 3	100	225	100	0.50	3.0	55	82	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-21	TITUS, DESV	1, 3	100	250	100	0.50	3.0	55	82	160	140	0.5	0.2	2	6	10	10	30	SEE PLANS		3,4
AT-22	TITUS, DESV	1, 3	175	475	225	0.50	10.0	55	95	160	140	1.0	0.2	2	8	12	10	30	SEE PLANS		3,4
AT-23	TITUS, DESV	1, 3	400	900	500	0.50	30.0	55	110	160	140	3.0	0.2	2	10	12	10	30	SEE PLANS		3,4
AT-24	TITUS, DESV	1, 3	160	400	200	0.50	10.0	55	100	160	140	1.0	0.2	2	8	12	10	30	SEE PLANS		

TYPE				ACCESSORIES					
1	PRESSURE INDEPENDENT	5	SERIES FAN POWERED	1	ELECTRIC HEAT	5	2-WAY TWO-POSITION VALVE	9	FACTORY MOUNTED TRANSFORMER
2	PRESSURE DEPENDENT	6	PARALLEL FAN POWERDED	2	FUSE	6	3-WAY TWO-POSITION VALVE	10	FACTORY MOUNTED DISCONNECT SWITCH
3	SINGLE DUCT	7	BYPASS	3	DDC CONTROLS	7	2-WAY PROPORTIONAL VALVE		
4	DUAL DUCT			4	PNEUMATIC CONTROLS	8	3-WAY PROPORTIONAL VALVE		

REMARKS:

(1) MAXIMUM STATIC PRESSURE DROP BASED ON MAXIMUM RATED AIR FLOW.

(2) HEATING CAPACITY OF REHEAT COIL BASED ON HEATING AIR FLOW LISTED.

(3) DDC CONTROLS SHALL BE PROVIDED PER 23 09 24.

(4) REFER TO 23 09 14 FOR TEMPERATURE CONTROL VALVE REQUIREMENTS.

AIR OUTLETS AND INLETS SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	APPLICATION	OUTLET/ INLET	TYPE	MOUNTING SYSTEM	DAMPER	SIZE (IN)	NECK (IN)	FINISH	MATERIAL	(1) MOUNTING HEIGHT	ACCESSORIES	LOCATION	REMARKS
SD-1	TITUS, TDC	SUPPLY	1	9	1	N	9x9	6	W	STEEL		24x24 LAY-IN PANEL	SEE PLANS	100 CFM (MAXIMUM)
SD-2	TITUS, TDC	SUPPLY	1	9	1	N	12x12	8	W	STEEL		24x24 LAY-IN PANEL	SEE PLANS	200 CFM
SD-3	TITUS, TDC	SUPPLY	1	9	1	N	15x15	10	W	STEEL		24x24 LAY-IN PANEL	SEE PLANS	350 CFM
SG-1	TITUS, 300RL	SUPPLY	3	1	2,3	N	14x8	12x6	M	STEEL			SEE PLANS	
EG-1	TITUS, 50F	EXHAUST	3	8	1	N	12x12	10X10	W	ALUM		24x24 LAY-IN PANEL	SEE PLANS	300 CFM
EG-2	TITUS, 50F	EXHAUST	3	8	1	N	18x18	16x16	W	ALUM		24x24 LAY-IN PANEL	SEE PLANS	600 CFM
EG-3	TITUS, 350RL	EXHAUST	3	1	2,3	N	12x12	10x10	W	STEEL			SEE PLANS	300 CFM
EG-4	TITUS, 355 ZRL-HD	RETURN	3	3	3	N	24X30	22x28	W	STEEL	12" AFF		SEE PLANS	HEAVY DUTY
RG-1	TITUS, 50F	RETURN	3	8	1	N	12x12	10X10	W	ALUM		24x24 LAY-IN PANEL	SEE PLANS	300 CFM
RG-2	TITUS, 50F	RETURN	3	8	1	N	24X24	22x22	W	ALUM		24x24 LAY-IN PANEL	SEE PLANS	1000 CFM
TG-1		TRANSFER				N		24x12			ABOVE CLG		SEE PLANS	
TG-2		TRANSFER				N		36X16			ABOVE CLG		SEE PLANS	

OUTLET/INLET		TYPE				MOUNTING SYSTEM		DAMPER		FINISH	
1	DIFFUSER	1	SINGLE DEFLECTION	8	EGGCRATE	1	T-BAR CEILING	N	NONE	M	MILL
2	REGISTER	2	DOUBLE DEFLECTION	9	LOUVERED	2	PLASTER/CONCRETE CEILING	B	BUTTERFLY	W	MFR STANDARD WHITE
3	GRILLE	3	FIXED BLADE	10	HOODED	3	PLASTER/MASONRY WALL	G	GRAVITY	S	MFR SPECIAL COLOR
4	LOUVER	4	PERFORATED	11	DOOR TRANSFER	4	EXPOSED DUCTWORK	MP	MOTORIZED-PNEUMATIC	O	OTHER (SEE...
5	PENTHOUSE	5	LINEAR	12	BRICK	5	METAL PANEL WALL	ME	MOTORIZED-ELECTRIC		
6	VENT	6	SLOT	13	PUNKAH	6	ROOF	OB	OPPOSED BLADE		
		7	DRUM	14	LAMINAR	7	EXTERIOR STUD WALL	PB	PARALLEL BLADE		
								LL	LOW-LEAKAGE, INSUL.		

REMARKS:

(1) MOUNTING HEIGHT SHALL BE FROM FINISHED FLOOR TO BOTTOM OF OPENING.

(2) PROVIDE TITUS 350RL GRILLE OVER TRANSFER OPENINGS (TG-1,2) THAT ARE EXPOSED TO VIEW IN MECHANICAL/STORAGE RMS., ETC.

(3)... PROVIDE SOUND TRAPS ABOVE ALL RETURN AIR GRILLES LOCATED IN THE OFFICE RETURN AIR PLENUM.

COMPUTER ROOM AC UNIT (CRAC) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	(2) E.S.P. (IN WC)	FAN MOTOR HP	COOLING CAPACITY EAT DB (F)	EAT WB(F)	CAPACITY (MBH) TOTAL	CAPACITY (MBH) SENS.	REFRIG. TYPE	ELECTRICAL VOLTS	PHASE	MCA	MOCP	ACCESSORIES	WEIGHT (LBS)	LOCATION	REMARKS
CRAC-1	LEIBERT, MMD 018	H	600	0	0.3	0 1/4	80	62	19	18	R-407C	208	1	1.8	15	1	250		1

TYPE				ACCESSORIES	
V	VERTICAL	R	RECESSSED	1 DISCONNECT SWITCH	6 FRESH AIR DAMPER
H	HORIZONTAL	A	ANGLE TOP	2 TAMPER PROOF ACCESS DOOR FASTENERS	7 FRESH AIR WALL BOX
L	LOW PROFILE	S	SEMI-RECESSED	3 LEVELING FEET	8 FACTORY MOUNTED PIPING PACKAGE
C	CONCEALED	CAB	CABINET	4 SUB-BASE (FOR SPECIFIED MOUNTING HEIGHT)	9 MANUAL THREE SPEED FAN CONTROL SWITCH
D	DUCTED			5 FALSE BACK	10 1/2" WIRE MESH SCREEN ON INLET & OUTLET

REMARKS:

(1) SEE SPECIFICATION SECTION 23 8123 FOR ANY ADDITIONAL ACCESSORIES

(2) DOES NOT INCLUDE PRESSURE DROP FOR INTERNAL COMPONENTS

AIR-TO-AIR HEAT EXCHANGER (AHE) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	WINTER SUPPLY AIR EAT (°F)	SUPPLY AIR LAT (°F)	SUPPLY AIR AIR FLOW (cfm)	EXHAUST AIR EAT (°F)	EXHAUST AIR LAT (°F)	EXHAUST AIR AIR FLOW (cfm)	HEAT RECOVERY (MBH)	EFF. (%)	SUPPLY FAN (Hp)	SUPPLY FAN (RPM)	EXHAUST FAN (Hp)	EXHAUST FAN (RPM)	VOLTS/PH	WEIGHT (lb)	LOCATION	REMARKS
AHE-1	GREENHECK MINI CORE 10	(-)10	40	800	70	20	800	44	60	0 1/2	1725	0 1/2	1725	208/ 1	250	LOCKER 129	

REMARKS:

(1) PROVIDE TIMED EXHAUST FOR FROST CONTROL.

CEILING FAN (CF) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	(1) FAN TYPE	FAN DIAM. (FT)	AIR FLOW RATE (CFM)	MOTOR HP	FAN SPEED (RPM)	DRIVE TYPE	ELECTRICAL (VOLTS/PH)	(2) MTG. HEIGHT (FT)	AIRFOIL BLADES NUMBER	AIRFOIL BLADES LENGTH	INTERLOCK WITH	WEIGHT (LB)	LOCATION	REMARKS
CF-1	BIG ASS FANS, POWERFOIL 8	CEILING	10		1.0	0-155	GEAR	208/3	27.75	8		FAN CONTROLLER	175	SERVICE BAY	3,4,5,6
CF-2	BIG ASS FANS, POWERFOIL 8	CEILING	10		1.0	0-155	GEAR	208/3	27.75	8		FAN CONTROLLER	175	SERVICE BAY	3,4,5,6
CF-3	BIG ASS FANS, POWERFOIL 8	CEILING	12		1.0	0-155	GEAR	208/3	17.9	8		FAN CONTROLLER	175	WELL SHOP	3,4,5,6

(1) AIRFOIL BLADES.

(2) MOUNTING HEIGHT IS FROM FINISHED FLOOR LEVEL OF ROOM INDICATED, IN FEET.

(3) PROVIDE MOUNTING HARDWARE.

(4) PROVIDE FAN MOUNTED VARIABLE FREQUENCY DRIVE; 0 - 100% SPEED CONTROL, SUMMER/WINTER/MANUAL OPERATION.

(5) PROVIDE WALL MOUNTED NEMA 1 CONTROLLER AND ETHERNET CABLE (CAT5) FROM CONTROLLER TO UNIT MOUNTED VFD.

(6) PROVIDE BUILDING AUTOMATION SYSTEM INTEGRATION.

FUME EXTRACTOR (FE) SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER FAN	EXTRACTOR	HOSE EXT	TYPE	FAN AIRFLOW (CFM)	E.S.P (IN...	MOTOR (HP)	SPEED (RPM)	ELECTRICAL (VOLTS/PH)	EXTRACTOR OPERATOR	MOUNTING	TUBING DIA. (IN)	LENGTH (FT)	(1) INTERLOCK FAN WITH	ACCESSORIES	(2) (3) MTG HEIGHT	WEIGHT (LBS)	SERVES	REMARKS
FE-1	CAR-MON	CMW-13	WX-150		1	1000	4	1.5	3450	208/3	MN	WALL FLANGE	8"		WALL SW	1,8	10'	150	WELDING	
FE-2	CAR-MON	CMW-13	TSR-P36	HTC	1	1000	4	2	3450	208/3	MD	8' SWING BOOM	8"	20'	CONTROLLER	1,3,7,8	12'	250	VEH EXHAUST	4
FE-3	CAR-MON	DXI-12...	TSR-P36	HTC	1	1400	5	3	3450	208/3	MD	8' SWING BOOM	8"	20'	CONTROLLER	1,3,7,8	12'	250	VEH EXHAUST	15L DIESEL ENG., 4

TYPE		REEL OPERATOR		DRUM MOUNTING		ACCESSORIES			
1	FLANGE MOUNTED, DIRECT DRIVE	MD	MOTOR DRIVEN	WALL	WALL MOUNTED	1	BOOM POSITIONER	5	WALL MOUNTED REEL DRIVE SWITCH
2	UTILITY SET, BELT DRIVE	MN	MANUAL CABLE WINCH	CLG	CEILING MOUNTED	2	MAGNETIC EXHAUST PIPE GRABBER	6	WIRELESS REEL DRIVE REMOTE
		SL	SPRING LOADED LATCH	BOOM	BOOM MOUNTED	3	STAINLESS CONE W/PIPE CLAMP	7	PENDANT REEL DRIVE
						4	EXHAUST NOZZLE WITH DAMPER	8	STARTER

REMARKS

(1) SEE SEQUENCE OF OPERATION SPECIFICATION SECTION 230993

(2) APPROX. MOUNTING HEIGHT IS FROM FINISHED FLOOR LEVEL TO BOTTOM OF REEL

(3) CONTRACTOR SHALL PROVIDE SHOP DRAWING TO ENGINEER SHOWING PROPOSED STRUCTURAL MOUNTING ARRANGEMENT PRIOR TO INSTALLATION

(4) VEHICLE FUME EXTRACTORS ARE NOT DESIGNED FOR REGENERATION TESTING AND HIGH RPM OVER 60 SECONDS.

INTAKE/RELIEF HOOD SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	INTAKE/ RELIEF	HOOD TYPE	MAXIMUM VELOCITY (FPM)	CAPACITY AIRFLOW (CFM)	CAPACITY PD (IN W.C.)	NECK SIZE (LxW) (IN)	HOOD SIZE (LxW) (IN)	CURB HEIGHT (IN)	APPROX HEIGHT W/ CURB (IN)	DAMPER	SYSTEM SERVED	WEIGHT INCL. CURB (LBS)	LOCATION	REMARKS
IH-1	GREENHECK WIH	INTAKE	2	600	4,600	0.1	24x48	32X56	18	38	M-PB	AHU-2	125	ROOF	(1) (2)

HOOD TYPE		DAMPER			
1	DOMED	G	GRAVITY	PB	PARALLEL BLADE
2	LOUVERED	M	MOTORIZED	OB	OPPOSED BLADE
3	HOODED				

REMARKS:

(1) MOTORIZED BACKDRAFT DAMPERS (115V - THROAT SIZE) TO BE EQUAL TO TAMPCO 9000.

(2) PROVIDE BIRDSCREEN.

Mead & Hunt

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Madison Water Utility
Quality and Reliability since 1887
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL

DO NOT SCALE DRAWINGS

SHEET CONTENTS
MECHANICAL SCHEDULES

SHEET NO.:
M-602

6/12/2015 2:10:37 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt

MAKE-UP AIR UNIT (MAU) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	FIRE TYPE	SUPPLY AIR FLOW HIGH SPEED (CFM)	SUPPLY AIR FLOW LOW SPEED (CFM)	(1) MIN. OUTDOOR AIR FLOW (CFM)	SUPPLY FAN E.S.P. (IN WC)	SUPPLY FAN MOTOR ENCL. TYPE	SUPPLY FAN MOTOR POWER (HP)	MIN. INLET TEMP. (°F)	HEATER INPUT (MBH)	HEATER OUTPUT (MBH)	HEATER HEAT EXCHR. MATL.	HEATER STAGES	HEATER VENT TYPE	COOLING COIL TAG	FILTER TYPE	ELECTRICAL VOLTS/PH	ELECTRICAL FLA	(2) INTERLOCK WITH	(3) MTG. HEIGHT (FT)	LOCATION	(4) ACCESSORIES	WEIGHT (LB)	REMARKS
MAU-1	GREENHECK, DGX-112-H12	I	D	2,000	-	2,000	0.5	ODP	1.0	-10	150	140	SS	MOD 25/1	-	-	2T	208/3		EF-G1	8'-0"	SEE PLANS	3,13	800	4, 5, 6, 7
MAU-2	GREENHECK, DGX-112-H22	I	D	4,000	-	4,000	0.5	ODP	2.0	-10	300	285	SS	MOD 25/1	-	-	2T	208/3		EF-G2, EF-G3	8'-0"	SEE PLANS	3,13	1200	4, 5, 6
MAU-3	GREENHECK, DGX-120-H32	I	D	8,000	-	8000	0.5	ODP	5.0	-10	600	570	SS	MOD 25/1	-	-	2T	208/3		EF-W1	12'-0"	SEE PLANS	3,13	1600	4, 5, 6

TYPE		FIRE TYPE		MOTOR ENCLOSURE TYPE		HEAT EXHANGER MATERIAL		HEATER STAGES		VENT TYPE		FILTER TYPE		ACCESSORIES		ACCESSORIES	
I	INDOOR	D	DIRECT	ODP	OPEN DRIP PROOF	AL ST	ALUMINIZED STEEL	1	1-STAGE	G	GRAVITY	1W	1" WASHABLE	1	INTAKE HOOD	8	THERMOSTAT
O	OUTDOOR	I	INDIRECT	TEFC	TOTALLY ENCLOSED, FAN COOLED	SS	STAINLESS STEEL	2	2-STAGE	F	FORCED DRAFT	2W	2" WASHABLE	2	ROOF CURB	9	UNIT-MOUNTED CONTROL PANEL
V	VERTICAL			XP	EXPLOSION PROOF			3	3-STAGE	SC	SEALED COMBUSTION	1T	1" THROWAWAY	3	DISCONNECT SWITCH	10	REMOTE CONTROL PANEL
H	HORIZONTAL							4	4-STAGE			2T	2" THROWAWAY	4	INLET DAMPER	11	7-DAY TIME CLOCK
								MOD, XX	MODULATING TO XX%					5	RETURN AIR DAMPER	12	24-HOUR TIME CLOCK
														6	FREEZESTAT	13	DDC INTERFACE
														7	CLOGGED FILTER SWITCH	14	DISCHARGE GRILLE

REMARKS:

(1) AT HIGH SPEED.
(2) PROVIDE BAS CONTROL INTERFACE. SEE SEQUENCE OF OPERATION FOR DETAILS. PROVIDE DISCHARGE TEMPERATURE CONTROL BY EXTERNAL DDC SIGNAL.
(3) APPROX. MOUNTING HEIGHT SHALL BE FROM FINISHED FLOOR OR MEZZANINE TO BOTTOM OF UNIT.
(4) PROVIDE DOUBLE WALL INSULATED HOUSING W/ PANEL BOTTOM. PROVIDE HORIZONTAL DISCHARGE W/ GRILLE SUPPLIED BY UNIT MANUFACTURER.
(5) SEE SPECIFICATION FOR OTHER ACCESSORIES.
(6) PROVIDE (2) NO AND (2) NC AUXILARY CONTACTORS ON STARTER.
(7) PROVIDE SINGLE POINT POWER CONNECTION FOR ALL HIGH AND LOW VOLTAGE CONNECTIONS.

WALL FIN (WF) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TOTAL CAP. (MBH)	EAT (F)	MEDIA TYPE	EMT (F)	LMT (F)	MEDIA FLOW RATE (GPM)	MAX. PRESS. DROP (FT)	ELEMENT (2) HEIGHT (IN)	ELEMENT (2) TUBE THICKNESS (IN)	ELEMENT (2) NO. OF TUBES	ELEMENT (2) APPROX LENGTH (FT)	MTG TYPE	(1) MTG. HEIGHT (IN)	LOCATION	REMARKS
WF-1	RUNTAL, RF-3	4.8	65	30% EG	160	140	0.5	0.5	8 3/4	0.058	3	8	W	4"	SEE PLANS	
WF-2	RUNTAL, RF-3	14.4	65	30% EG	160	140	1.4	0.5	8 3/4	0.058	3	24	W	4"	SEE PLANS	

MOUNTING TYPE	
W	WALL
F	FLOOR

REMARKS:

(1) MOUNTING HEIGHT IS TO BOTTOM OF ELEMENT
(2) ACTUAL WALL FIN LENGTH TO BE FIELD COORDINATED.
(3) PROVIDE ALL REQUIRED ACCESSORIES FOR CONTINUOUS APPEARANCE.

CABINET UNIT HEATER (CUH) SCHEDULE

MARK	MANUFACTURER, MODEL...	AIR FLOW (CFM)	EAT (F)	LAT (F)	HEATING MEDIA TYPE	HEATING CAPACITY MBH	HEATING CAPACITY COIL	HEATING FLOWRATE GPM	HEATING FLOWRATE WPD	EWT (F)	LWT (F)	ELECTRICAL (VOLT/PH)	FAN MOTOR HP	FAN MOTOR RPM	CABINET SIZE (IN) W	CABINET SIZE (IN) L	CABINET SIZE (IN) H	(1) MOUNTING HEIGHT (IN)	(1) MOUNTING ORIENT.	(1) MOUNTING TYPE	INLET LOCATION	OUTLET LOCATION	LOCATION	REMARKS
CUH-1	TRANE B 02 (FORCE-FLOW)	200	60	135	30% EG	15	2-ROW	1.0	3.0	160	130	115/1	0 1/15	600	10	34	26	FLR	VERT	W	BOTTOM	TOP	STAIR S-5	2,3
CUH-2	TRANE B 02	200	60	110	30% EG	10	2-ROW	0.7	3.0	160	130	115/1	0 1/15	600	10	34	26	FLR	VERT	W	BOTTOM	TOP	M. LOCKER 120	2,3
CUH-3	TRANE B 02	200	60	110	30% EG	10	2-ROW	0.7	3.0	160	130	115/1	0 1/15	600	10	34	26	FLR	VERT	W	BOTTOM	TOP	VEST 100	2,3
CUH-4	TRANE H 04	375	60	110	30% EG	20	2-ROW	1.3	3.0	160	130	115/1	0 1/15	600	10	48	30	4	VERT	R	FRONT	FRONT	STAIR S-1-1	2,3
CUH-5	TRANE B 02	200	60	135	30% EG	15	2-ROW	1.0	3.0	160	130	115/1	0 1/15	600	10	34	26	FLR	VERT	W	BOTTOM	TOP	STOR. 103-2	2,3
CUH-6	TRANE B 02	200	60	85	30% EG	5	2-ROW	0.5	3.0	160	130	115/1	0 1/15	600	10	34	26	FLR	VERT	W	BOTTOM	TOP	STAIR S-3	2,3
CUH-7	TRANE B 02	200	60	135	30% EG	15	2-ROW	1.0	3.0	160	130	115/1	0 1/15	600	10	34	26	FLR	VERT	W	BOTTOM	TOP	VEST 120	2,3

MOUNTING TYPE	
R	RECESSED
S	SEMI-RECESSED
C	CEILING
F	FLOOR STANDING
W	WALL

REMARKS:

(1) MOUNTING HEIGHT IS FROM BOTTOM OF UNIT TO FINISHED FLOOR.
(2) PROVIDE WITH DISCONNECT SWITCH.
(3) CABINET HEATER CAPACITIES SHALL BE BASED ON 30% ETHYLENE GLYCOL SOLUTION.

UNIT HEATER (UH) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	CAPACITY (MBH)	AIR FLOW (CFM)	AIRFLOW HORIZ. OR VERT.	OUTLET VELOCITY (FPM)	MOTOR (HP)	ELECTRICAL (VOLTS/PH)	EAT (F)	LAT (F)	WATER FLOW (GPM)	WATER PD (FT)	WATER EWT (F)	WATER LWT (F)	(1) MTG HEIGHT	WEIGHT (LBS)	LOCATION	ACCESSORIES	REMARKS
UH-1	TRANE 122-P	HYD	50.0	1,800	VERT	1200	1/6	115/1	60	85	5.0	1.0	160	140	26'	75	WELDING 141	1,5,8	
UH-2	TRANE 122-P	HYD	50.0	1,800	VERT	1200	1/6	115/1	60		5.0		160	140	26'	75	WELDING 141	1,5,8	
UH-3	TRANE 146-P	HYD	75.0	2,200	VERT	1000	1/6	115/1	60	95	7.5	1.0	160	140	28'	100	SERVICE BAY 2	1,5,8	
UH-4	TRANE 146-P	HYD	75.0	2,200	VERT	1000	1/6	115/1	60	95	7.5	1.0	160	140	28'	100	SERVICE BAY 2	1,5,8	
UH-5	TRANE 146-P	HYD	75.0	2,200	VERT	1000	1/6	115/1	60	95	7.5	1.0	160	140	28'	100	SERVICE BAY 1	1,5,8	
UH-6	TRANE 146-P	HYD	75.0	2,200	VERT	1000	1/6	115/1	60	95	7.5	1.0	160	140	28'	100	SERVICE BAY 1	1,5,8	
UH-7	TRANE 60-S	HYD	20.0	800	HOR	300	1/20	115/1	60	85	2.0	1.0	160	140	12'	50	MEZZANINE	5,8	
UH-8	TRANE 202-P	HYD	100.0	3,200	VERT	1500	1/4	115/1	60	90	10.0	1.0	160	140	24'	125	WELL SHOP	1,5,8	
UH-9	TRANE 202-P	HYD	100.0	3,200	VERT	1500	1/4	115/1	60	90	10.0	1.0	160	140	24'	125	WELL SHOP	1,5,8	
UH-10	TRANE 60-S	HYD	20.0	800	HOR	300	1/20	115/1	60	85	2.0	1.0	160	140	8'	50	BOILER RM	5,8	

TYPE		VENT TYPE		ACCESSORIES		ACCESSORIES	
HYD	HYDRONIC	GV	GRAVITY VENT	1	LOUVER CONE DIFFUSER	5	MFR. SUPPLIED MOUNTING...
STM	STEAM	PV	POWER VENT	2	DOWN TURN AIR NOZZLE	6	INTEGRAL THERMOSTAT
GAS	GAS-FIRED	S	SEPARATED COMBUSTION	3	STAINLESS STEEL HEAT EXCHANGER	7	REMOTE THERMOSTAT
ELEC	ELECTRIC					8	DISCONNECT SWITCH
EX	EXPLOSION PROOF			4	STAINLESS STEEL BURNER		
WD	WASH DOWN						

REMARKS:

(1) MOUNTING HEIGHT SHALL BE FROM FINISHED FLOOR TO BOTTOM OF UNIT IN FEET. COORDINATE W/ ARCHITECTURAL DRAWINGS.
(2) UNIT HEATER CAPACITIES SHALL BE BASED ON 30% ETHYLENE GLYCOL SOLUTION.

RADIANT FLOOR HEATING ZONE SCHEDULE

MARK	TUBE SIZE (IN)	TUBE DISTANCE ON CENTER (IN)	WATER TEMP DROP	SPACE LOAD (MBH)	UNIT HEATING LOAD (BTU/SF)	MAXIMUM LOOP LENGTH (FT)	SELECTOR NUMBER OF LOOPS	INDIVIDUAL LOOP LENGTH (FT)	INDIVIDUAL LOOP FLOW (GPM)	TOTAL ZONE FLOW (GPM)	TOTAL LOOP HEAD PRESSURE (FT. H20)	ASSOCIATED PUMP	SERVES
RZ-1	0 5/8	18	15.0	30	15	400	5	300-400	0.8	4	10	P-R1	WELDING BAY
RZ-2	0 5/8	18	15.0	35	15	400	5	300-400	0.8	4	10	P-R2	SERVICE BAY 2
RZ-3	0 5/8	18	15.0	33	15	400	5	300-400	0.8	4	10	P-R3	SERVICE BAY 1

REMARKS

(1) RADIANT ZONE MANIFOLD, VALVES AND PUMP ARE TO BE A PACKAGED SYSTEM ENCLOSED WITHIN AN 18-GAUGE 304 STAINLESS STEEL CABINET (APPROX. 36"X36"X8" DEEP) WITH FULL FRONT ACCESS.
(2) RADIANT ZONE SYSTEM CAPACITIES ARE BASED ON 120°F INLET TEMPERATURE.
(3) REFER TO PUMP SCHEDULE (P-R1,R2,R3) FOR PUMP REQUIREMENTS.

VARIABLE FREQUENCY DRIVE (VFD) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	MOTOR (HP)	VOLTS/ PHASE	ENCLOSURE	ACCESSORIES INTEGRAL DISCONNECT	ACCESSORIES MANUAL BYPASS	SERVES	LOCATION	REMARKS
VFD-1	ABB ACH550	7.5	208/3	NEMA 1	YES	NO	AHU-1		1,2
VFD-2	ABB ACH550	7.5	208/3	NEMA 1	YES	NO	AHU-2		1,2
VFD-R1	ABB ACH550	0 3/4	208/3	NEMA 1	YES	NO	RF-1		1,2
VFD-R2	ABB ACH550	0 3/4	208/3	NEMA 1	YES	NO	RF-2		1,2
VFD-P1	ABB ACH550	3	208/3	NEMA 1	YES	NO	HWP-1		1,2
VFD-P2	ABB ACH550	3	208/3	NEMA 1	YES	NO	HWP-2		1,2

REMARKS:

(1) INTEGRATE SERIAL COMMUNICATIONS W/ BUILDING AUTOMATION SYSTEM (BAS).
(2) PROVIDE INTEGRAL FUSIBLE DISCONNECT.
(3) REFER TO SPECIFICATION SECTION 230513 'MOTORS & VARIABLE FREQUENCY DRIVES FOR HVAC' FOR ADDITIONAL REQUIREMENTS.

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06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
MECHANICAL SCHEDULES

SHEET NO.:
M-603

6/12/2015 2:10:55 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt

GAS PRESSURE REGULATOR (GPR) SCHEDULE

MARK	MANUFACTURER, TYPE	MEDIA TYPE	VALVE SIZE (IN)	ENTERING PRESS. (PSIG)	EXITING PRESS. (PSIG)	CAPACITY (CFH)	SERVES	LOCATION	REMARKS
GPR-1	MAXITROL, APPLIANCE	NG	1	2	1/2	750	HWB-1	SEE PLANS	
GPR-2	MAXITROL, APPLIANCE	NG	1	2	1/2	750	HWB-1	SEE PLANS	
GPR-3	MAXITROL, APPLIANCE	NG	3/4	2	1/2	300	GWH-1	SEE PLANS	
GPR-4	MAXITROL, APPLIANCE	NG	3/4	2	1/2	150	MAU-1	SEE PLANS	
GPR-5	MAXITROL, APPLIANCE	NG	3/4	2	1/2	300	MAU-2	SEE PLANS	
GPR-6	MAXITROL, APPLIANCE	NG	1	2	1/2	600	MAU-3	SEE PLANS	

REMARKS:

SAFETY RELIEF VALVE (SRV) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	RELIEF CAPACITY (MBH)	MEDIA TYPE	MEDIA RELIEF PRESSURE (PSI)	SIZE INLET (IN)	SIZE OUTLET (IN)	DISCHAR... AREA (SQ IN)	SERVES	LOCATION	REMARKS
SRV-1	BELL & GOSSETT	1000	30% EG	60	3/4"	3/4"	1	HWS	BOILER 104	

REMARKS
(1) SAFETY RELIEF VALVE DISCHARGE TO BE PIPED TO ASSOC. GLYCOL FILL TANKS.

PUMP (P) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	SYSTEM SERVED	FLOW RATE (GPM)	TDH (FT)	MOTOR POWER (BHP)	MOTOR POWER (HP)	MOTOR SPEED (RPM)	MOTOR (VOLTS/ PHASE)	IMPELLER DIA. (IN)	PUMP EFF. (%)	MAX. FLUID TEMP. (F)	SIZE SUCTION (IN)	SIZE DISCHARGE (IN)	NPSHA (FT)	SUCTION DIFFUSER (IN)	TRIPLE DUTY VALVE (IN)	WEIGHT (LBS)	LOCATION	REMARKS
HWP-1	BELL & GOSSETT, 1510 2BC	FMES	HOT WATER	100	45	2.0	3.0	1,750	208/3	7	60.0	200	2-1/2	2	10	2 1/2 x 2 1/2	3	250	BOILER 104	1,2
HWP-2	BELL & GOSSETT, 1510 2BC	FMES	HOT WATER	100	45	2.0	3.0	1,750	208/3	7	60.0	200	2-1/2	2	10	2 1/2 x 2 1/2	3	250	BOILER 104	1,2
BP-1	BELL & GOSSETT, SERIES 60 2x6 1/4	IL	BOILER	75	20	0.7	1	1,750	208/3	5 1/8	65.0	200	2	2	10	-	-	100		2
BP-2	BELL & GOSSETT, SERIES 60 2x6 1/4	IL	BOILER	75	20	0.7	1	1,750	208/3	5 1/8	65.0	200	2	2	10	-	-	100		2
P-R1	BELL & GOSSETT, NBF-22	C	RAD. ZONE 1	4	10	-	1/20	2,900	115/1	2	-	200	1.0	1.0	-	-	-	10		2
P-R2	BELL & GOSSETT, NBF-22	C	RAD. ZONE 2	4	10	-	1/20	2,900	115/1	2	-	200	1.0	1.0	-	-	-	10		2
P-R3	BELL & GOSSETT, NBF-22	C	RAD. ZONE 3	4	10	-	1/20	2,900	115/1	2	-	200	1.0	1.0	-	-	-	10		2

TYPE			
IL	IN-LINE	SS	SUBMERSIBLE PUMP
VT	VERTICAL TURBINE	VS	VERTICAL SUBMERSIBLE
CCES	CLOSE COUPLED END SUCTION	ES	EFFLUENT SUMP
FMES	FRAME MOUNTED END SUCTION	SE	SEWAGE EJECTOR
DS	DOUBLE SUCTION	WRC	WET ROTOR CIRCULATOR

REMARKS:
(1) PROVIDE WITH VFD RATED MOTORS.
(2) PUMP RATINGS TO BE CORRECTED FOR 30% E. GLYCOL MEDIA..

GLYCOL FILL TANK (GFT) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TANK CAPACITY (GAL)	FLOWRATE (GPM)	HEAD PRESS. (PSI)	PRESS. SWITCH IN/OUT (PSI)	PRESS. RELIEF (PSI)	SYSTEM CONNECTION SIZE (IN)	GEAR PUMP (HP)	ELECTRICAL (V/PH)	SYSTEM	WEIGHT (LBS)	LOCATION	REMARKS
GFT-1	WINGERT, GL50-E1	50	2	30	10/20	50	3/4	1/3	115/1	HOT WATER	550	BOILER RM 104	

REMARKS:
(1) NEMA 4X CONTROL PANEL TO INCLUDE 2-POSITION MAIN POWER SWITCH AND H.O.A. SWITCH.
(2) PROVIDE DRY CONTACT FOR LOW LEVEL ALARM.

EXPANSION TANK (ET) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	SYSTEM	SYSTEM VOLUME (GAL)	TANK VOLUME (GAL)	MINIMAL ACCEPTANCE VOLUME (GAL) (MAX.)	DIMENSIONS DIA. (IN)	DIMENSIONS HEIGHT (IN)	DIMENSIONS SYSTEM CONNECTION (IN)	AIR CHARGE PRESSURE (PSIG)	RELIEF PRESSURE (PSIG)	EMPTY WEIGHT (LBS)	OPER. WEIGHT (LBS)	LOCATION	REMARKS
ET-1	BELL & GOSSETT D-80V	HOT WATER		40	20	16	55	1	20	60	200	600	BOILER...	

REMARKS:
(1) TANK RATING BASED ON 30% ETHYLENE GLYCOL MIXTURE

HOT WATER BOILER (HWB) SCHEDULE

MARK	MANUFACTURER MODEL NUMBER	TYPE	INPUT MAX (MBH)	INPUT MIN (MBH)	OUTPUT MAX (MBH)	OUTPUT MIN (MBH)	(1) MIN. EFF. (%)	FUEL	FLUID	FLUID TEMP. (2) IN (F)	FLUID TEMP. (2) OUT (F)	ACCESSORIES	ELECTRICAL (VOLTS/PH)	ELECTRICAL (FLA)	EMPTY WEIGHT (LBS)	OPER. WEIGHT (LBS)	LOCATION	REMARKS
HWB-1	AERCO, BMK 750	CN	750	50	680	48	91	NG	30% EG	135	160	2,5,6,9	115/1	13	700	850	BOILER 104	-
HWB-2	AERCO, BMK 750	CN	750	50	680	48	91	NG	30% EG	135	160	2,5,6,9	115/1	13	700	850	BOILER 104	-

TYPE		FUEL		FLUID		ACCESSORIES			
CI	CAST IRON	NG	NATURAL GAS	WATER	WATER	1	VIBRATION ISOLATION CUBES	7	EXHAUST MUFFLER
CU	COPPER FIN TUBE	LP	PROPANE	XX% EG	XX% ETHYLENE GLYCOL	2	CONDENSATE LIQUID DRAINER	8	INTAKE MUFFLER
FT	FIRE TUBE	EL	ELECTRIC	XX% PG	XX% PROPYLENE GLYCOL	3	WATER PIPE FLEXIBLE CONNECTORS	9	CIRCULATING PUMP
PULSE	PULSE					4	VENT/COMB. AIR PIPE FLEX CONNECTORS		(SEE PUMP SCHEDULE)
CN	CONDENSING					5	SCREENED INLET		
WT	WATER TUBE					6	EXHAUST VENT CAP		

REMARKS;
(1) MINIMUM EFFICIENCY AT MAXIMUM OUTPUT AND 125 F RETURN WATER TEMPERATURE.
(2) FLUID TEMPERATURES AND PRESSURE DROP AT DESIGN FLOWRATE
(3) PROVIDE SCHEDULE 40 PVC INTAKE PIPING AND STAINLESS STEEL VENT PIPING.
(4) PROVIDE ALL REQUIRED STORM COLLARS AND ROOF FLASHING.
(5) GAS PRESSURE RANGE: 4" WG (MIN) - 14" WG (MAX)
(6) WATER FLOW RANGE: 25 GPM (MIN) - 175 GPM (MAX)

AIR SEPARATOR (AS) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	FLOWRATE (GPM)	FLOWRATE MAX. OR NOM.	MAX. PRESSURE DROP (FT WATER)	PIPE CONNECTION SIZE (IN)	PIPE CONNECTION THD OR FLG	INTEGRAL STRAINER?	SYSTEM	WEIGHT (LBS)	LOCATION	REMARKS
AS-1	BELL & GOSSETT RL-3	TAN	100	MAX.	1.0	3	FLG	N	HW	125	BOILER 104	

TYPE	
AS	AIR SCOOP
TAN	TANGENTIAL

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DESIGNED BY: MDW
DRAWN BY: MDW
CHECKED BY: DVL

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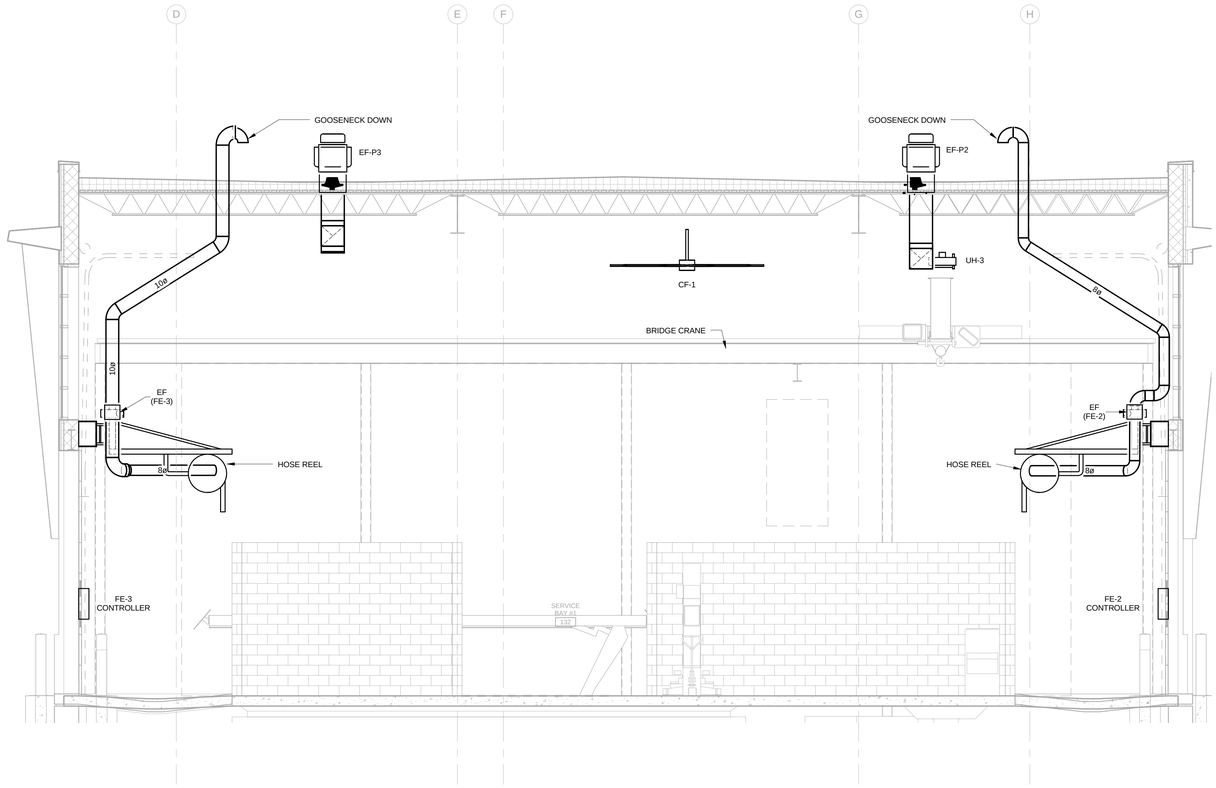
SHEET CONTENTS
MECHANICAL SCHEDULES

SHEET NO.:
M-604

6/12/2015 2:12:22 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt



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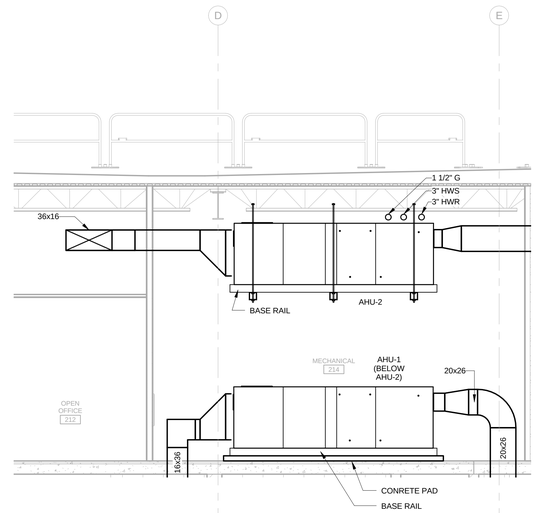
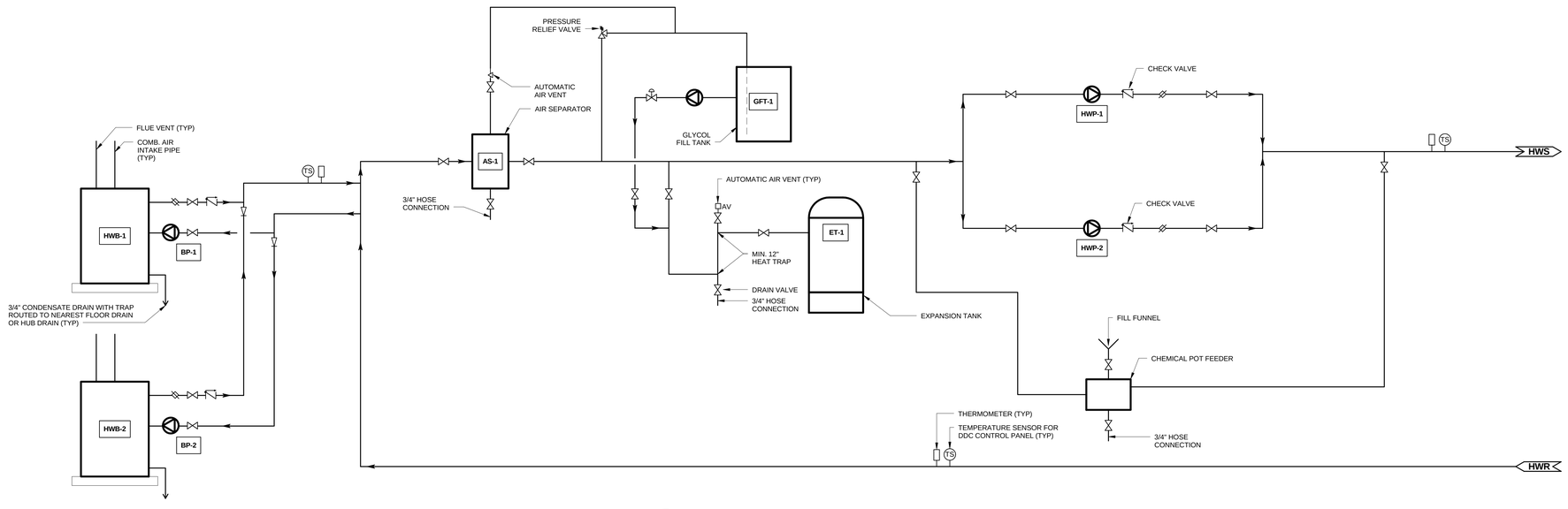
1/4" = 1'-0"



1 MECH ROOM SECTION
1/4" = 1'-0"



2 HOT WATER PIPING SCHEMATIC
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DATE: June 12, 2015
DESIGNED BY: MDW
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SHEET CONTENTS
MECHANICAL
SCHEMATICS

SHEET NO.:
M-701

6/12/2015 2:12:35 PM C:\Revit Local\3235300-131021-03-M-Central-2015_1760mdw.rvt

LUMINAIRE SYMBOLS

- RECESSED LUMINAIRE
- RECESSED TROFFER
- RECESSED LINEAR
- SURFACE ROUND LUMINAIRE
- SURFACE SQUARE LUMINAIRE
- SURFACE LINEAR
- SURFACE INDUSTRIAL
- SURFACE COVE STRIP
- PENDANT ROUND LUMINAIRE
- PENDANT SQUARE LUMINAIRE
- PENDANT LINEAR
- PENDANT INDUSTRIAL
- (#) TRACK (# INDICATES NUMBER TRACK HEADS)
- WALL BRACKET
- WALL SURFACE LINEAR
- WALL RECESSED LINEAR
- CEILING MOUNTED EXIT SIGN
- WALL MOUNTED EXIT SIGN
- WALL MOUNTED COMBINATION EXIT SIGN/EBU
- ARROW DENOTES EXIT SIGN CHEVRON
- EMERGENCY BATTERY UNIT
- RECESSED EMERGENCY BATTERY UNIT
- < WALL WASH MODIFIER
- EMERGENCY SHADING MODIFIER

LUMINAIRE CIRCUITRY & CONTROL KEY:

A1 — LUMINAIRE TYPE

1Ra

- LOWER CASE LETTER INDICATES SWITCHLEG CONTROL
- "R" INDICATES LIGHTING CONTROL PANEL REFER TO LIGHTING CONTROL PANEL SCHEDULE
- NUMBER INDICATES BRANCH PANEL CIRCUIT NUMBER

LUMINAIRE CONTROL SYMBOLS

OS 1	OCCUPANCY SENSOR CEILING MOUNT (x REPRESENTS SCHEDULE DESIGNATION)
DS	DAYLIGHT SENSOR , SEE OCCUPANCY SENSOR SCHEDULE
TC	ELECTRONIC TIME CLOCK
PE	PHOTO ELECTRIC CONTROL
LC	LIGHTING CONTACTOR
LCP X	LIGHTING CONTROL PANEL (x REPRESENTS PANEL DESIGNATION)
PT	UL 924 LISTED EMERGENCY LIGHTING BYPASS CONTROL UNIT
PP	POWER PACK USED IN CONJUNCTION WITH OCCUPANCY SENSORS OR DAYLIGHT SENSORS
PS	REMOTE POWER SUPPLY OR DRIVER
DR	DIMMER RACK
D	DIMMER CONTROL STATION MULTI-PRESET MODULAR DIMMING SYSTEM

DIMMER NOTATIONS:

MCS	DENOTES MASTER CONTROL STATION
RS	DENOTES REMOTE STATION
ES	ENTRY STATION
PS	PARTITION STATION

L *	LOW VOLTAGE SWITCH * DENOTES SWITCH NAME, SEE LIGHTING CONTROL PANEL & SWITCH SCHEDULE.
S	SINGLE POLE SWITCH

SWITCH NOTATIONS:

3	DENOTES 3-WAY SWITCH
4	DENOTES 4-WAY SWITCH
WL	DENOTES WET LOCATION SWITCH
D	DENOTES DIMMER SWITCH
T	DENOTES TIMER SWITCH
K	DENOTES KEY SWITCH
P	DENOTES PILOT SWITCH
O	DENOTES OCCUPANCY SENSOR (REFER TO OCCUPANCY SENSOR SCHEDULE)

SS	SWITCHES, FOR MULTI-LEVEL SWITCHING. REFER TO FLOOR PLANS AND FIXTURE SCHEDULE FOR EXACT CONTROL INTENT.
SWBK	SWITCHBANK

RACEWAY SYMBOLS

- SURFACE MOUNTED CONDUIT
- CONCEALED CONDUIT IN CEILING OR WALL
- WIREWAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
- CABLE TRAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
- UNDERFLOOR DUCT
- JUNCTION BOX - CEILING MOUNTED
- JUNCTION BOX - WALL MOUNTED
- HANDHOLE
- MANHOLE

RECEPTACLE SYMBOLS

- 60" DUPLEX RECEPTACLE TEXT INDICATES MOUNTING HEIGHT
- DOUBLE DUPLEX RECEPTACLE
- EMERGENCY POWER DUPLEX RECEPTACLE
- ABOVE COUNTER DUPLEX RECEPTACLE
- SIMPLEX RECEPTACLE
- SPLIT WIRED DUPLEX RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE, NEMA TYPE ON DRAWING
- F FLOOR BOX
- P POKE THRU
- C CEILING MOUNTED DUPLEX RECEPTACLE
- C CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE
- C CEILING MOUNTED SINGLE RECEPTACLE
- C SPECIAL PURPOSE RECEPTACLE, NEMA TYPE ON DRAWING
- E CORD REEL
- WELDING RECEPTACLE
- DISCONNECT/WELDING RECEPTACLE
- 4X DISCONNECT/WELDING RECEPTACLE, NEMA 4X
- MULTI-OUTLET SURFACE RACEWAY - REFER TO KEYED NOTES & SPECIFICATIONS FOR TYPES
- P DATA/POWER POLE

RECEPTACLE NOTATIONS:

a	DENOTES SWITCH LEG FOR SWITCHED OUTLETS
D	DENOTES DEDICATED OUTLETS
EWC	DENOTES ELECTRIC WATER COOLER OUTLETS
GFCI	DENOTES GROUND FAULT INTERRUPTER OUTLETS
IG	DENOTES ISOLATED GROUND OUTLETS
H	DENOTES HORIZONTALLY MOUNTED OUTLETS
TR	DENOTES TAMPER RESISTANT SAFETY OUTLETS
USB	DENOTES COMBINATION DUPLEX/USB OUTLETS
WP	DENOTES WEATHER PROOF OUTLETS
X1	DENOTES EXPLOSION PROOF CLASS 1 DIVISION 1 OUTLETS
X2	DENOTES EXPLOSION PROOF CLASS 1 DIVISION 2 OUTLETS
CRL	DENOTES CORD REEL LIGHT
CRR	DENOTES CORD REEL RECEPTACLE

SERVICE AND DISTRIBUTION SYMBOLS

GAP	GENERATOR ANNUNCIATOR PANEL
EPO	EMERGENCY POWER OFF
PFC	POWER FACTOR CORRECTION CAPACITOR
AHF	ACTIVE HARMONIC FILTER
	GROUND ACCESS WELL
	GROUND ROD
GR	GROUND RECEPTACLE
	LIGHTNING ROD
G	GROUNDING CONDUCTOR
	FEEDER BUS DUCT
	NEW PANELBOARD
	EXISTING PANELBOARD
C	CONTACTOR
P	PUSH BUTTON
EGB	EQUIPMENT GROUND BUS BAR

MOTOR & EQUIPMENT CONNECTION SYMBOLS

- 3 PHASE MOTOR CONNECTION
- 1 PHASE MOTOR CONNECTION
- EQUIPMENT CONNECTION
- COMBINATION MAGNETIC MOTOR CONTROLLER
- M MANUAL MOTOR CONTROLLER (3 PHASE)
- SS SOLID STATE MOTOR CONTROLLER
- VFD VARIABLE FREQUENCY MOTOR CONTROLLER
- MAGNETIC MOTOR CONTROLLER
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- DOUBLE THROW SWITCH
- S_F FUSED SINGLE POLE SWITCH
- S_M MOTOR RATED STARTER / DISCONNECT SWITCH

SITE SYMBOLS

- ELECTRIC TRANSFORMER
- E HANDHOLD, ELECTRIC
- HH HANDHOLD, GENERIC
- LIGHT GROUND MOUNT
- LIGHT POLE (SINGLE)

FIRE ALARM SYMBOLS

FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FSS	FIRE SUPPRESSION SYSTEM PANEL
KNOX	CABINET FOR HOLDING FIRE DEPARTMENT DOCUMENTS & KEYS WITH INTEGRAL TAMPER SWITCH. KNOX BRAND #4400 OR APPROVED EQUAL. SEE DRAWING ##.
FMCP	FIRE & MASS NOTIFICATION CONTROL PANEL
	FIRE ALARM PULL STATION
H	FIRE ALARM HORN
S	FIRE ALARM SPEAKER
## H	FIRE ALARM HORN/STROBE, (##) IS CANDELA RATING
## S	FIRE ALARM SPEAKER/STROBE, (##) IS CANDELA RATING
S	SUPERVISED FIRE ALARM HORN LOUDSPEAKER
##	FIRE ALARM STROBE, (##) IS CANDELA RATING
B	FIRE ALARM BELL
	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR
ER	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR FOR ELEVATOR RECALL
H	INTELLIGENT 135F FIXED & RATE OF RISE HEAT DETECTOR
H ##	CONVENTIONAL FIXED TEMP HEAT DETECTOR, (##) IS TEMP RATING
DS	INTELLIGENT PHOTOELECTRIC DUCT SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
##	CEILING MOUNTED FIRE ALARM STROBE, (##) IS CANDELA RATING
##	CEILING MOUNTED FIRE ALARM SPEAKER/STROBE, (##) IS CANDELA RATING
	CEILING MOUNTED FIRE ALARM SPEAKER
##	CEILING MOUNTED FIRE ALARM HORN/STROBE, (##) IS CANDELA RATING
	CEILING MOUNTED FIRE ALARM HORN
MM	NEW MONITOR MODULE
CM	NEW CONTROL MODULE
IM	NEW ISOLATOR MODULE
DH	NEW MAGNETIC DOOR HOLDER
ES	NEW ELECTRIC DOOR STRIKE
	NEW FIRE FIGHTERS TELEPHONE
	NEW FIRE FIGHTERS TELEPHONE JACK
FS	NEW SPRINKLER FLOW SWITCH
TS	NEW SPRINKLER TAMPER SWITCH
PE	NEW PRESSURE SWITCH
PS	NEW PRE-ACTION SOLENOID
RTS/I	NEW REMOTE TEST SWITCH WITH INDICATOR
HA	NEW HALON AUDIBLE ALARM
HP	NEW FIRE HALON PULL STATION
HS	NEW HALON STROBE

LINE TYPE KEY

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK DASHED LINE)
- EXISTING TO REMAIN WORK (THIN SOLID LINE)
- NEW WORK UNDER FLOOR BY THIS CONTRACTOR
- ONE-LINE EQUIPMENT ENCLOSURE
- PANEL DIVISION LINES
- CON — SITE UNDERGROUND CONDUIT
- //CON// — SITE REMOVED UNDERGROUND CONDUIT
- E — SITE UNDERGROUND ELECTRICAL CONDUIT
- //E// — SITE REMOVED UNDERGROUND ELECTRICAL CONDUIT

GENERAL SYMBOLS

#/E-###	DETAIL NUMBER / SHEET NUMBER
9.###	KEYED NOTE, USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.

PANEL DESIGNATION KEY

- FLOOR
- TYPE
- SYSTEM/SOURCE
- VOLTAGE
- SEQUENCE NUMBER OR LETTER

2 L N L 1

- NUMBER OR LETTER IN SEQUENCE I.E. 1,2,3 OR A,B,C
- L - 208Y/120V
H - 480Y/277V
- N - NORMAL BRANCH
U - UNINTERRUPTIBLE
E - EMERGENCY BRANCH (NEC 700)
X - LEGALLY REQUIRED STANDBY BRANCH (NEC 701)
O - OPTIONAL STANDBY BRANCH (NEC 702)
- L - LIGHTING PANEL BOARD
D - DISTRIBUTION PANEL BOARD
P - POWER/EQUIPMENT PANEL BOARD
R - RECEPTACLE PANEL BOARD
MS - MAIN SWITCHBOARD
MCC - MOTOR CONTROL CENTER
- G - GROUND FLOOR
B - BASEMENT FLOOR
1 - FIRST FLOOR
P - PENTHOUSE
M - MEZZANINE

ELECTRICAL ABBREVIATIONS

3R	NEMA 3R RATING
4X	NEMA 4X RATING
A/E	ARCHITECT / ENGINEER
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
APE	AIRCRAFT PROCESS EQUIPMENT
BLDG	BUILDING
C	CONDUIT
CF	CIRCULATION FAN
CHWP	CHILLED WATER PUMP
CP	CIRCULATION PUMP
CUH	CABINET UNIT HEATER
DH	DUCT HEATER
DISC	DISCONNECT
DO	DOOR OPERATOR
DWG	DRAWING
E/O	ELECTRICAL-TO-OPTICAL CONVERTER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY LIGHT
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
ES	EQUIPMENT SUPPLIER
ETR	EXISTING TO REMAIN
EWC	ELECTRICAL WATER COOLER
EWH	ELECTRICAL WATER HEATER
FA	FIRE ALARM
FAF	FORCED AIR FURNACE
FO	FIBER OPTIC
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
GWH	GAS WATER HEATER
HD	HAND DRYER
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWB	HOT WATER BOILER
HWP	HOT WATER PUMP
IDF	INTERMEDIATE DISTRIBUTION FRAME
IEWH	INSTANTANEOUS ELECTRIC WATER HEATER
IH	INFRARED HEATER
IMC	INTERMEDIATE METALLIC CONDUIT
IT	INFORMATION TECHNOLOGY
IWH	INSTANTANEOUS WATER HEATER
J-BOX	JUNCTION BOX
LBS	POUNDS
LFS	LIGHTING FIXTURE SCHEDULE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MM	MULTI-MODE FIBER OPTIC CABLE
MNS	MASS NOTIFICATION SYSTEM
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NL/EL	NIGHT LIGHT AND EMERGENCY LIGHT
NTS	NOT TO SCALE
NTWK	NETWORK (DATA)
O/E	OPTICAL-TO-ELECTRICAL CONVERTER
OC	ON CENTER
PVC	POLYVINYL CHLORIDE
RCP	RADIATE CEILING PANEL
REQ'D	REQUIRED
RF	RETURN FAN
SE	SERVICE ENTRANCE
SEC-P	SECURITY PANEL
SF	SUPPLY FAN
SM	SINGLE-MODE FIBER OPTIC CABLE
SP	SUMP PUMP
SS	STAINLESS STEEL
SW	SWITCH
SWBK	SWITCH BANK
TBR	TO BE REMOVED
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TYP	TYPICAL
UC	UNIT COOLER
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VER	VEHICLE EXHAUST REEL
VS	VERSUS
WFE	WELDING FUME EXTRACTOR
WL	WET LOCATION LISTED
WP	WEATHERPROOF
XFMR	TRANSFORMER

DEMOLITION GENERAL NOTES:

1. THE EXISTING BUILDING INFORMATION, INCLUDING BUT NOT LIMITED TO, ARCHITECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING, ELECTRICAL AND TECHNOLOGY, DEPICTED IN THESE CONSTRUCTION DOCUMENTS ARE BASED UPON EXISTING BUILDING DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION. THE ARCHITECT/ENGINEER MAKES NO WARRANTY OR REPRESENTATION WITH REFERENCE TO THE ACCURACY AND COMPLETENESS OF THE ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THE ACCURACY OF THE EXISTING CONDITIONS.
2. DASHED WALLS ON THE FLOOR PLANS INDICATE EXISTING WALLS BEING DEMOLISHED. REFER TO THE ARCHITECTURAL DEMOLITION PLANS FOR THE EXACT EXTENT OF WORK REQUIRED BY THIS PROJECT. REMOVE ALL DEVICES ON DASHED WALLS NOT SHOWN ON THE CONTRACT DRAWINGS. REFER TO DEMOLITION DRAWINGS OF OTHER TRADES. WHERE MOTORS CONTROL PANELS, AND OTHER LOADS OR APPARATUS THAT HAVE ELECTRICAL CONNECTION ARE BEING REMOVED, INCLUDE DISCONNECTION AND REMOVAL OF ALL ASSOCIATED CONDUIT, WIRING, ETC.
3. ELECTRICAL ITEMS (i.e., LIGHTING FIXTURES, PANELBOARDS, DISCONNECTS, MOTOR CONTROLLERS , ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER IN A STORAGE AREA TO BE DESIGNATED BY THE OWNER. EQUIPMENT BEING REMOVED SHALL BE HANDLED SO AS NOT TO FURTHER REDUCE ITS VALUE TO THE OWNER. THE CONTRACTOR SHALL DISPOSE OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN FOR MAINTENANCE PURPOSES.
4. WHERE LIGHTS, SWITCHES, RECEPTACLES, ETC., ARE BEING REMOVED ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE PANELBOARD OR FEEDER JUNCTION BOX SERVING THE DEVICE SHALL ALSO BE REMOVED, UNLESS THE CONDUIT CAN BE REUSED FOR NEW CONDUCTORS. THE CONTRACTOR SHALL DISPOSE OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN FOR MAINTENANCE PURPOSES.
5. ALL BOXES THAT REMAIN IN PLACE IN EXISTING MASONRY WALLS THAT ARE TO REMAIN SHALL BE PROVIDED WITH A BLANK COVERPLATE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH TYPE AND ATTACHMENT.
6. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE, AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC., SHALL ALSO BE REMOVED. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
7. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK, INCLUDING PHASING WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING ELECTRICAL AND INSTALLING NEW ITEMS.
8. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
9. MAINTAIN CONTINUITY OF DEVICES LOCATED OUTSIDE OF CONSTRUCTION AREA. DEVICE AND EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
10. BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCBs AND SHALL BE DISPOSED OF IN ACCORDANCE WITH SPECIFICATIONS.
11. HID AND FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF IN ACCORDANCE WITH SPECIFICATIONS.
12. CONTRACTOR SHALL REMOVE AND INSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK THAT IS OUTSIDE THE CONTRACT LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
13. PROVIDE REVISED TYPED CIRCUIT DIRECTORY IN PANELBOARDS THAT HAVE CIRCUITS REMOVED OR ADDED CIRCUITS.
14. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
15. REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT RACEWAY FLUSH WITH WALLS AND FLOORS, PATCH SURFACES TO MATCH EXISTING. REMOVE ALL ASSOCIATED CLAMPS, HANGERS, SUPPORTS, ETC. ASSOCIATED WITH RACEWAY REMOVAL.
16. DISCONNECT AND REMOVE ABANDONED LUMINAIRES, INCLUDING BRACKETS, STEMS, HANGERS, AND OTHER ACCESSORIES.
17. DISCONNECT AND REMOVED ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED.

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.

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110 S. Paterson Street, Madison, WI

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1 06/12/15 BID SET

M&H NO.:	3235300-131021.03
DATE:	June 12, 2015
DESIGNED BY:	MAM
DRAWN BY:	KAF
CHECKED BY:	MAS

DO NOT SCALE DRAWINGS

SHEET CONTENTS
NOTES, SYMBOLS & ABBREVIATIONS

SHEET NO.:
E-001

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KEYED NOTES:

9.XXX

9.002 EXISTING POWER & CONTROL WIRING CONDUIT TO FUEL PUMPS. REMOVAL BY OTHERS. DISCONNECT AND REMOVE CONDUITS AND WIRING BACK TO FUEL DISPENSER ISLAND. PROVIDE NECESSARY JUNCTION BOXES, CONDUIT AND WIRING TO PROVIDE TEMPORARY POWER AND CONTROL TO FUEL DISPENSERS DURING CONSTRUCTION. ALL ROUGH-IN SHALL BE IN ACCORDANCE WITH NEW ARTICLE 514. COORDINATE WORK WITH OWNER.

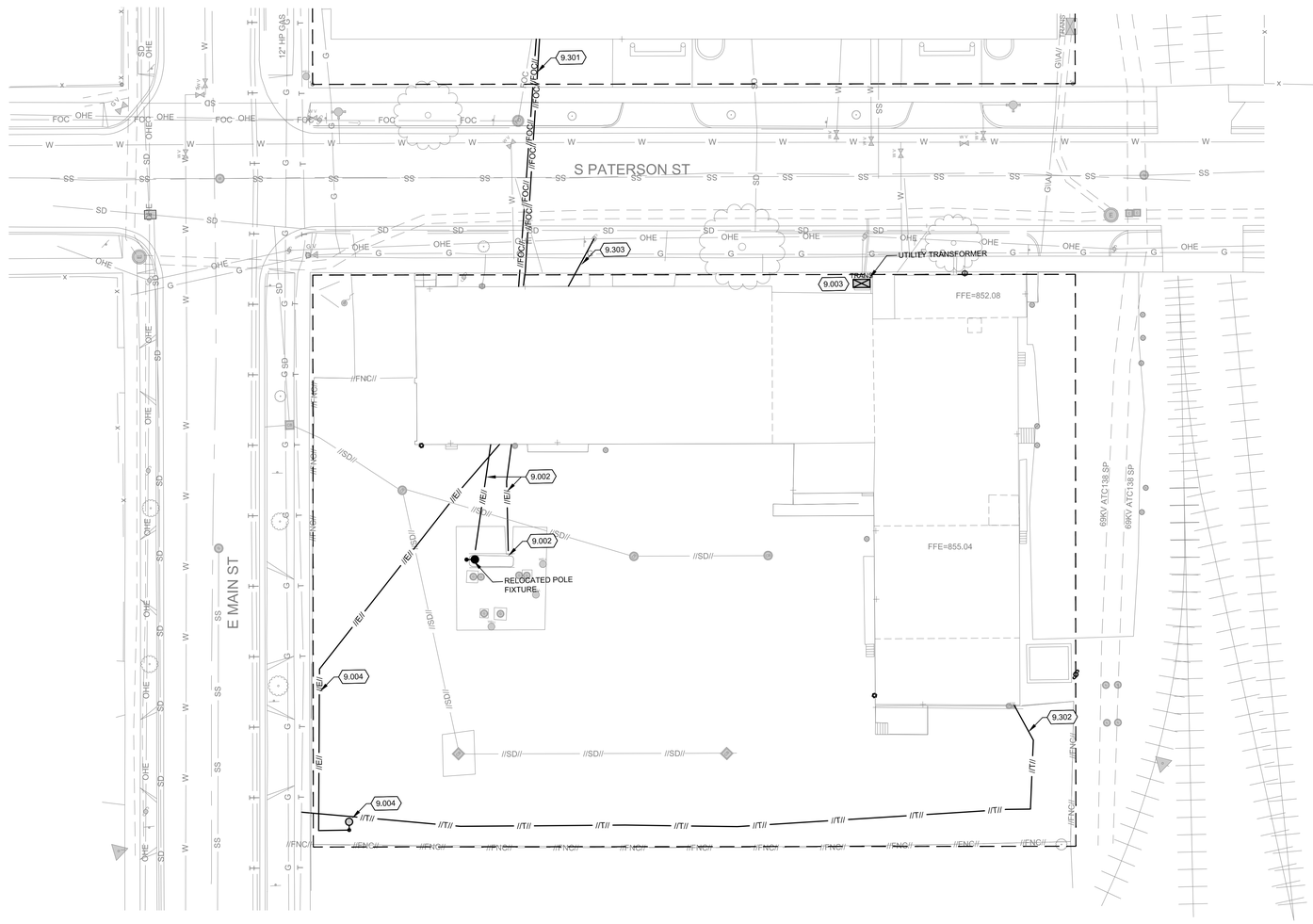
9.003 TRANSFORMER TO BE MAINTAINED DURING PHASE 1 DEMOLITION. UPON COMPLETION AND ENERGIZING OF NEW SERVICE EXISTING UTILITY TRANSFORMER SHALL BE REMOVED BY UTILITY CO.

9.004 REMOVE EXISTING POLE, BASE, WIRE AND CONDUIT BACK TO SOURCE. RETAIN EXISTING POLE AND LIGHT TO BE UTILIZED FOR PROVIDING TEMPORARY LIGHTING AT FUEL DISPENSER DURING CONSTRUCTION. SEE THIS SHEET FOR LOCATION. PROVIDE TEMPORARY POWER AND ON/OFF CONTROL THROUGH TEMPORARY CONSTRUCTION POWER. ON/OFF CONTROL CAN BE EITHER VIA TIME CLOCK OR PHOTOELECTRIC SWITCH.

9.301 EXISTING UNDERGROUND CONDUIT FROM VEHICLE MAINTENANCE BUILDING TO OPERATIONS BUILDING BENEATH PATERSON STREET, WITH (1) EXISTING FIBER OPTIC CABLE. CABLE IS TO BE REMOVED AND CONDUIT ABANDONED AFTER NEW UNDERGROUND FIBER CONDUIT AND FIBER OPTIC CABLING HAVE BEEN INSTALLED TO NEW DATA ROOM 215. REFER TO CIVIL AND SITE ELECTRICAL DRAWINGS.

9.302 EXISTING UNDERGROUND TELECOMMUNICATIONS CABLE. CABLE IS TO BE REMOVED BACK TO SOURCE. PATCH HOLE AT BUILDING.

9.303 LEGACY INCOMING TELECOMMUNICATIONS SERVICE AND TERMINATION EQUIPMENT TO BE REMOVED. CONFIRM ALL SERVICES HAVE BEEN DECOMMISSIONED BEFORE DEMOLITION.



TRUE NORTH PLAN NORTH

1

ELECTRICAL SITE DEMOLITION PLAN

1" = 20'

0 10 20 40

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110 S. Paterson Street, Madison, WI

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06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM/DP
DRAWN BY: KAF
CHECKED BY: MAS/FCB
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SHEET CONTENTS
ELECTRICAL SITE DEMOLITION PLAN

SHEET NO.
ED011

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6/9/2015 3:06:51 PM

GENERAL NOTES:

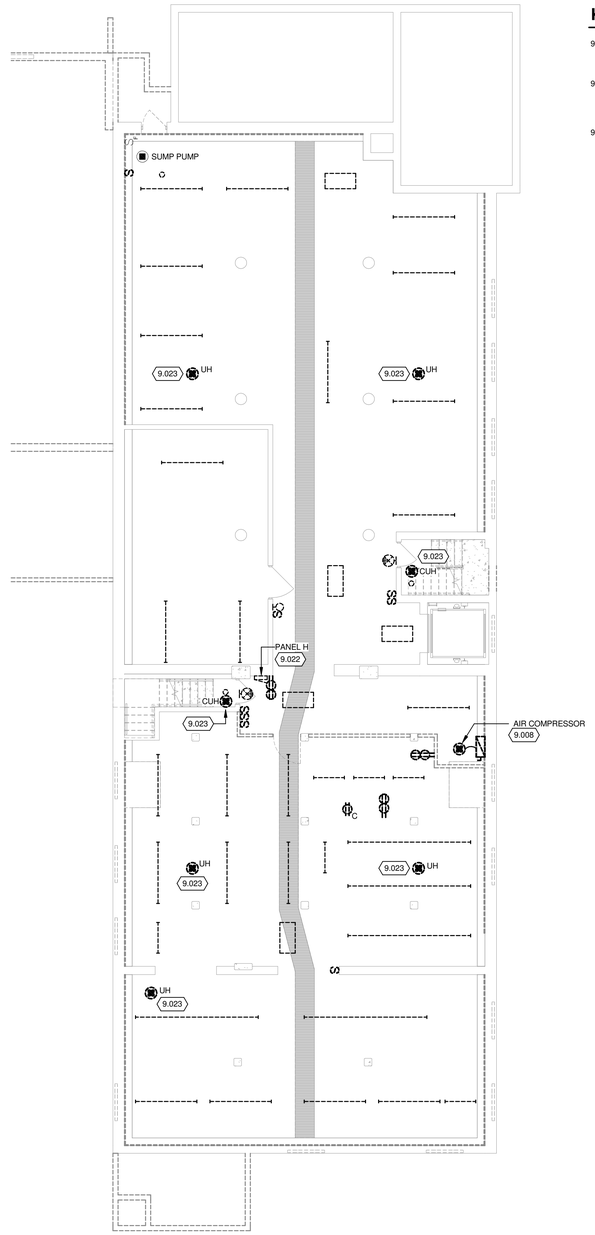
1. REFER TO DRAWING E-001 FOR SYMBOLS, ABBREVIATIONS & DEMOLITION GENERAL NOTES.
2. REFER TO DRAWINGS G-101, G-102, G-103 & G-104 FOR CONSTRUCTION PHASING PLANS.

KEYED NOTES

9.008 DISCONNECT POWER TO COMPRESSOR. REMOVE STARTER/DISCONNECT SWITCH AND ASSOCIATED CONDUIT AND WIRING BACK TO PANEL H. OWNER TO REMOVE COMPRESSOR.

9.022 EXTEND EXISTING 20A,120 VAC BRANCH CIRCUITS SERVING EXISTING REMEDIATION CONTROL PANEL, ELEVATOR SUMP PUMP AND EASTSIDE STOCK ROOM SUMP PUMP TO NEW PANEL "BRNL1" . MATCH EXISTING CONDUCTORS.

9.023 DISCONNECT POWER TO EQUIPMENT AND ASSOCIATED CONTROLLERS, ETC TO ALLOW REMOVAL BY MC.



TRUE NORTH PLAN NORTH

1 **BASEMENT FLOOR PLAN - DEMOLITION**

1/8" = 1'-0"

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SHEET CONTENTS
BASEMENT FLOOR PLAN - DEMOLITION

SHEET NO.:
ED100

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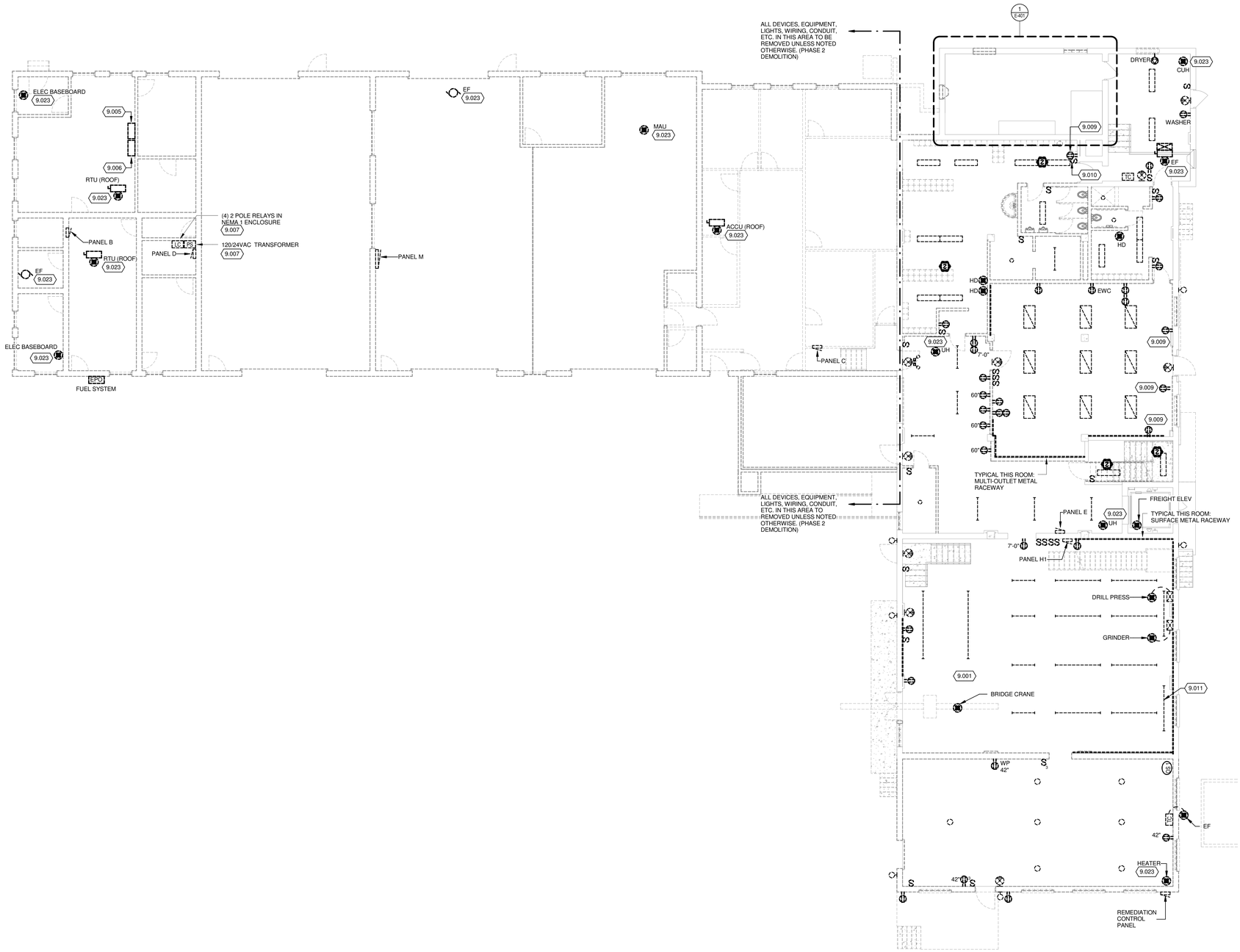

TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO DRAWING E-001 FOR SYMBOLS, ABBREVIATIONS & DEMOLITION GENERAL NOTES.
2. REFER TO DRAWINGS G-101, G-102, G-103 & G-104 FOR CONSTRUCTION PHASING PLANS.

KEYED NOTES

9.001 DISCONNECT POWER TO COLUMN RECEPTACLES PRIOR TO REMOVAL OF ENGINEERED MEZZANINE. REMOVAL OF MEZZANINE BY OTHERS.

9.005 GAS PUMP CONTROL AND ALARM PANEL. DISCONNECT POWER TO ALLOW REMOVAL AND RELOCATION BY FUEL SYSTEM PROVIDER/INSTALLER, OWNER.

9.006 FUEL SYSTEM MONITORING ALARM PANEL. DISCONNECT POWER TO ALLOW REMOVAL AND RELOCATION BY FUEL SYSTEM PROVIDER/INSTALLER,OWNER;.

9.007 GAS PUMP CONTROL TRANSFORMER AND CONTROL RELAYS. DISCONNECT POWER TO ALLOW REMOVAL AND RELOCATION BY FUEL SYSTEM PROVIDER/INSTALLED.

9.009 DISCONNECT AND REMOVE DEVICE AND WIRING BACK TO SOURCE. BACKBOX AND CONDUIT TO REMAIN IN PLACE FOR NEW DEVICE AND WIRING SHOWN ON DRAWING 1/E-131.

9.010 DISCONNECT AND REMOVE DEVICE AND WIRING BACK TO SOURCE. BACKBOX AND CONDUIT TO REMAIN ABANDON IN PLACE. CUT CONDUIT FLUSH WITH TOP OF WALL. PROVIDE BLANK DEVICE COVERPLATE TO MATCH OPENING.

9.011 TYPICAL THIS ROOM. ALL FIXTURES MOUNTED TO BOTTOM OF PORTABLE MEZZNINE. DISCONNECT AND ROMOVAL FIXTURES AND ASSOCIATED CONDUIT AND WIRING TO ALLOW REMOVEAL OF MEZZININE BY GC.

9.023 DISCONNECT POWER TO EQUIPMENT AND ASSOCIATED CONTROLLERS, ETC TO ALLOW REMOVAL BY MC.

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SHEET CONTENTS
FIRST FLOOR PLAN - DEMOLITION

SHEET NO.:
ED101

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GENERAL NOTES:

1. REFER TO DRAWING E-001 FOR SYMBOLS, ABBREVIATIONS & DEMOLITION GENERAL NOTES.
2. REFER TO DRAWINGS G-101, G-102, G-103 & G-104 FOR CONSTRUCTION PHASING PLANS.

KEYED NOTES

9.012 DISCONNECT AND REMOVE DEVICE AND WIRING BACK TO SOURCE. BACKBOX AND CONDUIT TO REMAIN IN PLACE FOR NEW DEVICE AND WIRING SHOWN ON DRAWING 1/E-132.

9.013 DISCONNECT AND REMOVE DEVICE AND WIRING BACK TO SOURCE AS PART OF PHASE 1 DEMO. BACKBOX AND CONDUIT MAY BE UTILIZED IN PLACE TO SERVE TEMPORARY DEVICE (S) AND WIRING SHOWN ON DRAWING 2/ED102. UNDER PHASE 3 DEMOLITION ALL CONDUIT, BACKBOX(S) AND WIRING TO BE DEMOLISHED.

9.014 PANEL 'F' TO REMAIN IN PLACE UNTIL PHASE 3 SECOND FLOOR DEMOLITION. REFER TO G-SERIES PHASING PLANS

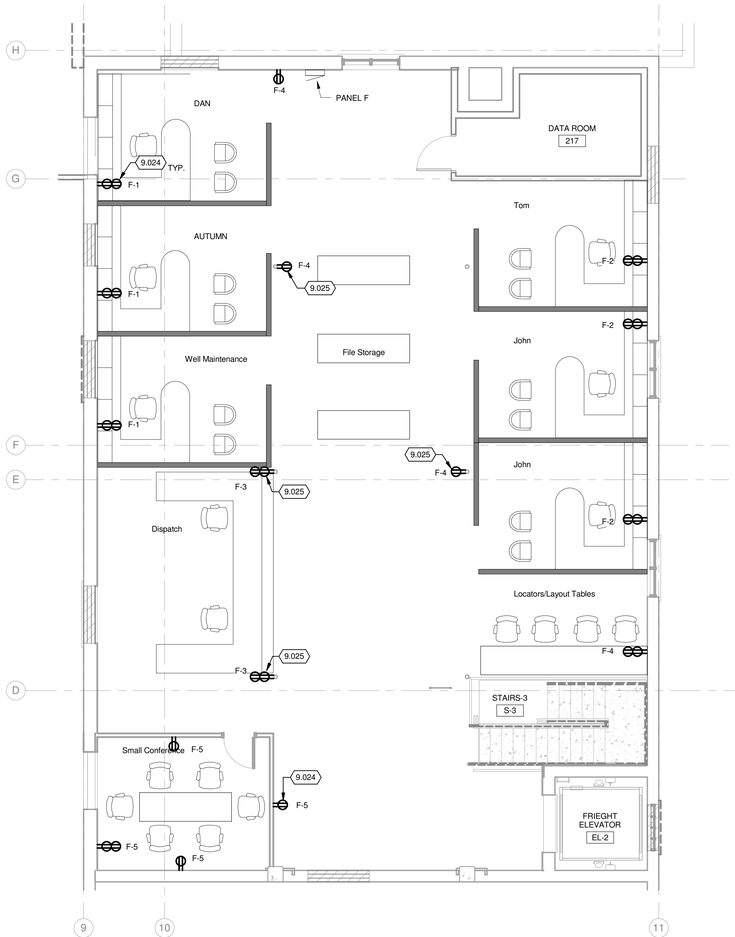
9.015 TYPICAL FOR ROOM: LIGHTING FIXTURES AND WIRING DEVICES TO REMAIN IN PLACE UNTIL PHASE 3 SECOND FLOOR DEMOLTION. REFER TO G-SERIES PHASING PLANS.

9.016 DISCONNECT AND REMOVE PANEL AND ALL ASSOCIATED CONDUIT AND WIRING.

9.017 MAINTAIN POWER TO RTU UNTIL PHASE 3 SECOND FLOOR DEMOLITION. REFER TO MD-SERIES DRAWINGS

9.024 DEVICE(S) NOTED WITH PANEL DESIGNATION 'F' ARE TEMPORAY AND MAYBE SURFACE MOUNTED. CIRCUIT NUMBERS INDICATED ARE NOT NECESSARYILY THE PANEL CIRCUIT NUMBER BUT ARE INDICATED TO SHOW INTENTED CIRCUIT GROUPING ONLY. CONNECT TO EXISTING 20A SPARE BREAKERS AND OR BREAKERS MADE AVAILABLE DURING DEMOLTION. INDICATED ON DRAWING 1/ED102.

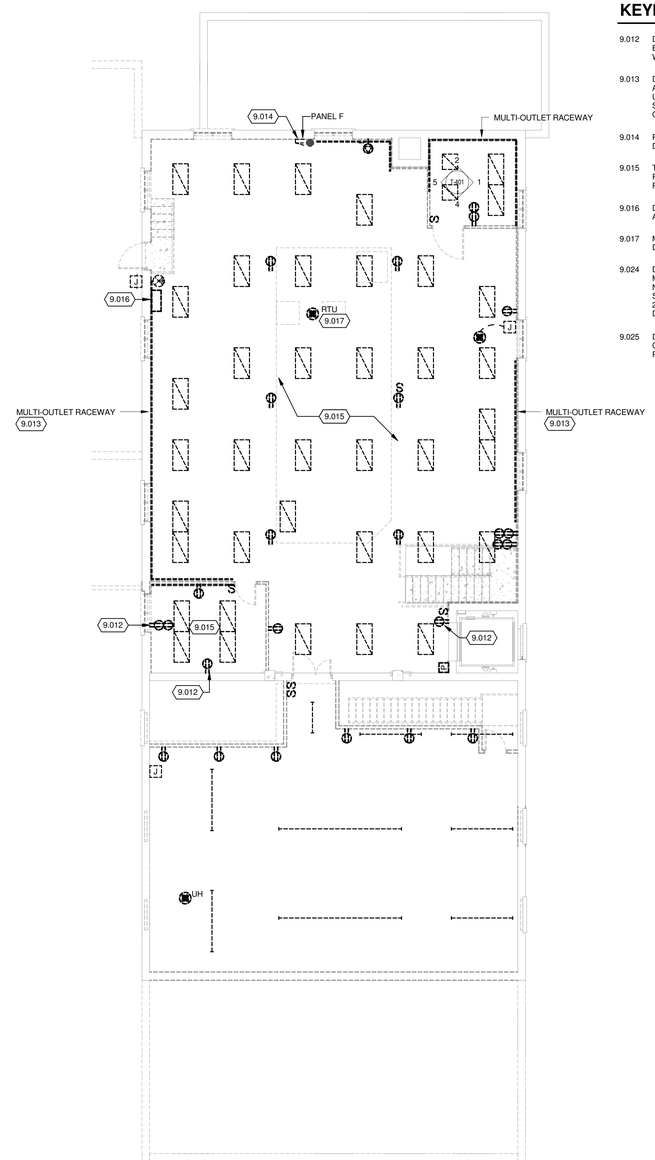
9.025 DEVICE SURFACE MOUNTED ON ROUND STEEL POST(COLUMN). COORDINATE EXACT LOCATION/ORENTATION WITH OWNER PRIOR TO ROUGH-IN.



TRUE NORTH PLAN NORTH

2 SECOND FLOOR PLAN - TEMPORARY POWER

3/16" = 1'-0"



TRUE NORTH PLAN NORTH

1 SECOND FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

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SHEET CONTENTS
SECOND FLOOR PLAN - DEMOLITION

SHEET NO.:
ED102

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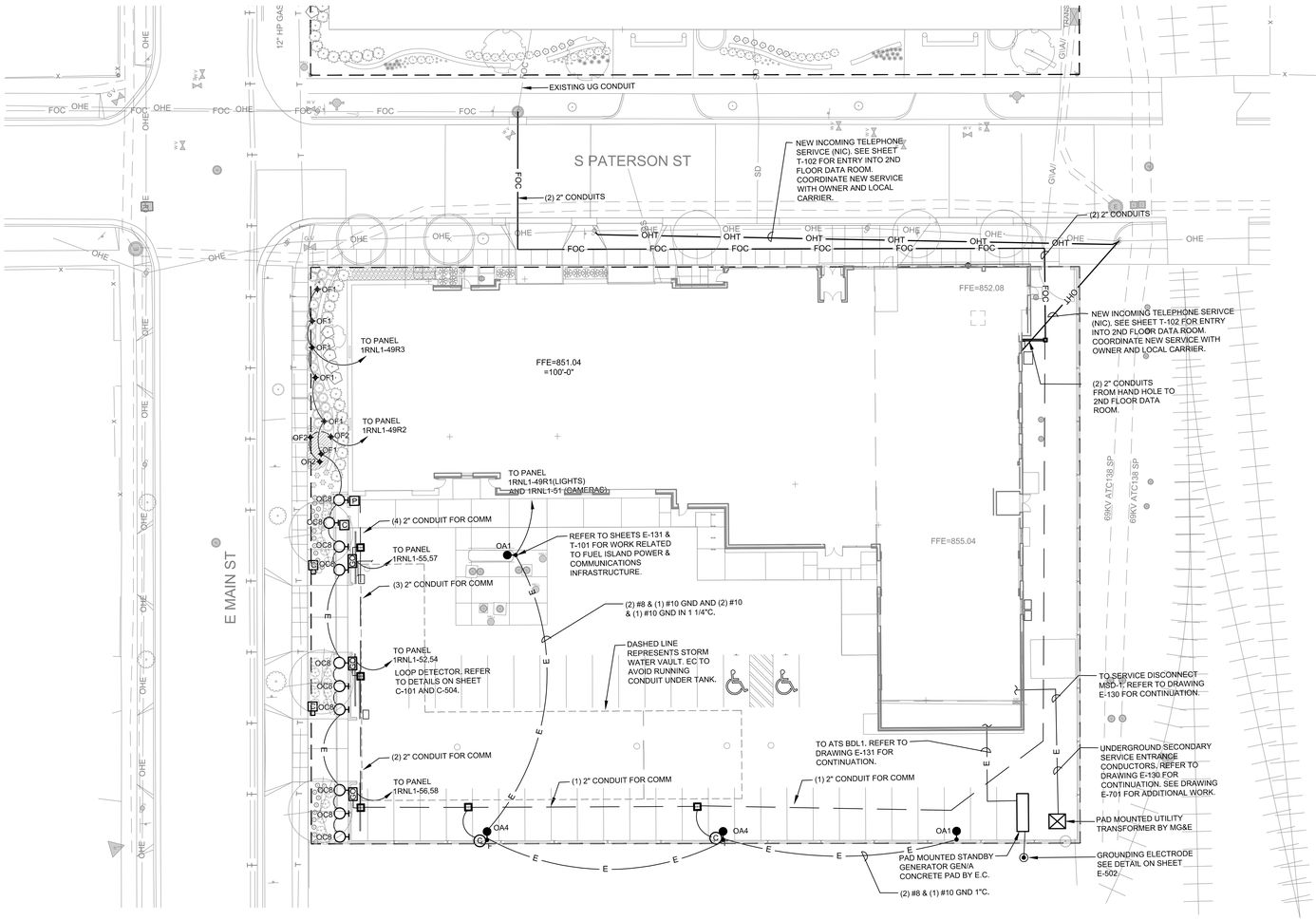

TRUE NORTH PLAN NORTH

1 **ELECTRICAL/TECHNOLOGY SITE PLAN**

1" = 20'

0 10 20 40

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SHEET CONTENTS
ELECTRICAL SITE PLAN

SHEET NO.
E-011

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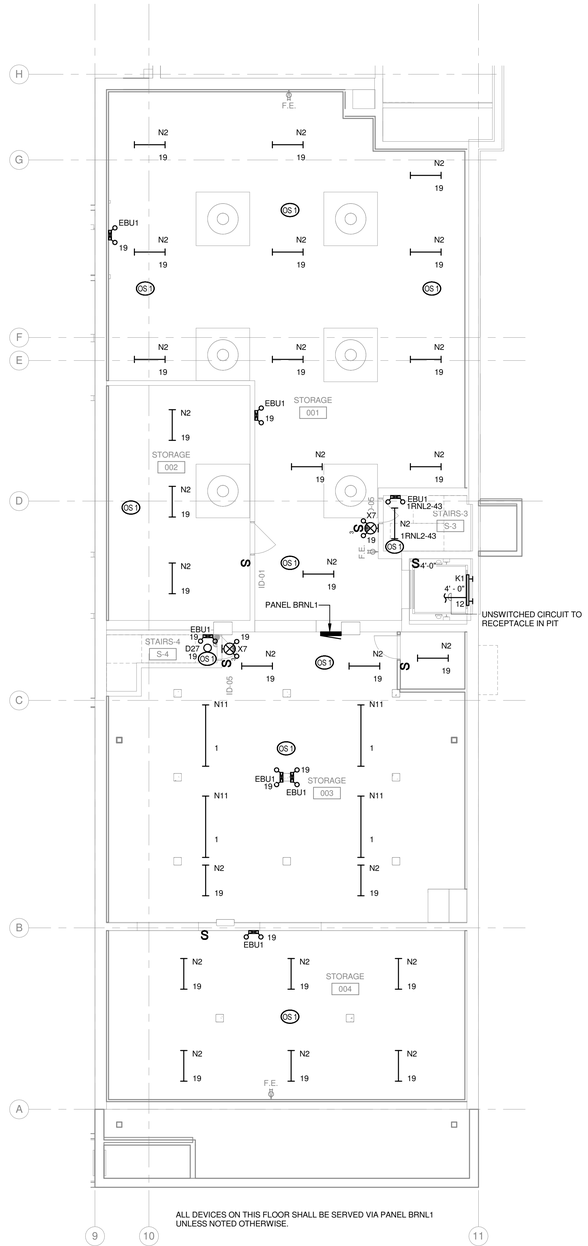

TRUE NORTH PLAN NORTH

1 BASEMENT FLOOR PLAN - LIGHTING

1/8" = 1'-0"

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SHEET CONTENTS
BASEMENT FLOOR PLAN - LIGHTING

SHEET NO.:
E-100

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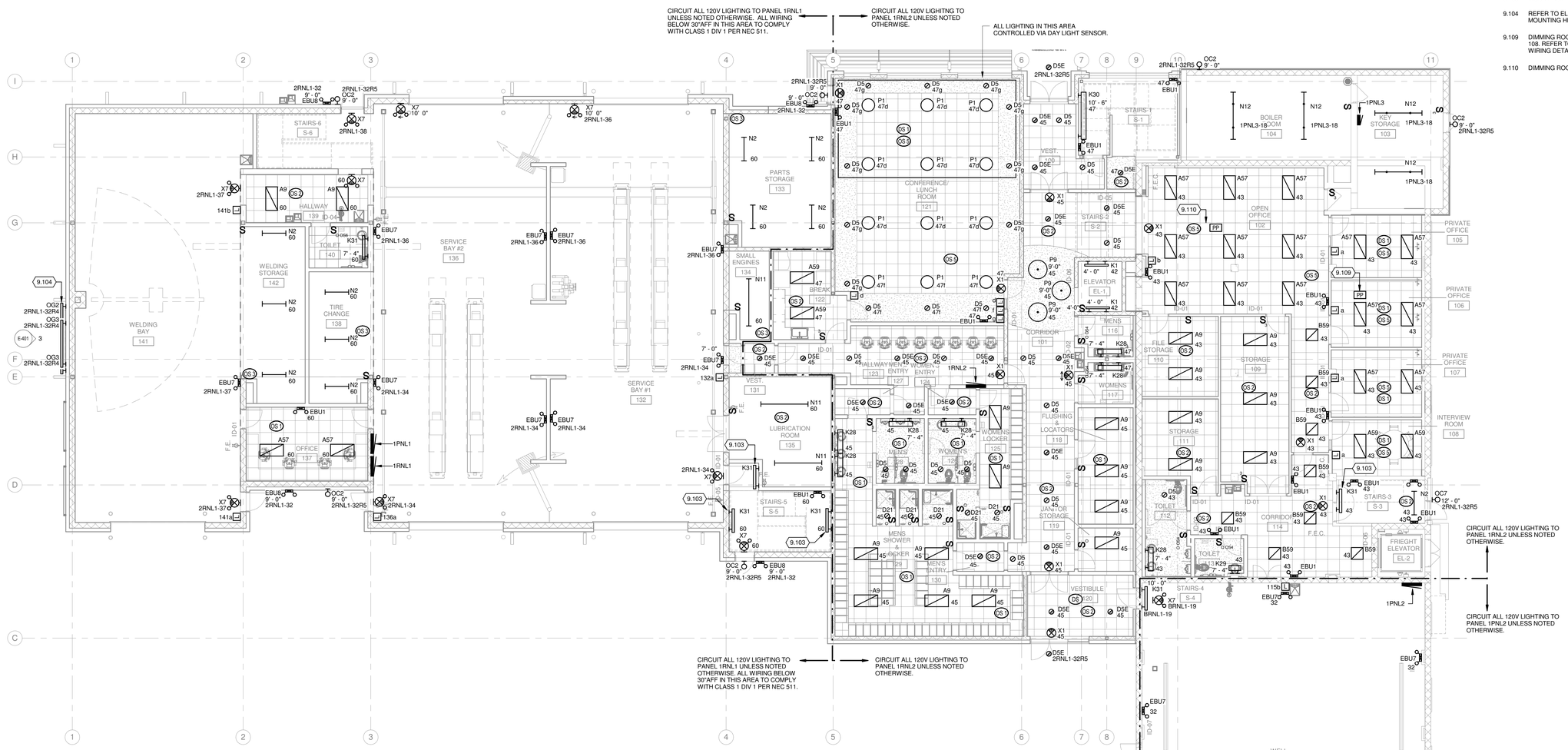
KEYED NOTES

9.103 MOUNT BOTTOM OF FIXTURE AT 8'-0" AFF.

9.104 REFER TO ELEVATION FOR EXACT QUANTITY AND SPECIFIC MOUNTING HEIGHT OF EACH FIXTURE.

9.109 DIMMING ROOM CONTROLLER TO SERVE ROOMS 105, 106, 107, AND 108. REFER TO SHEET E-501 FOR TYPICAL OFFICE LIGHTING CONTROL WIRING DETAIL.

9.110 DIMMING ROOM CONTROLLER TO SERVE ROOMS 102 AND 121.



TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - LIGHTING

1/8" = 1'-0"

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS

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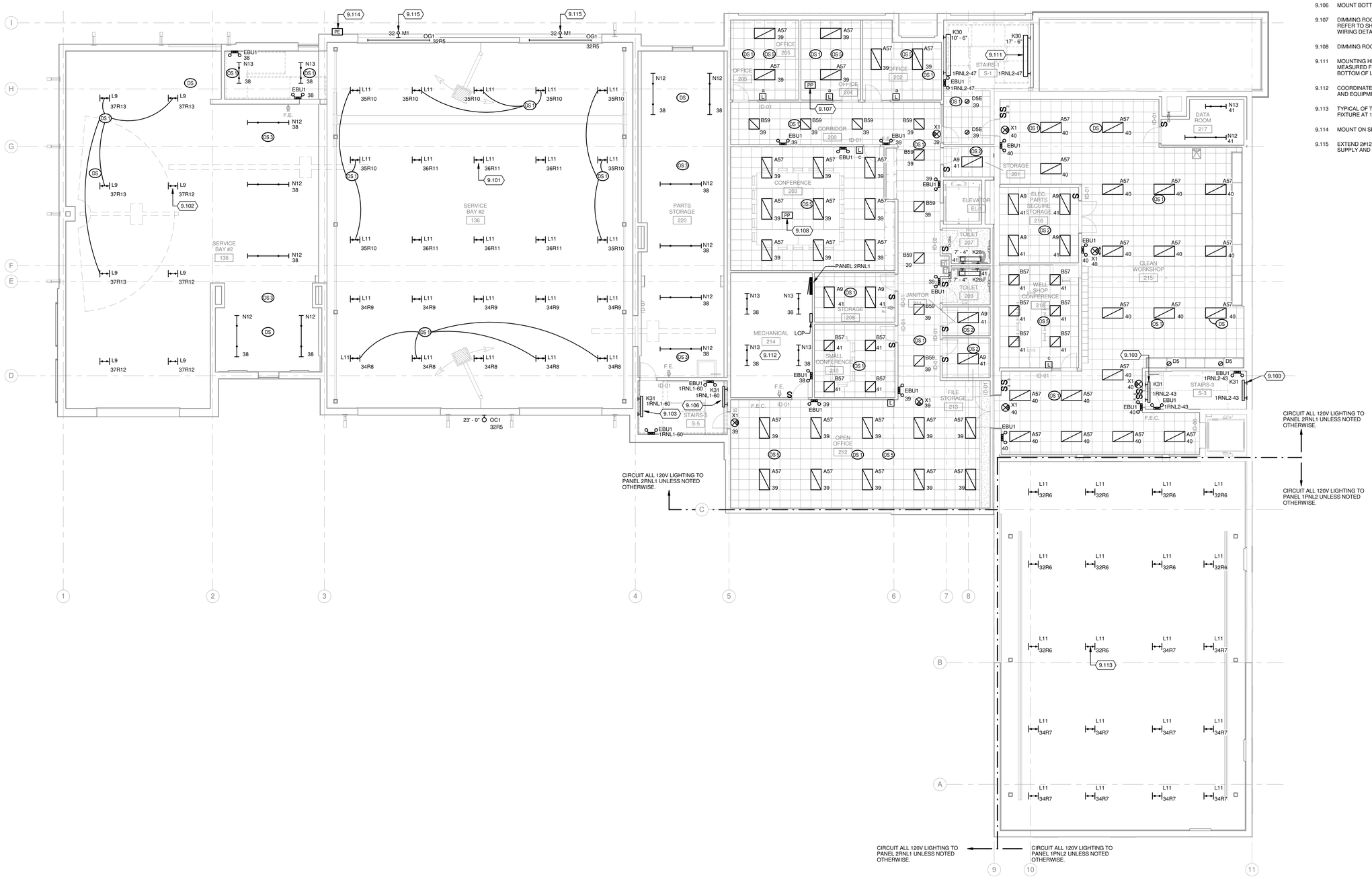
SHEET CONTENTS
FIRST FLOOR PLAN - LIGHTING

SHEET NO.:
E-101

6/9/2015 3:18:14 PM C:\Revit Local\3235300-131021-03-E-Central-2015_16r8kwl.rvt



TRUE NORTH PLAN NORTH

1 SECOND FLOOR PLAN - LIGHTING

1/8" = 1'-0"

KEYED NOTES

9.101 TYPICAL OF TYPE L11 LIGHTS IN THIS AREA: MOUNT BOTTOM OF FIXTURE AT 28'-6" AFF.

9.102 TYPICAL OF TYPE L9 LIGHTS: MOUNT BOTTOM OF FIXTURE AT 21'-6" AFF.

9.103 MOUNT BOTTOM OF FIXTURE AT 8'-0" AFF.

9.106 MOUNT BOTTOM OF FIXTURE AT 7'-0"

9.107 DIMMING ROOM CONTROLLER TO SERVE ROOMS 202, 204 AND 205. REFER TO SHEET E-501 FOR TYPICAL OFFICE LIGHTING CONTROL WIRING DETAIL.

9.108 DIMMING ROOM CONTROLLER TO SERVE ROOMS 203, 212 AND 218.

9.111 MOUNTING HEIGHT OF LIGHT IS TO BOTTOM OF LIGHT AND MEASURED FROM FINISHED FLOOR OF NEW FIRST FLOOR LEVEL. BOTTOM OF LIGHT TO BE MOUNTED 9 1/2" BELOW WINDOW.

9.112 COORDINATE EXACT LOCATION OF LIGHTS WITH DUCTWORK, PIPING AND EQUIPMENT.

9.113 TYPICAL OF TYPE L11 LIGHTS IN THIS AREA: MOUNT BOTTOM OF FIXTURE AT 18'-0" AFF.

9.114 MOUNT ON SERVICE BAY ROOF FACING NORTH.

9.115 EXTEND 2#12 IN 1/2" C TO VEHICLE DETECTION SENSOR POWER SUPPLY AND TERMINATE TO THE NORMALLY OPEN FROM C CONTACT.

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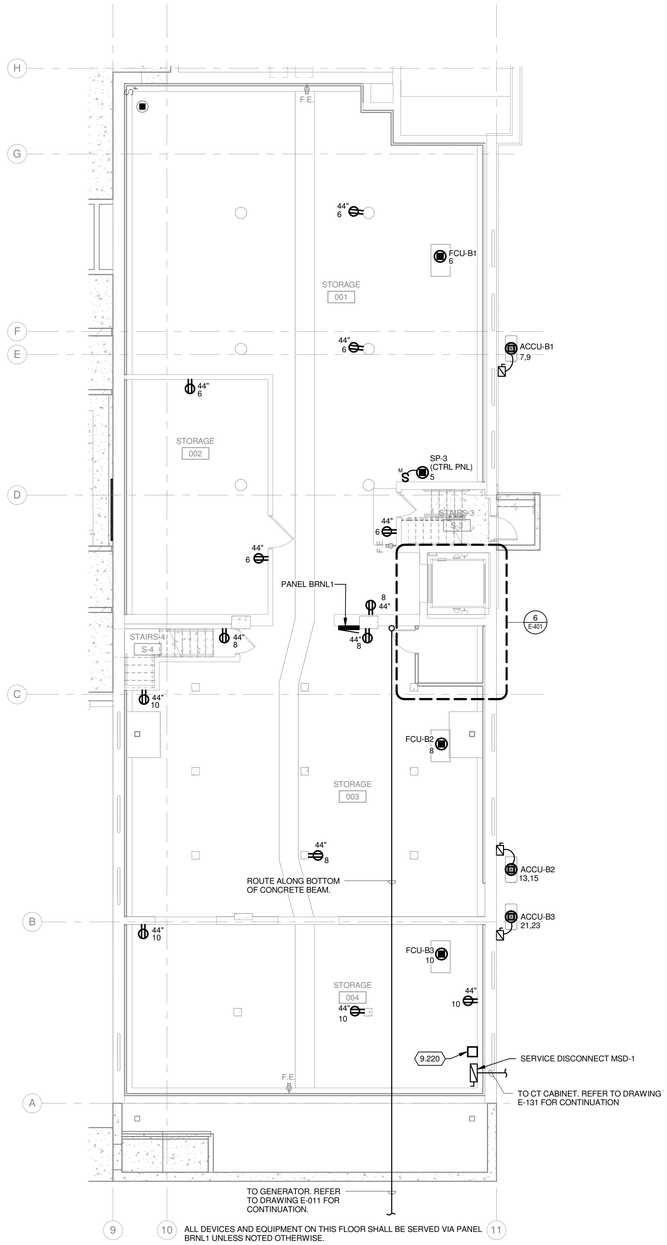
SHEET CONTENTS
SECOND FLOOR PLAN - LIGHTING

SHEET NO.:
E-102

6/9/2015 3:18:17 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt

KEYED NOTES

9.220 GENERATOR AND ATS REMOTE MONITORING INTERFACE CONTROLLER MOUNTED IN A NEMA 1 ENCLOSURE. REFER TO SPECIFICATION SECTION 263213 AND 233600 FOR ADDTIONAL REQUIREMENTS.



TRUE NORTH PLAN NORTH

1 **BASEMENT FLOOR PLAN - POWER**
1/8" = 1'-0"

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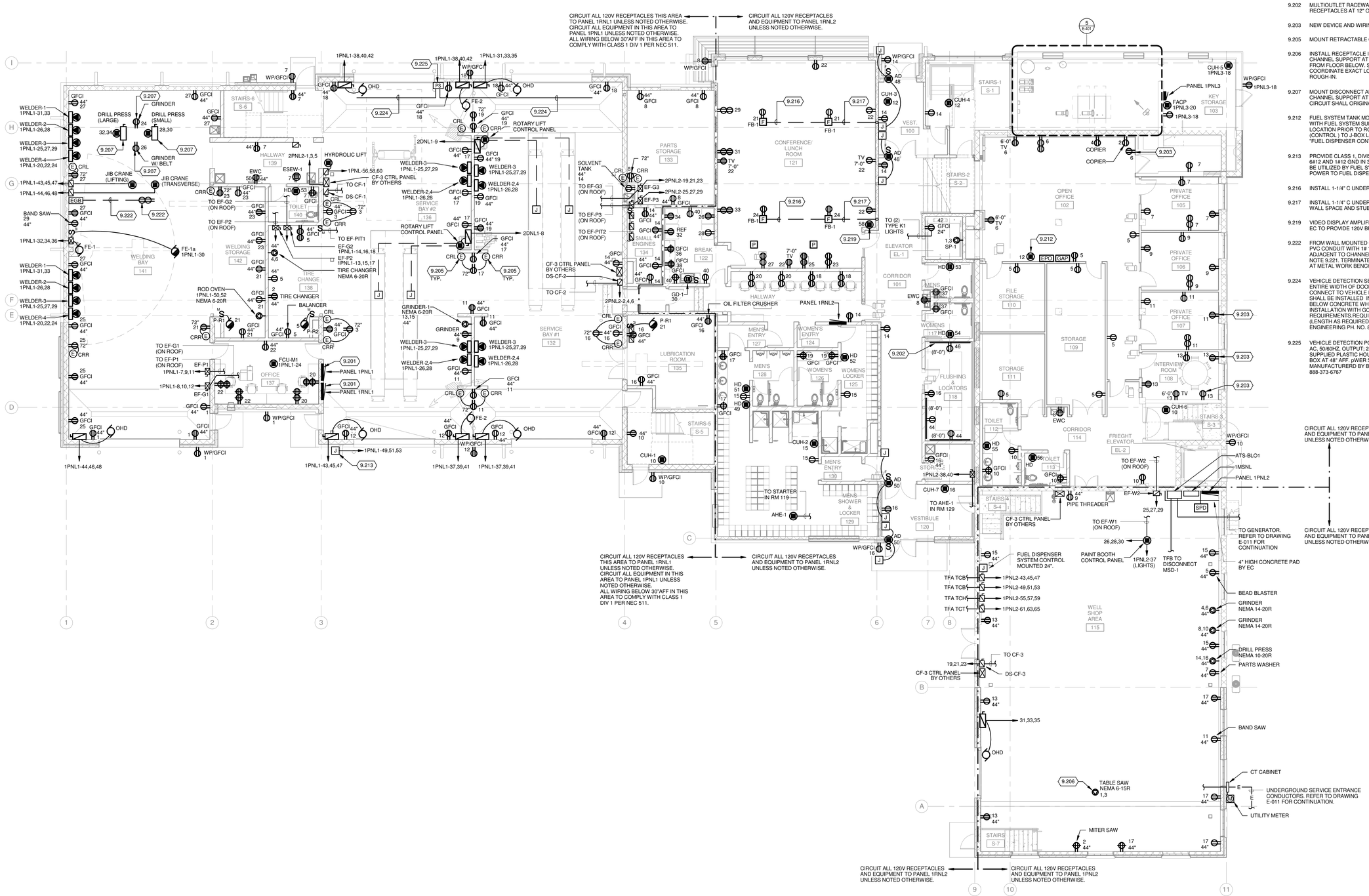
SHEET CONTENTS
BASEMENT FLOOR PLAN - POWER

SHEET NO.:
E-130

6/9/2015 3:18:18 PM C:\Revit Local\3235300-131021-03-E-Central-2015_16199all.rvt



KEYED NOTES

9.201 BOTTOM OF PANEL TO BE NO LOWER THAN 33" AFF.

9.202 MULTIOUTLET RACEWAY MOUNTED ABOVE COUNTER WITH DUPLEX RECEPTACLES AT 12" OC. LENGTH AS NOTED ON PLANS.

9.203 NEW DEVICE AND WIRING IN EXISTING BACKBOX AND CONDUIT.

9.205 MOUNT RETRACTABLE CORD REELS AT 84" AFF

9.206 INSTALL RECEPTACLE IN CAST FS BACKBOX ON A FLOOR MOUNTED CHANNEL SUPPORT AT 18"FF. CORE OPENING IN FLOOR AND SERVE FROM FLOOR BELOW. SEAL OPENING IN FLOOR PER SPECIFICATIONS. COORDINATE EXACT LOCATION OF OUTELT WITH OWNER PIOR TO ROUGH-IN.

9.207 MOUNT DISCONNECT AND/OR RECEPTACLE ON FLOOR MOUNTED CHANNEL SUPPORT AT 24" AFF TO BOTTOM OF DEVICE. BRANCH CIRCUIT SHALL ORIGINATE FROM BELOW FLOOR.

9.212 FUEL SYSTEM TANK MONITORING CONTROL PANEL. COORDIANTE WITH FUEL SYSTEM SUPPLIER/INSTALLER AND OWNER FOR EXACT LOCATION PRIOR TO ROUGH-IN. EXTEND 1" EMPTY CONDUIT (CONTROL) TO J-BOX LOCATED IN WELL SHOP AREA 115 LABELED "FUEL DISPENSER CONTROL"

9.213 PROVIDE CLASS 1, DIVISION 2 JUNCTION BOX MOUNTED 24" AFF WITH 6#12 AND 1#12 GND IN 3/4" C TO PANEL 1PNL1-49,51,53. CIRCUITS TO BE UTILIZED BY FUEL SYSTEM SUPPLIER/INSTALLER FOR NEW POWER TO FUEL DISPENSER PUMPS.

9.216 INSTALL 1-1/4" C UNDERFLOOR FOR COMMUNICATION WIRING

9.217 INSTALL 1-1/4" C UNDERFLOOR FOR COMMUNICATION WIRING.RISE IN WALL SPACE AND STUBBED TO ABOVE ACCESSIBLE CEILING

9.219 VIDEO DISPLAY AMPLIFIER FURNISHED BY DIVISION 27 CONTRACTOR. EC TO PROVIDE 120V BRANCH CIRCUIT AS NOTED.L

9.222 FROM WALL MOUNTED GROUND BAR EXTEND UNDERGROUND 1-1/4" PVC CONDUIT WITH 1# I/0 GROUND CONDUCTOR STUBBED UP ADJACENT TO CHANNEL MOUNTED RECEPTACLE NOTED IN KEYED NOTE 9.221. TERMINATE GROUND CONDUCTOR AT GROUND BAR AND AT METAL WORK BENCH.

9.224 VEHICLE DETECTION SENSOR CABLE INSTALLED IN FLOOR THE ENTIRE WIDTH OF DOOR OPENING WITH ENOUGH CABLE TO CONNECT TO VEHICLE DETECTION SYSTEM POWER SUPPLY. CABLE SHALL BE INSTALLED IN 1" PVC CONDUIT FROM POWER SUPPLY TO 4" BELOW CONCRETE WHERE CABLE EXITS FLOOR. COORDIATE CABLE INSTALLATION WITH GC AND MANUFACTURERS INSTALLATION REQUIREMENTS.REQUIREMENTS. CABLE SHALL BE TYPE Q7MBEB (LENGTH AS REQUIRED) AS MANUFACTURED BY BANNER ENGINEERING PH. NO. 888-373-6767

9.225 VEHICLE DETECTION POWER SUPPLY: INPUT VOLTAGE 105 TO 130V AC, 50/60HZ, OUTPUT; 24VDC, 100mA. MOUNT POWER SUPPLY IN SUPPLIED PLASTIC HOUSING AND IN 6" X 6" X 4" . NEMA 1 JUNCTION BOX AT 48" AFF. pWER SUPPLY SHALL BE A PS115-1N AS MANUFACTURERD BY BANNER ENGIEERING CORP. PH NO. 888-373-6767

TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - POWER

1/8" = 1'-0"

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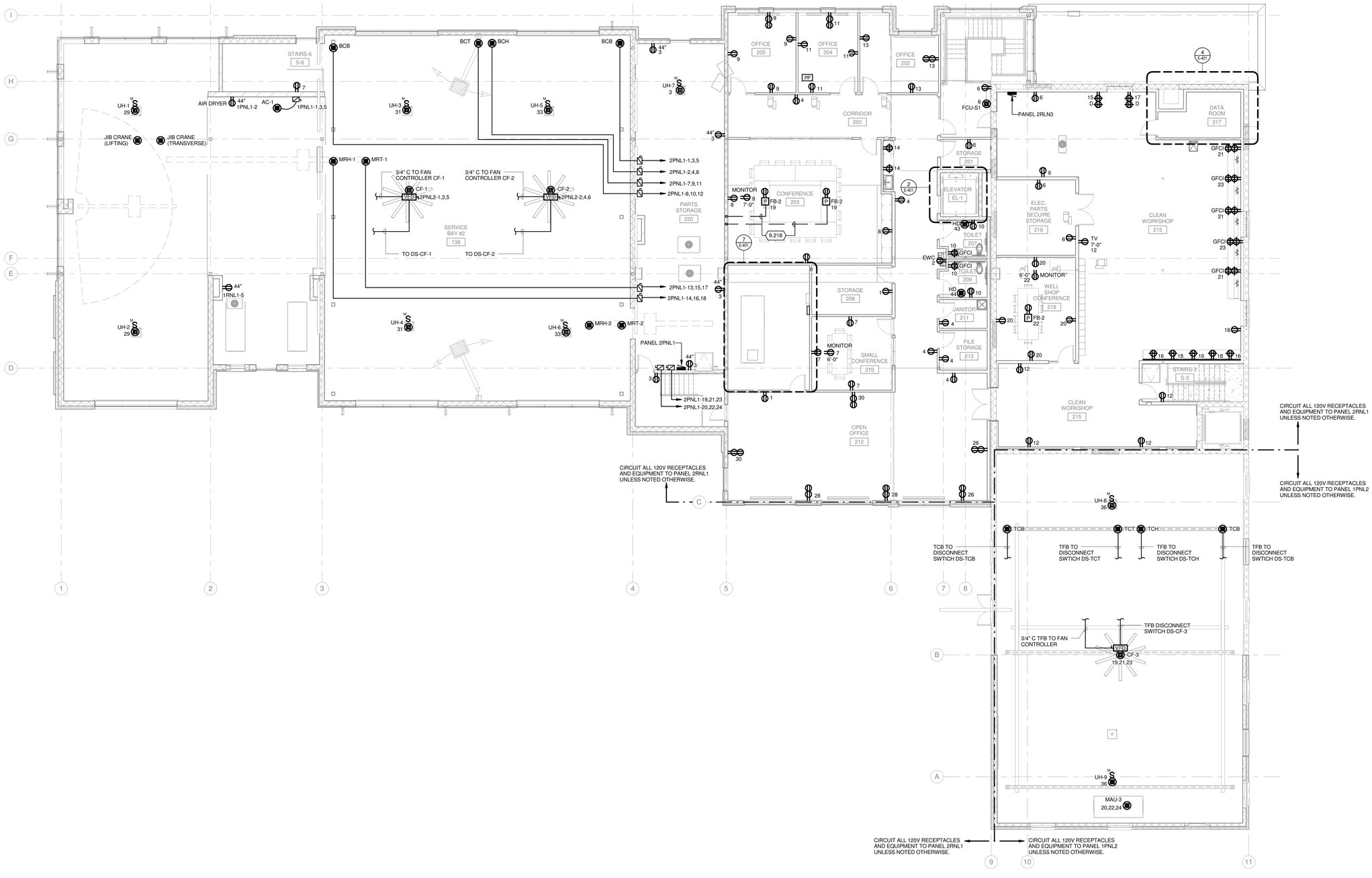
SHEET CONTENTS
FIRST FLOOR PLAN - POWER

SHEET NO.:
E-131

6/9/2015 3:18:21 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618Rail.rvt

KEYED NOTES

9.218 INSTALL 1-1/2" C IN CEILING SPACE OF FLOOR BELOW FOR COMMUNICATION WIRING.RISE IN WALL SPACE AND STUBBED TO ABOVE ACCESSIBLE CEILING.



TRUE NORTH PLAN NORTH

1 **SECOND FLOOR PLAN - POWER**
1/8" = 1'-0"

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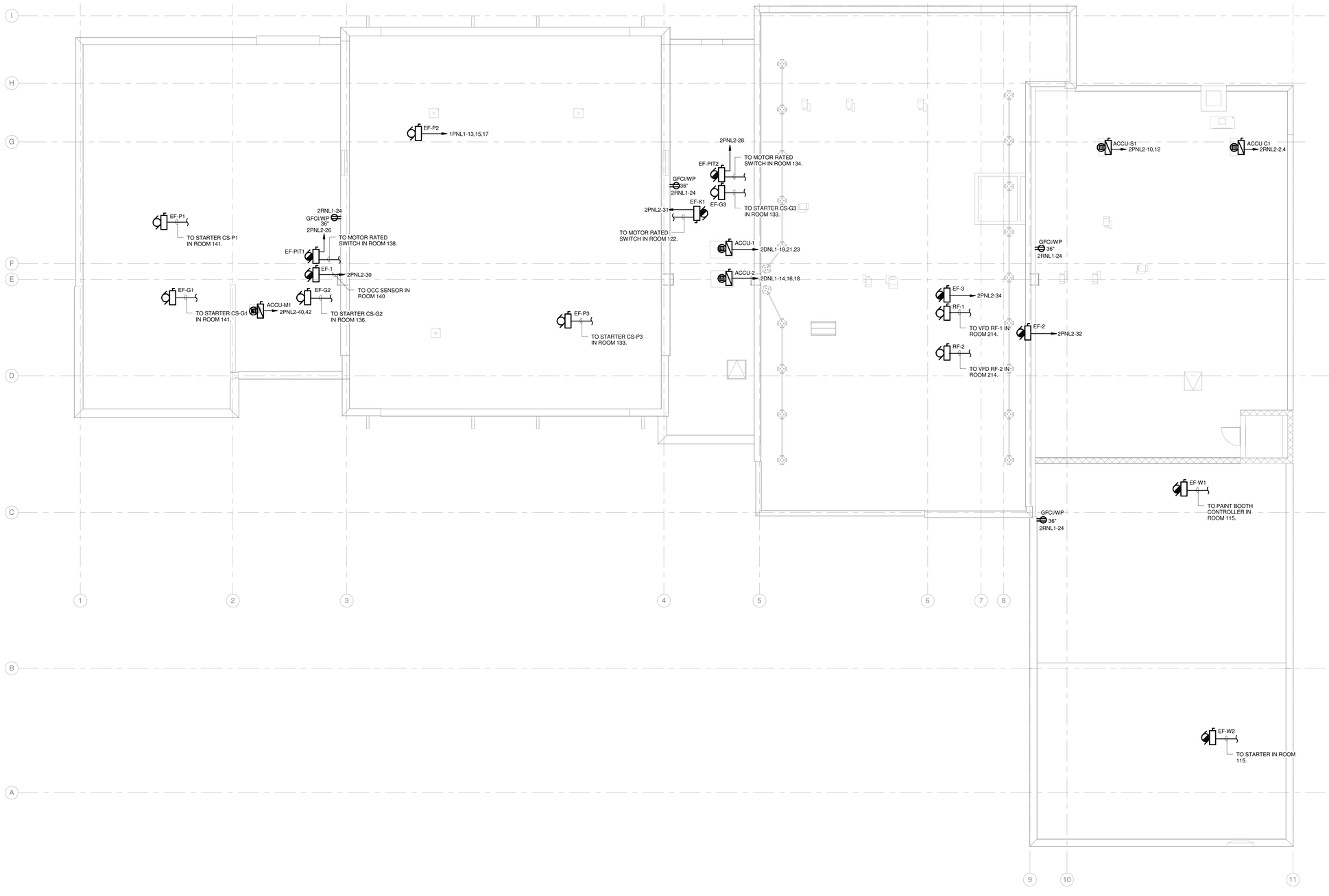
SHEET CONTENTS
SECOND FLOOR
PLAN - POWER

SHEET NO.:
E-132

6/9/2015 3:18:23 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt



TRUE NORTH PLAN NORTH

1 ROOF PLAN - POWER

1/8" = 1'-0"

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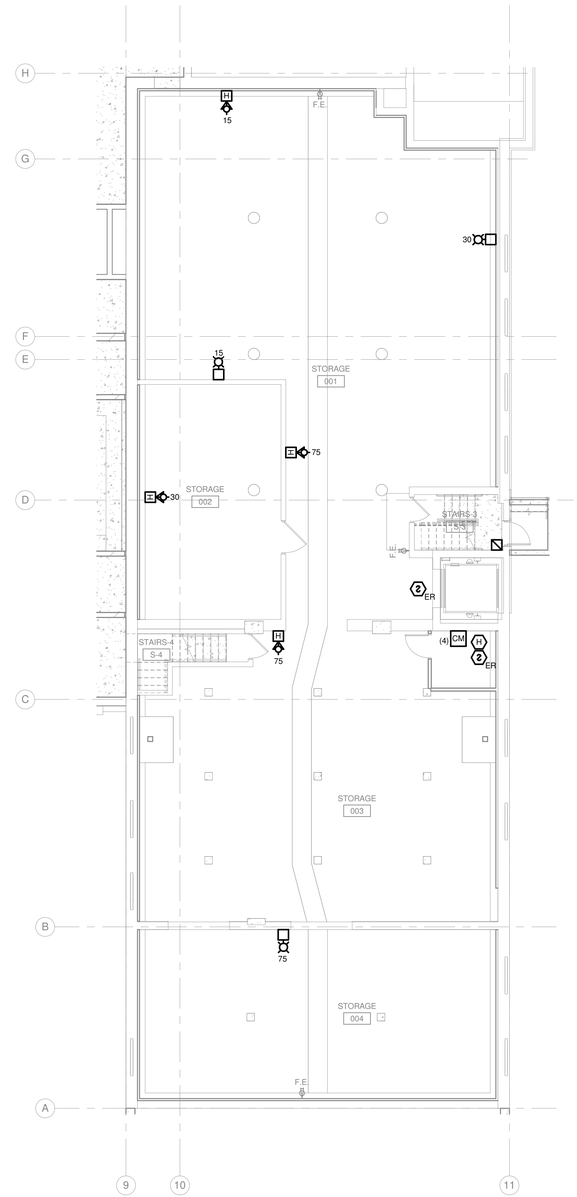
SHEET CONTENTS
ROOF PLAN - POWER

SHEET NO.:
E-133

6/9/2015 3:18:24 PM C:\Revit Local\3235300-131021-03-E-Central-2015_16r8kaf.rvt



TRUE NORTH PLAN NORTH

1 **BASEMENT FLOOR PLAN - FIRE ALARM**

1/8" = 1'-0"

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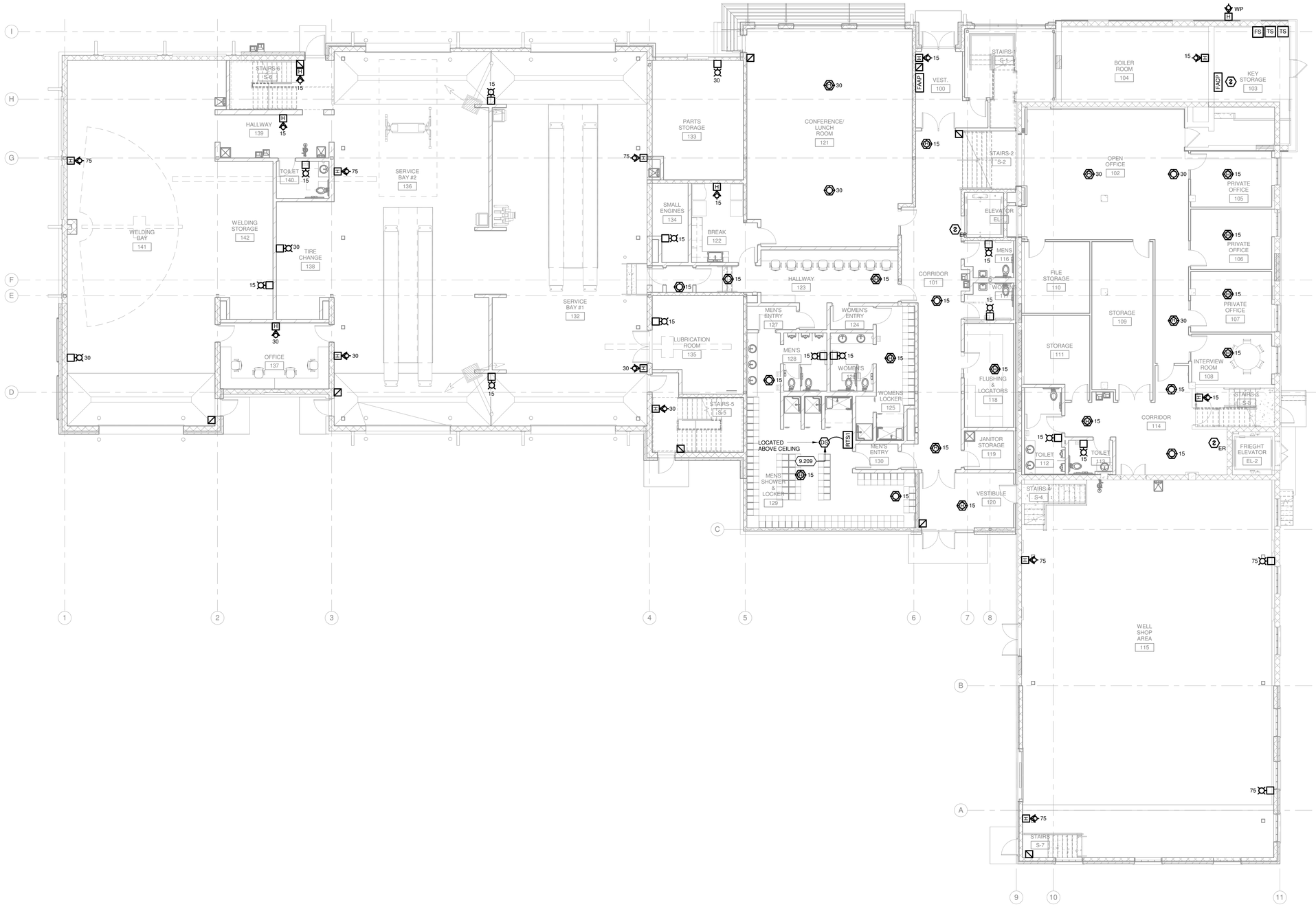
SHEET CONTENTS
BASEMENT FLOOR PLAN - FIRE ALARM

SHEET NO.:
E-160

6/9/2015 3:18:24 PM C:\Revit Local\3235300-131021-03-E-Central-2015_16189all.rvt

KEYED NOTES

9.209 DUCT MOUNTED SMOKE DETECTORS ARE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. FIRE ALARM SYSTEM CONTRACTOR SHALL CONNECT THESE DETECTORS TO THE FIRE ALARM CONTROL PANEL.



TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - FIRE ALARM

1/8" = 1'-0"

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SHEET CONTENTS
FIRST FLOOR PLAN - FIRE ALARM

SHEET NO.:
E-161

6/9/2015 3:18:27 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt

KEYED NOTES

9.209 DUCT MOUNTED SMOKE DETECTORS ARE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. FIRE ALARM SYSTEM CONTRACTOR SHALL CONNECT THESE DETECTORS TO THE FIRE ALARM CONTROL PANEL.

TRUE NORTH PLAN NORTH

SECOND FLOOR PLAN - FIRE ALARM

1/8" = 1'-0"

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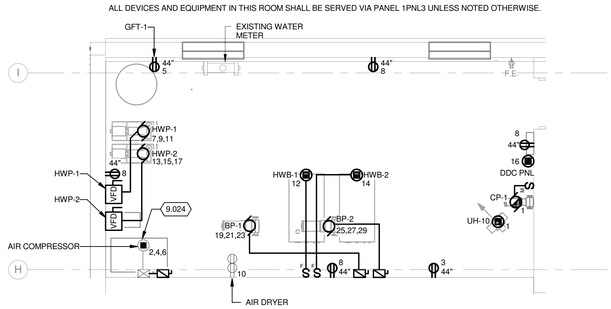
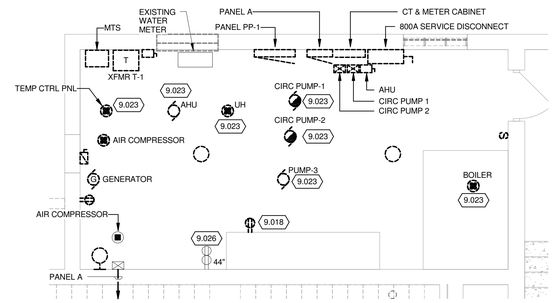
SHEET CONTENTS
SECOND FLOOR PLAN - FIRE ALARM

SHEET NO.:
E-162

6/9/2015 3:18:28 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt



5 ENLARGED BOILER ROOM - POWER
1/4" = 1'-0"



1 ENLARGED BOILER ROOM - DEMOLITION
1/4" = 1'-0"

KEYED NOTES

9.018 DEVICE MOUNTED ON CHANNEL SUPPORT. SUPPORT REMOVED BY GC

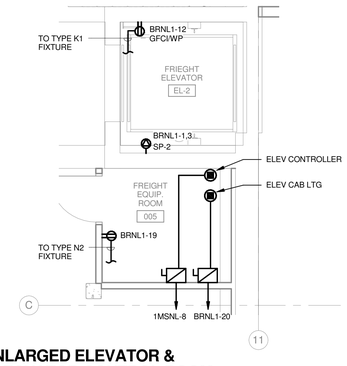
9.023 DISCONNECT POWER TO EQUIPMENT AND ASSOCIATED CONTROLLERS, ETC TO ALLOW REMOVAL BY MC.

9.024 DEVICE(S) NOTED WITH PANEL DESIGNATION 'F' ARE TEMPORAY AND MAYBE SURFACE MOUNTED. CIRCUIT NUMBERS INDICATED ARE NOT NECESSARYILY THE PANEL CIRCUIT NUMBER BUT ARE INDICATED TO SHOW INTENTED CIRCUIT GROUPING ONLY. CONNECT TO EXISTING 20A SPARE BREAKERS AND OR BREAKERS MADE AVAILABLE DURING DEMOLTION. INDICATED ON DRAWING 1/ED102.

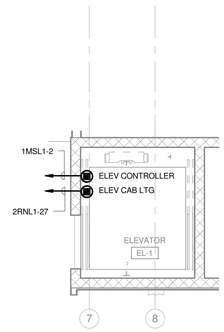
9.026 MAINTAIN EXISTING BRANCH CIRCUIT UP TO NEAREST J-BOX AND EXTEND TO NEW CIRCUIT AS SHOWN ON DRAWING 5/E-401.

9.105 FIXTURE MOUNTED BEHIND SIGNAGE AND ADJUST TO AIM UP OR DOWN TO BACK LIGHT THE SIGNAGE.

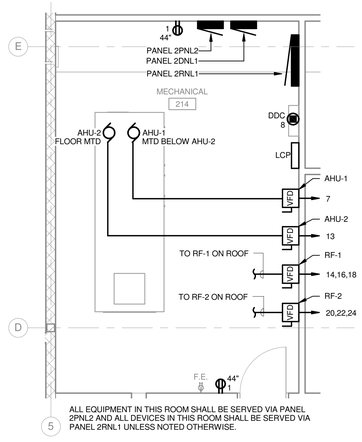
9.214 MOUNT DEVICE(S) TO LADDER RACK DIRECTLY ABOVE EQUIPMENT RACK(S). COORDINATE EXACT LOCATION WITH DIVISION 27 CONTRACTOR.



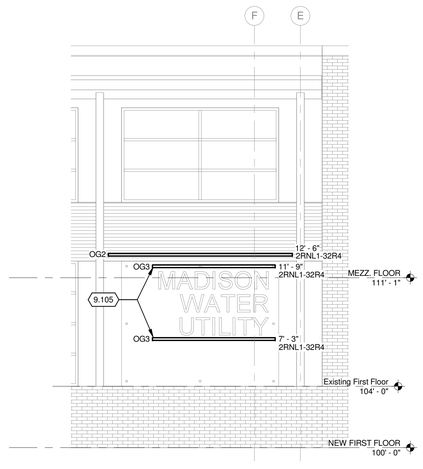
6 ENLARGED ELEVATOR & ELECVATOR CONTROL ROOM
1/4" = 1'-0"



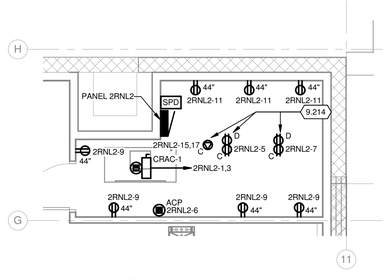
2 ENLARGED ELEVATOR EL-1 & ELEVATOR CONTROL ROOM
1/4" = 1'-0"



7 ENLARGED MECHANICAL ROOM - POWER
1/4" = 1'-0"



3 West Elevation - Signage
1/4" = 1'-0"



4 ENLARGED DATA ROOM
1/4" = 1'-0"

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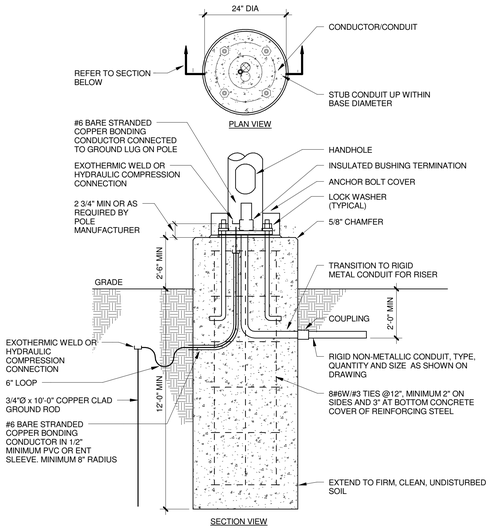
SHEET CONTENTS
ENLARGED PLANS

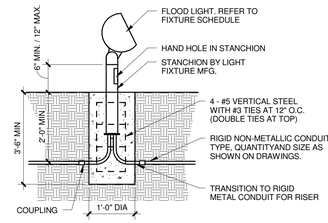
SHEET NO.:
E-401

6/9/2015 3:18:30 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1619kall.rvt

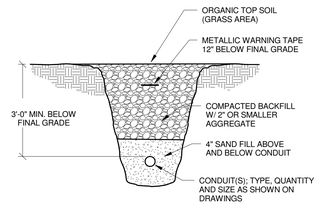


NOTES
1. CONTRACTOR SHALL USE TEMPLATE FURNISHED WITH POLE TO SET ANCHOR BOLTS. CENTER ON CONCRETE BASE.
2. ANCHOR BOLTS SHALL BE ORIENTED PARALLEL TO THE CURB LINE.
3. NON-SHRINK GROUT BETWEEN POLE AND BASE. PROVIDE A CHANNEL THROUGH GROUT FOR POLE INTERIOR DRAINAGE.
4. EXPOSED SURFACES TROWELLED SMOOTH.
5. ANCHOR BOLTS FOR POLE AS REQUIRED BY MANUFACTURER.
6. CONCRETE BASE PER SPECIFICATIONS.

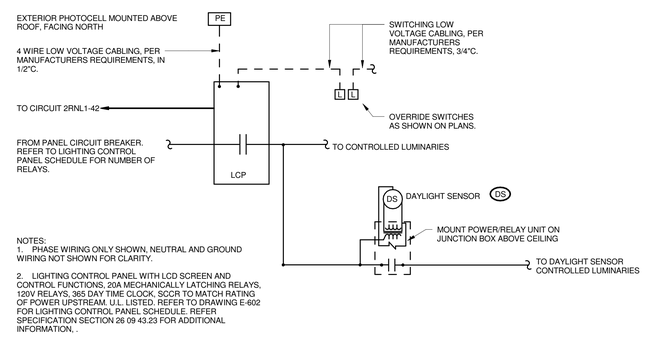
10 EXTENDED POLE BASE DETAIL W/ GND
NO SCALE



6 FLOOD LIGHT BASE DETAIL STANCHION
NO SCALE



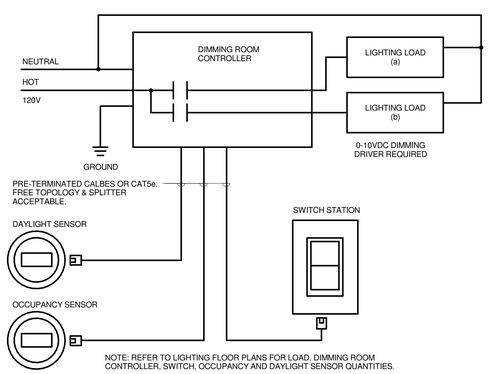
7 UNDERGROUND CONDUIT
NO SCALE



NOTES;
1. PHASE WIRING ONLY SHOWN, NEUTRAL AND GROUND WIRING NOT SHOWN FOR CLARITY.

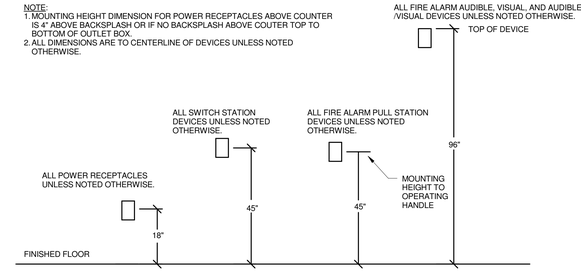
2. LIGHTING CONTROL PANEL WITH LCD SCREEN AND CONTROL FUNCTIONS, 20A MECHANICALLY LATCHING RELAYS, 120V RELAYS, 365 DAY TIME CLOCK, SCCR TO MATCH RATING OF POWER UPSTREAM. U.L. LISTED. REFER TO DRAWING E-602 FOR LIGHTING CONTROL PANEL SCHEDULE. REFER SPECIFICATION SECTION 26 09 43.23 FOR ADDITIONAL INFORMATION, .

8 LIGHTING RELAY CONTROL DIAGRAM
NO SCALE

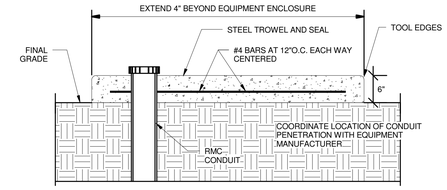


9 TYPICAL OFFICE/CONFERENCE ROOM LIGHTING CONTROL WIRING DIAGRAM
NO SCALE

NOTE:
1. MOUNTING HEIGHT DIMENSION FOR POWER RECEPTACLES ABOVE COUNTER IS 4" ABOVE BACKSPLASH OR IF NO BACKSPLASH ABOVE COUTER TOP TO BOTTOM OF OUTLET BOX.
2. ALL DIMENSIONS ARE TO CENTERLINE OF DEVICES UNLESS NOTED OTHERWISE.

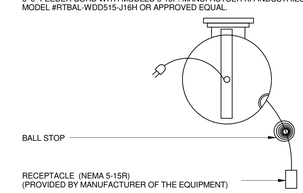


1 DEVICE MOUNTING HEIGHTS DETAIL
NO SCALE



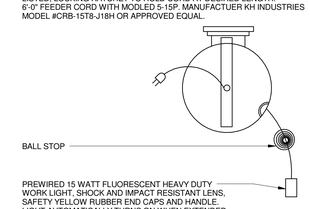
2 GENERATOR PAD MOUNTING DETAIL
NO SCALE

CONTINUOUS (360 DEGREE) SWIVEL GROUNDED RETRACTABLE POWER CORD W/ SINGLE RECEPTACLE ON END.FURNISHED W/ 35 FT OF 16-3 SOW CORD (2 CONDUCTORS PLUS GROUND) ENCLOSED STEEL CONSTRUCTION, UL LISTED, LOCKING RATCHET TO HOLD CORD AT DESIRED LENGTH.
6'-0" FEEDER CORD WITH MODLED 5-15P. MANUFACTUER KH INDUSTRIES MODEL #RTBAL-WDD515-J16H OR APPROVED EQUAL.

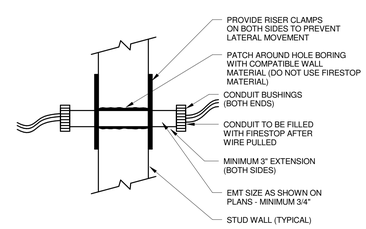


3 RETRACTABLE RECEPTACLE DETAIL - CRR
NO SCALE

CONTINUOUS (360 DEGREE) SWIVEL GROUNDED RETRACTABLE CORD REEL W/ SINGLE LIGHT ON END. FURNISHED W/ 35 FT OF 18-2 SOW CORD (2 CONDUCTORS PLUS GROUND) ENCLOSED STEEL CONSTRUCTION, UL LISTED, LOCKING RATCHET TO HOLD CORD AT DESIRED LENGTH.
6'-0" FEEDER CORD WITH MODLED 5-15P. MANUFACTUER KH INDUSTRIES MODEL #CRB-15T8-J18H OR APPROVED EQUAL.



4 RETRACTABLE LIGHT DETAIL - CRL
NO SCALE



5 NON-RATED WALL PENETRATION
NO SCALE

Mead & Hunt
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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS
DO NOT SCALE DRAWINGS

SHEET CONTENTS
DETAILS

SHEET NO.:
E-501

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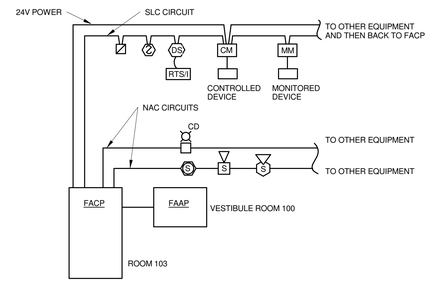
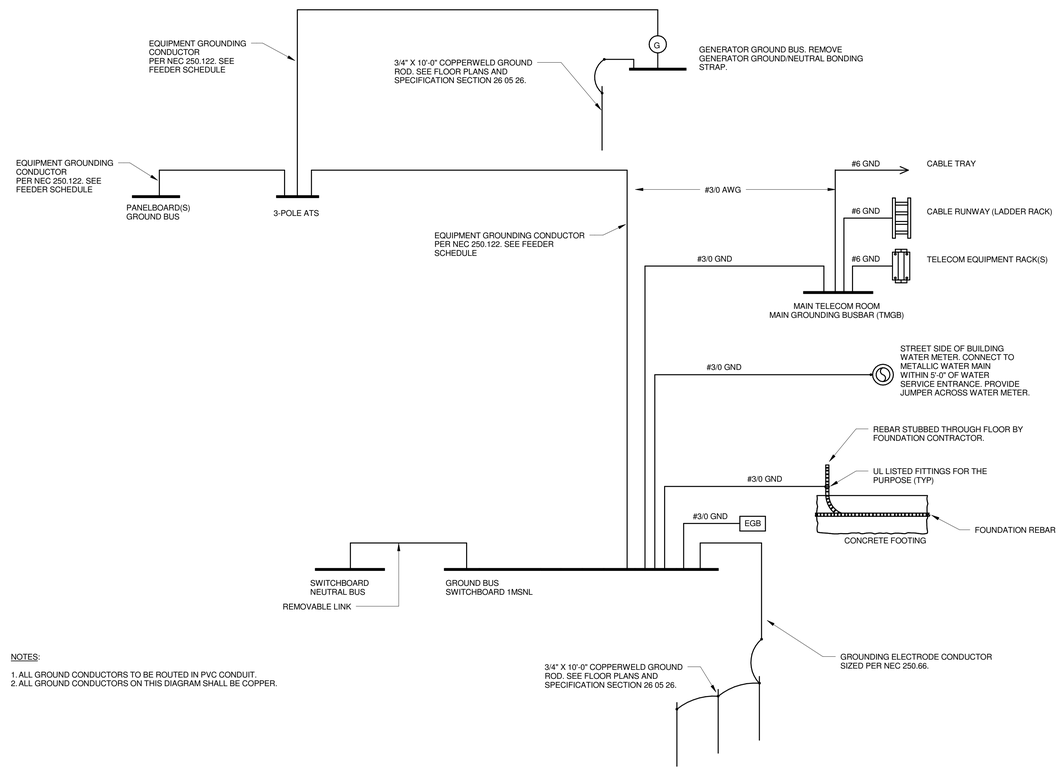
FIRE ALARM NOTES:

1. THE RISER DIAGRAM IS INTENDED TO CONVEY THE TYPES OF FIRE ALARM CONNECTION AND SPECIFICALLY DOES NOT INDICATE QUANTITIES, NUMBER OF CIRCUITS REQUIRED OR DISTANCES.
2. IF NOTIFICATION APPLIANCE CIRCUIT (NAC) POWER SUPPLIES OR AMPLIFIERS ARE REQUIRED, DETERMINATION OF NEED TO BE MADE BY FIRE ALARM VENDOR, LOCATIONS SHALL BE APPROVED BY THE A/E AND SHALL BE ACCESSIBLE TO THE FIRE DEPARTMENT. PROVIDE SMOKE DETECTOR (NOT SHOWN ON FLOOR PLANS) AT EACH NAC POWER SUPPLY/AMPLIFIER LOCATION UNLESS THE ROOM IS COVERED BY AREA SMOKE DETECTION.
3. SEE PLANS FOR SPECIFIC CANDELA (CD) RATINGS ON NOTIFICATION APPLIANCES
4. ALL JUNCTION, TERMINAL, AND PULLING BOXES AND COVERS SHALL BE PAINTED RED AND SHALL BE IDENTIFIED WITH ENGRAVED LABELS BY CIRCUIT THAT IT CONTAINS. ALL CONDULETS AND SIMILAR UNITS SHALL BE PAINTED RED. ALL DETECTION AND TERMINAL DEVICES SHALL HAVE ENGRAVED PLASTIC OR METALLIC ALPHANUMERIC IDENTIFICATION, WHICH SHALL BE KEYED TO THE POSTED AND OPERATIONS AND MAINTENANCE INSTRUCTIONS.
5. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
6. THE COMPLETE SYSTEM SHALL MEET ALL APPLICABLE CODES AND MANUFACTURERS RECOMMENDATIONS.



1 FIRE ALARM ONE-LINE DIAGRAM

NO SCALE



NOTES:

1. ALL GROUND CONDUCTORS TO BE ROUTED IN PVC CONDUIT.
2. ALL GROUND CONDUCTORS ON THIS DIAGRAM SHALL BE COPPER.

2 GROUNDING SYSTEM DETAIL (TYP)

NO SCALE

Mead & Hunt

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meadhunt.com

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Madison Water Utility
Quality and Reliability since 1972
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS
DO NOT SCALE DRAWINGS

SHEET CONTENTS
DETAILS

SHEET NO.:
E-502

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LUMINAIRE SCHEDULE

NOTE: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING LUMINAIRE AND INSTALLATION REQUIREMENTS. PROVIDE OPTIONS AND ACCESSORIES REFERENCED BY THE COLUMN TITLED " OPTIONS/ACCESSORIES". MANUFACTURERS LISTED ACCEPTABLE SHALL MEET ALL REQUIREMENTS AND FEATURES INDICATED. ACCEPTABLE MANUFACTURERS MUST MEET THE PHOTOMETRIC PERFORMANCE OF THE LISTED UNIT.

ABBREVIATIONS: GWB = GYPSUM WALL BOARD; ES = EXPOSED STRUCTURE; LG = LAY-IN GRID; P = PENDANT; PLAS = PLASTER; PL = POLE...; R = RECESSED; S = SURFACE; W = WALL MOUNTED; V = VARIES

DES.	MANUFACTURER	CATALOG SERIES	DESCRIPTION	LAMP DATA	VOLT	BALLAST/ DRIVER	MOUNT	CEILING TYPE	FIXTURE DEPTH	MAXIMUM INPUT WATTAGE	MINIMUM DELIVERED LUMENS	OPTIONS / ACCESSORIES	ACCEPTABLE MANUFACTURERS	SEE NOTE
A9	LITHONIA	2GTL SERIES	2'x4', LED GRID LENSED TROFFER WITH COLD ROLLED STEEL HOUSING, ACRYLIC LENS AND MATTE WHITE FINISH.	4000K LED	120V	D	R	LG	4"	35W	3000	08, 28	METALUX GR LED SERIES DAYBRITE LT LED SERIES	
A57	LITHONIA	RTLED SERIES	2'x4', LED GRID VOLUMETRIC TROFFER WITH COLD ROLLED STEEL HOUSING, FACETED ACRYLIC REFLECTOR AND MATTE WHITE FINISH.	4000K LED	120V	D	R	LG	4"	50W	4800		METALUX AC SERIES	
A59	LITHONIA	RTLED SERIES	2'x4', LED GRID VOLUMETRIC TROFFER WITH COLD ROLLED STEEL HOUSING, FACETED ACRYLIC REFLECTOR AND MATTE WHITE FINISH.	4000K LED	120V	D	R	LG	4"	35W	3100		METALUX AC SERIES	
B57	LITHONIA	RTLED SERIES	2'x2', LED GRID VOLUMETRIC TROFFER WITH COLD ROLLED STEEL HOUSING, FACETED ACRYLIC REFLECTOR AND MATTE WHITE FINISH.	4000K LED	120V	D	R	LG	4"	40W	3300		METALUX AC SERIES	
B59	LITHONIA	RTLED SERIES	2'x2', LED GRID VOLUMETRIC TROFFER WITH COLD ROLLED STEEL HOUSING, FACETED ACRYLIC REFLECTOR AND MATTE WHITE FINISH.	4000K LED	120V	D	R	LG	4"	20W	2200		METALUX AC SERIES	
D5	GOTHAM	EVO SERIES	4" LED ROUND RECESSED OPEN DOWNLIGHT WITH SELF-FLANGED TRIM, WIDE LIGHT DISTRIBUTION, 45 DEGREE CUTOFF, 16-GAUGE STEEL HOUSING.	4000K LED	120V	D	R	LG	6 3/4"	20W	1000	15	PORTFOLIO LD4A SERIES PHILIPS CALCULITE SERIES	
D5E	GOTHAM	EVO SERIES	4" LED ROUND RECESSED OPEN DOWNLIGHT WITH SELF-FLANGED TRIM, WIDE LIGHT DISTRIBUTION, 45 DEGREE CUTOFF, 16-GAUGE STEEL HOUSING. PROVIDE WITH EMERGENCY BATTERY PACK WITH INTEGRAL TEST SWITCH.	4000K LED	120V	D	R	LG	6 3/4"	20W	1000	15	PORTFOLIO LD4A SERIES PHILIPS CALCULITE SERIES	
D21	GOTHAM	EVO SERIES	6" LED ROUND RECESSED SHOWER DOWNLIGHT WITH 16-GAUGE STEEL HOUSING, REGRESSED LENS, IP65 RATED AND SELF-FLANGED TRIM.	4000K LED	120V	D	R	LG	7 1/2"	30W	1400	15	PORTFOLIO CD SERIES PHILIPS CALCULITE SERIES	
D27	HALO	SLD SERIES	4" LED ROUND LENSED SURFACE DOWNLIGHT WITH DIE CAST ALUMINUM HOUSING AND SURFACE J-BOX ADAPTER AND WHITE FINISH.	4000K LED	120V	D	S	ES	3/4"	15W	800			
K1	KENALL	SH5 SERIES	4', LED FIXTURE WITH 16-GAUGE STEEL HOUSING, AND POLYCARBONATE LENS.	4000K LED	120V	D	W	-	3 3/4" MAX	50W	4181	29	LITHONIA ZL1N SERIES LSI WNA SERIES	
K28	CORELITE	DIVIDE WALL SERIES	10"X 4' LED DIRECT/INDIRECTFIXTURE, EXTRUDED ALUMINUM & COLD ROLLED STEEL HOUSING, OPTICAL ACRYLIC LENS AND MATTE WHITE FINISH.	4000K LED	120V	D	W	-	3"	35W	3400			
K29	CORELITE	DIVIDE WALL SERIES	10"X 2' LED DIRECT/INDIRECTFIXTURE, EXTRUDED ALUMINUM & COLD ROLLED STEEL HOUSING, OPTICAL ACRYLIC LENS AND MATTE WHITE FINISH.	4000K LED	120V	D	W	-	3"	20W	1500			
K30	CORELITE	DIVIDE WALL SERIES	10"X 8' LED DIRECT/INDIRECTFIXTURE, EXTRUDED ALUMINUM & COLD ROLLED STEEL HOUSING, INTEGRAL DAYLIGHT AND OCCUPANCY SENSORS, OPTICAL ACRYLIC LENS AND MATTE WHITE FINISH.	4000K LED	120V	D	W	-	3"	70W	6000			
K31	LITHONIA	WL4 SERIES	4"X 4' LED WALL BRACKET WITH STEEL HOUSING, INTERGRAL PIR OCCUPANCY SENSOR, ACRYLIC LENS AND MATTE WHITE FINISH.	4000K LED	120V	D	W	-	5"	30W	3200			
L9	LITHONIA	IBH SERIES	LED HIGH BAY FIXTURE WITH STEEL HOUSING, HIGH REFLECTIVE WHITE PAINT REFLECTOR, SEMI-DIFFUSE ACRYLIC LENS AND MEDIUM LIGHT DISTRIBUTION. DAMP LOCATION LISTED.	4000K LED	120V	D	P	-	-	125W	12000		METALUX HB SERIES PHILIPS FBX SERIES	
L11	LITHONIA	IBH SERIES	LED HIGH BAY FIXTURE WITH STEEL HOUSING, HIGH REFLECTIVE WHITE PAINT REFLECTOR, SEMI-DIFFUSE ACRYLIC LENS AND MEDIUM LIGHT DISTRIBUTION. DAMP LOCATION LISTED.	4000K LED	120V	D	P	-	-	155W	15000		METALUX HB SERIES PHILIPS FBX SERIES	
M1	EDWARDS SIGNALING	BEACONS 125 CLASS SERIES	LED FLASHING LIGHT IN NEMA 4X ENCLOSURE WITH GRAY BASE. MOUNT ON WALL BRACKET.	AMBER LED	120V	-	S	-	4"	-	-		APPROVED EQUAL	
N2	LITHONIA	MSL SERIES	4' LED INDUSTRIAL FIXTURE WITH STEEL HOUSING AND BAKED WHITE ENAMEL FINISH.	4000K LED	120V	D	S	-	3 1/4"	40W	4000		COLUMBIA LCR SERIES	
N11	LITHONIA	MSL SERIES	8' LED INDUSTRIAL FIXTURE WITH STEEL HOUSING AND BAKED WHITE ENAMEL FINISH.	4000K LED	120V	D	S	-	3 1/4"	70W	8000		COLUMBIA LCR SERIES	
N12	LITHONIA	MSL SERIES	8' LED INDUSTRIAL FIXTURE WITH STEEL HOUSING , 2' SWIVEL STEM HANGER AND BAKED WHITE ENAMEL FINISH.	4000K LED	120V	D	p	-	-	70W	8000		COLUMBIA LCR SERIES	
N13	LITHONIA	MSL SERIES	4' LED INDUSTRIAL FIXTURE WITH STEEL HOUSING , 2' SWIVEL STEM HANGER AND BAKED WHITE ENAMEL FINISH.	4000K LED	120V	D	p	-	-	40W	8000		COLUMBIA LCR SERIES	
OA1	LITHONIA	D-SERIES	LED POLE MOUNTED AREA FIXTURE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, DARK SKY FRIENDLY CERTIFIED, IP65 RATED, SINGLE FUSE, HANDHOLE, TYPE III LIGHT DISTRIBUTION AND NATURAL ALUMINUM FINISH. 6"X30' SQUARE STRAIGHT STEEL POLE.	4000K LED	120V	D	-	-	-	105W	9500		CREE EDGE SERIES PHILIPS PUREFORM SERIES	
OA4	LITHONIA	D-SERIES	LED POLE MOUNTED AREA FIXTURE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, DARK SKY FRIENDLY CERTIFIED, IP65 RATED, SINGLE FUSE, HANDHOLE, TYPE III LIGHT DISTRIBUTION AND NATURAL ALUMINUM FINISH. 6"X30' SQUARE STRAIGHT STEEL POLE. PROVIDE HANDHOLE MOUNTED 1'-6" ABOVE POLE BASE, ORIENTATED ON THE SAME SIDE AS THE LUMINAIRE. PROVIDE TWO 3/4" NPT THREADED HUBS SPACED 8" APART VERTICALLY, CENTER AT 1'-6" AT 180 DEGREE TO THE LUMINAIRE AND ONE 3/4" NPT THREADED HUB AT 20'-0" ABOVE POLE BASE.	4000K LED	120V	D	-	-	-	105W	9500		CREE EDGE SERIES PHILIPS PUREFORM SERIES	
OC1	LITHONIA	D-SERIES	LED WALL MOUNTED AREA FIXTURE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, DARK SKY FRIENDLY CERTIFIED, IP65 RATED, TYPE III LIGHT DISTRIBUTION AND NATURAL ALUMINUM FINISH.	4000K LED	120V	D	W	-	7 1/2"	110W	8700		CREE EDGE SERIES PHILIPS PUREFORM SERIES	
OC2	LITHONIA	WST LED SERIES	LED WALL MOUNTED FIXTURE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, DARK SKY FRIENDLY CERTIFIED, IP65 RATED AND NATURAL ALUMINIUM FINISH.	4000K LED	120V	D	W	-	5 3/4"	10W	735		MCGRAW EDISON IST SERIES PHILIPS 101 SCONCE SERIES	
OC7	LITHONIA	WSTM LED SERIES	LED WALL MOUNTED FIXTURE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, DARK SKY FRIENDLY CERTIFIED, IP65 RATED AND NATURAL ALUMINIUM FINISH.	4000K LED	120V	D	W	-	5 3/4"	25W	1275		MCGRAW EDISON IST SERIES PHILIPS 101 SCONCE SERIES	
OC8	BEGA	3065 SERIES	LED RECESSED WALL STEP LIGHT WITH DIE CAST AND EXTRUDED ALUMINIUM HOUSING AND FACEPLATE, CLEAR TEMPERED GLASS LENS AND SILVER FINISH. MOUNT AT 12" AFF TO CENTER OF FIXTURE.	4000K LED	120V	D	W	-	4"	10W	400		FC LIGHTING FCSL240 SERIES	
OF1	B-K LIGHTING	NITE STAR SERIES	ABOVE GRADE LED LANDSCAPE FLOOD LIGHT WITH ALUMINUM HOUSING, INTEGRAL DRIVER, MEDIUM FLOOD DISTRIBUTION, SOFT FOCUS LENS AND ROTATIONAL KNUCKLE MOUNTING. FINISH TO BE SELETECED BY ARCHITECT.	4000K LED	120V/24V	D	-	-	-	10W	350		LUMIERE CAMBRIA 203 SERIES INTENSE LIGHITNG IVT104L SERIES	
OF2	LITHONIA	D SIZE 2 FLOOD SERIES	ABOVE GRADE LED FLOOD LIGHT WITH ALUMINUM HOUSING, INTEGRAL DRIVER, MEDIUM FLOOD DISTRIBUTION, WOTH FULL VISOR AND KNUCKLE MOUNTING. FINISH TO BE SELETECED BY ARCHITECT.	4000K LED	120V	D	-	-	-	75W	5800			
OG1	LUMENPULSE	LUMENFACDE	12' LINEAR SURFACE MOUNTED FAÇADE LIGHT WITH EXTRUDED ALUMINUM HOUSING, INTEGRAL DRIVER, 10 BY 60 DEGREE DISTRIBUTION, FIXED MOUNTING AND SILVER FINISH.	4000K LED	120V	D	S	-	-	5W/LF	150/LF		COLOR KINETICS ESSENTIAL WHITE SERIES	
OG2	LUMENPULSE	LUMENCOVE XT SERIES	12' LINEAR SURFACE MOUNTED COVE LIGHT WITH EXTRUDED ALUMINUM HOUSING, INTEGRAL DRIVER, HIGH OUTPUT, CLEAR LENS, IP66 RATED, 12" ADJUSTABLE EXTENDED ARM MOUNT AND SILVER FINISH.	4000K LED	120V	D	S	-	-	5W/LF	150/LF		COLOR KINETICS ESSENTIAL WHITE SERIES	
OG3	LUMENPULSE	LUMENCOVE XT SERIES	8' LINEAR SURFACE MOUNTED COVE LIGHT WITH EXTRUDED ALUMINUM HOUSING, INTEGRAL DRIVER, HIGH OUTPUT, CLEAR LENS, IP66 RATED, UNIVERSAL ADJUSTABLE ARM MOUNT AND SILVER FINISH.	BLUE LED	120V	D	W	-	-	12W/LF	-		COLOR KINETICS ESSENTIAL WHITE SERIES	
P1	IMPACT LIGHTING	WAF.R LED SERIES	26" DIAMETER ROUND SURFACE FIXTURE WITH MATTE WHITE ACRYLIC FLAT BOTTOM LENS AND ALUMINUM HOUSING. FINISH TO BE SELECTED BY ARCHITECT.	4000K LED	120V	D	P	-	-	60W	4200		FOCAL POINT SKYDOME SERIES PRUDENTIAL LTG P4000 SERIES	
P9	IMPACT LIGHTING	WHT.WAL LED SERIES	38" DIAMETER DECORATIVE OPEN CENTER PENDANT FIXTURE WITH MATTE WHITE ACRYLIC LENS, ALUMINUM HOUSING WITH FOUR POINT FIELD ADJUSTABLE MOUNTING CABLES. FINISH TO BE SELECTED BY ARCHITECT.	4000K LED	120V	D	P	-	-	55W	3233			
EBU1	LITHONIA	ELM2 SERIES	EMERGENCY BATTERY UNIT WITH TWO 5.4W/6V KRYPTON LAMPS, LEAD ACID BATTERY AND SELF DIAGNOTICS. MOUNT AT 7'-6" AFF UNLESS NOTED OTHERWISE.	W/ UNIT	120/277V	-	W	-	-	12W	-		DUAL-LITE LZ SERIES PHILIPS VU6L SERIES	
EBU7	LITHONIA	ELM2 SERIES	EMERGENCY BATTERY UNIT WITH TWO 9W/12V KRYPTON LAMPS, NI-CAD BATTERY AND SELF DIAGNOTICS. MOUNT AT 10'-0" AFF UNLESS NOTED OTHERWISE.	W/ UNIT	120/277V	-	W	-	-	20W	-		DUAL-LITE LZ SERIES PHILIPS VU6L SERIES	
EBU8	LITHONIA	AFN SERIES	EMERGENCY BATTERY UNIT TWO 6W/120/277V XENON LAMPS, DIE CAST HOUSING, NI-CAD BATTERY, SELF DIAGNOTICS AND WET LOCATION LISTED. FINISH TO BE SELECTED BY ARCHITECT.	W/ UNIT	120/277V	-	W	-	-	20W	-		DUAL-LITE PG SERIES PHILIPS PATRON SERIES	
X1	LITHONIA	EDG SERIES	EXIT SIGN EDGE LIT RECESSED LED WITH BRUSHED ALUMINUM SINGLE RED ON MIRROR FACE WITH NICKEL CADMINUM BATTERY AND SELF DIAGNOTICS.	W/ UNIT	120/277V	-	-	-	-	-	-		SURE-LITE EUX SERIES PHILIPS 44R SERIES	
X7	LITHONIA	LHQM SERIES	EXIT SIGN LED AND EMERGENCY BATTERY UNIT COMBINATION WITH 5.4W/6V KRYPTON LAMPS, WHITE THERMOPLASTIC HOUSING, STENCILED SINGLE RED FACE WITH NICKEL CADMINUM BATTERY AND SELF DIAGNOTICS. WALL MOUNTED SIGNS TO BE MOUNT AT 8'-0" AFF UNLESS NOTED OTHERWISE.	W/ UNIT	120/277V	-	-	-	-	-	-		SURE-LITE AP SERIES DUALITE HCX SERIES	

OPTIONS/ACCESSORIES CODE LISTING:

01 AIR HANDLING CAPABILITY - RETURN AIR
02 3" DEEP PARABOLIC LOUVERS
03 4" DEEP PARABOLIC LOUVERS
04 SEMI-SPECULAR PARABOLIC LOUVER
05 LOW IRIDESCENT PARABOLIC LOUVER
06 FLAT ALUMINUM DOOR FRAME
07 REGRESSED ALUMINUM DOOR FRAME
08 FLAT STEEL DOOR FRAME
09 SINGLE GASKETED DOOR FRAME
10 DOUBLE GASKETED DOOR FRAME
11 TRIPLE GASKETED DOOR FRAM, LENS & BODY
12 ANTIMIRCOBIAL PROTECTION PAINTED FINISH
13 DAMP LOCATION CONSTRUCTION
14 STAINLESS STEEL TRIM & DOOR FRAME
15 MATTE DIFFUSE CLEAR REFLECTOR
16 REFLECTOR COLOR OTHER THAN CLEAR
17 WHITE MILLIGROOVE BAFFLE
18 BLACK MILLIGROOVE BAFFLE
19 FURNISH WITH AUXILIARY QUARTZ RESTRIKE
20 FURNISH WITH SYMMETRIC REFLECTOR
21 FURNISH WITH ASYMMETRIC REFLECTOR
22 FURNISH WITH SLOPE ADAPTER - VERIFY SLOPE
23 FURNISH WITH AUXILIARY EMERGENCY BATTERY PACK
24 FURNISH WITH WIRE GUARD
25 FURNISH WITH CHAIN MOUNTING ACCESSORIES
26 FURNISH WITH RIGID PENDANT STEMS
27 FURNISH WITH SWIVEL CANOPY
28 PATTERN 12 ACRYLIC LENS - 0.125" MIN. THICKNESS
29 PATTERN 12 ACRYLIC LENS - 0.156" MIN. THICKNESS

BALLAST CODE LISTING: (SEE SPECIFICATIONS)

D LED DIMMABLE POWER SUPPLY (0-10V).

OCCUPANCY/PHOTO SENSOR SCHEDULE

SYMBOL	VOLTAGE	TECHNOLOGY PIR	TECHNOLOGY US	PATTERN	COVERAGE AREA	DESCRIPTION	MOUNTING	SEE NOTES
OS1	120V	X	X	360	1000	SELF-ADJUSTING, CEILING MOUNT OCCUPANCY SENSOR. SEE SPEC SECTION 26 09 23.	CEILING	1
OS2	120V	X		360	1000	SELF-ADJUSTING, CEILING MOUNT OCCUPANCY SENSOR. SEE SPEC SECTION 26 09 23.	CEILING	1
OS3	120V	X	X	180	1000	SELF-ADJUSTING, SWIVEL BRACKET MOUNT OCCUPANCY SENSOR. SEE SPEC SECTION 26 09 23.	CEILING	1
OS4	120V	X		180	500	SINGLE-POLE, WALL MOUNT SWITCH TYPE OCCUPANCY SENSOR. SEE SPEC SECTION 26 09 23.	WALL	2
OS5	24V	X	X	360	1000	SELF-ADJUSTING, CEILING MOUNT OCCUPANCY SENSOR. PROVIDE AS PART OF DIMMING ROOM CONTROLLER SYSTEM MANUFACTURER. SEE SPEC SECTION 26 09 23.	CEILING	
OS6	120V	X		180	500	DOUBLE-POLE, WALL MOUNT SWITCH TYPE OCCUPANCY SENSOR. SEE SPEC SECTION 26 09 23.	WALL	2
DS	120V					0 FC (MIN) TO 50-750 FC (MAX) DAYLIGHT SENSOR. SEE SPEC SECTION 26 09 23.		
DS1	120V					0 FC (MIN) TO 50-750 FC (MAX) DAYLIGHT SENSOR. PROVIDE AS PART OF LIGHTING CONTROL SYSTEM MANUFACTURER. SEE SPEC SECTION 26 09 23.		
PE	120V					0 FC (MIN) TO 50-750 FC (MAX) OUTDOOR PHOTOCELL. PROVIDE AS PART OF LIGHTING CONTROL SYSTEM MANUFACTURER. SEE SPEC SECTION 26 09 42.23.	JBOX	3

GENERAL NOTES:

1. PROVIDE 8' OF ADDITIONAL WIRING ABOVE ACCESSIBLE CEILING.
2. PROVIDE ADEQUATE SUPPORT FOR CONTROL WIRING.
3. COORDINATE LOCATION OF CEILING MOUNTED OCCUPANCY SENSORS WITH HVAC CEILING DIFFUSER. DO NOT INSTAL SENSOR WITHIN 3' OF DIFFUSER.
4. DAYLIGHT SENSOR PLACEMENT IS GENERAL SUGGESTED PLACEMENT DURING DESIGN. FINAL PLACEMENT IS THE RESPONSIBILITY OF ELECTRICAL CONTRACTOR BASED ON THE SENSOR MANUFACTURER RECOMMENDATIONS AND WIRING DIAGRAMS.

SCHEDULE NOTES:

1. PROVIDE 20A RATED POWER PACKS WITH ZERO CROSS SWITCHING TECHNOLOGY AND MANUAL ON MODE.
2. REFER TO SPECIFICATIONS FOR DEVICE AND WALL PLATE FINISH COLORS.
3. EXTERIOR PHOTOSENSOR WIRED TO LIGHTING CONTROL PANEL LCP.

LIGHTING CONTROL PANEL SCHEDULE (LCP)

RELAY NUMBER	RELAY TYPE POLES	RELAY TYPE VOLTAGE	RELAY TYPE SIZE	CIRCUIT	OVERRIDE DEVICE	AREA CONTROLLED	KEYED NOTES
1	1	120V	20A	1RNL1-49	PE, TS	TYPES OA1 & OA4 SITE LIGHTS	
2	1	120V	20A	1RNL1-49	PE, TS	TYPES OF2 FLAG POLE LIGHTS	1
3	1	120V	20A	1RNL1-49	PE, TS	TYPES OC8 & OF1 SITE LIGHTS	
4	1	120V	20A	2RNL1-32	PE, TS	TYPES OG2 & OG3 EXT LIGHTS	1
5	1	120V	20A	2RNL1-32	PE, TS	TYPES OC2, OC7 & D5E EXT...	
6	1	120V	20A	1PNL2-32	TS, LV115a, LV115b	TYPE L11 LIGHTS	
7	1	120V	20A	1PNL2-34	TS, LV115a, LV115b	TYPES L11 LIGHTS	
8	1	120V	20A	2RNL1-34	TS, LV132a, LV136a	TYPE L11 LIGHTS (DAYLIGHT ZONE)	
9	1	120V	20A	2RNL1-34	TS, LV132a, LV136a	TYPE L11 LIGHTS	
10	1	120V	20A	2RNL1-35	TS, LV132a, LV136a	TYPE L11 LIGHTS (DAYLIGHT ZONE)	
11	1	120V	20A	2RNL1-36	TS, LV132a, LV136a	TYPE L11 LIGHTS	
12	1	120V	20A	2RNL1-37	TS, LV141a, LV141b	TYPE L9 LIGHTS	
13	1	120V	20A	2RNL1-37	TS, LV141a, LV141b	TYPE L9 LIGHTS	
14	1	120V	20A				
15	1	120V	20A				
16	1	120V	20A				

GENERAL NOTES:

1. SITE LIGHTING TO TURN ON VIA PHOTOELCTRIC SWITCH AND OFF AT MIDNIGHT.
2. BUILDING PHOTOELECTRIC SWITCH WILL OVERRIDE THE SITE LIGHTING DURING DAYTIME HOURS.
3. INTERIOR BUILDING LIGHTING TO TURN OFF AT 1:00 AM. LIGHTS SHALL BLINK 5 MINUTES PRIOR TO SHUTOFF. AUTO OFF 1:00 AM; 1:00 AM TO 4:00 AM - LV SWITCH OVERRIDE ON FOR 2 HRS.
4. RELAYS SERVING EMERGENCY LIGHTING TO TURN LIGHTING ON IN LOSS OF POWER.
5. VERIFY PROGRAMMING WITH OWNER.

KEYED NOTES:

1. PHOTOELECTRIC SWITCH ON, PHOTOELECTRIC SWITCH OFF

ABBREVIATIONS:

LVx - LOW VOLTAGE SWITCH (x=SWITCH NUMBER)
PE - EXTERIOR PHOTOELECTRIC SWITCH
DS - DAYLIGHT SENSOR
OS - OCCUPANCY SENSOR
TS - TIME SCHEDULE BY CONTROL PANEL
S - STANDARD LINE VOLTAGE SWITCH

LOW VOLTAGE SWITCH SCHEDULE

SWITCH ID	# BUTTONS REQUIRED	CONTROLLED RELAY	SEE NOTES
a	4	VIA DIMMING ROOM CONTROLLER	1,2
b	4	VIA DIMMING ROOM CONTROLLER	2
c	4	VIA DIMMING ROOM CONTROLLER	2
d	4	VIA DIMMING ROOM CONTROLLER	2
f	4	VIA DIMMING ROOM CONTROLLER	2
g	4	VIA DIMMING ROOM CONTROLLER	2
115a	1	6,7	
115b	1	6,7	
132a	1	8,9,10,11	
136a	1	8,9,10,11	
141a	1	12,13	
141b	1	12,13	

SCHEDULE NOTES:

1. DAYLIGHT SENSOR TO PROVIDE CONTINUOUS DIMMING OF ROOM LIGHTING
2. SWITCH TO PROVIDE INDEPENDENT ON, OFF, RAISE & LOWER CONTROL.

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Madison Water Utility
Quality and Reliability since 1882
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS

DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-601

6/9/2015 3:18:32 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt

ELECTRICAL EQUIPMENT WIRING SCHEDULE

STARTER/DISCONNECT TYPE:		KEY:
MX - MANUAL MOTOR SWITCH	2SP - 2 SPEED, 2 WINDING	MFR - MANUFACTURER
MS - MANUAL MOTOR STARTER (W/OVER LOADS)	SW - 2 SPEED, 1 WINDING	F- FUSED
YD - WYE- DELTA	CS - COMBINATION MAGNETIC CONTROLLER	NF - NON-FUSED
FV - FULL VOLTAGE	FS - FUSED SWITCH	EC - ELECTRICAL CONTRACTOR
SS - SOLID STATE	VFD - VARIABLE FREQUENCY DRIVE	MC - MECHANICAL CONTRACTOR
	RVS - REDUCED VOLTAGE	PC - PLUMBING CONTRACTOR

EQUIPMENT	EQUIPMENT DESCRIPTION	LOCATION	LOAD			EQUIPMENT		BRANCH WIRING				STARTER			DISCONNECT TYPE AND RATING					SEE ONE-LINE DIAG.	KEYED NOTE
			KW	HP	AMPS	VOLTS	PHASE	NO.	SIZE	GND.	C	TYPE	NEMA SIZE	BY	TYPE	SIZE / FUSE	CIRCUIT BREAKER	NEMA ENCLOSURE	BY		
AC - BOILER	AIR COMPRESSOR - BOILER ROOM	RM 104	---	5	---	208	3	3	#8	#10	3/4"			---	F	30 / 25	---	1	EC	---	7
AC - 1	AIR COMPRESSOR	RM 230	---	(2) 7.5	---	208	3	3	#4	#8	1"	---	---	---	F	100 / 70	---	1	EC	---	---
ACCU - 1	AIR COOLED CONDENSING UNIT	ROOF	---	---	56 MCA	208	3	3	#4	#8	1"	---	---	MFR	F	100 / 70	---	3R	EC	---	---
ACCU - 2	AIR COOLED CONDENSING UNIT	ROOF	---	---	56 MCA	208	3	3	#4	#8	1"	---	---	MFR	F	100 / 70	---	3R	EC	---	---
ACCU - B1	AIR COOLED CONDENSING UNIT	GRADE	---	---	13 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	F	30 / 20	---	3R	EC	---	---
ACCU - B2	AIR COOLED CONDENSING UNIT	GRADE	---	---	13 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	F	30 / 20	---	3R	EC	---	---
ACCU - B3	AIR COOLED CONDENSING UNIT	GRADE	---	---	13 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	F	30 / 20	---	3R	EC	---	---
ACCU - S1	AIR COOLED CONDENSING UNIT	ROOF	---	---	13 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	F	30 / 20	---	3R	EC	---	---
ACCU - M1	AIR COOLED CONDENSING UNIT	ROOF	---	---	13 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	F	30 / 20	---	3R	EC	---	---
ACCU - C1	AIR COOLED CONDENSING UNIT	ROOF	---	---	15 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	F	30 / 25	---	3R	EC	---	---
AD	AUTOMATIC DOORS	SEE PLANS	500W	---	---	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	---	---	19
AHE - 1	HEAT EXCHANGER	RM 129	---	(2) 1/2	10.8 MCA	208	1	2	#12	#12	3/4"	FV	0	EC	CS	30/15	---	1	EC	---	---
AHU - 1	AIR HANDLER UNIT	RM 214	---	7.5	25.3	208	3	3	#8	#10	3/4"	VFD	---	MC	---	---	---	---	---	---	---
AHU - 2	AIR HANDLER UNIT	RM 214	---	7.5	25.3	208	3	3	#8	#10	3/4"	VFD	---	MC	---	---	---	---	---	---	---
BCB	BRIDGE CRANE - BRIDGE	RM 132	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/6	---	---	EC	---	29
BCB	BRIDGE CRANE - BRIDGE	RM 132	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/6	---	---	EC	---	29
BCH	BRIDGE CRANE - HOIST	RM 132	---	8	---	208	3	3	#8	#10	3/4"	---	---	MFR	F	60/40	---	---	EC	---	29
BCT	BRIDGE CRANE - TROLLEY	RM 132	---	2.5	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/15	---	---	EC	---	28
BP - 1	BOILER PUMP	RM 104	---	1	---	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 6	---	1	EC	---	---
BP - 2	BOILER PUMP	RM 104	---	1	---	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 6	---	1	EC	---	---
CF - 1	CEILING FAN	RM 136	---	1	---	208	3	3	#12	#12	3/4"	VFD	---	MFR	F	30 / 6	---	---	EC	---	10
CF - 2	CEILING FAN	RM 132	---	1	---	208	3	3	#12	#12	3/4"	VFD	---	MFR	F	30 / 6	---	---	EC	---	10
CF - 3	CEILING FAN	RM 115	---	1	---	208	3	3	#12	#12	3/4"	VFD	---	MFR	F	30 / 6	---	---	EC	---	10
CP - 1	CIRCULATING PUMP	RM 104	---	---	0.5	120	1	2	#12	#12	3/4"	---	---	EC	MX	---	---	1	EC	---	1
CP FCU - B1	FCU CONDENSATE PUMP	SEE PLANS	---	---	0.24	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	EC	---	25
CP FCU - B2	FCU CONDENSATE PUMP	SEE PLANS	---	---	0.24	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	EC	---	25
CP FCU - B3	FCU CONDENSATE PUMP	SEE PLANS	---	---	0.24	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	EC	---	25
CP FCU - S1	FCU CONDENSATE PUMP	SEE PLANS	---	---	0.24	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	EC	---	25
CP FCU - M1	FCU CONDENSATE PUMP	SEE PLANS	---	---	0.24	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	EC	---	25
CRAC - 1	COMPUTER ROOM AIR CONDITIONER	RM 217	---	---	1.8 MCA	208	1	2	#12	#12	3/4"	---	---	MFR	---	---	---	---	MFR	---	5
CRL	RETRACTABLE CORD REEL LIGHT	SEE PLANS	50W	---	---	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	14
CRR	RETRACTABLE CORD REEL RECEPT	SEE PLANS	180W	---	---	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	14
CUH - 1	CABINET UNIT HEATER	STAIRS - 5	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
CUH - 2	CABINET UNIT HEATER	LOCKER RM 120	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
CUH - 3	CABINET UNIT HEATER	VESTIBULE 100	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
CUH - 4	CABINET UNIT HEATER	STAIR - S1 -1	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
CUH - 5	CABINET UNIT HEATER	STOR 103 - 2	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
CUH - 6	CABINET UNIT HEATER	STAIR - 5 - 3	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
CUH - 7	CABINET UNIT HEATER	VEST 120	---	1/15	---	120	1	2	#12	#12	1/2"	---	---	MFR	---	---	---	---	MFR	---	5
DRILL PRESS	DRILL PRESS SMALL	RM 141	---	---	5	120	1	2	#12	#12	3/4"	---	---	---	NF	---	---	1	EC	---	---
DRILL PRESS	DRILL PRESS LARGE	RM 141	---	---	11	208	1	2	#12	#12	3/4"	---	---	---	NF	---	---	1	EC	---	---
EF - 1	EXHAUST FAN	ROOF	---	1/10	---	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	20
EF - 2	EXHAUST FAN	ROOF	---	1/4	---	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	20
EF - 3	EXHAUST FAN	ROOF	---	1/10	---	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	20
EF - G1	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	1	EC	---	20
EF - G2	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	1	EC	---	20
EF - G3	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	1	EC	---	20
EF - K1	EXHAUST FAN	ROOF	---	1/20	1.8	120	1	2	#12	#12	1/2"	MX	---	EC	---	---	---	---	---	---	20,21
EF - P1	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	1	EC	---	20
EF - P2	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	1	EC	---	20
EF - P3	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	1	EC	---	20
EF - W1	EXHAUST FAN	ROOF	---	3	11	208	3	3	#12	#12	3/4"	FV	1	EC	CS	30 / 15	---	3R	EC	---	20
EF - W2	EXHAUST FAN	ROOF	---	1/2	2.5	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30 / 3.5	---	3R	EC	---	20
EF - PIT1	EXHAUST FAN	ROOF	---	1/10	3.2	120	1	2	#12	#12	1/2"	MX	20A	EC	---	---	---	1	EC	---	20
EF - PIT2	EXHAUST FAN	ROOF	---	1/10	3.2	120	1	2	#12	#12	1/2"	MX	20A	EC	---	---	---	1	EC	---	20
ELEV EL-1, EL-2	ELEVATOR CAB LTG	SEE PLANS	---	---	20	120	1	2	#12	#12	1/2"	---	---	---	F	30/20	---	1	EC	---	11
EWES - 1	EMERGENCY EYEWASH STATION	RM 138	---	---	1	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	---	---	4
FCU - B1	FAN COIL UNIT	BASEMENT	---	1/10	3.2	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	MFR	---	---
FCU - B2	FAN COIL UNIT	BASEMENT	---	1/10	3.2	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	MFR	---	---
FCU - B3	FAN COIL UNIT	BASEMENT	---	1/10	3.2	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	MFR	---	---
FCU - S1	FAN COIL UNIT	STAIR	---	1/10	3.2	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	MFR	---	---
FCU - M1	FAN COIL UNIT	RM 137	---	1/10	3.2	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	MFR	---	---
FE - 1A	EXTRACTOR TUBING REEL	RM 141	---	1/6	4.4	120	1	2	#12	#12	3/4"	RVS	---	MFR	MX	---	---	1	EC	---	17
FE - 1	FUME EXTRACTOR (WELDING)	RM 141	---	1.5	6.9	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30/9	---	1	EC	---	18
FE - 2	FUME EXTRACTOR (SERVICE BAY)	RM 132	---	2	4.8	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30/10	---	1	EC	---	18
FE - 3	FUME EXTRACTOR	RM 132	---	3	4.8	208	3	3	#12	#12	3/4"	FV	0	EC	CS	30/15	---	1	EC	---	18
GFT - 1	GLYCOL FILL TANK	RM 104	---	1/3	7.2	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	EC	---	6
GO	GATE OPERATOR	SITE	---	1	---	208	1	2	#10	#10	3/4"	---	---	MFR	---	---	---	---	MFR	---	---
GRINDER	GRINDER - LARGE	RM 136	---	1	4.8	208	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	EC	---	13
HD	HAND DRYER	SEE PLANS	---	---	14	120	1	2	#12	#12	1/2"	---	---	---	---	---	---	---	-	---	---
HWB - 1	HOT WATER BOILER	RM 104	---	---	13	120	1	2	#12	#12	3/4"	---	---	MFR	FS	20 / 16	---	1	EC	---	8
HWB - 2	HOT WATER BOILER	RM 104	---	---	13	120	1	2	#12	#12	3/4"	---	---	MFR	FS	20 / 16	---	1	EC	---	8
HWP - 1	HOT WATER PUMP	RM 104	---	3	11	208	3	3	#12	#12	3/4"	VFD	---	MC	---	---	---	---	---	---	22
HWP - 2	HOT WATER PUMP	RM 104	---	3	11	208	3	3	#12	#12	3/4"	VFD	---	MC	---	---	---	---	---	---	22
HYD. LIFT	HYDRAULIC LIFT	RM 136	---	4	14.0	208	3	3	#10	#10	3/4"	---	---	MFR	F	30/25	---	1	EC		---
MAU - 1	MAKE-UP AIR UNIT	MEZANINE	---	1	8.8	208	3	3	#12	#12	3/4"	---	---	MFR	---	---	---	---	EC	---	5
MAU - 2	MAKE-UP AIR UNIT	MEZANINE	---	2	4.8	208	3	3	#12	#12	3/4"	---	---	MFR	---	---	---	---	EC	---	5
MAU - 3	MAKE-UP AIR UNIT	MEZANINE	---	5	17.5	208	3	3	#10	#10	3/4"	---	---	MFR	---	---	---	---	EC	---	5
MRH-1	MONORAIL CRANE - HOIST	RM 141	---	3	---	208	3	3	#8	#8	1"	---	---	MFR	F	60/50	---	1	EC	---	29
MRT-1	MONORAIL CRANE - TROLLEY	RM 141	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/3.5	---	1	EC	---	28
MRH-2	MONORAIL CRANE - HOIST	RM 132	---	3	---	208	3	3	#8	#8	1"	---	---	MFR	F	60/50	---	1	EC	---	29
MRT-2	MONORAIL CRANE - TROLLEY	RM 132	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/3.5	---	1	EC	---	28
JIB CRANE	JIB CRANE - LIFTING	RM 141	---	1	4.5	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/6	---	1	EC	---	---
JIB CRANE	JIB CRANE - TRAVERSING	RM 141	---	1/2	2.4	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/3.5	---	1	EC	---	---
OHD	OVERHEAD SECTIONAL DOORS	SEE PLANS	---	1/2	2.5	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/3.5	---	1	EC	---	12
P - R1	PUMP - RADIANT FLOOR	RM 142	---	1/20	1.4	120	1	2	#12	#12	1/2"	---	---	---	MX	---	---	1	EC	---	---
P - R2	PUMP - RADIANT FLOOR	RM 138	---	1/20	1.4	120	1	2	#12	#12	3/4"	---	---	---	MX	---	---	1	EC	---	---
P - R3	PUMP - RADIANT FLOOR	RM 135	---	1/20	1.4	120	1	2	#12	#12	3/4"	---	---	---	MX	---	---	1	EC	---	---
PT BOOTH	PAINT BOOTH	RM 115	---	2	---	208.00	3	3	#12	#12	3/4"	---	---	MFR	---	---	---	---	---	---	27
RF - 1	RELIEF FAN	ROOF	---	3/4	7.6	208	3	3	#12	#12	3/4"	VFD	---	MC	---	---	---	---	---	---	20,22
RF - 2	RELIEF FAN	ROOF	---	3/4	7.6	208	3	3	#12	#12	3/4"	VFD	---	MC	---	---	---	---	---	---	20,22
RO	ROD OVEN	RM 142	1.0	---	---	208	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	24
ROTARY LIFT	ROTARY PARALLELOGRAM LIFT	RM 136	---	20	62.0	208	3	3	#4	#8	1"	---	---	MFR	F	100/80	---	1	EC	---	26
ROTARY LIFT	ROTARY PARALLELOGRAM LIFT	RM 137	---	20	62.0	208	3	3	#4	#8	1"	---	---	MFR	F	100/80	---	1	EC	---	26
SP -1	SUMP PUMP	ELEV EL-1	---	---	8.8	208	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	3
SP -2	SUMP PUMP	ELEV EL-2	---	---	8.8	208	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	3
SP-3	SUMP PUMP	STOR.001		1/2	9.8	120	1	2	#12	#12	3/4"			MFR	MX	---	---	---	EC	---	---
TABLE SAW	TABLE SAW	RM 115	---	---	7	208	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	9
TIRE CHANGER	TIRE CHANGER	RM 138	---	---	12	208	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	13
TCB	TRANSFER CRANE - BRIDGE	RM 115	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/6	---	---	EC	---	29
TCB	TRANSFER CRANE - BRIDGE	RM 115	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/6	---	---	EC	---	29
TCH	TRANSFER CRANE - HOIST	RM 115	---	3	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/15	---	---	EC	---	29
TCT	TRANSFER CRANE - TROLLEY	RM 115	---	1	---	208	3	3	#12	#12	3/4"	---	---	MFR	F	30/6	---	---	EC	---	28
UH - 1	UNIT HEATER	RM 141	---	1/6	4.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 2	UNIT HEATER	RM 141	---	1/6	4.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 3	UNIT HEATER	RM 132	---	1/6	4.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 4	UNIT HEATER	RM 132	---	1/6	4.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 5	UNIT HEATER	RM 131	---	1/6	4.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 6	UNIT HEATER	RM 131	---	1/6	4.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 7	UNIT HEATER	MEZZANINE	---	1/20	1.8	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 8	UNIT HEATER	WELL SHOP	---	1/4	5.8	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 9	UNIT HEATER	WELL SHOP	---	1/4	5.8	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
UH - 10	UNIT HEATER	RM 104	---	1/20	1.4	120	1	2	#12	#12	1/2"	---	---	MC	---	---	---	---	MFR	---	---
WELDER-1	WELDER MILLER 180SD	RM 141	---	---	54	208	1	2	#8	#8	1"	---	---	---	---	---	---	---	---	---	15,24
WELDER-2	WELDERMATIC 251	RM 141	---	---	48	208	1	2	#8	#8	1"	---	---	---	---	---	---	---	---	---	15,23
WELDER-3	MILLER AXCESS 300MIG	RM 141	---	---	33	208	3	3	#8	#8	1"	---	---	---	---	---	---	---	---	---	16,23
WELDER-4	PLASMA CUTTER	RM 141	---	---	42	208	1	2	#8	#8	1"	---	---	---	---	---	---	---	---	---	16
WS - 1	WATER SOFTENER	RM 104	---	---	5	120	1	2	#12	#12	3/4"	---	---	---	---	---	---	---	---	---	2

EQUIPMENT SCHEDULE GENERAL NOTES:

1. ALL WORK BY THIS CONTRACTOR TO COMPLY WITH ALL LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES TO AVOID CONFLICTS AND TO VERIFY ALL EQUIPMENT CONNECTIONS AND FOR COMPLETE INSTALLATION AND CONNECTION.
3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE ELECTRICAL SYSTEM PER CONTRACT DRAWINGS AND ENSURING THAT THE SYSTEM IS OPERATIONAL UPON JOB COMPLETION.
4. PROVIDE ALL POWER WIRING INCLUDING ALL CIRCUITRY CARRYING ELECTRICAL ENERGY FROM PANELBOARD OR OTHER SOURCE THROUGH STARTERS AND DISCONNECTS TO MOTORS, PACKAGED EQUIPMENT OR PACKAGED CONTROL PANELS. PROVIDE ALL WIRING BETWEEN CONTROL PANELS AND MOTORS. INCLUDE STARTERS, DISCONNECTS AND OVERLOAD PROTECTION IF NOT INCLUDED HVAC SPECIFICATION. COORDINATE WITH HVAC SPECIFICATIONS.
5. MOTORS CONNECTED TO EMERGENCY SYSTEMS CIRCUITRY SHALL HAVE CIRCUITRY INSTALLED IN SEPARATE RACEWAY PER NEC ARTICLE 700.
6. THIS CONTRACTOR SHALL VERIFY WITH MECHANICAL CONTRACTOR, ELECTRICAL REQUIREMENTS INCLUDING VOLTAGES, HORSE POWER, DISCONNECTING MEANS, STARTERS FOR MOTORS AND EQUIPMENT PRIOR TO ORDERING CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS.

EQUIPMENT SCHEDULE KEYED NOTES:

1. PUMP FURNISHED WITH TIMER AND AQUA STAT FOR " ON/OFF " CONTROL. E.C. TO INSTALL AND WIRE COMPLETE.
2. MOUNT DUPLEX RECEPTACLE ADJACENT TO CONTROLLER. COORDINATE ROUGH-IN WITH PC.
3. FURNISH NEMA 6-20R RECEPTACLE MOUNTED 24" ABOVE ELEVATOR PIT FLOOR.
4. INSTALL AND WIRE COMPLETE ALARM AND LIGHT FURNISHED WITH UNIT. COORDINATE ROUGH-IN WITH PC.
5. DISCONNECT MOUNTED INTEGRAL TO UNIT.
6. UNIT FURNISHED WITH CORD AND PLUG.
7. FURNISH FUSIBLE DISCONNECT SWITCH MOUNTED ADJACENT TO EXISTING CONTROLLER. EXTEND NEW MOTOR BRANCH CIRCUIT FROM DISCONNECT TO CONTROLLER.
8. BUSS FUSES TYPE " SSY ".
9. PROVIDE 12/3 AWG TYPE SJO 300V CORD WITH NEMA 6-15R.
10. FAN PROVIDED WITH VFD MOUNTED AT FAN MOTOR. PROVIDE ONE (1) EMPTY 3/4" CONDUIT FROM VFD TO WALL-MOUNTED CONTROLLER FURNISHED WITH FAN. CONDUIT SHALL BE USED FOR CONTROL CABLE INSTALLED BY MC.
11. LABEL DISCONNECT SWITCH ELEVATOR CAB LIGHTING.
12. COORDINATE DISCONNECT LOCATION PRIOR TO ROUGH-IN WITH DOOR INSTALLER. DOOR OPERATION STATIONS, SWITCHES, SENSORS, ETC ARE INSTALLED BY DOOR...
13. PROVIDE NEMA 6-20R RECEPTACLE TO MATCH CORD & PLUG. VERIFY CORD & PLUG.
14. MOUNT CORD REELS 72" AFF ADJACENT TO PROVIDED RECEPTACLE SHOWN ON PLANS. REFER TO DETAIL ON E-501 FOR MANUFACTURER AND MODEL NUMBER. FIELD ADJUST CORD STOP IN FIELD PER USERS REQUEST.
15. PROVIDE RECEPTACLE TO MATCH CORD & PLUG FURNISHED WITH EQUIPMENT.
16 PROVIDE 50A, 3-PHASE 250VAC, 3-POLE, 4-WIRE GROUNDING RECEPTACLE - HUBBEL NO. CS8369 (RECEPT) AND CS8364C (CONNECTOR BODY) OR EQUAL.
17 PROVIDE WIRING TO PENDANT UP/DOWN REEL DRIVE SWITCH. INTERLOCK REEL DRIVE WITH FUME EXTRACTOR FAN FE-1. EXTRACTOR TUBING REEL IS LOCATED AT END OF BOOM ARM.
18 MOTOR DRIVEN EXTRACTOR OPERATOR. FAN INTERLOCKED WITH WALL SWITCH. REFER TO MECHANICAL DRAWINGS.
19 PROVIDE EMPTY 3/4"C BETWEEN DOOR OPERATOR ROUGH-IN FOR PUSH BUTTON(S). ALL CONTROL WIRING BY DOOR SUPPLIER. COORDINATE DOOR OPERATOR ROUGH-IN MTG HEIGHT WITH ARCHITECTURAL DWGS. PROVIDE DISCONNECT SWITCH ON THE UNIT.
20 MANUFACTURER MOUNTED NON-FUSED DISCONNECT SWITCH.
21 CONTROLLED THROUGH MANUAL MOTOR SWITCH IN ROOM 122. MANUAL MOTOR SWITCH TO BE FLUSH MOUNTED.
22 VFD INSTALLED BY E.C.
23 PROVIDE NEMA 6-50R RECEPTACLE MOUNTED AT 44" AFF.
24 PROVIDE NEMA 6-20R RECEPTACLE TO MATCH CORD & PLUG. MOUNT AT 44" AFF.
25 EQUIPMENT FURNISHED WITH QUICK-CONNECT CORD. EC IS RESPONSIBLE FOR FINAL CONNECTION.
26 PROVIDE (2) 1"C (RMC) UNDERGROUND FROM CONTROLLER TO THE SERVICE LEG LOCATIONS OF THE LIFT. COORDINATE EXACT ROUGH-IN LOCATION WITH LIFT INSTALLER PRIOR TO ROUGH-IN. INSTALL ALL CONDUITS, J-BOXES ETC. TO MEET THE REQUIREMENTS OF NEC ARTICLE 511.4, CLASS 1,DIVISION 2 REQUIREMENTS.
27 E.C SHALL INSTALL CONTROL PANEL AND THREE (3) 2'X4' LIGHT FIXTURES FURNISHED LOOSE PER MANUFACTURERS INSTALLATION REQUIREMENTS. CONTROL PANEL PROVIDES A SINGLE POINT CONNECTION TO LIGHTS AND EXHAUST FAN FOR CONTROL. INSTALL ADJACENT TO CONTROL PANEL FIRE ALARM CONTROL MODULE TO SEND AN ALARM TO FACP UPON ACTIVATION OF FIRE ALARM SUPPRESSION SYSTEM.
28 PROVIDE FIELD WIRING FROM DISCONNECT SWITCH UP TO BRIDGE TROLLEY BUS BARS. COORDINATE ROUGH-IN WITH CRANE INSTALLER.
29 PROVIDE FIELD WIRING FROM DISCONNECT SWITCH UP TO MOTOR CONNECTION POINT. COORDINATE ROUGH-IN WITH CRANE INSTALLER.

FLOOR BOX SCHEDULE

THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVIENCE OF THE CONTRACTOR. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFCATION OF QUANTITIES AND SHALL FURNISH ALL MATERIAL REQUIRED, WHETHER SPECIFIED OR NOT, TO PRODUCE A SATISFACTORY WORKING SYSTEM. CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN. "STANDARD COLR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE.

DESIGNATION	DESCRIPTION	APPROVED MANUFACTURER
FB-1	FLOOR BOX, RECESSED MULTI-SERVICE - POWER/COMMUNICATIONS, FOUR COMPARTMENTS CONSISTING OF: (2) 20 AMP, 125 VOLT, NEMA 5-20R DUPLEX RECEPTACLE, (1) GFCI BRACKET TO ACCEPT 4 PORT STYLE LINE OUTLET FRAME, AND CAST IRON, ADJUSTABLE RECTANGULAR FLOOR BOX WITH DIE-CAST FLANGED ALUMINUM BLANK COVER IN BRUSHED ALUMINUM FINISH, FLUSH COVER, U.L. LISTED. SEE SPECIAL SYSTEMS DRAWINGS FOR VOICE/DATA OUTLET REQUIREMENTS.	WIREMOLD RFB4-CI-FPCTCGY STEEL CITY AFM-SERIES HUBBELL HBLCFB SERIES
FB-2	FLOOR BOX, FLUSH, FIRE RATED POKE-THROUGH, U.L. LISTED FOR 2 HOUR RATED FLOORS, SEMI-FLUSH DIE-CAST ALUMINUM CARPET FLANGE, HINGED 180 DEGREE RECEPTACLE COVERS, 20 AMP, 125 VOLT, N.E.M.A. 5-20R DUPLEX RECEPTACLE AND 6 PORT STYLE LINE OUTLET FRAME WITH ONE 3/4" C (POWER) AND 1-1/2" C (TECHNOLOGY) . UL514A SCRUB WATER LISTED.	HUBBELL S1PTFAVIT-SISP--S1PTALS1C FCGY WIREMOLD STEEL CITY

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Madison Water Utility
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-602

6/9/2015 3:18:33 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt

Panelboard: Panel BRNL1

Bus Ampacity	125	Volts	208Y/120	Panel Source:	
Branch Brkr Space	42 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	22 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	60 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	SP -2	1	20/2	920			830			20/1	2	EXIST. SUMP PUMP	
	|	3	|		920			0		20/1	4	SPARE	
	SP-3	5	20/1			1,113			1,270	20/1	6	FCU -B1, (5) RECEPT	
	ACCU - B1	7	20/2	1,900			1,090			20/1	8	FCU -B2, (4) RECEPT	
	|	9	|		1,900			1,080		20/1	10	FCU -B3, (4) RECEPT	
	SPARE	11	20/1			0			230	20/1	12	ELEV RECEPT, 1-K1	
	ACCU - B2	13	20/2	1,900			1,500			20/2	14	GEN BLOCK HTR	
	|	15	|		1,900			1,500		|	16	|	
	SPARE	17	20/1			0			500	20/1	18	GEN CHARGER & LTG	
	LIGHTING	19	20/1	1,500			360			20/1	20	ELEV EL-2 LTG	
	ACCU - B3	21	20/2		1,900			0		20/1	22	SPARE	
	|	23	|			1,900			0	20/1	24	SPARE	
	SPARE	25	20/1	0			0			20/1	26	SPARE	
	SPARE	27	20/1		0			0		20/1	28	SPARE	
	SPARE	29	20/1			0			0	20/1	30	SPARE	
	SPARE	31	20/1	0			0			20/1	32	SPARE	
	SPARE	33	20/1		0			0		20/1	34	SPARE	
	SPARE	35	20/1			0			0	20/1	36	SPARE	
	SPARE	37	20/1	0			0			20/1	38	SPARE	
	SPARE	39	20/1		0			0		20/1	40	SPARE	
	SPARE	41	20/1			0			0	20/1	42	SPARE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panelboard: Panel 1PNL3

Bus Ampacity	125	Volts	208Y/120	Panel Source:	
Branch Brkr Space	42 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	70 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	CP -1, UH - 10,	1	20/1	970			2,033			40/3	2	EXIST. AIR COMP.	
	WS - 1	3	20/1		600			2,033		|	4	|	
	GFT - 1	5	20/1			830			2,033	|	6	|	
	HWP - 1	7	20/3	1,266			720			20/1	8	(4) RECEPT	
	|	9	|		1,266			380		20/1	10	EXIST. AIR DRYER	
	|	11	|			1,266			1,560	20/1	12	HWB - 1	
	HWP - 2	13	20/3	1,266			1,560			20/1	14	HWB - 2	
	|	15	|		1,266			500		20/1	16	DDC PANEL	
	|	17	|			1,266			640	20/1	18	RECEPT, CUH-5, LTG	
	BP -1	19	20/3	566			500			20/1	20	FACP	
	|	21	|		566			0		40/3	22	SPARE	
	|	23	|			566			0	|	24	|	
	BP - 2	25	20/3	566			0			|	26	|	
	|	27	|		566			0		20/1	28	SPARE	
	|	29	|			566			0	20/1	30	SPARE	
	SPARE	31	20/1	0			0			20/1	32	SPARE	
	SPARE	33	20/1		0			0		20/1	34	SPARE	
	SPARE	35	20/1			0			0	20/1	36	SPARE	
	SPARE	37	20/1	0			0			20/1	38	SPARE	
	SPARE	39	20/1		0			0		20/1	40	SPARE	
	SPARE	41	20/1			0			0	20/1	42	SPARE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panelboard: Panel 1PNL1

Bus Ampacity	400	Volts	208Y/120	Panel Source:	
Branch Brkr Space	84 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Flush		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	203 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	AC -1	1	100/3	556			670			20/1	2	AIR DRYER	
	|	3	|		556			0		20/1	4	SPARE	
	|	5	|			556			0	20/1	6	SPARE	
	EF - P1	7	20/3	300			300			20/3	8	EF - G1	
	|	9	|		300			300		|	10	|	
	|	11	|			300			300	|	12	|	
	EF - P2	13	20/3	300			300			20/3	14	EF - G2	
	|	15	|		300			300		|	16	|	
	|	17	|			300			300	|	18	|	
	SPARE	19	20/1	0			9,000			50/2	20	WELDER-4 (PLASMA)	
	SPARE	21	20/1		0			9,000		|	22	|	
	SPARE	23	20/1			0			570	20/1	24	FCU-M1/COND. PUMP	
	WELDER-3 (MIG)	25	60/3	3,900			4,900			50/2	26	WELDER-2 (251)	
	|	27	|		3,900			4,900		|	28	|	
	|	29	|			3,900			510	20/1	30	FE-1a	
	WELDER-1 (180 SD)	31	50/2	3,744			800			20/3	32	FE-1	
	|	33	|		3,744			800		|	34	|	
	SPARE	35	20/1			0			800	|	36	|	
	FE-3	37	20/3	1,266			900			20/3	38	FE-2	
	|	39	|		1,266			900		|	40	|	
	|	41	|			1,266			900	|	42	|	
	JIB CRANE-LIFT	43	20/3	566			300			20/3	44	JIB CRANE-TRAVRS	
	|	45	|		566			300		|	46	|	
	|	47	|			566			300	|	48	|	
	FUEL DISPENSER	49	20/1	900			500			20/2	50	ROD OVEN	
	FUEL DISPENSER	51	20/1		900			500		|	52	|	
	FUEL DISPENSER	53	20/1			900			0	20/1	54	SPARE	
	SPACE	55		0			1,266			20/3	56	HYDRAULIC LIFT	
	SPACE	57			0			1,266		|	58	|	
	SPACE	59				0			1,266	|	60	|	
	SPACE	61		0			0				62	SPACE	
	SPACE	63			0			0			64	SPACE	
	SPACE	65				0			0		66	SPACE	
	SPACE	67		0			0				68	SPACE	
	SPACE	69			0			0			70	SPACE	
	SPACE	71				0			0		72	SPACE	
	SPACE	73		0			0				74	SPACE	
	SPACE	75			0			0			76	SPACE	
	SPACE	77				0			0		78	SPACE	
	SPACE	79		0			0				80	SPACE	
	SPACE	81			0			0			82	SPACE	
	SPACE	83				0			0		84	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panelboard: Panel 1RNL1

Bus Ampacity	225	Volts	208Y/120	Panel Source:	
Branch Brkr Space	84 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Flush		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	102 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	(5) RECEPT	1	20/1	900			768			20/1	2	TIRE CHANGER	
	(4) RECEPT	3	20/1		720			720		20/2	4	TIRE CHANGER	
	(4) RECEPT, P-R2	5	20/1			930			720	|	6	|	
	(4) RECEPT, ESEW-1	7	20/1	840			920			20/1	8	(5) RECEPT	
	GRINDER	9	20/1		1,113			605		20/1	10	(2) RECEPT, CUH-1	
	(5) RECEPT	11	20/1			900			900	20/1	12	(5) RECEPT	
	GRINDER-1	13	20/2	919			720			20/1	14	(6) RECEPT	
	|	15	|		919			950		20/1	16	(5) RECEPT	
	(5) RECEPT	17	20/1			900			900	20/1	18	(5) RECEPT	
	(5) RECEPT	19	20/1	900			720			20/1	20	(4) RECEPT	
	(4) RECEPT, P-R1	21	20/1		930			900		20/1	22	(5) RECEPT	
	(4) RECEPT	23	20/1			720			984	20/1	24	GRINDER 2-WHEEL	
	(4) RECEPT	25	20/1	720			1,080			20/1	26	GRINDER W/BELT	
	(6) RECEPT	27	20/1		1,080			1,440		20/2	28	SMALL DRILL PRESS	
	BAND SAW	29	20/1			1,885			1,440	|	30	|	
	OHD 132A	31	20/3	300			575			20/2	32	LARGE DRILL PRESS	
	|	33	|		300			575		|	34	|	
	|	35	|			300			0	20/1	36	SPARE	
	OHD 132B	37	20/3	300			300			20/3	38	OHD 136A	
	|	39	|		300			300		|	40	|	
	|	41	|			300			300	|	42	|	
	OHD 136B	43	20/3	300			300			20/3	44	OHD 141B	
	|	45	|		300			300		|	46	|	
	|	47	|			300			300	|	48	|	
	SITE LIGHT	49	20/1	805			864			20/1	50	EWC	
	CAMERA	51	20/1		500			1,200		20/2	52	GATE OPERATOR	
	HAND DRYER	53	20/1			1,400			1,200	|	54	|	
	GATE OPERATOR	55	20/2	1,200			1,200			20/2	56	GATE OPERATOR	
	|	57	|		1,200			1,200		|	58	|	
	SPARE	59	20/1			0			925	20/1	60	LIGHTING	
	SPARE	61	20/1	0			0			20/1	62	SPARE	
	SPARE	63	20/1		0			0		20/1	64	SPARE	
	SPACE	65				0			0		66	SPACE	
	SPACE	67		0			0				68	SPACE	
	SPACE	69			0			0			70	SPACE	
	SPACE	71				0			0		72	SPACE	
	SPACE	73		0			0				74	SPACE	
	SPACE	75			0			0			76	SPACE	
	SPACE	77				0			0		78	SPACE	
	SPACE	79		0			0				80	SPACE	
	SPACE	81			0			0			82	SPACE	
	SPACE	83				0			0		84	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panelboard: Panel 1PNL2

Bus Ampacity	225	Volts	208Y/120	Panel Source:	
Branch Brkr Space	84 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	22 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	106 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	TABLE SAW	1	20/2	770			1,540			20/1	2	MITER SAW	
	|	3	|		770			1,040		20/2	4	GRINDER	
	BEAD BLASTER	5	20/1			900			1,040	|	6	|	
	PARTS WASHER	7	20/1	1,920			520			20/2	8	GRINDER	
	PIPE THREADER	9	20/1		1,920			520		|	10	|	
	BAND SAW	11	20/1			1,440			0	20/1	12	SPARE	
	(4) RECEPT	13	20/1	720			1,120			20/2	14	DRILL PRESS	
	(3) RECEPT	15	20/1		540			1,120		|	16	|	
	(4) RECEPT	17	20/1			720			0	20/1	18	SPARE	
	CF - 3	19	20/3	566			2,033			35/3	20	MAU - 3	
	|	21	|		566			2,033		|	22	|	
	|	23	|			566			2,033	|	24	|	
	EF - W2	25	20/3	300			1,266			20/3	26	EF - W1	
	|	27	|		300			1,266		|	28	|	
	|	29	|			300			1,266	|	30	|	
	OHD 115B	31	20/3	300			1,550			20/1	32	LIGHTING	
	|	33	|		300			1,550		20/1	34	LIGHTING	
	|	35	|			300			1,020	20/1	36	UH-8, UH-9	
	PAINT BOOTH LTG	37	20/1	405			1,350			20/2	38	AHE-1	
	SPARE	39	20/1		0			1,350		|	40	|	
	SPARE	41	20/1			0			0	20/1	42	SPARE	
	SPARE	43	20/3	0			0			20/1	44	SPARE	
	|	45	|		0			0		20/1	46	SPARE	
	|	47	|			0			0	20/1	48	SPARE	
	SPACE	49		0			0			20/3	50	SPARE	
	SPACE	51			0			0		|	52	|	
	SPACE	53				0			0	|	54	|	
	SPACE	55		0			0				56	SPACE	
	SPACE	57			0			0			58	SPACE	
	SPACE	59				0			0		60	SPACE	
	SPACE	61		0			0				62	SPACE	
	SPACE	63			0			0			64	SPACE	
	SPACE	65				0			0		66	SPACE	
	SPACE	67		0			0				68	SPACE	
	SPACE	69			0			0			70	SPACE	
	SPACE	71				0			0		72	SPACE	
	SPACE	73		0			0				74	SPACE	
	SPACE	75			0			0			76	SPACE	
	SPACE	77				0			0		78	SPACE	
	SPACE	79		0			0				80	SPACE	
	SPACE	81			0			0			82	SPACE	
	SPACE	83				0			0		84	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panelboard: Panel 1RNL2

Bus Ampacity	225	Volts	208Y/120	Panel Source:	
Branch Brkr Space	66 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Flush		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	110 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	SP - 1	1	20/2	1,848			1,200			20/1	2	COPIER	
	|	3	|		1,848			1,400		20/1	4	COPIER	
	(7) RECEPT	5	20/1			840			940	20/1	6	(3) RECEPT (2) TV	
	(6) RECEPT	7	20/1	720			780			20/1	8	EWC	
	(5) RECEPT	9	20/1		900			1,142		20/1	10	(5) RECEPT, CUH - 6	
	(5) RECEPT	11	20/1			900			485	20/1	12	CUH - 3, CUH - 4	
	(4) RECEPT, TV	13	20/1	920			1,080			20/1	14	(6) RECEPT	
	(3) RECEPT, CUH - 2	15	20/1		785			965		20/1	16	(4) RECEPT, CUH - 7	
	(2) RECEPT	17	20/1			360			720	20/1	18	(4) RECEPT	
	(2) RECEPT	19	20/1	360			720			20/1	20	(4) RECEPT	
	(2) FB - 1	21	20/1		720			1,140		20/1	22	(3) RECEPT, (3) TV	
	(2) RECEPT	23	20/1			360			720	20/1	24	(2) FB - 1	
	(2) RECEPT	25	20/1	360			1,200			20/1	26	VENDING	
	(2) RECEPT	27	20/1		360			1,200		20/1	28	VENDING	
	(2) RECEPT	29	20/1			360			1,113	20/1	30	GD - 1	
	(2) RECEPT	31	20/1	360			1,000			20/1	32	REF	
	(2) RECEPT	33	20/1		360			1,000		20/1	34	ICE MACHINE	
	EWC	35	20/1			780			1,100	20/1	36	MICROWAVE	
	(2) RECEPT	37	20/1	360			1,000			20/1	38	COFFEE MAKER	
	FUEL SYS. MON. PNL.	39	20/1		360			540		20/1	40	(3) RECEPT	
	SPARE	41	20/1			0			280	20/1	42	(1) RECEPT, (2) K-1	
	LIGHTING	43	20/1	1,500			1,080			20/1	44	MULTI-OUT RACEWAY	
	LIGHTING	45	20/1		1,440			720		20/1	46	MULTI-OUT RACEWAY	
	LIGHTING	47	20/1			1,300			500	20/1	48	(2) MOTORIZED DOOR	
	HAND DRYER	49	20/1	1,400			500			20/1	50	(2) MOTORIZED DOOR	
	HAND DRYER	51	20/1		1,400			1,400		20/1	52	HAND DRYER	
	HAND DRYER	53	20/1			1,400			1,400	20/1	54	HAND DRYER	
	HAND DRYER	55		1,400			1,400			20/1	56	HAND DRYER	
	SPACE	57			0			840		20/1	58	VIDEO DISPLAY UNIT	
	SPACE	59				0			0		60	SPACE	
	SPACE	61		0			0				62	SPACE	
	SPACE	63			0			0			64	SPACE	
	SPACE	65				0			0		66	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

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Madison Water Utility
Quality and Reliability since 1882
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center

Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-603

6/9/2015 3:18:34 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt

Panel 2PNL1

Panelboard: **Panel 2PNL1**

Bus Ampacity	125	Volts	208Y/120	Panel Source:	
Branch Brkr Space	42 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	76 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	BCB	1	20/3	566			3,000			70/3	2	BCH	
		3	|		566			3,000		|	4		
		5	|			566			3,000	|	6		
	BCT	7	20/3	566			566			20/3	8	BCB	
		9	|		566			566		|	10		
		11	|			566			566	|	12		
	MRT-1	13	20/3	566			1,266			20/3	14	MRH-1	
		15	|		566			1,266		|	16		
		17	|			566			1,266	|	18		
	MRT-2	19	20/3	566			1,266			20/3	20	MRH-2	
		21	|		566			1,266		|	22		
		23	|			566			1,266	|	24		
	SPARE	25	20/3	0			0			20/3	26	SPARE	
		27	|		0			0		|	28		
		29	|			0			0	|	30		
	SPACE	31		0			0				32	SPACE	
	SPACE	33			0			0			34	SPACE	
	SPACE	35				0			0		36	SPACE	
	SPACE	37		0			0				38	SPACE	
	SPACE	39			0			0			40	SPACE	
	SPACE	41				0			0		42	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panel 2RNL1

Panelboard: **Panel 2RNL1**

Bus Ampacity	125	Volts	208Y/120	Panel Source:	
Branch Brkr Space	84 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	93 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	(4) RECEPT	1	20/1	720			864			20/1	2	EWC	
	(5) RECEPT, UH-7	3	20/1		1,410			1,080		20/1	4	(6) RECEPT	
	(4) RECEPT	5	20/1			720			1,270	20/1	6	(5) RECEPT, FCU-S1	
	(4) RECEPT	7	20/1	720			720			20/1	8	(4) RECEPT	
	(5) RECEPT	9	20/1		900			1,080		20/1	10	(4) RECEPT	
	(5) RECEPT	11	20/1			900			1,080	20/1	12	(4) RECEPT, TV	
	(4) RECEPT	13	20/1	720			1,200			20/1	14	(2) RECEPT	
	(2) RECEPT	15	20/1		360			540		20/1	16	(3) RECEPT	
	(2) RECEPT	17	20/1			360			540	20/1	18	(3) RECEPT	
	(2) FB - 2	19	20/1	360			720			20/1	20	(4) RECEPT	
	(6) RECEPT	21	20/1		1,080			480		20/1	22	(1) FB - 2, MONITOR	
	(4) RECEPT	23	20/1			720			540	20/1	24	(3) RECEPT (ROOF)	
	(1) RECEPT, (1) N13	25	20/1	230			720			20/1	26	(4) RECEPT	
	ELEV EL - 1 LTG	27	20/1		360			720		20/1	28	(4) RECEPT	
	UH-1, UH-2	29	20/1			1,020			720	20/1	30	(4) RECEPT	
	UH-3, UH-4	31	20/1	1,020			500			20/1	32	EXT LIGHTING	
	UH-5, UH-6	33	20/1		1,020			1,550		20/1	34	LIGHTING	
	LIGHTING	35	20/1			1,400			930	20/1	36	LIGHTING	
	LIGHTING	37	20/1	1,000			1,180			20/1	38	LIGHTING	
	LIGHTING	39	20/1		1,465			950		20/1	40	LIGHTING	
	LIGHTING	41	20/1			970			500	20/1	42	LTG CONTROL PNL	
	HAND DRYER	43	20/1	1,400			1,400			20/1	44	HAND DRYER	
	SPARE	45	20/1		0			0		20/1	46	SPARE	
	SPARE	47	20/1			0			0	20/1	48	SPARE	
	SPARE	49	20/1	0			0			20/1	50	SPARE	
	SPARE	51	20/1		0			0		20/1	52	SPARE	
	SPARE	53	20/1			0			0	20/1	54	SPARE	
	SPARE	55	20/1	0			0			20/1	56	SPARE	
	SPARE	57	20/1		0			0		20/1	58	SPARE	
	SPARE	59	20/1			0			0	20/1	60	SPARE	
	SPARE	61	20/1	0			0			20/1	62	SPARE	
	SPARE	63	20/1		0			0		20/1	64	SPARE	
	SPARE	65	20/1			0			0	20/1	66	SPARE	
	SPARE	67	20/1	0			0			20/1	68	SPARE	
	SPACE	69			0			0		20/1	70	SPARE	
	SPACE	71				0			0	20/1	72	SPARE	
	SPACE	73		0			0			20/1	74	SPARE	
	SPACE	75			0			0			76	SPACE	
	SPACE	77				0			0		78	SPACE	
	SPACE	79		0			0				80	SPACE	
	SPACE	81			0			0			82	SPACE	
	SPACE	83				0			0		84	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panel 2PNL2

Panelboard: **Panel 2PNL2**

Bus Ampacity	125	Volts	208Y/120	Panel Source:	
Branch Brkr Space	84 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	100 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	CF - 1	1	20/3	566			566			20/3	2	CF - 2	
	|	3	|		566			566		|	4	|	
	|	5	|			566			566	|	6	|	
	AHU - 1	7	50/3	2,933			500			20/1	8	DDC PANEL	
	|	9	|		2,933			1,900		20/2	10	ACCU-S1	
	|	11	|			2,933			1,900	|	12	|	
	AHU - 2	13	50/3	2,933			433			20/3	14	RF - 1	
	|	15	|		2,933			433		|	16	|	
	|	17	|			2,933			433	|	18	|	
	EF - P3	19	20/3	300			433			20/3	20	RF - 2	
	|	21	|		300			433		|	22	|	
	|	23	|			300			433	|	24	|	
	EF - G3	25	20/3	300			370			20/1	26	EF - PIT 1	
	|	27	|		300			370		20/1	28	EF - PIT 2	
	|	29	|			300			370	20/1	30	EF - 1	
	EF - K1	31	20/1	370			700			20/1	32	EF - 2	
	SPARE	33	20/1		0			370		20/1	34	EF - 3	
	SPARE	35	20/1			0			0	20/1	36	SPARE	
	SPARE	37	20/3	0			0			20/1	38	SPARE	
	|	39	|		0			1,900		20/2	40	ACCU - M1	
	|	41	|			0			1,900	|	42	|	
	SPARE	43	20/3	0			0			20/1	44	SPARE	
	|	45	|		0			0		20/1	46	SPARE	
	|	47	|			0			0	20/1	48	SPARE	
	SPARE	49	20/1	0			0			20/1	50	SPARE	
	SPARE	51	20/1		0			0			52	SPACE	
	SPARE	53	20/1			0			0		54	SPACE	
	SPACE	55		0			0				56	SPACE	
	SPACE	57			0			0			58	SPACE	
	SPACE	59				0			0		60	SPACE	
	SPACE	61		0			0				62	SPACE	
	SPACE	63			0			0			64	SPACE	
	SPACE	65				0			0		66	SPACE	
	SPACE	67		0			0				68	SPACE	
	SPACE	69			0			0			70	SPACE	
	SPACE	71				0			0		72	SPACE	
	SPACE	73		0			0				74	SPACE	
	SPACE	75			0			0			76	SPACE	
	SPACE	77				0			0		78	SPACE	
	SPACE	79		0			0				80	SPACE	
	SPACE	81			0			0			82	SPACE	
	SPACE	83				0			0		84	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panel 2RNL2

Panelboard: **Panel 2RNL2**

Bus Ampacity	100	Volts	208Y/120	Panel Source:	
Branch Brkr Space	42 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	27 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	CRAC	1	20/2	670			1,560			25/2	2	ACCU - C1	
	|	3	|		670			1,560		|	4		
	(2) RECEPT	5	20/1			360			200	20/1	6	ACP	
	(2) RECEPT	7	20/1	360			0			20/1	8	SPARE	
	(4) RECEPT	9	20/1		720			0		20/1	10	SPARE	
	(3) RECEPT	11	20/1			540			0	20/1	12	SPARE	
	SPARE	13	20/1	0			0			20/1	14	SPARE	
	UPS	15	30/2		1,500			0		20/1	16	SPARE	
	|	17	|			1,500			0	20/1	18	SPARE	
	SPARE	19	20/1	0			0			20/1	20	SPARE	
	SPARE	21	20/1		0			0		20/1	22	SPARE	
	SPARE	23	20/1			0			0	20/1	24	SPARE	
	SPARE	25	20/1	0			0			20/1	26	SPARE	
	SPARE	27	20/1		0			0		20/1	28	SPARE	
	SPARE	29	20/1			0			0	20/1	30	SPARE	
	SPARE	31	20/1	0			0				32	SPACE	
	SPARE	33	20/1		0			0			34	SPACE	
	SPARE	35	20/1			0			0		36	SPACE	
	SPACE	37		0			0				38	SPACE	
	SPACE	39			0			0			40	SPACE	
	SPACE	41				0			0		42	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Panel 2RNL3

Panelboard: **Panel 2RNL3**

Bus Ampacity	100	Volts	208Y/120	Panel Source:	
Branch Brkr Space	30 Poles	Phase	3	Feed-Thru Lugs	None
Main Type	MLO	Wires	4		
MCB Amps	-	Delta/Wye	Wye	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 1	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	0 A		
Comments:				SPD	
				Iso Grd	

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	SPARE	1	20/1	0			0			20/1	2	SPARE	
	SPARE	3	20/1		0			0		20/1	4	SPARE	
	SPARE	5	20/1			0			0	20/1	6	SPARE	
	SPARE	7	20/1	0			0			20/1	8	SPARE	
	SPARE	9	20/1		0			0		20/1	10	SPARE	
	SPACE	11				0			0		12	SPACE	
	SPACE	13		0			0				14	SPACE	
	SPACE	15			0			0			16	SPACE	
	SPACE	17				0			0		18	SPACE	
	SPACE	19		0			0				20	SPACE	
	SPACE	21			0			0			22	SPACE	
	SPACE	23				0			0		24	SPACE	
	SPACE	25		0			0				26	SPACE	
	SPACE	27			0			0			28	SPACE	
	SPACE	29				0			0		30	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GROUND S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING

Mead & Hunt

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

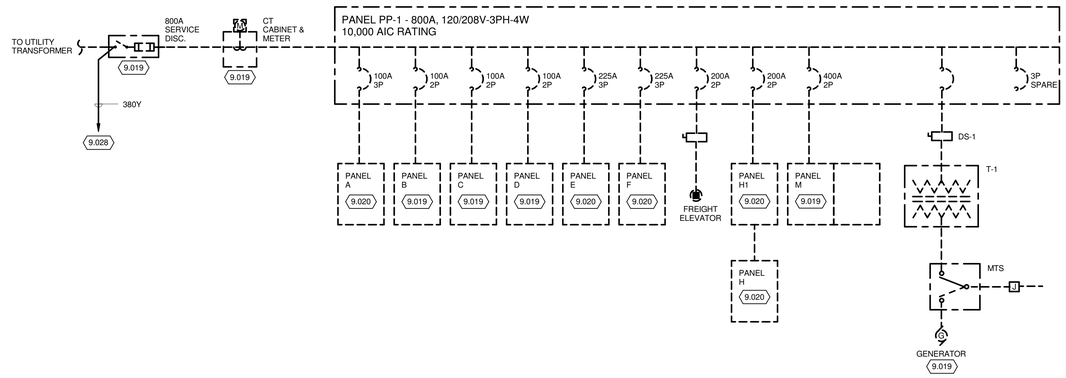
M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS

DO NOT SCALE DRAWINGS

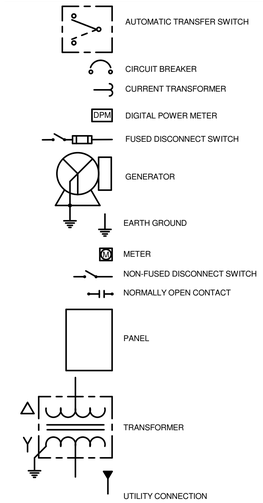
SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-604

6/9/2015 3:18:35 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1618kaf.rvt



1 ONE-LINE POWER DIAGRAM - DEMOLITION
NO SCALE



ONE-LINE SYMBOLS

KEYED NOTES

9.019 MAINTAIN IN SERVICE DURING DURING PHASE 1 AND UNTIL NEW ELECTRICAL SERVICE IS IN PLACE. DISCONNECT AND REMOVE AS PART OF PHASE 2 DEMOLITION.

9.020 MAINTAIN IN SERVICE DURING PHASE 1 AND PHASE 2 DEMOLITION AND REMOVED IN PHASE 3 DEMOLITION.

9.028 PROVIDE TEMPORARY FEEDER FROM NEW SERVICE SWITCHBOARD 1MSNL1. UTILIZE SPARE 400A/3P BREAKER. EXACT ROUTING TO BE DETERMINED IN FIELD.

9.208 ELEVATOR POWER MODULE SWITCH. REFER TO SPECIFICATION SECTION 26 28 16.COORDINATE FINAL DISCONNECT, FUSING AND OVERCURRENT PROTECTION DEVICE SIZES WITH SELECTED ELEVATOR MANUFACTURER.

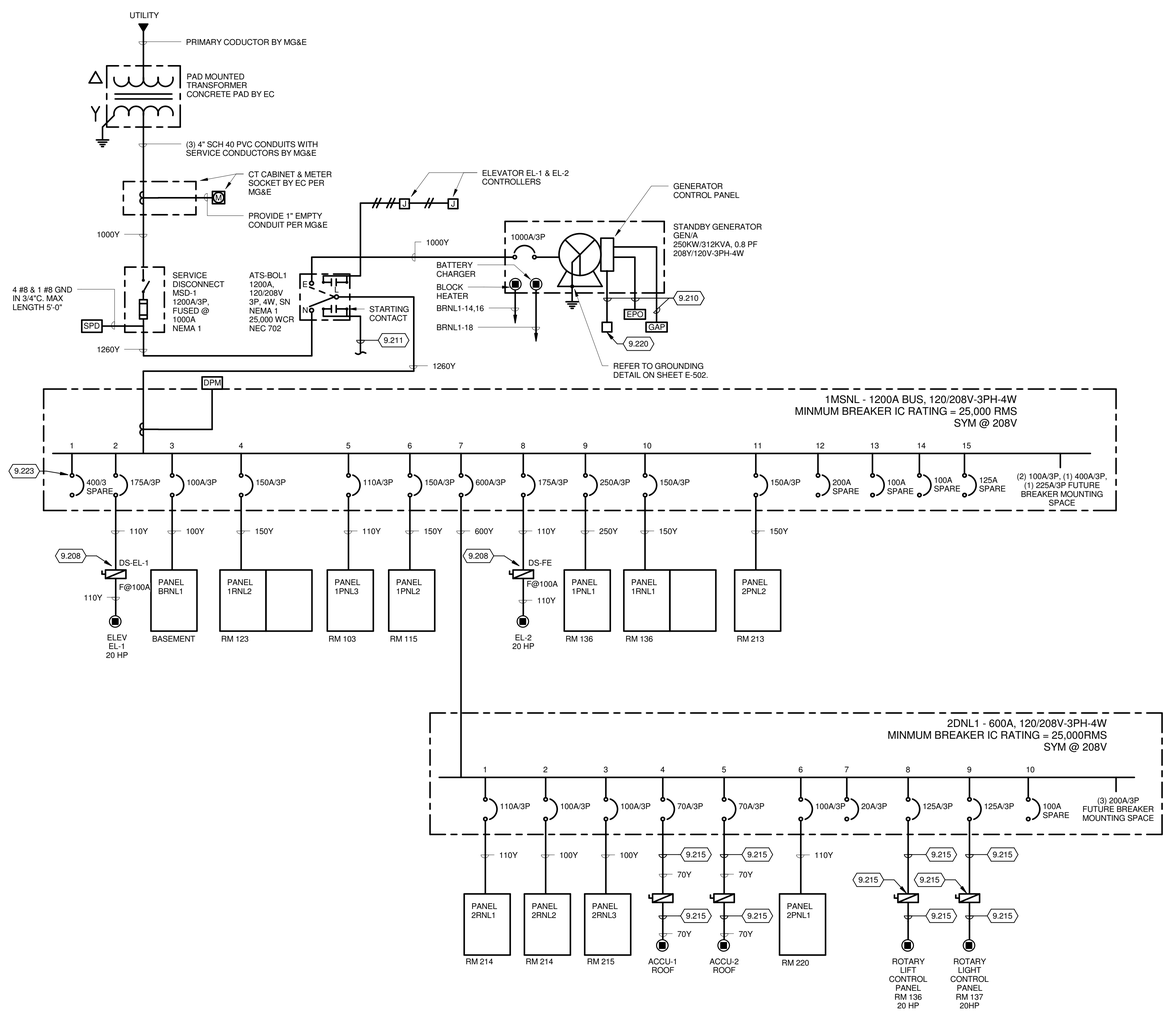
9.210 PROVIDE 1"C WITH CONTROL WIRING PER MANUFACTURERS WIRING REQUIREMENTS.

9.211 INSTALL 2#12 IN 3/4" C TO GENERATOR CONTROL PANEL START CIRCUIT CONTACTS,

9.215 REFER TO ELECTRICAL EQUIPMENT WIRING SCHEDULE FOR BRANCH CIRCUIT WIRING, CONDUIT AND DISCONNECT SIZES.

9.220 GENERATOR AND ATS REMOTE MONITORING INTERFACE CONTROLLER MOUNTED IN A NEMA 1 ENCLOSURE. REFER TO SPECIFICATION SECTION 263213 AND 233600 FOR ADDTIONAL REQUIREMENTS.

9.223 UTILIZE BREAKER TO PROVIDE TEMPORARY POWER TO EXISTING BUILDING SERVICE. REFER TO DRAWING 1/E-701.



2 ONE-LINE POWER DIAGRAM
NO SCALE

COPPER FEEDER SCHEDULE

MARK	AMPACITY	NO. OF SETS	CONDUCTOR SIZES (AWG or KCMIL)				CONDUIT SIZE
			PHASE	NEUTRAL	EQ GND	ISO GND	
20	20	1	3 - # 12	-	1 - # 12	-	1/2"
20Y	20	1	3 - # 12	1 - # 12	1 - # 12	-	1/2"
25	25	1	3 - # 10	-	1 - # 10	-	1/2"
25Y	25	1	3 - # 10	1 - # 10	1 - # 10	-	1/2"
30	30	1	3 - # 10	-	1 - # 10	-	3/4"
30Y	30	1	3 - # 10	1 - # 10	1 - # 10	-	3/4"
35	35	1	3 - # 8	-	1 - # 10	-	3/4"
35Y	35	1	3 - # 8	1 - # 8	1 - # 10	-	3/4"
40	40	1	3 - # 8	-	1 - # 10	-	3/4"
40Y	40	1	3 - # 8	1 - # 8	1 - # 10	-	1"
45	45	1	3 - # 6	-	1 - # 10	-	3/4"
45Y	45	1	3 - # 6	1 - # 6	1 - # 10	-	1"
50	50	1	3 - # 6	-	1 - # 10	-	1"
50Y	50	1	3 - # 6	1 - # 6	1 - # 10	-	1-1/4"
60	60	1	3 - # 4	-	1 - # 10	-	1"
60Y	60	1	3 - # 4	1 - # 4	1 - # 10	-	1-1/4"
70	70	1	3 - # 4	-	1 - # 8	-	1-1/4"
70Y	70	1	3 - # 4	1 - # 4	1 - # 8	-	1-1/4"
80	80	1	3 - # 3	-	1 - # 8	-	1-1/4"
80Y	80	1	3 - # 3	1 - # 3	1 - # 8	-	1-1/4"
100	100	1	3 - # 1	-	1 - # 8	-	1-1/2"
100Y	100	1	3 - # 1	1 - # 1	1 - # 8	-	1-1/2"
110	110	1	3 - # 1	-	1 - # 6	-	1-1/2"
110Y	110	1	3 - # 1	1 - # 1	1 - # 6	-	2"
125	125	1	3 - # 1/0	-	1 - # 6	-	1-1/2"
125Y	125	1	3 - # 1/0	1 - # 1/0	1 - # 6	-	2"
150	150	1	3 - # 1/0	-	1 - # 6	-	1-1/2"
150Y	150	1	3 - # 1/0	1 - # 1/0	1 - # 6	-	2"
175	175	1	3 - # 2/0	-	1 - # 6	-	2"
175Y	175	1	3 - # 2/0	1 - # 2/0	1 - # 6	-	2"
200	200	1	3 - # 3/0	-	1 - # 6	-	2"
200Y	200	1	3 - # 3/0	1 - # 3/0	1 - # 6	-	2-1/2"
225	225	1	3 - # 4/0	-	1 - # 4	-	2"
225Y	225	1	3 - # 4/0	1 - # 4/0	1 - # 4	-	2-1/2"
250	250	1	3 - 250	-	1 - #4	-	2-1/2"
250Y	250	1	3 - 250	1 - 250	1 - #4	-	3"
300	300	1	3 - 350	-	1 - # 4	-	3"
300Y	300	1	3 - 350	1 - 350	1 - # 4	-	3-1/2"
350	350	1	3 - 500	-	1 - # 3	-	3"
350Y	350	1	3 - 500	1 - 500	1 - # 3	-	3-1/2"
380	380	1	3 - 500	-	1 - # 3	-	3"
380Y	380	1	3 - 500	1 - 500	1 - # 3	-	3-1/2"
400	400	1	3 - 500	-	1 - # 3	-	3"
400Y	400	1	3 - 500	1 - 500	1 - # 3	-	3-1/2"
450	450	2	3 - # 4/0	-	1 - # 2	-	2"
450Y	450	2	3 - # 4/0	1 - # 4/0	1 - # 2	-	2-1/2"
500	500	2	3 - 250	-	1 - # 2	-	2-1/2"
500Y	500	2	3 - 250	1 - 250	1 - # 2	-	3"
600	600	2	3 - 350	-	1 - # 1	-	3"
600Y	600	2	3 - 350	1 - 350	1 - # 1	-	3"
700	700	2	3 - 500	-	1 - # 1/0	-	3"
700Y	700	2	3 - 500	1 - 500	1 - # 1/0	-	3-1/2"
800	800	2	3 - 500	-	1 - # 1/0	-	3"
800Y	800	2	3 - 500	1 - 500	1 - # 1/0	-	3 - 1/2"
1000	1000	4	3 - # 350	-	1 - # 4/0	-	3"
1000Y	1000	4	3 - # 350	1 - # 350	1 - # 4/0	-	3"

FEEDER SCHEDULE NOTES:

1. THE SCHEDULE IS A SCHEDULE OF TYPICAL FEEDERS AND SOME OF THE SIZES MAY NOT APPLY TO THIS PROJECT.
2. ALL THE CONDUCTOR AMPACITIES ARE BASED ON TABLE 310-16 OF THE NEC FOR COPPER [ALUMINUM] CONDUCTOR TYPE THHN/THWN-2
3. FEEDER SIZES SHOWN ON THE RISER DIAGRAM INDICATE FEEDER AMPACITIES AND DO NOT NECESSARILY CORRESPOND TO THE CIRCUIT BREAKER AMPACITIES. CERTAIN FEEDERS MAY BE SIZED FOR DERATION FACTORS AND/OR OVERSIZED FOR VOLTAGE DROP PER NEC REQUIREMENTS.

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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: MAM
DRAWN BY: KAF
CHECKED BY: MAS
DO NOT SCALE DRAWINGS

SHEET CONTENTS
ONE-LINE DIAGRAM

SHEET NO.:
E-701

6/10/2015 1:59:00 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1307mab.rvt

TECHNOLOGY ABBREVIATIONS

&	AND
3R	NEMA 3R RATED
4X	NEMA 4X RATED
@	AT
A/E	ARCHITECT / ENGINEER
ACS	ACCESS CONTROL SYSTEM
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
ALT	ALTERNACE
ANT	ANTENNA
AP	(WIRELESS) ACCESS POINT
AV	AUDIO VISUAL
BET	BUILDING ENTRANCE TERMINAL
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CATV	COMMUNITY ANTENNA TELEVISION
CL	CENTERLINE
CLG	CEILING
COAX	COAXIAL
COMM	COMMUNICATIONS
DO	DOOR OPERATOR
DSS	DIGITAL SATELLITE SERVICE
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FO	FIBER OPTIC
FPD	FLAT-PANEL DISPLAY
GC	GENERAL CONTRACTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HAND HOLE
HPC	HIGH PAIR COUNT
HVAC	HEATING, VENTILATION, AIR CONDITIONING
IDF	INTERMEDIATE DISTRIBUTION FRAME
IDS	INFORMATION DISPLAY SYSTEM
IDS	INTRUSION DETECTION SYSTEM
IMC	INTERMEDIATE METALLIC CONDUIT
IT	INFORMATION TECHNOLOGY
ITS	INFORMATION TRANSPORT SYSTEMS
JB	JUNCTION BOX
MAX	MAXIMUM
MDF	MAIN DISTRIBUTION FRAME
MH	MAN HOLE
MIN	MINIMUM
MMFO	MULTIMODE FIBER OPTIC
MNS	MASS NOTIFICATION SYSTEM
MON	MONITOR
MTD	MOUNTED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
PA	PUBLIC ADDRESS
PIR	PASSIVE INFRARED
PROJ	PROJECTOR
PTZ	PAN - TILT - ZOOM
PVC	POLYVINYL CHLORIDE
RCV	RECEIVER
REQ'D	REQUIRED
REX	REQUEST-TO-EXIT
SCHED	SCHEDULE
SE	SERVICE ENTRANCE
SMFO	SINGLEMODE FIBER OPTIC
SS	STAINLESS STEEL
SYS	SYSTEM
TBR	TO BE REMOVED
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TSE	TELEPHONE SERVICE EQUIPMENT
TV	TELEVISION
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDERGOUND
UNO	UNLESS NOTED OTHERWISE
UTP	UNSHIELDED TWISTED PAIR
VSS	VIDEO SURVEILLANCE SYSTEM
WL	WET LOCATION LISTED
WP	WEATHERPROOF
WS	WORKSTATION

TECHNOLOGY GENERAL NOTES

1. WORK PERFORMED INCLUDES ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO INSTALL COMPLETE TECHNOLOGY SYSTEMS AS INDICATED ON THESE DRAWINGS AND AS SPECIFIED.
2. ALL TELECOMMUNICATIONS OUTLETS SHALL BE MOUNTED AT HEIGHTS ABOVE FINISHED FLOOR AS SHOWN IN THE DEVICE MOUNTING HEIGHT DETAIL U.N.O.
3. SEE ELECTRICAL SPECIFICATIONS FOR LOCATIONS WHERE GRS CONDUIT SHALL BE USED, OR WHERE IMC, EMT, OR PVC CONDUIT MAY BE USED.
4. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE-RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. 'THRU-THE-WALL' BOXES SHALL NOT BE AOLLWED WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
5. CONTRACTOR SHALL VERIFY ALL EQUIPMENT SIZES AND POWER REQUIREMENTS FOR EQUIPMENT SUPPLIED BY OTHERS PRIOR TO INSTALLATION OF CONDUIT.
6. TECHNOLOGY SYSTEMS EQUIPMENT/DEVICES SHALL BE MOUNTED SO AS TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TECHNOLOGY SYSTEMS EQUIPMENT/DEVICES ON EQUIPMENT SUPPLIED BY AND/OR CONTRACTOR SHALL BE COORDINATED WITH AND APPROVED BY THAT CONTRACTOR IN ADVANCE OF INSTALLATION.
7. ALL ELECTRICAL CONDUITS AND JUNCTION BOXES SHALL BE CONCEALED. CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES AND USE CHASES AND CEILING SPACES PROVIDED. WHERE BOXES AND CONDUIT ARE NOTED TO BE INSTALLED EXPOSED, THEY SHALL BE PAINTED TO MATCH THE SURFACE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS. PENETRATIONS THROUGH FLOORS AND FIRE-RATED WALLS SHALL BE FIRESTOPPED IN A MANNER THAT MAINTAINS THE RATING OF THE FLOOR OR WALL PENETRATED.
9. ALL TRENCHING AND BACKFILL FOR BURIED ELECTRICAL CONDUITS SHALL BE BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
10. PROVIDE METALLIC TAPE ABOVE BURIED PVC CONDUIT FOR FUTURE LOCATING.
11. CONDUIT ROUTED UNDER THE BUILDING SHALL BE MINIMUM 18" BELOW SLAB.
12. ALL TELEPHONE AND DATA JACKS SHALL BE TERMINATED WITH ALL 4 PAIRS TO ALLOW FOR INTERCHANGEABILITY. ALL ELEVATOR AND FIRE ALARM CONNECTIONS SHALL NOT BE TERMINATED ON PATCH PANEL OR JACKS; THESE LOCATIONS MUST BE CONNECTED DIRECTLY TO THE EQUIPMENT AND THE INCOMING SERVICE.
13. ALL TELEPHONE AND DATA CABLES SHALL BE INSTALLED IN CONDUIT OR CABLE TRAY.
14. ALL CONDUIT STUBS SHALL HAVE PLASTIC OR NYLON BUSHINGS INSTALLED PRIOR TO THE INSTALLATION OF CABLES.
15. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
16. THE EXISTING BUILDING INFORMATION, INCLUDING BUT NOT LIMITED TO, ARCHITECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING, ELECTRICAL AND TECHNOLOGY, DEPICTED IN THESE CONSTRUCTION DOCUMENTS ARE BASED UPON EXISTING BUILDING DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION. THE ARCHITECT/ENGINEER MAKES NO WARRANTY OR REPRESENTATION WITH REFERENCE TO THE ACCURACY AND COMPLITENESS OF THE ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THE ACCURACY OF THE EXISTING CONDITIONS.
17. REFER TO ELECTRICAL SITE PLAN SHEET E-011 FOR ALL TECHNOLOGY SITE WORK.

TECHNOLOGY DEMOLITION GENERAL NOTES

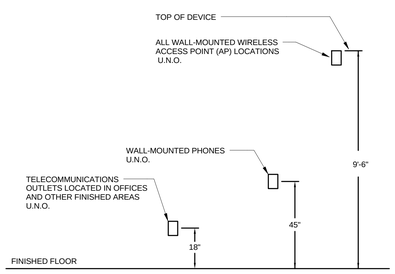
1. THE INFORMATION SHOWN IS BASED ON EXISTING DRAWINGS AND SITE OBSERVATIONS TO ASSIST THE CONTRACTOR IN BIDDING. THE CONTRACTOR SHOULD VISIT THE SITE TO VERIFY EXISTING CONDITIONS. THE TECHNOLOGY SYSTEMS DRAWINGS INDICATE EXISTING TECHNOLOGY SYSTEMS ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY DEVICE, BOX, CONDUIT, WIRE OR CABLE THAT MUST BE REMOVED.
2. DASHED WALLS ON THE FLOOR PLANS INDICATE EXISTING WALLS BEING DEMOLISHED. REFER TO THE ARCHITECTUAL DEMOLITION PLANS FOR THE EXACT EXTENT OF WORK REQUIRED BY THIS PROJECT. REMOVE ALL DEVICES ON DASHED WALLS NOT SHOWN ON THE CONTRACT DRAWINGS. REFER TO DEMOLITION DRAWINGS OF OTHER TRADES. WHERE CONTROL PANELS AND ACCESSORIES THAT HAVE TECHNOLOGY SYSTEMS CONNECTIONS ARE BEING REMOVED, INCLUDE DISCONNECTION AND REMOVAL OF ALL ASSOCIATED CONDUIT, WIRING AND CABLING.
3. TECHNOLOGY SYSTEMS ITEMS (E.G. TELECOMMUNCATIONS OUTLETS, SECURITY SYSTEMS DEVICES, AUDIO DEVICES) THAT ARE REMOVED AND NOT RELOCATED SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN FOR MAINTENANCE PURPOSES.
4. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF POWER TO TECHNOLOGY SYSTEMS EQUIPMENT OR DEVICES. COORDINATE ALL OUTAGES WITH THE OWNER. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
5. ALL BOXES THAT REMAIN IN PLACE IN EXISTING MASONY WALLS THAT ARE TO REMAIN SHALL BE PROVIDED WITH A BLANK COVER PLATE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH TYPE AND ATTACHMENT.
6. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE OR CABLE AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC. SHALL ALSO BE REMOVED.
7. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING TECHNOLOGY SYSTEMS ITEMS AND INSTALLING NEW ITEMS.
8. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED.
9. REFER TO ELECTRICAL SITE DEMOLITION PLAN SHEET ED011 FOR ALL TECHNOLOGY SITE DEMOLITION WORK.

TECHNOLOGY SCOPE RESPONSIBILITY MATRIX

ITEM	SHOWN ON	FURNISHED BY	INSTALLED BY	NOTES
UNDERGROUND CONDUITS IN/OUT OF BUILDING, INCLUDING ASSOCIATED HANDHOLES	T-SERIES	EC	EC	1
FLOOR BOX ROUGH-IN, INCLUDING FLOOR BOXES AND CONDUITS	E AND T-SERIES	EC	EC	2
TECHNOLOGY SYSTEMS ROUGH-IN, INCLUDING BACKBOXES, TRIM RINGS, CONDUIT AND SLEEVES	T-SERIES	EC	EC	3
CABLE TRAY, INCLUDING ALL REQUIRED SUPPORT HARDWARE AND FITTINGS	T-SERIES	EC OR TC	EC OR TC	4
EQUIPMENT ROOM FITTINGS (PER SPECIFICATION SECTION 271100)	T-SERIES	TC	TC	
EQUIPMENT ROOM POWER RECEPTACLES	E-SERIES (PWR)	EC	EC	
GROUND BARS (TMGB, TGB) AND ELECTRICAL SERVICE BONDING	T-SERIES	EC	EC	
GROUNDING OF CABLE TRAY AND EQUIPMENT ROOM COMPONENTS	T-SERIES	TC	TC	
BACKBONE CABLING, TERMINATION COMPONENTS (e.g. WALL-FIELDS), TERMINATION, TESTING AND LABELING	T-SERIES	TC	TC	
PATCH PANELS	T-SERIES	TC	TC	
TELECOMMUNICATIONS OUTLET (TO) FACEPLATES AND JACKS	T-SERIES	TC	TC	
HORIZONTAL CABLING, TERMINATIONS, TESTING AND LABELING	T-SERIES	TC	TC	
FLOOR BOX AND TELECOMMUNICATION OUTLET (TO) ASSOCIATED POWER RECEPTACLES	E-SERIES (PWR)	EC	EC	5
EQUIPMENT ROOM PLYWOOD WALL COVERINGS	T-SERIES	GC	GC	6
ROOF PENETRATION CONDUITS	T-SERIES	EC	EC	7
PA SYSTEM ROUGH-IN, INCLUDING BACKBOXES, TRIM RINGS AND CONDUIT	T-SERIES	EC	EC	
PA SYSTEM COMPONENTS (HEAD-END, MICROPHONES, SPEAKERS/HORNS, VOLUME CONTROLS) AND CABLING	T-SERIES	TC	TC	
DISPLAY AND TV ROUGH-IN, INCLUDING BACKBOXES, TRIM RINGS AND CONDUIT	T-SERIES	EC	EC	
DISPLAY AND TV LOCATION BLOCKING FOR DISPLAY MOUNT ATTACHMENT/SUPPORT	T-SERIES	GC	GC	8
DISPLAY AND TV OUTLETS, MOUNTS, DISPLAYS AND CABLING	T-SERIES	TC	TC	
DISPLAY HEAD-END COMPONENTS AND MONITOR INTERFACES	T-SERIES	OWNER	OWNER	
TV SERVICE, DISTRIBUTION EQUIPMENT AND RECEIVERS	N/A	OWNER	OWNER	
SECURITY SYSTEMS (ACS, VSS) ROUGH-IN, INCLUDING BACKBOXES, TRIM RINGS AND CONDUIT	T-SERIES	EC	EC	
ACS FIELD DEVICES (e.g. CARD READERS, STATUS SENSORS, REX) AND CABLING	T-SERIES	TC	TC	
ACS DOOR HARDWARE INCLUDING ELECTRIC STRIKES, MAGNETIC LOCKS AND ASSOCIATED POWER SUPPLIES	T-SERIES	GC	GC / EC / TC	9
VSS HEAD-END, CAMERAS, MOUNTS AND CABLING	T-SERIES	TC	TC	

TECHNOLOGY SYSTEMS RESPONSIBILITY MATRIX NOTES:
1. UNDERGROUND CONDUITS IN/OUT OF BUILDING ARE SHOWN FOR INTENT ONLY. ACTUAL LOCATIONS SHALL BE COORDINATED IN THE FIELD WITH OTHER UNDERGROUND WORK (STORM, SEWER, POWER, ETC).
2. FLOOR BOX LOCATIONS SHALL BE COORDINATED WITH THE LOCATION(S) OF ASSOCIATED MILLWORK AND FURNITURE.
3. PENETRATIONS THROUGH FLOORS AND FIRE-RATED WALLS WHERE APPLICABLE SHALL BE FIRESTOPPED IN A MANNER THAT MAINTAINS THE RATING OF THE FLOOR OR WALL PENETRATED. REFER TO ARCHITECTURAL SPECIFICATIONS.
4. CABLE TRAY INDICATED ON DRAWINGS IS SHOWN FOR INTENT, AND THE INSTALLATION OF THE CABLE TRAY SHALL BE COORDINATED WITH OTHER TRADES (MECHANICAL, PLUMBING).
5. LOCATIONS OF TECHNOLOGY SYSTEMS ROUGH-IN SHALL BE COORDINATED WITH ASSOCIATED POWER RECEPTACLES.
6. PLYWOOD WALL COVERINGS SHALL BE AS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS.
7. ROOF PENETRATIONS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND SHALL BE SEALED AS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS.
8. BLOCKING FOR ALL TV AND IDS (FPD) LOCATIONS SHALL BE AS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS OR AS INDICATED ON ARCHITECTURAL DRAWINGS.
9. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL ACCESS CONTROL SYSTEM COMPONENTS WITH DOOR AND DOOR HARDWARE VENDOR.

DEVICE MOUNTING HEIGHT NOTE:
MOUNTING HEIGHT DIMENSION FOR TELECOMMUNICATIONS OUTLETS ABOVE COUNTER IS HEIGHT A.F.F. TO BOTTOM OF OUTLET BOX.



TYPICAL DEVICE MOUNTING HEIGHTS - TECHNOLOGY DEVICES

TELECOMMUNICATION OUTLET SYMBOLS

- SINGLE-PORT TELECOMMUNICATIONS OUTLET
- TWO-PORT TELECOMMUNICATIONS OUTLET
- AP — WIRELESS ACCESS POINT (WAP) TELECOMMUNICATIONS OUTLET WAP BY OWNER UNO.
- W — WALL MOUNTED TELEPHONE OUTLET
- F — FLOOR BOX MOUNTED TELECOMMUNICATIONS OUTLET (REFER TO ELECTRICAL FLOOR BOX SCHEDULE)
- P — FIRE-RATED POKE-THROUGH MOUNTED TELECOMMUNICATIONS OUTLET (REFER TO ELECTRICAL FLOOR BOX SCHEDULE)
- TSE — TELEPHONE SERVICE ENTRANCE PROTECTION DEVICE
- TMGB — TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
- ANTENNA

VIDEO SYMBOLS

- RCV — TELEVISION RECEIVER OUTLET
- FPD — FLAT-PANEL DISPLAY
- RCV — VIDEO RECEIVER OUTLET

PUBLIC ADDRESS SYSTEM SYMBOLS

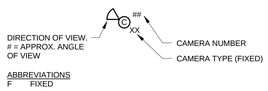
- S — LOUDSPEAKER (HORN TYPE)
- S — CEILING MOUNTED SPEAKER
- S — WALL MOUNTED SPEAKER
- V — VOLUME CONTROL

ACCESS CONTROL SYSTEM SYMBOLS

- C — CARDREADER
- N — CARDREADER-PINPAD
- K — KEY PAD
- M — MOTION DETECTOR
- S — DOOR POSITION SWITCH
- A — AUDIBLE ALARM
- L — MAGNETIC LOCK
- Y — KEY SHUNT
- E — ELECTRIC STRIKE
- DL — DELAY EGRESS SYSTEM
- P — PUSH BUTTON
- H — PANIC HARDWARE
- IL — INTEGRATED LOCKSET
- KP — OVERRIDE KEYPAD
- ACS — ACCESS CONTROL SYSTEM
- ACP — ACCESS CONTROL PANEL
- D — DURESS PUSHBUTTON
- GO — GATE OPERATOR
- O — LOOP DETECTOR

VIDEO SURVEILLANCE SYMBOLS

VIDEO SURVEILLANCE CAMERA



ABBREVIATIONS
F FIXED

SITE SYMBOLS

- HH — HANDHOLE, GENERIC
- C — CABLE MARKER
- CTV — CTV PEDISTAL BOX
- FO — FIBER OPTIC MANHOLE

LINE TYPE KEY

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK DASHED LINE)
- EXISTING TO REMAIN WORK (THIN SOLID LINE)
- NEW WORK UNDER FLOOR BY THIS CONTRACTOR
- CON — SITE UNDERGROUND CONDUIT
- //CON// — SITE REMOVED UNDERGROUND CONDUIT
- FOC — SITE UNDERGROUND FIBER OPTIC
- //FOC// — SITE REMOVED UNDERGROUND FIBER OPTIC
- T — SITE UNDERGROUND TELEPHONE
- OHT — SITE OVERHEAD TELEPHONE
- //T// — SITE REMOVED TELEPHONE
- TV — SITE UNDERGROUND TV CABLE

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Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: DP
DRAWN BY: KAF
CHECKED BY: FCB

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SHEET CONTENTS
NOTES, SYMBOLS & ABBREVIATIONS

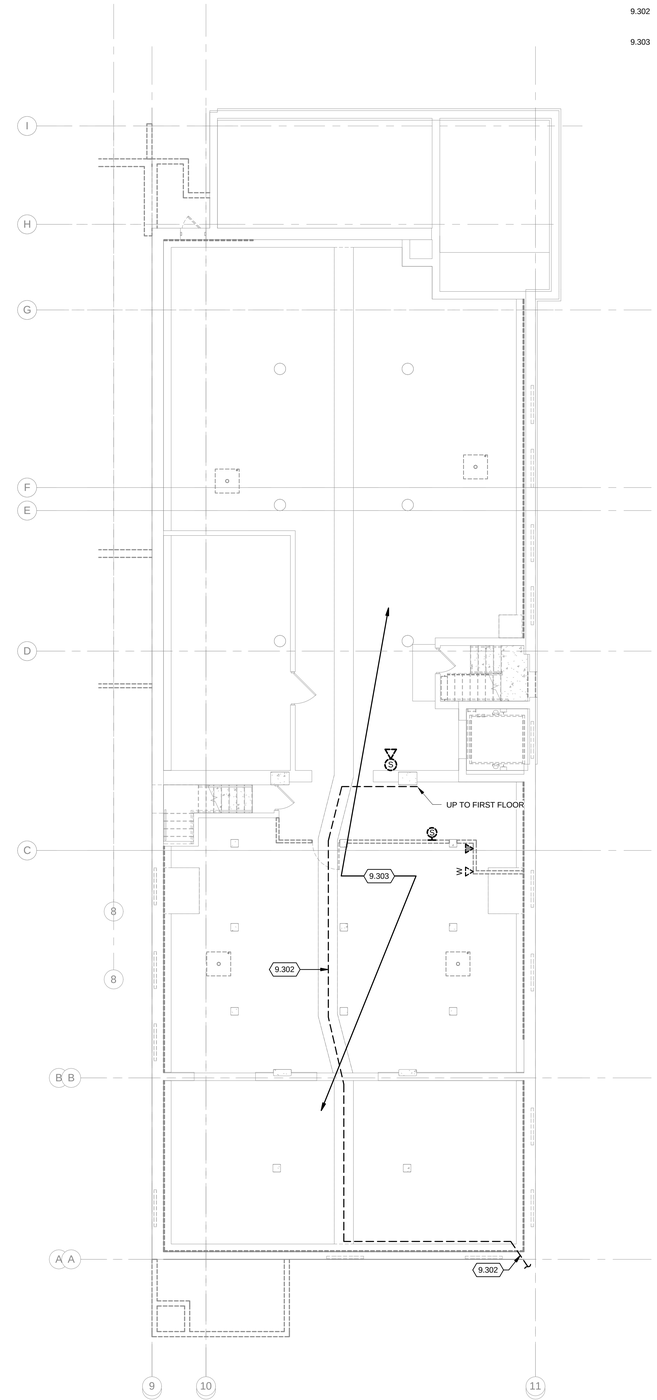
SHEET NO.:
T-001

6/11/2015 4:04:37 PM C:\Revit Local\3235300-131021-03-E-Central-2015_15170mp.rvt

KEYED NOTES

9.302 EXISTING UNDERGROUND TELECOMMUNICATIONS CABLE. CABLE IS TO BE REMOVED BACK TO SOURCE. PATCH HOLE AT BUILDING.

9.303 LEGACY INCOMING TELECOMICATIONS SERVICE AND TERMINATION EQUIPMENT TO BE REMOVED. CONFIRM ALL SERVICES HAVE BEEN DECOMMISSIONED BEFORE DEMOLITION.



TRUE NORTH PLAN NORTH

1 **BASEMENT FLOOR PLAN - DEMOLITION**
1/8" = 1'-0"

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BASEMENT FLOOR PLAN - DEMOLITION

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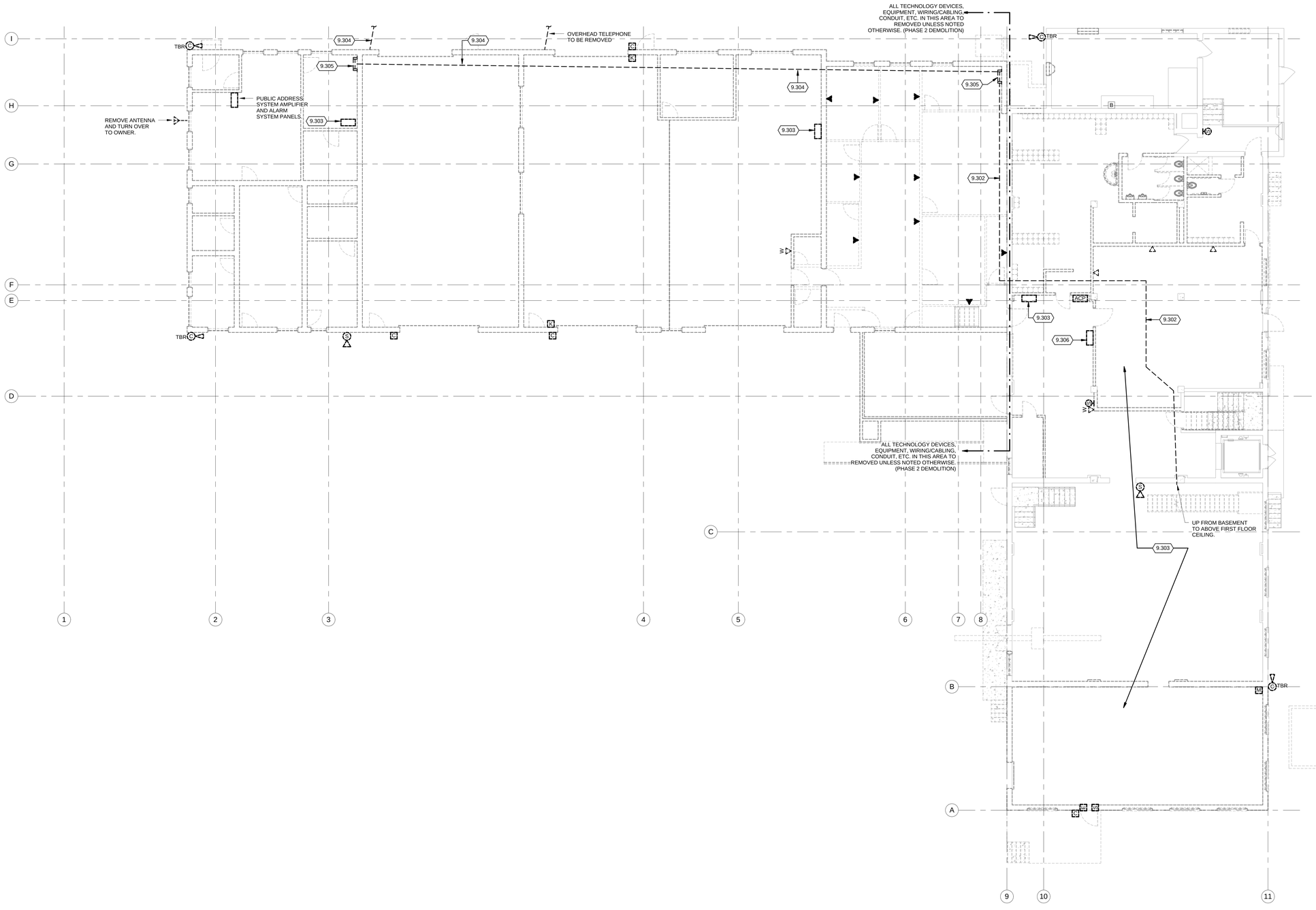

FIRST FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

TRUE NORTH PLAN NORTH

KEYED NOTES

9.302 EXISTING UNDERGROUND TELECOMMUNICATIONS CABLE. CABLE IS TO BE REMOVED BACK TO SOURCE. PATCH HOLE AT BUILDING.

9.303 LEGACY INCOMING TELECOMICATIONS SERVICE AND TERMINATION EQUIPMENT TO BE REMOVED. CONFIRM ALL SERVICES HAVE BEEN DECOMMISSIONED BEFORE DEMOLITION.

9.304 LEGACY BACKBONE FIBER OPTIC CABLE TO BE REMOVED. CONFIRM ALL SERVICES HAVE BEEN DECOMMISSIONED PRIOR TO DEMOLITION.

9.305 EXISTING NETWORK EQUIPMENT RACK TO BE REMOVED.

9.306 EXISTING LONGWATCH SYSTEM TO BE REMOVED AND TURNED OVER TO OWNER.

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FIRST FLOOR PLAN - DEMOLITION

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TD101

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KEYED NOTES

9.303 LEGACY INCOMING TELECOMICATIONS SERVICE AND TERMINATION EQUIPMENT TO BE REMOVED. CONFIRM ALL SERVICES HAVE BEEN DECOMMISSIONED BEFORE DEMOLITION.

9.361 TELECOMMUNICATIONS OUTLETS SHOWN FOR QUANTITY ONLY. PULL AND COIL MINIMUM OF 30' SLACK CABLE FOR ROUTING INTO OWNER-FURNISHED FURNITURE SYSTEM. INSTALL CABLES AND TELECOMMUNICATIONS OUTLETS INTO FURNITURE SYSTEM.

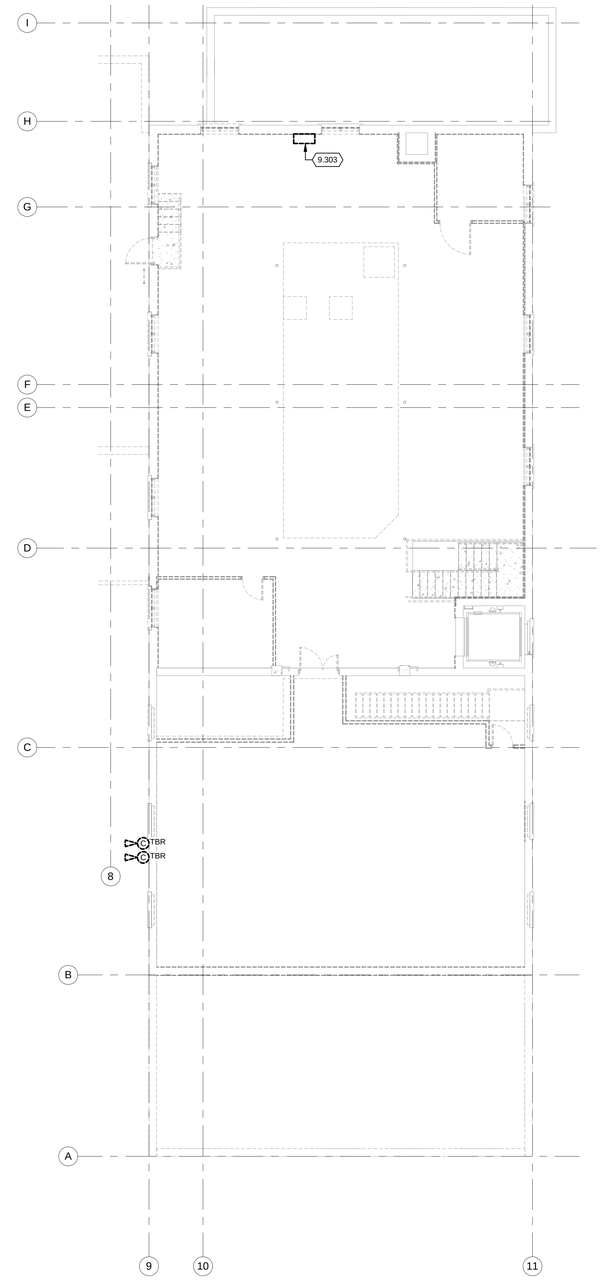
TEMPORARY TECHNOLOGY GENERAL NOTES

1. ALL TEMPORARY TELECOMMUNICATIONS OUTLETS SHALL BE TWO-PORT CATEGORY 6 HOME RUN TO TEMPORARY CATEGORY 6 PATCH PANEL IN DATA ROOM 217.
2. EACH TELECOMMUNICATIONS OUTLET SHALL INDLUDE A 4" SQUARE X 2 1/8" DEEP BACKBOX AND A 3/4" CONDUIT STUB UP TO 6" ABOVE CEILING.

TRUE NORTH PLAN NORTH

2 SECOND FLOOR PLAN - TECHNOLOGY TEMPORARY

3/16" = 1'-0"



TRUE NORTH PLAN NORTH

1 SECOND FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

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SECOND FLOOR PLAN - DEMOLITION

SHEET NO.:
TD102

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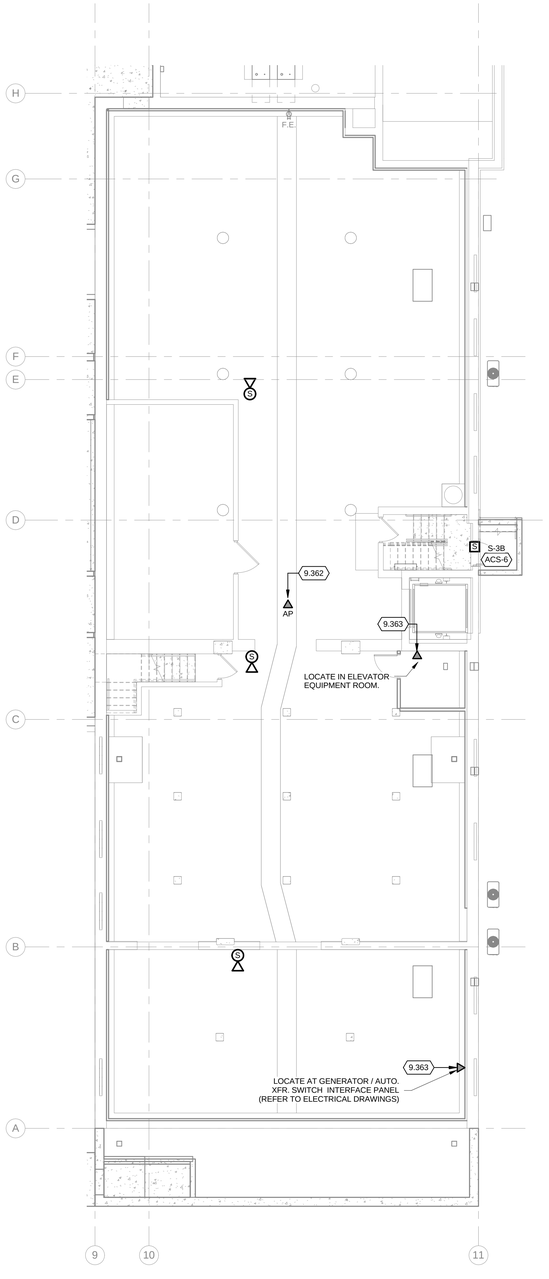
KEYED NOTES

9.362	MOUNT TELECOMMUNICATIONS OUTLET TO CEILING.
9.363	COORDINATE DEVICE MOUNTING AND CONNECTION WITH EQUIPMENT.
ACS-6	ACCESS-CONTROLLED DOOR TYPE ACS-6 CONSISTING OF: SINGLE DOOR WITH (1) RECESSED DOOR POSITION SWITCH.



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1 **BASEMENT FLOOR PLAN - TECHNOLOGY**
1/8" = 1'-0"

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BASEMENT FLOOR PLAN - TECHNOLOGY

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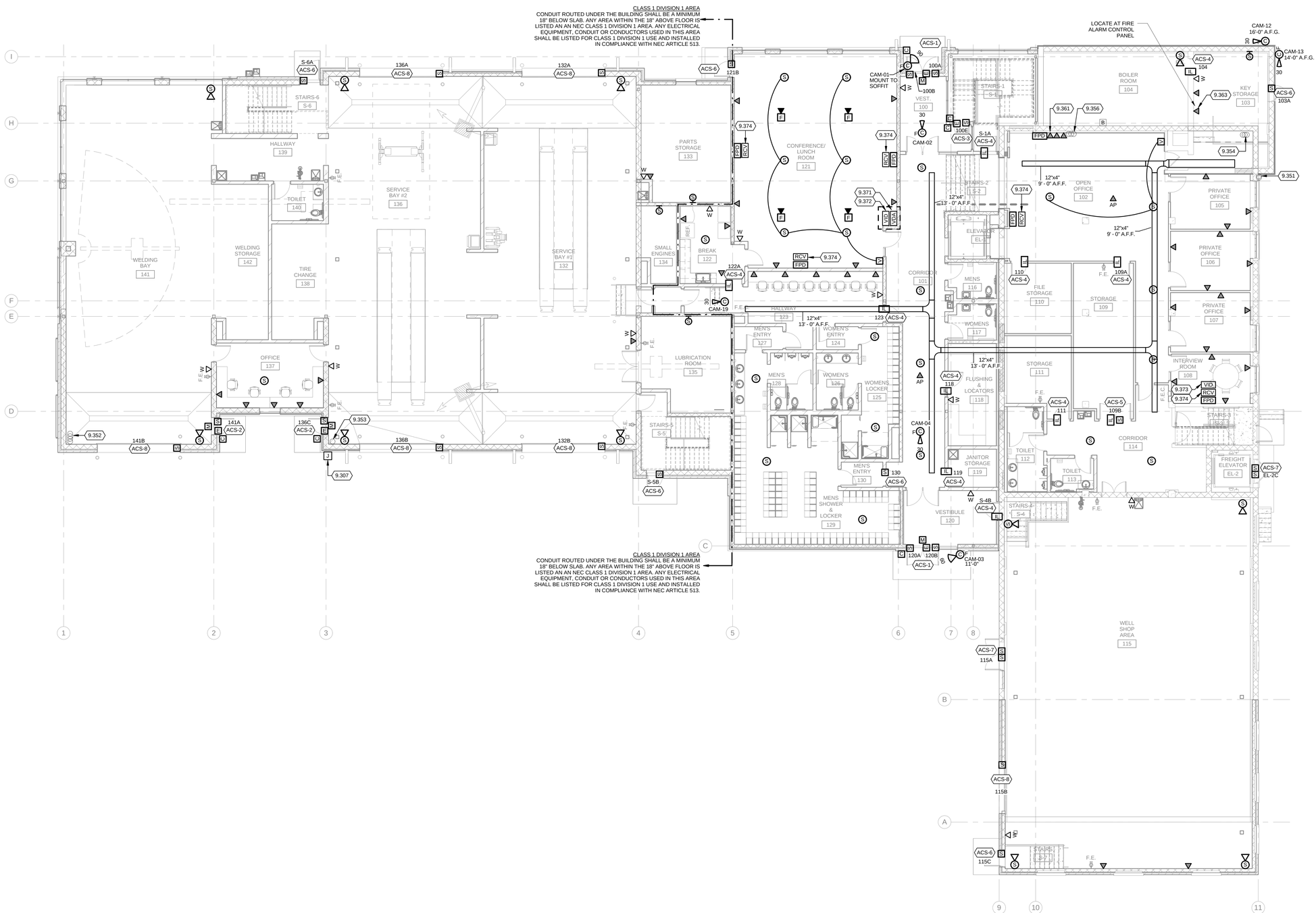

FIRST FLOOR PLAN - TECHNOLOGY

1/8" = 1'-0"

TRUE NORTH PLAN NORTH

KEYED NOTES

9.307 PROVIDE CLASS 1 DIVSION 2 JUNCTION BOX FOR FUEL ISLAND COMMUNICATIONS.

9.351 (2) 2" UNDERGROUND CONDUITS FROM VEHICLE MAINTENANCE BUILDING TO DATA ROOM 217. ROUTE CONDUITS AS INDICATED ON CIVIL AND SITE ELECTRICAL PLANS AND THEN UP THE OUTSIDE OF THE BUILDING TO DATA ROOM 217. STUB CONDUITS INTO DATA ROOM AT 9'-0" A.F.F. INSTALL NEW FIBER OPTIC CABLE IN ONE CONDUIT AND A PULL STRING IN THE OTHER CONDUIT.

9.352 2" UNDERGROUND CONDUITS TO MAIN STREET GATES AND YARD CAMERAS AS INDICATED ON SHEET E-011. ROUTE CONDUITS UP INTO WELDING BAY AND EXTEND TO CABLE TRAY IN HALLWAY 123. LABEL CONDUITS WITH TO/FROM DESTINATIONS AT POINT OF ENTRY INTO BUILDING AND AT CABLE TRAY.

9.353 2" CONDUIT FOR FUEL FARM COMMUNICATIONS (N.I.C.). REFER TO ELECTRICAL PLAN FOR JUNCTION BOX LOCATION. ROUTE CONDUIT UP AND EXTEND TO CABLE TRAY IN HALLWAY 123. LABEL CONDUIT WITH TO/FROM DESTINATIONS AT POINT OF ENTRY INTO BUILDING AND AT CABLE TRAY.

9.354 (3) 4" CONDUIT SLEEVES THROUGH FLOOR FOR ALL FIRST FLOOR TELECOMMUNICATIONS AND SECURITY CABLING.

9.356 (3) 2" CONDUITS TO ROOF FOR RADIO ANTENNAS.

9.361 TELECOMMUNICATIONS OUTLETS SHOWN FOR QUANTITY ONLY. PULL AND COIL MINIMUM OF 30' SLACK CABLE FOR ROUTING INTO OWNER-FURNISHED FURNITURE SYSTEM. INSTALL CABLES AND TELECOMMUNICATIONS OUTLETS INTO FURNITURE SYSTEM.

9.363 COORDINATE DEVICE MOUNTING AND CONNECTION WITH EQUIPMENT.

9.371 AUDIO/VISUAL WALL BOX, FSR, INC. MODEL PWB-253 OR SIMILAR, CONTAINING HDMI VIDEO DISTRIBUTUION AMPLIFIER, EXTRON HDMI DA4 OR SIMILAR; REFER TO DIVISION 27 SPECIFICATIONS.

9.372 HDMI VIDEO INPUT RECEPTACLE CONSISTING OF HDMI PASS-THROUGH (BULKHEAD) CONNECTOR AND HDMI CABLE TO AUDIO/VISUAL WALL BOX.

9.373 HDMI VIDEO INPUT RECEPTACLE CONSISTING OF HDMI PASS-THROUGH (BULKHEAD) CONNECTOR AND HDMI CABLE TO LOCAL DISPLAY.

9.374 PROVIDE AND INSTALL (1) 3.50" x 19" EIA RACK SHELF FOR TV RECEIVER. ATTACH SHELF TO WALL ABOVE DISPLAY.

ACS-1 ACCESS-CONTROLLED DOOR TYPE ACS-1 CONSISTING OF: EXTERIOR DOUBLE DOORS WITH (1) CARD READER ON UNSECURED SIDE OF DOOR, (2) RECESSED DOOR POSITION SWITCHES (ONE ON EACH DOOR), (1) ELECTRIC STRIKE ON SECONDARY DOOR, FED THROUGH SECONDARY DOOR VIA POWER TRANSFER IN DOOR FRAME, (1) PASSIVE INFRARED REQUEST-TO-EXIT (REX) MOTION DETECTOR ON SECURED SIDE OF DOOR. DOOR ALSO HAS AUTOMATIC DOOR OPERATOR ON PRIMARY DOOR.

ACS-2 ACCESS-CONTROLLED DOOR TYPE ACS-2 CONSISTING OF: EXTERIOR SINGLE DOOR WITH (1) CARD READER ON UNSECURED SIDE OF DOOR, (1) RECESSED DOOR POSITION SWITCH, (1) ELECTRIC STRIKE IN DOOR FRAME AND (1) PASSIVE INFRARED REQUEST-TO-EXIT (REX) MOTION DETECTOR ON SECURED SIDE OF DOOR.

ACS-3 ACCESS-CONTROLLED DOOR TYPE ACS-3 CONSISTING OF : INTERIOR SINGLE DOOR WITH (2) CARD READERS (ONE ON EACH SIDE OF DOOR), (1) RECESSED DOOR POSITION SWITCH AND (1) ELECTRIC STRIKE IN DOOR FRAME.

ACS-4 ACCESS-CONTROLLED DOOR TYPE ACS-4 CONSISTING OF: INTERIOR SINGLE DOOR WITH (1) INTEGRATED LOCKSET PER DIVISION 8, FED VIA POWER TRANSFER IN DOOR FRAME.

ACS-5 ACCESS-CONTROLLED DOOR TYPE ACS-5 CONSISTING OF: INTERIOR DOUBLE DOOR WITH (1) INTEGRATED LOCKSET PER DIVISION 8, FED VIA POWER TRANSFER IN DOOR FRAME AND (1) RECESSED DOOR POSITION SWITCH IN OPPOSITE DOOR.

ACS-6 ACCESS-CONTROLLED DOOR TYPE ACS-6 CONSISTING OF: SINGLE DOOR WITH (1) RECESSED DOOR POSITION SWITCH.

ACS-7 ACCESS-CONTROLLED DOOR TYPE ACS-7 CONSISTING OF: DOUBLE DOORS WITH (2) RECESSED DOOR POSITION SWITCHES (ONE ON EACH DOOR).

ACS-8 ACCESS-CONTROLLED DOOR TYPE ACS-8 CONSISTING OF: OVERHEAD DOOR WITH (1) SURFACE-MOUNTED DOOR POSITION SWITCH.

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SHEET CONTENTS
FIRST FLOOR PLAN - TECHNOLOGY

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T-101

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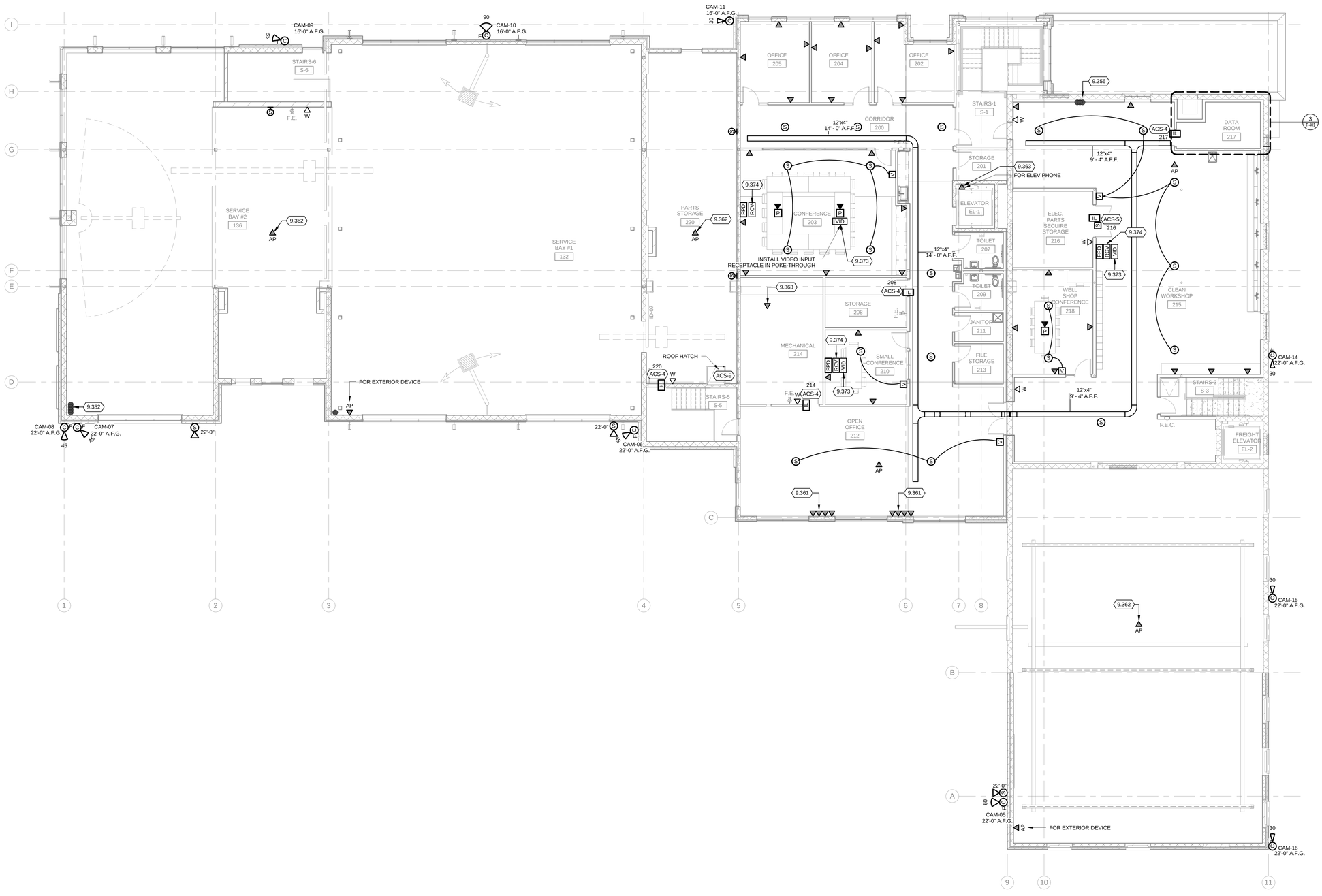

KEYED NOTES

9.352 2" UNDERGROUND CONDUITS TO MAIN STREET GATES AND YARD CAMERAS AS INDICATED ON SHEET E-011. ROUTE CONDUITS UP INTO WELDING BAY AND EXTEND TO CABLE TRAY IN HALLWAY 123. LABEL CONDUITS WITH TO/FROM DESTINATIONS AT POINT OF ENTRY INTO BUILDING AND AT CABLE TRAY.

9.356 (3) 2" CONDUITS TO ROOF FOR RADIO ANTENNAS.

9.361 TELECOMMUNICATIONS OUTLETS SHOWN FOR QUANTITY ONLY. PULL AND COIL MINIMUM OF 30' SLACK CABLE FOR ROUTING INTO OWNER-FURNISHED FURNITURE SYSTEM. INSTALL CABLES AND TELECOMMUNICATIONS OUTLETS INTO FURNITURE SYSTEM.

9.362 MOUNT TELECOMMUNICATIONS OUTLET TO CEILING.

9.363 COORDINATE DEVICE MOUNTING AND CONNECTION WITH EQUIPMENT.

9.373 HDMI VIDEO INPUT RECEPTACLE CONSISTING OF HDMI PASS-THROUGH (BULKHEAD) CONNECTOR AND HDMI CABLE TO LOCAL DISPLAY.

9.374 PROVIDE AND INSTALL (1) 3.50" x 19" EIA RACK SHELF FOR TV RECEIVER. ATTACH SHELF TO WALL ABOVE DISPLAY.

ACS-4 ACCESS-CONTROLLED DOOR TYPE ACS-4 CONSISTING OF: INTERIOR SINGLE DOOR WITH (1) INTEGRATED LOCKSET PER DIVISION 8, FED VIA POWER TRANSFER IN DOOR FRAME.

ACS-5 ACCESS-CONTROLLED DOOR TYPE ACS-5 CONSISTING OF: INTERIOR DOUBLE DOOR WITH (1) INTEGRATED LOCKSET PER DIVISION 8, FED VIA POWER TRANSFER IN DOOR FRAME AND (1) RECESSED DOOR POSITION SWITCH IN OPPOSITE DOOR.

ACS-9 ACCESS-CONTROLLED DOOR TYPE ACS-9 CONSISTING OF: ROOF HATCH WITH (1) SURFACE-MOUNTED DOOR POSITION SWITCH.

TRUE NORTH PLAN NORTH

1 **SECOND FLOOR PLAN - TECHNOLOGY**
1/8" = 1'-0"

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Madison Water Utility
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MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: BP
DRAWN BY: KAF
CHECKED BY: FCB
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SECOND FLOOR PLAN - TECHNOLOGY

SHEET NO.:
T-102

6/11/2015 4:05:15 PM C:\Revit Local\3235300-131021-03-E-Central-2015_15171dmp.rvt

KEYED NOTES

9.351 (2) 2" UNDERGROUND CONDUITS FROM VEHICLE MAINTENANCE BUILDING TO DATA ROOM 217. ROUTE CONDUITS AS INDICATED ON CIVIL AND SITE ELECTRICAL PLANS AND THEN UP THE OUTSIDE OF THE BUILDING TO DATA ROOM 217. STUB CONDUITS INTO DATA ROOM AT 9'-0" A.F.F. INSTALL NEW FIBER OPTIC CABLE IN ONE CONDUIT AND A PULL STRING IN THE OTHER CONDUIT.

9.354 (3) 4" CONDUIT SLEEVES THROUGH FLOOR FOR ALL FIRST FLOOR TELECOMMUNICATIONS AND SECURITY CABLING.

9.355 (2) 4" CONDUIT SLEEVES THROUGH WALL FOR ALL SECOND FLOOR TELECOMMUNICATIONS AND SECURITY CABLING.

9.357 (1) 2" CONDUIT TO ROOF FOR DIGITAL SATELLITE SERVICE.

9.359 BIG-ASS FAN LOCATION PER ELECTRICAL DRAWINGS. ROUTE ALL TECHNOLOGY SYSTEMS CABLING AT LEAST 10' CLEAR OF FAN BLADE RADIUS.

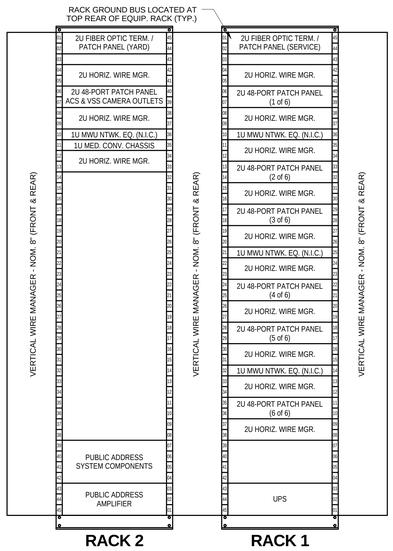
9.381 PLYWOOD WALL COVERING PER ARCHITECTURAL SPECIFICATIONS.

9.382 CABLE RUNWAY, SIZE AND MOUNTING HEIGHT AS INDICATED.

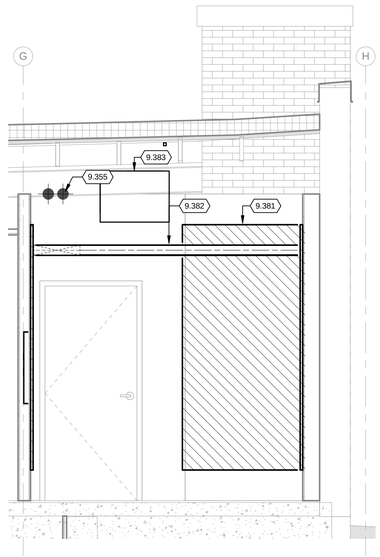
9.383 CRAC (COMPUTER ROOM AIR CONDITIONER) PER MECH. DRAWINGS. SHOWN FOR REFERENCE ONLY.

9.384 (1) 2"C FOR NEW INCOMING TELEPHONE SERVICE. REFER TO SHEET E-011.

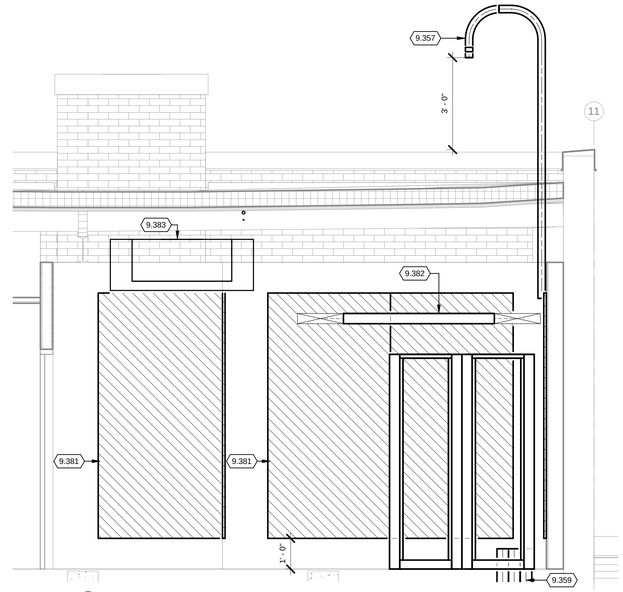
9.385 INCOMING TELEPHONE SERVICE EQUIPMENT.



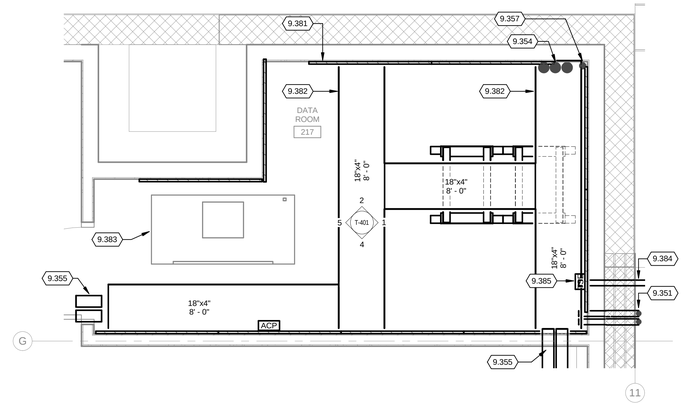
6 EQUIPMENT RACK LAYOUT
NO SCALE



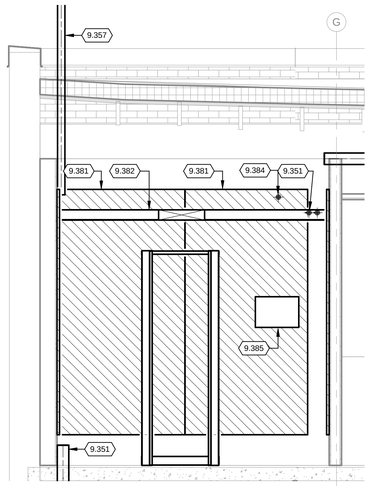
5 DATA ROOM WEST ELEVATION
1/2" = 1'-0"



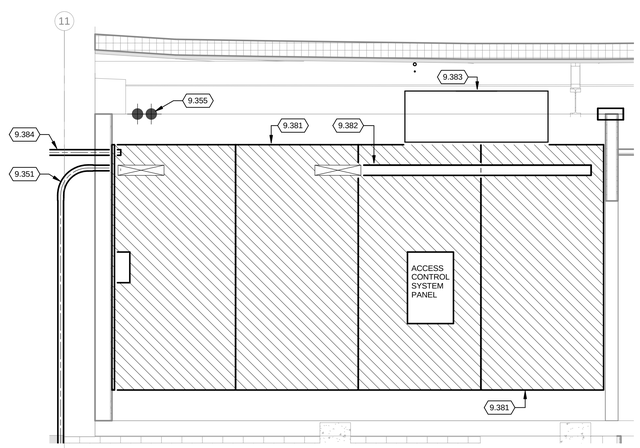
2 DATA ROOM NORTH ELEVATION
1/2" = 1'-0"



3 ENLARGED DATA ROOM PLAN
1/2" = 1'-0"



1 DATA ROOM EAST ELEVATION
1/2" = 1'-0"



4 DATA ROOM SOUTH ELEVATION
1/2" = 1'-0"

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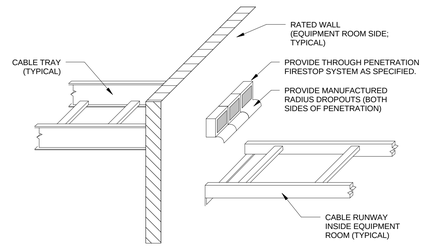
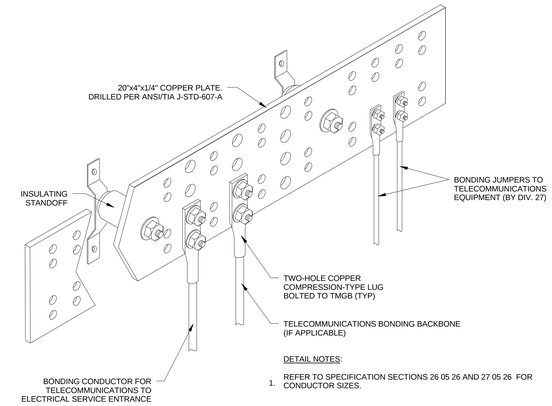
SHEET CONTENTS
ENLARGED PLANS - TECHNOLOGY

SHEET NO.:
T-401

6/11/2015 4:05:25 PM C:\Revit Local\3235300-131021-03-E-Central-2015_15178mp.rvt



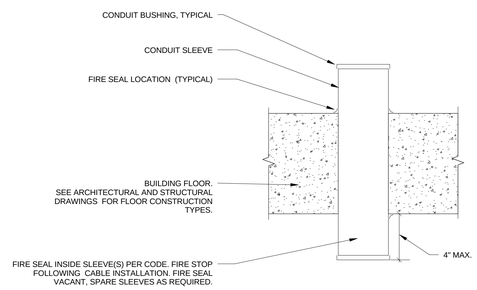
4 WALL PENETRATION - FIRESTOP
NO SCALE



DETAIL NOTES:

1. REFER TO SPECIFICATION SECTIONS 26 05 26 AND 27 05 26 FOR CONDUCTOR SIZES.

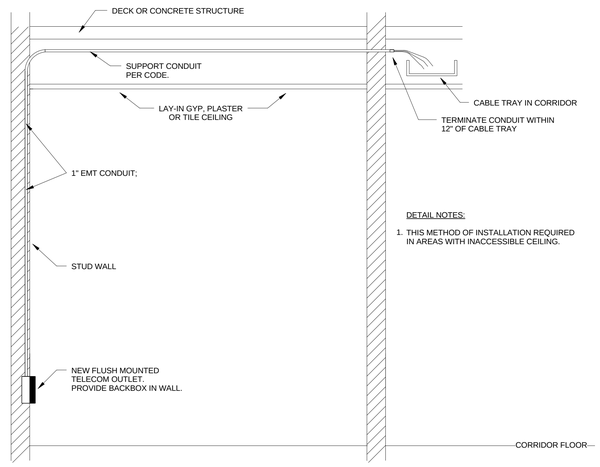
1 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
NO SCALE



DETAIL NOTES:

1. REFER TO FLOOR PLANS FOR FLOOR SLEEVE LOCATIONS AND SIZES.
2. PROVIDE ADDITIONAL SLEEVES AS REQUIRED TO RESULT IN MAXIMUM OF 40% FILL (CABLE AREA / SLEEVE AREA) PLUS ONE SPARE SLEEVE OF THE SAME SIZE.

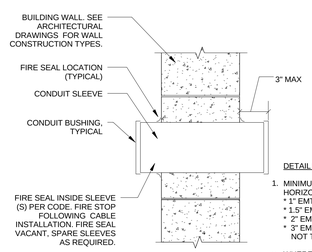
5 FLOOR PENETRATION SLEEVE
NO SCALE



DETAIL NOTES:

1. THIS METHOD OF INSTALLATION REQUIRED IN AREAS WITH INACCESSIBLE CEILING.

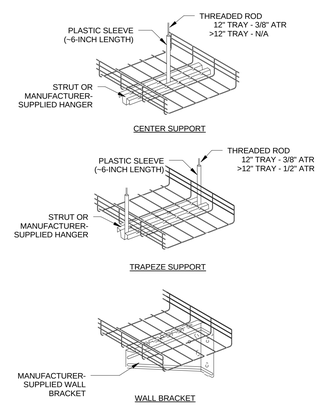
2 TELECOMMUNICATIONS OUTLET PATHWAY
NO SCALE



DETAIL NOTES:

1. MINIMUM SIZING OF SLEEVE FOR HORIZONTAL (STATION) CABLING:
   * 1" EMT CONDUIT (1-6 CABLES)
   * 1.5" EMT CONDUIT (15 CABLES OR LESS)
   * 2" EMT CONDUIT (20 CABLES OR LESS)
   * 3" EMT CONDUIT (MORE THAN 15 CABLES; NOT TO EXCEED 40% FILL)
2. WHERE SLEEVE IS PART OF BACKBONE CABLE PATH, SIZE TO RESULT IN MAXIMUM OF 40% FILL (CABLE AREA / SLEEVE AREA).

6 WALL PENETRATION SLEEVE
NO SCALE



CABLE TRAY DETAIL GENERAL NOTES:

REFER TO SPECIFICATION SECTION 26 05 36 FOR TRAY SPACING AND OTHER INSTALLATION REQUIREMENTS.

SEE PLAN DRAWINGS FOR WIDTH(S) AND DEPTH(S).

ANCHOR THREADED ROD TO STEEL WITH BEAM CLAMPS OR USING STEEL DROP-IN ANCHORS. PLASTIC OR LEAD TYPE ANCHORS ARE NOT APPROVED.

COORDINATE WITH OTHER TRADES TO MAINTAIN CLEARANCE OF ONE (1) FOOT ON BOTH SIDES OF THE TRAY AND EIGHT (8) INCHES ABOVE TOP OF THE TRAY.

PROVIDE ALL ANGLES, TEE'S, CROSSES, SPLICES, ACCESSORIES, ETC. AS REQUIRED.

PROVIDE OFFSETS AS REQUIRED TO CHANGE ELEVATIONS AS OBSTRUCTIONS DICTATE. WHERE CABLE TRAY CONTINUITY CANNOT BE MAINTAINED, PROVIDE STRAP BONDED TO ADJACENT TRAY SECTIONS.

MAINTAIN MINIMUM SEPARATION DISTANCES FROM <480V POWER LINES AS FOLLOWS:
- 12" FROM POWER LINES OF <5-KVA
- 18" FROM HIGH VOLTAGE LIGHTING (INCL. FLUORESCENT)
- 39" FROM POWER LINES OF 5-KVA OR GREATER
- 39" FROM TRANSFORMERS AND MOTORS.

PROVIDE RADIUSED DROP-OUT AT LOCATIONS WHERE CABLE EXITS THE TRAY.

WORKING NOTES:
CONFIRM ROD SIZING.

CONFIRM PLACEMENT OF INSTALLATION LANGUAGE - DETAIL OR SPEC?

3 CABLE TRAY MOUNTING
NO SCALE

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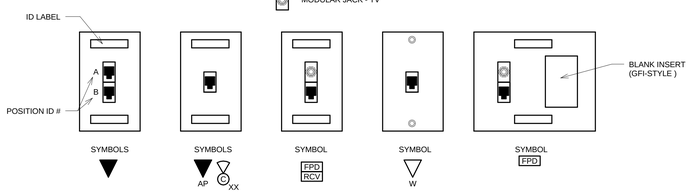
SHEET CONTENTS
TECHNOLOGY DETAILS

SHEET NO.:
T-501

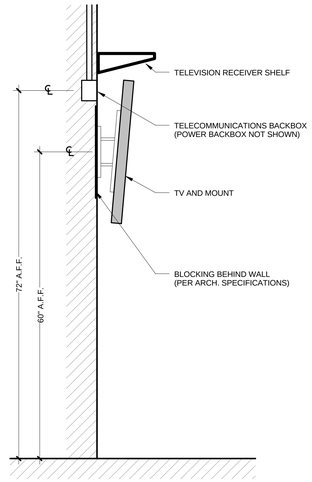
6/11/2015 4:05:31 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1517.rvt

DETAIL NOTES:
1. REFER TO DIVISION 27 SPECIFICATIONS FOR PERFORMANCE, PINUPAIR ASSIGNMENTS AND COLOR.
2. REFER TO DIVISION 27 SPECIFICATIONS FOR FACEPLATE MATERIAL & COLOR (TYPICAL)

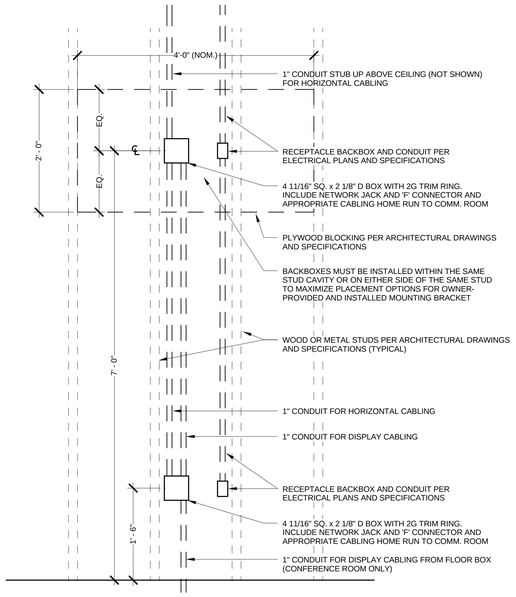
KEY
- MODULAR JACK - DATA
- MODULAR JACK - TV



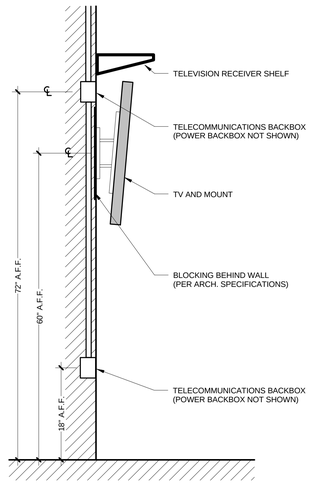
1 TELECOMMUNICATIONS OUTLET CONFIGURATIONS
NO SCALE



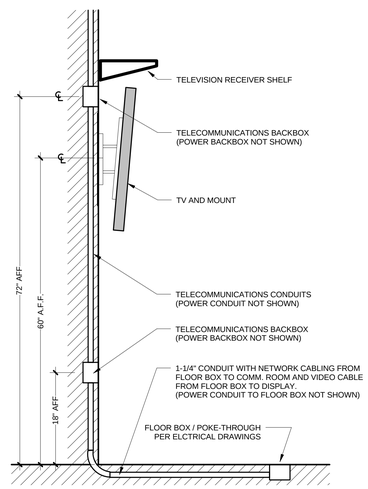
3 WALL-MOUNTED DISPLAY
NO SCALE



2 DISPLAY ELEVATION DETAIL
NO SCALE



4 WALL-MOUNTED DISPLAY DETAIL
NO SCALE



5 CONFERENCE ROOM DISPLAY DETAIL
NO SCALE

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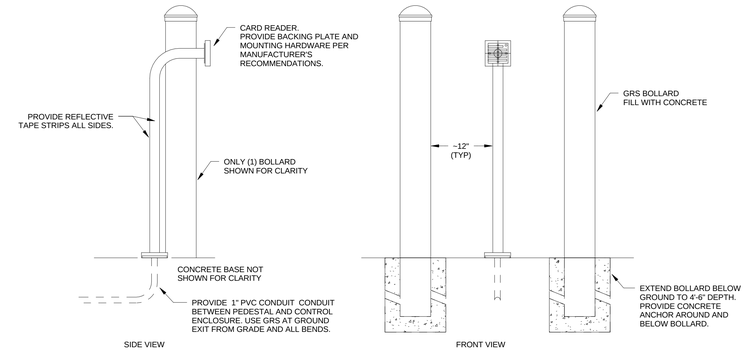
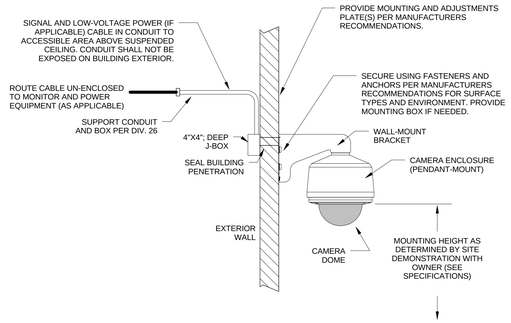
SHEET CONTENTS
TECHNOLOGY DETAILS

SHEET NO.:
T-502

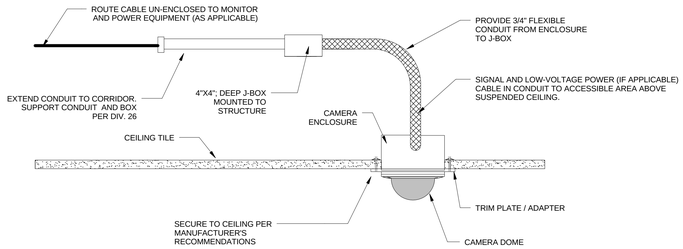
6/11/2015 4:05:37 PM C:\Revit Local\3235300-131021-03-E-Central-2015_1517dmp.rvt



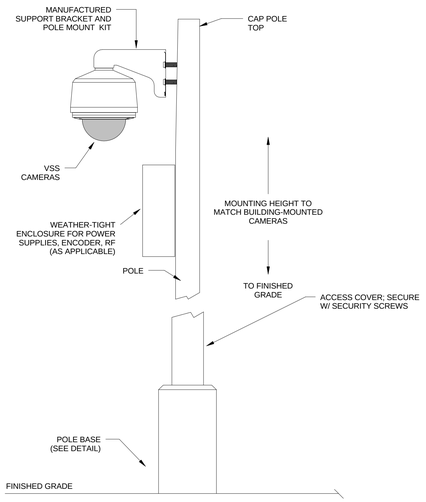
4 PEDESTAL CARD READER
NO SCALE



1 CAMERA DOME - EXTERIOR WALL
NO SCALE



2 CAMERA DOME - INTERIOR CEILING
NO SCALE



NOTES:

PROVIDE CAMERA, ANTENNA, WIRING, MOUNTING HARDWARE, POLE, POLE FOUNDATION, RELATED HARDWARE AND ALL ASSOCIATED INSTALLATION.

CAMERA, ENCLOSURE AND ANTENNA APPEARANCE, LOCATION AND ORIENTATION SHOWN ARE DIAGRAMMATIC. POSITION SPECIFIED ANTENNA TYPE ON POLE AS REQUIRED FOR LINK TO TERMINAL BUILDING.

POWER AND SIGNAL CABLING (NOT SHOWN) TO BE IN FLEX CONDUIT UON.

3 CAMERA - POLE
NO SCALE

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SHEET CONTENTS
TECHNOLOGY DETAILS

SHEET NO.:
T-503

6/11/2015 4:05:44 PM C:\Revit Local\3235300-131021-03-E-Central-2015_15171dwp.rvt

ACCESS CONTROLLED DOOR SCHEDULE

DOOR					HARDWARE								
					ACS ID	UNSECURED SIDE		SECURED SIDE		LOCK	STATUS	FAIL	COMMENTS
FLOOR	ID	TYPE	SGL / DBL	DESCRIPTION		ROOM	DEVICE	ROOM	DEVICE				
BASEMENT	S3-A	EXTERIOR	SINGLE	BASEMENT STAIR EXIT	ACS-6	EXTERIOR	N/A	EXIT STAIR S-3	N/A	N/A	S	N/A	
FIRST	100A	EXTERIOR	DOUBLE	PATERSON STREET ENTRY	ACS-1	EXTRIOR	N/A	VESTIBULE 101	M	E	S	SECURE	[E] IN LEAF 100A VIA [PT]
	100B						C			LATCH	S		
FIRST	100E	INTERIOR	SINGLE	SECOND FLOOR EXIT STAIR	ACS-3	VESTIBULE 100	C	EXIT STAIR S-1	C	E	S	SAFE	PANIC HARDWARE FOR EMERGENCY EGRESS
FIRST	S-1A	INTERIOR	SINGLE	SECOND FLOOR EXIT STAIR	ACS-4	OPEN OFFICE 102	IL	EXIT STAIR S-1	IL	IL	IL	SAFE	PANIC HARDWARE FOR EMERGENCY EGRESS
FIRST	103A	EXTERIOR	SINGLE	KEY STORAGE EMERGENCY EXIT	ACS-6	EXTERIOR	N/A	KEY STORAGE 103	N/A	N/A	S	N/A	
FIRST	104	INTERIOR	SINGLE	BOILER ROOM ENTRY	ACS-4	KEY STORAGE 103	IL	BOILER ROOM 104	IL	IL	IL	SAFE	
FIRST	109A	INTERIOR	SINGLE	SOTRAGE ROOM 109 ENTRY (NORTH)	ACS-4	OPEN OFFICE 102	IL	STORAGE 109	IL	IL	IL	SAFE	
FIRST	109B	INTERIOR	DOUBLE	SOTRAGE ROOM 109 ENTRY (SOUTH)	ACS-5	CORRIDOR 114	IL	STORAGE 109	IL	IL	IL + S	SAFE	ADDITIONAL [S] FOR FIXED LEAF
FIRST	110	INTERIOR	SINGLE	FILE STORAGE ENTRY	ACS-4	OPEN OFFICE 102	IL	FILE STORAGE 110	IL	IL	IL	SAFE	
FIRST	111	INTERIOR	SINGLE	STORAGE ROOM 111 ENTRY	ACS-4	CORRIDOR 114	IL	STORAGE 109	IL	IL	IL	SAFE	
FIRST	115A	EXTERIOR	DOUBLE	WELL SHOP CRANE DOORS	ACS-7	EXTERIOR	N/A	WELL SHOP 115	N/A	N/A	S (2)	N/A	
FIRST	115B	EXTERIOR	OVERHEAD	WELL SHOP OVERHEAD DOOR	ACS-8	EXTERIOR	N/A	WELL SHOP 115	N/A	N/A	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
FIRST	115C	EXTERIOR	SINGLE	WELL SHOP EMERGENCY EXIT	ACS-6	EXTERIOR	N/A	WELL SHOP 115	N/A	N/A	S	N/A	
FIRST	118	INTERIOR	SINGLE	FLUSHING & LOCATORS ENTRY	ACS-4	CORRIDOR 101	IL	FLUSHING & LOCATORS 118	IL	IL	IL	SAFE	
FIRST	119	INTERIOR	SINGLE	JANITOR STORAGE	ACS-4	CORRIDOR 101	IL	JANITOR STORAGE 119	IL	IL	IL	SAFE	
FIRST	120A	EXTERIOR	DOUBLE	YARD ENTRY	ACS-1	EXTERIOR	N/A	VESTIBULE 101	M	LATCH	S	SECURE	[E] IN LEAF 120B VIA [PT]
	120B						C			E	S		
FIRST	S-4B	INTERIOR	SINGLE	WELDING SHOP STAIRS S-4	ACS-4	VESTIBULE 104	IL	EXIT STAIR S-4	IL	IL	IL	SAFE	PANIC HARDWARE FOR EMERGENCY EGRESS
FIRST	121B	EXTERIOR	SINGLE	CONF. / LUNCH RM. EMERGENCY EXIT	ACS-6	EXTERIOR	N/A	CONF. / LUNCH RM. 121	N/A	N/A	S	N/A	
FIRST	122A	INTERIOR	SINGLE	BREAK ROOM ENTRY (HALL)	ACS-4	HALLWAY 123	IL	BREAK ROOM 122	IL	IL	IL	SAFE	
FIRST	123	INTERIOR	SINGLE	HALLWAY ENTRY	ACS-4	CORRIDOR 101	IL	HALLWAY 123	IL	IL	IL	SAFE	
FIRST	132A	EXTERIOR	OVERHEAD	SERVICE BAY #1 OVERHEAD DOOR (NORTH)	ACS-8	EXTERIOR	N/A	SERVICE BAY #1 132	N/A	N/A	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
FIRST	132B	EXTERIOR	OVERHEAD	SERVICE BAY #1 OVERHEAD DOOR (SOUTH)	ACS-8	EXTERIOR	N/A	SERVICE BAY #1 132	N/A	N/A	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
FIRST	136A	EXTERIOR	OVERHEAD	SERVICE BAY #2 OVERHEAD DOOR (NORTH)	ACS-8	EXTERIOR	N/A	SERVICE BAY #2 136	N/A	N/A	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
FIRST	136B	EXTERIOR	OVERHEAD	SERVICE BAY #2 OVERHEAD DOOR (SOUTH)	ACS-8	EXTERIOR	N/A	SERVICE BAY #2 136	N/A	N/A	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
FIRST	136C	EXTERIOR	SINGLE	SERVICE BAY #2 ENTRY	ACS-2	EXTERIOR	C	SERVICE BAY #2 136	M	E	S	SECURE	
FIRST	141A	EXTERIOR	SINGLE	WELDING BAY ENTRY	ACS-2	EXTERIOR	C	WELDING BAY 141	M	E	S	SECURE	
FIRST	141B	EXTERIOR	OVERHEAD	WELDING BAY OVERHEAD DOOR	ACS-8	EXTERIOR	N/A	WELDING BAY 141	N/A	N/A	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
FIRST	EL-2C	EXTERIOR	DOUBLE	FREIGHT ELEVATOR EXTREIOR DOORS	ACS-7	EXTERIOR	N/A	FREIGHT ELEVATOR EL-2	N/A	N/A	S (2)	N/A	
FIRST	S-5A	EXTERIOR	SINGLE	STAIR 5 EMERGENCY EXIT	ACS-6	EXTERIOR	N/A	STAIR 5	N/A	N/A	S	N/A	
FIRST	S-6A	EXTERIOR	SINGLE	STAIR 6 EMERGENCY EXIT	ACS-6	EXTERIOR	N/A	STAIR 6	N/A	N/A	S	N/A	
SECOND	208	INTERIOR	SINGLE	STORAGE ROOM ENTRY	ACS-4	CLEAN WORKSHOP 215	IL	CORRIDOR 200	IL	IL	IL	SAFE	
SECOND	214	INTERIOR	SINGLE	MECHANICAL ROOM ENTRY	ACS-4	OPEN OFFICE 212	IL	MECHANICAL ROOM 214	IL	IL	IL	SAFE	
SECOND	216	INTERIOR	DOUBLE	ELEC. PARTS SECURE STORAGE ENTRY	ACS-5	CLEAN WORKSHOP 215	IL	ELEC. PARTS SEC. STOR. 216	IL	IL	IL	SAFE	ADDITIONAL [S] FOR FIXED LEAF
SECOND	217	INTERIOR	SINGLE	DATA ROOM ENTRY	ACS-4	CLEAN WORKSHOP 215	IL	DATA ROOM 217	IL	IL	IL	SAFE	
SECOND	220	INTERIOR	SINGLE	PARTS STORAGE ENTRY	ACS-4	STAIR ST-5	IL	PARTS STORAGE 220	IL	IL	IL	SAFE	
SECOND	ROOF	EXTERIOR	HATCH	ROOF ACCESS HATCH	ACS-9	PARTS STORAGE 220	N/A	ROOF	N/A	LATCH	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
EXTERIOR	PED	EXTERIOR	SINGLE	PEDESTRIAN GATE	ACS-10	PUBLIC SPACE	C	YARD	P	E	S	N/A	SURFACE-MOUNTED WIDE-GAP [S]
EXTERIOR	DRIVE	EXTERIOR	DOUBLE	DRIVE GATE (SOUTH)	ACS-11	PUBLIC SPACE	C	YARD	LOOP	GATE	N/A	N/A	

SYMBOL KEY:

- C CARD READER
- E ELECTRIC STRIKE
- S DOOR POSITION SWITCH
- IL INTEGRATED LOCKSET
- M MOTION DETECTOR
- P PUSH BUTTON
- PT POWER TRANSFER

VIDEO SURVEILLANCE CAMERA SCHEDULE

CAMERA NUMBER	CAMERA LOCATION		CAMERA CONFIGURATION				
	INTERIOR	EXTERIOR	TYPE	RESOLUTION	VIEW ANGLE	AREA OF COVERAGE	MOUNTING
CAM-01		PATERSON STREET ENTRY	FIXED	5MP	90	ENTRY INTO BUILDING FROM PATERSON STREET	SOFFIT AT ENTRY
CAM-02	VESTIBULE 100		FIXED	1MP	30	ENTRY INTO BUILDING FROM PATERSON STREET	CEILING
CAM-03		YARD ENTRY	FIXED	5MP	60	ENTRY INTO BUILDING FROM YARD	EXTERIOR WALL
CAM-04	CORRIDOR 101		FIXED	1MP	30	ENTRY INTO BUILDING FROM YARD	CEILING
CAM-05		WELL SHOP WALL - WEST	FIXED	5MP	60	YARD	WALL
CAM-06		SERVICE BAY WALL - SOUTH	FIXED	5MP	45	YARD / FUEL PUMPS	WALL
CAM-07		WELDING BAY WALL - SOUTH	FIXED	5MP	45	YARD / FUEL PUMPS	WALL
CAM-08		WELDING BAY WALL - SOUTH	FIXED	5MP	45	YARD GATES	WALL
CAM-09		PATERSON STREET DRINKING FOUNTAIN	FIXED	5MP	45	PATERSON STREET SIDEWALK	WALL
CAM-10		SERVICE BAY WALL - NORTH	FIXED	5MP	90	PATERSON STREET SIDEWALK	WALL
CAM-11		PARTS STORAGE WALL - NORTH	FIXED	5MP	30	PATERSON STREET SIDEWALK	WALL
CAM-12		KEY STORAGE WALL - NORTH	FIXED	5MP	30	PATERSON STREET SIDEWALK	WALL
CAM-13		KEY STORAGE WALL - EAST	FIXED	5MP	30	EAST SIDE OF BUILDING	WALL
CAM-14		WELL SHOP WALL - EAST	FIXED	5MP	30	EAST SIDE OF BUILDING	WALL
CAM-15		WELL SHOP WALL - EAST	FIXED	5MP	30	EAST SIDE OF BUILDING	WALL
CAM-16		WELL SHOP WALL - EAST	FIXED	5MP	30	EAST SIDE OF BUILDING	WALL
CAM-17		YARD LIGHT POLE	FIXED	5MP	45	YARD	POLE
CAM-18		YARD LIGHT POLE	FIXED	5MP	45	YARD	POLE
CAM-19	HALLWAY 123		FIXED	1MP	30	ENTRY INTO OFFICE FROM SERVICE BAYS	CEILING

Mead & Hunt

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Madison Water Utility
Quality and Reliability since 1872
www.madisonwater.org

MADISON WATER UTILITY
Reconstruction of the Madison Water Utility Operations Center
Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: DP
DRAWN BY: KAF
CHECKED BY: FCB

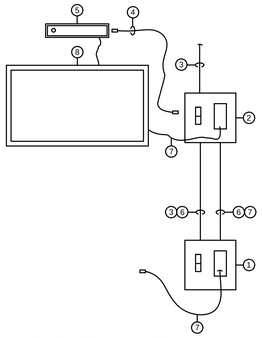
DO NOT SCALE DRAWINGS

SHEET CONTENTS
TECHNOLOGY SCHEDULES

SHEET NO.:
T-601

6/11/2015 4:05:56 PM C:\Revit Local\3235300-131021-03-E-Central-2015_15178mp.rvt

DISPLAY WIRING SCHEDULE		
NUMBER	DESCRIPTION	COMMENTS
1	LOWER RCV/VID OUTLET	
2	UPPER FPD/RCV OUTLET	
3	DISPLAY HORIZONTAL CABLING	
4	COAXIAL PATCH CORD	
5	MATV RECEIVER	BY OWNER
6	CONDUIT	BY DIV. 26
7	HDMI CABLE	
8	DISPLAY	



7 DISPLAY WIRING SCHEMATIC
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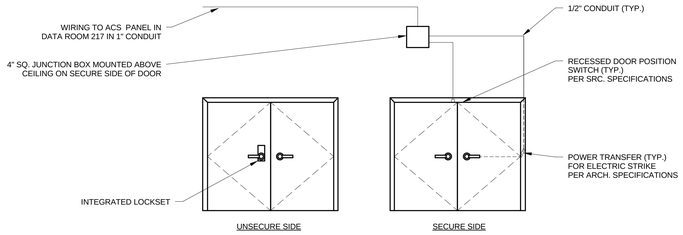
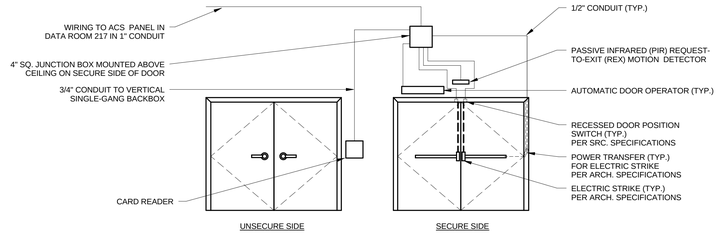


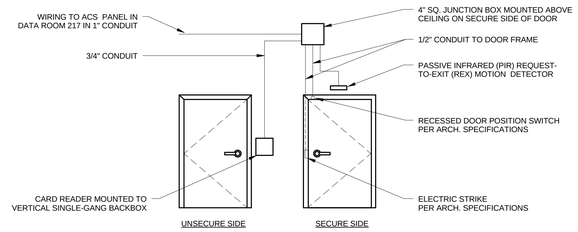
NOTE: ALL CABLING PER MANUFACTURER'S RECOMMENDATIONS

5 TYPE ACS-5 DOOR DETAIL
NO SCALE



NOTE: ALL CABLING PER MANUFACTURER'S RECOMMENDATIONS

1 TYPE ACS-1 DOOR DETAIL
NO SCALE



NOTE: ALL CABLING PER MANUFACTURER'S RECOMMENDATIONS

2 TYPE ACS-2 DOOR DETAIL
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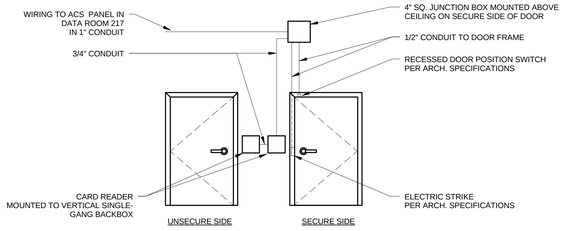
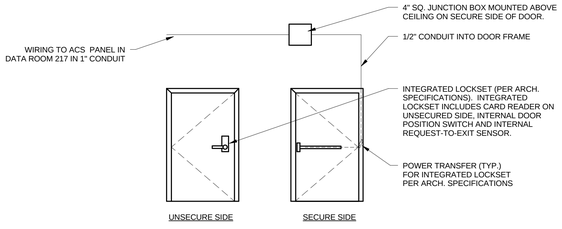


NOTE: ALL CABLING PER MANUFACTURER'S RECOMMENDATIONS

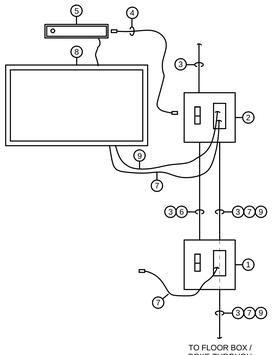
3 TYPE ACS-3 DOOR DETAIL
NO SCALE



NOTE: ALL CABLING PER MANUFACTURER'S RECOMMENDATIONS

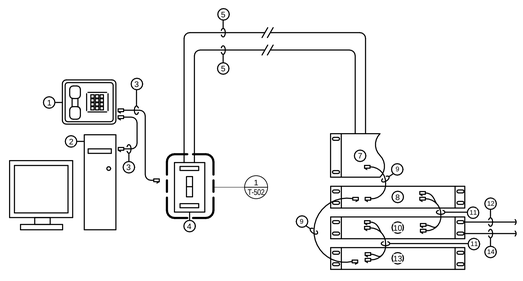
4 TYPE ACS-4 DOOR DETAIL
NO SCALE

DISPLAY WIRING SCHEDULE		
NUMBER	DESCRIPTION	COMMENTS
1	LOWER RCV/VID OUTLET	
2	UPPER FPD/RCV OUTLET	
3	HORIZONTAL COAXIAL CABLING	
4	COAXIAL PATCH CORD	
5	MATV RECEIVER	BY OWNER
6	CONDUIT	BY DIV. 26
7	HDMI CABLE	
8	DISPLAY	
9	HDMI CABLE	



8 DISPLAY WIRING SCHEMATIC - CONFERENCE ROOM
NO SCALE

COMMUNICATION EQUIPMENT SCHEDULE			
NUMBER	DESCRIPTION	COMMENTS	SCHEDULE NOTES
1	VOIP TELEPHONE	BY AGENCY	SEE DIVISION 27 SECTIONS FOR CABLE AND CONNECTIVITY PERFORMANCE AND PHYSICAL CONFIGURATION AS APPLICABLE TO EACH COMPONENT. REFER TO TELECOMMUNICATIONS OUTLET DETAIL INDICATED FOR CONFIGURATIONS, JACK POSITIONS, ETC. ALL TELECOMMUNICATIONS OUTLETS SHALL BE CATEGORY 6 COMPLIANT FOR DATA USE BUT MAY BE USED FOR VOICE.
2	COMPUTER	BY AGENCY	
3	MODULAR PATCH CORD		
4	TELECOMMUNICATIONS OUTLET		
5	HORIZONTAL CABLING		
6	MODULAR PATCH PANEL		
7	MODULAR PATCH PANEL		
8	NETWORK EQUIPMENT	BY AGENCY	
9	MODULAR PATCH CORD		
10	FIBER OPTIC PATCH PANEL		
11	FIBER OPTIC PATCH CORD		
12	INCOMING FIBER OPTIC SERVICE CABLE	SEE SITE ELEC.	
13	MEDIA CONVERTER CHASSIS / MODULES	FOR SITE SEC. DEVICES	
14	FIBER OPTIC CABLES TO SITE CAMS / GATES	SEE SITE ELEC.	



6 COMMUNICATIONS HORIZONTAL CABLE AND EQUIPMENT
NO SCALE

Mead & Hunt

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Contract No. 7529, Project No. 10442
110 S. Paterson Street, Madison, WI

ISSUED
1 06/12/15 BID SET

M&H NO.: 3235300-131021.03
DATE: June 12, 2015
DESIGNED BY: DP
DRAWN BY: KAF
CHECKED BY: FCB

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SHEET CONTENTS
TECHNOLOGY
ONE-LINE DIAGRAMS

SHEET NO.:
T-701

6/11/2015 4:06:05 PM C:\Revit Local\3235300-131021-03-E-Central-2015_15170mp.rvt