

# MADISON PUBLIC LIBRARY MAINTENANCE & SUPPORT CENTER REMODEL

## 1301 WEST BADGER ROAD

## MADISON, WI 53713

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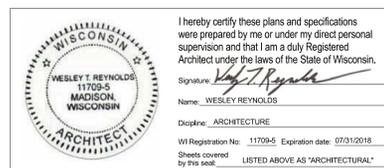
### LOCATION MAP



1301 W. BADGER ROAD

Area Location Plan  
 Not to scale

**ARCHITECT OF RECORD:**  
 OPN ARCHITECTS



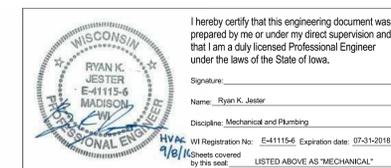
**CIVIL ENGINEER:**  
 SNYDER & ASSOCIATES



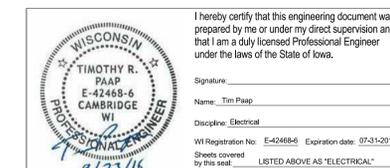
**STRUCTURAL ENGINEER:**  
 KJWW ENGINEERING



**MECHANICAL ENGINEER:**  
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**ELECTRICAL ENGINEER:**  
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 MADISON PUBLIC LIBRARY

201 W Mifflin St  
 Madison, WI 53703

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 Madison Public Library  
 Maintenance & Support  
 Center Remodel

1301 West Badger Road  
 Madison, WI 53713

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Key Plan

Sheet Issue Date  
 Bid Set 12/09/2016

Previous Issue Dates

Revision Dates  
 Addendum 2 02/01/2017

Drawing  
 COVER SHEET

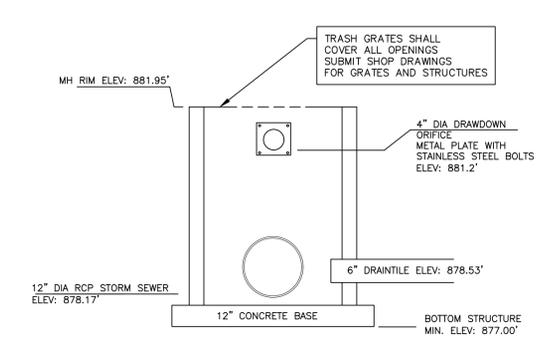
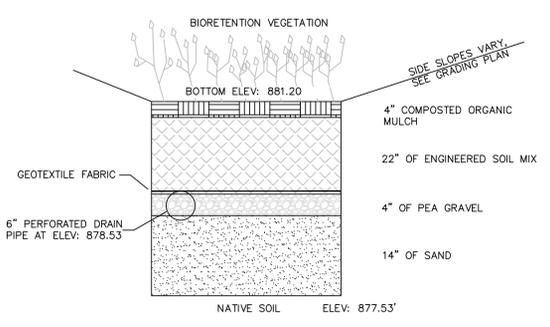
OPN Project No. 15617000

**A000**



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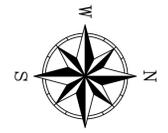


**BIORETENTION NOTES**

1. BIORETENTION SHALL CONFORM TO WIS. DNR TECH STANDARD 1004.
2. ENGINEERED SOIL SHALL CONSIST OF 70%-85% SILICA SAND AND 15%-30% COMPOST WITH A PH OF 5.5-6.5
3. BIORETENTION BASINS SHALL BE EXCAVATED AND USED AS SEDIMENT TRAPS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION AND SITE STABILIZATION, THE BASINS SHALL BE OVER-EXCAVATED 3 FEET MINIMUM AND THEN THE SAND LAYER AND ENGINEERED SOIL SHALL BE PLACED TO WITHIN THREE INCHES OF FINAL GRADE. ONCE THE ENGINEERED SOIL IS PLACED, THREE INCHES OF HARDWOOD MULCH SHALL BE ADDED ON TOP OF THE ENGINEERED SOIL.
4. SPECIFIC SPECIES OR CONTAINER SIZE SUGGESTED SUBSTITUTIONS SHALL BE PRESENTED TO CONSULTANT ALONG WITH THE REASONS FOR THE SUGGESTIONS. WITH CONSULTANT OR PROJECT ENGINEER'S APPROVAL, SUBSTITUTIONS MAY BE MADE. IF SUBSTITUTIONS ARE MADE, CONTRACT PRICES MAY NEED TO BE ADJUSTED ACCORDINGLY.
5. LIVE PLANTS CAN BE PLANTED IN THE FIELD DURING THE GROWING SEASON FROM MAY 1 THROUGH OCTOBER 1. ANY SUGGESTED PLANTING TIMES NOT IN THIS WINDOW SHALL BE APPROVED BY CONSULTANT OR ENGINEER. IF PLANTING OCCURS OUTSIDE OF THIS WINDOW ADDITIONAL MEASURES MAY NEED TO BE TAKEN (I.E. MULCH) TO ENSURE PLANT SURVIVAL. IN THESE INSTANCES, THE CONTRACT PRICE MAY NEED TO BE ADJUSTED ACCORDINGLY.
6. ALL PLANTED MATERIALS WILL BE WARRANTED BY INSTALLATION CONTRACTOR TO BE IN HEALTHY CONDITION WITH A REPLACEMENT GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF PLANTING.
7. NATIVE PLANTS SHOULD BE WATERED IN AFTER INSTALLATION TO ENSURE THEIR SURVIVAL. THIS TYPICALLY INVOLVES WATERING AT TIME OF INSTALLATION AND 2 TIMES WEEKLY FOR A ONE MONTH PERIOD OR UNTIL GROUND FREEZE UP IF NATURAL RAINFALLS ARE INSUFFICIENT. A SINGLE WATERING EVENT INVOLVES WATERING THE SOIL IN THE PLANTED AREAS TO THE POINT OF SATURATION BUT STOPPING SHORT OF SOIL DISPLACEMENT. SHOULD VERY DRY CONDITIONS DEVELOP WITHIN ONE YEAR OF PLANTING, ADDITIONAL WATERINGS MAY BE NECESSARY. CONSULTANT OR PROJECT ENGINEER WILL DETERMINE THIS AND CONTRACT PRICES MAY BE ADJUSTED TO ACCOMMODATE THIS ACTION.
8. PLANTS SHALL BE PLANTED IN THE BIORETENTION AREA AT A MINIMUM OF ONE PLANT PER EVERY TWO SQUARE FEET.
9. UPON COMPLETION OF EXCAVATING & GRADING OPERATIONS, A LOOSE, FRIABLE SEEDBED SHALL BE PREPARED FOR INSTALLATION OF NATIVE SEED.
10. CARE SHALL BE TAKEN TO MINIMIZE SOIL COMPACTION DURING CONSTRUCTION ACTIVITY. BY EXAMPLE OF A STANDARD SOIL PENETROMETER (COMPACTION TESTER), THE TOPSOIL COMPACTION READINGS SHALL BE LESS THAN 200 PSI AT THE 0-6 INCH DEPTH AND LESS THAN 250 PSI AT THE 6-18 INCH DEPTHS IN ALL AREAS TO BE SEEDED.
11. UNDULATIONS OR IRREGULARITIES IN THE SEEDBED WHICH WOULD INTERFERE WITH A CONSISTENT SEEDING OPERATION SHALL BE LEVELED PRIOR TO FINAL SEEDING.
12. FINAL SEEDBED SHOULD BE GRADED SUCH THAT THE AREAS TO BE SEEDED CONSIST OF A SMOOTH, FREE DRAINING, EVEN SURFACE WITH A LOOSE POROUS TEXTURE.

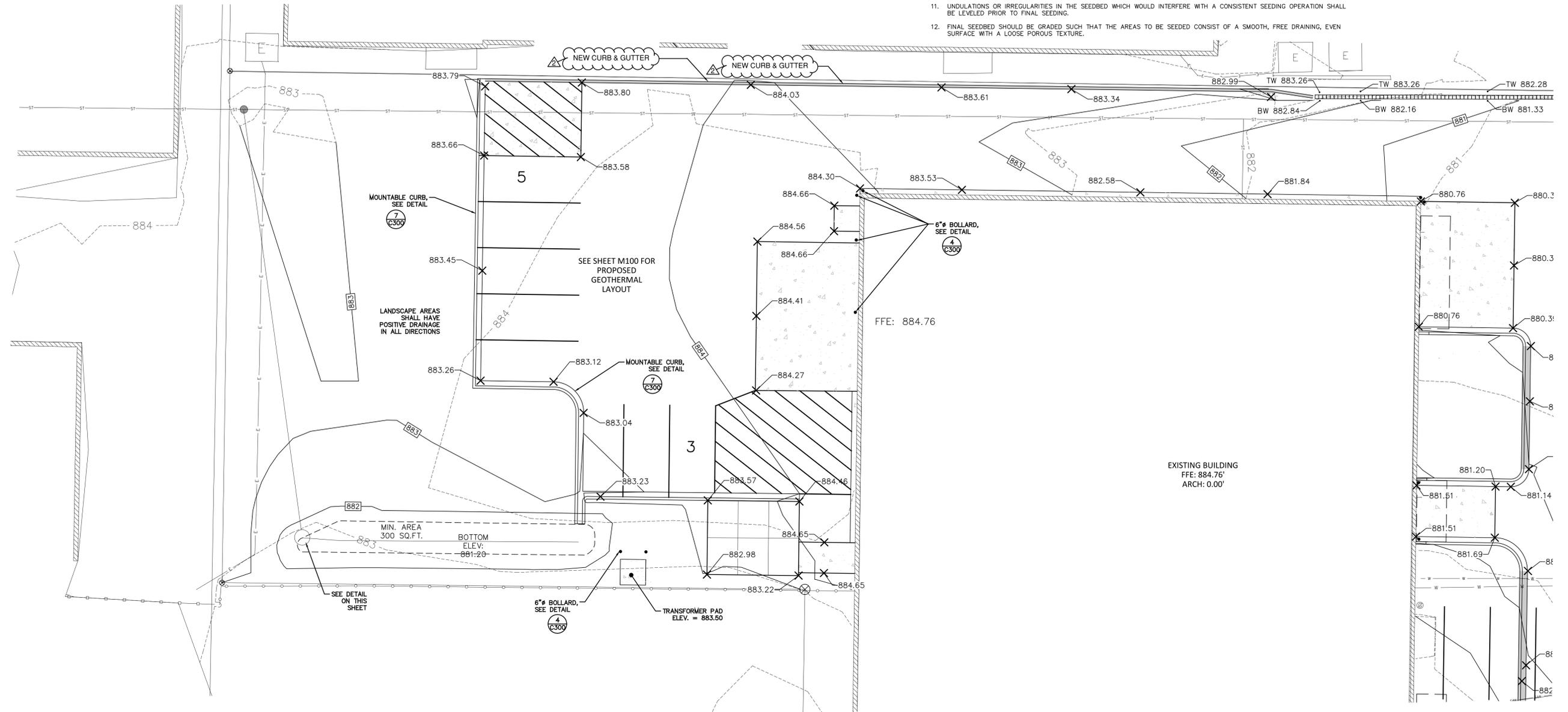


Know what's below.  
Call before you dig.  
WS. STATUTE 182.0175 (1974)  
REQUIRES MIN. OF 3 WORK DAYS  
NOTICE BEFORE YOU EXCAVATE



1 SOUTH BIORETENTION PROFILE  
NOT TO SCALE

2 SOUTH BIORETENTION  
BIORETENTION OVERFLOW MANHOLE  
NOT TO SCALE



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Key Plan

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Addendum 2 02/01/2017

Drawing  
DETAILED GRADING PLAN

OPN Project No. 15617000

**C202**

**CONSTRUCTION SPECIFICATIONS**

THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES. STORAGE HEIGHT SHALL NEVER EXCEED 18". THE FENCE LINE SHALL FOLLOW THE CONTOUR AS CLOSELY AS POSSIBLE.

IF POSSIBLE, THE FILTER FABRIC SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.

POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.

THE ENDS OF THE FENCE SHALL BE TURNED UPHILL.

A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.

WHEN STANDARD-STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG. THE WIRES OR HOG RINGS, THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

THE STANDARD-STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 6 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.

THE TRENCH SHALL BE BACKFILLED AND/OR THE SOIL COMPACTED OVER THE TOP OF THE FILTER FABRIC. THE FILTER FABRIC SHALL NOT BE SECURED BY SAND BAGS.

SILT FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 6 FEET FROM THE TOE IN ORDER TO INCREASE PONDING VOLUME.

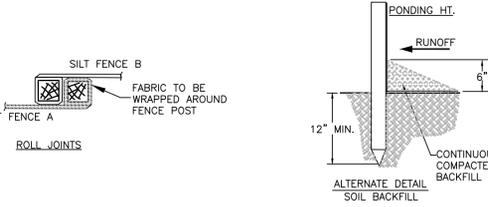
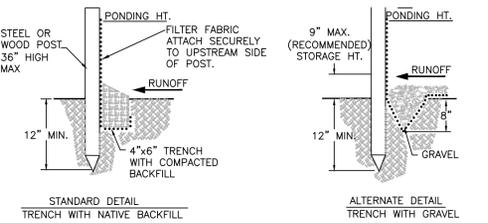
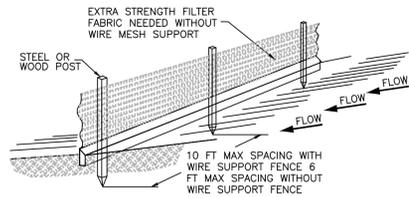
SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED, AND ANY SEDIMENT STORED BEHIND THE SILT FENCE HAS BEEN REMOVED.

**INSPECTION AND MAINTENANCE**

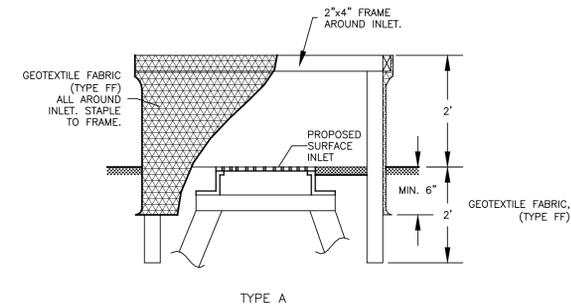
SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT STORM (1" IN 24 HR.). ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 HEIGHT OF THE FENCE OR 9 INCHES MAXIMUM.

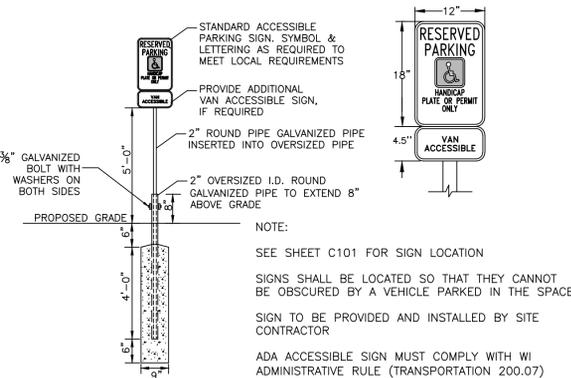
THE REMOVED SEDIMENT SHALL BE VEGETATED OR OTHERWISE STABILIZED.



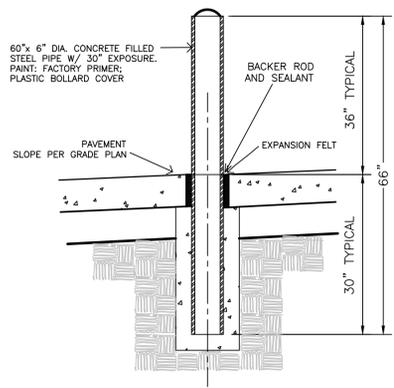
**1 SILT FENCE INSTALLATION DETAILS**  
C300 NOT TO SCALE



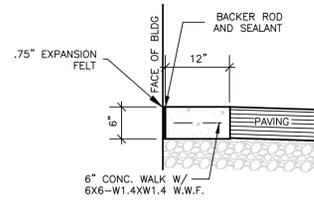
**2 STORM WATER INLET PROTECTION**  
C300 NOT TO SCALE



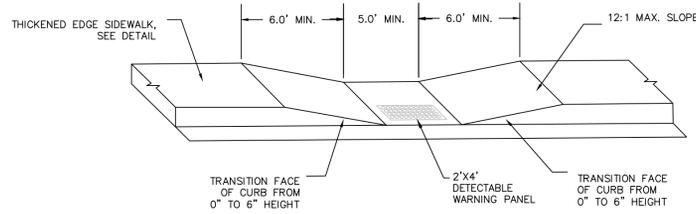
**3 ADA ACCESSIBLE SIGNAGE DETAIL**  
C300 NOT TO SCALE



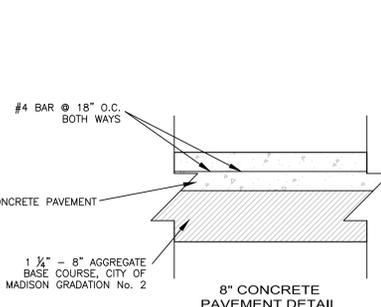
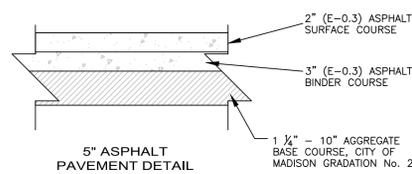
**4 36" HIGH ~ 6" PIPE BOLLARD**  
C300 NOT TO SCALE



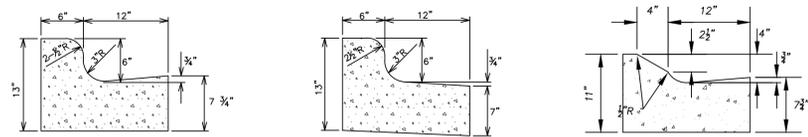
**CONCRETE APRON AROUND BUILDING**



**5 SIDEWALK DETAILS**  
C300



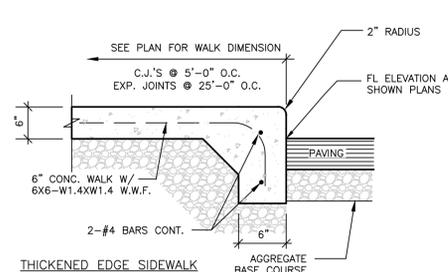
**6 PAVEMENT SECTIONS**  
C300 NOT TO SCALE



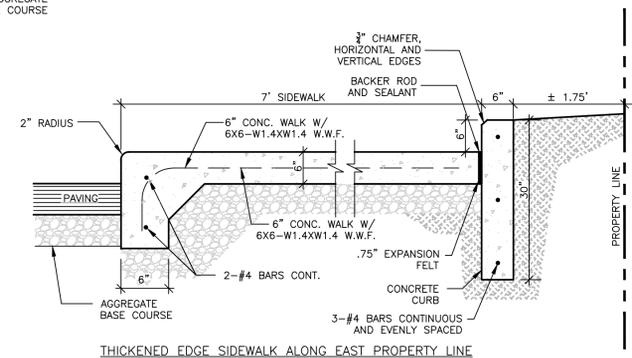
**7 CONCRETE CURB AND GUTTER**  
C300 NOT TO SCALE

**NOTES:**  
LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER.

THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK. IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED CRUSHED STONE THAT IS 6" THICK.

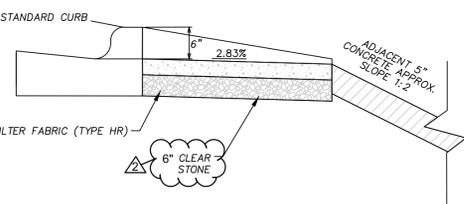


**THICKENED EDGE SIDEWALK**

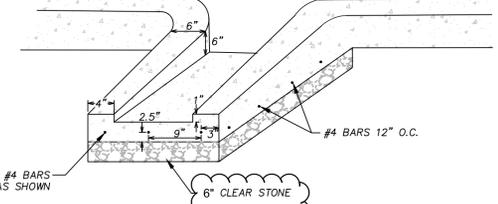


**THICKENED EDGE SIDEWALK ALONG FAST PROPERTY LINE**

**CONCRETE FLUME OPENING DETAIL (NOT TO SCALE)**



**CONCRETE FLUME DETAIL (NOT TO SCALE)**



**8 STORMWATER FLUME**  
C300 NOT TO SCALE

**GENERAL NOTES**

- FIELD VERIFY ALL EXISTING SITE CONDITIONS, UNDERGROUND UTILITIES, ABOVE GRADE UTILITIES AND UTILITY STRUCTURES, EXTENT OF PAVING AND CURBS, AND ALL EXISTING VEGETATION PRIOR TO DEMOLITION OR NEW CONSTRUCTION. CONTACT OWNER AND WISCONSIN ONE-CALL FOR UTILITY LOCATES PRIOR TO ANY WORK ON SITE. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BEFORE CONTINUING DEMOLITION OR NEW CONSTRUCTION.
- REFERENCE CIVIL, MECHANICAL AND ELECTRICAL SHEETS FOR UTILITIES AND DETAILS.
- PRESERVE & PROTECT EXISTING PLANT MATERIALS ON AND ADJACENT TO SITE EXCLUDING THOSE MARKED FOR REMOVAL ON DEMOLITION PLANS. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY IF PLANT MATERIALS ARE DAMAGED FOR ASSESSMENT OF PLANT REPLACEMENT.
- CONTRACTOR MUST PROVIDE EROSION/SEDIMENTATION CONTROLS AS REQUIRED TO CONTAIN SEDIMENT WITHIN CONSTRUCTION AREA. IN THE EVENT THAT SOILS LEAVE THE SITE, CLEANUP OF ALL SURROUNDING DRIVES, PARKING LOTS, AND WALKS SHALL BE PERFORMED ON A DAILY BASIS AND UPON REQUEST OF OWNER AT NO ADDITIONAL COST. REFERENCE LANDSCAPE AND CIVIL SHEETS FOR ADDITIONAL INFORMATION.
- WARNING - CALL 72 HOURS BEFORE YOU DIG. WISCONSIN ONE-CALL: 1-800-242-8511
- SITE LAYOUT INFORMATION TAKEN FROM CIVIL SITE PLAN PREPARED BY SNYDER & ASSOCIATES.
- SOD ALL DISTURBED AREAS AFFECTED BY CONSTRUCTION.

**LANDSCAPE NOTES**

- ONE WEEK PRIOR TO INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT OPN ARCHITECTS TO REVIEW TREES AT NURSERY.
- ALL PLANT MATERIAL SHALL AT LEAST MEET MINIMUM REQUIREMENTS IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
- ALL SITEWORK, SODDING AND LANDSCAPING SHALL BE IN ACCORDANCE WITH LOCAL JURISDICTION'S STANDARD SPECIFICATIONS UNLESS NOTED OTHERWISE.
- NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- PLANT QUANTITIES ARE FOR CONTRACTORS CONVENIENCE. DRAWING SHALL PREVAIL WHERE CONFLICT OCCURS.
- NO PLANT MATERIAL SHALL BE SUBSTITUTED IN SIZE OR SPECIES WITHOUT AUTHORIZATION OF LANDSCAPE ARCHITECT.
- ALL PROPOSED PLANTS SHALL BE LOCATED AS SHOWN ON PLANS, AND THEIR LAYOUT SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE INSTALLATION.
- LANDSCAPE PLAN TO BE REVIEWED BY CITY ARBORIST.
- TOPSOIL SHALL BE SPREAD TO MINIMUM DEPTH OF 6-INCHES ON ALL DISTURBED AREAS. SEE DETAILS FOR DEPTH OF TOPSOIL IN PLANTING BEDS. TOPSOIL SHALL BE DRY, LOOSE AND FREE OF DEBRIS.
- ALL PLANTS SHALL BE WATERED DURING THE LANDSCAPE MAINTENANCE PERIOD AS SPECIFIED.
- AN ON SITE MEETING WILL BE REQUIRED WITH THE GENERAL CONTRACTOR, GRADING CONTRACTOR, LANDSCAPE CONTRACTOR AND LANDSCAPE ARCHITECT PRIOR TO ANY LANDSCAPING WORK ON SITE.

**KEYED NOTES**

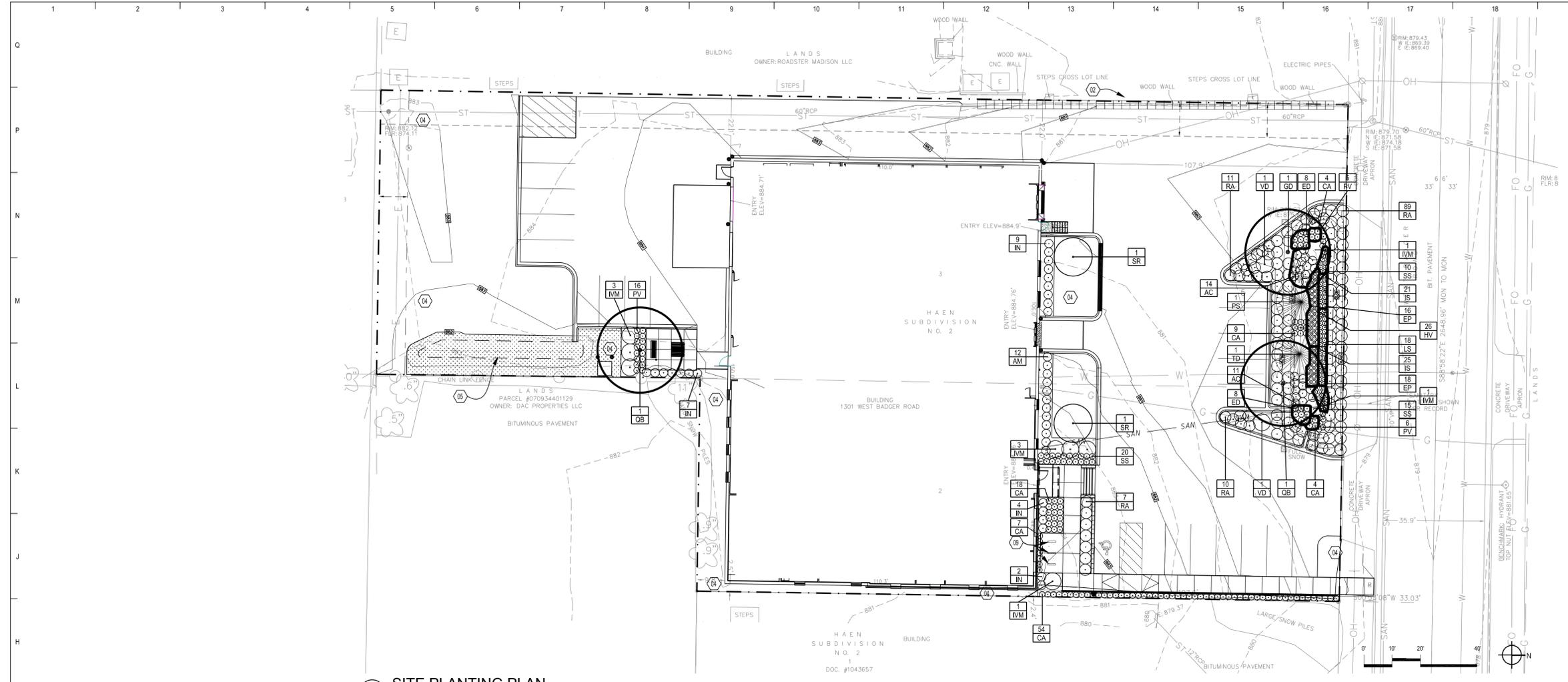
- 01 MULCH TYPE "A". SHREDDED HARDWOOD BARK MULCH AS SPECIFIED.
- 02 MULCH TYPE "B". WASHED RIVER ROCK AS SPECIFIED.
- 03 SPADE CUT PLANT BED EDGER.
- 04 RHIZOMATOUS TALL FESCUE SOD.
- 05 RAIN GARDEN BIO INFILTRATION BED PLUGS. PLUG TO PLANTS TO MEET WI DNR APPROVED SPECIES LIST. SEE C202 FOR PLANT SPACING AND DETAILS.
- 06 PLANT TABLE. SEE C11.102.
- 07 BENCH. SEE C15L102.
- 08 SMOKER ASH URN. SEE C12L102.
- 09 BIKE RACK. SEE C8L102.
- 10 COLOR CONCRETE WEEXPOSED AGGREGATE

**LANDSCAPE SUMMARY**

DEVELOPED AREA: 23,019 POINTS  
NEW LANDSCAPING POINTS REQUIRED: 385 POINTS

APPROXIMATE POINTS PROVIDED: 1,368

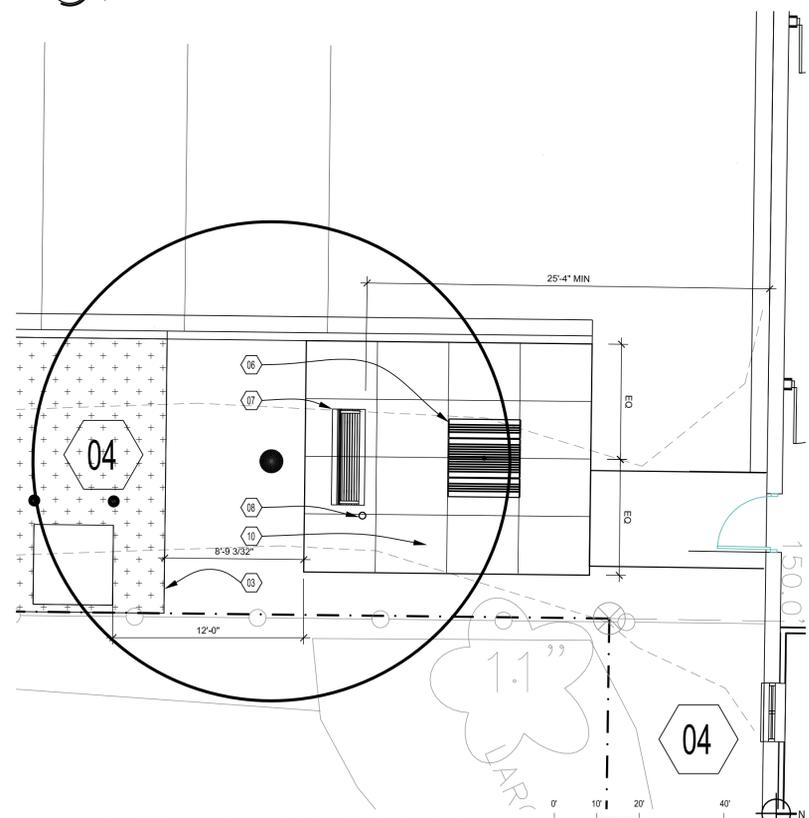
3 OVERSTORY TREES X 35 =	105 POINTS
2 EVERGREEN TREES X 35 =	70 POINTS
2 UNDERSTORY TREES X 15 =	30 POINTS
162 SHRUBS X 3 POINTS =	486 POINTS
333 PERENNIALS/GRASSES X 2 PTS =	666 POINTS
FURN. 1 BENCH. 1 P. TABLE X 5PTS =	10 POINTS
<b>TOTAL</b>	<b>1,367 POINTS</b>



**G4 SITE PLANTING PLAN**

**PLANT SCHEDULE**

Key	Qty	Botanical Name	Common Name	Size	Cond	Max Height and Width	Remarks	Points
<b>Deciduous Overstory Trees</b>								
GD	1	Gymnocladus dioicus 'Espresso'	ESPRESSO KENTUCKY COFFEE TREE	2.5" CAL	B&B	50' x 35'	1 CENTRAL LEADER	35
QB	2	Quercus bicolor	SWAMP WHITE OAK	2.5" CAL	B&B	50-60' x 50-60'	1 CENTRAL LEADER	70
<b>Deciduous Understory Trees</b>								
SR	1	Syringa reticulata 'Ivory Silk'	JAPANESE TREE LILAC	2" CAL	B&B	20'-25' x 15'-20'	Single Stem	15
<b>Evergreen Trees</b>								
PS	1	Pinus strobus	WHITE PINE	4-6' HGT	B&B	50-80' x 30-50'		35
TD	1	Taxodium distichum	BALD CYPRESS	4-6' HGT	B&B	50-70' x 20-40'		35
<b>Shrubs</b>								
AM	12	Aronia melanocarpa	BLACK CHOKEBERRY	#5	CONT	3-6' x 3-6'		36
IN	22	Ilex verticillata 'Nana'	RED SPRITE WINTERBERRY	#5	CONT	3' x 3'		81
IWM	9	Ilex verticillata 'Southern Gentlemen'	SOUTHERN GENTLEMEN WINTERBERRY	#5	CONT	7'x7'	MALE SPECIES	27
RA	117	Rhus aromatica 'Gro-low'	GRO-LOW FRAGRANT SUMAC	#5	CONT	2-3' x 6-8'		351
VD	2	Viburnum dentatum	ARROWOOD VIBURNUM	#5	CONT	6-10' x 6-10'		6
<b>Perennials</b>								
AC	25	Amorpha canescens	LEAD PLANT	#1	CONT	2-3'		50
EP	34	Echinacea purpurea 'Fatal Attraction'	FATAL ATTRACTION CONEFLOWER	#1	CONT	2' x 1'-6"		68
ED	16	Eupatorium dubium 'Little Joe'	LITTLE JOE COASTAL PLAIN JOE P. WEED	#1	CONT	3' x 3'		32
HV	26	Heuchera villosa 'Brownies'	HAIRY ALUM ROOT	#1	CONT	2' x 2'		52
IS	46	Iris sibirica	SIBERIAN IRIS	#1	CONT	2'x2'		92
LS	18	Liatris spicata 'Kabold'	BLAZING STAR	#1	CONT	2' x 1'-6"		36
<b>Grasses</b>								
CA	96	Calamagrostis acutiflora 'Karl Foerster'	KARL FOERSTER FEATHER REED GRASS	#1	CONT	5' x 2'		192
PV	27	Panicum virgatum 'Shenandoah'	SHENANDOAH SWITCHGRASS	#1	CONT	4' x 18"		54
SS	45	Schizachyrium scoparium 'Blue Heaven'	BLUE HEAVEN LITTLE BLUESTEM	#1	CONT	2-3' x 2'		90

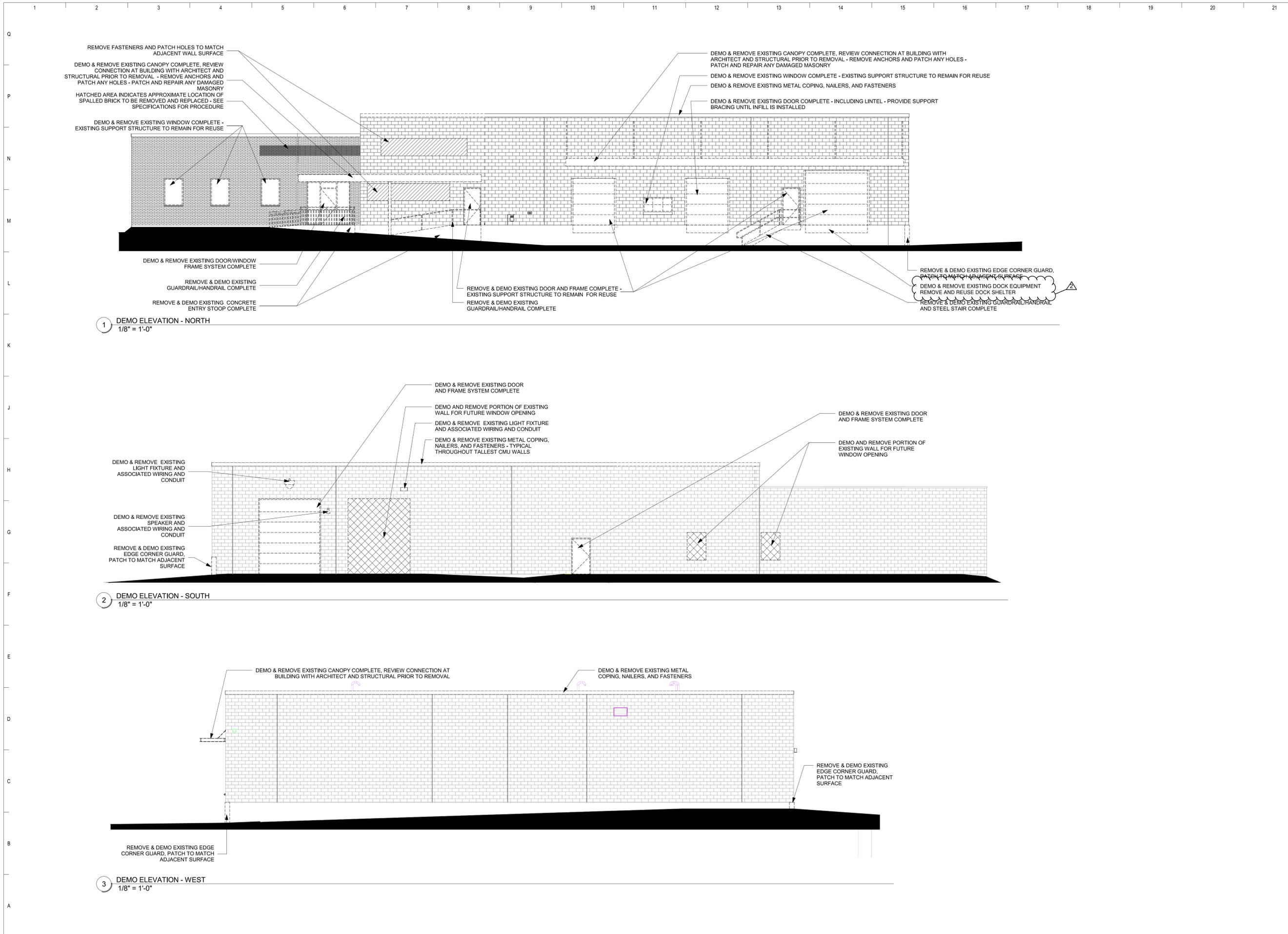


**A4 LAYOUT PLAN ENLARGEMENT: PATIO**  
3/16" = 1'-0"

I hereby certify these plans and specifications were prepared by me or under my direct personal supervision and that I am a duly Registered Architect under the laws of the State of Wisconsin.  
Signature: *Wesley Reynolds*  
Name: WESLEY REYNOLDS  
Discipline: ARCHITECTURE  
WI Registration No: 11709-5. Expiration date: 07/31/2018  
Sheets covered by this seal: LISTED ABOVE AS "ARCHITECTURAL"



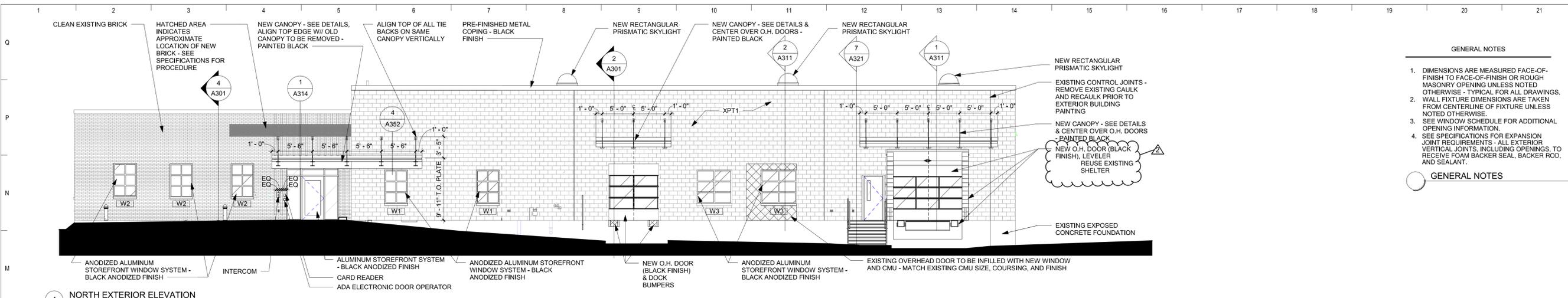




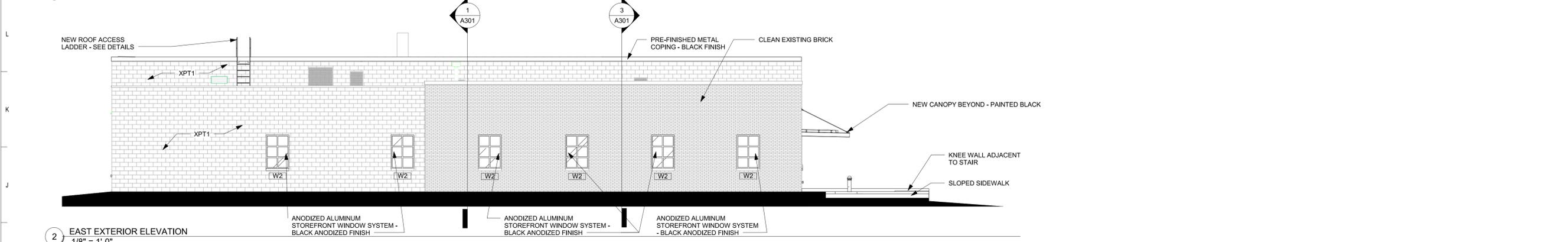
GENERAL NOTES

- DIMENSIONS ARE MEASURED FACE-OF-FINISH TO FACE-OF-FINISH OR ROUGH MASONRY OPENING UNLESS NOTED OTHERWISE - TYPICAL FOR ALL DRAWINGS.
- WALL FIXTURE DIMENSIONS ARE TAKEN FROM CENTERLINE OF FIXTURE UNLESS NOTED OTHERWISE.
- SEE WINDOW SCHEDULE FOR ADDITIONAL OPENING INFORMATION.
- SEE SPECIFICATIONS FOR EXPANSION JOINT REQUIREMENTS - ALL EXTERIOR VERTICAL JOINTS, INCLUDING OPENINGS, TO RECEIVE FOAM BACKER SEAL, BACKER ROD, AND SEALANT.

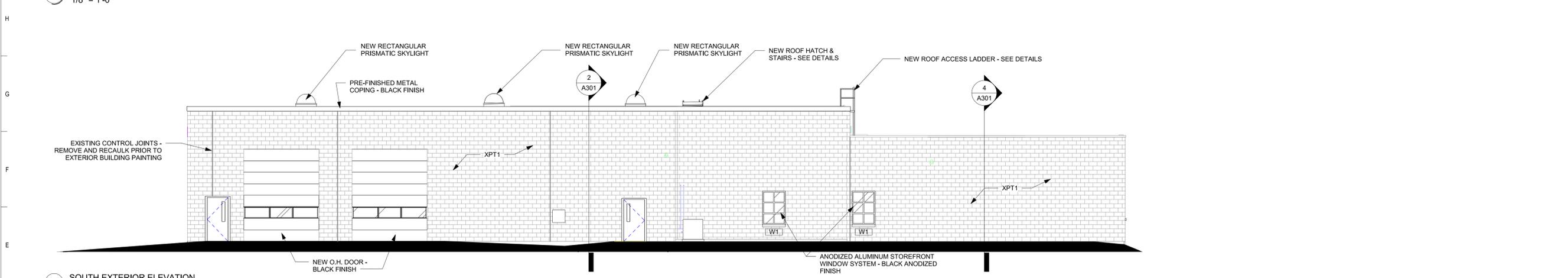
GENERAL NOTES



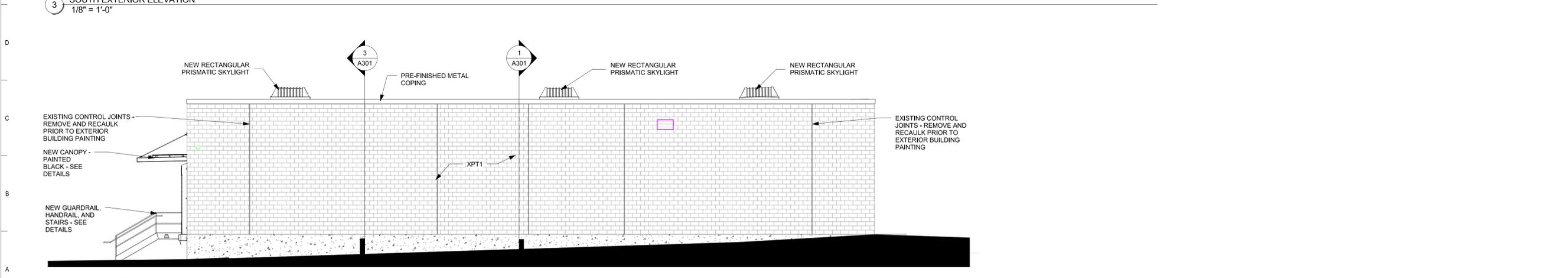
1 NORTH EXTERIOR ELEVATION  
1/8" = 1'-0"



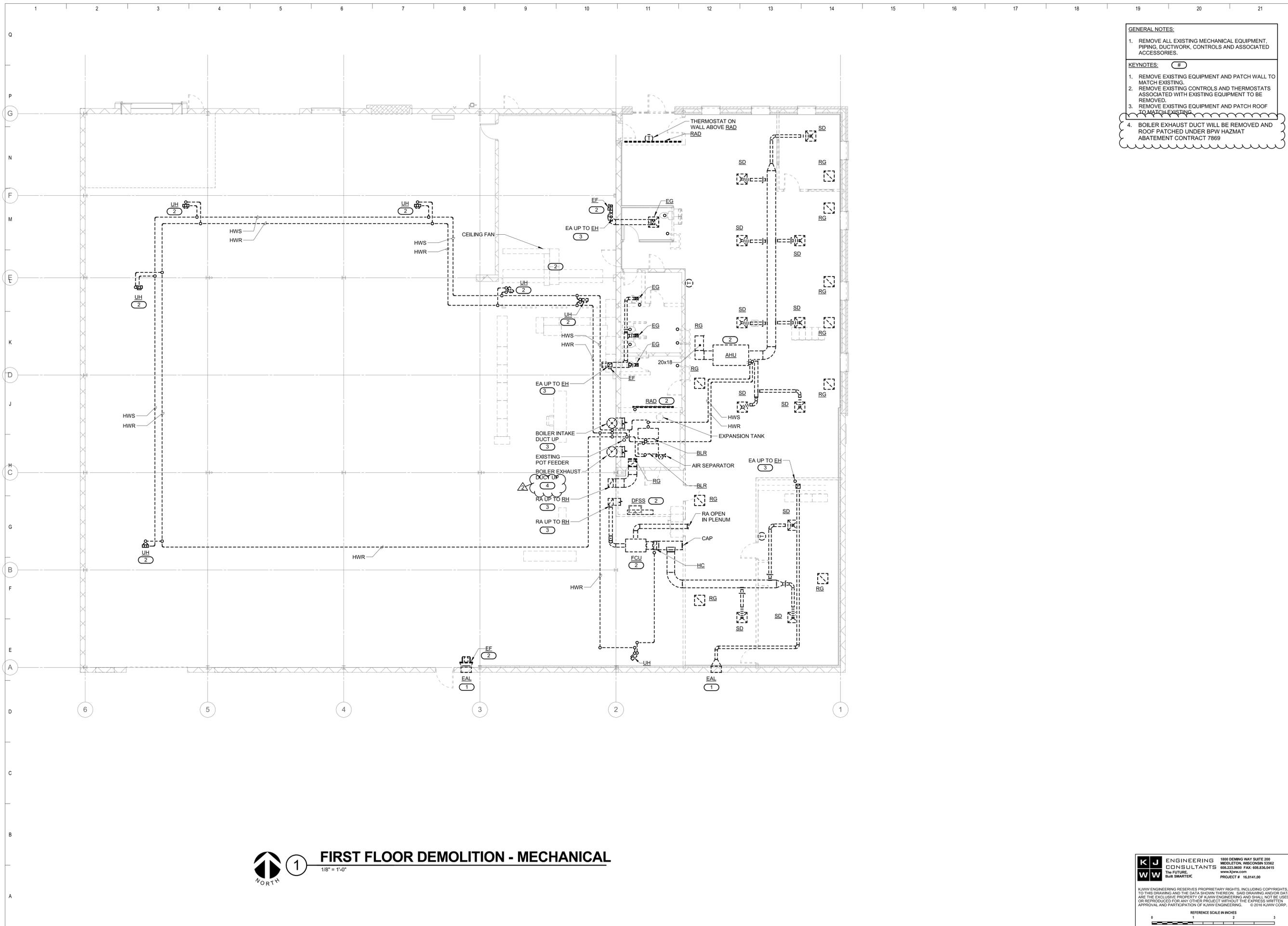
2 EAST EXTERIOR ELEVATION  
1/8" = 1'-0"



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



4 WEST EXTERIOR ELEVATION  
1/8" = 1'-0"



- GENERAL NOTES:**
1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, DUCTWORK, CONTROLS AND ASSOCIATED ACCESSORIES.
- KEYNOTES:** #
1. REMOVE EXISTING EQUIPMENT AND PATCH WALL TO MATCH EXISTING.
  2. REMOVE EXISTING CONTROLS AND THERMOSTATS ASSOCIATED WITH EXISTING EQUIPMENT TO BE REMOVED.
  3. REMOVE EXISTING EQUIPMENT AND PATCH ROOF TO MATCH EXISTING.
  4. BOILER EXHAUST DUCT WILL BE REMOVED AND ROOF PATCHED UNDER BPW HAZMAT ABATEMENT CONTRACT 7869



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Key Plan

Sheet Issue Date  
 Bid Set 12/09/2016

Previous Issue Dates


Revision Dates  
 Addendum 2 02/01/2017

Drawing  
**FIRST FLOOR  
 DEMOLITION -  
 MECHANICAL**

OPN Project No. **15617000**

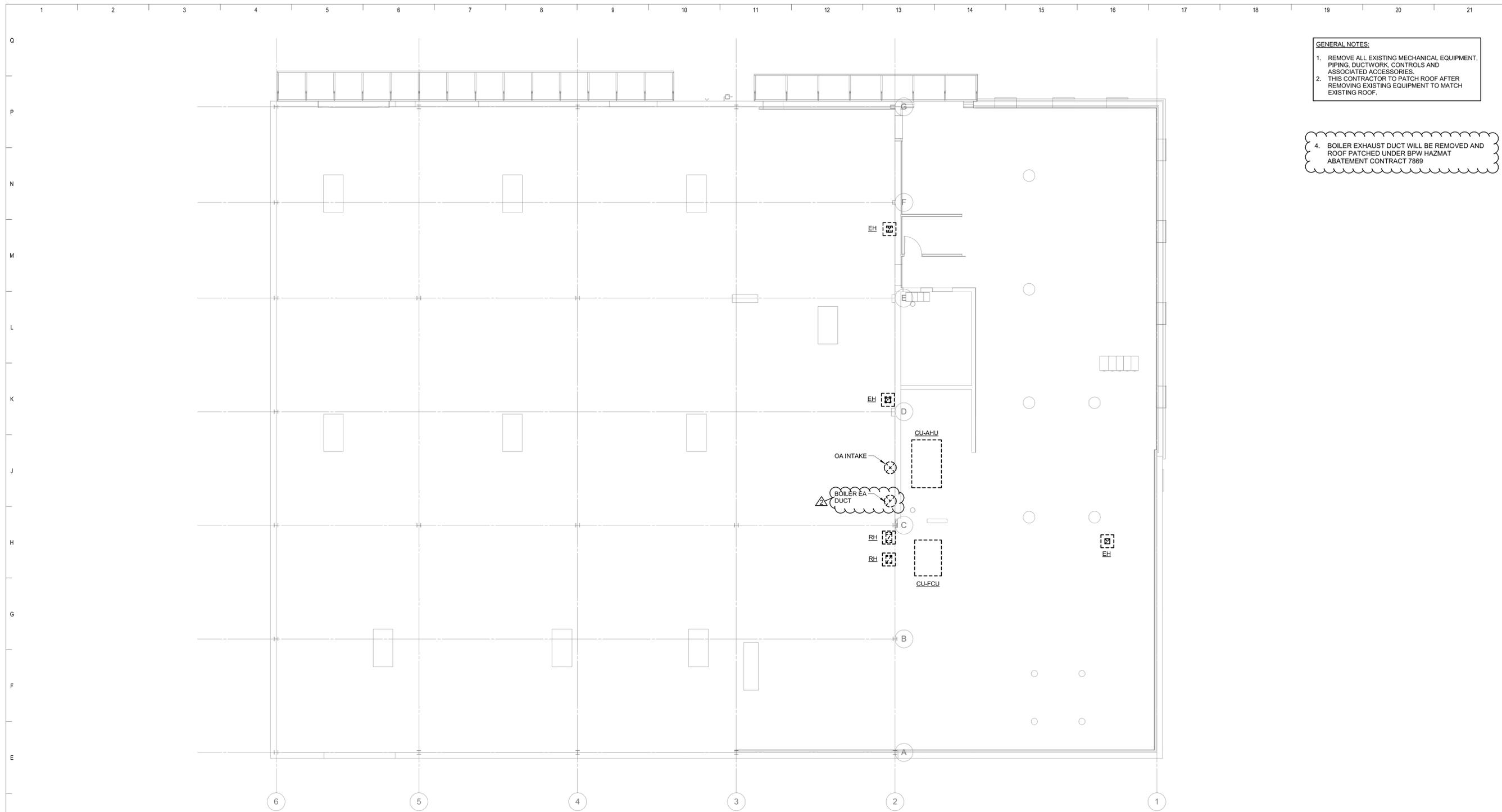
**MD101.1**

**1 FIRST FLOOR DEMOLITION - MECHANICAL**  
 1/8" = 1'-0"

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REFERENCE SCALE IN INCHES  
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**GENERAL NOTES:**

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, DUCTWORK, CONTROLS AND ASSOCIATED ACCESSORIES.
2. THIS CONTRACTOR TO PATCH ROOF AFTER REMOVING EXISTING EQUIPMENT TO MATCH EXISTING ROOF.

4. BOILER EXHAUST DUCT WILL BE REMOVED AND ROOF PATCHED UNDER BPW HAZMAT ABATEMENT CONTRACT 7869

**OPN ARCHITECTS**  
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Sheet Issue Date  
Bid Set 12/09/2016

Previous Issue Dates

Revision Dates  
Addendum 2 02/01/2017

Drawing  
**ROOF DEMOLITION PLAN  
- MECHANICAL**

OPN Project No. **15617000**

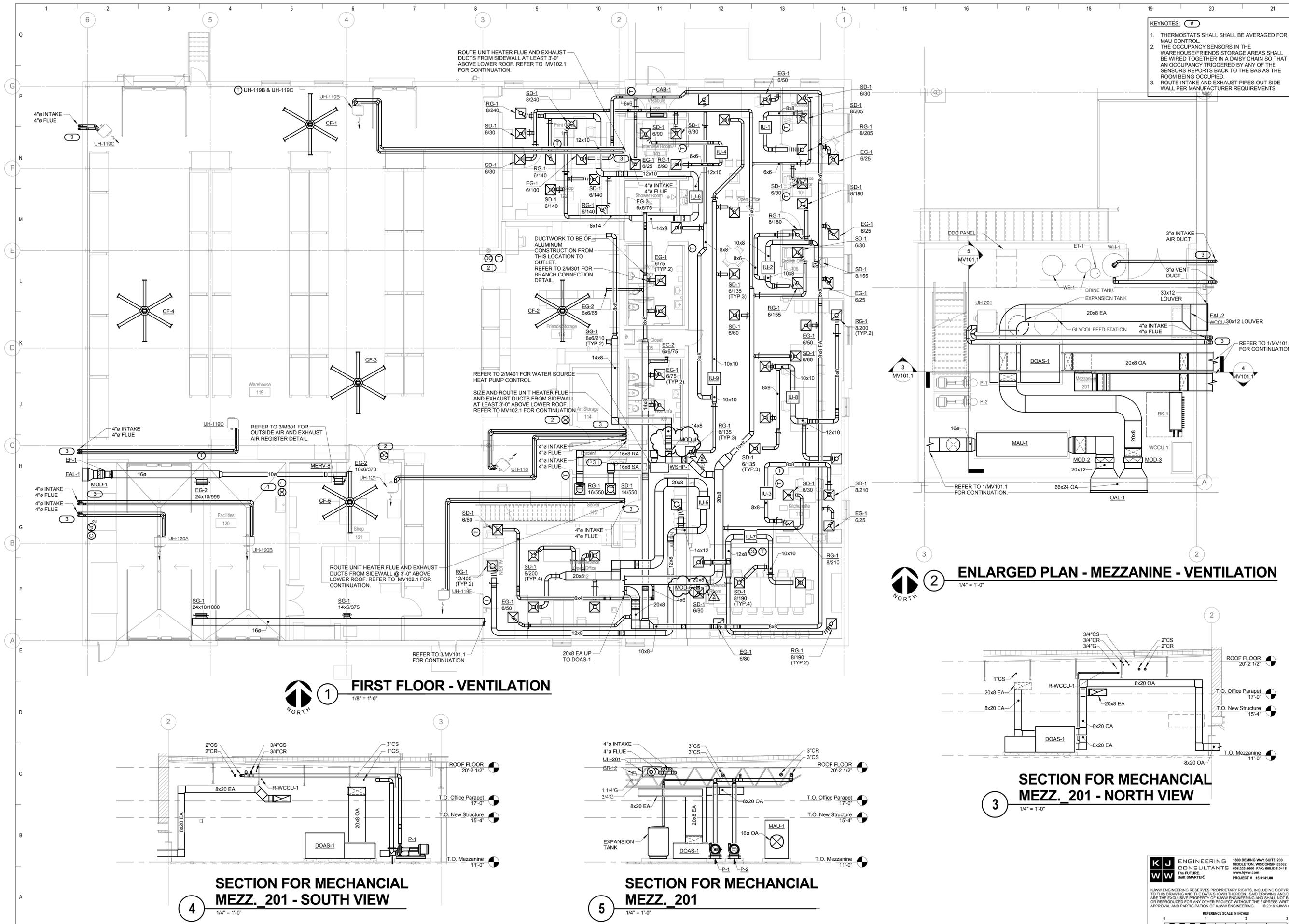
**MD102.1**

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

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- KEYNOTES:**
1. THERMOSTATS SHALL BE AVERAGED FOR MAU CONTROL.
  2. THE OCCUPANCY SENSORS IN THE WAREHOUSE/FRIENDS STORAGE AREAS SHALL BE WIRED TOGETHER IN A DAISY CHAIN SO THAT AN OCCUPANCY TRIGGERED BY ANY OF THE SENSORS REPORTS BACK TO THE BAS AS THE ROOM BEING OCCUPIED.
  3. ROUTE INTAKE AND EXHAUST PIPES OUT SIDE WALL PER MANUFACTURER REQUIREMENTS.

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 2 Addendum 2 02-01-2017

Drawing  
**FIRST FLOOR - MECHANICAL**

OPN Project No. 15617000

**MV101.1**

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REFERENCE SCALE IN INCHES  
 1" = 1'-0"

**DOAS UNIT SCHEDULE**

NOTES:  
1. PROVIDE UNIT WITH MULTIPLE SPEED CONTROLLER TO COORDINATE WITH CONTROL DIAGRAM 1/M403.  
2. REFER TO 1/M403 FOR DOAS UNIT CONTROL.

AIR HANDLING UNIT TAG NAME	AREA SERVED	CORE	CORE QUANTITY	CORE MINIMUM EFFICIENCY	MAX. DIMENSIONS			OUTSIDE/SUPPLY AIR STREAM							SUPPLY FAN CHARACTERISTICS					FILTERS		EXHAUST AIR STREAM				EXHAUST FAN CHARACTERISTICS																					
					LENGTH	WIDTH	HEIGHT	CFM	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	APD	SUPPLY	ESP IN. W.C.	TYPE	RPM	BHP	MHP	DISCONNECT BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)	TYPE	QTY	CFM	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	APD	CFM	ESP IN. W.C.	TYPE	RPM	BHP	MHP	DISCONNECT BY	DISCONNECT TYPE	CONTROLLER STARTED BY	CONTROLLER STARTED TYPE		
DOAS-1	BUILDING	ENTHALPIC	3	63%	46"	49"	30"	860	87	75	76.8	70.6	-15	-15	42.7	42.5	0.6	860	1.8		BACKWARD-INCLIN ED PLENUM (TWIN)	3050	0.8	1.06	MFR	NF	MFR	FV	MERV 8	3	845	72	67	70	63	0.6	845	1.2		BACKWARD-INCLIN ED PLENUM (TWIN)	3050	0.8	1.06	MFR	NF	MFR	FV

**DOAS UNIT SCHEDULE (CONTINUED)**

TYPE	QTY	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUMMER		COOLING LAT °F	HEATING LAT °F	RECOVERED SUMMER MBH	RECOVERED WINTER MBH	VOLTAGE	PHASE	MCA	MAXIMUM OVERCURRENT PROTECTION	MANUFACTURER	MODEL	REMARKS
				DB °F	WB °F											
MERV 8	3	48	54	80	67	70	70	56.2	105.5	120	1	14 A	20 A	ALDES	E1800-F1	NOTES 1, 2

**WATER COOLED CONDENSING UNIT SCHEDULE ( 25% PROPYLENE GLYCOL)**

NOTES:  
1. REFER TO SPECIFICATION SECTION 23 62 13.  
2. PROVIDE UNIT SELECTION WITH 25% PROPYLENE GLYCOL.  
3. REFER TO 1/M401 FOR VRF SYSTEM CONROLS.

TAG NAME	COOLING EWT	HEATING EWT	NOMINAL DESIGN TONS	MAX. REFRIGERANT CHARGE	COOLING CAPACITY BTUH	HEATING CAPACITY BTUH	MODULES	GPM	WPD	VOLTAGE	PHASES	FLA	MCA	MOCP	DISCONNECT BY (NOTE A)	CONTROLLER/ STARTER BY (NOTE A)	MANUFACTURER	MODEL	REMARKS
WCCU-1	90	32	10	R410A - 11 LBS	120,000	135,000	P96	25.4	8 FT	208	3	33.9	29.0	50	EC	MFR	MITSUBISHI	PQRY-P120TLMU-A	NOTES 1,2,3
WCCU-2	90	32	6	R410A - 11 LBS	72,000	80,000	P96	25.4	8 FT	208	3	15	13.0	20	EC	MFR	MITSUBISHI	PQRY-P72TLMU-A	NOTES 1,2,3

**PUMP SCHEDULE (25% PROPYLENE GYCOL)**

NOTES:  
1. PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.  
2. PROVIDE UNIT SELECTION WITH 25% PROPYLENE GLYCOL.

TAG NAME	AREA SERVED	GPM	PUMP FT. HEAD AT DESIGN	MINIMUM PUMP EFFICIENCY	INLET SIZE	IMPELLER SIZE	BRAKE HORSEPOWER	HP (NOTE E)	RPM	VOLTAGE	PHASES	DISCONNECT BY (NOTE A)	TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)	TYPE (NOTE C)	MANUFACTURER	MODEL	NOTES
P-1	BUILDING	55.0	91.00	48	2"	8.8"	2.62	5	1750	208	3	M.C.	VFD	M.C.	VFD	B & G	1510 SERIES	NOTES 1, 2
P-2	BUILDING	55.0	91.00	48	2"	8.8"	2.62	5	1750	208	3	M.C.	VFD	M.C.	VFD	B & G	1510 SERIES	NOTES 1, 2

**GLYCOL FEED SYSTEM**

NOTES:  
1. SEE 23 21 00 FOR ADDITIONAL SYSTEM REQUIREMENTS.

TAG NAME	AREA SERVED	TANK VOLUME	SYSTEM FILL PRESSURE	PUMP HEAD PSI	GPM	RPM	BHP	MHP	VOLTAGE	PHASES	DISCONNECT BY (NOTE A)	CONTROLLER/ STARTER BY (NOTE A)	MANUFACTURER	MODEL (NOTE 1)	NOTES
GFS-1	VRF SYSTEM	55.0	60	30	10.0	3600	0.5	1	115	1	MFR	MFR	B & G	GMU-30	NOTE 1

**FAN SCHEDULE**

NOTES:  
1. REFER TO 2/M402 FOR EXHAUST FAN CONTROL.  
2. PROVIDE WITH 0-10V INPUT FOR SPEED CONTROL.

TAG NAME	AREA SERVED	CFM	S.P. IN. W.C.	WHEEL DIA. INCHES	FAN RPM (NOTE F)	DRIVE TYPE	MAX. AMCA SONES	BACKDRAFT DAMPER TYPE	CURB TYPE (NOTE G)	BHP	MHP	VOLTAGE	PHASES	DISCONNECT BY (NOTE A)	TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)	TYPE (NOTE C)	MANUFACTURER	MODEL	REMARKS
EF-1	GARAGE & SHOP	1365	0.50	13.1	1480	DIRECT	12	ELECTRIC	NA	0.28	0.5	115	1	MFR	NF	MFR	ECM	GREENHECK	SQI	NOTE 1, 2

**MOTOR OPERATED DAMPER SCHEDULE**

NOTES:  
1. COORDINATE DAMPER ACTUATOR LOCATION AND MOUNTING REQUIREMENTS WITH TEMPERATURE CONTROL CONTRACTOR.

TAG NAME	AREA SERVED	WIDTH	HEIGHT	CFM	BLADE CONFIGURATION	BLADE ORIENTATION	INSULATED	ACTUATOR TYPE (NOTE 1)	ACTUATOR STYLE	POWER FAILURE POSITION	POSITIVE POSITION FEEDBACK REQUIRED	NOTES
MOD-1	EF-1	18	12	1365	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY OPEN (NO)	NOTE 1
MOD-2	MAU-1	20	12	1375	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY OPEN (NO)	NOTE 1
MOD-3	DOGSY	20	8	420	0	OPPOSED	HORIZONTAL	No	ELECTRIC	TWO POSITION	NORMALLY OPEN (NO)	NOTE 1
MOD-4	LIB STOR	14	8	420	0	OPPOSED	HORIZONTAL	No	ELECTRIC	TWO POSITION	NORMALLY OPEN (NO)	NOTE 1
MOD-5	CONF	8	8	90	0	OPPOSED	HORIZONTAL	No	ELECTRIC	TWO POSITION	NORMALLY OPEN (NO)	NOTE 1

**GRILLES REGISTERS & DIFFUSERS SCHEDULE**

NOTES:  
1. CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING CONSTRUCTION.  
2. ALL RUN OUT DUCTWORK TO DIFFUSERS SHALL BE NECK SIZE UNLESS OTHERWISE NOTED.

TAG NAME	MATERIAL	CONFIGURATION	MARGIN (NOTE 1)	INLET SIZE (IN.) (NOTE 2)	FACE SIZE (IN.)	VOLUME DAMPER REQUIRED	FINISH	MANUFACTURER	MODEL	NOTES
EG-1	STEEL	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	
EG-2	ALUMINIUM	35 DEGREE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	NO	WHITE	TITUS	350F	
EG-3	ALUMINIUM	35 DEGREE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	NO	WHITE	TITUS	350F	
RG-1	STEEL	PERFORATED FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	PAR	DUCTED RETURN
SD-1	STEEL	LOUVER FACE	LAY-IN	SEE DWG.	24x24	NO	WHITE	TITUS	TMS	STAMPED LOUVER DROP FACE. MINIMUM OF TWO STEPDOWN DIFFUSION CONES
SG-1	STEEL	DOUBLE DEFLECTION	1 1/4"	SEE DWG.	INLET +2	YES	WHITE	TITUS	301R	BLADES VERTICAL UNLESS NOTED OTHERWISE

**HOOD & LOUVERED SCHEDULE**

NOTES:  
1. BAKED ENAMEL FINISH ON PRETREATED PRIME PAINT. STANDARD COLOR - SELECTION BY ARCHITECT.

TAG NAME	SERVICE	CFM	SIZE W x H (IN.)	FREE AREA VEL. FPM	STATIC PRESSURE DROP	FINISH	MANUFACTURER	MODEL	REMARKS
EAL-1	FACILITIES	1365	30x18	746	0.09	NOTE 1	RUSKIN	ELF375DFL	NOTE 1
EAL-2	DOAS	845	30x12	741	0.09	NOTE 1	RUSKIN	ELF375DFL	NOTE 1
OAL-1	DOAS	2235	66x24	400	0.03	NOTE 1	RUSKIN	ELF375DFL	NOTE 1

**BRANCH SELECTOR BOX SCHEDULE**

SYMBOL	TYPE	VOLTAGE	PHASES	MCA	MOCP	DISCONNECT BY (NOTE A)	CONTROLLER BY (NOTE A)	MANUFACTURER	MODEL	REMARKS
BS-1	MAIN	208	1	1.7 A	15 A	EC	MFR	MITSUBISHI	CMB-P1018NU-HA1	
BS-2	SUB	208	1	0.32 A	15 A	EC	MFR	MITSUBISHI	CMB-P104NU-GB1	

**E - VARIABLE FREQUENCY DRIVE SCHEDULE**

ITEM	LINE DISC.	DRIVE BYPASS	CONTROL	VOLTAGE		PH.	H.P. RATING	DRIVE TYPE	NEMA ENCLOSURE	REMARKS	APPROVED MANUFACTURERS
				INPUT	OUTPUT						
VFD-MAU1	DS	3 CONTACT	420 PN	208 V	208 V	3	1	PWM	1	SA, VARIABLE TORQUE	TOSHIBA O9 SERIES ABB ACH 550 SERIES ALLEN BRADLEY POWERFLEX 40 SERIES DANFOSS VLT6000 SERIES G.E. AF300 P11 SERIES SQUARE D [E-FLEX] [M-FLEX]
VFD-P1	DS	3 CONTACT	420 PN	208 V	208 V	3	5	PWM	1	SA, VARIABLE TORQUE	TOSHIBA O9 SERIES ABB ACH 550 SERIES ALLEN BRADLEY POWERFLEX 40 SERIES DANFOSS VLT6000 SERIES G.E. AF300 P11 SERIES SQUARE D [E-FLEX] [M-FLEX]
VFD-P2	DS	3 CONTACT	420 PN	208 V	208 V	3	5	PWM	1	SA, VARIABLE TORQUE	TOSHIBA O9 SERIES ABB ACH 550 SERIES ALLEN BRADLEY POWERFLEX 40 SERIES DANFOSS VLT6000 SERIES G.E. AF300 P11 SERIES SQUARE D [E-FLEX] [M-FLEX]