PROJECT

ADDITION AND RENOVATIONS AT WINNEBAGO COUNTY ANIMAL SERVICES

4517 NORTH MAIN STREET,
ROCKFORD, ILLINOIS 61103

IFB NO. 22B-2240

OWNER

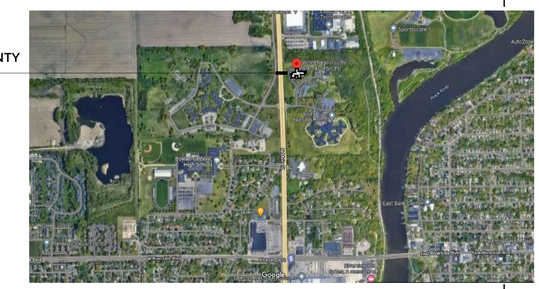
WINNEBAGO COUNTY

404 ELM STREET,
ROCKFORD, ILLINOIS 61101

WINNEBAGO COUNTY ANIMAL SERVICES
4517 N. MAIN STREET
ROCKFORD IL. 61103

STATE MAP
SCALE: N.T.S.

WINNEBAGO COUNTY ANIMAL SERVICES



SITE LOCATION MAP
SCALE: N.T.S.

ARCHITECT OF RECORD

RICHARD L. JOHNSON ASSOCIATES
4703 Charles Street
Rockford IL. 61108
PHONE: 815/398-1231 FAX 815/398-1280
www.rljarch.com
IL. Design Firm No. 187-000524

STATE OF ILLINOIS — SCOTT R. JOHNSON 01 4871 — LICENSED ARCHITECT

8-16-2022
DATE

EXPIRES 11-30-2022

CIVIL

CHASTAIN & ASSOCIATES, LLC. Consulting Engineers
6832 Stalter Drive, Suite 100
Rockford, IL. 61108
PHONE: 815/489-0050 FAX 815/484-4303
www.chastainengineers.com
IL. Design Firm No. 184-001397

LICENSED PROFESSIONAL ENGINEER — TREVOR LARSON 062-074124 — STATE OF ILLINOIS

Exp: 11-30-23

STRUCTURAL

HIGHLAND ENGINEERING P.C. Consulting & Forensic Engineers
700 INDUSTRIAL DRIVE, SUITE A
CARY IL. 60013
PHONE: 847/639- 9000 FAX 847/639-9002
www.highlandengineeringpc.com
IL. Design Firm No. 184.003362

STATE OF ILLINOIS — TODD M. LESPERANCE 081-006057 — LICENSED STRUCTURAL ENGINEER

08/16/2022
DATE

EXPIRES: 11/30/2022

MECHANICAL / ELECTRICAL / PLUMBING

LEGACY DESIGNS, INC.
6116 Mulford Village Drive
Rockford IL. 61107
PHONE: 815/484-4708 FAX 815/484-4710
www.legacy@legacydesigns.net
IL. Design Firm No. 187-003483

LICENSED PROFESSIONAL ENGINEER — JAY THAKKAR 062-057756 — STATE OF ILLINOIS

EXP 11-30-23

SHEET INDEX

TITLE SHEET

T101 TITLE SHEET

CIVIL

C101 GENERAL NOTES
C102 EXISTING CONDITIONS AND REMOVALS PLAN
C103 LAYOUT PLAN
C104 GRADING AND EROSION CONTROL PLAN
C105 DETAILS

ARCHITECTURAL

G101 ABBREVIATIONS, WALL TYPES, CONSTRUCTION LEGEND, ROOM SCHEDULE, DOOR SCHEDULE, DOOR, FRAME AND WINDOW TYPES
G102 DEMOLITION GENERAL NOTES, DEMOLITION NOTES, GENERAL NOTES AND KEY NOTES
G103 CODE PLAN AND NOTES

STRUCTURAL

S001 GENERAL NOTES
S002 GENERAL NOTES
S003 GENERAL NOTES
S101 FOUNDATION PLAN
S201 ROOF FRAMING PLAN
S202 MECHANICAL DUCT LAYOUT PLAN
S301 SCHEDULES
S401 FOUNDATION DETAILS
S501 FRAMING DETAILS
S601 RETAINING WALL
S602 RETAINING WALL

ARCHITECTURAL

AD101 DEMOLITION PLANS AND NOTES
AD102 DEMOLITION PLANS, ELEVATIONS, SECTIONS AND NOTES
A101 RENOVATION PLANS AND NOTES
A102 REFLECTED CEILING PLANS AND NOTES
A103 ROOF PLAN AND NOTES
A104 CASEWORK ELEVATIONS AND DETAILS
A105 TRASH ENCLOSURE PLANS, ELEVATIONS, SECTIONS AND DETAILS
A106 HEAD, JAMB AND SILL DETAILS
A107 HEAD, JAMB AND SILL DETAILS
A201 BUILDING ELEVATIONS AND NOTES
A202 FINISH ELEVATIONS W/ CONTROL JOINTS AND BUILDING SECTIONS
A203 BUILDING SECTIONS AND BUILDING DETAILS
A204 BUILDING DETAILS

MECHANICAL

MD1 HVAC DEMOLITION FLOOR PLAN
M1 HVAC REVISED FLOOR PLAN
M2 HVAC REVISED ROOF PLAN
M3 HVAC DETAILS
M4 HVAC SCHEDULES
M5 HVAC SPECIFICATIONS

PLUMBING

PD1 PLUMBING DEMOLITION FLOOR PLAN
P1 PLUMBING UNDERGROUND FLOOR PLAN
P2 PLUMBING FLOOR PLAN
P3 PLUMBING ROOF PLAN
P4 PLUMBING DETAILS AND SCHEDULES
P5 PLUMBING ISOMETRICS
P6 PLUMBING SPECIFICATIONS

ELECTRICAL

SE1 ELECTRICAL SITE PLAN
SE2 PHOTOMETRIC SITE PLAN
ED1 ELECTRICAL DEMOLITION PLAN
E1 LIGHTING FLOOR PLAN
E2 POWER AND SYSTEMS FLOOR PLAN
E3 POWER AND SYSTEMS ROOF PLAN
E4 ELECTRICAL SPECIFICATIONS AND SYMBOLS

ALTERNATE BID INDEX

ALTERNATE BID NO.1

ALL THE WORK REQUIRED FOR DEMOLITION AND REMODELING WORK ASSOCIATED WITH NEW ROOMS RECEPTION A1, WAITING A2 AND OFFICE A3

ALTERNATE BID NO.2

ALL THE WORK REQUIRED FOR REPLACEMENT OF SITE LIGHTING

ALTERNATE BID NO.3

ALL THE WORK ASSOCIATED WITH REPLACEMENT OF EXISTING ROOFTOP UNITS RTU-1, RTU-2 AND RTU-3

ALTERNATE BID NO.4

PROVIDE ELECTRONIC AIR FILTERING SYSTEM TO EXISTING ROOFTOP UNITS RTU-1, RTU-2 AND RTU-3

ALTERNATE BID NO.5

PROVIDE A 100% PERFORMANCE AND PAYMENT BOND

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
TITLE SHEET

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
T101

GRADING NOTES

1. ALL EARTHWORK, GRADING AND PAVING SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION, (CURRENT EDITION), AND ALL REVISIONS AND SUPPLEMENTS THERETO, AND THE REQUIREMENTS AND SPECIFICATIONS OF WINNEBAGO COUNTY.

4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY CURB OR PAVEMENT ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO CONTROL POINTS AND BENCHMARKS. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.

5. EXISTING UTILITY AND TOPOGRAPHICAL INFORMATION IS BASED ON SURVEY WORK PERFORMED BY WENDLER ENGINEERING SERVICES ON APRIL 20, 2022.

6. THE MAXIMUM SLOPE RATIO ON CUT/FILL SLOPES IS 4 HORIZONTAL TO 1 VERTICAL UNLESS OTHERWISE NOTED.

7. ALL UNSURFACED AREAS ARE TO RECEIVE 4 INCHES OF TOPSOIL AND BE SEEDED, MULCHED OR BLANKETED (WHERE INDICATED) AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

8. ALL PROPOSED AREAS SHALL BE STRIPPED OF ALL TOPSOIL AND UNSUITABLE MATERIAL AND EXCAVATED OR FILLED TO WITHIN 0.10 FOOT OF DESIGN SUBGRADE.

9. THE SUBGRADE OF PAVEMENT AREAS SHALL BE FREE OF ALL UNSUITABLE MATERIAL AND SHALL BE COMPACTED TO A MINIMUM 95 PERCENT OF STANDARD PROCTOR DENSITY.

10. THE SUBGRADE SHALL BE PROOF ROLLED, INSPECTED AND APPROVED BY THE OWNER PRIOR TO PLACING THE BASE MATERIAL.

11. STOCKPILING OF SOIL SHALL BE AT LOCATIONS APPROVED BY THE OWNER OR AS SHOWN ON THE DRAWINGS. CUT OR FILL SLOPES SHALL HAVE A MAXIMUM RATIO OF 3 HORIZONTAL TO ONE VERTICAL. THESE SLOPE CONSTRAINTS APPLY TO TEMPORARY STOCK PILES AS WELL AS FINISHED SLOPE CONDITIONS.

12. ANY QUANTITIES CONTAINED IN THESE DOCUMENTS, WHERE PROVIDED, ARE APPROXIMATE AND ESTIMATED. THESE ARE PRESENTED AS A CONVENIENCE TO THE CONTRACTOR IN DETERMINING THE SCOPE OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL QUANTITIES AND TO BECOME FAMILIAR WITH THE SITE AND SOIL CONDITIONS.

13. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AT THE CONCLUSION OF EACH WORKING DAY.

14. PRIOR TO FINAL ACCEPTANCE OF SITE BY THE OWNER, THE SITE SHALL BE CLEAN OF ALL DEBRIS AND TRASH.

15. PIPE FITTINGS USED FOR DOWNSPOUT EXTENSIONS SHALL BE HDPE SUITABLE FOR DRAINAGE.

SEEDING NOTES

1. ALL SEEDING, MULCHING, AND FERTILIZER SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION, (CURRENT EDITION), AND ALL REVISIONS AND SUPPLEMENTS THERETO, AND THE REQUIREMENTS AND SPECIFICATIONS OF WINNEBAGO COUNTY.

2. FERTILIZER SHALL BE APPLIED AT A RATE OF 270 LBS/ACRE OF FERTILIZER. FERTILIZER WILL BE APPLIED AT A 1:1:1 RATIO BETWEEN NITROGEN FERTILIZER NUTRIENTS: PHOSPHORUS FERTILIZER NUTRIENTS: POTASSIUM FERTILIZER NUTRIENTS.

LAYOUT NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PIPE INVERTS, PAD ELEVATIONS, CURB OR PAVEMENT WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.

2. ALL ANGLES FOR ROADWAY, PARKING LOT AND PAD LOCATION ARE 90° UNLESS NOTED OTHERWISE.

3. ALL RADII AND ROADWAY ARE DIMENSIONED TO THE BACK OF CURB, UNLESS THERE IS NO CURB, IN WHICH CASE THESE WILL BE DIMENSIONED TO EDGE OF PAVEMENT.

4. ALL COORDINATES AND DIMENSIONS ARE REFERENCED TO THE TOP OF CURB, EDGE OF PAVEMENT, OR CENTERLINE OF STRIPE UNLESS NOTED OTHERWISE.

5. SOME FIELD ADJUSTMENTS MAY BE NECESSARY AT POINTS WHERE PROPOSED PAVEMENT AND SIDEWALKS MEET EXISTING PAVEMENT, CURB AND SIDEWALKS. REVIEW ANY REQUIRED CHANGES WITH ENGINEER PRIOR TO CONSTRUCTION OF WORK

6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING LAYOUT AND STAKING.

UTILITY NOTES

1. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO ANY TEMPORARY DISCONNECT OF UTILITIES NEEDED TO FACILITATE CONSTRUCTION.

2. CONTACT ALL PUBLIC AND PRIVATE UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION. COST OF REPLACEMENT OR REPAIR OF EXISTING UTILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

3. ALL WATER SERVICE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", CURRENT EDITION.

4. PROPOSED WATER SERVICE SHALL MATCH TYPE AND DIAMETER OF EXISTING SERVICE LINE.

5. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY CURB OR PAVEMENT ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO CONTROL POINTS AND BENCHMARKS. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.

PAVING NOTES

1. THE SUBGRADE OF PAVEMENT AREAS SHALL BE FREE OF ALL UNSUITABLE MATERIAL AND SHALL BE COMPACTED TO A MINIMUM 95 PERCENT OF STANDARD PROCTOR DENSITY.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF SPOIL MATERIAL FROM THE UNDERGROUND CONTRACTORS, BACK FILLING AND COMPACTING SOIL BEHIND THE CURB AND GUTTER, PREPARING THE ROADWAY SUBGRADE, PROOF ROLLING, PLACING TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES TO FINISHED GRADE IN THE PARKWAYS AND DETENTION AREAS, GRADING OF DRAINAGE SWALES, AND ALL OTHER TASKS AS DIRECTED BY THE OWNER OR ENGINEER.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE FINAL SUBGRADE PREPARATION, PROOF ROLLING, THE PAVEMENT BASE, BINDER, AND SURFACE, AND ALL FINAL CLEAN-UP AND RELATED WORK ASSOCIATED WITH THE PAVING OPERATION.

4. CONSTRUCTION OF HOT MIX ASPHALT (HMA) BINDER AND SURFACE COURSES ON A PREPARED BASE SHALL BE IN ACCORDANCE WITH SECTION 406 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION (CURRENT EDITION), AND ALL REVISIONS AND SUPPLEMENTS THERETO, AND THE REQUIREMENTS AND SPECIFICATIONS OF WINNEBAGO COUNTY.

5. CONSTRUCTION OF CONCRETE SIDEWALK AND SIDEWALK ACCESSIBILITY RAMPS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 424 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION (CURRENT EDITION), AND ALL REVISIONS AND SUPPLEMENTS THERETO, AND THE REQUIREMENTS AND SPECIFICATIONS OF WINNEBAGO COUNTY.

6. CONSTRUCTION OF CONCRETE PAVEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 421 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION (CURRENT EDITION), AND ALL REVISIONS AND SUPPLEMENTS THERETO, AND THE REQUIREMENTS AND SPECIFICATIONS OF WINNEBAGO COUNTY.

7. CONCRETE JOINTING NOTES:

7.1. JOINTS SHALL BE PROVIDED AT A MAXIMUM OF 15' O.C. EITHER DIRECTION.

7.2. JOINTS SHALL BE LOCATED TO PROVIDE SQUARE PANELS. THE MAXIMUM L:W RATIO OF JOINTS SHALL NOT EXCEED 1.25:1 IN EITHER DIRECTION.

DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, FOUNDATIONS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED OR AS NECESSARY.

2. THE DEMOLITION WORK SHALL INCLUDE BUT NOT BE LIMITED TO: OBTAINING ALL PERMITS REQUIRED TO DEMOLISH THE EXISTING PAVEMENTS, REMOVAL OF ALL BUILDINGS AND FOUNDATIONS, REMOVAL OF ALL UTILITIES, AND OTHER ITEMS TO COMPLETE THE SITE WORK

3. DISPOSAL OF ALL MATERIALS SHALL COMPLY WITH ALL STATE LOCAL AND FEDERAL REGULATIONS. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT APPROVED LOCATIONS OFFSITE. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL HAZARDOUS MATERIALS (IF ANY) FROM THE SITE, AND ALL ASSOCIATED PERMITS AND REGULATORY REQUIREMENTS.

4. COORDINATION WITH THE UTILITY COMPANIES AND THE CITY TO BE DONE BY CONTRACTOR AND SHALL BE INCIDENTAL TO SITE DEMOLITION.

5. ALL CURBCUTS AND SAWCUTS NECESSARY FOR REMOVALS SHALL BE INCIDENTAL TO THE REMOVALS. ACQUISITION OF NECESSARY PERMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

6. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY TYPE, SIZE AND LOCATION.

CIVIL:

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS

6832 STALTER DRIVE,
SUITE 100
ROCKFORD, ILLINOIS
61108

OFFICE (815) 489-0050
www.chastainengineers.com

CHASTAIN PROJECT #: 8322

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

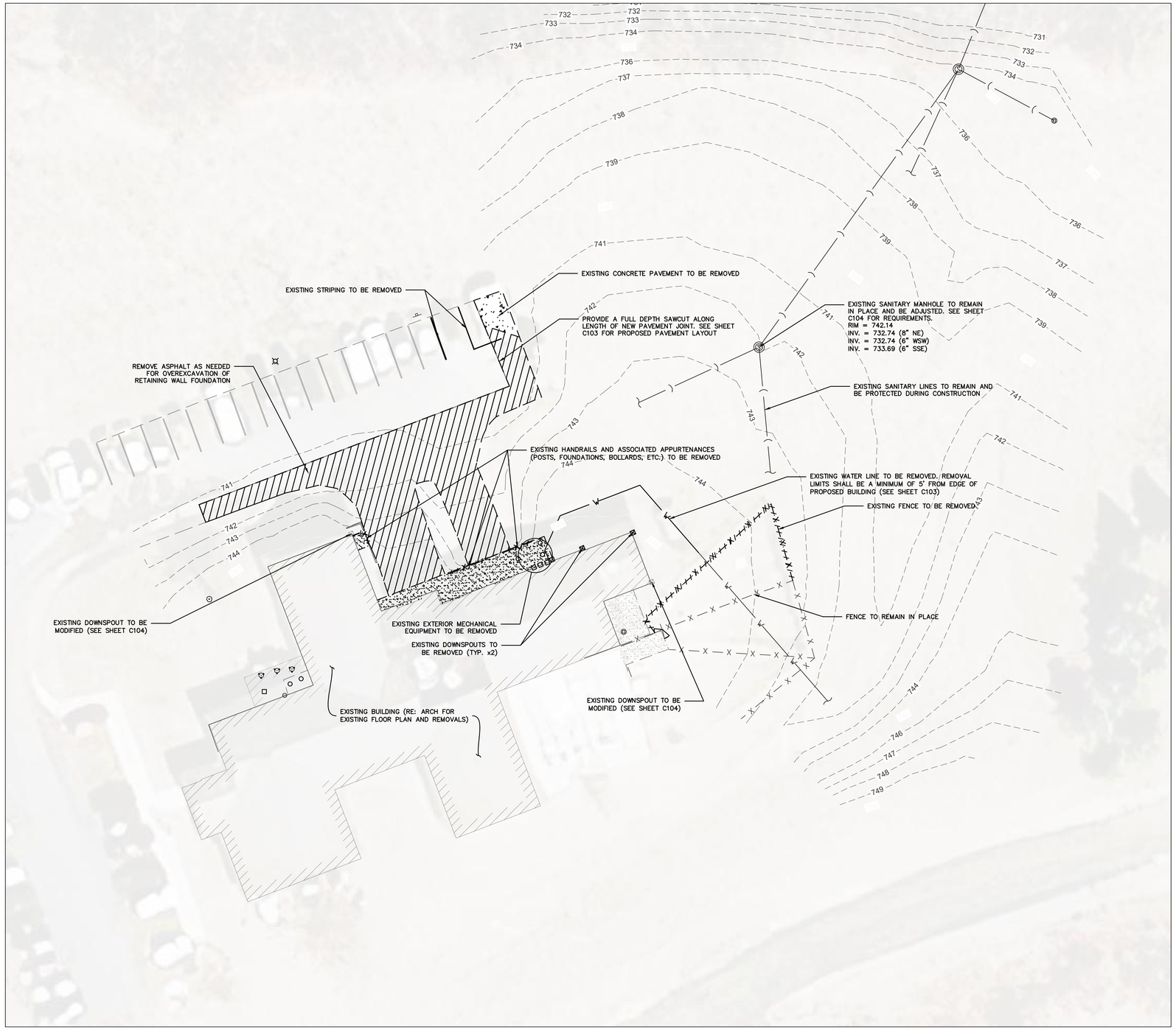
RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
GENERAL NOTES (CIVIL)

PROJECT INFORMATION

Date	Aug. 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
C101



LEGEND

- EXISTING FENCE / HANDRAIL TO REMAIN
- EXISTING FENCE / HANDRAIL TO BE REMOVED
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF PAVEMENT TO BE REMOVED
- EXISTING PAVEMENT STRIPE
- EXISTING SANITARY TO REMAIN
- EXISTING WATER LINE TO REMAIN
- EXISTING WATER LINE TO BE REMOVED
- 800 — EXISTING CONTOUR
- EXISTING HMA PAVEMENT TO BE REMOVED
- EXISTING PCC PAVEMENT TO BE REMOVED
- EXISTING CONCRETE SIDEWALK TO REMAIN
- EXISTING CONCRETE SIDEWALK TO BE REMOVED
- EXISTING DOWNSPOUT TO BE REMOVED

NOTES

1. SITE ACREAGE: ±X.XX
2. PIN: XX-XX-XXX-XX
3. BENCHMARK DATA:

BENCHMARK NO 1
--

BENCHMARK NO 2
--

N

20' 0' 20'

CIVIL:

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
6832 STALTER DRIVE, SUITE 100
ROCKFORD, ILLINOIS 61108
OFFICE (815) 489-0050
www.chastainengineers.com

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ADDITION & RENOVATIONS AT
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ROCKFORD, ILLINOIS

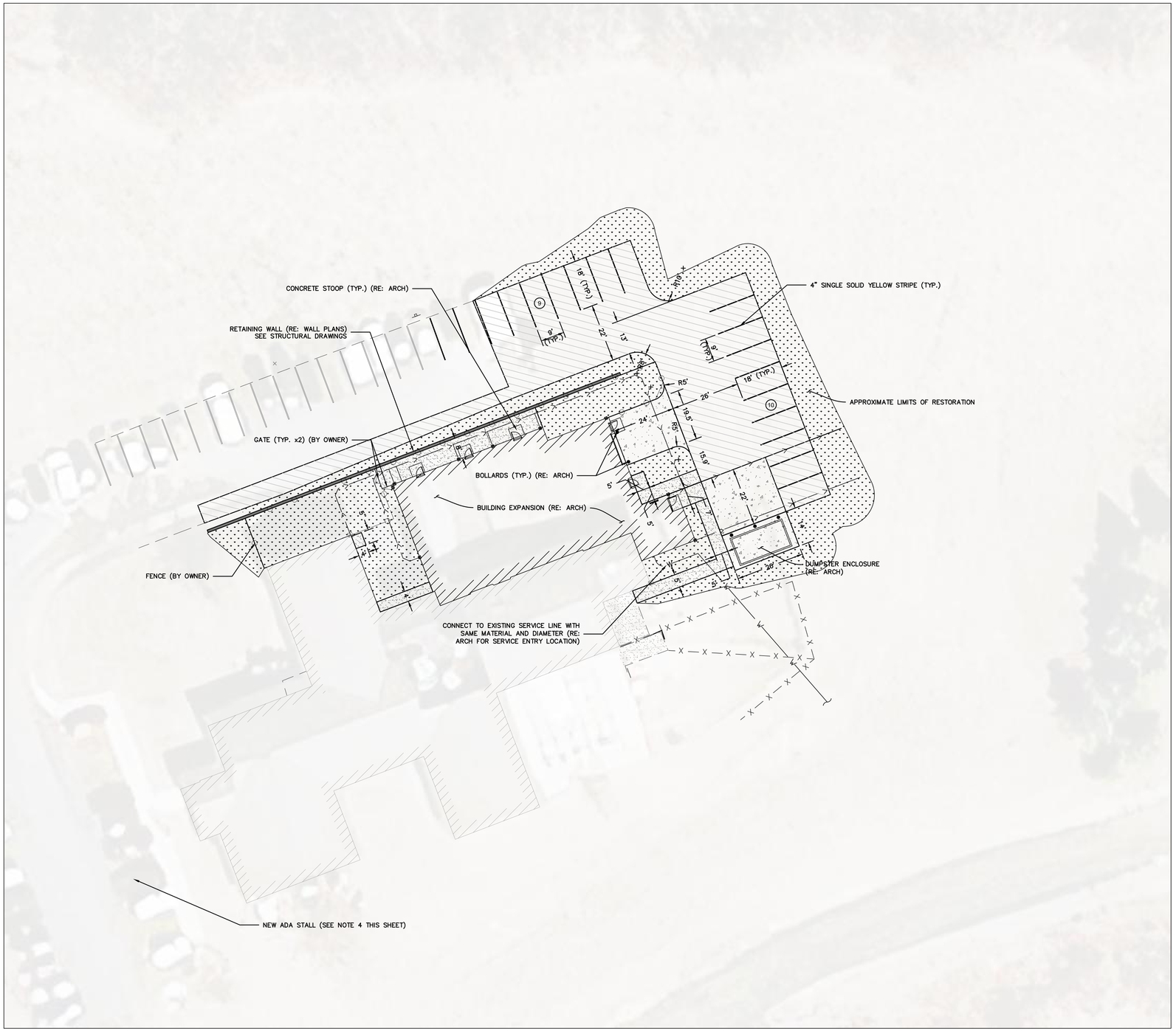
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
EXISTING CONDITIONS AND REMOVALS PLAN

PROJECT INFORMATION

Date	Aug. 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
C102



LEGEND

- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING FENCE
- PROPOSED FENCE (RE: ARCH)
- EXISTING PAVEMENT STRIPE
- PROPOSED PAVEMENT STRIPE
- PROPOSED WATER LINE
- PROPOSED STANDARD DUTY PAVEMENT (BASE: ASPHALT; ALT.: CONCRETE)
- PROPOSED CONCRETE PAVEMENT
- EXISTING CONCRETE SIDEWALK
- PROPOSED CONCRETE SIDEWALK
- PROPOSED TURF RESTORATION
- PROPOSED SIGN
- NUMBER OF PARKING STALLS IN ROW
- BOLLARD

NOTES

1. SITE DISTURBANCE: 0.47 ACRES
2. PIN: 07-36-351-008
3. CONTRACTOR SHALL REFERENCE GENERAL NOTES SHEET FOR NOTES RELATING TO PAVEMENT, SIDEWALK, PAVEMENT STRIPING, AND RESTORATION REQUIREMENTS.
4. CONTRACTOR TO PROVIDE ADA STRIPING AND SIGNAGE FOR ONE (1) STALL ALONG FRONT OF BUILDING. VERIFY NUMBER AND LOCATION OF ADA STALL WITH OWNER PRIOR TO CONSTRUCTION. SEE SHEET C105 FOR DETAILS.
5. CONNECTION TO EXISTING SERVICE LINE SHALL INCLUDE ALL NECESSARY FITTINGS AND APPURTENANCES.

N

20' 0' 20'

CIVIL:

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS

6832 STALTER DRIVE,
SUITE 100
ROCKFORD, ILLINOIS
61108

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CHASTAIN PROJECT #: 8322

ADDITION & RENOVATIONS AT

WINNEBAGO CO. ANIMAL SERVICES

ROCKFORD, ILLINOIS

RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

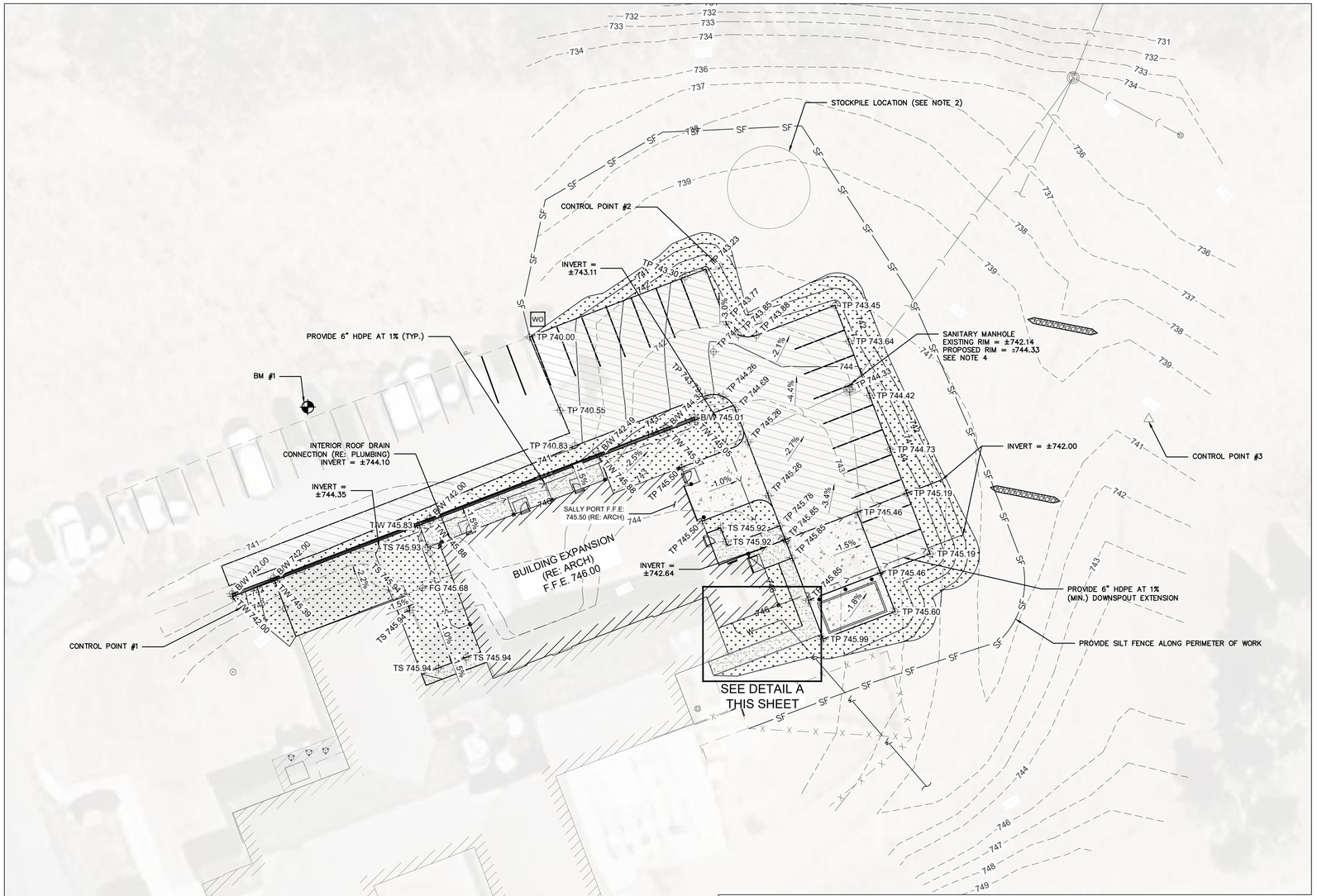
LAYOUT PLAN

PROJECT INFORMATION

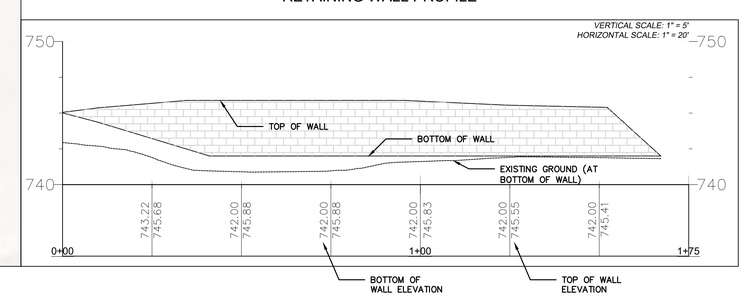
Date	Aug. 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

C103



RETAINING WALL PROFILE



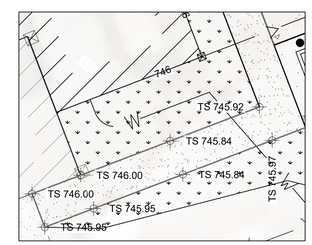
LEGEND

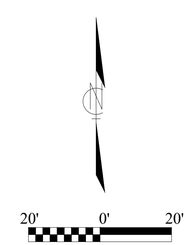
800	EXISTING CONTOUR
800	PROPOSED CONTOUR
	PROPOSED GRADE BREAK LINE
	PROPOSED STORM SEWER
	DOWNSPOUT
TP XXX.X	TOP OF PAVEMENT ELEVATION
TW XXX.X	TOP OF SIDEWALK ELEVATION
FG XXX.X	FINISHED GRADE ELEVATION
T/W XXX.X	TOP OF WALL ELEVATION
B/W XXX.X	BOTTOM OF WALL ELEVATION
X%	PROPOSED SLOPE
SF	SILT FENCE
	BENCHMARK
	CONTROL POINT
WO	CONCRETE WASHOUT (PER IUM CODE 954)
	CHECK DAM

NOTES

1. BENCHMARK DATA:
   BENCHMARK 1: SET CHISELED SQUARE ON TOP SOUTH SIDE OF CONCRETE LIGHT FOUNDATION LOCATED AT NORTH SIDE OF NORTH PARKING LOT
   ELEVATION: 740.88
2. CONTROL POINT DATA (STATE PLANE IL WEST):
   CONTROL POINT 1:
   NORTHING: 2062907.28
   EASTING: 2591370.80
   CONTROL POINT 2:
   NORTHING: 2063022.39
   EASTING: 2591532.04
   CONTROL POINT 3:
   NORTHING: 2062970.06
   EASTING: 2591677.57
3. STOCKPILES, WASHOUTS, AND OTHER EROSION CONTROL MEASURES SHALL BE LOCATED WITHIN PERIMETER SILT FENCE.
4. ADJUSTMENT TO SANITARY MANHOLE SHALL BE COMPLETED AS FOLLOWS:
   4.1. REMOVE EXISTING FRAME AND COVER.
   4.1.1. FRAME AND COVER MAY BE REUSED IF IN ACCEPTABLE CONDITION (THE CONTRACTOR SHALL VERIFY THE CONDITION WITH THE ENGINEER PRIOR TO REINSTALLATION).
   4.2. REMOVE CONE SECTION.
   4.3. CONSTRUCT ADDITIONAL MANHOLE RISER (1-24" OR 2-12" RISERS).
   4.4. CONSTRUCT NEW CONE SECTION.
   4.5. CONSTRUCT NEW FRAME AND COVER, INCLUDING ADJUSTMENT RINGS.
   4.5.1. ADJUSTMENT RINGS SHALL HAVE A MINIMUM HEIGHT OF 2" AND MAXIMUM HEIGHT OF 12".
   4.5.2. THE TOTAL HEIGHT OF ALL ADJUSTMENT RINGS SHALL NOT EXCEED 12".

DETAIL A (SCALE: 1" = 10')





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ROCKFORD, ILLINOIS

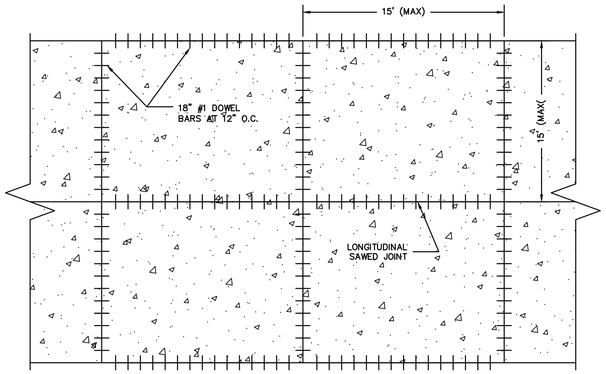
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
GRADING AND EROSION CONTROL PLAN

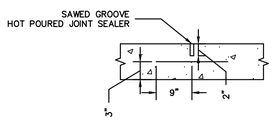
PROJECT INFORMATION

Date	Aug. 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
C104

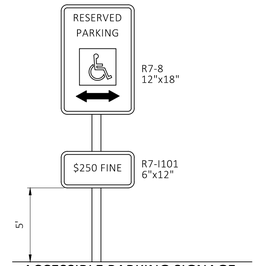


PAVEMENT JOINTING PLAN



LONGITUDINAL SAWED JOINT

CONCRETE JOINTING DETAIL



ACCESSIBLE PARKING SIGNAGE
(RE: SHEET C103)

VERIFY FINE AMOUNT WITH MUNICIPALITY PRIOR TO INSTALLATION

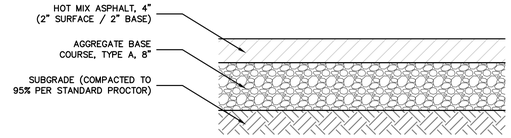
(NOT TO SCALE)

EFFECTIVE JANUARY 1, 1985, PUBLIC ACT 83-1316 AMENDED SEC. 11-301 OF "THE ILLINOIS VEHICLE CODE" TO REQUIRE PARKING SIGNS (FOR PARKING LOTS SUBJECT TO "THE ILLINOIS VEHICLE CODE") TO COMPLY WITH THE R7-8 SIGN SHOWN BELOW (U.S. DEPARTMENT OF TRANSPORTATION STANDARD). EXISTING SIGNS MAY REMAIN, BUT THEIR USEFUL LIVES SHALL NOT BE EXTENDED BY OTHER MEANS OTHER THAN NORMAL MAINTENANCE.

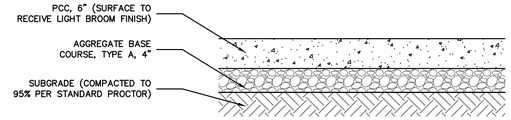
COLORS
LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

COLORS
LEGEND AND BORDER - GREEN NON REFLECTORIZED
BACKGROUND - WHITE REFLECTORIZED

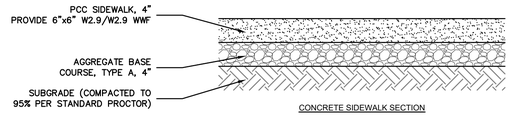
NOTE: SIGNS SHALL BE MOUNTED 5 FEET ABOVE PAVING



STANDARD DUTY HMA PAVEMENT SECTION

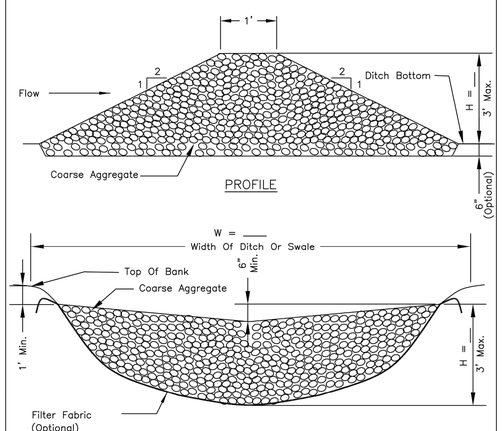


CONCRETE PAVEMENT SECTION



CONCRETE SIDEWALK SECTION

ROCK CHECK DAM - COARSE AGGREGATE



PROFILE

CROSS SECTION

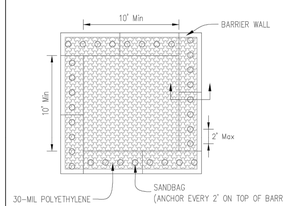
NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class I, II, or IV and shall be placed over the cleared area prior to the placing of rock.
2. Coarse aggregate shall meet one of the following IDOT gradations, CA-1, CA-2, CA-3, or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. For added stability, the base of the dam may be keyed 6 inches into the soil.
4. See plans for spacing of dams and H dimensions.
5. Drainage area to each dam shall be less than 2 acres.
6. Use ROCK CHECK DAM-RIPRAP IL-605R for drainage areas of 2 to 10 acres.

REFERENCE			
Project			
Designed		Date	
Checked		Date	
Approved		Date	

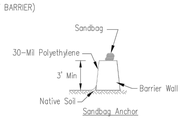
NRCS
Natural Resources Conservation Service

STANDARD DWG. NO.
IL-605CA
SHEET 1 OF 1
DATE 1-29-99

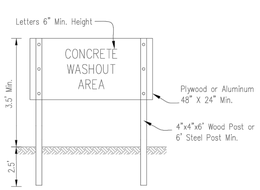
AUTOCAD2006



PLAN VIEW



BARRIER WALL ANCHOR SECTION



SIGN DETAIL

NOTES:

1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardend concrete and/or slurry and returning the facilities to a functional condition.

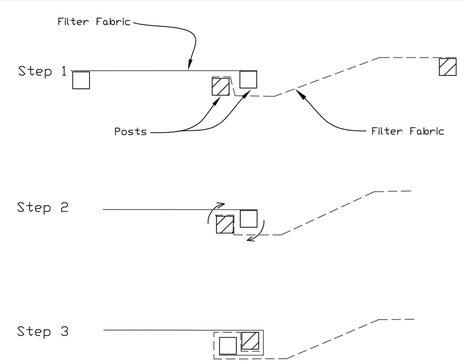
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

Date	Revisions	No.
8/20/08	Revised	1

TEMPORARY CONCRETE WASHOUT FACILITY - BARRIER WALL

Designed		Date
Drawn	R. JOHNSON	8/08
Checked		
Approved		

SILT FENCE - SPLICING TWO FENCES



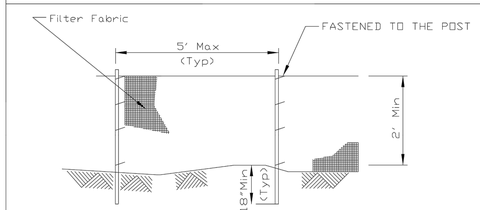
ATTACHING TWO SILT FENCES

1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Cut the fabric near the bottom of the stakes to accommodate the 6" flap.
4. Drive both posts a minimum of 18 inches into the ground and bury the flap.
5. Compact backfill (particularly at splices) completely to prevent stormwater piping.

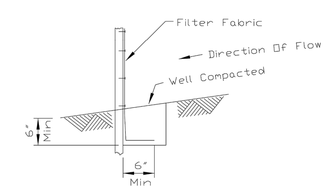
REFERENCE			
Project			
Designed		Date	
Checked		Date	
Approved		Date	

STANDARD DWG. NO.
IUM-620B(W)
SHEET 1 OF 1
DATE 3-16-2012

SILT FENCE PLAN



ELEVATION



FABRIC ANCHOR DETAIL

NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1, Class 2.
3. Fence posts shall be either standard steel post or wood post 2" X 2" nominal.

REFERENCE			
Project			
Designed		Date	
Checked		Date	
Approved		Date	

STANDARD DWG. NO.
IUM-620A
SHEET 1 OF 2
DATE 04-15-2021

CIVIL:
CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS

6832 STALTER DRIVE,
SUITE 100
ROCKFORD, ILLINOIS
61108

OFFICE (815) 489-0050
www.chastainengineers.com

CHASTAIN PROJECT #: 8322

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
DETAILS

PROJECT INFORMATION
Date Aug. 16, 2022
Rev. Date
RLJA Proj 2022-020

SHEET NUMBER
C105

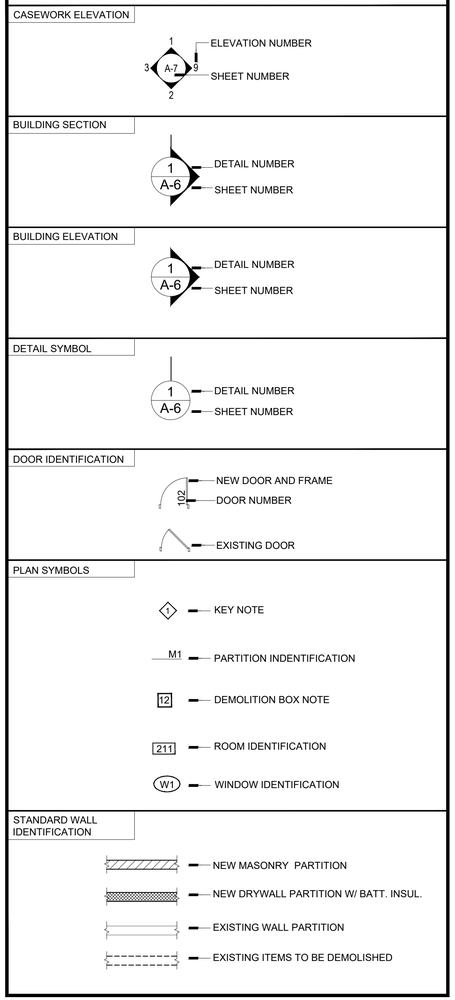
ABBREVIATIONS

ACT	ACOUST. CEILING TILE SYSTEM	CTOP	COUNTERTOP	FAAP	FIRE ALARM ANNUNCIATOR PANEL	IN	INCH	PR	PAIR	STRUC	STRUCTURAL
ACU	AIR CONDITIONING UNIT	CTR	COUNTER	FACP	FIRE ALARM CONTROL PANEL	INSUL	INSULATION	PT	PAINT	SUH	SUSPENDED UNIT HEATER
ADJ	ADJACENT	CUH	CABINET UNIT HEATER	FB	FACE BRICK	INT	INTERIOR	PLYWD	PLYWOOD	SUSP	SUSPENDED
ADS	ADJUSTABLE SHELVES	CUV	CABINET UNIT VENTILATOR	FBO	FURNISHED BY OWNER/OTHERS	JAN	JANITOR	QT	QUARRY TILE	SV	SHEET VINYL
AFF	ABOVE FINISH FLOOR	DEF	DEFIBRILLATOR	FD	FLOOR DRAIN	KEH	KITCHEN EXHAUST HOOD	QTZ	QUARTZ TILE	TB	TACK BOARD
AHU	AIR HANDLING UNIT	DF	DRINKING FOUNTAIN	FDTN	FOUNDATION	LAM	LAMINATE	R	RISER	TERR	TERRAZZO
AL	ALUMINUM	DIA	DIAMETER	FE	FIRE EXTINGUISHER	LAV	LAVATORY	RAD	RADIATION	T/O	TOP OF
ALT	ALTERNATE	DIM	DIMENSION	FEC	FIRE EXTINGUISHER CABINET	LF	LATERAL FILE	RB	RUBBER BASE	TP	TACK PANEL
AVG	AVERAGE	DN	DOWN	FH	FIRE HYDRANT	LK	LOCK/LOCKABLE CABINET	RD	ROOF DRAIN	TS	TACK STRIP
BD	BOARD	DP	DEEP	FHC	FIRE HOSE CABINET	LP	LIGHT POLE	REINF	REINFORCEMENT	TYP	TYPICAL
BITUM	BITUMINOUS	DR	DOOR	FIN	FINISH	LVT	LUXURY VINYL TILE	REQ'D	REQUIRED	UE	UNDERGROUND ELECTRICAL
BLDG	BUILDING	DS	DOWNSPOUT	FLR	FLOOR	MAS	MASONRY	RFT	RUBBER FLOOR TILE	UC	UNDERGROUND CABLE
BM	BEAM	DTL	DETAIL	FP	FOLDING PARTITION	MAX	MAXIMUM	RM	ROOM	UG	UNDERGROUND GAS
B/O	BOTTOM OF	DWG	DRAWING	FRP	FIBERGLASS REINFORCED PANEL	MB	MARKER BOARD	RST	RUBBER STAIR TREAD	UH	UNIT HEATER
BRG	BEARING	EA	EACH	FS	FLOOR SINK	MECH	MECHANICAL	RTU	ROOFTOP UNIT	U.N.O.	UNLESS NOTED OTHERWISE
BS	BACKSPLASH	EEW	EMERGENCY EYE WASH	FT	FEET	MEZZ	MEZZANINE	SAN	SANITARY SEWER	UV	UNIT VENTILATOR
CAB	CABINET	EF	EXHAUST FAN	FTG	FOOTING	MFR	MANUFACTURER	SB	SMART BOARD	VRB	VENTED RUBBER BASE
CB	CHALKBOARD	EIFS	EXTERIOR INSULATION & FINISH SYSTEMS	FURN	FURNACE	MH	MANHOLE	SC	SEALED CONCRETE	VCT	VINYL COMPOSITION TILE
CJ	CONTROL JOINT			G	GAS	MIN	MINIMUM	SECT	SECTION	VERT	VERTICAL
CLG	CEILING	EJ	EXPANSION JOINT	GA	GAUGE	MISC	MISCELLANEOUS	SF	SQUARE FOOT	V.I.F.	VERIFY IN FIELD
CLR	CLEAR	EL	ELEVATION	GALV	GALVANIZED	MLB	MAIL BOXES	SG	SINGLE	W	WATER
CMU	CONCRETE MASONRY UNIT	ELEC	ELECTRIC	GL	GLASS	MTL	METAL	SGT	STRUCTURAL GLAZED TILE	WC	WATER CLOSET
CO	CLEANOUT	ERF	EPOXY RESINOUS FLOORING	GMT	GROMMET	NTS	NOT TO SCALE	SIM	SIMILAR	WD	WOOD
COL	COLUMN	EMRG	EMERGENCY	GYP	GYPSUM WALL BOARD	OC	ON CENTER	SK	SINK	WDW	WINDOW
CONC	CONCRETE	EPDM	ETHYL. PROPYL. DIENE MONOMER	HC	HANDICAP	OE	OVERHEAD ELECTRICAL	SM	SMARTBOARD BY OWNER	WH	WATER HEATER
CONT	CONTINUOUS	EPT	EPOXY PAINT	HDWR	HARDWARE	OH	OVERHEAD	SQ	SQUARE	WS	WATER SOFTENER
CORR	CORRIDOR	EQ	EQUAL	HM	HOLLOW METAL	OPP	OPPOSITE	SS	STAINLESS STEEL	WT	WEIGHT
CPT	CARPET TILES	EXP	EXPOSED/EXPANSION	HORIZ	HORIZONTAL	P.LAM	PLASTIC LAMINATE	ST	STORM SEWER	WWF	WELDED WIRE FABRIC
CPT-W	WALK-OFF CARPET TILES	EXT	EXTERIOR	HR	HOUR	PC	PRECAST CONCRETE	STD	STANDARD	W/	WITH
CR	COAT ROD	EXTG	EXISTING	HT	HEIGHT	PL	PLATE	STL	STEEL	W/O	WITHOUT
CT	CERAMIC TILE	FA	FIRE ALARM	HVAC	HEATING/VENTILATION/AIR COND.	PLAS	PLASTER	STP	STONE PANEL	YR	YEAR

PARTITION TYPES

MASONRY	
M1	8" CMU INFILL - TOOTH-IN AS REQUIRED - MATCH EXISTING COURSING
M2	8" CMU REINFORCED - EXTEND TO STRUCTURE ABOVE - SEE STRUCTURAL DRAWINGS
M3	8" CMU - EXTEND TO STRUCTURE ABOVE
M4	6" CMU - EXTEND TO STRUCTURE ABOVE
M5	8" CMU - RUNNING BOND - EXTEND TO 24" A.F.F.
M6	4" CMU - EXTEND TO STRUCTURE ABOVE
M7	4" CMU - EXTEND TO 4" ABOVE CEILING
STUD PARTITION	
S1	PARTITION INFILL - 5/8" TYPE "X" GYP BOARD OVER BOTH SIDES OF METAL STUD FRAMING @ 16" O.C. WITH BATT. INSULATION - FINAL ASSEMBLY TO MATCH EXISTING THICKNESS OF ADJACENT WALL - VERIFY IN FIELD - EXTEND TO UNDERSIDE OF EXISTING WALL OPENING - PROVIDE LEVEL 5 FINISH ON GYPSUM WALL
S2	3 5/8" METAL STUDS AT 16" O.C. WITH 5/8" TYPE "X" GYP BOARD ONE SIDE - ASSEMBLY SHALL EXTEND TO THE UNDERSIDE OF CEILING ABOVE - PROVIDE LEVEL 5 FINISH ON GYPSUM WALL

MATERIAL / CONSTRUCTION LEGEND



ROOM FINISH SCHEDULE

ROOM NO.	ROOM	FLOOR	BASE	WALLS NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	CEILING	REMARKS
A1	RECEPTION	LVT	RB	GYP/PT	EXTG/PT	EXTG/GYP/PT	EXTG/PT	ACT-1	-
A2	WAITING	LVT	RB	EXTG/PT	EXTG/GYP/PT	EXTG/GYP/PT	EXTG/PT	ACT-1	-
A3	OFFICE	LVT	RB	EXTG/GYP/PT	EXTG/GYP/PT	EXTG/PT	EXTG/GYP/PT	ACT-1	-
A4	OFFICE/WORK STATION	EXTG	EXTG/RB	EXTG/GYP/PT	EXTG	EXTG	EXTG	EXTG	-
A5	CORRIDOR	LVT	RB	EXTG/PT	EXTG/GYP/PT	EXTG/PT	-	ACT-1	-
A6	CORRIDOR	EXTG	EXTG	EXTG/PT	EXTG	EXTG	EXTG	EXTG	-
A7	CAT WARD	SC	-	EXTG/PT	EXTG/CMU/PT	EXTG/CMU/PT	EXTG/CMU/PT	EXTG	-
A8	DOG WARD	EXTG	EXTG	EXTG	EXTG	EXTG/CMU/PT	EXTG	ACT-1	-
A9	STORAGE	SC	RB	EXTG/PT	EXTG/PT	CMU/PT	EXTG/CMU/PT	ACT-1	-
A10	CORRIDOR	SC	RB	EXTG/PT	EXTG/PT	CMU/PT	EXTG/CMU/PT	ACT-1	-
A11	EXAM ROOM	EXTG	RB	CMU/PT	EXTG/CMU/PT	EXTG/PT	EXTG/CMU/PT	ACT-3	-
A12	CORRIDOR	EXTG	RB	EXTG/PT	CMU/PT	-	CMU/PT	ACT-1	-
A13	X-RAY	SC	RB	CMU/PT	EXTG/PT	EXTG/PT	CMU/PT	GYP/PT	-
A14	DOG INTRO	SC	RB	CMU/PT	CMU/PT	EXTG/PT	CMU/PT	ACT-1	-
A15	CORRIDOR	SC	RB	EXTG/CMU/PT	CMU/PT	CMU/PT	EXTG/CMU/PT	ACT-1	-
A16	CORRIDOR	SC	RB	EXTG/PT	EXTG/PT	EXTG/PT	-	ACT-1	-
A17	CORRIDOR	SC	RB	CMU/PT	-	EXTG/PT	EXTG/PT	ACT-1	-
A18	LAUNDRY/DISHWASHING	SC	RB	EXTG/CMU/PT	EXTG/PT	EXTG/PT	EXTG/PT	ACT-3	-
A19	DOG WARD	SC	-	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-2	-
A20	FOOD/SUPPLY STORAGE	SC	RB	EXTG/CMU/PT	EXTG/PT	EXTG/PT	EXTG/PT	EXTG/PT	NOTE 1
A21	CORRIDOR	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-1	-
A22	DOG WARD	SC	-	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-2	-
A23	PREP	EXTG	EXTG	EXTG/CMU/PT	EXTG	EXTG	EXTG	EXTG	-
A24	CORRIDOR	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-1	-
A25	DOG WARD	SC	-	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-2	-
A26	CORRIDOR	SC	RB	CMU/PT	-	CMU/PT	CMU/PT	ACT-1	-
A27	EUTHANASIA	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-3	-
A28	SALLY PORT	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	GYP/PT	-
A29	CAT ISOLATION	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-1	-
A29A	WATER	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	WD/PT	-
A30	VESTIBULE	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-1	-
A31	DOG ISOLATION	SC	RB	CMU/PT	CMU/PT	CMU/PT	CMU/PT	ACT-1	-
A32	VESTIBULE	EXTG	EXTG	EXTG	EXTG	EXTG	EXTG	EXTG	-

ROOM FINISH NOTES

NOTE 1: REMOVE AND REPLACE DAMAGED GYP CEILINGS AS REQUIRED - PAINT

DOOR SCHEDULE

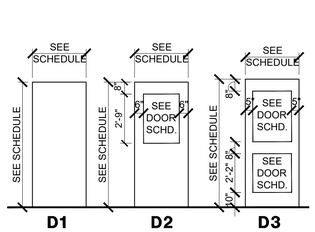
DOOR NO.	DOORS SG/PR	WIDTH	HEIGHT	THICK	DOOR TYPE MTL	ELEV.	FRAMES MTL	ELEV.	GLAZING DOOR	FRAME	DETAILS HEAD	JAMB	SILL	HDWR GROUP	LABEL	REMARKS
A3	SG	3'-0"	7'-0"	1 3/4"	WD	D1	HM	F2	-	-	H1	J1	-	1	-	-
A6	SG	±3'-4"	±7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H2	J2,J3	-	2	-	-
A9	SG	3'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H3	J4,J5	-	6	-	-
A11	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5	-	7	-	-
A12	SG	3'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H3	J5,J6	-	8	-	NOTE 3
A13	SG	±3'-0"	±7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H2	J2	-	7	-	-
A14	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5,J7	-	9	-	-
A15	SG	3'-0"	7'-2"	2"	AL	D3	AL	F3	GL-1	GL-1	H7	J23	-	10	-	NOTE 3
A17	SG	3'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H3	J5,J8	-	8	-	NOTE 3
A18	SG	3'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H4	J9,J10	-	3	3/4 HR	-
A19A	SG	3'-0"	7'-2"	2"	AL	D3	AL	F4	GL-1	GL-1	H8	J20	-	10	-	NOTE 3
A19B	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5	-	7	-	-
A20	SG	4'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H4	J10,J11	-	11	3/4 HR	NOTE 3
A21	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5,J12	-	2	-	-
A22A	SG	3'-0"	7'-2"	2"	AL	D3	AL	F4	GL-1	GL-1	H8	J20	-	10	-	NOTE 3
A22B	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5	-	7	-	-
A24	SG	4'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H3	J5,J12	-	8	-	NOTE 3
A25A	SG	3'-0"	7'-2"	2"	AL	D3	AL	F4	GL-1	GL-1	H8	J20	-	10	-	NOTE 3
A25B	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5	-	7	-	-
A27	SG	3'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	GL-3	-	H3	J5,J7	-	8	-	NOTE 3
A27A1	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	NOTE 1
A27A2	-	-	-	-	-	-	-	-	-	-	H5	J13	-	14	-	NOTE 1
A28A	SG	3'-0"	7'-2"	2"	AL	D3	AL	F2	GL-1/GL-3	-	2/A203 SIM.	J16,J19	-	12	-	NOTE 3
A28B	SG	4'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-4	-	H3	J5,J14	-	4	3/4 HR	-
A28C	OHD	12'-0"	8'-0"	-	-	-	-	-	-	-	H6	J15,J16	-	15	-	NOTE 2
A29	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5,J17	-	5	-	-
A29A	PR	2'-0"	7'-0"	1 3/4"	HM	D1	HM	F1	-	-	H4	J26	-	16	-	-
A30A	SG	3'-0"	7'-2"	2"	AL	D3	AL	F5	GL-1	GL-1	2/A203	J21,J22	-	10	-	NOTE 3
A30B	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F6	GL-2	GL-2	H3	J14,J18	-	2	-	-
A31	SG	3'-0"	7'-0"	1 3/4"	HM	D2	HM	F1	GL-2	-	H3	J5,J17	-	5	-	-
A32A	EXTG	-	-	-	-	-	-	-	-	-	-	-	-	13	-	NOTE 3
A32B	EXTG	-	-	-	-	-	-	-	-	-	-	-	-	13	-	NOTE 3

DOOR SCHEDULE NOTES

NOTE 1: DOOR BY FREEZER MANUFACTURER - SEE SPECIFICATIONS
NOTE 2: OVERHEAD GARAGE DOOR - SEE SPECIFICATIONS
NOTE 3: CARD READER BY OTHERS - SEE SPECIFICATIONS

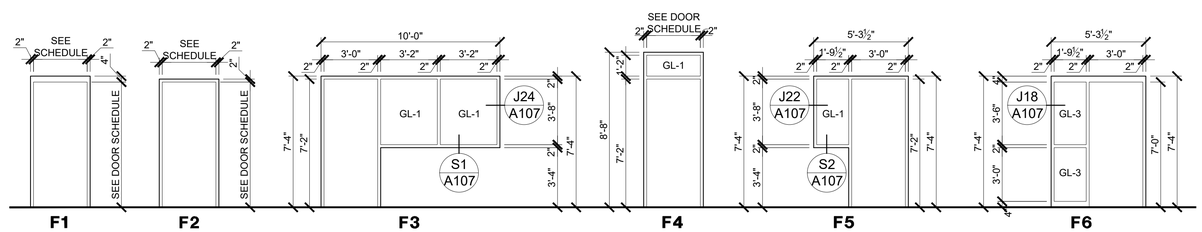
GLASS TYPES

GL-1	1" INSULATED, LOW 'E', TEMPERED, TINTED GLASS
GL-2	1/4", CLEAR, TEMPERED GLASS
GL-3	1" INSULATED MAPES PANEL
GL-4	FIRE RATED GLASS



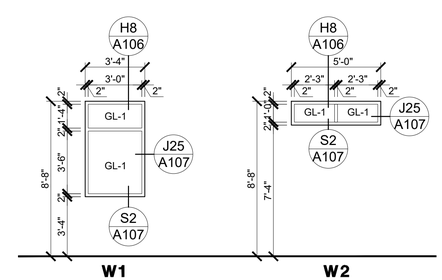
DOOR TYPES

SCALE: 1/4"=1'-0"



FRAME TYPES

SCALE: 1/4"=1'-0"



WINDOW TYPES

SCALE: 1/4"=1'-0"

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

ABBREVIATIONS, WALL TYPES, CONSTRUCTION LEGEND, ROOM SCHEDULE, DOOR SCHEDULE, DOOR, FRAME AND WINDOW TYPES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

G101
OF
3

DEMOLITION GENERAL NOTES

1. THE GENERAL CONTRACTOR IS TO COORDINATE AND PROVIDE ALL DEMOLITION AND REMOVAL OF DEBRIS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION.
2. THE DEMOLITION PLAN IS PROVIDED AS AID IN PLANNING AND DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY IN FIELD VERIFYING THE EXISTING JOB SITE.
3. PROVIDE ALL TEMPORARY SHORING AS REQUIRED TO SUPPORT STRUCTURES AND FINISHES TO REMAIN.
4. ALL AREAS, FINISHES AND ITEMS NOT REQUIRING DEMOLITION MUST BE PROTECTED DURING DEMOLITION AND CONSTRUCTION WORK.
5. THIS DEMOLITION PLAN IS TO BE USED IN CONJUNCTION WITH THE REST OF THE SHEETS IN THE SET.
6. EACH CONTRACTOR IS RESPONSIBLE TO PATCH AND MATCH EXISTING TO REMAINING OPENINGS CREATED FROM DEMOED PENETRATIONS THRU WALLS, CEILINGS AND FLOORS.
7. EACH CONTRACTOR IS RESPONSIBLE TO PATCH AND MATCH EXISTING TO WALLS, AND FLOORS FROM DEMOED RADIATORS AND UNIT VENTILATORS.
8. ALL ITEMS TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE.
9. REFERENCE HVAC, PLUMBING, AND ELECTRICAL SHEETS FOR ITEMS TO BE REMOVED AND/OR RELOCATED.
10. PRIOR TO DEMOLITION THE CONTRACTOR SHALL VERIFY WITH THE OWNER OF ITEMS TO BE SALVAGED IN THE PROJECT AREAS IDENTIFIED FOR DEMOLITION - SALVAGED ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO THE OWNER - ANY ITEMS NOT WANTED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR.

DEMOLITION BOX NOTES

1. REMOVE EXISTING GYPSUM WALL CONSTRUCTION COMPLETE.
2. OWNER TO REMOVE EXISTING FURNITURE.
3. REMOVE EXISTING ACOUSTICAL CEILING TILE, GRID AND LIGHTING COMPLETE - SEE ELECTRICAL.
4. REMOVE EXISTING VCT FLOORING, MASTIC AND BASE COMPLETE.
5. LINE OF EXISTING VCT FLOORING TO REMAIN.
6. REMOVE EXISTING HOLLOW METAL FRAME.
7. REMOVE EXISTING BORROWED LIGHT AND COUNTER-TOP COMPLETE DOWN TO EXISTING GYPSUM WALL.
8. REMOVE EXISTING CASEWORK AND COUNTER-TOP(S) COMPLETE.
9. REMOVE EXISTING HOLLOW METAL DOOR, FRAME AND HARDWARE COMPLETE.
10. EXISTING TRENCH DRAIN(S) TO REMAIN - SEE PLUMBING.
11. EXISTING FLOOR CLEAN-OUT TO REMAIN - SEE PLUMBING.
12. RELOCATE EXISTING FLOOR CLEAN-OUT - SEE PLUMBING.
13. REMOVE AND SALVAGE EXISTING DOG CAGE(S), DIVIDER PANEL(S), PULLEY SYSTEMS(S), TRENCH COVER(S) AND ASSOCIATED HARDWARE COMPLETE - RETURN TO OWNER.
14. REMOVE EXISTING MASONRY HALF-WALL(S) COMPLETE DOWN TO EXISTING CONCRETE FLOOR.
15. REWORK EXISTING DUCTWORK AS REQUIRED FOR NEW WORK - SEE MECHANICAL.
16. EXISTING EXHAUST FAN TO REMAIN - SEE MECHANICAL.
17. EXISTING LOUVER TO REMAIN - SEE MECHANICAL.
18. CAREFULLY REMOVE & SALVAGE EXISTING WASHING MACHINE(S) FOR REINSTALLATION - SEE MECHANICAL & ELECTRICAL.
19. REMOVE EXISTING SOLID SURFACE COUNTER-TOP(S), TUB, FAUCET, CABINETRY AND MASONRY BASE COMPLETE DOWN TO EXISTING CONCRETE FLOOR - SEE PLUMBING.
20. CAREFULLY SAWCUT EXISTING COUNTER-TOP FLUSH WITH FRONT EDGE OF ADJACENT COUNTER-TOP AND REWORK FRONT EDGE OF THE REMAINING COUNTER-TOP AS REQUIRED FOR A SMOOTH CONTINUOUS TRANSITION TO THE WALL - MATCH EXISTING EDGE PROFILE.
21. EXISTING CABINETRY, COUNTER-TOP(S) AND SINK TO REMAIN.
22. REMOVE EXISTING ACOUSTICAL CEILING TILE, GRID, LIGHTING AND CEILING FANS COMPLETE - SEE ELECTRICAL.
23. REMOVE EXISTING BASE CABINET(S), UPPER CABINET(S) AND MASONRY BASE COMPLETE.
24. REMOVE AND SALVAGE EXISTING TRIPLE SINK AND FAUCET - RETURN TO OWNER - SEE PLUMBING.
25. REMOVE EXISTING SHELVING COMPLETE.
26. OWNER TO REMOVE EXISTING CAGES.
27. REMOVE AND SALVAGE EXISTING DIGITAL SCALE - RETURN TO OWNER.
28. OWNER TO REMOVE, SALVAGE AND REINSTALL EXISTING CLEANING SOLUTION PUMP AND DRUM - SEE ELECTRICAL AND PLUMBING.
29. REMOVE EXISTING FAUCET - SEE PLUMBING.
30. OWNER TO REMOVE AND REINSTALL EXISTING HOSE REEL.
31. REMOVE EXISTING IN-GROUND TRIPLE BASIN - SEE PLUMBING.
32. OWNER TO REMOVE EXISTING SHELVING UNIT.
33. REMOVE EXISTING SUSPENDED UNIT HEATER - SEE MECHANICAL.
34. REMOVE AND SALVAGE EXISTING OVERHEAD DOOR, DOOR OPERATOR AND MOUNTING HARDWARE COMPLETE - RETURN TO OWNER - EXISTING LINTEL TO REMAIN - SEE ELECTRICAL.
35. OWNER TO REMOVE EXISTING FLAMMABLE STORAGE CABINET.
36. REMOVE AND SALVAGE EXISTING TACK BOARD - RETURN TO OWNER.
37. REMOVE EXISTING FLOOR DRAIN - SEE PLUMBING.
38. REMOVE EXISTING CHAIN LINK GATE AND POST COMPLETE.
39. OWNER TO REMOVE EXISTING REFRIGERATOR.
40. REMOVE EXISTING FREEZER AND ASSOCIATED EXTERIOR DOOR TRIM COMPLETE.
41. REMOVE EXISTING BASE CABINET(S), UPPER CABINET(S), SINK, TABLE AND MASONRY BASE COMPLETE - SEE PLUMBING AND ELECTRICAL.
42. EXISTING FLOOR DRAIN TO REMAIN - SEE PLUMBING.
43. REMOVE EXISTING WINDOW SYSTEM COMPLETE - EXISTING LINTEL TO REMAIN.
44. REMOVE EXISTING LIGHTING - SEE ELECTRICAL.
45. REMOVE EXISTING CONCRETE PAD - SEE CIVIL.
46. REMOVE EXISTING ASPHALT DRIVE - SEE CIVIL.
47. REMOVE EXISTING CONCRETE STOOP AND ASSOCIATED FOUNDATION WALLS COMPLETE - SEE CIVIL.
48. REMOVE EXISTING RAILING(S) COMPLETE - SEE CIVIL.
49. REMOVE EXISTING WOOD LANDSCAPE BEAM(S) - SEE CIVIL.
50. REMOVE EXISTING FACE BLOCK AS REQUIRED FOR NEW WORK - CMU BACKING TO REMAIN.
51. REMOVE EXISTING MASONRY WALL COMPLETE AS REQUIRED FOR NEW WORK.
52. REMOVE EXISTING HOLLOW METAL DOOR, FRAME, HARDWARE, LINTEL AND MASONRY ABOVE UP TO EXISTING ROOF STRUCTURE COMPLETE.
53. SAWCUT EXISTING FOUNDATION WALL 8" DOWN AS REQUIRED FOR NEW WORK.
54. REMOVE AND SALVAGE EXISTING OVERHEAD DOOR, DOOR OPERATOR AND MOUNTING HARDWARE COMPLETE - RETURN TO OWNER - REMOVE EXISTING LINTEL AND ASSOCIATED MASONRY COURSING - BALANCE OF MASONRY WALL ABOVE LINTEL TO REMAIN - SEE ELECTRICAL.
55. REMOVE EXISTING BOLLARDS - SEE CIVIL.
56. REMOVE, SALVAGE AND REINSTALL EXISTING CONDENSING UNIT(S) AS REQUIRED FOR NEW WORK - SEE MECHANICAL AND ELECTRICAL.
57. REMOVE EXISTING DOCK LEVELER COMPLETE - SEE CIVIL.
58. REMOVE EXISTING CONCRETE RETAINING WALL - SEE CIVIL.
59. REMOVE EXISTING DOWNSPOUT.
60. FOR SITE DEMOLITION WORK - SEE CIVIL.
61. REMOVE EXISTING OVERHANG CONSTRUCTION FLUSH WITH EXISTING EXTERIOR WALL - SEE DEMOLITION SECTION(S)
62. REMOVE ROOFING SHINGLES DOWN TO EXISTING SHEATHING AS REQUIRED FOR NEW WORK.
63. LINE OF REMOVED SHINGLES WHERE NEW CONSTRUCTION TIES INTO EXISTING - VERIFY IN FIELD.
64. REMOVE EXISTING VENT - SEE MECHANICAL.
65. REMOVE AND SALVAGE EXISTING CAMERA AND MOUNTING HARDWARE COMPLETE - RETURN TO OWNER.
66. REMOVE EXISTING GUTTER SECTION AS REQUIRED FOR NEW WORK - PATCH OPEN ENDS TO MATCH.
67. REMOVE EXISTING GUTTER.
68. REMOVE EXISTING LOUVER - SEE MECHANICAL.
69. REMOVE EXISTING HOSE BIB - SEE PLUMBING.
70. REMOVE AND SALVAGE EXISTING FLOOD LIGHT AND MOUNTING HARDWARE COMPLETE - RETURN TO OWNER - SEE ELECTRICAL.
71. REMOVE AND SALVAGE EXISTING SIGNAGE - RETURN TO OWNER.
72. REMOVE AND RELOCATE EXISTING DOORBELL - SEE ELECTRICAL.
73. REMOVE AND RELOCATE EXISTING PROX READER - SEE ELECTRICAL.
74. REWORK EXISTING CONDUIT, JUNCTION BOX AND HEAT TRACE WIRING AS REQUIRED FOR NEW WORK - SEE ELECTRICAL.
75. REMOVE, SALVAGE AND REINSTALL EXISTING CASH DRAWER(S) INTO NEW CASEWORK AS REQUIRED - VERIFY LOCATION WITH OWNER.
76. OWNER TO REMOVE EXISTING VENDING MACHINE(S).
77. REMOVE, SALVAGE AND REINSTALL EXISTING FREEZER UNIT AS REQUIRED FOR NEW WORK - SEE MECHANICAL AND ELECTRICAL.
78. REMOVE EXISTING STRIKE PLATE AND MODIFY EXISTING FRAME AS REQUIRED FOR NEW ELECTRIC STRIKE - SEE DOOR SCHEDULE AND ELECTRICAL.

GENERAL NOTES

1. BUILDING ELEVATIONS ARE BASED OFF FIRST FLOOR EL: = 0'-0" = 746.00'.
2. ALL DIMENSIONS ARE TAKEN FROM OUTSIDE OF FINISH WALL UNLESS NOTED OTHERWISE
3. SEE MEP'S FOR ALTERATIONS TO EXISTING CEILINGS FOR INSTALLATION OF ABOVE-CEILING PIPING
4. CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL FLOOR, ROOF AND WALL SLEEVES AND ALL MECHANICAL SHAFTS AND OPENINGS WITH MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. GENERAL CONTRACTOR SHALL PROVIDE SLEEVES AT FLOOR AND ROOF OPENINGS AS REQUIRED TO ALLOW INSTALLATION OF ALL DUCTS AND PIPING AS SHOWN ON THE MECHANICAL AND ELECTRICAL DRAWINGS.
5. WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS OF THE VARIOUS TRADES, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
6. COORDINATE PLACEMENT OF ALL CEILING ELEMENTS WITH MECHANICAL, ELECTRICAL AND INSTALLER. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND INSTALLATION, REVIEW WITH ARCHITECT PRIOR TO PROCEEDING.
7. CONTRACTOR'S RESPONSIBILITY FOR DAMAGE DURING CONSTRUCTION: THE CONTRACTOR WILL REPAIR AND/OR REPLACE ALL DAMAGED MATERIALS THAT ARE FOUND TO HAVE BEEN MADE DURING THE COURSE OF THE WORK AND CLEAN-UP PROCEDURE. REPAIR SHALL MEAN THE ITEM(S) ARE RETURNED TO THEIR ORIGINAL STATE, AS A MINIMUM, AS DETERMINED BY THE OWNER.
8. ALL REFUSE AND DEBRIS SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
9. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

KEY NOTES

1. CONCRETE STOOP - SEE STRUCTURAL
2. X-RAY MACHINE BY OWNER - SEE ELECTRICAL
3. GROOMING TUB BY OWNER - SEE PLUMBING
4. PROVIDE CERAMIC TILE COVE BASE OVER CMU BACKING TO MATCH EXISTING FROM DEMOED TUB ENCLOSURE - PROVIDE STAINLESS STEEL PANEL TO MATCH ADJACENT FROM TOP OF BASE INFILL TO UNDERSIDE OF EXISTING COUNTER-TOP.
5. CAT CAGES, BY OWNER, OVER CMU WALL FRAMING - SEE ELEVATIONS, PARTITION TYPES AND SPECIFICATIONS
6. RELOCATED WASHER AND DRYER - SEE MECHANICAL, PLUMBING AND ELECTRICAL
7. RELOCATED TRIPLE SINK - SEE PLUMBING
8. DOG KENNELS BY OWNER - SEE ELEVATIONS AND SPECIFICATIONS
9. FREEZER BY OWNER - SEE MECHANICAL, PLUMBING AND ELECTRICAL
10. FLOOR DRAIN - SEE PLUMBING
11. TRENCH DRAIN - SEE PLUMBING
12. EXISTING ASPHALT SHINGLE ROOFING SYSTEM
13. CLOSE OFF END OF EXISTING GUTTER THAT REMAINS - MATCH EXISTING
14. PROVIDE NEW METAL GUTTER - SEE DETAIL(S)
15. PROVIDE NEW RIDGE VENT
16. EXISTING EPDM ROOFING SYSTEM
17. PROVIDE NEW 4"X5" METAL DOWNSPOUT - DOWNSPOUT TO ANGLE BACK TO EXTERIOR WALL LINE AND THEN DROP VERTICALLY - PROVIDE 45 DEGREE ELBOW AT THE BOTTOM - PROVIDE CONCRETE SPLASHBLOCK
18. PROVIDE NEW 4"X5" METAL DOWNSPOUT - DOWNSPOUT TO ANGLE BACK TO EXTERIOR WALL LINE AND THEN DROP VERTICALLY - TIE INTO NEW 6" HDPE DOWNSPOUT EXTENSION - SEE CIVIL
19. REWORK EXISTING DOWNSPOUT - TIE INTO NEW 6" HDPE DOWNSPOUT EXTENSION - SEE CIVIL
20. EXISTING GUTTER TO REMAIN
21. RETAINING WALL DRAINAGE OUTLET(S) - SEE CIVIL
22. NEW RETAINING WALL - SEE CIVIL AND STRUCTURAL
23. EXISTING ANTENNA TO REMAIN - SEE ELECTRICAL
24. MASONRY WALL INFILL - SEE DETAIL(S)
25. REWORKED CONDUIT, JUNCTION BOX AND HEAT TRACE WIRING - SEE ELECTRICAL
26. FENCING BY OWNER
27. ASPHALT SHINGLE ROOFING SYSTEM - SEE ROOF PLAN
28. MEMBRANE FLASHING - SEE ROOF PLAN
29. CONCRETE INFILL OF EXISTING DEPRESSED SLAB - SEE STRUCTURAL
30. RELOCATED TRASH CONTAINER
31. 6" DIA. STEEL BOLLARD - PAINTED - SEE DETAIL 12/A105 (TYP.)
32. PROVIDE TAPERED INSULATION SADDLE. SLOPE OF TAPER TO BE 1/2" PER FOOT - VERIFY SLOPE IN FIELD - TAPERED INSULATION MANUFACTURER TO DESIGN TAPERED INSULATION AS REQUIRED TO PROVIDE PROPER SLOPES
33. ASPHALT SHINGLES - PATCH TO MATCH EXISTING
34. ROOFTOP UNITS NOT SHOWN FOR CLARITY - SEE MECHANICAL
35. REWORK DUCTWORK AS REQUIRED - SEE MECHANICAL
36. CONCRETE SLAB INFILL - SEE STRUCTURAL
37. CONCRETE SIDEWALK - SEE CIVIL
38. R-30 BATT INSULATION
39. ENGINEERED WOOD TRUSSES - SEE STRUCTURAL
40. SLOPED CONCRETE SLAB WITH FLOOR DRAIN - SEE STRUCTURAL AND PLUMBING
41. ACOUSTICAL WALL PANELS - SEE SPECIFICATIONS

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
DEMOLITION GENERAL NOTES, DEMOLITION NOTES, GENERAL NOTES AND KEY NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
G102
OF
3

CODE REVIEW DATA

APPLICABLE CODES

- 2015 INTERNATIONAL BUILDING CODE
- LATEST ILLINOIS PLUMBING CODE
- 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
- 2018 ILLINOIS ACCESSIBILITY CODE
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE
- 2015 INTERNATIONAL FIRE CODE
- CURRENT NATIONAL ELECTRICAL CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL FUEL GAS CODE

TYPE OF PROJECT	ADDITION AND REMODELING
TYPE OF CONSTRUCTION	VB
USE GROUP	"B" BUSINESS
FIRE SUPPRESSION SYSTEM	N/A
HEIGHT OF BUILDING	EXISTING: +/- 21'-0"
ACTUAL AREAS OF FIRE AREAS (SEE PLAN THIS SHEET)	BUSINESS "B" = 11,351 SF (EXIST) BUSINESS "B" = 4,385 SF (NEW)

USE GROUP "B" EXISTING & NEW

ALLOWABLE AREA	9,000 SF
ACTUAL AREA	11,351 SF + 4,385 SF = 15,736 SF
OPEN PERIMETER	800/800 - .25 = .75 X 9000 = 6,750 SF
TOTAL ALLOWABLE AREA	9,000 + 6,750 = 15,750 SF
ALLOWABLE TABULAR AREA	15,736 SF < 15,750 = OK

CODE SYMBOLES

ONE HOUR FIRE WALL

EXISTING ONE HOUR FIRE WALL

ONE HOUR RATED SHAFT WALL CEILING "UL Des U415, SYSTEM A"

50 / 180 — ACTUAL OCCUPANTS / CAPACITY OF EXIT

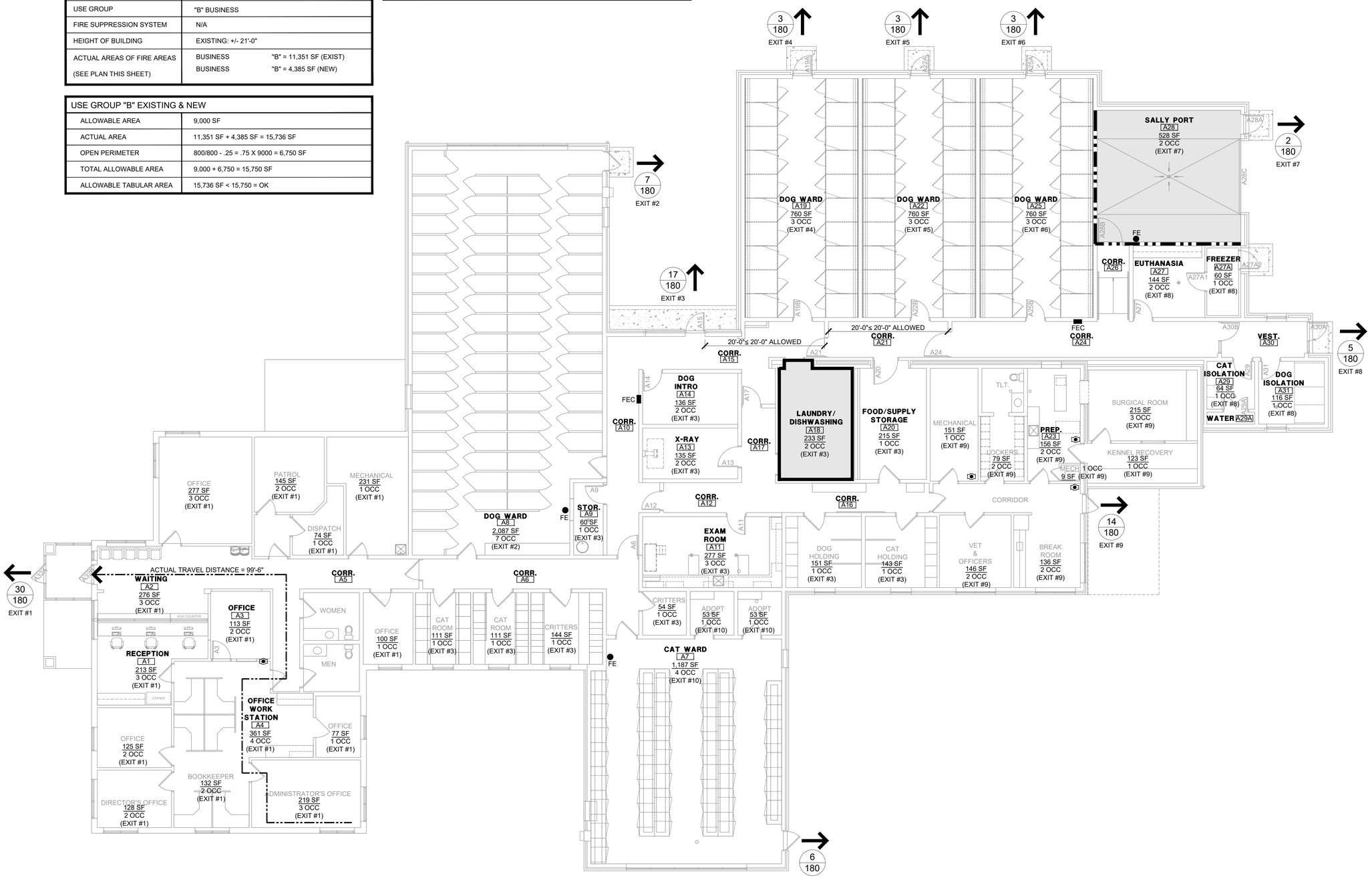
EXIT #? — EXIT NUMBER

NEW FIRE EXTINGUISHER CABINET - SEMI-RECESSED

NEW FIRE EXTINGUISHER - WALL-MOUNT

EXISTING FIRE EXTINGUISHER

75'-0" MAXIMUM TRAVEL DISTANCE TO FIRE EXTINGUISHER



1 CODE PLAN

SCALE: 1/8"=1'-0"

ADDITION & RENOVATIONS AT

WINNEBAGO CO. ANIMAL SERVICES

ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

CODE PLAN AND NOTES

PROJECT INFORMATION

Date	August 16, 2022
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SHEET NUMBER

G103 OF 3

DESIGN DATA

CODES AND STANDARDS

ALL WORK SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS:

"INTERNATIONAL BUILDING CODE", 2015 EDITION, INTERNATIONAL CODE COUNCIL WITH ALL LOCAL BUILDING CODE AMENDMENTS AND REQUIREMENTS
"ASCE 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", LATEST EDITION, AMERICAN SOCIETY OF CIVIL ENGINEERS
"ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 301, SPECIFICATION FOR STRUCTURAL CONCRETE", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 305 GUIDE TO HOT WEATHER CONCRETING", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 306 GUIDE TO COLD WEATHER CONCRETING", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 315R MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURE", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 302 GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION" LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"MANUAL OF STANDARD PRACTICE", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 530, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"ACI 530.1, SPECIFICATIONS FOR MASONRY STRUCTURES", LATEST EDITION, AMERICAN CONCRETE INSTITUTE
"TMS 402/602 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES", LATEST EDITION, THE MASONRY'S SOCIETY
"MANUAL OF STEEL CONSTRUCTION", 15TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
"AISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", LATEST EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
"SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", LATEST EDITION, RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.
"AISC 303, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
"ASTM A123 STANDARD SPECIFICATION FOR ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", LATEST EDITION, ASTM INTERNATIONAL.
"AWS D1.1, STRUCTURAL WELDING CODE-STEEL", LATEST EDITION, AMERICAN WELDING SOCIETY
"AWS D1.3, STRUCTURAL WELDING CODE-SHEET STEEL", LATEST EDITION, AMERICAN WELDING SOCIETY
"AWS D1.4, STRUCTURAL WELDING CODE-REINFORCING STEEL", LATEST EDITION, AMERICAN WELDING SOCIETY
"AWS D1.8, STRUCTURAL WELDING CODE-SEISMIC SUPPLEMENT", LATEST EDITION, AMERICAN WELDING SOCIETY
"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", LATEST EDITION, THE AMERICAN WOOD COUNCIL
"NATIONAL DESIGN SPECIFICATION SUPPLEMENT, DESIGN VALUES FOR WOOD CONSTRUCTION", LATEST EDITION, THE AMERICAN WOOD COUNCIL
"TFEC 2, CODE OF STANDARD PRACTICE FOR TIMBER FRAME STRUCTURES", LATEST EDITION, TIMBER FRAME ENGINEERING COUNCIL
"ANSI A190.1, STANDARD FOR WOOD PRODUCTS-STRUCTURAL GLUED LAMINATED TIMBER", LATEST EDITION, APA-THE ENGINEERED WOOD ASSOCIATION
"APA PDS, PANEL DESIGN SPECIFICATION", LATEST EDITION, APA-THE ENGINEERED WOOD ASSOCIATION
"ANSI/TPI 1, NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION", LATEST EDITION, TRUSS PLATE INSTITUTE
"BCSI 1, BUILDING COMPONENT SAFETY INFORMATION, GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES", LATEST EDITION, WOOD TRUSS COUNCIL OF AMERICA AND TRUSS PLATE INSTITUTE.

SCOPE OF WORK

THE STRUCTURAL DESIGN OF THE ONE STORY ADDITION TO THE EXISTING ONE STORY BUILDING.

DESIGN LOADS

FLOOR LIVE LOAD

SLAB ON GRADE	125 PSF

ROOF LIVE LOADS

MINIMUM ROOF LIVE LOAD	20 PSF

SNOW LOADS

GROUND SNOW, Pg	30 PSF
FLAT ROOF SNOW LOAD, Pf	23.1 PSF
EXPOSURE FACTOR, Ce	1.0
IMPORTANCE FACTOR, I	1.0
THERMAL FACTOR, Ct	1.0
ROOF SNOW (DESIGN)	30 PSF
DRIFT LOADS AS REQUIRED	SEE DRIFT DIAGRAM ON S003

WIND LOADS

BASIC WIND SPEED V(ult)	115 MPH
WIND DIRECTIONALITY FACTOR, Kd	0.85
TOPOGRAPHY FACTOR, Kzt	1.0
EXPOSURE	C
RISK CATEGORY	II
INTERNAL PRESSURE COEFFICIENT, GCpi	±0.18
MWFRS	SEE TABLE ON SHEET S002
COMPONENTS AND CLADDING	SEE TABLE ON SHEET S002
BALCONIES/PARAPETS/OVERHANGS	40 PSF MINIMUM
NET UPLIFT – METAL DECK/ROOF JOIST	20 PSF

SEISMIC LOADS

RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR, Ie	1.00
MCER, 0.2-SECOND, Ss	0.118
MCER, 1-SECOND, S1	0.056
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENT, SDS	0.126
SPECTRAL RESPONSE COEFFICIENT, SD1	0.090
SEISMIC DESIGN CATEGORY	B
SEISMIC FORCE RESISTING SYSTEM	INT. REINFORCED MASONRY SHEAR WALLS
LATERAL FORCE PROCEDURE	EQUIVALENT
SEISMIC RESPONSE COEFFICIENT, C_s	0.036
RESPONSE MODIFICATION COEFFICIENT, R	3.5
SEISMIC BASE SHEAR – NS & EW	18.15 K (ULT.)

WOOD ROOF TRUSS LOADS

TOP CHORD LIVE LOAD	30 PSF
TOP CHORD DEAD LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	10 PSF

MATERIALS

CONCRETE

CONCRETE EXPOSED TO WEATHER AND EARTH SHALL BE AIR-ENTRAINED
AIR-ENTRAINMENT 5% ± 1½% BY VOLUME (REFER TO ACI 318-14 TABLE 19.3.3.1)

AIR-ENTRAINMENT ADMIXTURE	ASTM C260
CEMENT (TYPE I, II, OR III)	ASTM C150

NORMAL WEIGHT CONCRETE (145 PCF) 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:

APPLICATION (EXPOSURE CLASSIFICATION)

FOOTINGS & FOUNDATIONS (F1, S0, W0, C0)	3000 PSI
WALLS (F1, S0, W0, C1)	4000 PSI
SLAB-ON-GRADE (F0, S0, W0, C0)	4000 PSI

REINFORCING STEEL

DEFORMED REINFORCING BARS	ASTM A615, 60 KSI
WELDED WIRE REINFORCEMENT	ASTM A1064

STRUCTURAL STEEL

STRUCTURAL WIDE FLANGE SHAPES	ASTM A992 GR. 50
MISCELLANEOUS SHAPES & PLATES	ASTM A36 U.N.O. ON DRAWINGS
STRUCTURAL TUBE (HSS)	ASTM A500 GR. B
STRUCTURAL PIPE	ASTM A53
ANCHOR BOLTS, ¾"ø U.N.O.	ASTM F1554 GR36 MIN
STRUCTURAL BOLTS	ASTM A325 N
WELDING ELECTRODES	E-70XX
HEADED STUDS, ¾"ø U.N.O.	ASTM A1044
POST INSTALLED ANCHORS (MECHANICAL/CHEMICAL)	HILTI, SIMPSON OR APPROVED EQUAL

WOOD

MOISTURE CONTENT SHALL NOT EXCEED 19% FOR SAWN LUMBER, U.N.O.

MOISTURE PRESERVATIVE AND FIRE RETARDANT TO BE COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

CONNECTORS AND FASTENERS ARE SIMPSON STRONG-TIE OR APPROVED EQUAL AND SHALL BE INSTALLED PER MANUFACTURERS WRITTEN INSTRUCTION.

SEE DRAWINGS FOR LOCATIONS OF LUMBER GRADE AND PROPERTIES.

DIMENSIONAL LUMBER (DESIGN VALUES BASED ON NDS 2015):	
SPRUCE-PINE-FIR (SPF) #1/#2	FB = 875 PSI, E = 1,400,000 PSI
SOUTHERN-YELLOW-PINE (SP/SYP) #2	FB = 1,100 PSI, E = 1,400,000 PSI
COMPOSITE LUMBER (DESIGN VALUES BASED ON TRUS JOIST):	
MICROLLAM LVL 2.0E	Fb = 2,600 PSI, E = 2,000,000 PSI
PARALLAM PSL (BEAM) 2.0E	Fb = 2,900 PSI, E = 2,000,000 PSI
PARALLAM PSL (COLUMN/POST) 1.8E	FB = 2,400 PSI, E = 1,800,000 PSI
TIMBERSTRAND LSL (BEAM/COLUMN) 1.3E	FB = 1,700 PSI, E = 1,300,000 PSI
TIMBERSTRAND LSL (BEAM) 1.55E	FB = 2,325 PSI, E = 1,550,000 PSI
1⅞" TJ RIM BOARD	FB = 700 PSI, E = 600,000 PSI

SHEATHING (BASED ON IBC 2015 SPAN TABLES TWO OR MORE SPANS):

APA RATED SHEATHING (ROOF)	¾" NOMINAL, SPAN RATING 40/20

WOOD CONNECTORS

6d COMMON NAILS	0.120"ø x 2" LONG
8d COMMON NAILS	0.134"ø x 2½" LONG
10d COMMON NAILS	0.148"ø x 3" LONG
16d COMMON NAILS	0.162"ø x 3½" LONG
#6 SCREWS	0.138"ø x 1½" LONG
#8 SCREWS	0.164"ø x 2" LONG
#10 SCREWS	0.190"ø x 2½" LONG

MASONRY

MASONRY PRISM COMPRESSIVE STRENGTH	F'm = 2000 PSI
LOAD BEARING/REINFORCED CMU 28 DAY COMPRESSIVE STRENGTH (3 UNIT)	ASTM C90, TYPE 1 2800 PSI MINIMUM
MORTAR 28 DAY COMPRESSIVE STRENGTH	ASTM C270, TYPE S
GROUT 28 DAY COMPRESSIVE STRENGTH	ASTM C476 3000 PSI MINIMUM
NON-LOAD BEARING/UNREINFORCED 28 DAY COMPRESSIVE STRENGTH (3 UNIT)	ASTM C129, TYPE I 600 PSI MINIMUM
MASONRY REINFORCEMENT, GALVANIZED	ASTM A951
FACING BRICK	ASTM C216 CSA A82, F'm = 3000 PSI TYPE N MORTAR

FOUNDATIONS

1. AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF HAS BEEN ASSUMED FOR DESIGN PURPOSES. THE CONTRACTOR SHALL VERIFY THE ALLOWABLE BEARING CAPACITY PRIOR TO CONSTRUCTION AND NOTIFY HIGHLAND ENGINEERING IMMEDIATELY OF ANY DISCREPANCIES.
2. ALL WELL GRADED GRANULAR MATERIAL FOR FILLS DEEMED ACCEPTABLE BY THE OWNER'S GEOTECHNICAL ENGINEER SHALL BE PLACED IN LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS, AND COMPACTED TO MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557)
3. ALL FOOTING SUBGRADES AND ALL SLAB SUBGRADES INCLUDING PIT SLABS, ALL BACKFILL AROUND AND ABOVE ALL FOUNDATION ELEMENTS, FOOTINGS, CAPS, MATS, GRADE BEAMS AND PITS, SHALL BE COMPACTED TO MINIMUM 95 PERCENT OF THE MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D1557.

CONSTRUCTION

GENERAL

1. REPRODUCTION OF ALL OR PART OF THE STRUCTURAL CONTRACT PLANS OR DETAIL DRAWINGS FOR RESUBMITTAL AS SHOP OR ERECTION DRAWINGS IS PROHIBITED. SHOP DRAWING SUBMITTALS PRODUCED IN SUCH A MANNER SHALL BE REJECTED AND RETURNED WITHOUT FURTHER REVIEW.
2. THE STRUCTURAL CONTRACT PLANS AND DETAIL DRAWINGS ARE ONLY COMPLETE WHEN USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL/SITE DRAWINGS. CONTRACTOR(S) SHALL REFER TO THE COMPLETE SET OF DRAWINGS WHEN PREPARING SUBMITTAL PACKAGES.
3. THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL/SITE DRAWINGS FOR DIMENSIONS, DETAILS, ETC. OF THE ITEMS WHICH PENETRATE OR ATTACH TO THE BUILDING STRUCTURE.
4. IN CASE OF CONFLICT BETWEEN NOTES, DETAILS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
5. THE CONTRACTOR(S) SHALL COORDINATE THE DIMENSIONS ON THE STRUCTURAL DRAWINGS WITH THOSE ON THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL/SITE DRAWINGS. THE CONTRACTOR(S) SHALL IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ARCHITECT.
6. CONTRACTOR(S) SHALL VISIT SITE PRIOR TO FINALIZING PRICING AND PROPOSAL AND SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN FIELD PRIOR TO STARTING WORK. CONTRACTOR(S) SHALL NOTIFY ARCHITECT IMMEDIATELY IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON DRAWINGS. HIGHLAND ENGINEERING, P.C. IS NOT RESPONSIBLE FOR THE ACCURACY OF EXISTING INFORMATION PROVIDED BY OTHERS. ADDITIONAL SERVICES MAY BE CHARGED FOR DESIGN WORK RESULTING FROM THE VARIATION OF EXISTING CONDITIONS.
7. WRITTEN REQUESTS FOR INFORMATION (RFI) SHALL BE INITIATED BY CONTRACTOR FOR INQUIRES, CLARIFICATIONS, DISCREPANCIES, INTERPRETATION OF CONTRACT DOCUMENTS, ETC. CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL A WRITTEN RESPONSE IS RECEIVED FROM THE ENGINEER.
8. IF CONTRACTOR DETERMINES THAT A CHANGE IN THE SCOPE OF WORK EXISTS THAT WILL RESULT IN INCREASED COSTS, CONTRACTOR SHALL SUBMIT A CHANGE ORDER REQUEST TO THE PROJECT OWNER AND SHALL NOT PROCEED WITH THE CHANGED WORK UNTIL WRITTEN RESPONSE TO REQUEST HAS BEEN RECEIVED FROM OWNER.
9. REFER TO PROJECT SPECIFICATIONS FOR REQUIRED INSPECTIONS AND ASSOCIATED COSTS.
10. MANUFACTURED ITEMS SHALL COMPLY WITH CODES AND SPECIFICATIONS, INDUSTRY STANDARDS, LOCAL JURISDICTIONS AND SPECIFIC CRITERIA NOTED HEREIN. COMPLIANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, DESIGN MANUFACTURING AND INSTALLATION AND SHALL REST SOLELY ON THE MANUFACTURER.
11. ALL GALVANIZING OF STEEL SHALL CONFORM TO ASTM A123, A53, A653 OR A767.
12. THESE DRAWINGS DESCRIBE THE COMPLETED PROJECT. THEY DO NOT INDICATE ELEMENTS WHICH MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR(S) IS SOLELY RESPONSIBLE FOR THE SAFETY IN AND ABOUT THE JOB SITE. OBSERVATION VISITS BY FIELD REPRESENTATIVE (ARCHITECT/ENGINEER) SHALL NOT INCLUDE OBSERVATIONS OF THE CONTRACTORS SAFETY PROVISIONS.
13. THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR(S) RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.
14. HIGHLAND ENGINEERING, P.C. PROHIBITS THE USE OF OR THE SUITABILITY OF THESE DOCUMENTS ON EXTENSIONS OF THIS PROJECT OR OTHER PROJECTS. ANY RE-USE WITHOUT WRITTEN PERMISSION OF HIGHLAND ENGINEERING, P.C. IS AT THE SOLE RISK OF OTHERS AND WITHOUT LEGAL EXPOSURE TO OR LIABILITY TO HIGHLAND ENGINEERING, P.C.
15. HIGHLAND ENGINEERING, P.C. IS NOT RESPONSIBLE FOR SUPERVISING, DIRECTING, OR HAVING CONTROL OVER THE CONSTRUCTION WORK. HIGHLAND ENGINEERING, P.C. DOES NOT HAVE THE AUTHORITY OR RESPONSIBILITY FOR THE CONTRACTOR'S CHOSEN MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION.
16. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL SAFETY REQUIREMENTS AND REGULATIONS OF ALL LOCAL AND FEDERAL GOVERNING AUTHORITIES.

FOUNDATIONS

1. REFER TO THE PROJECT SPECIFICATIONS REQUIREMENTS FOR EXCAVATION AND PREPARATION OF THE FOUNDATIONS AND THE SLAB-ON-GRADE SUBGRADE, INCLUDING COMPACTION PROCEDURES.
2. THE CONTRACTOR SHALL PROTECT CONCRETE BEARING ELEVATIONS FROM FROST AT ALL TIMES. FROZEN SOIL BELOW CONCRETE BEARING ELEVATIONS MUST BE REMOVED.
3. ALL EXTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF 3'-6" BELOW FINISHED GRADE, U.N.O.
4. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL.
5. CONCRETE FOR THE FOUNDATIONS SHALL BE POURED THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE OWNER'S GEOTECHNICAL ENGINEER.
6. PROOF ROLLING OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER. ANY SOFT SPOTS OR AREAS DETERMINED BY THE GEOTECHNICAL ENGINEER SHALL BE IMPROVED OR REPLACED AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
7. GENERAL CONTRACTOR SHALL COORDINATE STEP FOOTING LOCATIONS WITH FINAL PRECAST CONCRETE MANUFACTURERS SHOP DRAWINGS.
8. NEW FOUNDATIONS ADJACENT TO EXISTING FOUNDATIONS SHALL BE CONSTRUCTED IN A MANNER NOT TO DISTURB OR UNDERMINE THE EXISTING FOUNDATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY BRACING AND/OR SHORING REQUIRED TO CONSTRUCT THE NEW FOUNDATIONS.

STRUCTURAL FILL UNDERNEATH FOOTINGS & SLAB-ON-GRADE

1. APPROVED MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS, MOISTURE CONDITIONED AS REQUIRED TO ACHIEVE COMPACTION TO A MINIMUM OF 95% MODIFIED PROCTOR UNDER FOOTINGS. COMPACTION OF FILL SOILS USED FOR SLAB-ON-GRADE SUBGRADE CONSTRUCTION SHALL BE SIMILARLY COMPACTED TO 95% OF STANDARD PROCTOR.
2. SUPERVISION OF THE PLACEMENT OF COMPACTED STRUCTURAL FILL SHALL BE BY A QUALIFIED GEOTECHNICAL ENGINEER/OWNER'S GEOTECHNICAL ENGINEER.

BACKFILL

1. ALL BACKFILL SHALL BE ACCOMPLISHED USING MATERIALS CONSISTING OF BANK RUN GRAVEL, CRUSHED STONE AND/OR MATERIAL APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER WITH OPTIMUM MOISTURE CONTENT TO COMPACTING AND SHALL BE FREE FROM DEBRIS.
2. BACKFILL SHALL BE PLACED EQUALLY ON BOTH SIDES OF FOUNDATION WALLS AND GRADE BEAMS. NO BACKFILL SHALL BE PLACED AGAINST BASEMENT WALLS UNTIL THE UPPER BRACING FLOORS ARE IN PLACE OR UNTIL ADEQUATE BRACING IS INSTALLED.

CONCRETE

1. THE COMPRESSIVE STRENGTH OF GROUT USED TO CONSTRUCT LEVEL COLUMN BEARING PLATES SHALL MATCH THE COMPRESSIVE STRENGTH OF THE SUPPORTING CONCRETE.
2. CONCRETE OR CONCRETE ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED IN ANY CONCRETE.
3. CONCRETE SHALL BE ADEQUATELY CONSOLIDATED DURING PLACEMENT. NEITHER OVER CONSOLIDATING NOR TRANSPORTING CONCRETE WITH VIBRATORS SHALL BE PERMITTED.
4. PREPARE AND TEST CONCRETE CYLINDERS AS OUTLINED IN CHAPTER 16 OF ACI 301 OR IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS.
5. COLD WEATHER CONCRETE SHALL BE IN ACCORDANCE WITH ACI 306. HOT WEATHER CONCRETE SHALL BE IN ACCORDANCE WITH ACI 305.
6. ALL REINFORCING BARS AND ACCESSORIES SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARDS 315 AND 315R.
7. WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED UNLESS SHOWN ON THE DRAWINGS. WHEN WELDING IS SHOWN, WELDS MUST COMPLY WITH "RECOMMENDED PRACTICE FOR WELDING REINFORCEMENT STEEL, METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION", AWS D1.4. IN NO CASE SHALL WELDING BE PERMITTED AT BAR BENDS, NOR TACK WELDING OF CROSSING BARS.
8. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
SLABS, WALLS, JOISTS	¾"
BEAMS, COLUMNS	1½"

9. WALL POURS SHALL BE LIMITED TO 100 FEET. THE END OF POURS SHALL BE BULKHEADED WITH A SHEAR KEY AND DOWELS TO ENGAGE THE ADJACENT POUR. EXPOSED WALLS SHALL HAVE UNIFORM CONTROL JOINTS NOT TO EXCEED 20 FEET ON CENTER.
10. SLABS-ON-GRADE SHALL HAVE CONTROL JOINTS IN A SQUARE OR RECTANGULAR PATTERN. THE JOINT SPACING SHALL BE LIMITED TO THREE (3) TIMES THE SLAB THICKNESS (IN FEET) OR 12 FEET, WHICHEVER IS LESS. (U.N.O. ON DRAWINGS)
11. VAPOR BARRIER (AS NOTED ON ARCHITECTURAL DRAWINGS/SPECIFICATIONS) SHALL BE INSTALLED IN MAXIMUM SHEET SIZE AND A MINIMUM OF JOINTS. JOINTS SHALL BE LAPPED A MINIMUM OF 6" AND SHALL BE FULLY TAPED. LOCATION OF VAPOR BARRIER BELOW SLAB SHALL BE BASED ON OWNER'S USE AND SELECTED ARCHITECTURAL FINISH TREATMENTS. CONTRACTOR SHALL REFER TO THE LATEST EDITION OF ACI 302 FOR RECOMMENDED LOCATION. CONTRACTOR SHALL ALSO CONSULT PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. CARE SHALL BE TAKEN TO PREVENT RUPTURE OF VAPOR BARRIER.
12. GENERAL CONTRACTOR SHALL COORDINATE AND CHECK WITH TRADE CONTRACTORS, ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO CONCRETE WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY BEFORE PERMITTING CONCRETE PLACEMENT. CONCRETE SURFACES SHALL BE SLOPED AS SHOWN ON DRAWINGS OR AS REQUIRED.
13. ALUMINUM, OR MATERIALS CONTAINING ALUMINUM, SHALL NOT BE PERMITTED IN THE CONCRETE UNLESS AN ADEQUATE COATING TO PREVENT ALUMINUM-CONCRETE REACTION IS PROVIDED. THIS INCLUDES PUMPING CONCRETE THROUGH ALUMINUM PIPE.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE REFERENCED CODES AND STANDARDS NOTED ABOVE.
2. HORIZONTAL ELEMENTS SHALL BE DETAILED, MANUFACTURED AND INSTALLED WITH THE NATURAL CAMBER UP.
3. TYPICAL BEAM CONNECTIONS SHALL BE DESIGNED FOR 50% OF THE 'ALLOWABLE UNIFORM LOAD IN KIPS' AS FOUND IN THE MANUAL OF STEEL CONSTRUCTION, UNLESS NOTED OTHERWISE ON DRAWINGS. THE STEEL CONTRACTOR HAS THE OPTION OF BOLTED OR WELDED CONNECTIONS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
4. ALL WELDED CONNECTIONS AND JOINTS SHALL BE PERFORMED USING AWS PREQUALIFIED WELDING PROCEDURES AND AWS CERTIFIED WELDERS.
5. ALL BOLTED CONNECTIONS SHALL CONTAIN A MINIMUM OF TWO (2) BOLTS.
6. POST-INSTALLED ANCHORS SHALL BE PROVIDED TO ANCHOR STEEL TO MASONRY OR CONCRETE WHEN ANCHOR BOLTS, BEARING PLATES OR OTHER ANCHORAGE IS NOT SPECIFIED AND SHALL BE INSTALLED PER MANUFACTURERS WRITTEN INSTRUCTION WITH MINIMUM EFFECTIVE EMBEDMENT DEPTH OF 8 TIMES ANCHOR DIAMETER, U.N.O.
7. STEEL BEAMS SHALL BEAR A MINIMUM OF 8" ON CONCRETE OR MASONRY, UNLESS NOTED OTHERWISE ON DRAWINGS. MINIMUM ANCHORAGE TO CONCRETE OR MASONRY SHALL BE (2) ½" DIAMETER HOOKED ANCHOR BOLTS OR HEADED STUDS WITH 4" EMBEDMENT.
8. STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF APPROVED PRIME PAINT, 2 MILS DFT, UNLESS NOTED OTHERWISE ON DRAWINGS OR ARCHITECTURAL SPECIFICATIONS. REFER TO ARCHITECTURAL SPECIFICATIONS FOR ADDITIONAL PAINTING REQUIREMENTS FOR EXPOSED STRUCTURAL STEEL.
9. STEEL/LINTELS IN EXTERIOR WALLS SHALL BE HOT DIPPED GALVANIZED, U.N.O.
10. ALL COPES SHALL BE SHAPED NOTCH FREE TO A MINIMUM RADIUS OF ½ INCH
11. A HEAVY COATING OF ASPHALTIC PAINT SHALL BE APPLIED TO PORTIONS OF STRUCTURAL STEEL EXPOSED TO THE EARTH. SEE ARCHITECTURAL SPECIFICATIONS FOR REQUIREMENTS.

WOOD

1. WOOD (1"x4") OR METAL CROSS BRIDGING SHALL BE PROVIDED AT NOT OVER 8 FEET ON CENTER FOR ALL WOOD JOISTS. SOLID WOOD BLOCKING OF THE SAME DIMENSIONS SHALL BE PROVIDED AT JOIST SUPPORTS.
2. PLYWOOD DECKS SHALL BE GLUED AND NAILED, U.N.O. ON DRAWINGS.
3. TEMPORARY BRACING SHALL BE REQUIRED TO INSURE ALIGNMENT AND STABILITY OF TRUSSES DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL INSURE THE TEMPORARY BRACING COMPLIES WITH THE CODES AND STANDARDS NOTED ABOVE AND THE LOCAL GOVERNING AUTHORITIES.
4. ALL EXTERIOR EXPOSED WOOD AND WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.
5. GALVANIZED OR COATED CONNECTORS SHALL BE USED FOR ALL OUTDOOR WOOD CONNECTIONS. CONNECTOR TYPE SHALL BE COMPATIBLE WITH WOOD TREATMENT AND FASTENERS.
6. MINIMUM NAILED CONNECTIONS SHALL BE IN ACCORDANCE WITH IBC 2015 TABLE 2304.10.1
7. SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WALLS W/(1) ½"ø CAST-IN-PLACE A.B. W/7" MIN. EMBED INTO WALL W/STANDARD HOOK @ 6'-0" O.C. MAX., MINIMUM (2) PER PLATE AND (1) A.B. WITHIN 1'-0" OF EACH END TYP., U.N.O. ON DRAWINGS.

WOOD TRUSSES

1. WOOD TRUSSES AND WALL STUDS SHALL ALIGN. PROVIDE ADDITIONAL STUDS AT TRUSS BEARING AS REQUIRED.
2. TEMPORARY BRACING SHALL BE REQUIRED TO INSURE ALIGNMENT AND STABILITY OF TRUSSES DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL INSURE THE TEMPORARY BRACING COMPLIES WITH THE CODES AND STANDARDS ABOVE AND THE LOCAL GOVERNING AUTHORITIES.
3. ROOF TRUSSES SHALL BE DESIGNED FOR LIVE LOAD DEFLECTIONS OF L/360 AND TOTAL LOAD DEFLECTIONS OF L/240.
4. SHOP DRAWINGS AND CALCULATIONS, SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF THE PROJECT, SHALL BE SUBMITTED FOR EACH WOOD TRUSS. THE SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE: TRUSS DIMENSIONS, LOADING CONDITIONS WITH MEMBER FORCES, MEMBER SIZES AND MEMBER SPECIES WITH WORKING STRESS, AND CONNECTION LOCATION AND SIZES.
5. TOP CHORD BRACING PROVIDED BY ROOF SHEATHING, SEE MATERIALS NOTES THIS SHEET.
6. BOTTOM CHORD LATERAL BRACING PROVIDED BY 2x6 (FLATWISE) @ 6'-0" O.C., LAPPED OVER TWO TRUSSES AND DIAGONAL BRACING 2x6 (FLATWISE) @ 10'-0" O.C., TO BE COORDINATED W/TRUSS MANUFACTURER REQUIREMENTS, SEE GENERAL NOTES FOR MATERIALS.
7. TRUSS WEB LATERAL BRACING PROVIDED BY 2x4 (FLATWISE), TO BE COORDINATED W/TRUSS MANUFACTURER REQUIREMENTS, SEE GENERAL NOTES FOR MATERIALS.
8. GABLE END WALL/TRUSSES LATERAL BRACING PROVIDED BY 2x6 (SPF #2) DIAGONAL BRACING @ 6'-0" O.C., SEE GENERAL NOTES FOR MATERIALS.
9. ALL EXTERIOR EXPOSED WOOD SHALL BE TREATED PER THE ARCHITECTURAL SPECIFICATIONS.
10. GALVANIZED OR COATED CONNECTORS SHALL BE USED FOR ALL OUTDOOR WOOD CONNECTIONS. CONNECTOR TYPE SHALL BE COMPATIBLE WITH WOOD TREATMENT AND FASTENERS.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
GENERAL NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
S001
OF
11

MASONRY

1. MASONRY WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVING TWO OR MORE WYTHES, EXCEPT CAVITY WALLS, OF BRICK AND/OR CONCRETE BLOCK SHALL HAVE VERTICAL COLLAR JOINTS FILLED WITH MORTAR FOR THEIR FULL HEIGHT. PARGING IS NOT ACCEPTABLE.

2. THE OWNER SHALL RECEIVE AFFIDAVITS FROM AN APPROVED TESTING LABORATORY CERTIFYING ALL MASONRY UNITS CONFORM TO THEIR RESPECTIVE ASTM REQUIREMENTS PRIOR TO THEIR DELIVERY TO THE JOB SITE.

3. PROVIDE HORIZONTAL JOINT REINFORCING, MINIMUM W1.7 EACH FACE (9 GAGE WIRE DIAMETER EACH FACE) AT EVERY SECOND BLOCK COURSE, 16" O.C. VERTICALLY IN ALL WALLS. INSTALL JOINT REINFORCEMENT IN THE FIRST AND SECOND BED JOINTS, EIGHT INCHES (8") O.C. IMMEDIATELY ABOVE AND BELOW MASONRY OPENINGS. THE JOINT REINFORCEMENT SHALL BE EXTENDED A MINIMUM OF 24" BEYOND JAMBS.

4. VERTICAL REINFORCEMENT SHALL BE #5 @ 32" O.C. MINIMUM OR AS NOTED ON THE PLAN. PROVIDE TWO (2) BARS, ONE (1) AT EACH SIDE OF CONTROL JOINTS, EACH FACE, SAME SIZE AS VERTICAL REINFORCEMENT, EACH SIDE OF OPENING AND AT BUILDING CORNERS, FULL HEIGHT. PROVIDE TWO (2) BARS UNDER ALL GRILLAGE BEAMS AND BEAM BEARING PLATES, UNLESS NOTE OTHERWISE. PROVIDE DOWELS TO FOUNDATION WALLS BELOW. DOWELS SHALL MATCH WALL VERTICAL REINFORCING BARS NOTED AND SHALL BE 5'–0" LONG AND EMBEDDED 2'–6" INTO THE FOUNDATION WALL BELOW, U.N.O.

5. GROUT ALL CAVITIES AND/OR BOND BEAMS CONTAINING REINFORCEMENT SOLID. CAVITIES SHALL BE GROUTED IN LIFTS NOT EXCEEDING 5'–0". DO NOT DISPLACE THE REINFORCEMENT WHILE PLACING THE GROUT.

6. THE REINFORCEMENT PLACEMENT SHALL BE CHECKED PRIOR TO GROUTING THE FIRST LIFT OF WALL ABOVE THE SLAB AND PRIOR TO GROUTING THE TOP LIFT OF THE WALL. AT EACH REINFORCEMENT CHECK, THREE (3) GROUT AND MORTAR SPECIMENS SHALL BE TAKEN FOR EACH 500 SQUARE FEET OF MASONRY BEING ERECTED. TEST SPECIMENS AT SEVEN (7) DAYS, AT TWENTY–EIGHT (28) DAYS, AND HOLD THE THIRD SPECIMEN FOR FURTHER TESTING, AS REQUIRED.

7. SPLICED REINFORCEMENT SHALL BE LAPPED 24" OR FORTY EIGHT (48) BAR DIAMETERS, WHICHEVER IS GREATER.

8. CONTROL JOINTS ARE REQUIRED IN ALL WYTHES OF MASONRY AT A MAXIMUM HORIZONTAL SPACING OF 25'–0" O.C. REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF CONTROL JOINTS. NO PLATES SHALL BE LOCATED WITHIN TWO (2) FEET OF BEAM BEARING. NO RIGID ELEMENTS SHALL BE INSTALLED ACROSS JOINT THAT WILL HINDER THE PERFORMANCE OF THE JOINT.

9. BOND BEAMS SHALL BE LAPPED A MINIMUM OF 4'–0" IN STEPPED BOND BEAM COURSES.

10. A 1½" FLEXIBLE JOINT SHALL BE PROVIDED ON ALL SIDES OF STEEL BEAMS AND/OR STEEL JOISTS PENETRATING NON–BEARING MASONRY WALLS.

11. CALCIUM CHLORIDE AND/OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT MIXES. NO ANTI–FREEZE CHEMICALS SHALL BE USED TO LOWER THE FREEZING POINT OF EITHER MORTAR OR GROUT.

12. MASONRY SHALL NOT BE LAID IN HOT WEATHER OR COLD WEATHER UNLESS THE RECOMMENDATIONS IN ACI 530.1 ARE STRICTLY ADHERED TO.

13. MASONRY BELOW GRADE SHALL BE SET WITH TYPE 'S' MORTAR. THE UNITS SHALL BE SOLID OR BE GROUTED SOLID.

14. MASONRY WALLS SHALL BE BRACED TO WITHSTAND THE CODE SPECIFIED HORIZONTAL LOADS DURING THEIR ERECTION, AND UNTIL THEIR DESIGN SUPPORTS ARE IN PLACE. BRACING SYSTEMS SHALL BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER. SHORES AND/OR FORMS SHALL NOT BE REMOVED, NOR CONCENTRATED LOADS APPLIED, UNTIL MASONRY HAS SET ADEQUATELY ENOUGH TO CARRY ITS OWN WEIGHT AND ANY APPLIED LOADS.

15. MASONRY WALLS THAT ARE NON–LOAD BEARING SHALL BE ANCHORED TO THE STRUCTURE ABOVE PER THE STRUCTURAL DETAILS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE LOCATION AND EXTENT OF ALL MASONRY WALLS.

16. QUALITY ASSURANCE AND INSPECTION OF WORK, AS DEFINED IN THE CODES AND STANDARDS IN THE GENERAL NOTES, THE ARCHITECTURAL SPECIFICATIONS AND LOCAL AUTHORITIES SHALL BE STRICTLY ADHERED TO.

17. LINTELS SHALL BEAR ON 1'–4" x 1'–4" SOLID, OR GROUTED SOLID MASONRY EACH END, UNLESS NOTED OTHERWISE. PROVIDE BEARING PLATES OR MASONRY ANCHORS, AS NOTED ON THE DRAWINGS. STEEL LINTELS SHALL BE WELDED TO BEARING PLATES.

18. LINTELS IN EXTERIOR WALLS SHALL BE HOT DIPPED GALVANIZED, U.N.O.

19. EMBEDDED STEEL SHALL HAVE ADJUSTABLE MASONRY ANCHORS SPACED NOT GREATER THAN 16" VERTICALLY, 32" HORIZONTALLY, UNLESS NOTED OTHERWISE.

SPECIAL INSPECTIONS

1. ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY. THE SPECIAL INSPECTOR FROM THIS TESTING AGENCY SHALL OBSERVE THE WORK FOR THE CONFORMANCE TO THE DESIGN DRAWINGS AND SPECIFICATIONS.

2. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OR THE ARCHITECT OF RECORD, AND ALL OTHER DESIGNATED INDIVIDUALS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF NOT CORRECTED, TO THE PROPER DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL.

3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS, SPECIFICATIONS, SOILS REPORT, AND APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE.

4. THE FOLLOWING ITEMS MARKED 'X' REQUIRE SPECIAL INSPECTIONS: (REFER TO IBC 2015 CHAPTER 17 FOR ADDITIONAL INFORMATION)

SHOP DRAWING AND PRODUCT SUBMITTAL

1. SHOP DRAWINGS AND PROJECT SHALL BE FULLY REVIEWED BY THE CONTRACTOR PRIOR TO THE SUBMITTAL TO THE ARCHITECT/ENGINEER. SHOP DRAWINGS/CALCULATIONS SHALL BE SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF ILLINOIS.

2. SHOP DRAWINGS/CALCULATIONS/SUBMITTALS SHALL BE PROVIDED TO THE ARCHITECT/ENGINEER AND SHALL INCLUDE, BUT NOT BE LIMITED TO SIZE, SPACING, CONNECTIONS, BEARING STIFFENERS, WEB STIFFENERS, BLOCKING, PLACEMENT, ETC. FOR THE FOLLOWING:

   - MASONRY WORK: (MASONRY MORTAR, GROUT, PLACEMENT, PLACEMENT OF ALL STEEL REINFORCING)
   - CONCRETE WORK: (MIX DESIGNS, PLACEMENT OF ALL STEEL REINFORCEMENT)
   - STEEL FRAMING, CONNECTION DESIGN, COATING.
   - WOOD TRUSSES FRAMING & ALL CONNECTIONS.

COMPONENT AND CLADDING WIND LOAD SUMMARY (STRENGTH LEVEL)

ROOF SURFACE	ZONE	<10 SF TRIBUTARY AREA	50 SF TRIBUTARY AREA	>100 SF TRIBUTARY AREA
ROOF:	NEG ZONE 1	−27.1	−25.3	−24.6
	NEG ZONE 2	−24.6	−38.3	−34.6
	NEG ZONE 3	−69.7	−59.1	−54.6
	POSITIVE	+17.0	+13.5	+12.0
WALL SURFACE	ZONE	<10 SF TRIBUTARY	50 SF TRIBUTARY	>500 SF TRIBUTARY
WALLS:	NEG ZONE 4	−32.1	−29.0	−24.6
	NEG ZONE 5	−39.6	−33.4	−24.6
	POSITIVE	+29.6	+26.5	+22.0

MAIN WIND FORCE RESISTING SYSTEM LOAD SUMMARY (STRENGTH LEVEL)

WALL/ROOF SURFACE	PRESSURES (PSF)	
	W/+GCpi	W/−GCpi
WINDWARD WALL	+12.1	+21.1
LEEWARD WALL	−15.2	−6.1
SIDE WALL	−19.4	−10.4
ROOF:		
0 TO H/2 (PARALLEL GABLE)	−23.9	+1.0
H/2 TO H (PARALLEL GABLE)	−23.9	+1.0
H TO 2H (PARALLEL GABLE)	−15.2	+1.0
> 2H (PARALLEL GABLE)	−10.9	+1.0
WINDWARD GABLE	−9.1	+10.6
LEEWARD GABLE	−17.3	−8.3

ADDITION & RENOVATIONS AT
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SHEET IDENTIFICATION
GENERAL NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
S002
OF
11

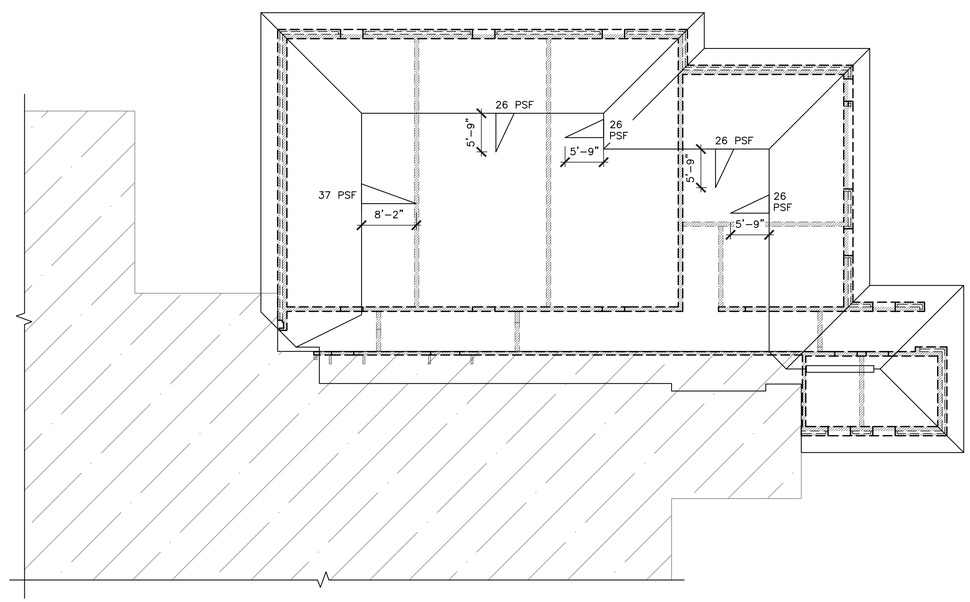
2015 IBC INSPECTION SCHEDULE

				VERIFICATION AND INSPECTION	YES	
					CONTINUOUS	PERIODIC
1				STEEL CONSTRUCTION (IBC 2015 – 1705.2)		
	A			MATERIAL VERIFICATION OF HIGH–STRENGTH BOLTS, NUTS AND WASHERS		X
	B			INSPECTION OF HIGH STRENGTH BOLTING		
		a		BEARING TYPE		X
		b		PRETENSIONED/SLIP CRITICAL TYPE W/MATCHMARKING, TWIST OFF OR DIRECT TENSION INDICATOR METHODS		X
		c		PRETENSIONED/SLIP CRITICAL TYPE WITHOUT MATCHMARKING, TWIST OFF OR DIRECT TENSION INDICATOR METHODS	X	
	C			INSPECTION OF WELDING		
		a		COMPLETE AND PARTIAL PENETRATION WELDS	X	
		b		MULTI PASS FILLET WELDS	X	
		c		SINGLE PASS FILLET WELDS > 5/16"	X	
		d		SINGLE PASS FILLET WELDS ≤ 5/16"		X
		e		PLUG AND SLOT WELDS	X	
		f		FLOOR AND ROOF DECK		X
	D			INSPECTION OF STEEL FRAME DETAILS		X
	E			MATERIAL VERIFICATION OF COLD–FORMED STEEL DECK		X
	F			ANCHORAGE OF COLD–FORMED STEEL TO BUILDING FRAME		X
2				CONCRETE CONSTRUCTION (IBC 2015 – 1705.3)		
	A			INSPECTION OF REINFORCING STEEL		X
	B			INSPECTION OF BOLTS INSTALLED IN CONCRETE (CAST IN PLACE)	X	
	C			INSPECTION OF POST – INSTALLED ANCHOR IN CONCRETE		X
	D			VERIFY USE OF REQUIRED MIX DESIGN		X
	E			SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT, AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT TIME OF MAKING SPECIMENS FOR STRENGTH TESTS.	X	
	F			INSPECTION OF CONCRETE PLACEMENT	X	
	G			INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TECHNIQUES		X
	H			INSPECTION OF FORM WORK FOR SHAPE, LOCATION & PLACEMENT		X
3				MASONRY CONSTRUCTION (IBC 2015 – 1705.4)		
	A			COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED		X
	B			VERIFICATION OF F'm PRIOR TO CONSTRUCTION		X
	C			AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE.		
		a		PROPORTIONS OF SITE–PREPARED MORTAR.		X
		b		CONSTRUCTION OF MORTAR JOINTS.		X
		c		LOCATION OF REINFORCEMENT		X
	D			DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:		
		a		SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X
		b		TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.		X
		c		SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT		X
		d		WELDING OF REINFORCING BARS.	X	
		e		PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)		X
	E			PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
		a		CLEANLINESS OF GROUT SPACE.		X
		b		PLACEMENT OF REINFORCEMENT AND CONNECTORS.		X
		c		PROPORTIONS OF SITE–PREPARED GROUT.		X
		d		CONSTRUCTION OF MORTAR JOINTS.		X
	F			PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	X	
	G			GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS.	X	
4				SOILS (IBC 2015 – 1705.6)		
	A			VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		X
	B			VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		X
	C			PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		X
	D			VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	
	E			PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		X

2015 IBC INSPECTION SCHEDULE (CONT.)

				VERIFICATION AND INSPECTION	YES	
					CONTINUOUS	PERIODIC
5				WOOD CONSTRUCTION (IBC 2015 – 1705.5)		
	A			INSPECT GRADING OF WOOD MATERIAL		
		a		SAWN LUMBER FRAMING		X
		b		STRUCTURAL COMPOSITE LUMBER		X
		c		WOOD STRUCTURAL PANELS		X
	B			INSPECT FRAMING AND DETAILS		
		a		FRAMING LAYOUT, MEMBER SIZES AND BEARING LENGTHS		X
		b		BLOCKING AND BRIDGING		X
		c		HOLES AND NOTCHES[a]		X
	C			INSPECT CONNECTIONS		
		a		BOLTED AND SCREWED CONNECTIONS, INCLUDING DIAMETER, LENGTH, SPACING AND EDGE DISTANCE		X
		b		NAILED CONNECTIONS, INCLUDING DIAMETER, LENGTH, TYPE AND SPACING OF NAILS		X
		c		PROPRIETARY HANGERS AND FRAMING ANCHORS, INCLUDING FASTENERS SIZES AND QUANTITIES		X
		d		TIE–DOWN ANCHORS, INCLUDING ANCHOR ROD SIZE AND FASTENERS SIZES AND QUANTITIES		X
	D			INSPECT SHEAR WALLS AND DIAPHRAGMS		
		a		PANEL GRADE AND THICKNESS[b]		X
		b		FASTENER SIZE, LENGTH AND SPACING		X
		c		FRAMING MEMBER SIZES AT PANEL EDGES		X
		d		BLOCKING AT PANEL EDGES		X
		e		FIELD GLUING	X	
		f		HIGH–LOAD DIAPHRAGMS		X
	E			INSPECT METAL–PLATE CONNECTED WOOD TRUSSES		
		a		TEMPORARY INSTALLATION RESTRAIN/BRACING FOR TRUSS SPANNING 60 FEET MORE		X
		b		PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING FOR TRUSSES SPANNING 30 FEET OR MORE		X
		c		MULTI–PLY TRUSS CONNECTIONS		X

a. INSPECTION OF HOLES AND NOTCHED TO BE PERFORMED AFTER ELECTRICAL, MECHANICAL AND PLUMBING ROUGH–IN INSPECTIONS.
b. APPLIES TO WOOD STRUCTURAL PANELS AND GYPSUM BOARD PANELS.



1 SNOW DRIFT DIAGRAM
Scale: N.T.S.

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ADDITION & RENOVATIONS AT
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RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

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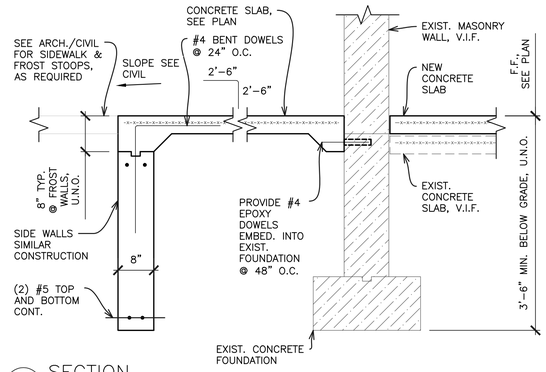
GENERAL NOTES

PROJECT INFORMATION
Date August 16, 2022
Rev. Date
RLJA Proj 2022-020

SHEET NUMBER
S003
OF
11



2 SECTION
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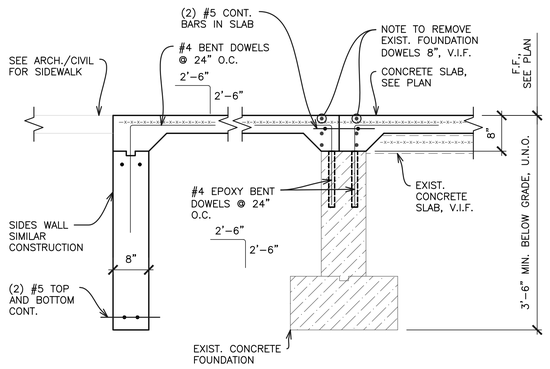

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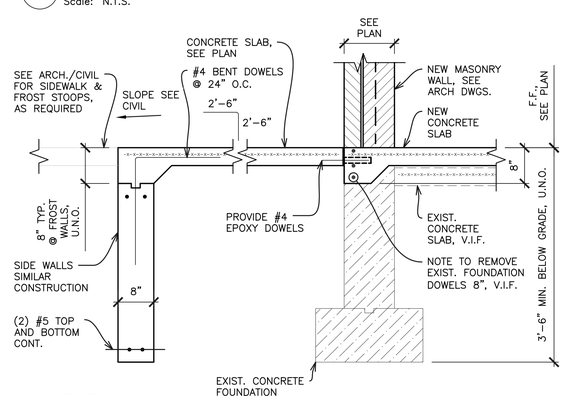

4 SECTION
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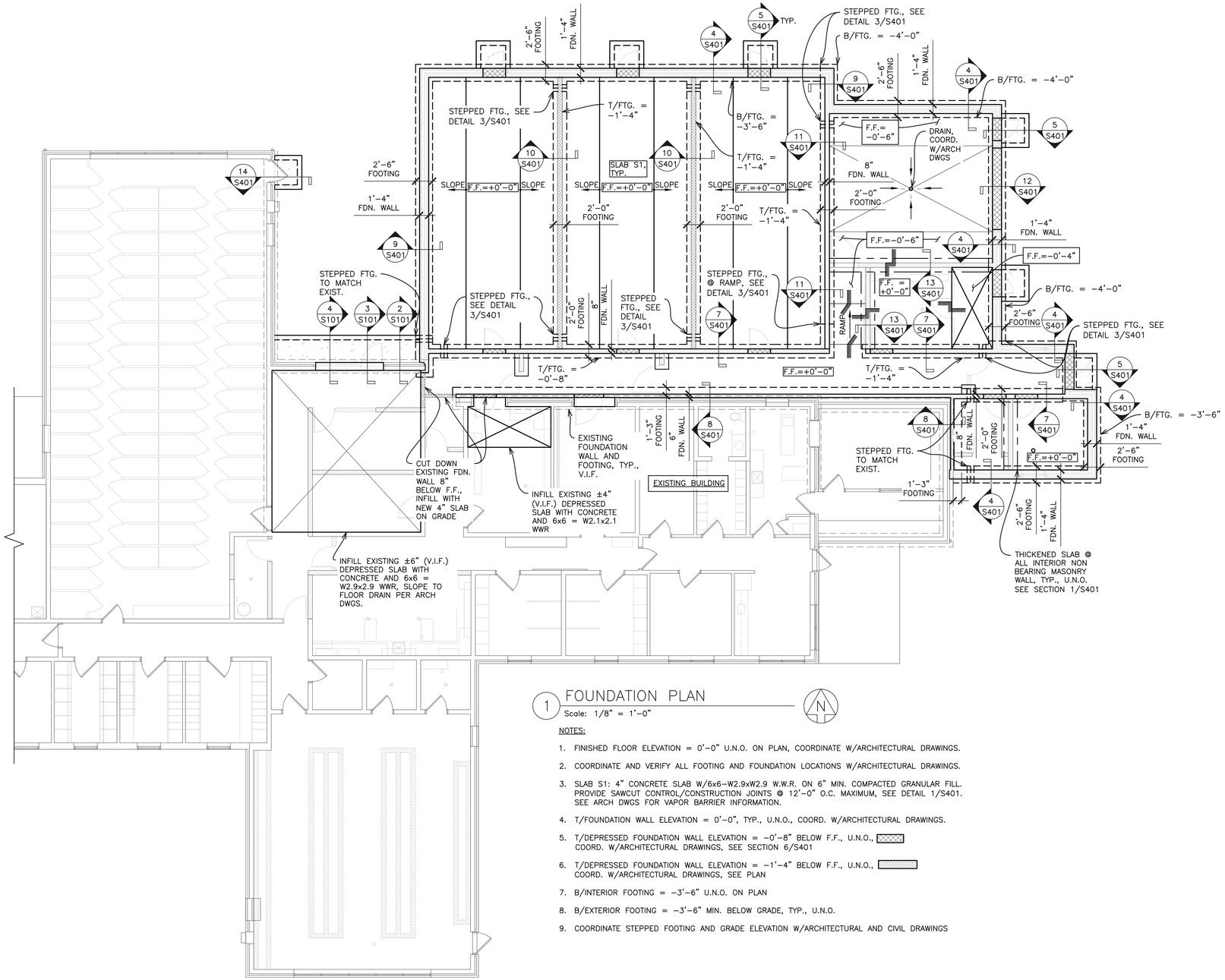
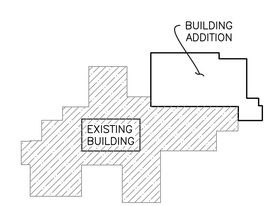


1 FOUNDATION PLAN
Scale: 1/8" = 1'-0"

NOTES:

1. FINISHED FLOOR ELEVATION = 0'-0" U.N.O. ON PLAN, COORDINATE W/ARCHITECTURAL DRAWINGS.
2. COORDINATE AND VERIFY ALL FOOTING AND FOUNDATION LOCATIONS W/ARCHITECTURAL DRAWINGS.
3. SLAB S1: 4" CONCRETE SLAB W/6x6-W2.9xW2.9 W.W.R. ON 6" MIN. COMPACTED GRANULAR FILL. PROVIDE SAWCUT CONTROL/CONSTRUCTION JOINTS @ 12'-0" O.C. MAXIMUM, SEE DETAIL 1/S401. SEE ARCH DWGS FOR VAPOR BARRIER INFORMATION.
4. T/FOUNDATION WALL ELEVATION = 0'-0", TYP., U.N.O., COORD. W/ARCHITECTURAL DRAWINGS.
5. T/DEPRESSED FOUNDATION WALL ELEVATION = -0'-8" BELOW F.F., U.N.O., COORD. W/ARCHITECTURAL DRAWINGS, SEE SECTION 6/S401
6. T/DEPRESSED FOUNDATION WALL ELEVATION = -1'-4" BELOW F.F., U.N.O., COORD. W/ARCHITECTURAL DRAWINGS, SEE PLAN
7. B/INTERIOR FOOTING = -3'-6" U.N.O. ON PLAN
8. B/EXTERIOR FOOTING = -3'-6" MIN. BELOW GRADE, TYP., U.N.O.
9. COORDINATE STEPPED FOOTING AND GRADE ELEVATION W/ARCHITECTURAL AND CIVIL DRAWINGS



KEY PLAN
Scale: N.T.S.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

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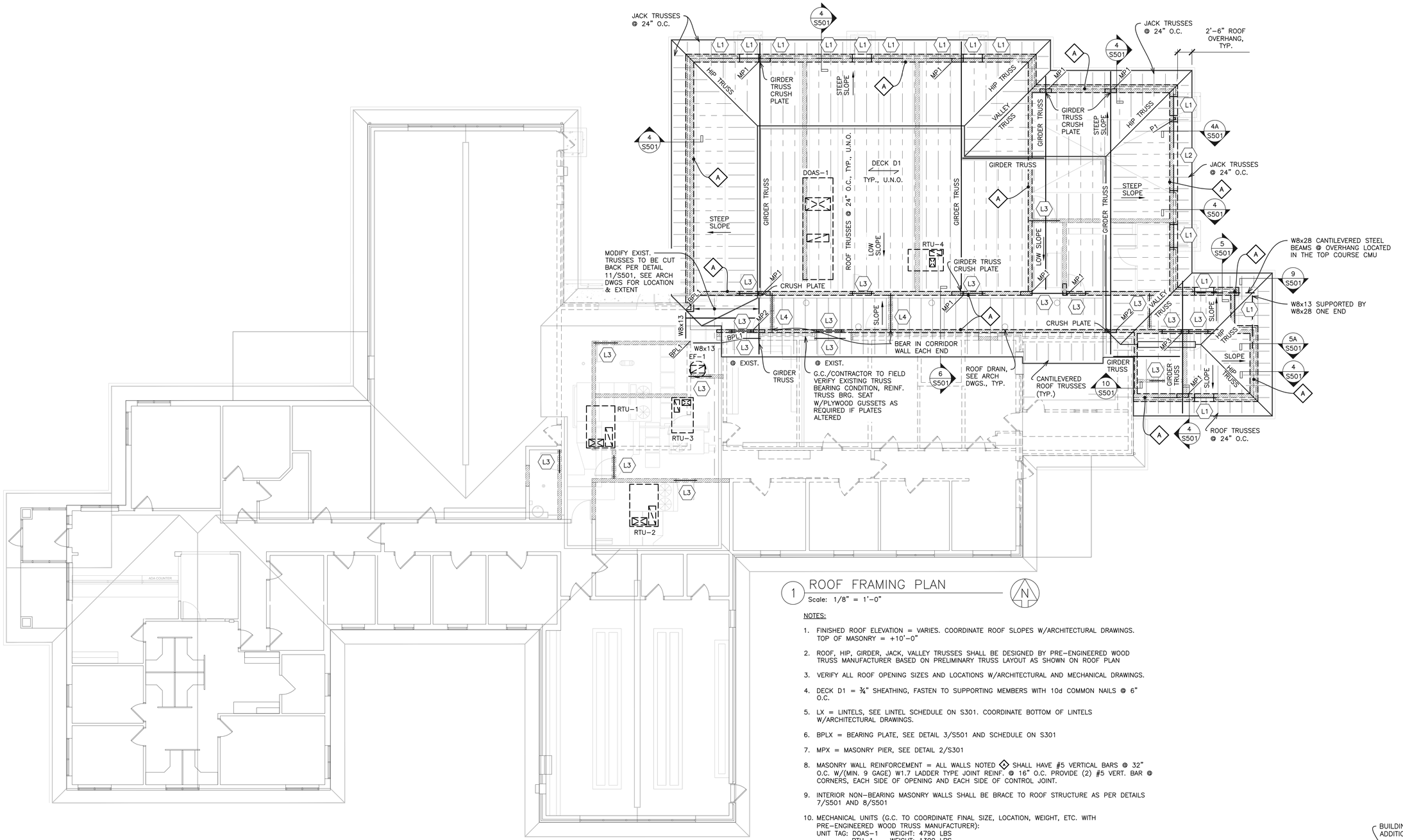
SHEET IDENTIFICATION
FOUNDATION PLAN

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
S101
OF
11



1 ROOF FRAMING PLAN

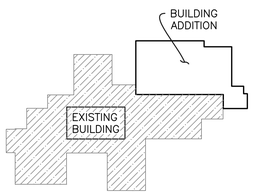
Scale: 1/8" = 1'-0"

NOTES:

1. FINISHED ROOF ELEVATION = VARIES. COORDINATE ROOF SLOPES W/ARCHITECTURAL DRAWINGS. TOP OF MASONRY = +10'-0"
2. ROOF, HIP, GIRDER, JACK, VALLEY TRUSSES SHALL BE DESIGNED BY PRE-ENGINEERED WOOD TRUSS MANUFACTURER BASED ON PRELIMINARY TRUSS LAYOUT AS SHOWN ON ROOF PLAN
3. VERIFY ALL ROOF OPENING SIZES AND LOCATIONS W/ARCHITECTURAL AND MECHANICAL DRAWINGS.
4. DECK D1 = ¾" SHEATHING, FASTEN TO SUPPORTING MEMBERS WITH 10d COMMON NAILS @ 6" O.C.
5. LX = LINTELS, SEE LINTEL SCHEDULE ON S301. COORDINATE BOTTOM OF LINTELS W/ARCHITECTURAL DRAWINGS.
6. BPLX = BEARING PLATE, SEE DETAIL 3/S501 AND SCHEDULE ON S301
7. MPX = MASONRY PIER, SEE DETAIL 2/S301
8. MASONRY WALL REINFORCEMENT = ALL WALLS NOTED ◇ SHALL HAVE #5 VERTICAL BARS @ 32" O.C. W/(MIN. 9 GAGE) W1.7 LADDER TYPE JOINT REINF. @ 16" O.C. PROVIDE (2) #5 VERT. BAR @ CORNERS, EACH SIDE OF OPENING AND EACH SIDE OF CONTROL JOINT.
9. INTERIOR NON-BEARING MASONRY WALLS SHALL BE BRACE TO ROOF STRUCTURE AS PER DETAILS 7/S501 AND 8/S501
10. MECHANICAL UNITS (G.C. TO COORDINATE FINAL SIZE, LOCATION, WEIGHT, ETC. WITH PRE-ENGINEERED WOOD TRUSS MANUFACTURER):

UNIT TAG:	WEIGHT:
DOAS-1	4790 LBS
RTU-1	1300 LBS
RTU-2	1300 LBS
RTU-3	1250 LBS
RTU-4	1800 LBS
EF-1	51 LBS

11. P1 = HSS4x4x¼ WITH ½"x8"x10" BASE PLATE WITH (2) ¾"ø HILTI KWIK BOLT 3



KEY PLAN

Scale: N.T.S.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

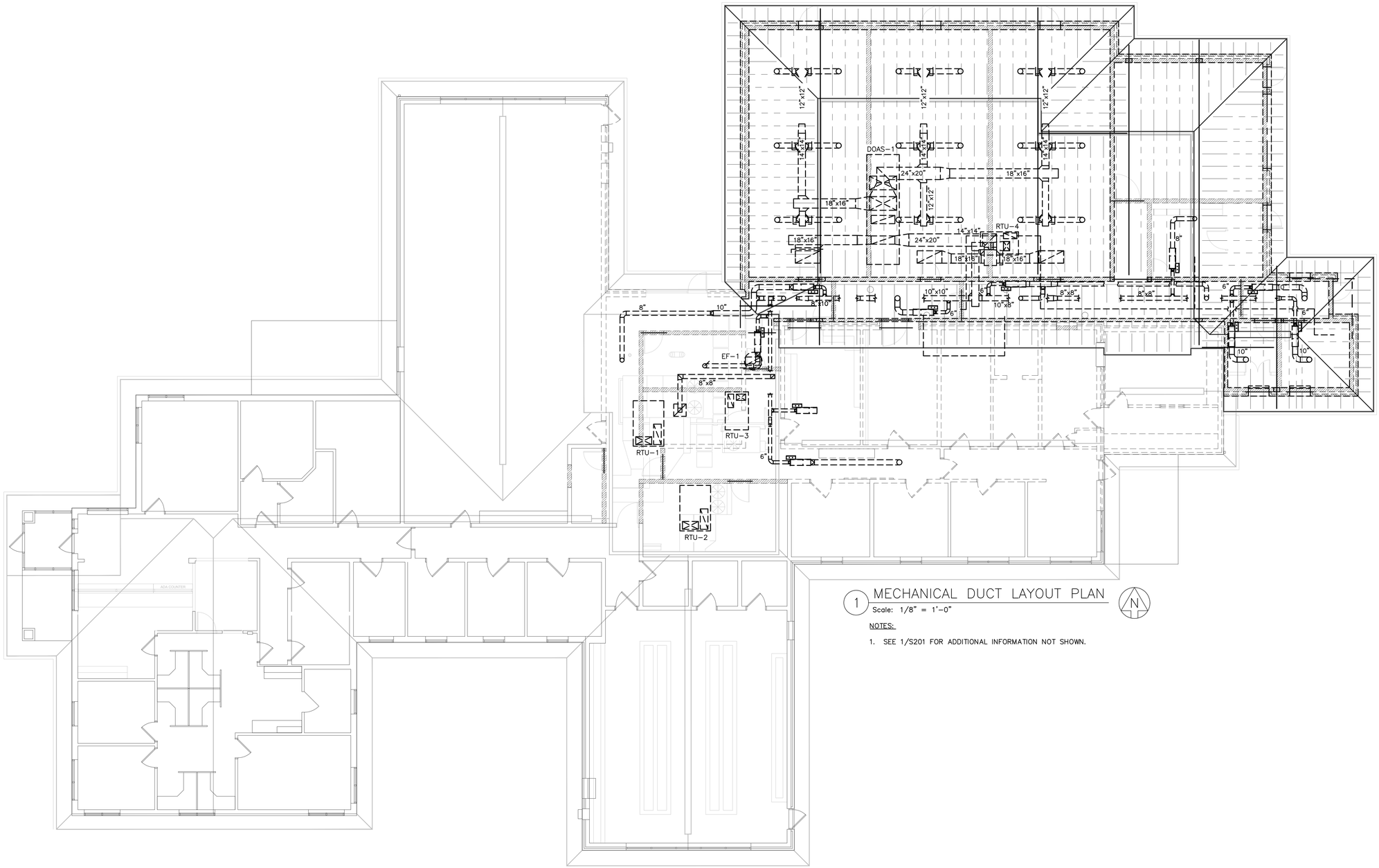
SHEET IDENTIFICATION
ROOF FRAMING PLAN

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

S201
OF
11

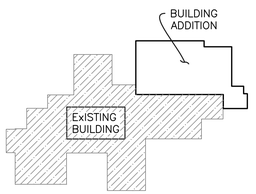


1 MECHANICAL DUCT LAYOUT PLAN

Scale: 1/8" = 1'-0"

NOTES:

1. SEE 1/S201 FOR ADDITIONAL INFORMATION NOT SHOWN.



KEY PLAN

Scale: N.T.S.

ADDITION & RENOVATIONS AT

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SHEET IDENTIFICATION

MECHANICAL DUCT LAYOUT PLAN

PROJECT INFORMATION

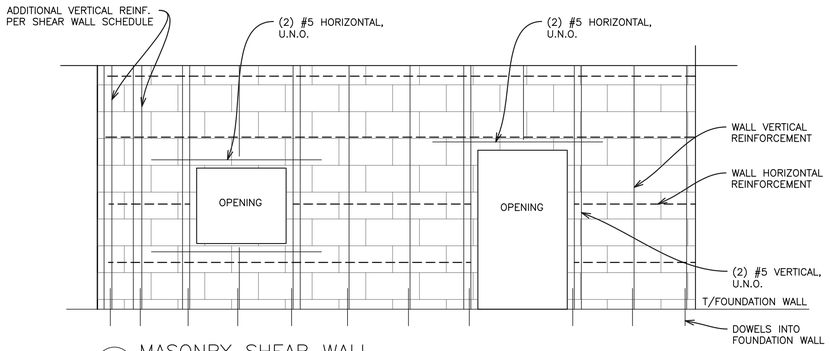
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

S202

OF

11



1 MASONRY SHEAR WALL

Scale: N.T.S.

TYPICAL REINFORCED MASONRY NOTES

TYPICAL HORIZONTAL AND VERTICAL REINFORCING BARS SHALL BE AS NOTED ON THE PLAN SHEET.
ADDITIONAL REINFORCING SHALL BE AS FOLLOWS:

1. (1) #5 VERTICAL REINFORCING BARS SHALL BE PROVIDED, CONTINUOUSLY FROM SUPPORT TO SUPPORT (FINISHED FLOOR TO ROOF) AT:

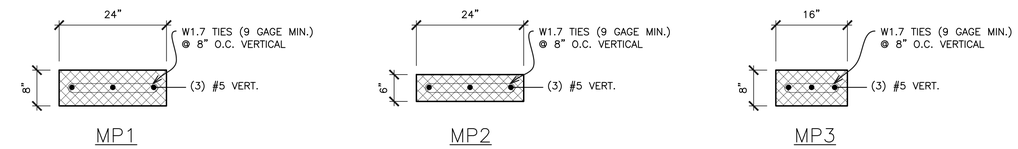
   A. EACH END OF WALL;
   B. EACH WALL INTERSECTION;
   C. EACH SIDE OF A MASONRY OPENING > 1'-0" IN WIDTH;
   D. EACH SIDE OF A MASONRY CONTROL OR EXPANSION JOINT;
   E. EACH CORNER OF THE BUILDING.

2. (1) #5 HORIZONTAL REINFORCING BARS SHALL BE PROVIDED AT:

   A. TOP AND BOTTOM OF MASONRY OPENINGS;
   B. FLOOR AND ROOF LEVELS, CONTINUOUS;
   C. TOP OF MASONRY WALLS, CONTINUOUS;
   D. BOTTOM OF MASONRY WALLS, CONTINUOUS.

3. FOR LARGE OPENINGS, PROVIDE SAME NUMBER OF BARS, EACH SIDE OF OPENING AS THAT NUMBER OF BARS INTERRUPTED BY OPENING.

4. PROVIDE DOWELS TO FOUNDATION WALLS BELOW. DOWELS SHALL MATCH REINFORCING BARS NOTED AND SHALL BE 5'-0" LONG AND EMBEDDED 2'-6" INTO THE FOUNDATION WALL BELOW



2 MASONRY PIER DETAIL

Scale: N.T.S.

REINFORCED MASONRY LINTEL SCHEDULE

MARK	MEMBERS	SHP.	BRG.	REMARKS
L1	W8x10 + HSS3½x3½x3/16 + CONT. 5/16" BOTTOM PL TO MATCH WALL WIDTH (LESS ½")	I	8"	PROVIDE BEARING PLATE BPL1 E.E. SEE DETAIL 2/S501
L2	W8x24 + CONT. 5/16" BOTTOM PL TO MATCH WALL WIDTH (LESS ½")	I	8"	PROVIDE BEARING PLATE BPL1 E.E. SEE DETAIL 2/S501
L3	W8x10 + CONT. 5/16" BOTTOM PL TO MATCH WALL WIDTH (LESS ½")	I	8"	PROVIDE BEARING PLATE BPL1 E.E. SEE DETAIL 2/S501
L4	W8x10 + CONT. 5/16" BOTTOM PL TO MATCH WALL WIDTH (LESS ½")	I	7"	SEE DETAIL 2/S501, BEAR END OF L4 IN CORRIDOR WALL EACH END

NOTES:
1. LINTELS SHALL BEAR ON SOLID/GROUTED SOLID MASONRY, SEE GENERAL NOTES AND DETAILS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING SIZES, LOCATIONS AND ELEVATIONS.

MISCELLANEOUS LINTEL SCHEDULE (NON-BEARING WALLS)

WALL THICKNESS	≤4'-0" MSY. OPNG.	4'-0" TO 8'-0" MSY. OPNG.
EACH 4"	8" MSY. BOND BM. W/(1) #4 OR L3x3x3/16	L6x3x3/16
6"	8" MSY. BOND BM. W/(2) #4	N.A.
8"	8" MSY. BOND BM. W/(2) #4 OR (2) L3½x3½x3/16	W8x13 + 5/16" PL CONT.

NOTES:
1. LINTELS SHALL BEAR ON SOLID/GROUTED SOLID MASONRY, SEE GENERAL NOTES AND DETAILS
2. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING SIZES, LOCATIONS AND ELEVATIONS.
3. FOR BEARING PLATE DETAIL, SEE 3/S501

BEARING PLATE SCHEDULE

MK	MEMBERS	REMARKS
BPL 1	½" THICK x 7" W x 8" LONG W/(2) ½"ø x 4" HEADED STUDS	SEE DETAIL 3/S501

NOTES:
1. BEARING PLATE SHALL BEAR ON SOLID/GROUTED SOLID MASONRY, SEE GENERAL NOTES AND DETAILS

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

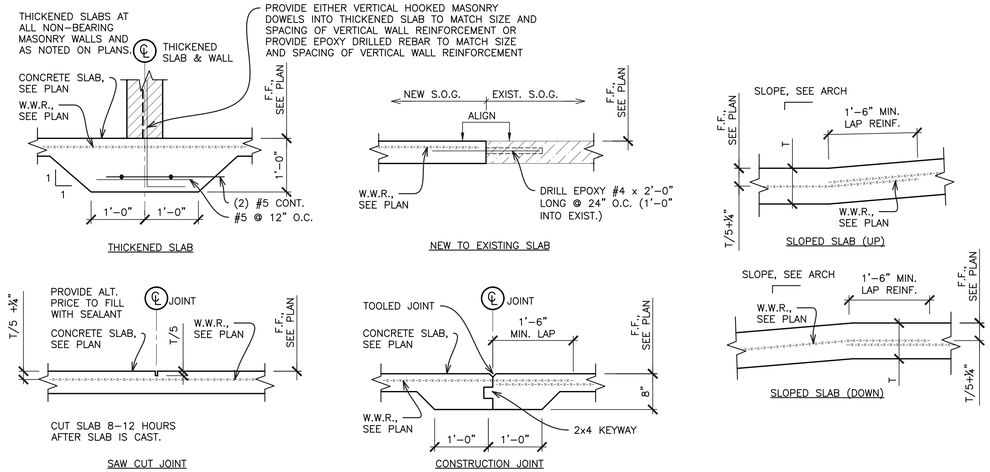
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
SCHEDULES

PROJECT INFORMATION

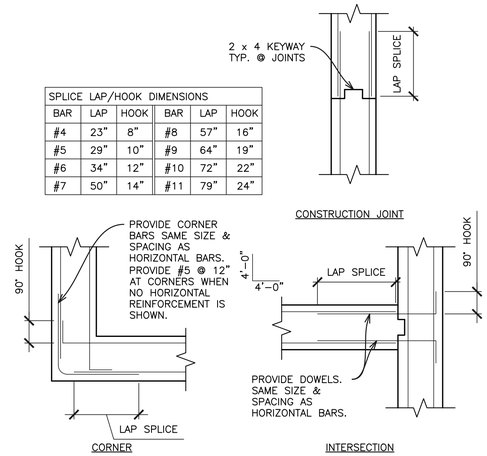
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
S301
OF
11

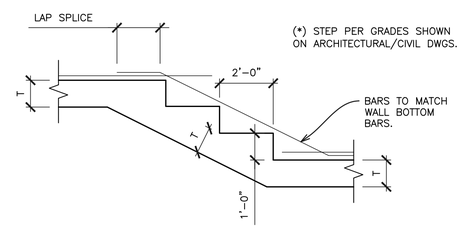


1 SLAB ON GRADE DETAILS
Scale: N.T.S.

SPLICE LAP/HOOK DIMENSIONS					
BAR	LAP	HOOK	BAR	LAP	HOOK
#4	23"	8"	#8	57"	16"
#5	29"	10"	#9	64"	19"
#6	34"	12"	#10	72"	22"
#7	50"	14"	#11	79"	24"



2 CONCRETE WALL DETAILS
Scale: N.T.S.



3 STEPPED FOOTING DETAIL
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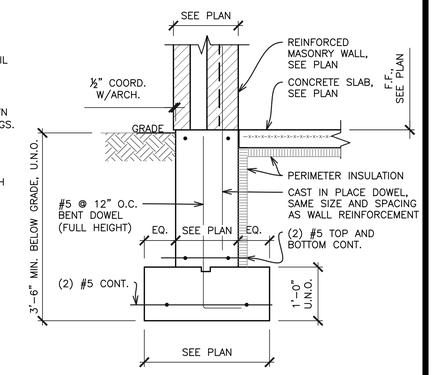

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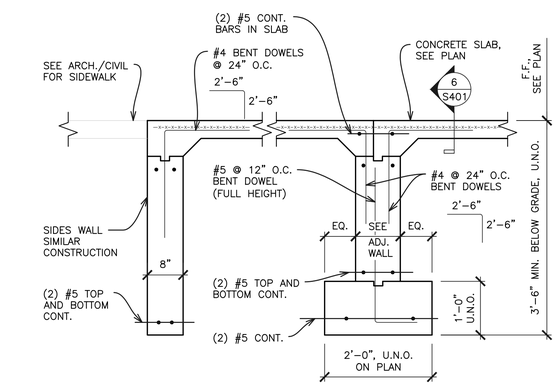

5 FOOTING DETAIL
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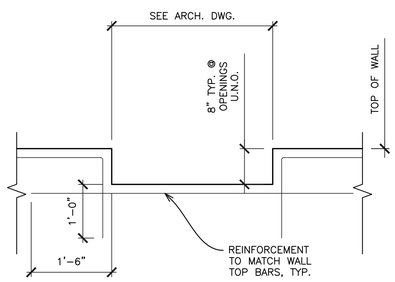

6 DEPRESSED WALL DETAIL
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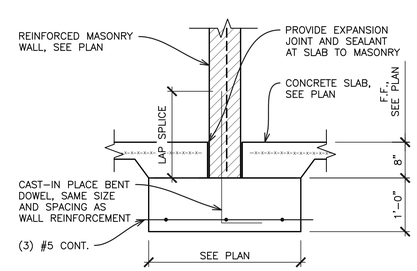

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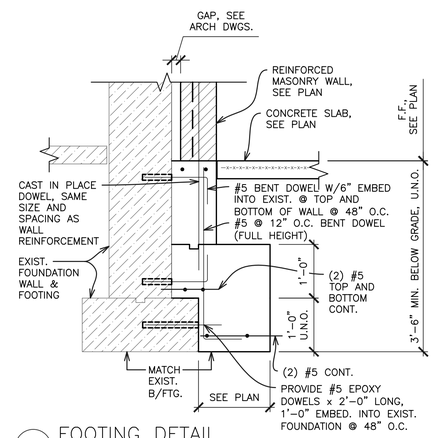

8 FOOTING DETAIL
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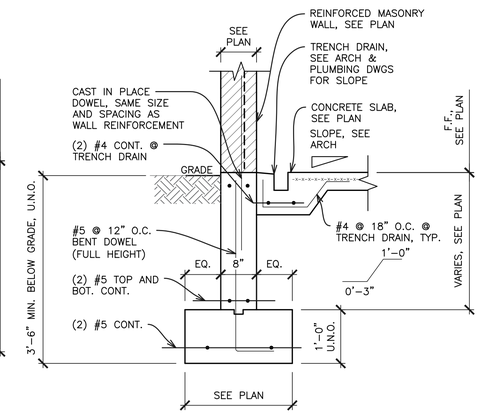

9 SECTION
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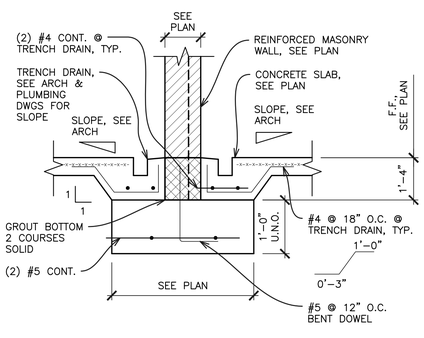

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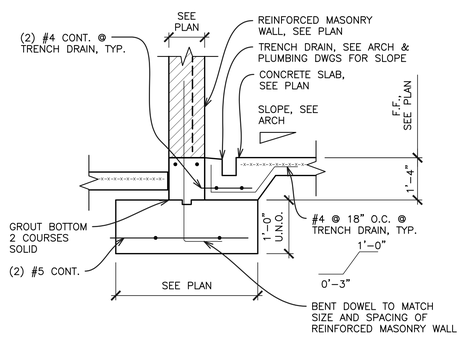

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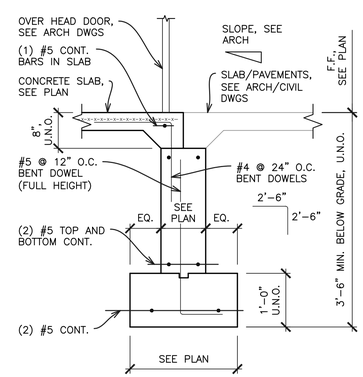

12 SECTION
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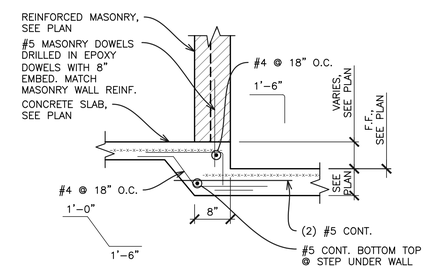
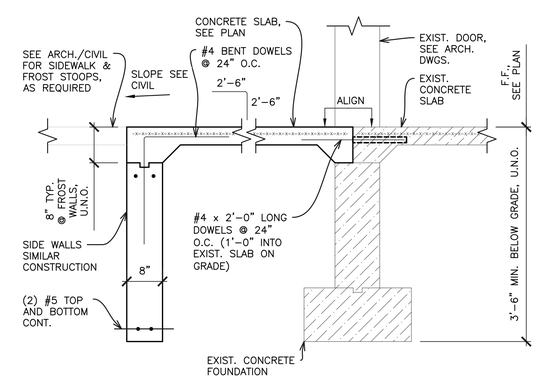


13 SECTION
Scale: N.T.S.



14 SECTION
Scale: N.T.S.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

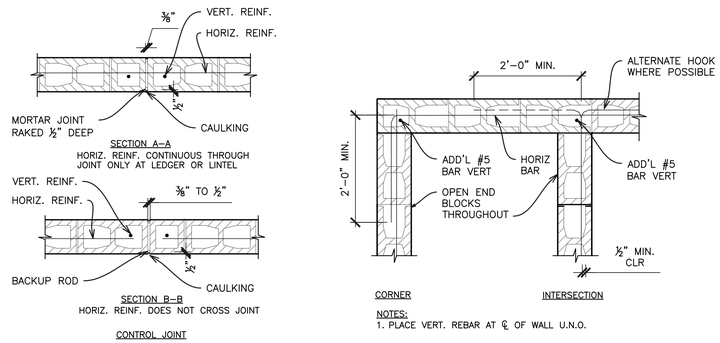
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
FOUNDATION DETAILS

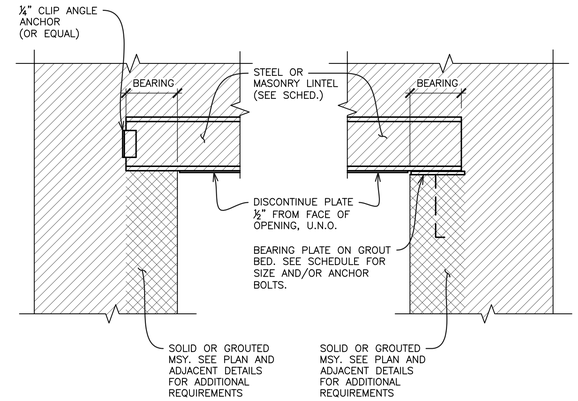
PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
S401
OF
11



1 MASONRY WALL DETAILS
Scale: N.T.S.



2 LINTEL DETAIL
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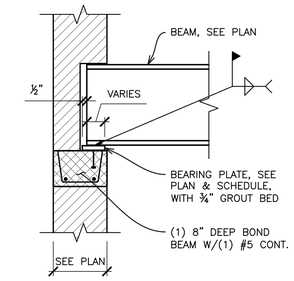

3 BEARING PLATE DETAIL
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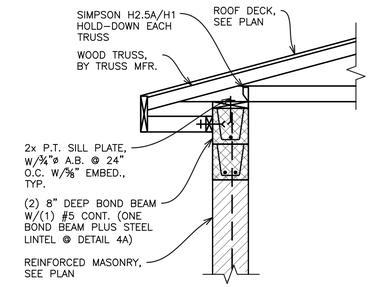
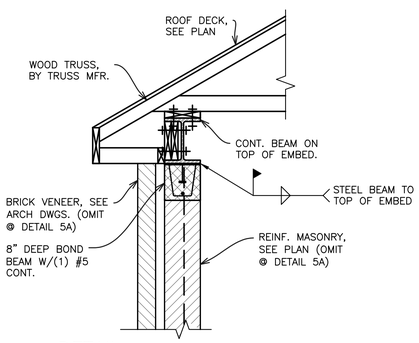
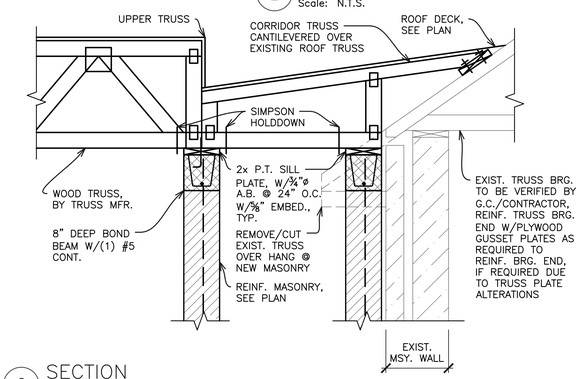


4 4A DETAIL
Scale: N.T.S.



5 5A DETAIL
Scale: N.T.S.



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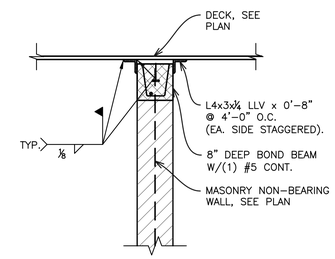
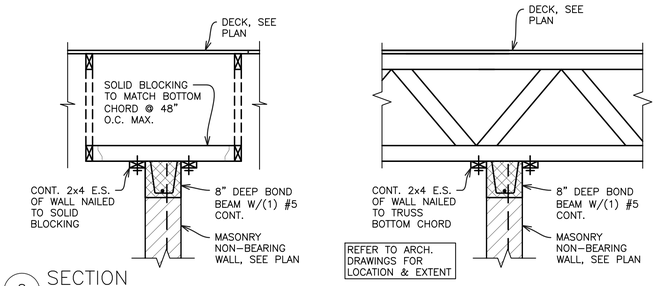


7 SECTION
Scale: N.T.S.



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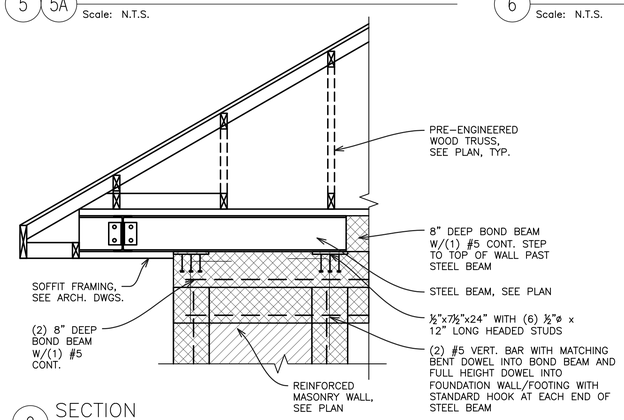

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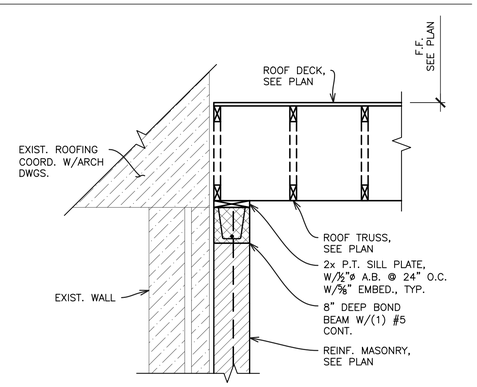

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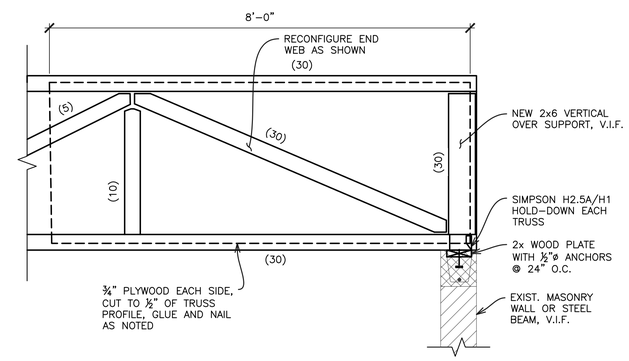


11 PROPOSED BEARING
Scale: N.T.S.

NOTES:
1. (XX) = TOTAL NUMBER 10d COMMON NAILS, ½ EACH SIDE OF TRUSS
2. MIN. EDGE DISTANCE 1"
3. EQUALLY SPACED NAILS, MINIMUM SPACING IS 2½"
4. OFFSET NAIL SPACING EACH SIDE

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
FRAMING DETAILS

PROJECT INFORMATION
Date: August 16, 2022
Rev. Date:
RLJA Proj: 2022-020

SHEET NUMBER
S501
OF
11

DESIGN DATA FOR SEGMENTAL RETAINING WALL ONLY

CODES AND STANDARDS

THE PROJECT SHALL CONFORM TO THE FOLLOWING CODES & STANDARDS:
"INTERNATIONAL BUILDING CODE" 2015 EDITION, BY INTERNATIONAL CODE COUNCIL WITH LOCAL AMENDMENTS AS ADOPTED BY THE LOCAL GOVERNING JURISDICTION.
"DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS", LATEST EDITION, BY NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA).
"SEGMENTAL RETAINING WALL INSTALLATION GUIDE", LATEST EDITION, BY NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA).
"SEGMENTAL RETAINING WALLS BEST PRACTICES GUIDE", LATEST EDITION, BY NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA).
"DESIGN AND CONSTRUCTION REFERENCE MANUAL" BY RECON RETAINING WALL SYSTEMS.

DESIGN LOADS

DEAD LOAD SURCHARGE:	0 PSF
LIVE LOAD SURCHARGE:	100 PSF
GUARDRAIL:	NONE
OPEN FENCE/HANDRAIL:	50 PLF, 200 LB (POINT) APPLIED 36" A.F.G.

DESIGN CRITERIA

EXTERNAL STABILITY FACTORS – GRAVITY

FACTOR OF SAFETY FOR BASE SLIDING:	1.5
FACTOR OF SAFETY AGAINST OVERTURNING:	1.5

MATERIALS

SOIL PARAMETERS

	FRICTION ANGLE	COHESION	UNIT WEIGHT
RETAINED BACKFILL	28°	0 PSF	120 PCF
FOUNDATION SOIL	28°	0 PSF	120 PCF

GRADATION OF FILL MATERIALS

UNIT FILL/DRAINAGE AGGREGATE

U.S. SIEVE NUMBER	PERCENT PASSING
1 INCH	100
3/4 INCH	75–100
NO. 4	0–60
NO. 40	0–50
NO. 200	0–5

MODULAR CONCRETE UNITS

THE SEGMENTAL RETAINING WALL UNITS ARE RECON UNITS 16" TALL AND DEPTHS AS NOTED ON THE ELEVATIONS.

SUBSTITUTION OF THE SEGMENTAL RETAINING WALL UNITS IS PROHIBITED. INSTALL THE WALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

SOILS

FILL MATERIALS SHALL BE FREE FROM ORGANIC OR DELETERIOUS MATERIALS.

MATERIAL PASSING THE NO. 200 SIEVE SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN 20 UNLESS APPROVED IN WRITING BY THE OWNER, THE OWNER'S REPRESENTATIVE OR THE OWNER'S GEOTECHNICAL ENGINEER.

SOILS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.

AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF HAS BEEN ASSUMED FOR DESIGN PURPOSES. THE CONTRACTOR SHALL VERIFY THE ALLOWABLE BEARING CAPACITY PRIOR TO CONSTRUCTION AND NOTIFY HIGHLAND ENGINEERING IMMEDIATELY OF ANY DISCREPANCIES.

CONSTRUCTION

GENERAL

THE SHOP/DESIGN DRAWINGS ARE BASED ON CIVIL SHEET C104 AS PREPARED BY CHASTAIN & ASSOCIATES LLC, DATED OF 07/20/2022.

THE SOILS DATA NOTED ABOVE ARE ASSUMED FOR DESIGN PURPOSES. THE OWNER, THE OWNER'S REPRESENTATIVE OR THE OWNER'S GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR ENSURING THE DATA NOTED ABOVE IS CORRECT PRIOR TO AND DURING CONSTRUCTION. HIGHLAND ENGINEERING, P.C. SHALL BE NOTIFIED IF CONDITIONS VARY.

THE OWNER, THE OWNER'S REPRESENTATIVE OR THE OWNER'S GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR INTERPRETATION OF SUBSURFACE CONDITIONS, SUITABILITY OF DESIGN PARAMETERS AND INTERPRETATION OF SUBSURFACE GROUNDWATER CONDITIONS. THE RETAINING WALL HAS BEEN DESIGNED FOR A CASE 1 CONDITION.

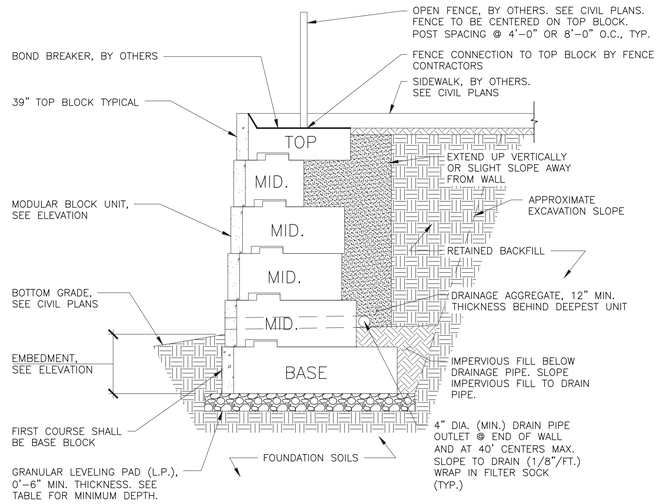
THE RETAINING WALL DESIGN ONLY CONSIDERS EXTERNAL STABILITY FOR BASE SLIDING AND OVERTURNING. THE OWNER, THE OWNER'S REPRESENTATIVE OR THE OWNER'S GEOTECHNICAL ENGINEER SHALL REVIEW OTHER EXTERNAL STABILITY CONSIDERATIONS, INCLUDING BUT NOT LIMITED TO, SLOPE STABILITY, SETTLEMENT AND BEARING CAPACITY. THE OWNER, THE OWNER'S REPRESENTATIVE OR THE OWNER'S GEOTECHNICAL ENGINEER SHALL NOTIFY HIGHLAND ENGINEERING IMMEDIATELY IF THEIR DESIGN CONSIDERATIONS CONTROL ANY ASPECT OF THE SEGMENTAL RETAINING WALL DESIGN.

THE CONTRACTOR SHALL VERIFY ALL WALL ELEVATIONS, STEPS, AND STATIONS IN WALL ELEVATIONS PRIOR TO CONSTRUCTION.

THE CONTRACTOR SHALL COORDINATE EXISTING CONSTRUCTION AND/OR ADJACENT CONSTRUCTION WITH OTHER TRADE CONTRACTORS AND WITH DESIGN DRAWINGS PREPARED BY OTHERS.

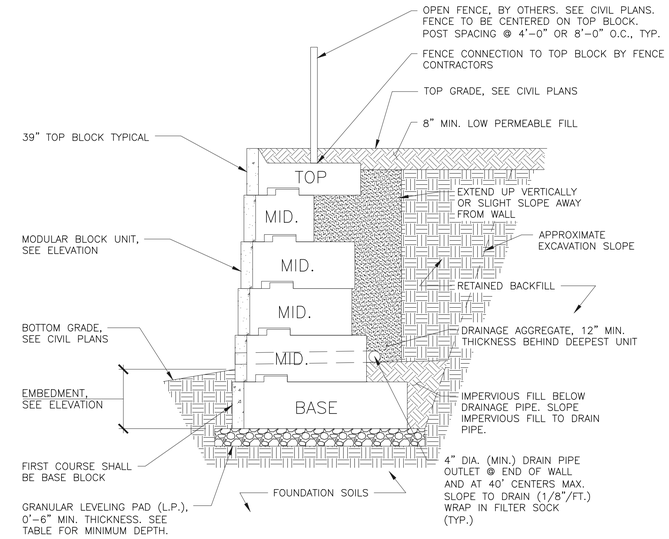
HIGHLAND ENGINEERING, P.C. SHALL NOT SUPERVISE, DIRECT OR HAVE CONTROL OVER THE CONSTRUCTION WORK NOR SHALL IT HAVE AUTHORITY OVER OR RESPONSIBILITY FOR THE MEANS, METHODS, TECHNIQUES OR PROCEDURES OF CONSTRUCTION SELECTED BY THE CONTRACTOR.

ALL LOCAL, STATE AND FEDERAL REGULATIONS AND PROCEDURES REGARDING SAFETY ARE THE RESPONSIBILITY OF THE CONTRACTOR.



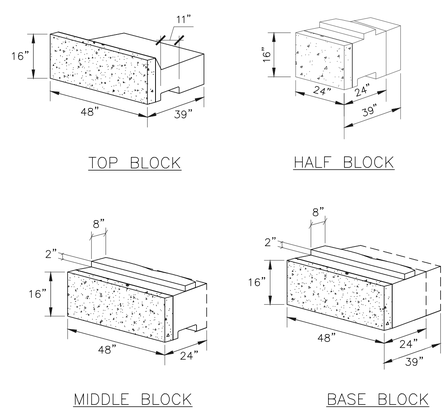
TYPICAL GRAVITY RETAINING WALL SECTION – SIDEWALK

NO SCALE 3.6° BATTER



TYPICAL GRAVITY RETAINING WALL SECTION – GRASS

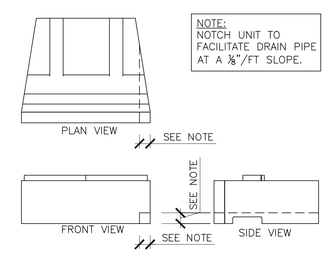
NO SCALE 3.6° BATTER



RECON BLOCK LEGEND	
BLOCK DESCRIPTION	BLOCK ABBREVIATION
39" TOP	39T
24" BASE	24B
39" BASE	39B
24" MIDDLE	24M
24" HALF	24H
39" HALF	39H

TYPICAL BLOCK DIMENSIONS

NO SCALE



NOTE:
NOTCH UNIT TO FACILITATE DRAIN PIPE AT A ⅛"/FT SLOPE.

DRAIN PIPE INSTALLATION

NO SCALE

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

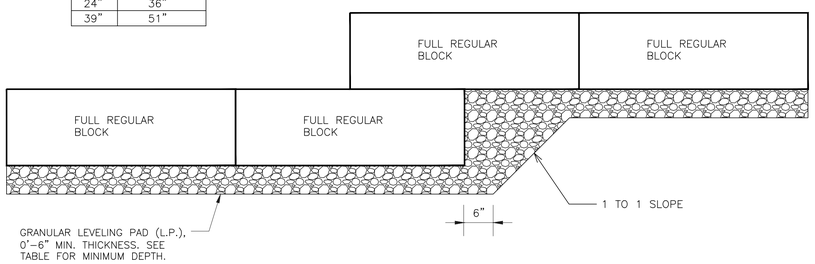
SHEET IDENTIFICATION
RETAINING WALL

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

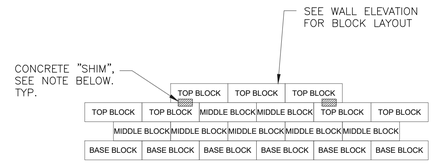
SHEET NUMBER
S601
OF
11

BASE BLOCK	LEVELING PAD DEPTH (MIN.)
24"	36"
39"	51"



BASE ROW STEP UP

NO SCALE



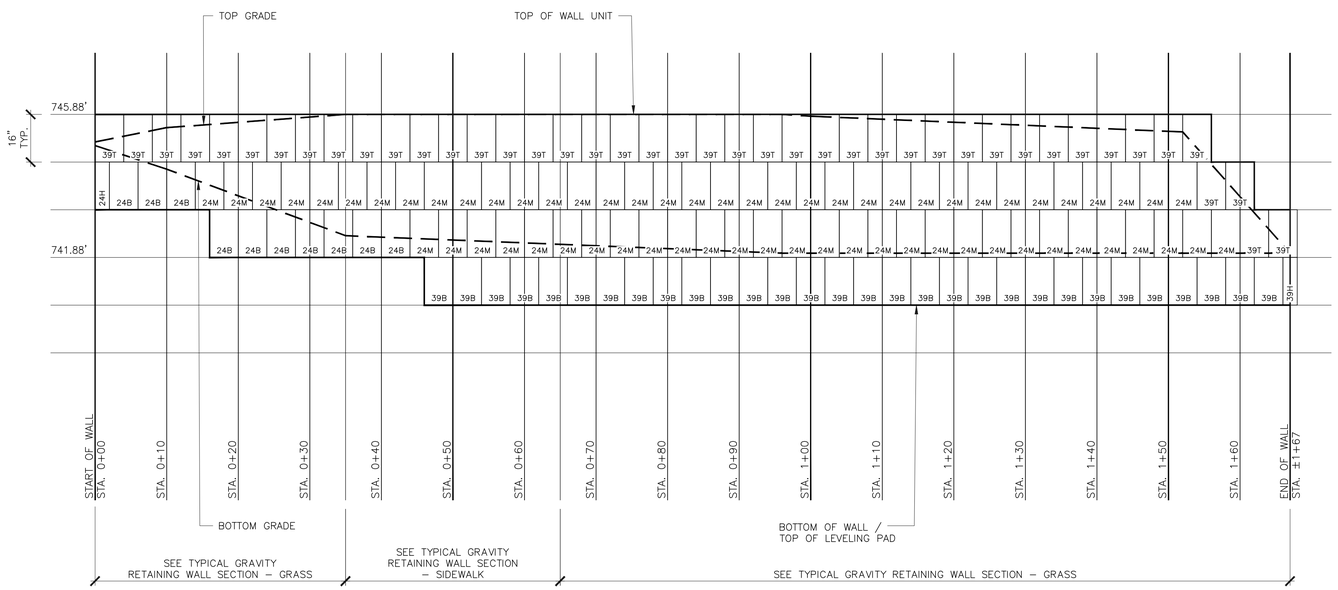
NOTE: A CONCRETE "SHIM" MUST BE PLACED BETWEEN THE TOP BLOCK AND A LEFT OR RIGHT CORNER TOP BLOCK AT EACH POINT IN THE WALL WHERE THE TOP OF WALL STEPS UP. USE A STANDARD CONCRETE MASONRY UNIT (CMU) FOR THE "SHIM". THE REQUIRED THICKNESS OF THE "SHIM" IS 7½" SO THE CMU WILL NEED TO BE TRIMMED ACCORDINGLY. THE "SHIM" SHOULD BE GLUED TO BOTH THE TOP BLOCK ON WHICH IT IS PLACED AND ALSO TO THE LEFT OR RIGHT CORNER TOP BLOCK ABOVE. PL PREMIUM IS THE RECOMMENDED ADHESIVE FOR GLUING THE "SHIM" IN PLACE. ANY REMAINING VOID SPACE BETWEEN THE TOP BLOCK AND THE CORNER TOP BLOCK SHOULD BE FILLED WITH CRUSHED STONE.

STANDARD TOP OF WALL STEP

NO SCALE

REVIEWER/CONTRACTOR NOTE:
RETAINING WALL LENGTHS AND STATIONS TO BENDS, RADII, ETC. ARE APPROXIMATE AS SCALED OFF REFERENCED DRAWINGS. LAYOUT STAKING SHALL BE PER REFERENCED DRAWINGS. NOTIFY HIGHLAND ENGINEERING OF ANY DISCREPANCIES BETWEEN STAKED WALL AND THESE DRAWINGS IMMEDIATELY.

REVIEWER/CONTRACTOR NOTE:
HIGHLAND ENGINEERING IS NOT RESPONSIBLE FOR CODE APPLICABILITY OF FENCE OR GUARDRAIL. DETERMINATION OF FENCE OR GUARDRAIL REQUIREMENTS BY OTHERS. IF FENCE OR GUARDRAIL IS REQUIRED, NOTIFY HIGHLAND ENGINEERING IMMEDIATELY.



RETAINING WALL

SCALE: 1"=2' VERTICAL
1"=10' HORIZONTAL

SEE WALL ELEVATION FOR TYPICAL SECTION

6" MIN. EMBEDMENT

CONTRACTOR NOTE:
BUILDING DOWNSPOUTS SHALL BE CONNECTED TO PUBLIC UTILITY OR EXTENDED TO OUTLET THROUGH BLOCK WALL. DOWNSPOUTS SHALL NOT OUTLET AT GRADE BEHIND THE RETAINING WALL.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
RETAINING WALL

PROJECT INFORMATION

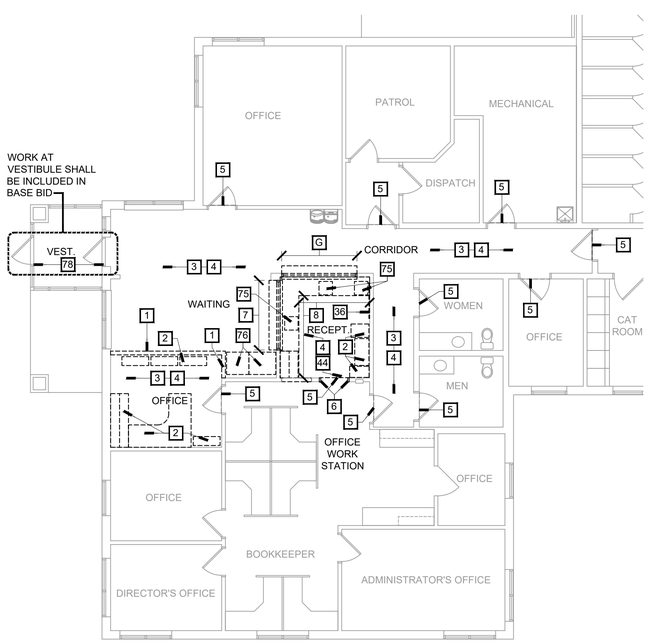
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
S602
OF
11

NOTES LEGEND

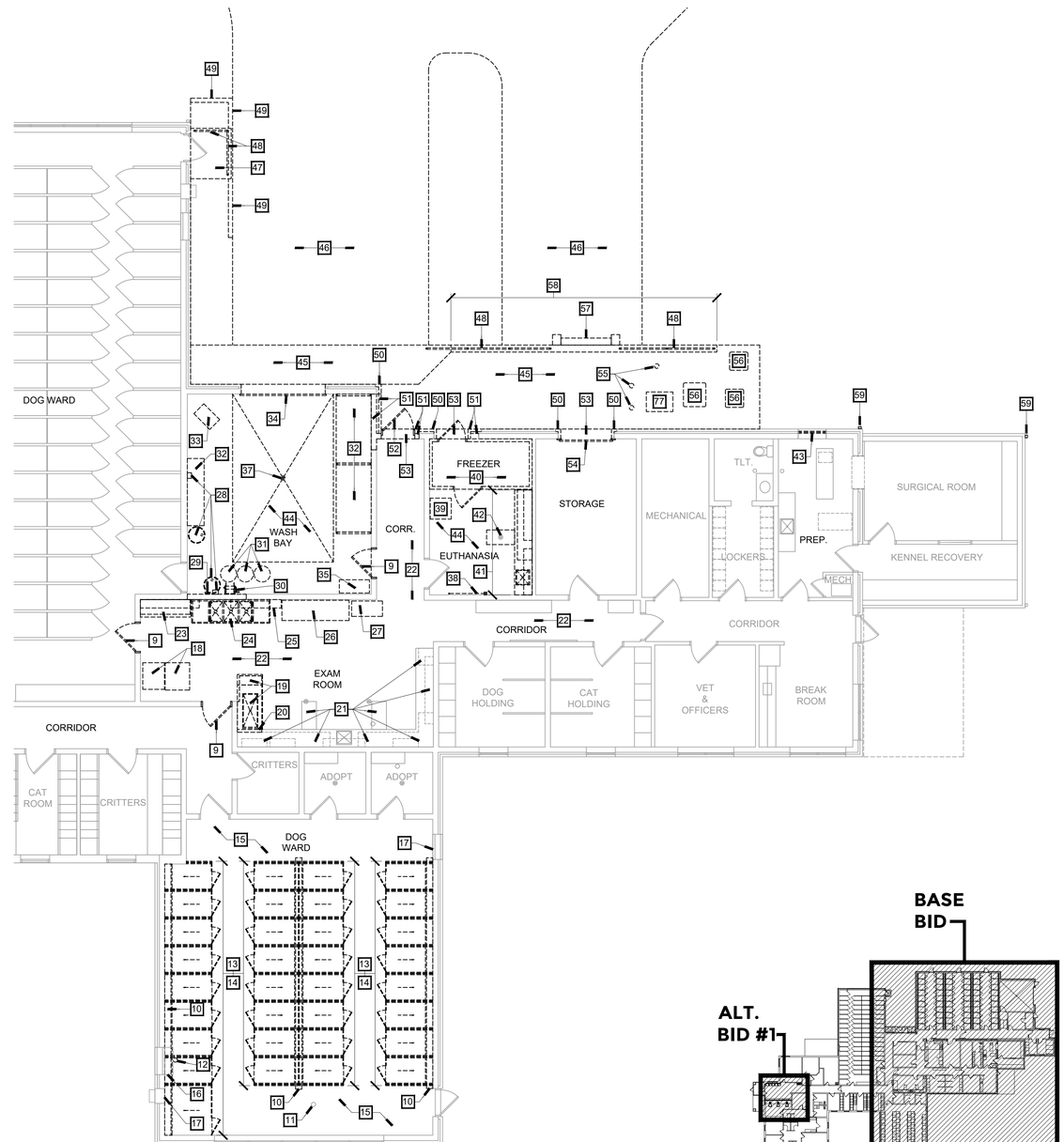
- REFER TO SHEET G102 FOR DEMOLITION GENERAL NOTES AND DEMOLITION BOX NOTES.

-REFER TO SHEET G102 FOR RENOVATION GENERAL NOTES, RENOVATION KEY NOTES AND PARTITION TYPES.



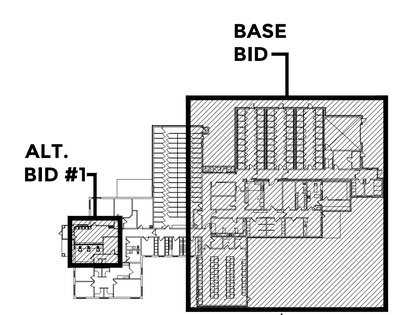
1 ALTERNATE BID #1 DEMOLITION FLOOR PLAN

SCALE: 1/8"=1'-0"



2 BASE BID DEMOLITION FLOOR PLAN

SCALE: 1/8"=1'-0"



KEY PLAN

ADDITION & RENOVATIONS AT

WINNEBAGO CO. ANIMAL SERVICES

ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

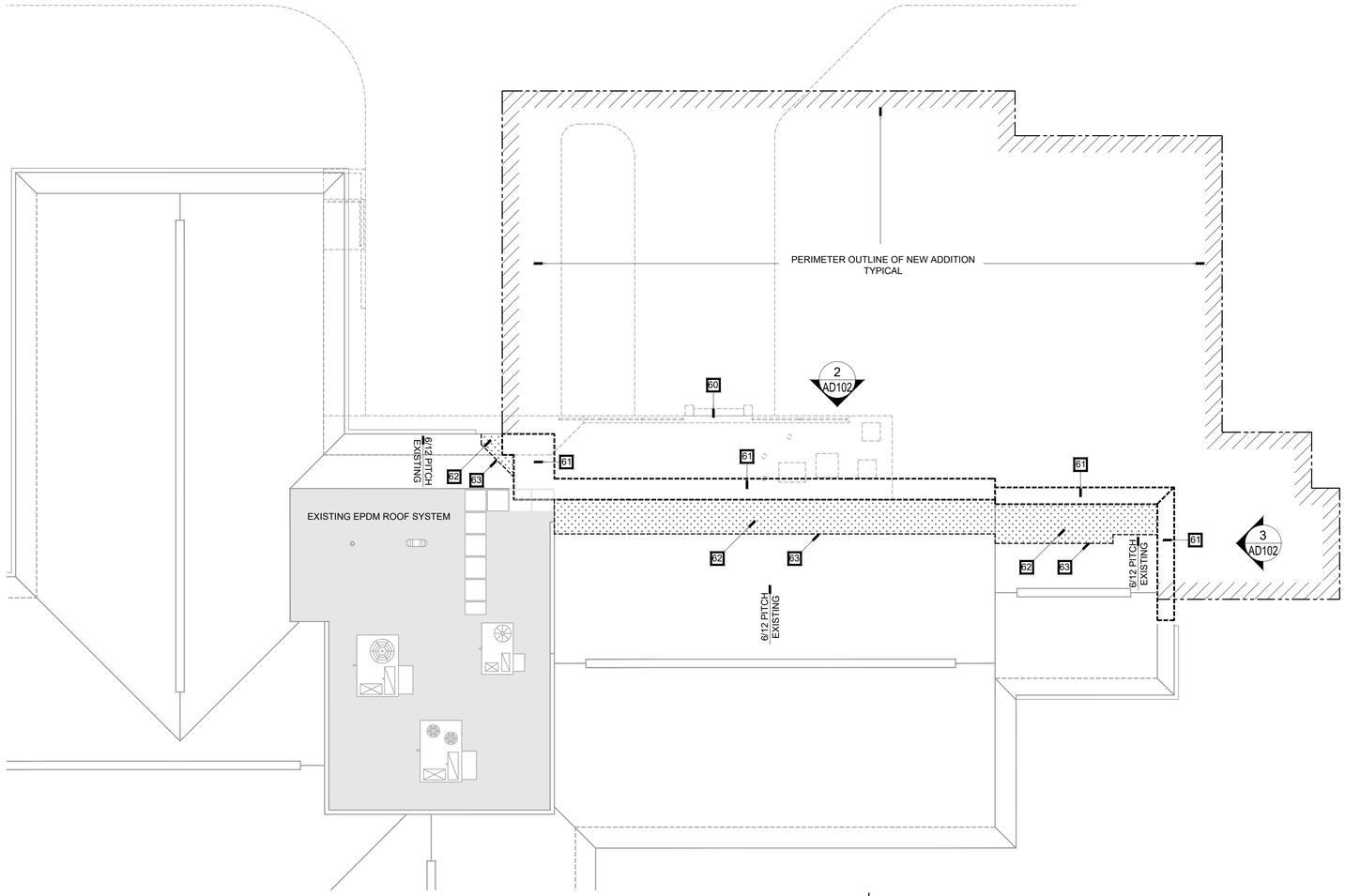
DEMOLITION PLANS AND NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

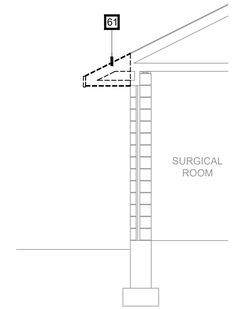
SHEET NUMBER

AD101 OF 2



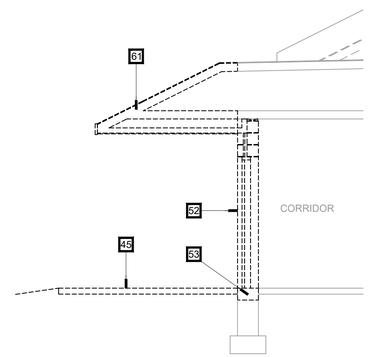
1 DEMOLITION ROOF PLAN

SCALE: 1/8"=1'-0"



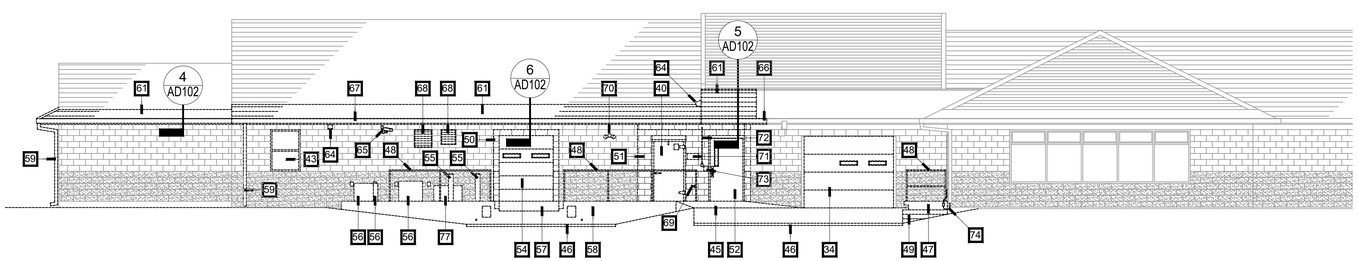
4 DEMOLITION SECTION

SCALE: 1/8"=1'-0"



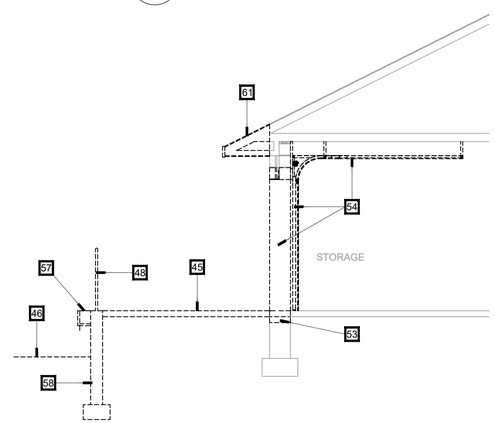
5 DEMOLITION SECTION

SCALE: 1/8"=1'-0"



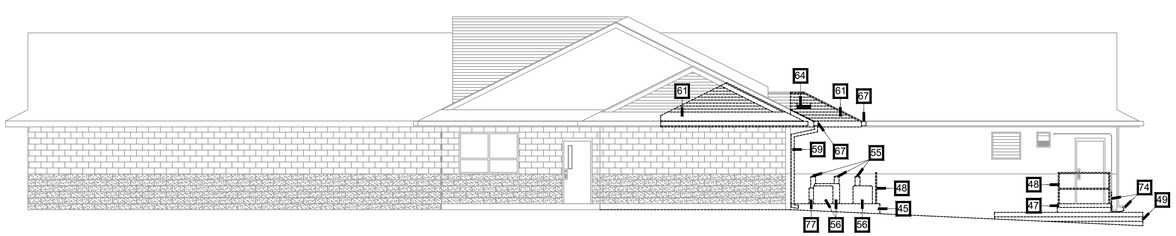
2 DEMOLITION ELEVATION

SCALE: 1/8"=1'-0"



6 DEMOLITION SECTION

SCALE: 1/8"=1'-0"



3 DEMOLITION ELEVATION

SCALE: 1/8"=1'-0"

NOTES LEGEND

- REFER TO SHEET G102 FOR DEMOLITION GENERAL NOTES AND DEMOLITION BOX NOTES.

-REFER TO SHEET G102 FOR RENOVATION GENERAL NOTES, RENOVATION KEY NOTES AND PARTITION TYPES.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
DEMOLITION PLANS, ELEVATIONS, SECTIONS AND NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

AD102
OF
2

NOTES LEGEND

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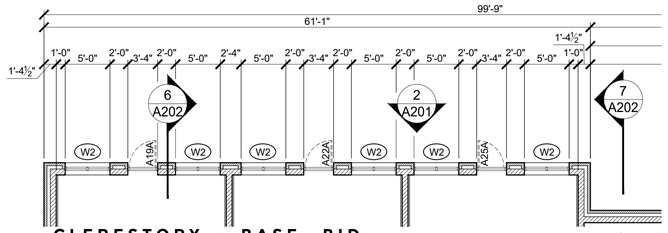
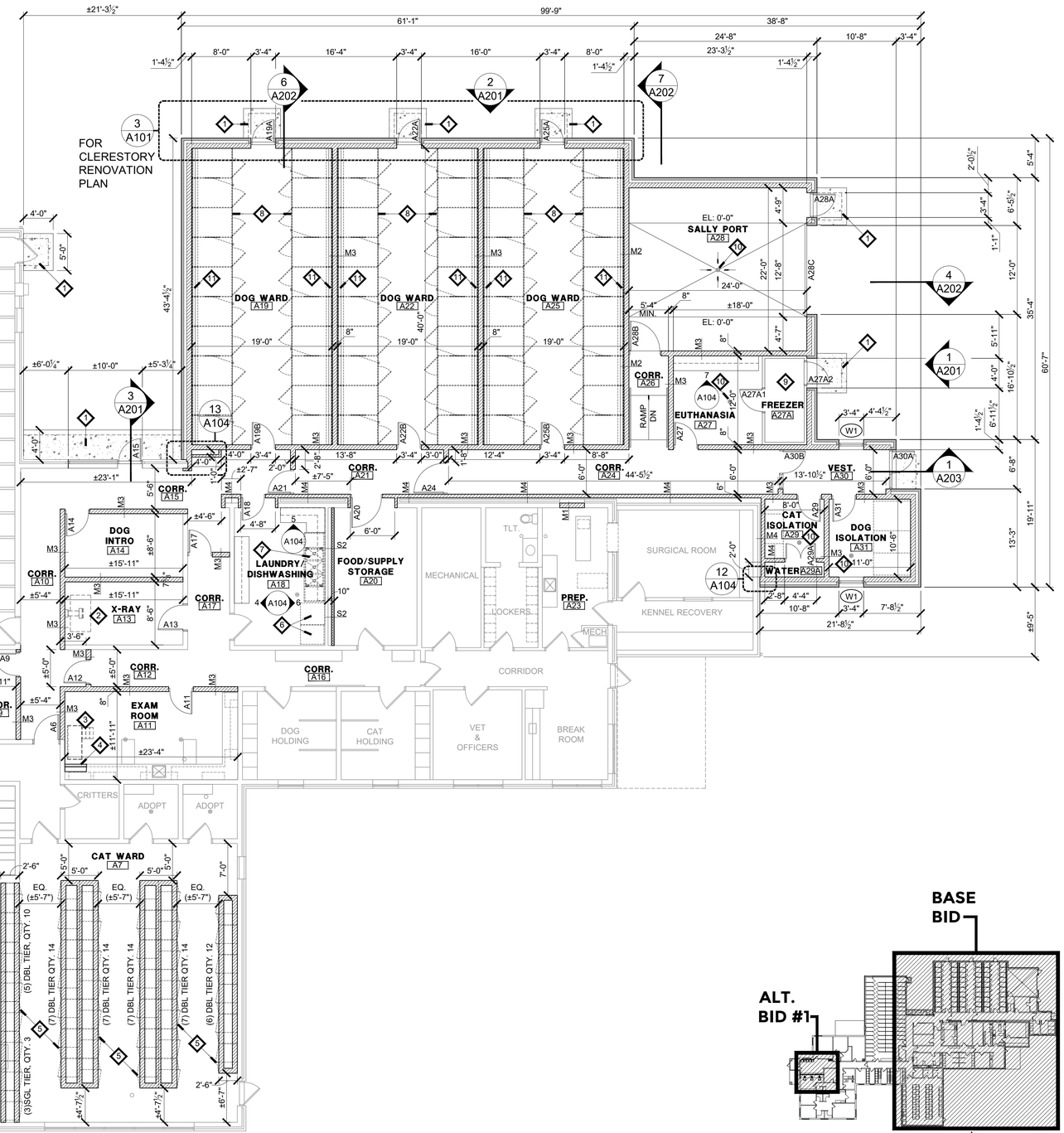


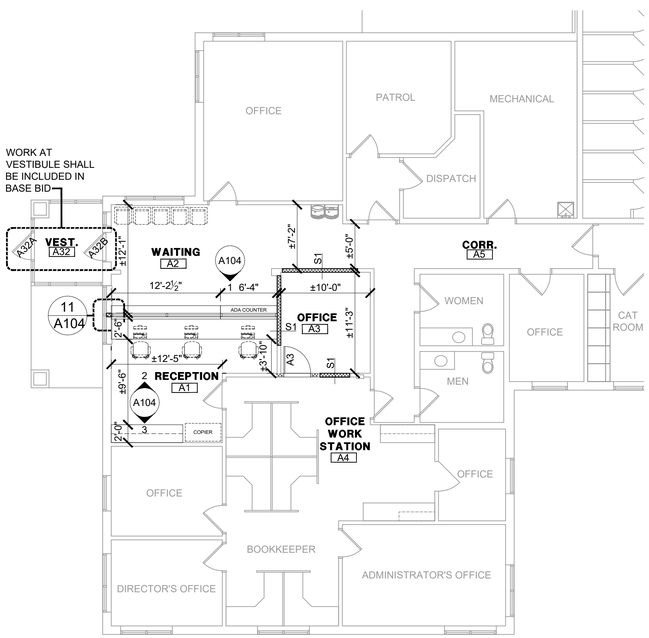
3 CLERESTORY - BASE BID PARTIAL RENOVATION FLOOR PLAN

SCALE: 1/8"=1'-0"



2 BASE BID RENOVATION FLOOR PLAN

SCALE: 1/8"=1'-0"



1 ALTERNATE BID #1 RENOVATION FLOOR PLAN

SCALE: 1/8"=1'-0"

KEY PLAN

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

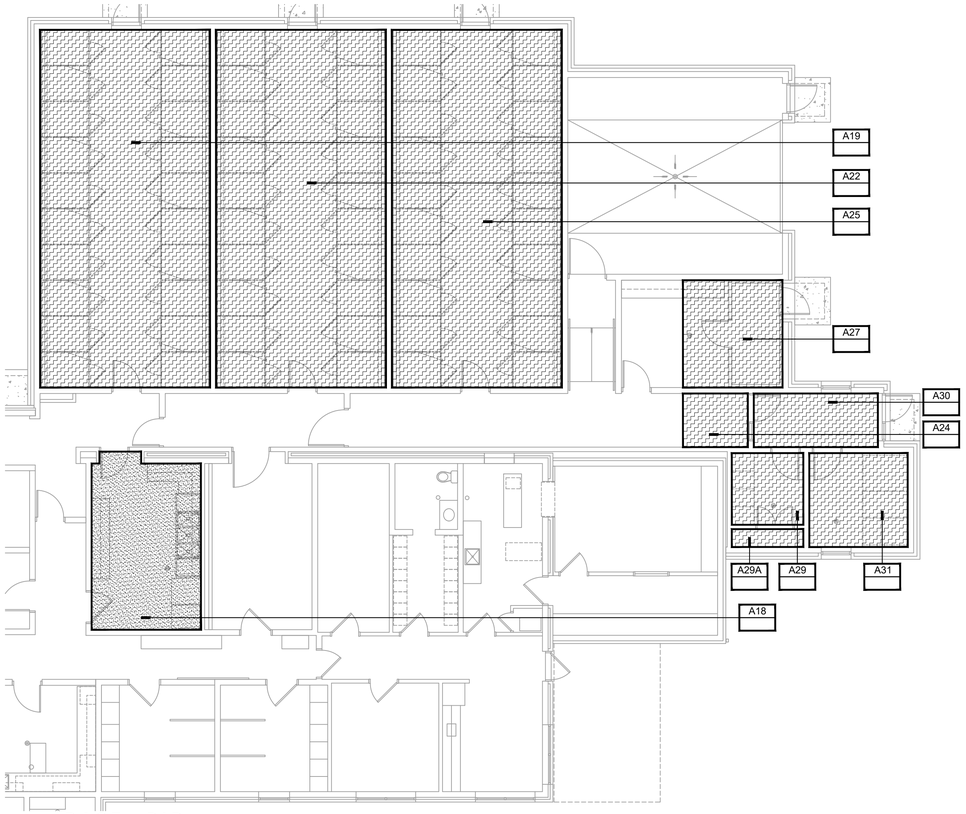
SHEET IDENTIFICATION
RENOVATION PLANS AND NOTES

PROJECT INFORMATION

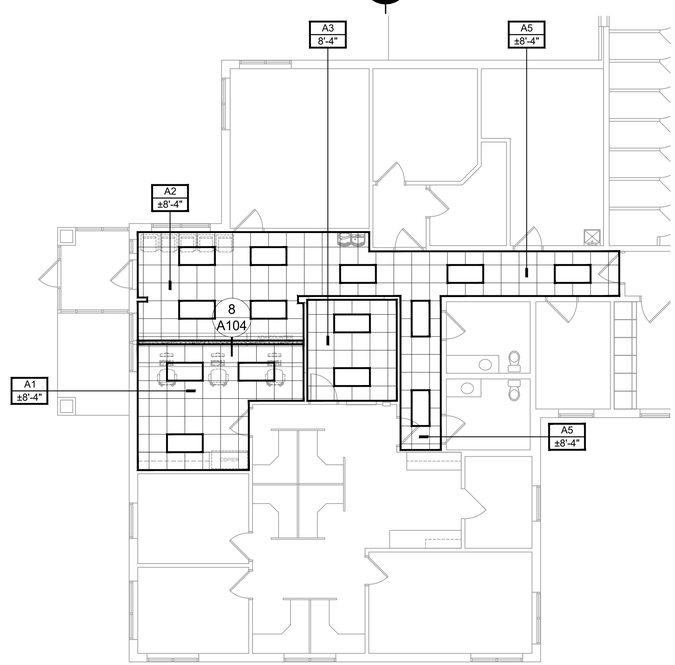
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

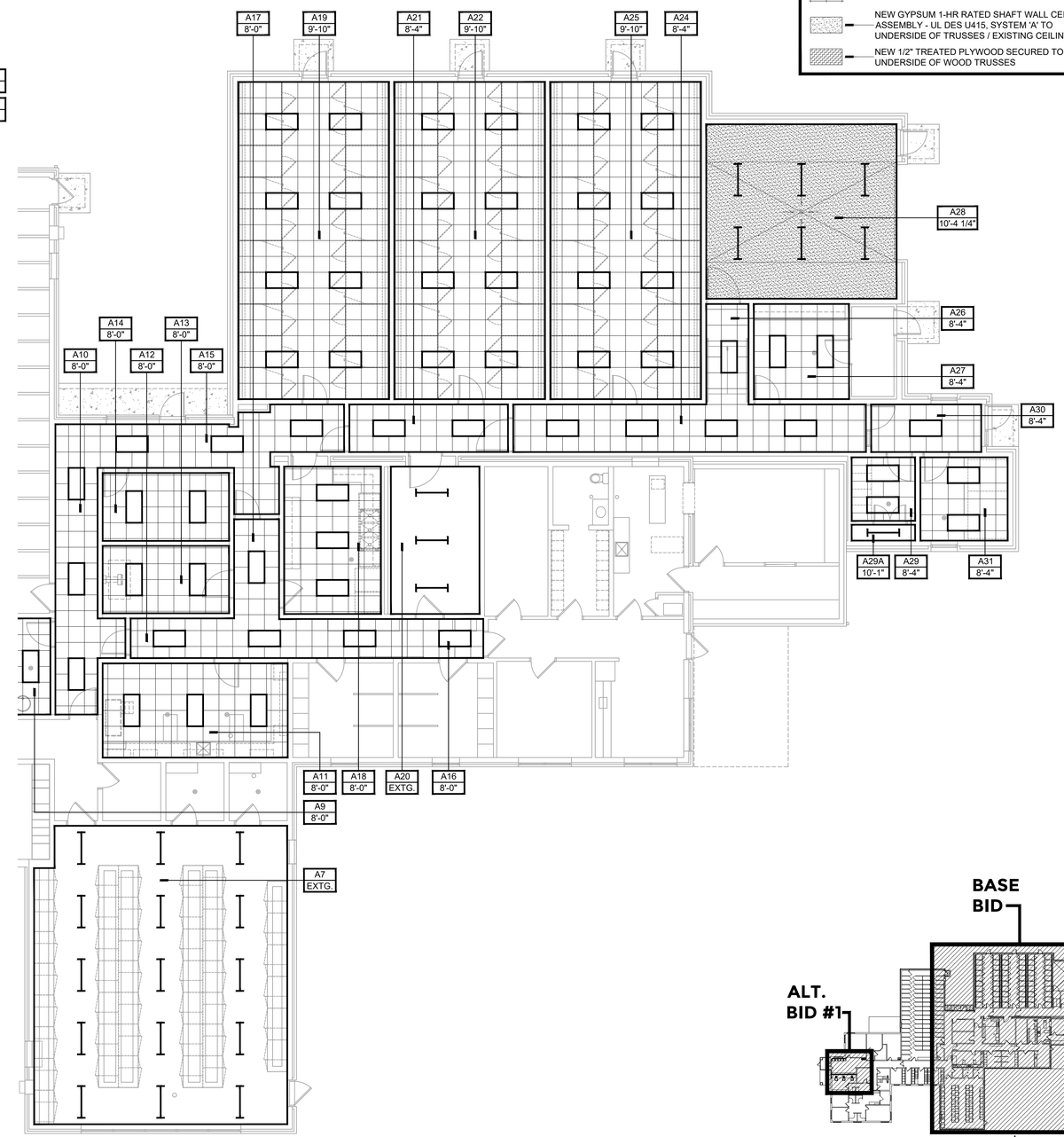
A101
OF
7



3 BASE BID ABOVE CEILING PLAN
SCALE: 1/8"=1'-0"



1 ALTERNATE BID #1 REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"



2 BASE BID REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"

REFLECTED CEILING GENERAL NOTES

1. ALL CEILING HEIGHTS ARE TAKEN FROM FINISH FLOOR OF INDIVIDUAL AREAS
2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF BUILT-IN ITEMS, INCLUDING SUPPLY DIFFUSERS, EXHAUST REGISTERS, ETC.
3. VERIFY NEW CEILING HEIGHT SHOWN.
4. PROVIDE ADEQUATE CLEARANCE FOR ELECTRICAL AND MECHANICAL WORK.
5. PRIOR TO THE INSTALLATION OF ANY MODIFIED CEILING HEIGHTS NOTIFY ARCHITECT
6. SEE ELECTRICAL FOR CANOPY LIGHTING.
7. REMOVE AND REINSTALL EXISTING INSULATION AT CEILING AS REQUIRED.

REFLECTED CEILING PLAN LEGEND

CEILING HEIGHT SYMBOL

103 — ROOM NUMBER
9'-0" — CEILING HEIGHT

DETAIL SYMBOL

1 — DETAIL NUMBER
A101 — SHEET NUMBER

LIGHTING IDENTIFICATION

NEW 2' X 4' RECESSED LED LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS

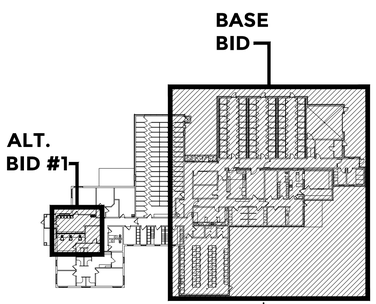
SURFACE-MOUNTED LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS

CEILING TILE IDENTIFICATION

NEW 2'X2' ACOUSTICAL CEILING TILE AND GRID

NEW GYPSUM 1-HR RATED SHAFT WALL CEILING ASSEMBLY - UL DES U415, SYSTEM 'A' TO UNDERSIDE OF TRUSSES / EXISTING CEILING - PAINT

NEW 1/2" TREATED PLYWOOD SECURED TO UNDERSIDE OF WOOD TRUSSES



KEY PLAN

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

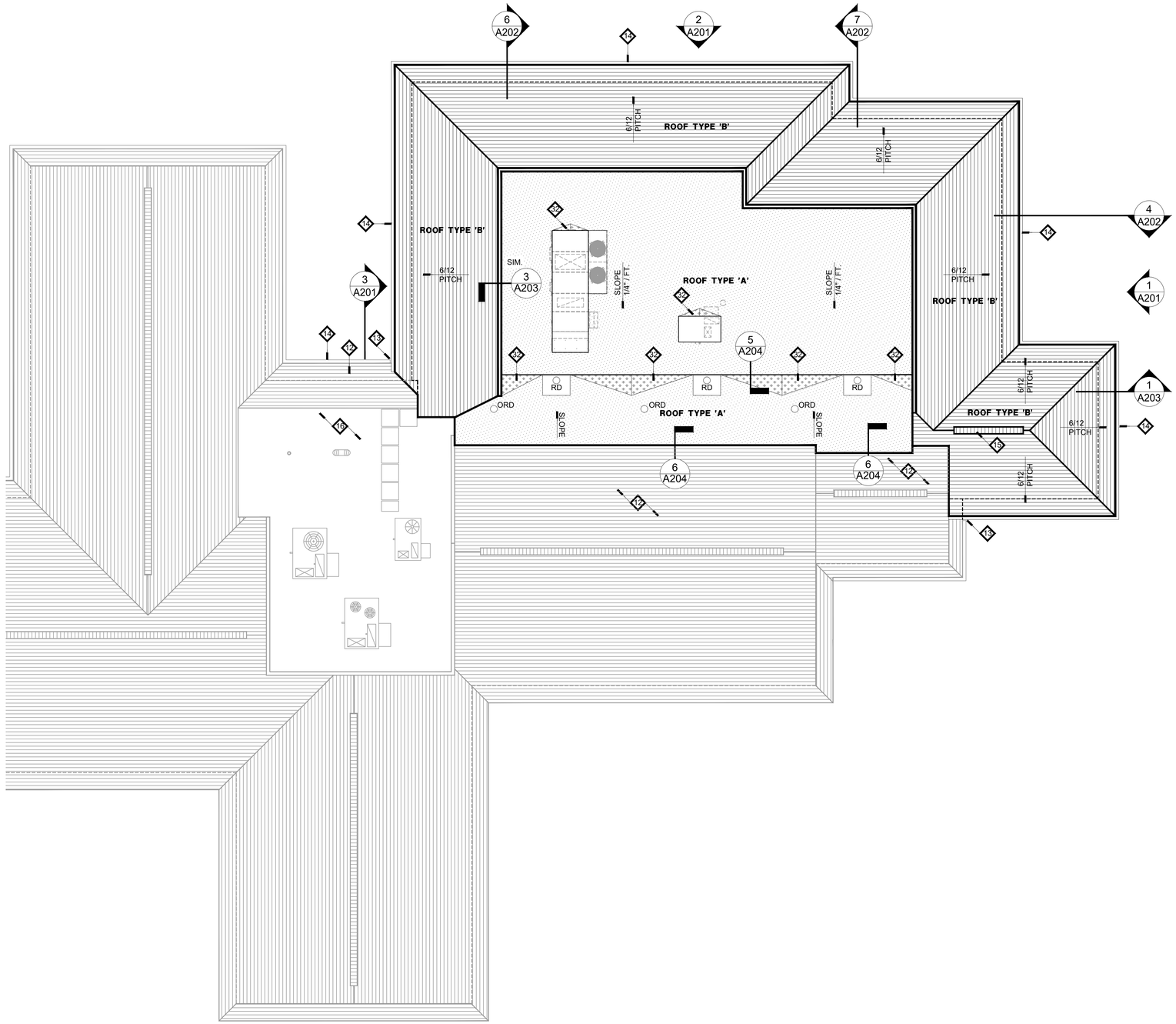
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
REFLECTED CEILING PLANS AND NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
A102
OF
7



1 ROOF PLAN

SCALE: 1/8"=1'-0"

NOTES LEGEND

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ADDITION & RENOVATIONS AT

WINNEBAGO CO. ANIMAL SERVICES

ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

ROOF PLAN AND NOTES

PROJECT INFORMATION

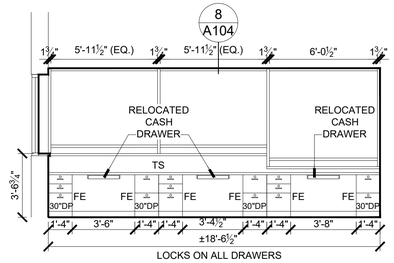
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

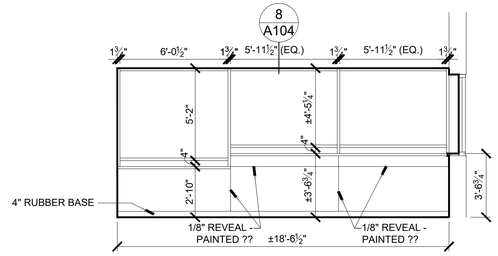
A103

OF

7



1 RECEPTION - A1
SCALE: 1/4" = 1'-0"



2 RECEPTION - A1
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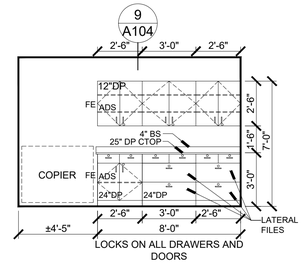
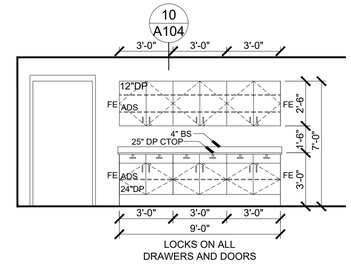


3 RECEPTION - A1
SCALE: 1/4" = 1'-0"



4 LAUNDRY/DISH - A18
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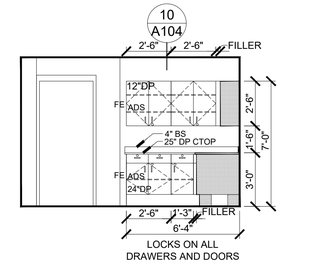

5 LAUNDRY/DISH - A18
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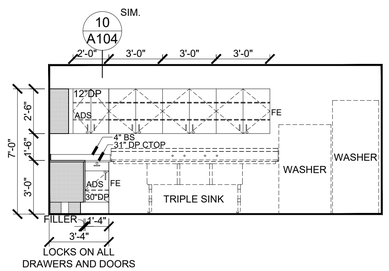
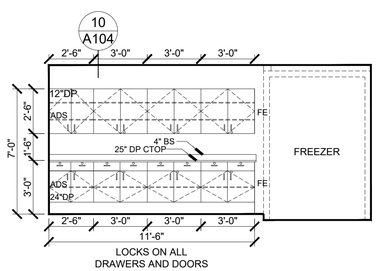
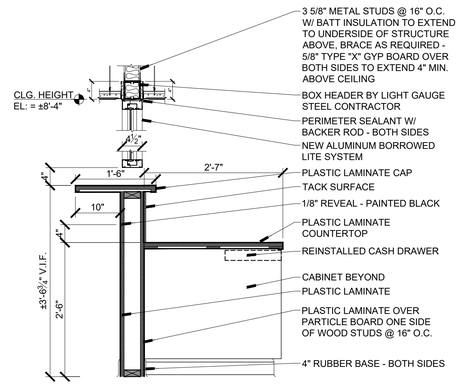


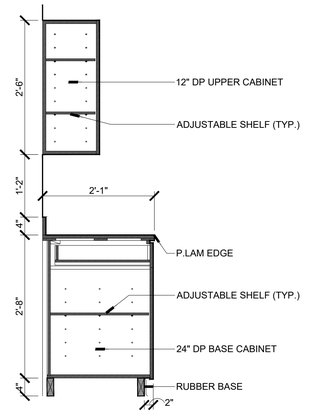
6 LAUNDRY/DISH - A18
SCALE: 1/4" = 1'-0"



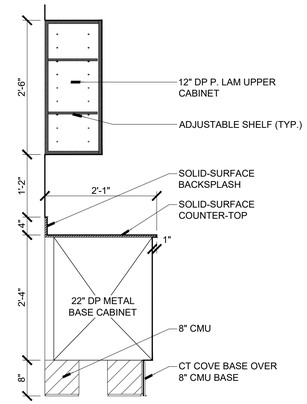
7 EUTHANASIA - A27
SCALE: 1/4" = 1'-0"



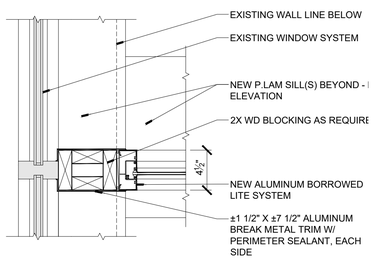
8 DETAIL
SCALE: 3/4" = 1'-0"



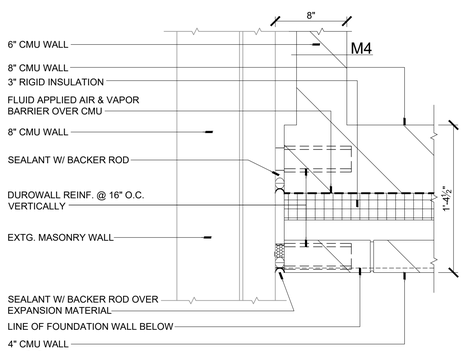
9 DETAIL
SCALE: 3/4" = 1'-0"



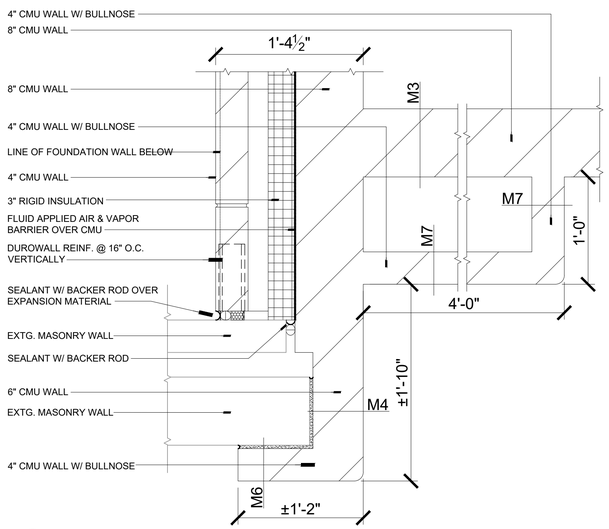
10 DETAIL
SCALE: 3/4" = 1'-0"



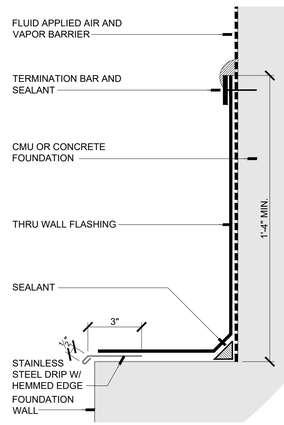
11 DETAIL
SCALE: 1 1/2" = 1'-0"



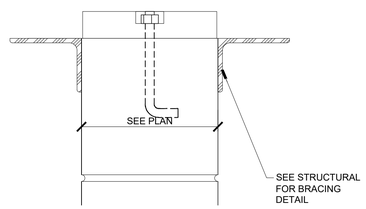
12 DETAIL
SCALE: 1 1/2" = 1'-0"



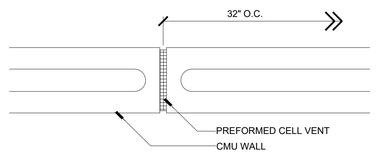
13 DETAIL
SCALE: 1 1/2" = 1'-0"



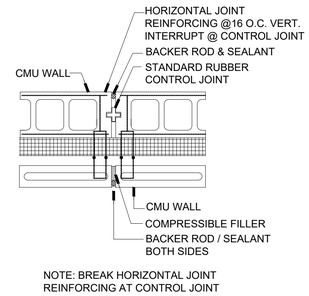
14 TYP. BASE FLASHING DETAIL
SCALE: 3"=1'-0"



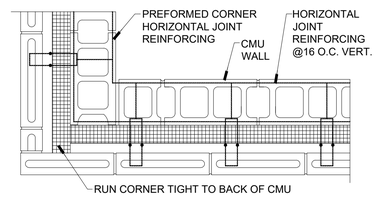
15 TYP. TOP OF MASONRY WALL
SCALE: 1"=1'-0"



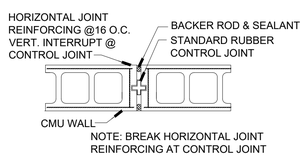
16 TYP. OPEN JOINT DETAIL
SCALE: 3"=1'-0"



17 TYP. CONTROL JOINT - CAVITY WALL
SCALE: 1"=1'-0"



18 TYP. CORNER DETAIL
SCALE: 1"=1'-0"



19 TYP. CONTROL JOINT
SCALE: 1"=1'-0"

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

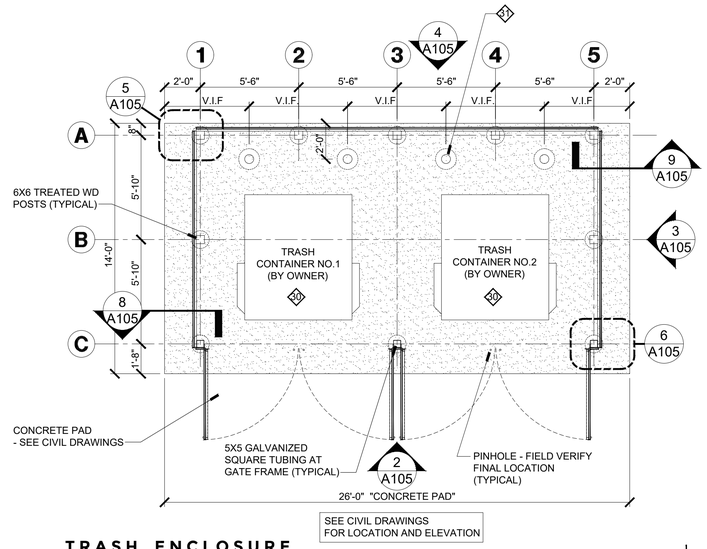
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
CASEWORK ELEVATIONS AND DETAILS

PROJECT INFORMATION

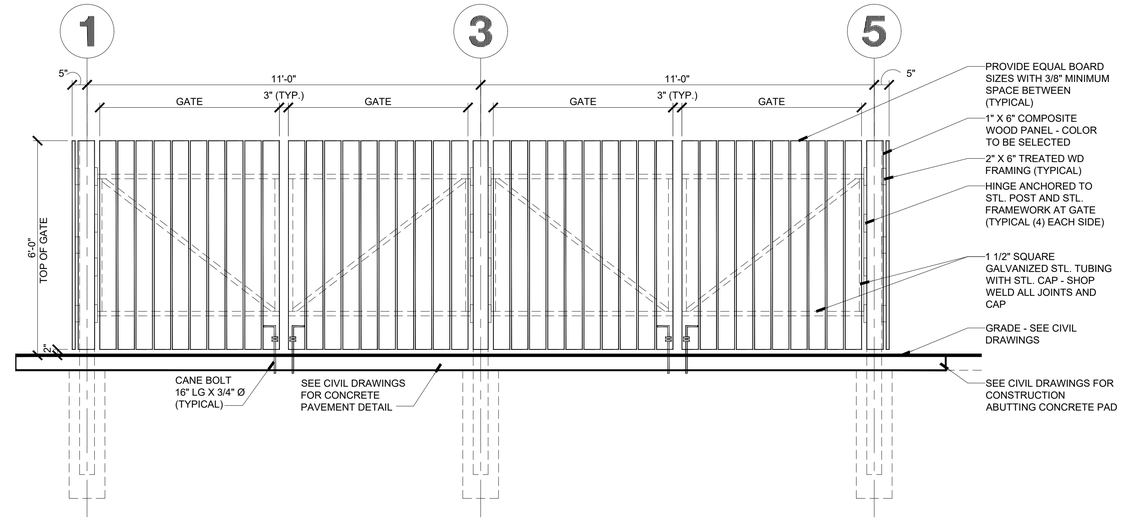
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
A104
OF
7



1 TRASH ENCLOSURE FLOOR PLAN

SCALE: 1/4"=1'-0"



2 TRASH ENCLOSURE NORTH ELEVATION

SCALE: 1/2"=1'-0"

NOTES LEGEND

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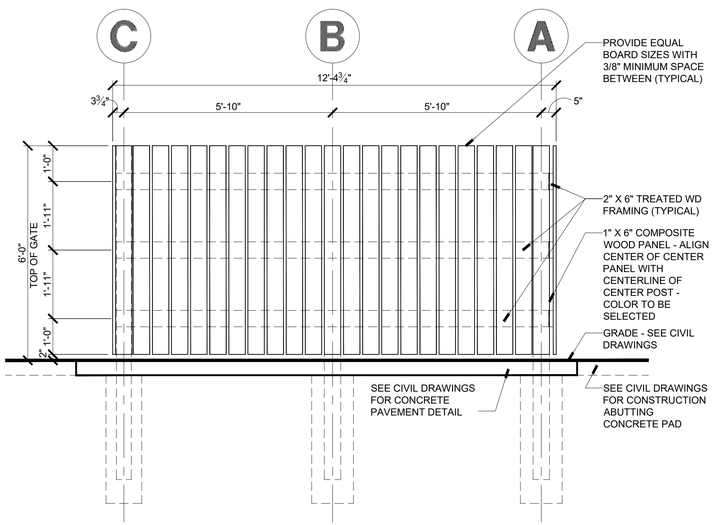
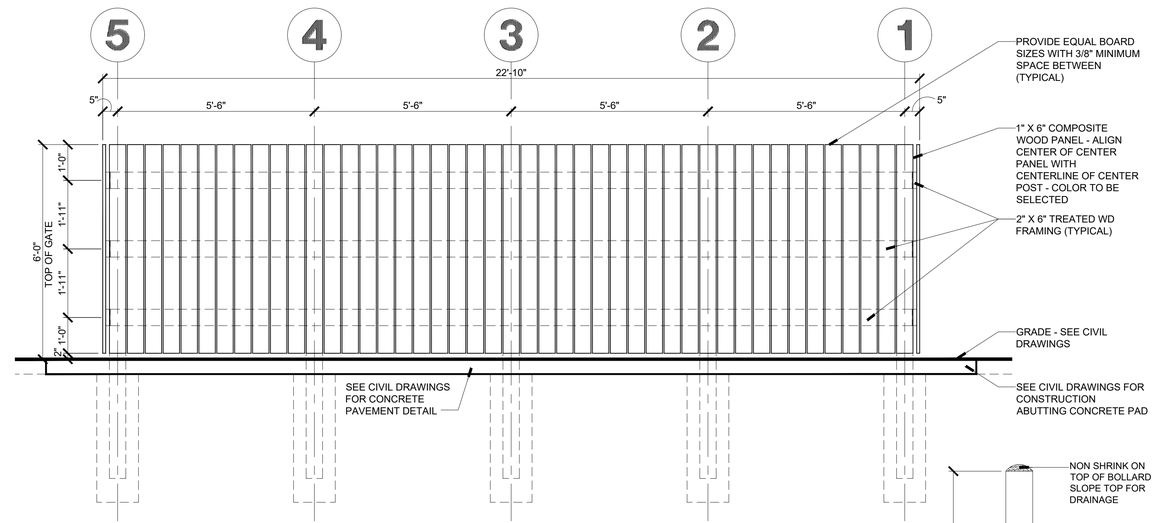


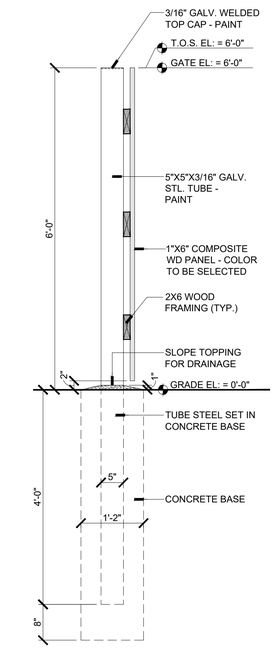
3 TRASH ENCLOSURE EAST ELEVATION

SCALE: 1/2"=1'-0"



4 TRASH ENCLOSURE NORTH ELEVATION

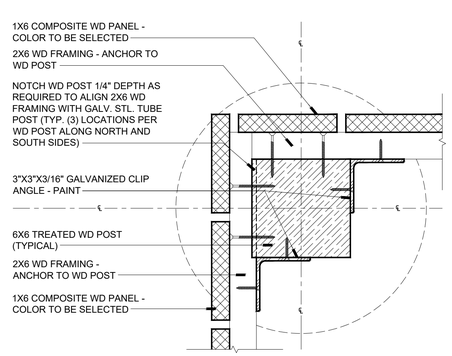
SCALE: 1/2"=1'-0"



8 METAL GATE POST DETAIL

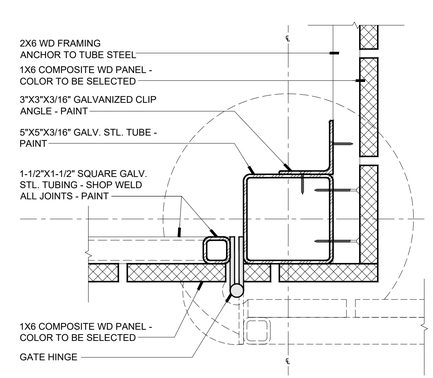
SCALE: 3/4"=1'-0"

TRASH ENCLOSURE NOTES:
- ALL WOOD BLOCKING SHALL BE TREATED LUMBER
- ALL EXPOSED STEEL SHALL BE PAINTED - COLOR TO BE SELECTED
- COMPOSITE WOOD PANEL - COLOR TO BE SELECTED



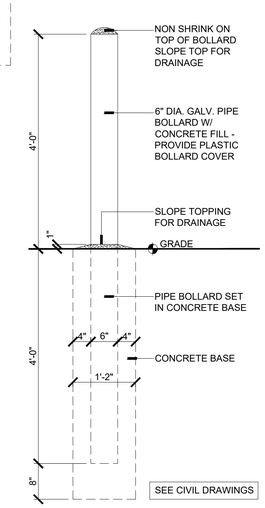
5 DETAIL

SCALE: 3"=1'-0"



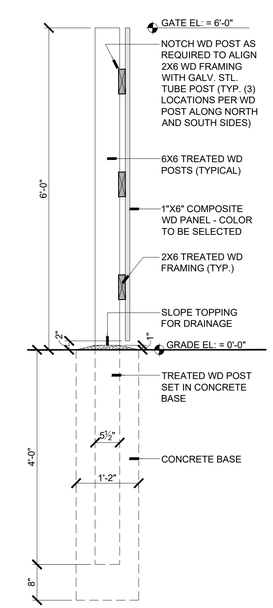
6 DETAIL

SCALE: 3"=1'-0"



7 PIPE BOLLARD DETAIL

SCALE: 3/4"=1'-0"



9 WD FENCE POST DETAIL

SCALE: 3/4"=1'-0"

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

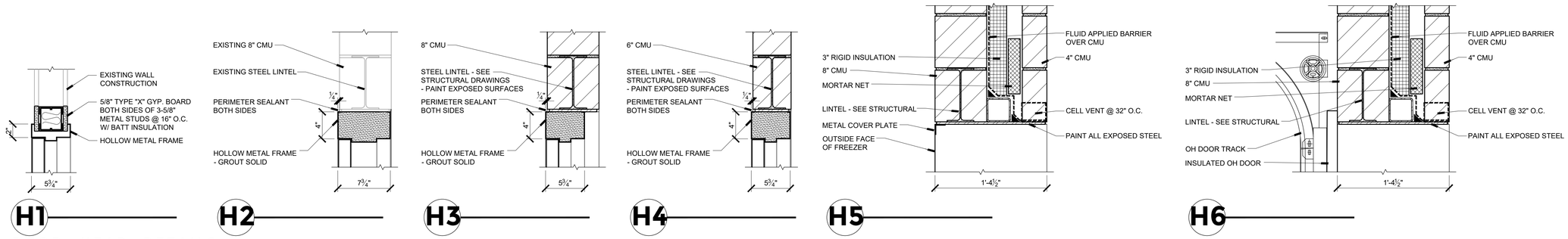
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
TRASH ENCLOSURE PLANS, ELEVATIONS, SECTIONS AND DETAILS

PROJECT INFORMATION

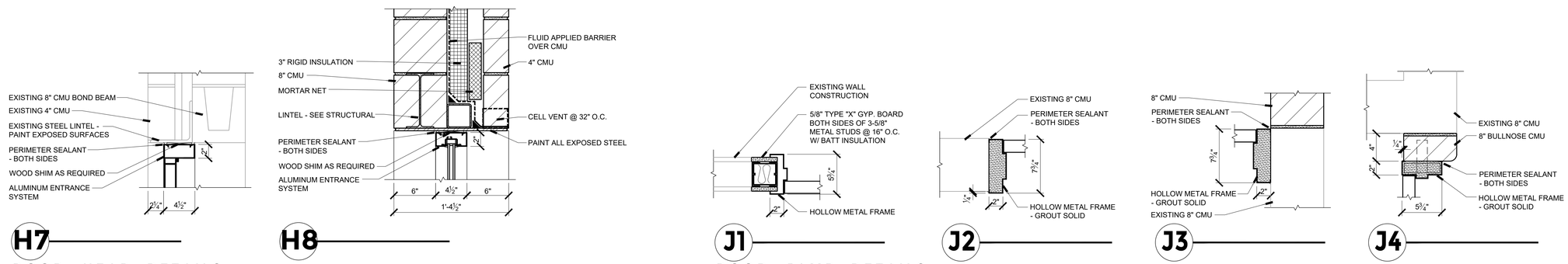
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
A105
OF
7



DOOR HEAD DETAILS

SCALE: 1 1/2" = 1'-0"

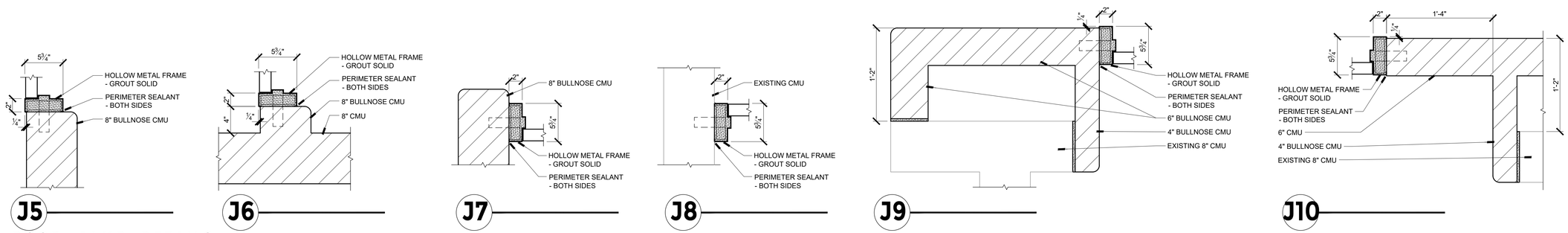


DOOR HEAD DETAILS

SCALE: 1 1/2" = 1'-0"

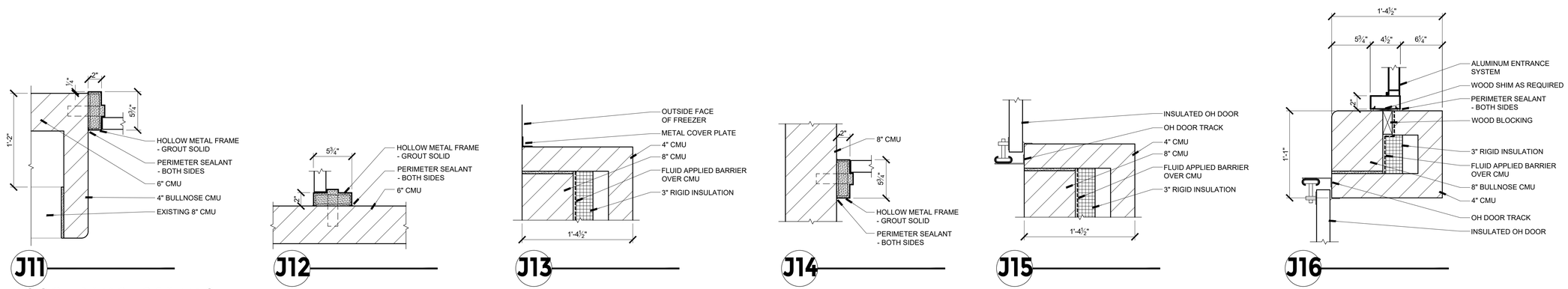
DOOR JAMB DETAILS

SCALE: 1 1/2" = 1'-0"



DOOR JAMB DETAILS

SCALE: 1 1/2" = 1'-0"



DOOR JAMB DETAILS

SCALE: 1 1/2" = 1'-0"

ADDITION & RENOVATIONS AT

WINNEBAGO CO. ANIMAL SERVICES

ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

HEAD, JAMB AND SILL DETAILS

PROJECT INFORMATION

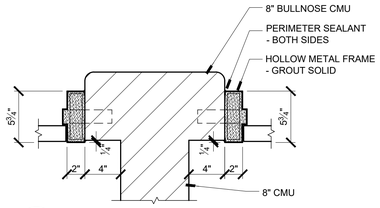
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

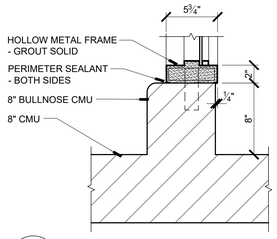
A106

OF

7



J17



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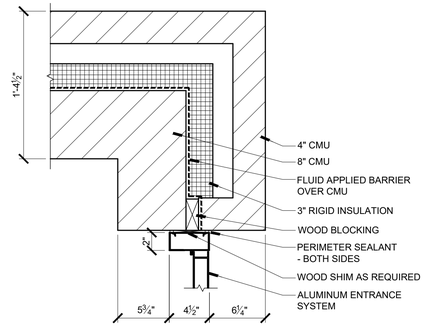

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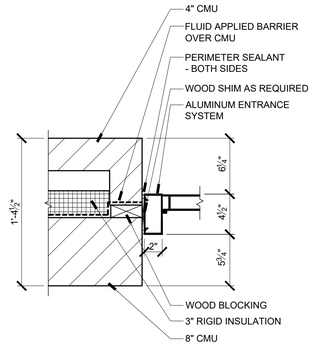

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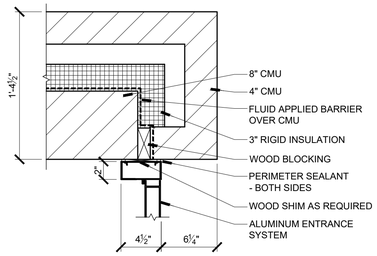
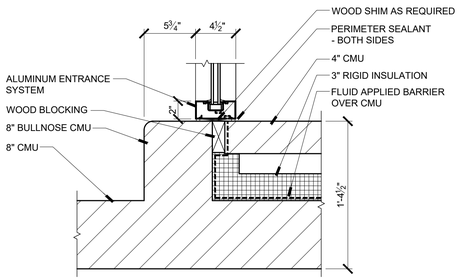


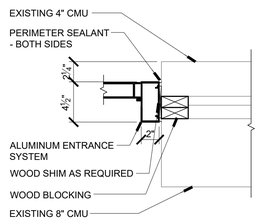
J21

DOOR JAMB DETAILS

SCALE: 1 1/2" = 1'-0"



J22



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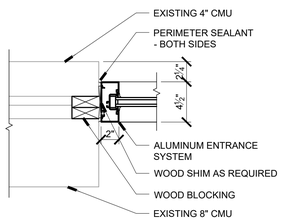

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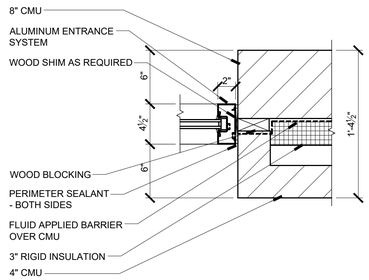

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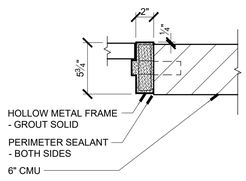
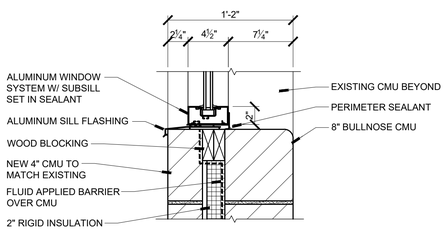


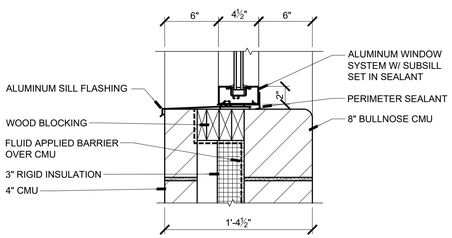
J26

DOOR JAMB DETAILS

SCALE: 1 1/2" = 1'-0"



S1



S2

DOOR SILL DETAILS

SCALE: 1 1/2" = 1'-0"

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

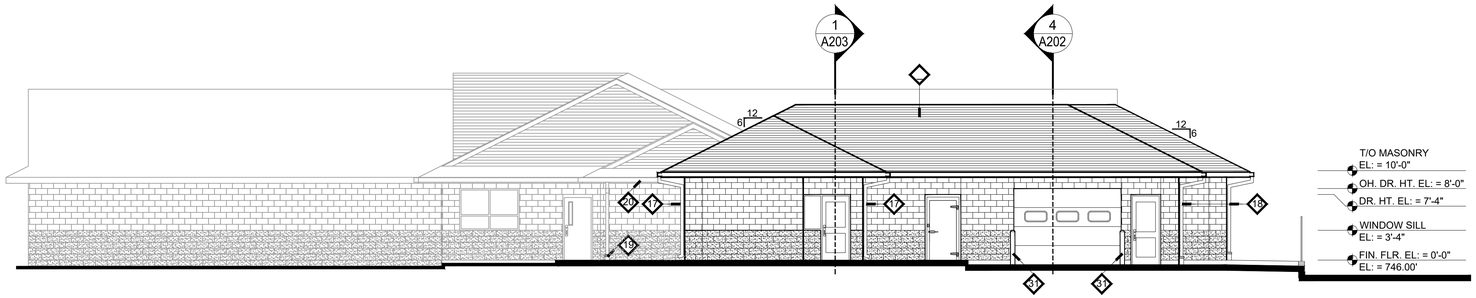
SHEET IDENTIFICATION
HEAD, JAMB AND SILL DETAILS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

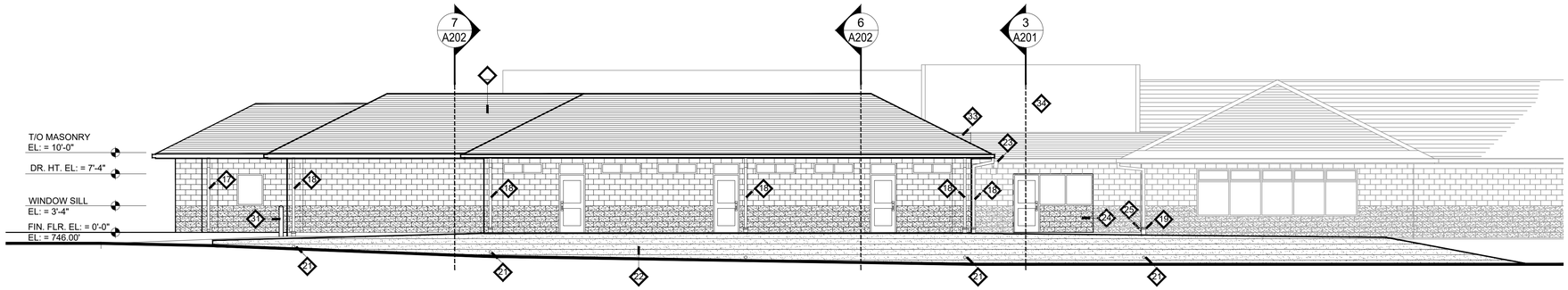
SHEET NUMBER

A107
OF
7



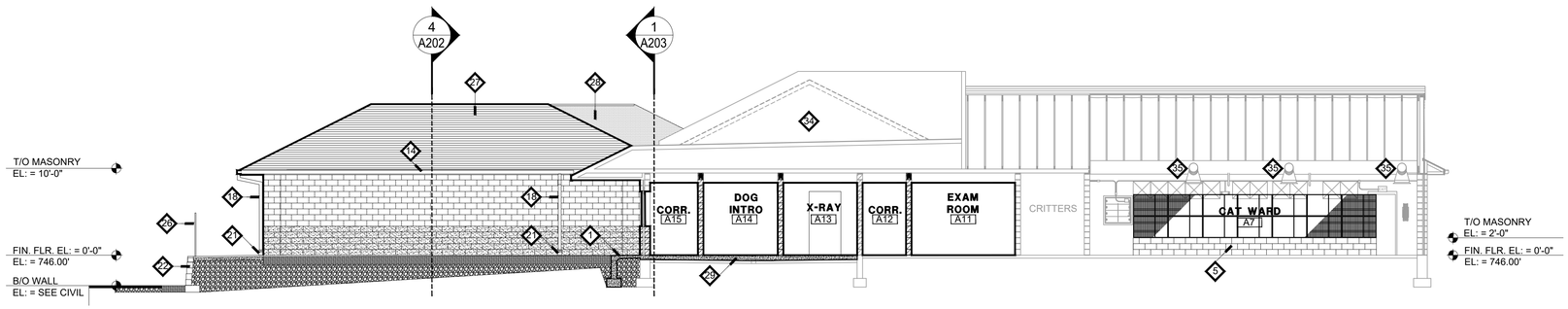
1 BUILDING ELEVATION EAST

SCALE: 1/8"=1'-0"



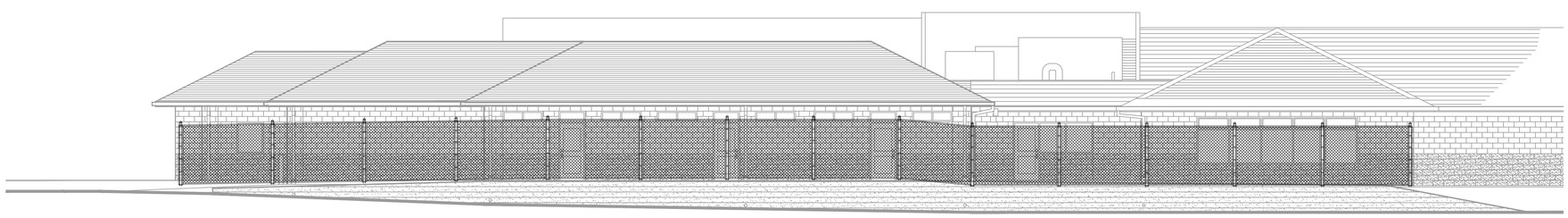
2 BUILDING ELEVATION NORTH

SCALE: 1/8"=1'-0"



3 BUILDING ELEVATION / SECTION WEST

SCALE: 1/8"=1'-0"



4 BUILDING ELEVATION NORTH WITH FENCE (fencing willbe supplied and installed by the owner)

SCALE: 1/8"=1'-0"

NOTES LEGEND

- REFER TO SHEET G102 FOR DEMOLITION GENERAL NOTES AND DEMOLITION BOX NOTES.

-REFER TO SHEET G102 FOR RENOVATION GENERAL NOTES, RENOVATION KEY NOTES AND PARTITION TYPES.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

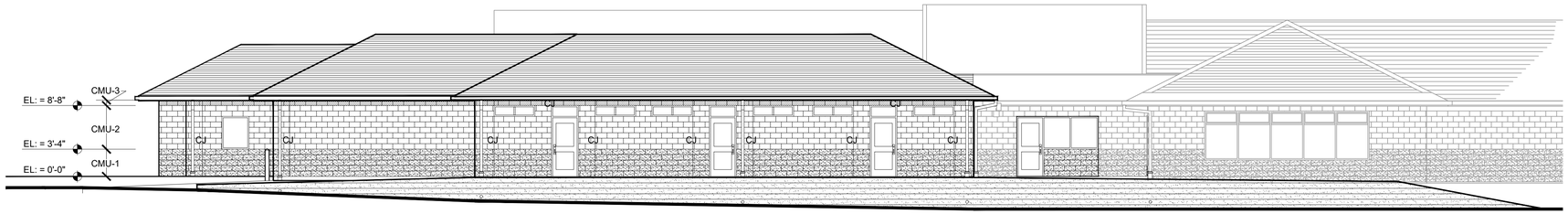
SHEET IDENTIFICATION
BUILDING ELEVATIONS AND NOTES

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

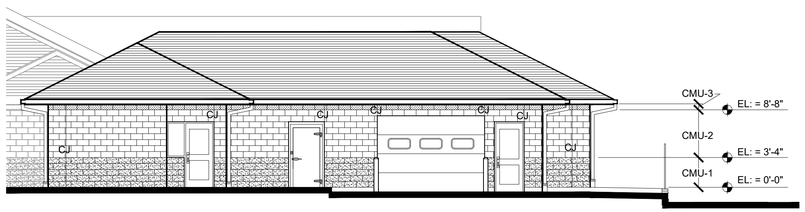
SHEET NUMBER

A201
OF
4



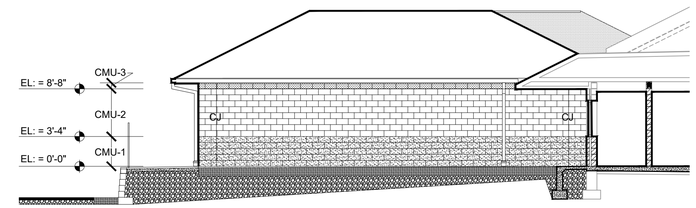
1 FINISH ELEVATION W/ CONTROL JOINTS - NORTH

SCALE: 1/8"=1'-0"



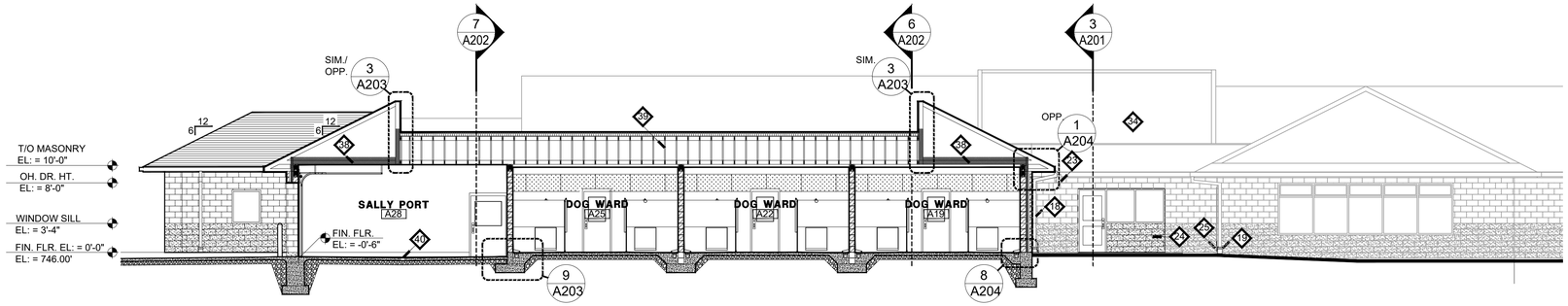
2 FINISH ELEVATION W/ CONTROL JOINTS - EAST

SCALE: 1/8"=1'-0"



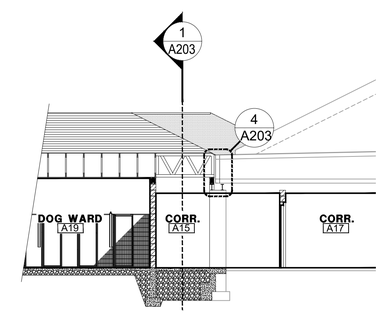
3 FINISH ELEVATION W/ CONTROL JOINTS - WEST

SCALE: 1/8"=1'-0"



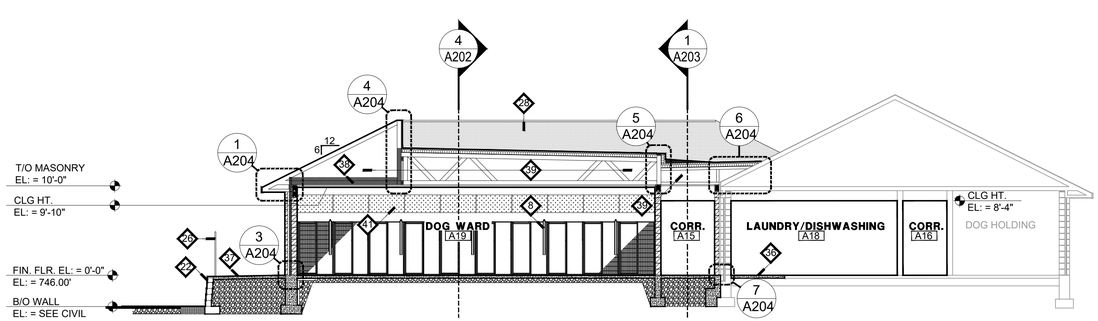
4 BUILDING SECTION

SCALE: 1/8"=1'-0"



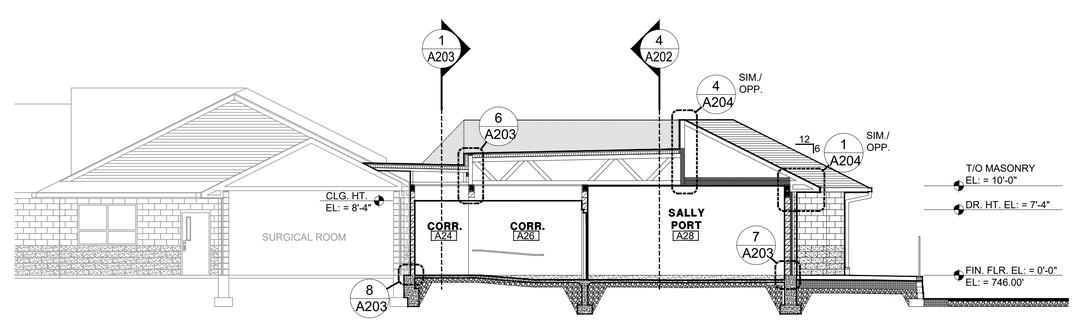
5 BUILDING SECTION

SCALE: 1/8"=1'-0"



6 BUILDING SECTION

SCALE: 1/8"=1'-0"



7 BUILDING SECTION

SCALE: 1/8"=1'-0"

NOTES LEGEND

- REFER TO SHEET G102 FOR DEMOLITION GENERAL NOTES AND DEMOLITION BOX NOTES.

-REFER TO SHEET G102 FOR RENOVATION GENERAL NOTES, RENOVATION KEY NOTES AND PARTITION TYPES.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

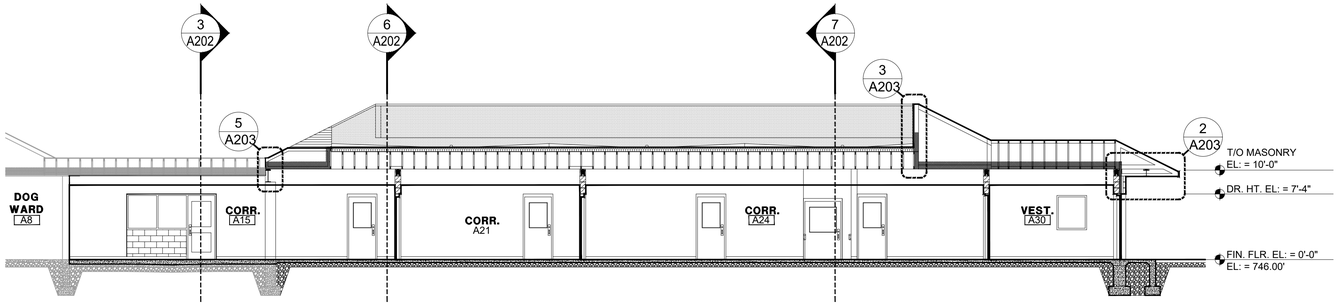
SHEET IDENTIFICATION
FINISH ELEVATIONS W/ CONTROL JOINTS AND BUILDING SECTIONS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

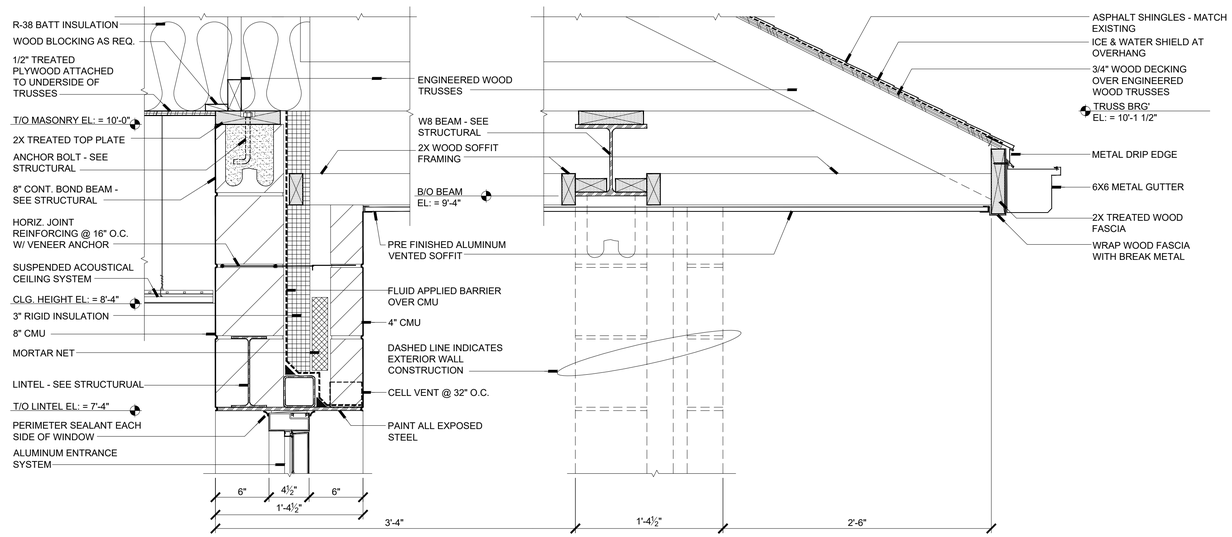
SHEET NUMBER

A202
OF
4



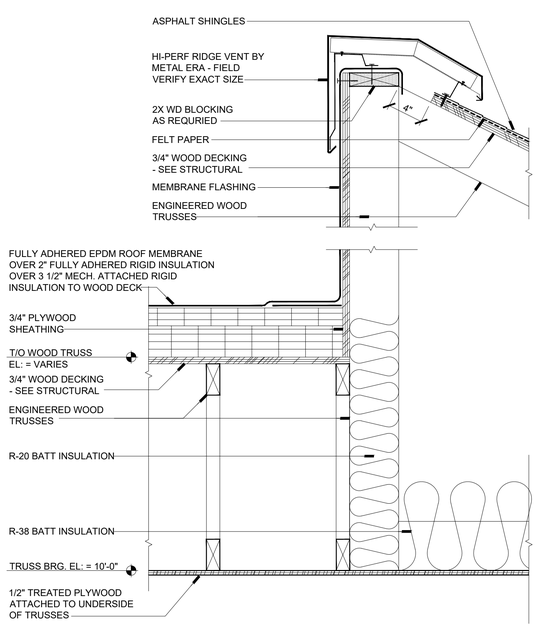
1 BUILDING SECTION

SCALE: 1/8"=1'-0"



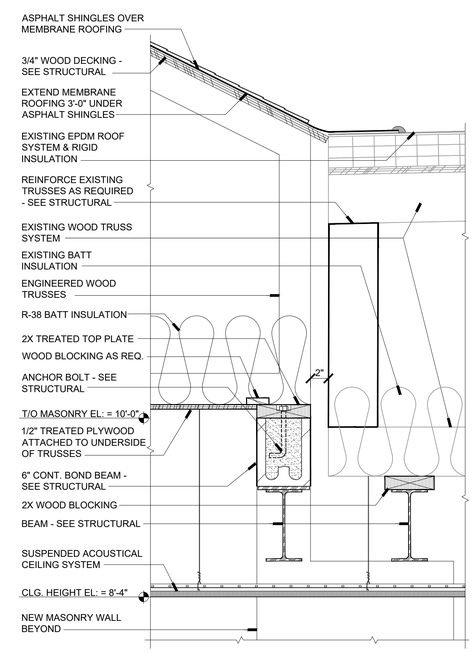
2 DETAIL

SCALE: 11/2"=1'-0"



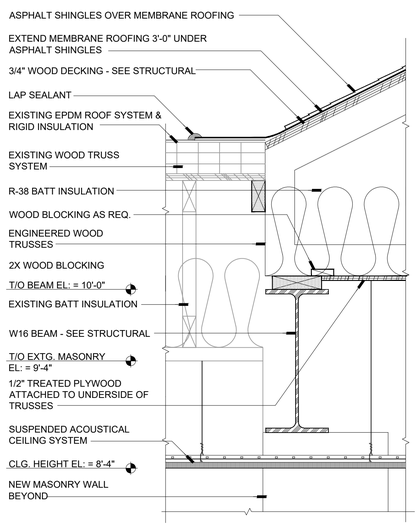
3 DETAIL

SCALE: 11/2"=1'-0"



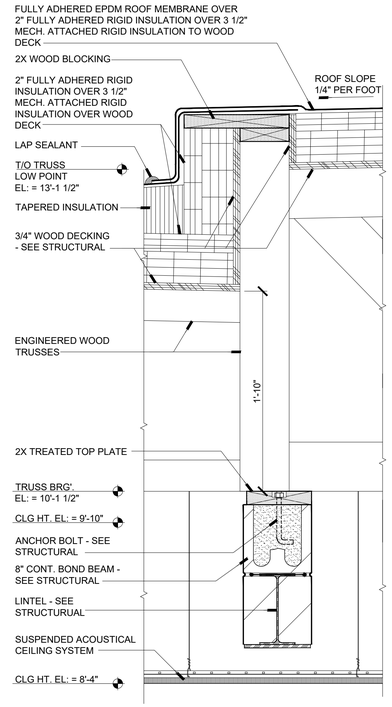
4 DETAIL

SCALE: 11/2"=1'-0"



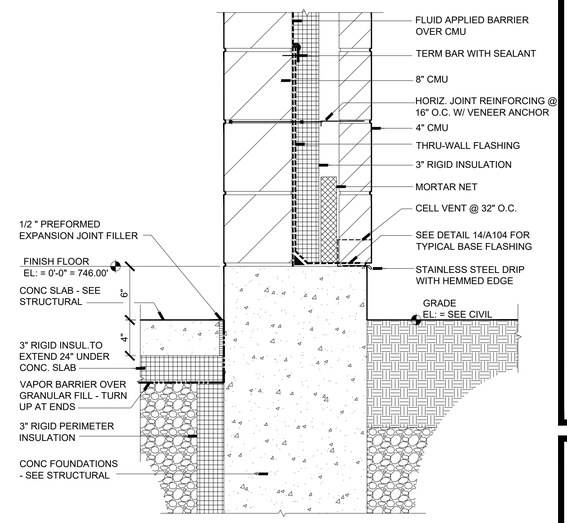
5 DETAIL

SCALE: 11/2"=1'-0"



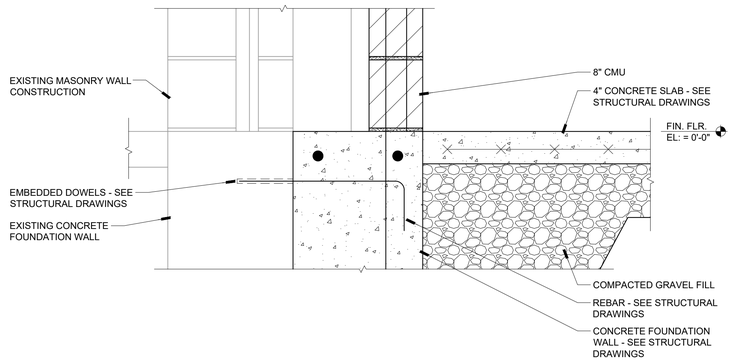
6 DETAIL

SCALE: 11/2"=1'-0"



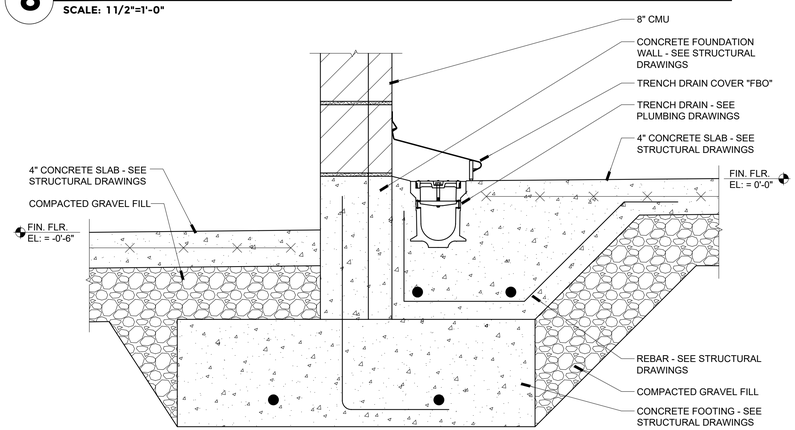
7 DETAIL

SCALE: 11/2"=1'-0"



8 DETAIL

SCALE: 11/2"=1'-0"



9 DETAIL

SCALE: 11/2"=1'-0"

NOTES LEGEND

- REFER TO SHEET G102 FOR DEMOLITION GENERAL NOTES AND DEMOLITION BOX NOTES.

-REFER TO SHEET G102 FOR RENOVATION GENERAL NOTES, RENOVATION KEY NOTES AND PARTITION TYPES.

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

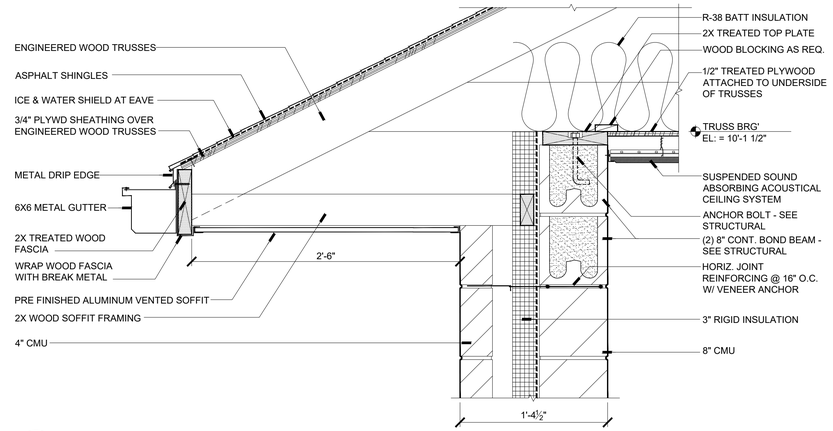
SHEET IDENTIFICATION
BUILDING SECTIONS AND BUILDING DETAILS

PROJECT INFORMATION

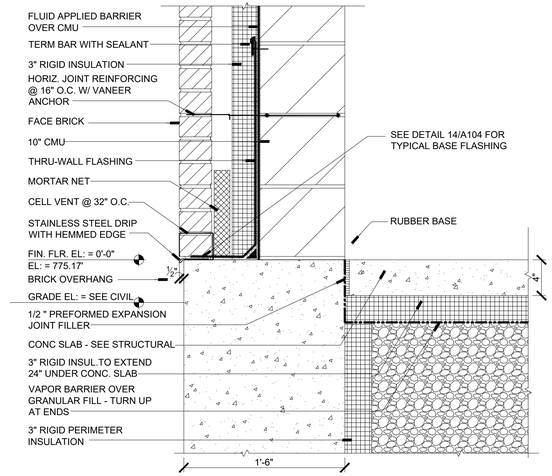
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

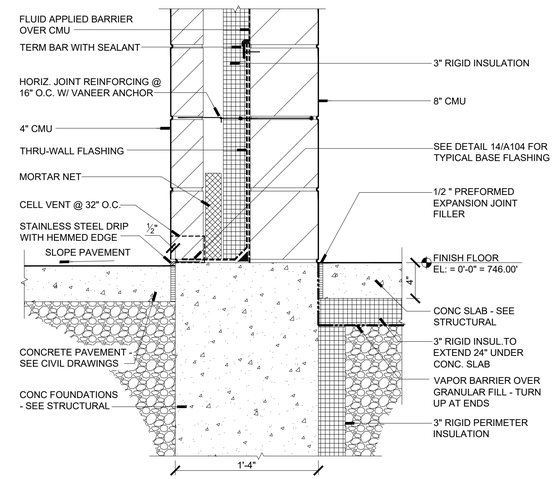
A203
OF
4



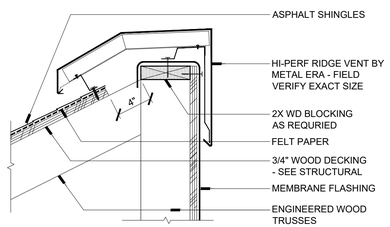
1 DETAIL
SCALE: 11/2"=1'-0"

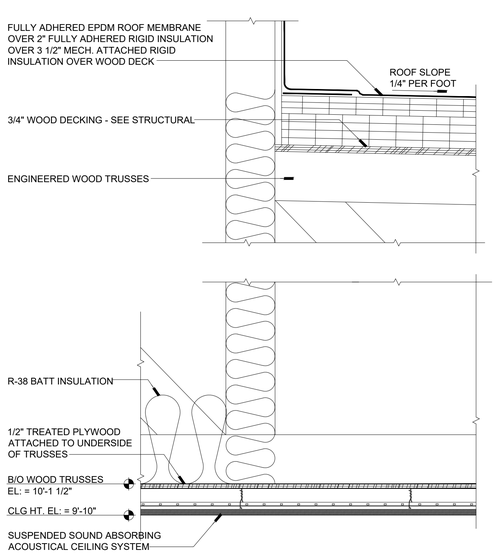


2 DETAIL
SCALE: 11/2"=1'-0"



3 DETAIL
SCALE: 11/2"=1'-0"





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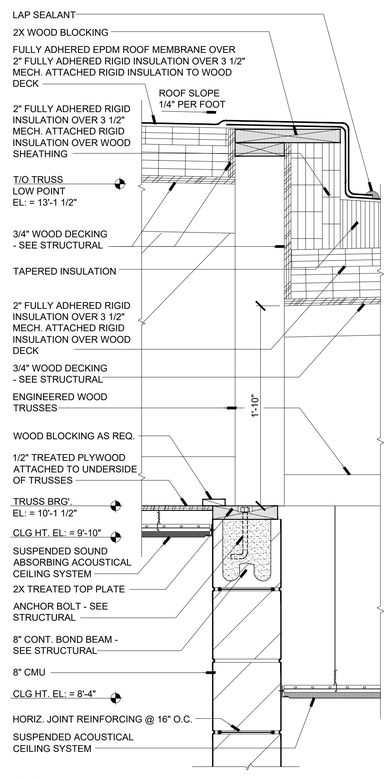

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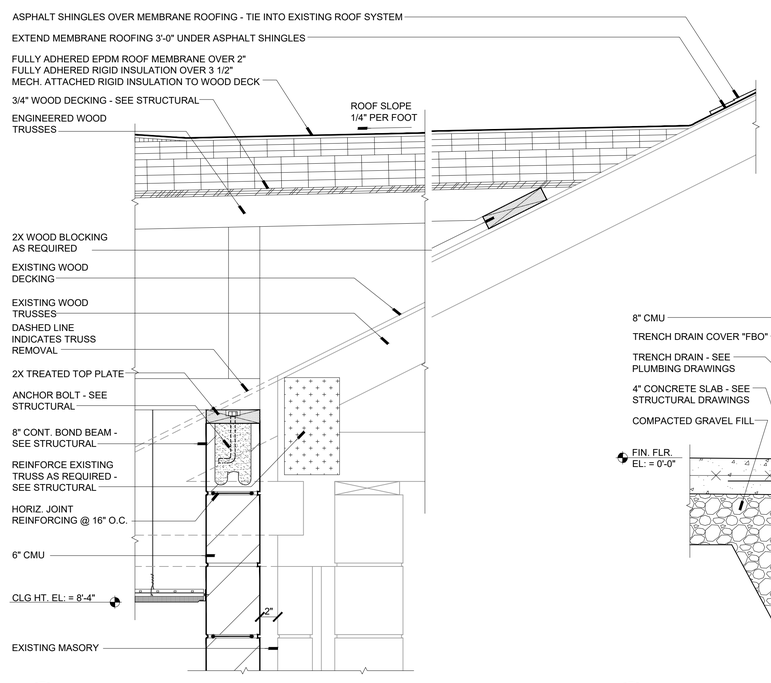

6 DETAIL
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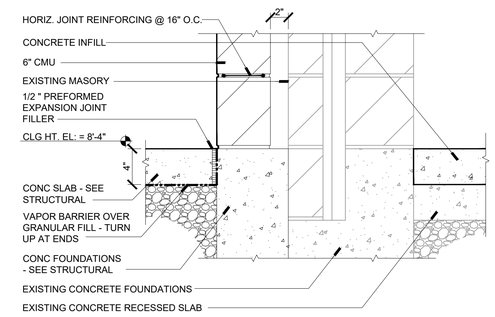
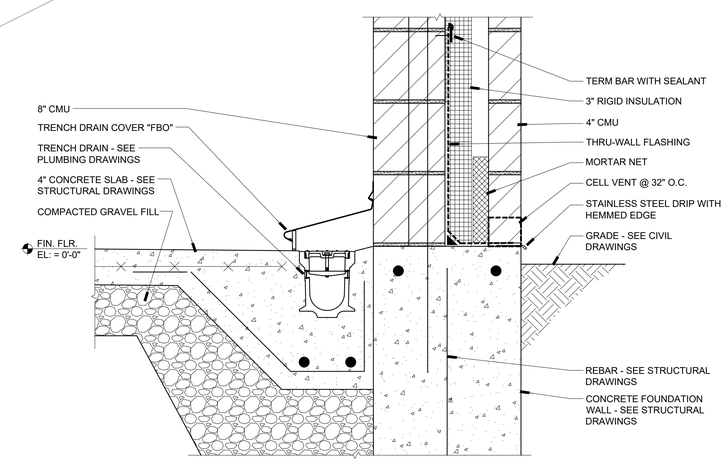


7 DETAIL
SCALE: 11/2"=1'-0"



8 DETAIL
SCALE: 11/2"=1'-0"

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
BUILDING DETAILS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
A204
OF
4

MECHANICAL LEGEND

———	NEW DUCTWORK AND AIR DEVICES TO MATCH EXISTING.
10"x10"	NEW DUCTWORK DIMENSIONS
10/10	EXISTING DUCTWORK DIMENSIONS
(T)	THERMOSTAT
	TAKEOFF WITH MANUAL VOLUME DAMPER
	LOCKABLE MANUAL VOLUME DAMPER (MVD)
FD	FIRE DAMPER
A.F.F.	ABOVE FINISHED FLOOR
B.F.C.	BELOW FINISHED CEILING
W.C.	INCHES OF WATER COLUMN
U.C.	UNDER CUT DOOR
U.T.R.	UP THROUGH ROOF
RT-1	EQUIPMENT TAG
(A) (CFM) (SIZE)	NEW AIR DEVICE TAG
	CEILING DIFFUSER WITH FOUR WAY THROW
	CEILING DIFFUSER FOR RETURN AIR
	SUPPLY REGISTER
	RETURN / EXHAUST GRILLE
(X)-(CFM)	EXISTING AIR DEVICE X = S = SUPPLY AIR = R = RETURN AIR = E = EXHAUST AIR = M = MAKEUP AIR = T = TRANSFER AIR
	VENTLESS PRESSURE REGULATOR
	MANUAL GAS VALVE
	MECHANICAL GAS VALVE
	EXISTING TO NEW CONNECTION

MECHANICAL SPECIFICATIONS

1. THE MECHANICAL CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY ALL EXISTING CONDITIONS IN FIELD AND INCLUDE IN THEIR BID ALL REQUIRED CHANGES TO PROVIDE A COMPLETE OPERATING SYSTEM.

2. THIS CONTRACTOR SHALL FURNISH AND INSTALL MATERIAL INDICATED ON DRAWINGS AND AS REQUIRED TO PROVIDE A COMPLETE AND SATISFACTORY OPERATING INSTALLATION.

3. ALL MATERIALS SHALL BE NEW AND OF STANDARD QUALITY UNLESS OTHERWISE NOTED; NO REJECTS. ALL MATERIALS FOR WHICH AN UNDERWRITER'S LABORATORY STANDARD EXISTS SHALL BEAR A U.L. LABEL. PROTECT ALL EQUIPMENT AND WORK FROM DAMAGE DUE TO ANY CAUSE.

4. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE NATIONAL, STATE AND LOCAL CODES AND REGULATIONS GOVERNING THE INSTALLATION OF THE WORK INVOLVED. ALL PERMITS FOR THE INSTALLATION OF THE WORK AND ALL INSPECTIONS OF SAME SHALL BE ARRANGED FOR BY THIS CONTRACTOR. ALL FEES AND ASSESSMENTS IN CONNECTION THEREWITH SHALL BE PAID BY THIS CONTRACTOR, THE COST OF WHICH SHALL BE INCLUDED IN THEIR BID.

5. THE GENERAL CONDITIONS AND SPECIAL CONDITIONS ISSUED BY THE OWNER AND/OR ARCHITECT SHALL GOVERN WHERE APPLICABLE. GENERAL CONDITIONS AND SPECIAL CONDITION REQUIREMENTS RELATED BUT NOT LIMITED TO THE FOLLOWING SHALL APPLY:

   A. RUBBISH REMOVAL.
   B. COMPLIANCE WITH THE OWNER'S REQUIREMENTS.
   C. OBTAINING AND PAYING FOR REQUIRED LICENSES AND PERMITS.
   D. REPLACEMENT OF DAMAGED SYSTEM EQUIPMENT, AND/OR BUILDING DUE TO NEW INSTALLATIONS.
   E. COMPLIANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES.
   F. WORKMAN'S COMPENSATION INSURANCE, PUBLIC LIABILITY INSURANCE.

6. THE ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIONAL AND ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT.

7. NEW DUCTWORK AND PIPING SHALL RUN IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO THE BUILDING CONSTRUCTION, AS HIGH AS POSSIBLE.

8. THIS CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPLETE THE WORK INCLUDING MOVING AND RIGGING OF MATERIAL AND EQUIPMENT, HANGERS, SUPPORTS, STRUCTURAL FRAMING CHANGES, FITTINGS AND SLEEVES.

9. ALL MATERIAL, WORKMANSHIP AND EQUIPMENT SHALL BE GUARANTEED FOR ONE YEAR AFTER SYSTEM ACCEPTANCE. PROVIDE TYPEWRITTEN OPERATING INSTRUCTIONS, AND EQUIPMENT WARRANTIES.

10. ALL SHEET METAL DUCTS SHALL BE ERECTED IN FIRST CLASS AND WORKMANLIKE MANNER TRUE TO THE DIMENSIONS INDICATED ON THE DRAWINGS, UNLESS OTHERWISE APPROVED, STRAIGHT AND SMOOTH ON THE INSIDE WITH NEATLY FINISHED AIRTIGHT JOINTS. ALL SLOP JOINTS SHALL BE MADE IN THE DIRECTION OF FLOW, AND UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL ELBOWS SHALL HAVE A CENTERLINE RADIUS EQUAL TO 1.5 TIMES THE WIDTH OF THE DUCT. THE SHEET METAL USED SHALL BE GALVANIZED IRON, EXCEPT AS HEREINAFTER SPECIFIED. THE THICKNESS OF THE SHEET METAL AND SIZE AND SPACING OF THE STIFFENERS USED SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE BOOK. CONSTRUCT DUCTWORK IN ACCORDANCE WITH THE REQUIREMENTS OF SMACNA AND CURRENT LOCAL CODES. ASHRAE GUIDE AND DATA BOOK "SCHEDULE OF RECOMMENDED CONSTRUCTION FOR LOW PRESSURE RECTANGULAR SHEET METAL DUCTS." ALL DUCTWORK SHALL COMPLY WITH ASHRAE AND SMACNA STANDARDS.

11. ALL DUCTWORK TO BE SUPPORTED FROM BUILDING CONSTRUCTION WITH ROD HANGERS AND PROPERLY SIZED ANGLE IRON BOTTOM SUPPORTS. THE DUCTS SHALL BE SECURELY ANCHORED TO THE BUILDING IN AN APPROVED MANNER AND SHALL BE SO INSTALLED AS TO BE COMPLETELY FREE FROM VIBRATION UNDER ALL CONDITIONS OF OPERATION. THE DUCTS SHALL BE PROPERLY BRACED AND REINFORCED WITH STEEL ANGLES OR OTHER STRUCTURAL MEMBERS SPACED NOT MORE THAN 60" ON CENTERS. ALL SAGGING DUCTWORK WILL BE REMOVED AND REHUNG AS DIRECTED BY ENGINEER.

12. FLEXIBLE DUCTS AND CONNECTORS SHALL BE TESTED IN ACCORDANCE WITH UL 181 AND BE LABELED. FLEXIBLE DUCTS AND CONNECTORS SHALL BE LIMITED TO A MAXIMUM LENGTH OF 5'-0".

13. ALL DUCTWORK SHALL BE INSULATED AS FOLLOWS UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS. COVERINGS AND LININGS, INCLUDING ADHESIVES, SHALL HAVE A FLAME-SPREAD INDEX NO MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50, WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL DUCTWORK LOCATED WITHIN AND SPACE THAT DOES NOT DIRECTLY COMMUNICATE WITH THE OUTDOORS, AND IS WITHIN THE BUILDING ENVELOPE SHALL BE CONSIDERED TO BE WITHIN A CONDITIONED SPACE.

    CONDITIONED SPACES
    RECTANGULAR: GLASS FIBER LINING WITH R-4 INSTALLED VALUE
    ROUND: FOIL FACED DUCT WRAP WITH R-4 INSTALLED VALUE

    *OUTSIDE AIR INTAKE DUCTWORK IN CONDITIONED SPACES SHALL BE WRAPPED WITH R-5 FOIL FACED DUCT WRAP.
    *EXPOSED SPIRAL DUCTWORK IN CONDITIONED SPACES NOT INSULATED

    UNCONDITIONED SPACE
    RECTANGULAR: GLASS FIBER LINING WITH R-6 INSTALLED VALUE OR FOIL FACED DUCT WRAP WITH R-6 INSTALLED VALUE.
    ROUND; FOIL FACED DUCT WRAP WITH R-6 INSTALLED VALUE

    EXTERIOR DUCTWORK
    RIGID BOARD EXTERIOR INSULATION WITH R-8 INSTALLED VALUE SIMILAR TO "CERTAINTEED" COMMERCIAL BOARD WITH WEATHER PROOF ALUMINUM JACKET WRAP SIMILAR TO "VENTURE CLAD" #1577CW

14. ALL DUCTWORK DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.

15. THE MECHANICAL CONTRACTOR SHALL SUBMIT (4) FOUR PRODUCT SHOP DRAWINGS FOR ALL NEW EQUIPMENT AND DUCT LAYOUT TO BE FURNISHED FOR ARCHITECT, OWNER, AND ENGINEER'S APPROVAL. CATALOG CUT SHEETS FOR ALL EQUIPMENT AND MATERIAL SHALL BE MADE AVAILABLE ON SITE. ALL EQUIPMENT AND APPLIANCES MUST BEAR LABEL INDICATING SUITABLE FOR USE. THE MECHANICAL CONTRACTOR SHALL SUBMIT THE MANUFACTURER'S INSTALLATION INSTRUCTIONS TO THE BUILDING OWNER, INCLUDING INSTALLATION FOR OUTSIDE INSTALLATION WHEN APPLICABLE.

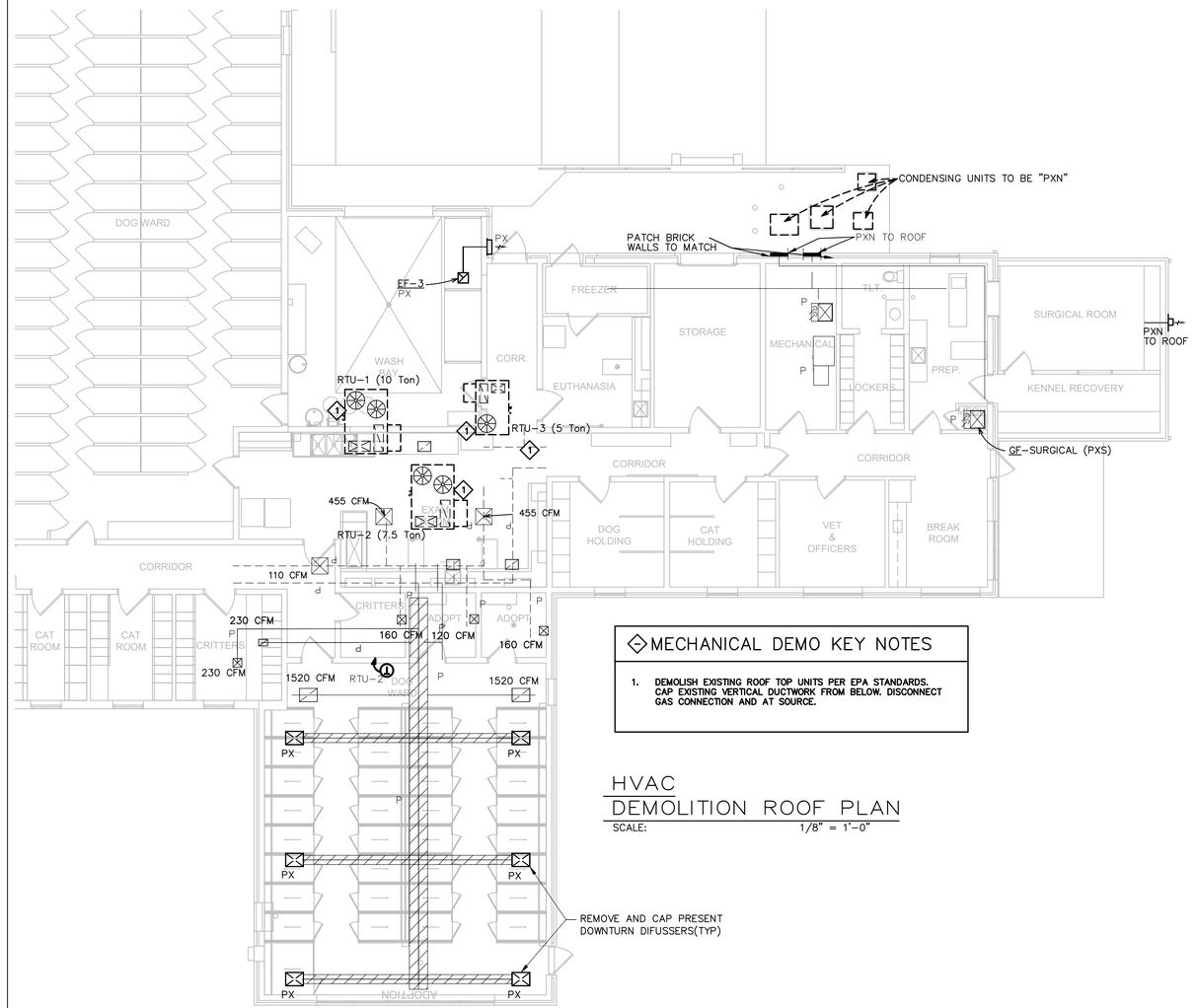
16. THE EQUIPMENT SPECIFIED TO SET STANDARDS, INTENTION IS "OR EQUAL" IF APPROVED PRIOR TO BID DUE DATE.

17. THE MECHANICAL CONTRACTOR SHALL HIRE AN INDEPENDENT AND CERTIFIED TEST AND BALANCE CONTRACTOR TO BALANCE SYSTEM TO AIR QUANTITIES AS INDICATED ON PLANS, AND SHALL PROVIDE A TEST AND BALANCE REPORT TO BE SENT TO THE BUILDING DEPARTMENT NO LESS THAN THREE DAYS PRIOR TO FINAL INSPECTION. CONTRACTOR SHALL ALSO PROVIDE COPIES OF THE BALANCE REPORT TO THE OWNER, ARCHITECT, AND ENGINEER. REPORT SHALL ALSO INCLUDE FAN RPM AND PRESSURE INFORMATION.

18. PROVIDE 7-DAY PROGRAMMABLE ELECTRONIC THERMOSTAT WITH 2 HOUR OVERRIDE, 10 HOUR BATTERY BACKUP, AUTOCHANGEOVER BETWEEN HEATING AND COOLING MODES, 5 DEGREE DEADBAND, DIGITAL READOUT, AND FAN AUTO/ON CONTROLS. THERMOSTAT SHALL BE MANUFACTURED BY HONEYWELL, WHITE-ROGERS OR APPROVED EQUAL. PROVIDE CLEAR PLASTIC LOCKING COVER WITH KEYS.

19. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL FIRE DAMPERS IN DUCTWORK AND FIRESTOP ALL PIPE PENETRATIONS THRU RATED FLOORS, CEILINGS AND WALLS. VERIFY LOCATIONS OF ALL RATED ASSEMBLIES WITH ARCHITECTURAL PLANS. FIRE DAMPERS SHALL BE IN ACCORDANCE WITH UL 555. ALL FIRE DAMPERS SHALL BE "TYPE B" OR "TYPE C" DAMPERS WITH STORED DAMPER OUT OF AIRSTREAM UNLESS OTHERWISE NOTED.

20. ALL DUCT LAYOUTS, PIPING LAYOUTS, WIRING LAYOUTS, ETC. ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL CERTIFY IN WRITING TO THE OWNER AND ARCHITECT THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF DUCTS, PIPING, CONDUITS, ETC. AND START OF INSTALLATION OF SAME. ANY INSTALLATION OF CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.



MECHANICAL DEMO KEY NOTES

1. DEMOLISH EXISTING ROOF TOP UNITS PER EPA STANDARDS. CAP EXISTING VERTICAL DUCTWORK FROM BELOW. DISCONNECT GAS CONNECTION AND AT SOURCE.

HVAC DEMOLITION ROOF PLAN

SCALE: 1/8" = 1'-0"

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

HVAC DEMOLITION FLOOR PLAN

PROJECT INFORMATION

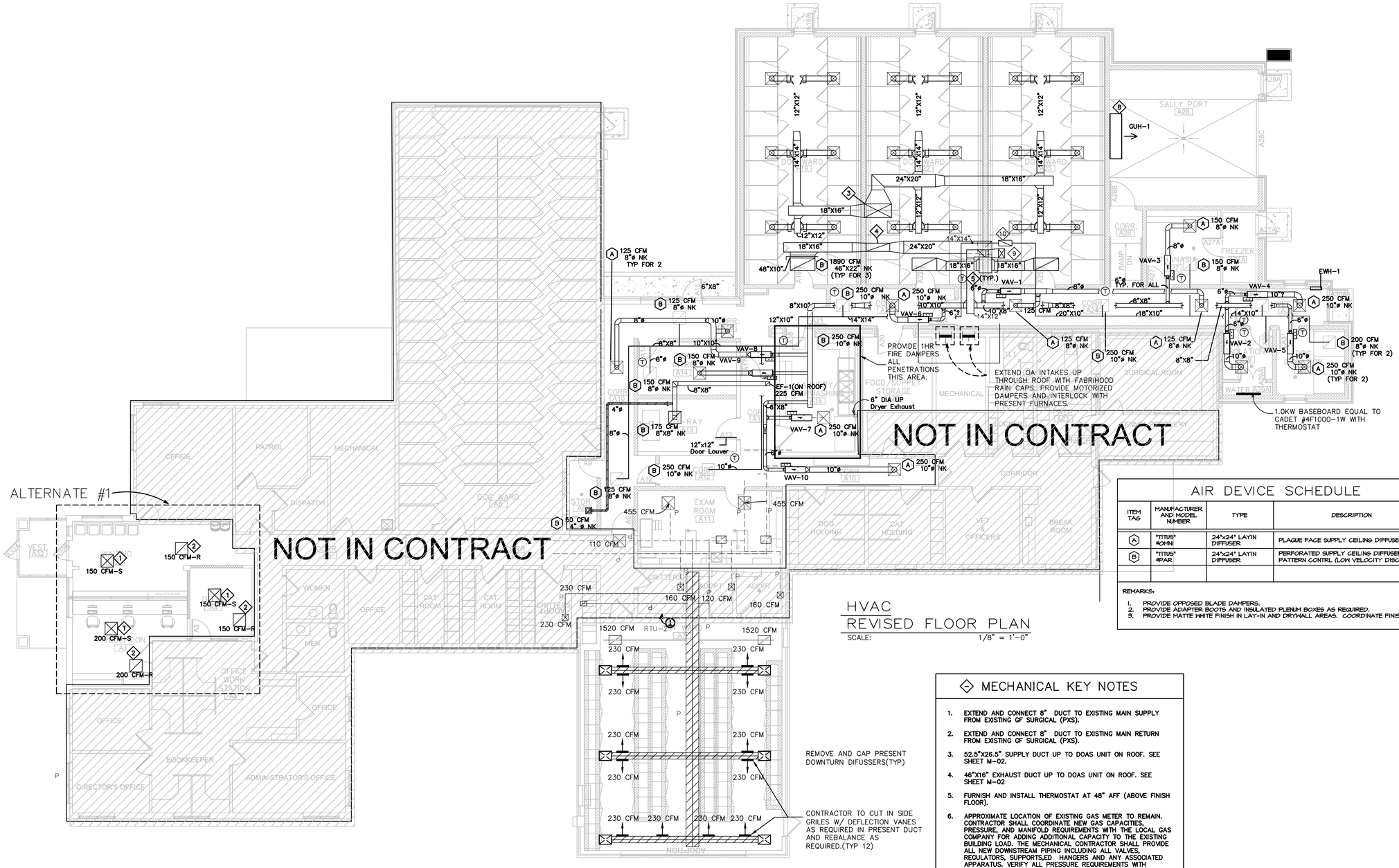
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

MD1 OF **6**

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
STATE OF ILLINOIS
EXP 11-30-23

221218



HVAC
REVISED FLOOR PLAN

SCALE: 1/8" = 1'-0"

AIR DEVICE SCHEDULE

ITEM TAG	MANUFACTURER AND MODEL NUMBER	TYPE	DESCRIPTION	REMARKS
A	"TITUS" #OPNI	24"x24" LAYIN DIFFUSER	PLAQUE FACE SUPPLY CEILING DIFFUSER	1, 2, 3
B	"TITUS" #PAR	24"x24" LAYIN DIFFUSER	PERFORATED SUPPLY CEILING DIFFUSER W/O PATTERN CONTRL (LOW VELOCITY DISCHARGE)	1, 2, 3

REMARKS:

1. PROVIDE OPPOSED BLADE DAMPERS.
2. PROVIDE ADAPTER BOOTS AND INSULATED PLENUM BOXES AS REQUIRED.
3. PROVIDE MATTE WHITE FINISH IN LAY-IN AND DRYWALL AREAS. COORDINATE FINISH WITH ARCHITECT.

MECHANICAL KEY NOTES

1. EXTEND AND CONNECT 8" DUCT TO EXISTING MAIN SUPPLY FROM EXISTING GF SURGICAL (PXS).
2. EXTEND AND CONNECT 8" DUCT TO EXISTING MAIN RETURN FROM EXISTING GF SURGICAL (PXS).
3. 52.5"X26.5" SUPPLY DUCT UP TO DOAS UNIT ON ROOF. SEE SHEET M-02.
4. 46"X16" EXHAUST DUCT UP TO DOAS UNIT ON ROOF. SEE SHEET M-02
5. FURNISH AND INSTALL THERMOSTAT AT 48" AFF (ABOVE FINISH FLOOR).
6. APPROXIMATE LOCATION OF EXISTING GAS METER TO REMAIN. CONTRACTOR SHALL COORDINATE NEW GAS CAPACITIES, PRESSURE, AND MANIFOLD REQUIREMENTS WITH THE LOCAL GAS COMPANY FOR ADDING ADDITIONAL CAPACITY TO THE EXISTING BUILDING LOAD. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL NEW DOWNSTREAM PIPING INCLUDING ALL VALVES, REGULATORS, SUPPORTS,ED HANGERS AND ANY ASSOCIATED APPARATUS. VERIFY ALL PRESSURE REQUIREMENTS WITH MANUFACTURER'S EQUIPMENT SPECIFICATIONS.
7. FOR CONTINUATION SEE SHEET M-02.
8. EXTEND AND CONNECT GAS PIPING TO NEW GAS UNIT HEATER WITH UNION, GAS COCK AND DIRT LEG. EXTEND CONNECT FLUE AND VENT TO NEW GAS FURNACE UNIT.
9. 18"X12" SUPPLY DUCT UP TO RTU-4 ON ROOF. SEE SHEET M-02.
10. 26"X12" RETURN DUCT UP TO RTU-4 ON ROOF. SEE SHEET M-02.

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Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

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HVAC REVISED FLOOR PLAN

PROJECT INFORMATION

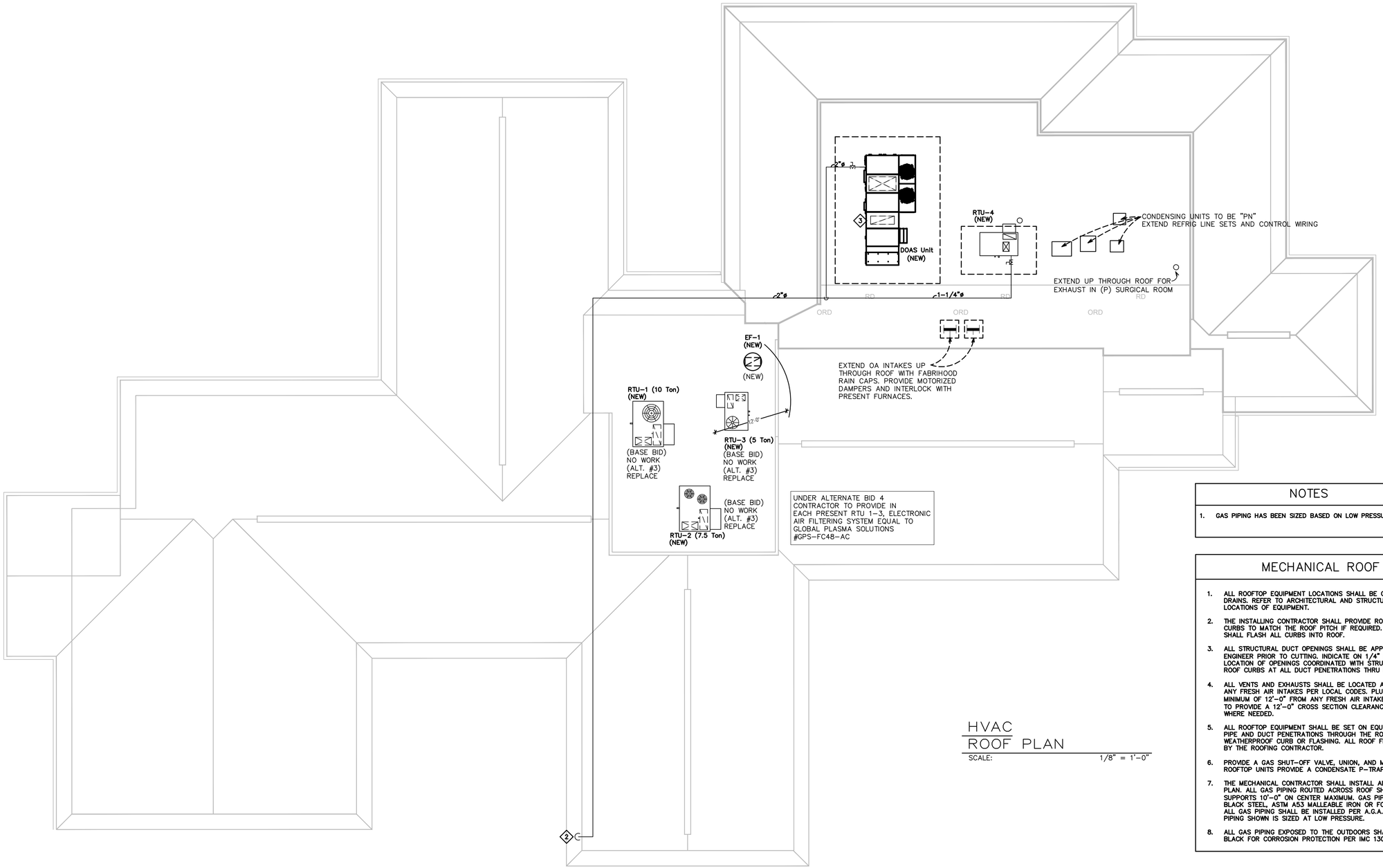
Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER

M1
OF
6

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP 11-30-23

221218



HVAC
ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTES

1. GAS PIPING HAS BEEN SIZED BASED ON LOW PRESSURE.

MECHANICAL ROOF NOTES

1. ALL ROOFTOP EQUIPMENT LOCATIONS SHALL BE COORDINATED WITH ROOF DRAINS. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT LOCATIONS OF EQUIPMENT.
2. THE INSTALLING CONTRACTOR SHALL PROVIDE ROOF CURBS AND LEVELING CURBS TO MATCH THE ROOF PITCH IF REQUIRED. THE ROOFING CONTRACTOR SHALL FLASH ALL CURBS INTO ROOF.
3. ALL STRUCTURAL DUCT OPENINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CUTTING. INDICATE ON 1/4" SHOP DRAWINGS EXACT LOCATION OF OPENINGS COORDINATED WITH STRUCTURAL TRADES. PROVIDE DUCT ROOF CURBS AT ALL DUCT PENETRATIONS THRU ROOF.
4. ALL VENTS AND EXHAUSTS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKES PER LOCAL CODES. PLUMBING VENTS SHALL BE A MINIMUM OF 12'-0" FROM ANY FRESH AIR INTAKE. EXTEND TERMINATION HEIGHT TO PROVIDE A 12'-0" CROSS SECTION CLEARANCE FROM PLUMBING VENTS WHERE NEEDED.
5. ALL ROOFTOP EQUIPMENT SHALL BE SET ON EQUIPMENT CURBS OR RAILS. ALL PIPE AND DUCT PENETRATIONS THROUGH THE ROOF SHALL HAVE A WEATHERPROOF CURB OR FLASHING. ALL ROOF FLASHING SHALL BE PERFORMED BY THE ROOFING CONTRACTOR.
6. PROVIDE A GAS SHUT-OFF VALVE, UNION, AND MIN. 6" DIRT LEG AT ALL ROOFTOP UNITS PROVIDE A CONDENSATE P-TRAP AT ALL ROOFTOP UNITS.
7. THE MECHANICAL CONTRACTOR SHALL INSTALL ALL GAS PIPING SHOWN ON THIS PLAN. ALL GAS PIPING ROUTED ACROSS ROOF SHALL BE SUPPORTED BY ROOF SUPPORTS 10'-0" ON CENTER MAXIMUM. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A53 MALLEABLE IRON OR FORGED STEEL WELDING TYPE. ALL GAS PIPING SHALL BE INSTALLED PER A.G.A. REQUIREMENTS ALL GAS PIPING SHOWN IS SIZED AT LOW PRESSURE.
8. ALL GAS PIPING EXPOSED TO THE OUTDOORS SHALL BE CLEANED AND PAINTED BLACK FOR CORROSION PROTECTION PER IMC 1303.21

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP. 11-30-23

221218

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ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
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ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

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HVAC REVISED ROOF PLAN

PROJECT INFORMATION

Date	August 16, 2022
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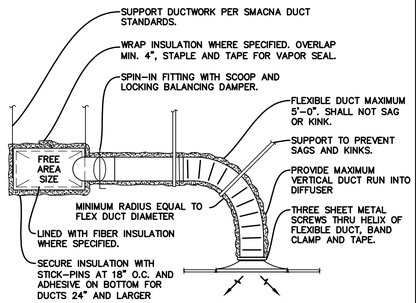
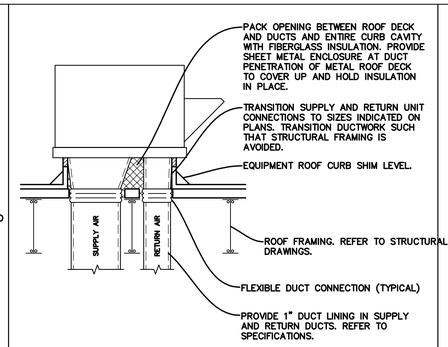
M2
OF
6

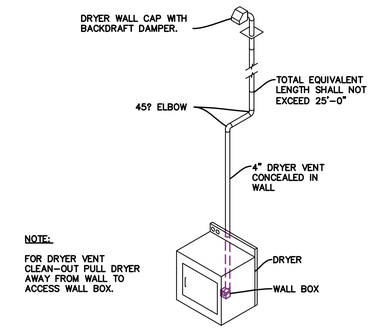
221218



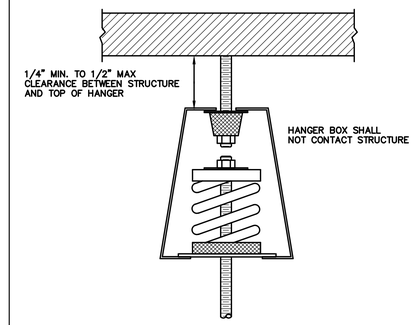
DETAIL – DUCTWORK TAKE-OFF
SCALE: NONE



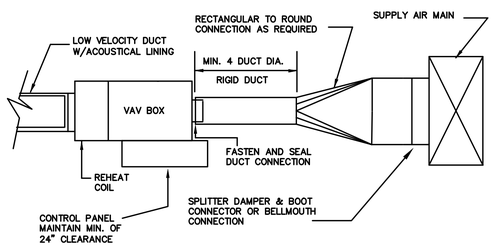
ROOFTOP UNIT ROOF
DETAIL – PENETRATION DETAIL
SCALE: NONE



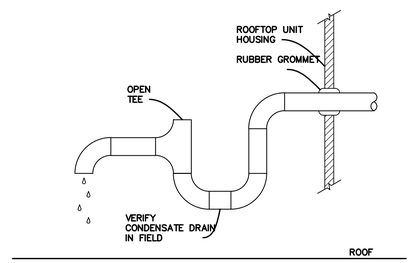
DETAIL – DRYER VENTING DETAIL
SCALE: NONE



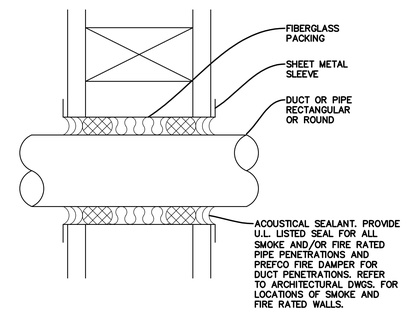
DETAIL – SPRING AND NEOPRENE ISOLATOR
SCALE: NONE



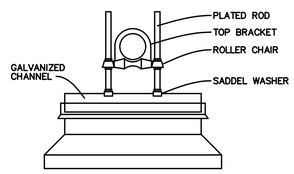
DETAIL – VAV BOX CONNECTION
SCALE: NONE



CONDENSATE DRAIN
DETAIL – P-TRAP PIPING DETAIL
SCALE: NONE



DUCT OR PIPE THRU
DETAIL – INTERIOR WALL SLEEVE
SCALE: NONE

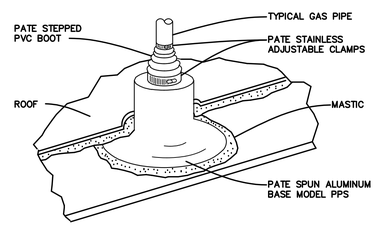


NOTES:

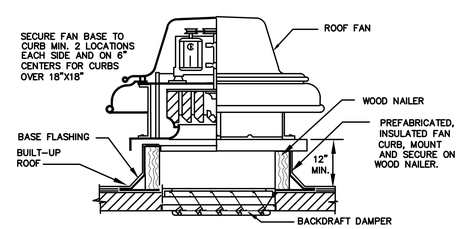
1. PAINTING OF BLOCK AND PLATE SHALL BE AS SPECIFIED BY THE ARCHITECT.

2. SUPPORT SHALL BE SPACED A MAXIMUM OF 10'-0" ON CENTER.

DETAIL – GAS PIPE SUPPORT ON ROOF
SCALE: NONE



DETAIL – GAS PIPE THRU ROOF
SCALE: NONE



ROOF FAN MOUNTING DETAIL
NOT TO SCALE

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
HVAC DETAILS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
M3 OF **6**

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
STATE OF ILLINOIS
EXP. 11-30-23

221218

AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	SUPPLY FAN CFM	SUPPLY FAN HP	SUPPLY FAN BHP	SUPPLY FAN RPM	SUPPLY FAN ESP (IN W.G.)	SUPPLY FAN TSP (IN W.G.)	OUTDOOR CFM	COOLING COIL TOTAL MBH	COOLING COIL SENSIBLE MBH	COOLING COIL EDB (DEG F)	COOLING COIL EWB (DEG F)	COOLING COIL LDB (DEG F)	COOLING COIL LWB (DEG F)	HEATING COIL MBH INPUT	HEATING COIL MBH OUTPUT	HEATING COIL EDB (DEG F)	HEATING COIL LDB (DEG F)	EER	FILTERS FILTER EFF	FILTERS ESP PD (in w.g.)	ELECTRICAL V	ELECTRICAL PH	ELECTRICAL MCA	ELECTRICAL MOP	OPERATING WEIGHT	REMARKS
RTU–1	CARRIER	48FCTM12D6A5–6W0C0	4000		3.00	2050	1.2	1.4	1200	128.63	96.3	80.5	67.2	57.6	57.0	250	205	46	95	11	13	<0.1	208	3	51	60	815	1,3–12
RTU–2	CARRIER	48FCTM08D6A5–6W0C0	3000		2.13	1801	1.2	1.3	900	92.61	66.3	80.5	67.2	59.5	57.5	224	181	46	103	11.2	13	<0.1	208	3	40	50	743	1,3–12
RTU–3	CARRIER	48FCTA06D3A5–6W0C0	2000		1.62	2491	1.1	1.2	600	60.21	44.0	80.5	67.2	59.6	57.8	150	120	46	103	14	13	<0.1	208	3	28	40	635	1,3–12
RTU–4	CARRIER	48LCRB07D2A5–1N1C0	2400		1.25	828	1.0	1.1	420	74.52	57.8	78.6	65.9	56.3	55.9	125	103	56	96	13	13	<0.1	208	3	35	45	1314	1–11

REMARKS:
1. BASED ON CARRIER, TRANE AND LENNOX APPROVED EQUAL.
2. FURNISH WITH STANDARD 14" KNOCK DOWN ROOF CURB WITH WOOD NAILERS.
3. ECONOMIZER, COMP ENTHALPY 0–100% WITH BAROMETRIC RELIEF, LOW LEAK DAMPERS.
4. FURNISH WITH UNPOWERED 120V CONVENIENCE OUTLET.
5. FURNISH WITH ELECTRICAL DISCONNECT SWITCH.
6. FURNISH WITH TWO STAGE NATURAL GAS BURNER, STANDARD HX.
7. PROVIDE SECUREAIRE SLIMLINE ELECTROSTATIC FILTER.
8. PROVIDE FACTORY INSTALLED FILTER STATUS SWITCH.
9. WALL MOUNT THERMOSTAT WHERE SHOWN ON PLANS AT 48"A.F.F.
10. PROVIDE FACTORY INSTALLED SUPPLY & RETURN SMOKE DETECTORS.
11. FURNISH WITH NETWORK DDC INTERFACE CARD FOR FUTURE CONNECTION TO BMS SYSTEM, AND FURNISH DISCHARGE AIR TEMPERATURE SENSOR.
12. DIRECT REPALCEMENT OF EXIUSITING UNIT, NO CURB ADAPTER REQUIRED, MC TO VERIFY DIMENSIONS.

BASE BID:
RTU–1,RTU–2,RTU–3 – DUCT MODIFICATIONS ONLY

ALT. #3
RTU–1,RTU–2,RTU–3 – REPLACE WITH NEW UNITS

ALT. #4
RTU–1,RTU–2,RTU–3 – DUCT MODIFICATIONS AND PROVIDE ELECTRONIC FILTERS FOR UNITS AS SPECIFIED ON SHEET M1

VARIABLE AIR VOLULE (VAV) BOX SCEHDULE

GENERAL DATA TAG	AREA SERVED	MANUFACTURER /MODEL NUMBER	CFM UAX.	CFM MIN.	INLET SIZE (IN)	NOTES
VAV–1	CORRIDOR A24	TITUS DESV	250	75	6	1 TO 4
VAV–2	CAT ISOLATION A29	TITUS/DESV	200	60	6	1 TO 4
VAV–3	EUTHANASIA	TITUS/DESV	150	50	6	1 TO 4
VAV–4	VESTIBULE A30	TITUS/DESV	250	75	6	1 TO 4
VAV–5	DOG ISOLATION A31	TITUS/DESV	250	75	6	1 TO 4
VAV–6	CORRIDOR A21	TITUS/DESV	250	75	6	1 TO 4
VAV–7	LAUNDRY/DISHWASHING	TITUS/DESV	250	75	6	1 TO 4
VAV–8	CORRIDOR A15	TITUS/DESV	250	75	6	1 TO 4
VAV–9	DOG INTRO A14	TITUS/DESV	150	50	6	1 TO 4
VAV–10	CORRIDOR A16	TITUS/DESV	250	75	6	1 TO 4

NOTES:
1. PROVIDE THERMOSTAT WITH DISPLAY PANEL FOR EACH TERMINAL UNIT.
2. PROVIDE WITH AIRFLOW CROSS SENSOR FOR CFM MEASUREMENT.
3. PROVIDE WITH CLASS II, 24V CONTROL TRANSFORMER.
4. ACCEPTABLE MANUFACTURERS: TTTUS, PRTCE INDUSTRIES, CARRIER.

GAS UNIT HEATER SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	SUPPLY FAN CFM	SUPPLY FAN HP	HEATING MBH INPUT	HEATING MBH OUTPUT	VOLTAGE	PHASE	MOCP	REMARKS
GUH–1	WAREHOUSE	REZNOR	UDZ–30	456	0.06	30	24.6	115	1	15	1,2,3,4

REMARKS:
1. INSTALL PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE WITH NON–FUSED DISCONNECT SWITCH.
3. FURNISH WITH SINGLE STAGE THERMOSTAT, WALL/COLUMN–MOUNTED AT 48" A.F.F.
4. PROVIDE 8" DIAMETER CONCENTRIC VENT/INLET AIR PIPE.

ELECTRIC UNIT HEATER

MARK	SERVICE	MANUFACTURER	MODEL	KW	ELECTRICAL AMPS	ELECTRICAL VOLTS	ELECTRICAL PH	NOTES
EWH–1	VESTIBULE	MERKEL	F30522T2DWB	1		208	1	*1–5

NOTES:
1. INSTALL PER MANUFACTURER'S REQUIREMENTS.
2. WALL MOUNT 8" FROM FINISHED FLOOR .
3. FURNISH WITH DISCONNECT SWITCH.
4. FURNISH WITH INTEGRATED THERMOSTAT.
5. COORDINATE COLOR WITH ARCHITECT

EXHAUST FAN

MARK	SERVICE	MANUFACTURER	MODEL	TYPE	DRIVE TYPE	ESP (IN–WG)	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	WEIGHT (LBS)	NOTES
EF–1	A13 X–RAY	GREENHECK	G–095–D	CENTRIFUGAL	DIRECT	0.5	0.125	115	1	51	*1–5

NOTES:
1. BASED ON GREENHECK, LOREN COOK APPROVIDE EQUAL.
2. NAME PLATE SHALL INCLUE DESIGNATION AND AREA SERVED BY FAN.
3. FURNISH WITH ELECTRICAL DISCONNECT.
4. PROVIDE FAN WITH UNIT MOUNTED SPEED CONTROL SWITCH FOR AIR FLOW ADJUSTMENT.
5. PROVIDE FAN WITH MINIMUM 14" HIGH INSULATED ROOF CURB AND GRAVITY BACKDRAFT DAMPE

ENERGY RECOVERY UNIT SCHEDULE

MARK	LOCATION	SERVICE	MANUFACTURER	MODEL	SUPPLY TSP	SUPPLY ESP	SUPPLY MOTOR QTY	SUPPLY MOTOR HP	SUPPLY MOTOR BHP	SUPPLY RPM	EXHAUST TSP	EXHAUST ESP	EXHAUST MOTOR QTY	EXHAUST MOTOR HP	EXHAUST MOTOR BHP	EXHAUST RPM	SUMMER OPERATION SUPPLY AIR CFM	SUMMER SUPPLY AIR LDB	SUMMER SUPPLY AIR LWB	SUMMER OUTSIDE AIR CFM	SUMMER OUTSIDE AIR EDB	SUMMER OUTSIDE AIR EWB	SUMMER EXHAUST AIR CFM	SUMMER EXHAUST AIR EDB	SUMMER EXHAUST AIR EWB	WINTER OPERATION SUPPLY CFM	WINTER SUPPLY LDB	WINTER OUTSIDE AIR CFM	WINTER OUTSIDE AIR EDB	WINTER EXHAUST AIR CFM	WINTER EXHAUST AIR EDB	WINTER EXHAUST AIR EWB	DX COOLING EDB	DX COOLING EWB	DX COOLING LDB	DX COOLING LWB	FACE VELOCITY	COOLING LOAD (BTUH) TOTAL	COOLING LOAD (BTUH) SENSIBLE	INDIRECT GAS HEATING TEMP RISE	INDIRECT GAS HEATING EDB	INDIRECT GAS HEATING INPUT MBH	INDIRECT GAS HEATING OUTPUT MBH	ELECTRICAL V	ELECTRICAL PH	ELECTRICAL Hz	ELECTRICAL MCA	ELECTRICAL MOP	OPERATING WEIGHT	REMARKS
DOAS–1	ROOF	DOG WARD	TRANE	HORIZON OAD	2.74	1.00	1	5.0	3.61	1,003	2.24	1.00	1	5	3.30	1643	5,770	80	68	5,990	94	74	5,990	87.9	69.5	5,700	49.8	5,990	–1.7	5,990	30.4	30.2	79.8	68.1	54.5	54.2	328	247.9	159.3	65	49.8	500.0	400	208	3	60	100.2	125	4,289	1 TO 14

REMARKS:
1. FURNISH WITH DOWN DISCHARGE SUPPLY AND RETURN. MOUNT ON INSULATED 24" CURB.
2. FURNISH WITH SINGLE ZONE VAV FAN CONTROL.
3. 2–STAGE COOLING.
4. FURNISH WITH FULL SENSIBLE ECONOMIZER.
5. FURNISH WITH DIRECT DRIVE VFD FOR SUPPLY AND EXHAUST FAN.
6. FURNISH WITH ELECTRICAL DISCONNECT SWITCH.
7. FURNISH WITH MODULATING NATURAL GAS BURNER, STAINLESS STEEL HEAT EXCHANGER. PROVIDE WITH STAINLESS STEEL DRAIN PAN.
8. 2" PLEATED FILTERS, MERV 8.
9. UNIT TO HAVE TOTAL ENTHALPY WHEEL COMPLETE WITH BY–PASS DAMPERS AND FROST CONTROL.
10. FURNISH WITH POWERED 120V CONVENIENCE OUTLET.
11. WALL MOUNT THERMOSTAT WHERE SHOWN ON PLANS AT 48"A.F.F.
12. FURNISH WITH HOT GAS REHEAT COIL.
13. PROVIDE DUCT SMOKE DETECTOR IN BOTH THE SUPPLY AND RETURN DUCTS.
14. PROVIDE WITH AN INTERNALLY LINED DROP PLENUM WITH 4–WAY DRUM LOUVER DISTRIBUTION.
15. ERV PURGE REQUIRD TO LIMIT CROSS CONTAMINATION TO LESS THAN .04% CROSSOVER AIR
16. ERV WHEEL TO HAVE VFD, BYPASS DAMPERS FOR FROST PREVEION AND ECONOMIZER SEQUENCE.
17. PROVIDE SLIDE OUT FANS, SLIDE OUT ERV WHEEL, AND 6" GAP BETWEEN COILS FOR EASE OF SERVICABILITY
18. ACTIVE HEAD PRESSURE CONTROL ON THE CONDENSER FANS TO ENSURE REHEAT PERFORMANCE
19. PROVIDE 1ST YEAR PARTS AND LABOR WARRANTY ON THE ENTIRE UNIT, 5 YEAR COMPRESSOR WARRANTY AND 25 YEAH HEAT EXCHANGER WARRANTY

Additional Schedule items:
ERV Total Summer/Winter Capacity: 144.25 MBH/375.88
ERV Sensible Summer/Winter Capacity: 79.53/259.52 MBH and 66% Efficiency
ERV Latent Summer/Winter Capacity: 64.7/116.36 MBH and 62% Efficiency
EER : 18.3
MRE : 5.79 lb/kwh
MRC : 111.86.lb/h

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
OF ILLINOIS
EXPIRES 30-23

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184–003483
815–484–4708 Phone 815–484–4710 Fax
e–mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
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ROCKFORD, ILLINOIS

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SHEET IDENTIFICATION
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PROJECT INFORMATION
Date August 16, 2022
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SHEET NUMBER
M4
OF
6

221218

DUCT AND EQUIPMENT SYMBOLS

24x12 / 24x12	NEW RECTANGULAR METAL DUCT: 1) FIRST DIMENSION IS SIDE SHOWN 2) ALL DUCTWORK SIZES SHOWN ARE NET FREE INSIDE DIMENSIONS 3) GALVANIZED SHEET METAL UNLESS NOTED
6"ø / 6"ø	NEW ROUND DUCT (SEE NOTES ABOVE)
24x12 / 24x12	NEW OVAL DUCT (SEE NOTES ABOVE)
	ROUND DUCT ELBOW TURNED UP
	RECTANGULAR ELBOW TURNED UP, SUPPLY OR OUTSIDE AIR DUCT
	RECTANGULAR ELBOW TURNED UP, EXHAUST OR RETURN AIR DUCT
	ROUND DUCT ELBOW TURNED DOWN
	RECTANGULAR ELBOW TURNED DOWN, SUPPLY OR OUTSIDE AIR DUCT
	RECTANGULAR ELBOW TURNED DOWN, EXHAUST OR RETURN AIR DUCT
	RADIUS ELBOW OR RECTANGULAR ELBOW WITH TURNING VANES
	RECTANGULAR ELBOW OR TRANSFER DUCT WITHOUT TURNING VANES
	RADIUS TEE DUCT JUNCTION
	MITERED TEE DUCT JUNCTION WITH TURNING VANES
UP / UP	DUCT RISE IN DIRECTION OF ARROW
DOWN / DOWN	DUCT DROP IN DIRECTION OF ARROW
	DUCT SIZE TRANSITION FOB = FLAT ON BOTTOM FOT = FLAT ON TOP
	STANDARD LOW VELOCITY BRANCH, NO SPLITTER WITH 45° FLARE
AD / AD	ACCESS DOOR/PANEL (SIDE OR BOTTOM)
	FLEXIBLE DUCT
	ACOUSTICALLY LINED DUCT
	FLEXIBLE CONNECTION
	EXHAUST, RETURN OR TRANSFER AIR REGISTER OR GRILLE
	SUPPLY AIR REGISTER OR GRILLE
SQUARE (4-WAY) / ROUND	CEILING SUPPLY DIFFUSERS (AIR FLOW DIRECTION BY ARROWS)
S-1 300-10"ø	REGISTER OR DIFFUSER # CFM# - ROUND NECK SIZE INDICATED
SQUARE / RECTANGULAR	CEILING RETURN OR EXHAUST REGISTER OR GRILLE
	TYPE TD T-BAR DIFFUSER (PROVIDE VOLUME DAMPER AT DUCT TAKEOFF)
DG CFM	(DG) DOOR GRILLE (UC) UNDER CUT
LOUVER SIZE CFM	AIR LOUVER, (BOTTOM OF DUCT TO DRAIN TOWARD LOUVER)
M / M	MOTOR OPERATED DAMPER PROVIDE CEILING & DUCT ACCESS
FD	FIRE DAMPER

CONTROL SYMBOLS

T	THERMOSTAT OR DDC TEMPERATURE SENSOR

GENERAL NOTES

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. EACH CONTRACTOR SHALL MAKE REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS SUCH AS OFF SETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND THE BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. FOR PRESENT CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO AVOID CONFLICT. IT IS INTENDED THAT ALL EQUIPMENT, MATERIAL, DEVICES, ETC., SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARITY OF PRESENTATION.
2. ALL MECHANICAL WORK SHALL CONFORM WITH THE INTERNATIONAL MECHANICAL CODES 2015, LOCAL & MUNICIPAL CODES AND AUTHORITY HAVING JURISDICTION.
3. EACH CONTRACTOR SHALL CHECK DRAWINGS OF THE OTHER TRADES TO VERIFY THEIR WORK WILL BE INSTALLED CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AT ALL POINTS IN THE BUILDING, WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION.
4. FURNISH ALL TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVE AND OPENINGS NEEDED FOR WORK. FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT OTHER TRADES TO COORDINATE THEIR WORK.
5. WHERE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF ANOTHER TRADE, ALL TRADES SHALL ASSIST TO WORK COORDINATE THEIR WORK.
6. PRIOR TO BIDDING THE HVAC CONTRACTOR SHALL REVIEW ALL DRAWINGS AND COORDINATE WORK. CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ARCHITECT ANY INCONSISTENCIES OR INTERFERENCE WITH HIS WORK.
7. CONTRACTOR SHALL COORDINATE ALL CEILING DIFFUSERS, REGISTERS, AND/OR GRILLES WITH SUSPENDED CEILING AND LIGHT PATTERNS. OPENINGS SHALL BE IN CENTER OF TILES.
8. SHEETMETAL DUCT SIZES MAY BE ALTERED TO FIT JOB CONDITIONS, BUT NET FREE AREAS MUST BE MAINTAINED. INCREASE SHEETMETAL DUCT SIZE TO ALLOW FOR DUCT LINING WHERE USED. WRAP ALL DUCTWORK EXCEPT AS NOTED. MAXIMUM DUCT ASPECT RATIO 1:5
9. ALL DUCTWORK TO BE HELD TIGHT TO STRUCTURAL ROOF JOISTS, BEAMS, ETC, AS CLEARANCE IS MINIMAL. COORDINATE WITH OTHER CONTRACTORS TO AVOID CONFLICT.
10. CONTRACTOR SHALL INCLUDE IN HIS WORK THE RELOCATION OF ALL CROSS BRACING, AS REQUIRED TO FIT DUCTS BETWEEN JOISTS. THIS WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR WITH ARCHITECTURAL APPROVAL.
11. CONTRACTOR SHALL PROVIDE ALL DUCT DROPS AND OFFSETS TO AVOID INTERFERENCES WITH JOISTS, OTHER DUCTS, LIGHTS, PIPES, ETC.
12. ALL THERMOSTATS LOCATED UP 4'-6" TO 5'-0" TO MATCH ADJACENT LIGHT SWITCHES AND WITH PLASTIC OR CAST GUARDS AS SPECIFIED. ALL THERMOSTATS LOCATED ON EXTERIOR WALLS OR COLUMNS MUST BE MOUNTED ON THERMAL INSULATING BLOCKS.
13. CONTRACTOR SHALL PROVIDE COOLING COIL CONDENSATE DRAIN LINES FROM AIR HANDLING UNIT TO DRAIN.
14. HEATING, VENTILATING, AIR CONDITIONING AND ELECTRICAL DESIGNS ARE BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. CONDUITS, DISCONNECTS, BREAKERS, FUSES AND WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT MANUFACTURER. INCREASED CURRENT REQUIREMENTS NECESSITATING LARGER WIRE, BREAKERS, FUSES, SWITCHES, ETC. TO ACCOMMODATE ANY ALTERNATE OR SUBSTITUTE MANUFACTURER'S EQUIPMENT OTHER THAN AS SHOWN ON DRAWINGS OR SCHEDULES SHALL BE PROVIDED WITHOUT INCREASE IN CONTRACT PRICE BY THE CONTRACTOR FURNISHING EQUIPMENT.
15. INSTALL 1" OF NON-SHRINK GROUT AROUND DUCTWORK AND PIPING ON EACH WALL FACE TO SEAL OPENINGS AND ELIMINATE SOUND TRANSFER WITH AIR-TIGHT CONNECTIONS.
16. EXTEND RTU EXHAUST TO MAINTAIN 10 FT SEPARATION TO ANY AIR INTAKES. VERIFY LOCATION. CONFIRM WITH LOCAL INSPECTORS AS TO REQUIREMENTS.
17. GUARDS SHALL BE PROVIDED WHERE APPLIANCES EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE ARE LOCATED WITHIN 10 FT OF ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR, ROOF OR GRADE BELOW. THE GUARD SHALL BE EXTEND NOT LESS THAN 30 INCHES BEYOND EACH END OF EQUIPMENT AND THE TOP OF THE GUARD SHALL BE LOCATED NOT LESS THAN 42 INCHES ABOVE ELEVATED SURFACE.
18. DUCT INSULATION AND SEALING
    DUCT INSULATION SHALL CONFORM TO THE REQUIREMENTS OF 2018 IMC SECTION 604 AND 2018 IECC SECTION C403.11.1 FOR COMMERCIAL BUILDINGS AND R403.3.1 FOR RESIDENTIAL BUILDINGS.
    A. COMMERCIAL BUILDINGS
       SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH NOT LESS THAN R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND WHERE LOCATED OUTSIDE THE BUILDING WITH NOT LESS THAN R-8 INSULATION IN CLIMATE ZONES 1-4 AND NOT LESS THAN R-12 INSULATION IN CLIMATE ZONES 5-8. WHERE LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY NOT LESS THAN OF R-8 INSULATION IN CLIMATE ZONES 1-4 AND NOT LESS THAN R-12 INSULATION IN CLIMATE ZONES 5-8.
       EXCEPTION: WHERE LOCATED WITHIN EQUIPMENT.
       EXCEPTION: WHERE THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM IS NOT GREATER THAN 15 DEG. F.
       DUCTS, AHU & FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH IMC SECTION 603.9.
19. SUPPORTS AND ANCHORS
    A. MANUFACTURERS: GRINNELL, B-LINE, O.Z. GEDNEY, MICHIGAN HANGER, BERGEN/CARPENTER AND PATERSON.
    B. USE MATERIALS COMPATIBLE WITH PIPING SYSTEMS AVOIDING ELECTROLYTIC ACTION AND CONFORM TO ANSI/ASME B31, NFPA, MSS SP-58, 69, 89.
    C. WIRE ARE NOT ALLOWED TO BE USED AS A HANGER SUPPORT.
20. TESTING AND BALANCING
    A. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF ADJUSTABLE FAN SHEAVES. BRANCH DAMPERS ARE TO BE USED FOR ANY REQUIRED TRIM ADJUSTMENT.
    B. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND EQUIPMENT INCLUDING SHEAVES AS REQUIRED TO BALANCE ALL AIR SYSTEMS IN ACCORDANCE WITH QUANTITIES SHOWN.
    C. BALANCING SHALL BE PERFORMED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER AND REPORT SHALL BE PROVIDED ON AABC TYPE FORMS.
21. AIR DISTRIBUTION SYSTEMS
    A. AIR TERMINALS
       1. PROVIDE SUPPLY AND RETURN AIR DIFFUSERS/REGISTERS AS SHOWN ON SCHEDULES.
    B. SHEET METAL WORK
       1. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED SHEET STEEL AND SHALL BE INSTALLED IN ACCORDANCE WITH SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA) DUCT CONSTRUCTION. STANDARDS. DUCT SYSTEMS TO BE 2" PRESSURE CLASS.
       2. ALL DUCT DIMENSIONS INDICATED ON THE PLANS ARE INSIDE CLEAR DIMENSIONS.
       3. SUPPLY DUCTWORK TO BE RECTANGULAR WITH HEMMED "S" LONGITUDINAL SEAMS AND DUCTMATE TRANSVERSE JOINTS.
       4. MANUAL VOLUME DAMPERS: GALVANIZED STEEL, PER SMACNA EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT, WITH LEVER AND LOCKSCREW AT THE OPPOSITE END. FOR INSULATED DUCTS, QUADRANTS MOUNTED ON COLLAR TO CLEAR INSULATION. LEVERS MUST BE ACCESSIBLE.
    C. EXHAUST DUCTWORK ELBOWS TO BE LONG RADIUS TYPE.
    D. ACCESS DOORS SHALL BE PROVIDED IN DUCTWORK WHEREVER CONTROLS, CONTROL DAMPERS, COILS, & INSTRUMENTS ARE INSTALLED.
    E. THE PLENUM CHAMBER THAT IS USED FOR RECIRCULATION OF AIR SHALL BE OF TIGHT CONSTRUCTION AND ALL SOURCES OF AIR CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS, EXHAUST DISCHARGE AND OTHER SOURCES WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.
22. CONTROL SYSTEM WIRING
    A. HVAC CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL CONTROL WIRING FOR HVAC EQPM.
23. SHUTOFF DAMPERS (MANDATORY)
    A. PER 2018 IECC SECTION C403.7.7, OUTDOOR AIR INTAKE AND EXHAUST OPENINGS AND STAIRWAY AND SHAFT VENTS SHALL BE PROVIDED WITH CLASS I MOTORIZED DAMPERS. THE DAMPERS SHALL HAVE AN AIR LEAKAGE RATE NOT GREATER THAN 4 CFM/SQ. FT. OF DAMPER SURFACE AREA AT 1.0 INCH WATER GAUGE (249 Pa) AND SHALL BE LABELED BY AN APPROVED AGENCY WHEN TESTED IN ACCORDANCE WITH AMCA 500D FOR SUCH PURPOSE.
    B. OUTDOOR AIR INTAKE AND EXHAUST DAMPERS SHALL BE INSTALLED WITH AUTOMATIC CONTROLS CONFIGURED TO CLOSE WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE OR DURING UNOCCUPIED PERIOD WARM-UP AND SETBACK OPERATION, UNLESS THE SYSTEMS SERVED REQUIRE OUTDOOR OR EXHAUST AIR IN ACCORDANCE WITH THE IMC OR THE DAMPERS ARE OPENED TO PROVIDE INTENTIONAL ECONOMIZER COOLING.
    C. STAIRWAY AND SHAFT VENT DAMPERS SHALL BE INSTALLED WITH AUTOMATIC CONTROLS CONFIGURED TO OPEN UPON THE ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE OF THE BUILDING'S FIRE ALARM SYSTEM OR THE INTERRUPTION OF POWER TO THE DAMPER.

    EXCEPTION: NONMOTORIZED GRAVITY DAMPERS SHALL BE AN ALTERNATIVE TO MOTORIZED DAMPERS FOR EXHAUST AND RELIEF OPENINGS AS FOLLOWS:
    1. IN BUILDINGS LESS THAN THREE STORIES IN HEIGHT ABOVE GRADE PLANE.
    2. IN BUILDINGS OF ANY HEIGHT LOCATED IN CLIMATE ZONES 1, 2 OR 3.
    3. WHERE THE DESIGN EXHAUST CAPACITY IS NOT GREATER THAN 300 CFM.

HVAC SPECIFICATIONS

15050 BASIC MECHANICAL MATERIALS AND METHODS
Provide complete systems as called for, and/or shown, and/or specified. HVAC contractor to furnish and completely install the system, service, equipment, or material named, together with other associated devices, equipment, materials, wiring, piping, etc., as required to perform work called for, shall be responsible to the HVAC Contractor. Secure all permits for work as required. Where "furnish and install", "provide", "furnish", "install" or equivalent words are used, they mean that the contractor shall furnish and completely install the system, service, equipment or material named, together with other associated devices, equipment, material, wiring, piping, etc., as required for a complete operating installation.

STANDARDS, CODES AND REGULATIONS
Equipment, devices, apparatus and installations to be in full compliance with applicable standards, requirements, rules, regulations, codes, statutes, ordinances, etc., local, city, county, state government, Illinois Administrative Code, Owner's insurance company, local gas and electric utilities, labor regulations. Changes required to conform to requirements shall be made without increase in contract price as approved by the Architect.

Electrical equipment, wiring, gas burning equipment, handling and storage equipment, all hydronic piping, refrigeration piping, insulating materials, etc., shall comply with requirements of NFPA, NEC, UL, AGA, OSHA, EPA, BOCA, local and all applicable state and federal safety codes; for a particular type installation and shall be so labeled where applicable.

MATERIALS
Materials to be of new grade, U.S. make and quality specified.

WIRING
Wiring to be in compliance with latest N.E.C. and all applicable codes. Line wires, of proper size, shall be furnished by Electrical Contractor, with final power connections made by Electrical Contractor. Heating Contractor, within his contract, shall be responsible for all control wiring of equipment, provide devices, panels, disconnect switches, starters, interlocks, controls, etc., to give a complete/satisfactory operating system.

COORDINATION
Before any work is installed and before any equipment is purchased, contractor shall carefully check specifications and drawings for every trade and job conditions and any lack of coordination between his work and the specifications and drawings or job conditions shall be immediately reported to the Architect, in writing. The Architect will work out conflicts and adjustments in contract prices. Changes in equipment shall be incorporated in the shop drawings.
If contractor fails to call such lack of coordination between specifications, drawings and job conditions to the Architect's attention, in writing, before any work is done or before equipment is purchased, it will be assumed that no conflicts exist. If conflicts arise during the construction period, they shall be immediately reported to the Architect in writing and they will be worked out by the Architect, but no increase in contract price will be allowed. The Architect's decisions shall be final.
When heating and cooling equipment is operated by the Heating contractor, the Heating contractor shall be solely responsible for the operation and safety of such equipment. When heating and cooling equipment is operated by the owner (or other contractors), the owner (or other contractors) shall be solely responsible for the operation and safety of such equipment.

GUARANTEE
HVAC Contractor shall guarantee all equipment, apparatus, materials and workmanship entering into this contract and shall replace all parts at his own expense which have proven defective within one (1) year from formal acceptance. Individual items shall be guaranteed as called for in addition to the above.

SUBMITTALS
Each respective contractor shall submit to the Architect for approval, before construction is started, seven (7) copies of shop drawings for equipment, devices, material, controls, accessories, wiring diagrams, etc., for respective installation.

SPECIAL SUPERVISION AND INSTRUCTIONS
Each specialized installation shall be made under the supervision of a factory trained engineer or contractor's superintendent who shall (a) submit a written report that the installation has been installed in keeping with the specified requirements and the manufacturer's standards; (b) instruct the Owner's operating personnel before final acceptance; (c) prepare permanent form operating instructions, parts lists, wiring diagrams and control diagrams, in booklet form, in triplicate, turned over to Owner and (d) certify that the installation is operating satisfactorily under the Owner's personnel and certify that the Owner's personnel are trained on systems and equipment per manufacturer's guidelines.

CUTTING AND PATCHING
Contractor shall set sleeves and inserts required for intakes, piping, hangers, louvers, ventilators, ductwork, etc., in construction. Supply General Contractor with complete information as to size and location of openings, through walls, floors, roofs, etc., for installation of this work if this information is not supplied before new walls or floors are built, HVAC contractor shall cut all openings as approved by the Architect.
Patching and rebuilding required to patch openings, and to restore construction to its original condition before cutting, using skilled craftsmen, as approved by the Architect. Shall be performed by others.
Openings shall be accurately located, as small as possible, and neatly and cleanly cut.
Wall openings shall be neatly cemented and wall frames grouted in place by Heating contractor.

The Mechanical Contractor shall be responsible to cut and patch necessary wall or floor openings and provide materials and hardware for complete installation.

THIS PROJECT HAS BEEN DESIGNED TO MEET ALL THE APPLICABLE CODES PERTAINING TO HEATING, VENTILATING AND AIR CONDITIONING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL THE SYSTEMS AS DESIGNED AND IN A MANNER THAT MEETS THE APPROPRIATE CODE REQUIREMENTS AND MANUFACTURER RECOMMENDATIONS.

15815 METAL DUCTS
Sheet metal ductwork to be installed, constructed, fabricated, etc., in accordance with the latest SMACNA manual, all local codes; galvanized sheet steel or 2s or 3s aluminum sheets. Furnish volume dampers with external locking quadrants. Provide sealed hinged-removable access doors where called for and/or required for access to controls, operators, sensors, filters, dampers, etc..

FLEXIBLE DUCTWORK
Flexible ducts shall be of Wiremold, Flexmaster, Thermaflex, Genflex or approved make, Wiremold type WG constructed of high temperature, vinyl organsol coated glass fabric; 14 oz. and cold rolled corrosion-resistant coated steel spiral. Duct shall be factory pre-insulated with minimum of 1" of 3/4 lb. density glass fiber blanket, sheathed with an exterior flame-resistant vinyl vapor barrier. Strap clamps shall be plastic trap or stainless steel draw-up clamps for securing flexible air duct. Prior to clamping, duct shall be sealed as per manufacturer's recommendations. Flexible duct to be suitable for use with system pressure rating and design. FLEXIBLE DUCT RUNS SHALL NOT EXCEED MAXIMUM LENGTH DICTATED BY LOCAL CODE.

15820 DUCT ACESSORIES
Flexible connections, as called for on drawings, to be fire-water-weather-resistant fabric as manufactured by Ventfab or approved make.

SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES
GENERAL
Submittals: Product Data for each model indicated.

PRODUCTS
Diffusers, registers, and grilles are scheduled on Drawings.

EXECUTION

Install diffusers, registers, and grilles level and plumb, according to manufacturer's written instructions, Coordination Drawings, original design, and referenced standards.

Ceiling-Mounted Outlets and Inlets: Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practicable. For units installed in lay-in ceiling panels, locate units in the center of the panel. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.

Install diffusers, registers, and grilles with airtight connection to ducts and to allow service and maintenance of dampers, air extractors, and fire dampers.

Install diffusers, registers, and grilles according to NFPA 90A, "Standard for the Installation of Air-Conditioning and Ventilating Systems."

After installation of diffusers, registers, and grilles, inspect exposed finish. Clean exposed surfaces to remove burrs, dirt, and smudges. Replace diffusers, registers, and grilles that have damaged finishes.

END OF SECTION 15855

OPENINGS, SLEEVES AND CHASES
Contractor shall set sleeves and inserts required for piping, hangers, intakes, louvers, ventilators, ductwork, curbs, etc., in construction. Contractor to furnish General Contractor with complete information as to size and location of openings through walls, floors, roofs, etc., for installing this work. If this information is not supplied before new walls, floors, roofs, etc., are built, respective Contractor shall furnish, cut and patch all required openings for installation of equipment, material, devices, etc., as required and approved by the Architect. For new construction, General Contractor will cut holes through roof and Roofing Contractor will do all flashing, roof patching, etc., unless otherwise noted. Roof openings 18" and larger shall be framed with headers connected to roof joists with steel members framed between. All roofing work and equipment to meet requirements of National Association of Roofing Contractors.

ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT	KW	KILOWATT
AFF	ABOVE FINISH FLOOR	MBH	THOUSAND BTU'S PER HOUR
BDD	BACKDRAFT DAMPER	MCA	MINIMUM CIRCUIT AMPACITY
BTU	BRITISH THERMAL UNIT	MECH	MECHANICAL
CFM	CUBIC FEET PER MINUTE	MIN	MINIMUM
CLG	CEILING	MNT	MOUNTED
DB	DRY BULB	NTS	NOT TO SCALE
DWG(S)	DRAWING, DRAWINGS	OA	OUTSIDE AIR
EA	EXHAUST AIR	OED	OPEN ENDED DUCT
EF	EXHAUST FAN	R	RETURN
EH	ELECTRIC HEATER	RF	RETURN AIR FAN
ERC	ELECTRIC REHEAT COIL	RLA	RUNNING LOAD AMPS
FLA	FULL LOAD AMPS	RPM	REVOLUTIONS PER MINUTE
GF	GAS FURNACE	S	SUPPLY
GWH	GAS WATER HEATER	TD	AIR TRANSFER DUCT
HP	HORSEPOWER, HEAT PUMP	TYP	TYPICAL
HVAC	HEATING VENTILATING AIR CONDITIONING	V	VOLTS
		VD	AIR VOLUME DAMPER

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

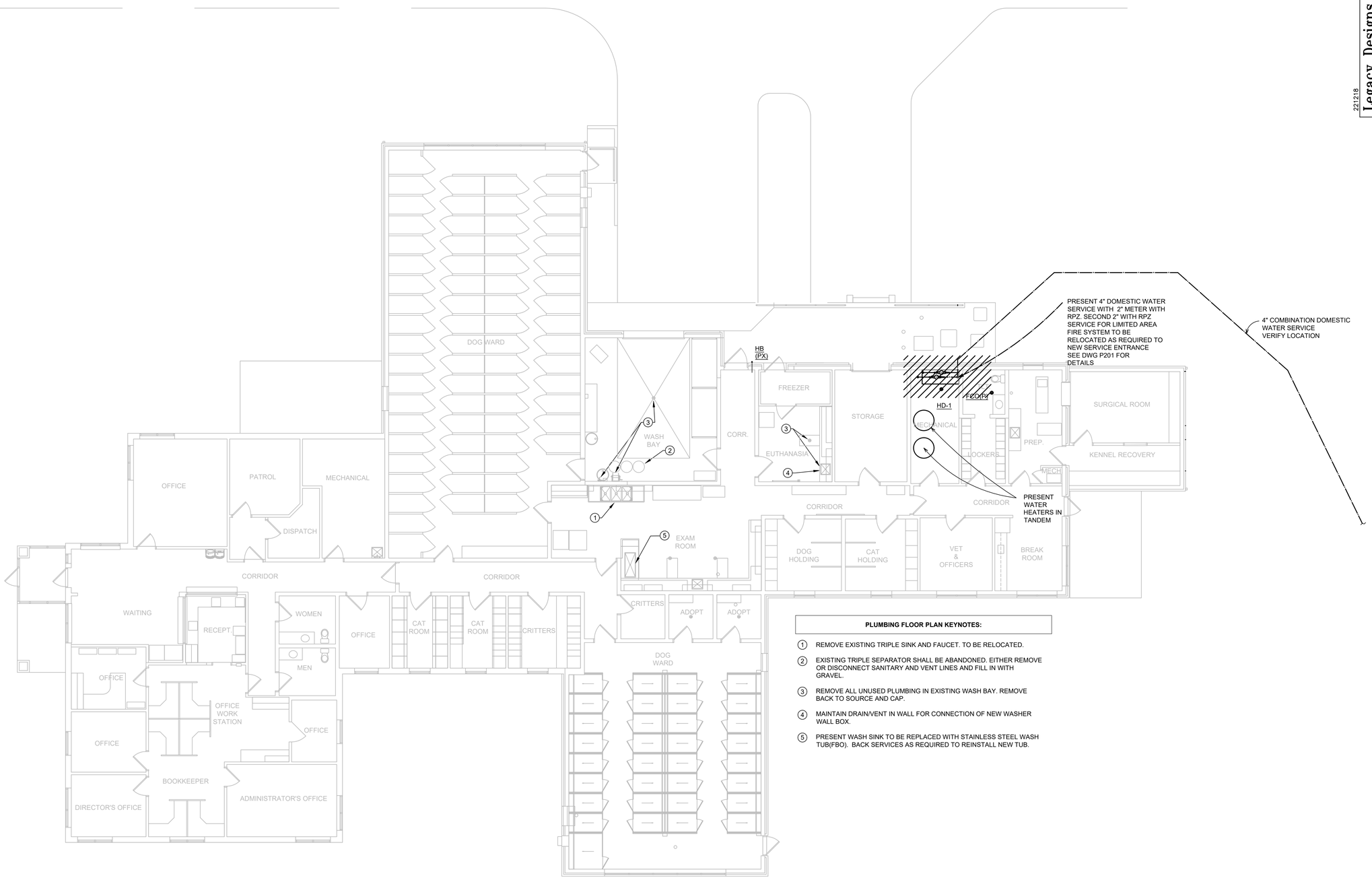
SHEET IDENTIFICATION
HVAC SPECIFICATIONS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
M5
OF
6

221218



PLUMBING FLOOR PLAN KEYNOTES:

1. REMOVE EXISTING TRIPLE SINK AND FAUCET. TO BE RELOCATED.
2. EXISTING TRIPLE SEPARATOR SHALL BE ABANDONED. EITHER REMOVE OR DISCONNECT SANITARY AND VENT LINES AND FILL IN WITH GRAVEL.
3. REMOVE ALL UNUSED PLUMBING IN EXISTING WASH BAY. REMOVE BACK TO SOURCE AND CAP.
4. MAINTAIN DRAIN/VENT IN WALL FOR CONNECTION OF NEW WASHER WALL BOX.
5. PRESENT WASH SINK TO BE REPLACED WITH STAINLESS STEEL WASH TUB(FBO). BACK SERVICES AS REQUIRED TO REINSTALL NEW TUB.

PLUMBING DEMOLITION FLOOR PLAN

SCALE: 1/8" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP. 11-30-23

221218

Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

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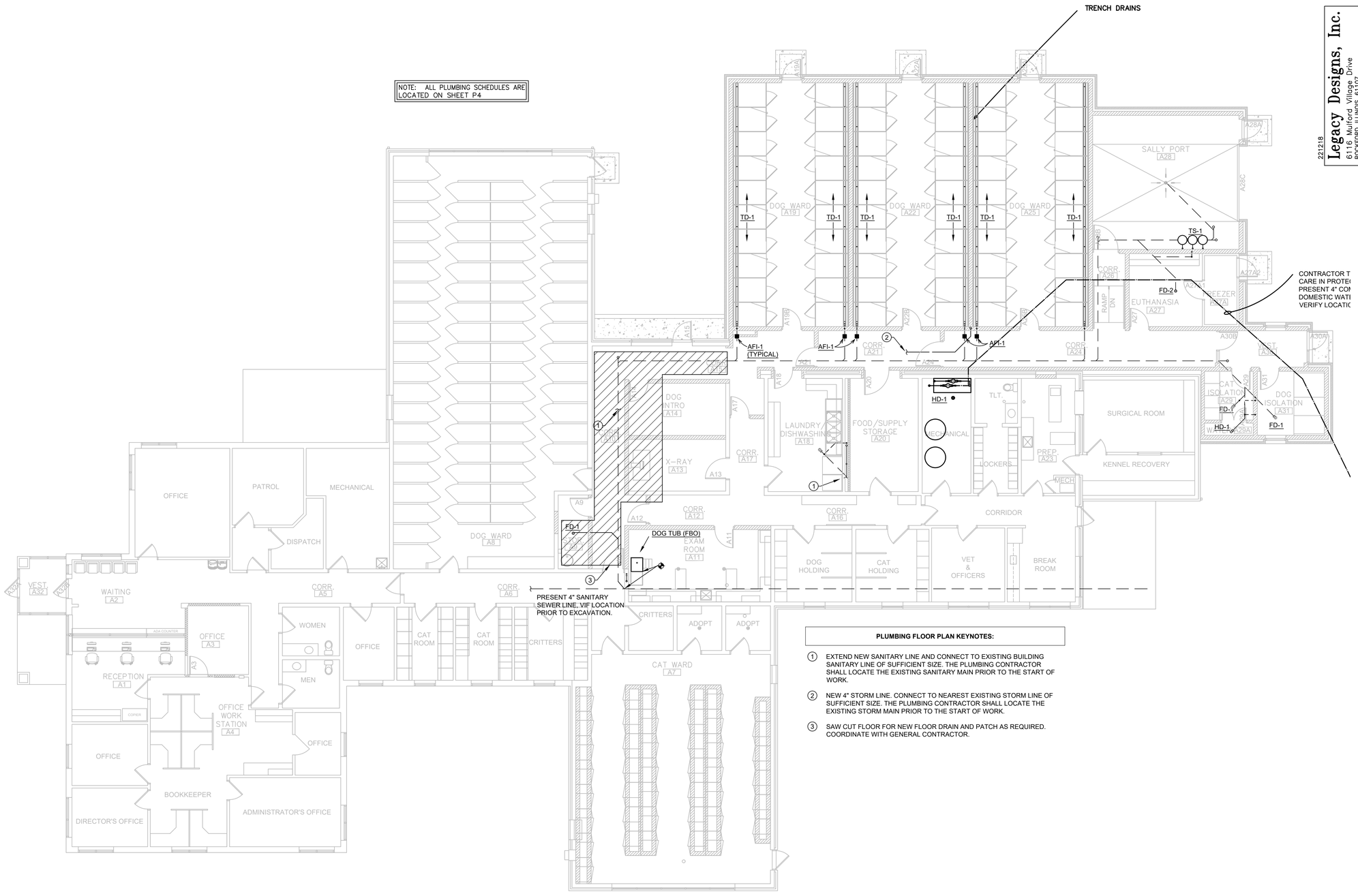
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
PD1 OF **7**

221218

NOTE: ALL PLUMBING SCHEDULES ARE LOCATED ON SHEET P4



PLUMBING FLOOR PLAN KEYNOTES:

1. EXTEND NEW SANITARY LINE AND CONNECT TO EXISTING BUILDING SANITARY LINE OF SUFFICIENT SIZE. THE PLUMBING CONTRACTOR SHALL LOCATE THE EXISTING SANITARY MAIN PRIOR TO THE START OF WORK.
2. NEW 4" STORM LINE. CONNECT TO NEAREST EXISTING STORM LINE OF SUFFICIENT SIZE. THE PLUMBING CONTRACTOR SHALL LOCATE THE EXISTING STORM MAIN PRIOR TO THE START OF WORK.
3. SAW CUT FLOOR FOR NEW FLOOR DRAIN AND PATCH AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.

PLUMBING UNDERGROUND FLOOR PLAN

SCALE: 1/8" = 1'-0"

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
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web site www.legacydesigns.net

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PLUMBING UNDERGROUND FLOOR PLAN

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SHEET NUMBER
P1 OF 7

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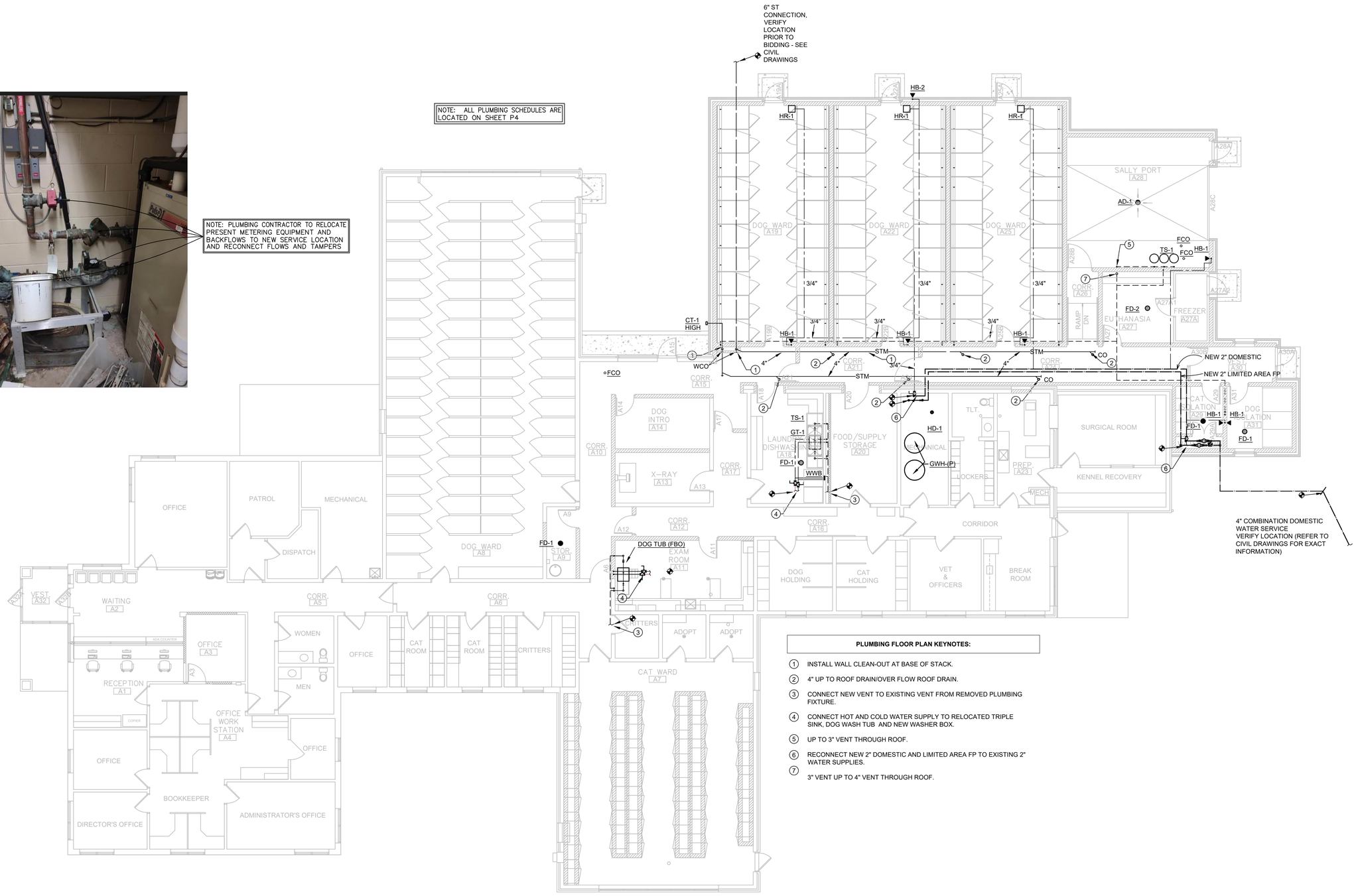
NOTE: PLUMBING CONTRACTOR TO RELOCATE PRESENT METERING EQUIPMENT AND BACKFLOWS TO NEW SERVICE LOCATION AND RECONNECT FLOWS AND TAMPERS

NOTE: ALL PLUMBING SCHEDULES ARE LOCATED ON SHEET P4



PLUMBING FLOOR PLAN KEYNOTES:

1. INSTALL WALL CLEAN-OUT AT BASE OF STACK.
2. 4" UP TO ROOF DRAIN/OVER FLOW ROOF DRAIN.
3. CONNECT NEW VENT TO EXISTING VENT FROM REMOVED PLUMBING FIXTURE.
4. CONNECT HOT AND COLD WATER SUPPLY TO RELOCATED TRIPLE SINK, DOG WASH TUB AND NEW WASHER BOX.
5. UP TO 3" VENT THROUGH ROOF.
6. RECONNECT NEW 2" DOMESTIC AND LIMITED AREA FP TO EXISTING 2" WATER SUPPLIES.
7. 3" VENT UP TO 4" VENT THROUGH ROOF.

PLUMBING FLOOR PLAN

SCALE: 1/8" = 1'-0"

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
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RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

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PLUMBING FLOOR PLAN

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SHEET NUMBER

P2 OF 7

LICENSED PROFESSIONAL ENGINEER JAY THAKKAR 062-057756 ILLINOIS EXP 11-30-23

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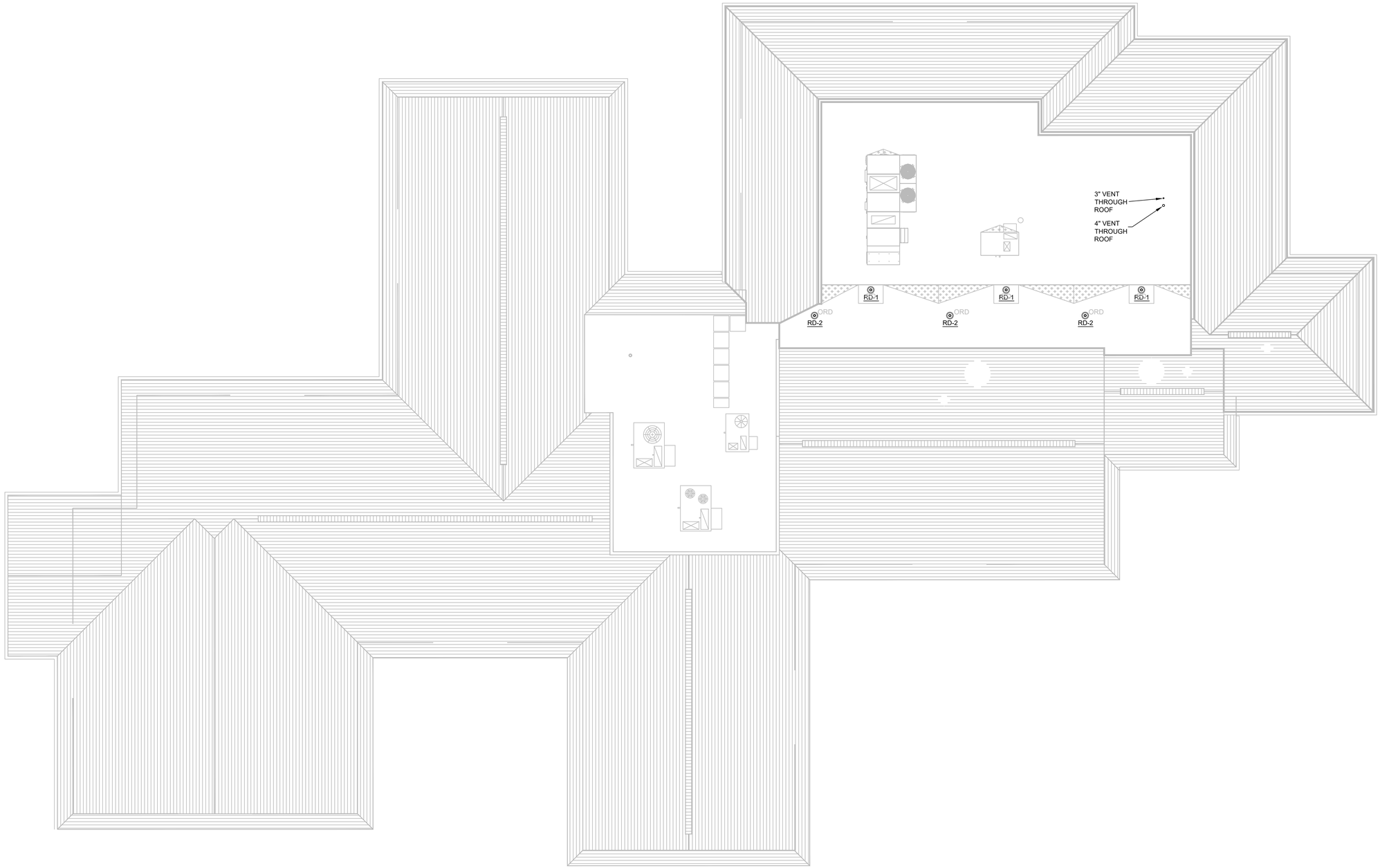

PLUMBING
ROOF PLAN
SCALE: 1/8" = 1'-0"

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
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WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON
ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
PLUMBING ROOF PLAN

PROJECT INFORMATION

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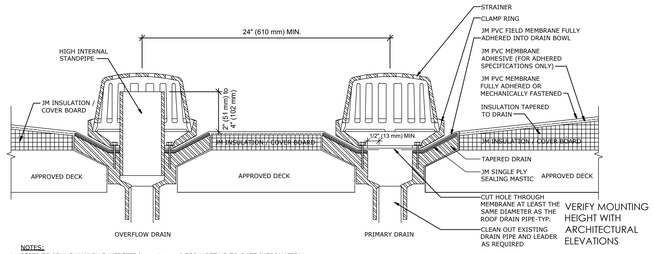
SHEET NUMBER
P3 OF 7

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057758
ILLINOIS
EXP. 11-30-23

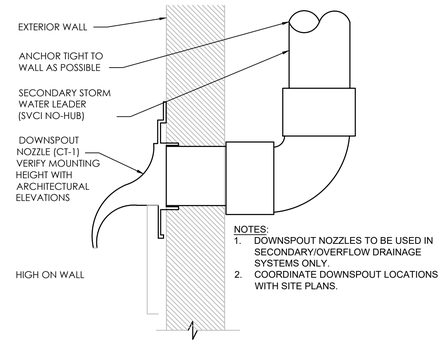
221218



NOTES:
1. REFER TO JOHNS MANVILLE WEBSITE (www.jm.com) FOR MOST UP-TO-DATE INFORMATION.
2. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
3. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
4. JM PVC EDGE SEALANT IS RECOMMENDED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL P-MS-01).
5. REPLACE ANY BROKEN COMPONENTS (DRAINS, RINGS, BOLTS, ETC.)
6. SUMP AREA MUST BE PROPERLY TAPERED SO THAT THE DRAIN FLASHING IS NOT INSTALLED UNDER TENSION.

1 OVERFLOW ROOF DRAIN DETAIL

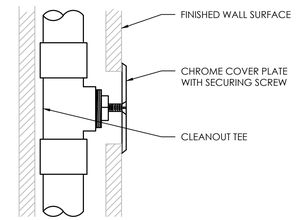
P4 SCALE: N.T.S.



NOTES:
1. DOWNSPOUT NOZZLES TO BE USED IN SECONDARY/OVERFLOW DRAINAGE SYSTEMS ONLY.
2. COORDINATE DOWNSPOUT LOCATIONS WITH SITE PLANS.

3 SECONDARY DOWNSPOUT DETAIL

P4 SCALE: N.T.S.



4 WALL CLEANOUT DETAIL

P4 SCALE: N.T.S.

TRIPLE GARAGE BASIN CALCULATIONS (VEHICLE STORAGE)

SIZED PER ILLINOIS PLUMBING CODE SECTION 890.520 "GASOLINE, OIL AND FLAMABLE LIQUIDS"

TOTAL SQUARE FEET OF GARAGE AREA= 580

STORAGE REQUIRED= 6 CUBIC FEET

CUBIC FEET MULTIPLIED BY 7.48 = 45 GALLONS REQUIRED

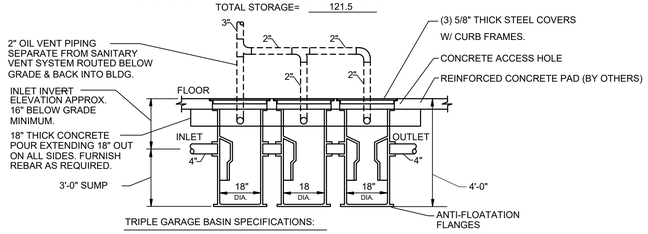
TOTAL GALLONS DIVIDED BY 3= 15 STORAGE PER BASIN

VOLUME IN GALLONS PER FOOT OF WATER

18" DIA=13.5/FT	30" DIA=36/FT
24" DIA=23.5/FT	48" DIA=94/FT
36" DIA=52.9/FT	72" DIA=211.5/FT
60" DIA=147/FT	

18" DIA BASIN x 4'-0" DEEP = 40.5 GALLONS EACH BASIN

TOTAL STORAGE= 121.5

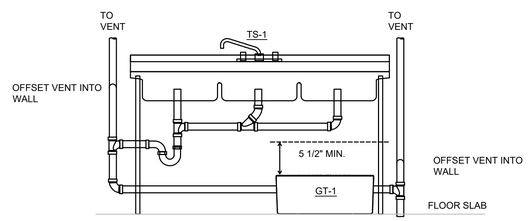


TRIPLE GARAGE BASIN SPECIFICATIONS:

FURNISH (1) AK INDUTRIES HEAVY DUTY FIBERGLASS TRIPLE GARAGE BASIN WITH 18" DIAMETER BY 4'-0" DEEP BASINS, ANTI-FLOATATION FLANGES, 4" INLET & OUTLETS (@ 16" BELOW COVER) AND 5/8" THICK TRAFFIC RATED COVERS WITH CURB FRAMES. ALL THREE BASINS SHALL BE "GLASSED" TOGETHER AT THE FACTORY.

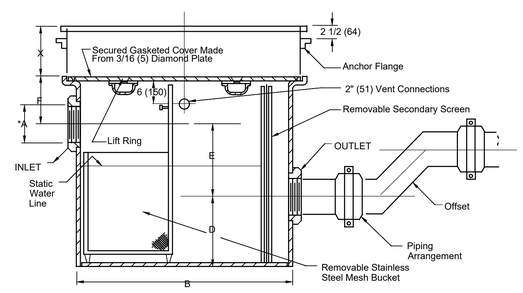
5 TRIPLE SEPARATOR DETAIL

P4 SCALE: N.T.S.



6 GREASE INTERCEPTOR DETAIL

P4 SCALE: N.T.S.



C = Body Width
X = Specify Additional Height Required
AFTER REQUIRED INVERTS ARE FIELD VERIFIED.

NOTE: It is the responsibility of the installer to check all parts (internal and external) to verify they are in their proper operating order and location.

Fig. No.	GPM Flow Rate	* Inlet & Outlet Size	Dimensions: Body Length A	Body Width B	Body Width C	Roughing Dimensions D	Roughing Dimensions E	Roughing Dimensions F	Securing Screws In Cover
SQ-8-2180	25	4	04 (100)	36 (915)	24 (610)	12 (305)	12 (305)	8 (205)	8

*Specify larger or smaller inlets/outlets as required.
NOTE: Dimensions shown in parentheses are in millimeters.

REGULARLY FURNISHED:
Fabricated Steel with Gray Duco Coating and Stainless Steel Mesh Bucket, Stainless Steel Secondary Screen, 3/16" (5) Diamond Plate Cover (Secured & Gasketed) and Threaded Inlet and Outlet.

VARIATIONS;
- All Stainless Steel Unit -SS
- Anchor Flange -F
- Extension -E Specify height eg: -E06 for 6"(150) Ext
- Flashing Flange with Flashing Clamp -F-C
- NO-HUB Inlet & Outlet Connection
- 2" (51)Threaded Vent Connections - VC

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TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com

6 AFI-1 ANIMAL FUR SEPERATOR

P4 SCALE: N.T.S.

PLUMBING FIXTURE SCHEDULE

HOSE BIB-(HB-1) CHICAGO FAUCETS MODEL NO. 952-CP, INSIDE SILL FITTING, CHROME PLATED, METAL TEE HANDLE, SLOW COMPRESSION REBUILDABLE CARTRIDGE, 3/4" NPT FEMALE THREAD, ATMOSPHERIC VACUUM BREAKER. NOTE: VACUUM BREAKER NOT INTENDED FOR CONTINUOUS PRESSURE APPLICATIONS.

HOSE-BIB (HB-2) WOODFORD 65 FREEZELESS OUTSIDE FITTING CHROME PLATED

TRENCH DRAIN-(TD-1) H100-8 W/ STEEL RAIL AND EITHER ADA PLASTIC GRATE OR STAINLESS STEEL WITH PERFORATED TOP. GRATINGS SHALL BE SECURED WITH "QUICKLOK" ALL AS MANUFACTURED BY ACO DRAIN OR EQUAL APPROVED. THE TRENCH SYSTEM BODIES SHALL BE MANUFACTORED FROM POLYESTER POLYMER CONCRETE. THE NOMINAL CLEAR OPENING SHALL BE 4" WITH THE OVERALL WIDTH 6.1". DRAIN BODY SHALL HAVE A POSITIVE SLOPE TOWARDS THE DRAIN OPENING. PROVIDE VERTICAL STRAINER TO CATCH DEBRIS.

ROOF DRAIN (RD-1) MODEL NUMBER Z121 BY ZURN, 12" DIAMETER ROOF DRAIN, LOW SILHOUETTE.

ROOF DRAIN (RD-2) MODEL NUMBR Z121-89 BY ZURN, 12" DIAMETER ROOF DRAIN, LOW SILHOUETTE, OVERFLOW DRAIN WITH 2" HIGH DAM.

FLOOR DRAIN (AD-1) AREA DRAIN APPLICATION, CAST IRON BODY,CJOSAM 30000-9E-80 SERIES, 4" CONNECTION, TRACTOR GRATE, PERFORATED STAINLESS STEEL BASKET.

FLOOR DRAIN (FD-1) FINISHED FLOOR APPLICATION, CAST IRON BODY, JOSAM 30000-A SERIES, SEE PLANS AND RISER DIAGRAMS FOR SIZE.

FLOOR DRAIN (FD-2) FINISHED FLOOR APPLICATION, CAST IRON BODY, JOSAM 30000-E SERIES, SEE PLANS AND RISER DIAGRAMS FOR SIZE.

FLOOR CLEAN OUTS (FCO) CLEAN OUT SHALL BE JOSAM SERIES 55000 SATIN FINISH NIKALOY TOP. PROVIDE RECESSED COVER IF REQUIRED BY FLOOR FINISH.

WALL CLEAN OUT (WCO) WALL CLEAN OUT SHALL BE JOSAM SERIES 58600-PLG, ROUND STAINLESS STEEL WALL ACCESS COVER WITH SCREW.

DOWNSPOUT NOZZLE (CT-1) CAST BRONZE DOWNSPOUT NOZZLE WITH WALL FLANGE WITH BIRD SCREEN. MODEL NUMBER 25018-BS BY JOSAM.

GREASE INTERCEPTOR (GT-1) MODEL NUMBER GB1 BY SCHIER. 25 GPM FLOW CAPACITY, 64.9 LBS GREASE CAPACITY.

TRIPLE SINK (TS-1) EXISTING TRIPLE SINK TO BE RELOCATED.

HR-1 RETRACTABLE HOSE REEL EQUAL TO COXREELS PLP450-HV - 300 PSI 1 / 2" WATER INLET - MULTI-FIT BRACKET TO FIT WALL OR CEILING.

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Legacy Designs, Inc.
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e-mail legacy@legacydesigns.net
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ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

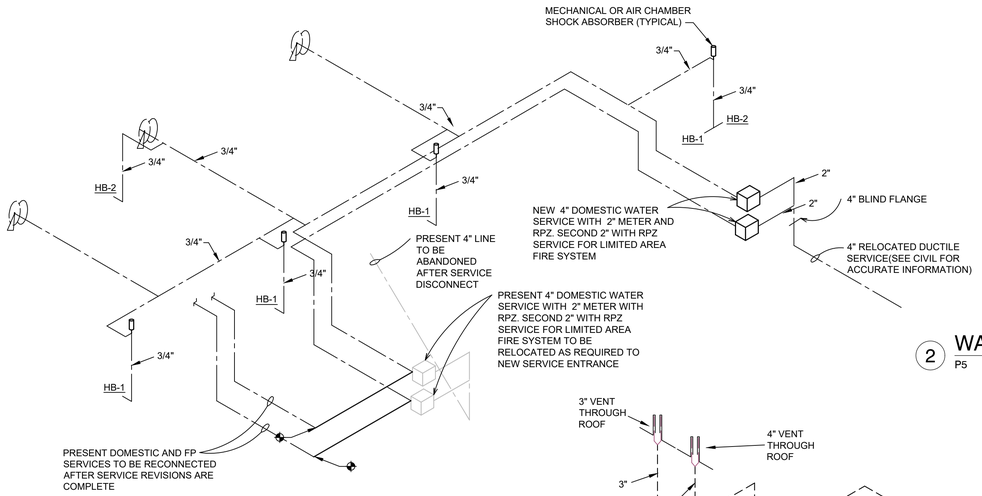
RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
PLUMBING DETAILS & SCHEDULES

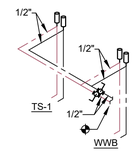
PROJECT INFORMATION
Date August 16, 2022
Rev. Date
RLJA Proj 2022-020

SHEET NUMBER
P4 OF 7

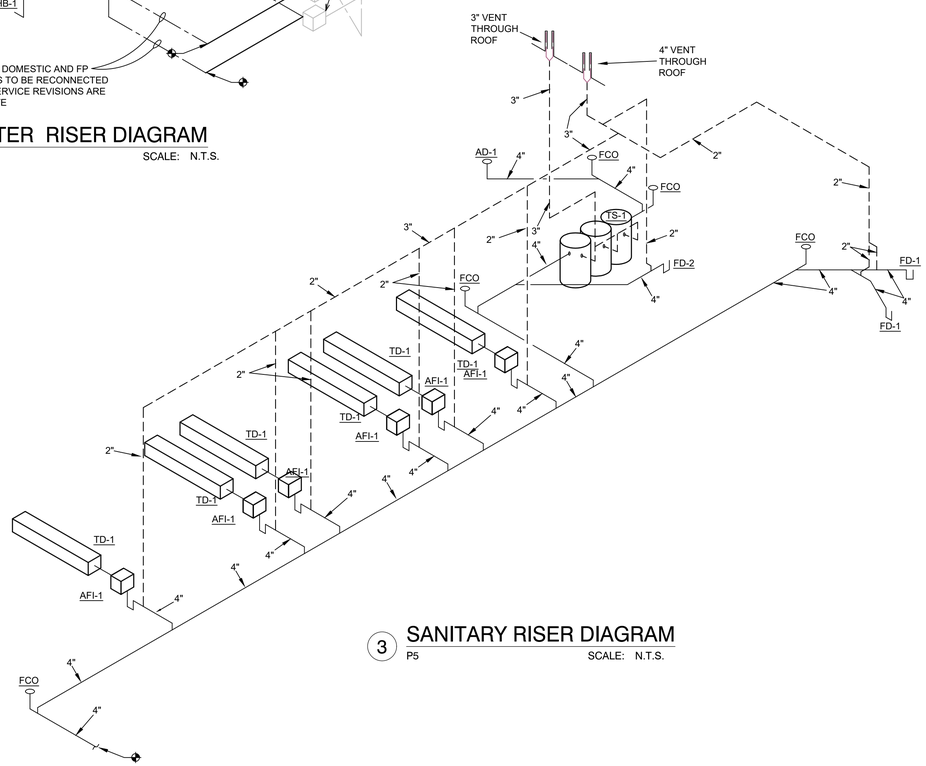
221218



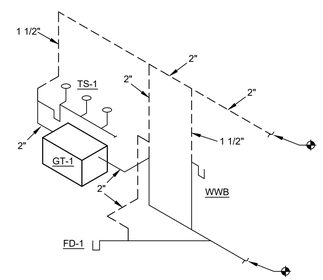
1 WATER RISER DIAGRAM
P5 SCALE: N.T.S.



2 WATER RISER DIAGRAM
P5 SCALE: N.T.S.



3 SANITARY RISER DIAGRAM
P5 SCALE: N.T.S.



4 SANITARY RISER DIAGRAM
P5 SCALE: N.T.S.

WATER FLOW RATE CALCULATION (NEW ADDITION)					
FIXTURES	QTY.	WSFU	CWFU	HWFU	DFU
FLOOR DRAIN - 4" TRAP	11	0.0	0.0	0.0	110
TRIPLE SINK (EXISTING RELOCATED)	1	4.0	2.0	2.0	5.0
SUB TOTAL	12	4.0	2.0	2.0	115.0

SUBTOTAL FLOW RATES, GPM					
CW	2.0				
HW	2.0				
TOTAL (MAIN SERVICE)	3.0				

ADDITIONAL FIXTURES - CONTINUOUS FLOW	QTY.	CW(EA.)	CW	HW (EA.)	HW
HOSE BIB (INTERMITTANT USE 50%)	5	2.5	2.5	0	0
SUBTOTAL FLOW RATES, GPM			12.5		0
TOTAL FLOW RATES, GPM					
CW	14.5				
HW	2.0				
TOTAL (MAIN SERVICE)	15.5				

WATER SERVICE PIPING SIZE SHALL BE 3/4"

221218
Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

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WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
PLUMBING ISOMETRICS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
P5
OF
7

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP.11-30-23

221218

General

1. Related Documents:

1.1. The general requirements of the architectural specifications are part of these specifications. Where an inconsistency exists between the wording or intent, this section shall take precedence. The standard form of "general conditions" issued by the American Institute of Architects document A201, latest edition, shall form part of this contract.

1.2. Contract documents may include, but are not limited to the following: Architectural, Structural, Electrical, Mechanical, Fire Protection, and Civil.

2. Definitions:

2.1. Terminology: as defined in MSS SP-90, "guidelines on terminology for pipe hangers and supports."

2.2. Water distribution piping: interior domestic water piping.

2.3. Water service: exterior domestic water piping.

2.4. Accessible fixture: plumbing fixture that can be approached, entered, and used by people with disabilities.

3. Performance Requirements:

3.1. Design supports for multiple pipes capable of supporting combined weight of supported systems, system contents, and components.

3.2. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

3.3. Design seismic-restraint (if applicable) hangers and supports for piping and equipment, and obtain approval from authorities having jurisdiction.

3.4. Components and installation shall be capable of withstanding the following working pressure, unless otherwise indicated:

3.4.1. Domestic water piping: 125 PSIG.
3.4.2. Sanitary waste and vent piping: 10-foot head of water.
3.4.3. Storm drainage piping: 10-foot head of water.
3.4.4. Force-main: 100 PSIG.

4. Submittals:

4.1. Contractor shall submit for review to the architect/engineer a complete list of items to be furnished and installed under this contract. including, but not be limited to the following:

4.1.1. Dimensioned shop drawings of materials, fixtures and equipment.
4.1.2. Dimensioned shop drawings of equipment and piping plan layout(s).
4.1.3. Product data.
4.1.4. Field-quality control inspection and test reports
4.1.5. Field test certificates.
4.1.6. Operation and maintenance data.
4.1.7. Equipment manuals.
4.1.8. Valve tags.
4.1.9. Welding certificates.

4.2. At the contractor's option, AutoCAD files can be obtained from the engineering firm at the cost of $100.00 per drawing file.

5. Codes and Standards:

5.1. Applicable codes:

5.1.1. Local plumbing code.
5.1.2. Local department of public health.
5.1.3. Local amendments to plumbing code.
5.1.4. Local ordinances.

5.2. Systems shall be designed, manufactured, tested and installed in accordance with following standards:

5.2.1.	ANSI	American National Standards Institute.
5.2.2.	ARI	Air Conditioning and Refrigeration Institute.
5.2.3.	ASHRAE	American Society of Heating Refrigeration and Air Conditioning Engineers.
5.2.4.	ASME	American Society of Mechanical Engineers.
5.2.5.	ASPE	American Society of Plumbing Engineers.
5.2.6.	ASSE	American Society of Sanitary Engineers.
5.2.7.	ASTM	American Society of Testing and Materials.
5.2.8.	CISPI	Cast Iron Soil and Pipe Institute.
5.2.9.	IAPMO	International Association of Plumbing and Mechanical Officials.
5.2.10.	ICC	International Code Council.
5.2.11.	FM	Factory Mutual Standard.
5.2.12.	NFPA	National Fire Protection Association.
5.2.13.	OSHA	Occupational Safety and Health Administration.
5.2.14.	PDI	Plumbing and Drainage Institute.
5.2.15.	UL	Underwriters Laboratories.

6. Quality Assurance:

6.1. Welding: quality procedures and personnel according to ASME Boiler and Pressure Vessel Code: Section IX.

6.2. Fire test response characteristics: insulation and related materials shall have fire test response characteristics indicated, as determined by testing identical products per ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, and cement material containers, with appropriate markings of applicable testing and inspecting agency.

6.2.1. Insulation installed indoors: flame spread index of 25 or less, and smoke developed index of 50 or less.
6.2.2. Insulation installed outdoors: flame spread index of 75 or less, and smoke developed index of 150 or less.

6.3. Piping materials shall bear label, stamp, or other markings of specified testing agency.

6.4. ASME compliance:

6.4.1. ASME B31.9 for building services piping valves.
6.4.2. ASME compliance for ferrous valves: ASME B16.10 and ASME B16.34 for dimension and design criteria.

6.5. NSF compliance:

6.5.1. NSF 14, "plastic piping system components and related materials."
6.5.2. NSF 61, "drinking water system components - health effects; sections 1 through 9."

6.6. Electrical components, devices and accessories: listed and labeled as defined in NFPA 70, article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

6.7. Regulatory requirements:

6.7.1. Comply with public law 101-336, "American with Disabilities Act," and "Uniform Federal Accessibility Standards."
6.7.2. Comply with public law 102-486, "Energy Policy Act."

7. Contract Documents:

7.1. Contractor shall review contract documents and become familiar with the site and local conditions relating to work as described herein prior to submitting bid proposal. Failure to do so shall not relieve contractor of the obligations of the contract. Identify all discrepancies and notify architect/engineer, in writing.

7.2. The drawings indicate the general layout of the various system(s) and equipment. The layout of the system(s) equipment, accessories and other components are diagrammatic unless specifically shown or dimensioned.

7.3. Contractor shall bid all work as shown, and material and equipment as specified herein. Any substitution (not approved) during the bidding process to secure award of the contract will not be acknowledged.

7.4. Contractor shall be financially liable for any required engineering review due to any proposed product change and/or voluntary "value engineering" during the bidding procedure and the submittal process.

7.5. Any conflicting information depicted or implied on the drawings identified during the bidding process shall be submitted for clarification of intent. Failure to clarify the architect/engineer intent, may make the contractor liable for any associated costs relative to changes during the construction process.

8. Specifications and Drawings:

8.1. Specifications and drawings are intended to be cooperative. What is called for by either shall be as binding as if called for by both. Any work or materials not specifically mentioned though required to make the job complete, shall be furnished at the contractor's expense.

9. Visiting the Site:

9.1. Prior to submitting bid proposal, contractor shall visit the site and become familiar with the site and existing conditions for doing work as shown on drawings and specified herein. Failure to comply shall not relieve the contractor of the obligations of the contract. Contractor shall identify all discrepancies and notify architect/engineer, in writing.

10. Permits, Fees & Inspections:

10.1. Contractor shall prepare and submit all data, drawings and details required, secure and pay for all permits, governmental fees, taxes, inspections, and licenses necessary for the proper execution and completion of the work.

10.2. Contractor shall pay for all applicable fees for test and inspections required by local authorities having jurisdiction.

10.3. Where regulations of utility companies apply, conformance with their regulations is mandatory and any costs involved shall be included in the contract.

11. Laws and Ordinances:

11.1. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of work as shown on drawings and specified herein. If contractor observes that the drawings and specifications are at variance therewith, contractor shall promptly notify architect/engineer in writing when submitting bid and any necessary changes shall be adjusted as provided in the contract for such changes in work. If contractor performs any work, contrary to such laws, ordinances, rules and regulations, contractor shall bear all costs for correcting the work.

12. Trade Jurisdiction:

12.1. When it becomes necessary for the complete fulfillment of this work for this contractor to furnish labor or materials other than that which is generally accepted by this trade or branch of work, the contractor shall sublet same to a contractor engaged in the trade or branch of work involved. There shall be no delay to or stoppage of work due to the infringement or alleged infringement to trade agreements as to the jurisdiction.

13. Requests for Information (RFI's):

13.1. All requests for information (RFI's) shall be submitted in writing to the general contractor or construction manager.

13.2. If there is no construction manager or general contractor, submit RFI's to the architect/engineer.

13.3. There will be no response to RFI's that are not submitted in written form.

13.4. Any formal or informal, or phone conversation does not constitute the authorization to proceed.

14. Workmanship:

14.1. All labor shall be executed in a neat, workmanlike manner and shall be performed by persons skilled in their respective trades. The architect/engineer shall decide all matters pertaining to the quality of workmanship and materials.

15. Coordination of Work:

15.1. Contractor shall coordinate with other construction to avoid interference before starting any installation. Any neglect by the contractor to coordinate with other construction shall be made at the contractor's own expense.

16. Cutting and Patching:

16.1. Contractor shall include all cutting and patching, as required. All cores through slabs and foundation walls shall be approved in writing by the architect/engineer. Contractor shall assume all liabilities for cores which have not bee approved. Patch all disturbed wall, floors, partitions, ceilings, etc., restore to original condition.

17. Operating Instructions:

17.1. Contractor shall prepare a typewritten list in duplicate, of instructions of the operation of all equipment and shall instruct in its operation. All valves and equipment shall be marked with a metal tag and a typewritten schedule shall be given to the owner.

18. Guarantee:

18.1. Contractor shall guarantee work to be free from defective workmanship and materials for a period of one (1) year from date of final certificate. Any repairs or replacement during this period shall be made without cost to the owner, upon owner's request.

Products

19. Materials:

19.1. All materials shall be new and of first class products of manufacturers specified herein and or as approved by the architect/engineer of record.

19.2. The design intent, space requirements, performance, etc., are based on products of the manufacturer(s) indicated in these specifications. Unless noted otherwise comparable products of other manufacturer(s) may be submitted for review to the architect/engineer of record. Products installed without approval of the architect/engineer shall be replaced at the contractor's expense.

19.3. Manufacturer(s) identification of material: each length of pipe, pipe fitting, equipment, device and appurtenance in the fire protection system shall have cast, stamped or indelibly marked on it the marker's mark or name, weight, class of product and standard that applies.

20. Plumbing Fixtures:

20.1. Plumbing fixtures and trimmings have been selected as a base for this installation, except where otherwise specified, but other makes which are equal and approved may be used. Contractor shall submit for architect/engineer's approval portfolio illustrating and describing in detail the fixtures, trimmings and valves contractor contemplates using, giving names and catalog numbers or identifying description.

20.1.1. Plumbing fixtures shall be of the best quality, grade "A", and shall have manufacturer's guarantee label or trademark indicting first quality.

20.2. Install/provide flush valves and/or flush tanks with handle on open side of fixture.

20.3. Set all floor fixtures on a white tile setters grout to form a solid water tight base.

20.4. Caulk all fixtures water tight to wall and floor using clear silicone caulk neat and smoothly set in place and excess cleaned from wall or fixture.

21. Hangers and Supports:

21.1. Steel pipe hangers and supports: MSS SP-58, types 1 through 58, factory-fabricated components. refer to execution section "hanger and support applications."

21.1.1. Galvanized, metallic coatings: pre-galvanized or hot dipped.
21.1.2. Non-metallic coatings: plastic coating, jacket, or liner.
21.1.3. Padded hangers: hanger with fiberglass or other pipe insulation pad or cushion for support of bearing surface of piping.

21.2. Trapeze pipe hangers: MSS SP-69, type 69, shop or field fabricated pipe-support assembly made from structural steel shapes with MSS-SP-58 hanger rods, nuts, saddles, and U-bolts.

21.3. Metal framing systems: MFMA-3, shop or field fabricated pipe support assembly made of steel channels and other components.

21.4. Thermal hanger shield inserts: 100-psig minimum, compressive strength insulation insert encased in sheet metal shield.

21.5. Fastener systems:

21.5.1. Powder actuated fasteners: threaded steel stud, for use in hardened Portland cement concrete with pullout, tension, and shear capacities appropriate for supported loads and building materials where used.
21.5.2. Mechanical expansion anchors: insert wedge type, zinc coated or stainless steel, for use in hardened Portland cement concrete with pullout, tension, and shear capacities appropriate for supported loads and building materials where used.

21.6. Equipment supports: welded, shop or field fabricated equipment support made from structural steel shapes.

21.7. Miscellaneous materials:

21.7.1. Structural steel: ASTM A 46/A 36M, steel plates, and bars; black and galvanized.
21.7.2. Grout: ASTM C 1107, factory-mixed and packaged, dry, hydraulic-cement, non-shrink and non-metallic grout; suitable for interior and exterior applications.
21.7.3. Properties: non-staining, non-corrosive, and non-gaseous.
21.7.4. Design mix: 5000-psi, 28-day compressive strength.

22. Insulation:

22.1. Thermal insulation materials shall meet the property requirements of the following specifications as applicable to the specific product or end use:

22.1.1. ASTM C547, ASTM C585, and ASTM C1136.

22.2. Insulation materials shall meet the minimum requirements of ASHRAE 90.1 (latest edition).

22.3. Insulation materials shall have a maximum flame spread index of 25 and a maximum smoke developed index of 50 when tested in accordance with the following testing standards:

22.3.1. ASTM E84, UL 723 and NFPA 255.

22.4. Insulation shall be fiberglass pipe insulation, one-piece, hinged section, with factory applied white polymer facing, two-component adhesive closure system, and matching pressure sensitive tape. Manufacturer's data regarding thickness constraints in relation to operating temperature shall be followed. Stapling is not allowed to complete the closure.

22.5. Molded closed cell polyethylene foam insulation in not allowed or approved.

22.6. Cover all of the following pipe types listed with premolded pipe insulation of thickness indicated, 4 lb. density and ASJ jacket.

Pipe Type	Insulation Thickness (Inches)
Domestic cold water	
Pipe 1 inch and smaller	1/2
Pipe 1-1/4 inch to 2 inch	3/4
Pipe 2-1/2 inch and larger	1
Domestic hot water	
Pipe 2 inch and smaller	1
Pipe 2-1/2 inch larger	1-1/2
Domestic hot water (circulating)	
Pipe 2 inch and smaller	1
Pipe 2-1/2 inch and larger	1-1/2
Storm leaders (including drain body and horizontal pipe)	
All sizes	1/2
Heat traced & hot water temperature maintenance piping	
Pipe 1 inch and smaller	1
Pipe 1-1/4 inch to 2 inch	2
Pipe 3 inch and larger	3

22.7. For heat traced & hot water temperature maintenance piping 1-1/4 inches and smaller, use insulation that is oversized by 1/4 inch to allow room for installing over the heating cables. For pipes three inches and larger, the thickness of insulation shall be equal to the pipe diameter with one (1) heating cable or 1/3 the pipe diamter with two (2) runs of heating cable.

23. Firestopping:

23.1. Contractor shall be responsible for fire stopping, fire caulking and installing all systems where plumbing piping and equipment penetrate fire rated systems. See architectural plans for locations of fire rated walls, floors and structures. Material shall stop and prevent fire and smoke from passing/pentrating fire barrier.

Execution

24. Scope of Work:

24.1. Provide all labor, material, equipment, facilities, transportation, fees, and services necessary for a complete plumbing system(s) as indicated on the drawings and specified herein. Workmanship shall be complete in every aspect, tested, approved and satisfactory to the architect/engineer and in accordance with local, state and federal laws having jurisdiction.

24.2. It is the declared and acknowledged intent of these specifications to provide a complete plumbing system(s), inclusive of all required parts and accessories complete and ready for use as described, but not limited to the following:

24.2.1. Domestic water service and distribution.
24.2.2. Domestic hot water.
24.2.3. Sanitary drainage system.
24.2.4. Storm drainage system.
24.2.5. Plumbing fixtures.
24.2.6. Plumbing equipment.
24.2.7. Plumbing specialties.

24.3. The drawings indicate diagrammatically the extent and location of the work included. Work indicated, but having minor details obviously omitted, shall be provided, including these details, without extra cost to the owner.

25. Submittals and Shop Drawings:

25.1. Shop drawing layout submittal(s) shall be a minimum of 1/8 inch per foot scale, showing all piping to be installed. Detailed layout(s) of toilets, kitchens and equipment rooms shall be not less than 1/4 inch per foot scale. The drawing shall also show the work coordinated with all other trades, all drawings shall be submitted prior to starting any work, and in accordance with an approved schedule, provided by the general contractor, to avoid any delay on the project.

25.2. Equipment, fixtures and other related appurtenances shall be submitted in bounded booklets. All data must be clearly legible. Submit six (6) copies minimum of each.

25.3. Contractor shall submit to governmental agencies and utility companies, shop drawings which are required by these agencies for their approval.

25.4. Contractor shall prepare and furnish to the owner, two (2) bound booklets each containing a complete list of all equipment installed under this contract. Each piece of equipment listed shall also be described by manufacturer(s) model number, figure number and the components therein which make up the part(s) list. Electronic version of shop drawings may also be submitted to the architect in pdf form via email.

25.5. Shop drawings shall include contractor's name, job address, manufacturer's name, catalog numbers, cuts, diagrams, and other such descriptive data as required to identify and review the equipment.

25.6. One (1) week prior to final inspection, deliver to the architect/engineer typewritten copies of each of the following:

25.6.1. Certification from contractor that all equipment and system(s) have been properly installed, adjusted and tested.
25.6.2. Certification from respective manufacturer(s) authorized representative that equipment and system(s) have been properly installed, adjusted and tested.
25.6.3. Certification from authority having jurisdiction that all equipment and system(s) have been properly installed, adjusted, tested, and accepted from the authority having jurisdiction.

26. Inspections and Tests:

26.1. Testing shall be done in the presence of governing authority and owner's representative. provide five (5) days notice to the owner, architect of record and governing authority. Provide all necessary equipment, material and labor to perform tests.

26.2. Roughed-in plumbing: the drainage and vent piping systems shall be tested upon completion of roughed-in piping installation, by using water or air to prove watertight.

26.3. Water test: water test shall be applied to the drainage system either in its entirety or in sections after piping has been roughed-in. Drainage system shall not be tested with less than ten (10) foot head of water. The water shall be kept in the system or section being tested for at least fifteen (15) minutes before inspection starts. Testing of the system shall confirm that the system is tight at all points.

26.4. Air test: air test shall be made by attaching an air compressor testing apparatus to a suitable opening after closing all other inlets and outlets to the system. Force air into the system until there is a uniform gauge pressure of five (5) pi or sufficient to balance a column of mercury ten (10) inches in height. Pressure shall be held without introduction of additional air for a period of at least fifteen (15) minutes.

26.5. Water supply system: water supply system shall be tested and proved watertight upon completion of a section or the entire system. System shall be tested under a water pressure of at least 1.5 times the system pressure, but at least 100 psi at a minimum by air or water. Testing pressure shall be maintained for a least fifteen (15) minutes and water used for test shall be from potable water.

27. Disinfection of Potable Water System:

27.1. System (or part thereof) shall be filled with a chlorine solution containing at 50 parts per million of chlorine, valved off and allowed to stand for 24 hours or filled with a chlorine solution containing 200 parts per million of chlorine and allowed to stand for three (3) hours.

27.2. After required (standing) time, system shall be flushed with clean potable water until chlorine level is within acceptable limits for potable water.

28. Flushing:

28.1. Chlorinated water supply: if water supply serving system is chlorinated from community water system, system shall be flushed with clean, potable water until no dirty water appears at the point of outlet.

28.2. Non-chlorinated water supply: water supply system shall be flushed with clean, potable water until no dirty water appears at the point of outlet.

29. Label and Identification:

29.1. Identification for all piping system(s) shall comply with ANSI A13.1 for size of lettering and background color field.

29.2. Piping system(s): identification shall include the contents of the piping system(s) and an arrow indicating the direction of flow. Hazardous piping system(s) shall also contain information addressing the nature of the hazard. Identification shall be repeated at maximum intervals of twenty-five (25) feet and at each point where piping passes through a wall, floor or roof. Color of the pipe identification shall be discernible and consistent throughout the building.

29.3. Equipment: identification shall include system number, capacity, flow, rate, static pressure, pump head, horsepower, voltage, etc.

29.4. Valve tags: provide brass valve tags and brass "S" hook fasteners with valve number and type of service noted on tag. Provide duplicate charts, the chart shall be for all valves and shall indicate valve identification number, location and purpose.

30. Record Drawing Submittals:

30.1. At project close-out, contractor shall submit record drawings (certified or approved) also known as "as-built" drawings. Layout submittals shall be submitted for records prior to final acceptance in electronic form on compact disc(s), using AutoCAD version 2010 "dwg" format or adobe acrobat "pdf" format viewable from adobe. Record data equipment, fixture and related appurtenances may be submitted as bound hardcopy or electronic adobe acrobat "pdf" format.

30.2. Provide record submittals as follows:
30.2.1. Owner: 1 copy.
30.2.2. Architect of record: 1 copy.
30.2.3. Engineer of record: 1 copy.

30.3. Contractor is not allowed to use the contract documents for "as-built" drawings. backgrounds shall be in the latest release of AutoCAD.

30.3.1. At the contractor's option AutoCAD files can be obtained from the engineering firm at the cost of $100.00 per drawing file.

31. Piping Materials:

31.1. Domestic Water Distribution
31.1.1. Domestic water distribution (3 inch and smaller): hard copper tube, ASTM B88, type L, water tube, drawn temper.
31.1.1.1. Pressure fittings: ASME B16.18 or B16.22.
31.1.1.2. Bronze flanges: ASME B16.24, class 150.
31.1.1.3. Unions: MSS SP-123.
31.1.1.4. Grooved-end fittings: ASTM B75 copper tube or ASTM B584 bronze castings.

31.2. Soil, Waste and Vent Piping
31.2.1. Aboveground soil, waste and vent piping: hub-and-spigot, cast-iron soil pipe and fittings.
31.2.1.1. Pipe and fittings: ASTM A74 service class.
31.2.1.2. Gaskets: ASTM C564, rubber.
31.2.1.3. Lead and oakum: ASTM B29, pure lead and oakum or hemp fiber.

31.2.2. Aboveground soil, waste and vent piping: PVC pipe and fittings.
31.2.2.1. Schedule 40, PVC.

32. Plumbing General Notes:

32.1. Plumbing general notes on these drawings are a part of the plumbing specifications to the same extent as if written herein full.

32.2. All work and material shall conform to the requirements of local and state governing codes, ordinances and health department regulations.

32.3. The intent of these drawings is to furnish the owner with a plumbing installation ready for use and complete in every aspect.

32.4. Furnish and install a complete and operable soil, waste and vent system with final connections to all fixtures, appliances, drains, equipment, structures, etc., requiring drainage. Connections thereto to conveyance to the public sewer system.

32.4.1. Horizontal drainage piping shall be installed at uniform slopes not less than the following.
32.4.1.1. Piping less than four (4) inches: 1/4 inch per lineal foot.
32.4.1.2. Piping four (4) inches and larger: 1/8 inch per lineal foot.
32.4.1.3. Unless otherwise indicated on drawings, underground drainage
32.4.1.4. Piping shall be a minimum of four (4) inches.
32.4.1.5. Vent piping shall be minimally sloped back to drainage piping.

32.5. Furnish and install a complete and operable domestic water distribution system with final connections to all plumbing fixtures, appliances, equipment, wall hydrants, etc., requiring domestic water connections thereto from the domestic water service.

32.6. Furnish and install all plumbing fixtures, equipment, appliances, complete with all necessary and required trimmings, accessories, components, and appurtenances including but not limited to P-traps, backflow devices, air chambers, stops, and supplies, hangers, supports, anchors, carriers, tailpipes, tempering valves, etc.

32.7. All piping shall be supported from structural members of the building, or as approved by the architect or owner's representative. Place all hangers on eight (8) foot centers.

32.7.1. Pipes one (1) inch in diameter or less: solid or split ring type
32.7.2. Pipes larger than one (1) inch: standard weight clevis hangers
32.7.3. Insulated piping: semi-circular shield.

32.8. Contractor shall provide access panels to access any valves or any plumbing items requiring access for maintenance. Contractor shall provide to the general contractor all location and sizes of access panels for approval by the architect. contractor shall provide access panels to the general contractor for installation.

33. Plumbing Products and Materials

33.1. Cleanouts:

33.1.1. FCO (finished areas): adjustable floor cleanout, lacquered cast iron body, secondary closure plug, stainless steel combined round (square in tiled areas) cover and plug top assembly, stainless steel vandal resistant security screws.

33.1.1.1. Manufacturer: MIFAB Series C1220-3-6-34B
33.1.1.2. Manufacturer: MIFAB Series C1220-S-6-34B (tiled areas).
33.1.1.3. Manufacturer: MIFAB Suffix -T, -TS, -UR, -US (tiled areas with recessed 1/8" or 1-1/4" tile)

33.1.2. FCO (unfinished areas): adjustable floor cleanout, lacquered cast iron body, secondary brass closure plug, scoriated combined ductile iron round cover and plug top assembly, stainless steel vandal resistant security screws.

33.1.2.1. Manufacturer: MIFAB Series C1220-4-6-34B.

33.1.3. WCO (finished areas): lacquered cast iron cleanout with large access area and threaded plug, stainless steel 6 inch round cover and frame assembly, stainless steel vandal resistant security screws.

33.1.3.1. Manufacturer: MIFAB Series C1460-R6-3-6.

33.2. Valves:

33.2.1. Ball valve (1/2 inch to 2-1/2 inch) full port opening, 2 piece brass body, blow out proof stem, TFE seats, TFE with adjustable stem packing gland, free-floating chrome plated brass ball, 100 percent factory tested.

33.2.1.1. Manufacturer: Hammond Valve Service 8300 Series.

33.2.2. Balancing valve: dezincification resistant brass body, bonnet and trim, non-rising stem, screwed bonnet, parabolic regulating disk, double regulating (memory stop) device, flow measurement accuracy, supplied fitted with two duseal test points, end connections threaded to ANSI B1.20 and solder end to ANSI B16.18, drain plug, pre-formed insulation.

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6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
e-mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
PLUMBING SPECIFICATIONS

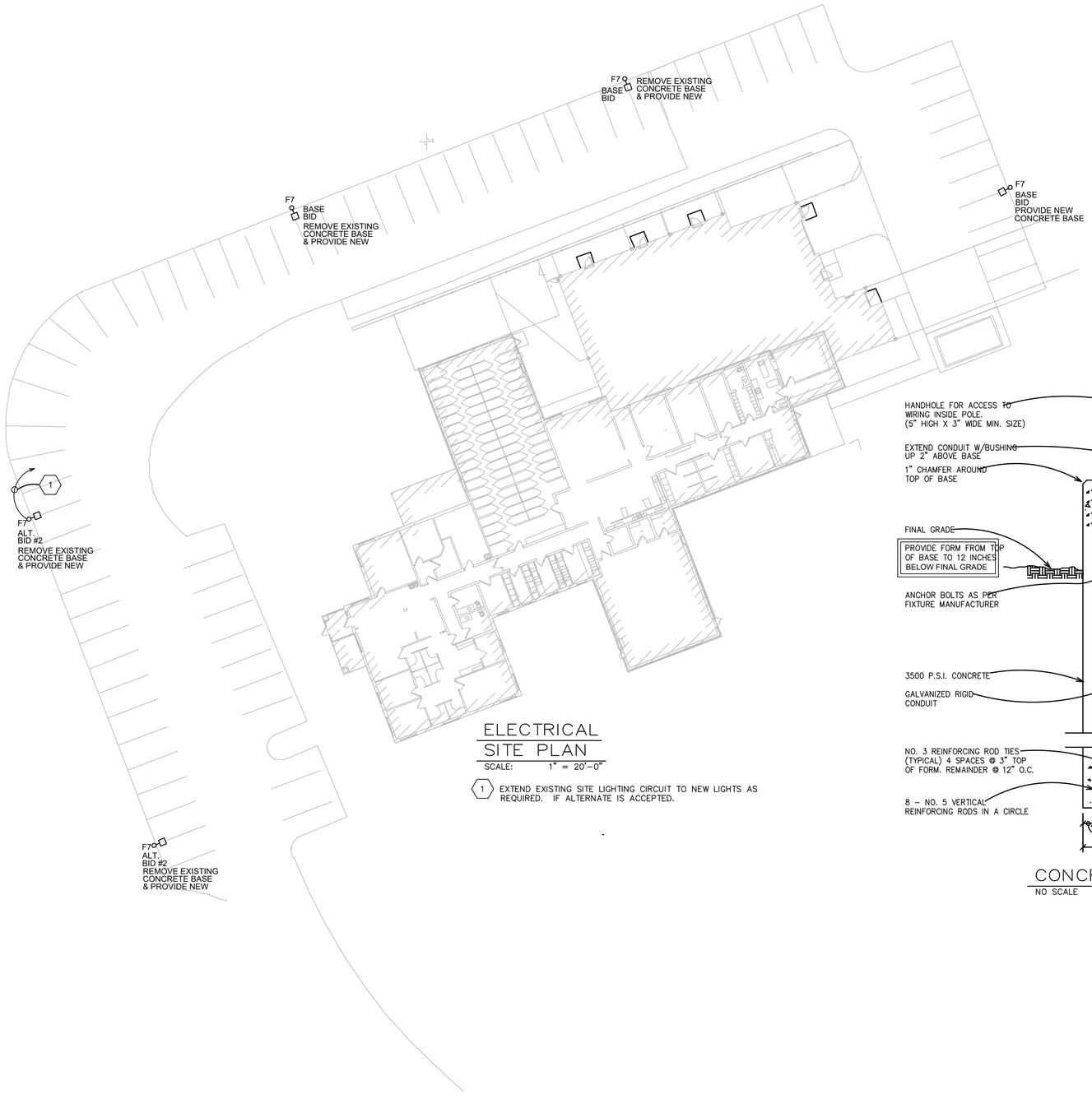
PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
P6 OF 7

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP 11-30-23

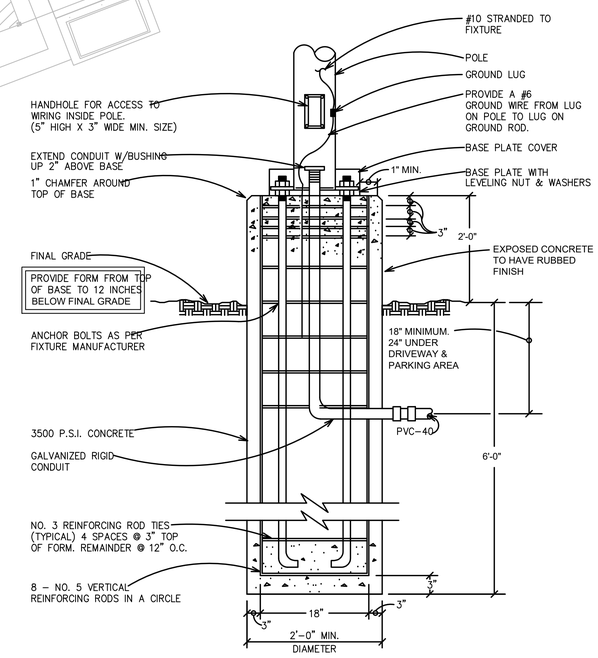
221218



ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

(1) EXTEND EXISTING SITE LIGHTING CIRCUIT TO NEW LIGHTS AS REQUIRED. IF ALTERNATE IS ACCEPTED.



CONCRETE BASE DETAIL

NO SCALE

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ROCKFORD, ILLINOIS 61107
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ELECTRICAL SITE PLAN

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SE1 OF **7**

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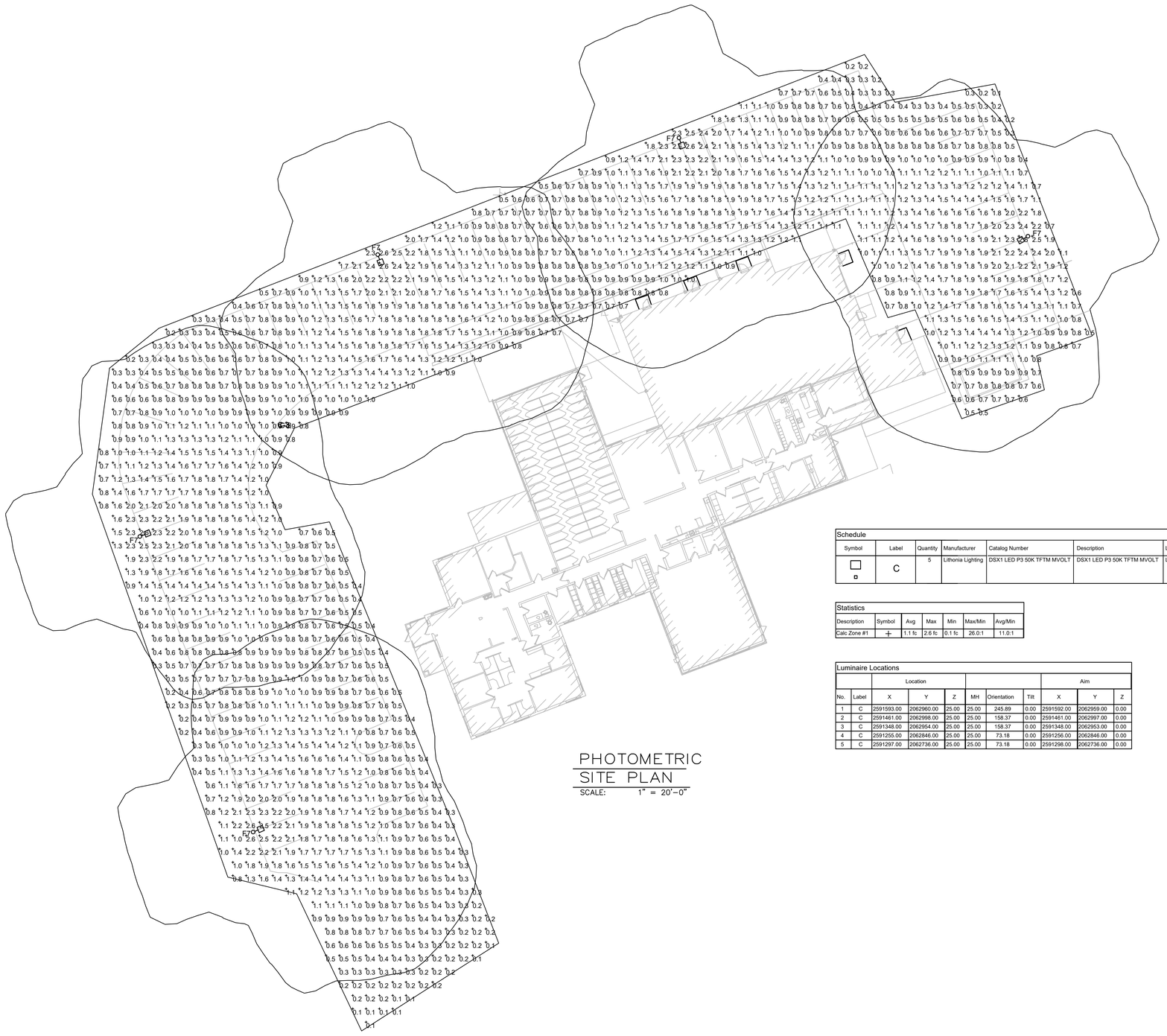

PHOTOMETRIC SITE PLAN

SCALE: 1" = 20'-0"

Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	C	5	Lithonia Lighting	DSX1 LED P3 50K TFTM MVOLT	DSX1 LED P3 50K TFTM MVOLT	LED	1	DSX1_LED_P3_50K_TFTM_MVOLT.ies	12733	1	102

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.1 fc	2.6 fc	0.1 fc	26.0:1	11.0:1

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
1	C	2591593.00	2062960.00	25.00	25.00	245.89	0.00	2591592.00	2062959.00	0.00
2	C	2591461.00	2062998.00	25.00	25.00	158.37	0.00	2591461.00	2062997.00	0.00
3	C	2591348.00	2062954.00	25.00	25.00	158.37	0.00	2591348.00	2062953.00	0.00
4	C	2591255.00	2062846.00	25.00	25.00	73.18	0.00	2591256.00	2062846.00	0.00
5	C	2591297.00	2062736.00	25.00	25.00	73.18	0.00	2591298.00	2062736.00	0.00

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PHOTOMETRIC SITE PLAN

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SHEET NUMBER
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EXP. 11-30-23

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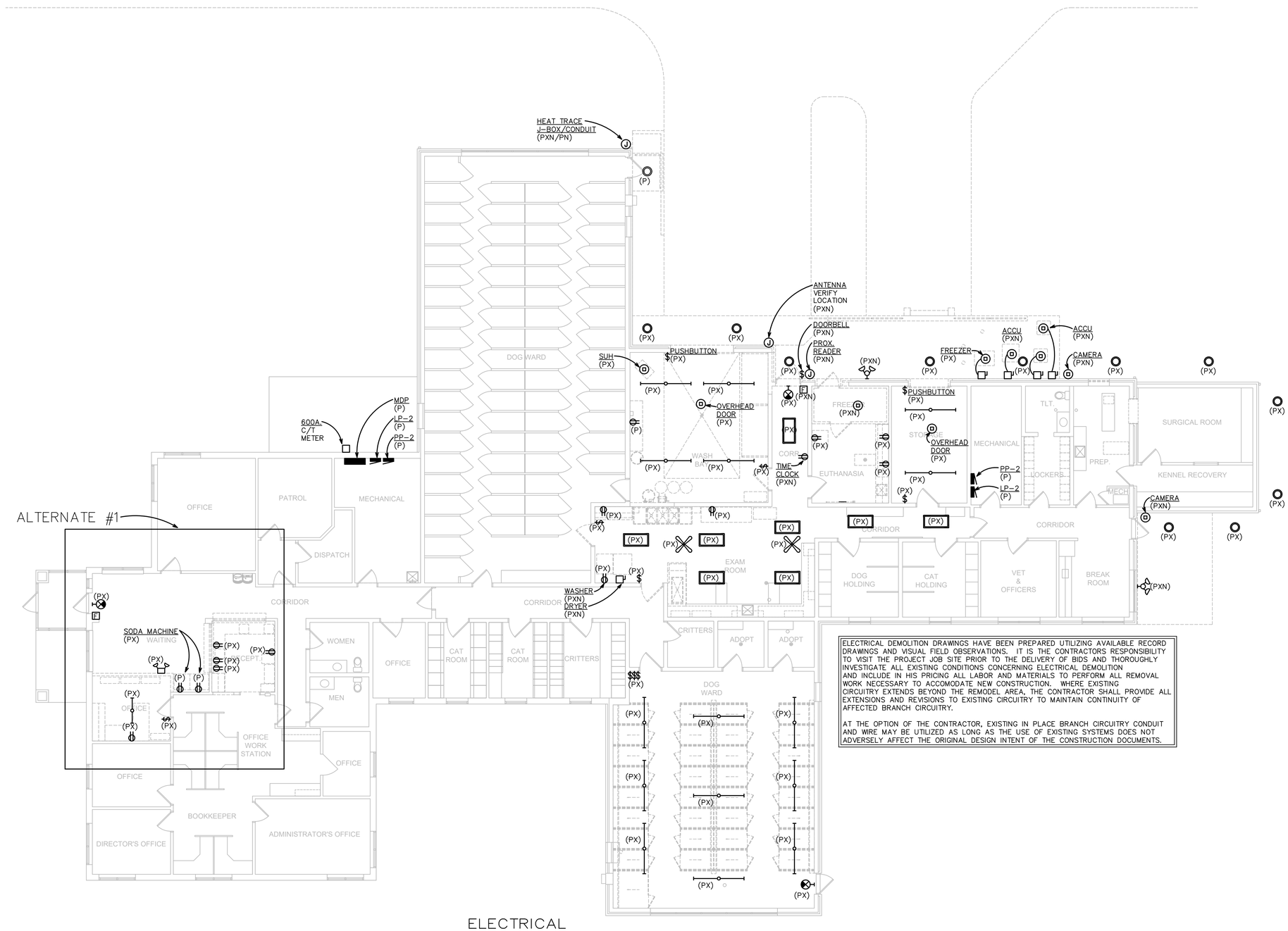

ELECTRICAL DEMOLITION DRAWINGS HAVE BEEN PREPARED UTILIZING AVAILABLE RECORD DRAWINGS AND VISUAL FIELD OBSERVATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO VISIT THE PROJECT JOB SITE PRIOR TO THE DELIVERY OF BIDS AND THOROUGHLY INVESTIGATE ALL EXISTING CONDITIONS CONCERNING ELECTRICAL DEMOLITION AND INCLUDE IN HIS PRICING ALL LABOR AND MATERIALS TO PERFORM ALL REMOVAL WORK NECESSARY TO ACCOMODATE NEW CONSTRUCTION. WHERE EXISTING CIRCUITRY EXTENDS BEYOND THE REMODEL AREA, THE CONTRACTOR SHALL PROVIDE ALL EXTENSIONS AND REVISIONS TO EXISTING CIRCUITRY TO MAINTAIN CONTINUITY OF AFFECTED BRANCH CIRCUITRY.

AT THE OPTION OF THE CONTRACTOR, EXISTING IN PLACE BRANCH CIRCUITRY CONDUIT AND WIRE MAY BE UTILIZED AS LONG AS THE USE OF EXISTING SYSTEMS DOES NOT ADVERSELY AFFECT THE ORIGINAL DESIGN INTENT OF THE CONSTRUCTION DOCUMENTS.

ELECTRICAL DEMOLITION FLOOR PLAN

SCALE: 1/8" = 1'-0"

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ROCKFORD, ILLINOIS 61107
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ADDITION & RENOVATIONS AT

WINNEBAGO CO. ANIMAL SERVICES

ROCKFORD, ILLINOIS

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SHEET NUMBER

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STATE OF ILLINOIS
EXP 11-30-23

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LIGHTING REVISED FLOOR PLAN

SCALE: 1/8" = 1'-0"

REFERENCE NOTES:

1. PROVIDE MOTION SENSOR SWITCH. UNIT TO BE EQUIVALENT TO WATTSTOPPER NO. PW-100W
2. EXTEND EXISTING ROOM LIGHTING CIRCUIT TO NEW LIGHTS AS REQUIRED. WIRE TO NEW LIGHT SWITCH AS REQUIRED.

LIGHTING FIXTURE SCHEDULE

FIXTURE NUMBER	LAMP SIZE AND TYPE	MOUNTING	MANUFACTURERS NUMBER	REMARKS
F1	LED 4000K	RECESSED LAY-IN GRID CEILING	LITHONIA NO. CPX2X4400LM 40KM2-120V ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	2'X4'FLAT LENS FIXTURE
F2	LED AND TWIN HEAD FURNISHED WITH FIXTURE	SURFACE	LITHONIA NO. LHQM-LED-R120V ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	COMBINATION EXIT SIGN AND BATTERY TWIN HEAD UNIT NICKEL CADMIUM BATTERY SELF CONTAINED
F2A	LED AND TWIN HEAD FURNISHED WITH FIXTURE WITH DIRECTION ARROW AS SHOWN	SURFACE/ CEILING	LITHONIA NO. LHQM-LED-R120V DOUBLE FACE-120V ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	DOUBLE FACE COMBINATION EXIT SIGN AND BATTERY TWIN HEAD UNIT NICKEL CADMIUM BATTERY SELF CONTAINED
F3	LED LAMPS 4000K FURNISHED WITH FIXTURE	SURFACE/ CEILING	LITHONIA NO. WL 40L EZ1 LP840 ELL4L 120V ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	4' STRIP LIGHT WITH LENS FULL 0.125" THICK ACRYLIC PRISMATIC LENS
F4	LAMPS FURNISHED WITH FIXTURE	SURFACE CENTER OF FIXTURE TO BE MOUNTED AT 7'-0" AFF	LITHONIA NO. ELMLT W LPQ6 V5-120V ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	BATTERY 6 VOLT EMERGENCY LIGHT WITH 2 HEADS WHITE HOUSING LEAD CALCIUM BATTERY
F5	FURNISHED WITH FIXTURE	SURFACE	LITHONIA NO. ELM2-RO-ELA-W NX-TH0606-120V ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	WEATHERPROOF EGRESS TWIN HEAD LIGHT WITH REMOTE BATTERY INCLUDED
F6	LED 4000K	RECESSED IN CANOPY	LITHONIA NO. LDN635-20LO4W ARLD-120V-W ACCEPTABLE MANUFACTURERS OR APPROVED EQUAL	4" APERATURE RECESSED DOWNLIGHT WHITE BAFFLE WET LOCATION

LICENSED PROFESSIONAL ENGINEER JAY THAKKAR 062-057756 ILLINOIS EXP. 11-30-23

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Professional Design Firm No. 184-003483
815-484-4708 Phone 815-484-4710 Fax
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SHEET IDENTIFICATION
LIGHTING REVISED FLOOR PLAN

PROJECT INFORMATION
Date: August 16, 2022
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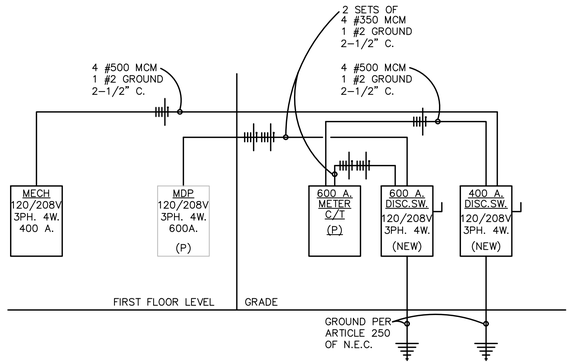
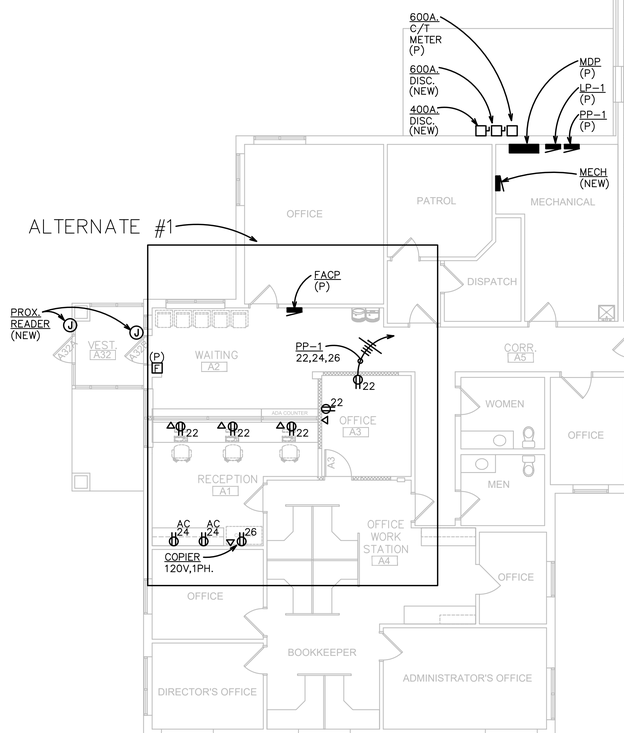
SHEET NUMBER
E1 OF 7

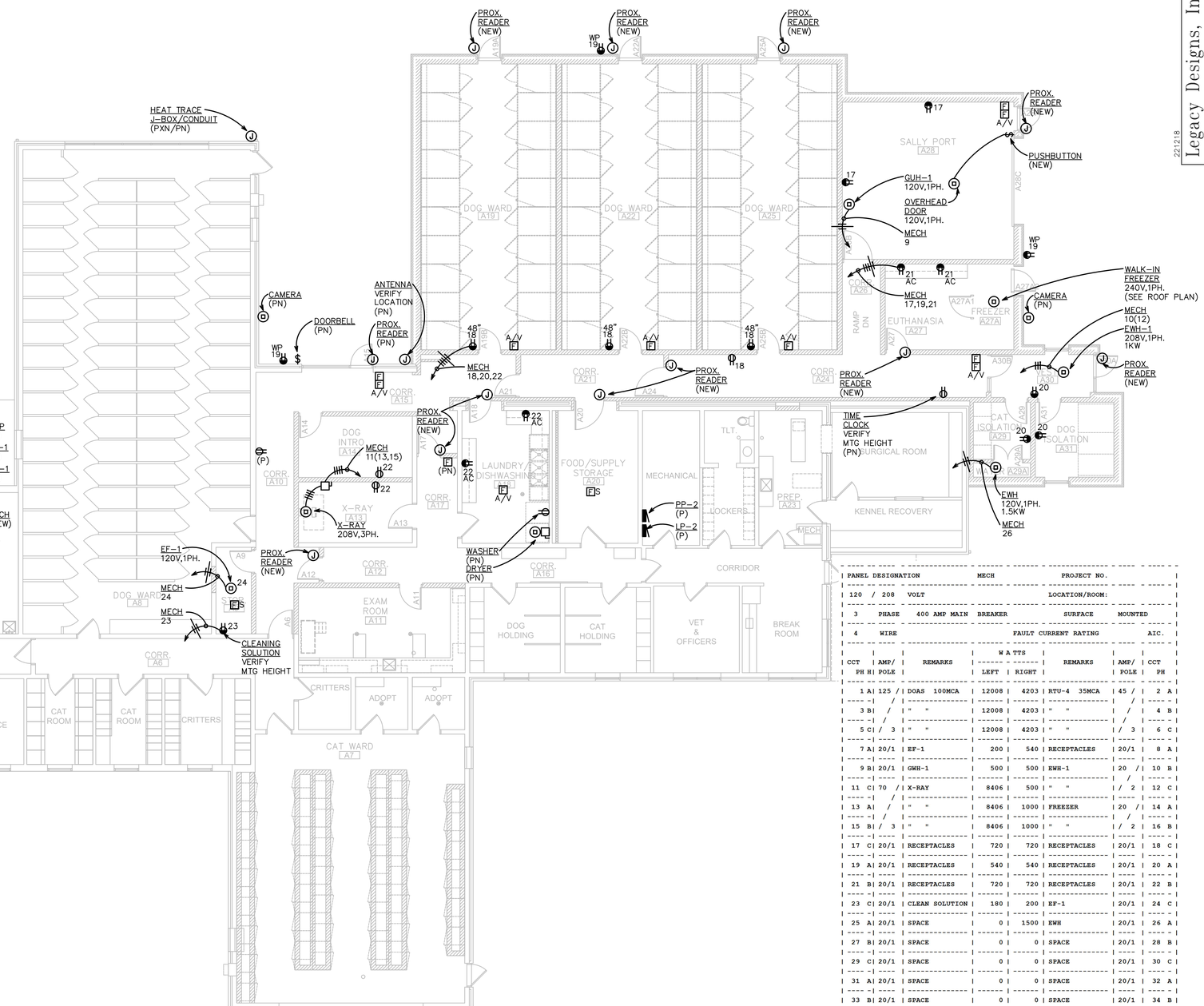
221218



ELECTRICAL RISER DIAGRAM

NO SCALE — PURELY DIAGRAMMATIC





POWER & SYSTEMS
REVISED FLOOR PLAN

SCALE: 1/8" = 1'-0"

PANEL DESIGNATION				MECH			PROJECT NO.	
120 / 208	VOLT						LOCATION/ROOM:	
3	PHASE	400 AMP MAIN	BREAKER			SURFACE	MOUNTED	
4	WIRE				FAULT CURRENT RATING			AIC.

CCT	PH	W	AMP/ POLE	REMARKS	WATTS LEFT	WATTS RIGHT	REMARKS	AMP/ POLE	CCT	PH
1	A		125 /	DOAS 100MCA	12008	4203	RTU-4 35MCA	45 /	2	A
3	B		/	" "	12008	4203	" "	/	4	B
5	C		/ 3	" "	12008	4203	" "	/ 3	6	C
7	A		20/1	EF-1	200	540	RECEPTACLES	20/1	8	A
9	B		20/1	GWH-1	500	500	EWH-1	20 /	10	B
11	C		70 /	X-RAY	8406	500	" "	/ 2	12	C
13	A		/	" "	8406	1000	FREEZER	20 /	14	A
15	B		/ 3	" "	8406	1000	" "	/ 2	16	B
17	C		20/1	RECEPTACLES	720	720	RECEPTACLES	20/1	18	C
19	A		20/1	RECEPTACLES	540	540	RECEPTACLES	20/1	20	A
21	B		20/1	RECEPTACLES	720	720	RECEPTACLES	20/1	22	B
23	C		20/1	CLEAN SOLUTION	180	200	EF-1	20/1	24	C
25	A		20/1	SPACE	0	1500	EWH	20/1	26	A
27	B		20/1	SPACE	0	0	SPACE	20/1	28	B
29	C		20/1	SPACE	0	0	SPACE	20/1	30	C
31	A		20/1	SPACE	0	0	SPACE	20/1	32	A
33	B		20/1	SPACE	0	0	SPACE	20/1	34	B
35	C		20/1	SPACE	0	0	SPACE	20/1	36	C
37	A		20/1	SPACE	0	0	SPACE	20/1	38	A
39	B		20/1	SPACE	0	0	SPACE	20/1	40	B
41	C		20/1	SPACE	0	0	SPACE	20/1	42	C

PHASE A =	28937	TOTAL CONNECTED	
PHASE B =	28057	LOAD (WATTS) =	
PHASE C =	26937		83931

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ADDITION & RENOVATIONS AT
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ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
POWER & SYSTEMS REVISED FLOOR PLAN

PROJECT INFORMATION

Date	August 16, 2022
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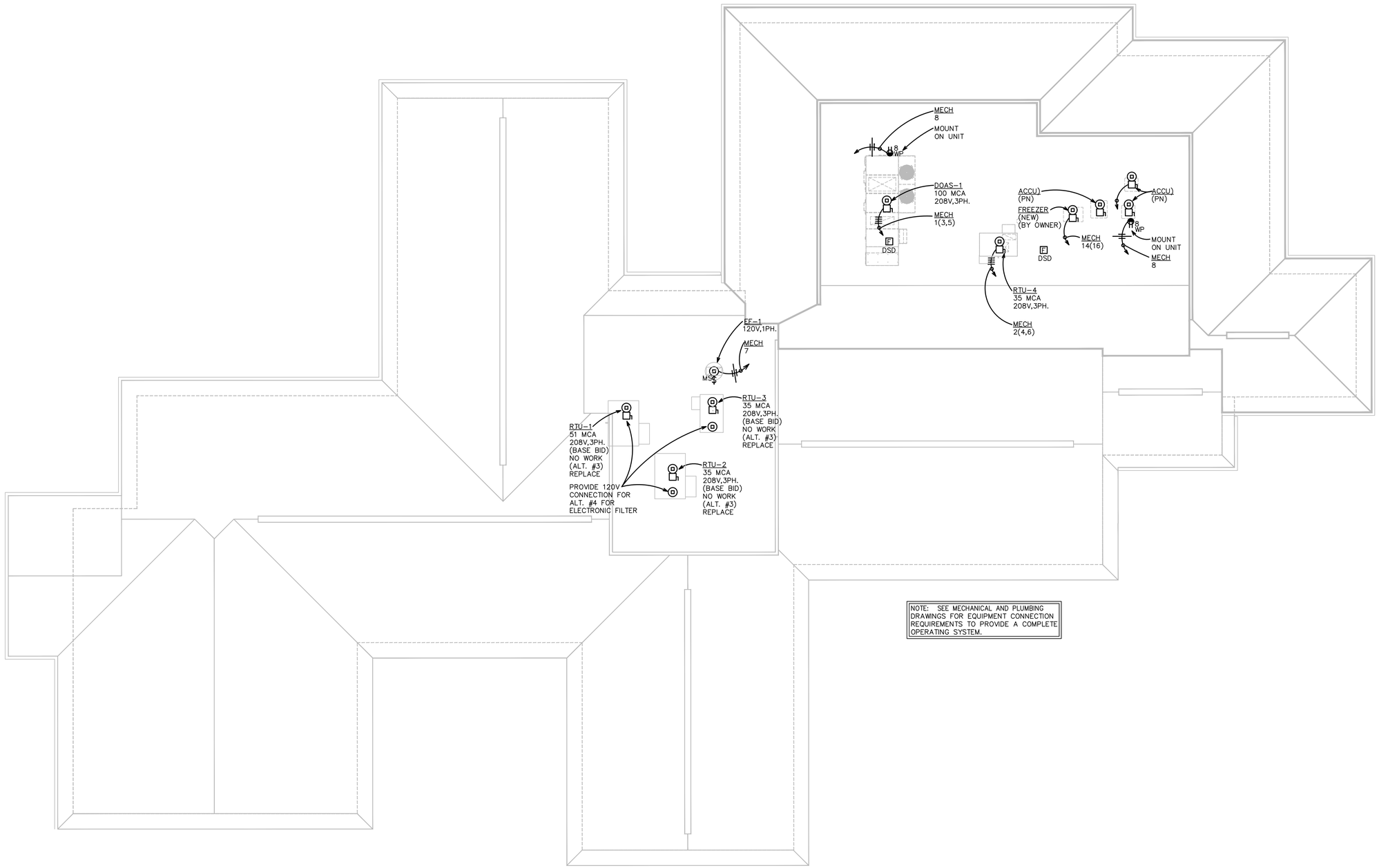

NOTE: SEE MECHANICAL AND PLUMBING DRAWINGS FOR EQUIPMENT CONNECTION REQUIREMENTS TO PROVIDE A COMPLETE OPERATING SYSTEM.

POWER & SYSTEMS
REVISED ROOF PLAN
SCALE: 1/8" = 1'-0"

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SHEET NUMBER
E3
OF
7

LICENSED PROFESSIONAL ENGINEER
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ELECTRICAL SPECIFICATIONS:

1.01. WORK INCLUDES

A. Raceways.
B. Wires and cables.
C. Boxes.
D. Supporting devices.

1.02. REGULATORY REQUIREMENTS

A. National Electrical Code, NEC (2014)
   1. Comply with NEC/NFPA No. 70, for construction and installation of basic materials.
   2. NEC 300–21: Wiring Methods; Spread of Fire or Products of Combustion.
   3. Building code for the city of Rockford.
B. Underwriter's Laboratories, UL:
   1. All basic materials listed and labeled by UL.

1.03. REFERENCED

A. American National Standards Institute, ANSI:
   1. C80.3: Specification for Electrical Metallic Tubing, Zinc Coated.
B. National Electrical Manufacturer's Association, NEMA:
   1. Enclosures: Publication 250.
      a. Type 1: Indoor use, atmospheric conditions normal.
C. Underwriter's Laboratories, UL

1.04. SUBMITTALS

A. Shop Drawings:
   1. Submit drawings for:
      a. Lighting fixtures.

1.05. PROJECT RECORD DOCUMENTS

A. Accurately record on mylar sepia copy of actual locations and wiring methods and "As–built" record documents.
B. Submit for Architect's review.

1.06. DRAWINGS AND SPECIFICATIONS

A. With the exception of systems and equipment furnished by Owner, it is intended that work covered by Specifications and Drawings includes systems complete and operative, irrespective of whether or not every item is specifically shown on plans and/or specified. Any omission of direct reference herein to any essential item shall not excuse contractor from complying with above intent.
B. In case of error or inconsistency, between Specifications and Drawings or within either document itself the item or arrangement of better quality, greater quantity or highest cost shall take precedence over drawings as directed by Owner. Figured dimensions supersede scaled dimensions. Contractor shall take no advantage of, and shall promptly call Owner's attention to any error, omission or inconsistency in Specifications and Drawings prior to submitting bid.
C. Material shall be new. Seconds or damaged materials will be rejected by Owner, who reserves the right to disapprove and reject any materials, proposed or installed which, in their opinion, fail to meet quality standards specified. Contractor shall, at his expense, remove any rejected materials and replace with approved materials.

2. PRODUCTS

2.01. RACEWAYS

A. Conduit Materials, Components:
   1. Conduit:
      a. Electrical Metallic Tubing: ANSI C80.3.
   2. Couplings:
      a. EMT Conduit: Gland compression.

2.02. WIRES AND CABLES

A. Building Wiring: 98% conductivity copper, 600 volt insulation, THWN or THHN.
B. Branch Circuit Wiring: Conductors smaller than #12 AWG not permitted.
C. Provide permanent plastic name tag indicating load fed.

2.03. WIRING SYSTEM IDENTIFICATION

A. Wire Insulation Color:

   120/240 v., 1 phase, 3 wire
   1. Phase A Black
   2. Phase B Red
   3. Neutral White
   4. Ground Green

2.04. BOXES

A. Outlet Boxes: Hot dipped galvanized, 1.25 oz./sq. ft. or cadmium plated.
   1. Interior Boxes: Pressed sheet steel, with knockouts for conduit; attached lugs for locating.
   2. Ceiling Boxes: 4 inch octagon boxes for 1 fixture; including fixture studs and maximum 2 connecting conduits.
   3. Flush Mounted in Walls:
      a. Boxes with matching plaster cover for single or two gang outlets.
      b. Two gang box or larger for conductors, conductor joints, conduit terminations and wiring devices.
B. Pull Boxes and Junction Boxes: NEC metal construction; with screw–on or hinged cover.
   1. Flush Mounted Pull Boxes: Overlapping covers with flush–head cover retaining screws; prime coated.

2.05. SUPPORTING DEVICES
A. Conduit Supports:
   1. Single Runs: Galvanized conduit straps or ring bolt type hangers with specialty spring clips.
   2. Vertical Runs: Channel support with conduit fittings.
B. Anchors
   1. Hollow Masonry: Toggle bolts or spider type expansion anchors.
   2. Solid Masonry: Lead expansion anchors or preset inserts
   3. Metal Surfaces: Machine screws, bolts, or welded studs.
   4. Wood Surfaces: Wood screws.
   5. Concrete Surfaces: Self–drilling anchors or power–driven studs.

2.06. FIRE AND SMOKE PENETRATION SEALANT

A. NEC 300–21; UL rated flexible sealant.

2.07. LUMINAIRES

A. Manufacturer: See lighting fixture schedule on floor plans.

2.08. EXIT SIGNS

A. Manufacturers: See lighting fixture schedule on floor plans.

2.11. BALLASTS

A. Fluorescent Ballast – Rapid Start Electronic:
   1. Magna Tek.
   2. Description: ANSI C82.1A, high power factor type (above .95) electronic ballast, Class P, sound rating A.
   3. FCC Regulation – RFI and EMI – CFR 47 Part 18 NEMA.
   4. Transient Protection – ANSI C62.41, CAT. A.
   5. Voltage: 108 to 132 for 120 volt circuit; 249 to 305 for 277 volt circuit at input frequency of 60 HZ light output to remain constant for voltage fluctuation of plus or minus 5%.
   6. Frequency – 25 Khz of higher with less than 2% lamp flicker.
   7. Lamp current crest factor – maximum 1.5.
   8. Total harmonic distortion – 10% or less.
   9. Ballast efficiency – above 91% (power out/power in).
   10. Ballast shall not contain PCBs.

3. EXECUTION

3.01. INSTALLATION

A. Drawings are diagrammatic and are intended to convey scope of work and indicate general arrangement of conduit, boxes, equipment, fixtures and other work included in contract.

3.02. RACEWAYS

A. Locations:
   1. Above–Grade Interior Locations: Electrical metallic tubing.
   2. Install liquid–tight flexible conduit where subjected to one or more of the following conditions.
      a. Moist or humid atmosphere where condensate can be expected or accumulate.
      b. Corrosive atmosphere.
      c. Subjected to water spray.
      d. Subjected to dripping oil, grease, or water.
   3. Size raceways in accordance with NEC for TW wire regardless of wire type used.

B. Installation of Conduit:
   1. Install conduit and tubing products indicated, in accordance with manufacturer's written instructions and requirements of NEC and NECA, Standard of Installation.
   2. Conceal conduit in all areas excluding mechanical, electrical and other unfinished rooms, connections to motors, and connections to surface cabinets.
   3. Attach conduit with clamps.
   4. Coordinate installation of conduit in partition work.
   5. Install conduit free from dents and bruises.
   6. Plug conduit ends to prevent entry of dirt or moisture.
   7. Clean out conduit before installation of conductor(s).
   8. Alter conduit routing to avoid structural obstructions, minimize cross–overs; and where possible, install raceways above water and steam piping.
   9. Allow minimum 6 inch clearance at flues, steam pipes, and heat sources.
   10. Route all exposed conduits parallel or perpendicular to building lines.
   11. Fire rated walls, partitions, floors, ceiling penetrations: Sealed in accordance with NEC 300–21.
      a. Flexible conduit sufficient length to avoid vibration transmission.
   12. Building Expansion Joints: Install UL listed expansion fittings complete with grounding jumpers where conduits cross building expansion joints.
      a. Provide bends or offsets in conduit adjacent to building expansion joints where conduit is installed above suspended ceiling.

3.03. RACEWAY SYSTEM IDENTIFICATION

A. Identify all exposed conduits and boxes as follows:

   1. Boxes, on face of coverplate.

      a. Power – Show panel, voltage and circuit number, painted stenciled letters. (Black letters, yellow background).
      b. Systems – Indicate system, such as sound, clock, telephone, etc., (black letters, yellow background).

B. Identify all conduit and boxes above accessible ceilings.

   1. Follow steps A.1. above.

C. Lettering to be as large as possible for each conduit size.

3.04. WIRE AND CABLES
A. Installation:
   1. Make conductor length for parallel feeders identical.
   2. Lace or clip groups of feeder conductors at distribution center, pull boxes and wireways.
   3. Conductor size indicated on drawings indicates ampacity requirements using copper conductors.

3.05. BOXES

A. Installation:
   1. Provide knockout closures to cap unused knockout holes where blanks have been removed.
   2. Support all boxes independently of conduit.
   3. Outlet Boxes:
      a. Flush mount outlet boxes in areas other than mechanical rooms, electrical rooms, and above removable ceilings.
      b. Masonry Walls:
         1) Adjust position of outlets in finished masonry walls to suit masonry course lines.
         2) Coordinate cutting of masonry walls to achieve neat openings for boxes.
         3) Locate boxes in masonry walls so that only corner need be cut from masonry units.
      c. Do not use sectional boxes unless approved by Architect/Engineer.
      d. Adjust outlet mounting height to grade with specified location for equipment served.
   4. Pull Boxes and Junction Boxes: Locate pull boxes and junction boxes above removable ceilings or in electrical rooms, utility rooms, or storage areas.

3.06. SUPPORTING DEVICES
A. Installation:
   1. Maintain headroom, neat mechanical appearance, and support equipment loads specified.

3.07. PRESENT EQUIPMENT AND CONSTRUCTION
A. Examination
   1. Before submitting his bid, Contractor shall visit the present site, building, areas being remodeled and adjacent areas not being remodeled.

   2. Contractor shall contact the Owner to carefully verify all present external and internal exposed, concealed, buried points of connections as to location, size, type, depth, operating characteristics, etc., including, but not limited to the following:

      a. Present building construction and conditions.
      b. Present interior electrical distribution system.
      c. Present electrical operating characteristics.
      d. New connections to present equipment and/or services.
      e. All areas/locations of demolition and adjoining spaces.
      f. All areas/locations for relocated/reinstalled equipment.

   3. Verify that abandoned wiring, equipment, piping, boxes, etc. serve only abandoned facilities and remove.

   4. If contractor finds that any present point of points of connection to present facilities/equipment are incorrectly shown on plans or incorrectly specified, he shall notify the Owner, in writing, at least 10 (ten) working days before bids are due to be submitted.

   5. Owner will issue an addendum to all contractors, calling their attention to revised point or points of connection, as required.

   6. If electrical contractors fail to notify the Owner, in writing, as outlined above, it will be expected that their bid includes everything required to provide proper connections to all present points of connection as they actually exist or as they will be provided.

   7. All modifications, relocations, replacements, additional runs and extensions, etc. will be provided by electrical contractors without increase in contract price.

B. Following removed present equipment and materials which are in good condition (or are placed in good condition), suitable, meet requirements of these specifications, and are approved in writing by engineer, or called for, may be reused (PXN–PN).

   1. Lighting fixtures.
   2. Speakers.

C. Removed conduit and wire must not be reused.
D. Any of above equipment which is not reused and following removed present equipment shall become property of contractor, and shall be removed from premises by him (PX).
   1. Equipment so designated on drawings.
E. Following present equipment shall be carefully removed, intact, match, marked, in–so–far as is practical, shall remain property of Owner, and shall be delivered to Owner outside of building where directed by the engineer (PX–DO).
   1. Equipment so designated on drawings.

F. Contractor shall:
   1. Provide new floors under removed present equipment and where called for.
   2. Repair floors under and walls adjacent to removed equipment, to match adjacent construction.
   3. Fill in present chases which are no longer required and neatly patch to match adjacent construction.
   4. Cut openings required for:
      a. His work.
      b. Admission of new equipment.
      c. Removal of present equipment.
      d. New connection to present construction.
   5. Patch and repair unused present holes and openings, and those left by the removal of present equipment and admission of new equipment.
   6. Patch and repair present equipment, and building construction which has been cut, removed, disturbed or marred as required to restore it to original condition before being disturbed.
G. Unused openings in enclosures in conduits, boxes, cabinets, and panels shall be filled.
H. Present painted construction which is marred shall be repaired same as new construction.

J. Work of every division shall be coordinated with all other work and with present conditions, so that:
   1. Electrical services to be present buildings or portions of buildings will not be interrupted during periods when those services are needed.

K. New conduit serving new and/or present electrical devices in finished rooms or spaces shall be concealed in finished rooms, where possible, or shall be run in adjoining unfinished rooms, shafts, chambers, cloak rooms, etc., where exposed conduit is permitted in finished present rooms by Architect in writing, it shall be wiremold, with matching boxes, run as inconspicuously as possible, in straight lines, parallel to walls and ceilings, with neat bends. Unneeded boxes, switches and wiring shall be completely removed and openings patched. In present rooms or locations where new lighting equipment is shown, present fixtures, boxes, wiring, switches, etc., shall be removed as per note "PX", unless another symbol is shown on drawings. Where specifically approved by Architect in writing, boxes may be permitted to remain and be provided with new flush covers, extending over entire wall opening.
L. Lighting fixtures which are reused shall have lens and reflectors cleaned. All fixtures shall be provided with new lamps.
M. Work shall be coordinated so that heating, plumbing, electrical and telephone services to the present building will not be interrupted, except as approved by the Architect.

3.09. CLEANING

A. Clean systems internally before placing in operation. Clean externally and restore damaged surfaces.
B. Lubricate equipment per manufacturer's instructions. Where – lubricating points are not easily accessible, provide extensions.

ELECTRICAL SYMBOLS

TYPICAL: ALL MOUNTING HEIGHTS ARE TO DEVICE CENTERLINE U.N.O.

RECEPTACLES

DUPLEX RECEPTACLE
DUPLEX RECEPTACLE GROUND FAULT
} 18" AFF UNLESS NOTED OTHERWISE

MISCELLANEOUS

MOTOR OUTLET BOX (* HP, KW OR KVA). VERIFY EXACT LOCATION AND HEIGHT OF ALL MOTORS BEFORE ROUGH–IN.

OUTLET WITH FINAL CONNECTIONS TO EQUIPMENT. WHICH IS FBO. VERIFY EXACT LOCATION AND HEIGHT BEFORE ROUGH–IN.

CEILING SURFACE JUNCTION BOX

SAFETY SWITCH (F = FUSED) 4'–6" AFF

SURFACE ELECTRICAL PANEL 36" AFF TO BOTTOM UNO

WIRING IN CONDUIT CONCEALED, ABOVE CEILINGS OR IN WALLS
WIRING IN CONDUIT CONCEALED IN OR UNDER FLOORS (UNO)
WIRING HOMERUN TO PANEL
} CHARACTER MARKS= NUMBER OF WIRES, IF NONE ARE SHOWN PROVIDE TWO EXCEPT IF A GROUND CONDUCTOR IS REQUIRED PROVIDE THREE

GROUND CONDUCTOR

REFERENCE NOTE

TELEPHONE SYSTEM

TELEPHONE CONDUIT CONCEALED ABOVE CEILINGS OR IN WALLS

TELEPHONE CONDUIT CONCEALED IN OR UNDER FLOORS

WALL TELEPHONE OUTLET BOX 18" AFF
"W" = 4'–6" AFF
PROVIDE 1/2" EMPTY CONDUIT TO ABOVE ACCESSIBLE CEILING UNO

ELECTRICAL ABBREVIATIONS

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
A	AMPERES
ASC	ABOVE SUSPENDED CEILING
C	CONDUIT
℄	CENTER LINE
DP	DISTRIBUTION PANEL
DISC	DISCONNECT
EC	ELECTRICAL CONTRACTOR
E	EMERGENCY
FBO	FURNISHED BY OTHER THAT ELECTRICAL CONTRACTOR. COMPLETELY WIRED, WITH FINAL CONNECTIONS TO EQUIPMENT AND DEVICES, BY ELECTRICAL CONTRACTOR.
FL	FLUORESCENT
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
HP	HORSEPOWER
HT	HEIGHT
JB	JUNCTION BOX
KW	KILOWATTS
LTG	LIGHTING
MAG	MAGNETIC
MAX	MAXIMUM
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MIN	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
NC	NEW CONNECTIONS TO PRESENT RACEWAY, DEVICE, WIRING, EQUIPMENT, ETC, INSTALL, TEST, COVER, PAINT, ETC., SAME AS NEW WORK
NEC	NATIONAL ELECTRICAL CODE
N?C	NOT IN CONTRACT
NL	NIGHT LIGHT
P	TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.
PX	TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, CONDUITS, RACEWAYS, PIPING, DUCTS, BOXES, WIRING, BASES, ETC., OF EVERY KIND. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS NEW WORK. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., EQUAL TO ORIGINAL CONDITION. REMOVED MATERIALS MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.
PX–DO	FIXTURES, EQUIPMENT, DEVICES, ETC., REMOVED INTACT, AS FAR AS PRACTICAL, IDENTIFIED AS REQUIRED, AND DELIVERED TO OWNER OUTSIDE OF BUILDING AS DIRECTED BY ARCHITECT/ENGINEER. ASSOCIATED BOXES, WIRING, CONDUITS, ETC, TO BE "PX".
PXR	REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AS REINSTALLED, SAME AS NEW, IN ORIGINAL POSITION. IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE/EQUIPMENT, AS APPROVED BY ENGINEER, AT NO INCREASE TO CONTRACT PRICE. IF ADJACENT WALLS, FLOORS, CEILING, ETC., ARE DAMAGED, THEY SHALL BE REPAIRED BY ELECTRICAL CONTRACTOR AS DIRECTED BY ARCHITECT.
PXN	REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED AT POINT/LOCATION MARKED "PN". BOXES, WIRING CONDUIT, ETC, TO BE "PX".
PN	COMPLETELY REINSTALL DEVICE, LINE, EQUIPMENT, ETC., REMOVED, AT NEW LOCATION, SAME AS NEW WORK. RECONNECT TO PRESENT CIRCUIT/SWITCH LEG/SYSTEMS WIRING, ETC., UNLESS NOTED OTHERWISE ON DRAWINGS.
PH	PHASE (?)
PNL	PANEL
SW	SWITCH
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VM	VOLTMETER
W	WIRE
WP	WEATHERPROOF

LICENSED PROFESSIONAL ENGINEER
JAY THAKKAR
062-057756
ILLINOIS
EXP 11-30-23

221218

Legacy Designs, Inc.
6116 Mulford Village Drive
ROCKFORD, ILLINOIS 61107
Professional Design Firm No. 184–003483
815–484–4708 Phone 815–484–4710 Fax
e–mail legacy@legacydesigns.net
web site www.legacydesigns.net

ADDITION & RENOVATIONS AT
WINNEBAGO CO. ANIMAL SERVICES
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
ELECTRICAL SPECIFICATIONS & SYMBOLS

PROJECT INFORMATION

Date	August 16, 2022
Rev. Date	
RLJA Proj	2022-020

SHEET NUMBER
E4 OF **7**

221218