GENERAL NOTES:

1. THE CON TRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. SUBCONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS:

KANSAS ONE-CALL	687-2470
A T& T	1-800-246-8464
BLACK HILLS ENERGY	1-800-694-8989
CITY OF WICHITA WATER & SEWER	1-316-219-8921
CITY OF WICHITA STORMWATER	1-316-268-4090
CITY OF WICHITA TRAFFIC	1-316-268-4034
COX COMMUNICATIONS	1-888-249-3530
WESTAR ENERGY	1-800-544-4857

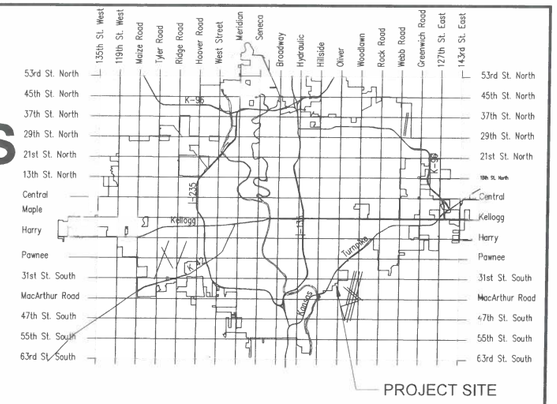
3. UTILITY SERVICE LINES, POLES, ETC. ARE TO ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE SUBCONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
4. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITE TO BE PROVIDED BY OWNER'S REPRESENTATIVE. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT WILL LEAVE UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITE MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS. OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
5. TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE SUBCONTRACTOR WITH THE CITY ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
6. THE SUBCONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
7. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE SUBCONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
8. THE SUBCONTRACTOR SHALL NOTIFY THE INSPECTING ENGINEER AND TOM MASON AT 316-268-4574 WITH THE CITY OF WICHITA WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF PROJECT COMPLETION. STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
9. IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT TRAFFIC@WICHITA.GOV BEFORE CONSTRUCTION CAN BEGIN. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY.
10. ALL ELEVATIONS SHOWN ARE IN NAVD 88.
11. ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.
12. ANY SIDEWALK, DIRVE APPROACH, OR STREET PAVEMENT REMOVED TO CONSTRUCT PROJECT MUST HAVE A PAVEMENT CUT PERMIT AND BE REPLACED BY THE CITY CONTRACTOR. PERMITS CAN BE OBTAINED BY CALLING 316-268-4501 OR 316-268-4480.
13. CITY MAINTENANCE OF STORM SEWER ENDS AT THE LAST STRUCTURE IN THE EASEMENT OR RIGHT-OF-WAY.
14. A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUND SHALL BE CONSTRUCTED WITH NEW DEVELOPMENT A SIX (6) FOOT DIAMETER FLAT TOP WITH 4:1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP TO THE MANHOLE.
15. GEOTECHNICAL REPORT AVAILABLE UPON REQUEST.
16. SUBCONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPENINGS OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
17. THE INSPECTING FIRM SHALL SUBMIT TO THE CITY STORMWATER MAINTENANCE DIVISION A DIGITAL COPY OF THE CCTV INSPECTION OF THE CONDUITS AND STRUCTURES FOLLOWING CONSTRUCTION. THE DIGITAL FILE FORMATION SHALL BE COMPATIBLE WITH THE CITY INPUT TEMPLATE. A COPY OF THE TEMPLATE IS AVAILABLE UPON REQUEST AT 316-268-4090.
18. THE SUBCONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT EXISTING UTILITIES THROUGH CONSTRUCTION AS APPROVED BY THE UTILITY OWNER AND THE CONTRACTOR AT THE SUBCONTRACTOR'S EXPENSE.

STORM SEWER IMPROVEMENTS
to serve
AUTOMATED WAREHOUSE
3801 S OLIVER STREET
CITY OF WICHITA, KANSAS

GARY JANZEN, P.E. City Engineer

Project Number

514 PPD (133119)



Sheet Index	
Sheet Number	Sheet Title
STORM SEWER G-001	STORM SEWER COVER SHEET
CS100	OVERALL SITE PLAN
CG100	OVERALL GRADING PLAN
CG101	GRADING PLAN 1
CG102	GRADING PLAN 2
CG501	EROSION CONTROL DETAILS 1
CG502	EROSION CONTROL DETAILS 2
CU100	OVERALL UTILITY PLAN
CU101	UTILITY PLAN 1
CU102	UTILITY PLAN 2
CU201	STORM PROFILES 1
CU202	STORM PROFILES 2
CU501	UTILITY DETAILS 1
CU502	UTILITY DETAILS 2
CU503	UTILITY DETAILS 3
CU505	UTILITY DETAILS 5

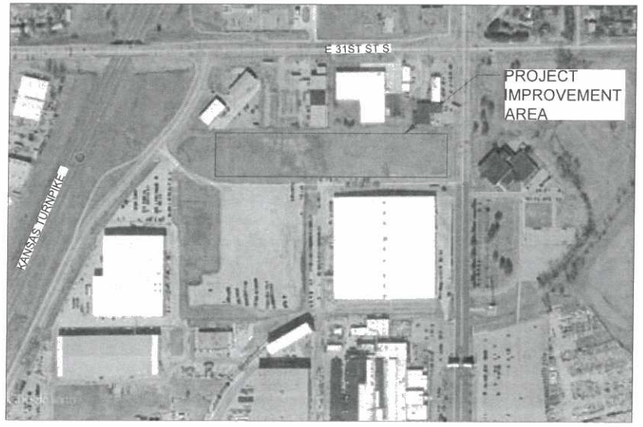
AS BUILTS

Contractor:	Project Inspector:
Pearson Construction	Larry Gann
3/28/2019	KEMILLER ENGINEERING PA 117 E. Lewis, Wichita, KS 67202 (316)264-0242

Stormwater Certification:
New Development or Redevelopment

These construction plans were prepared in accordance with the current Stormwater Management Regulations as set forth in the City of Wichita's Stormwater Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Stormwater Manual

Disturbed Area = 10.18 AC.
Water Quality Treatment: OFFSITE BMP PROGRAM
Downstream Channel Protection: N/A
Detention: DETENTION POND PLANNED
The BMP used for this development is DETENTION.



APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Engineering Julianne Kallman 5-18-18
Stormwater Joe Hrkle PE 5/20/18

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said Inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such Inspection, nor shall any work be commenced without written authorization by the City Engineer.

BENCHMARKS

BM #201 - SQUARE CUT ON THE WEST END OF THE CURB RETURN ON THE NORTHWEST CORNER OF S. OLIVER ST. AND E. COLFAX ST. \35' NORTH-NORTHWEST TO CONTROL POINT #101. \13' NORTHEAST TO THE BASE OF THE 'STOP' SIGN POST. \15' NORTH-NORTHWEST TO THE BASE OF THE 'NO OUTLET' SIGN POST.

ELEV.=1356.23 (NAVD88)

BM #202 - SQUARE CUT ON THE WEST END OF THE NORTH CURB LINE IN THE NORTHWEST CORNER OF THE PARKING LOT ON THE NORTH SIDE OF 1-355C BUILDING. \91' NORTHEAST TO CONTROL POINT #102. \46' EAST-NORTHEAST TO POST INDICATOR VALVE #1082.

ELEV.=1360.63 (NAVD88)

BM #203 - SQUARE CUT ON TOP OT THE EAST SIDE OF THE CONCRETE DRAINAGE STRUCTURE ON EAST SIDE OF TURNPIKE DR. \49' NORTH-NORTHEAST TO CONTROL POINT #103. \42' SOUTH TO THE NORTH EDGE OF THE DRIVE TO "Y" PARKING LOT (3300 S. TURNPIKE DR.) \40' SOUTHWEST TO BASE OF A POWER POLE.

ELEV.=1348.61 (NAVD88)

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

APRIL 2018

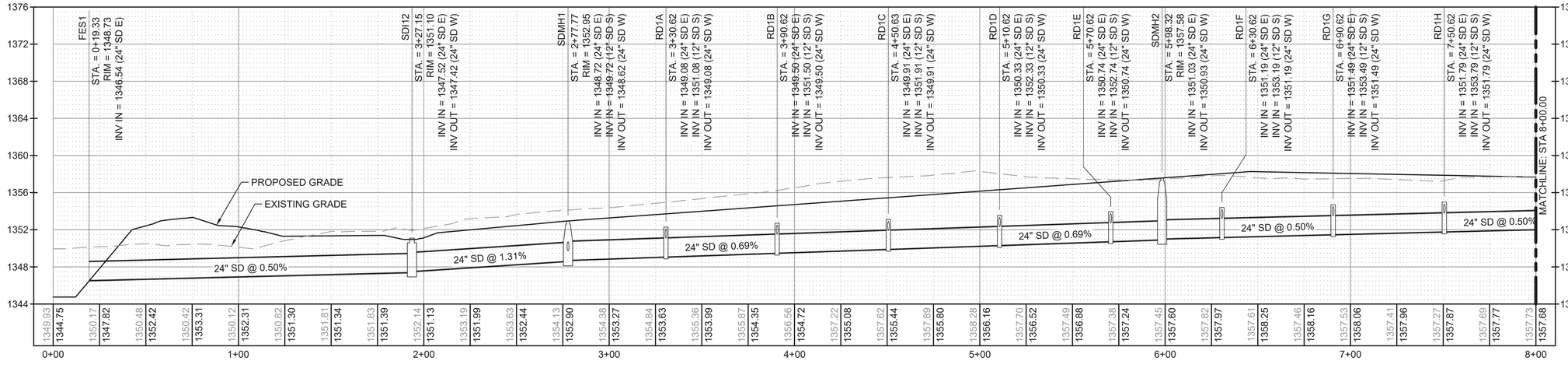
PROJECT: Spirit Automated Warehouse
LOCATION: AS-BUILTS
~~CLIENT~~: Page CU101

DATE 3/28/2019.
BY Larry Gann K.E. Miller Eng.
JOB NO. ___ SHEET NO. ___ OF ___

Manhole	Rim	Inv In	Inv. Out	Inv. In
SDM5	1351.73	1345.67	1345.47	
FES2.			1345.67.	
FES1		1346.32		
FES6			1345.50	
FES5			1345.55	
FES4		1345.28		
FES3		1345.29		
FES7		1348.70		
SD112.	1351.13	1347.72	1347.65	
SDMH1	1352.95	1348.82	1348.65	1349.42.
SD12	1357.66	1351.69.	1349.83	1350.01
SD13	1358.61	1350.45	1350.38	
SD110	1359.20	1354.57	1354.45	
SD14	1359.21	1351.36	1351.36	
Page CU102.				
SD15	1359.64	1352.50	1352.45	
SDMH2	1357.56	1351.28	1351.23	
SD16.	1360.00	1353.42	1353.35	
SD17	1359.94	1354.19	1354.16	
SDMH3	1357.21	1352.98	1352.94	
SD11	1359.13		1355.03	
SD19.	1359.37		1356.28	
SD18	1359.92.	1355.07	1354.94.	
SDMH4	1359.88	1355.35	1355.28	

City Blue Print, Inc.

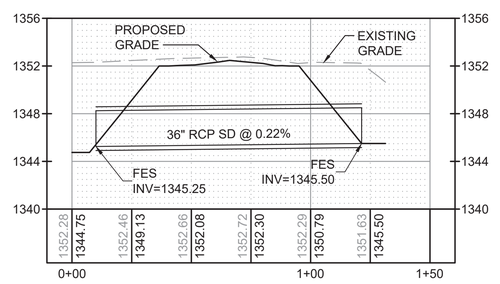
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PROFILE VIEW SD1

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

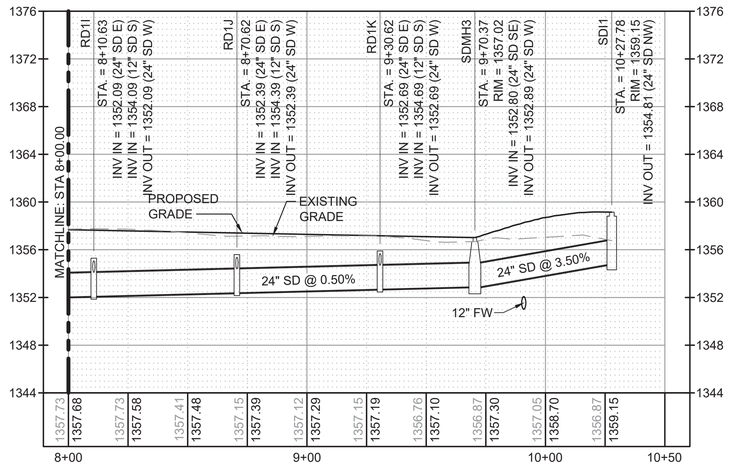
VERTICAL: 0 3' 6' 12' — SCALE IN FEET

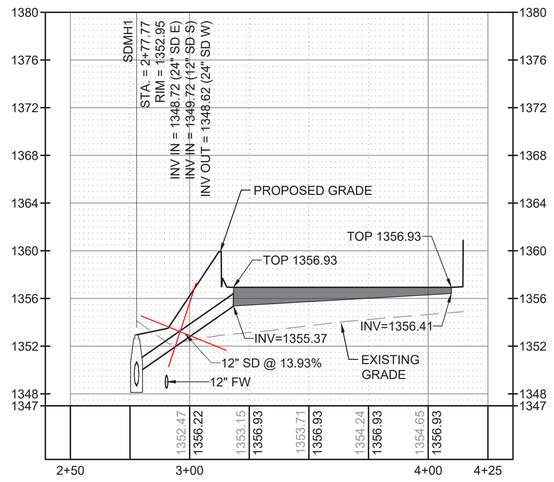


PROFILE VIEW SD4

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET





PROFILE VIEW SD1

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

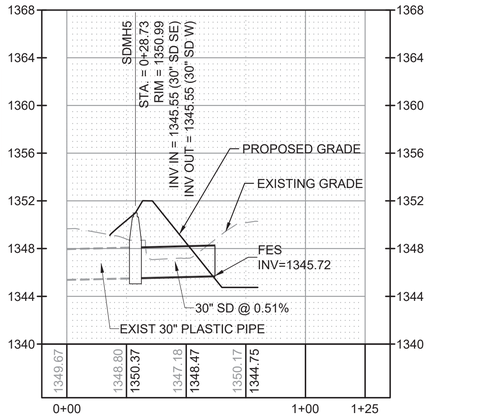
VERTICAL: 0 3' 6' 12' — SCALE IN FEET

PROFILE VIEW SD1A - TRENCH DRAIN

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

MANHOLE
20' &45 DEG. BEND
2'8" & 45 DEG. BEND
(VERT)
8"X12" REDUCER & 8'
FURNCO 8" & 8"
VALVE & 4' OF PIPE
WALL



PROFILE VIEW SD5

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

NOTES:

1. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.

AS BUILTS

KEMILLER ENGINEERING PA
117 E. Lewis,
Wichita, KS 67202
(316)264-0242

27APR2018 - PKG 1A - SITE WORK - IFC - ECN02
PE CONTACT: WAYNE HERBERT @ 316-623-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A: SITE WORK - IFC	CAK	NT
E	03/26/2018	PKG 1A: SITE WORK - IFC - ADD2	CAK	NT
I	03/27/2018	PKG 1A: SITE WORK - IFC - ECN02	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

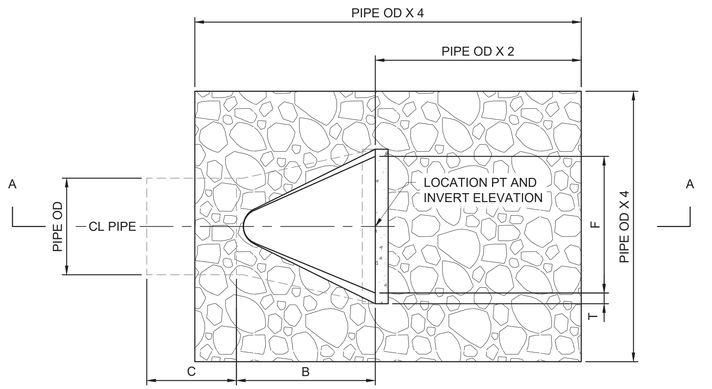
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



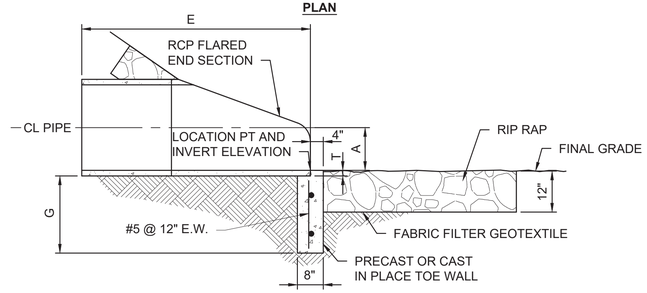
Facilities Engineering
COLFAX AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS 02/20/18
Designed by: C. KINGSLAND 02/20/18

Project No.
6936
Sheet Name:
STORM PROFILES 1
Sheet CU201 of XX
Drawing No.
108M-137-XXX

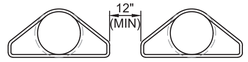
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



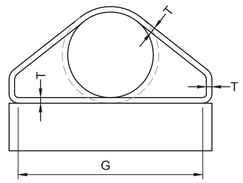
PLAN



SECTION A-A



SPACING FOR MULTIPLE INSTALLATION



FRONT ELEVATION

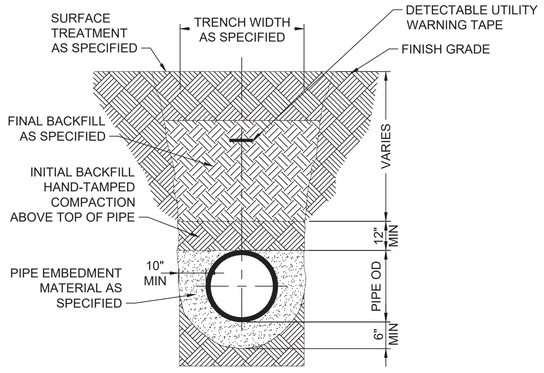
PIPE DIA	DIMENSIONS (INCHES)						
	T	A	B	C	E	F	G
18"	2 1/2	9	27	46	73	36	24"
24"	3	9 1/2	43 1/2	30	73 1/2	48	24"
27"	3 1/4	10 1/2	49 1/2	24	73 1/2	54	24"
30"	3 1/2	12	54	19 3/4	73 3/4	60	24"
36"	4	15	63	34 3/4	97 3/4	72	24"
42"	4 1/2	21	63	35	98	78	24"
48"	5	24	72	26	98	84	24"
54"	5 1/2	27	65	33 1/4	98 1/4	90	36"

NOTES:

1. WHEN PIPE CENTERLINE AND DITCH CENTERLINE INTERSECTION IS APPROX. PERPENDICULAR, EXTEND RIPRAP UP SIDE SLOPE OPPOSITE PIPE DISCHARGE TO HEIGHT LEVEL WITH TOP OF PIPE.
2. PLACE RIPRAP AT ALL END SECTIONS AND CULVERT HEADWALLS.

FLARED END SECTION WITH RIPRAP PROTECTION

DETAIL 1 / CU101

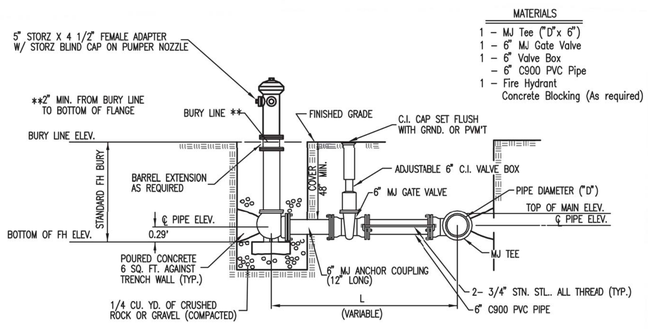


NOTES:

1. BOTTOM OF TRENCH AND BEDDING MATERIAL SHALL PROVIDE UNIFORM LONGITUDINAL SUPPORT FOR BOTTOM SECTION OF PIPE.
2. FINAL BACKFILL UNDER PAVEMENTS MAY BE SUBJECT TO ADDITIONAL COMPACTION REQUIREMENTS AND TESTING.
3. BURIED WARNING AND IDENTIFICATION TAPE SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATIONS.

UTILITY TRENCH

DETAIL 3 / CU101



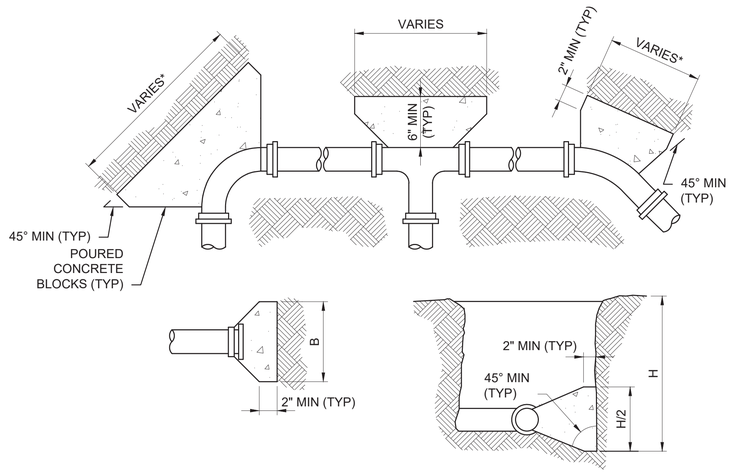
FIRE HYDRANT ASSEMBLY

CAUTION ! – WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.

* MUELLER CENTURION (5 1/4") OR APPROVED EQUAL. FIRE HYDRANTS SHALL COMPLY WITH THE REQUIREMENT PER AWWA C502. ALL HYDRANTS SHALL HAVE 5 1/4" COMPRESSION VALVE (OPENING AGAINST THE WATER PRESSURE) AND SHALL BE 3–WAY, TRAFFIC MODEL TYPE THAT SHALL REMAIN CLOSED IF DAMAGED IN AN ACCIDENT, AND BE DESIGNED FOR 200 PSIG WORKING PRESSURE. HYDRANTS SHALL HAVE TWO 2 1/2" NOZZLES AND ONE 4 1/2" PUMPER NOZZLE THAT SHALL SCREW INTO THE HYDRANT BODY. THE CONTRACTOR SHALL VERIFY WITH THE BOEING FIRE DEPARTMENT SIZE AND TYPE OF NOZZLES, SIZE AND SHAPE OF OPERATING NUT AND DIRECTION OF OPERATION REQUIRED BEFORE ORDERING HYDRANTS. THE CONTRACTOR SHALL SUBMIT CERTIFICATION OF CORRECT REQUIREMENTS ALONG WITH THE EQUIPMENT SUBMITTAL.

FIRE HYDRANT ASSEMBLY

DETAIL 4 / CU101



THRUST BLOCK BEARING AREA (SQ FT)						
SERVICE TYPE	FITTING SIZE	TEE & END	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
FIRE PROTECTION	12"	16.96	23.99	12.98	6.62	3.33
COMP. AIR	6"	4.24	6.00	3.25	1.65	0.83
DOM. W	3"	1.06	1.50	0.81	0.41	0.21
NAT. GAS	4"	1.88	2.67	1.44	0.74	0.37

NOTE: BEARING AREA BASED ON 2000 PSF SOIL BEARING CAPACITY AND A PIPE TEST PRESSURE OF 200 PSI.

NOTES:

1. THRUST BLOCKS ARE REQUIRED AT ALL VERTICAL AND HORIZONTAL TEES, OR ELBOWS OF PRESSURIZED PIPING.
2. BLOCKING PROVIDED SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
3. THRUST BLOCK CONCRETE SHALL EXTEND TO UNDISTURBED EARTH.
4. A NONPOROUS MATERIAL 8 MILS MIN VISQUEEN OR 15 LB MIN FELT SHALL BE PLACED BETWEEN THE FITTING AND CONCRETE THRUST BLOCK.
5. JOINTS SHALL NOT BE COVERED WITH CONCRETE. SUFFICIENT CLEARANCE SHALL BE PROVIDED BETWEEN CONCRETE AND FITTINGS FOR FUTURE MAINTENANCE.
6. DOUBLE LAYER OF TAR PAPER BETWEEN CONCRETE BLOCK AND PLUG TO PERMIT EASY REMOVAL FOR FUTURE EXTENSION OF WATER MAIN WHERE REQUIRED.
7. JOINT RESTRAINTS CAN BE PROVIDED WHERE USE OF CONCRETE THRUST BLOCKING CANNOT BE USED BECAUSE OF OBSTRUCTIONS OR REQUIREMENTS IN THE SPECIFICATIONS. RESTRAINT DETAILS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

THRUST BLOCK

DETAIL 2 / CU101

09MAR2018 - PKG 1A-SITE WORK - IFC
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	DESCRIPTION	DATE	A
CAK	PKG 1A - SITE WORK - IFC	03/09/2018	

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

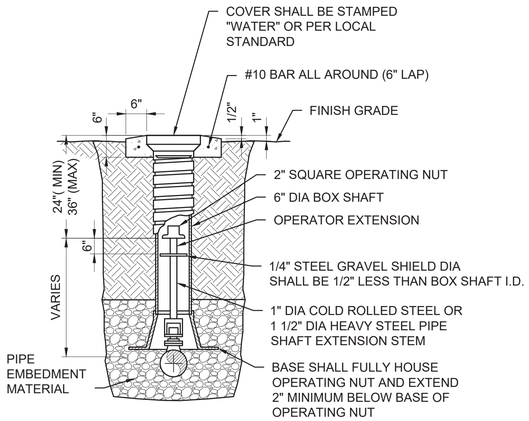
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

LICENSED PROFESSIONAL ENGINEER
19889
4/1/2018
KANSAS
PROFESSIONAL ENGINEER

COLFAX AUTOMATED WAREHOUSE
WICHITA, KS
Facilities Engineering
BLDG-1-338G
Designed by C. KINGSLAND 02/23/2018
Drawn by J. JENKINS 02/23/2018

Project No. 6936
Sheet Name: UTILITY DETAILS 1
Sheet CU501 of XX
Drawing No. 108M-141-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

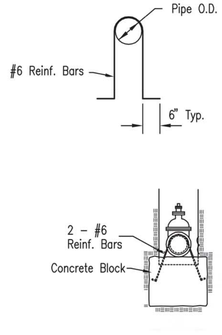


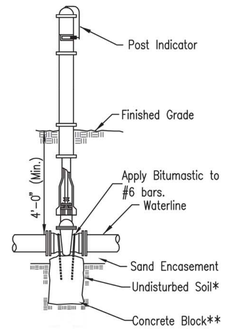
NOTES:

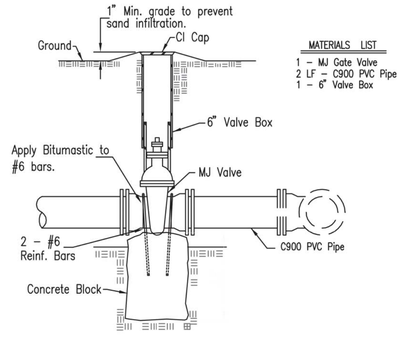
1. VALVE BOX SHALL NOT REST ON OPERATING ASSEMBLY.
2. VALVE BOXES LOCATED IN VEHICULAR AREAS SHALL BE TRAFFIC RATED.
3. VALVE BOXES LOCATED IN PAVED AREAS SHALL BE INSTALLED FLUSH WITH FINAL GRADING.
4. CONCRETE COLLAR MAY BE LOWERED ON RISER ASSEMBLY TO ACCOMMODATE SPECIAL FINISH GRADING.
5. VALVE BOX SHALL BE PAINTED WITH HEAVY COAT OF BITUMINOUS PAINT.
6. A CORROSIVE RESISTANT DEBRIS CAP SHALL BE INSTALLED TO PREVENT DEBRIS FROM PASSING AROUND THE CAP AND DOWN INTO THE VALVE HOUSING. THE CAP SHALL BE HELD IN PLACE BY A MECHANISM WHICH WILL NOT DAMAGE THE VALVE HOUSING. CAP SHALL BE CONSTRUCTED TO ALLOW THE DEVICE TO BE SECURED BY A LOCK. HANDLE AND BODY OF THE CAP SHALL BE INTEGRALLY COLORED AS REQUIRED BY LOCAL STANDARDS.

SCREW SHAFT-TYPE VALVE BOX

DETAIL 1 / CU101

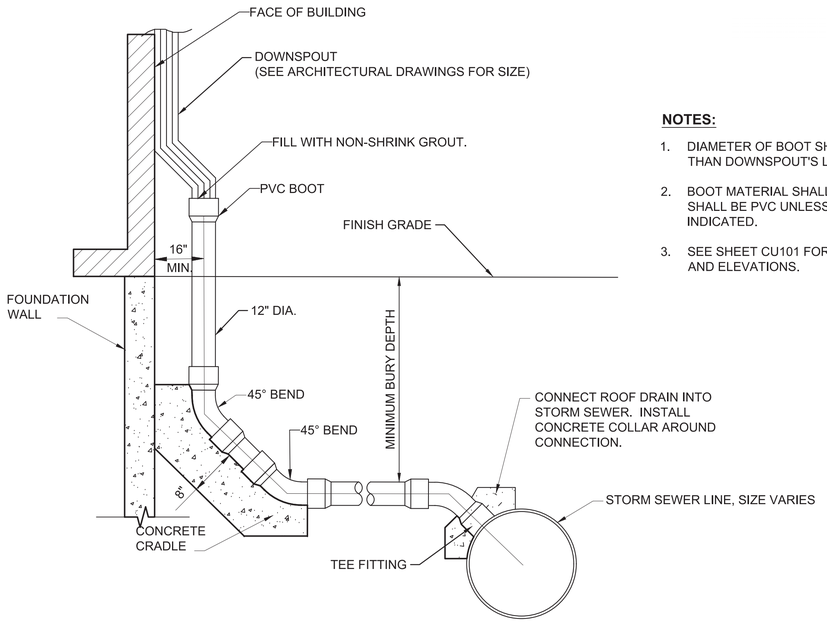






VALVE WITH INDICATOR POST

DETAIL 2 / CU101



NOTES:

1. DIAMETER OF BOOT SHALL BE 1/2" GREATER THAN DOWNSPOUT'S LARGEST DIMENSION.
2. BOOT MATERIAL SHALL BE PVC. ALL ELSE SHALL BE PVC UNLESS OTHERWISE INDICATED.
3. SEE SHEET CU101 FOR STORM SEWER SIZE AND ELEVATIONS.

DOWNSPOUT CONNECTION

DETAIL 3 / CU101

09MAR2018 - PKG 1A -SITE WORK - IFC
PE CONTACT: WAYNE HERBERT @ 316-523-2359

A	03/09/2018	PKG 1A - SITE WORK - IFC	CAK

FIRE PROTECTION REVIEW — APPROVED / NOT REQUIRED — DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

COMMERCIAL TECHNOLOGY ENGINEERING — 19889 — 4/1/2018 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering

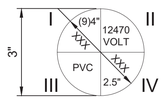
COLFAX AUTOMATED WAREHOUSE

WICHITA, KS

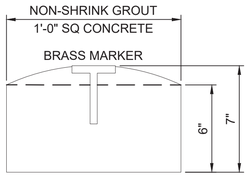
BLDG-1-338G — Drawn by: J. JENKINS — 02/23/2018 — Designed by: C. KINGSLAND — 02/23/2018

Project No. 6936
Sheet Name: UTILITY DETAILS 2
Sheet CU502[rev] XX
Drawing No. 108M-142-XXX

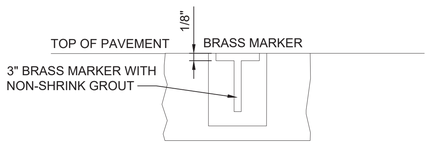
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN



SECTION - GRADE AREA



SECTION - GRADE AREA

MARKING INSTRUCTIONS LEGEND			
LEGEND/QUADRANT:	CODE:	MECHANICAL:	ELECTRICAL:
I	SIZE	SIZE	QTY AND SIZE
II	UTILITY	WTR, GAS, ETC	VOLTAGE OR COMM
III	MATERIAL	IRON, PVC, ETC	RGS OR PVC
IV	DEPTH	DISTANCE IN FEET, FROM TOP OF MARKER TO TOP OF UTILITY PIPE	

APPROVED UTILITY MARKER ABBREVIATIONS:

DESCRIPTION:	ABBREVIATION:
COMPRESSED AIR	CA
CHILLED WATER SUPPLY	CHWS
CHILLED WATER RETURN	CHWR
CONDESATE	CNDST
COMMUNICATION	COMM
CONDENSER WATER SUPPLY	CWS
CONDENSER WATER RETURN	CWR
DEIONIZED WATER	DI
GAS	GAS
HOTWATER SUPPLY	HWS
HOT WATER RETURN	HWR
IRRIGATION	IRRG
INDUSTRIAL WASTE	IW
SANITARY SEWER	SAN
STORM WATER SEWER	STS
STEAM	STEAM
TRANSITE	XITE
VOLTAGE	VOLT
DOMESTIC WATER	WTR
GROUND WTR RECOVERY	WTR REC

DESCRIPTION:	ABBREVIATION:
CAST IRON PIPE	CIP
CORRUGATED METAL PIPE	CMP
COMPOSITE PIPE	CP
POLYVINYL CHLORIDE	PVC
REINFORCED CONCRETE PIPE	RCP
RIGID GALVANIZED STEEL	RGS
STEEL PIPE	STL
VITRIFIED CLAY PIPE	VCP
ALUMINUM	AL
CONDUIT	C

UTILITY MARKER INSTRUCTIONS:

ARROW: DIRECTION(S) OF UTILITY WITH DISTANCES, XXX IN FEET, TO AND FROM ADJACENT MARKER(S) OR UTILITY STUB UPS.

MARKERS:: FURNISH AND INSTALL UNDERGROUND UTILITY MARKERS PER THE FOLLOWING REQUIREMENTS:

LOCATION: EXTERIOR INSTALLATIONS:
-CHANGE OF DIRECTION
-WITHIN 5'-0" OF BLDG WALL
-MINIMUM ONE MARKER PER REQUIRED UTILITY
-CROSSING OF SIDEWALKS, ROADS, ETC.
-MAXIMUM 150' APART, WITHIN LINE OF SIGHT
-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC.

INTERIOR INSTALLATIONS:
-CHANGE OF DIRECTION
-WITHIN 5'-0" OF BLDG WALL
-MINIMUM ONE MARKER PER REQUIRED UTILITY
-MAXIMUM 50' APART, WITHIN LINE OF SIGHT
-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC.

REQUIRED MARKERS: SHALL BE INSTALLED FOR THE FOLLOWING UTILITIES:

EXTERIOR: -ALL EXTERIOR PIPES OR CONDUIT EXCEPT IRRIGATION (LAWN SPRINKLER SYSTEMS) DISTRIBUTION PIPES.

INTERIOR: -600V AND ABOVE
-SUBSTATION FEEDERS
-ENVIRONMENTAL UTILITIES
-GAS AND/OR PROPANE LINE(S)
-CRITICAL SERVICE-EMERGENCY, BREATH AIR, ETC.
-ALL PIPE AND/OR CONDUIT OF 1.25" AND LARGER DIAMETER.

NOTES: -LETTERING SHALL BE STAMPED 0.25" BLOCK STYLE LETTERS

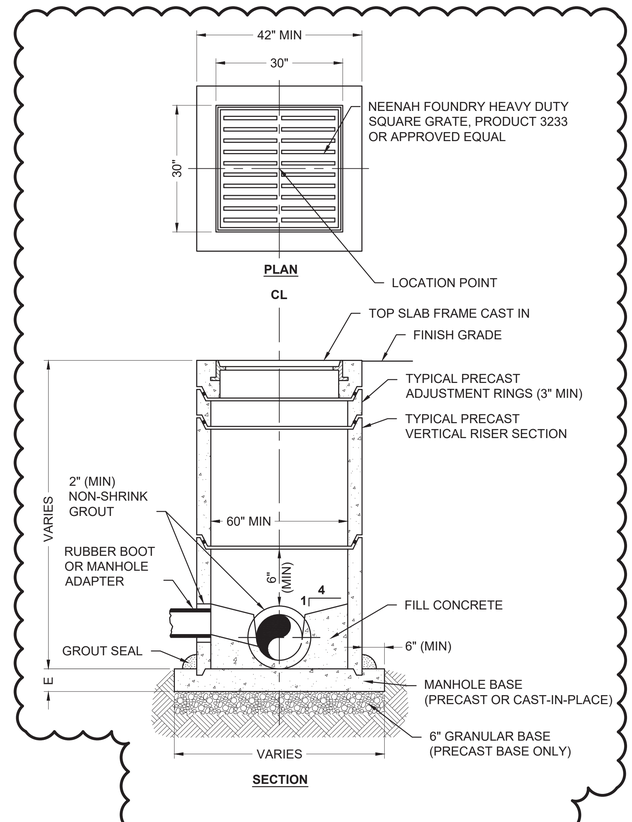
-ALL NEW AND EXISTING (UNCOVERED AT POINT OF EXCAVATION UNDERGROUND UTILITIES SHALL BE MARKED PER THE ABOVE REQUIREMENTS.

-ANY DISTURBED MARKERS SHALL BE REPLACED.

-MARKERS SHALL BE A 3" FLAT BRASS SURVEY MARKER. LIETZ #8434-08 OR BOEING PLANT ENGINEERING APPROVED EQUAL.

-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC. COVERS SHALL REFLECT CORRECT UTILITY.

UTILITY MARKER DETAIL 1 — CU100, CU101, CU102



PLAN

SECTION

PRECAST INLET DETAIL 2 — CU100, CU101, CU102

MANHOLE NOTES:

1. ALL PRECAST MANHOLE SECTIONS SHALL CONFORM TO ASTM C478.
2. ALL UTILITY STRUCTURES ARE TO BE H-20 RATED UNLESS INDICATED OTHERWISE.
3. IF A MANHOLE IS LOCATED IN PAVEMENT AREAS, RIM ELEVATION SHALL BE FLUSH WITH FINAL GRADE. IF A MANHOLE IS LOCATED OUTSIDE OF PAVEMENT AREAS, RIM ELEVATION SHALL BE 6.00" MINIMUM ABOVE ADJACENT FINISH GRADE.
4. COVERS AND CASTINGS OF MANHOLES AND STRUCTURES SHALL BE STAMPED PER THE APPROPRIATE UTILITY TYPE OR PER THE LOCAL STANDARDS, AND SHALL BE STAMPED PER THE ORIGIN OF MANUFACTURE.
5. COVERS AND CASTINGS SHALL BE TAMPER-PROOF FOR STRUCTURES LOCATED IN PEDESTRIAN AREAS, EASEMENT AREAS, AND AREAS WITH SPECIAL SECURITY RESTRICTIONS.
6. COVERS THAT MAY BE SUBMERGED SHALL BE WATERTIGHT.
7. FRAME AND ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINK GROUT, PREFORMED PLASTIC, OR RUBBER RING TO FORM WATERTIGHT SEAL.
8. ALL JOINTS SHALL BE SEALED WITH JOINT COMPOUND OR GROUTED WITH MORTAR.
9. ANY LIFT LOOPS FOR UTILITY STRUCTURES SHALL BE GROUTED FLUSH AFTER INSTALLATION.
10. ALL MANHOLE BASES (PRECAST OR CAST-IN-PLACE) SHALL HAVE #4 @ 12" ON CENTER EACH WAY REINFORCEMENT.
11. ALL REINFORCEMENT SHALL BE PLACED 2" CLEAR OF NEAREST FACE OF CONCRETE UNLESS INDICATED OTHERWISE.
12. IF MANHOLES ARE INDICATED ON SANITARY LINES, A 2.00 INCH DROP IN ELEVATION BETWEEN THE INCOMING AND OUTGOING SEWER SHALL BE PROVIDED IN EACH MANHOLE UNLESS INDICATED OTHERWISE. INVERT FLOW CHANNELS SHALL BE CONSTRUCTED TO PROVIDE SMOOTH AND UNIFORM SLOPE WITH GRADUAL TRANSITION SECTIONS.
13. PIPE MAY EXTEND 2.00" MAXIMUM BEYOND INTERIOR MANHOLE WALL.
14. SUBCONTRACTOR SHALL SUBMIT PRECAST STRUCTURE WITH PRODUCT DATA, DESIGN CALCULATIONS,AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
15. MANHOLE STEPS SHALL BE PLACED INTO MANHOLE WALL DURING MANUFACTURE OR MORTARED INTO HOLES AFTER CONCRETE HAS CURED.

09MAR2018 - PKG 1A -SITE WORK - IFC
PE CONTACT: WAYNE HERBERT @ 316-523-2339

BY	DESCRIPTION	DATE
CAK	PKG 1A - SITE WORK - IFC	03/09/2018
CAK	PKG 1A - SITE WORK - IFC - ADD2	03/26/2018
NT	APPROVED	
NT		

FIRE PROTECTION REVIEW — APPROVED / NOT REQUIRED — DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME — DEPT. — DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering

COLFAX AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Drawn by: J. JENKINS — 03/09/2018 — Designed by: C. KINGSLAND — 03/09/2018

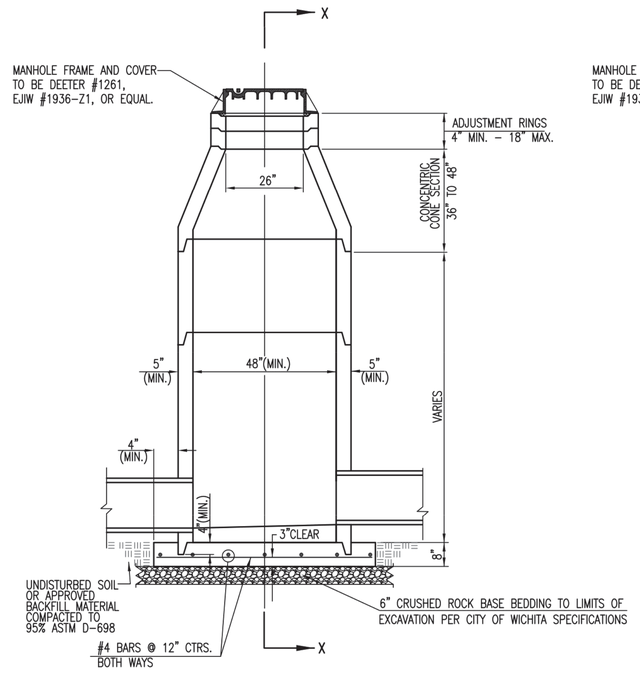
Project No. 6936

Sheet Name: UTILITY DETAILS 3

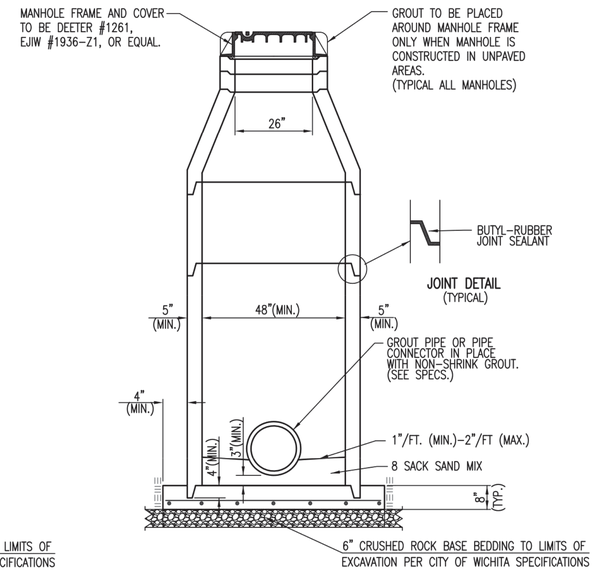
Sheet CU503 of XX

Drawing No. 108M-143-XXX

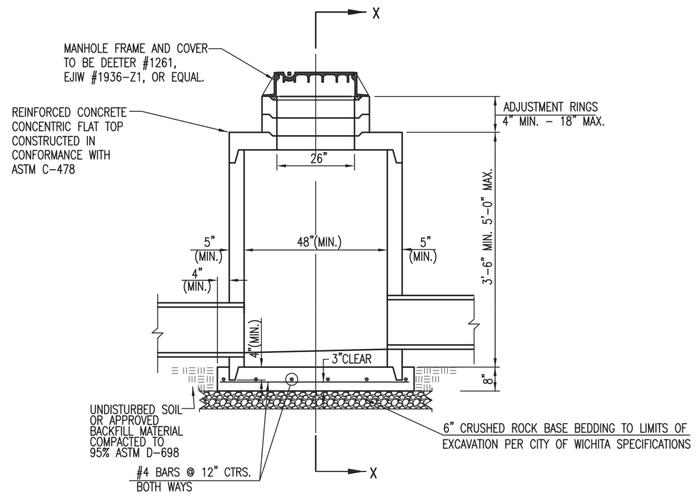
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



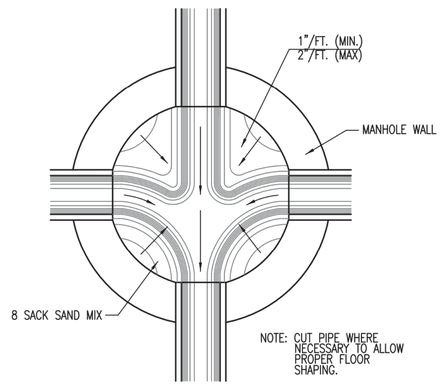
PRECAST
STANDARD MANHOLE
TYPE "A"



SECTION X-X
(TYPICAL)



PRECAST
SHALLOW MANHOLE
TYPE "B"



TYPICAL MANHOLE
FLOOR SHAPING

GENERAL NOTES

1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
4. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
5. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C-478 AS MODIFIED BY THE SPECIFICATIONS.
6. CONCRETE USED FOR MANHOLE CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO MANHOLE BASE.
8. MANHOLES WITH PIPE SIZES 24" AND LARGER SHALL HAVE 5 FOOT INSIDE DIAMETER (MIN.)
9. MANHOLES WITH PRECAST BASES MAY BE USED AT THE CONTRACTORS OPTION. THESE MANHOLES SHALL HAVE AN 8" MINIMUM BASE THICKNESS AND SHALL BE PLACED ON AN 8" MIN. CRUSHED ROCK BASE. PIPES SHALL BE ENCASED WITH CRUSHED ROCK TO AT LEAST 3 FEET FROM THE MANHOLE WALL.
10. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
11. THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE MANHOLE WALL.
12. MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE MANHOLE WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
13. MANHOLE FRAME AND COVER TO BE DEETER #1261, EJIW #1936-Z1, OR APPROVED EQUAL, SEE SW-303.
14. FOR FLAT GRATED INLET APPLICATION, GRATE TO BE DEETER #1933, EJIW #1205 MDI, OR APPROVED EQUAL.
15. FOR BEEHIVE GRATE APPLICATION, GRATE TO BE DEETER #4495, EJIW #120545, OR APPROVED EQUAL.

REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST CONCRETE MANHOLE (STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-301

	DESCRIPTION	DATE	BY	APPROVED
1	PKG 1A - SITE WORK - IFC - ECN02	04/27/2018	CAK	NT
			CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

LICENSED PROFESSIONAL ENGINEER
19889
4/27/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
COLFAX AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Drawn by J. JENKINS 04/27/2018 | Designed by C. KINGSLAND 04/27/2018

27APR2018 - PKG 1A - SITE WORK - IFC - ECN02
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Project No.
6936
Sheet Name:
UTILITY DETAILS 5
Sheet No. CU505 XX
Drawing No.
108M-150-XXX

SPIRIT AEROSYSTEMS - WICHITA, KS

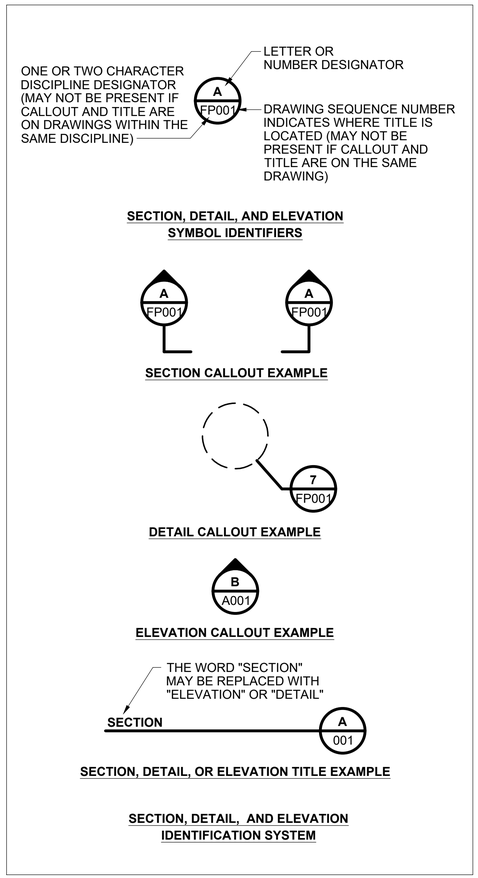
AUTOMATED WAREHOUSE

PACKAGE 1A - SITE WORK

ISSUED FOR CONSTRUCTION - REVISION Z

Spirit Project Number: 6936 | Building: 1-338G

NOVEMBER 16, 2018





no.	date	by	ckd	description
A	03/09/18	JJJ	-	PKG 1A: SITE WORK - IFC
E	03/29/18	JJJ		PKG 1A: SITE WORK - IFC - ADD2
F	04/12/18	JJJ		PKG 1A: SITE WORK - IFC - ADD3
I	04/27/18	JJJ		PKG 1A: SITE WORK - IFC - ECN02
L	06/01/18	JJJ		PKG 1A: SITE WORK - REV L

no.	date	by	ckd	description
N	06/22/18	JJJ	-	PKG 1A: SITE WORK - REV N
U	09/13/18	JJJ	-	PKG 1A: SITE WORK - REV U
V	09/28/18	JJJ	-	PKG 1A: SITE WORK - REV V
W	10/26/18	JJJ	-	PKG 1A: SITE WORK - REV W
Z	11/16/18	JJJ	-	PKG 1A: SITE WORK - REV Z

BURNS McDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

AUTOMATED WAREHOUSE - WICHITA, KS
SPIRIT PROJECT # 6936
BMCD PROJECT # 104543

Cover

SPIRIT AEROSYSTEMS - WICHITA, KS

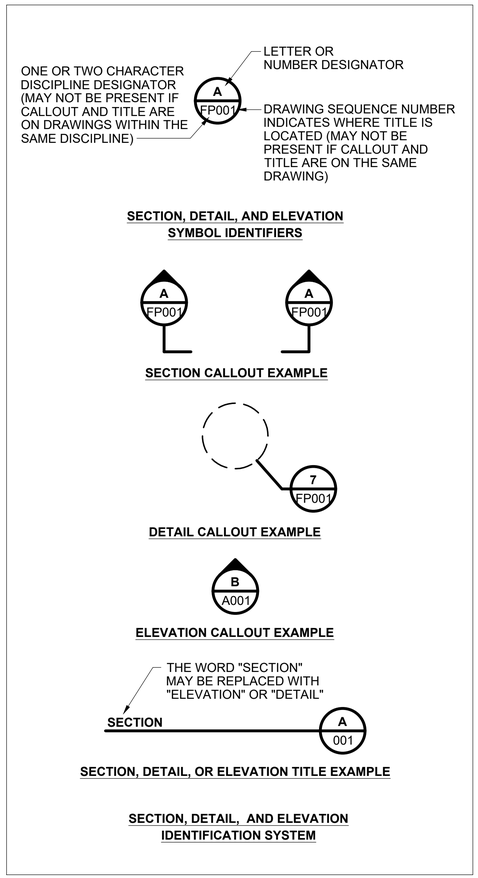
AUTOMATED WAREHOUSE

PACKAGE 2A - FOUNDATIONS & SOG

ISSUED FOR CONSTRUCTION - REVISION Z

Spirit Project Number: 6936 | Building: 1-338G

NOVEMBER 16, 2018





no.	date	by	ckd	description
J	05/11/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV J
L	06/01/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV L
P	07/02/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV P
R	07/19/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV R
S	07/30/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV S
Z	11/16/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV Z

no.	date	by	ckd	description

BURNS McDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

AUTOMATED WAREHOUSE - WICHITA, KS
SPIRIT PROJECT # 6936
BMCD PROJECT # 104543

Cover

SPIRIT AEROSYSTEMS - WICHITA, KS

AUTOMATED WAREHOUSE

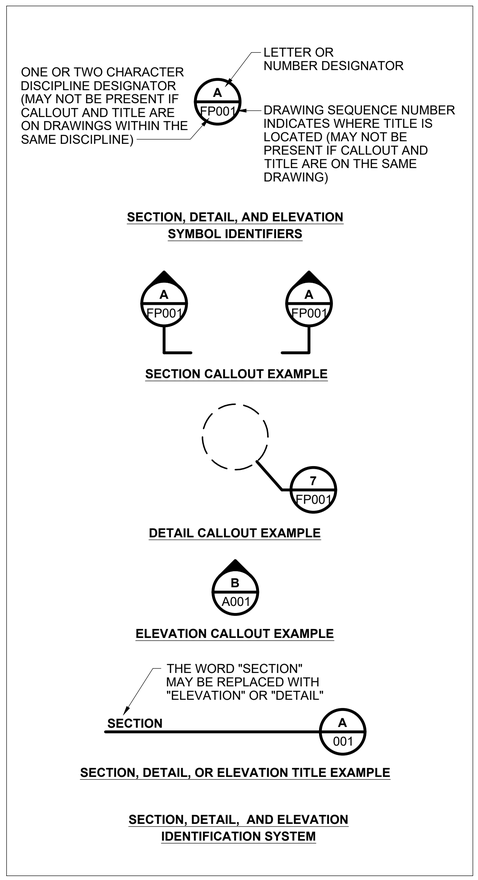
PACKAGE 2B - MEP, FP, FINISHES

ISSUED FOR CONSTRUCTION - REVISION Z

Spirit Project Number: 6936 | Building: 1-338G

NOVEMBER 16, 2018





no.	date	by	ckd	description
Q	07/13/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV Q
V	09/28/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV V
W	10/26/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV W
Z	11/15/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV Z

BURNS McDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

AUTOMATED WAREHOUSE - WICHITA, KS
SPIRIT PROJECT # 6936
BMCD PROJECT # 104543

Cover

Contract Drawings

GENERAL

PKG	DWG. NO.	TITLE	REV	STATUS
1A, 1C, 2A, 2B	G-001	COVER	Z	IFC
1A, 1C, 2A, 2B	G-002	INDEX	Z	IFC
1A, 1C, 2A, 2B	G-003	INDEX	Z	IFC

LANDSCAPE

PKG	DWG. NO.	TITLE	REV	STATUS
1A	LS100	LANDSCAPE PLAN	Z	IFC

CIVIL

PKG	DWG. NO.	TITLE	REV	STATUS
1A	GC001	ACCESS AND SAFETY PLAN	Z	IFC
1A	GC002	CIVIL GENERAL NOTES	Z	IFC
1A	GC100	UTIL BASEMAP	Z	IFC
1A	V-100	OVERLALL EXISTING CONDITIONS PLAN	Z	IFC
1A	V-101	EXISTING CONDITIONS PLAN 1	Z	IFC
1A	V-102	EXISTING CONDITIONS PLAN 2	Z	IFC
1A	V-103	SURVEY INFORMATION	Z	IFC
1A	CD100	OVERALL DEMOLITION PLAN	Z	IFC
1A	CD101	DEMOLITION PLAN 1	Z	IFC
1A	CD102	DEMOLITION PLAN 2	Z	IFC
1A	CS100	OVERALL SITE PLAN	Z	IFC
1A	CS101	SITE PLAN 1	Z	IFC
1A	CS102	SITE PLAN 2	Z	IFC
1A	CS103	POINT TABLES	Z	IFC
1A	CS111	JOINTING PLAN 1	Z	IFC
1A	CS112	JOINTING PLAN 2	Z	IFC
1A	CS113	JOINTING PLAN 3	Z	IFC
1A	CS114	ELEVATION PLAN 1	Z	IFC
1A	CS115	ELEVATION PLAN 2	Z	IFC
1A	CS116	ELEVATION PLAN 3	Z	IFC
1A	CS501	SITE DETAILS 1	Z	IFC
1A	CS502	SITE DETAILS 2	Z	IFC
1A	CS503	SITE DETAILS 3	Z	IFC
1A	CG100	OVERALL GRADING PLAN	Z	IFC
1A	CG101	GRADING PLAN 1	Z	IFC
1A	CG102	GRADING PLAN 2	Z	IFC
1A	CG103	GRADING ENLARGEMENT	Z	IFC
1A	CG110	EXISTING, DRAIN AREA	Z	IFC
1A	CG111	PROPOSED, DRAIN AREA	Z	IFC
1A	CG201	ROADWAY PROFILE	Z	IFC
1A	CG501	EROSION CONTROL DETAILS 1	Z	IFC
1A	CG502	EROSION CONTROL DETAILS 2	Z	IFC
1A	CG503	EROSION CONTROL DETAILS 3	Z	IFC
1A	CU100	OVERALL UTILITY PLAN	Z	IFC
1A	CU101	UTILITY PLAN 1	Z	IFC
1A	CU102	UTILITY PLAN 2	Z	IFC
1A	CU103	OVERALL WATER PLAN	Z	IFC
1A	CU104	DOMESTIC & FIRE WATER PLAN 1	Z	IFC
1A	CU105	DOMESTIC & FIRE WATER PLAN 2	Z	IFC
1A	CU201	STORM PROFILES 1	Z	IFC
1A	CU202	STORM PROFILES 2	Z	IFC
1A	CU203	SANITARY PROFILES	Z	IFC
1A	CU204	DUCTBANK PROFILE	Z	IFC
1A	CU205	DOMESTIC WATER PROFILE	Z	IFC
1A	CU206	FIRE WATER PROFILE 1	Z	IFC
1A	CU207	FIRE WATER PROFILE 2	Z	IFC
1A	CU208	COMPRESSED AIR PROFILE	Z	IFC
1A	CU501	UTILITY DETAILS 1	Z	IFC
1A	CU502	UTILITY DETAILS 2	Z	IFC
1A	CU503	UTILITY DETAILS 3	Z	IFC
1A	CU504	UTILITY DETAILS 4	Z	IFC
1A	CU505	UTILITY DETAILS 5	Z	IFC

ARCHITECTURAL

PKG	DWG. NO.	TITLE	REV	STATUS
2B	AG001	ARCHITECTURAL LEGEND & GENERAL NOTES	Z	IFC
2B	AG002	ADA INFORMATION	Z	IFC
2B	AL001	BUILDING CODE & LIFE SAFETY CRITERIA	Z	IFC
2B	AL010	OVERALL LIFE SAFETY PLAN	Z	IFC
2B	AL101	ENLARGED LIFE SAFETY PLANS	Z	IFC
1C	A-001	PEMB SPECIFICATION	Z	IFC
1C	A-002	PEMB SPECIAL INSPECTIONS	Z	IFC
1C	A-003	PEMB FLOOR PLAN	Z	IFC
1C	A-004	PEMB ENLARGED FLOOR PLANS	Z	IFC
1C	A-005	PEMB EXTERIOR ELEVATIONS	Z	IFC
1C	A-006	PEMB SECTIONS	Z	IFC

ARCHITECTURAL *(continuation)*

PKG	DWG. NO.	TITLE	REV	STATUS
2B	A-011	OVERALL GROUND FLOOR PLAN	Z	IFC
2B	A-012	OVERALL SECOND FLOOR PLAN	Z	IFC
2B	A-101	ENLARGED GROUND FLOOR PLAN	Z	IFC
2B	A-102	ENLARGED SECOND FLOOR PLAN	Z	IFC
2B	A-103	EQUIPMENT MEZZANINE FLOOR PLAN	Z	IFC
2B	A-151	REFLECTED CEILING AREA PLANS	Z	IFC
2B	A-152	REFLECTED CEILING AREA PLANS	Z	IFC
2B	A-401	ENLARGED PLANS - ENTRY VESTIBULE	Z	IFC
2B	A-411	STAIR 01 - PLANS AND SECTION	Z	IFC
2B	A-412	STAIR 02 - PLANS AND SECTION	Z	IFC
2B	A-413	STAIR AND HANDRAIL DETAILS	Z	IFC
2B	A-421	ELEVATOR PLANS AND SECTION	Z	IFC
2B	A-431	ENLARGED TOILET PLANS	Z	IFC
2B	A-432	TOILET ELEVATIONS AND SECTIONS	Z	IFC
2B	A-433	ENLARGED RESTROOM PLANS AND DETAILS	Z	IFC
2B	A-441	ENLARGED INTERIOR ELEVATIONS	Z	IFC
2B	A-451	PLAN DETAILS	Z	IFC
2B	A-501	PARTITION TYPES	Z	IFC
2B	A-601	DOOR SCHEDULE	Z	IFC
2B	A-602	DOOR & FRAME TYPES	Z	IFC
2B	A-611	DOOR DETAILS	Z	IFC
2B	A-612	DOOR DETAILS	Z	IFC
2B	A-621	WINDOW AND STOREFRONT DETAILS	Z	IFC
2B	A-701	ROOM FINISH SCHEDULE	Z	IFC

STRUCTURAL

PKG	DWG. NO.	TITLE	REV	STATUS
2A, 2B	S-001	GENERAL NOTES	Z	IFC
2A, 2B	S-002	GENERAL NOTES	Z	IFC
2A, 2B	S-003	LEGEND & ABBREVIATIONS	Z	IFC
2A, 2B	S-004	STATEMENT OF SPECIAL INSPECTIONS	Z	IFC
2A, 2B	S-005	STATEMENT OF SPECIAL INSPECTIONS	Z	IFC
2A	S-100	OVERALL FLOOR PLAN	Z	IFC
2A	S-101	FOUNDATION PLAN - AREA A	Z	IFC
2A	S-102	FOUNDATION PLAN - AREA B	Z	IFC
2A	S-103	SLAB PLAN - AREA A	Z	IFC
2A	S-104	SLAB PLAN - AREA B	Z	IFC
2B	S-105	FINISHES PLAN	Z	IFC
2A	S-300	FOUNDATION SCHEDULES	Z	IFC
2A	S-501	STANDARD CONCRETE DETAILS	Z	IFC
2A	S-502	STANDARD CONCRETE DETAILS	Z	IFC
2A	S-503	FOUNDATION DETAILS	Z	IFC
2A	S-504	FOUNDATION DETAILS	Z	IFC
2B	S-505	STANDARD MASONRY DETAILS	Z	IFC
2B	S-506	STANDARD GUARDRAIL DETAILS	Z	IFC
2B	S-507	FRAMING SECTIONS AND DETAILS	Z	IFC
2B	S-508	FRAMING SECTIONS AND DETAILS	Z	IFC
2B	S-509	FRAMING SECTIONS AND DETAILS	Z	IFC

PROCESS & MECHANICAL

PKG	DWG. NO.	TITLE	REV	STATUS
2B	M-001	MECHANICAL LEGEND AND NOTES	Z	IFC
2B	M-003	BASIS OF DESIGN	Z	IFC
2B	M-101	OVERALL MECHANICAL HVAC PLAN	Z	IFC
2B	M-301	MECHANICAL SECTIONS	Z	IFC
2B	M-401	ENLARGED HVAC PLAN - OFFICE GROUND FLOOR	Z	IFC
2B	M-402	ENLARGED HVAC PLAN - OFFICE SECOND FLOOR	Z	IFC
2B	M-403	ENLARGED HVAC PLAN - EQUIPMENT MEZZANINE	Z	IFC
2B	M-404	ENLARGED MECHANICAL PLAN	Z	IFC
2B	M-501	MECHANICAL DETAILS	Z	IFC
2B	M-502	MECHANICAL DETAILS	Z	IFC
2B	M-503	MECHANICAL DETAILS	Z	IFC
2B	M-601	MECHANICAL SCHEDULES	Z	IFC
2B	M-602	MECHANICAL SCHEDULES	Z	IFC
2B	M-603	MECHANICAL SCHEDULES	Z	IFC
2B	M-701	MECHANICAL CONTROLS SEQUENCES	Z	IFC
2B	M-702	MECHANICAL CONTROLS SEQUENCES	Z	IFC

PLUMBING

PKG	DWG. NO.	TITLE	REV	STATUS
2A, 2B	P-001	PLUMBING GENERAL NOTES AND SYMBOLS	Z	IFC
2A	P-100	UNDER SLAB PLUMBING PLAN - AREA A	Z	IFC
2B	P-101	PLUMBING PLAN - ABOVE GROUND PLUMBING PLAN	Z	IFC
2B	P-301	PLUMBING SECTION	Z	IFC
2A	P-400	ENLARGED UNDER SLAB PLAN - OFFICE	Z	IFC
2B	P-401	ENLARGED PLUMBING PLAN - OFFICE	Z	IFC
2B	P-402	ENLARGED PLUMBING PLAN - SECOND FLOOR	Z	IFC
2B	P-403	ENLARGED PLUMBING PLAN - MEZZANINE	Z	IFC
2B	P-501	PLUMBING DETAILS	Z	IFC
2B	P-502	PLUMBING DETAILS	Z	IFC
2B	P-503	PLUMBING DETAILS	Z	IFC
2B	P-601	PLUMBING SCHEDULES	Z	IFC
2A	P-701	UNDER SLAB WASTE RISER DIAGRAM	Z	IFC
2B	P-702	DOMESTIC WATER RISER DIAGRAM	Z	IFC
2B	P-703	COMPRESSED AIR RISER DIAGRAM	Z	IFC
2B	P-704	NATURAL GAS RISER DIAGRAM	Z	IFC
2B	P-705	ABOVE GROUND WASTE RISER DIAGRAM	Z	IFC

no.	date	by	ckd	description
S	07/30/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV S
U	09/13/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV U
V	09/28/18	JJJ	-	PKG 1A: SITE WORK - REV V
V	09/28/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV V
W	10/26/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV W
Z	11/16/18	JJJ	-	PKG 1A: SITE WORK - REV Z
Z	11/16/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV Z
Z	11/16/18	JJJ	-	PKG 2A: FOUNDATIONS & SOG - REV Z

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

AUTOMATED WAREHOUSE - WICHITA, KS
SPIRIT PROJECT # 6936
BMCD PROJECT # 104543

Index

Contract Drawings (continuation)

ELECTRICAL

PKG	DWG. NO.	TITLE	REV	STATUS
1A	E-001	ELECTRICAL LEGEND AND NOTES	Z	IFC
2A	E-002	ELECTRICAL LEGEND AND NOTES	Z	IFC
2B	E-003	ELECTRICAL LEGEND AND NOTES	Z	IFC
2B	E-004	BASIS OF DESIGN	Z	IFC
2B	E-005	LOAD CALCULATIONS	Z	IFC
2B	E-010	SITE UTILITY PLAN	Z	IFC
2B	E-011	SITE UTILITY PLAN - ABLAH BUILDING	Z	IFC
1A	EU101	OVERALL ELECTRICAL UTILITY PLAN	Z	IFC
1A	EU102	ELECTRICAL UTILITY PLAN 1	Z	IFC
1A	EU103	ELECTRICAL UTILITY PLAN 1	Z	IFC
2A	EU104	UNDERGROUND ELECTRICAL PLAN - AREA A	Z	IFC
2A	EU105	UNDERGROUND ELECTRICAL PLAN - AREA B	Z	IFC
2B	EU106	UNDERGROUND ELECTRICAL PLAN - AREA A	Z	IFC
2B	EU107	UNDERGROUND ELECTRICAL PLAN - AREA B	Z	IFC
2B	E-101	POWER PLAN - AREA 1	Z	IFC
2B	E-102	POWER PLAN - AREA 2	Z	IFC
2B	E-103	POWER PLAN - AREA 3	Z	IFC
2B	E-104	POWER PLAN - AREA 4	Z	IFC
2B	E-105	POWER PLAN - AREA 5	Z	IFC
2B	E-106	POWER PLAN - AREA 6	Z	IFC
2B	E-107	POWER PLAN - AREA 7	Z	IFC
2B	E-108	POWER PLAN - AREA 8	Z	IFC
2B	E-121	POWER PLAN - OFFICE MEZZANINE	Z	IFC
2B	E-201	LIGHTING PLAN - AREA 1	Z	IFC
2B	E-202	LIGHTING PLAN - AREA 2	Z	IFC
2B	E-203	LIGHTING PLAN - AREA 3	Z	IFC
2B	E-204	LIGHTING PLAN - AREA 4	Z	IFC
2B	E-205	LIGHTING PLAN - AREA 5	Z	IFC
2B	E-206	LIGHTING PLAN - AREA 6	Z	IFC
2B	E-207	LIGHTING PLAN - AREA 7	Z	IFC
2B	E-208	LIGHTING PLAN - AREA 8	Z	IFC
2B	E-211	LIGHTING PLAN - GROUND FLOOR AT MEZZANINE	Z	IFC
2B	E-221	LIGHTING PLAN - OFFICE MEZZANINE	Z	IFC
2B	E-301	SPECIAL SYSTEMS PLAN - AREA 1	Z	IFC
2B	E-302	SPECIAL SYSTEMS PLAN - AREA 2	Z	IFC
2B	E-303	SPECIAL SYSTEMS PLAN - AREA 3	Z	IFC
2B	E-304	SPECIAL SYSTEMS PLAN - AREA 4	Z	IFC
2B	E-305	SPECIAL SYSTEMS PLAN - AREA 5	Z	IFC
2B	E-306	SPECIAL SYSTEMS PLAN - AREA 6	Z	IFC
2B	E-307	SPECIAL SYSTEMS PLAN - AREA 7	Z	IFC
2B	E-308	SPECIAL SYSTEMS PLAN - AREA 8	Z	IFC
2B	E-321	SPECIAL SYSTEMS PLAN - OFFICE MEZZANINE	Z	IFC
2B	E-401	LIGHTNING PROTECTION	Z	IFC
1A	E-501	ELECTRICAL DETAILS	Z	IFC
2A	E-502	ELECTRICAL DETAILS	Z	IFC
2B	E-503	ELECTRICAL DETAILS ELEVATIONS & SECTIONS	Z	IFC
2B	E-504	ELECTRICAL DETAILS DEMATIC ELEVATIONS	Z	IFC
2B	E-505	ELECTRICAL DETAILS POWER & GROUNDING	Z	IFC
2B	E-506	ELECTRICAL DETAILS LIGHTING	Z	IFC
2B	E-507	ELECTRICAL DETAILS SPECIAL SYSTEMS	Z	IFC
2B	E-508	ELECTRICAL DETAILS SPECIAL SYSTEMS	Z	IFC
2B	E-509	IDF CABINET RACK ARRANGEMENTS	Z	IFC
2B	E-601	ELECTRICAL ONE-LINE DIAGRAM	Z	IFC
2B	E-602	LIGHT FIXTURE SCHEDULE	Z	IFC
2B	E-603	COMMUNICATIONS RISER DIAGRAM	Z	IFC
2B	E-604	COMMUNICATIONS SCHEDULES	Z	IFC
2B	E-701	PANEL SCHEDULES	Z	IFC
2B	E-702	PANEL SCHEDULES	Z	IFC
2B	E-703	PANEL SCHEDULES	Z	IFC
2B	E-704	PANEL SCHEDULES	Z	IFC
2B	E-705	PANEL SCHEDULES	Z	IFC
2B	E-706	PANEL SCHEDULES	Z	IFC

FIRE ALARM

PKG	DWG. NO.	TITLE	REV	STATUS
2B	FA001	FIRE ALARM NOTES, LEGEND, & ABBR.	Z	IFC
2B	FA101	FIRE ALARM PLAN - WEST	Z	IFC
2B	FA102	FIRE ALARM PLAN - EAST	Z	IFC
2B	FA103	ENLARGED FIRE ALARM OFFICE AND MEZZANINE PLANS	Z	IFC
2B	FA601	FIRE ALARM RISER & MATRIX	Z	IFC

FIRE SUPPRESSION

PKG	DWG. NO.	TITLE	REV	STATUS
2B	FX001	FIRE SUPPRESSION NOTES, LEGEND, & ABBR.	Z	IFC
2B	FX101	FIRE SUPPRESSION PLAN - WEST	Z	IFC
2B	FX102	FIRE SUPPRESSION PLAN - EAST	Z	IFC
2B	FX103	ENLARGED FIRE SUPPRESSION PLANS	Z	IFC
2B	FX601	FIRE SUPPRESSION ONE LINE DIAGRAM	Z	IFC

no.	date	by	ckd	description
Q	07/13/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV Q
R	07/19/18	JJJ	-	PKG 2A: FOUNDATION & SOG - REV R
S	07/30/18	JJJ	-	PKG 2A: FOUNDATION & SOG - REV S
V	09/28/18	JJJ	-	PKG 1A: SITE WORK - REV V
V	09/28/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV V
Z	11/16/18	JJJ	-	PKG 2B: MEP, FP, FINISHES - REV Z

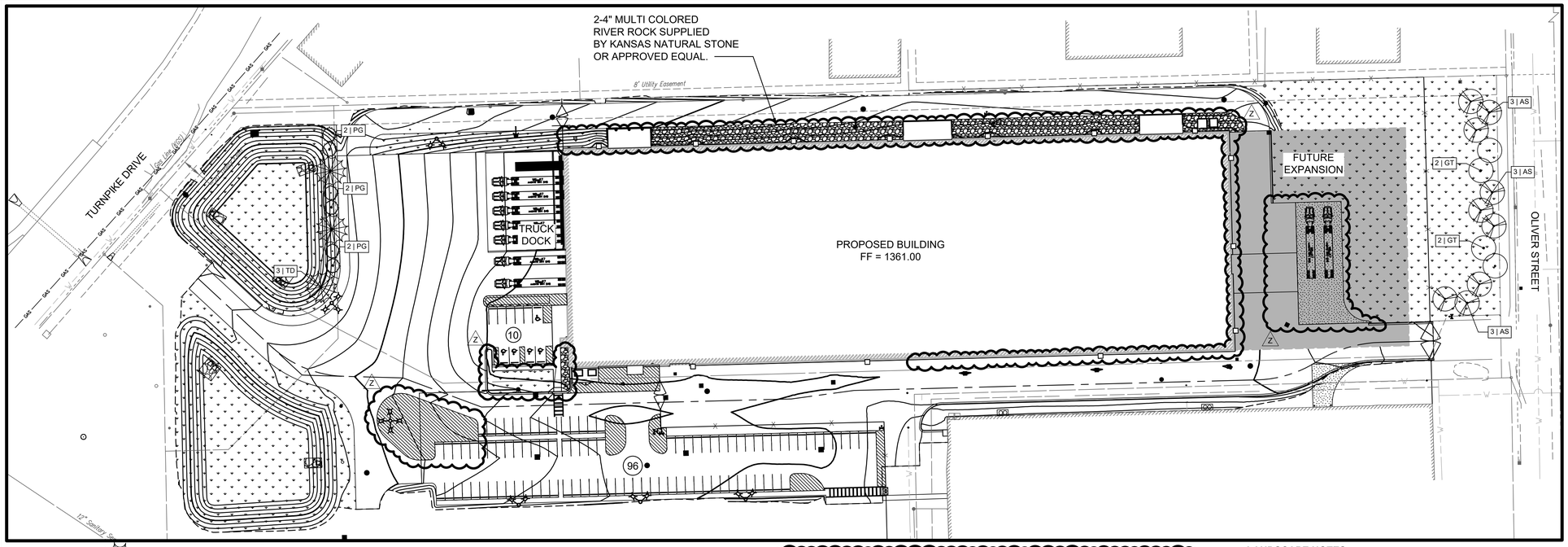
no.	date	by	ckd	description
Z	11/16/18	JJJ	-	PKG 1A: SITE WORK - REV Z
Z	11/16/18	JJJ	-	PKG 2A: FOUNDATION & SOG - REV Z

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

AUTOMATED WAREHOUSE - WICHITA, KS
SPIRIT PROJECT # 6936
BMCD PROJECT # 104543

Index

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LANDSCAPE REQUIRED:

Average Lot Depth: 536'
Square Footage Factor = 20 (From Table 2.1)

Total Street Frontage (Linear Footage)
Oliver Street: 312 L.F.
Turnpike Drive: 200 L.F.

312 x 20 (Square Footage Factor) = 6,240 sq.ft.
200 x 20 (Square Footage Factor) = 4,000 sq.ft.

Total sq. ft. of Landscaped Street Yard:
Required = 10,240 sq.ft.
Provided = 45,200 sq.ft.

Parking Lot:
Screening Exception:
1. Parking lots in industrial districts located on collector streets with industrial zoning on both sides of street.
2. Entire parking lot is 150 feet beyond the property line abutting the street.

TREES REQUIRED:
1 shade or 2 ornamental trees/500 sq.ft of landscape required

Oliver Street = 13 Shade

Shade Trees Provided:
Oliver Street = 13 Shade
Turnpike Drive = 3 Shade + 6 Evergreen for screen

LEGEND:

DECIDUOUS TREE

EVERGREEN TREE

TURF GRASS SEED

2-4" MULTI COLORED RIVER ROCK. SUBMIT TO OWNER FOR APPROVAL.

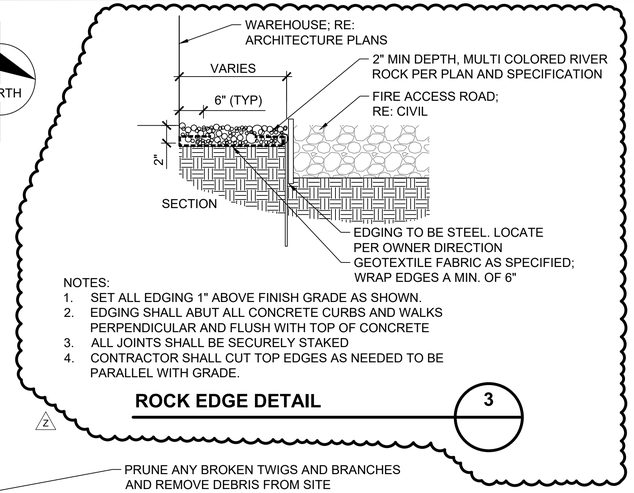
OVERALL SITE PLAN

0 60' 120'
SCALE IN FEET

NORTH

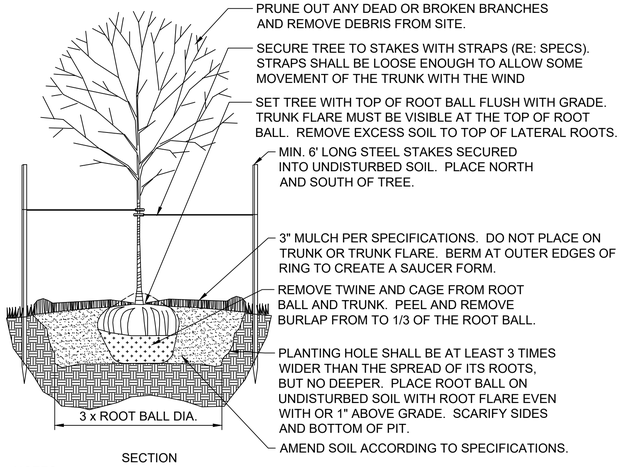
PLANT SCHEDULE

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	COND.
TREES					
(9)	AS	Acer saccharum	Sugar Maple	2" CAL.	B&B
(4)	GT	Gleditsia triancanthos var. inermis	Thornless Honeylocust	2" CAL.	B&B
(6)	PG	Picea glauca var. densata	Black Hills Spruce	5' Height	B&B
(3)	TD	Taxodium distichum	Baldcypress	2" CAL.	B&B



NOTES:
1. SET ALL EDGING 1" ABOVE FINISH GRADE AS SHOWN.
2. EDGING SHALL ABUT ALL CONCRETE CURBS AND WALKS PERPENDICULAR AND FLUSH WITH TOP OF CONCRETE
3. ALL JOINTS SHALL BE SECURELY STAKED
4. CONTRACTOR SHALL CUT TOP EDGES AS NEEDED TO BE PARALLEL WITH GRADE.

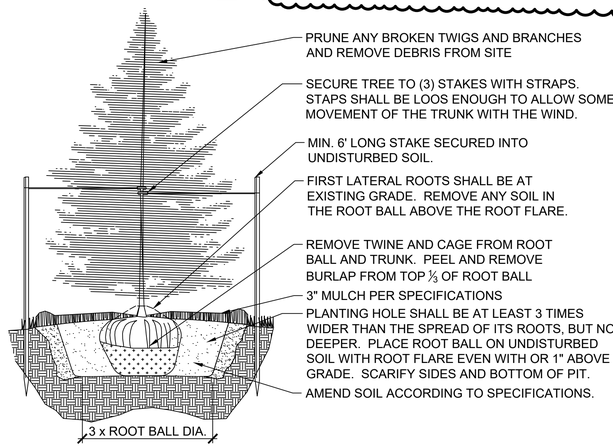
ROCK EDGE DETAIL 3



SECTION

NOTES:
1. TREES THAT DO NOT MEET THE SIZE REQUIREMENT WILL BE REJECTED
2. TREES SHALL BE INSPECTED BY OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.

DECIDUOUS TREE DETAIL 1



EVERGREEN TREE DETAIL 2

LANDSCAPE NOTES

1. LOCATE UTILITIES PRIOR TO COMMENCING LANDSCAPE OPERATIONS. ALL TREES SHALL BE FIELD POSITIONED AS TO AVOID CONFLICTS WITH EXISTING AND PROPOSED UTILITIES. NOTIFY CONTRACTOR OF ANY CONFLICTS OR OBSTRUCTIONS.
2. CONTRACTOR SHALL STAKE ALL PLANTING AREAS IN THE FIELD PRIOR TO PLANTING FOR APPROVAL OF THE CONTRACTOR.
3. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES PRIOR TO PLANTING. ANY DISCREPANCIES WITH THE PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR THE PLAN QUANTITIES SHALL SUPERCEDE SCHEDULED QUANTITIES.
4. ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY AND SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 THE 'AMERICAN STANDARD FOR NURSERY STOCK'.
5. TOPSOIL MIX: ASTM 5268, PH RANGE OF 5.5 TO 7%. TOPSOIL SOURCE SHALL BE FROM ON-SITE MATERIALS; IF ON-SITE SOURCE IS UNAVAILABLE, SUPPLEMENT WITH IMPORTED TOPSOIL FROM A PRE-APPROVED SOURCE. ALL IMPORTED TOPSOIL MIXES SHALL BE TESTED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTOR PRIOR TO INSTALLATION.
6. PREPARE PLANTING BEDS AND INCORPORATE AMENDMENTS AS FOLLOWS:
   - 6.1. PLANTING BEDS:
     - 6.1.1. LOOSE PEAT HUMUS BY VOLUME: 1 PART
     - 6.1.2. WELL-ROTTED COMPOSTED MANURE BY VOLUME: 1 PART
     - 6.1.3. TOPSOIL (: 2 PARTS
     - 6.1.4. FERTILIZER: 3 LBS./100SF
   - 6.2. BACKFILL FOR TREES
     - 6.2.1. LOOSE PEAT HUMUS BY VOLUME: 1 PART
     - 6.2.2. WELL-ROTTED COMPOSTED MANURE BY VOLUME: 1 PART
     - 6.2.3. TOPSOIL: 3 PARTS
     - 6.2.4. FERTILIZER: AGRIFORM TABLET (OR APPROVED EQUAL) PER MANUFACTURER'S RECOMMENDATION
7. ALL TREES SHALL BE STAKED PER DETAIL.
8. ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A ONE FOOT (1') CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT.
9. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE SITE IS FREE OF DEBRIS CAUSED BY ON-GOING CONSTRUCTION OPERATIONS. REMOVAL OF DEBRIS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. LANDSCAPE WORK SHALL NOT BEGIN UNTIL THE GENERAL CONTRACTOR HAS GIVEN WRITTEN APPROVAL FOR SUCH. THERE SHALL BE NO DELAYS DUE TO LACK OF COORDINATION FOR THIS ACTIVITY.
10. THE CONTRACTOR SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SEEDING OPERATIONS.
11. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT DESIGNATED FOR OTHER PLANTINGS OR HARDSCAPE SHALL BE SEEDED. PROVIDE SEED OF GRASS SPECIES AND VARIETIES, PROPORTIONS BY WEIGHT, AND MINIMUM PERCENTAGES OF PURITY, GERMINATION, AND MAXIMUM PERCENTAGE OF WEED SEED TURF TYPE TALL FESUCE TYPE. SEED SHALL BE INSTALLED IN A PROFESSIONAL MANNER, DURING NORMAL PLANTING SEASONS FOR TYPE OF LAWN WORK REQUIRED. FINAL ACCEPTANCE OF SEED INSTALLATION SHALL BE BY THE CONTRACTOR.
12. ALL LANDSCAPE SHALL BE MONITORED AND MAINTAINED BY THE LANDSCAPE CONTRACTOR; REFER TO MAINTENANCE NOTES THIS SHEET.
13. CONTRACTOR SHALL WARRANTY ALL LIVING PLANTING MATERIAL (INCLUDING BUT NOT LIMITED TO TREES, SHRUBS AND GROUNDCOVERS) FOR A PERIOD OF ONE (1) YEARS AFTER DATE OF SUBSTANTIAL COMPLETION, AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLECT, OR ABUSE BY THE OWNER, ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD OR INCIDENTS THAT ARE BEYOND THE CONTRACTOR'S CONTROL.

Z	DATE	DESCRIPTION	BY	APPROVED
	11/19/2018	PKG 1A SITE WORK - REV Z	RG	BMS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE ____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

19NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2339

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G - WICHITA, KS
Drawn by: R.GARCIA 02/12/18 | Designed by: B.SWARTZ 02/12/18



Project No. 6936
Sheet Name: LANDSCAPE PLAN
Sheet 1 of 1
Drawing No. LS100

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

ACCESS AND SAFETY NOTES:

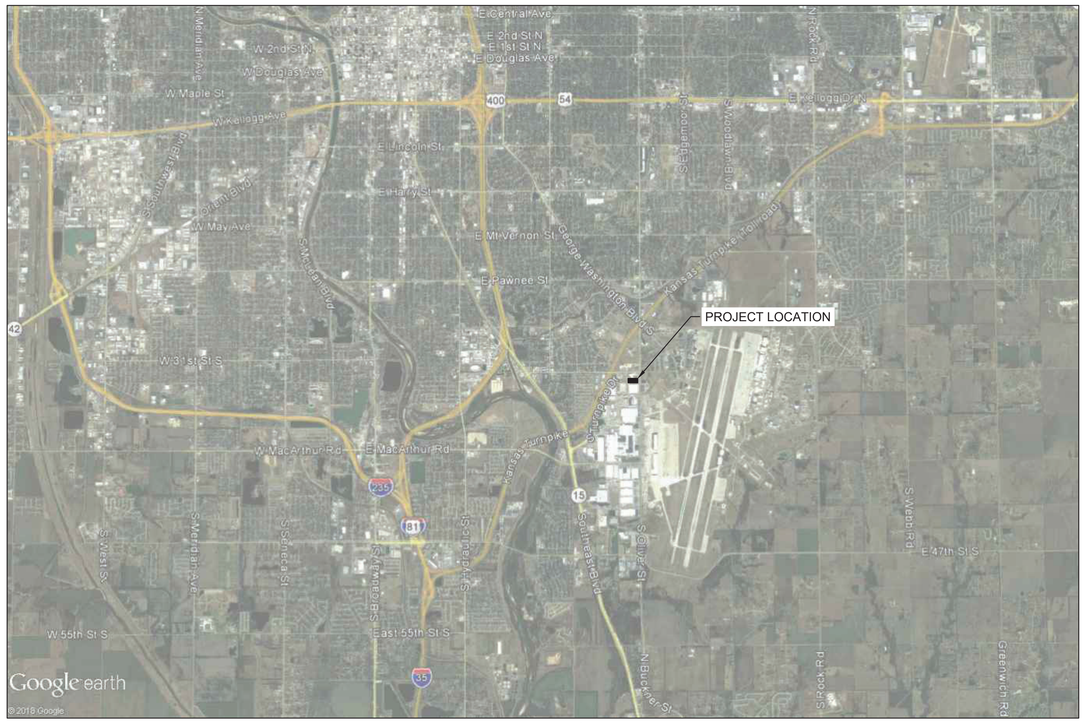
1. ACCESS AND HAUL ROUTES FOR ALL SUBCONTRACTOR PERSONNEL, VEHICLES, EQUIPMENT, AND DELIVERIES ARE ILLUSTRATED ON THIS DRAWING AND ARE SUBJECT TO THE APPROVAL OF THE CONTRACTOR. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ACCESS ROUTES AND HAUL ROUTES ARE SUBJECT TO CHANGE AT THE DIRECTION OF THE CONTRACTOR AND MAY CHANGE BASED ON OPERATIONAL REQUIREMENTS OF THE PROJECT SITE.
2. SUBCONTRACTOR SHALL COORDINATE ACTIVITIES AND MAINTAIN ALL ACCESS AND HAUL ROUTES IN A MANNER THAT ALLOWS UNOBSTRUCTED EMERGENCY ACCESS TO ALL PROJECT AREAS AND EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAY TO EMERGENCY AND SECURITY VEHICLE RESPONSE TIME.
3. IF ANY EMERGENCY ROUTES REQUIRE CLOSURE DUE TO CONSTRUCTION ACTIVITIES, SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR, POLICE, LOCAL FIRE AUTHORITY, AND ALL OTHER EMERGENCY SERVICES OF THE CLOSURE.
4. SUBCONTRACTOR SHALL MAINTAIN ACCESS AND HAUL ROUTES TO BE FREE FROM DEBRIS CAUSED FROM CONSTRUCTION ACTIVITIES ON A DAILY BASIS.
5. SUBCONTRACTOR SHALL RESTRICT ALL OPERATIONS TO AREAS WITHIN THE CONSTRUCTION LIMITS UNLESS COORDINATED OTHERWISE WITH THE CONTRACTOR.
6. SUBCONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FENCING AROUND THE ENTIRE SITE DURING CONSTRUCTION.
7. SUBCONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A STAGING AND STOCKPILE AREA FOR MATERIALS AND EQUIPMENT. LOCATION OF SUBCONTRACTOR'S STAGING SHALL BE AS ILLUSTRATED ON THIS DRAWING AND IS SUBJECT TO THE APPROVAL OF THE CONTRACTOR. SUBCONTRACTOR MAY SUBMIT ALTERNATIVES TO THE STAGING AREA LOCATIONS AS SHOWN. SUBCONTRACTOR'S STAGING AREA IS SUBJECT TO CHANGE AT THE DIRECTION OF THE CONTRACTOR AND MAY CHANGE BASED ON OPERATIONAL REQUIREMENTS OF THE PROJECT SITE.
8. WHEN NOT ENGAGED IN CONSTRUCTION ACTIVITIES, SUBCONTRACTOR'S EQUIPMENT AND VEHICLES SHALL BE PARKED IN THE STAGING AREA.
9. SUBCONTRACTOR SHALL PROVIDE AND INSTALL AT THE CONSTRUCTION ENTRANCE A PROFESSIONALLY PAINTED SIGN, MEETING CONTRACTOR APPROVAL, TO DIRECT MATERIAL SUPPLIERS, EMPLOYEES, AND DELIVERIES TO THE CONSTRUCTION SITE. THE SIGN SHALL READ "CONSTRUCTION VEHICLES ONLY - NO VENDORS ALLOWED."
10. SUBCONTRACTOR SHALL PROVIDE A MINIMUM NOTICE OF 48 HOURS TO THE CONTRACTOR REGARDING CONSTRUCTION DELIVERIES PRIOR TO THOSE DELIVERIES. DELIVERIES SHALL BE SCHEDULED MONDAY-FRIDAY, 8:00 AM TO 3:00 PM.
11. SECURITY FENCING AND GATES ASSOCIATED WITH SUBCONTRACTOR'S WORK AREA SHALL MEET OR EXCEED THE EXISTING FENCE STRENGTH, SIZE, AND DIMENSIONS. SECURITY GATE SHALL BE STAFFED AT ALL TIMES DURING WORKING HOURS AND SHALL BE LOCKED DURING NON-WORKING HOURS. AT PROJECT COMPLETION, SUBCONTRACTOR SHALL REMOVE SECURITY GATE AND RESTORE SECURITY FENCE TO ITS ORIGINAL CONDITION.
12. ALL SUBCONTRACTOR VEHICLES AND PERSONNEL ARE SUBJECT TO SEARCH BY SECURITY WHEN ENTERING THE SITE AND MAY EXPERIENCE DELAYS. ALL PERSONNEL MUST HAVE A CURRENT AND VALID PHOTO IDENTIFICATION PER DLC SECURITY REQUIREMENTS, AND ALL VEHICLES MUST HAVE CURRENT AND VALID REGISTRATION AND INSURANCE.
13. ALL SUBCONTRACTOR VEHICLES AND PERSONNEL SHALL BE RESPONSIBLE FOR COORDINATING WITH THE DLC SECURITY OFFICE IN OBTAINING PROPER SECURITY CLEARANCE AND BADGING PRIOR TO ENTERING SECURE AREAS.
14. ACCESS POINTS, HAUL ROUTES, STAGING AREA, AND ANY OTHER AREAS DISTURBED BY THE SUBCONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE CONTRACTOR.

COORDINATION AND COMMUNICATION

1. SUBCONTRACTOR SHALL APPOINT A PRIMARY CONSTRUCTION SUPERINTENDENT, SUBJECT TO THE APPROVAL OF THE CONTRACTOR, WHO SHALL BE PRESENT ON THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS AND ACCESSIBLE AT ALL TIMES WHILE WORK IS IN PROGRESS. THE PRIMARY CONSTRUCTION SUPERINTENDENT SHALL BE DESIGNATED THE RESPONSIBLE SUBCONTRACTOR'S REPRESENTATIVE WHO SHALL BE AVAILABLE ON A 24-HOUR BASIS. WHEN THE SUBCONTRACTOR'S PRIMARY CONSTRUCTION REPRESENTATIVE IS NOT AVAILABLE ON THE CONSTRUCTION SITE, AN ALTERNATE REPRESENTATIVE SHALL BE PROVIDED. SUBCONTRACTOR SHALL PROVIDE NAMES AND CONTACT INFORMATION OF REPRESENTATIVES TO THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
2. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONSTANT COORDINATION BETWEEN ANY SUBCONTRACTORS AND THE CONTRACTOR. ALL CONSTRUCTION ACTIVITIES PLANNED BY THE SUBCONTRACTOR SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR.
3. THE FOLLOWING CONTACT INFORMATION IS PROVIDED FOR SUBCONTRACTOR'S USE IN CASE OF AN EMERGENCY:
   a. EMERGENCY 911
   b. OTHER CONTACTS AS DIRECTED AT PRE-CONSTRUCTION MEETING

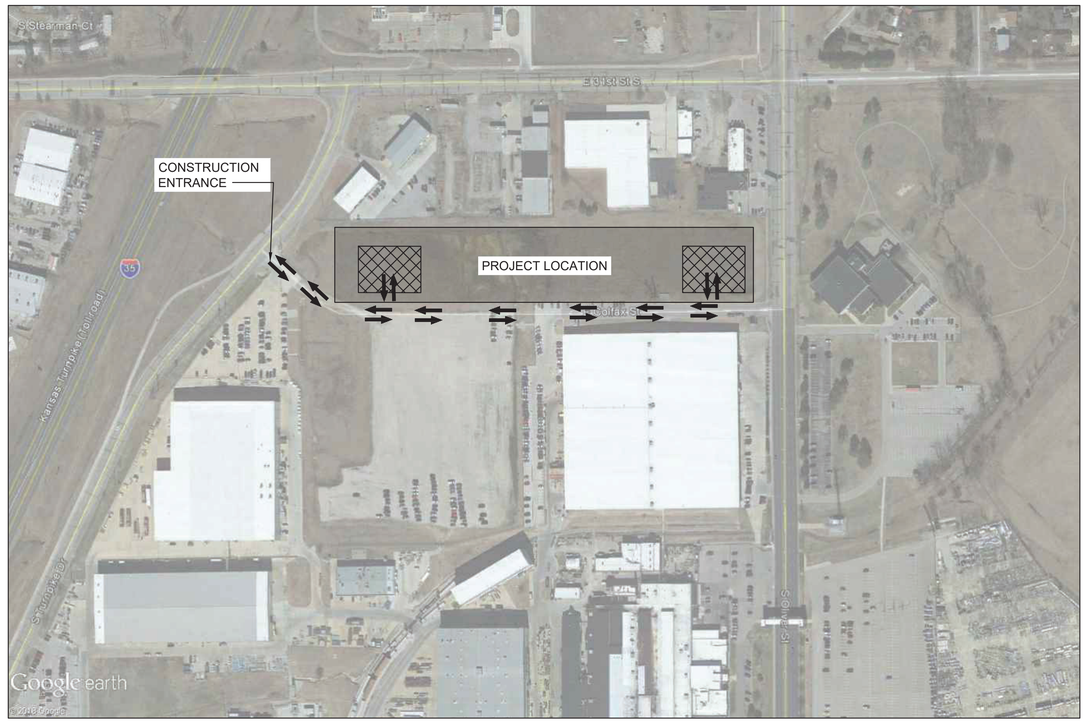
LEGEND

- SUBCONTRACTOR ACCESS AND HAUL ROUTE
- SUBCONTRACTOR STAGING AND LAYDOWN
- PROJECT LOCATION
- BENCHMARK
- TEMPORARY CONSTRUCTION FENCE



LOCATION MAP
NOT TO SCALE

NORTH



VICINITY MAP
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A, SITE WORK - IFC	CAK	NT
Z	11/16/2018	PKG 1A, SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED
FP REVIEW REQUIRED
06/07/2018 9:43:49 AM
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

LICENSED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G - WICHITA, KS
Drawn by: J. JENKINS 02/19/18 | Designed by: C. KINGSLAND 02/19/18

Project No.: 6936
Sheet Name: ACCESS PLAN
Sheet: GC001 of XX
Drawing No.: 108M-101-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES:

1. SEE DRAWING V-103 FOR HORIZONTAL AND VERTICAL CONTROL BENCHMARK INFORMATION.
2. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE IN FEET, UNLESS INDICATED OTHERWISE.
3. CALLOUTS, COORDINATES, AND DIMENSIONS ARE POINTED TO OR MEASURED TO STRUCTURE CENTER, EDGE OF PAVEMENT, BACK OF CURB, OR OUTSIDE FACE OF FOUNDATION WALL, UNLESS INDICATED OTHERWISE.
4. ALL WORK SHALL BE SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF LOCAL AND GOVERNMENT REGULATORY AGENCIES AND THE CONTRACTOR.
5. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND LOCAL AND GOVERNMENT CODES, ORDINANCES, AND REGULATIONS. IN CASE OF CONTRADICTION OR DISCREPANCY BETWEEN REQUIREMENTS, SUBCONTRACTOR SHALL INCORPORATE WHICHEVER IS MOST STRINGENT. WHERE A QUESTION REMAINS ON WHICH REQUIREMENT IS MOST STRINGENT, SUBCONTRACTOR SHALL SUBMIT ISSUE TO THE CONTRACTOR IN WRITING. THE DECISION OF THE CONTRACTOR SHALL BE CONSIDERED FINAL.
6. ALL WORK SHALL BE CONDUCTED IN A PROFESSIONAL WORKMANSHIP MANNER USING QUALITY MATERIALS.
7. WHEN CONSTRUCTION WORK RESTRICTED TO BEING PERFORMED WITHIN EASEMENTS, SUBCONTRACTOR SHALL CONFINE WORK WITHIN THE PERMANENT AND TEMPORARY EASEMENTS.

RECORD DRAWING NOTES:

1. SUBCONTRACTOR SHALL MAINTAIN UPDATED RECORD DRAWINGS AT ALL TIMES THROUGH THE DURATION OF THE PROJECT. CONSTRUCTION RECORD DRAWINGS SHALL BE SUBMITTED TO THE CONTRACTOR.
2. DURING CONSTRUCTION OF THE PROJECT, SUBCONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING TRACK OF ANY CONTRACTOR-APPROVED FIELD CONSTRUCTION REVISIONS TO THE DESIGN DEPICTED ON APPROVED CONSTRUCTION DRAWINGS. THESE REVISIONS SHALL BE USED TO PREPARE RECORD DRAWINGS OF COMPLETED CONSTRUCTION.
3. ALL VARIATIONS IN PROJECT CONDITIONS, LOCATIONS, AND CONFIGURATIONS, AND ANY OTHER CHANGES OR DEVIATIONS FROM THE INFORMATION PRESENTED ON THE ORIGINAL, APPROVED CONSTRUCTION DRAWINGS SHALL BE NOTED. THIS INCLUDES BURIED OR CONCEALED CONSTRUCTION AND UTILITY FEATURES THAT WERE REVEALED DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL REVIEW COMPLETENESS, ACCURACY, AND FORMAT OF SUBMITTED RECORD DRAWINGS. IF THE RECORD DRAWINGS ARE CONSIDERED UNACCEPTABLE, THEY SHALL BE RETURNED TO THE SUBCONTRACTOR FOR CORRECTION AND RESUBMISSION.

EQUIPMENT HEIGHT:

1. DURING PERIODS OF LOW VISIBILITY, EQUIPMENT SHALL BE IDENTIFIED BY AN APPROPRIATELY SIZED FLASHING OR STEADY BURNING AMBER BEACON MOUNTED ON THE UPPER MOST PART OF THE EQUIPMENT SUCH THAT IT IS CONSPICUOUS FROM ANY DIRECTION INCLUDING FROM THE AIR.
2. WHEN NOT IN OPERATION, ALL EQUIPMENT AND CRANES SHALL HAVE BOOMS OR ARMS LOWERED TO THEIR LOWEST ELEVATION.

EXCAVATION AND TRENCHES:

1. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EXCAVATION, TRENCHING, AND SHORING ARE PERFORMED IN A MANNER THAT COMPLIES WITH LOCAL REGULATIONS AND OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) REGULATIONS FOR CONSTRUCTION.
2. OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE BARRICADES WITH FLASHING RED LIGHTS ACCEPTABLE TO SPIRIT AEROSYSTEMS.
3. SUBCONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS TO THE CONTRACTOR BEFORE PROCEEDING WITH ANY EXCAVATION.
4. OPEN ONLY THOSE TRENCHES FOR WHICH MATERIAL IS ON-HAND AND READY FOR PLACING THEREIN. AS SOON AS POSSIBLE AFTER THE MATERIAL HAS BEEN PLACED AND WORK APPROVED, BACK FILL AND COMPACT TRENCHES AS SPECIFIED.

BASIS OF DESIGN:

SILICONE:

1. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THIS PROJECT IS PROHIBITED.

STORMWATER DRAINAGE:

1. BUILDING ROOF DRAINS SHALL NOT BE SURFACE DISCHARGED OVER THE PAVED APRON OF THE BUILDING, BUT SHALL BE DISCHARGED INTO THE UNDERGROUND STORM SYSTEM.
2. SURFACE SITE DRAINAGE SHALL BE SUBJECT TO APPROVAL BY SPIRIT. GRADE TO PREVENT DRAINAGE ACROSS ENTRY WAYS FOR VEHICULAR OR PEDESTRIAN TRAFFIC.
3. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE CONFORMING TO ASTM F2648. DOWNSPOUT CONNECTION PIPES SHALL BE PVC. MANHOLES, INLETS, FRAMES, AND COVERS SHALL COMPLY WITH THE CITY OF WICHITA REQUIREMENTS AND DETAILS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. DESIGN STORM IS 10-YEAR, 24-HOUR PER CITY WICHITA (KANSAS) AND SEDGWICK COUNTY STORMWATER MANUAL FOR THE PROPOSED STORM SYSTEM. THE DETENTION PONDS HAVE BEEN SIZED FOR THE 2 THROUGH 100-YEAR STORMS PER THE STORMWATER MANUAL.
5. THE STORM SYSTEM AND DETENTION PONDS WERE SIZED USING A 90% IMPERVIOUS AREA CALCULATION FOR THE ENTIRE DRAINAGE AREA TO PROPERLY SIZE THE INFRASTRUCTURE FOR FUTURE EXPANSION.
6. SUBCONTRACTOR SHALL SUBMIT PROPOSED TEMPORARY CONSTRUCTION SITE DRAINAGE PLAN TO SPIRIT AEROSYSTEMS PRIOR TO THE START OF CONSTRUCTION.

CONCRETE PAVEMENT:

1. SEE DRAWING CS501 AND THE GEOTECHNICAL REPORT FOR GENERAL DESIGN REQUIREMENTS.
2. PAVEMENT REINFORCING SHALL BE A MINIMUM OF #4 REINFORCING BARS AT 16" ON CENTER EACH WAY. WIRE MESH IS NOT PERMITTED.
3. MINIMUM COMPACTION SHALL BE PER GEOTECHNICAL REPORT.
4. ALL PAVEMENT REMOVED AND REPLACED FOR UTILITIES SHALL MATCH EXISTING PAVEMENT TYPE, DEPTH, AND ELEVATIONS, AND SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT UNLESS OTHERWISE INDICATED.

UTILITIES:

1. ANY NEW UTILITIES SHALL HAVE UTILITY MARKERS INSTALLED PER THE CIVIL STANDARD DESIGN GUIDE.

PERMITTING:

1. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NOI APPLICATION AND THE INITIAL SWPPP APPLICATION PER THE CITY OF WICHITA AND STATE OF KANSAS REGULATIONS. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT THE DURATION OF THE PROJECT.

GENERAL UTILITY NOTES:

1. ALL PIPE SIZES ARE IN INCHES UNLESS INDICATED OTHERWISE.
2. SUBCONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL BUILDING CONNECTIONS WITH BUILDING SUBCONTRACTOR AND THE INFORMATION PROVIDED ON MECHANICAL AND ELECTRICAL DRAWINGS.
3. SUBCONTRACTOR SHALL CONTACT THE CONTRACTOR AND ALL ASSOCIATED UTILITY COMPANIES AND AGENCIES TO IDENTIFY THE LOCATION OF UTILITIES PRIOR TO COMMENCEMENT OF WORK.
4. SUBCONTRACTOR SHALL COORDINATE ALL REQUIRED UTILITY SHUTDOWNS FOR UTILITY CONNECTIONS WITH THE CONTRACTOR.
5. CONNECTION TO EXISTING WATER, SEWER, AND STORM MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL REQUIREMENTS OF ASSOCIATED UTILITY COMPANIES AND AGENCIES.
6. SUBCONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING ALL UTILITY CONNECTION FEES AND OBTAINING ALL PERMITS REQUIRED FOR THE UTILITY CONSTRUCTION AND CONNECTIONS. THIS INCLUDES ALL FEES ASSOCIATED WITH CONNECTION CHARGES AND METERS.
7. SEE 3 ON CU501 FOR TYPICAL PIPE TRENCH DETAIL.
8. THE MINIMUM DEPTH OF COVER FOR UTILITIES SHALL BE AS FOLLOWS UNLESS INDICATED OTHERWISE:
   a. WATER: 42 INCHES (E)
   b. FIRE PROTECTION: 42 INCHES
   c. ELECTRICAL AND COMMUNICATION: 36 INCHES
   d. ALL OTHER UTILITIES: 36 INCHES
9. ALL UNDERGROUND UTILITIES ARE SUBJECT TO ACCEPTANCE TESTING AND INSPECTION METHODS DETAILED IN THE SPECIFICATIONS, WHICH MAY INCLUDE VIDEO CAMERA INSPECTION.
10. ANY CHANGES TO PROPOSED UTILITY DESIGN SHALL BE APPROVED BY THE CONTRACTOR. (E)
11. ALL DOWNSPOUT LEADERS SHALL BE 12.00 INCH LINES UNLESS INDICATED OTHERWISE.
12. BACKFLOW PREVENTERS FOR POTABLE WATER CONNECTION SHALL BE CERTIFIED AS MEETING THE REQUIREMENTS OF THE STANDARD FOR BACKFLOW PREVENTERS IN PLUMBING SYSTEMS, ANSI A40.6.

WATER UTILITY NOTES:

1. THRUST BLOCKS OR JOINT RESTRAINTS ARE REQUIRED AT ALL TEES, BENDS, OR ELBOWS OF PRESSURIZED PIPING IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AND MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL 2 ON CU501 FOR TYPICAL THRUST BLOCK DETAIL.
2. WATER LINES SHALL BE INSTALLED A MINIMUM OF 3.00 FEET BEHIND THE EDGE OF PAVEMENT OR FACE OF CURB UNLESS INDICATED OTHERWISE. SEE SPECIFICATIONS FOR ADDITIONAL CLEARANCE REQUIREMENTS FOR WATER PIPING.
3. FIRE HYDRANTS SHALL BE INSTALLED A MINIMUM OF 3.00 FEET AND A MAXIMUM OF 6.00 FEET FROM EDGE OF PAVEMENT OR FACE OF CURB AND A MINIMUM OF 1.00 FEET FROM EDGE OF SIDEWALK UNLESS INDICATED OTHERWISE. A RADIUS OF 3.00 FEET AROUND HYDRANT SHALL BE KEPT CLEAR FOR FIRE DEPARTMENT ACCESS. AREA BETWEEN CURB AND HYDRANTS SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
4. SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION, TESTING, AND INSPECTION OF ALL DOMESTIC WATER AND FIRE WATER SYSTEMS WITH THE ASSOCIATED UTILITY COMPANIES AND AGENCIES. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ON WATER UTILITY TESTING AND INSPECTION.

SANITARY UTILITY NOTES:

(E)

1. ALL SANITARY SEWER BUILDING CONNECTIONS ARE TO BE MADE USING 4.00 INCH LINES UNLESS INDICATED OTHERWISE.
2. ALL SANITARY LINES ARE TO BE LAID AT A UNIFORM SLOPE FROM THE BUILDING CONNECTIONS TO THE CONNECTING SEWER AND BETWEEN UTILITY STRUCTURES.
3. SEWER LINES SHALL BE INSTALLED A MINIMUM OF 10.00 FEET HORIZONTALLY FROM ADJACENT WATER LINES UNLESS INDICATED OTHERWISE. SEE SPECIFICATIONS FOR ADDITIONAL CLEARANCE REQUIREMENTS FOR SANITARY PIPING.
4. SEWER LINES SHALL BE INSTALLED BELOW WATER LINES WITH A MINIMUM VERTICAL SEPARATION OF 24 INCHES UNLESS INDICATED OTHERWISE. SEE DETAIL # ON DRAWING # FOR SANITARY SEWER ENCASEMENT DETAIL WHERE SANITARY SEWER WILL BE INSTALLED ABOVE WATER LINES.
5. MANHOLE INVERT FLOW CHANNELS SHALL BE CONSTRUCTED TO PROVIDE SMOOTH AND UNIFORM SLOPES WITH GRADUAL TRANSITION SECTIONS.

UTILITY STRUCTURE NOTES:

1. ALL UTILITY STRUCTURES ARE TO BE H-20 RATED UNLESS INDICATED OTHERWISE.
2. IF A MANHOLE IS LOCATED IN PAVEMENT AREAS, RIM ELEVATION SHALL BE FLUSH WITH FINAL GRADE. IF A MANHOLE IS LOCATED OUTSIDE OF PAVEMENT AREAS, RIM ELEVATION SHALL BE 6.00" MINIMUM ABOVE ADJACENT FINISH GRADE.
3. COVERS AND CASTINGS OF MANHOLES AND STRUCTURES SHALL BE STAMPED PER THE APPROPRIATE UTILITY TYPE OR PER THE LOCAL STANDARDS, AND SHALL BE STAMPED PER THE ORIGIN OF MANUFACTURE.
4. COVERS AND CASTINGS SHALL BE TAMPER-PROOF FOR STRUCTURES LOCATED IN PEDESTRIAN AREAS, EASEMENT AREAS, AND AREAS WITH SPECIAL SECURITY RESTRICTIONS.
5. COVERS THAT MAY BE SUBMERGED SHALL BE WATERTIGHT.
6. ANY LIFT LOOPS FOR UTILITY STRUCTURES SHALL BE GROUTED FLUSH AFTER INSTALLATION.
7. PIPE MAY EXTEND 2.00" MAXIMUM BEYOND INTERIOR MANHOLE WALL.

MANHOLE FRAME ADJUSTMENT NOTES:

1. AREA REQUIRING MANHOLE ADJUSTMENT SHALL BE SAWCUT SQUARE OR CIRCULAR 12.00" MINIMUM AROUND MANHOLE FRAME.
2. MANHOLE COVER AND FRAME SHALL BE RAISED TO FINISH GRADE BY INSTALLING PRECAST MANHOLE ADJUSTMENT RINGS AND LEVELING MORTAR.
3. GRADE ADJUSTMENT AREA SHALL BE BACKFILLED WITH EARLY STRENGTH PCC.

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
E	03/26/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
APPROVED BY AHJ (CONDITIONAL)
05/07/2018 9:43:02 AM
☐ APPROVED
☐ NOT REQUIRED
DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Drawn by: J. JENKINS | 02/21/2018
Designed by: C. KINGSLAND | 02/21/2018

Project No.: 6936
Sheet Name: CIVIL GEN NOTES
Sheet: GC002 XX
Drawing No.: 108M-102-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

EXISTING UTILITIES BASE MAP
FOR REFERENCE ONLY

0 60' 120'

SCALE IN FEET

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED
AHJ: WICHITA, KS
05/07/2018 9:41:43 AM

☐ APPROVED
☐ NOT REQUIRED

DATE _____

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G - WICHITA, KS

Drawn by J. JENKINS 03/06/18 | Designed by C. KINGSLAND 03/06/18

Project No. 6936

Sheet Name: UTIL BASEMAP

Sheet GC100 of XX

Drawing No. 108M-103-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.
THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT

V-101

V-102

PROPOSED LOT SPLIT PROPERTY LINE (TYP)

Z LOT

RESERVE A

TURNPIKE INDUSTRIAL 3RD ADDITION

CARO 3RD ADDITION

CARO 2ND ADDITION

TURNPIKE INDUSTRIAL ADDITION

BRADLEY ADDITION

TURNPIKE INDUSTRIAL 4TH ADDITION

UNPLATTED

TURNPIKE DRIVE

(COLFAX ST.)

OLIVER STREET E SECTION LINE

ABLAH BUILDING (SDC 1)

TOOL FAB BUILDING

OWNER: SPIRIT AEROSYSTEMS WICHITA, KS

OWNER: STEVEN R. & LINDA S. BROWN WICHITA, KS

OWNER: THE TAP OF KANSAS HOLDINGS, LLC WICHITA, KS

OWNER: RADER PROPERTIES GROUP IX LLC WICHITA, KS

OWNER: TURNPIKE DRIVE INC. CHICAGO, IL

OWNER: MID-WESTERN AIRCRAFT SYSTEMS INC. WICHITA, KS

North Cor., Lot 2 Turnpike Industrial 3rd Addition, Found Mag Nail

Northeast Corner, Lot 1 Turnpike Industrial Park 3rd Addition, Found 1/2" Rebar w/Armstrong cap

NW Cor. Lot 1, Blk. A, Bradley Addition

NE Cor. Lot 1, Blk. A, Bradley Addition, Found Chiseled +

SW Cor. Lot 1, Blk. A, Bradley Addition

SE Cor. Lot 1, Blk. A, Bradley Addition

E Cor. Sec. 11, T28S, R1E Found ____

OVERALL EXISTING CONDITIONS PLAN

0 60' 120'

SCALE IN FEET

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A, SITE WORK - IFC	CAK	NT
Z	11/16/2018	PKG 1A, SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW APPROVED BY WICHITA, KS 06/07/2018 9:48:09 AM

☐ APPROVED

☐ NOT REQUIRED

DATE _____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

STATE OF KANSAS WAYNE A. HERBERT 19889 11/16/2018 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: J. JENKINS 02/21/18

Designed by: C. KINGSLAND 02/21/18

Project No. 6936

Sheet Name: EXIST COND PLAN

Sheet V-100 of XX

Drawing No. 108M-104-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



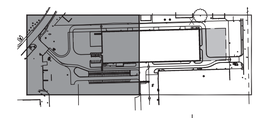
EXISTING CONDITIONS PLAN 1

0 15' 30' 60'
SCALE IN FEET

NORTH

EXISTING CONDITIONS NOTES:

1. THE LOCATIONS OF STRUCTURES AND UNDERGROUND UTILITIES AS INDICATED HAVE BEEN OBTAINED FROM EXISTING RECORDS AND FIELD SURVEYS. UNDERGROUND STRUCTURES AND UTILITIES MAY BE PRESENT WHICH ARE NOT DOCUMENTED OR LOCATED.
2. THE SUBCONTRACTOR SHALL FIELD-CHECK ALL EXISTING CONDITIONS AND BE THOROUGHLY FAMILIAR WITH THE SITE BEFORE ANY WORK COMMENCES. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE CONTRACTOR BEFORE ANY FURTHER WORK COMMENCES.
3. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY EXISTING STRUCTURES, UTILITIES, AND SURVEY INFORMATION, AND TO TAKE NECESSARY PRECAUTIONS DURING DEMOLITION AND CONSTRUCTION. SUBCONTRACTOR SHALL VERIFY EXISTENCE AND MARK LOCATIONS OF ALL UTILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES, PRIOR TO BEGINNING WORK. SUBCONTRACTOR SHALL CONTACT THE CONTRACTOR AND ALL ASSOCATED UTILITY COMPANIES AND AGENCIES TO IDENTIFY THE LOCATION OF UTILITIES. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION.
4. PRIOR TO CONSTRUCTION, THE SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF OPERATIONAL PLANS. IN THE EVENT AN UNEXPECTED UTILITY OR STRUCTURE INTERFERENCE OR CONFLICT IS ENCOUNTERED DURING CONSTRUCTION, THE SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTOR. ANY UTILITY SERVICES OR STRUCTURES DISTURBED BY THE SUBCONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
5. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROTECTING ITEMS NOT TO BE DAMAGED DURING DEMOLITION AND CONSTRUCTION. THE SUBCONTRACTOR SHALL REPAIR OR REPLACE DAMAGED OR DISTURBED ITEMS TO THE SATISFACTION OF THE CONTRACTOR.
6. REFER TO DRAWING V-103 FOR THE EXISTING CONDITIONS LEGEND AND ABBREVIATIONS.



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	APPROVED
CAK	NT
CAK	NT

	DESCRIPTION
A	PKG 1A, SITE WORK - IFC
Z	PKG 1A, SITE WORK - REV Z

	DATE
A	03/09/2018
Z	11/16/2018

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED
FP REVIEW ADDITIONAL
05/07/2018 9:38:27 AM
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

LICENSED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by J. JENKINS 02/21/18
Designed by C. KINGSLAND 02/21/18

Project No.
6936
Sheet Name:
EXIST COND PLAN 1
Sheet V-101 of XX
Drawing No.
108M-105-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC., ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT THE CONTENTS THEREOF SHALL BE RETURNED UPON REQUEST.

MATCH LINE: SEE SHEET V-101 FOR CONTINUATION

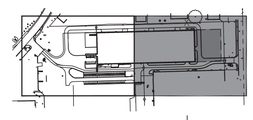


EXISTING CONDITIONS PLAN 2

0 15' 30' 60'

SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2399

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A, SITE WORK - IFC	CAK	NT
Z	11/16/2018	PKG 1A, SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
APPROVED BY
WICHITA, KS
05/07/2018 9:38:42 AM

☐ APPROVED
☐ NOT REQUIRED

DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS
CERTIFICATE OF AUTHORIZATION
E-2000
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Designed by	C. KINGSLAND	02/21/18
Drawn by	J. JENKINS	02/21/18

Project No.
6936

Sheet Name:
EXIST COND PLAN 2

Sheet V-102 of XX

Drawing No.
108M-106-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

TOPO LEGEND

- #B-1 — Bore Location
- △ — Monument/Horizontal Control Point
- BM — Benchmark
- E — Electric Box
- LP — Light Pole
- Power Pole
- SDA — Storm Water Drain Area Inlet
- SDM — Storm Drain Manhole
- CO — Clean Out
- SS — Sanitary Sewer Manhole
- SS(IW) — Sanitary Sewer Industrial Waste Manhole
- FH — Fire Hydrant
- WV — Water Valve
- ICV — Irrigation Control Valve
- PIV — Post Indicator Valve
- Post — Gate Post
- Post — Guard Post
- TMKR — Telephone Marker
- GWR — Groundwater Recovery Manhole
- GRD — Ground Shot Elevation
- GW — Groundwater Line
- ABN — Abandoned Line
- A — Compressed Air
- GAS — Gas Line
- T — Buried Telephone Line
- XX — Fence Types
- Guard Rail
- ST — Storm Sewer
- SS — Sanitary Sewer
- E — Overhead Electric
- FP — Fire Water
- Major Contour Interval
- Minor Contour Interval
- W — Water Line
- R/W — Right-of-Way
- Property Line

BENCH MARK LIST ⊕

BM #201 – SQUARE CUT ON THE WEST END OF THE CURB RETURN ON THE NORTHWEST CORNER OF S. OLIVER ST. AND E. COLFAX ST. \35' NORTH-NORTHWEST TO CONTROL POINT #101. \13' NORTHEAST TO THE BASE OF THE 'STOP' SIGN POST. \15' NORTH-NORTHWEST TO THE BASE OF THE 'NO OUTLET' SIGN POST.

ELEV.=1356.23 (NAVD88)

BM #202 – SQUARE CUT ON THE WEST END OF THE NORTH CURB LINE IN THE NORTHWEST CORNER OF THE PARKING LOT ON THE NORTH SIDE OF 1-355C BUILDING. \91' NORTHEAST TO CONTROL POINT #102. \46' EAST-NORTHEAST TO POST INDICATOR VALVE #1082.

ELEV.=1360.63 (NAVD88)

BM #203 – SQUARE CUT ON TOP OT THE EAST SIDE OF THE CONCRETE DRAINAGE STRUCTURE ON EAST SIDE OF TURNPIKE DR. \49' NORTH-NORTHEAST TO CONTROL POINT #103. \42' SOUTH TO THE NORTH EDGE OF THE DRIVE TO "Y" PARKING LOT (3300 S. TURNPIKE DR.) \40' SOUTHWEST TO BASE OF A POWER POLE.

ELEV.=1348.61 (NAVD88)

CONTROL POINTS 101

Pt. No. 101
1/2" REBAR WITH PEC CONTROL CAP SET FLUSH WITH GROUND, ON TOP OF BERM ON THE NORTH WEST CORNER OF S. OLIVER ST. AND E. COLFAX ST.
N: 1,666,680.73, E: 1,665,391.56
1. 34.8' SOUTH-SOUTHEAST TO BMK-201
2. 38.5' EAST TO THE WEST CURB LINE ALONG S. OLIVER ST.
3. 33.5' SOUTH TO THE NORTH CURB LINE ALONG ALONG E. COLFAX ST.

Pt. No. 102
1/2" REBAR WITH PEC CONTROL CAP SET FLUSH WITH GROUND NORTH OF THE PARKING LOT ON THE NORTH SIDE OF 1-355C BUILDING
N: 1,666,665.78, E: 1,664,833.37
1. 26.0' SOUTH TO THE NORTH EDGE OF ASPHALT OF THE PARKING LOT
2. 91.0' SOUTHWEST TO BMK-202
3. 46.4' EAST-NORTHEAST TO POST INDICATOR VALVE #1082

Pt. No. 103
1/2" REBAR WITH PEC CONTROL CAP SET FLUSH WITH GROUND ON THE EAST SIDE OF TURNPIKE DR.
N: 1,666,824.28, E: 1,664,063.76
1. 49.4' SOUTH-SOUTHWEST TO BMK-203
2. 23.8' WEST-NORTHWEST TO THE TOP BOLT OF A FIRE HYDRANT
3. 61.4' NORTHEAST TO THE CORNER FENCE POST OF A CHAIN-LINK FENCE

HORIZONTAL DATUM

KANSAS STATE PLANE (SOUTH ZONE)

STORM SEWER (NAVD88)

(Corrugated Black Plastic Pipe = ABS)

SDA#5 (Pt. 6001)
8'x5' Conc. Structure
2'x3' SDA Lids (two)
Top= 1348.65
FL=1345.55 30" Plastic Pipe (SW)*
FL=1346.35 5" Hole in Wall (NE)
FL=1347.35 12" W x 6" H hole (NE)
(Black plastic for 25'\ to a PI, then 30" RCP to RCE. 9 sections x 8ft.)

SDA#6 (Pt.1809)
Top= 1358.37
FL=1356.37 15" PVC (E-W)
Plugged 2' West

SDA#7 (Pt.1810)
Top= 1358.16
FL=1356.46 15" PVC (E-W)

SDA#8 (Pt.1811)
Top= 1358.32
FL=1356.32 15" PVC (E-W)

SDA#9 (Pt.1812)
Top= 1358.34
FL=1356.19 15" PVC (E-W)

SDA#10 (Pt.1815)
Top= 1358.07
FL=1355.97 15" PVC (E-W)

SDM#11 (Pt.6470) Conc. MH
Top= 1349.14
FL=1343.14 30" ABS (W)
FL=1343.14 30" ABS (S)
(near SW corner of big parking area)

SDM#12 (Pt.6472) Conc. MH
Top= 1349.19
FL=1342.99 30" ABS (N)
FL=1342.89 30" RCP (SSW)
FL=1342.99 12" ABS (E)
(partly under chain link fence)

SDA#13 (Pt.6474)
Top= 1349.03
FL=1343.63 12" ABS (W)

SDM#14 (Pt.6467) Conc. MH
Top= 1350.93
FL=1345.83 15" ABS (W)
FL=1343.33 30" ABS (E)
FL=1343.33 30" ABS (N)

SDM#15 (Pt.6460) Conc. MH
Top= 1350.64
FL=1343.34 24" ABS (N)
FL=1343.39 30" ABS (S)
FL=1344.94 12" ABS (W)
FL=1343.44 12" PVC (E)

SDM#16 (Pt.6457) Conc. MH
Top= 1350.84
FL=1345.04 24" ABS (W)
FL=1344.94 24" ABS (NE)
FL=1343.54 24" ABS (S)

SDA#17 (Pt.6456)
Top= 1349.70
FL=1345.30 18" ABS (N)
FL=1345.20 24" ABS (SW)

SDA#18 (Pt.6455)
Top= 1349.64
FL=1345.74 18" ABS (S)

SDA#19 (Pt.6541)
Top= 1348.89
FL=1345.89 15" ABS (E)

SDA#20 (Pt.6540)
Top= 1348.95
FL=1345.35 15" ABS (E)

SDA#21 (Pt.6538)
Top= 1349.06
FL=1344.96 24" ABS (E)
FL=1345.06 18" ABS (N)

SDA#22 (Pt.6537)
Top= 1348.97
FL=1344.97 18" ABS (S)
FL=1344.97 18" ABS (N)

SDA#23 (Pt.1770)
Top= 1359.93
FL=1356.13 15" PVC (W)
FL=1356.03 24" PVC (S)

SDA#24 (Pt.1771)
Top= 1360.06
FL=1356.16 15" PVC (W)
FL=1355.86 24" PVC (S)
FL=1355.86 24" PVC (N)

SDA#25 (Pt.1780)
Top= 1360.06
FL=1356.86 15" PVC (W)
FL=1355.76 24" PVC (N)
FL=1355.76 24" PVC (S)

SDM#26 (Pt.1782)
Conc. MH
Top= 1360.16
FL=1355.86 15" PVC (W)
FL=1355.76 18" PVC (E)

SDM#27 (Pt.1781) Conc. MH
Top= 1360.51
FL=1355.71 24" PVC (N)
FL=1355.61 30" PVC (S)
FL=1355.71 18" PVC (W)

SDA#28 (Pt.1808)
Top= 1360.16
FL=1355.56 15" PVC (W)
FL=1355.56 18" PVC (E)

SDM#29 (Pt.1807) Conc. MH
Top= 1360.68
FL=1355.48 30" PVC (N&S)
FL=1355.48 18" PVC (E)

SDA#30 (Pt.6451)
Top= 1348.59
FL=1345.59 15" PVC (N&S)
2 ft N to plug
(12" pipe at SDA-33)

SDA#33 (Pt.6517) 2x2 Grate
Top= 1349.20
FL=1345.19 12" PVC (N)
FL=1345.19 18" PVC (S)

SDC#40 (Pt.6139)
Top= 1348.69
FL=1344.26 40" RCP
FL=1340.29 48" RCP

SANITARY SEWER (NAVD88)

SSM#1 (Pt.1353) Conc. MH
Top= 1354.92
FL Out=1340.05 8" VCP (N)
FL In=1340.08 8" VCP (W)

SSM#2 (Pt.1382) Conc. MH
Top= 1357.34
FL Out=1340.65 8" VCP (E)
FL In=1340.75 8" VCP (W)

SSM#3 (Pt.1443) Conc. MH
Top= 1358.56
FL Out=1341.36 8" VCP (E)
FL In=1341.23 8" VCP (W)

SSM#4 (Pt.6266) Conc. MH
Top= 1349.45
FL Out=1342.73 8" VCP (E)
FL In=1342.73 8" VCP (SW)

SSM#31 (Pt.6515)
Conc. MH
Top= 1349.40
FL=1343.25 12" PVC (S)
FL=1343.27 6" PVC (NE)
FL=1343.05 15" VCP (NW)

SSM#341 (Pt.10012) Conc. MH
Top= 1351.54
FL=1341.71 8" VCP (E)
FL=1341.69 8" VCP (W)

SURVEY AND SUBSURFACE INVESTIGATION NOTES:

1. THE SURVEY WAS PERFORMED BY PEC IN FEBRUARY 2018. SURVEY CONTROL POINTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND SHALL BE RESET BY THE SUBCONTRACTOR IF DISTURBED DURING CONSTRUCTION.
2. SUBCONTRACTOR SHALL RETAIN A LICENSED SURVEYOR TO SURVEY PROJECT IMPROVEMENTS. IF BENCHMARKS SHOWN ARE IN AREAS THAT REQUIRE DEMOLITION, OTHER BENCHMARKS SHALL BE ESTABLISHED BEFORE DEMOLITION AND CONSTRUCTION WORK BEGINS. SUBCONTRACTOR SHALL SUPPLY CERTIFIED, CONTROL POINT DATA TO CONTRACTOR AFTER COMPLETION OF CONSTRUCTION.
3. THE GEOTECHNICAL INVESTIGATION WAS PERFORMED BY GSI ENGINEERING IN FEBRUARY 2018. THIS REPORT WAS PREPARED FOR SPIRIT AEROSYSTEMS AS REQUESTED BY BURNS & MCDONNELL. THE RESULTS OF THE INVESTIGATION ARE CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.

SUBSURFACE EXPLORATION NOTES:

1. THE BORING LOGS AND RELATED INFORMATION, INCLUDING WATER LEVELS, DEPICT CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND AT THE TIME DESIGNATED ON THE LOGS.
2. SOIL CONDITIONS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURING AT THESE SPECIFIC BORING LOCATIONS. ANY ATTEMPT TO INTERPOLATE THE STRATIGRAPHIC CONDITIONS BETWEEN BORINGS IS AT THE CONTRACTOR'S RISK.
3. FLUCTUATIONS OR CHANGES IN WATER LEVELS AND GROUNDWATER CONDITIONS CAN BE INFLUENCED BY SOURCES OUTSIDE THE AREAS OF THE SITE INVESTIGATED, BY SEASONAL RAINFALL, AND BY CHANGES IN DRAINAGE CONDITIONS IN AND AROUND THE SITE. FLUCTUATIONS CAN OCCUR AND SHOULD BE ANTICIPATED BETWEEN THE TIME OF INVESTIGATION AND THE TIME OF CONSTRUCTION.
4. LOCATIONS OF INDICATED STRATIGRAPHIC BOUNDARIES ARE APPROXIMATE AND THE TRANSITIONS BETWEEN SOIL TYPES MAY BE GRADUAL RATHER THAN CLEARLY DEFINED.
5. ADDITIONAL INFORMATION IS CONTAINED IN THE SUBSURFACE INFORMATION DOCUMENT, WHICH IS AVAILABLE AT THE OFFICE OF THE CONTRACTOR.
6. ADDITIONAL SUBSURFACE INFORMATION MAY EXIST AT THE SITE FROM EITHER PRIOR CONSTRUCTION ACTIVITIES OR FROM NEARBY FACILITIES. SUCH INFORMATION MAY BE AVAILABLE AT THE OFFICE OF THE CONTRACTOR.

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2399

	BY	DESCRIPTION	DATE
A	CAK	PKG 1A, SITE WORK - IFC	03/09/2018
Z	CAK	PKG 1A, SITE WORK - REV Z	11/16/2018

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED FOR ARCHITECTURAL
06/07/2018 9:37:23 AM
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

APPROVED NT

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS REGISTERED ENGINEERING
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

WICHITA, KS

Designed by C. KINGSLAND 02/21/18

BLDG-1-338G

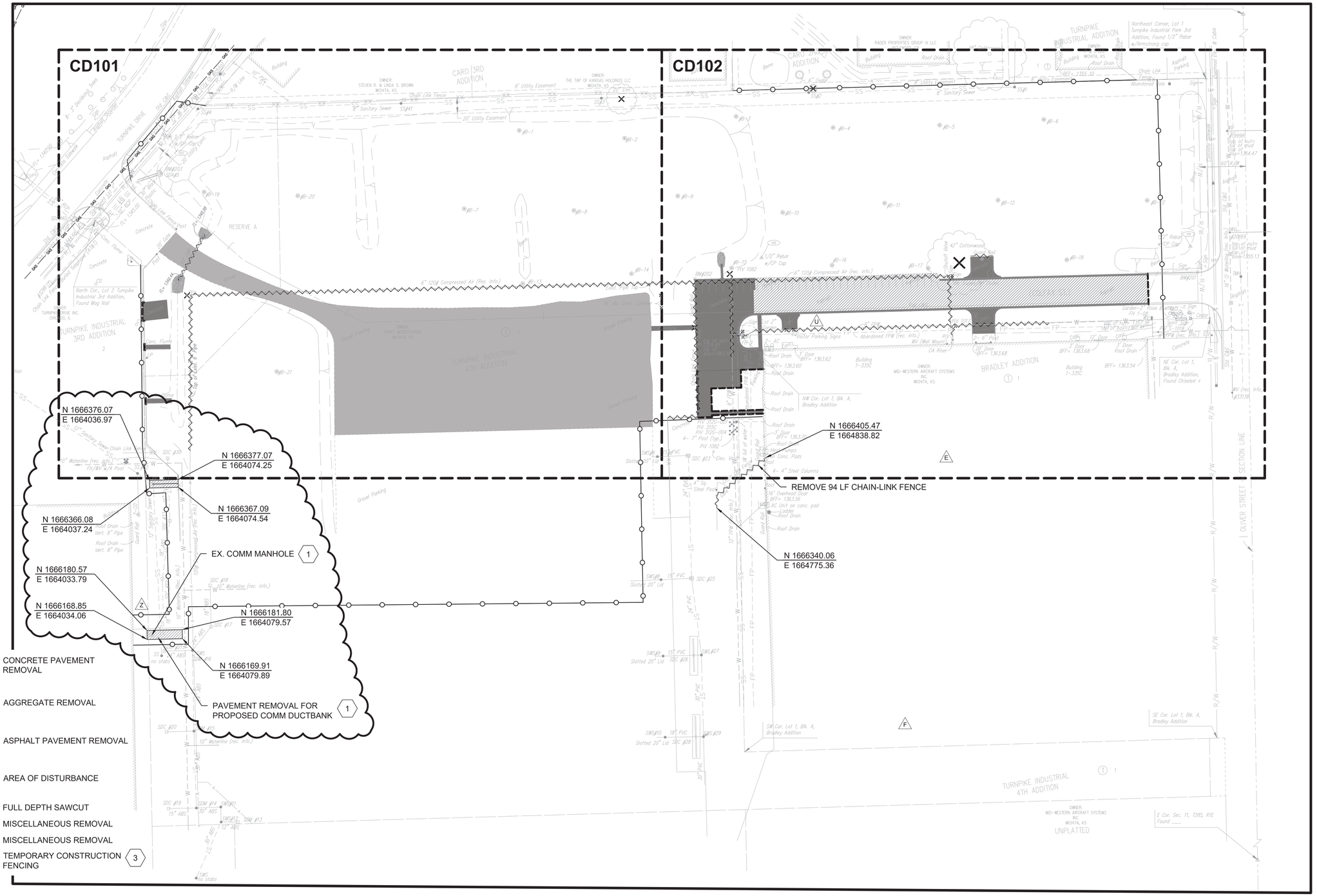
Drawn by J. JENKINS 02/21/18

AUTOMATED WAREHOUSE

Facilities Engineering

Project No. 6936
Sheet Name: SURVEY INFO
Sheet V-103 of XX
Drawing No. 108M-XXX-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

- CONCRETE PAVEMENT REMOVAL
- AGGREGATE REMOVAL
- ASPHALT PAVEMENT REMOVAL
- AREA OF DISTURBANCE
- FULL DEPTH SAWCUT
- MISCELLANEOUS REMOVAL
- MISCELLANEOUS REMOVAL
- TEMPORARY CONSTRUCTION FENCING 3

KEYED NOTES:

1. SUBCONTRACTOR SHALL FIELD-CONFIRM EXISTING COMM MANHOLE LOCATION AND DUCTBANK ROUTING PRIOR TO CONSTRUCTION. REFER TO THE CIVIL UTILITY BASE MAP REFERENCE DRAWING FOR ADDITIONAL INFORMATION.
2.
3. TEMPORARY CONSTRUCTION FENCING SHOWN FOR REFERENCE ONLY. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING FENCE THROUGHOUT THE DURATION OF THE PROJECT AS CONSTRUCTION PROGRESSES, AS REQUIRED.

OVERALL DEMOLITION PLAN

0 60' 120'
SCALE IN FEET

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
E	03/26/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
F	04/12/2018	PKG 1A SITE WORK - IFC - ADD3	CAK	NT
U	09/13/2018	PKG 1A SITE WORK - REV U	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE ____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

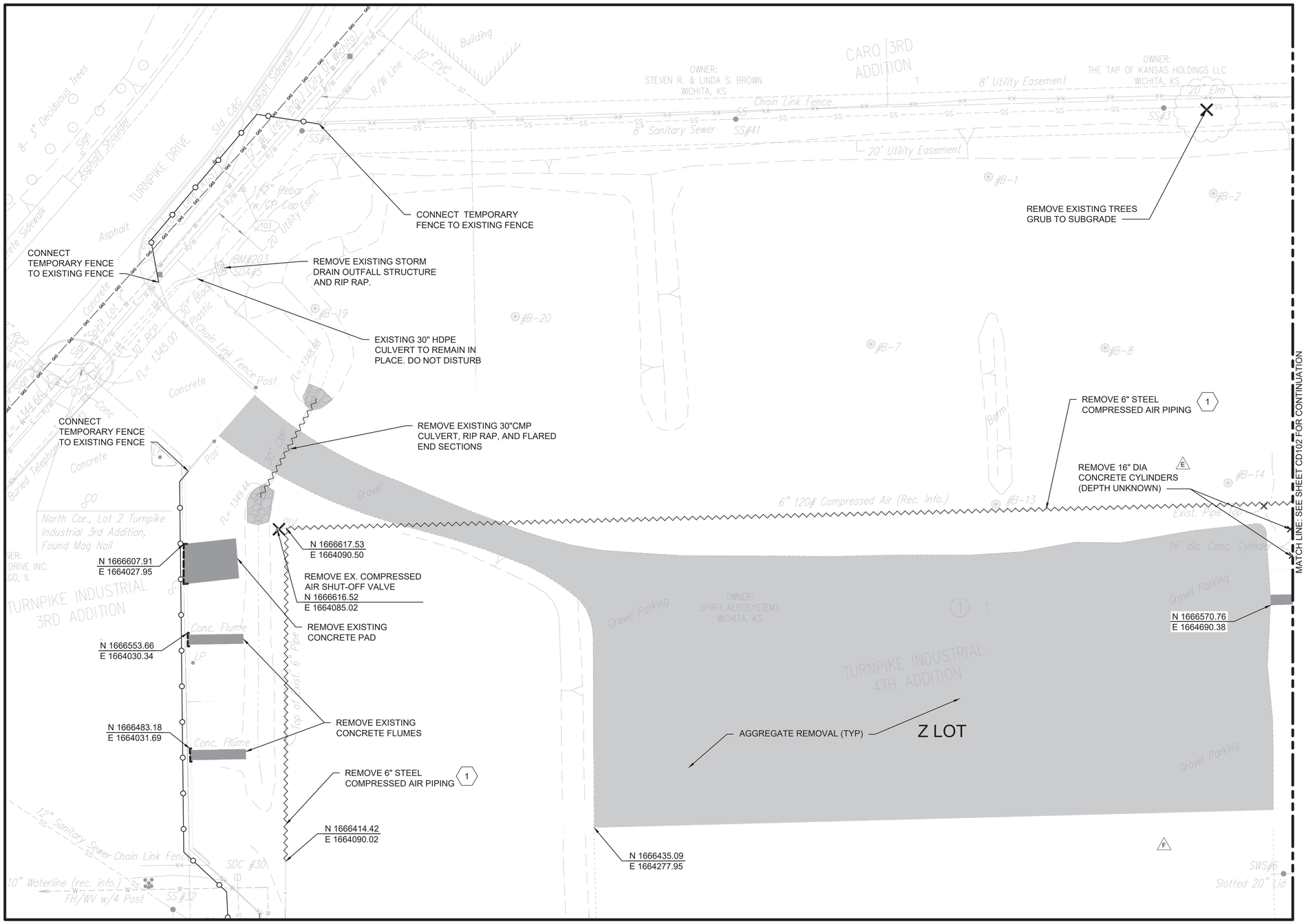
COMMONWEALTH OF KANSAS
CHRISTOPHER A. KINGSLAND
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Designed by C. KINGSLAND 02/21/18
Drawn by J. JENKINS 02/21/18

Project No. 6936
Sheet Name: DEMOLITION PLAN
Sheet CD100 of XX
Drawing No. 108M-XXX-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



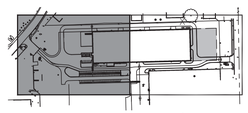
LEGEND

- CONCRETE PAVEMENT REMOVAL
- AGGREGATE REMOVAL
- ASPHALT PAVEMENT REMOVAL
- FULL DEPTH SAWCUT
- MISCELLANEOUS REMOVAL
- MISCELLANEOUS REMOVAL
- TEMPORARY CONSTRUCTION FENCING

DEMOLITION PLAN 1

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

GENERAL DEMOLITION NOTES:

1. ALL DEMOLITION, WASTE, DEBRIS, AND UNSATISFACTORY MATERIALS SHALL BE DISPOSED OF OFF SITE.
2. LOCATIONS NOTED FOR DEBRIS REMOVAL MAY CONTAIN ANY OF THE FOLLOWING MATERIALS: AGGREGATE, CONCRETE, ASPHALT, MASONRY, FOUNDATIONS, REBAR, FENCE MATERIAL, PIPING, AND MISCELLANEOUS STRUCTURES. LARGE PIECES OF MATERIAL MAY NEED TO BE CRUSHED AND/OR BROKEN UP FURTHER IN ORDER TO BE HAULED AWAY TO THE WASTE DISPOSAL SITE.
3. SUBCONTRACTOR SHALL COORDINATE LIMITS OF SAWCUT AND PAVEMENT REMOVAL WITH PROPOSED PAVEMENT LAYOUT AND JOINTING PLAN.
4. PAVEMENT DESIGNATED FOR SAWCUT SHALL BE SAWCUT FULL DEPTH.
5. EXISTING PAVEMENT EDGES SHALL BE SAWCUT IN LOCATIONS SHOWN TO PROVIDE CLEAN EDGE FOR CONSTRUCTION OF PROPOSED PAVEMENT.
6. PAVEMENT REMOVAL LIMITS SHALL BE TO THE NEAREST EXISTING PAVEMENT JOINT TO THE GREATEST EXTENT POSSIBLE TO PREVENT PARTIAL PANEL REMOVAL. PAVEMENT REMOVAL SHALL INCLUDE REMOVAL OF PAVEMENT AND ANY SUBBASE MATERIAL PRESENT.
7. ANY DAMAGE TO PAVEMENT AREAS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REMOVED AND REPLACED AT NO ADDITIONAL COST TO OWNER.
8. SUBCONTRACTOR SHALL PRESERVE EXISTING TREES AND VEGETATION WHENEVER PRACTICABLE. SUBCONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
9. EXISTING VEGETATION AND FACILITIES WHICH ARE NOT INDICATED TO BE REMOVED SHALL BE PROTECTED FROM DEMOLITION OR OTHER CONSTRUCTION ACTIVITIES.
10. SPECIAL HANDLING AND CONSIDERATION SHALL BE REQUIRED FOR EXCAVATED SOILS THOUGHT TO CONTAIN PETROLEUM-BASED /CONTAMINATED /HAZARDOUS SUBSTANCES. SUBCONTRACTOR SHALL PERIODICALLY MONITOR EXCAVATED SOILS. SOILS SHALL BE TREATED ON SITE OR DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS AND THE PROJECT SPECIFICATIONS. SUBCONTRACTOR SHALL COORDINATE REMOVAL OF PETROLEUM-BASED /CONTAMINATED /HAZARDOUS MATERIALS WITH CONTRACTOR.

UTILITY DEMOLITION NOTES:

1. SUBCONTRACTOR SHALL COORDINATE WITH THE CONTRACTOR PRIOR TO REMOVAL OF EXISTING UTILITIES IN SERVICE. RELOCATED UTILITIES SHALL BE CONSTRUCTED BEFORE REMOVAL OF EXISTING UTILITIES TO ENSURE UNINTERRUPTED SERVICE TO THE FACILITIES SERVED BY THE UTILITY. ALL RELOCATIONS SHALL BE COORDINATED WITH THE CONTRACTOR.
2. UTILITY CAPPING METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC PIPE MATERIAL IN SERVICE. ALL CAPPING SHALL BE INSPECTED AND APPROVED BY THE CONTRACTOR.
3. ALL STRUCTURES, VALVES, ETC. TO REMAIN SHALL BE PROTECTED AND ADJUSTED TO FINISH GRADE.
4. IN AREAS OF UTILITY REMOVAL OF ABANDONED LINES, THE PORTION OF EXISTING ABANDONED LINES TO REMAIN SHALL BE CAPPED OR PLUGGED AT REMOVAL INTERFACE.

KEYED NOTES:

1 SUBCONTRACTOR SHALL COORDINATE WITH CONTRACTOR FOR PLANNED COMPRESSED AIR SHUT-DOWN. SUBCONTRACTOR SHALL HAVE RELOCATED COMPRESSED AIR PIPING INSTALLED AND READY FOR TIE-IN PRIOR TO THE SHUT-DOWN TO MINIMIZE IMPACTS TO EXISTING OPERATIONS.

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A - SITE WORK - IFC	CAK	NT
E 03/26/2018 PKG 1A - SITE WORK - IFC - ADD2	CAK	NT
F 04/12/2018 PKG 1A SITE WORK - IFC - ADD3	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED PER WICHITA
05/07/2018 9:35:35 AM

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

☐ APPROVED
☐ NOT REQUIRED
DATE _____

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



AUTOMATED WAREHOUSE
Facilities Engineering
WICHITA, KS
BLDG-1-338G

Designed by C. KINGSLAND 02/21/18
Drawn by J. JENKINS 02/21/18

Project No. 6936
Sheet Name: DEMO PLAN 1
Sheet CD101 of XX
Drawing No. 108M-XXX-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CS101 FOR CONTINUATION

REMOVE EXISTING TREE; GRUB TO SUBGRADE

REMOVE AND RELOCATE EXISTING SIGNS, POSTS, AND FOUNDATIONS

REMOVE CONCRETE FLUME AND RIP RAP

REMOVE EXISTING PIV VALVE AND PIPE △U
N 1666644.35
E 1664792.34

REMOVE CA SHUTOFF VALVE
N 1666642.22
E 1665076.92

REMOVE EXISTING TREE; GRUB TO SUBGRADE

N 1666667.72
E 1665135.31

REMOVE EXISTING CURB (TYP)

N 1666657.78
E 1664780.05

REMOVE EX. CONCRETE PAVEMENT

REMOVE 6" STEEL COMPRESSED AIR PIPING ⬡1

N 1666645.71
E 1665061.98

N 1666645.69
E 1665336.10

N 1666637.81
E 1664746.09

N 1666566.02
E 1664794.75

N 1666604.69
E 1665337.12

REMOVE EX. SIDEWALK △E

N 1666573.17
E 1664880.28

REMOVE EX 8" FIRE PROTECTION △U
N 1666581.08
E 1665207.94

N 1666571.32
E 1664747.61

⬡1 REMOVE 6" STEEL COMPRESSED AIR PIPING
N 1666579.76
E 1665079.53

N 1666567.83
E 1665137.74

N 1666518.52
E 1664749.44

N 1666535.94
E 1664795.26

REMOVE AND REPLACE EXISTING SIGNS, POSTS, AND FOUNDATIONS

REMOVE AND REPLACE EXISTING FIRE HYDRANT, VALVE, AND PIPE. CAP AT MAIN. △E

N 1666520.78
E 1664836.17

REMOVE AND REPLACE EXISTING PIV VALVE RESTORE WATER SERVICE TO EXISTING CONDITION

N 1666518.70
E 1664756.47

N 1666495.74
E 1664768.07

N 1666496.77
E 1664807.22

N 1666520.01
E 1664806.62

REMOVE EX 6" FIRE PROTECTION LINE (DO NOT DISTURB EX PIV)

N 1666457.88
E 1664751.09

REMOVE EXISTING FENCE

END 6" FP REMOVAL
N 1666562.07
E 1665082.34

N 1666467.93
E 1664835.53

N 1666465.96
E 1664768.85

N 1666462.94
E 1664835.68

N 1666457.25
E 1664711.10

N 1666460.90
E 1664768.98

N 1666458.35
E 1664769.05

REMOVE EXISTING FENCE

N 1666403.99
E 1664836.91

LEGEND

- FULL DEPTH CONCRETE PAVEMENT REMOVAL
- FULL DEPTH AGGREGATE REMOVAL
- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH SAWCUT
- MISCELLANEOUS REMOVAL
- MISCELLANEOUS REMOVAL
- TEMPORARY CONSTRUCTION FENCING

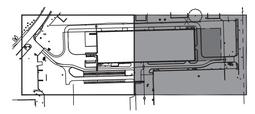
KEYED NOTE:

⬡1 SUBCONTRACTOR SHALL COORDINATE WITH CONTRACTOR FOR PLANNED COMPRESSED AIR SHUT-DOWN. SUBCONTRACTOR SHALL HAVE RELOCATED COMPRESSED AIR PIPING INSTALLED AND READY FOR TIE-IN PRIOR TO THE SHUT-DOWN TO MINIMIZE IMPACTS TO EXISTING OPERATIONS.

DEMOLITION PLAN 2

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2339

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A SITE WORK - IFC	CAK	NT
E 03/26/2018 PKG 1A SITE WORK - IFC - ADD2	CAK	NT
U 06/13/2018 PKG 1A SITE WORK - REV U	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

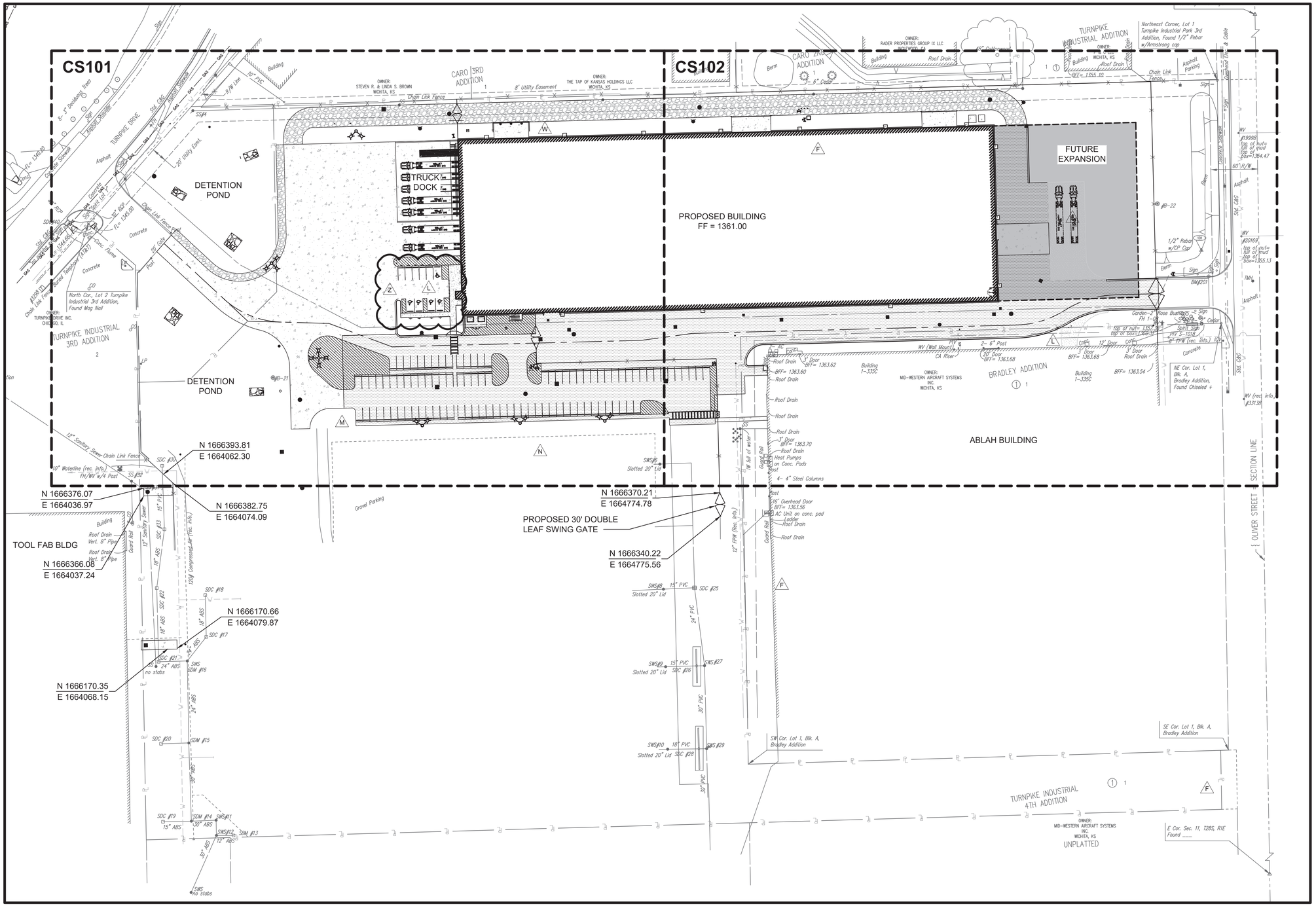
COMMONWEALTH OF KANSAS
CHRISTOPHER A. KINGSLAND
19889
11/16/2018
REGISTERED PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Designed by C. KINGSLAND 02/21/18
Drawn by J. JENKINS 02/21/18

Project No. 6936
Sheet Name: DEMO PLAN 2
Sheet CD102 of XX
Drawing No. 108M-XXX-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL SITE NOTES:

1. SUBCONTRACTOR SHALL COORDINATE BUILDING ENTRANCES, EGRESSES, WALKWAYS, AND DOORWAY LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. SEE ARCHITECTURAL/STRUCTURAL/MECHANICAL/ELECTRICAL DRAWINGS FOR MISCELLANEOUS SITE EQUIPMENT AND PADS.
3. NO WATERCOURSE OR 100 YEAR FLOOD PLAIN AS MAPPED BY F.E.M.A. OR AS DEFINED BY ANY FEDERAL, STATE, OR LOCAL AUTHORITY IS LOCATED ON THIS PROPERTY.
4. SEE SHEETS CS111 THROUGH CS116 FOR CONCRETE JOINTING AND ELEVATION PLAN.
5. BOLLARDS SHALL BE PLACED A MINIMUM OF 1.5' FROM STRUCTURE FACE.
6. SEE SHEET LS100 FOR LANDSCAPING DESIGN AND DETAILS.

OVERALL SITE PLAN

0 60' 120'
SCALE IN FEET

NORTH

LEGEND

- VEHICULAR CONCRETE PAVEMENT — 1 / CS501
- AGGREGATE SURFACE — 3 / CS501
- VEHICULAR ASPHALT PAVEMENT — 2 / CS501

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2369

	BY	APPROVED
DESCRIPTION		
M 06/13/2018 PKG 1A SITE WORK - REV M	CAK	NT
N 06/22/2018 PKG 1A SITE WORK - REV N	CAK	NT
V 09/28/2018 PKG 1A SITE WORK - REV V	CAK	NT
W 10/26/2018 PKG 1A SITE WORK - REV W	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE ____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

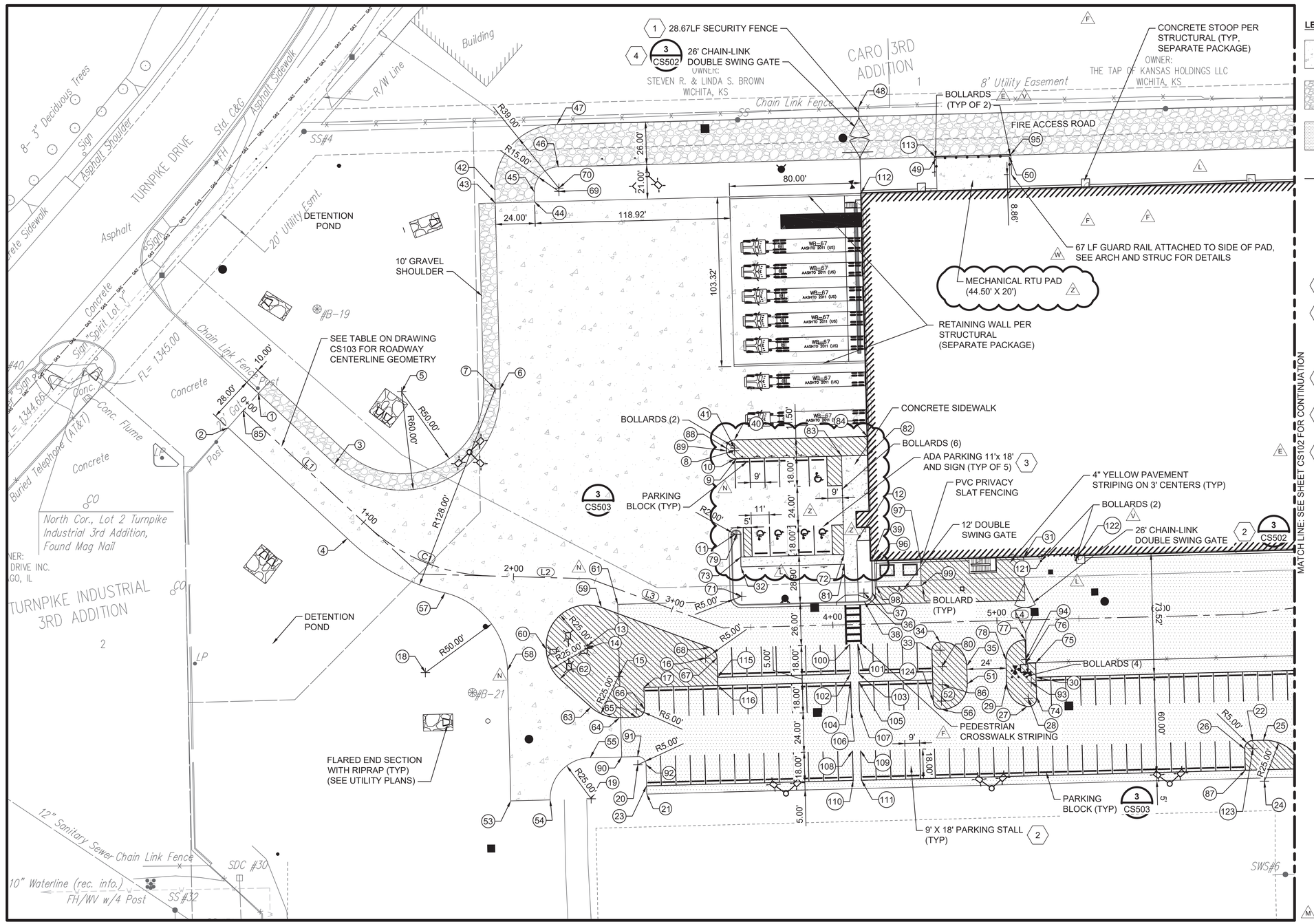
LICENSED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Designed by	C. KINGSLAND	02/12/18
Drawn by	J. JENKINS	02/12/18

Project No. 6936
Sheet Name: OVERALL SITE PLAN
Sheet CS100 of XX
Drawing No. 108M-111-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SITE PLAN 1

0 15' 30' 60'

SCALE IN FEET

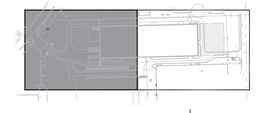
NORTH

LEGEND

- VEHICULAR CONCRETE PAVEMENT — 1 CS501
- AGGREGATE SURFACE — 3 CS501
- VEHICULAR ASPHALT PAVEMENT — 2 CS501
- SECURITY FENCE — 2 CS502
- PROPOSED FIRE HYDRANT

KEYED NOTES:

1. INSTALL NEW SECURITY FENCE CORNER POST AGAINST EXISTING CHAIN-LINK FENCE MESH.
2. SPIRIT PARKING STALL MARKING COLORS MAY VARY. SUBCONTRACTOR SHALL SUBMIT PROPOSED PARKING STALL MARKING COLORS TO THE CONTRACTOR FOR APPROVAL. THE CONTRACTOR WILL OBTAIN OWNER'S APPROVAL FOR MARKING COLOR AND QUANTITY OF EACH COLORED STALL.
3. ADA SYMBOL AND ASSOCIATED PAVEMENT STRIPING SHALL MATCH CITY OF WICHITA STANDARDS.
4. SUBCONTRACTOR TO PROVIDE CHAIN AND PADLOCK FOR SWING GATE. COORDINATE WITH CONTRACTOR FOR LOCK REQUIREMENTS.
5. PROVIDE 6" RED PAVEMENT STRIPING WITH "NO PARKING - FIRE LANE" TEXT IN 6" RED LETTERS, SPACED AT 25' ON CENTERS.



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
PKG 1A SITE WORK - REV M	CAK	NT
PKG 1A SITE WORK - REV N	CAK	NT
PKG 1A SITE WORK - REV V	CAK	NT
PKG 1A SITE WORK - REV W	CAK	NT
PKG 1A SITE WORK - REV Z	CAK	NT

	DATE
M	06/13/2018
N	06/22/2018
V	09/28/2018
W	10/26/2018
Z	11/16/2018

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE ____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

STATE OF KANSAS — WAYNE HERBERT — 19889 — 11/16/2018 — ANVSA — PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: J. JENKINS — 02/12/18 — Designed by: C. KINGSLAND — 02/12/18

Project No. 6936

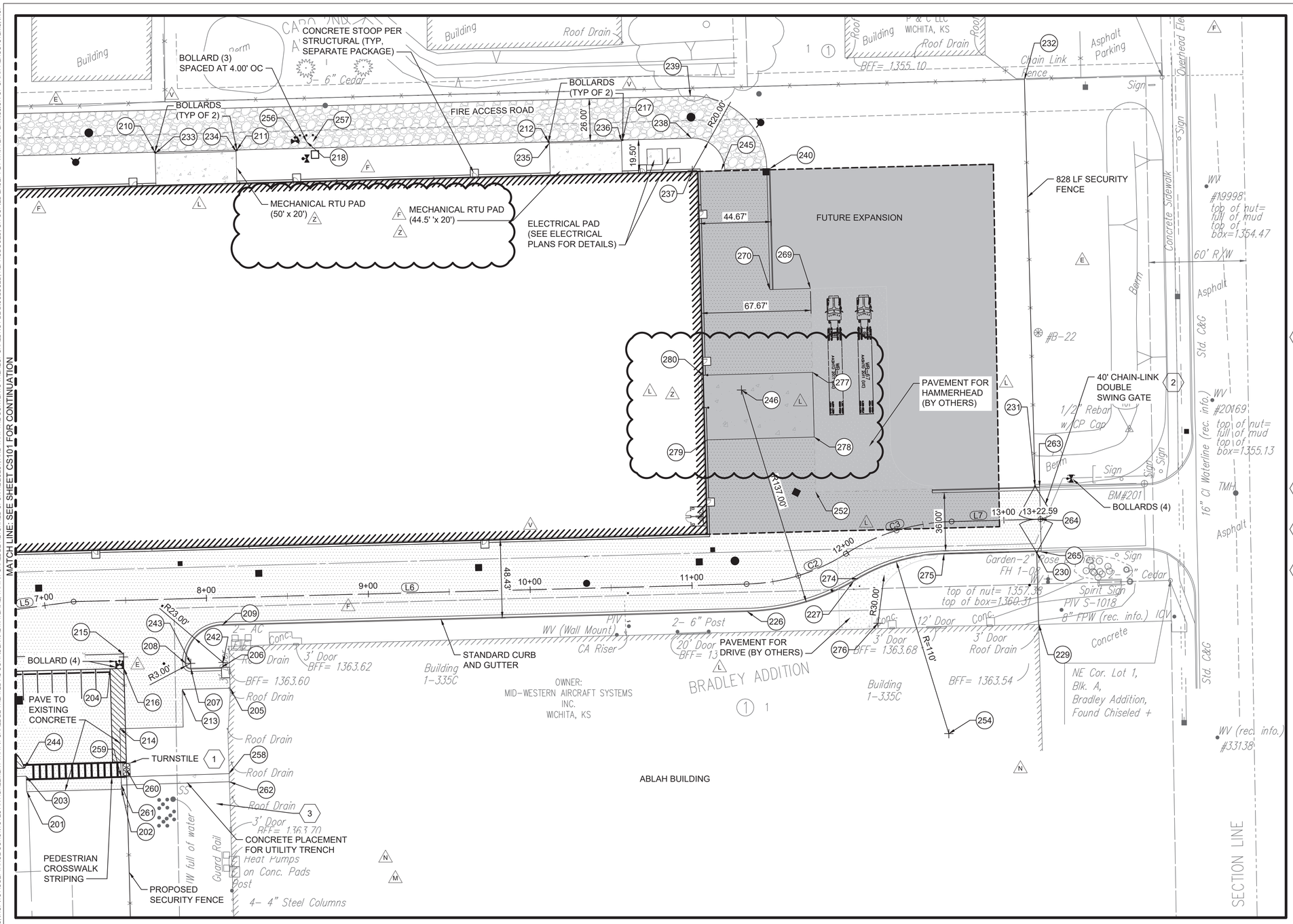
Sheet Name: SITE PLAN 1

Sheet CS101 of XX

Drawing No. 108M-112-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CS101 FOR CONTINUATION



LEGEND

- VEHICULAR CONCRETE PAVEMENT — 1 / CS501
- AGGREGATE SURFACE — 3 / CS501
- VEHICULAR ASPHALT PAVEMENT — 2 / CS501
- 4" RIVER ROCK OVER MIRAFI 140N GEOTEXTILE OR APPROVED EQUAL
- SECURITY FENCE — 2 / CS502
- PROPOSED FIRE HYDRANT

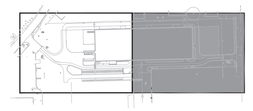
KEYED NOTES:

1. TURNSTILE SHALL BE ALVARADO MANUFACTURER'S MSTT-6XGL-1 PRODUCT OR APPROVED EQUAL. THE TURNSTILE SHALL FEATURE MSTX SINGLE ROTATION SECTION, ELECTRIC LOCK CONTROL (ENTRY AND EXIT), HOT-DIPPED GALVANIZED FINISH, SELF-CENTERING SPEED CONTROL AND KEY OVERRIDES FOR EACH DIRECTION. TURNSTILES SHALL BE OPERATED AND UNLOCKED USING A 6"x6" CARD READER ADAPTER PLATE (PRODUCT MSTX-SR). SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION. SUBCONTRACTOR SHALL SUBMIT PROPOSED TURNSTILE AND ASSOCIATED PARTS TO THE CONTRACTOR FOR APPROVAL PRIOR TO CONSTRUCTION.
2. SUBCONTRACTOR TO PROVIDE CHAIN AND PADLOCK FOR SWING GATE. COORDINATE WITH CONTRACTOR FOR LOCK REQUIREMENTS.
3. EXISTING ADA PARKING FOR THE ABLAH BUILDING SHALL REMAIN UPON PROJECT COMPLETION. RE-STRIPE STALLS AS REQUIRED.
4. TEMPORARY PAVEMENT INSTALLATION SHALL CONSIST OF THE TWO DRIVEWAY HAMMERHEADS ONLY. ALL OTHER ASPHALT PAVEMENT SHOWN SHALL BE VEHICULAR ASPHALT PAVEMENT.

SITE PLAN 2

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-623-2359

BY	APPROVED
CAK	NT
CAK	NT
CAK	NT
CAK	NT
CAK	NT

	DESCRIPTION	DATE
M	PKG 1A SITE WORK - REV M	06/13/2018
N	PKG 1A - SITE WORK - REV N	06/22/2018
V	PKG 1A - SITE WORK - REV V	09/28/2018
W	PKG 1A - SITE WORK - REV W	10/26/2018
Z	PKG 1A - SITE WORK - REV Z	11/16/2018

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

REGISTERED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Designed by C. KINGSLAND 02/12/18
Drawn by J. JENKINS 02/12/18

Project No. 6936
Sheet Name: SITE PLAN 2
Sheet CS102 of XX
Drawing No. 108M-113-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

△L

ROADWAY CENTERLINE GEOMETRY			
NUMBER	LENGTH	RADIUS	LINE/CHORD DIRECTION
L1	103.533		S47° 08' 58.59"E
C1	82.105	114.000	S67° 46' 56.15"E
L2	60.936		S88° 24' 53.70"E
L3	86.432		S69° 41' 37.45"E
L4	319.546		N88° 30' 21.28"E
L5	65.296		S82° 15' 22.07"W
L6	415.827		N88° 30' 21.28"E
C2	64.861	120.000	N73° 01' 17.59"E
C3	69.185	128.000	N73° 01' 17.59"E
L7	54.869		N88° 30' 21.28"E

CS101 POINTS		
NUMBER	NORTHING	EASTING
1	1666700.16	1664072.29
2	1666679.18	1664053.74
3	1666657.09	1664118.71
4	1666611.70	1664126.46
5	1666701.08	1664159.52
6	1666702.64	1664219.50
7	1666702.78	1664216.49
8	1666665.27	1664362.44
9	1666660.30	1664363.57
10	1666660.27	1664362.57
11	1666614.26	1664362.77
12	1666610.40	1664436.89
13	1666546.17	1664272.60
14	1666544.62	1664272.64
15	1666527.48	1664291.61
16	1666538.67	1664344.73
17	1666520.88	1664307.18
18	1666529.93	1664173.99
19	1666453.02	1664275.03
20	1666473.76	1664303.41
21	1666455.90	1664308.88
22	1666488.54	1664678.15
23	1666460.90	1664308.75
24	1666463.72	1664685.31
25	1666488.71	1664684.66
26	1666483.41	1664673.29
27	1666509.26	1664540.57
28	1666514.19	1664541.44
29	1666523.64	1664528.19
30	1666527.11	1664546.10
31	1666600.46	1664538.61
32	1666594.34	1664366.29
33	1666543.46	1664482.66
34	1666548.59	1664487.52
35	1666534.01	1664503.91
36	1666578.39	1664441.23
37	1666578.52	1664446.23
38	1666573.40	1664441.36
39	1666598.04	1664445.72
40	1666671.77	1664362.27

△F △Z △E △N

CS101 POINTS		
NUMBER	NORTHING	EASTING
41	1666666.77	1664362.40
42	1666824.14	1664216.33
43	1666816.14	1664216.54
44	1666816.77	1664240.53
45	1666822.76	1664240.37
46	1666838.15	1664254.98
47	1666864.14	1664254.30
48	1666874.61	1664438.01
49	1666843.49	1664485.25
50	1666844.65	1664529.74
51	1666523.02	1664504.20
52	1666512.60	1664488.46
53	1666451.74	1664226.04
54	1666452.37	1664250.03
55	1666478.01	1664274.37
56	1666507.60	1664488.59
57	1666578.49	1664185.92
58	1666531.24	1664223.97
59	1666569.61	1664281.27
60	1666543.96	1664247.64
61	1666571.53	1664291.19
62	1666526.07	1664255.88
63	1666508.93	1664274.85
64	1666502.48	1664292.26
65	1666502.75	1664302.66
66	1666507.88	1664307.52
67	1666538.85	1664351.73
68	1666545.23	1664347.16
69	1666823.15	1664255.32
70	1666825.15	1664255.32
71	1666576.45	1664366.76
72	1666601.98	1664429.11
73	1666600.34	1664366.13
74	1666515.14	1664546.42
75	1666535.69	1664545.89
76	1666535.53	1664539.88
77	1666549.96	1664539.50
78	1666537.65	1664527.82
79	1666614.29	1664363.77
80	1666533.62	1664488.91

CS101 POINTS		
NUMBER	NORTHING	EASTING
81	1666595.99	1664429.26
82	1666662.38	1664443.54
83	1666661.96	1664427.54
84	1666673.88	1664443.24
85	1666689.62	1664063.06
86	1666522.63	1664489.20
87	1666470.42	1664673.63
88	1666666.64	1664357.40
89	1666665.14	1664357.44
90	1666478.51	1664293.62
91	1666478.76	1664303.28
92	1666473.90	1664308.41
93	1666524.03	1664543.18
94	1666537.96	1664539.82
95	1666845.33	1664530.38
96	1666598.12	1664448.72
97	1666598.82	1664475.71
98	1666582.13	1664449.14
99	1666582.83	1664476.13
100	1666547.16	1664432.54
101	1666547.29	1664437.54
102	1666529.16	1664433.01
103	1666529.29	1664438.01
104	1666524.16	1664433.14
105	1666524.29	1664438.14
106	1666506.17	1664433.61
107	1666506.30	1664438.61
108	1666482.18	1664434.24
109	1666482.31	1664439.24
110	1666464.18	1664434.71
111	1666464.32	1664439.70
112	1666821.95	1664439.36
113	1666844.15	1664484.88
115	1666527.05	1664352.04
116	1666522.05	1664352.17
121	1666597.95	1664549.09
122	1666598.51	1664570.25
123	1666483.54	1664678.28
124	1666512.47	1664483.46

△F △V

CS102 POINTS		
NUMBER	NORTHING	EASTING
201	1666456.82	1664710.50
202	1666458.35	1664769.05
203	1666466.37	1664710.17
204	1666532.74	1664762.03
205	1666520.78	1664836.16
206	1666533.64	1664830.79
207	1666533.15	1664811.88
208	1666536.07	1664808.80
209	1666559.66	1664831.19
210	1666852.10	1664789.66
211	1666853.42	1664840.27
212	1666858.44	1665032.82
213	1666520.01	1664806.62
214	1666495.74	1664768.07
215	1666541.96	1664770.30
216	1666532.96	1664770.53
217	1666859.63	1665078.46
218	1666858.51	1664883.33
226	1666568.12	1665155.58
227	1666586.81	1665221.16
229	1666560.20	1665335.54
230	1666604.66	1665334.39
231	1666645.63	1665333.32
232	1666897.02	1665326.76
233	1666851.26	1664789.85
234	1666852.56	1664839.83
235	1666857.79	1665033.38
236	1666858.95	1665077.86
237	1666840.75	1665121.62
238	1666860.74	1665121.10
239	1666886.73	1665120.42
240	1666842.00	1665169.61
242	1666536.67	1664831.79
243	1666536.15	1664811.80
244	1666471.34	1664709.12
245	1666841.22	1665139.62
246	1666705.08	1665152.00
252	1666642.04	1665197.84
254	1666492.68	1665280.07
256	1666858.40	1664879.33

CS102 POINTS		
NUMBER	NORTHING	EASTING
257	1666858.61	1664887.33
258	1666467.93	1664835.53
259	1666465.96	1664768.85
260	1666470.44	1664772.16
261	1666460.90	1664768.98
262	1666462.94	1664835.68
263	1666645.20	1665336.11
264	1666625.22	1665336.63
265	1666605.23	1665337.15
269	1666767.84	1665194.55
270	1666767.19	1665169.56
274	1666588.50	1665224.04
275	1666603.66	1665277.11
276	1666560.91	1665236.30
277	1666716.02	1665195.91
278	1666676.03	1665196.95
279	1666674.31	1665130.80
280	1666714.25	1665128.26

△V △N △Z △E △E △N

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
F	04/12/2018	PKG 1A SITE WORK - IFC - ADD3	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A SITE WORK - REV N	CAK	NT
V	09/28/2018	PKG 1A SITE WORK - REV V	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

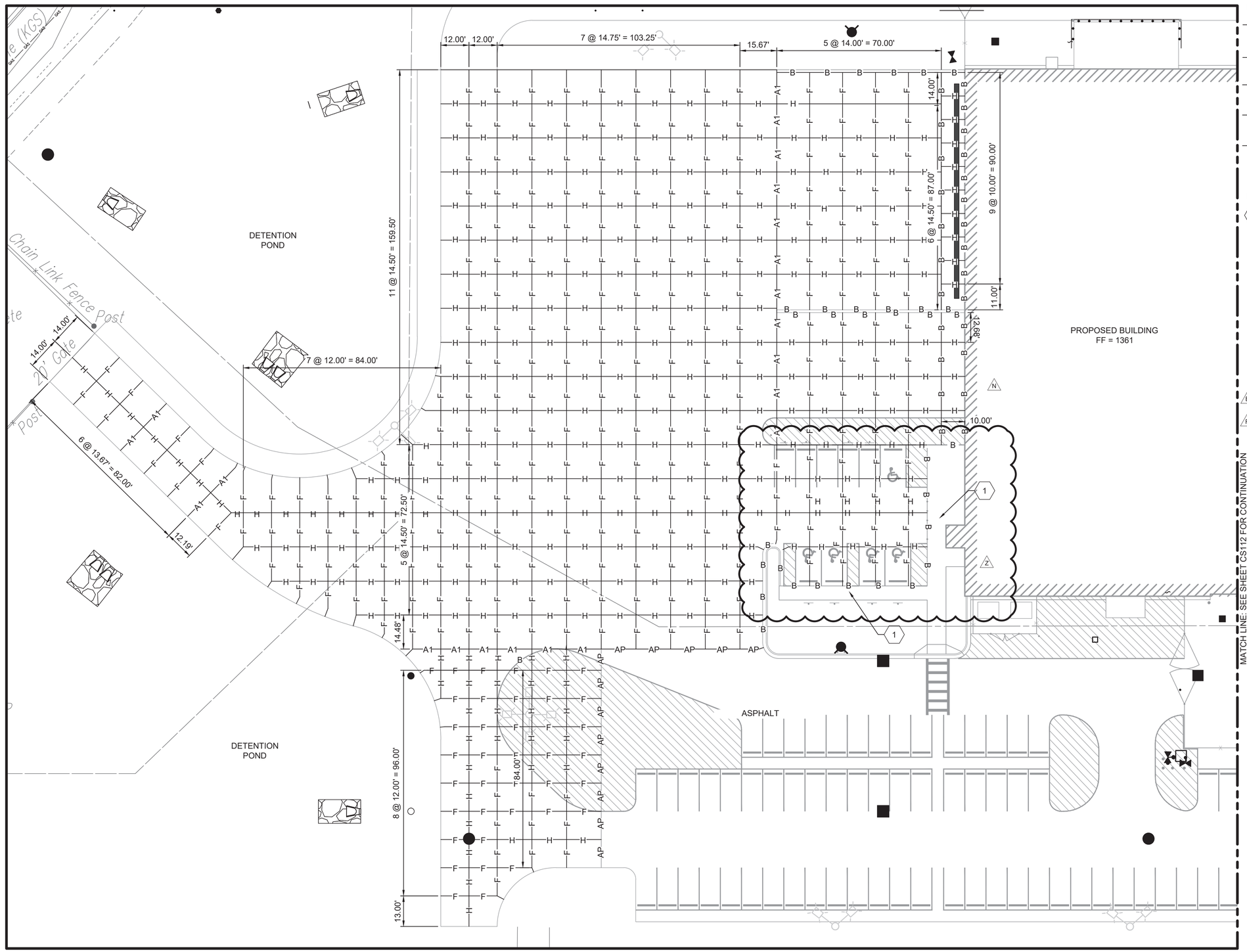
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS REGISTERED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS | 03/06/2018 | Designed by: C. KINGSLAND

Project No.
6936
Sheet Name:
POINT TABLES
Sheet CS103 OF XX
Drawing No.
108M-114-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND:

- H — DUMMY CONTRACTION JOINT — 8 / CS501
- F — DOWELED CONTRACTION JOINT — 10 / CS501
- B — THICKENED EDGE ISOLATION JOINT — 12 / CS501
- A1 — DOWELED EXPANSION JOINT — 6 / CS501
- AP — ASPHALT PAVEMENT JUNCTURE — 1 / CS503

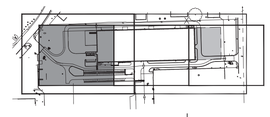
KEYED NOTE:

1. REFER TO SIDEWALK DETAIL FOR JOINTING REQUIREMENTS.

JOINTING PLAN 1

0 10' 20' 40'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
E 03/29/2018 PKG 1A SITE WORK - IFC - ADD2	CAK	NT
F 04/12/2018 PKG 1A SITE WORK - IFC - ADD3	CAK	NT
L 06/01/2018 PKG 1A SITE WORK - REV L	CAK	NT
N 06/22/2018 PKG 1A SITE WORK - REV N	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

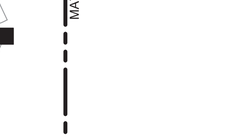
FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

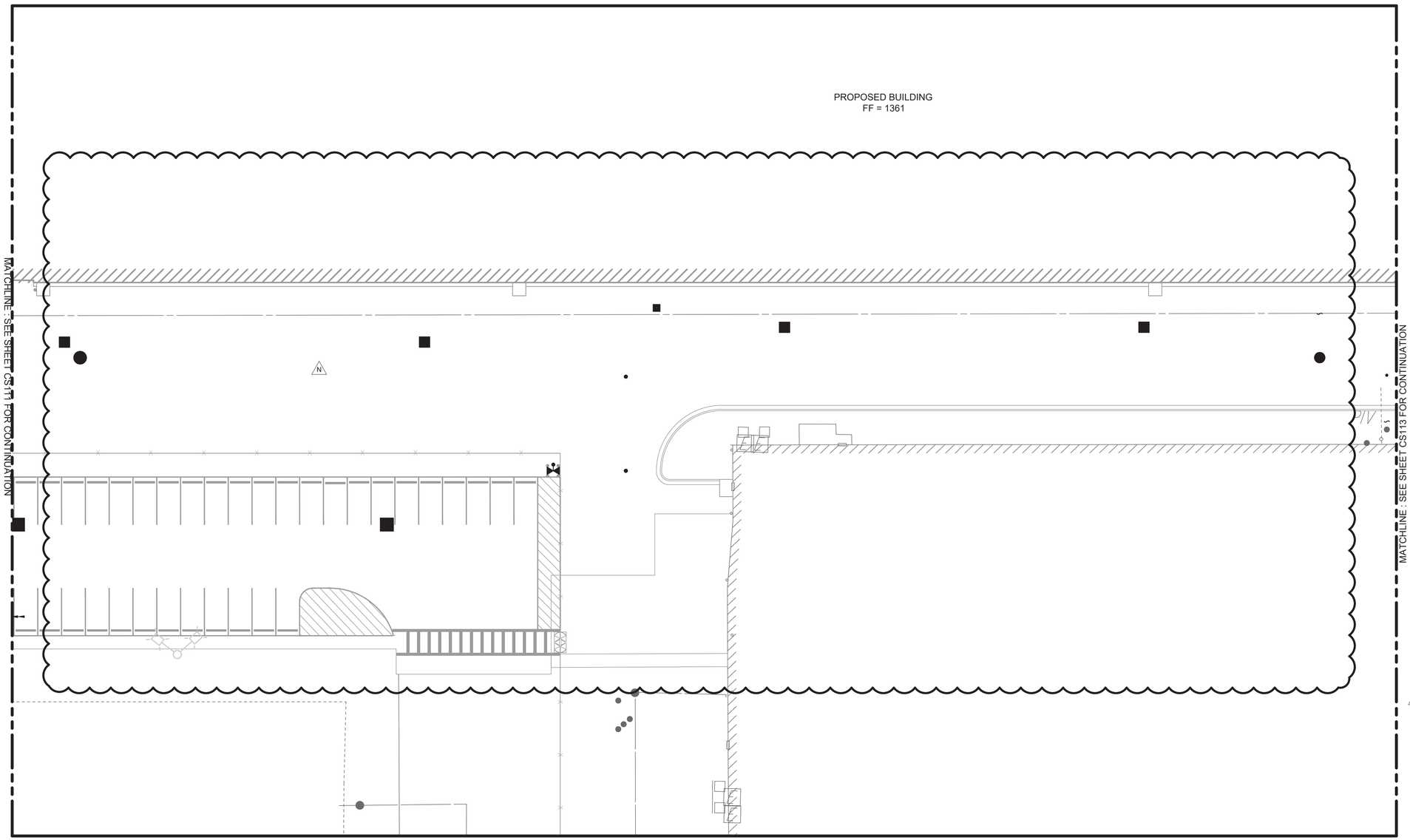
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: J. JENKINS | 03/08/2018 | Designed by: C. KINGSLAND | 03/08/2018

Project No. 6936
Sheet Name: JOINTING PLAN 1
Sheet CS111 of XX
Drawing No. 108M-115-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

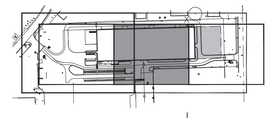


JOINTING PLAN 2

0 10' 20' 40'

SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
E	03/29/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
F	04/12/2018	PKG 1A SITE WORK - IFC - ADD3	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A SITE WORK - REV N	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED
☐ NOT REQUIRED
DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

WICHITA, KS

Drawn by J. JENKINS

Designed by C. KINGSLAND

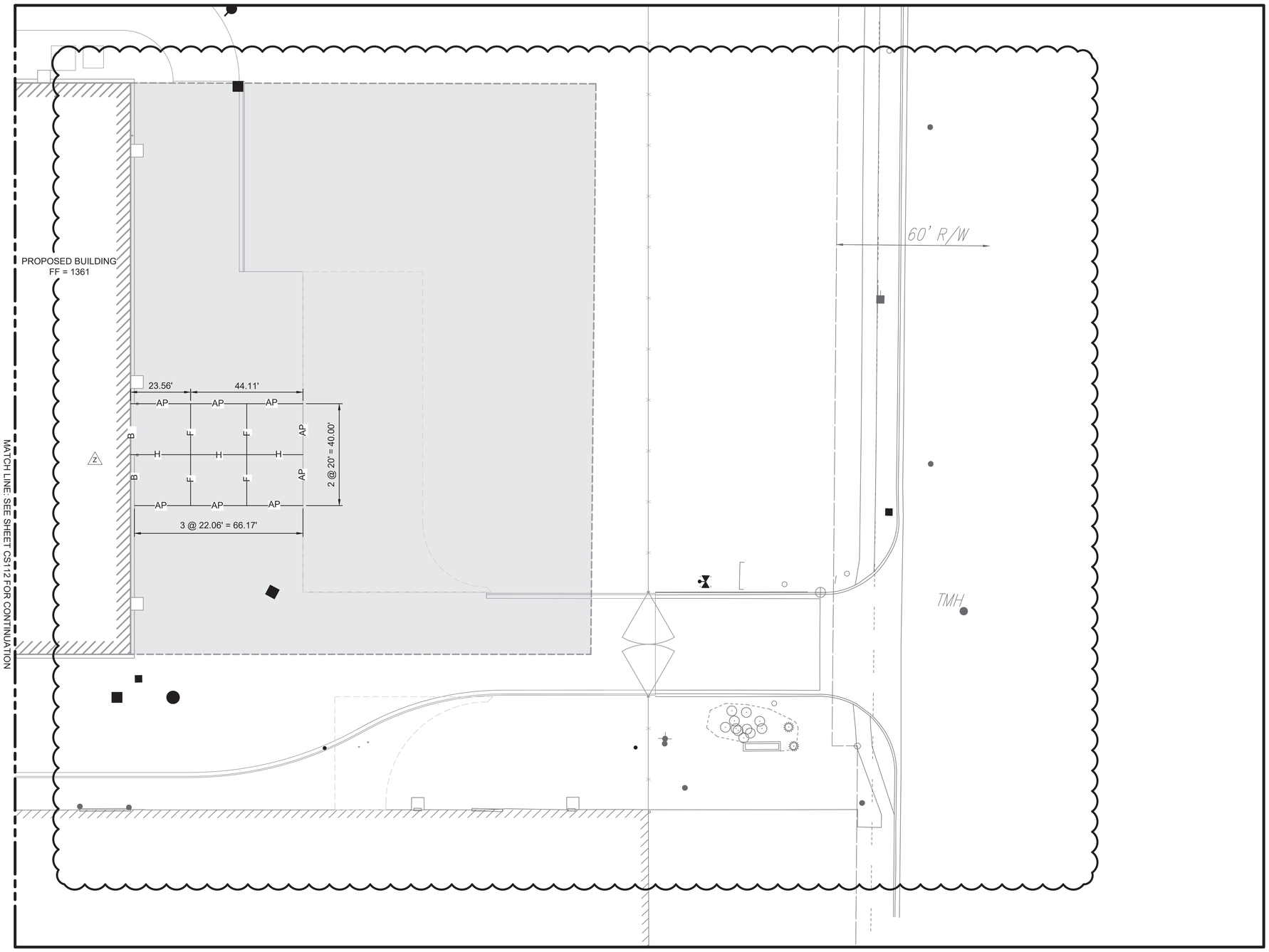
Project No.
6936

Sheet Name:

Sheet CS112 of XX

Drawing No.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND:

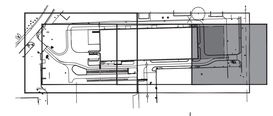
- H — DUMMY CONTRACTION JOINT — 8 / CS501
- F — DOWELED CONTRACTION JOINT — 10 / CS501
- B — THICKENED EDGE ISOLATION JOINT — 12 / CS501
- A1 — DOWELED EXPANSION JOINT — 6 / CS501
- AP — ASPHALT PAVEMENT JUNCTURE — 1 / CS503

JOINTING PLAN 3

0 10' 20' 40'

SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
A — 03/09/2018 — PKG 1A - SITE WORK - IFC	CAK	NT
E — 03/29/2018 — PKG 1A- SITE WORK - IFC - ADD2	CAK	NT
Z — 11/16/2018 — PKG 1A- SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Drawn by J. JENKINS — 03/08/2018 — Designed by C. KINGSLAND — 03/08/2018

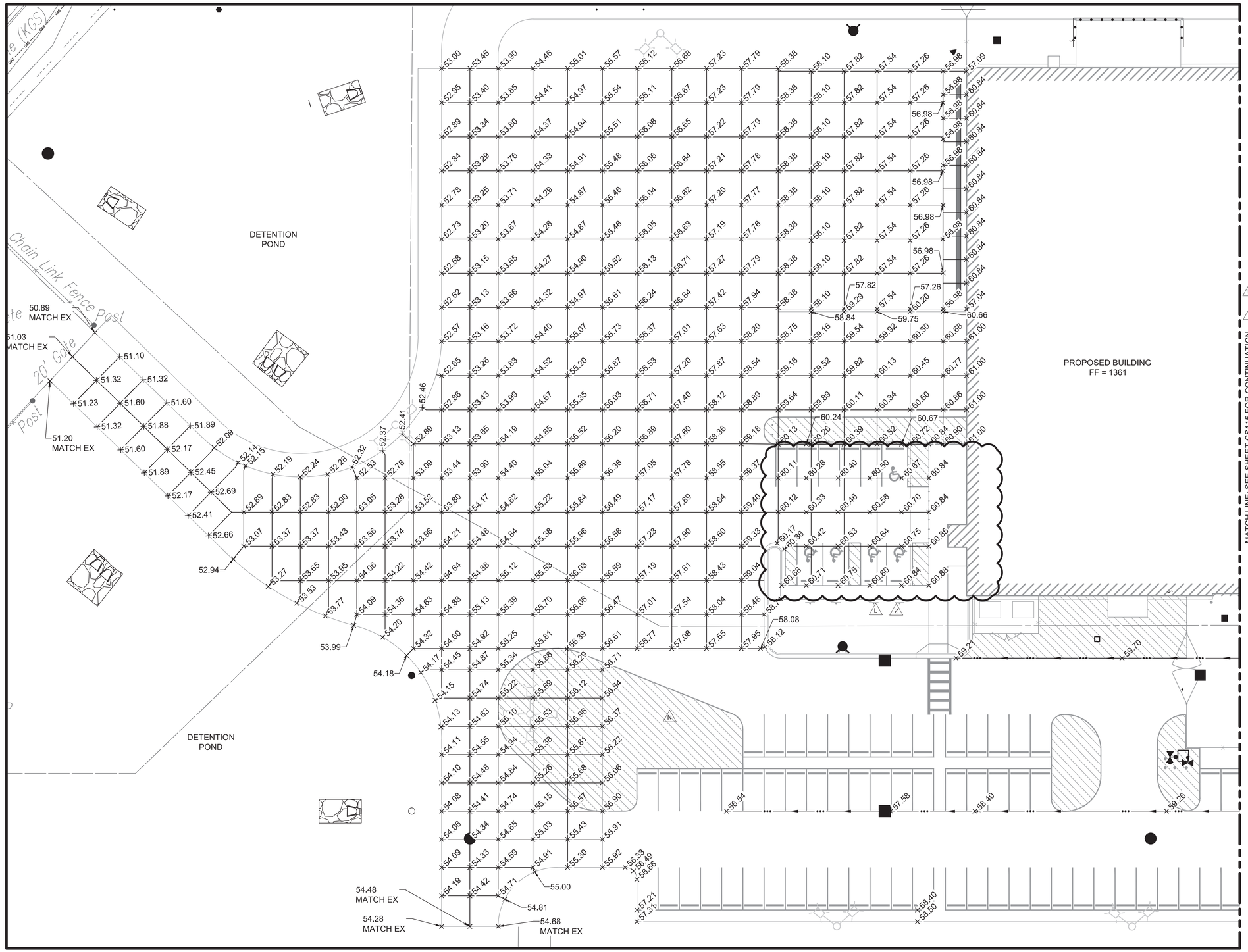
Project No. 6936

Sheet Name: JOINTING PLAN 3

Sheet CS113 of XX

Drawing No. 108M-117-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



NOTE:

1. SUBCONTRACTOR SHALL ADD 1300 FEET TO ALL SPOT ELEVATIONS FOR TRUE ELEVATIONS.

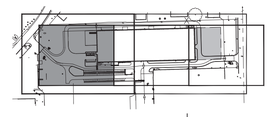
LEGEND:

+ 54.60	SPOT ELEVATION
+ 54.60 MATCH EX	MATCH EXISTING
FF = 1361	FINISH FLOOR

ELEVATION PLAN 1

0 10' 20' 40'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
E	03/29/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
F	04/12/2018	PKG 1A SITE WORK - IFC - ADD3	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A SITE WORK - REV N	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

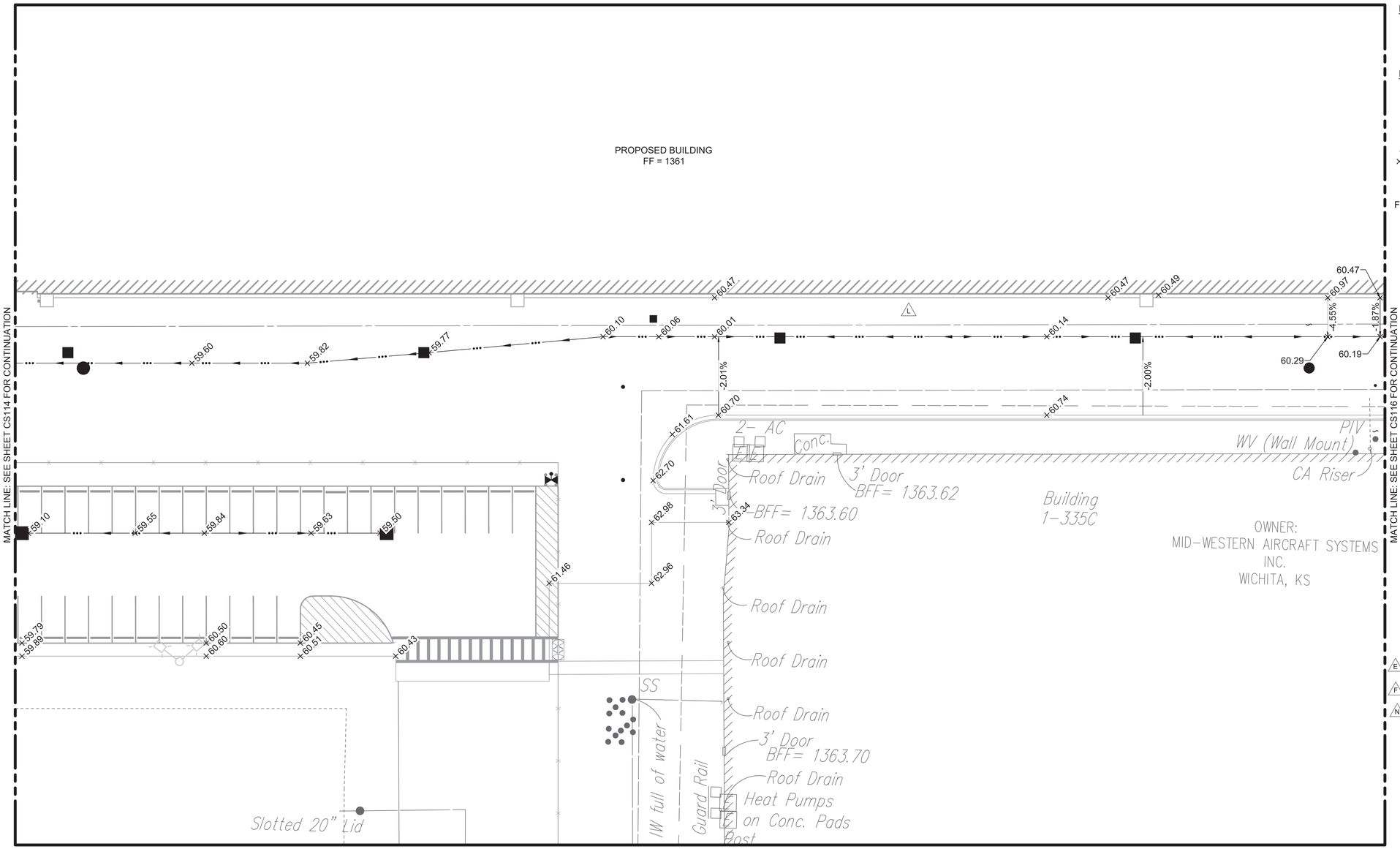
STATE OF KANSAS
WAYNE C. HERBERT
19889
11/16/2018
REGISTERED PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Drawn by: J. JENKINS | 03/08/2018
Designed by: C. KINGSLAND | 03/08/2018

Project No.
6936
Sheet Name:
ELEVATION PLAN 1
Sheet CS114 of XX
Drawing No.
108M-118-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC.. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



NOTE:

1. SUBCONTRACTOR SHALL ADD 1300 FEET TO ALL SPOT ELEVATIONS FOR TRUE ELEVATIONS.

LEGEND:

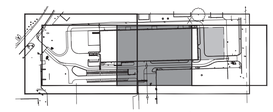
+54.60	SPOT ELEVATION
+54.60 MATCH EX	MATCH EXISTING
FF = 1361	FINISH FLOOR

ELEVATION PLAN 2

0 10' 20' 40'

SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2399

△	DATE	DESCRIPTION	BY	APPROVED
E	03/29/2018	PKG 1A: SITE WORK - IFC - ADD2	CAK	NT
F	04/12/2018	PKG 1A: SITE WORK - IFC - ADD3	CAK	NT
L	06/01/2018	PKG 1A: SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A: SITE WORK - REV N	CAK	NT
Z	11/16/2018	PKG 1A: SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED
☐ NOT REQUIRED

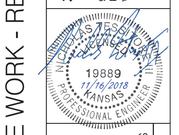
DATE _____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

WICHITA, KS

Drawn by: J. JENKINS | 03/08/2018
Designed by: C. KINGSLAND | 03/08/2018

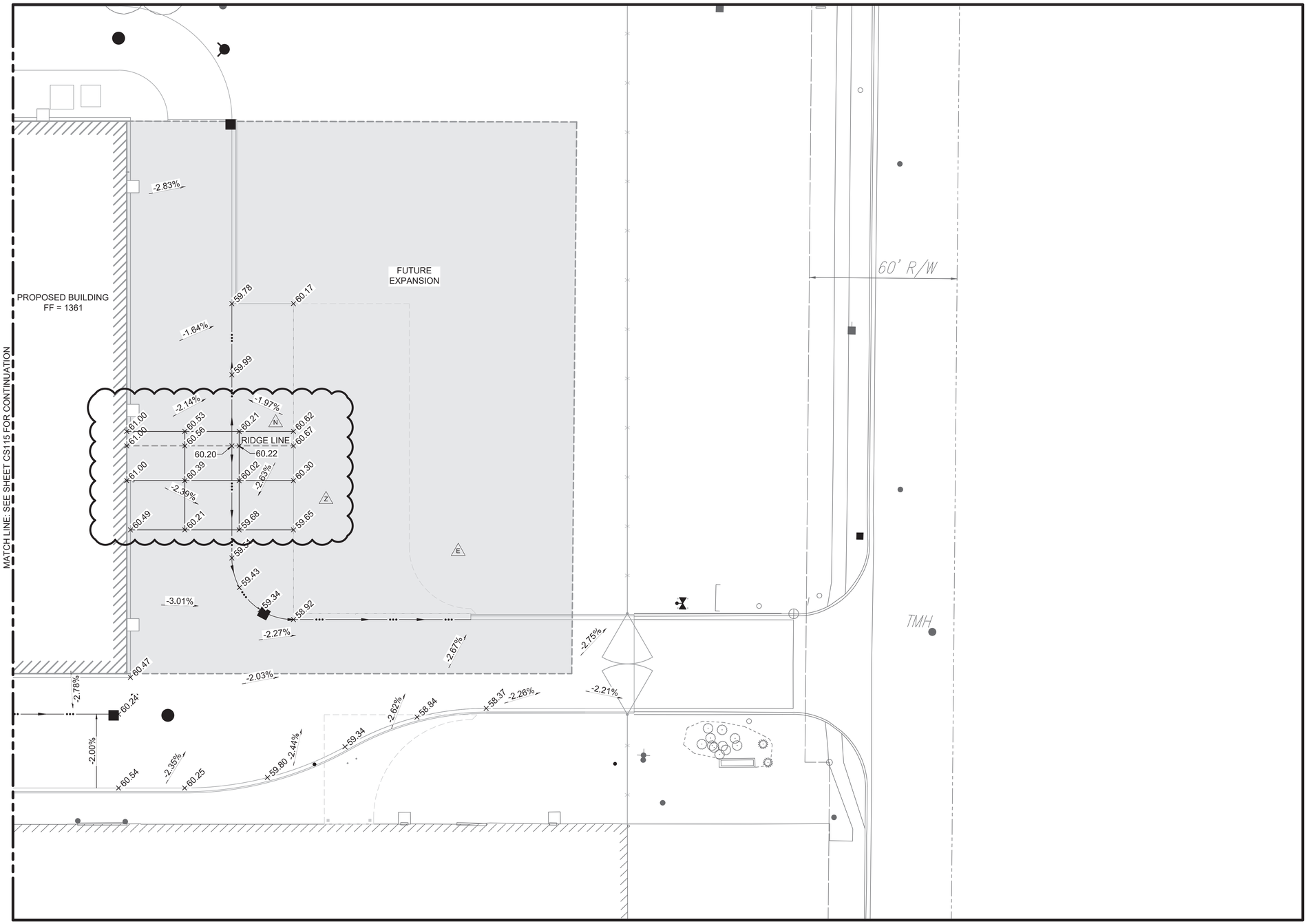
Project No.
6936

Sheet Name:
ELEVATION PLAN 2

Sheet CS115 of XX

Drawing No.
108M-119-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



NOTE:

1. SUBCONTRACTOR SHALL ADD 1300 FEET TO ALL SPOT ELEVATIONS FOR TRUE ELEVATIONS.

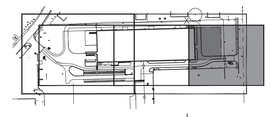
LEGEND:

+ 54.60	SPOT ELEVATION
+ 54.60 MATCH EX	MATCH EXISTING
FF = 1361	FINISH FLOOR

ELEVATION PLAN 3

0 10' 20' 40'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
PKG 1A SITE WORK - IFC	CAK	NT
PKG 1A SITE WORK - IFC - ADD2	CAK	NT
PKG 1A SITE WORK - REV N	CAK	NT
PKG 1A SITE WORK - REV Z	CAK	NT

△	DATE
A	03/09/2018
E	03/26/2018
N	06/22/2018
Z	11/16/2018

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Drawn by J. JENKINS | 06/19/2018 | Designed by C. KINGSLAND

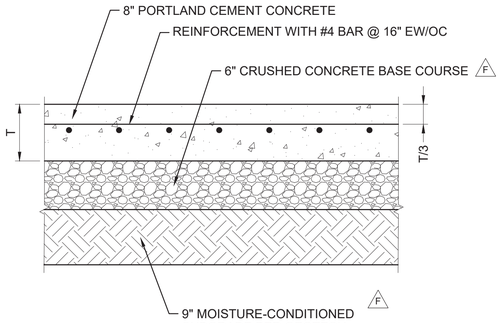
Project No.
6936

Sheet Name:
ELEVATION PLAN 3

Sheet CS116 of XX

Drawing No.
108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

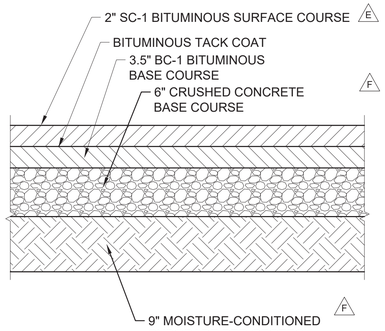


NOTES:

1. REFER TO CIVIL SPECIFICATION 312000 FOR SUBGRADE PREPARATION AND MATERIAL REQUIREMENTS.

VEHICULAR CONCRETE PAVEMENT

DETAIL 1 — CS100, CS101, CS102

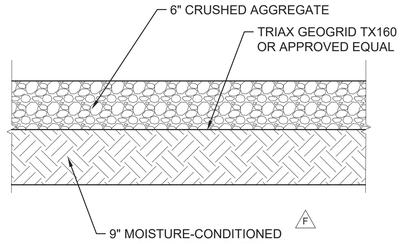


NOTES:

1. REFER TO CIVIL SPECIFICATION 312000 FOR SUBGRADE PREPARATION AND MATERIAL REQUIREMENTS.

VEHICULAR ASPHALT PAVEMENT

DETAIL 2 — CS100, CS101, CS102

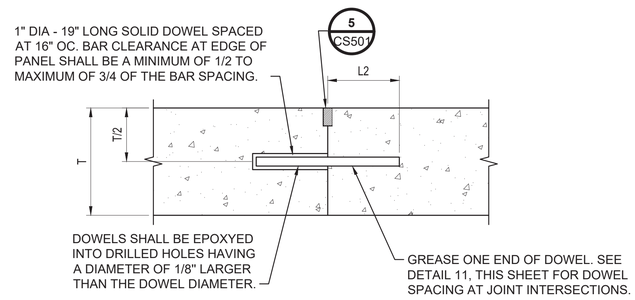


NOTES:

1. REFER TO CIVIL SPECIFICATION 312000 FOR SUBGRADE PREPARATION AND MATERIAL REQUIREMENTS.

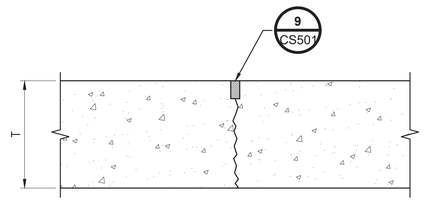
AGGREGATE SURFACE

DETAIL 3 — CS100, CS101, CS102



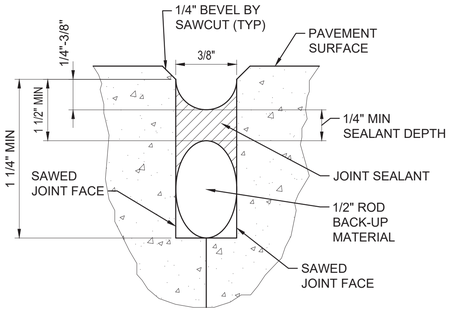
DETAIL 4 — CS113

DOWELED CONSTRUCTION JOINT



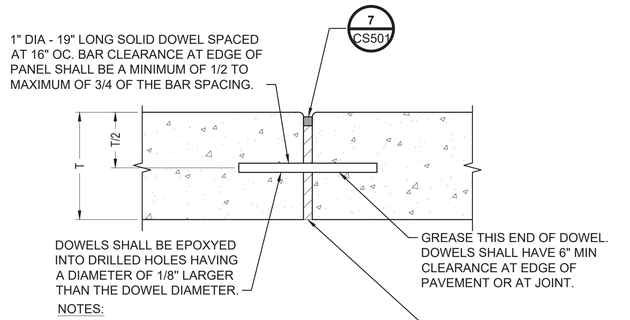
TYPE H - DUMMY CONTRACTION JOINT

DETAIL 8 — CS111, CS112, CS113



CONSTRUCTION JOINT SEALANT

DETAIL 5 — CS501

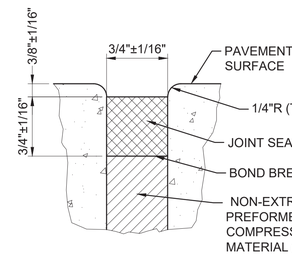


NOTES:

1. SEE SPECIFICATIONS FOR DRILLING METHODS.
2. DOWEL ALIGNMENT TOLERANCES SHALL BE NO MORE THAN 1/4" PER LINEAL FOOT OF DOWEL.
3. SEE SPECIFICATIONS FOR MATERIAL COATING, ETC.

DOWELED EXPANSION JOINT

DETAIL 6 — CS111, CS112, CS113

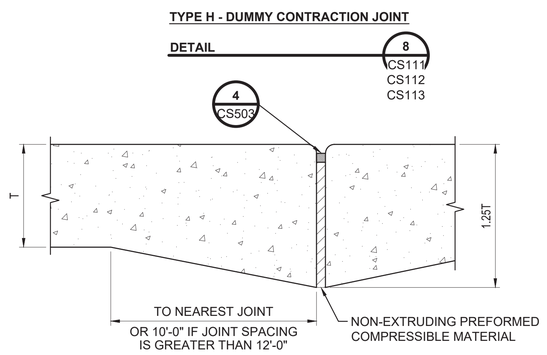


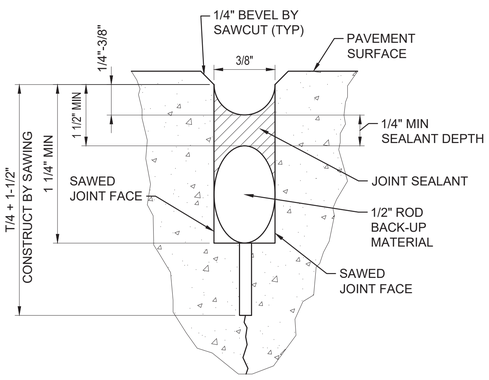
NOTES:

1. PREFORMED JOINT FILLER SHALL CONFORM TO SECTION 1503 OF THE KDOT SPECIFICATIONS AND SHALL BE OF AN ELASTOMERIC TYPE, WITH SHORE A HARDNESS IN THE RANGE OF 20-45.

EXPANSION JOINT SEALANT

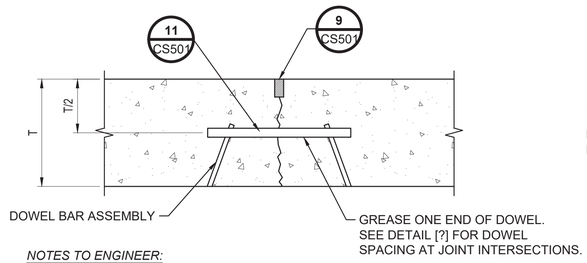
DETAIL 7 — CS501





CONTRACTION JOINT SEALANT

DETAIL 9 — CS501

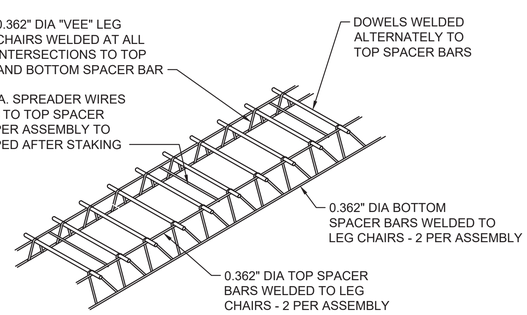


NOTES TO ENGINEER:

1. *SEE DOWEL DESIGN TABLE FOR DOWEL SIZE, LENGTH, AND SPACING.*

TYPE F - DOWELED CONTRACTION JOINT

DETAIL 10 — CS100, CS101, CS102



DOWEL BAR ASSEMBLY
(FOR TYPE A, F, AND D-1 JOINTS)

DETAIL 11 — CS501

THICKENED EDGE ISOLATION JOINT

DETAIL 12 — CS111, CS112, CS113

CONCRETE MIX DESIGN NOTES:

1. CONCRETE MIX DESIGN, CONSTRUCTION, AND QUALITY TESTING SHALL CONFORM TO SECTION 403 OF THE KANSAS DEPARTMENT OF TRANSPORTATION (KDOT) SPECIFICATIONS. REFER TO TABLE 403.1 FOR PRIMARY DESIGN PARAMETERS.
2. FLY ASH SHALL NOT EXCEED 15% BY WEIGHT OF TOTAL CEMENTITIOUS MATERIALS. FLY ASH SHALL CONFORM TO CLASS F REQUIREMENTS. F
3. AGGREGATE BASE SHALL BE AB-1 AGGREGATE IN ACCORDANCE WITH SECTION 1104 OF THE KDOT SPECIFICATIONS, WITH A MAXIMUM OF 3% PASSING THE NO. 200 SIEVE. PREPARE BASE AND COMPACT IN ACCORDANCE WITH SECTION 305 OF THE KDOT SPECIFICATIONS, EXCEPT THAT THE BASE SHALL BE COMPACTED TO 100% STANDARD DENSITY.
4. APPLY MEDIUM BROOM FINISH DURING CURING.

E

ASPHALT MIX DESIGN NOTES:

1. ASPHALT MIX DESIGN SHALL CONFORM TO SECTION 405 OF THE CITY OF WICHITA SPECIFICATIONS. ASPHALT BINDER SHALL BE PG64-22.
2. ASPHALT CONSTRUCTION AND QUALITY TESTING SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS.

	DESCRIPTION	DATE	BY	APPROVED
A	PKG 1A SITE WORK - IFC	03/09/2018	CAK	NT
E	PKG 1A SITE WORK - IFC - ADD2	03/29/2018	CAK	NT
F	PKG 1A SITE WORK - IFC - ADD3	04/12/2018	CAK	NT
Z	PKG 1A SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW
PF REVIEW NOT REQUIRED AS PER NFPA 101
05/07/2018 9:49:28 AM
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED AS NOTED

NAME	DEPT.	DATE
SS	PE	5/10/2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

COMPASS ENGINEERING, LLC
CERTIFICATE OF AUTHORIZATION
E-2009.004
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

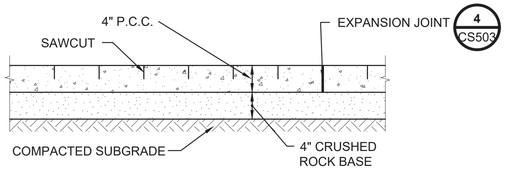
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS

Designed by	C. KINGSLAND	03/08/2018
Drawn by	J. JENKINS	03/08/2018
BLDG-1-338G		

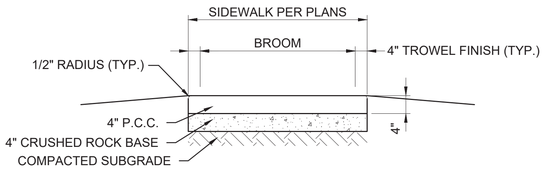
16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Project No. 6936
Sheet Name: SITE DETAILS 1
Sheet CS501 of XX
Drawing No. 108M-121-XXX

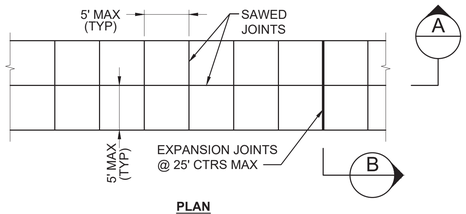
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SECTION A



SECTION B



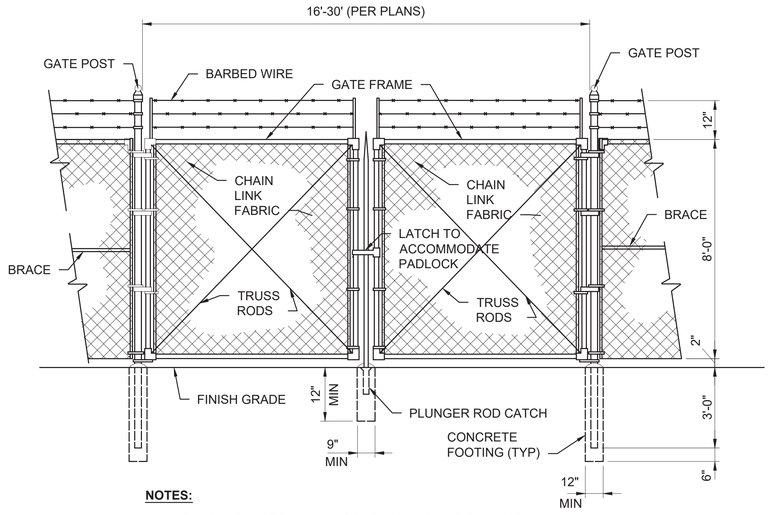
PLAN

NOTES:

1. BROOM FINISH SHALL BE APPLIED NORMAL TO DIRECTION OF TRAFFIC.
2. SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CIVIL SPECIFICATIONS.

TYPICAL SIDEWALK DETAIL

DETAIL NOT TO SCALE — **1** (CS100, CS101, CS102)

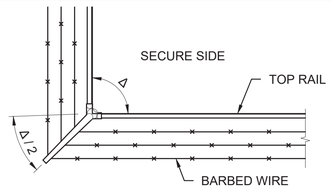


NOTES:

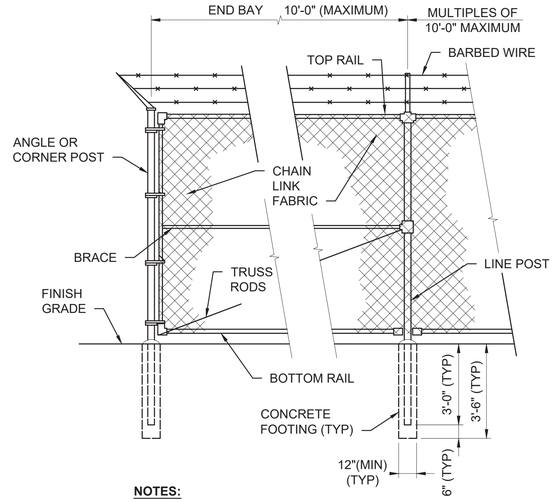
1. SUBCONTRACTOR SHALL CONFIRM EXISTING SECURITY FENCE HEIGHT NEXT TO THE ABLAH BUILDING AND PROVIDE GATE MATCHING EXISTING HEIGHTS AND FINISHES.

DOUBLE-SWING GATE

DETAIL — **3** (CS100, CS101, CS102)



SECURITY FENCE - CORNER PLAN

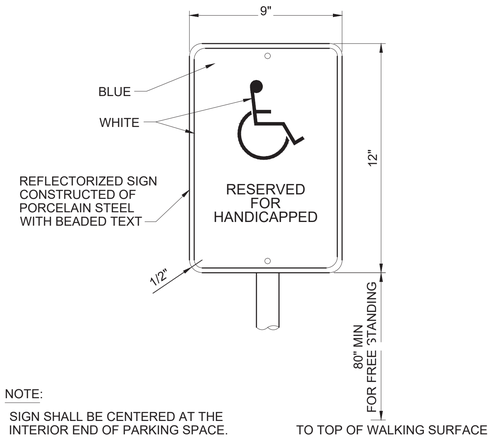


NOTES:

1. SUBCONTRACTOR SHALL CONFIRM EXISTING SECURITY FENCE HEIGHT NEXT TO THE ABLAH BUILDING AND PROVIDE FENCE MATCHING EXISTING HEIGHTS AND FINISHES.

SECURITY FENCE

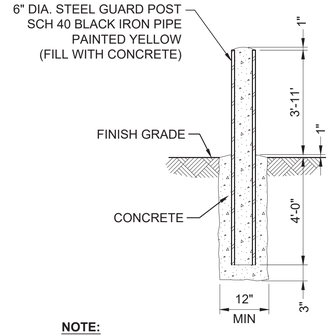
DETAIL — **2** (CS101, CS102)



NOTE:
SIGN SHALL BE CENTERED AT THE INTERIOR END OF PARKING SPACE.

HANDICAPPED PARKING STALL SIGN

DETAIL — **4** (CS100, CS101, CS102)

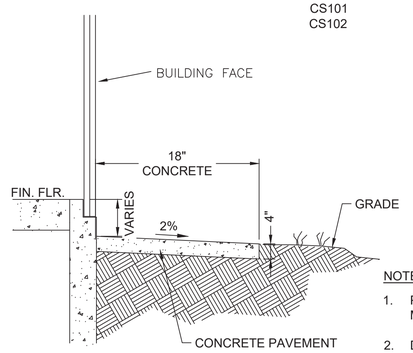


NOTE:

1. BOLLARDS SHALL BE PLACED A MINIMUM OF 18" FROM WALL, TO CENTER OF BOLLARD WHERE APPLICABLE.

TYPICAL BOLLARD

DETAIL — **5** (CS100, CS101, CS102)

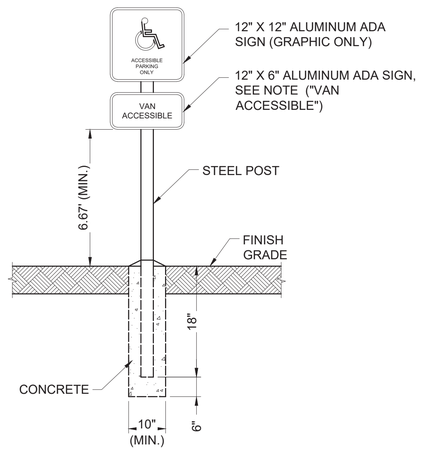


NOTE:

1. PROVIDE TOOLED JOINT EVERY 10', 15' MAX SPACING.
2. DIFFERENTIAL GRADE FROM INTERIOR AND EXTERIOR GRADE VARIES. NORTH FACE OF WAREHOUSE IS 12" AND ELSEWHERE IS 6". SEE GRADING PLAN FOR MORE DETAILS.

HOUSEKEEPING STRIP

DETAIL — **6** (CS101)



NOTES:

1. VAN ACCESSIBLE SIGN SHALL ONLY BE PLACED ON VAN POSITIONS AS SHOWN ON SHEET C103.

SIGN POST

DETAIL — **7** (CS100, CS101, CS102)

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A, SITE WORK - IFC	CAK	NT
Z 11/16/2018 PKG 1A, SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
PF REVIEW NOT REQUIRED
PER IBC 2012 SECTION 104.7
05/07/2018 9:49:28 AM

☐ APPROVED
☐ NOT REQUIRED
DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5/10/2018

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

REGISTERED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS

Facilities Engineering

AUTOMATED WAREHOUSE

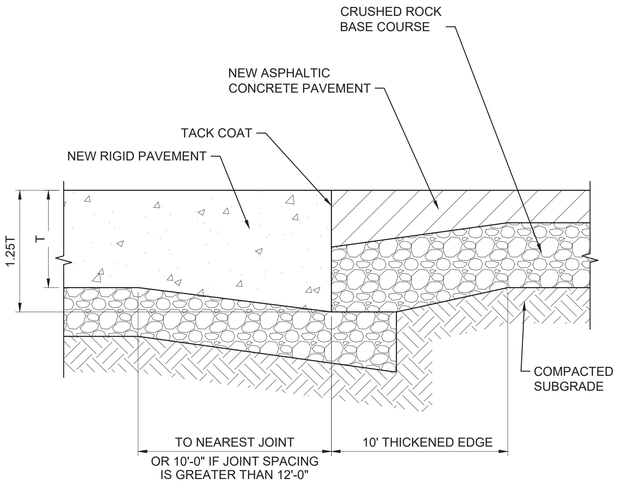
WICHITA, KS

BLDG-1-338G

Designed by C. KINGSLAND 02/23/2018
Drawn by J. JENKINS 02/23/2018

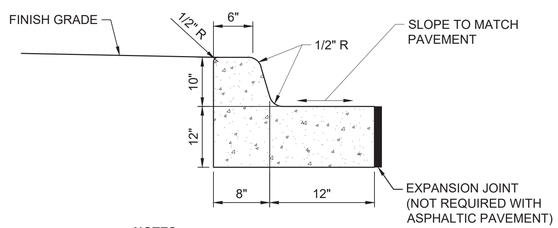
Project No. 6936
Sheet Name: SITE DETAILS 2
Sheet CS502 of XX
Drawing No. 108M-122-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC., ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PAVEMENT JUNCTURE BETWEEN NEW RIGID PAVEMENT AND ASPHALTIC PAVEMENT

DETAIL 1 — CS111, CS112 — N

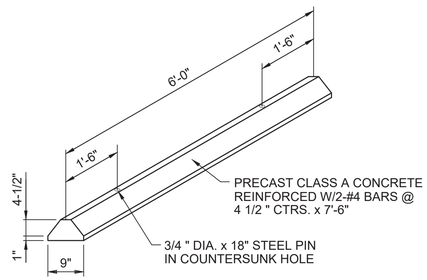


NOTES:

1. PLACE 3/4" EXPANSION JOINTS WITH 24" DOWELS AT RADIUS POINTS OR A MAXIMUM OF 60' ON STRAIGHT SECTIONS. THESE DOWELS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. INSTALL 1 1/2" DEEP CONTRACTION JOINTS AT APPROXIMATELY 15' INTERVALS. THESE JOINTS SHALL PASS THROUGH THE ENTIRE CURB SECTION.

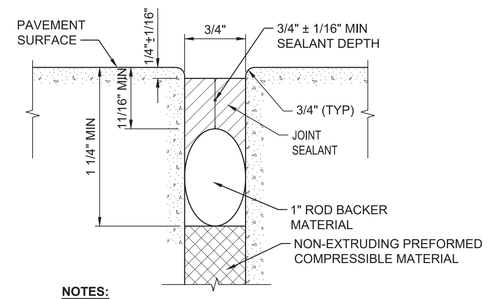
CURB AND GUTTER

DETAIL 2 — CS101, CS102



PRECAST CONCRETE PARKING BLOCK

DETAIL 3 — CS101, CS102

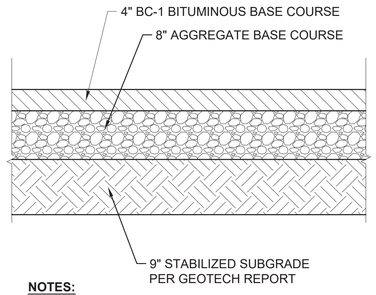


NOTES:

1. PROVIDE 1/4" RADIUS TO EXISTING PAVEMENT EDGE.

ISOLATION JOINT SEALING

DETAIL 4 — CS501

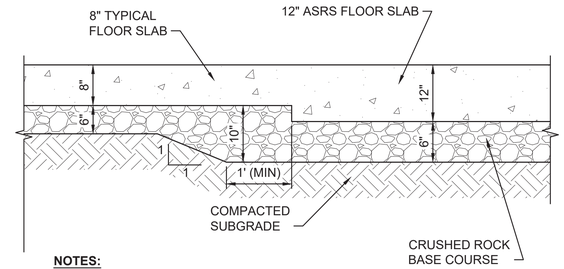


NOTES:

1. REFER TO CIVIL SPECIFICATION 312000 FOR SUBGRADE PREPARATION AND MATERIAL REQUIREMENTS.

TEMPORARY PAVEMENT

DETAIL 6 — CS100, CS101, CS102 — N, C



NOTES:

1. REFER TO CIVIL SPECIFICATION 312000 AND THE GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION AND MATERIAL REQUIREMENTS.

SUBGRADE PREPARATION AT FLOOR SLAB JUNCTURES

DETAIL 8 — CS100, CS101, CS102 — N, I

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2399

	DESCRIPTION	DATE	BY	APPROVED
A	PKG 1A SITE WORK - IFC	03/09/2018	CAK	NT
E	PKG 1A SITE WORK - IFC - ADD2	03/26/2018	CAK	NT
I	PKG 1A SITE WORK - IFC - ED/N02	04/27/2018	CAK	NT
N	PKG 1A SITE WORK - REV N	06/22/2018	CAK	NT
Z	PKG 1A SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW — APPROVED — NOT REQUIRED — DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

CHRISTOPHER A. KINGSLAND — 19889 — 11/16/2018 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by J. JENKINS | 03/08/2018 | Designed by C. KINGSLAND | 03/08/2018

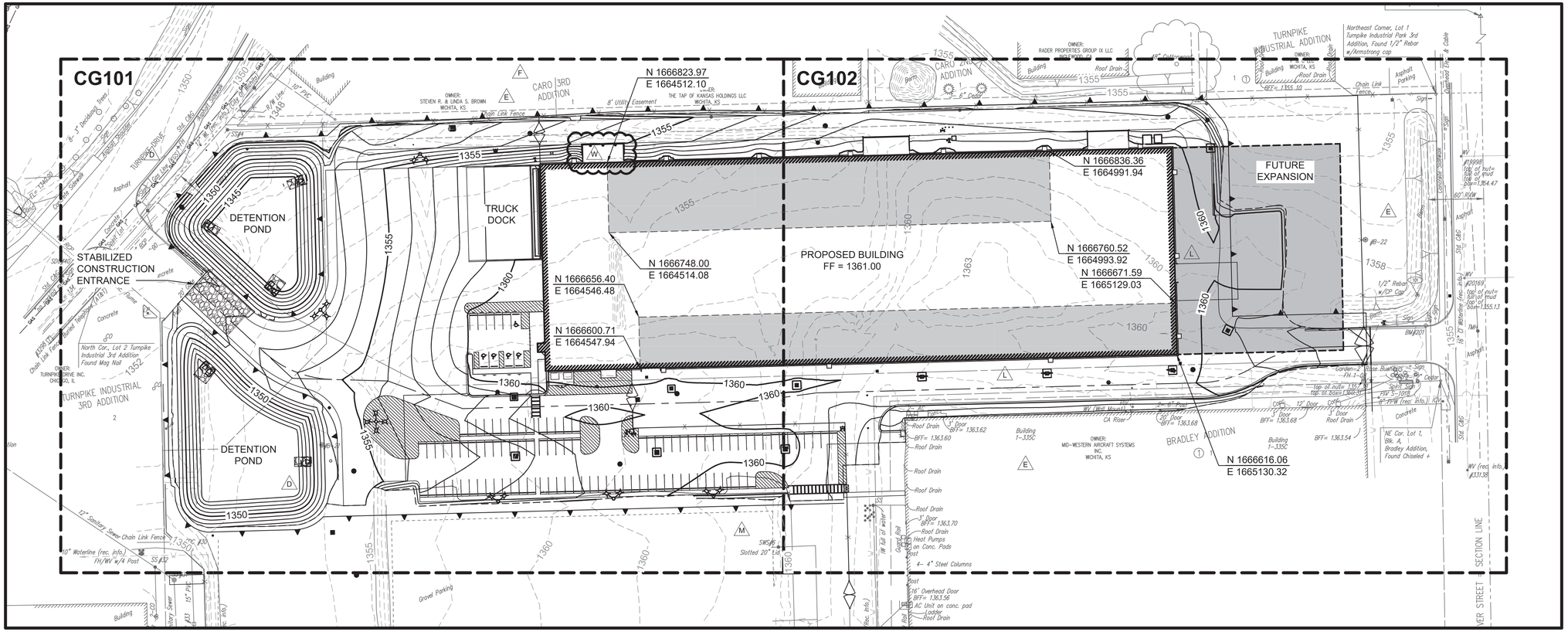
Project No. 6936

Sheet Name: SITE DETAILS 3

Sheet CS503 of XX

Drawing No. 108M-123-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



EROSION AND SEDIMENT CONTROL NOTES

BEST MANAGEMENT PRACTICES

1. CONSTRUCTION ACTIVITY POLLUTION PREVENTION IS REQUIRED FOR THIS PROJECT. PREVENTION OF POLLUTION RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE ACCOMPLISHED BY CONTROLLING SOIL EROSION, WATERWAY SEDIMENTATION, AND AIRBORNE DUST GENERATION. SUBCONTRACTOR SHALL ENSURE THAT NO SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES INFRINGES ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COORDINATE EROSION AND SEDIMENT CONTROL WITH OTHER CONSTRUCTION ENTITIES PERFORMING WORK ON ADJACENT PROPERTIES.

2. SOIL EROSION AND SEDIMENT CONTROLS ARE MEASURES USED TO REDUCE THE AMOUNT OF SOIL PARTICLES THAT ARE CARRIED OFF AN AREA AND DEPOSITED INTO A DRAINAGE COLLECTION SYSTEM OR INTO A BODY OF WATER. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENTATION ARE CONTROLLED TO THE EXTENT PRACTICABLE. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. PRIOR TO INITIATING CONSTRUCTION IN AN AREA, ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE. UPON PROJECT COMPLETION ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

3. TEMPORARY EROSION CONTROL SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY, WHO SHALL UTILIZE APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS). THOSE BMPS SHALL CONSIST OF SILT FENCE, WATTLES OR OTHER MEANS TO CONTROL EROSION AS NEEDED. THE SUBCONTRACTOR SHALL PROVIDE AND FOLLOW THE EROSION AND SWPPP PLANS AS NEEDED.

4. SUBCONTRACTOR SHALL PLACE SILT FENCE AS SHOWN PRIOR TO BEGINNING WORK. THE DEVICES SHALL BE PLACED DOWN-SLOPE OF DISTURBED AREAS WHERE SHEET EROSION WOULD OCCUR. SILT FENCE SHALL BE CLEANED AND REPAIRED WHEN SEDIMENT BUILDUP REACHES ONE-THIRD OF SILT FENCE HEIGHT. AFTER SIGNIFICANT RUNOFF EVENTS, THE SUBCONTRACTOR SHALL INSPECT ALL EROSION CONTROL STRUCTURES FOR SILT BUILD-UP THAT INTERFERES WITH THE PERFORMANCE OF THE EROSION CONTROL STRUCTURE AND REPAIR OR REPLACE THOSE STRUCTURES, AS NECESSARY.

5. ALL STORM DRAIN INLETS SHALL BE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION, UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGE TO THE INLETS HAVE BEEN STABILIZED.

6. ALL EXISTING DRAIN INLETS SHALL HAVE SEDIMENT SOCK PROTECTION INSTALLED IN ACCORDANCE WITH DETAIL ON DRAWING CS501. EROSION PROTECTION MAY BE REMOVED WHEN VEGETATION IS ESTABLISHED.

7. SUBCONTRACTOR SHALL INSTALL A STABILIZED CONSTRUCTION ENTRANCE AT LOCATIONS WHERE CONSTRUCTION TRAFFIC SHALL ENTER THE PROJECT SITE FROM ROADWAYS AND PAVEMENTS. SEE DETAIL ON DRAWING CS501.

8. STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED IN YARD DURING CONSTRUCTION.

9. CONSTRUCTION STOCKPILE AREA SHALL BE SEEDED/SOD AS PERMANENT STABILIZATION, AFTER THE COMPLETION OF CONSTRUCTION.

10. TEMPORARY OR PERMANENT GROUND COVER SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.

11. SUBCONTRACTOR SHALL INSTALL REINFORCED SILT FENCE AROUND ALL INLETS AND FLARED END SECTIONS, AS DETAILED ON DRAWING CG502. AREA INLETS TO RECEIVE PAVING SHALL HAVE "CURB INLET PROTECTION" INSTALLED UPON COMPLETION OF THE APPLICABLE PAVING OPERATIONS, AS DETAILED ON DRAWING CG501. (D)

GENERAL GRADING NOTES:

1. PROPOSED ELEVATIONS INDICATED ARE FOR TOP OF FINAL GRADE, PAVEMENT, OR STRUCTURE UNLESS INDICATED OTHERWISE.

2. ELEVATION DENOTED AS "MATCH" ARE INTENDED TO MEET EXISTING GRADE ELEVATIONS. SUBCONTRACTOR SHALL VERIFY ELEVATIONS AT TIE-INS AND MATCH POINTS PRIOR TO BEGINNING CONSTRUCTION.

3. EXTERIOR FINISH GRADES AT BUILDING ENTRANCES AND DOORWAY THRESHOLDS SHALL BE MAXIMUM 0.25 INCHES BELOW BUILDING FINISH FLOOR IF A VERTICAL THRESHOLD IS PROVIDED, AND SHALL BE MAXIMUM 0.5 INCHES BELOW BUILDING FINISH FLOOR IF A BEVELED THRESHOLD IS PROVIDED, UNLESS INDICATED OTHERWISE.

4. EXTERIOR FINISH GRADES ADJACENT TO BUILDING ON THE NORTH SIDE SHALL BE 12 INCHES BELOW BUILDING FINISH FLOOR UNLESS INDICATED OTHERWISE. SEE SPOT ELEVATIONS LISTED FOR THE OTHER THREE SIDES OF THE BUILDING.

OVERALL GRADING PLAN

0 60' 120'
SCALE IN FEET

NORTH

EARTHWORK

CUT = 13,458 C.Y.
FILL = 25,397 C.Y.
BORROW = 11,939 C.Y.

TOTAL DISTURBED AREA = 10.18 ACRES (443,569 SQ. FT.)

PROPOSED BUILDING = 3.53 ACRES (153553 SQ. FT.)

5. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE FEATURE OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER SUBJECT TO THE APPROVAL OF THE CONTRACTOR.

6. SURFACES AROUND FACILITY SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND PAVEMENTS.

7. THE SUBCONTRACTOR SHALL REMOVE STANDING WATER FROM THE PROJECT WORK LIMITS AS NECESSARY TO PROTECT SUBGRADE, SUBBASE, AND/OR BASE COURSE OF NEW PAVEMENT, SURROUNDING PAVEMENT-TO-REMAIN, OR OTHER COMPLETED WORKS.

8. SEE DRAWINGS CG101-CG102 FOR RECOMMENDED BEST PRACTICES FOR SEDIMENT AND EROSION CONTROL.

9. TOP ELEVATION OF ALL UTILITY STRUCTURES TO REMAIN SHALL BE ADJUSTED ACCORDINGLY TO FINISH GRADE ELEVATION.

10. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE SPECIFICATIONS.

11. ACCESSIBLE PARKING SHALL NOT HAVE A CROSS-SLOPE THAT EXCEEDS 2.00 PERCENT IN ANY DIRECTION.

12. FINISH GRADE OF CONCRETE STOOPS AT BUILDING DOORWAYS SHALL MATCH FINISH FLOOR OF BUILDING AND SLOPE AWAY FROM THE BUILDING AT 2.00 PERCENT UNLESS NOTED OTHERWISE.

13. SEE DETENTION POND CALL-OUTS FOR POND BOTTOM ELEVATIONS. GRADE POND AT 4:1 SLOPE FROM THE POND BOTTOM TO THE ELEVATIONS INDICATED.

LEGEND

- AREA INLET PROTECTION — CG502
- CURB INLET PROTECTION — CG501
- SILT FENCE — CG502
- SEED/SOD (PERMANENT STABILIZATION POST CONSTRUCTION)
- SEDIMENT SOCK
- STABILIZED CONSTRUCTION ENTRANCE — CG501
- SUBGRADE PREPARATION TO ELEVATION 1359.67 — (1)/(L)

KEYED NOTE:

(L) 1 CIVIL SUBCONTRACTOR SHALL PREPARE BUILDING PAD TO ELEVATION 1359.67 IN THE AREAS DENOTED. FOR ALL OTHER AREA WITHIN THE BUILDING FOOTPRINT, SUBCONTRACTOR SHALL PREPARE BUILDING PAD TO ELEVATION 1360.33. REFER TO DETAIL 8 ON CS503 FOR SUBGRADE PREPARATION AT DIFFERING FLOOR SLAB JUNCTURES.

BY	APPROVED
CAK	NT
CAK	NT
CAK	NT
CAK	NT
CAK	NT

	DATE	DESCRIPTION
M	06/13/2018	PKG 1A SITE WORK - REV M
N	06/22/2018	PKG 1A SITE WORK - REV N
V	09/28/2018	PKG 1A SITE WORK - REV V
W	10/26/2018	PKG 1A SITE WORK - REV W
Z	11/16/2018	PKG 1A SITE WORK - REV Z

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED.

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

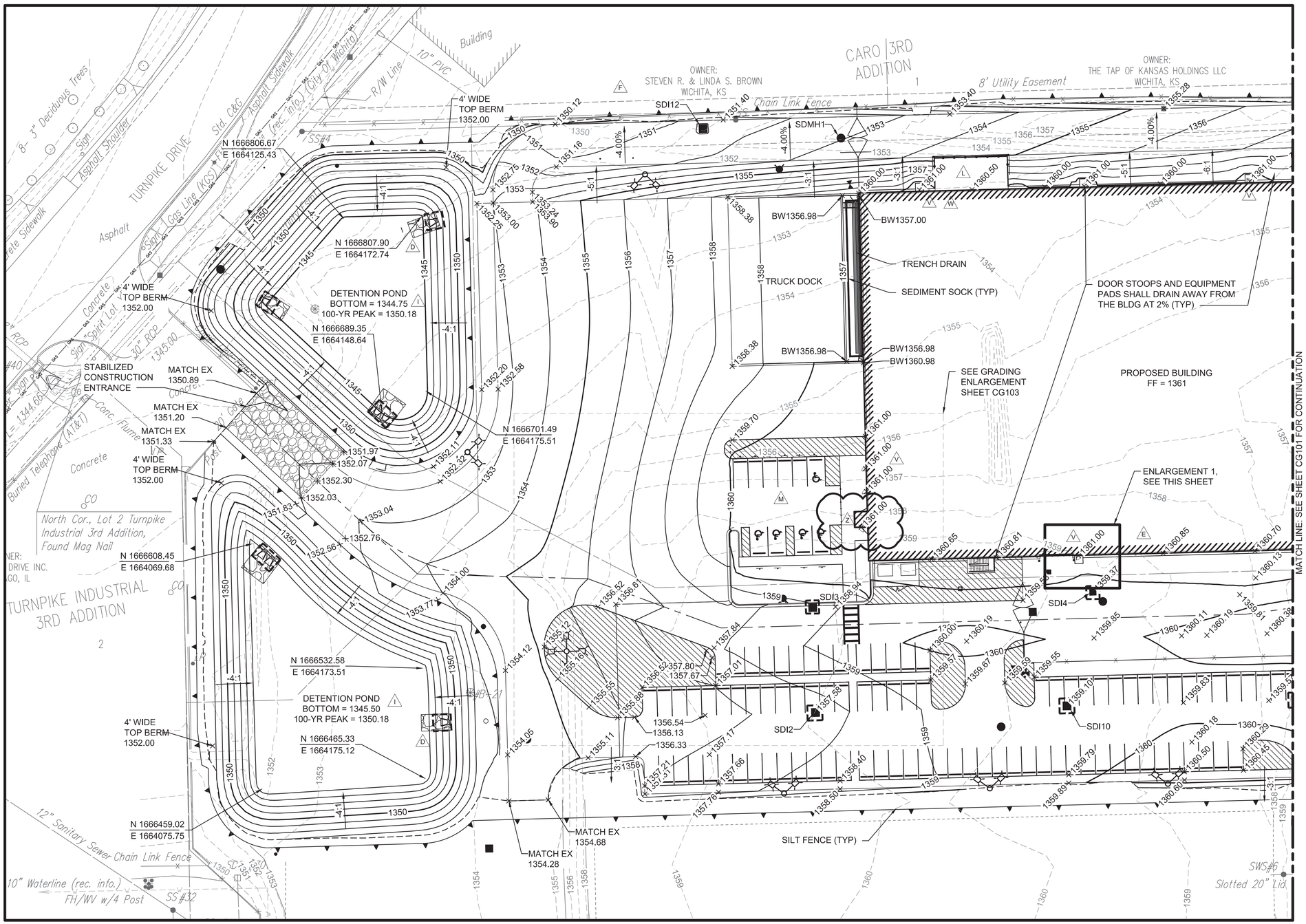
CERTIFICATE OF AUTHORIZATION
E-1459
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. KINGSLAND 02/19/18
Drawn by J. JENKINS 02/19/18

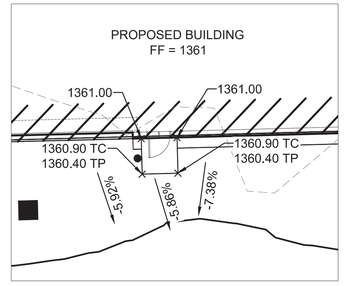
Project No. 6936
Sheet Name: GRADING PLAN
Sheet CG100 OF XX
Drawing No. 108M-124-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

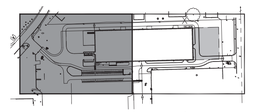
- AREA INLET PROTECTION — CG502
- CURB INLET PROTECTION — CG501
- SILT FENCE — CG502
- SEED/SOD (PERMANENT STABILIZATION POST CONSTRUCTION)
- SEDIMENT SOCK
- STABILIZED CONSTRUCTION ENTRANCE — CG501
- +1361.00 SPOT ELEVATION
- +TC1361.00 TOP CURB ELEVATION
- +BC1361.00 BOTTOM CURB ELEVATION



M ENLARGEMENT 1
1' = 10'

GRADING PLAN 1
0 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	APPROVED
CAK	NT
CAK	NT
CAK	NT
CAK	NT
CAK	NT

	DATE	DESCRIPTION
M	06/13/2018	PKG 1A SITE WORK - REV M
N	06/22/2018	PKG 1A SITE WORK - REV N
V	09/28/2018	PKG 1A SITE WORK - REV V
W	10/26/2018	PKG 1A SITE WORK - REV W
Z	11/16/2018	PKG 1A SITE WORK - REV Z

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

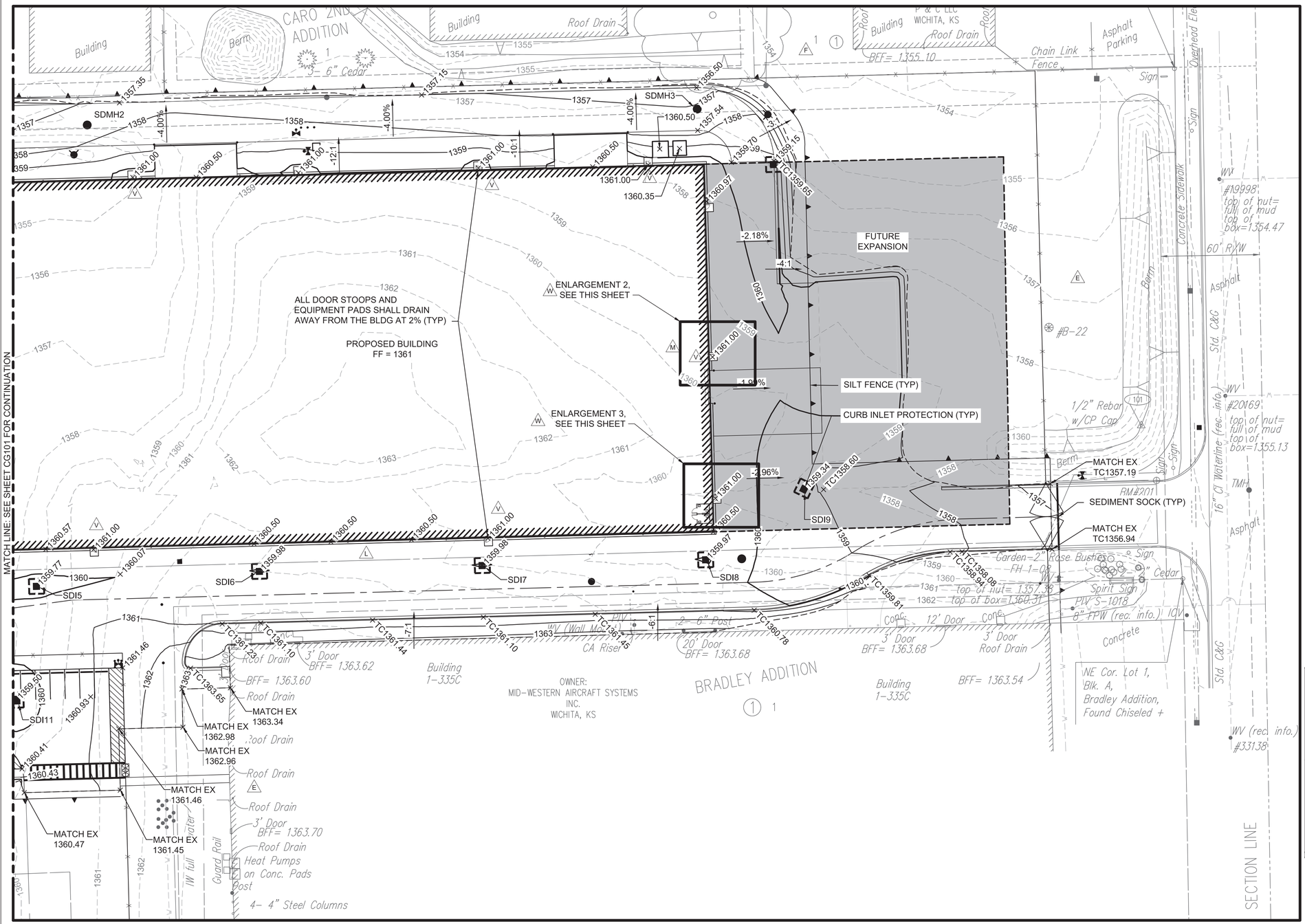
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS | 02/19/18
Designed by: C. KINGSLAND | 02/19/18

Project No.
6936
Sheet Name:
GRADING PLAN
Sheet CG101 of XX
Drawing No.
108M-125-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CG101 FOR CONTINUATION

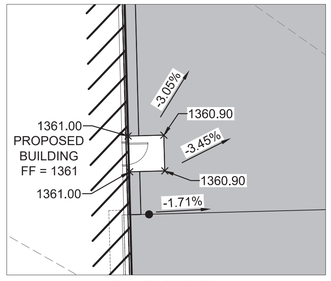


GRADING PLAN 2

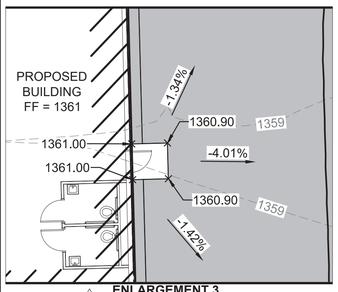
0 30' 60'

SCALE IN FEET

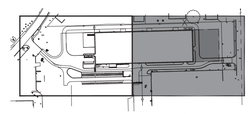
NORTH



ENLARGEMENT 2
1" = 10'



ENLARGEMENT 3
1" = 10'



KEY PLAN
NOT TO SCALE

NORTH

LEGEND

- AREA INLET PROTECTION — CG502, CG503
- CURB INLET PROTECTION — CG501
- SILT FENCE — CG502
- SEED/SOD (PERMANENT STABILIZATION POST CONSTRUCTION)
- SEDIMENT SOCK
- STABILIZED CONSTRUCTION ENTRANCE — CG501
- +1361.00 SPOT ELEVATION
- +TC1361.00 TOP CURB ELEVATION
- +BC1361.00 BOTTOM CURB ELEVATION

	DATE	DESCRIPTION	BY	APPROVED
M	06/13/2018	PKG 1A SITE WORK - REV M	CAK	NT
N	06/22/2018	PKG 1A- SITE WORK - REV N	CAK	NT
V	09/28/2018	PKG 1A- SITE WORK - REV V	CAK	NT
W	10/26/2018	PKG 1A- SITE WORK - REV W	CAK	NT
Z	11/16/2018	PKG 1A- SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

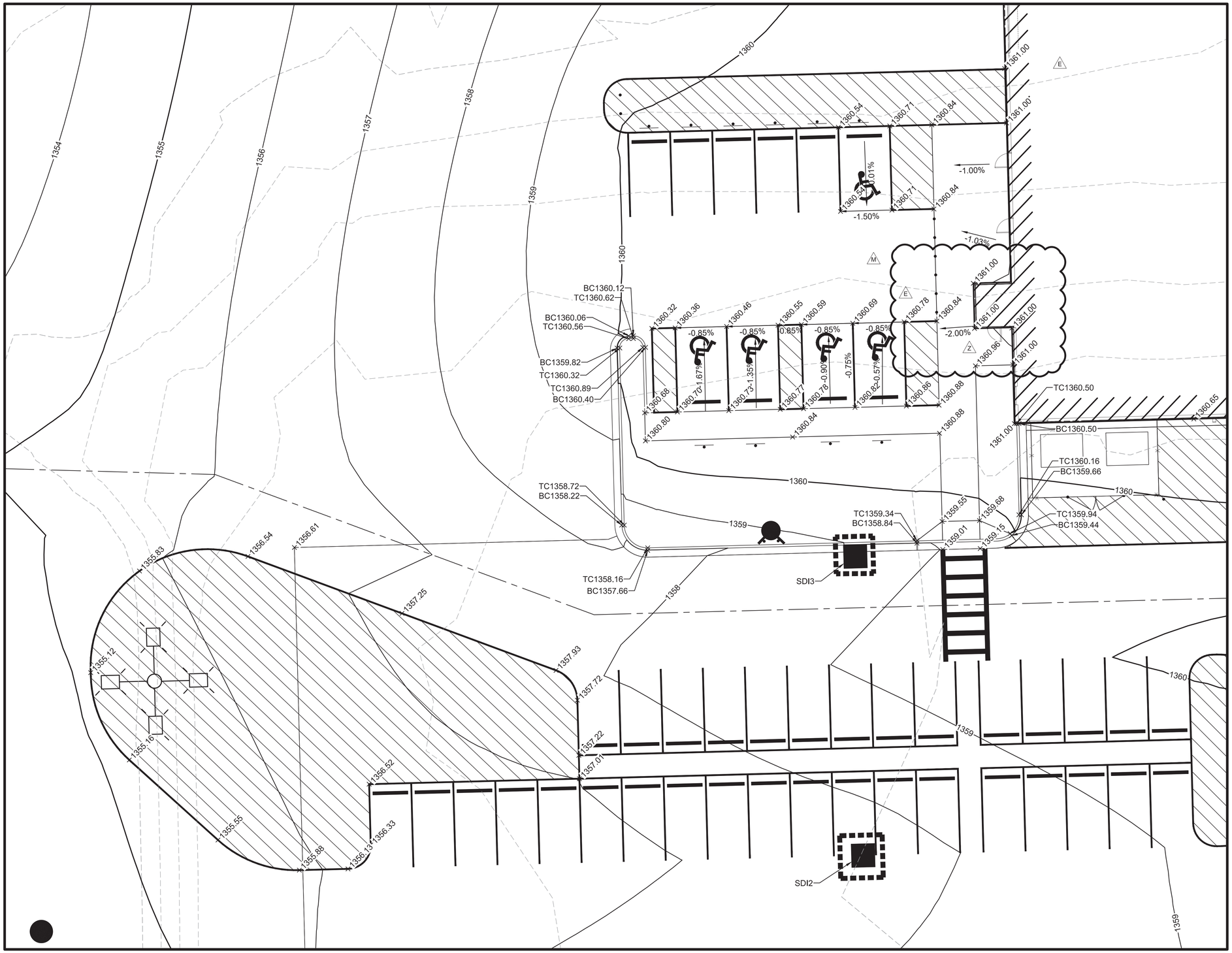
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by J. JENKINS
02/19/18
Designed by C. KINGSLAND
02/19/18

Project No. 6936
Sheet Name: GRADING PLAN
Sheet CG102 of XX
Drawing No. 108M-126-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



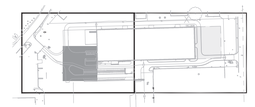
LEGEND

- AREA INLET PROTECTION — CG502, CG503
- CURB INLET PROTECTION — CG501
- SILT FENCE — CG502
- SEED/SOD (PERMANENT STABILIZATION POST CONSTRUCTION)
- SEDIMENT SOCK
- STABILIZED CONSTRUCTION ENTRANCE — CG501
- +1361.00 SPOT ELEVATION
- +TC1361.00 TOP CURB ELEVATION
- +BC1361.00 BOTTOM CURB ELEVATION

GRADING ENLARGEMENT

0 10' 20'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
DATE		
E 03/29/2018 PKG 1A SITE WORK - IFC - ADD2	CAK	NT
M 06/13/2018 PKG 1A SITE WORK - REV M	CAK	NT
N 06/22/2018 PKG 1A SITE WORK - REV N	CAK	NT
W 10/26/2018 PKG 1A SITE WORK - REV W	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

CHRISTOPHER A. KINGSLAND
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: J. JENKINS 03/06/18 | Designed by: C. KINGSLAND 03/06/18

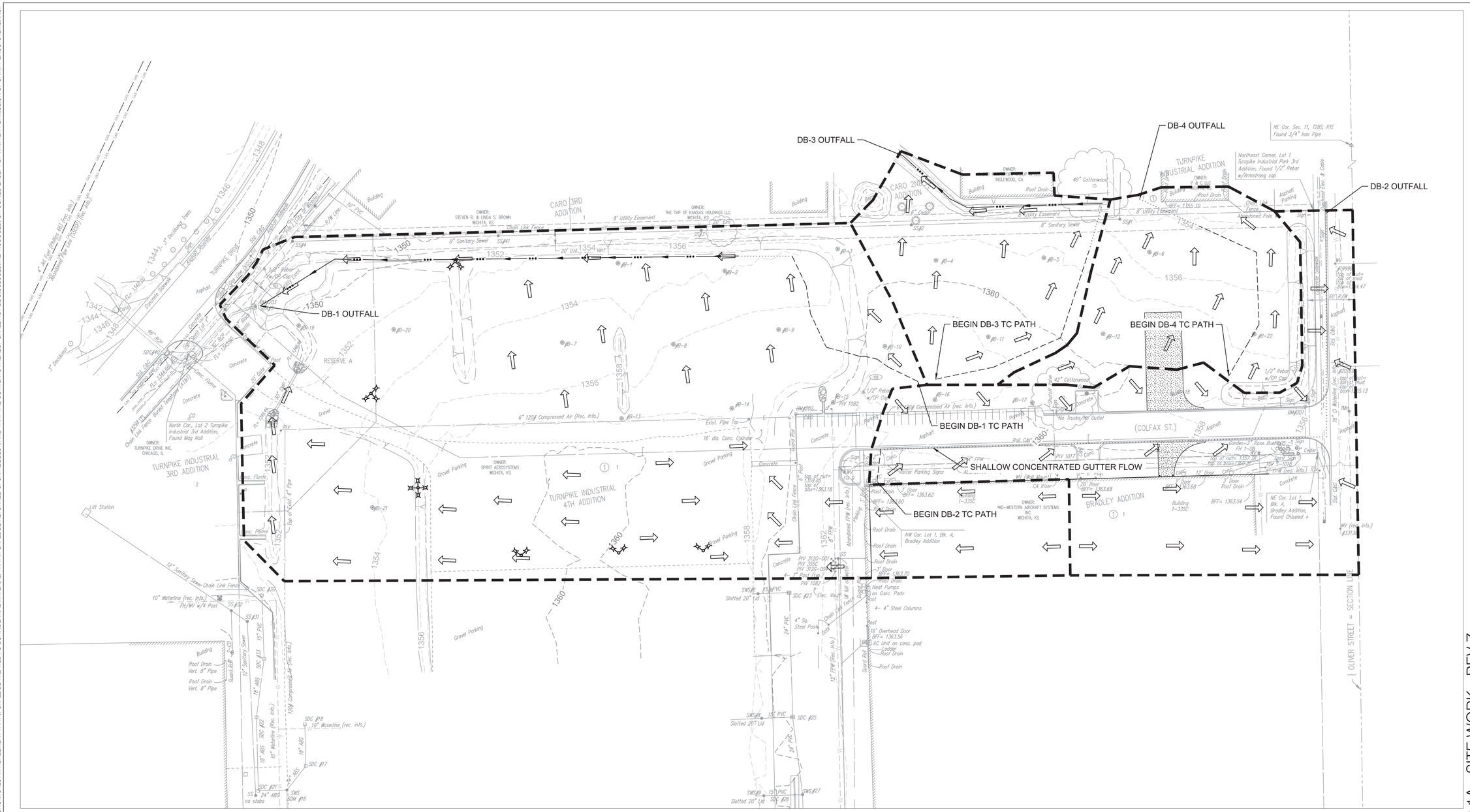
Project No.
6936

Sheet Name:
GRADING ENLGMNT

Sheet CG103 OF XX

Drawing No.
108M-127-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

▬ ▬ ▬	DRAINAGE BASIN EXTENTS
— —1360.0— —	EXISTING MAJOR CONTOUR
— —1359.5— —	EXISTING MINOR CONTOUR
——▸▪▪▪——	CHANNEL FLOW
·····	SHALLOW CONCENTRATED FLOW
– – – – – –	SHEET FLOW
DB	DRAINAGE BASIN
CN	CURVE NUMBER
TC	TIME OF CONCENTRATION (MINUTES)
AC	ACRE
⇦	FLOW ARROW

NOTE:

1. REFER TO THE DRAINAGE REPORT FOR SUPPORTING DATA AND CALCULATIONS.

EXISTING CONDITIONS RUNOFF

Basin ID	Total Area (AC)	Impervious Area (AC)	CN	TC (MIN)
DB-1	9.10	3.08	89	26.00
DB-2	3.20	1.96	93	11.60
DB-3	1.54	0.08	85	19.80
DB-4	1.52	0.04	84	17.70

EXISTING DRAINAGE BOUNDARIES

0 60' 120'
SCALE IN FEET

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DESCRIPTION	DATE	BY	APPROVED
A	PKG 1A, SITE WORK - IFC	03/09/2018	CAK	NT
Z	PKG 1A, SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED
PER IFC 2012 w/ WSU AMD
05/07/2018 9:47:20 AM

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

☐ APPROVED
☐ NOT REQUIRED
DATE _____

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

COMMONWEALTH OF KANSAS
WAYNE A. HERBERT
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

WICHITA, KS

Facilities Engineering

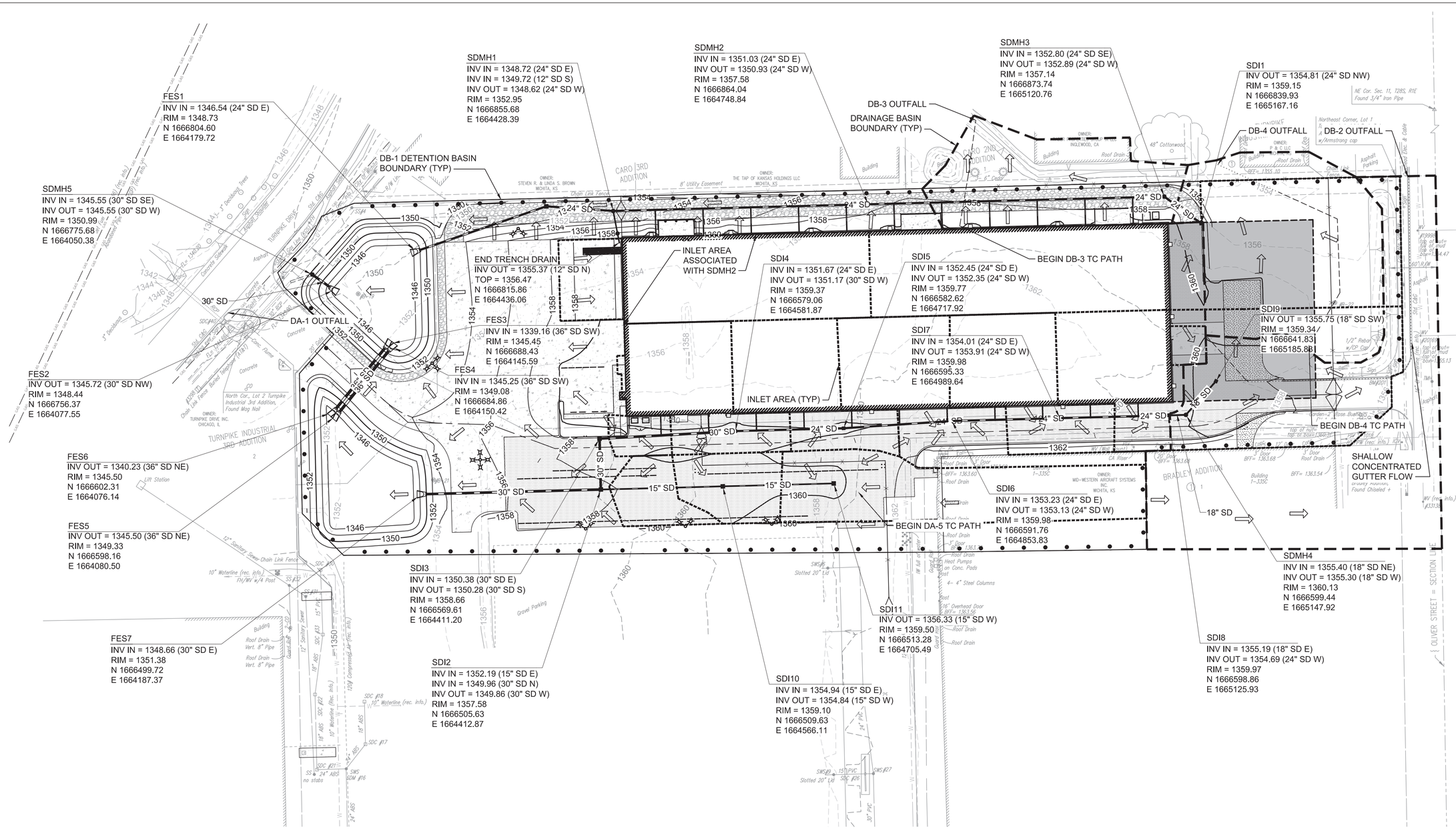
AUTOMATED WAREHOUSE

BLDG-1-338G

Designed by C. KINGSLAND 03/06/2018
Drawn by J. JENKINS 03/06/2018

Project No. 6936
Sheet Name: EXIST. DRAIN AREA
Sheet CG110 of XX
Drawing No. 108M-128-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL.



LEGEND

1360.0	EXISTING MAJOR CONTOUR
1359.5	EXISTING MINOR CONTOUR
1360.0	PROPOSED MAJOR CONTOUR
1359.5	PROPOSED MINOR CONTOUR
DB	DRAINAGE BASIN
CN	CURVE NUMBER
TC	TIME OF CONCENTRATION (MINUTES)
AC	ACRE
FES	FLARED END SECTION
SD	STORM DRAIN
SDI	STORM DRAIN INLET
	FLOW ARROWS

NOTES:

1. REFER TO THE DRAINAGE REPORT FOR SUPPORTING DATA AND CALCULATIONS.
2. TIME OF CONCENTRATION ASSUMED TO BE 5-MINUTES FOR ALL INLET CALCULATIONS. REFER TO DRAINAGE REPORT NARRATIVE FOR MORE INFORMATION. FLOW PATHS NOT SHOWN FOR CLARITY.
3. SDMH2 WAS MODELED AS AN INLET TO CORRECTLY SIZE THE 24" PIPE BETWEEN SDMH2 AND SDMH1 IN LIEU OF INCLUDING THE DOWNSPOUTS IN THE STORMWATER MODEL.
4. DETENTION BASIN (DB-1) WAS OVERSIZED FOR FUTURE DEVELOPMENT. FUTURE DRAINAGE PATTERNS AND LIMITS UNKNOWN AT THIS TIME. HOWEVER, DB-2, DB-3, AND DB-4 WERE ALSO MODELED TO COMPARE THE RUNOFF VALUES FOR THIS PROJECT, AS SHOWN IN THE PROVIDED TABLES.
5. SDI1 AND SDI8 WERE SIZED FOR FUTURE DEVELOPMENT. SDI8 AREA PROVIDED IN TABLE CONSISTS OF THE TOTAL SHOWN AREA MINUS THE SDI9 CONTRIBUTING AREA.
6. ALL CULVERTS WILL BE RCP WITH RCP FLARED END SECTIONS. ALL INLETS WILL BE PRECAST CONCRETE. ALL OTHER STORM PIPING SHALL BE HDPE.

DRAINAGE BOUNDARIES

0 60' 120'
SCALE IN FEET

NORTH

PROPOSED CONVEYANCES

Basin ID	Total Area (AC)	Impervious Area (AC)	C	TC (MIN)
SDI1	1.97	1.78	0.93	5.00
SDI2	0.17	0.17	0.93	5.00
SDI3	0.09	0.08	0.93	5.00
SDI4	0.54	0.54	0.93	5.00
SDI5	0.52	0.52	0.93	5.00
SDI6	0.67	0.60	0.93	5.00
SDI7	0.55	0.49	0.93	5.00
SDI8	1.54	1.39	0.93	5.00
SDI9	0.05	0.05	0.93	5.00
SDI10	0.24	0.24	0.93	5.00
SDI11	0.79	0.79	0.93	5.00
SDMH2	0.77	0.77	0.93	5.00
Trench Drain	0.19	0.19	0.93	5.00

PROPOSED CONDITIONS BASIN RUNOFF

Basin ID	Total Area (AC)	Impervious Area (AC)	CN	TC (MIN)
DB-1 (Overall Detention Basin)	13.36	12.03	97	5.00
DB-2	2.37	1.73	94	11.30
DB-3	0.75	0.31	90	9.70
DB-4	1.24	0.06	85	17.70

SUMMARY TABLE OF RUNOFF CALCULATIONS

Basin ID	2-YR PRE	2-YR POST	5-YR PRE	5-YR POST	10-YR PRE	10-YR POST	25-YR PRE	25-YR POST	100-YR PRE	100-YR POST
DB-1	19.90	12.10	26.67	21.31	32.58	27.73	40.92	34.31	55.14	42.28
DB-2	11.65	8.86	15.08	11.38	18.04	13.56	22.22	16.64	29.32	21.87
DB-3	3.44	2.73	4.77	3.61	5.94	4.37	7.61	5.44	10.48	7.27
DB-4	3.27	2.79	4.58	3.87	5.75	4.82	7.41	6.18	10.26	8.51

All values in CFS

BY	DESCRIPTION	DATE
CAK	PKG 1A, SITE WORK - IFC	A 03/09/2018
CAK	PKG 1A, SITE WORK - REV Z	Z 11/16/2018

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED PER IFC 2012
05/07/2018, 9:47:10 AM
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018
		03/06/2018
		03/06/2018

APPROVED
NT
NT

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS 19889 11/16/2018 PROFESSIONAL ENGINEER

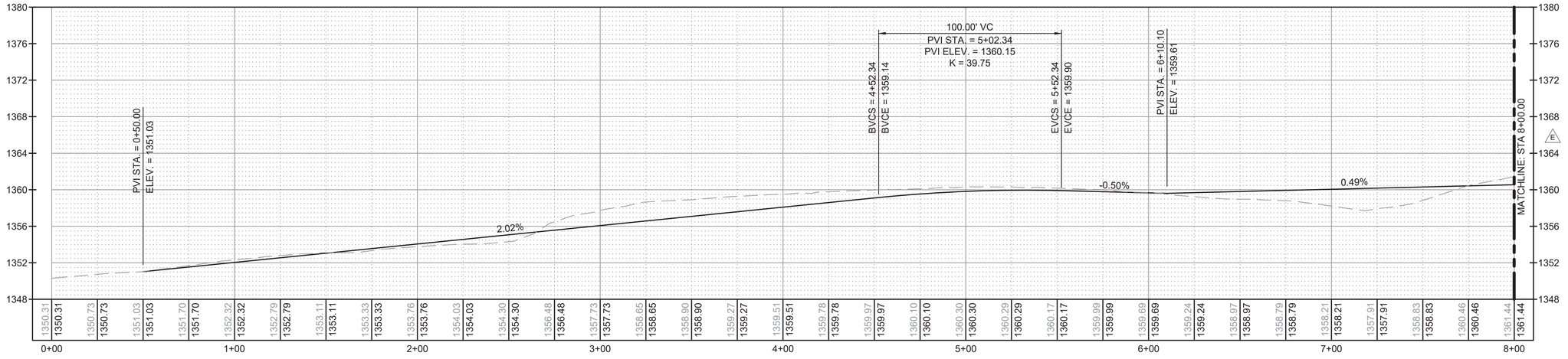
16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G - WICHITA, KS

Designed by C. KINGSLAND 03/06/2018
Drawn by J. JENKINS 03/06/2018

Project No. 6936
Sheet Name: PROP. DRAIN AREA
Sheet CG111 of XX
Drawing No. 108M-126-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



ROADWAY PROFILE STA 0+00 TO 8+00

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

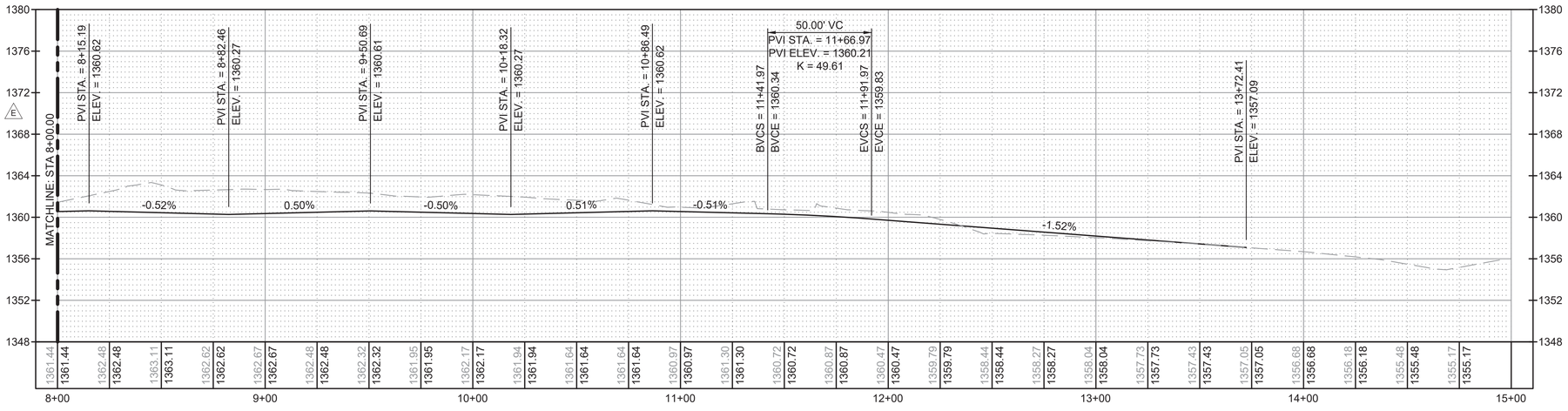
VERTICAL: 0 3' 6' 12' SCALE IN FEET

ABBREVIATIONS:

PVI	POINT OF VERTICAL INTERSECTION
STA	STATION
ELEV	ELEVATION
K	RATE OF VERTICAL CURVATURE
BVCS	BEGIN VERTICAL CURVE STATION
EVCS	END VERTICAL CURVE STATE

NOTE:

1. SEE SHEETS CS101-CS103 FOR ROADWAY CENTERLINE HORIZONTAL GEOMETRY.



ROADWAY PROFILE STA 8+00 TO 15+00

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	APPROVED
CAK	NT
CAK	NT
CAK	NT
CAK	NT

	DATE	DESCRIPTION
A	03/09/2018	PKG 1A SITE WORK - IFC
E	03/26/2018	PKG 1A SITE WORK - IFC - ADD2
L	06/01/2018	PKG 1A SITE WORK - REV L
Z	11/16/2018	PKG 1A SITE WORK - REV Z

FIRE PROTECTION REVIEW

☐ APPROVED ☐ NOT REQUIRED

DATE _____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

COMMONWEALTH OF KENTUCKY 19889 11/16/2018 REGISTERED PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: J. JENKINS 03/06/2018 Designed by: C. KINGSLAND

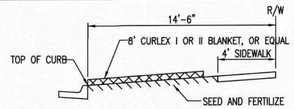
Project No. 6936

Sheet Name: ROADWAY PROFILE

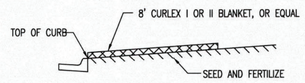
Sheet CG201 of XX

Drawing No. 108M-130-XXX

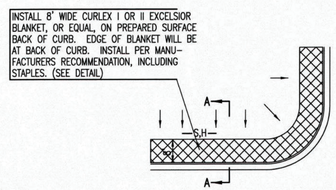
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SECTION B-B



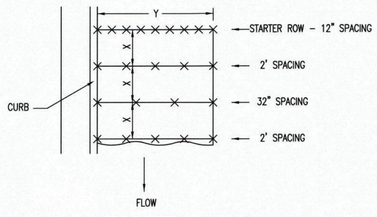
SECTION A-A



GENERAL NOTES

1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL



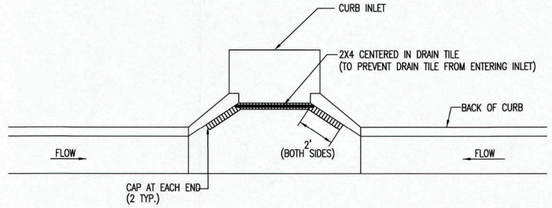
STAPLE PATTERN

NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)



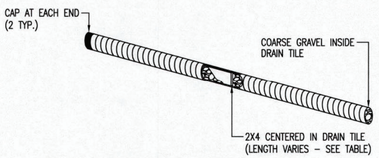
STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT

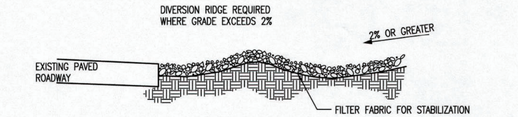


NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

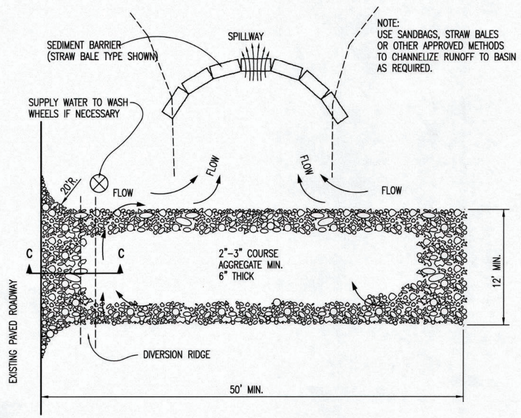
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013

GARY L. JANZEN 16804 REGISTERED PROFESSIONAL ENGINEER KANSAS
05/13/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-501

REFERENCE DRAWING

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2399

	DESCRIPTION	DATE	BY	APPROVED
A	PKG 1A, SITE WORK - IFC	03/09/2018	CAK	NT
Z	PKG 1A, SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED AT THIS STAGE
05/07/2018 9:46:11 AM
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

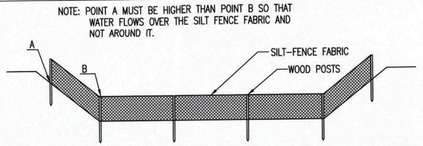
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G

Designed by	C. KINGSLAND	02/19/18
Drawn by	J. JENKINS	02/19/18

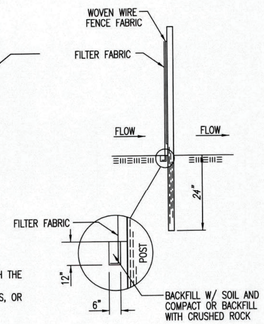
Project No. 6936
Sheet Name: EROSION DETAILS
Sheet CG501 of XX
Drawing No. 108M-131-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

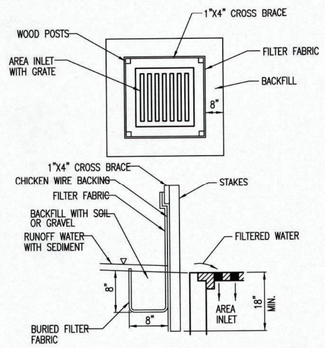
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK–NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC–MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

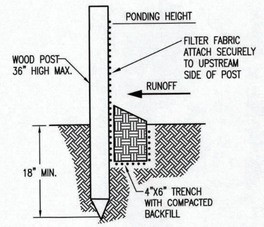
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET–NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT–OF–WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT–FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT–FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND–SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/24/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW-502

REFERENCE DRAWING

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2369

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED
PER IFC 2012 AS AMENDED
05/07/2018 9:45:55 AM
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS 02/19/18
Designed by: C. KINGSLAND 02/19/18

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

SPIRIT AEROSYSTEMS

Project No.
6936
Sheet Name:
EROSION DETAILS
Sheet CG502 of XX
Drawing No.
108M-132-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

△D

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

REFERENCE DRAWING

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2016

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED
AHJ ACCEPTANCE
05/07/2018 9:45:32 AM

☐ APPROVED
☐ NOT REQUIRED
DATE _____

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
D	03/16/2018	PKG 1A SITE WORK - IFC - ADDI	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by J. JENKINS 02/19/18 Designed by C. KINGSLAND 02/19/18

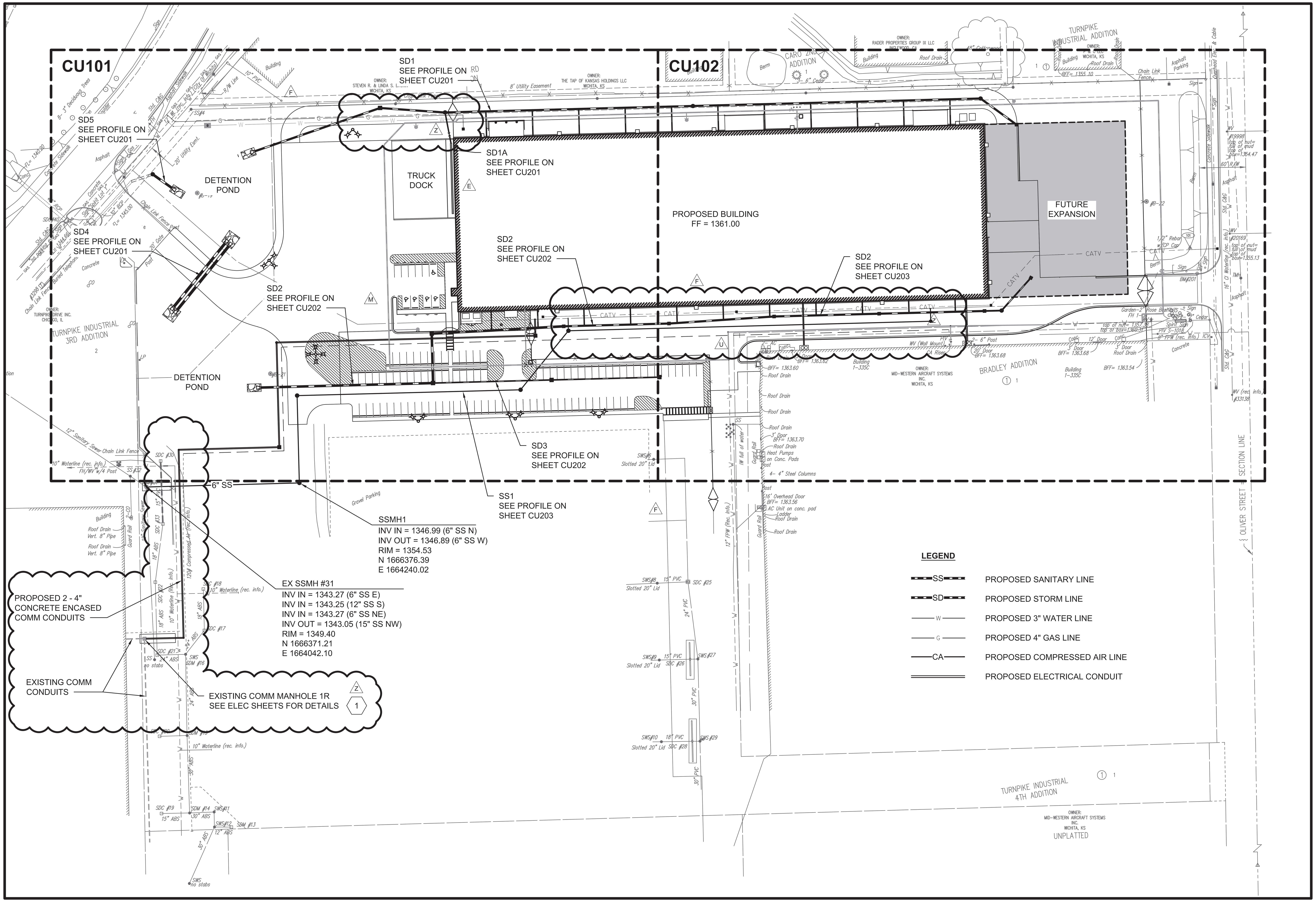
Project No.
6936

Sheet Name:
EROSION DETAILS

Sheet CG503 of XX

Drawing No.
108M-133-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



KEYED NOTE:

1. SUBCONTRACTOR SHALL FIELD-CONFIRM EXISTING COMM MANHOLE LOCATION AND DUCTBANK ROUTING PRIOR TO CONSTRUCTION. REFER TO THE CIVIL UTILITY BASE MAP REFERENCE DRAWING FOR ADDITIONAL INFORMATION.
2.

OVERALL UTILITY PLAN

0 60' 120'
SCALE IN FEET

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
F	04/12/2018	PKG 1A: SITE WORK - IFC - ADD3	CAK	NT
L	06/01/2018	PKG 1A: SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A: SITE WORK - REV N	CAK	NT
U	09/13/2018	PKG 1A: SITE WORK - REV U	CAK	NT
Z	11/16/2018	PKG 1A: SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE ____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

NICHOLAS TESSITORE LICENSED 19889 11/16/2018 KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering

AUTOMATED WAREHOUSE

\-

BLDG-1-338G WICHITA, KS

Drawn by J. JENKINS 02/20/18 Designed by C. KINGSLAND 02/20/18

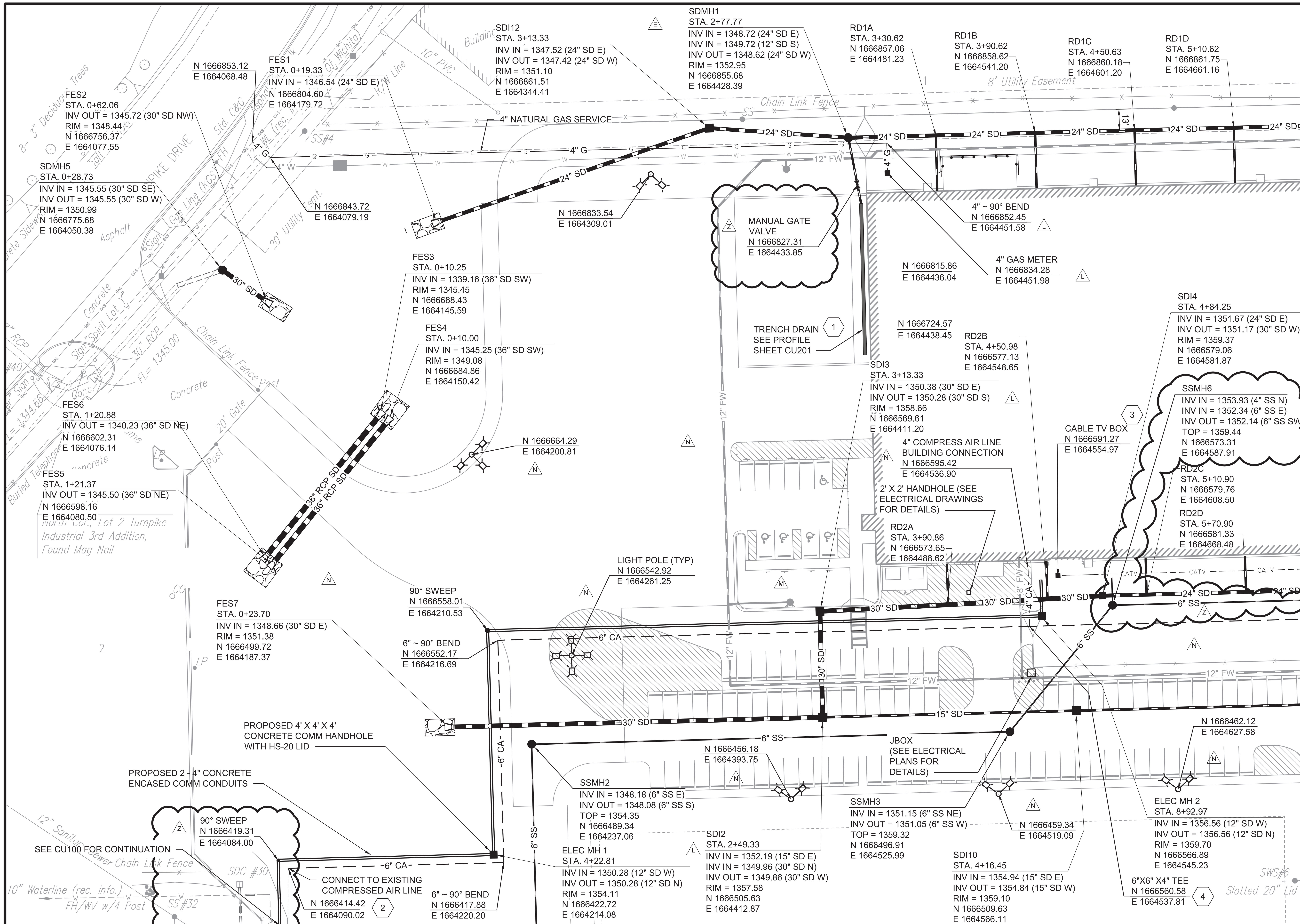
Project No. 6936

Sheet Name: UTILITY PLAN

Sheet CU100 of XX

Drawing No. 108M-134-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



KEYED NOTES:

1. SUBCONTRACTOR SHALL INSTALL ZURN Z812-HDG TRENCH DRAIN WITH CLASS C GRATE OR APPROVED EQUAL.
2. SEE KEYED NOTE 1 ON CD102. INSTALL NEW ABOVE GROUND SHUT-OFF VALVE MATCHING EXISTING VALVE TYPE AND SIZE.
3. SEE ELECTRICAL DRAWINGS FOR TRAFFIC-RATED CABLE BOX DETAIL.
4. ADD REDUCERS TO 1 $\frac{1}{4}$" COMPRESS AIR LINE

UTILITY PLAN 1

0 15' 30' 60'
SCALE IN FEET

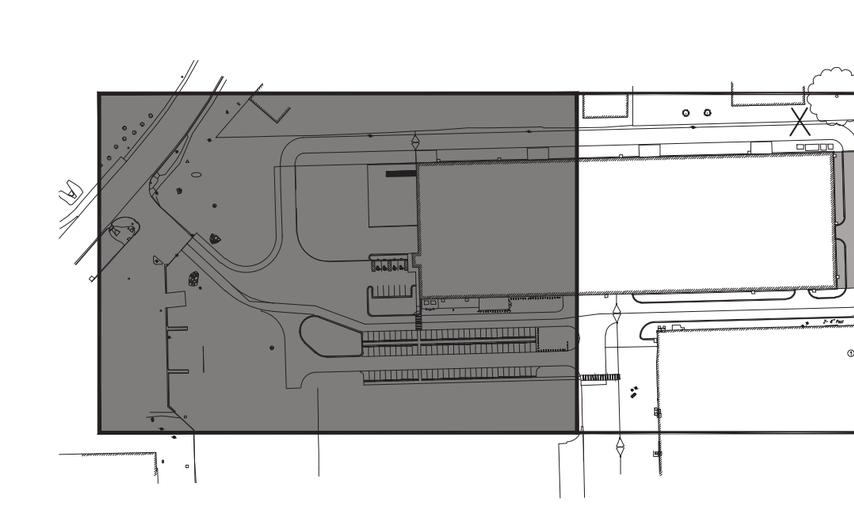
NORTH

LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT
FH	FIRE HYDRANT
PVI	POST INDICATOR VALVE
SD	STORM DRAIN
SDAI	STORM DRAIN AREA INLET

NOTES:

1. SEE ELECTRICAL PLANS FOR HANDHOLE AND DUCTBANK DETAILS.
2. CIVIL SUBCONTRACTOR SCOPE SHALL EXTEND TO 12 FEET OUTSIDE THE BUILDING FOR ALL UTILITIES UNLESS NOTED OTHERWISE. CIVIL SUBCONTRACTOR SHALL PROVIDE TEMPORARY STUB-UP UNLESS OTHERWISE COORDINATED WITH PLUMBING SUBCONTRACTOR.
3. SEE MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR CONTINUATION OF ALL UTILITIES AT THE 12 FOOT LINE.
4. ALL MANHOLES SHALL BE PRECAST STANDARD MANHOLE TYPE A PER THE CITY OF WICHITA STANDARD SPECIFICATIONS, OR APPROVED EQUAL. SUBCONTRACTOR SHALL SUBMIT MANHOLE PRODUCT DATA, DESIGN CALCULATIONS, AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
5. DOMESTIC WATER AND NATURAL GAS LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 3'.
6. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC, AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.
7. NATURAL GAS TAP PIPE ROUTING AND METER BY GAS UTILITY COMPANY. REFER TO MECHANICAL PLANS FOR NG ROUTING FROM THE METER TO THE BUILDING



KEY PLAN
NOT TO SCALE

△	DATE	DESCRIPTION	BY	APPROVED
I	04/27/2018	PKG 1A: SITE WORK - IFC - ECN02	CAK	NT
L	06/01/2018	PKG 1A: SITE WORK - REV L	CAK	NT
M	06/13/2018	PKG 1A: SITE WORK - REV M	CAK	NT
N	06/22/2018	PKG 1A: SITE WORK - REV N	CAK	NT
Z	11/16/2018	PKG 1A: SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

NICHOLAS TESSITORE LICENSED 19889 11/16/2018 KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering

AUTOMATED WAREHOUSE

-

BLDG-1-338G

WICHITA, KS

Drawn by J. JENKINS 02/20/18

Designed by C. KINGSLAND 02/20/18

Project No. 6936

Sheet Name: UTILITY PLAN 1

Sheet CU101 of XX

Drawing No. 108M-135-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CU101 FOR CONTINUATION

RD1E
STA. 5+70.62
N 1666863.31
E 1664721.14

RD1G
STA. 6+90.62
N 1666866.44
E 1664841.49

RD1I
STA. 8+10.63
N 1666869.57
E 1664961.08

RD1H
STA. 7+50.62
N 1666868.01
E 1664901.08

RD1J
STA. 8+70.62
N 1666871.14
E 1665021.04

RD1K
STA. 9+30.62
N 1666872.70
E 1665081.02

RD1F
STA. 6+30.62
N 1666864.88
E 1664781.12

SDMH3
STA. 9+70.37
INV IN = 1352.80 (24" SD SE)
INV OUT = 1352.89 (24" SD W)
RIM = 1357.14
N 1666873.74
E 1665120.76

SDMH2
STA. 5+98.32
INV IN = 1351.03 (24" SD E)
INV OUT = 1350.93 (24" SD W)
RIM = 1357.58
N 1666864.04
E 1664748.84

JBOX
(SEE ELECTRICAL
PLANS FOR DETAILS)

TRANSFORMER

15 KV BREAKER WITH
RELAYING TO SWITCHGEAR

SDI1
STA. 10+27.78
INV OUT = 1354.81 (24" SD NW)
RIM = 1359.15
N 1666839.93
E 1665167.16

SDI9
STA. 11+07.63
INV OUT = 1355.75 (18" SD SW)
RIM = 1359.34
N 1666641.83
E 1665185.83

SDI5
STA. 6+20.35
INV IN = 1352.45 (24" SD E)
INV OUT = 1352.35 (24" SD W)
RIM = 1359.77
N 1666582.62
E 1664717.92

RD2G
STA. 7+51.01
N 1666591.39
E 1664848.28

SDI6
STA. 7+56.57
INV IN = 1353.23 (24" SD E)
INV OUT = 1353.13 (24" SD W)
RIM = 1359.98
N 1666591.76
E 1664853.83

RD2J
STA. 9+31.02
N 1666596.33
E 1665028.21

N 1666670.54
E 1665190.98

SS2 - BUILDING CONNECTION
INV = 1357.18 (6" SS S)
N 1666602.12
E 1665055.91

END CONDUIT
N 1666672.56
E 1665244.06

CABLE TV HANDHOLE 2
TOP = 1352.83
N 1666679.51
E 1665426.90

BEGIN CONDUIT
N 1666670.77
E 1665197.09

RD2E
STA. 6+30.91
N 1666583.33
E 1664728.45

RD2F
STA. 6+90.96
N 1666587.36
E 1664788.37

RD2H
STA. 8+11.00
N 1666593.19
E 1664908.24

RD2I
STA. 8+71.02
N 1666594.77
E 1664968.23

RD2K
STA. 9+91.02
N 1666597.88
E 1665088.19

PROPOSED 2 - 4" CONCRETE
ENCASED COMM CONDUITS

N 1666548.27
E 1664892.66

SDI7
STA. 8+92.43
INV IN = 1354.01 (24" SD E)
INV OUT = 1353.91 (24" SD W)
RIM = 1359.98
N 1666595.33
E 1664989.64

CONNECT TO EXISTING
COMPRESSED AIR LINE
N 1666574.76
E 1665079.66

SSMH7
INV IN = 1357.01 (6" SS N)
INV OUT = 1357.01 (6" SS W)
TOP = 1360.55
N 1666585.57
E 1665056.34

CONCRETE ENCASE
2-WAY 6" PVC

SDMH4
STA. 10+50.77
INV IN = 1355.40 (18" SD NE)
INV OUT = 1355.30 (18" SD W)
RIM = 1360.13
N 1666599.44
E 1665147.92

N 1666606.38
E 1665134.20

SDI8
STA. 10+28.77
INV IN = 1355.19 (18" SD E)
INV OUT = 1354.69 (24" SD W)
RIM = 1359.97
N 1666598.86
E 1665125.93

SECTION LINE

KEYED NOTES:

1. COORDINATE COMM LOCATION AND BUILDING CONNECTION WITH THE ELECTRICAL PLANS AND THE ELECTRICAL CONTRACTOR.

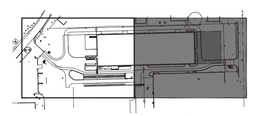
UTILITY PLAN 2

0 15' 30' 60'
SCALE IN FEET

NORTH

LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT



KEY PLAN
NOT TO SCALE

NORTH

LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
FH	FIRE HYDRANT
PVI	POST INDICATOR VALVE
SD	STORM DRAIN
SDAI	STORM DRAIN AREA INLET

NOTES:

1. SEE ELECTRICAL PLANS FOR HANDHOLE AND DUCTBANK DETAILS.
2. CIVIL SUBCONTRACTOR SCOPE SHALL EXTEND TO 12 FEET OUTSIDE THE BUILDING FOR ALL UTILITIES UNLESS NOTED OTHERWISE. CIVIL SUBCONTRACTOR SHALL PROVIDE TEMPORARY STUB-UP UNLESS OTHERWISE COORDINATED WITH PLUMBING SUBCONTRACTOR.
3. SEE MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR CONTINUATION OF ALL UTILITIES AT THE 12 FOOT LINE.
4. ALL MANHOLES SHALL BE PRECAST STANDARD MANHOLE TYPE A PER THE CITY OF WICHITA STANDARD SPECIFICATIONS, OR APPROVED EQUAL. SUBCONTRACTOR SHALL SUBMIT MANHOLE PRODUCT DATA, DESIGN CALCULATIONS, AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. (E)
6. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC, AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION. (1)

	BY	APPROVED
DESCRIPTION		
PKG 1A SITE WORK - IFC - ECN02	CAK	NT
PKG 1A SITE WORK - REV L	CAK	NT
PKG 1A SITE WORK - REV N	CAK	NT
PKG 1A SITE WORK - REV U	CAK	NT
PKG 1A SITE WORK - REV Z	CAK	NT

	DATE
I	04/27/2018
L	06/01/2018
N	06/22/2018
U	09/13/2018
Z	11/16/2018

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

LICENSED PROFESSIONAL ENGINEER
19889
11/16/2018
KANSAS

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE - WICHITA, KS
BLDG-1-338G

Drawn by: J. JENKINS 02/20/18
Designed by: C. KINGSLAND 02/20/18

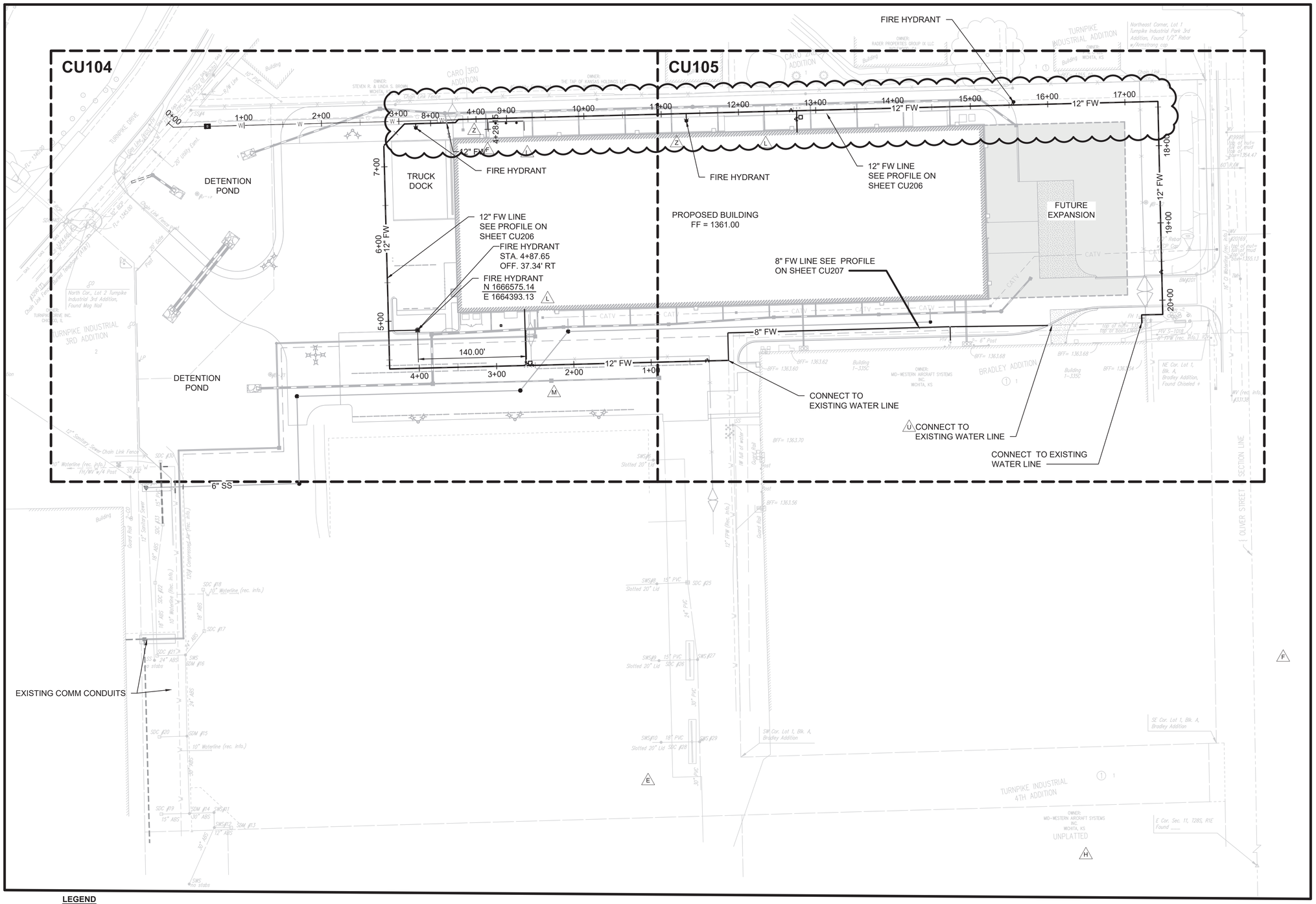
Project No.
6936

Sheet Name:
UTILITY PLAN 2

Sheet CU102 of XX

Drawing No.
108M-136-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

- SS — PROPOSED SANITARY LINE
- SD — PROPOSED STORM LINE
- 12" FW — PROPOSED FIRE WATER LINE
- W — PROPOSED WATER LINE
- G — PROPOSED GAS LINE
- CA — PROPOSED COMPRESSED AIR LINE
- PROPOSED ELECTRICAL CONDUIT

OVERALL WATER PLAN

0 60' 120'

SCALE IN FEET

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
L — PKG 1A SITE WORK - REV L — DATE: 06/01/2018	CAK	NT
M — PKG 1A SITE WORK - REV M — DATE: 06/13/2018	CAK	NT
N — PKG 1A SITE WORK - REV N — DATE: 06/22/2018	CAK	NT
U — PKG 1A SITE WORK - REV U — DATE: 09/13/2018	CAK	NT
Z — PKG 1A SITE WORK - REV Z — DATE: 11/16/2018	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED

☐ NOT REQUIRED

DATE _____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS — 19889 — 11/16/2018 — PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: J. JENKINS — 03/16/2018

Designed by: C. KINGSLAND — 03/16/2018

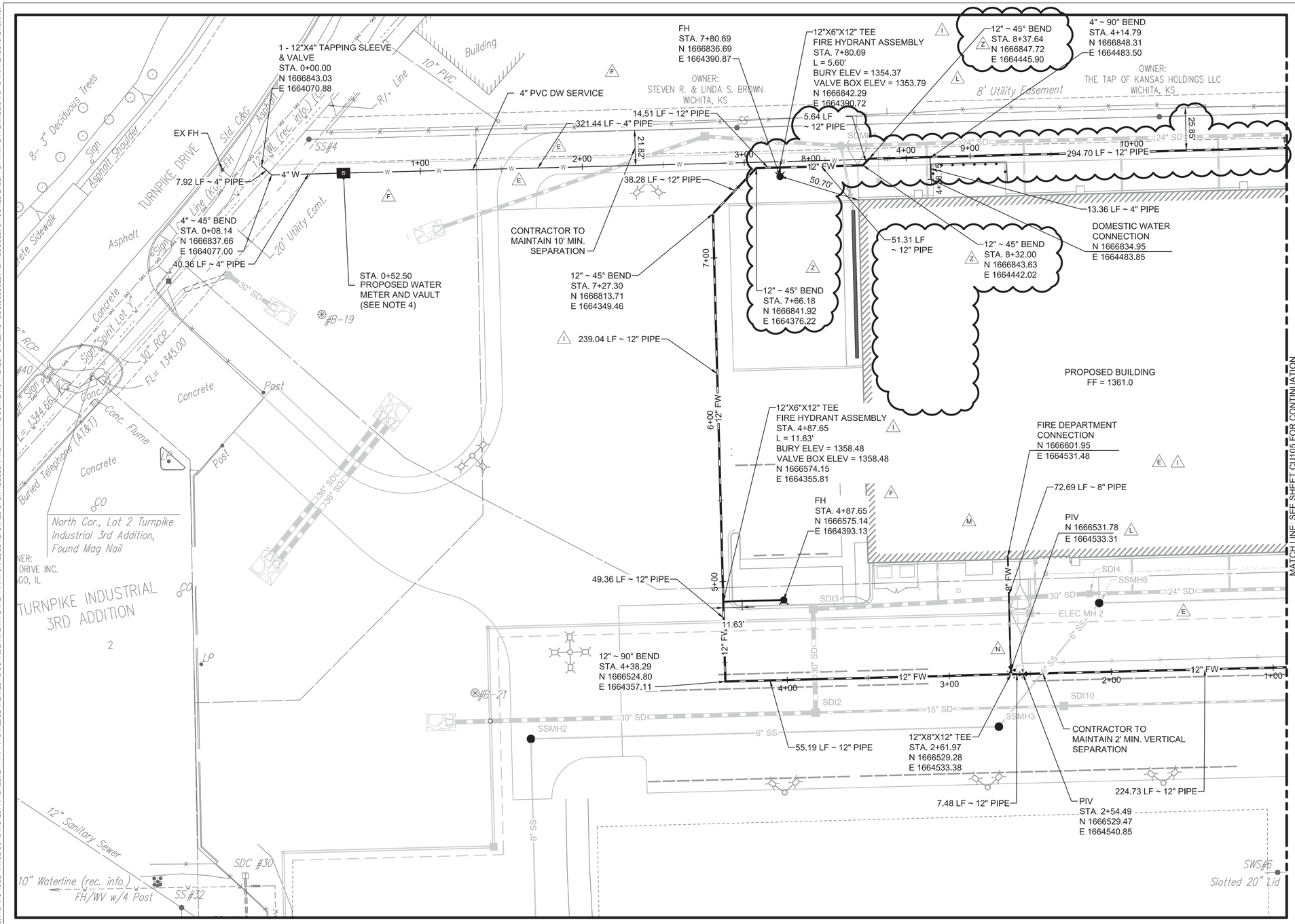
Project No. 6936

Sheet Name: OVERALL WATER

Sheet CU103 of XX

Drawing No. 108M-137-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
12" FW	PROPOSED 12" FIRE WATER LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT
FH	FIRE HYDRANT
PVI	POST INDICATOR VALVE
SD	STORM DRAIN
SDAI	STORM DRAIN AREA INLET

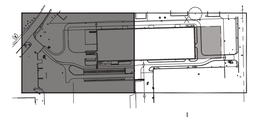
NOTES:

1. CIVIL SUBCONTRACTOR SCOPE SHALL EXTEND TO 12 FEET OUTSIDE THE BUILDING FOR ALL UTILITIES UNLESS NOTED OTHERWISE. CIVIL SUBCONTRACTOR SHALL PROVIDE TEMPORARY STUB-UP UNLESS OTHERWISE COORDINATED WITH PLUMBING SUBCONTRACTOR.
2. SEE MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR CONTINUATION OF ALL UTILITIES AT THE 12 FOOT LINE.
3. CIVIL CONTRACTOR FIREWATER SCOPE SHALL EXTEND TO A POINT 36" INSIDE THE BUILDING. SUBCONTRACTOR SHALL CHANGE PIPE MATERIALS FROM PVC TO WRAPPED DUCTILE IRON 5' OUTSIDE THE BUILDING. SUBCONTRACTOR SHALL PROVIDE A FLANGED CONNECTION 12" ABOVE FINISHED FLOOR. COORDINATE PENETRATION AND STUB-UP LOCATION WITH THE STRUCTURAL AND FIRE PROTECTION DRAWINGS. REFER TO FIRE PROTECTION SPECIFICATIONS FOR PIPE MATERIAL REQUIREMENTS.
4. SEE '3" DOMESTIC SERVICE' DETAIL AND NOTES ON DRAWING CU504 FOR THE CIVIL SUBCONTRACTOR SCOPE BREAKDOWN AT THE WATER METER AND VAULT.
5. REFER TO DETAIL 4 ON SHEET CU501 FOR FIRE HYDRANT DETAIL AND LOCATION BURY LINE ELEVATION.

DOMESTIC & FIRE WATER PLAN 1

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2399

BY	DATE	DESCRIPTION	APPROVED
CAK	04/27/2018	PKG 1A SITE WORK - IFC - ECN02	NT
CAK	06/01/2018	PKG 1A SITE WORK - REV L	NT
CAK	06/13/2018	PKG 1A SITE WORK - REV M	NT
CAK	06/22/2018	PKG 1A SITE WORK - REV N	NT
CAK	11/16/2018	PKG 1A SITE WORK - REV Z	NT

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

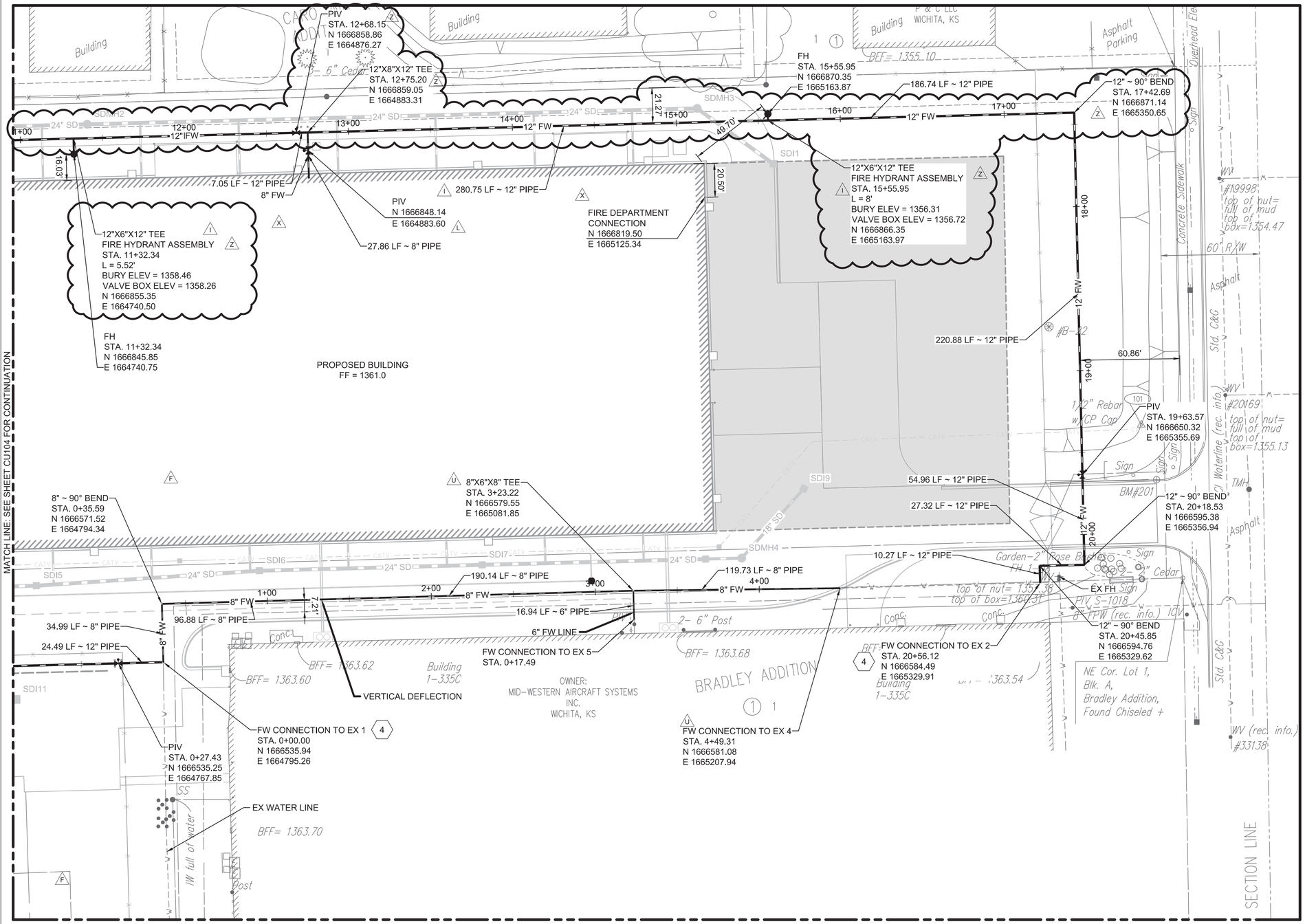
COMMERCIAL KANSAS 19889 11/16/2018 PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by J. JENKINS | 03/16/2018
Designed by C. KINGSLAND | 03/16/2018

Project No. 6936
Sheet Name: D & F WATER PLAN 1
Sheet CU104 of XX
Drawing No. 108M-138-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CU104 FOR CONTINUATION



LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
12" FW	PROPOSED 12" FIRE LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT
FH	FIRE HYDRANT
PVI	POST INDICATOR VALVE
SD	STORM DRAIN
SDAI	STORM DRAIN AREA INLET

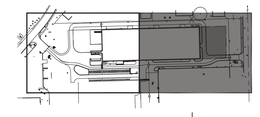
NOTES:

1. CIVIL SUBCONTRACTOR SCOPE SHALL EXTEND TO 12 FEET OUTSIDE THE BUILDING FOR ALL UTILITIES UNLESS NOTED OTHERWISE. CIVIL SUBCONTRACTOR SHALL PROVIDE TEMPORARY STUB-UP UNLESS OTHERWISE COORDINATED WITH PLUMBING SUBCONTRACTOR.
2. SEE MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR CONTINUATION OF ALL UTILITIES AT THE 12 FOOT LINE.
3. CIVIL CONTRACTOR FIREWATER SCOPE SHALL EXTEND TO A POINT 36" INSIDE THE BUILDING. SUBCONTRACTOR SHALL CHANGE PIPE MATERIALS FROM PVC TO WRAPPED DUCTILE IRON 5' OUTSIDE THE BUILDING. SUBCONTRACTOR SHALL PROVIDE A FLANGED CONNECTION 12" ABOVE FINISHED FLOOR. COORDINATE PENETRATION AND STUB-UP LOCATION WITH THE STRUCTURAL AND FIRE PROTECTION DRAWINGS. REFER TO FIRE PROTECTION SPECIFICATIONS FOR PIPE MATERIAL REQUIREMENTS. (E)
4. INSTALL NEW 12"X12"X12" TEE TO CONNECT TO EXISTING FIRE MAIN. SUBCONTRACTOR SHALL COORDINATE TEMPORARY FIRE MAIN SHUT DOWN WITH CONTRACTOR. (1) (U)
5. REFER TO DETAIL 4 ON SHEET CU501 FOR FIRE HYDRANT DETAIL AND LOCATION BURY LINE ELEVATION.

DOMESTIC & FIRE WATER PLAN 2

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	APPROVED
CAK	NT
CAK	NT
CAK	NT
CAK	NT
CAK	NT
CAK	NT

	DATE	DESCRIPTION
L	06/01/2018	PKG 1A SITE WORK - REV L
N	06/22/2018	PKG 1A SITE WORK - REV N
U	09/13/2018	PKG 1A SITE WORK - REV U
X	11/01/2018	PKG 1A SITE WORK - REV X
Z	11/16/2018	PKG 1A SITE WORK - REV Z

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

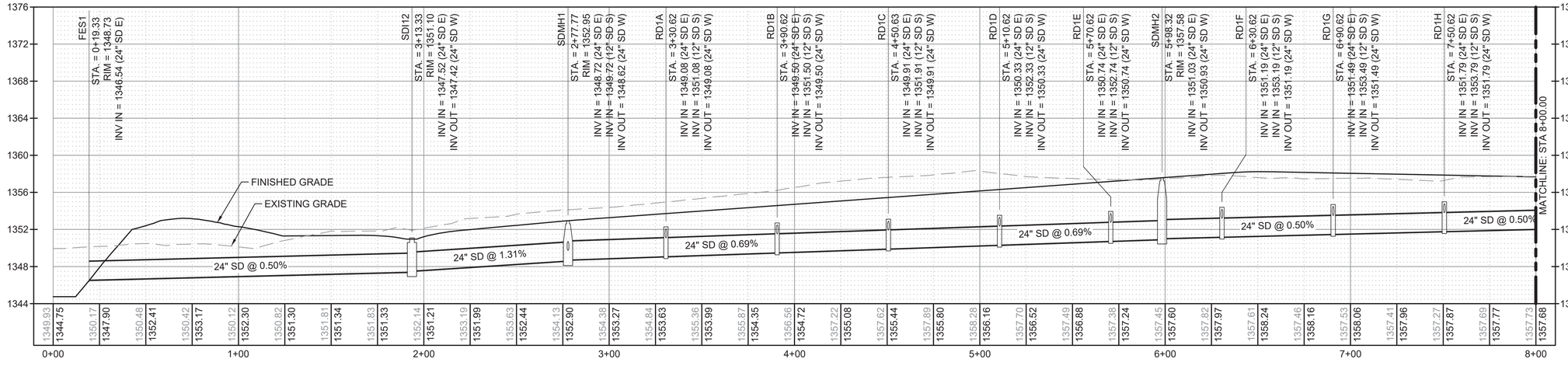
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G | 03/16/2018 | Designed by C. KINGSLAND | 03/16/2018
Drawn by J. JENKINS

Project No. 6936
Sheet Name: D & F WATER PLAN 2
Sheet CU105 of XX
Drawing No. 108M-XXX-XXX

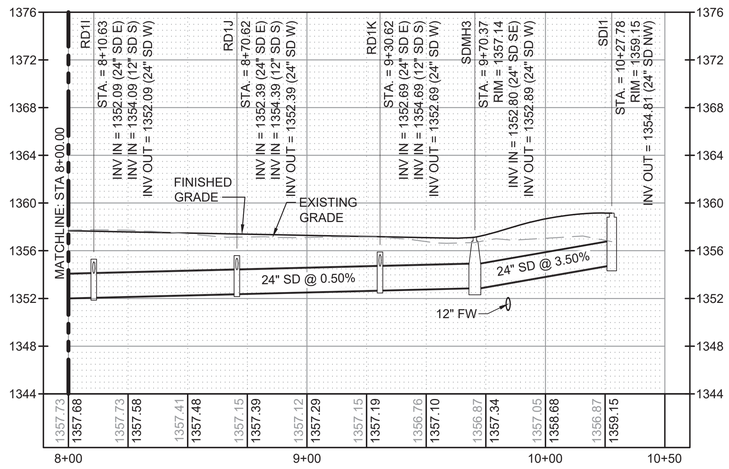
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PROFILE VIEW SD1

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

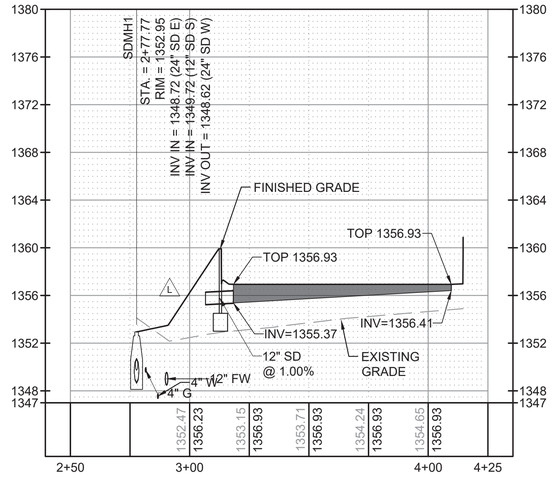
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD1

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

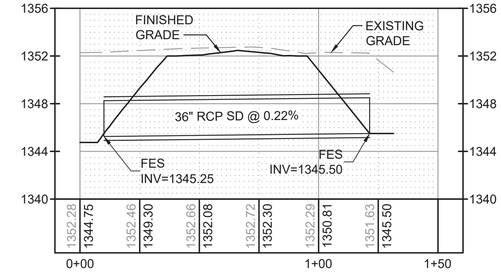
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD1A - TRENCH DRAIN

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

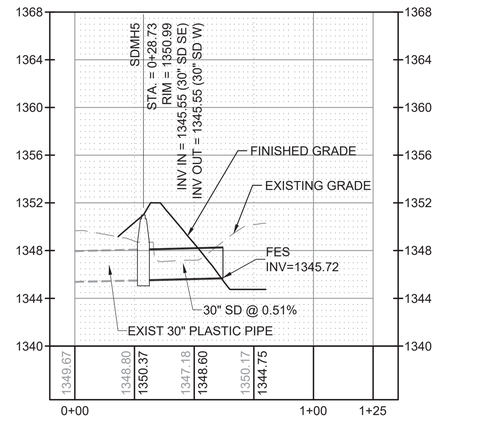
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD4

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD5

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET

NOTES:

1. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.

	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
E	03/26/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
I	03/27/2018	PKG 1A SITE WORK - IFC - ED/N02	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED

☐ NOT REQUIRED

DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
WDH	PE	6-8-2018

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering

AUTOMATED WAREHOUSE - WICHITA, KS

BLDG-1-338G

Drawn by J. JENKINS 02/20/18 | Designed by C. KINGSLAND 02/20/18

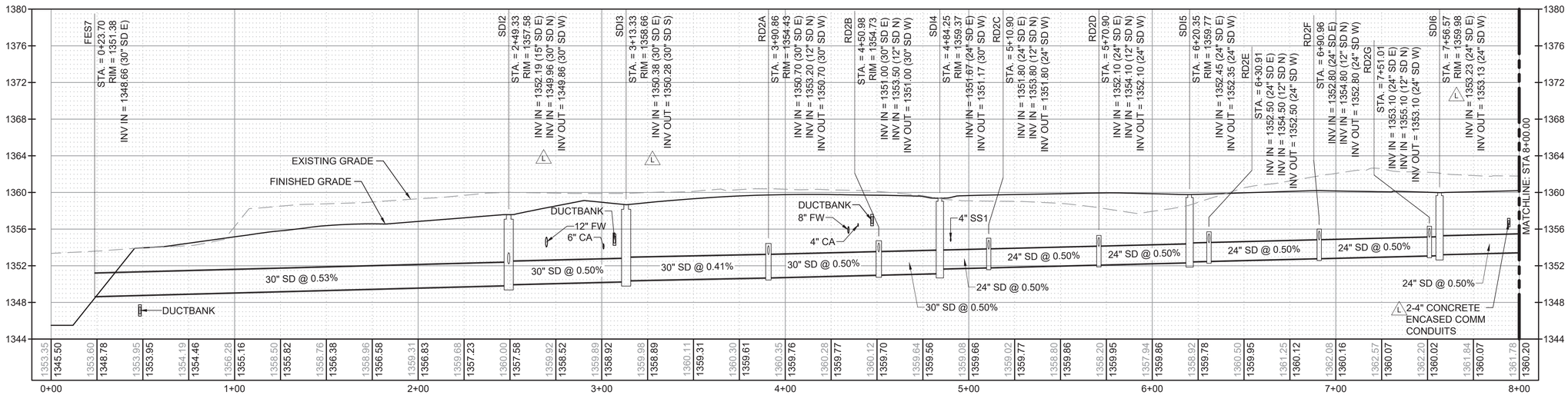
Project No. 6936

Sheet Name: STORM PROFILES 1

Sheet CU201 of XX

Drawing No. 108M-137-XXX

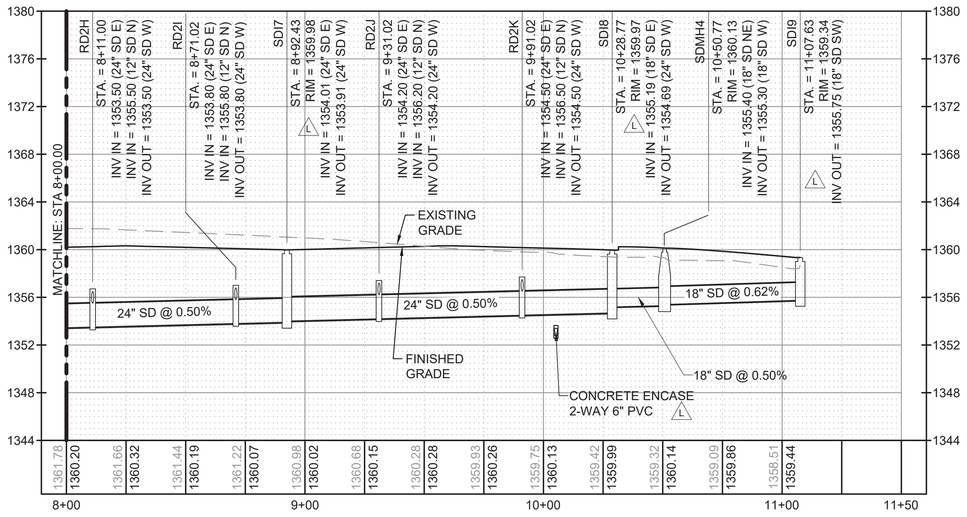
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PROFILE VIEW SD2

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

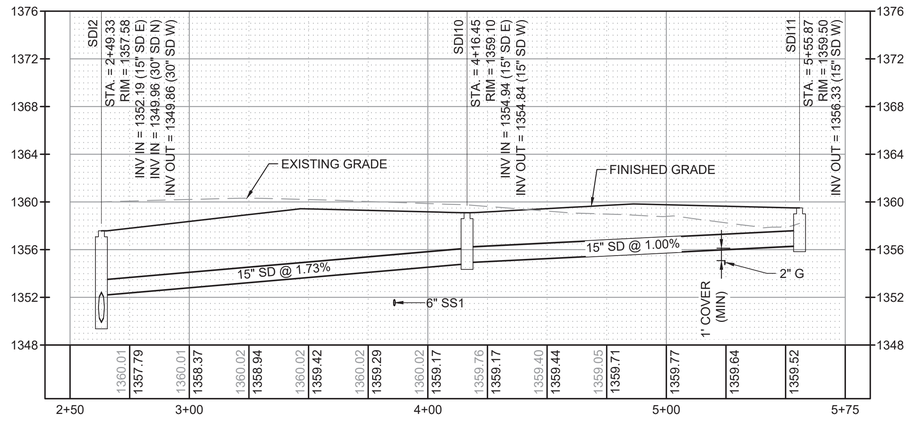
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD2

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD3

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET

NOTES:

1. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
I	03/27/2018	PKG 1A SITE WORK - IFC - ECN02	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
WDH	PE	6-8-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

WICHITA, KS

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Drawn by: J. JENKINS 02/20/18 | Designed by: C. KINGSLAND 02/20/18

Project No.
6936

Sheet Name:
STORM PROFILES 2

Sheet CU202 rev XX

Drawing No.
108M-138-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PROFILE VIEW SS1

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET

△E

△L

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
E	03/26/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED ☐ NOT REQUIRED

DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
WDH	PE	6-8-2018
DM	PE	6-12-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

STATE OF KANSAS
WAYNE D. HERBERT
19889
11/16/2018
PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G - WICHITA, KS

Drawn by J. JENKINS 02/20/18 | Designed by C. KINGSLAND 02/20/18

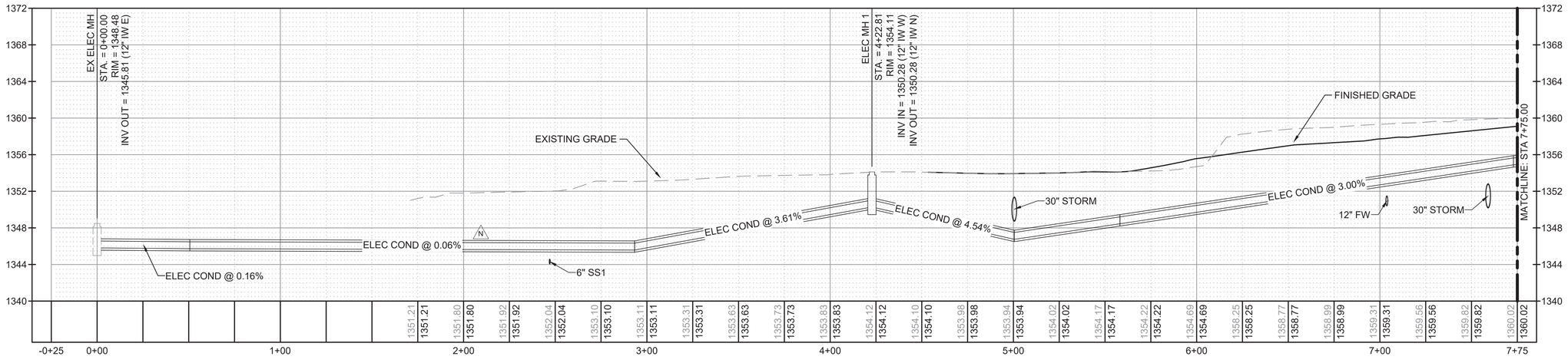
Project No. 6936

Sheet Name: SANITARY PROFILES

Sheet CU203 of XX

Drawing No. 108M-139-XXX

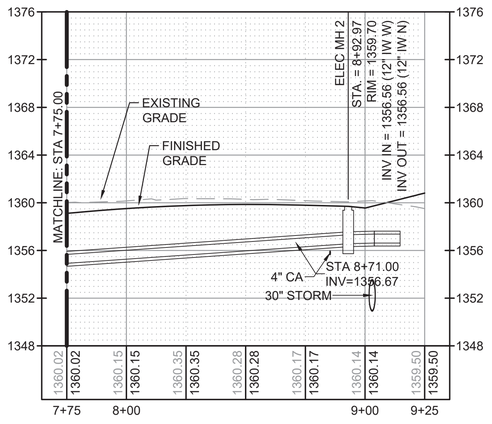
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PROFILE VIEW COMM1

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

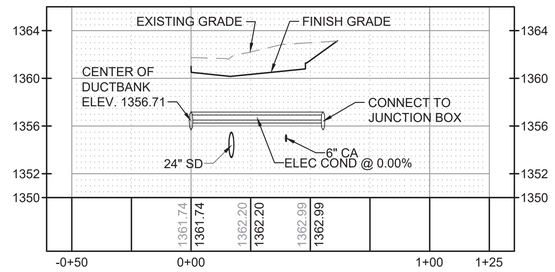


PROFILE VIEW COMM1

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

E

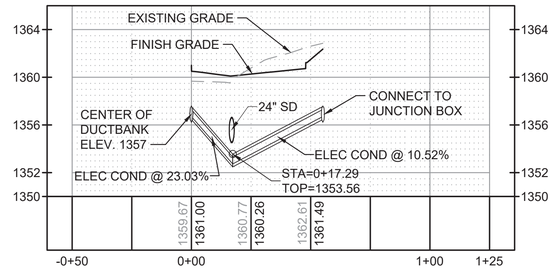


PROFILE VIEW CONCRETE-ENCASED DUCTS

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

L



PROFILE VIEW POWER DUCTBANK

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

L

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-623-2359

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A, SITE WORK - IFC	CAK	NT
E 03/26/2018 PKG 1A, SITE WORK - IFC - ADD2	CAK	NT
L 06/01/2018 PKG 1A, SITE WORK - REV L	CAK	NT
N 06/22/2018 PKG 1A, SITE WORK - REV L	CAK	NT
Z 11/16/2018 PKG 1A, SITE WORK - REV Z	CAK	NT

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

FIRE PROTECTION REVIEW

☐ APPROVED

☐ NOT REQUIRED

DATE _____

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS REGISTERED PROFESSIONAL ENGINEER
19889
11/16/2018
WAYNE M. HERBERT
PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

WICHITA, KS

Designed by C. KINGSLAND 03/5/18

Drawn by J. JENKINS 03/5/18

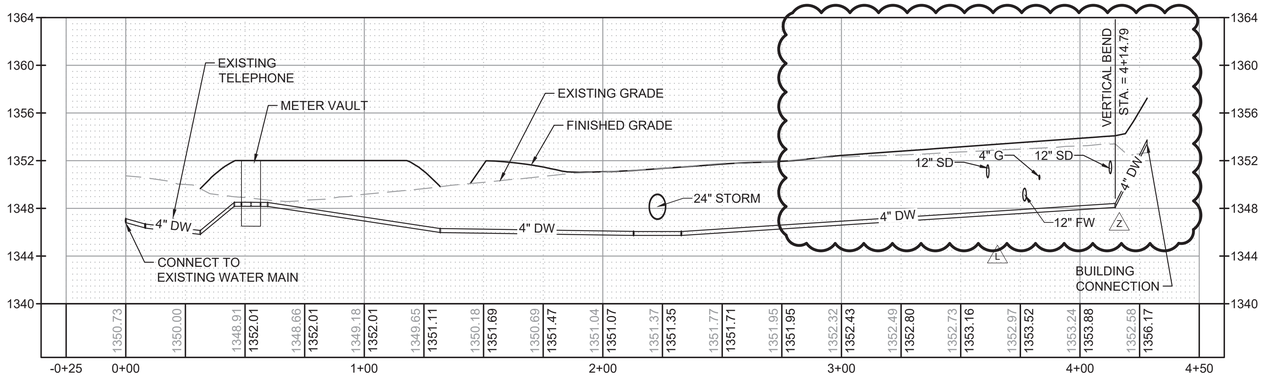
Project No.
6936

Sheet Name:
DUCTBANK PROFILE

Sheet CU204 of XX

Drawing No.
108M-140-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



DOMESTIC WATER PROFILE L

HORIZONTAL: 0 15' 30' 60'
SCALE IN FEET

VERTICAL: 0 3' 6' 12'
SCALE IN FEET

F

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DESCRIPTION	DATE	BY	APPROVED
D	PKG 1A SITE WORK - IFC - ADD1	03/16/2018	CAK	NT
E	PKG 1A SITE WORK - IFC - ADD2	03/26/2018	CAK	NT
F	PKG 1A SITE WORK - IFC - ADD3	04/12/2018	CAK	NT
L	PKG 1A SITE WORK - REV L	06/01/2018	CAK	NT
Z	PKG 1A SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

	NAME	DEPT.	DATE
WDH		PE	6/8/18
DM		PE	6/12/18

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

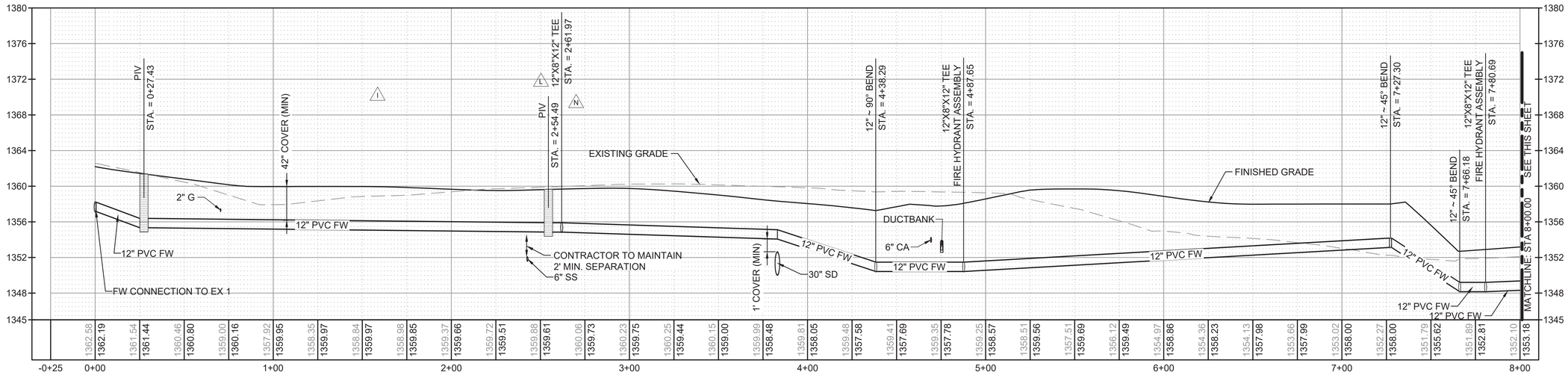


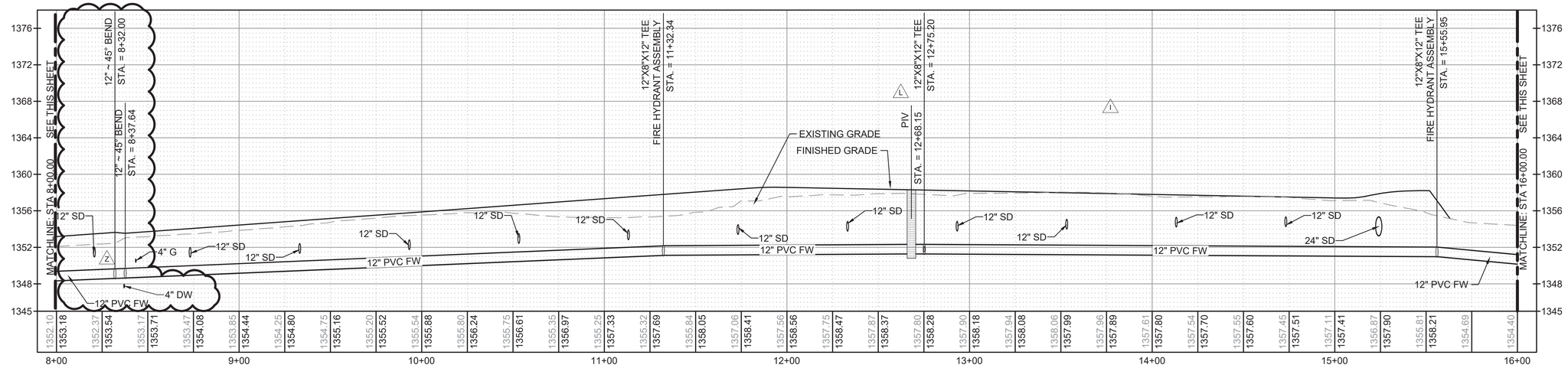
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

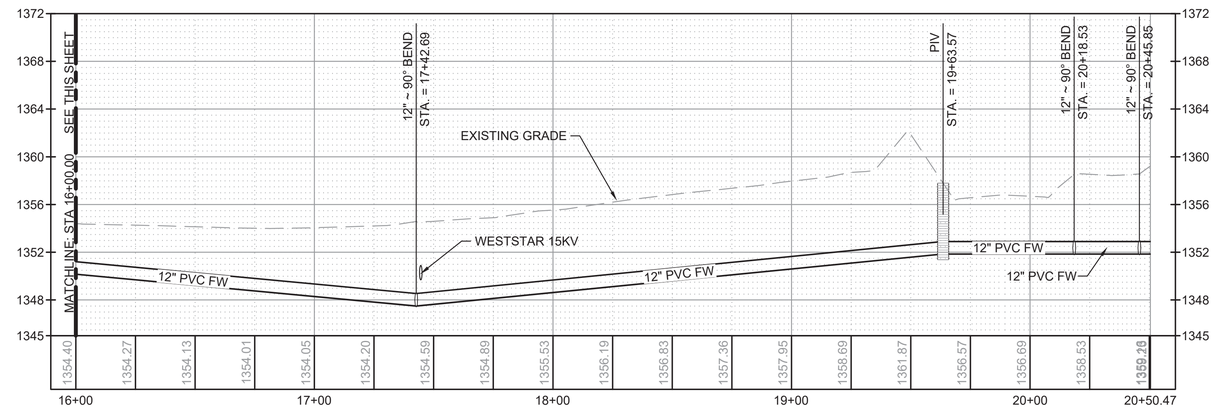
Drawn by J. JENKINS 03/16/2018 Designed by C. KINGSLAND 03/16/2018

Project No. 6936
Sheet Name: DOM WTR PROFILE
Sheet CU205 of XX
Drawing No. 108M-144-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.







FIRE WATER PROFILE 1

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

	DATE	DESCRIPTION	BY	APPROVED
D	03/16/2018	PKG 1A SITE WORK - IFC - ADD1	CAK	NT
I	04/27/2018	PKG 1A SITE WORK - IFC - ECN02	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A SITE WORK - REV N	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED ☐ NOT REQUIRED

DATE _____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 1A - SITE WORK - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

STATE OF KANSAS — WAYNE A. HERBERT — 19889 — 11/16/2018 — PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE - WICHITA, KS

BLDG-1-338G | Drawn by J. JENKINS | 03/16/2018 | Designed by C. KINGSLAND | 03/16/2018

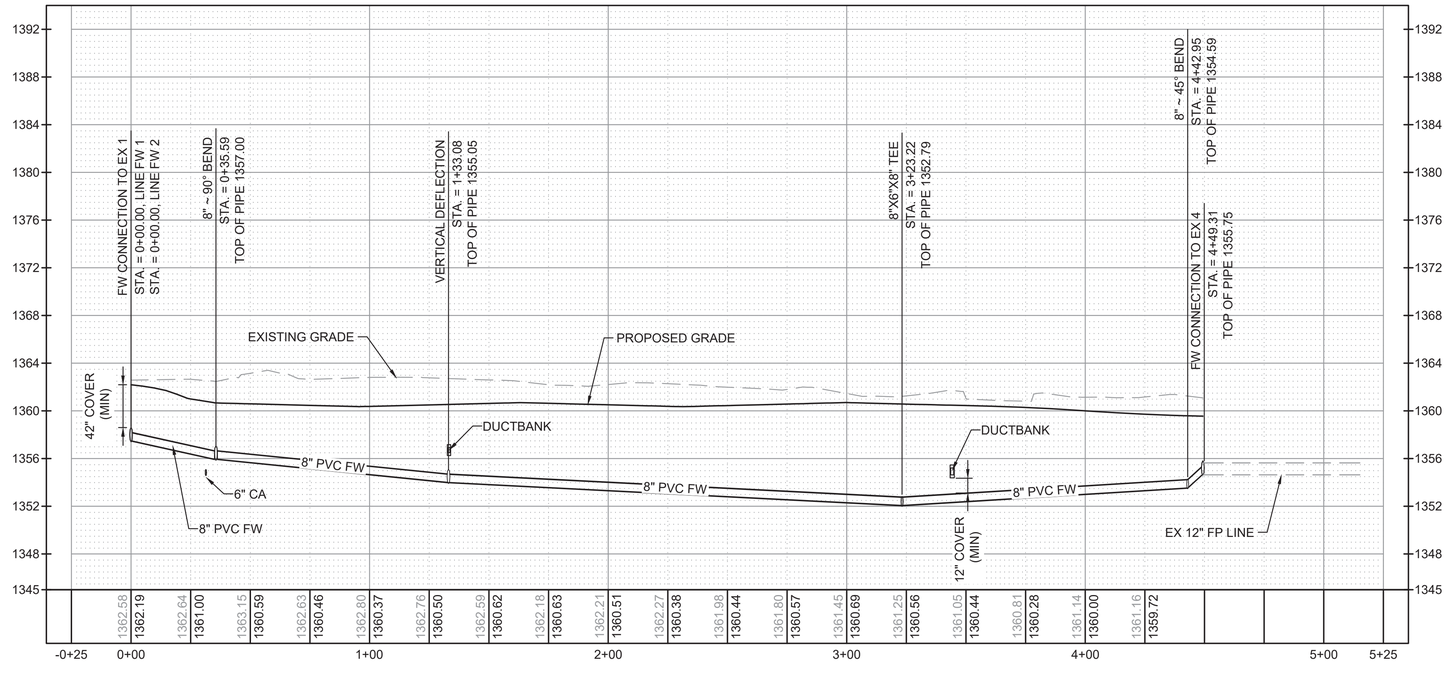
Project No. 6936

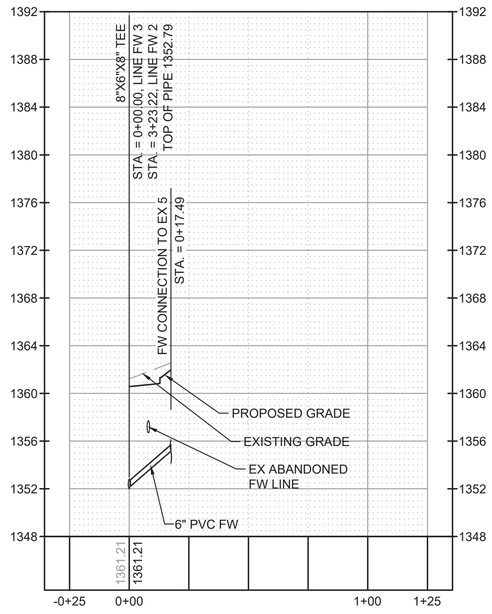
Sheet Name: FIRE WTR PROFILE 1

Sheet CU206 of XX

Drawing No. 108M-145-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.





FIRE WATER PROFILE 2

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

NOTES:

1. FIELD-CONFIRM EXISTING PIPING ELEVATIONS AT TIE-INS PRIOR TO CONSTRUCTION.
2. SUBCONTRACTOR SHALL INSTALL THRUST BLOCKS PER DETAIL 4 ON SHEET CU502 FOR ALL VERTICAL ELEVATION CHANGES (BENDS, TEES, ETC.)

	DATE	DESCRIPTION	BY	APPROVED
U	09/13/2018	PKG 1A, SITE WORK - REV U	CAK	NT
Z	11/16/2018	PKG 1A, SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE _____

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS PROFESSIONAL ENGINEER 19889 11/16/2018

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Drawn by: J. JENKINS | 09/13/2018 | Designed by: C. KINGSLAND | 09/13/2018

Project No. 6936

Sheet Name: FIRE WTR PROFILE 2

Sheet CU207 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

COMPRESSED AIR PROFILE

HORIZONTAL: 0 15' 30' 60" SCALE IN FEET

VERTICAL: 0 3' 6' 12" SCALE IN FEET

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
L	06/01/2018	PKG 1A: SITE WORK - REV L	CAK	NT
N	06/22/2018	PKG 1A: SITE WORK - REV N	CAK	NT
Z	11/16/2018	PKG 1A: SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: J. JENKINS | 06/01/2018 | Designed by: C. KINGSLAND | 06/01/2018

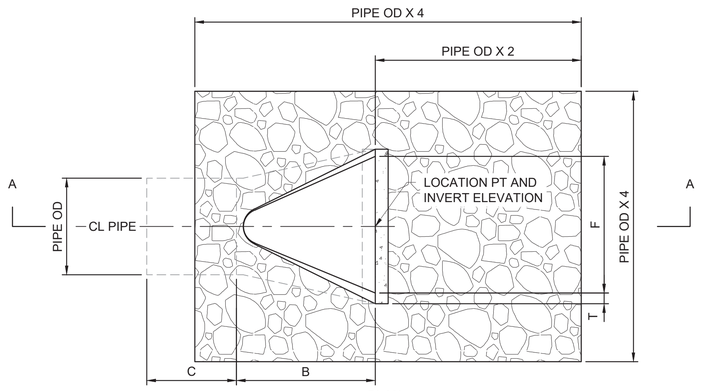
Project No.: 6936

Sheet Name: COMP AIR PROFILE

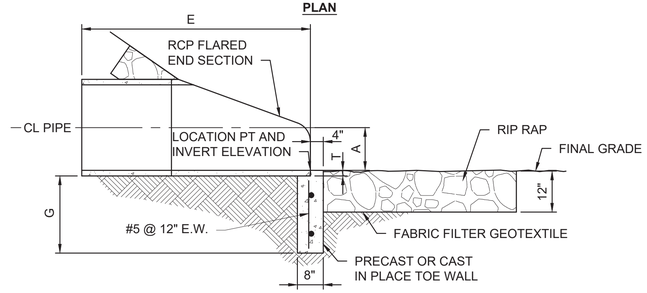
Sheet CU208 of XX

Drawing No.: 108M-146-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN



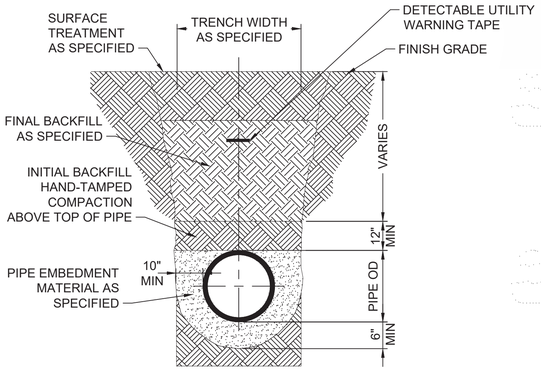
SECTION A-A

NOTES:

1. WHEN PIPE CENTERLINE AND DITCH CENTERLINE INTERSECTION IS APPROX. PERPENDICULAR, EXTEND RIPRAP UP SIDE SLOPE OPPOSITE PIPE DISCHARGE TO HEIGHT LEVEL WITH TOP OF PIPE.
2. PLACE RIPRAP AT ALL END SECTIONS AND CULVERT HEADWALLS.

FLARED END SECTION WITH RIPRAP PROTECTION

DETAIL 1 / CU101

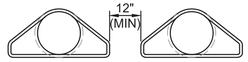


NOTES:

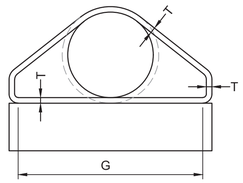
1. BOTTOM OF TRENCH AND BEDDING MATERIAL SHALL PROVIDE UNIFORM LONGITUDINAL SUPPORT FOR BOTTOM SECTION OF PIPE.
2. FINAL BACKFILL UNDER PAVEMENTS MAY BE SUBJECT TO ADDITIONAL COMPACTION REQUIREMENTS AND TESTING.
3. BURIED WARNING AND IDENTIFICATION TAPE SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATIONS.

UTILITY TRENCH

DETAIL 3 / CU101

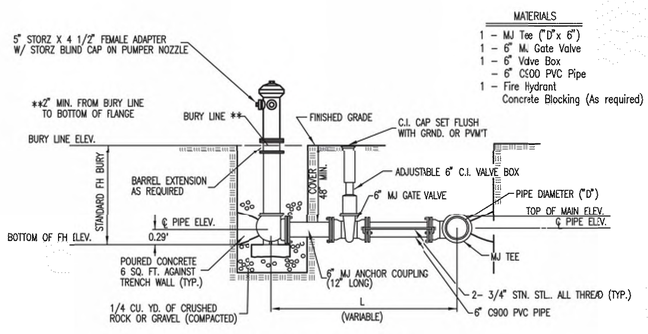


SPACING FOR MULTIPLE INSTALLATION



FRONT ELEVATION

PIPE DIA	DIMENSIONS (INCHES)						
	T	A	B	C	E	F	G
18"	2 1/2	9	27	46	73	36	24"
24"	3	9 1/2	43 1/2	30	73 1/2	48	24"
27"	3 1/4	10 1/2	49 1/2	24	73 1/2	54	24"
30"	3 1/2	12	54	19 3/4	73 3/4	60	24"
36"	4	15	63	34 3/4	97 3/4	72	24"
42"	4 1/2	21	63	35	98	78	24"
48"	5	24	72	26	98	84	24"
54"	5 1/2	27	65	33 1/4	98 1/4	90	36"



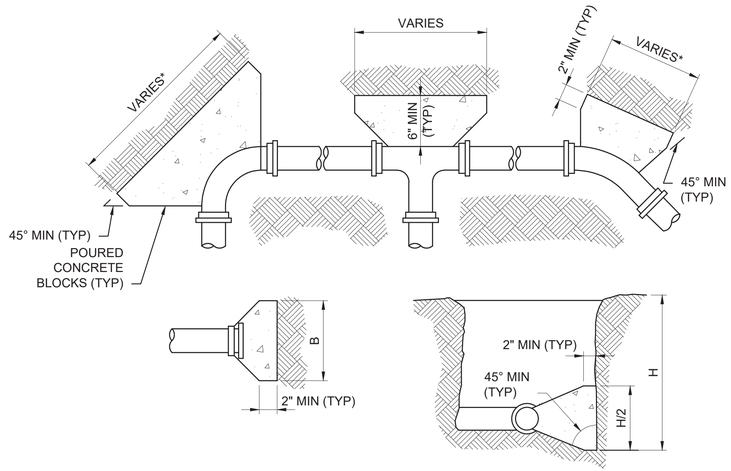
FIRE HYDRANT ASSEMBLY

CAUTION ! - WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.

* MUELLER CENTURION (5 1/4") OR APPROVED EQUAL.
FIRE HYDRANTS SHALL COMPLY WITH THE REQUIREMENT PER AWWA C502. ALL HYDRANTS SHALL HAVE 5 1/4" COMPRESSION VALVE (OPENING AGAINST THE WATER PRESSURE) AND SHALL BE 3-WAY, TRAFFIC MODEL TYPE THAT SHALL REMAIN CLOSED IF DAMAGED IN AN ACCIDENT, AND BE DESIGNED FOR 200 PSIG WORKING PRESSURE. HYDRANTS SHALL HAVE TWO 2 1/2" NOZZLES AND ONE 4 1/2" PUMPER NOZZLE THAT SHALL SCREW INTO THE HYDRANT BODY. THE CONTRACTOR SHALL VERIFY WITH THE BOEING FIRE DEPARTMENT SIZE AND TYPE OF NOZZLES, SIZE AND SHAPE OF OPERATING NUT AND DIRECTION OF OPERATION REQUIRED BEFORE ORDERING HYDRANTS. THE CONTRACTOR SHALL SUBMIT CERTIFICATION OF CORRECT REQUIREMENTS ALONG WITH THE EQUIPMENT SUBMITTAL.

FIRE HYDRANT ASSEMBLY

DETAIL 4 / CU101



THRUST BLOCK BEARING AREA (SQ FT)						
SERVICE TYPE	FITTING SIZE	TEE & END	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
FIRE PROTECTION	12"	16.96	23.99	12.98	6.62	3.33
COMP. AIR	6"	4.24	6.00	3.25	1.65	0.83
DOM. W	3"	1.06	1.50	0.81	0.41	0.21
NAT. GAS	4"	1.88	2.67	1.44	0.74	0.37

NOTE: BEARING AREA BASED ON 2000 PSF SOIL BEARING CAPACITY AND A PIPE TEST PRESSURE OF 200 PSI.

NOTES:

1. THRUST BLOCKS ARE REQUIRED AT ALL VERTICAL AND HORIZONTAL TEES, OR ELBOWS OF PRESSURIZED PIPING.
2. BLOCKING PROVIDED SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
3. THRUST BLOCK CONCRETE SHALL EXTEND TO UNDISTURBED EARTH.
4. A NONPOROUS MATERIAL 8 MILS MIN VISQUEEN OR 15 LB MIN FELT SHALL BE PLACED BETWEEN THE FITTING AND CONCRETE THRUST BLOCK.
5. JOINTS SHALL NOT BE COVERED WITH CONCRETE. SUFFICIENT CLEARANCE SHALL BE PROVIDED BETWEEN CONCRETE AND FITTINGS FOR FUTURE MAINTENANCE.
6. DOUBLE LAYER OF TAR PAPER BETWEEN CONCRETE BLOCK AND PLUG TO PERMIT EASY REMOVAL FOR FUTURE EXTENSION OF WATER MAIN WHERE REQUIRED.
7. JOINT RESTRAINTS CAN BE PROVIDED WHERE USE OF CONCRETE THRUST BLOCKING CANNOT BE USED BECAUSE OF OBSTRUCTIONS OR REQUIREMENTS IN THE SPECIFICATIONS. RESTRAINT DETAILS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

THRUST BLOCK

DETAIL 2 / CU101

09MAR2018 - PKG 1A-SITE WORK - IFC
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	DATE	DESCRIPTION
CAK	03/09/2018	PKG 1A - SITE WORK - IFC
NT		

FIRE PROTECTION REVIEW — APPROVED by Fire Protection 05/07/2018 10:09:29 AM — ☐ APPROVED ☐ NOT REQUIRED — DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME: SS — DEPT.: PE — DATE: 5-10-2018

SPIRIT AEROSYSTEMS

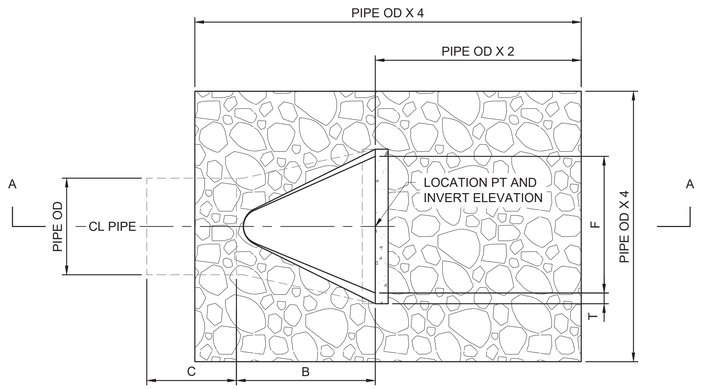
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS PROFESSIONAL ENGINEER — 19889 — 4/1/2018

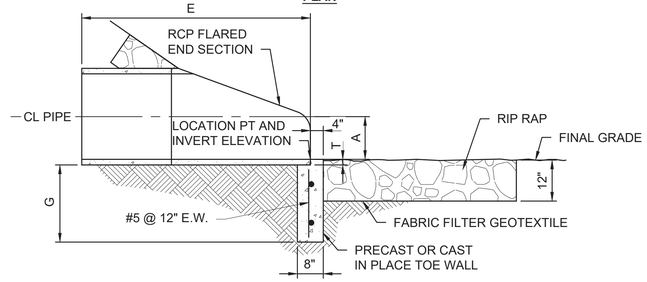
COLFAX AUTOMATED WAREHOUSE
Facilities Engineering
WICHITA, KS
BLDG-1-338G
Designed by: C. KINGSLAND — 02/23/2018
Drawn by: J. JENKINS — 02/23/2018

Project No. 6936
Sheet Name: UTILITY DETAILS 1
Sheet CU501 of XX
Drawing No. 108M-141-XXX

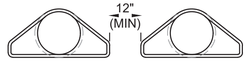
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



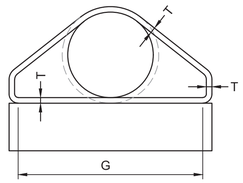
PLAN



SECTION A-A



SPACING FOR MULTIPLE INSTALLATION



FRONT ELEVATION

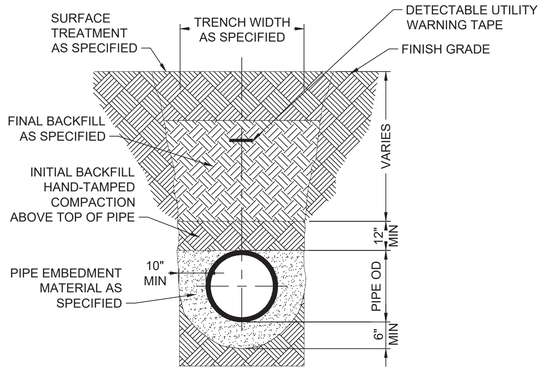
PIPE DIA	DIMENSIONS (INCHES)						
	T	A	B	C	E	F	G
18"	2 1/2	9	27	46	73	36	24"
24"	3	9 1/2	43 1/2	30	73 1/2	48	24"
27"	3 1/4	10 1/2	49 1/2	24	73 1/2	54	24"
30"	3 1/2	12	54	19 3/4	73 3/4	60	24"
36"	4	15	63	34 3/4	97 3/4	72	24"
42"	4 1/2	21	63	35	98	78	24"
48"	5	24	72	26	98	84	24"
54"	5 1/2	27	65	33 1/4	98 1/4	90	36"

NOTES:

1. WHEN PIPE CENTERLINE AND DITCH CENTERLINE INTERSECTION IS APPROX. PERPENDICULAR, EXTEND RIPRAP UP SIDE SLOPE OPPOSITE PIPE DISCHARGE TO HEIGHT LEVEL WITH TOP OF PIPE.
2. PLACE RIPRAP AT ALL END SECTIONS AND CULVERT HEADWALLS.

FLARED END SECTION WITH RIPRAP PROTECTION

DETAIL 1 / CU101

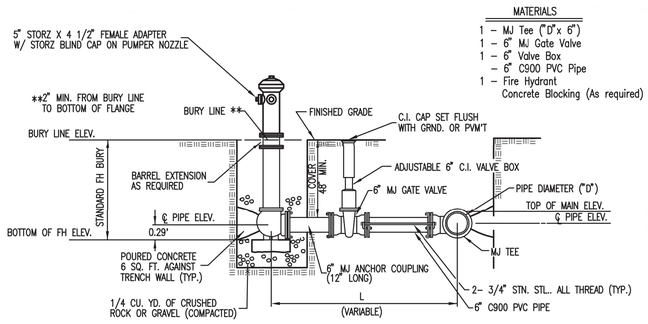


NOTES:

1. BOTTOM OF TRENCH AND BEDDING MATERIAL SHALL PROVIDE UNIFORM LONGITUDINAL SUPPORT FOR BOTTOM SECTION OF PIPE.
2. FINAL BACKFILL UNDER PAVEMENTS MAY BE SUBJECT TO ADDITIONAL COMPACTION REQUIREMENTS AND TESTING.
3. BURIED WARNING AND IDENTIFICATION TAPE SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATIONS.

UTILITY TRENCH

DETAIL 3 / CU101



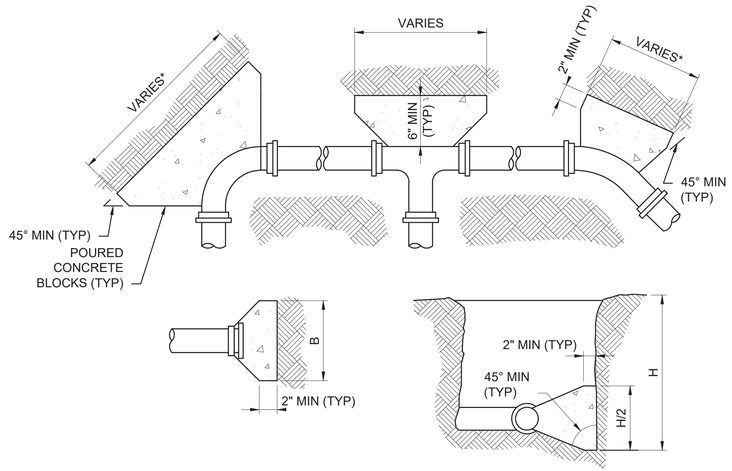
FIRE HYDRANT ASSEMBLY

CAUTION ! – WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.

* MUELLER CENTURION (5 1/4") OR APPROVED EQUAL. FIRE HYDRANTS SHALL COMPLY WITH THE REQUIREMENT PER AWWA C502. ALL HYDRANTS SHALL HAVE 5 1/4" COMPRESSION VALVE (OPENING AGAINST THE WATER PRESSURE) AND SHALL BE 3–WAY, TRAFFIC MODEL TYPE THAT SHALL REMAIN CLOSED IF DAMAGED IN AN ACCIDENT, AND BE DESIGNED FOR 200 PSIG WORKING PRESSURE. HYDRANTS SHALL HAVE TWO 2 1/2" NOZZLES AND ONE 4 1/2" PUMPER NOZZLE THAT SHALL SCREW INTO THE HYDRANT BODY. THE CONTRACTOR SHALL VERIFY WITH THE BOEING FIRE DEPARTMENT SIZE AND TYPE OF NOZZLES, SIZE AND SHAPE OF OPERATING NUT AND DIRECTION OF OPERATION REQUIRED BEFORE ORDERING HYDRANTS. THE CONTRACTOR SHALL SUBMIT CERTIFICATION OF CORRECT REQUIREMENTS ALONG WITH THE EQUIPMENT SUBMITTAL.

FIRE HYDRANT ASSEMBLY

DETAIL 4 / CU101



THRUST BLOCK BEARING AREA (SQ FT)						
SERVICE TYPE	FITTING SIZE	TEE & END	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
FIRE PROTECTION	12"	16.96	23.99	12.98	6.62	3.33
COMP. AIR	6"	4.24	6.00	3.25	1.65	0.83
DOM. W	3"	1.06	1.50	0.81	0.41	0.21
NAT. GAS	4"	1.88	2.67	1.44	0.74	0.37

NOTE: BEARING AREA BASED ON 2000 PSF SOIL BEARING CAPACITY AND A PIPE TEST PRESSURE OF 200 PSI.

NOTES:

1. THRUST BLOCKS ARE REQUIRED AT ALL VERTICAL AND HORIZONTAL TEES, OR ELBOWS OF PRESSURIZED PIPING.
2. BLOCKING PROVIDED SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
3. THRUST BLOCK CONCRETE SHALL EXTEND TO UNDISTURBED EARTH.
4. A NONPOROUS MATERIAL 8 MILS MIN VISQUEEN OR 15 LB MIN FELT SHALL BE PLACED BETWEEN THE FITTING AND CONCRETE THRUST BLOCK.
5. JOINTS SHALL NOT BE COVERED WITH CONCRETE. SUFFICIENT CLEARANCE SHALL BE PROVIDED BETWEEN CONCRETE AND FITTINGS FOR FUTURE MAINTENANCE.
6. DOUBLE LAYER OF TAR PAPER BETWEEN CONCRETE BLOCK AND PLUG TO PERMIT EASY REMOVAL FOR FUTURE EXTENSION OF WATER MAIN WHERE REQUIRED.
7. JOINT RESTRAINTS CAN BE PROVIDED WHERE USE OF CONCRETE THRUST BLOCKING CANNOT BE USED BECAUSE OF OBSTRUCTIONS OR REQUIREMENTS IN THE SPECIFICATIONS. RESTRAINT DETAILS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

THRUST BLOCK

DETAIL 2 / CU101

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	DESCRIPTION	DATE
CAK	PKG 1A - SITE WORK - IFC	03/09/2018
CAK	PKG 1A - SITE WORK - REV Z	11/16/2018

FIRE PROTECTION REVIEW
APPROVED BY
AMEC FOSTER WHEELER
05/07/2018 - 10:03:29 AM
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



WICHITA, KS

Designed by	C. KINGSLAND	02/23/2018
Drawn by	J. JENKINS	02/23/2018
Checked by		

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

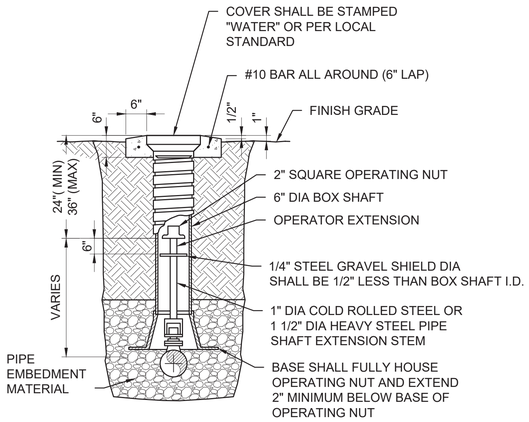
Project No.
6936

Sheet Name:
UTILITY DETAILS 1

Sheet CU501 of XX

Drawing No.
108M-146-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

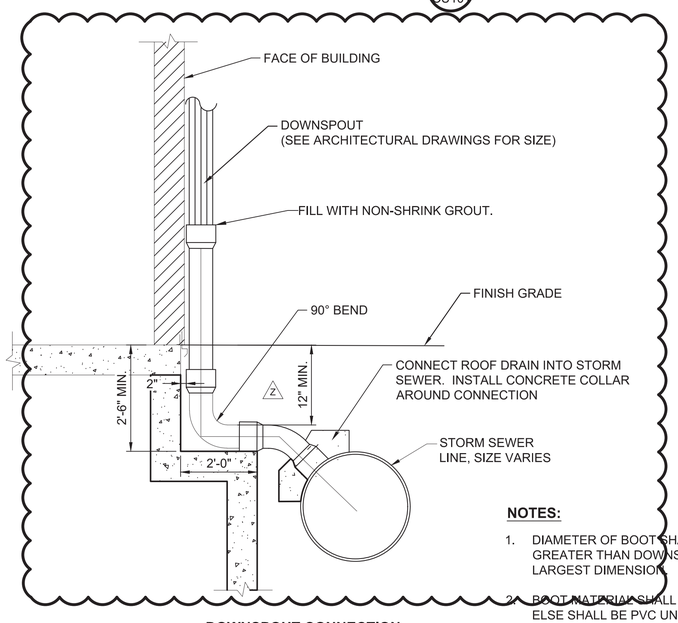


NOTES:

1. VALVE BOX SHALL NOT REST ON OPERATING ASSEMBLY.
2. VALVE BOXES LOCATED IN VEHICULAR AREAS SHALL BE TRAFFIC RATED.
3. VALVE BOXES LOCATED IN PAVED AREAS SHALL BE INSTALLED FLUSH WITH FINAL GRADING.
4. CONCRETE COLLAR MAY BE LOWERED ON RISER ASSEMBLY TO ACCOMMODATE SPECIAL FINISH GRADING.
5. VALVE BOX SHALL BE PAINTED WITH HEAVY COAT OF BITUMINOUS PAINT.
6. A CORROSIVE RESISTANT DEBRIS CAP SHALL BE INSTALLED TO PREVENT DEBRIS FROM PASSING AROUND THE CAP AND DOWN INTO THE VALVE HOUSING. THE CAP SHALL BE HELD IN PLACE BY A MECHANISM WHICH WILL NOT DAMAGE THE VALVE HOUSING. CAP SHALL BE CONSTRUCTED TO ALLOW THE DEVICE TO BE SECURED BY A LOCK. HANDLE AND BODY OF THE CAP SHALL BE INTEGRALLY COLORED AS REQUIRED BY LOCAL STANDARDS.

SCREW SHAFT-TYPE VALVE BOX

DETAIL 1 / CU101

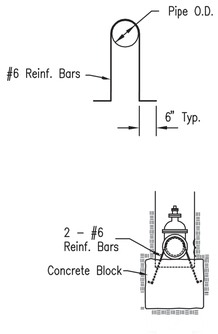


DOWNSPOUT CONNECTION

DETAIL 3 / CU101

NOTES:

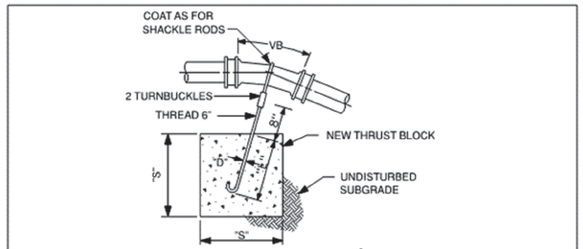
1. DIAMETER OF BOOT SHALL BE 1/2" GREATER THAN DOWNSPOUT'S LARGEST DIMENSION.
2. BOOT MATERIAL SHALL BE PVC. ALL ELSE SHALL BE PVC UNLESS OTHERWISE INDICATED.
3. SEE SHEET CU101 FOR STORM SEWER SIZE AND ELEVATIONS.



MATERIALS LIST
1 – MJ Gate Valve
2 LF – C900 PVC Pipe
1 – 6" Valve Box

.VE WITH INDICATOR POST

DETAIL 2 / CU101



11 1/4° THRU 30° BENDS

G20011

TYPE "A" THRUST BLOCK TABLE

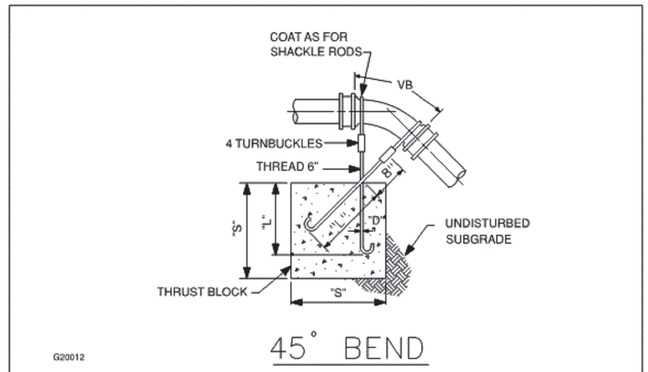
PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	VERTICAL BEND, VB (DEGREES)	NO. OF. CU. FT. OF CONCRETE BLOCKING	SIDE OF CUBE, "S" (FEET)	DIAMETER OF SHACKLE RODS, "D" (INCHES)	DEPTH OF RODS IN CONCRETE, "L" (FEET)
4	300	11 1/4	8	2.0	5/8	1.5
		22 1/2	11	2.2		2.0
		30	17	2.6		
6	300	11 1/4	11	2.2	5/8	2.0
		22 1/2	25	2.9		
		30	41	3.5		
8	300	11 1/4	16	2.5	5/8	2.0
		22 1/2	47	3.6		
		30	70	4.1	3/4	2.5
10	250	11 1/4	22	2.8	5/8	2.0
		22 1/2	64	4.0	5/8	2.0
		30	96	4.6	3/4	2.5
12	250	11 1/4	32	3.2	5/8	2.0
		22 1/2	88	4.5	7/8	3.0
		30	132	5.1		
14	225	11 1/4	50	3.7	3/4	2.5
		22 1/2	133	5.1	1	3.5
		30	198	5.8	1 1/8	3.5
16	225	11 1/4	70	4.1	7/8	3.0
		22 1/2	184	5.7	1–1/8	4.0
		30	275	6.5	1–1/4	

THRUST BLOCK NOTES:

CAUTION

1. THE SQUARE FEET OF CONCRETE THRUST BLOCK AREA IS BASED ON A SAFE BEARING LOAD OF 2000 POUNDS PER SQUARE FOOT. FOR A BEARING LOAD OF 1000 POUNDS, MULTIPLY THE THRUST BLOCK AREA FOUND IN THE TABLE BELOW BY A FACTOR OF 2.
2. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/2 SQUARE FOOT BEARING AGAINST THE FITTING.
3. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT.
4. IN ADDITION TO THRUST BLOCKS, SECURE ALL JOINTS WITH RETAINER GLANDS, TIE RODS, OR FLANGE FITTINGS.
5. CONCRETE FOR THRUST BLOCKS SHALL BE 3000 PSI @ 28 DAYS.

FIGURE 7 – OUTSIDE FIRE PROTECTION PIPING, THRUST BLOCKS (SHEET 4 OF 5)



45° BEND

G20012

TYPE "B" THRUST BLOCK TABLE

PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	VERTICAL BEND, VB (DEGREES)	NO. OF. CU. FT. OF CONCRETE BLOCKING	SIDE OF CUBE, "S" (FEET)	DIAMETER OF SHACKLE RODS, "D" (INCHES)	DEPTH OF RODS IN CONCRETE, "L" (FEET)
4	300	45	30	3.1	5/8	2.0
6			68	4.1		
8			123	5.0		
12	250		232	6.1	3/4	2.5
16	225		478	7.8	1–1/8	4.0

THRUST BLOCK NOTES:

CAUTION

1. THE SQUARE FEET OF CONCRETE THRUST BLOCK AREA IS BASED ON A SAFE BEARING LOAD OF 2000 POUNDS PER SQUARE FOOT. FOR A BEARING LOAD OF 1000 POUNDS, MULTIPLY THE THRUST BLOCK AREA FOUND IN THE TABLE BELOW BY A FACTOR OF 2.
2. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/2 SQUARE FOOT BEARING AGAINST THE FITTING.
3. BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING JOINT.
4. IN ADDITION TO THRUST BLOCKS, SECURE ALL JOINTS WITH RETAINER GLANDS, TIE RODS, OR FLANGE FITTINGS.
5. CONCRETE FOR THRUST BLOCKS SHALL BE 3000 PSI @ 28 DAYS.

FIGURE 8 – OUTSIDE FIRE PROTECTION PIPING, THRUST BLOCKS (SHEET 5 OF 5)

THRUST BLOCKS

DETAIL 4 / CU104 CU105 (0)

DESCRIPTION	DATE	BY	APPROVED
PKG 1A - SITE WORK - IFC	03/09/2018	CAK	NT
PKG 1A - SITE WORK - REV U	03/06/2018	CAK	NT
PKG 1A- SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

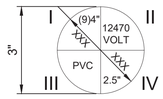


16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

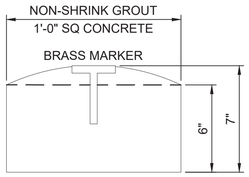
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by: C. KINGSLAND 02/23/2018
Drawn by: J. JENKINS 02/23/2018

Project No. 6936
Sheet Name: UTILITY DETAILS 2
Sheet CU502 of XX
Drawing No. 108M-147-XXX

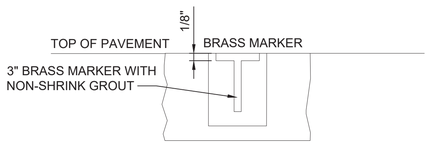
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN



SECTION - GRADE AREA



SECTION - GRADE AREA

MARKING INSTRUCTIONS LEGEND			
LEGEND/QUADRANT:	CODE:	MECHANICAL:	ELECTRICAL:
I	SIZE	SIZE	QTY AND SIZE
II	UTILITY	WTR, GAS, ETC	VOLTAGE OR COMM
III	MATERIAL	IRON, PVC, ETC	RGS OR PVC
IV	DEPTH	DISTANCE IN FEET, FROM TOP OF MARKER TO TOP OF UTILITY PIPE	

APPROVED UTILITY MARKER ABBREVIATIONS:

DESCRIPTION:	ABBREVIATION:
COMPRESSED AIR	CA
CHILLED WATER SUPPLY	CHWS
CHILLED WATER RETURN	CHWR
CONDESATE	CNDST
COMMUNICATION	COMM
CONDENSER WATER SUPPLY	CWS
CONDENSER WATER RETURN	CWR
DEIONIZED WATER	DI
GAS	GAS
HOTWATER SUPPLY	HWS
HOT WATER RETURN	HWR
IRRIGATION	IRRG
INDUSTRIAL WASTE	IW
SANITARY SEWER	SAN
STORM WATER SEWER	STS
STEAM	STEAM
TRANSITE	XITE
VOLTAGE	VOLT
DOMESTIC WATER	WTR
GROUND WTR RECOVERY	WTR REC

DESCRIPTION:	ABBREVIATION:
CAST IRON PIPE	CIP
CORRUGATED METAL PIPE	CMP
COMPOSITE PIPE	CP
POLYVINYL CHLORIDE	PVC
REINFORCED CONCRETE PIPE	RCP
RIGID GALVANIZED STEEL	RGS
STEEL PIPE	STL
VITRIFIED CLAY PIPE	VCP
ALUMINUM	AL
CONDUIT	C

UTILITY MARKER INSTRUCTIONS:

ARROW: DIRECTION(S) OF UTILITY WITH DISTANCES, XXX IN FEET, TO AND FROM ADJACENT MARKER(S) OR UTILITY STUB UPS.

MARKERS:: FURNISH AND INSTALL UNDERGROUND UTILITY MARKERS PER THE FOLLOWING REQUIREMENTS:

LOCATION: EXTERIOR INSTALLATIONS:
-CHANGE OF DIRECTION
-WITHIN 5'-0" OF BLDG WALL
-MINIMUM ONE MARKER PER REQUIRED UTILITY
-CROSSING OF SIDEWALKS, ROADS, ETC.
-MAXIMUM 150' APART, WITHIN LINE OF SIGHT
-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC.

INTERIOR INSTALLATIONS:
-CHANGE OF DIRECTION
-WITHIN 5'-0" OF BLDG WALL
-MINIMUM ONE MARKER PER REQUIRED UTILITY
-MAXIMUM 50' APART, WITHIN LINE OF SIGHT
-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC.

REQUIRED MARKERS: SHALL BE INSTALLED FOR THE FOLLOWING UTILITIES:

EXTERIOR: -ALL EXTERIOR PIPES OR CONDUIT EXCEPT IRRIGATION (LAWN SPRINKLER SYSTEMS) DISTRIBUTION PIPES.

INTERIOR: -600V AND ABOVE
-SUBSTATION FEEDERS
-ENVIRONMENTAL UTILITIES
-GAS AND/OR PROPANE LINE(S)
-CRITICAL SERVICE-EMERGENCY, BREATH AIR, ETC.
-ALL PIPE AND/OR CONDUIT OF 1.25" AND LARGER DIAMETER.

NOTES: -LETTERING SHALL BE STAMPED 0.25" BLOCK STYLE LETTERS

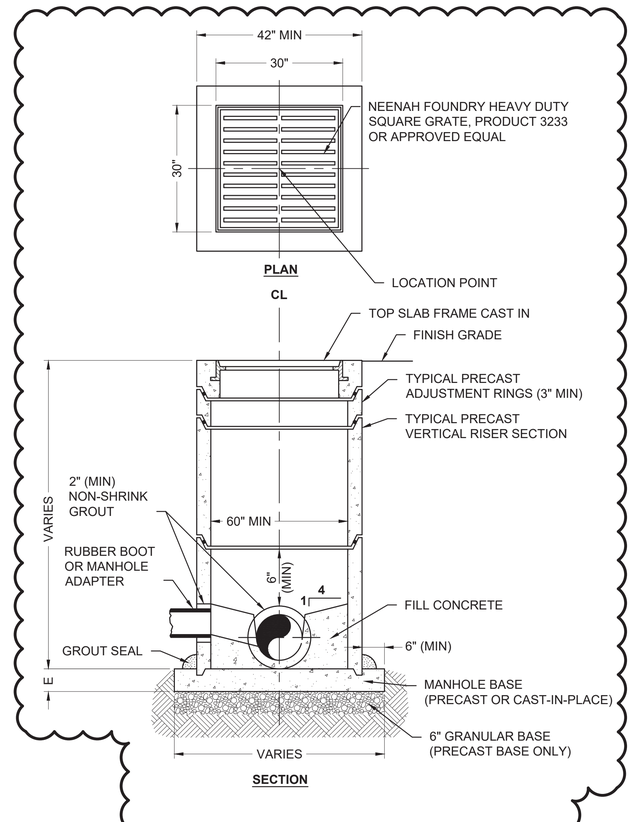
-ALL NEW AND EXISTING (UNCOVERED AT POINT OF EXCAVATION UNDERGROUND UTILITIES SHALL BE MARKED PER THE ABOVE REQUIREMENTS.

-ANY DISTURBED MARKERS SHALL BE REPLACED.

-MARKERS SHALL BE A 3" FLAT BRASS SURVEY MARKER. LIETZ #8434-08 OR BOEING PLANT ENGINEERING APPROVED EQUAL.

-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC. COVERS SHALL REFLECT CORRECT UTILITY.

UTILITY MARKER DETAIL 1 CU100 CU101 CU102



PLAN

SECTION

PRECAST INLET DETAIL 2 CU100 CU101 CU102 (C)

MANHOLE NOTES:

1. ALL PRECAST MANHOLE SECTIONS SHALL CONFORM TO ASTM C478.
2. ALL UTILITY STRUCTURES ARE TO BE H-20 RATED UNLESS INDICATED OTHERWISE.
3. IF A MANHOLE IS LOCATED IN PAVEMENT AREAS, RIM ELEVATION SHALL BE FLUSH WITH FINAL GRADE. IF A MANHOLE IS LOCATED OUTSIDE OF PAVEMENT AREAS, RIM ELEVATION SHALL BE 6.00" MINIMUM ABOVE ADJACENT FINISH GRADE.
4. COVERS AND CASTINGS OF MANHOLES AND STRUCTURES SHALL BE STAMPED PER THE APPROPRIATE UTILITY TYPE OR PER THE LOCAL STANDARDS, AND SHALL BE STAMPED PER THE ORIGIN OF MANUFACTURE.
5. COVERS AND CASTINGS SHALL BE TAMPER-PROOF FOR STRUCTURES LOCATED IN PEDESTRIAN AREAS, EASEMENT AREAS, AND AREAS WITH SPECIAL SECURITY RESTRICTIONS.
6. COVERS THAT MAY BE SUBMERGED SHALL BE WATERTIGHT.
7. FRAME AND ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINK GROUT, PREFORMED PLASTIC, OR RUBBER RING TO FORM WATERTIGHT SEAL.
8. ALL JOINTS SHALL BE SEALED WITH JOINT COMPOUND OR GROUTED WITH MORTAR.
9. ANY LIFT LOOPS FOR UTILITY STRUCTURES SHALL BE GROUTED FLUSH AFTER INSTALLATION.
10. ALL MANHOLE BASES (PRECAST OR CAST-IN-PLACE) SHALL HAVE #4 @ 12" ON CENTER EACH WAY REINFORCEMENT.
11. ALL REINFORCEMENT SHALL BE PLACED 2" CLEAR OF NEAREST FACE OF CONCRETE UNLESS INDICATED OTHERWISE.
12. IF MANHOLES ARE INDICATED ON SANITARY LINES, A 2.00 INCH DROP IN ELEVATION BETWEEN THE INCOMING AND OUTGOING SEWER SHALL BE PROVIDED IN EACH MANHOLE UNLESS INDICATED OTHERWISE. INVERT FLOW CHANNELS SHALL BE CONSTRUCTED TO PROVIDE SMOOTH AND UNIFORM SLOPE WITH GRADUAL TRANSITION SECTIONS.
13. PIPE MAY EXTEND 2.00" MAXIMUM BEYOND INTERIOR MANHOLE WALL.
14. SUBCONTRACTOR SHALL SUBMIT PRECAST STRUCTURE WITH PRODUCT DATA, DESIGN CALCULATIONS,AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
15. MANHOLE STEPS SHALL BE PLACED INTO MANHOLE WALL DURING MANUFACTURE OR MORTARED INTO HOLES AFTER CONCRETE HAS CURED.

09MAR2018 - PKG 1A -SITE WORK - IFC
PE CONTACT: WAYNE HERBERT @ 316-523-2339

BY	DESCRIPTION	DATE
CAK	PKG 1A - SITE WORK - IFC	03/09/2018
CAK	PKG 1A - SITE WORK - IFC - ADD2	03/26/2018
NT		
NT		

FIRE PROTECTION REVIEW — FP Review not Required — 05/07/2018 10:01:17 AM — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

SPIRIT AEROSYSTEMS

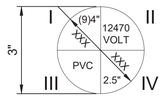
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



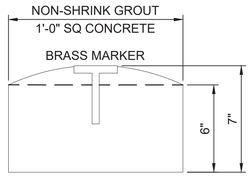
COLFAX AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Facilities Engineering

Drawn by	Designed by	Date
J. JENKINS	C. KINGSLAND	03/09/2018

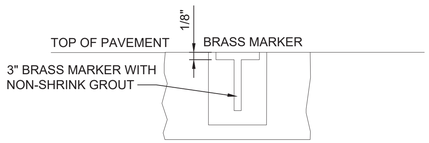
Project No. 6936
Sheet Name: UTILITY DETAILS 3
Sheet CU503 of XX
Drawing No. 108M-143-XXX



PLAN



SECTION - GRADE AREA



SECTION - GRADE AREA

MARKING INSTRUCTIONS LEGEND			
LEGEND/QUADRANT:	CODE:	MECHANICAL:	ELECTRICAL:
I	SIZE	SIZE	QTY AND SIZE
II	UTILITY	WTR, GAS, ETC	VOLTAGE OR COMM
III	MATERIAL	IRON, PVC, ETC	RGS OR PVC
IV	DEPTH	DISTANCE IN FEET, FROM TOP OF MARKER TO TOP OF UTILITY PIPE	

APPROVED UTILITY MARKER ABBREVIATIONS:

DESCRIPTION:	ABBREVIATION:
COMPRESSED AIR	CA
CHILLED WATER SUPPLY	CHWS
CHILLED WATER RETURN	CHWR
CONDESATE	CNDST
COMMUNICATION	COMM
CONDENSER WATER SUPPLY	CWS
CONDENSER WATER RETURN	CWR
DEIONIZED WATER	DI
GAS	GAS
HOTWATER SUPPLY	HWS
HOT WATER RETURN	HWR
IRRIGATION	IRRG
INDUSTRIAL WASTE	IW
SANITARY SEWER	SAN
STORM WATER SEWER	STS
STEAM	STEAM
TRANSITE	XITE
VOLTAGE	VOLT
DOMESTIC WATER	WTR
GROUND WTR RECOVERY	WTR REC

DESCRIPTION:	ABBREVIATION:
CAST IRON PIPE	CIP
CORRUGATED METAL PIPE	CMP
COMPOSITE PIPE	CP
POLYVINYL CHLORIDE	PVC
REINFORCED CONCRETE PIPE	RCP
RIGID GALVANIZED STEEL	RGS
STEEL PIPE	STL
VITRIFIED CLAY PIPE	VCP
ALUMINUM	AL
CONDUIT	C

UTILITY MARKER INSTRUCTIONS:

ARROW: DIRECTION(S) OF UTILITY WITH DISTANCES, XXX IN FEET, TO AND FROM ADJACENT MARKER(S) OR UTILITY STUB UPS.

MARKERS:: FURNISH AND INSTALL UNDERGROUND UTILITY MARKERS PER THE FOLLOWING REQUIREMENTS:

LOCATION: EXTERIOR INSTALLATIONS:
-CHANGE OF DIRECTION
-WITHIN 5'-0" OF BLDG WALL
-MINIMUM ONE MARKER PER REQUIRED UTILITY
-CROSSING OF SIDEWALKS, ROADS, ETC.
-MAXIMUM 150' APART, WITHIN LINE OF SIGHT
-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC.

INTERIOR INSTALLATIONS:
-CHANGE OF DIRECTION
-WITHIN 5'-0" OF BLDG WALL
-MINIMUM ONE MARKER PER REQUIRED UTILITY
-MAXIMUM 50' APART, WITHIN LINE OF SIGHT
-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC.

REQUIRED MARKERS: SHALL BE INSTALLED FOR THE FOLLOWING UTILITIES:

EXTERIOR: -ALL EXTERIOR PIPES OR CONDUIT EXCEPT IRRIGATION (LAWN SPRINKLER SYSTEMS) DISTRIBUTION PIPES.

INTERIOR: -600V AND ABOVE
-SUBSTATION FEEDERS
-ENVIRONMENTAL UTILITIES
-GAS AND/OR PROPANE LINE(S)
-CRITICAL SERVICE-EMERGENCY, BREATH AIR, ETC.
-ALL PIPE AND/OR CONDUIT OF 1.25" AND LARGER DIAMETER.

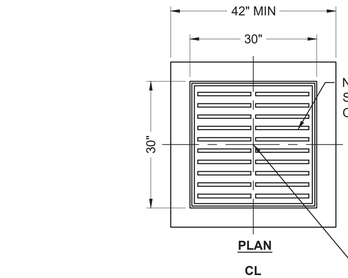
NOTES: -LETTERING SHALL BE STAMPED 0.25" BLOCK STYLE LETTERS

-ALL NEW AND EXISTING (UNCOVERED AT POINT OF EXCAVATION UNDERGROUND UTILITIES SHALL BE MARKED PER THE ABOVE REQUIREMENTS.

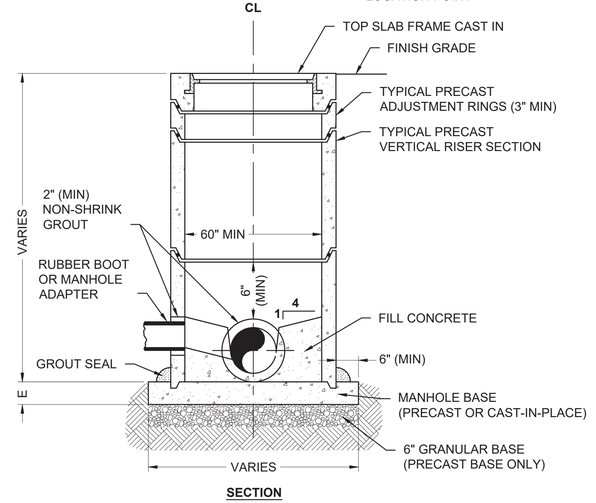
-ANY DISTURBED MARKERS SHALL BE REPLACED.

-MARKERS SHALL BE A 3" FLAT BRASS SURVEY MARKER. LIETZ #8434-08 OR BOEING PLANT ENGINEERING APPROVED EQUAL.

-ACCESS CONTROL POINTS, MANHOLES, VALVES, ETC. COVERS SHALL REFLECT CORRECT UTILITY.



PLAN



SECTION

UTILITY MARKER

DETAIL 1 / CU100 / CU101 / CU102

PRECAST INLET

DETAIL 2 / CU100 / CU101 / CU102 C

MANHOLE NOTES:

1. ALL PRECAST MANHOLE SECTIONS SHALL CONFORM TO ASTM C478.
2. ALL UTILITY STRUCTURES ARE TO BE H-20 RATED UNLESS INDICATED OTHERWISE.
3. IF A MANHOLE IS LOCATED IN PAVEMENT AREAS, RIM ELEVATION SHALL BE FLUSH WITH FINAL GRADE. IF A MANHOLE IS LOCATED OUTSIDE OF PAVEMENT AREAS, RIM ELEVATION SHALL BE 6.00" MINIMUM ABOVE ADJACENT FINISH GRADE.
4. COVERS AND CASTINGS OF MANHOLES AND STRUCTURES SHALL BE STAMPED PER THE APPROPRIATE UTILITY TYPE OR PER THE LOCAL STANDARDS, AND SHALL BE STAMPED PER THE ORIGIN OF MANUFACTURE.
5. COVERS AND CASTINGS SHALL BE TAMPER-PROOF FOR STRUCTURES LOCATED IN PEDESTRIAN AREAS, EASEMENT AREAS, AND AREAS WITH SPECIAL SECURITY RESTRICTIONS.
6. COVERS THAT MAY BE SUBMERGED SHALL BE WATERTIGHT.
7. FRAME AND ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINK GROUT, PREFORMED PLASTIC, OR RUBBER RING TO FORM WATERTIGHT SEAL.
8. ALL JOINTS SHALL BE SEALED WITH JOINT COMPOUND OR GROUTED WITH MORTAR.
9. ANY LIFT LOOPS FOR UTILITY STRUCTURES SHALL BE GROUTED FLUSH AFTER INSTALLATION.
10. ALL MANHOLE BASES (PRECAST OR CAST-IN-PLACE) SHALL HAVE #4 @ 12" ON CENTER EACH WAY REINFORCEMENT.
11. ALL REINFORCEMENT SHALL BE PLACED 2" CLEAR OF NEAREST FACE OF CONCRETE UNLESS INDICATED OTHERWISE.
12. IF MANHOLES ARE INDICATED ON SANITARY LINES, A 2.00 INCH DROP IN ELEVATION BETWEEN THE INCOMING AND OUTGOING SEWER SHALL BE PROVIDED IN EACH MANHOLE UNLESS INDICATED OTHERWISE. INVERT FLOW CHANNELS SHALL BE CONSTRUCTED TO PROVIDE SMOOTH AND UNIFORM SLOPE WITH GRADUAL TRANSITION SECTIONS.
13. PIPE MAY EXTEND 2.00" MAXIMUM BEYOND INTERIOR MANHOLE WALL.
14. SUBCONTRACTOR SHALL SUBMIT PRECAST STRUCTURE WITH PRODUCT DATA, DESIGN CALCULATIONS,AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
15. MANHOLE STEPS SHALL BE PLACED INTO MANHOLE WALL DURING MANUFACTURE OR MORTARED INTO HOLES AFTER CONCRETE HAS CURED.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

	BY	DESCRIPTION	DATE
A	CAK	PKG 1A - SITE WORK - IFC	03/09/2018
E	CAK	PKG 1A - SITE WORK - IFC - ACD2	03/26/2018
Z	CAK	PKG 1A SITE WORK - REV Z	11/16/2018

FIRE PROTECTION REVIEW
APPROVED BY
FM GLOBAL
05/27/2018 - 10:01:17 AM
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

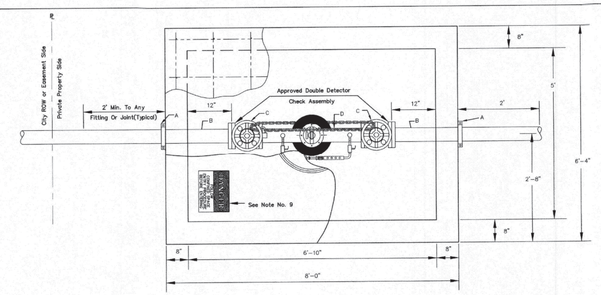
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

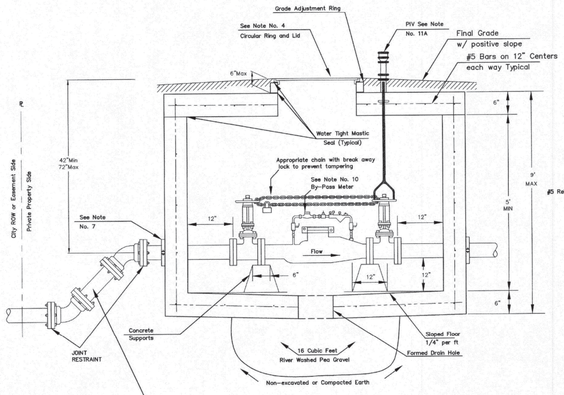


Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS | 03/09/2018
Designed by: C. KINGSLAND | 03/09/2018

Project No.
6936
Sheet Name:
UTILITY DETAILS 3
Sheet CU503 of XX
Drawing No.
108M-148-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

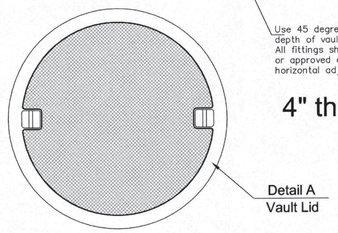




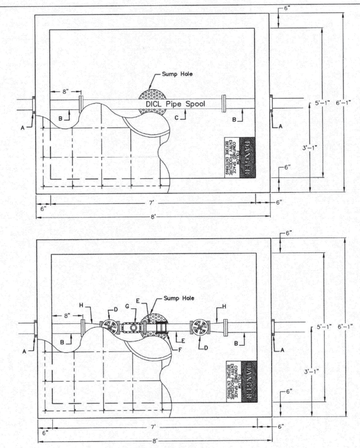
Use 45 degree fittings as necessary to keep depth of vault within 76 inch maximum. All fittings should be mega lug, restrained joint or approved equal. All fittings for vertical and horizontal adjustments are to be on private property.

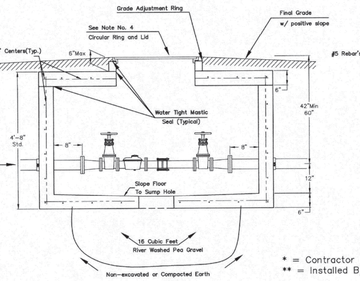
A – Mega Lug (See Note 7)*
B – Min. 3'-6" Piece of FL x PE DICL Pipe*
C – Flange Gate Valve, Wheel Operated*
D – Ames Model 3001SS or approved equal with metered(cubic foot) by-pass assembly*

4" thru 8" Fire Service



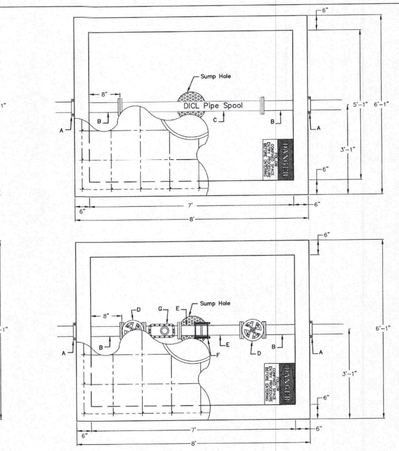
NOTE:
Domestic Services larger than 6" shall be custom designed by Consultant Engineer.

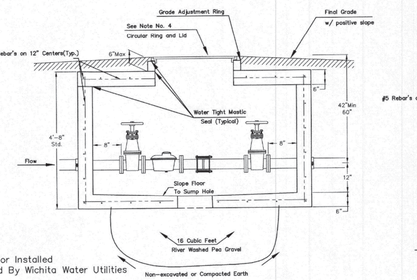




A – 4" Vault Clamp*
B – Min. 3' Piece of 4" FL x PE DICL Pipe*
C – 4" DICL Flanged Pipe Spool*
D – 3" Flange Non-rising Stem Gate Wheel Valve**
E – 3" FL x PE Pipe**
F – 3" Flex Coupling**
G – 3" Badger Recordall II Turbo Cubic Foot Meter with AMR Register with a ADE on the register.**
H – 3" x 4" FL Reducer**

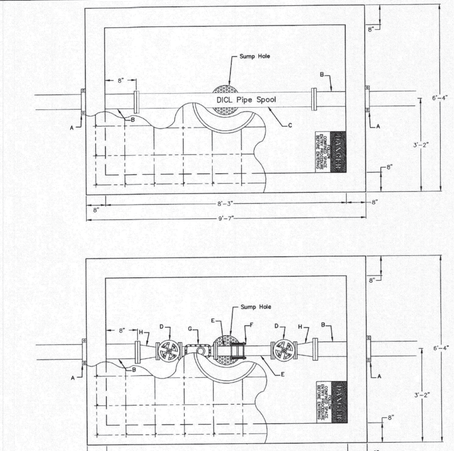
3" Domestic Service

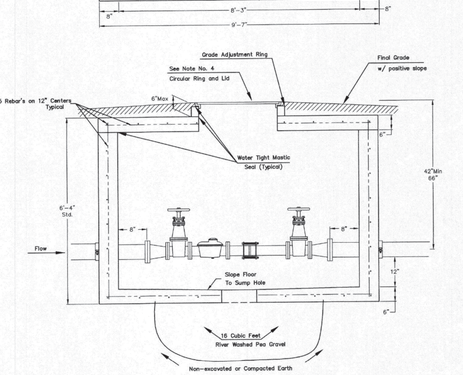




A – 4" Vault Clamp*
B – Min. 3' Piece of 4" FL x PE DICL Pipe*
C – 4" DICL Pipe Spool*
D – 4" Flange Non-rising Stem Gate Wheel Valve**
E – 4" FL x PE Pipe**
F – 4" Flex Coupling**
G – 4" Badger Recordall II Turbo Cubic Foot Meter with AMR Register with a ADE on the register.**

4" Domestic Service





A – 6" Mega Lug (See Note 7)*
B – Min. 3' Piece of 6" FL x PE DICL Pipe*
C – 6" DICL Pipe Spool*
D – 4" Flange Non-rising Stem Gate Wheel Valve**
E – 4" FL x PE Pipe**
F – 4" Flex Coupling**
G – 4" Badger Recordall II Turbo Cubic Foot Meter with AMR Register with a ADE on the register.**
H – 6" x 4" FL Reducer**

6" Domestic Service with 4" meter

* = Contractor Installed
** = Installed By Wichita Water Utilities

Notes For All Services – 3" thru 12":

1. When the standard vault dimensions are not applicable, such as when additional space is required for special pipe, fittings, additional meters, etc. the consultant design engineering shall design a vault with the required dimensions for Public Works and Utilities approval.
2. The vault shall be poured concrete, cement blocks (voids to be completely filled with 2500 P.S.I. concrete), or approved precast structure. The intent of these details shall not be limited by drawings or standards of precast structures.
3. Any vault located in pavement must be traffic rated unless it is protected. Traffic rated vaults must be design and approved by Public Works and Utilities.
4. The manhole ring and lid shall be Neenah R-6034 Frame with Type "C" Solid Lid and Drop Down Handle or US Foundry APS-30x30 (Aluminum) or Deeter 1261 or EJ 1936z1(with pick hole(s) as shown in Detail A). Where applicable the standard 10" Public Works and Utilities pattern meter reading lid and ring shall be located directly above water meter register. All joints of concrete to concrete or metal to concrete in the construction of the vault shall have a approved water tight mastic joint seal.
5. Any fittings or appurtenances required to achieve proper elevation of pipe through the vault shall be provided by the contractor and appropriately noted on the as-builts submitted by the inspecting engineer. Such fittings shall be a minimum of 2' from the exterior wall of vault.
6. For all domestic services larger than 3" the contractor shall provide an outlet flange connection as shown 8" from the inside wall. Inlet and outlet wall sleeves shall be provided and installed by the contractor and shall be in alignment with one another. The inlet and outlet pipe shall be ductile iron pipe, cement lined, Class 150 per Standard Specifications and shall be continuous through vault and joint no less than 2' from the exterior wall of vault. Flanges of inlet and outlet pipe shall be in proper alignment and bolt pattern shall be rotated in such a way that valves and other fittings shall be in their proper vertical alignment when installed.
7. For all services 4" and larger the contractor shall install a mega lug, restrained joint, or approved equal on the exterior walls of the vault, which shall be manufactured of ductile iron conforming ASTM A 536-80, heat treated to a minimum hardness of 370 BHN and have a working pressure of a least 250 P.S.I. For a services smaller than 4" the contractor shall install an approved vault clamp on the exterior walls of the vault.
8. All valves, meters, assemblies and fitting shall be provided with sufficient concrete or other approved supports to the vault floor.
9. The "Confined Space Warning" sign shall be fastened to the top of all vaults. If necessary for landscaping or site consideration, the sign may be fastened to the vault lid if it does not impede access to the handle. Acceptable materials: Aluminum 73415HH, Plastic 73439HH or S.A. Vinyl 73463HH.
10. All meters shall have a electronic read register compatible with the current City of Wichita meter reading system. All detector meters shall be on 5/8 cubic foot Badger meter with AMR register with a ADE on the register and 25' long Itron cord and plug or approved equal. Gallon meters shall not be accepted.
11. Additional Notes For Fire Services
    A. A post indicator valve (PIV) is an option for the outlet valve. It is not required by the City of Wichita ordinance, it can be requested by the owner and will be allowed at the discretion of the City Engineer.
    B. When Siamese connections are required by the Wichita Fire Department, refer to the current City Code Section 15.
    C. If due to any reason the completed vault retains ground or drainage water in excess of 4" in depth from the floor of the vault, the property owner shall be responsible for providing and installing a appropriate automatic sump pump or approved equal, as well as any other appurtenances required to make such system function as intended.

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
10/27/16

REVISED: OCTOBER 2016

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD VAULT DETAILS AND METER ASSEMBLIES

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

WL-103

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2399

△	DATE	DESCRIPTION	BY	APPROVED
F	04/12/2016	PKG 1A - SITE WORK - IFC - ADD 3	CAK	NT
I	04/27/2016	PKG 1A - SITE WORK - IFC - ECN02	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

FIRE PROTECTION REVIEW
APPROVED BY
ANDREW LAY
05/07/2018 - 10:01:26 AM

☐ APPROVED
☐ NOT REQUIRED
DATE

SPIRIT AEROSYSTEMS

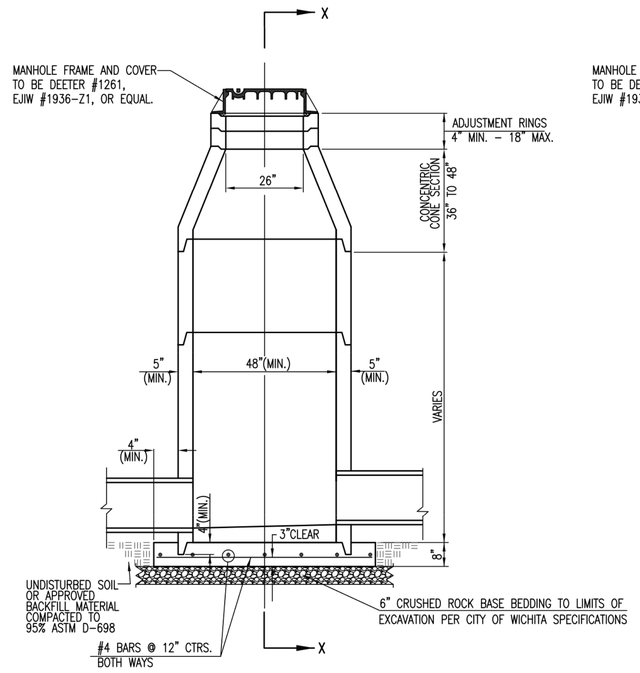
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

GARY L. JANZEN LICENSED 19889 11/16/2018 KANSAS PROFESSIONAL ENGINEER

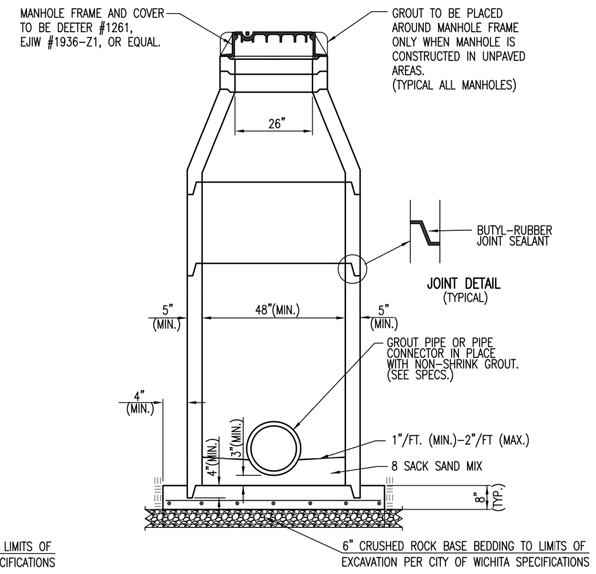
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: J. JENKINS 04/12/18
Designed by: C. KINGSLAND 04/12/18

Project No.
6936
Sheet Name:
UTILITY DETAILS 4
Sheet CU504 of XX
Drawing No.
108M-149-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



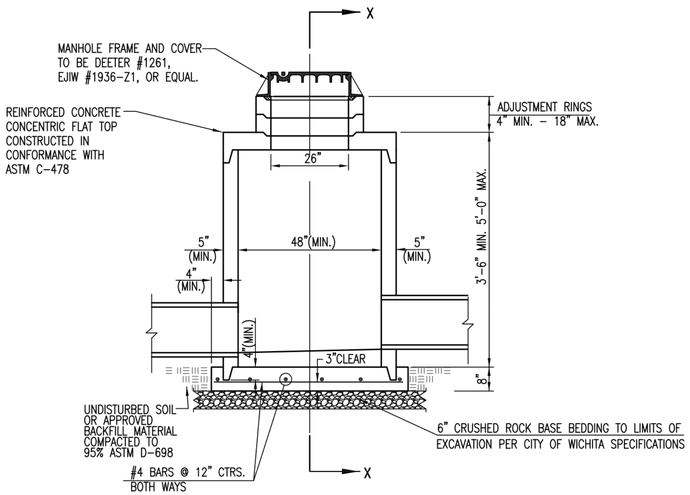
PRECAST
STANDARD MANHOLE
TYPE "A"



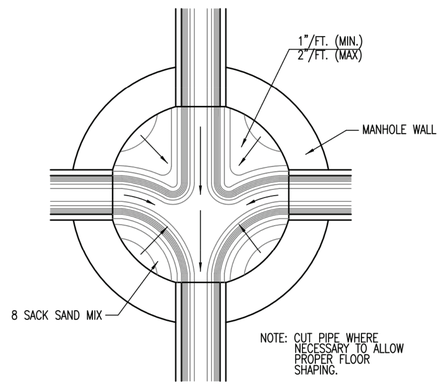
SECTION X–X
(TYPICAL)

GENERAL NOTES

1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR WILL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
4. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
5. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C–478 AS MODIFIED BY THE SPECIFICATIONS.
6. CONCRETE USED FOR MANHOLE CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO MANHOLE BASE.
8. MANHOLES WITH PIPE SIZES 24" AND LARGER SHALL HAVE 5 FOOT INSIDE DIAMETER (MIN.)
9. MANHOLES WITH PRECAST BASES MAY BE USED AT THE CONTRACTORS OPTION. THESE MANHOLES SHALL HAVE AN 8" MINIMUM BASE THICKNESS AND SHALL BE PLACED ON AN 8" MIN. CRUSHED ROCK BASE. PIPES SHALL BE ENCASED WITH CRUSHED ROCK TO AT LEAST 3 FEET FROM THE MANHOLE WALL.
10. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
11. THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE MANHOLE WALL.
12. MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE MANHOLE WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
13. MANHOLE FRAME AND COVER TO BE DEETER #1261, EJIW #1936–Z1, OR APPROVED EQUAL, SEE SW–303.
14. FOR FLAT GRATED INLET APPLICATION, GRATE TO BE DEETER #1933, EJIW #1205 MDI, OR APPROVED EQUAL.
15. FOR BEEHIVE GRATE APPLICATION, GRATE TO BE DEETER #4495, EJIW #120545, OR APPROVED EQUAL.



PRECAST
SHALLOW MANHOLE
TYPE "B"



TYPICAL MANHOLE
FLOOR SHAPING

REVISED: MARCH 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST CONCRETE MANHOLE (STORM SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

SW–301

	DESCRIPTION	DATE	BY	APPROVED
1	PKG 1A - SITE WORK - IFC - ECN02	04/27/2018	CAK	NT
2	PKG 1A - SITE WORK - REV Z	11/16/2018	CAK	NT

FIRE PROTECTION REVIEW
APPROVED BY
JAMES CRAIG
05/27/2018 - 10:01:44 AM
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

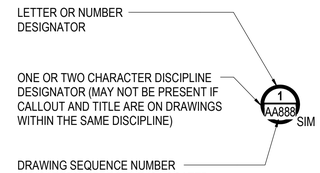


Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS 04/27/2018
Designed by: C. KINGSLAND 04/27/2018

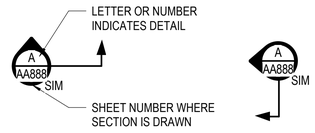
Project No.
6936
Sheet Name:
UTILITY DETAILS 5
Sheet CU505 of XX
Drawing No.
108M-150-XXX

CALL OUT IDENTIFICATION

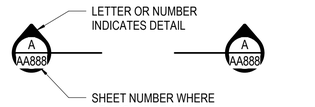
SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS:



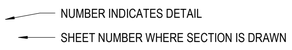
WALL SECTION CALLOUT EXAMPLE:



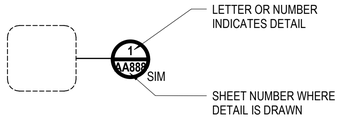
BUILDING SECTION CALLOUT EXAMPLE:



VIEW REFERENCE EXAMPLE:



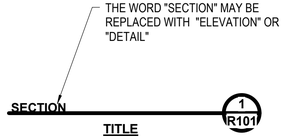
DETAIL CALLOUT EXAMPLE:



ELEVATION CALLOUT EXAMPLE:



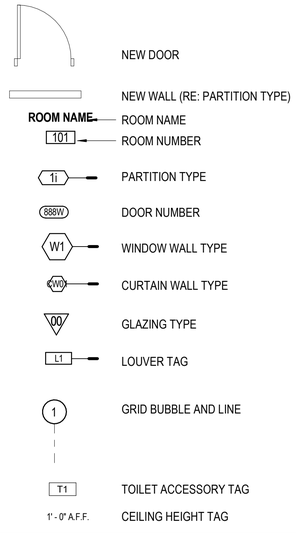
SECTION, DETAIL, AND ELEVATION TITLE EXAMPLE:



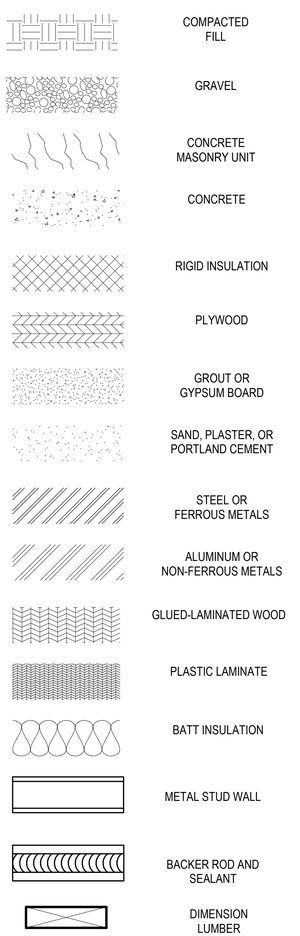
NORTH ARROW EXAMPLE:



PLAN LEGEND



MATERIAL SYMBOLS



ABBREVIATIONS

SEE ADDITIONAL FINISH MATERIAL ABBREVIATIONS IN THE MATERIAL LEGEND, DRAWING A-701

	-A-
ADJ	ADJACENT, ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURE, ARCHITECT
	-B-
BLDG	BUILDING
BO	BOTTOM OF, AS IN "BO STEEL"
	-C-
CAB	CABINET
CCTV	CLOSED CIRCUIT TELEVISION
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRUGATED OR CORRIDOR
	-D-
DBL	DOUBLE
DEMO	DEMOLITION
DESCR	DESCRIPTION
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DWG	DRAWING
	-E-
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION, AS IN HEIGHT
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATOR, OR ELEVATION AS IN NORTH ELEV
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	AND SO FORTH (ETCETERA)
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
	-F-
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER WITH WALL BRACKET
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FHC	FIRE HOSE CABINET (WITH EXTINGUISHER & BRACKET)
FHR	FIRE HOSE REEL (WITH EXTINGUISHER & BRACKET)
FIN	FINISHED, FINISH
FLR	FLOOR
FT	FEET / FOOT
°F	FAHRENHEIT
	-G-
GA	GAUGE
GALV	GALVANIZED
GYP	GYPSUM
GYP BD	GYPSUM BOARD
	-H-
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HVAC	HEATING, VENTILATION & AIR CONDITIONING
	-I-
IN	INCH
INT	INTERIOR
	-J-
JAN	JANITOR'S CLOSET
	-L-
L	LEFT, LONG, LENGTH
LAB	LABORATORY
LAV	LAVATORY
LB or #	POUND
LH	LEFT HAND
LVR	LOUVER
	-M-
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
	-N-
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
	-O-
OC	ON CENTER
OPP	OPPOSITE
	-P-
PERIM	PERIMETER
PL	PLATE
PLMB	PLUMBING
PROJ	PROJECT
PVC	POLYVINYL CHLORIDE
	-R-
R	RADIUS
RCP	REFLECTIVE CEILING PLAN
RD	ROOF DRAIN
RECP	RECEPTACLE
REFER	REFERENCE
REINF	REINFORCED
REQ'D	REQUIRED
REV	REVISION
RH	RIGHT HAND
RO	ROUGH OPENING
	-S-
S	SOUTH
S/A	SUPPLY AIR
SCHED	SCHEDULE
SF	SQUARE FOOT
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE, AS IN "SQ FT"
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STOR	STORAGE
STRUCT	STRUCTURAL
	-T-
TD	TRENCH DRAIN
TECH	TECHNICAL
THRU	THROUGH
TO	TOP OF, AS IN "TO STEEL"
TYP	TYPICAL
	-U-
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
	-V-
VENT	VENTILATE, VENTILATOR
VERT	VERTICAL
VOL	VOLUME
	-W-
W	WEST, WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER
WT	WEIGHT

ARCHITECTURAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AS LISTED OR REFERENCED ON LIFE SAFETY PLAN AND LIFE SAFETY CRITERIA OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
2. THE SUBCONTRACTOR SHALL INCLUDE ALL WORK REQUIRED TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AS LISTED OR REFERENCED ON LIFE SAFETY PLAN AND LIFE SAFETY CRITERIA OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS OR PLANS SHALL GOVERN OVER SMALL SCALE DETAILS OR PLANS. DO NOT SCALE DRAWINGS.
4. THE SUBCONTRACTOR SHALL PROVIDE AND INSTALL ALL EXIT SIGNS, EMERGENCY LIGHTING SYSTEMS, ALARM SYSTEMS AND AUTOMATIC SPRINKLER SYSTEMS AS REQUIRED BY APPLICABLE CODES AND STANDARDS OR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
5. ALL FLOORS SHALL BE INSPECTED FOR DAMAGE, WARPING OR OTHER NOTICEABLE DEVIATIONS AND PATCHED AND LEVELED PRIOR TO COVERING WITH FLOOR FINISHES, INSTALLATION OF ACCESS FLOOR SYSTEM, OR ERECTION AND INSTALLATION OF COLD-FORMED FRAMING.
6. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MANUFACTURER'S RECOMMENDED MAINTENANCE PROCEDURES AND SCHEDULES.
7. ANY MANUFACTURER'S OR BRAND NAME PRODUCTS INDICATED OR SPECIFIED ARE DONE SO TO ESTABLISH A MINIMUM LEVEL OF QUALITY.
8. ALL CONSTRUCTION SHALL MEET OR EXCEED LOCAL INDUSTRY STANDARDS. DETAILS ARE PROVIDED TO INDICATE MINIMUM QUALITY AND TO GIVE STANDARDS OF CONSTRUCTION. IF A CONDITION IS NOT SPECIFICALLY DETAILED, SUBMIT A SIMILAR DETAIL FOR GUIDE AND APPROVAL.
9. THE LETTERS I, O, AND Q ARE NOT USED TO INDICATE DETAILS, SECTIONS OR ELEVATIONS.
10. PROVIDE PRESERVATIVE-TREATED WOOD AT ALL LOCATIONS WHERE WOOD IS IN DIRECT CONTACT WITH CONCRETE OR MASONRY.
11. PROVIDE 3/4" FIRE-RETARDANT TREATED PLYWOOD BACKING AT ALL ELECTRICAL, PHONE, AND SECURITY SYSTEM PANELS.
12. PROVIDE FIRE-RESISTANT TREATED WOOD BLOCKING FOR SECURE ANCHORAGE OF ALL SHELVES, RUNNING TRIM, RAILINGS, SUSPENDED ITEMS, DOOR-STOPS, GRAB-BARS, AND OTHER SIMILAR WOODWORK, HARDWARE, SPECIALTIES, ACCESSORIES, FIXTURES, OR EQUIPMENT.
13. PROVIDE CEMENT BOARD SHEATHING AT ALL AREAS WHERE A TILE SURFACE IS TO BE INSTALLED ON METAL STUD WALLS.
14. PROVIDE WATER-RESISTANT GYPSUM BOARD AT ALL WET OR UNCONDITIONED AREAS INCLUDING, BUT NOT LIMITED TO, PARTITIONS BEHIND SINKS. SUBCONTRACTOR TO INSURE THAT FIRE RATING IS MAINTAINED.
15. PAINT, STAIN, OR COAT ALL EXPOSED SURFACES OF CONSTRUCTION UNLESS NOTED OTHERWISE OR IF SURFACES ARE PRE-FINISHED.
16. ALL OPENING DIMENSIONS ARE NOMINAL. THE SUBCONTRACTOR SHALL FIELD MEASURE ALL OPENINGS AND COORDINATE WITH THE APPROPRIATE SUPPLIER FOR ALL DOORS AND WINDOWS.
17. ALL CONDUITS, PLUMBING, PIPING, DUCTWORK, AND OTHER EQUIPMENT EXPOSED TO VIEW SHALL BE LOCATED PARALLEL OR PERPENDICULAR TO THE STRUCTURAL FRAMING SYSTEM.
18. PROVIDE GALVANIC PROTECTION BETWEEN DISSIMILAR MATERIALS, WHERE REQUIRED.
19. CERAMIC TILE TO BE INSTALLED UP TO 4'-0" ABOVE FINISH FLOOR AND 1'-0" TO EITHER SIDE AT ALL MOP SINK LOCATIONS. EXTENT OF TILE VARIES BY LOCATION.
20. ARCHITECTURAL DETAILS ARE APPLICABLE WHERE INDICATED BY SECTION CUT, BY NOTE, OR BY DETAIL TITLE. INCORPORATE SIMILAR DETAILS AT SIMILAR CONDITIONS UNLESS NOTED OTHERWISE. THE SUBCONTRACTOR MAY REQUEST A CLARIFICATION IF REQUIRED, OTHERWISE THE MORE STRINGENT REQUIREMENTS SHALL CONTROL.
21. PROVIDE FIRE-STOPPING SYSTEMS AT TOP OF AND AT ALL PENETRATIONS THROUGH FIRE-RATED PARTITIONS.
22. SEAL ALL EXTERIOR BUILDING JOINTS AT BOTH THE EXTERIOR AND INTERIOR SURFACES AGAINST MOISTURE AND AIR INFILTRATION.
23. SEAL AROUND ALL DOOR AND WINDOW FRAMES, COUNTERTOPS, WALL-MOUNTED FIXTURES AND EQUIPMENT TO ADJACENT WALL SURFACES.
24. THE SUBCONTRACTOR SHALL REVIEW THE DIMENSIONS OF ALL EQUIPMENT IN THE PROJECT REGARDLESS OF THE SOURCE AND COORDINATE ACCESS TO THE SPACE AND VERIFY CLEAR FLOOR SPACE IS PROVIDED AS REQUIRED TO ENSURE EASE OF INSTALLATION.
25. ALL WORK MUST BE OF GOOD QUALITY, FREE FROM DEFECTS, AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
26. THE SUBCONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL PENETRATIONS IN THE STRUCTURE FOR THE PROPER INSTALLATION OF THE WORK. REFER TO STRUCTURAL DRAWINGS FOR SECONDARY FRAMING AND OR REINFORCING REQUIRED AT PENETRATIONS IN STEEL, CONCRETE OR MASONRY.
27. THE SUBCONTRACTOR SHALL PROVIDE ACCESS DOORS OR PANELS AS REQUIRED FOR SERVICING OF PIPING, DUCTWORK, CABLE TRAYS, FIRE DAMPERS AND SIMILAR APPLICATIONS. ALL PROPOSED ACCESS DOOR LOCATIONS TO BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.
28. PROVIDE ALL HVAC, PLUMBING, GAS OR ELECTRIC SERVICE CONNECTIONS TO CASEWORK, FIXTURES, SIGNAGE, OR EQUIPMENT INDICATED (WHETHER UNITS ARE INSTALLED BY SUBCONTRACTOR OR BY OTHERS).
29. BRACE PARTITIONS, SUSPENDED CEILINGS, SOFFITS, SUSPENDED ITEMS, ETC. ONLY TO STRUCTURAL ELEMENTS ABOVE. DO NOT ANCHOR TO ROOF DECK, PLUMBING / SPRINKLER PIPES, DUCTWORK, ELECTRICAL CONDUIT OR SIMILAR ELEMENTS.
30. EXTEND ALL FLOORING AND WALL-BASE COMPLETELY INTO RECESSES, UNDER OPEN COUNTERTOPS, AND BEHIND ALL EQUIPMENT.
31. ALL MATERIALS USED FOR CONSTRUCTION SHALL BE NEW AND UNDAMAGED. THE SUBCONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL WORK SHOWN.
32. THE SUBCONTRACTOR SHALL BECOME FULLY ACQUAINTED WITH CONDITIONS RELATED TO THE WORK. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE ACTUAL CONDITIONS SHALL BE REPORTED TO THE DESIGN PROFESSIONALS FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
33. DRAWINGS CONTAINED IN THIS SET SHALL NOT BE REPRODUCED FOR SHOP DRAWINGS. COPIES OF THESE DRAWINGS SUBMITTED AS SHOP DRAWINGS WILL BE REJECTED AND RETURNED TO THE CONTRACTOR.
34. EACH INSTALLER MUST EXAMINE SUBSTRATE AND/OR CONDITIONS UNDER WHICH THE WORK WILL BE INSTALLED AND REPORT TO THE CONTRACTOR IN WRITING ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY EXECUTION OF THE INSTALLERS WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED. INSTALLATION SHALL CONSTITUTE ACCEPTANCE OF THE SUBSTRATE AND/OR CONDITIONS.
35. "TYPICAL" (TYP) AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITIONS OR DIMENSION IS THE SAME OR REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT.
36. CONTROL JOINTS (CJ) SHALL BE INSTALLED AT ALL PARTITIONS. CJ AT GYPSUM PARTITIONS SHALL BE MAXIMUM 30'-0" O.C., CJ AT CONCRETE MASONRY UNIT PARTITIONS SHALL BE MAXIMUM 20'-0" O.C., UNLESS OTHERWISE NOTED ON DRAWINGS. REFER TO ELEVATION DRAWINGS FOR EXTERIOR CONTROL JOINT LOCATIONS. REVIEW CJ LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
37. NON-BEARING PARTITIONS SHALL BE ISOLATED FROM THE BUILDING STRUCTURE TO PREVENT TRANSFER OF BUILDING LOADS FROM THE STRUCTURE TO THE PARTITIONS.
45. THE SUBCONTRACTOR SHALL COORDINATE WITH THE CONTRACTOR FOR DESIGNATED CONSTRUCTION STAGING LOCATIONS, STORAGE AREAS, AND CONSTRUCTION SEQUENCING.

KEY PLAN
NOT TO SCALE



16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	28JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LOH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LOH	BGB
Y	03NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LOH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LOH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

WICHITA, KS

BLDG-1-338G

AUTOMATED WAREHOUSE

Facilities Engineering

Drawn by L. HOOK	06/29/18	Designed by L. HOOK	06/29/18

Project No.
6936

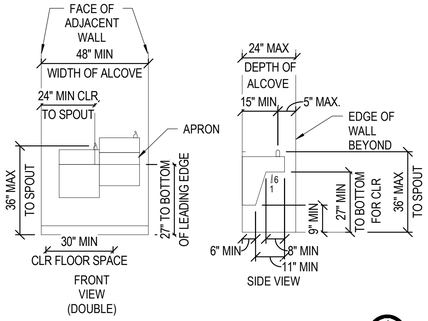
Sheet Name:
ARCHITECTURAL LEGEND & GENERAL NOTES

Sheet AG001 of XX

Drawing No.
108M-201-XXX

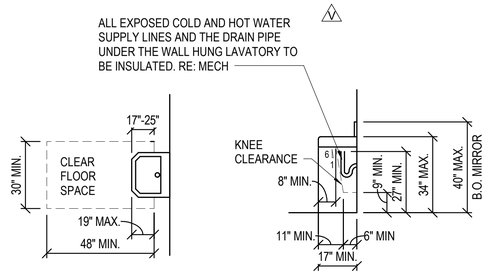
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED.



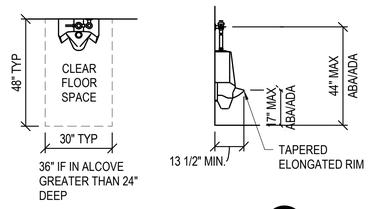
DETAIL 1 AG002

ELECTRIC WATER COOLER



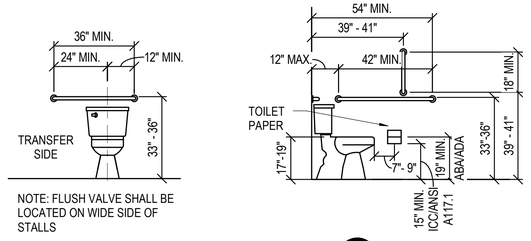
DETAIL 2 AG002

LAVATORIES



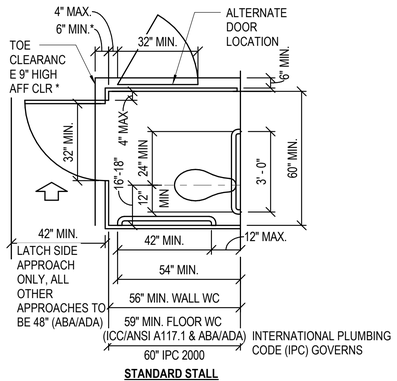
DETAIL 3 AG002

URINALS

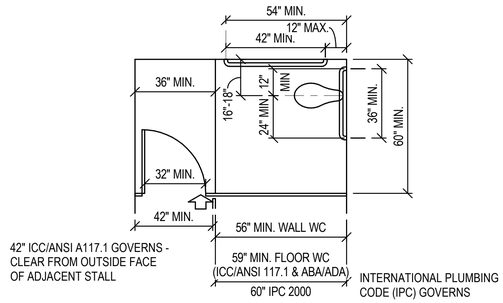


DETAIL 4 AG002

GRAB BARS



STANDARD STALL

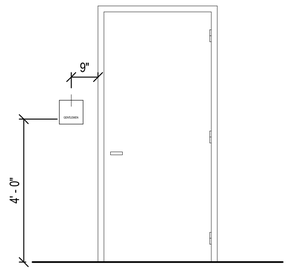


STANDARD STALL

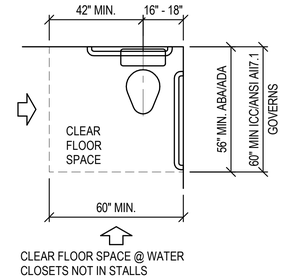
1. WHERE "*" IS INDICATED - TOE CLEARANCE AT THE FRONT OF THE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 62" DEEP WITH A WALL-HUNG WATER CLOSET OR 65" DEEP WITH A FLOOR-MOUNTED WATER CLOSET. TOE CLEARANCE AT THE SIDE IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66" WIDE (ICC/ANSI A117.1/ABA/ADA). TOE CLEARANCE IS EXCLUSIVE OF PARTITION SUPPORT MEMBERS.

DETAIL 5 AG002

STANDARD STALLS

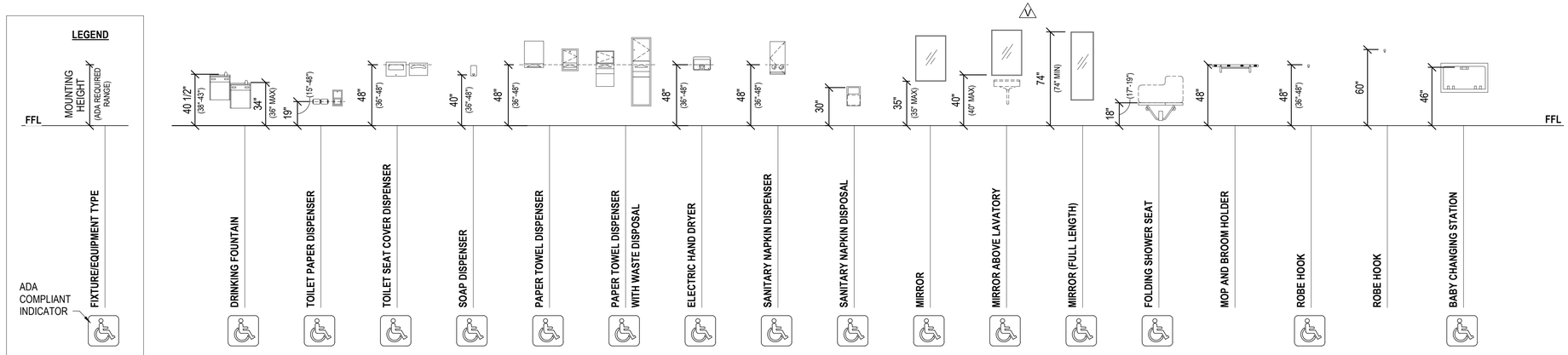


DOOR SIGNAGE LOCATION



DETAIL 6 AG002

WATER CLOSETS



NOTE: PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES AS NEEDED.

STANDARD ADA MOUNTING HEIGHTS

KEY PLAN
NOT TO SCALE

△	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
3	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	18SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Z	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB
	06NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G

Drawn by: L. HOOK 06/29/2018 | Designed by: L. HOOK 06/29/2018

Project No.: 6936
Sheet Name: ADA INFORMATION
Sheet: AG002 of
Drawing No.: 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

1. APPLICABLE CODES AND STANDARDS

ABBREVIATIONS	TITLE	EDITION
IBC	INTERNATIONAL BUILDING CODE	2012
IFC	INTERNATIONAL FIRE CODE	2012
IMC	INTERNATIONAL MECHANICAL CODE	2015
IPC	INTERNATIONAL PLUMBING CODE	2015
NEC	NATIONAL ELECTRICAL CODE - NFPA 70 - RESOLUTION 185	2017
ANSI A17.1	SAFETY CODE FOR ELEVATORS AND ESCALATORS - RESOLUTION 140-2017	2016

2. TYPE OF CONSTRUCTION (IBC 601)

BUILDING ELEMENT	TYPE OF CONSTRUCTION	FIRE RESISTANCE RATING
PRIMARY STRUCTURAL FRAME	IIB	0 HR
BEARING EXTERIOR WALL	IIB	0 HR
BEARING INTERIOR WALL	IIB	0 HR *
NON-BEARING EXTERIOR WALL	IIB	0 HR
NON-BEARING INTERIOR WALL	IIB	0 HR *
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	IIB	0 HR *
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	IIB	0 HR

* EXCEPT AS REQUIRED FOR OCCUPANCY SEPARATION, INCIDENTAL USE, AND OTHER PASSIVE FIRE PROTECTION.

3. CLASSIFICATION OF OCCUPANCY

AREAS	OCCUPANCY	IBC
BREAK ROOM, CONFERENCE > 50 OCCUPANTS	ASSEMBLY A-3	302.1
OPEN OFFICE, CIRCULATION, RESTROOMS, LOBBY	BUSINESS, GROUP B	304.1
WAREHOUSE AREA	MODERATE-HAZARD STORAGE, S-1	311.2

5. MULTIPLE OCCUPANCIES (IBC 508)

FLOOR / OCCUPANCY	SEPARATION	FLOOR / OCCUPANCY	SEPARATION RATING	IBC
LEVEL 1 / B	NONSEPARATED	LEVEL 1 / S-1	0 HR BARRIER	508.3.3
LEVEL 2 / B	NONSEPARATED	LEVEL 1 / S-1	0 HR BARRIER	508.3.3
EQUIPMENT PLATFORM / S-1	NONSEPARATED	LEVEL 1 / S-1	0 HR BARRIER	508.3.3

6. UNLIMITED AREA BUILDING (IBC 507)

OCCUPANCY	FLOORS	FRONTAGE	FIRE SUPPRESSION	IBC
B, S-1	2 LEVELS	> 60 FT ON ALL SIDES	FULLY SPRINKLERED	507.4

8. MODIFIED ALLOWABLE HEIGHT (IBC 504)

OCCUPANCY	*RESTRICTING ALLOWABLE HEIGHT (FT / STORY)	SPRINKLER INCREASE (FT / STORY)	MODIFIED ALLOWABLE HEIGHT (FT / STORY)
B, S-1*	55 / 2	20 / 1	75 / 3

* SPRINKLER WILL BE PROVIDED THROUGHOUT THE BUILDING.

9. PROTECTION FROM HAZARDS AND OTHER PASSIVE FIRE PROTECTION

AREA	REQUIRED RATING	CODE
SHAFT ENCLOSURE 3 STORIES OR LESS	1 HR FIRE BARRIER	IBC 713.4
CORRIDOR	NO RATING*	IBC 1018.1

* SPRINKLER WILL BE PROVIDED THROUGHOUT THE BUILDING.

10. BUILDING SEPARATION (IBC TABLE 602)

OCCUPANCY	ELEVATION	RESTRICTIVE FIRE SEPARATION DISTANCE (FT)*	FIRE RESISTIVE RATING OF EXTERIOR WALL
B, S-1	NORTH/SOUTH/WEST/EAST	> 30	NO RATING

11. OPENING PROTECTION FOR FIRE AND SMOKE RESISTIVE CONSTRUCTION

COMPONENT	FIRE DOOR / SHUTTER ASSEMBLIES	DUCT PENETRATIONS	OTHER PENETRATIONS	IBC
1 HR FIRE BARRIER FOR SHAFT ENCLOSURE NOT USED FOR EGRESS	1 HR	1-1/2 HR FIRE / SMOKE DAMPER	1 HR	715.4, 716.5.3

12. OCCUPANT LOAD CALCULATIONS (IBC 1004.1.1)

FLOOR	AREA	FUNCTION OF SPACE	AREA (SF)	OCCUPANT LOAD FACTOR (SF/PERSON)	OCCUPANTS
LEVEL 1	OFFICES, RESTROOMS	BUSINESS AREAS	2,748	100	43
LEVEL 1	FACTORY FLOOR	WAREHOUSE AREA	145,985	500	292
LEVEL 1	BREAKROOM, VENDING	ASSEMBLY	1,666	15	112
LEVEL 2	OFFICES, RESTROOMS	BUSINESS AREAS	3,278	100	33
LEVEL 2	CONFERENCE ROOM > 49 OCCUPANTS	ASSEMBLY	899	15	60
LEVEL 3	EQUIPMENT PLATFORM	MECHICAL EQUIPMENT	4,177	300	14

13. OCCUPANT LOAD SUMMARY AND MINIMUM EXITS FROM FLOOR

FLOOR	GROSS AREA (SF)	OCCUPANTS	REQUIRED EXITS (IBC 1021.1)	REQUIRED EXIT SEPARATION (IBC 1015.2)
LEVEL 1	153,623	342	2	1/3 DIAGONAL
LEVEL 2	4,177	93	2	1/3 DIAGONAL

14. MINIMUM EXITS OR EXIT ACCESSES FROM A SPACE OR AREA (IBC 1015.1)

FLOOR / OCCUPANCY	OCCUPANT LOAD PERMITTING ONE EXIT	OCCUPANT LOAD REQUIRING TWO EXITS
LEVEL 1 / B, S-1	49 OR LESS	50 OR GREATER
LEVEL 2 / B	29 OR LESS	30 OR GREATER

15. COMMON PATH, DEAD-END, AND TRAVEL DISTANCE LIMITS

OCCUPANCY	COMMON PATH LIMIT* (IBC 1014.3) (FT)	DEAD END LIMIT* (IBC 1018.4) (FT)	TRAVEL DISTANCE LIMIT* (IBC 1016.2) (FT)
B	100	50	300
S-1	100	50	400**

* DISTANCES BASED OFF AUTOMATIC SPRINKLER BEING PROVIDED THROUGHOUT THE BUILDING.
**IBC 2015 - SECTION 1017.2.2 ALLOWS FOR S-1 OCCUPANCY TRAVEL DISTANCE TO BE INCREASED TO 400 FT. IF ALL THE FOLLOWING REQUIREMENTS ARE MET: S-1 OCCUPANCY IS ONLY 1 STORY, MINIMUM CEILING/ROOF HEIGHT IS 24', AND FULLY SPRINKLERED. ALL CONDITIONS ARE MET.

16. MINIMUM EGRESS WIDTHS

COMPONENT	REQUIREMENT	WIDTH (IN)	IBC
DOORS IN EGRESS ACCESS	PER COMPONENT	32	1008.1.1
CORRIDOR SERVING 50 OR MORE OCCUPANTS	PER COMPONENT	44	1018.2
CORRIDOR SERVING LESS THAN 50 OCCUPANTS	PER COMPONENT	36	1018.2
CORRIDOR FOR ACCESS TO ELECTRICAL/MECHANICAL SYSTEMS	PER COMPONENT	24	1018.2
OTHER EGRESS COMPONENTS	PER PERSON	0.2	1005.3.2
STAIRWAYS	PER PERSON	0.3	1005.3.1

17 - MAXIMUM EGRESS COMPONENT CAPACITY

FLOOR	COMPONENT	RESTRICTING EGRESS COMPONENT / WIDTH	MAXIMUM OCCUPANT CAPACITY OF COMPONENT	OCCUPANT LOADING
LEVEL 2	STAIR ST01	STAIR / 44 INCHES	146	59*
LEVEL 2	STAIR ST02	STAIR / 44 INCHES	146	47

* INCLUDES HALF THE SECOND FLOOR OCCUPANT LOAD AND THE 13 OCCUPANT LOAD FROM THE EQUIPMENT PLATFORM.

18. MINIMUM INTERIOR FINISH RATINGS* (IBC TABLE 803.9)

OCCUPANCY	EXIT ENCLOSURE AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES
B	CLASS B	CLASS C	CLASS C
S-1	CLASS C	CLASS C	CLASS C

* DISTANCES BASED OFF AUTOMATIC SPRINKLER BEING PROVIDED THROUGHOUT THE BUILDING.

19. FIRE SUPPRESSION REQUIREMENTS

SPRINKLERS (IBC 903)	STANDPIPE (IBC 905)	FIRE EXTINGUISHERS (IBC 906)
SPRINKLERS PROVIDED THROUGHOUT THE BUILDING	NOT REQUIRED*	FIRE EXTINGUISHERS PROVIDED THROUGHOUT THE BUILDING

* STANDPIPE IS STILL BEING PROVIDED EVEN THOUGHT IT IS NOT REQUIRED PER CODE.

20. FIRE ALARM REQUIREMENTS (IBC 907)

AUTOMATIC INITIATION
FLOW AND TAMPER SWITCHES, SPOT SMOKE DETECTORS AND DUCT SMOKE DETECTORS PROVIDED

21. FIRE EXTINGUISHER DISTRIBUTION (IBC 906.3)

OCCUPANCY	PRIMARY CLASSIFICATION OF FIRE AND HAZARD	MINIMUM RATING	MINIMUM FLOOR AREA PER A (SF)	MAX TRAVEL DISTANCE (FT)
B, S-1	CLASS A:C - ORDINARY	2-A	1,500	75

23. REQUIRED PLUMBING FIXTURES (IBC 2902)

FLOOR / OCCUPANCY	OCCUPANT LOAD	WATER CLOSETS	LAVATORIES	DRINKING FOUNTAINS
LEVEL 1 / B	43	1 M 1 F	1 M 1 F	
LEVEL 1 / S-1	299	2 M 2 F	2 M 2 F	2
PROVIDED ON LEVEL 1		4 M* 4 F	4 M 4 F	
LEVEL 2 / B	32	1 M 1 F	1 M 1 F	
LEVEL 2 / A	60	1 M 1 F	1 M 1 F	
PROVIDED ON LEVEL 2		1 M 1 F	1 M 1 F	

* HALF OF THE NUMBER OF WATER CLOSETS PROVIDED ARE URINALS.

24. REQUIRED ACCESS ALONG FIRE ACCESS ROADS

NUMBER OF DOORS REQUIRED ALONG EXTERIOR WALL FIRE ACCESS ROADS (IFC 3206.6.1.1)
A MINIMUM OF ONE ACCESS DOOR SHALL BE PROVIDED IN EACH 100 LINEAL FEET OF THE EXTERIOR WALLS THAT FACE A REQUIRED FIRE APPARATUS ACCESS ROAD. THE DOORS WILL BE SIZED TO COMPLY WITH IFC 3206.6.1.2*

* SEE AL010 FOR ACCESS DOOR SPACING. DOORS WERE LOCATED TO MEET THE 100'-0" SPACING. IF INTERIOR AUTOMATED STORAGE EQUIPMENT CONFLICTED WITH ACCESS THE DOORS WERE LOCATED AT THE CLOSEST POSSIBLE DIMENSION FEASIBLE TO THE 100'-0" REQUIREMENT.

25. SMOKE AND HEAT REMOVAL (IBC 910)

SMOKE AND HEAT BENT REMOVAL SYSTEM (910.2)
NO SMOKE OR HEAT VENTS WERE PROVIDED IN THE BUILDING PER EXCEPTION 3 (IBC 2015)*

*THE BUILDING IS FULLY EQUIPMENT WITH CONTROL MODE SPECIAL APPLICATION SPRINKLERS WITH A RESPONSE TIME INDEX OF $50^{1/2}$ OR LESS. THIS COMPLIES WITH EXCEPTION 3 IN IBC 2015 910.2

	DATE	DESCRIPTION	BY	APPROVED
5	09MAY2018	PKG 2A: FOUNDATION & SOG - REV J	LCH	BGB
6	14JUN2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
9	29JUN2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B: MEP, FP, FINISHES - REV O	LCH	BGB
7	02NOV2018	PKG 2B: MEP, FP, FINISHES - REV 7	LCH	BGB
Z	16NOV2018	PKG 2B: MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
MCD #104543

BRIAN G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

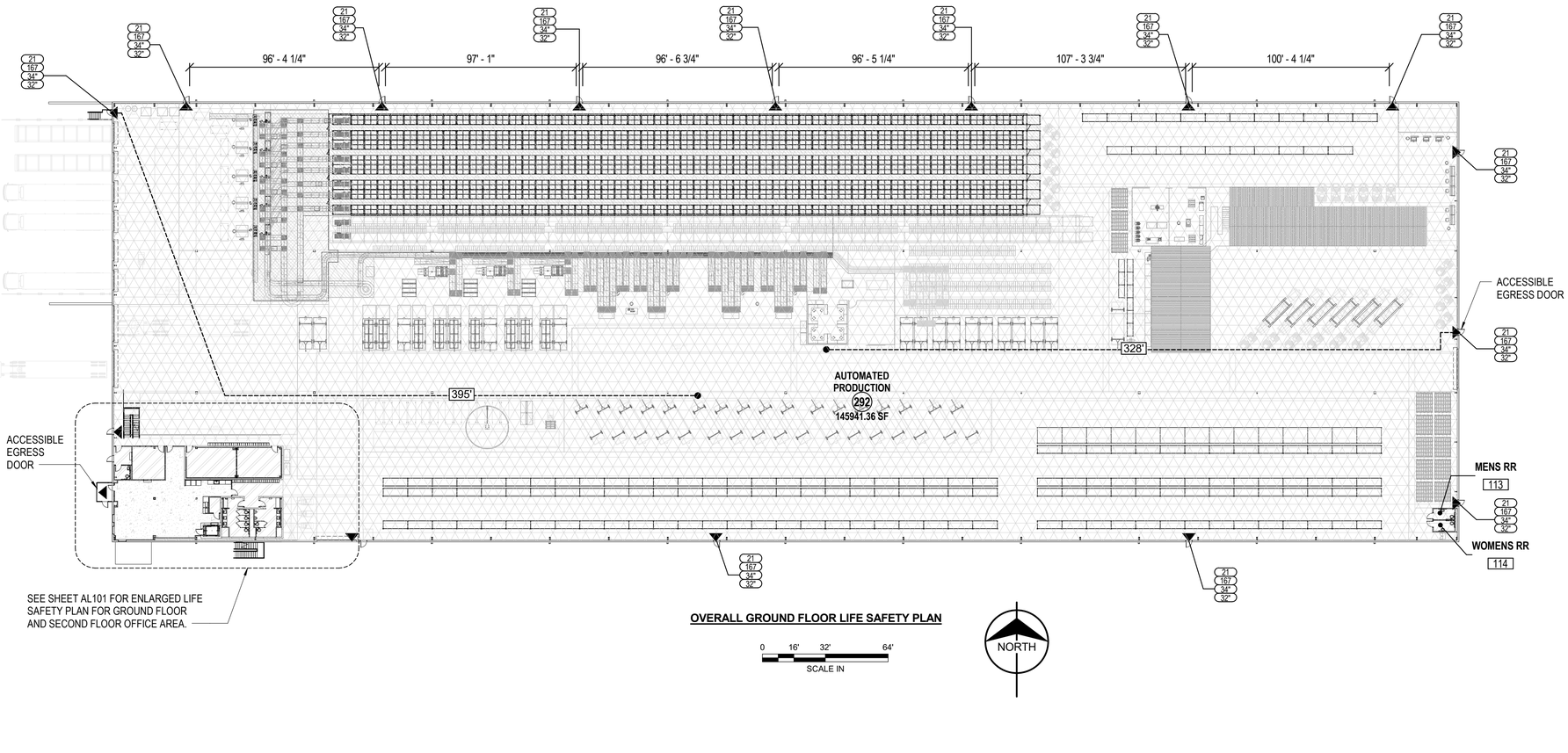
16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: L. HOOK 06/29/18 | Designed by: L. HOOK 06/29/18

KEY PLAN
NOT TO SCALE
NORTH

Project No. 6936
Sheet Name: BUILDING CODE & LIFE SAFETY CRITERIA
Sheet AL001 of XX
Drawing No. 108M-202-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\Arch\104543_A_lhook.rvt
11/20/2018 2:59:23 PM



OVERALL GROUND FLOOR LIFE SAFETY PLAN

0 16' 32' 64'

SCALE IN

NORTH

GENERAL NOTES

1. REFER TO ARCHITECTURAL LEGEND FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
2. REFER TO AG003 FOR LIFE SAFETY NARRATIVE AND BUILDING CODE ANALYSIS.
3. REFER TO THE ELECTRICAL LIGHTING PLANS FOR LOCATION OF EXIT SIGNS AND EMERGENCY LIGHTING.
4. REFER TO THE FIRE SUPPRESSION AND ALARM PLANS FOR LOCATION OF FIRE PROTECTION DEVICES.
5. FINAL LOCATIONS OF FIRE EXTINGUISHERS AND HOSE REELS SHALL BE APPROVED BY THE AHJ PRIOR TO INSTALLATION.

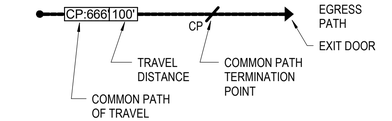
OCCUPANCY TYPES

ASSEMBLY - CONCENTRATED USE, WITHOUT FIXED SEATS

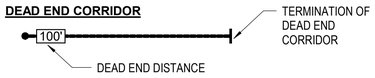
BUSINESS

STORAGE USE IN OTHER THAN STORAGE AND MERCANTILE

EGRESS PATH



DEAD END CORRIDOR



DOOR EGRESS TAG

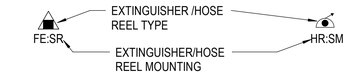
STAIR EGRESS TAG



FIRE AND SMOKE RESISTIVE CONSTRUCTION

1 HR FIRE BARRIER

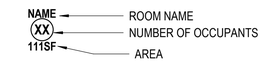
PORTABLE FIRE EXTINGUISHERS AND HOSE REELS



-FE: FIRE EXTINGUISHER
-SR: SEMI-RECESSED CABINET
-BR: BRACKET MOUNTED

A:B:C: TYPE DRY CHEMICAL
3A-40B:C BY AMEREX

ROOM OCCUPANCY TAG



KEY PLAN

NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
1	09MAY2018	PKG 2A: FOUNDATION & SOG - REV 1	LCH	BGB
6	18JUN2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
9	29JUN2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B: MEP, FP, FINISHES - REV O	LCH	BGB
Z	02NOV2018	PKG 2B: MEP, FP, FINISHES - REV Z	LCH	BGB
	16NOV2018	PKG 2B: MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW — APPROVED / NOT REQUIRED — DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT / DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD — LICENSED — 4932 — KANSAS — ARCHITECT

Nov 21 2018

WICHITA, KS

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Drawn by L. HOOK 06/29/2018 | Designed by L. HOOK 06/29/2018

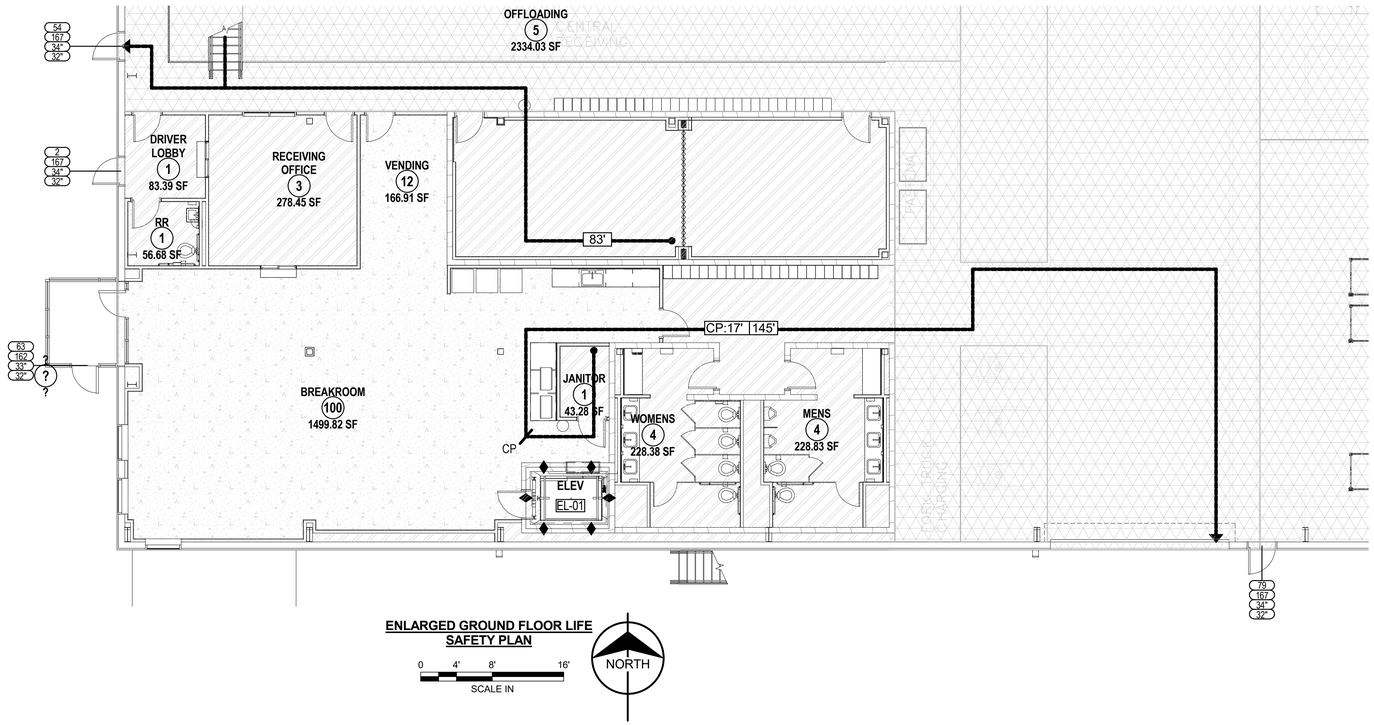
Project No. 6936

Sheet Name: OVERALL LIFE SAFETY PLAN

Sheet AL010 of XX

Drawing No. 108M-203-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

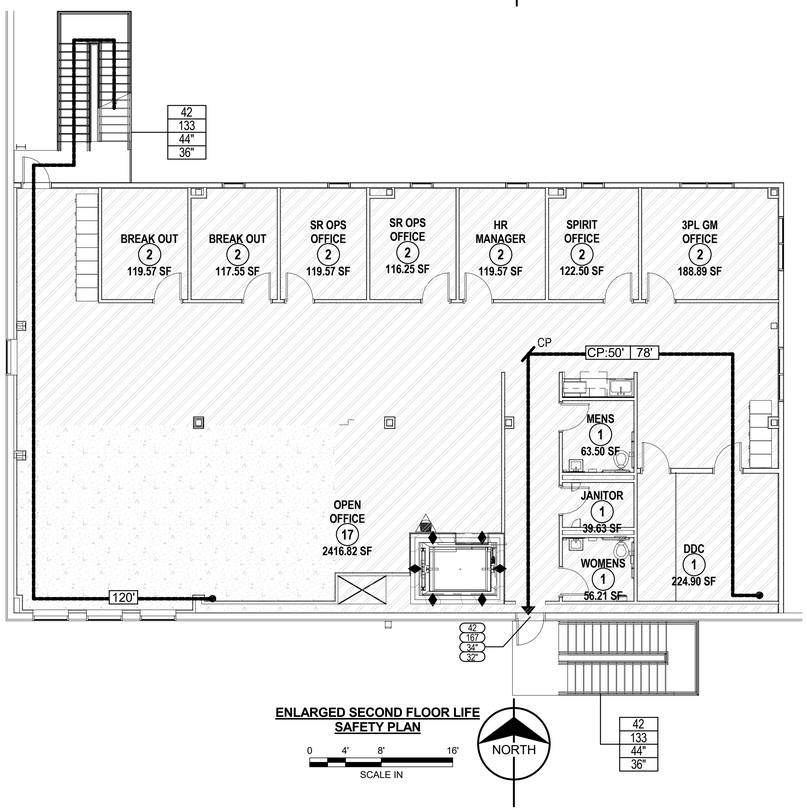


ENLARGED GROUND FLOOR LIFE SAFETY PLAN

0 4' 8' 16'

SCALE IN

NORTH



ENLARGED SECOND FLOOR LIFE SAFETY PLAN

0 4' 8' 16'

SCALE IN

NORTH

GENERAL NOTES

1. REFER TO ARCHITECTURAL LEGEND FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
2. REFER TO AG003 FOR LIFE SAFETY NARRATIVE AND BUILDING CODE ANALYSIS.
3. REFER TO THE ELECTRICAL LIGHTING PLANS FOR LOCATION OF EXIT SIGNS AND EMERGENCY LIGHTING.
4. REFER TO THE FIRE SUPPRESSION AND ALARM PLANS FOR LOCATION OF FIRE PROTECTION DEVICES.
5. FINAL LOCATIONS OF FIRE EXTINGUISHERS AND HOSE REELS SHALL BE APPROVED BY THE AHJ PRIOR TO INSTALLATION.

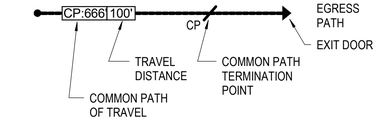
OCCUPANCY TYPES

ASSEMBLY - CONCENTRATED USE, WITHOUT FIXED SEATS

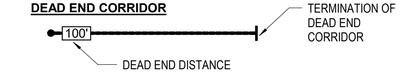
BUSINESS

STORAGE USE IN OTHER THAN STORAGE AND MERCANTILE

EGRESS PATH



DEAD END CORRIDOR



DOOR EGRESS TAG

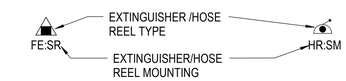
STAIR EGRESS TAG



FIRE AND SMOKE RESISTIVE CONSTRUCTION

1 HR FIRE BARRIER

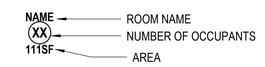
PORTABLE FIRE EXTINGUISHERS AND HOSE REELS



-FE: FIRE EXTINGUISHER
-SR: SEMI-RECESSED CABINET
-BR: BRACKET MOUNTED

A:B:C: TYPE DRY CHEMICAL
3A-40B:C BY AMEREX

ROOM OCCUPANCY TAG



KEY PLAN

NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
1	09MAY2018	PKG 2A: FOUNDATION & SOG - REV 1	LCH	BGB
5	18JUN2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
6	29JUN2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
9	13JUL2018	PKG 2B: MEP, FP, FINISHES - REV Q	LCH	BGB
Q	02NOV2018	PKG 2B: MEP, FP, FINISHES - REV Y	LCH	BGB
7	09NOV2018	PKG 2B: MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD — LICENSED — 4932 — KANSAS — ARCHITECT

Nov 21 2018

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Drawn by: L. HOOK 06/29/2018 | Designed by: L. HOOK 06/29/2018

Project No. 6936

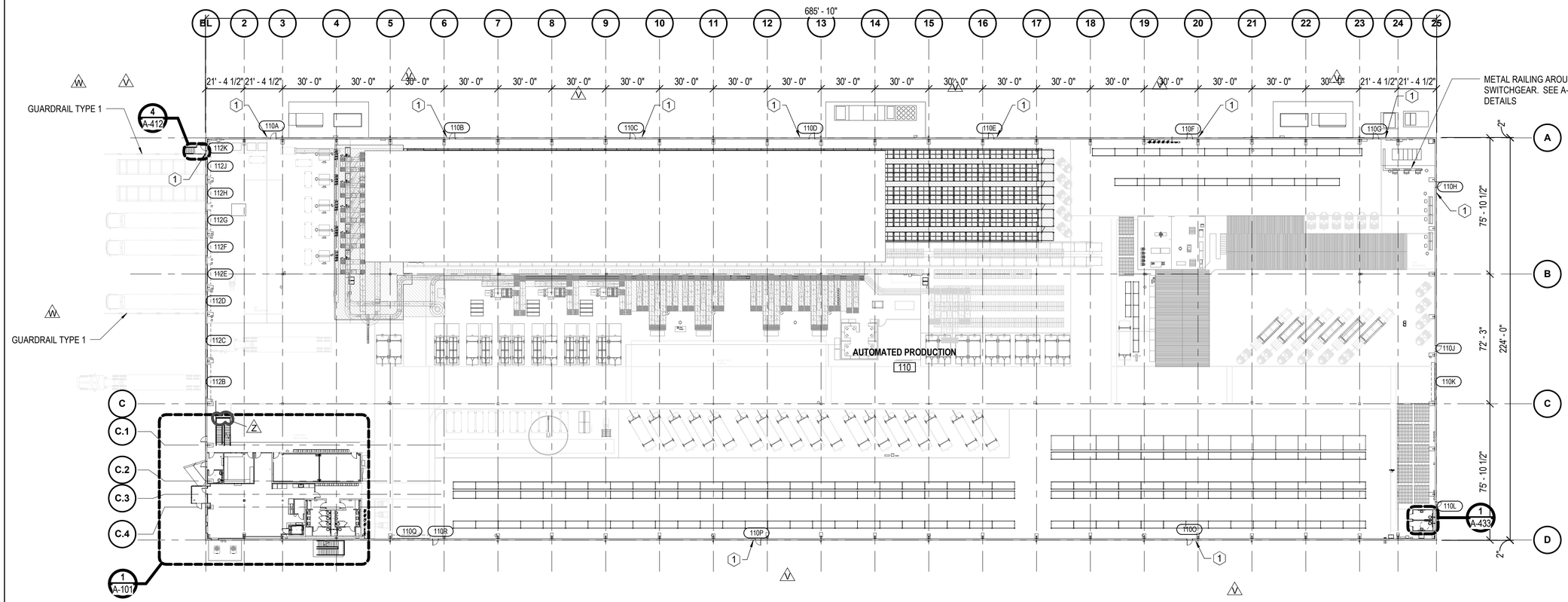
Sheet Name: ENLARGED LIFE SAFETY PLANS

Sheet AL101 of XXX

Drawing No. 108M-204-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



OVERALL GROUND FLOOR PLAN

0 30' 60'

SCALE IN

GENERAL OVERALL FLOOR PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, AND ABBREVIATIONS REFER TO SHEET AG001.
2. REFERENCE LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS, CODE ANALYSIS, AND EGRESS TRAVEL PATHS. ALL FIRE RATED WALLS AND SMOKE PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENINGS. SEE SHEETS AL001, AL010, AND AL101.
3. FOR PARTITION TYPES CONSTRUCTION AND DESCRIPTION REFER TO PARTITION TYPES SHEET ON A-501.
4. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK AND FABRICATION. THE CONTRACTOR SHALL BE NOTIFIED IN WRITING IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO CASE SHALL DIMENSIONS BE SCALED OFF PLANS, SECTIONS, OR DETAILS FROM THESE DRAWINGS.
5. FOR DOOR TAGS, WINDOW TAGS, KEYED NOTES, AND ADDITIONAL FLOOR PLAN INFORMATION NOT ILLUSTRATED, REFER TO LARGER SCALE DRAWINGS.
6. ARCHITECTURAL FLOOR ELEVATION 100'-0" = ACTUAL FLOOR ELEVATION 1361.00'
7. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, QUANTITIES, AND TYPE OF EQUIPMENT, OUTLETS, SWITCHES, ETC. ANY EQUIPMENT SHOWN IS FOR REFERENCE ONLY.
8. DOOR LOCATIONS NOT DIMENSIONED ARE 6 INCHES FROM FACE OF GYPSUM BOARD FINISH WALL TO DOOR JAMB FACE. VERIFY THERE IS A PULL SIDE MINIMUM 18 INCHES CLEAR FROM DOOR STRIKE TO INTERSECTING WALL FOR ADA COMPLIANCE. NOTIFY CONTRACTOR FOR NON-COMPLIANCE BEFORE SETTING DOOR FRAME AND WALL LOCATIONS.
9. SUBCONTRACTOR SHALL COORDINATE AND PROVIDE ALL MILLWORK TRIM AND INFILL PANELS AT ALL UNDERCOUNTER / CABINET LOCATIONS.
10. REFER TO FINISH SCHEDULE AND FINISH PLANS FOR ADDITIONAL FINISH INFORMATION, INCLUDING FLOOR MARKING LOCATIONS AND COLORS. ALL FLOOR FINISHES TO BE CONTINUOUS UNDER MILLWORK AND EQUIPMENT UNLESS NOTED OTHERWISE.
11. PROVIDE 18GA METAL PLATE OR FIRE TREATED WOOD BLOCKING IN WALL FOR TOILET FIXTURES, ACCESSORIES, EQUIPMENT, FLOOR AND WALL MOUNTED TOILET PARTITIONS, AND COUNTERTOP MOUNTING SUPPORTS.
12. REFER TO SPECIFICATIONS FOR LOCATIONS OF GYPSUM BOARD CONTROL JOINTS.
13. REFERENCE THE REFLECTED CEILING PLANS FOR CEILING HEIGHTS, CEILING FIXTURE LOCATIONS, AND CEILING DETAILS.
14. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, AND FINISH FACE OF METAL STUD WALL, UNLESS NOTED OTHERWISE.
15. PROVIDE FIRE-RETARDANT TREATED PLYWOOD WHERE ELECTRICAL IS TO BE MOUNTED TO GYPSUM BOARD OR CMU. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEYED NOTES:

1. PROVIDE SIGNAGE MOUNTED ON THE LATCH SIDE OF THE DOOR ON THE INTERIOR OF THE BUILDING. SIGNAGE TO READ "NOT ACCESSIBLE EXIT" AND THE SIGN SHALL COMPLY WITH A.D.A.A.G 216.4.1, 703.1, AND 703.5. RE: SHEET AG002 FOR TYPICAL SIGNAGE MOUNTING LOCATION FOR DOORS

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2016	PKG 2B, MEP, FP, FINISHES - 50% REVIEW	LCH	BGB
5	29JUN2016	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2016	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	16SEP2016	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
V	26OCT2016	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
W	16NOV2016	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Drawn by: L. HOOK	6/29/2018
Designed by: L. HOOK	6/29/2018

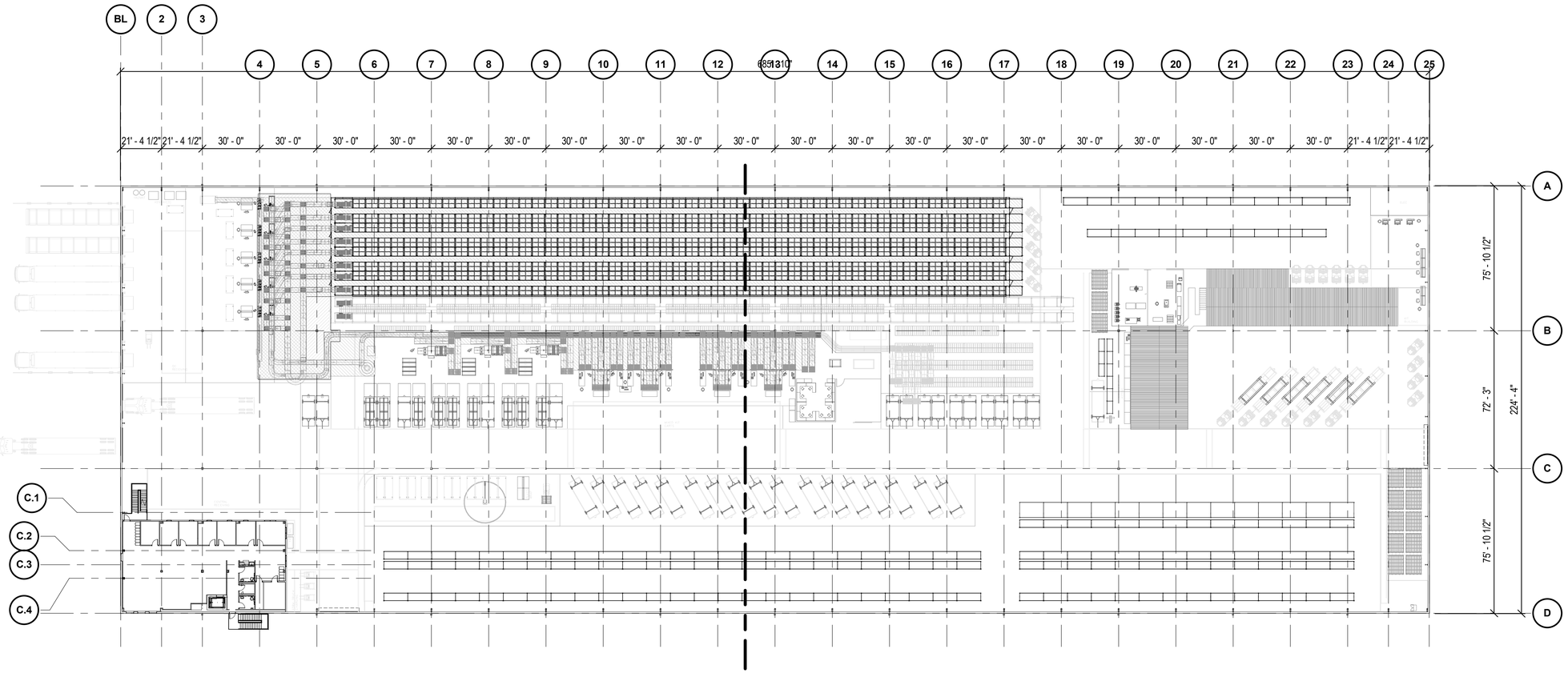
Project No. 6936

Sheet Name: OVERALL GROUND FLOOR PLAN

Sheet A-011 of XX

Drawing No. 108M-212-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



OVERALL SECOND FLOOR PLAN

0 30' 60'

SCALE IN

GENERAL OVERALL FLOOR PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, AND ABBREVIATIONS REFER TO SHEET AG001.
2. REFERENCE LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS, CODE ANALYSIS, AND EGRESS TRAVEL PATHS. ALL FIRE RATED WALLS AND SMOKE PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENINGS. SEE SHEETS AL001, AL010, AND AL101.
3. FOR PARTITION TYPES CONSTRUCTION AND DESCRIPTION REFER TO PARTITION TYPES SHEET ON A-501.
4. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK AND FABRICATION. THE CONTRACTOR SHALL BE NOTIFIED IN WRITING IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO CASE SHALL DIMENSIONS BE SCALED OFF PLANS, SECTIONS, OR DETAILS FROM THESE DRAWINGS.
5. FOR DOOR TAGS, WINDOW TAGS, KEYED NOTES, AND ADDITIONAL FLOOR PLAN INFORMATION NOT ILLUSTRATED, REFER TO LARGER SCALE DRAWINGS.
6. ARCHITECTURAL FLOOR ELEVATION 100'-0" = ACTUAL FLOOR ELEVATION 1361.00'
7. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, QUANTITIES, AND TYPE OF EQUIPMENT, OUTLETS, SWITCHES, ETC. ANY EQUIPMENT SHOWN IS FOR REFERENCE ONLY.
8. DOOR LOCATIONS NOT DIMENSIONED ARE 6 INCHES FROM FACE OF GYPSUM BOARD FINISH WALL TO DOOR JAMB FACE. VERIFY THERE IS A PULL SIDE MINIMUM 18 INCHES CLEAR FROM DOOR STRIKE TO INTERSECTING WALL FOR ADA COMPLIANCE. NOTIFY CONTRACTOR FOR NON-COMPLIANCE BEFORE SETTING DOOR FRAME AND WALL LOCATIONS.
9. SUBCONTRACTOR SHALL COORDINATE AND PROVIDE ALL MILLWORK TRIM AND INFILL PANELS AT ALL UNDERCOUNTER / CABINET LOCATIONS.
10. REFER TO FINISH SCHEDULE AND FINISH PLANS FOR ADDITIONAL FINISH INFORMATION, INCLUDING FLOOR MARKING LOCATIONS AND COLORS. ALL FLOOR FINISHES TO BE CONTINUOUS UNDER MILLWORK AND EQUIPMENT UNLESS NOTED OTHERWISE.
11. PROVIDE 18GA METAL PLATE OR FIRE TREATED WOOD BLOCKING IN WALL FOR TOILET FIXTURES, ACCESSORIES, EQUIPMENT, FLOOR AND WALL MOUNTED TOILET PARTITIONS, AND COUNTERTOP MOUNTING SUPPORTS.
12. REFER TO SPECIFICATIONS FOR LOCATIONS OF GYPSUM BOARD CONTROL JOINTS.
13. REFERENCE THE REFLECTED CEILING PLANS FOR CEILING HEIGHTS, CEILING FIXTURE LOCATIONS, AND CEILING DETAILS.
14. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, AND FINISH FACE OF METAL STUD WALL, UNLESS NOTED OTHERWISE.
15. PROVIDE FIRE-RETARDANT TREATED PLYWOOD WHERE ELECTRICAL IS TO BE MOUNTED TO GYPSUM BOARD OR CMU. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

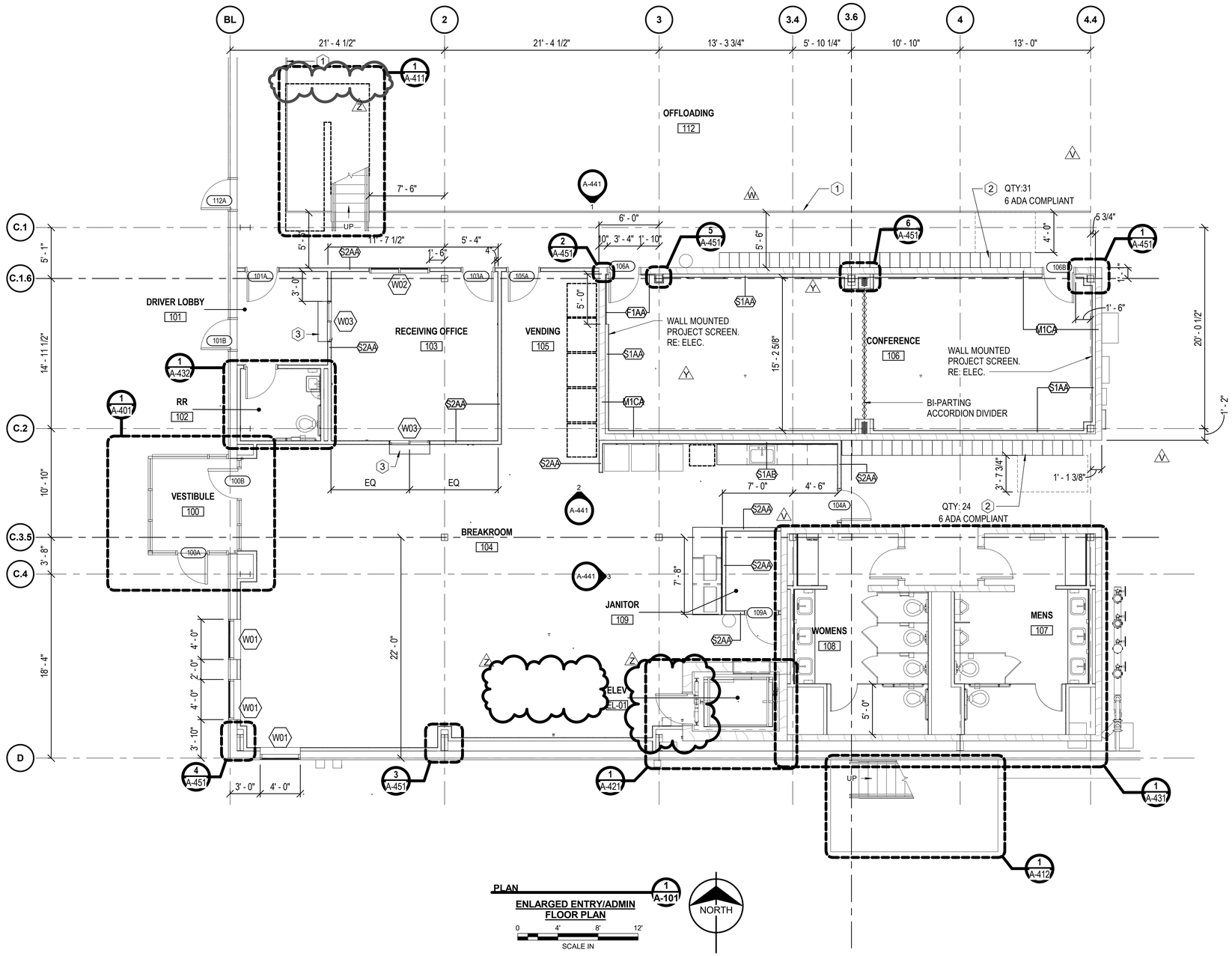
BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: L. HOOK | 06/29/2018 | Designed by: L. HOOK | 06/29/2018

Project No. 6936
Sheet Name: OVERALL SECOND FLOOR PLAN
Sheet A-012 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 A-101
ENLARGED ENTRY/ADMIN FLOOR PLAN
0 4' 8' 12'
SCALE IN

NORTH

GENERAL FLOOR PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, ABBREVIATIONS, AND ADA MOUNTING HEIGHTS AND CLEARANCES REFER TO SHEETS AG001 AND AG002.
2. REFERENCE LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS. ALL FIRE RATED WALLS AND SMOKE PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENINGS.
3. FOR PARTITION TYPES CONSTRUCTION AND DESCRIPTION REFER TO PARTITION TYPES SHEET A-501.
4. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK AND FABRICATION. THE CONTRACTOR SHALL BE NOTIFIED IN WRITING IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO CASE SHALL DIMENSIONS BE SCALED OFF PLANS, SECTIONS, OR DETAILS FROM THESE DRAWINGS.
5. FOR DIMENSIONS, WALL TAGS, DOOR TAGS OR ADDITIONAL INFORMATION NOT ILLUSTRATED, REFER TO LARGER SCALE DRAWINGS.
6. DOOR LOCATIONS NOT DIMENSIONED ARE 6 INCHES FROM FACE OF GYPSUM BOARD FINISH WALL TO DOOR JAMB FACE. VERIFY THERE IS A PULL SIDE MINIMUM 18 INCHES CLEAR FROM DOOR STRIKE TO INTERSECTING WALL FOR ADA COMPLIANCE. NOTIFY CONTRACTOR FOR NON-COMPLIANCE BEFORE SETTING DOOR FRAME AND WALL LOCATIONS.
7. SUBCONTRACTOR SHALL COORDINATE AND PROVIDE ALL MILLWORK TRIM AND INFILL PANELS AT ALL UNDERCOUNTER / CABINET LOCATIONS.
8. REFER TO FINISH SCHEDULE AND FINISH PLANS ON SHEET A-701 FOR ADDITIONAL FINISH INFORMATION. ALL FLOOR FINISHES TO BE CONTINUOUS UNDER MILLWORK AND EQUIPMENT UNLESS NOTED OTHERWISE.
9. PROVIDE 18GA METAL PLATE OR FIRE TREATED WOOD BLOCKING IN WALL FOR TOILET FIXTURES, ACCESSORIES, EQUIPMENT, FLOOR AND WALL MOUNTED TOILET PARTITIONS, AND COUNTERTOP MOUNTING SUPPORTS.
10. REFER TO SPECIFICATIONS FOR LOCATIONS OF GYPSUM BOARD CONTROL JOINTS.
11. REFERENCE STRUCTURAL DRAWINGS FOR EXACT LOCATIONS AND SIZES OF FLOOR SLAB OPENINGS AND FOR CONCRETE MASONRY UNIT WALL CONSTRUCTION.
12. ARCHITECTURAL FLOOR ELEVATION 100'-00" = ACTUAL FLOOR ELEVATION 1361.00'.
13. REFERENCE THE REFLECTED CEILING PLANS FOR CEILING HEIGHTS, CEILING FIXTURE LOCATIONS, AND CEILING DETAILS.
14. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, AND FINISH FACE OF METAL STUD WALL, UNLESS NOTED OTHERWISE.
15. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, QUANTITIES, AND TYPE OF EQUIPMENT, OUTLETS, SWITCHES, ETC. ANY EQUIPMENT SHOWN IS FOR REFERENCE ONLY.
16. PROVIDE GYPSUM BOARD HEADER ABOVE ALL CASED OPENINGS, REFERENCE REFLECTED CEILING PLANS.

KEYED FLOOR PLAN NOTES:

1. PAINTED STEEL GUARDRAIL - TYPE 2. RE: A-413 FOR ADDITIONAL INFORMATION.
2. METAL LOCKERS. DASHED LINES INDICATE REQUIRED CLEAR FLOOR SPACE TO BE MAINTAINED IN FRONT OF ACCESSIBLE LOCKERS. THE ADA ACCESSIBLE LOCKERS MUST COMPLY WITH ADAAG SEC. 811.2, 811.3, 811.4 AND THAT THE OPERATION OF THE HANDLE WILL NOT REQUIRE ANY GRASPING, PINCHING,OR TWISTING RE: A-441 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON ADA LOCKERS.
3. TRANSACTION COUNTERTOP AND WINDOW. RE: ELEVATIONS AND WINDOW SCHED.

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
W	26OCT2018	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
X	09NOV2018	PKG 2B, MEP, FP, FINISHES - REV X	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

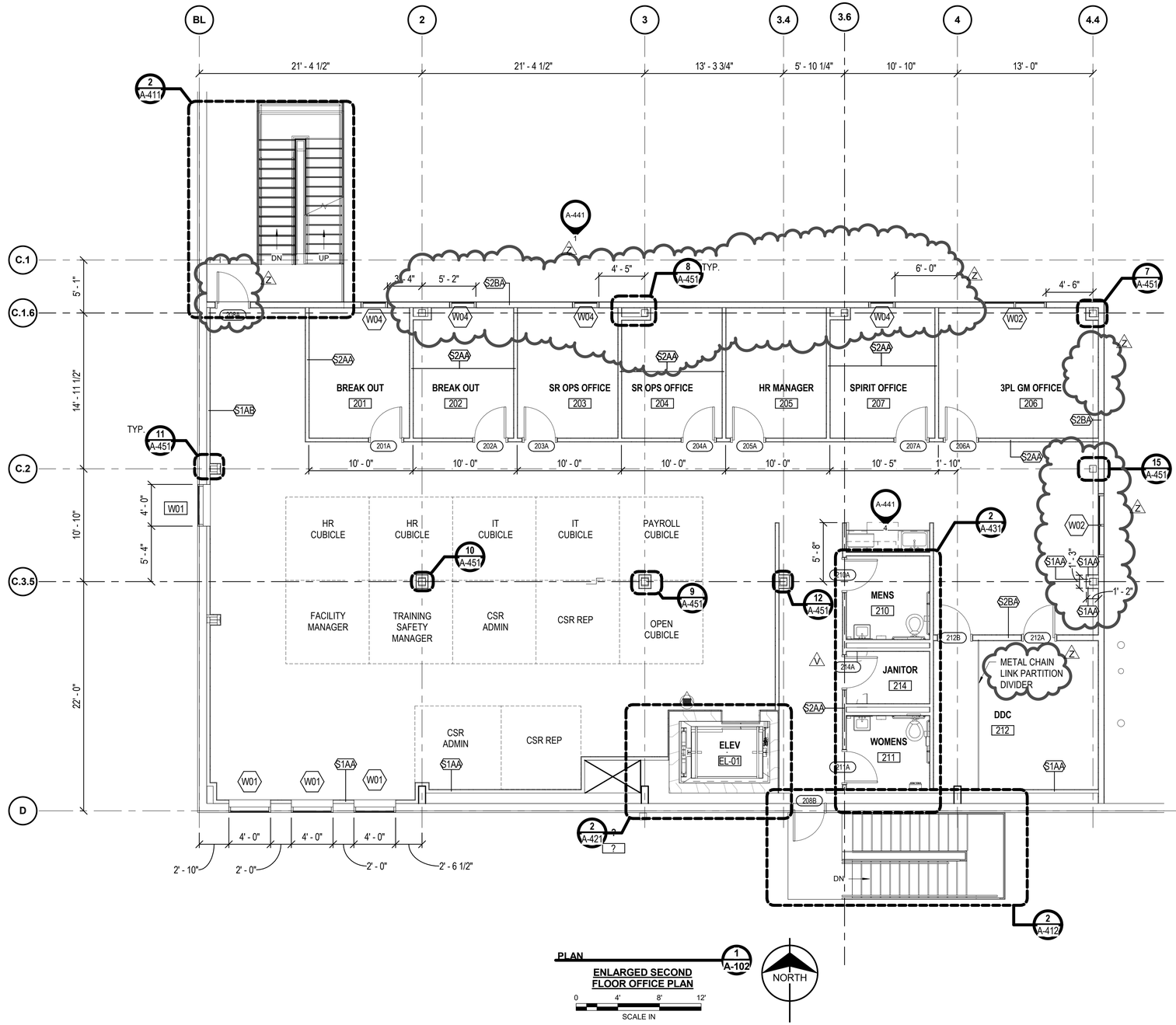
BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS
06/29/2018
Designed by L.HOOK
06/29/2018
Drawn by L. HOOK

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G

Project No. 6936
Sheet Name: ENLARGED GROUND FLOOR PLAN
Sheet A-101 of XX
Drawing No. 108M-215-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL FLOOR PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, ABBREVIATIONS, AND ADA MOUNTING HEIGHTS AND CLEARANCES REFER TO SHEETS AG001 AND AG002.
2. REFERENCE LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS. ALL FIRE RATED WALLS AND SMOKE PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENINGS.
3. FOR PARTITION TYPES CONSTRUCTION AND DESCRIPTION REFER TO PARTITION TYPES SHEET A-501.
4. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK AND FABRICATION. THE CONTRACTOR SHALL BE NOTIFIED IN WRITING IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO CASE SHALL DIMENSIONS BE SCALED OFF PLANS, SECTIONS, OR DETAILS FROM THESE DRAWINGS.
5. FOR DIMENSIONS, WALL TAGS, DOOR TAGS OR ADDITIONAL INFORMATION NOT ILLUSTRATED, REFER TO LARGER SCALE DRAWINGS.
6. DOOR LOCATIONS NOT DIMENSIONED ARE 6 INCHES FROM FACE OF GYPSUM BOARD FINISH WALL TO DOOR JAMB FACE. VERIFY THERE IS A PULL SIDE MINIMUM 18 INCHES CLEAR FROM DOOR STRIKE TO INTERSECTING WALL FOR ADA COMPLIANCE. NOTIFY CONTRACTOR FOR NON-COMPLIANCE BEFORE SETTING DOOR FRAME AND WALL LOCATIONS.
7. SUBCONTRACTOR SHALL COORDINATE AND PROVIDE ALL MILLWORK TRIM AND INFILL PANELS AT ALL UNDERCOUNTER / CABINET LOCATIONS.
8. REFER TO FINISH SCHEDULE AND FINISH PLANS ON SHEET A-701 FOR ADDITIONAL FINISH INFORMATION. ALL FLOOR FINISHES TO BE CONTINUOUS UNDER MILLWORK AND EQUIPMENT UNLESS NOTED OTHERWISE.
9. PROVIDE 18GA METAL PLATE OR FIRE TREATED WOOD BLOCKING IN WALL FOR TOILET FIXTURES, ACCESSORIES, EQUIPMENT, FLOOR AND WALL MOUNTED TOILET PARTITIONS, AND COUNTERTOP MOUNTING SUPPORTS.
10. REFER TO SPECIFICATIONS FOR LOCATIONS OF GYPSUM BOARD CONTROL JOINTS.
11. REFERENCE STRUCTURAL DRAWINGS FOR EXACT LOCATIONS AND SIZES OF FLOOR SLAB OPENINGS AND FOR CONCRETE MASONRY UNIT WALL CONSTRUCTION.
12. ARCHITECTURAL FLOOR ELEVATION 100'-00" = ACTUAL FLOOR ELEVATION 1361.00'.
13. REFERENCE THE REFLECTED CEILING PLANS FOR CEILING HEIGHTS, CEILING FIXTURE LOCATIONS, AND CEILING DETAILS.
14. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, AND FINISH FACE OF METAL STUD WALL, UNLESS NOTED OTHERWISE.
15. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, QUANTITIES, AND TYPE OF EQUIPMENT, OUTLETS, SWITCHES, ETC. ANY EQUIPMENT SHOWN IS FOR REFERENCE ONLY.
16. PROVIDE GYPSUM BOARD HEADER ABOVE ALL CASED OPENINGS, REFERENCE REFLECTED CEILING PLANS.

KEYED FLOOR PLAN NOTES:

1. PAINTED STEEL GUARDRAIL - TYPE 2. RE: A-413 FOR ADDITIONAL INFORMATION.
2. METAL LOCKERS. DASHED LINES INDICATE REQUIRED CLEAR FLOOR SPACE TO BE MAINTAINED IN FRONT OF ACCESSIBLE LOCKERS. THE ADA ACCESSIBLE LOCKERS MUST COMPLY WITH ADAAG SEC. 811.2, 811.3, 811.4 AND THAT THE OPERATION OF THE HANDLE WILL NOT REQUIRE ANY GRASPING, PINCHING,OR TWISTING RE: A-441 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON ADA LOCKERS.
3. TRANSACTION COUNTERTOP AND WINDOW. RE: ELEVATIONS AND WINDOW SCHED.

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2016	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2016	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2016	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2016	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Z	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB
Z1	09NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z1	LCH	BGB

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD — LICENSED — 4932 — KANSAS — ARCHITECT

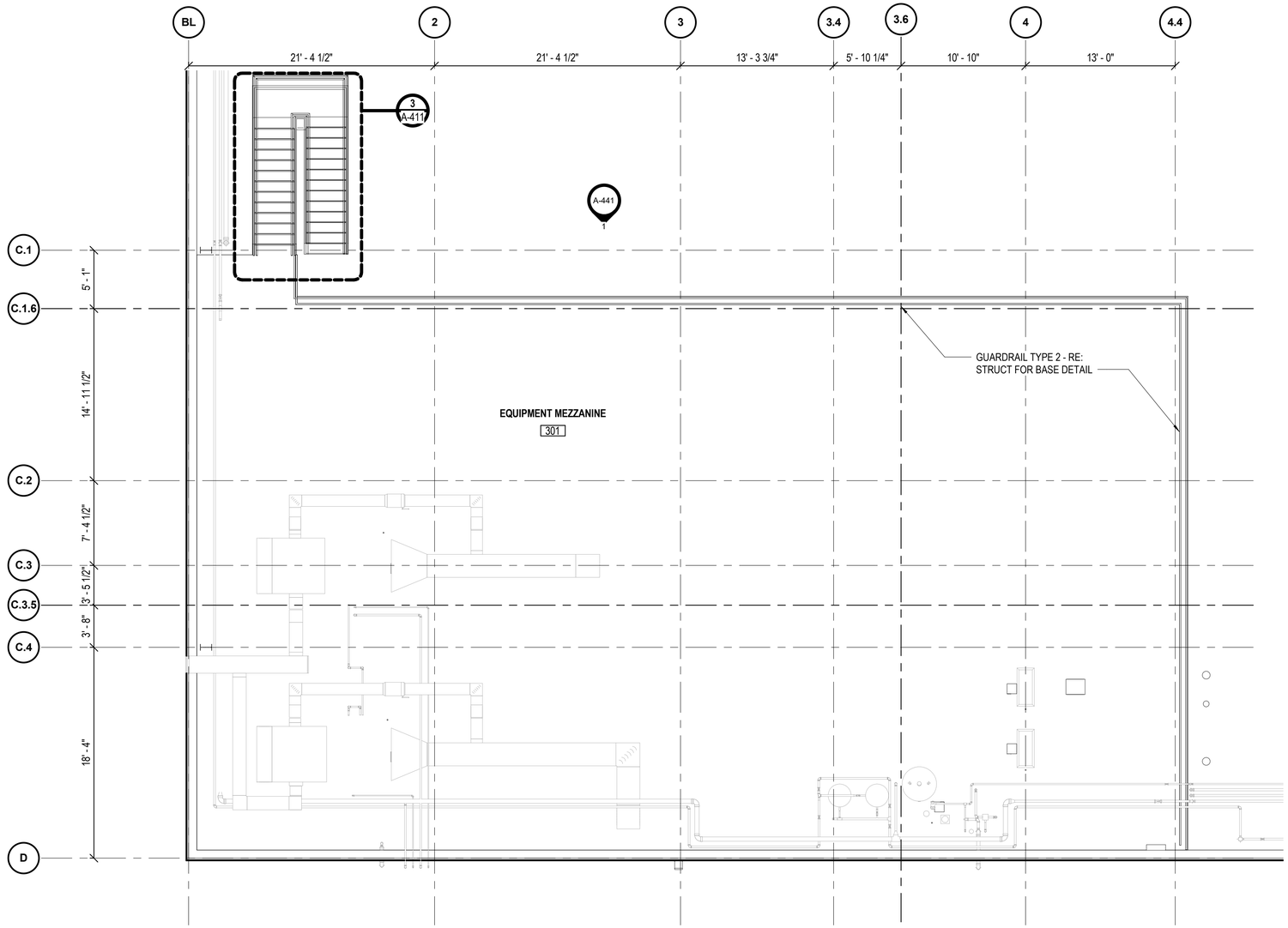
Nov 21 2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: L. HOOK — 06/29/2018
Designed by: L. HOOK — 06/29/2018

Project No. 6936
Sheet Name: ENLARGED SECOND FLOOR PLAN
Sheet A-102 of XX
Drawing No. 108M-XXX-XXX

KEY PLAN NOT TO SCALE



PLAN 1 A-103

ENLARGED EQUIPMENT MEZZANINE PLAN

0 4' 8' 12'

SCALE IN

NORTH

GENERAL FLOOR PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, ABBREVIATIONS, AND ADA MOUNTING HEIGHTS AND CLEARANCES REFER TO SHEETS AG001 AND AG002.
2. REFERENCE LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS. ALL FIRE RATED WALLS AND SMOKE PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENINGS.
3. FOR PARTITION TYPES CONSTRUCTION AND DESCRIPTION REFER TO PARTITION TYPES SHEET A-501.
4. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK AND FABRICATION. THE CONTRACTOR SHALL BE NOTIFIED IN WRITING IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO CASE SHALL DIMENSIONS BE SCALED OFF PLANS, SECTIONS, OR DETAILS FROM THESE DRAWINGS.
5. FOR DIMENSIONS, WALL TAGS, DOOR TAGS OR ADDITIONAL INFORMATION NOT ILLUSTRATED, REFER TO LARGER SCALE DRAWINGS.
6. DOOR LOCATIONS NOT DIMENSIONED ARE 6 INCHES FROM FACE OF GYPSUM BOARD FINISH WALL TO DOOR JAMB FACE. VERIFY THERE IS A PULL SIDE MINIMUM 18 INCHES CLEAR FROM DOOR STRIKE TO INTERSECTING WALL FOR ADA COMPLIANCE. NOTIFY CONTRACTOR FOR NON-COMPLIANCE BEFORE SETTING DOOR FRAME AND WALL LOCATIONS.
7. SUBCONTRACTOR SHALL COORDINATE AND PROVIDE ALL MILLWORK TRIM AND INFILL PANELS AT ALL UNDERCOUNTER / CABINET LOCATIONS.
8. REFER TO FINISH SCHEDULE AND FINISH PLANS ON SHEET A-701 FOR ADDITIONAL FINISH INFORMATION. ALL FLOOR FINISHES TO BE CONTINUOUS UNDER MILLWORK AND EQUIPMENT UNLESS NOTED OTHERWISE.
9. PROVIDE 18GA METAL PLATE OR FIRE TREATED WOOD BLOCKING IN WALL FOR TOILET FIXTURES, ACCESSORIES, EQUIPMENT, FLOOR AND WALL MOUNTED TOILET PARTITIONS, AND COUNTERTOP MOUNTING SUPPORTS.
10. REFER TO SPECIFICATIONS FOR LOCATIONS OF GYPSUM BOARD CONTROL JOINTS.
11. REFERENCE STRUCTURAL DRAWINGS FOR EXACT LOCATIONS AND SIZES OF FLOOR SLAB OPENINGS AND FOR CONCRETE MASONRY UNIT WALL CONSTRUCTION.
12. ARCHITECTURAL FLOOR ELEVATION 100'-00" = ACTUAL FLOOR ELEVATION 1361.00'.
13. REFERENCE THE REFLECTED CEILING PLANS FOR CEILING HEIGHTS, CEILING FIXTURE LOCATIONS, AND CEILING DETAILS.
14. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, AND FINISH FACE OF METAL STUD WALL, UNLESS NOTED OTHERWISE.
15. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, QUANTITIES, AND TYPE OF EQUIPMENT, OUTLETS, SWITCHES, ETC. ANY EQUIPMENT SHOWN IS FOR REFERENCE ONLY.
16. PROVIDE GYPSUM BOARD HEADER ABOVE ALL CASED OPENINGS, REFERENCE REFLECTED CEILING PLANS.

KEYED FLOOR PLAN NOTES:

1. PAINTED STEEL GUARDRAIL - TYPE 2. RE: A-413 FOR ADDITIONAL INFORMATION.
2. METAL LOCKERS. DASHED LINES INDICATE REQUIRED CLEAR FLOOR SPACE TO BE MAINTAINED IN FRONT OF ACCESSIBLE LOCKERS. THE ADA ACCESSIBLE LOCKERS MUST COMPLY WITH ADAAG SEC. 811.2, 811.3, 811.4 AND THAT THE OPERATION OF THE HANDLE WILL NOT REQUIRE ANY GRASPING, PINCHING,OR TWISTING RE: A-441 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON ADA LOCKERS.
3. TRANSACTION COUNTERTOP AND WINDOW. RE: ELEVATIONS AND WINDOW SCHED.

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

△	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LOH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LOH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LOH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LOH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LOH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐
NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
©MCD #104543

BRET G. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT

Nov 21 2018

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: L. HOOK 06/29/2018 | Designed by: L. HOOK 06/29/2018

Project No. 6936

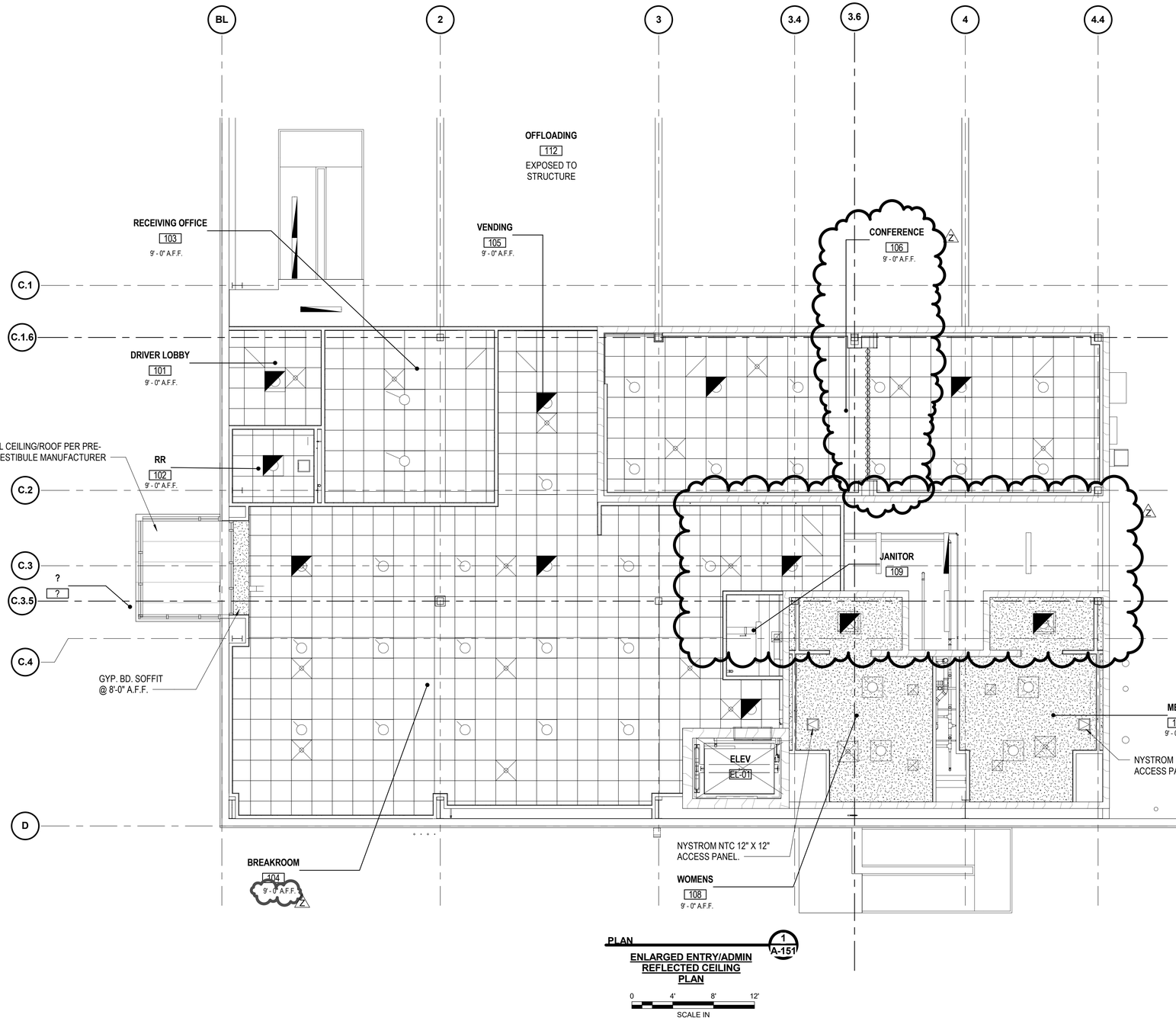
Sheet Name: EQUIPMENT MEZZANINE FLOOR PLAN

Sheet A-103 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 / A-151

ENLARGED ENTRY/ADMIN REFLECTED CEILING PLAN

0 4' 8' 12'

SCALE IN

GENERAL REFLECTED CEILING PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, AND ABBREVIATIONS REFER TO SHEET AG001.
2. ARCHITECTURAL CEILING PLANS INDICATE DIMENSIONING AND PLACEMENT OF VARIOUS CEILING MOUNTED DEVICES. REFER TO MEP DRAWINGS AND SPECIFICATIONS FOR ALL OTHER INFORMATION FOR MEP SYSTEMS INCLUDING BUT NOT LIMITED TO FIRE SUPPRESSION, FIRE ALARM DEVICES, SECURITY DEVICES, EXIT DEVICES, DIFFUSERS, LIGHTING, LIGHTING CONTROL DEVICES, AND ACCESS PANELS.
3. CENTER ACOUSTICAL LAY-IN TILE BOTH DIRECTIONS IN ROOM UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS ARE FROM: COLUMN GRIDLINE TO CENTERLINE OF DEVICE, FACE OF INTERIOR WALL FINISH TO CENTERLINE OF DEVICE, AND CENTERLINE OF DEVICE TO CENTERLINE OF DEVICE, UNLESS NOTED OTHERWISE.
5. CEILING HEIGHTS ARE SHOWN TO HEIGHT ABOVE FINISH FLOOR.
6. ALL LIGHTS, SPEAKERS, SPRINKLERS, SIGNAGE, STROBES AND OTHER HARDWARE INSTALLED IN TILED CEILING SYSTEMS TO BE CENTERED IN TILES IN BOTH DIRECTIONS UNLESS NOTED OTHERWISE.
7. ALIGN ALL CEILING MOUNTED DEVICES.
8. REFERENCE SHEET A-701 FOR ROOM FINISH SCHEDULE AND MATERIAL LEGEND.
9. CEILING MOUNTED EXIT SIGNS TO BE CENTERED WITHIN DOOR FRAME OR OPENING. MOUNT 4" OFF FACE OF WALL.
10. COORDINATE LOCATIONS OF CEILING ACCESS PANELS WITH THE FINAL LOCATIONS OF MECHANICAL EQUIPMENT AS REQUIRED TO SERVICE EQUIPMENT AND TO PROVIDE ACCESS TO ALL ABOVE CEILING EQUIPMENT.
11. FOR ROOMS THAT ARE EXPOSED TO STRUCTURE REFER TO MEP DRAWINGS FOR LIGHTING, HVAC, AND PIPING INFORMATION, INCLUDING BUT NOT LIMITED TO: QUANTITY, LOCATION, AND TYPE.
12. MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED IN SOFFITS AND CEILINGS OF RESTROOMS, LOCKER ROOMS, SHOWERS AND OTHER WET AREAS.

REFLECTED CEILING PLAN LEGEND:

	GYPSUM BOARD - PAINTED
	2' x 2' ACOUSTICAL CEILING TILE
	2' x 4' ACOUSTICAL CEILING TILE
ETS	EXPOSED TO STRUCTURE-PAINTED
	STRUCTURAL STEEL BEAM - PAINT
	1' x 4' FLUORESCENT FIXTURE - SUSPENDED
	2' x 2' FLUORESCENT FIXTURE - RECESSED
10' - 0" A.F.F.	CEILING HEIGHT ABOVE FINISH FLOOR
	HVAC AIR SUPPLY GRILLE
	HVAC EXHAUST OR RETURN GRILLE
	EXIT SIGN
	SECURITY CAMERA
	CABLE TRAY

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

KEY PLAN NOT TO SCALE

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: L. HOOK — 06/29/2018 — Designed by: L. HOOK — 06/29/2018

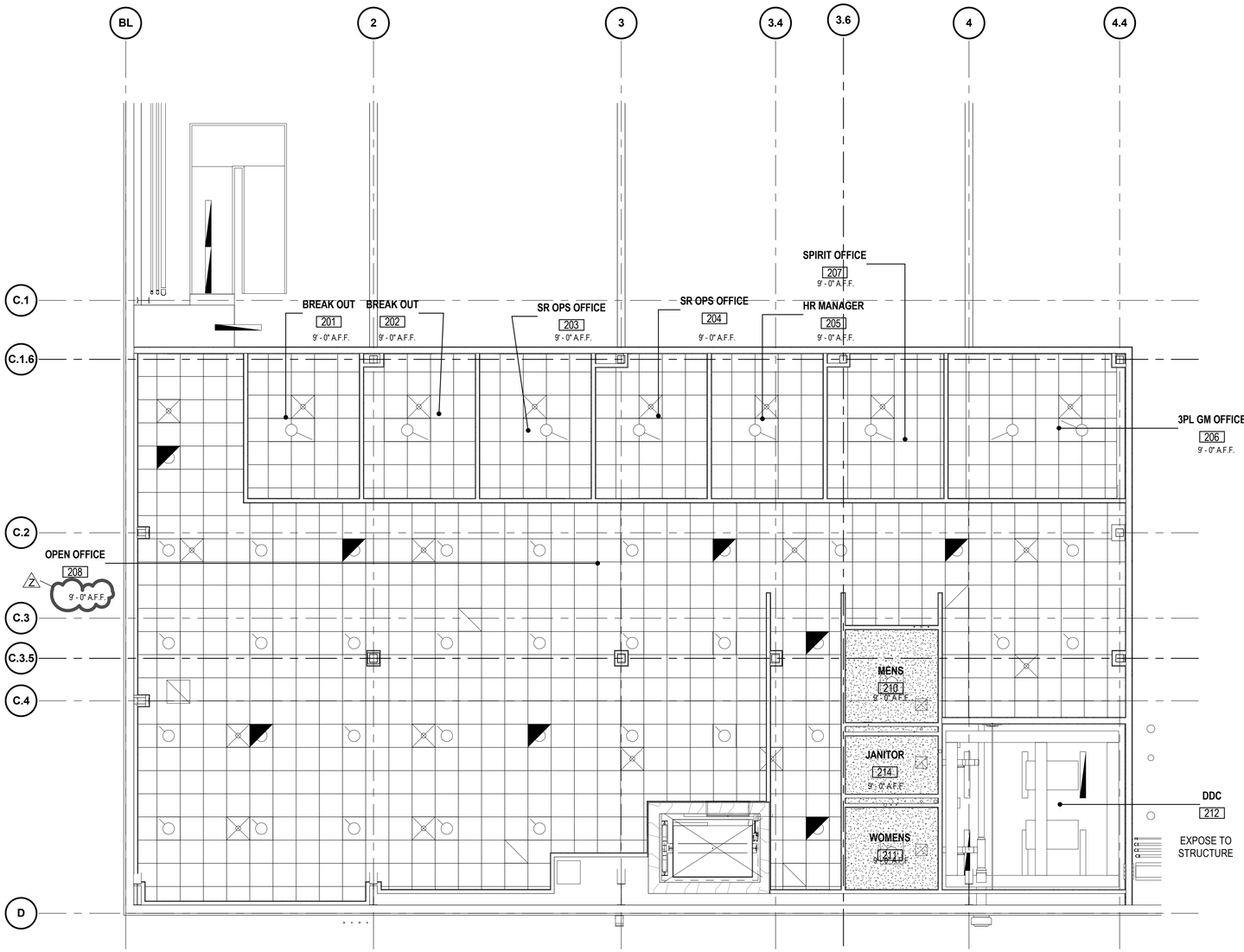
Project No. 6936

Sheet Name: REFLECTED CEILING AREA PLANS

Sheet A-151 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 A-152

ENLARGED SECOND FLOOR REFLECTED CEILING PLAN

0 4' 8' 12'

SCALE IN

NORTH

GENERAL REFLECTED CEILING PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, AND ABBREVIATIONS REFER TO SHEET AG001.
2. ARCHITECTURAL CEILING PLANS INDICATE DIMENSIONING AND PLACEMENT OF VARIOUS CEILING MOUNTED DEVICES. REFER TO MEP DRAWINGS AND SPECIFICATIONS FOR ALL OTHER INFORMATION FOR MEP SYSTEMS INCLUDING BUT NOT LIMITED TO FIRE SUPPRESSION, FIRE ALARM DEVICES, SECURITY DEVICES, EXIT DEVICES, DIFFUSERS, LIGHTING, LIGHTING CONTROL DEVICES, AND ACCESS PANELS.
3. CENTER ACOUSTICAL LAY-IN TILE BOTH DIRECTIONS IN ROOM UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS ARE FROM: COLUMN GRIDLINE TO CENTERLINE OF DEVICE, FACE OF INTERIOR WALL FINISH TO CENTERLINE OF DEVICE, AND CENTERLINE OF DEVICE TO CENTERLINE OF DEVICE, UNLESS NOTED OTHERWISE.
5. CEILING HEIGHTS ARE SHOWN TO HEIGHT ABOVE FINISH FLOOR.
6. ALL LIGHTS, SPEAKERS, SPRINKLERS, SIGNAGE, STROBES AND OTHER HARDWARE INSTALLED IN TILED CEILING SYSTEMS TO BE CENTERED IN TILES IN BOTH DIRECTIONS UNLESS NOTED OTHERWISE.
7. ALIGN ALL CEILING MOUNTED DEVICES.
8. REFERENCE SHEET A-701 FOR ROOM FINISH SCHEDULE AND MATERIAL LEGEND.
9. CEILING MOUNTED EXIT SIGNS TO BE CENTERED WITHIN DOOR FRAME OR OPENING. MOUNT 4" OFF FACE OF WALL.
10. COORDINATE LOCATIONS OF CEILING ACCESS PANELS WITH THE FINAL LOCATIONS OF MECHANICAL EQUIPMENT AS REQUIRED TO SERVICE EQUIPMENT AND TO PROVIDE ACCESS TO ALL ABOVE CEILING EQUIPMENT.
11. FOR ROOMS THAT ARE EXPOSED TO STRUCTURE REFER TO MEP DRAWINGS FOR LIGHTING, HVAC, AND PIPING INFORMATION, INCLUDING BUT NOT LIMITED TO: QUANTITY, LOCATION, AND TYPE.
12. MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED IN SOFFITS AND CEILINGS OF RESTROOMS, LOCKER ROOMS, SHOWERS AND OTHER WET AREAS.

REFLECTED CEILING PLAN LEGEND:

	GYPSUM BOARD - PAINTED
	2' x 2' ACOUSTICAL CEILING TILE
	2' x 4' ACOUSTICAL CEILING TILE
ETS	EXPOSED TO STRUCTURE-PAINTED
	STRUCTURAL STEEL BEAM - PAINT
	1' x 4' FLUORESCENT FIXTURE - SUSPENDED
	2' x 2' FLUORESCENT FIXTURE - RECESSED
10' - 0" A.F.F.	CEILING HEIGHT ABOVE FINISH FLOOR
	HVAC AIR SUPPLY GRILLE
	HVAC EXHAUST OR RETURN GRILLE
	EXIT SIGN
	SECURITY CAMERA
	CABLE TRAY

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

KEY PLAN
NOT TO SCALE

NORTH

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: L. HOOK | 06/29/2018 | Designed by: L. HOOK | 06/29/2018

Project No. 6936

Sheet Name: REFLECTED CEILING AREA PLANS

Sheet A-152 of XX

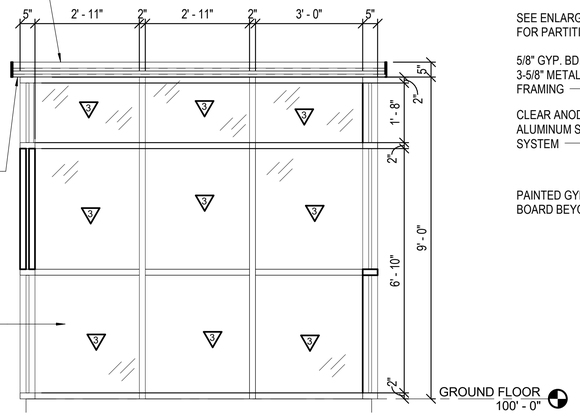
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, COPIED OR USED, EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

5" TALL METAL FASCIA AROUND PRE-FABRICATED VESTIBULE CEILING/ROOF ASSEMBLY. FINISH TO MATCH ADJACENT BUILDING

PRE-FABRICATED VESTIBULE MANUF. TO PROVIDE ROOF WITH INTERNAL GUTTER TO DOWNSPOUTS WITH ROOFING SYSTEM. FINISH TO MATCH ADJACENT BUILDING

PRE-FABRICATED ENTRY VESTIBULE SYSTEM. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION



STOREFRONT SYSTEM AND DOOR HEAD, JAMB, AND SILL DETAILS BY PRE-FABRICATED ENTRY VESTIBULE MANUF.

SECTION 2/A-401
PRE-FABRICATED ENTRY VESTIBULE

0 1' 2' 4'
SCALE IN

2" x 2" PREFINISHED 20 GA. SHEET METAL FLASHING, SET IN CONT. BEAD OF SEALANT. PROVIDED BY PREFABRICATED ENTRY VESTIBULE MANUF.

SEE ENLARGED FLOOR PLAN FOR PARTITION TYPE

5/8" GYP. BD. SOFFIT ON 3-5/8" METAL STUD FRAMING

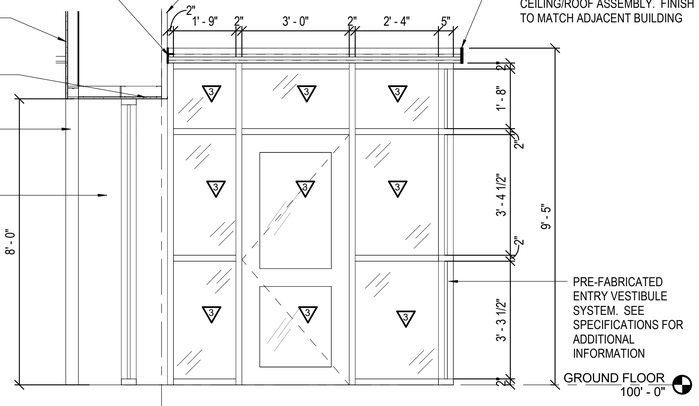
CLEAR ANODIZED ALUMINUM STOREFRONT SYSTEM

PAINTED GYPSUM BOARD BEYOND

BL

PEMB EXTERIOR METAL WALL PANEL

5" TALL METAL FASCIA AROUND PRE-FABRICATED VESTIBULE CEILING/ROOF ASSEMBLY. FINISH TO MATCH ADJACENT BUILDING

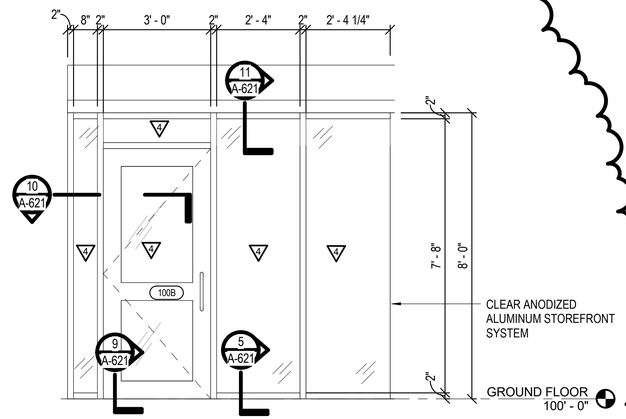


PRE-FABRICATED ENTRY VESTIBULE SYSTEM. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

STOREFRONT SYSTEM AND DOOR HEAD, JAMB, AND SILL DETAILS BY PRE-FABRICATED ENTRY VESTIBULE MANUF.

SECTION 3/A-401
PRE-FABRICATED ENTRY VESTIBULE

0 1' 2' 4'
SCALE IN



CLEAR ANODIZED ALUMINUM STOREFRONT SYSTEM

SECTION 4/A-401
ALUMINUM STOREFRONT ENTRY

0 1' 2' 4'
SCALE IN

GENERAL NOTES:
SEE SHEET A-601 FOR ADDITIONAL GLASS TYPE INFORMATION.

PLAN 1/A-401
ENLARGED ENTRY FLOOR PLAN

0 8' 16' 24'
SCALE IN

KEY PLAN
NOT TO SCALE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2016	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2016	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2016	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

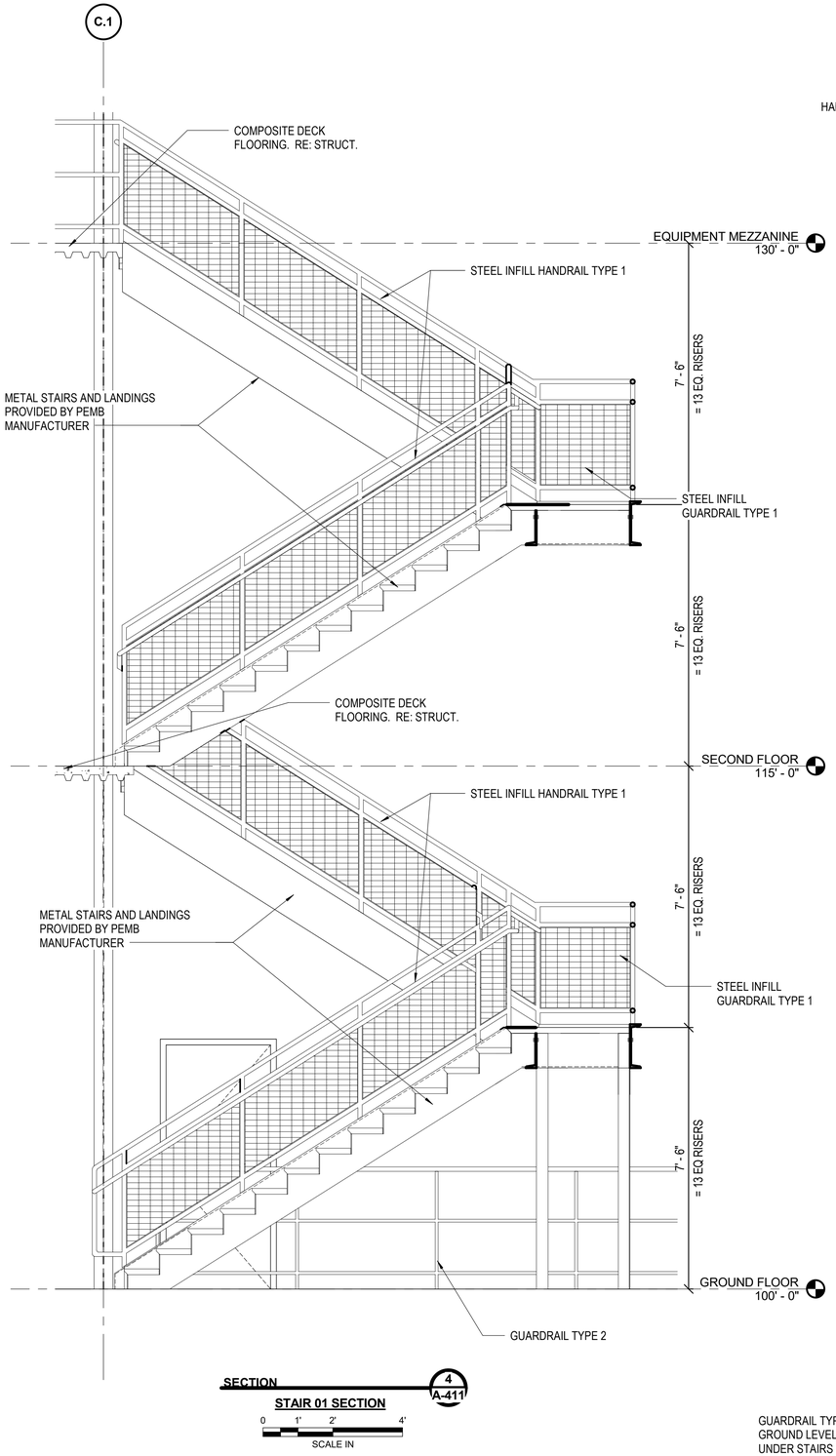
BRET G. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT

Nov 21 2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: L. HOOK | 06/29/2018 | Designed by: L. HOOK | 06/29/2018

Project No. 6936
Sheet Name: ENLARGED PLANS - ENTRY VESTIBULE
Sheet A-401 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

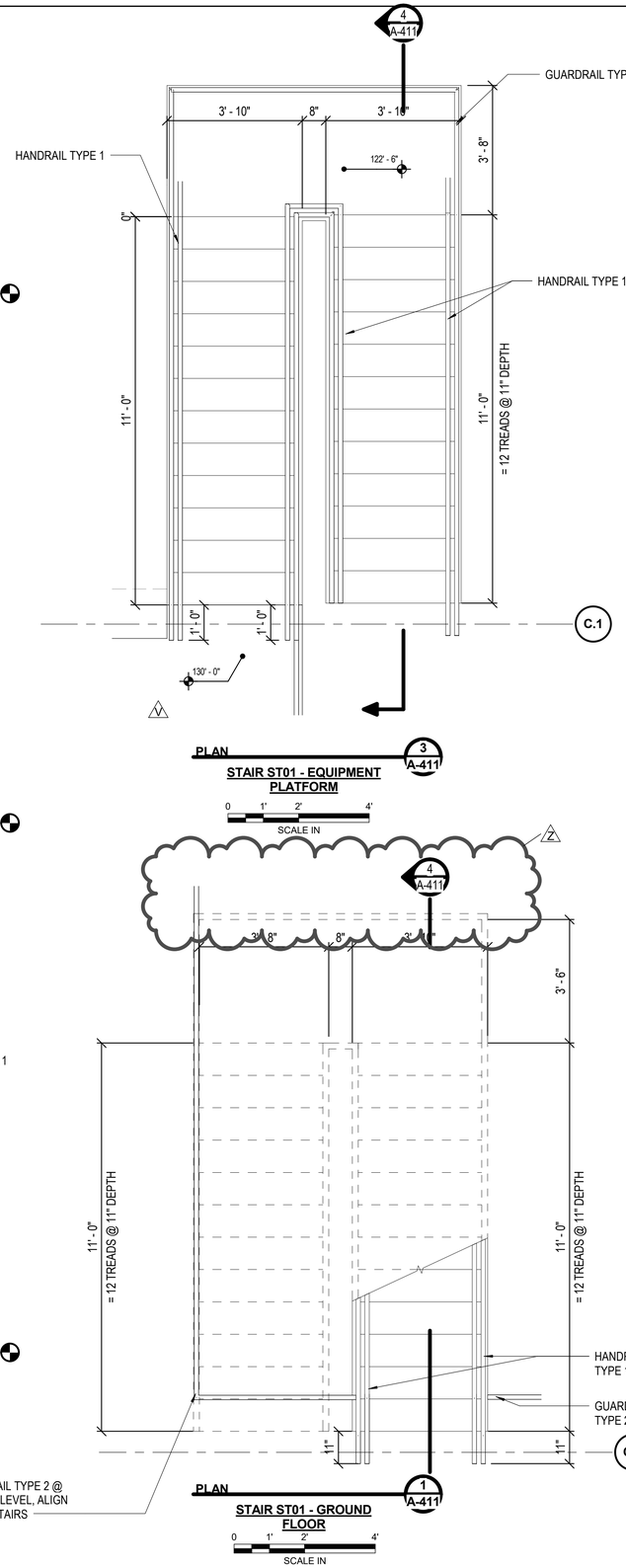


SECTION 4 A-411

STAIR 01 SECTION

0 1' 2' 4'

SCALE IN



PLAN 3 A-411

STAIR ST01 - EQUIPMENT PLATFORM

0 1' 2' 4'

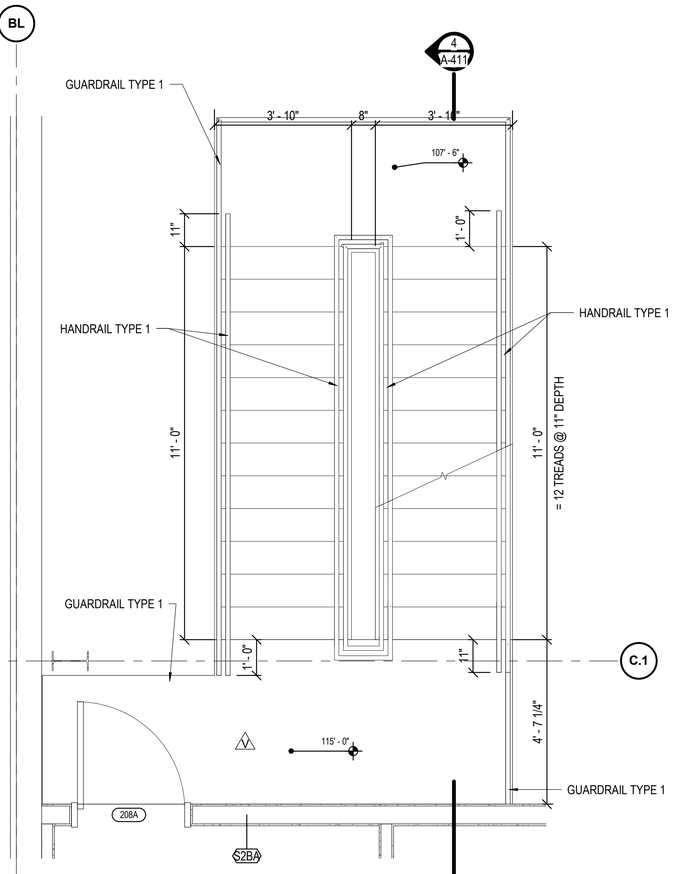
SCALE IN

PLAN 1 A-411

STAIR ST01 - GROUND FLOOR

0 1' 2' 4'

SCALE IN



PLAN 2 A-411

STAIR ST01 - SECOND FLOOR

0 1' 2' 4'

SCALE IN

GENERAL NOTES:

1. REFER TO SHEET A-413 FOR TYPICAL GUARDRAIL AND HANDRAIL DETAILS.

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2016	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2016	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2016	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2016	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Y	02NOV2016	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2016	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY D. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT
Nov 21 2018

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Drawn by: L. HOOK 06/29/2018 | Designed by: L. HOOK 06/29/2018

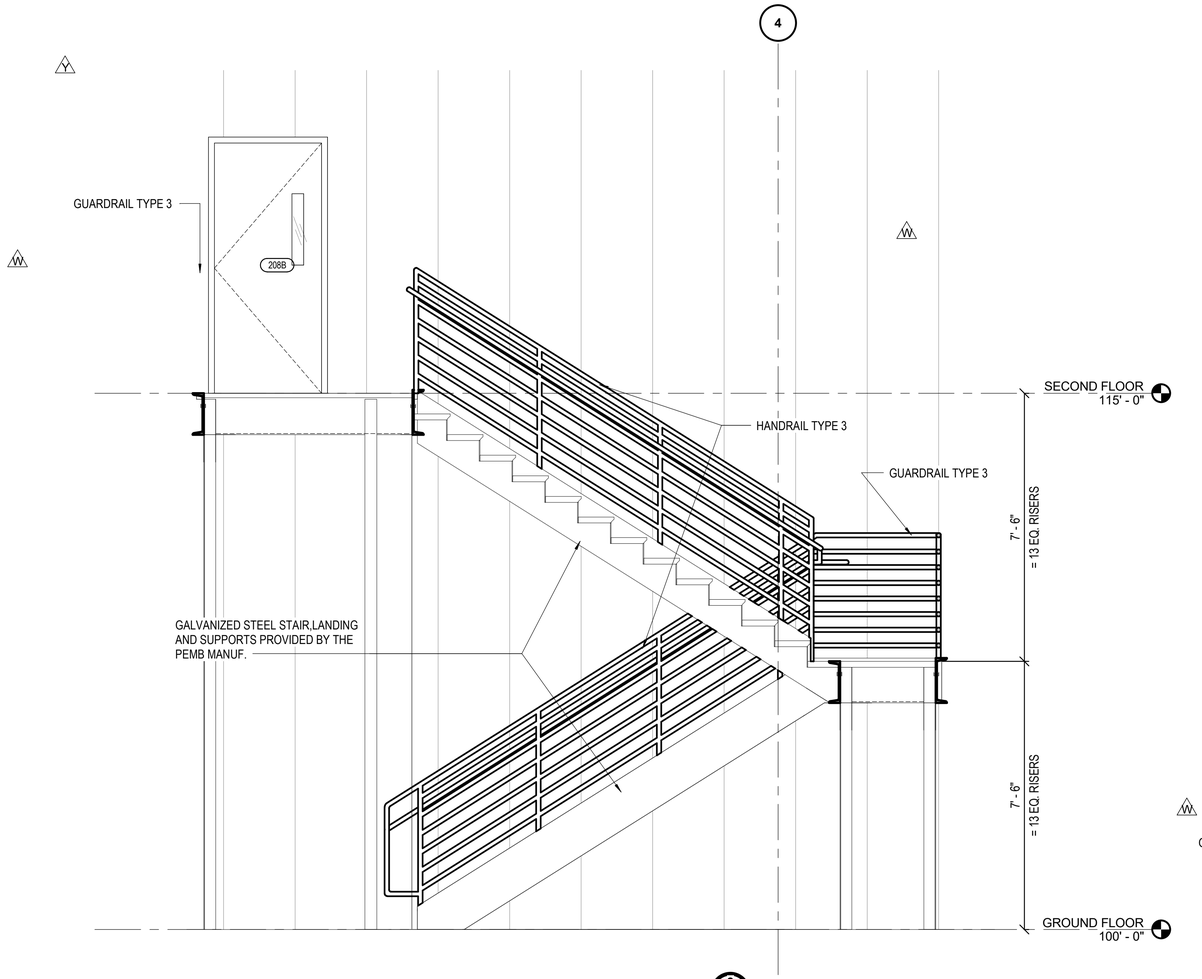
Project No. 6936

Sheet Name: STAIR 01 - PLANS AND SECTION

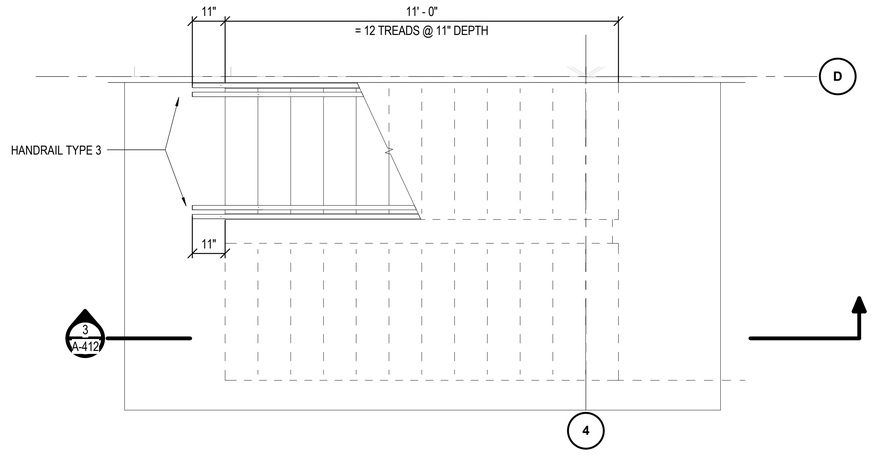
Sheet A-411 of

Drawing No. 108M-XXX-XXX

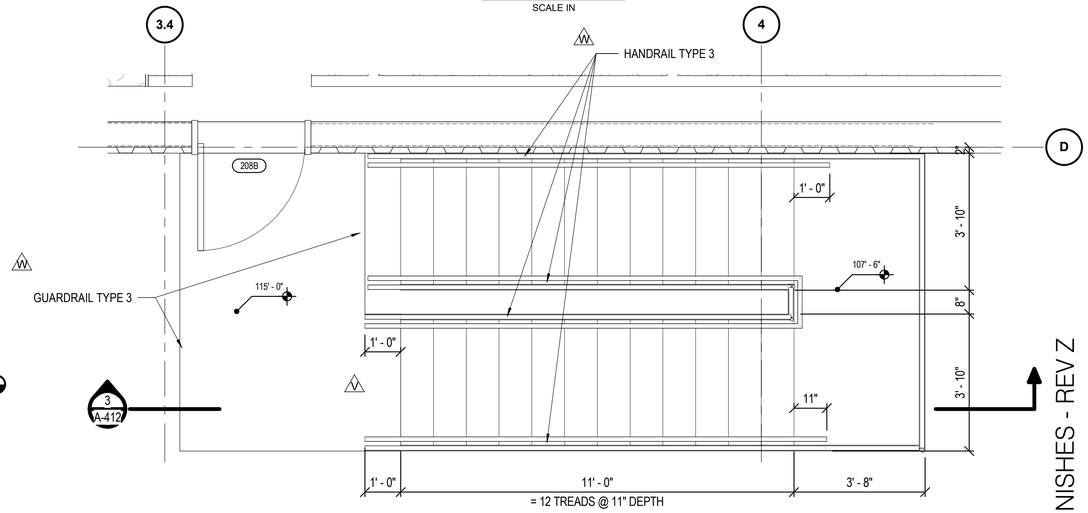
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



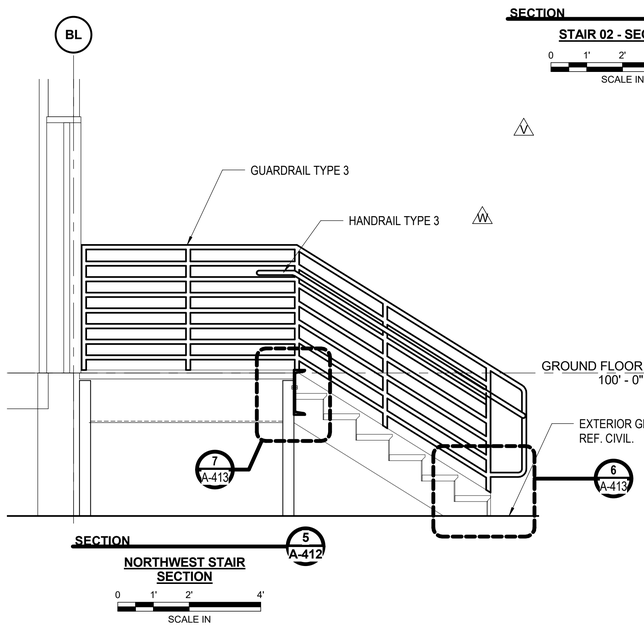
SECTION 3 A-412
STAIR 02 - SECTION
0 1' 2' 4'
SCALE IN



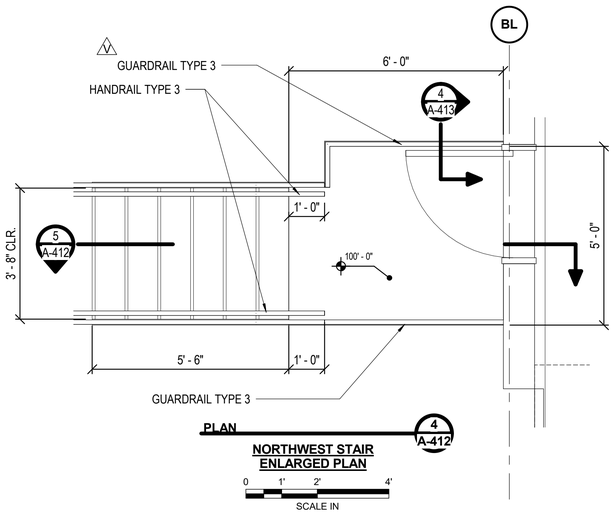
PLAN 1 A-412
STAIR 02 - GROUND FLOOR
0 1' 2' 4'
SCALE IN



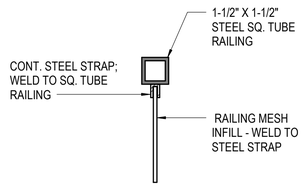
PLAN 2 A-412
STAIR 02 - SECOND FLOOR
0 1' 2' 4'
SCALE IN



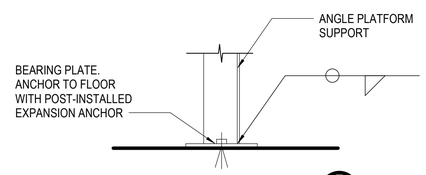
SECTION 5 A-412
NORTHWEST STAIR SECTION
0 1' 2' 4'
SCALE IN



PLAN 4 A-412
NORTHWEST STAIR ENLARGED PLAN
0 1' 2' 4'
SCALE IN



DETAIL 7 A-412
RAILING MESH INFILL



DETAIL 6 A-412
STAIR SUPPORT

GENERAL NOTES:

1. REFER TO SHEET A-413 FOR TYPICAL GUARDRAIL AND HANDRAIL DETAILS.

KEY PLAN
NOT TO SCALE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	14JUN2018	PKG 2B, MEP, FP, FINISHES - 50% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
W	26OCT2018	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
X	30OCT2018	PKG 2B, MEP, FP, FINISHES - REV X	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

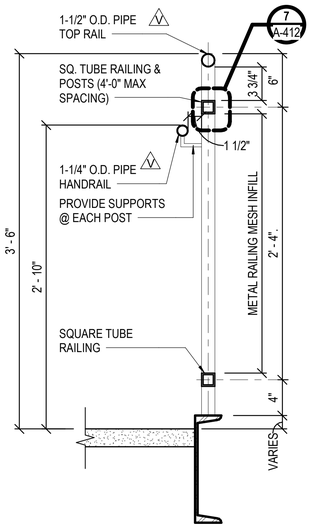
BARRY G. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT
Nov 21 2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G

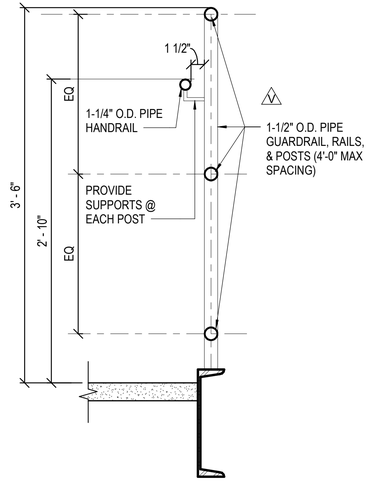
Drawn by: L. HOOK — 06/29/2018
Designed by: L. HOOK — 06/29/2018
06/29/2018

Project No. 6936
Sheet Name: STAIR 02 - PLANS AND SECTION
Sheet A-412 of XX
Drawing No. 108M-XXX-XXX

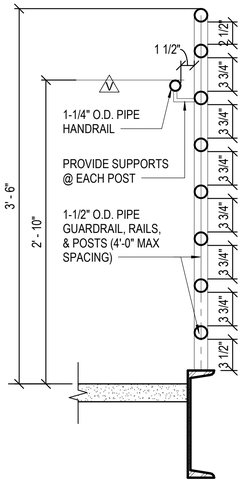
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



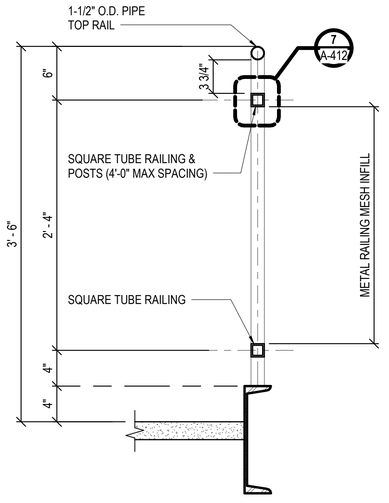
HANDRAIL TYPE 1



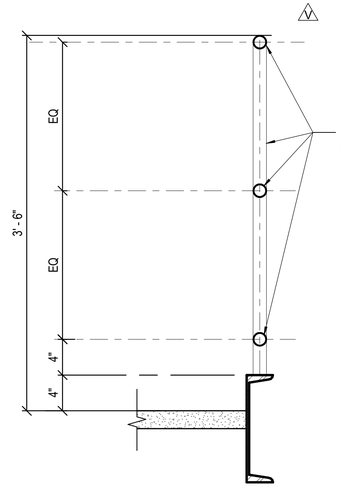
HANDRAIL TYPE 2



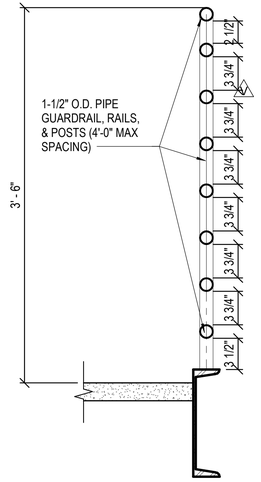
HANDRAIL TYPE 3



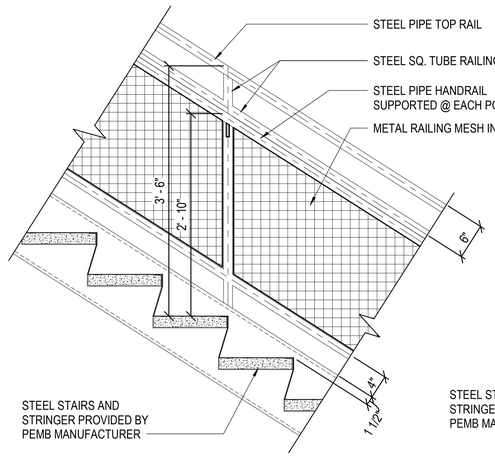
GUARDRAIL TYPE 1

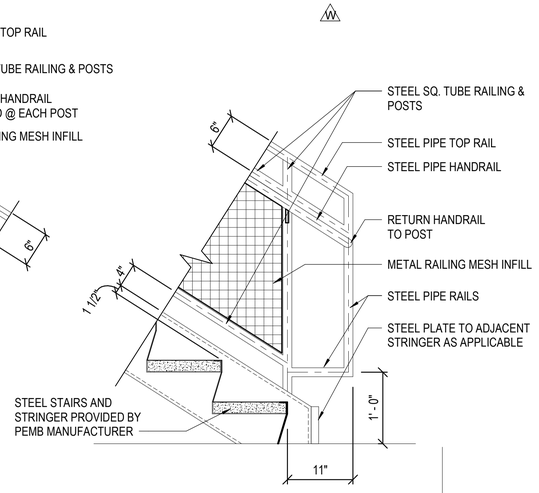


GUARDRAIL TYPE 2

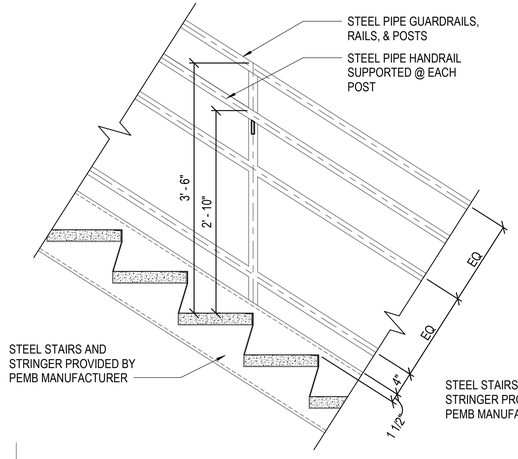


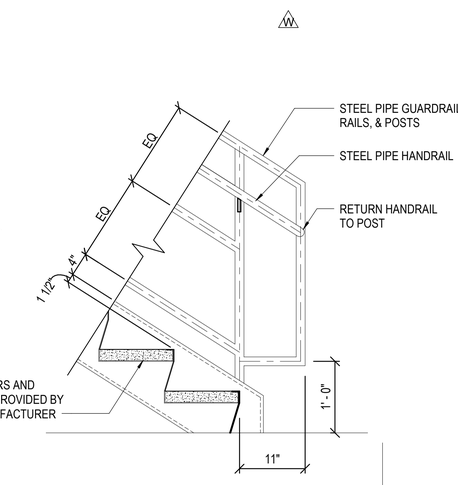
GUARDRAIL TYPE 3





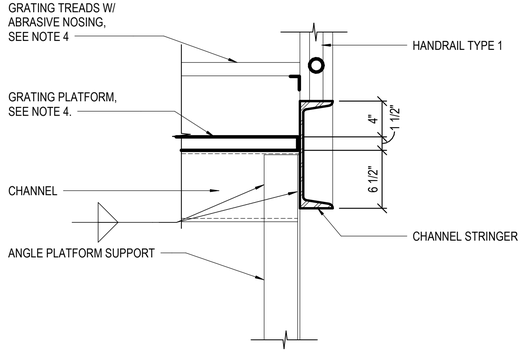
HANDRAIL TYPE 1





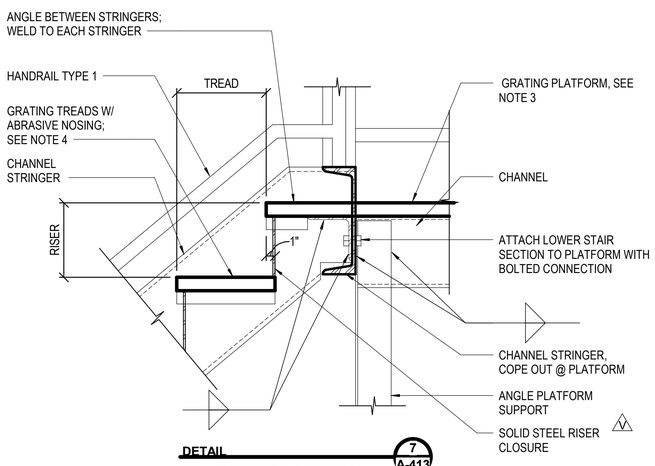
HANDRAIL TYPE 2

HANDRAIL TYPE 3 IS SIMILAR



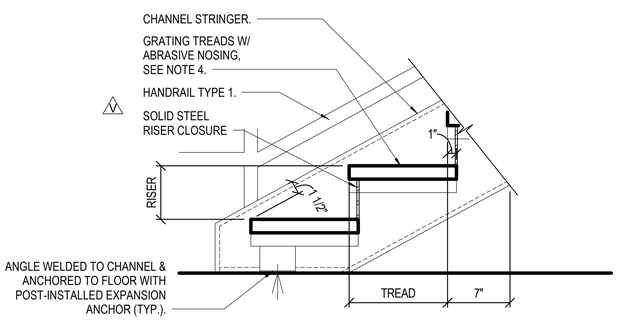
DETAIL 4 A-413

STAIR LANDING



DETAIL 7 A-413

STAIR TOP @ LANDING



DETAIL 6 A-413

STAIR BASE

KEY PLAN
NOT TO SCALE



	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2016	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2016	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2016	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	16SEP2016	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
W	26OCT2016	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
X	28NOV2016	PKG 2B, MEP, FP, FINISHES - REV X	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT
Nov 21 2018

WICHITA, KS

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Drawn by: L. HOOK 06/29/2018 | Designed by: L. HOOK 06/29/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

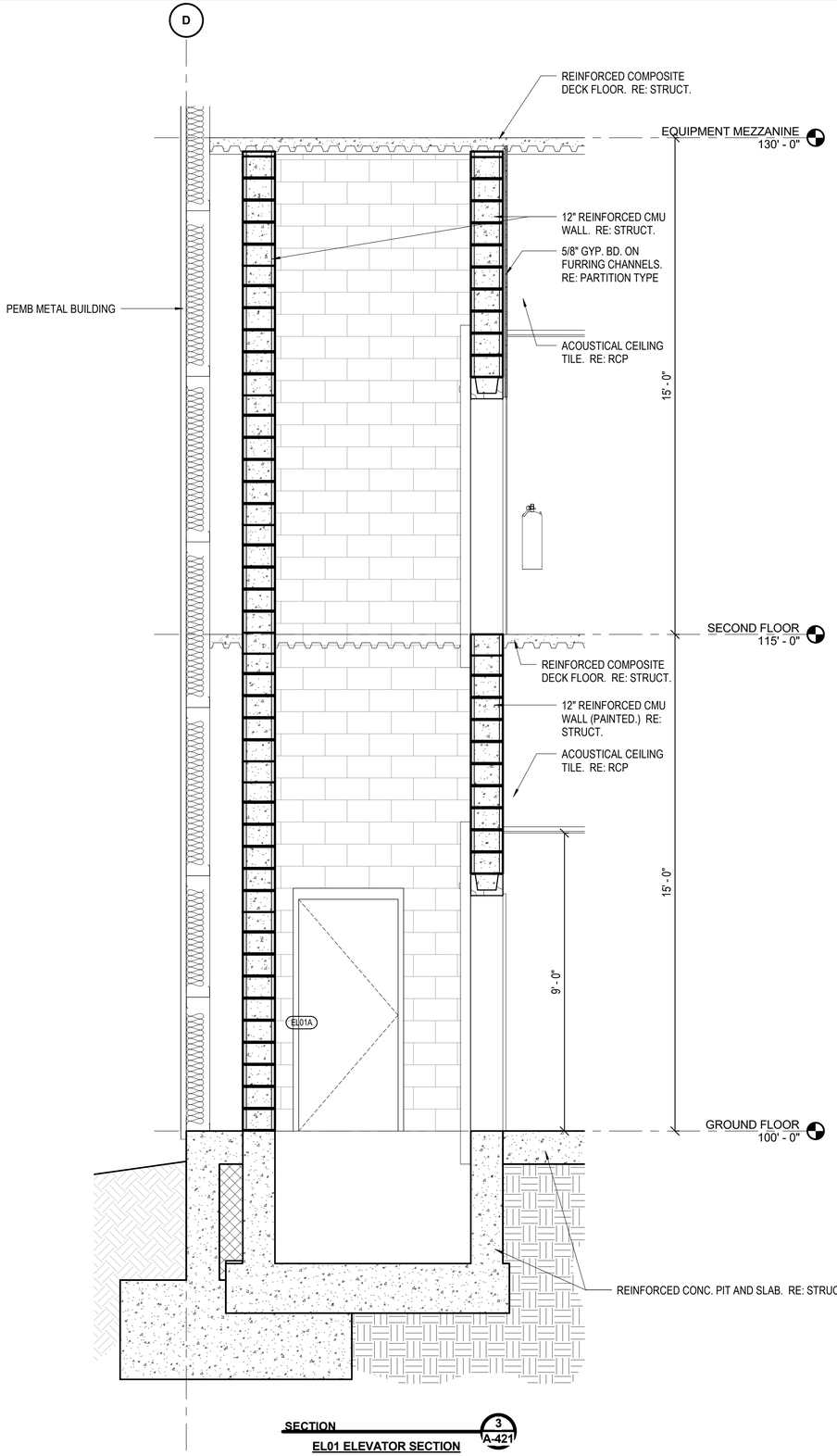
Project No.
6936

Sheet Name
STAIR AND HANDRAIL DETAILS

Sheet A-413 of XX

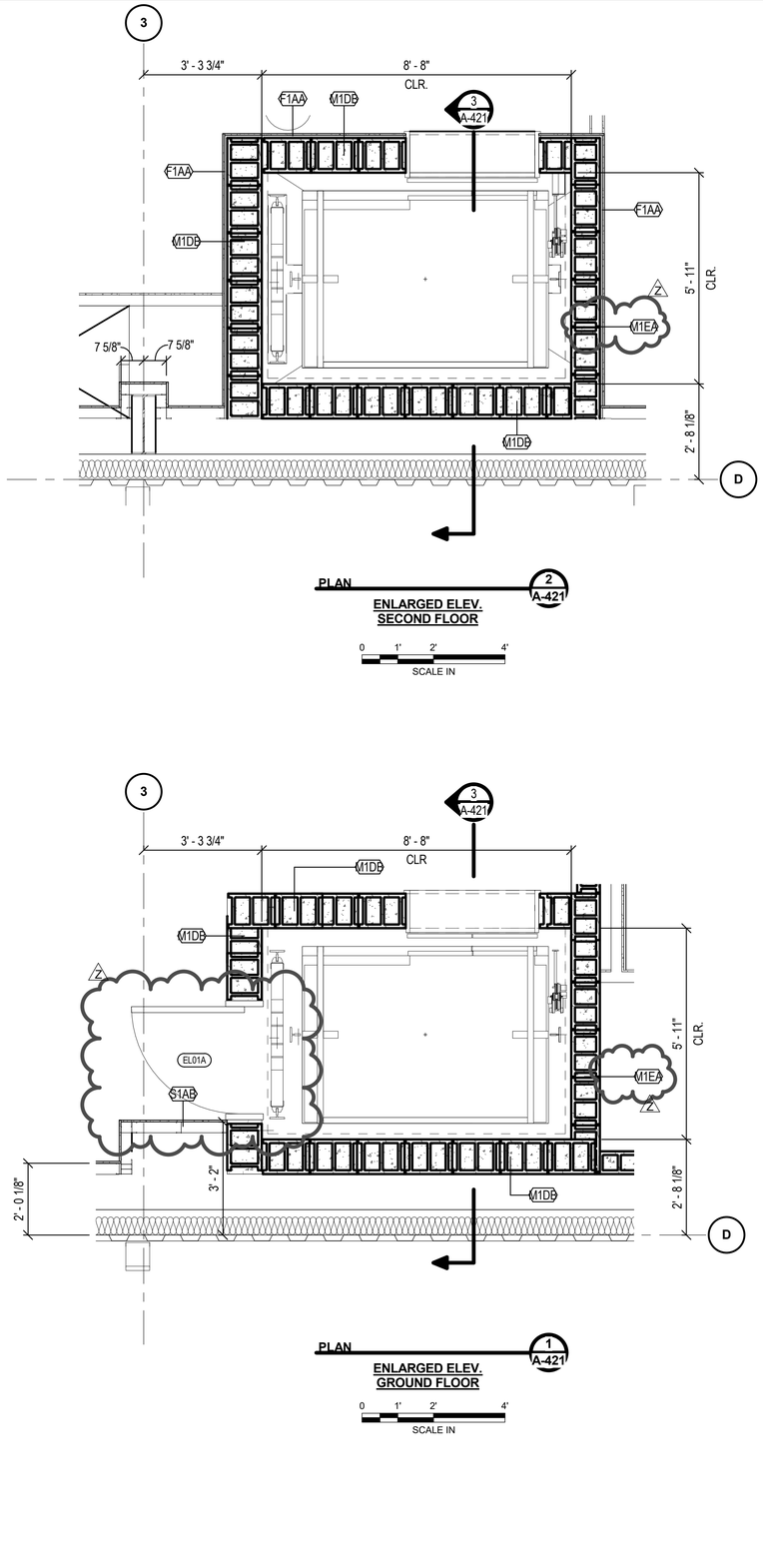
Drawing No.
108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SECTION 3 A-421
EL01 ELEVATOR SECTION

0 1' 2' 4'
SCALE IN



PLAN 2 A-421
ENLARGED ELEV. SECOND FLOOR

0 1' 2' 4'
SCALE IN

PLAN 1 A-421
ENLARGED ELEV. GROUND FLOOR

0 1' 2' 4'
SCALE IN

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
MCD #104543

BARRY S. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

WICHITA, KS

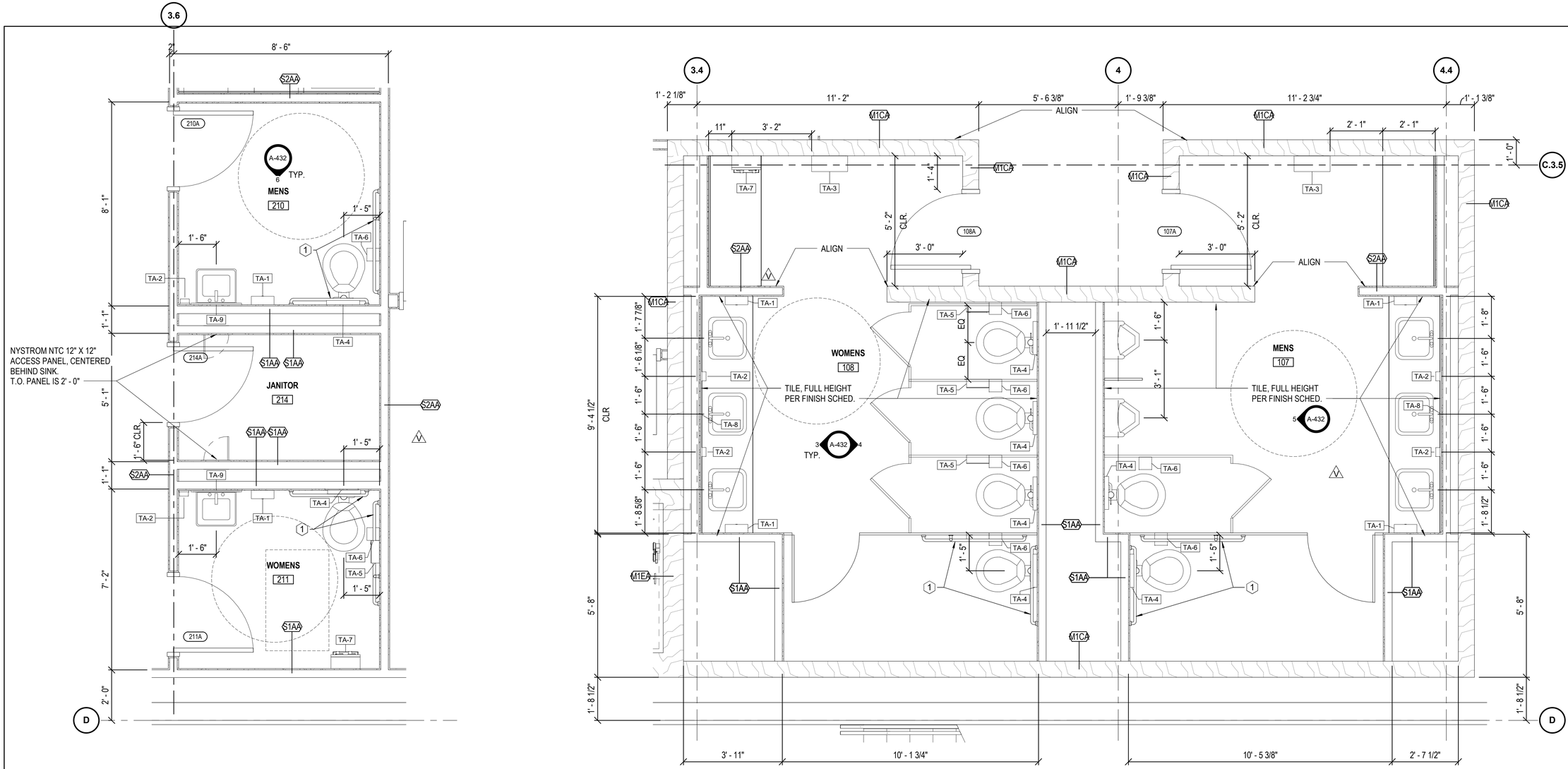
Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Designed by L. HOOK 06/29/2018
Drawn by L. HOOK 06/29/2018

Project No: 6936
Sheet Name: ELEVATOR PLANS AND SECTION
Sheet A-421 of XX
Drawing No: 108M-XXX-XXX



PLAN — 2 / A-431 — ENLARGED SECOND FLOOR RESTROOMS

NORTH

0 2' 4' 8'

SCALE IN

PLAN — 1 / A-431 — ENLARGED GROUND FLOOR RESTROOMS

NORTH

0 2' 4' 8'

SCALE IN

GENERAL FLOOR PLAN NOTES:

1. FOR ARCHITECTURAL GENERAL NOTES, MATERIAL LEGEND, AND ABBREVIATIONS REFER TO SHEET AG001.
2. REFERENCE LIFE SAFETY DRAWINGS FOR FIRE RATED WALL LOCATIONS. ALL FIRE RATED WALLS AND SMOKE PARTITIONS ARE CONTINUOUS ACROSS ALL DOOR OPENINGS.
3. FOR PARTITION TYPES CONSTRUCTION AND DESCRIPTION REFER TO PARTITION TYPES SHEET A-501.
4. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE BEGINNING WORK AND FABRICATION. THE CONTRACTOR SHALL BE NOTIFIED IN WRITING IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO CASE SHALL DIMENSIONS BE SCALED OFF PLANS, SECTIONS, OR DETAILS FROM THESE DRAWINGS.
5. FOR DIMENSIONS, WALL TAGS, DOOR TAGS OR ADDITIONAL INFORMATION NOT ILLUSTRATED, REFER TO LARGER SCALE DRAWINGS.
6. DOOR LOCATIONS NOT DIMENSIONED ARE 6 INCHES FROM FACE OF GYPSUM BOARD FINISH WALL TO DOOR JAMB FACE. VERIFY THERE IS A PULL SIDE MINIMUM 18 INCHES CLEAR FROM DOOR STRIKE TO INTERSECTING WALL FOR ADA COMPLIANCE. NOTIFY CONTRACTOR FOR NON-COMPLIANCE BEFORE SETTING DOOR FRAME AND WALL LOCATIONS.
7. SUBCONTRACTOR SHALL COORDINATE AND PROVIDE ALL MILLWORK TRIM AND INFILL PANELS AT ALL UNDERCOUNTER / CABINET LOCATIONS.
8. REFER TO FINISH SCHEDULE AND FINISH PLANS ON SHEET A-701 FOR ADDITIONAL FINISH INFORMATION. ALL FLOOR FINISHES TO BE CONTINUOUS UNDER MILLWORK AND EQUIPMENT UNLESS NOTED OTHERWISE.
9. PROVIDE 18GA METAL PLATE OR FIRE TREATED WOOD BLOCKING IN WALL FOR TOILET FIXTURES, ACCESSORIES, EQUIPMENT, FLOOR AND WALL MOUNTED TOILET PARTITIONS, AND COUNTERTOP MOUNTING SUPPORTS.
10. REFER TO SPECIFICATIONS FOR LOCATIONS OF GYPSUM BOARD CONTROL JOINTS.
11. REFERENCE STRUCTURAL DRAWINGS FOR EXACT LOCATIONS AND SIZES OF FLOOR SLAB OPENINGS AND FOR CONCRETE MASONRY UNIT WALL CONSTRUCTION.
12. ARCHITECTURAL FLOOR ELEVATION 100'-00" = ACTUAL FLOOR ELEVATION 1361.00'.
13. REFERENCE THE REFLECTED CEILING PLANS FOR CEILING HEIGHTS, FIXTURE LOCATIONS, AND CEILING DETAILS.
14. ALL DIMENSIONS ARE FROM: COLUMN GRID LINE, FACE OF CMU WALL, FINISH FACE OF METAL STUD WALL, AND FACE OF PRECAST CONCRETE WALL PANEL, UNLESS NOTED OTHERWISE.
15. REFERENCE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION, QUANTITIES, AND TYPE OF EQUIPMENT, OUTLETS, SWITCHES, ETC. ANY EQUIPMENT SHOWN IS FOR REFERENCE ONLY.
16. PROVIDE GYPSUM BOARD HEADER ABOVE ALL CASED OPENINGS, REFERENCE REFLECTED CEILING PLANS.
17. REFERENCE FURNITURE PLANS FOR LOCATIONS OF WALL ACCESSORIES AND VISUAL DISPLAY EQUIPMENT. PROVIDE BLOCKING AS REQUIRED

TOILET ACCESSORY SCHEDULE		
ACCESSORY NUMBER	DESCRIPTION	MODEL
TA-1	SURFACE-MOUNTED PAPER TOWEL DISPENSER	KIMBERLY CLARK - PROFESSIONAL - #09905
TA-2	SURFACE-MOUNTED SOAP DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED
TA-3	TOWEL DISPENSER, WASTE RECEPTACLE	BOBRICK #3949
TA-4	SURFACE-MOUNTED SEAT COVER DISPENSER	AMERICAN SPECIALTIES "0477SM"
TA-5	SURFACE-MOUNTED SANITARY NAPKIN DISPOSAL	BOBRICK #270
TA-6	SURFACE-MOUNTED MULTI-ROLL TOILET TISSUE DISPENSER	BOBRICK #2888
TA-7	SURFACE-MOUNTED SANITARY NAPKIN DISPENSER	BOBRICK #270
TA-8	MIRROR - VANITY 42" X FULL WIDTH OF COUNTER	BOBRICK #290
TA-9	MIRROR - VANITY (24" X 36")	BOBRICK #290

KEYED FLOOR PLAN NOTES

1. GRAB BARS
   AMERICAN SPECIALTIES "3200" SERIES (18")
   AMERICAN SPECIALTIES "3200" SERIES (36")
   AMERICAN SPECIALTIES "3200" SERIES (42")

KEY PLAN
NOT TO SCALE

NORTH

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2016	PKG 2B, MEP, FP, FINISHES - 50% REVIEW	LCH	BGB
5	29JUN2016	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2016	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2016	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
W	26OCT2016	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
X	30NOV2016	PKG 2B, MEP, FP, FINISHES - REV X	LCH	BGB
Z	16NOV2016	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

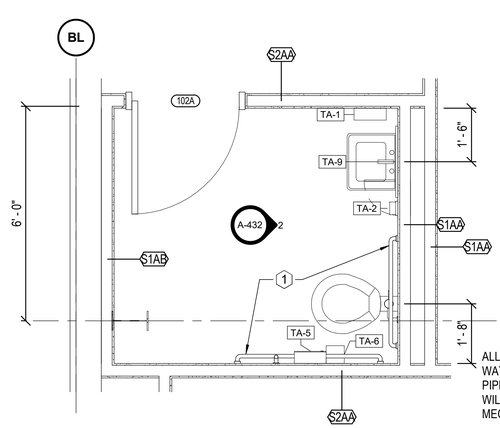
Nov 21 2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: L. HOOK 06/29/2018
Designed by: L. HOOK 06/29/2018

Project No. 6936
Sheet Name: ENLARGED TOILET PLANS
Sheet A-431 of XX
Drawing No. 108M-XXX-XXX

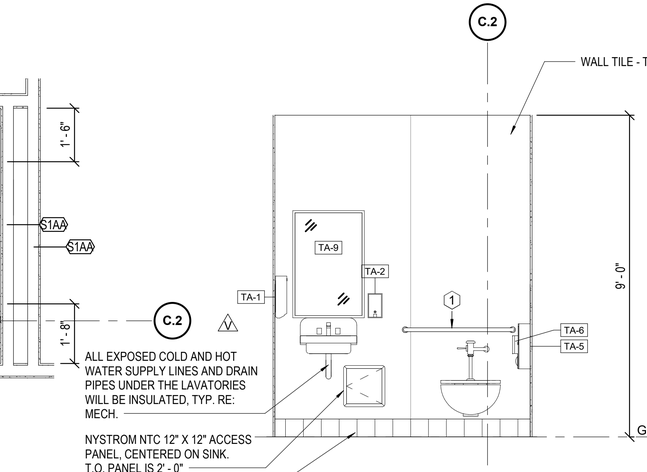
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



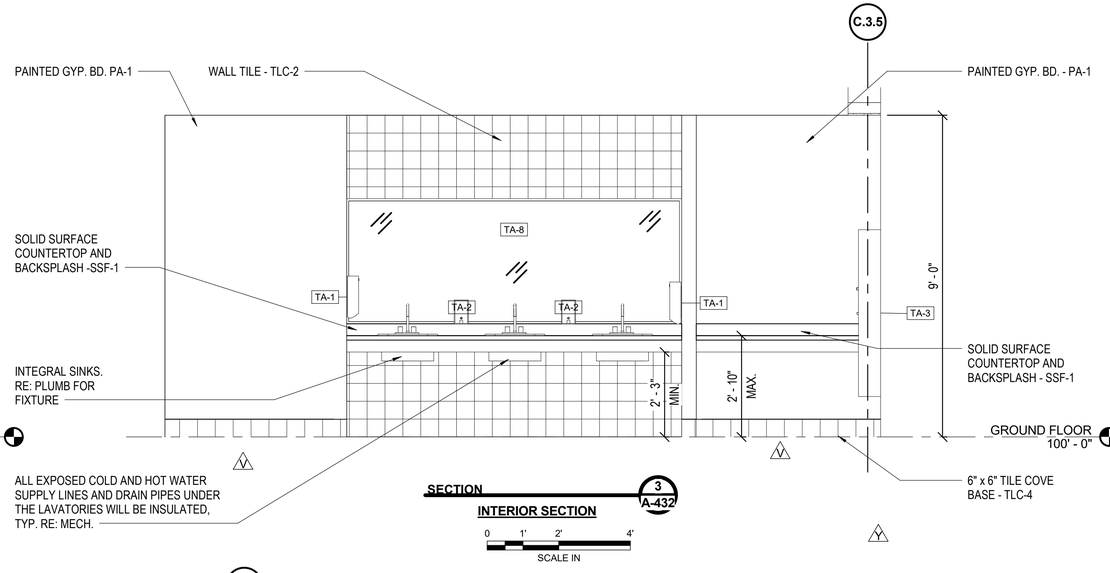
PLAN
1 A-432
ENLARGED RESTROOM PLAN

0 1' 2' 4'
SCALE IN



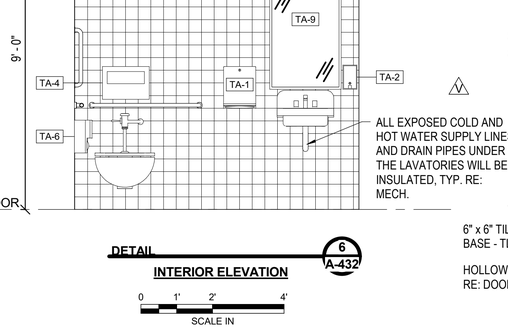
DETAIL
2 A-432
INTERIOR ELEVATIONS

0 1' 2' 4'
SCALE IN



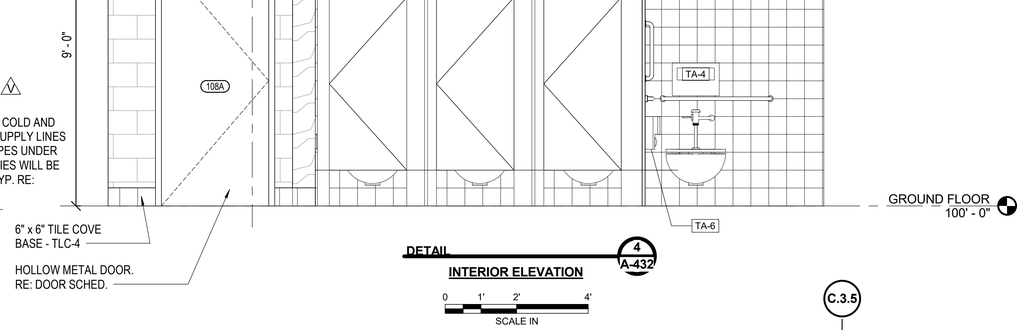
SECTION
3 A-432
INTERIOR SECTION

0 1' 2' 4'
SCALE IN



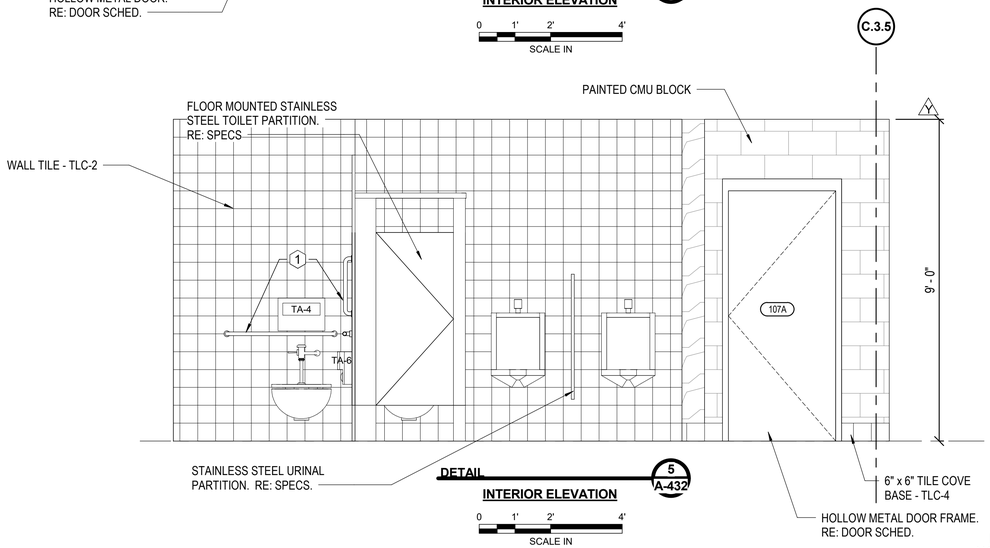
DETAIL
6 A-432
INTERIOR ELEVATION

0 1' 2' 4'
SCALE IN



DETAIL
4 A-432
INTERIOR ELEVATION

0 1' 2' 4'
SCALE IN



DETAIL
5 A-432
INTERIOR ELEVATION

0 1' 2' 4'
SCALE IN

KEY PLAN
NOT TO SCALE
NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	18SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Y	26NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	6NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
MCD #104543

BRIAN G. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT
Nov 21 2018

WICHITA, KS
06/29/2018

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G

Designed by L. HOOK
Drawn by L. HOOK
06/29/2018

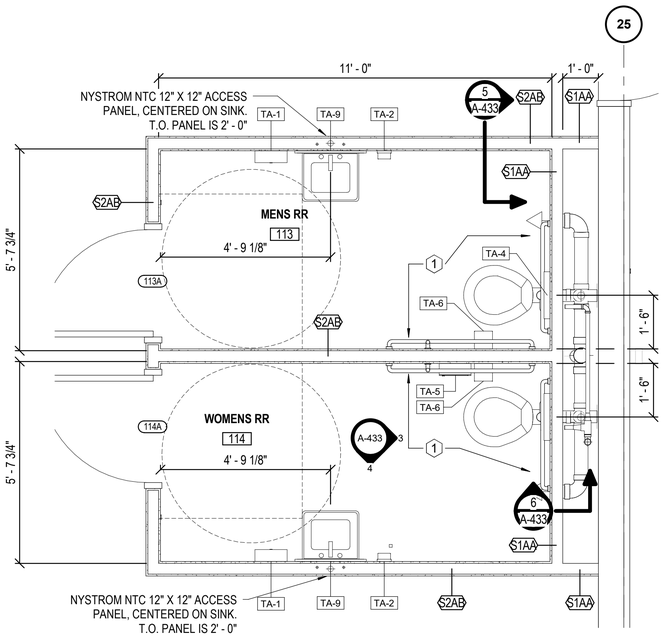
Project No.
6936

Sheet Name:
TOILET ELEVATIONS AND SECTIONS

Sheet A-432 of

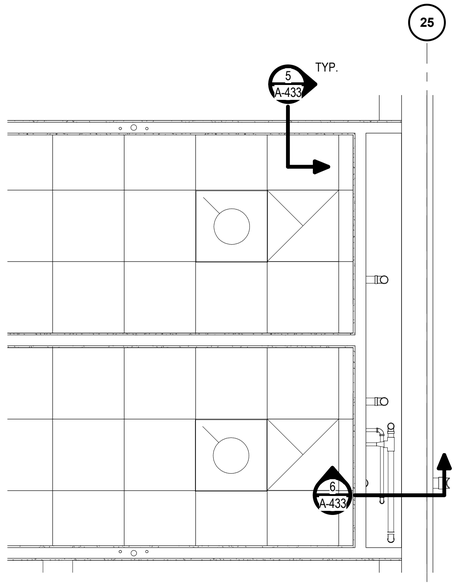
Drawing No.
108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



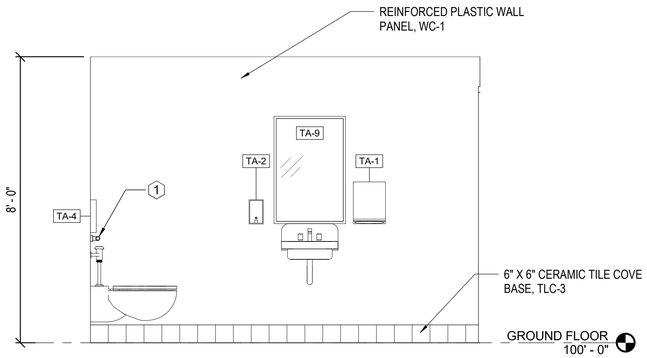
PLAN 1 A-433
ENLARGED RESTROOM PLAN
0 1' 2' 4'
SCALE IN

NORTH

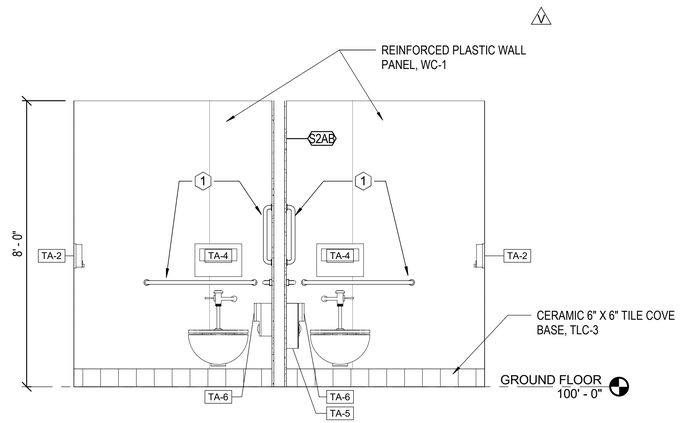


PLAN 2 A-433
SOUTHWEST BATHROOM RCP

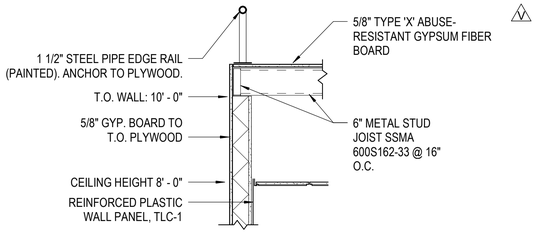
GENERAL NOTE:
1. SEE A-431 FOR TOILET ACCESSORY LEGEND AND ADDITIONAL INFORMATION.



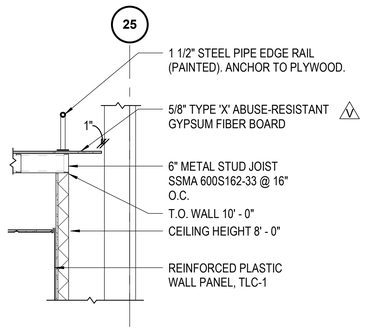
DETAIL 4 A-433
INTERIOR ELEVATION
0 1' 2' 4'
SCALE IN



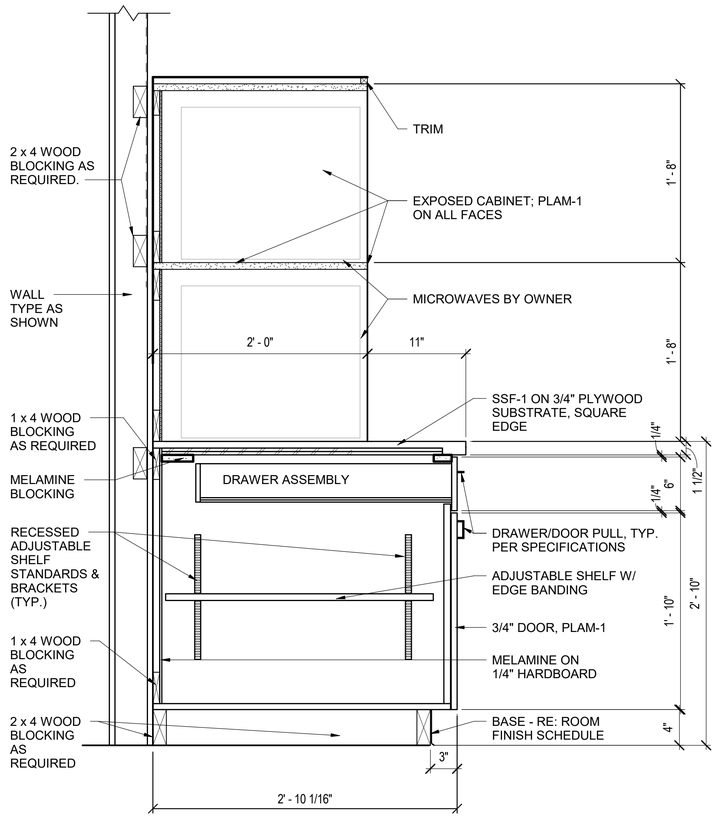
DETAIL 3 A-433
INTERIOR ELEVATION
0 1' 2' 4'
SCALE IN



DETAIL 5 A-433
BATHROOM CEILING DETAIL
0 1' 2' 3'
SCALE IN



SECTION 6 A-433
FURRING WALL DETAIL
0 1' 2' 3'
SCALE IN



SECTION 7 A-433
Cabinet Detail
0 1/2' 1' 1 1/2'
SCALE IN

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
P	18SEP2018	PKG 2B, MEP, FP, FINISHES - REV P	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES, REV Z	LCH	BGB

FIRE PROTECTION REVIEW — APPROVED / NOT REQUIRED — DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 West Parkway
Shawnee Mission, KS 66214
www.burnsmcd.com
KCMCD #104543

BRIAN G. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS

AUTOMATED WAREHOUSE

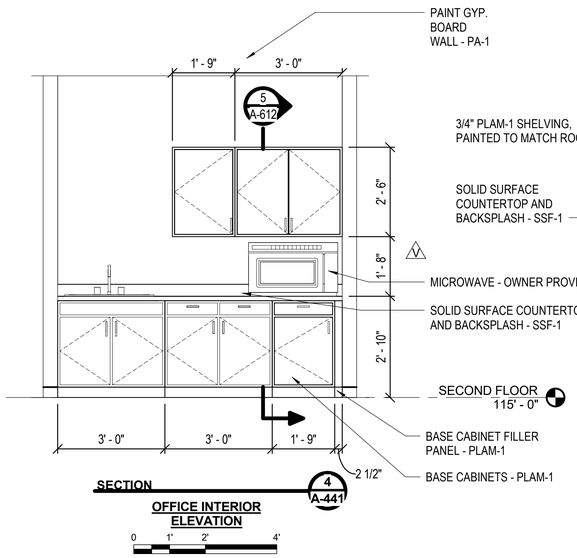
Facilities Engineering

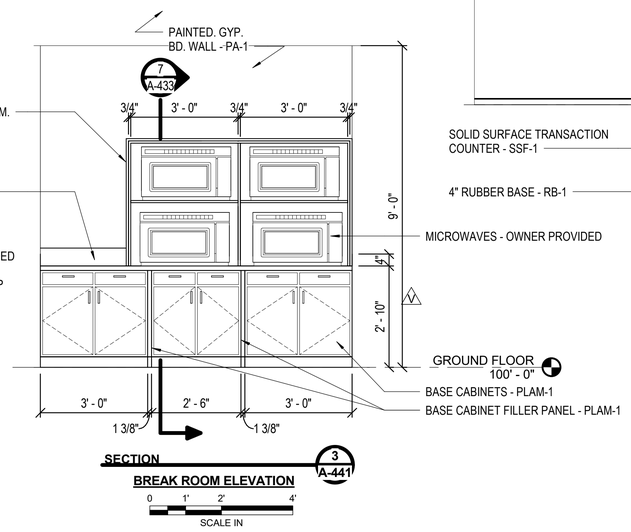
BLDG-1-338G

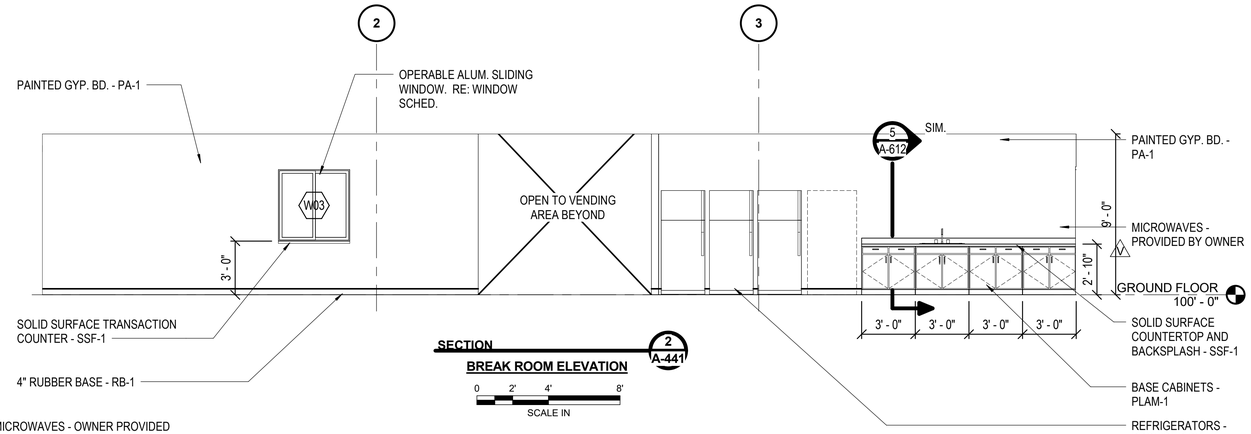
Drawn by: L. HOOK 7/13/2018 — Designed by: L. HOOK 7/13/2018

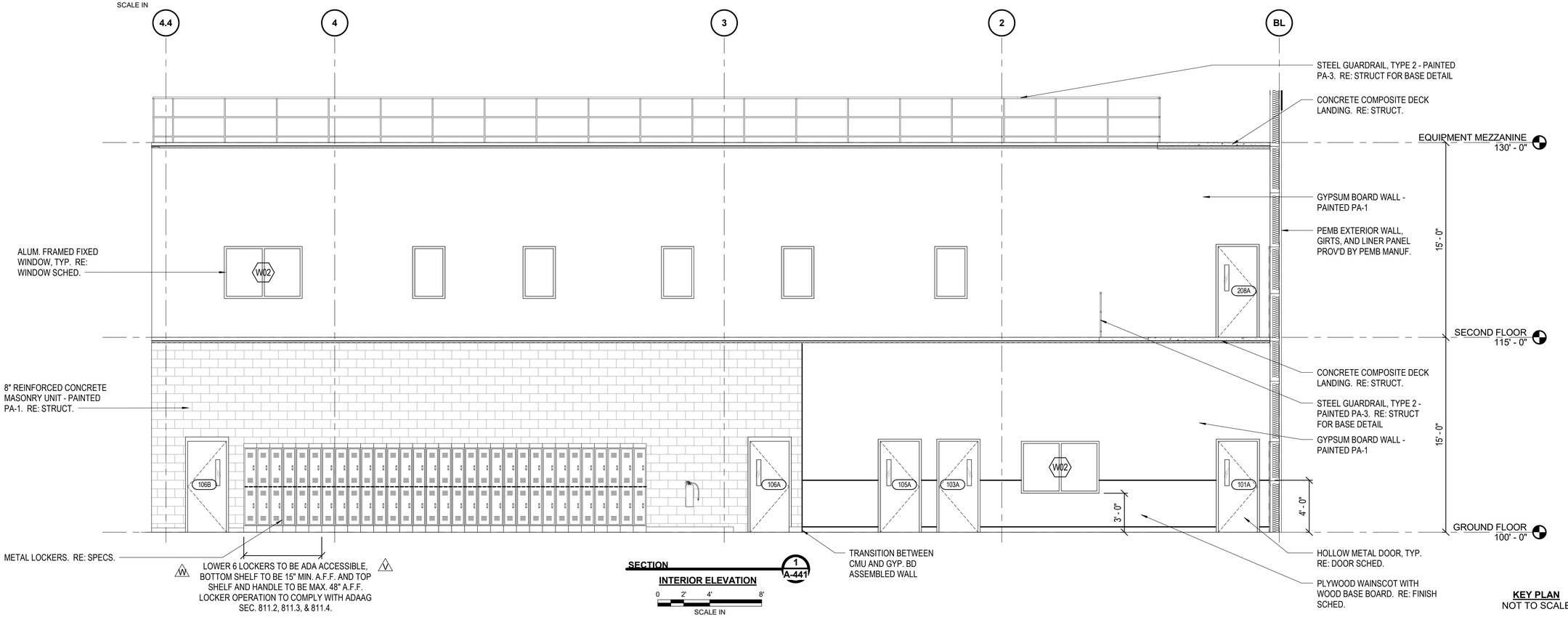
Project No. 6936
Sheet Name: ENLARGED RESTROOM PLANS AND DETAILS
Sheet A-433 of
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.









KEY PLAN
NOT TO SCALE



16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
A	28JUN2018	PKG 2B, MEP, FP, FINISHES, 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	18SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
W	26OCT2018	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
Y	12NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐
NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

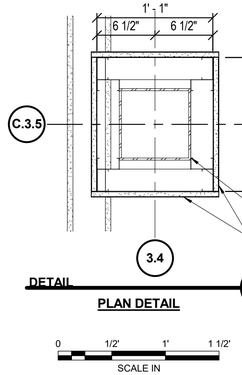
BARRY G. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT
Nov 21 2018

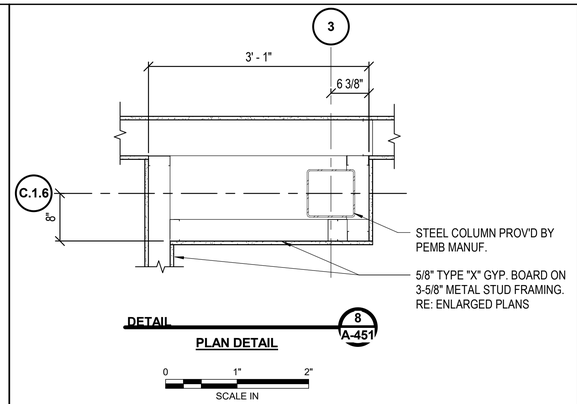
WICHITA, KS
06/29/2018
Designed by Designer
06/29/2018
Drawn by L. HOOK

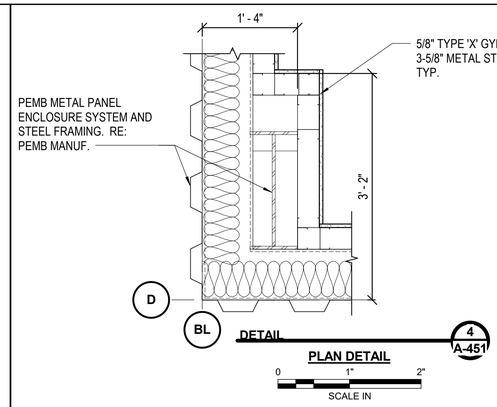
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G

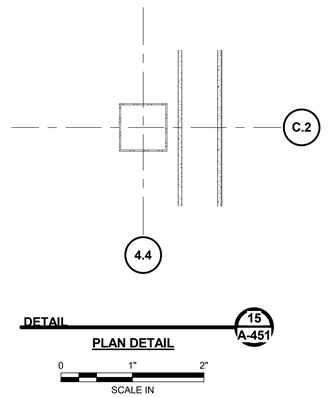
Project No.
6936
Sheet Name:
ENLARGED INTERIOR ELEVATIONS
Sheet A-441 of
Drawing No.
108M-XXX-XXX

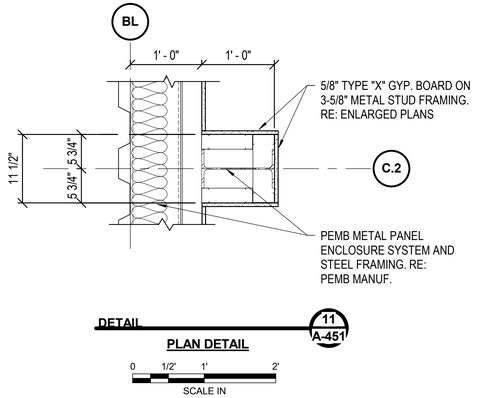
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

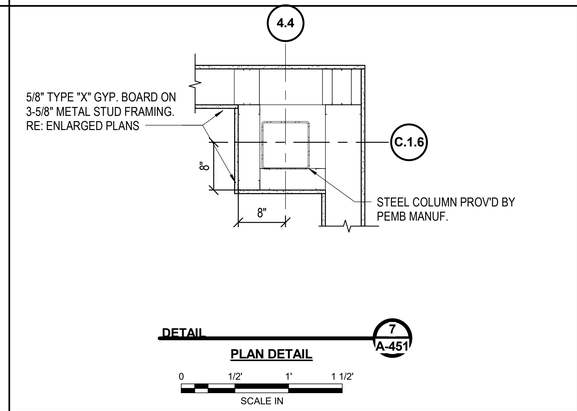


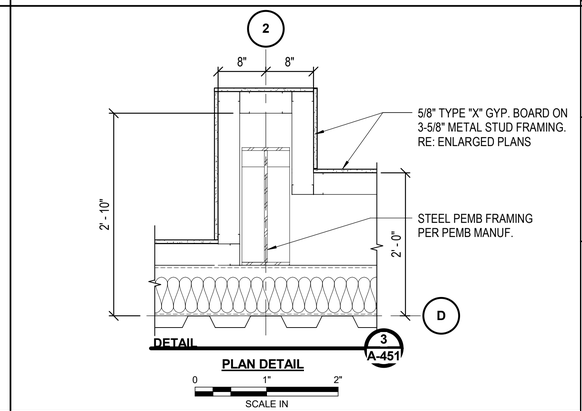


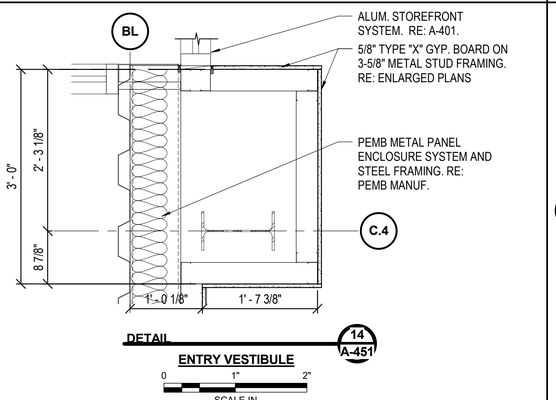


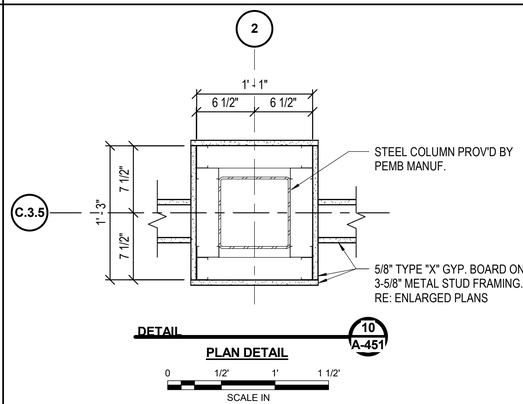


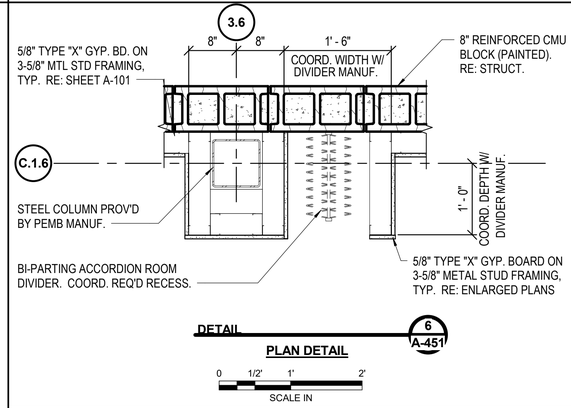


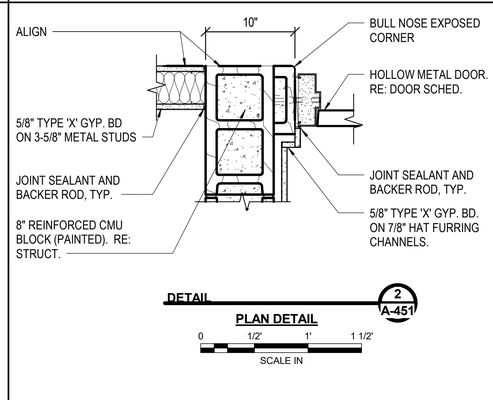


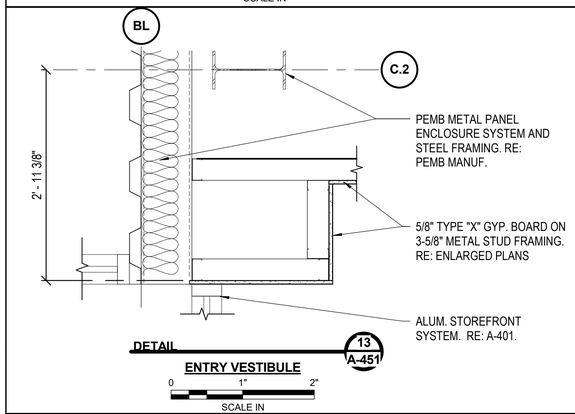


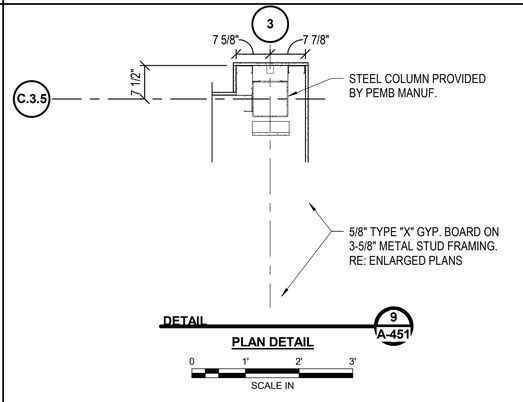


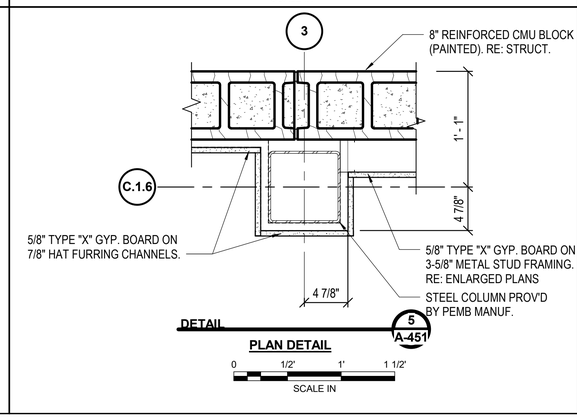


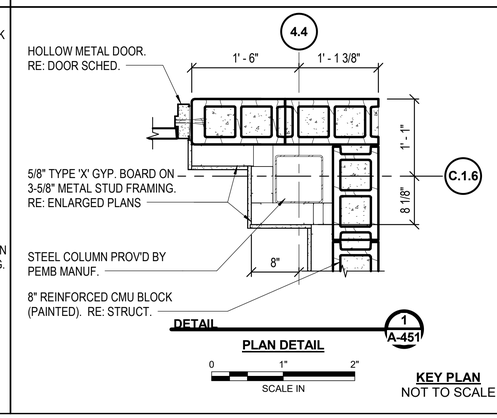












KEY PLAN
NOT TO SCALE

NORTH

	DATE	DESCRIPTION	BY	APPROVED
X	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

	DEPT	DATE
NAME		

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
KSCD #104543

BARRY S. BRADFORD
LICENSED
4932
KANSAS
ARCHITECT
Nov 21 2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

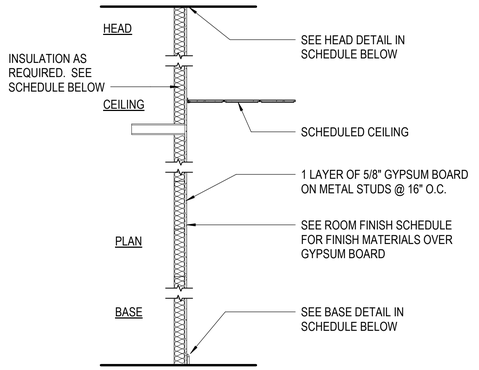
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Facilities Engineering
Designed by Designer 06/29/2018
Drawn by L. HOOK 06/29/2018

Project No. 6936
Sheet Name: PLAN DETAILS
Sheet A-451 of
Drawing No. 108M-XXX-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\Arch\104543_A_lhook.rvt
11/20/2018 2:58:55 PM

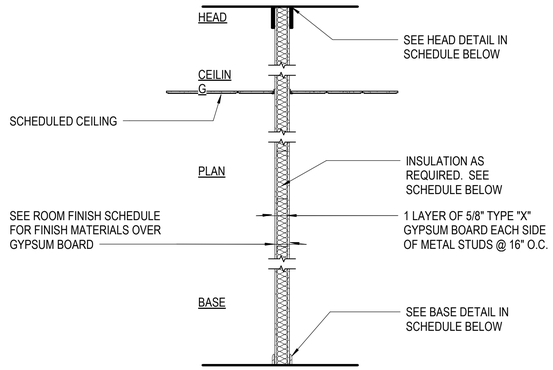
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PARTITION TYPE S1



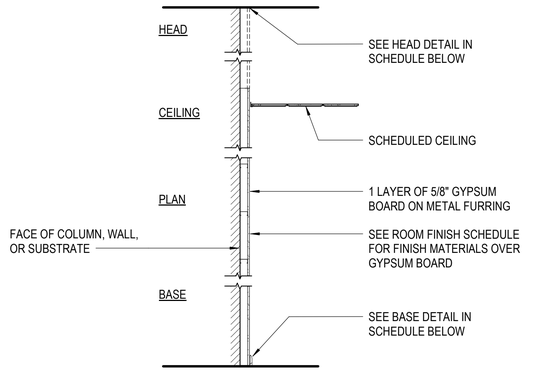
TYPE	STC	FIRE RATING	UL DESIGN NO	HEAD DETAIL	BASE DETAIL	TYPE COMMENTS
S1AA	-	-	-	3/A-501	2/A-501	3 5/8" METAL STUDS WITH BLANKET INSULATION.
S1AB	-	-	-	3/A-501	2/A-501	3 5/8" METAL STUDS WITHOUT BLANKET INSULATION.

PARTITION TYPE S2



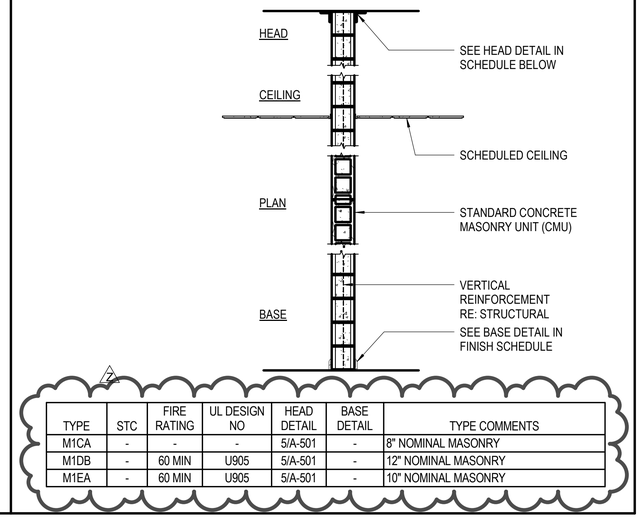
TYPE	STC	FIRE RATING	UL DESIGN NO	HEAD DETAIL	BASE DETAIL	TYPE COMMENTS
S2AA	-	-	-	3/A-501	1/A-501	3 5/8" METAL STUDS WITH BLANKET INSULATION.
S2AB	-	-	-	5/A-433	1/A-501	3 5/8" METAL STUD PARTIAL HEIGHT WALL. WITHOUT BLANKET INSULATION.
S2BA	-	-	-	3/A-501	1/A-501	6" METAL STUDS WITH BLANKET INSULATION.

PARTITION TYPE F1

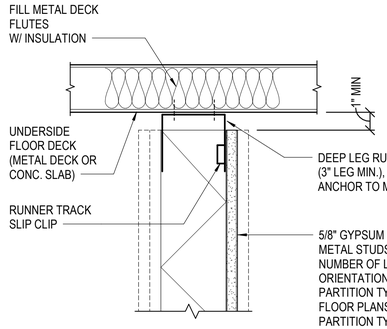


TYPE	STC	FIRE RATING	UL DESIGN NO	HEAD DETAIL	BASE DETAIL	TYPE COMMENTS
F1AA	-	-	-	4/A-501	2/A-501	7/8" FURRING STRIPS AT 24" O.C. HORIZONTALLY
F1CA	-	-	-			2 1/2" FURRING STUDS AT 16" O.C. VERTICALLY

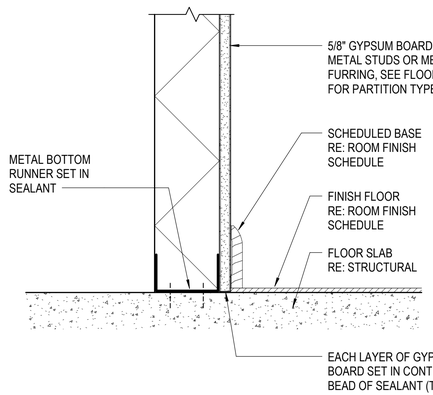
PARTITION TYPE M1



TYPE	STC	FIRE RATING	UL DESIGN NO	HEAD DETAIL	BASE DETAIL	TYPE COMMENTS
M1CA	-	-	-	5/A-501	-	8" NOMINAL MASONRY
M1DB	-	60 MIN	U905	5/A-501	-	12" NOMINAL MASONRY
M1EA	-	60 MIN	U905	5/A-501	-	10" NOMINAL MASONRY



DETAIL 3/A-501
INTERIOR PARTITION DETAILS

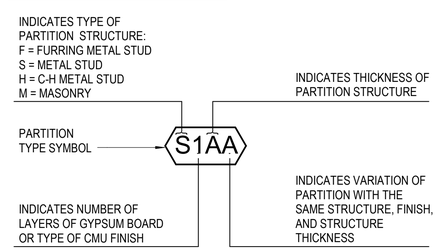


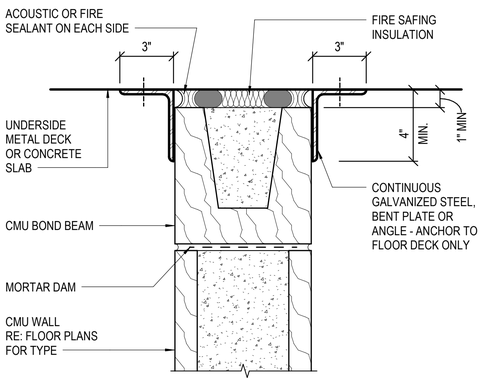
DETAIL 2/A-501
INTERIOR PARTITION DETAILS

PARTITION TYPES GENERAL NOTES:

1. WHERE STRUCTURAL MEMBERS PENETRATE FIRE-RATED GYPSUM BOARD WALLS, TAPE & SEAL WITH FIRE STOPPING SEALANT. WHERE STRUCTURAL MEMBERS PENETRATE FIRE-RATED CMU OR CONCRETE WALLS, SEAL WITH FIRE STOPPING SEALANT.
2. PROVIDE MINIMUM 20 GAUGE METAL BACKING AS REQUIRED FOR INSTALLATION OF EXTINGUISHER CABINETS, MESSAGE BOARDS, TOILET ACCESSORIES, TOILET PARTITIONS, WALL AND BASE CABINETS, ACCESS PANELS, ELECTRICAL AND FIRE PROTECTION SYSTEM PANELS, UNLESS NOTED OTHERWISE.
3. ALL METAL STUDS AND BRACING SHALL BE 20 GAUGE UNLESS NOTED OTHERWISE. REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. REFERENCE DRAWINGS A-101 THRU A-102 AND DRAWINGS A-401 THRU A-431 FOR PARTITION TYPE LOCATIONS.
5. PROVIDE METAL STUD DIAGONAL BRACING @ 4'-0" O.C. (ALTERNATE DIRECTIONS) TO UNDERSIDE OF METAL DECK FOR ALL WALLS GREATER THAN20'-0" IN HEIGHT.
6. ALL PARTITIONS DESIGNATED AS STC-45 (MINIMUM) OR AS STC-50 (MINIMUM) SHALL BE SUBJECT TO TESTING TO DETERMINE STC VALUES STC (SOUND TRANSMISSION CLASS) VALUES ARE BASED ON PERFORMANCE OF SPEECH FREQUENCIES FROM 125-4000 Hz.
7. SEE DRAWING A-520 FOR TYPICAL PENETRATION DETAILS THROUGH FIRE-RATED PARTITIONS.
8. FOR ALL GYPSUM BOARD PARTITIONS DESIGNATED AS STC-45 (SOUND TRANSMISSION CLASS-45), AT MINIMUM, PROVIDE ONE LAYER OF MINIMUM THICKNESS 5/8" TYPE "X" DRYWALL APPLIED TO EACH SIDE OF 3 5/8" METAL STUDS MAXIMUM 24" O.C. WITH 1" TYPE "S" DRYWALL SCREWS 7" O.C. TO EDGE OF VERTICAL JOINTS AND 12" O.C. TO INTERMEDIATE STUD. ADDITIONAL FACE LAYER (OR LAYERS IF 2 LAYERS APPLIED EACH SIDE FOR STC-50 WALLS) IS 5/8" TYPE "X" DRYWALL APPLIED ON ONE OR BOTH SIDES WITH LAMINATING COMPOUND AND ATTACHED WITH 1 3/8" TYPE "S" DRYWALL SCREWS 8" O.C. TO EDGES AND SIDES AND 12" O.C. TO INTERMEDIATE STUDS STAGGER JOINTS 24" O.C. EACH LAYER AND SIDE MINIMUM 3 1/2" OF GLASS FIBER INSULATION IN CAVITY.
9. PROVIDE CEMENTITIOUS BACKER UNITS (AT SHOWER WALLS) OR WATER RESISTANT GYPSUM BOARD (AT ALL OTHER TOILET OR RESTROOM WALLS) ON WET SIDE WALL.

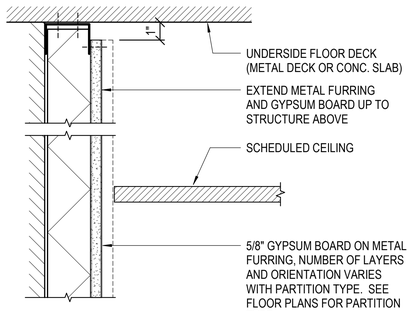
PARTITION TYPE SYMBOL LEGEND:



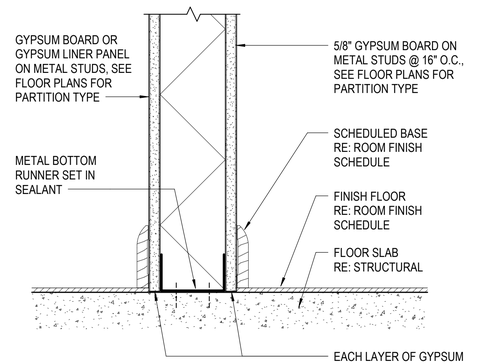


UL SYSTEM NUMBER: HW-D-0098
HW-D-0110

DETAIL 5/A-501
INTERIOR PARTITION DETAILS



DETAIL 4/A-501
INTERIOR PARTITION DETAILS



DETAIL 1/A-501
INTERIOR PARTITION DETAILS

KEY PLAN
NOT TO SCALE



	DATE	DESCRIPTION	BY	APPROVED
4	14JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LOH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LOH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LOH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LOH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LOH	BGB

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 W Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by L. HOOK 06/29/2018
Drawn by L. HOOK 06/29/2018

Project No. 6936
Sheet Name: PARTITION TYPES
Sheet A-501 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	ASSEMBLY RATING	STC	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	HARDWARE SET	REMARKS	REVISION
GROUND FLOOR																
100A	-	3' - 0"	7' - 0"	SL-IN	AL	-		AL	-	-	-	-	-	7.0	3, 4	
100B	-	3' - 0"	7' - 0"	SL	AL	-		AL	-	-	-	11/A-621	10/A-621	5/A-621	8.0	4
101A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	-	6.1	
101B	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
102A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	-	10.0	
103A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	-	6.1	
104A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	-	7.1	
105A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	-	6.0	
106A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.2	HM	PA-1	-	-	3/A-611	2/A-611	-	6.0	
106B	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.2	HM	PA-1	-	-	3/A-611	2/A-611	-	6.0	
107A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.2	HM	PA-1	-	-	3/A-611	2/A-611	-	6.0	
108A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.2	HM	PA-1	-	-	3/A-611	2/A-611	-	6.0	
109A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	-	9.0	
110A	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
110B	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
110C	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
110D	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
110E	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	3.0	
110F	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	3.0	
110G	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
110H	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	2.0	
110J	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	3.0	
110K	-		18' - 0"	OH-F	FAB	-	0	STL-G	-	-	-	2/A-612	1/A-612	-	4.0	1
110L	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	1.0	
110O	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	2.0	
110P	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	2.0	
110Q	-		18' - 0"	OH-F	FAB	-	0	STL-G	-	-	-	2/A-612	1/A-612	-	4.0	1
110R	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	3.0	
112A	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	3.0	
112B	-		16' - 0"	OH-F	FAB	-	0	STL-G	-	-	-	2/A-612	1/A-612	-	4.0	1
112C	-		16' - 0"	OH-F	FAB	-	0	STL-G	-	-	-	2/A-612	1/A-612	-	4.0	1
112D	-		12' - 0"	OS-IN	STL-G	-	0	STL-G	-	-	-	4/A-612	3/A-612	4/A-612	5.0	1
112E	-		12' - 0"	OS-IN	STL-G	-	0	STL-G	-	-	-	4/A-612	3/A-612	4/A-612	5.0	1
112F	-		12' - 0"	OS-IN	STL-G	-	0	STL-G	-	-	-	4/A-612	3/A-612	4/A-612	5.0	1
112G	-		12' - 0"	OS-IN	STL-G	-	0	STL-G	-	-	-	4/A-612	3/A-612	4/A-612	5.0	1
112H	-		12' - 0"	OS-IN	STL-G	-	0	STL-G	-	-	-	4/A-612	3/A-612	4/A-612	5.0	1
112J	-		12' - 0"	OS-IN	STL-G	-	0	STL-G	-	-	-	4/A-612	3/A-612	4/A-612	5.0	1
112K	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	12/A-611	11/A-611	10/A-611	3.0	1
113A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611		10.0	
114A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611		10.0	
EL01A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.2	HM	PA-1	45 MIN.	-	9/A-611	8/A-611	-	13.0	2
SECOND FLOOR																
201A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
202A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
203A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
204A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
205A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
206A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
207A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	11.0	
208A	-	3' - 0"	7' - 0"	NL	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	7.1	
208B	-	3' - 0"	7' - 0"	NL-IN	HM-G	PA-1	1.1	HM-G	PA-1	-	-	4/A-611	1/A-611	10/A-611 SIM.	3.0	
210A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	10.0	
211A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	10.0	
212A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	12.0	
212B	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	12.0	
214A	-	3' - 0"	7' - 0"	F	HM	PA-1	1.1	HM	PA-1	-	-	6/A-611	5/A-611	4/A-611	9.0	

GENERAL DOOR SCHEDULE NOTES:

1. REFERENCE ENLARGED FLOOR PLANS FOR WALL TYPES AND DOOR TAGS AND LOCATIONS. SEE SHEET A-501 FOR WALL TYPE ASSEMBLIES AND FIRE RATINGS.
2. REFERENCE SPECIFICATIONS FOR DETAILED INFORMATION ON DOORS.
3. SEE SHEET A-602 FOR DOOR TYPES, FRAMES TYPES, GLASS TYPES, AND TYPICAL HARDWARE MOUNTING.
4. ALL HOLLOW METAL AND WOOD DOORS AND FRAME FINISHES ARE TO BE FA (FIELD APPLIED) UNLESS NOTED AS FF (FACTORY FINISHED).
5. REFER TO SPECIFICATION SECTION 087000 FOR DOOR HARDWARE SCHEDULE.
6. COORDINATE DOOR AND FRAME MATERIALS WITH DOOR SCHEDULE.
7. COORDINATE HEAD, JAMB, AND SILL DETAILS WITH REFERENCED DRAWINGS AS INDICATED IN THE DOOR SCHEDULE. TYPICAL DOOR DETAILS ARE ON SHEETS A-610 THRU A-611.
8. SUBCONTRACTOR TO VERIFY WALLS WITH ROUGH OPENINGS FOR DIMENSIONAL CLEARANCE REQUIRED FOR DOOR FRAME.
9. PROVIDE FOR 0'-6" BETWEEN DOOR JAMB AND CORNERS OF WALL EXCEPT WHERE DIMENSIONED OTHERWISE. IF 0'-6" CAN NOT BE ACHIEVED CENTER THE DOOR IN THE SPACED AVAILABLE.
10. REFER TO THE MATERIAL LEGEND ON SHEET A-701 FOR DESCRIPTION OF PAINT FINISH TYPE AND COLOR FOR THE DOORS AND FRAMES.

GENERAL DOOR SCHEDULE REMARKS:

1. FRAME TYPE 0: TO BE PROVIDED BY DOOR MANUFACTURER AS PART OF THE DOOR SYSTEM.
2. PROVIDE ADDITIONAL FIRE-RATED GASKETS TO THE DOOR AND FRAME AS REQUIRED TO MEET THE DOOR RATING.
3. DOOR HEAD, JAMB, AND SILL DETAILS ARE PROVIDED BY THE PRE-FABRICATED VESTIBULE MANUFACTURER.
4. SEE SHEET A-401 FOR STOREFRONT ELEVATIONS AND DETAILS.

DOOR AND FRAME LEGEND

FINISH

FF-1*	FACTORY FINISHED
PE-1**	PAINT-EPOXY

MATERIAL

AL	ALUMINUM
FAB	FABRIC
HM	HOLLOW METAL
HM-G	HOLLOW METAL GALVANIZED
STL-G	STEEL - GALVANIZED
WD	WOOD

SIZE

-	SINGLE DOOR
PR	PAIR OF DOORS
UPR	UNEQUAL PAIR

WINDOW SCHEDULE

TYPE	SIZE WIDTH	SIZE HEIGHT	SILL HEIGHT	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	REMARKS
W01	4' - 0"	4' - 0"	3' - 0"	1/A-621	2/A-621	3/A-621	
W02	6' - 0"	4' - 0"	3' - 0"	6/A-621	6/A-621	4/A-621	
W03	4' - 0"	4' - 0"	3' - 0"	7/A-621	7/A-621	7/A-621	
W04	2' - 6"	4' - 0"	3' - 0"	6/A-621	6/A-621	7/A-621	

GENERAL WINDOW SCHEDULE NOTES:

1. ALL ROUGH OPENING DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF WINDOW UNITS.
2. REFERENCE SHEET A-621 FOR WINDOW DETAILS
3. ALL WINDOW FRAME FINISHES ARE TO BE FF (FACTORY FINISHED) UNLESS OTHERWISE NOTED AS FA (FACTORY APPLIED).
4. FOR GLAZING TYPES SEE SHEET A-602, REFERENCE SPECIFICATION SECTION 088000 FOR ADDITIONAL INFORMATION.

GENERAL WINDOW SCHEDULE REMARKS:

1. TBD

KEY PLAN
NOT TO SCALE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Z	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB
7	06NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT | DATE

SPIRIT AEROSYSTEMS

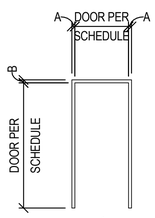
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS
AUTOMATED WAREHOUSE
Facilities Engineering
BLDG-1-338G
Drawn by: L. HOOK | 06/05/2018
Designed by: Designer | 06/05/2018

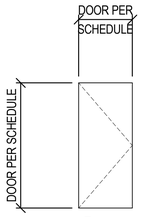
Project No. 6936
Sheet Name: DOOR SCHEDULE
Sheet A-601 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



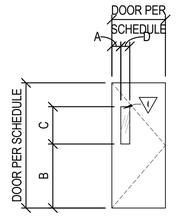
1

(DOOR FRAME)		
TYPE	A	B
1.1	2"	2"
1.2	2"	4"



F

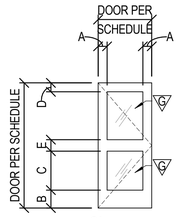
(FLUSH PANEL)	
TYPE	DESCRIPTION
F	FLUSH PANEL



NL

(NARROW LIGHT)						
TYPE	DESCRIPTION	A	B	C	D	G
NL	NARROW LITE	6"	43"	24"	4"	2
NL-IN	NARROW LITE INSULATED	6"	43"	24"	4"	2

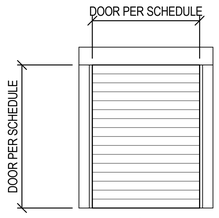
*GLAZING TO BE SAFETY GLAZED TO COMPLY WITH IBC SEC 2406.4.1



SL

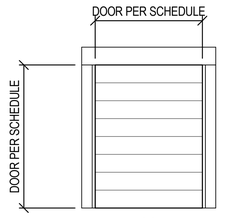
(SPLIT LITE)							
TYPE	DESCRIPTION	A	B	C	D	E	G
SL	FULL LITE	6"	6"	33"	6"	6"	4
SL-IN	SPLIT LITE INSULATED	6"	6"	33"	6"	6"	3

*GLAZING TO BE SAFETY GLAZED TO COMPLY WITH IBC SEC 2406.4.1



OH

(OVERHEAD)	
TYPE	DESCRIPTION
OH-F	HIGH-SPEED ROLL-UP DOOR - FABRIC



OS

(OVERHEAD SECTIONAL)	
TYPE	DESCRIPTION
OS-IN	OVERHEAD SECTIONAL DOOR - INSULATED

GLASS TYPES:

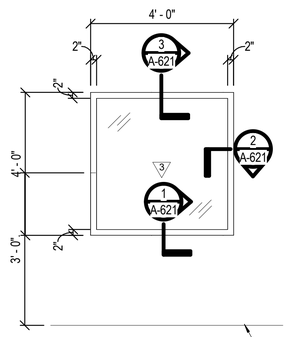
REFERENCE SPECIFICATION FOR GLASS TYPES

1. CLEAR FLOAT (1/4")
2. CLEAR TEMPERED (1/4") SAFETY GLAZING TO COMPLY WITH IBC 2406.
3. INSULATED LOW E, TRANSLUCENT - TEMPERED (1/2") SAFETY GLAZING TO COMPLY WITH IBC 2406.
4. LAMINATED CLEAR TEMPERED (1/4") SAFETY GLAZING TO COMPLY WITH IBC 2406.

GENERAL NOTES:

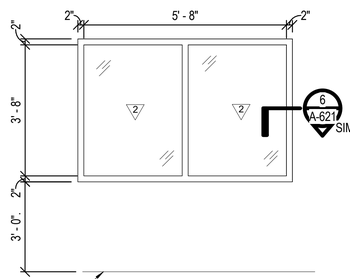
1. "SP" SOLID METAL PANEL
2. "GL" GLAZED PANEL

DOOR TYPES AND FRAMES



W01

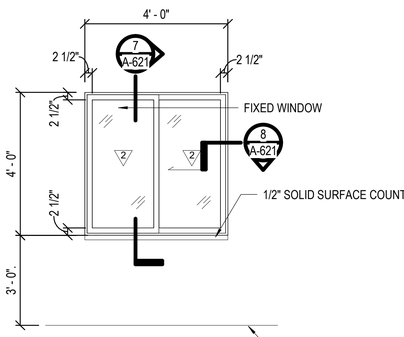
ALUMINUM



FINISH FLOOR

W02

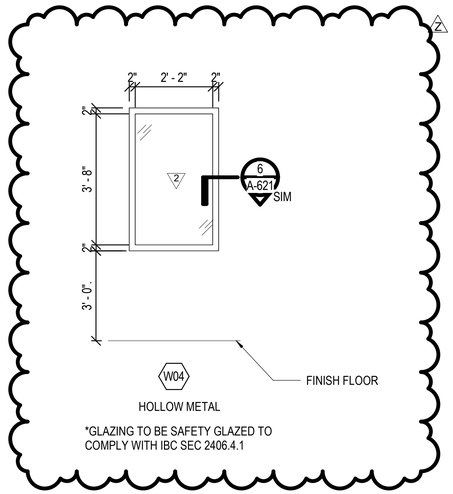
HOLLOW METAL



W03

ALUMINUM

FINISH FLOOR



W04

HOLLOW METAL

FINISH FLOOR

*GLAZING TO BE SAFETY GLAZED TO COMPLY WITH IBC SEC 2406.4.1

GENERAL NOTES

1. REFERENCE SECTION 08 80 00: GLASS AND GLAZING FOR GLAZING TYPE.
2. SEE SHEET A -601 FOR WINDOW SCHEDULE AND CALL OUTS FOR DETAILS.

WINDOW TYPES AND ELEVATIONS

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

△	DATE	DESCRIPTION	BY	APPROVED
4	14JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
5	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	16SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
W	26OCT2018	PKG 2B, MEP, FP, FINISHES - REV W	LCH	BGB
Y	30NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	6NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

WICHITA, KS

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Drawn by: L. HOOK	06/29/2018	Designed by: L. HOOK	06/29/2018

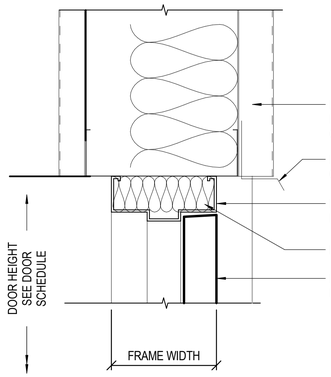
Project No.: 6936

Sheet Name: DOOR & FRAME TYPES

Sheet A-602 of XX

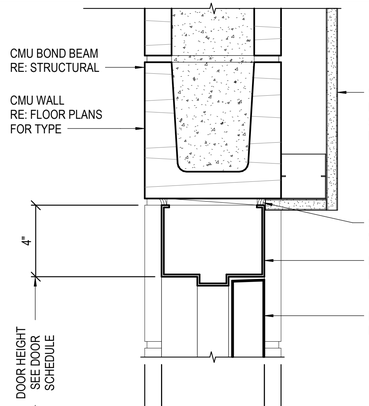
Drawing No.: 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



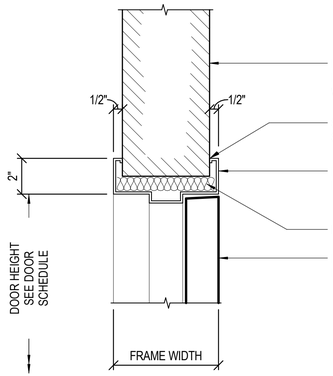
DETAIL 12 A-611
EXTERIOR DOOR HEAD

0 3" 6" 9"
SCALE IN FEET



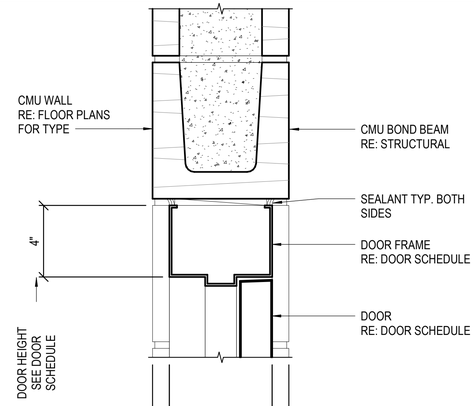
DETAIL 9 A-611
DOOR HEAD WITH FURRING

0 3" 6" 9"
SCALE IN FEET



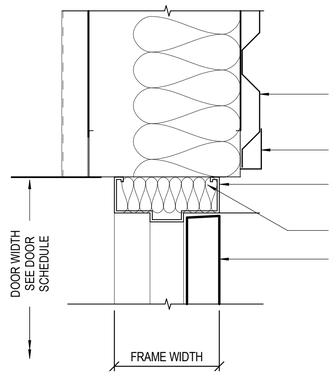
DETAIL 6 A-611
DOOR HEAD

0 3" 6" 9"
SCALE IN FEET



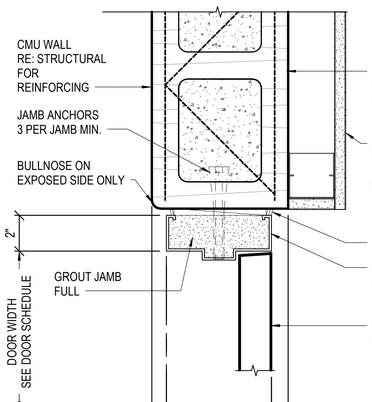
DETAIL 3 A-611
DOOR HEAD

0 3" 6" 9"
SCALE IN FEET



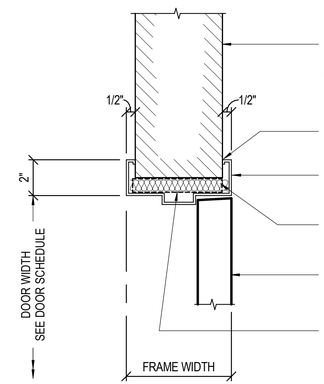
DETAIL 11 A-611
EXTERIOR DOOR JAMB

0 3" 6" 9"
SCALE IN FEET



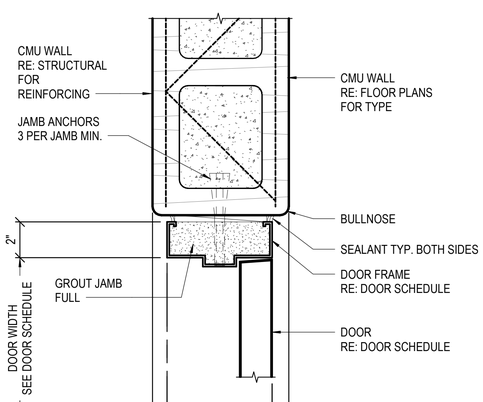
DETAIL 8 A-611
DOOR JAMB WITH FURRING

0 3" 6" 9"
SCALE IN FEET



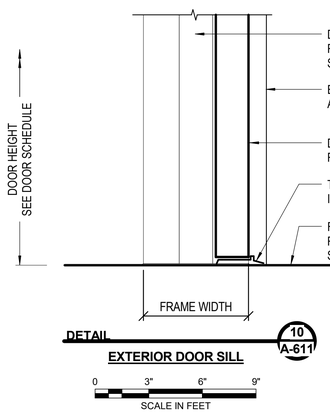
DETAIL 5 A-611
DOOR JAMB

0 3" 6" 9"
SCALE IN FEET



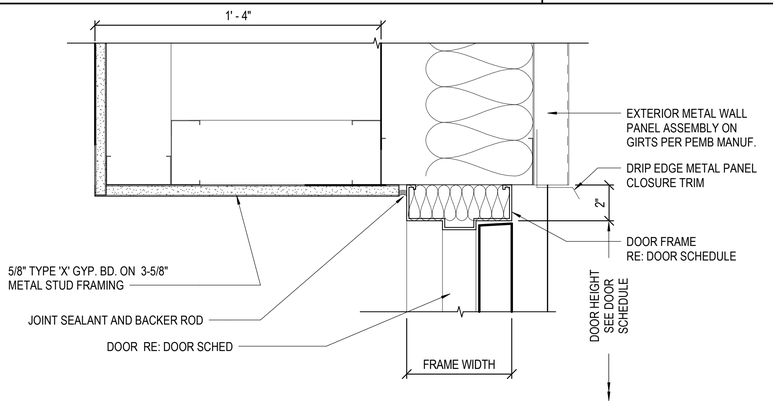
DETAIL 2 A-611
DOOR JAMB

0 3" 6" 9"
SCALE IN FEET



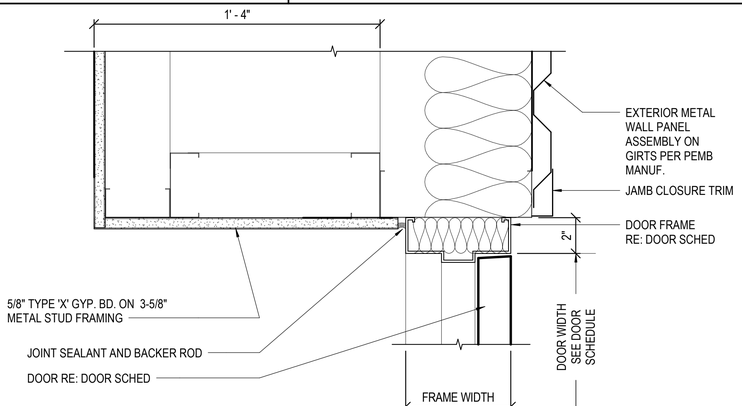
DETAIL 10 A-611
EXTERIOR DOOR SILL

0 3" 6" 9"
SCALE IN FEET



DETAIL 4 A-611
EXTERIOR DOOR HEAD

0 3" 6" 9"
SCALE IN FEET



DETAIL 1 A-611
EXTERIOR DOOR JAMB

0 3" 6" 9"
SCALE IN FEET

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

	DATE	DESCRIPTION	BY	APPROVED
4	16JUN2018	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	LCH	BGB
3	29JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐
NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

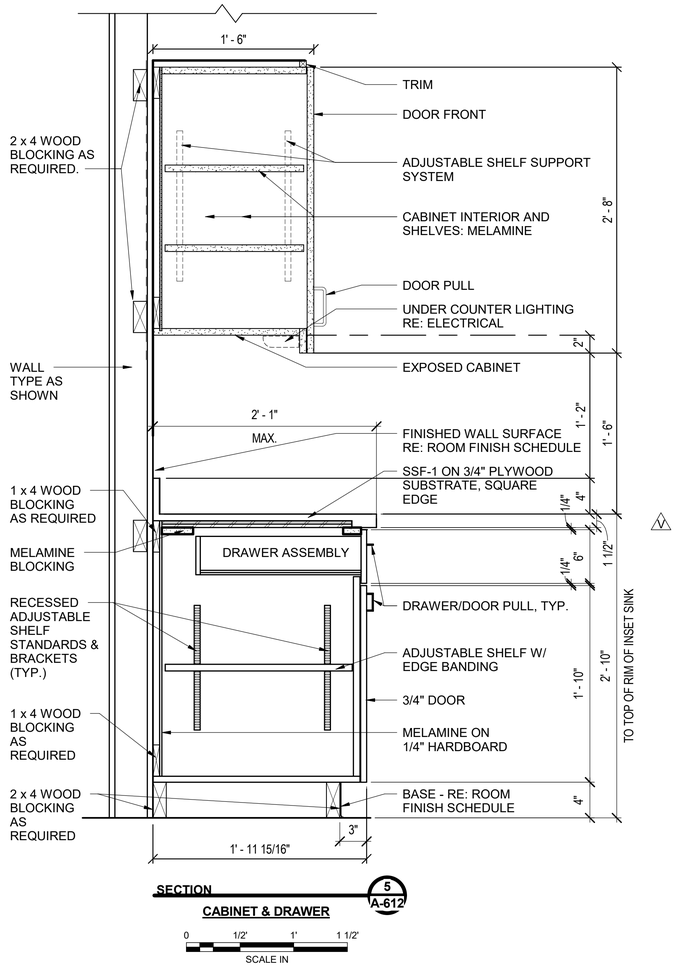
BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS
AUTOMATED WAREHOUSE
Facilities Engineering
BLDG-1-338G

Drawn by: L. HOOK	06/29/2018
Designed by: L. HOOK	06/29/2018

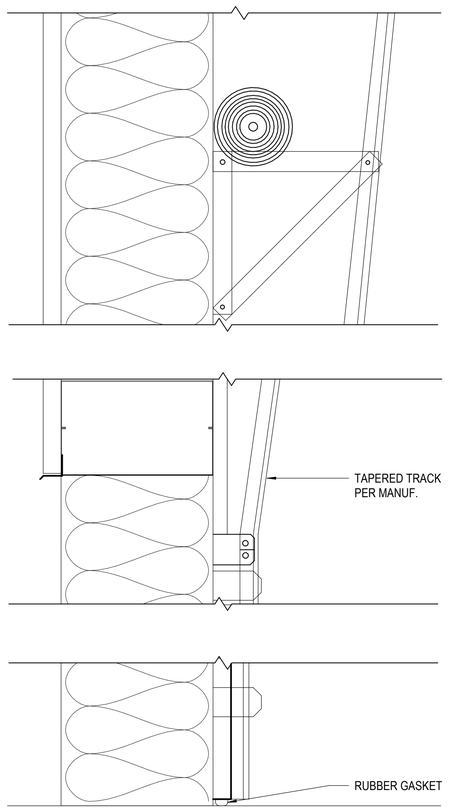
Project No.: 6936
Sheet Name: DOOR DETAILS
Sheet A-611 of XX
Drawing No.: 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



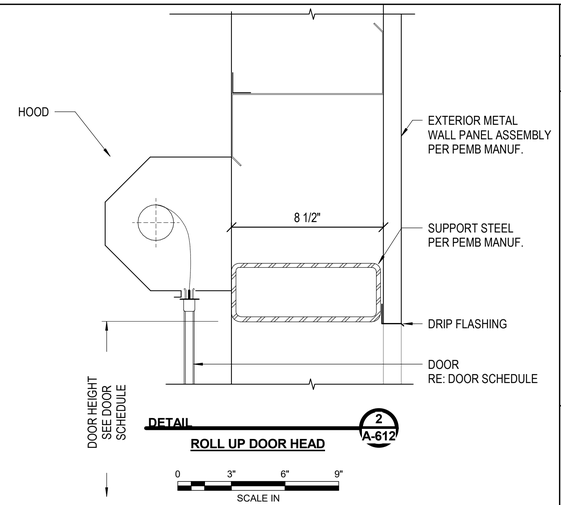
SECTION **CABINET & DRAWER** 5 / A-612

0 1/2' 1' 1 1/2'
SCALE IN



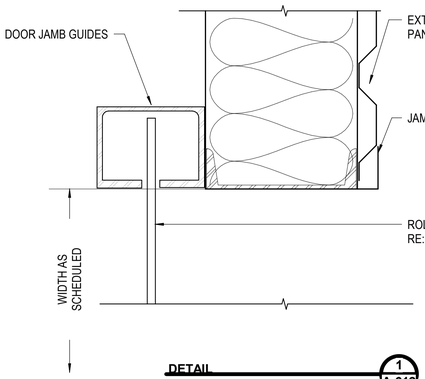
DETAIL **SECTIONAL DOOR HEAD AND SILL** 4 / A-612

0 3" 6" 9"
SCALE IN



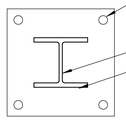
DETAIL **ROLL UP DOOR HEAD** 2 / A-612

0 3" 6" 9"
SCALE IN



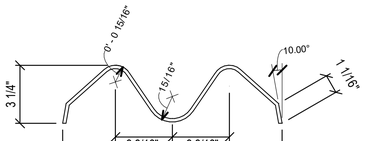
DETAIL **ROLL UP DOOR JAMB** 1 / A-612

0 3" 6" 9"
SCALE IN



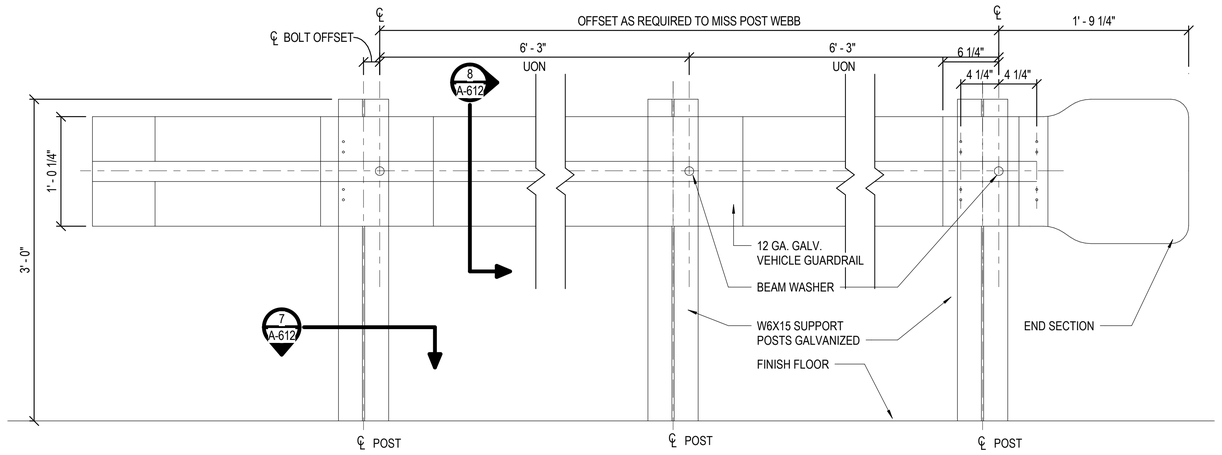
DETAIL **PLAN - POST DETAIL** 7 / A-612

0 1/2' 1' 1 1/2'
SCALE IN



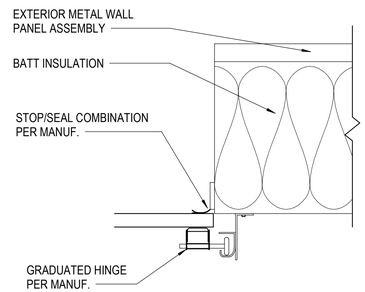
DETAIL **BEAM PROFILE** 8 / A-612

0 1/2' 1' 1 1/2'
SCALE IN



DETAIL **GUARDRAIL TRAFFIC PARTIAL ENLARGED ELEVATION** 6 / A-612

0 1/2' 1' 1 1/2'
SCALE IN



DETAIL **SECTIONAL DOOR JAMB** 3 / A-612

0 3" 6" 9"
SCALE IN

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
A	28JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	18SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Y	29NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	6NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 West Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT

Nov 21 2018

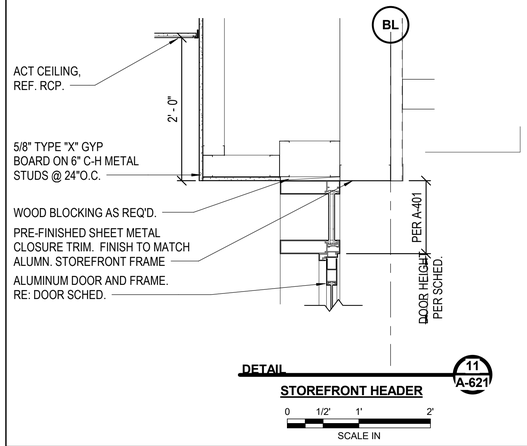
16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G

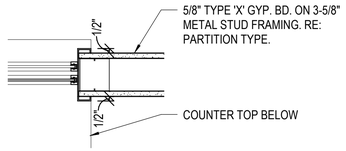
6/29/2018 Designed by Designer
6/29/2018 Drawn by Author

Project No. 6936
Sheet Name: DOOR DETAILS
Sheet A-612 of
Drawing No. 108M-XXX-XXX

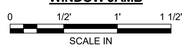
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT THE CONTENTS THEREOF SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED.

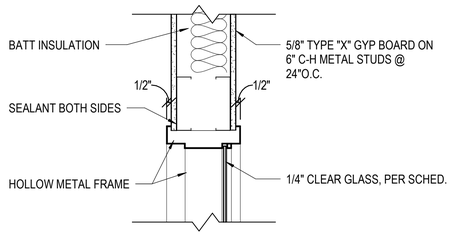


DETAIL 11 A-621
STOREFRONT HEADER

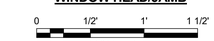


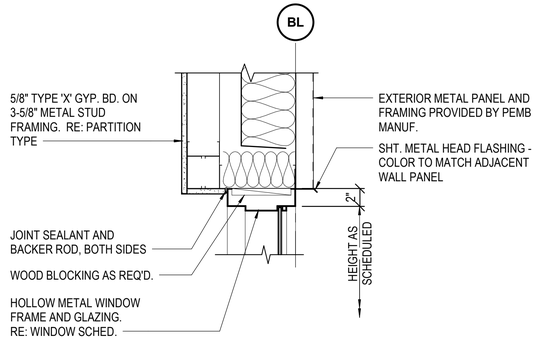
DETAIL 8 A-621
WINDOW JAMB



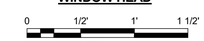


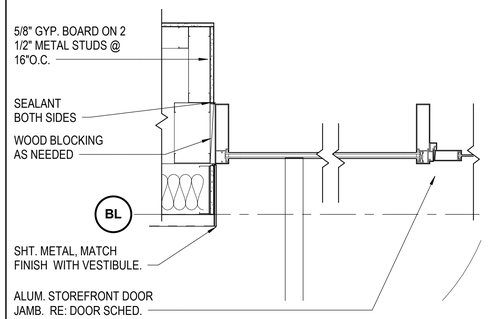
DETAIL 6 A-621
WINDOW HEAD/JAMB





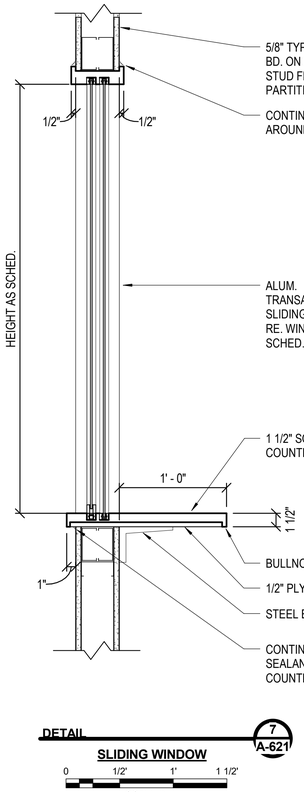
DETAIL 3 A-621
WINDOW HEAD



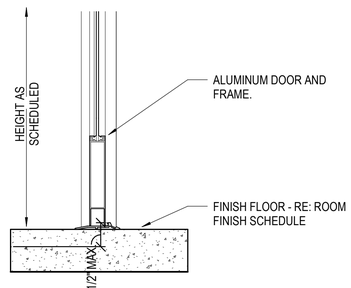


DETAIL 10 A-621
STORFRONT JAMB



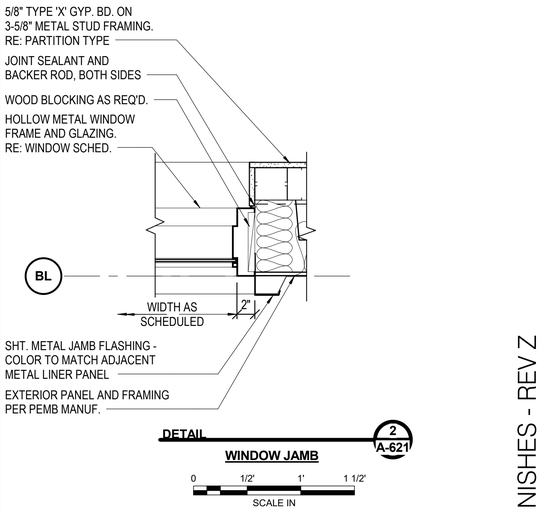


DETAIL 7 A-621
SLIDING WINDOW

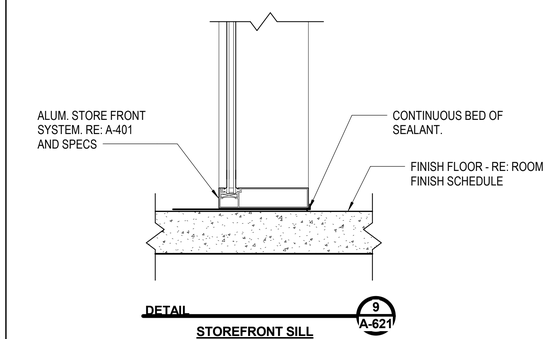


DETAIL 5 A-621
STOREFRONT DOOR SILL

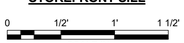


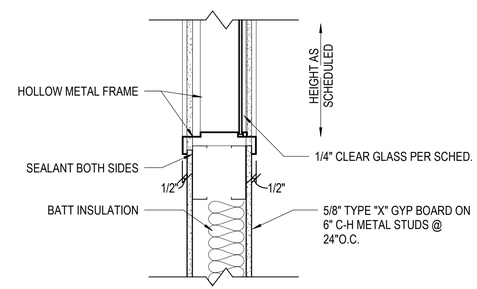


DETAIL 2 A-621
WINDOW JAMB



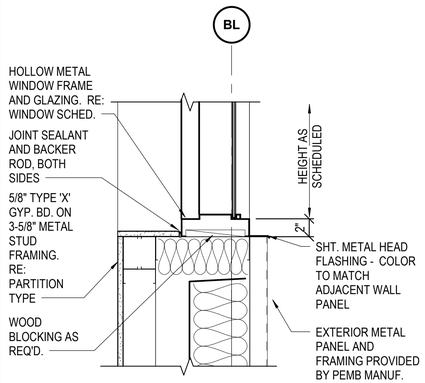
DETAIL 9 A-621
STOREFRONT SILL



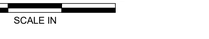


DETAIL 4 A-621
WINDOW SILL





DETAIL 1 A-621
WINDOW SILL



KEY PLAN
NOT TO SCALE



16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: BRYAN YOUNG @ 316-227-7007

Q	DATE	DESCRIPTION	BY	APPROVED
X	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
MCD #104543

BARRY D. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS

AUTOMATED WAREHOUSE

BLDG-1-338G

Facilities Engineering

Designed by	L. HOOK	7/13/2018
Drawn by	L. HOOK	7/13/2018

Project No: 6936
Sheet Name: WINDOW AND STOREFRONT DETAILS
Sheet A-621 of
Drawing No: 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE MATERIAL	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING	REMARKS	GN_REVISION01
GROUND FLOOR										
100	VESTIBULE	CS-1	-	-	-	-	-	-	1.	
101	DRIVER LOBBY	CS-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1	9	
102	RR	TLC-3	-	TLC-2	TLC-2	TLC-2	TLC-2	ACT-1	2	
103	RECEIVING OFFICE	CS-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1	9	
104	BREAKROOM	CS-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1	7, 12, 13, 14	
105	VENDING	CS-1	RB-1	PA-1	PA-1	-	PA-1	ACT-1	9	
106	CONFERENCE	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		X
107	MENS	TLC-3	TLC-4	PA-1	TLC-2/PA-1	PA-1	TLC-2/PA-1	GB-1	2, 11	X
108	WOMENS	TLC-3	TLC-4	PA-1	TLC-2/PA-1	PA-1	TLC-2/PA-1	GB-1	2, 11	X
109	JANITOR	CS-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1	3	
110	AUTOMATED PRODUCTION	CS-1	-	-	-	-	-	-	5, 6, 8, 10, 13	
112	OFFLOADING	CS-1	-	-	-	-	-	-	13	
113	MENS RR	TLC-3	TLC-3	WC-1	WC-1	WC-1	WC-1	ACT-1	2	V
114	WOMENS RR	TLC-3	TLC-3	WC-1	WC-1	WC-1	WC-1	ACT-1	2	V
EL-01	ELEV	-	-	-	-	-	-	-	4	
SECOND FLOOR										
201	BREAK OUT	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
202	BREAK OUT	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
203	SR OPS OFFICE	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
204	SR OPS OFFICE	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
205	HR MANAGER	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
206	3PL GM OFFICE	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
207	SPIRIT OFFICE	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1		
208	OPEN OFFICE	CPT-1	RB-1	PA-1	PA-1	PA-1	PA-1	ACT-1	7, 14	
210	MENS	TLC-3	-	TLC-1	TLC-1	TLC-1	TLC-1	GB-1		
211	WOMENS	TLC-3	-	TLC-1	TLC-1	TLC-1	TLC-1	GB-1		
212	DDC	VCT-1	RB-1	PA-1	PA-1	PA-1	PA-1	-		
214	JANITOR	CS-1	RB-1	PA-1	PA-1	PA-1	PA-1	GB-1	3	
EQUIPMENT MEZZANINE										
301	EQUIPMENT MEZZANINE	CS-1	-	-	-	-	-	-	5	

FINISH LEGEND - BASIS OF DESIGN OR EQUIVALENT

MATERIAL	MANUF.	MODEL NUMBER	PRODUCT NUMBER	COLOR	DESCRIPTION	REMARKS
ACOUSTICAL CEILING TILE						
ACT-1	ARMSTONG WORLD INDUSTRIES	"FISSURED" TEGULAR	#705	WHITE	24" x 24"	
CONCRETE						
CS-1					SEALED	SEE SPEC 03 30 00
CORNER GUARD						
CG-1	IPC INPRO	FLEXIBLE GUARDS	11248F		1-1/2" x 1-1/2" x 4' PVC CORNER GUARD	90 DEGREE CORNER
CG-2	C-S INC	ACROVYN	ACO-8	CLR ANODIZED	3-1/2" x 3-1/2" x 4' ALUM. CORNER GUARD	90 DEGREE CORNER
FLOORING						
CPT-1	BENTLEY	ACARADE LEGEND			CARPET	24" x 24" TILES
VCT-1	ARMSTRONG		51839	FORTRESS WHITE	VINYL COMPOSITE TILE	12" x 12" x 1/8" STATIC DISSAPATIVE FLOORING
GROUT						
GR-1	C-CURE CHEMICALS					
PAINT						
PA-1	SHERWIN WILLIAMS	INDUSTRIAL ENAMEL HS	B54 SERIES	WHITE	ACRYLIC	
PA-2	SHERWIN WILLIAMS	INDUSTRIAL ENAMEL HS	B54 SERIES	VIKING BLUE	ACRYLIC	
PA-3	SHERWIN WILLIAMS	INDUSTRIAL ENAMEL HS	B54 SERIES	STONESTHROW	ACRYLIC	
PA-4	SHERWIN WILLIAMS	INDUSTRIAL ENAMEL HS	B54 SERIES	SAFETY YELLOW	ACRYLIC	
PA-5	SHERWIN WILLIAMS	PRO INDUSTRIAL DTM		WHITE	ACRYLIC	
PLASTIC LAMINATE						
PLAM-1						
RESILIENT BASE						
RB-1	ROPPE			#76 MAUVE	4" RESILIENT COVED WALL BASE	
SOLID SURFACE FABRICATION						
SSF-1	CORIAN			DEEP NIGHT SKY		
TILE						
TLC-1	DAL-TILE				CERAMIC 4-1/2" x 4-1/2" WALL TILE	TOILET ROOMS IN OFFICE AND SUPPORT AREAS
TLC-2	DAL-TILE				CERAMIC 6" x 6" WALL TILE	TOILET ROOMS SERVING FACTORY PRODUCTION
TLC-3	DAL-TILE				CERAMIC 8" x 8" FLOOR TILE	TOILET ROOMS
TLC-4	DAL-TILE				CERAMIC 6" x 6" COVE BASE	TOILET ROOMS SERVING FACTORY PRODUCTION - BULLNOSE
WALLCOVERING						
WC-1	USG	MARLITE	P 151 LIGHT GREY		REINFORCED PLASTIC WALL PANEL	

ROOM FINISH SCHEDULE REMARKS:

1. VESTIBULE ENTRANCE IS A PRE-FABRICATED SHELTER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. SEE ENLARGED PLANS AND ELEVATIONS FOR ADDITIONAL FINISH INFORMATION. WALL INDICATED ON ENLARGED PLANS AND ELEVATIONS TO BE FULL HEIGHT TILE ARE TLC-2, ALL OTHER WALLS WILL HAVE TLC-4 6" TALL WALL BASE AND PAINTED GYPSUM OR PAINTED CMU ABOVE, PA-1.
3. PROVIDE WC-1 FOR THE FIRST 8'-0" OF THE WALL. SEE FINISH LEGEND FOR ADDITIONAL INFORMATION.
4. ELEVATOR CAB FINISHES PER SPECIFICATION
5. ALL METAL STAIRS, NON-REMOVABLE GUARDRAIL AND TOE KICKS TO BE PAINTED PA-3
6. ALL REMOVABLE GUARDRAIL, VEHICULAR RAILING, AND STRIPING TO BE PAINTED PA-4
7. CABINETS TO BE PLAM-1 AND COUNTER TOP TO BE SSF-1. SEE INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
8. PAINT HORIZONTAL BEAM SUPPORTS OF RAISED EQUIPMENT PLATFORMS PA-2
9. ON THE SIDE OF WALL OPEN TO THE WAREHOUSE PROVIDE 1/2" FIRE-RETARDANT TREATED PLYWOOD WAINSCOT FOR THE FIRST 4'-0" OF THE WALL WITH A 2x4 WOOD BASE. PAINTED TO MATCH ADJACENT WALL. FOR GYPSUM BOARD ASSEMBLY WALLS ONLY
10. COLUMNS TO BE PAINTED PA-1, PROVIDE CONTRAST PAINT ON THE FIRST 4'-0" OF COLUMN AND PROVIDE ALPHA-NUMERIC LETTERS 8" TALL LOCATED 12'-0" A.F.F. ON THE COLUMN. OWNER TO PROVIDE NUMBERING AND COLOR.
11. SINK COUNTERTOP WITH INTEGRAL SINKS TO BE SSF-1.
12. SEE ELECTRICAL DRAWINGS FOR ANY PRESENTATION OR A/V EQUIPMENT INDICATED TO BE ON THE WALLS OR CEILING.
13. PROVIDE CG-2 ON ALL OUTSIDE CORNERS OF CMU BLOCK WALLS.
14. PROVIDE CG-1 ON ALL OUTSIDE CORNERS OF GYPSUM BOARD ASSEMBLED WALLS.

GENERAL ROOM FINISH SCHEDULE NOTES:

1. REFER TO SPECIFICATIONS FOR THE BASIS OF DESIGN OR EQUIVALENT MANUFACTURER TECHNICAL REQUIREMENTS.
2. REFER TO INTERIOR ELEVATIONS, REFLECTED CEILING DRAWINGS, FLOOR FINISH DRAWINGS, ENLARGED PLAN DRAWINGS AND DETAIL DRAWINGS FOR ADDITIONAL FINISH PLACEMENT INFORMATION.
3. REFER TO ELECTRICAL DRAWINGS, MECHANICAL DRAWINGS, STRUCTURAL DRAWINGS AND COMMUNICATION DRAWINGS FOR COORDINATION OF BUILDING FINISHES TO BUILDING SYSTEMS.
4. REFER TO REFLECTED CEILING DRAWINGS FOR CEILING HEIGHTS AND CEILING MATERIAL EXTENTS.
5. REFER TO ENLARGED TOILET DRAWINGS, WALL FINISH PLANS AND INTERIOR ELEVATIONS FOR PLACEMENT OF INTERIOR FINISHES IN TOILET/LOCKER ROOMS.
6. REFER TO STAIR DETAILS FOR TYPICAL STAIR FINISH ASSIGNMENT.
7. REFER TO ELEVATOR SPECIFICATION SECTIONS FOR PASSENGER ELEVATOR FINISHES.
8. REFER TO MILLWORK DETAIL DRAWINGS AND INTERIOR ELEVATIONS FOR ASSIGNMENT OF SOLID SURFACE AND PLASTIC LAMINATE FINISHES AND ADDITIONAL INFORMATION.
9. PROVIDE BLOCKING AS REQUIRED TO SECURE ALL WALL MOUNTED ITEMS INCLUDING TOILET FIXTURES, TOILET ACCESSORIES, TOILET PARTITIONS, MILLWORK, SHELVES, COUNTERTOP SUPPORTS, MARKERBOARDS, TACKBOARDS, FLAT PANEL DISPLAYS, CAMERAS, ACOUSTICAL WALL PANELS, MURAL OR ART CABLE SYSTEMS, AND ANY OTHER WALL MOUNTED OBJECT.
10. UNLESS NOTED OTHERWISE, ALL EXPOSED STRUCTURAL STEEL TO BE PAINTED ***PA-1***.
11. UNLESS NOTED OTHERWISE, ALL EXTERIOR / PERIMETER WINDOWS BE FINISHED WITH FACTORY FINISHED CLEAR ANODIZED ALUMINUM.
12. ALL WINDOW SILLS TO BE ***SSF-1***.
13. ALL DOOR AND ELEVATOR FRAMES TO BE ***PA-1***.
14. ALL METAL FABRICATIONS AND HANDRAILS TO BE ***PA-3*** UNLESS OTHERWISE INDICATED.
15. INTERIOR CAULKING TO MATCH ADJACENT WALL FINISH COLOR.
16. NO FINISHES REQUIRED ON CONCRETE WALLS OR CONCRETE CEILINGS UNLESS NOTED OTHERWISE.
17. ALL EXPOSED CONCRETE FLOORS SHALL BE SEALED.
18. WALL CORNER GUARDS TO BE INSTALLED STARTING AT THE TOP OF THE SCHEDULED WALL BASE.
19. AT GYPSUM BOARD SOFFITS AND BULKHEADS, PAINT ALL EXPOSED SURFACES.
20. PAINT ALL EXPOSED STRUCTURAL STEEL ELEMENTS, MISCELLANEOUS STEEL, PIPING, HANGERS, VALVES AND CONDUITS EXCEPT PRE-FINISHED LINER PANELS AND FOAM GENERATORS. THE PAINT COLOR SHALL BE AS INDICATED ON SCHEDULE. ALL FIRE PROTECTION PIPING COLOR SHALL BE SAFETY RED.
21. ALL EXPOSED MECHANICAL AND ELECTRICAL EQUIPMENT AND ASSOCIATED SUPPORTING EQUIPMENT TO BE PAINTED ***PA-5*** UNLESS OTHERWISE REQUIRED BY CODE. COORDINATE WITH MECHANICAL / ELECTRICAL FOR FINISHES ON MECHANICAL OR ELECTRICAL EQUIPMENT.
22. DO NOT PAINT PRE-FINISHED ITEMS, FINISHED METAL SURFACES, OPERATING PARTS, LABELS OR WARNINGS.

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: BRYAN YOUNG @ 316-227-7007

KEY PLAN
NOT TO SCALE

	DATE	DESCRIPTION	BY	APPROVED
A	28JUN2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	LCH	BGB
O	13JUL2018	PKG 2B, MEP, FP, FINISHES - REV O	LCH	BGB
V	18SEP2018	PKG 2B, MEP, FP, FINISHES - REV V	LCH	BGB
Y	02NOV2018	PKG 2B, MEP, FP, FINISHES - REV Y	LCH	BGB
Z	16NOV2018	PKG 2B, MEP, FP, FINISHES - REV Z	LCH	BGB

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

BARRY G. BRADFORD LICENSED 4932 KANSAS ARCHITECT
Nov 21 2018

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Drawn by: L. HOOK | 06/28/2018 | Designed by Designer | 06/28/2018

Project No. 6936

Sheet Name: ROOM FINISH SCHEDULE

Sheet A-701 of

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

SCOPE OF WORK

1. THE SCOPE OF THIS PROJECT IS TO CONSTRUCT A WAREHOUSE STRUCTURE THAT WILL HOUSE AUTOMATED STORAGE AND RETRIEVAL SYSTEMS FOR PARTS USED IN THE MANUFACTURING OF AIRCRAFT. THE EXISTING FACILITY, SDC-1, IS LOCATED JUST SOUTH OF THE NEW FACILITY AND IS USED FOR MANUAL STORAGE AND RETRIEVAL OF PARTS OFF RACKS AND MEZZANINES. THE NEW FACILITY WILL BE SIGNIFICANTLY TALLER THAN THE EXISTING FACILITY TO OPTIMIZE FLOOR SPACE FOR AN AUTOMATED SYSTEM. THE NEW STRUCTURE IS A PRE-ENGINEERED METAL BUILDING (PEMB) APPROXIMATELY 685 FEET X 224 FEET. THE MAIN RIGID FRAMES ARE AT 60-FOOT SPACING WITH INTERIOR COLUMNS AT APPROXIMATELY 75 FEET ACROSS THE NARROW WIDTH OF THE BUILDING. THERE ARE WIND COLUMNS AT 30-FOOT SPACING ALONG THE NORTH AND SOUTH WALLS. IN THE NORTH-SOUTH DIRECTION, THE STRUCTURE HAS VERTICAL X-BRACING. THE WEST SIDE CONTAINS A LOADING DOCK WITH GROUND FLOOR FACILITIES AND A MEZZANINE FOR OFFICES AND EQUIPMENT. THE MAIN TRAFFIC AISLE FOR RETRIEVING AND DISTRIBUTING PARTS IS IN THE EAST WEST DIRECTION WITH PRIMARY TUG AND CART ACCESS ON THE EAST SIDE. THE WEST WALL IS NOT EXPANDABLE, BUT THE EAST WALL IS DESIGNED FOR POSSIBLE FUTURE EXPANSION TOWARD THE EAST. THE STRUCTURE IS SUPPORTED ON SPREAD FOOTINGS. THE PROJECT IS DIVIDED INTO PACKAGES WITH THE PEMB, FOUNDATIONS/SLAB-ON-GRADE AND MEP/FINISHES IN SEPARATE PACKAGES.

SILICONE PROHIBITION
THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

GENERAL NOTES

1. GENERAL:
   - A. THESE NOTES, AND OTHER DRAWING NOTES CONTAINED WITHIN, ARE PROVIDED TO MEET SPECIFIC REQUIREMENTS AND TO SUPPLEMENT THE CONTRACT SPECIFICATIONS. THESE NOTES NEITHER REPLACE NOR OVERRIDE THE PROVISIONS AND REQUIREMENTS OF THE CONTRACT SPECIFICATIONS.
   - B. SUBCONTRACTOR SHALL COORDINATE ALL STRUCTURAL WORK WITH WORK SHOWN ON ALL OTHER DRAWINGS.
   - C. SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING CONSTRUCTION AND REPORT ANY DISCREPANCIES FROM THE CONTRACT DRAWINGS TO THE ENGINEER PRIOR TO COMMENCING WITH WORK. SCALING OF WORKING DIMENSIONS FROM THE STRUCTURAL DRAWINGS IS PROHIBITED.
   - D. CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, SHORING AND TEMPORARY BRACING. SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO ENSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. VISITS TO THE SITE BY THE OWNER OR ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
   - E. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE CONTRACT DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR, WITH THE APPROVAL OF THE ENGINEER. WHERE SECTIONS VARY, SUBCONTRACTOR SHALL PROVIDE FOR SMOOTH TRANSITIONS BETWEEN THEM, UNLESS NOTED OTHERWISE.
   - F. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE.
   - G. ENGINEER OF RECORD (EOR) DISCLAIMS ANY RESPONSIBILITY FOR ITS DESIGN OF PRE-ENGINEERED METAL BUILDING. PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED AND SEALED BY A REGISTERED ENGINEER LICENSED IN THE STATE OF KANSAS.
   - H. ELEVATION 100'-0" CORRESPONDS TO MSL ELEVATION 1361.0 FT.
2. DESIGN STANDARDS
   - A. PRINCIPAL CODE OF RECORD: INTERNATIONAL BUILDING CODE(IBC) 2012 AND METROPOLITAN AREA BUILDING CODE AND CONSTRUCTION DEPARTMENT(MABCD) AMENDMENTS FOR THE CITY OF WICHITA AND SEDGWICK COUNTY.
   - B. ASCE/SEI 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2010
   - C. ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 2011.
   - D. AISC 360, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, 2010
   - E. AISI NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS S100-2010
   - F. OSHA 20 CFR, PART 1926, SUBPART R – STEEL ERECTION.
   - G. METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA) METAL BUILDING SYSTEMS MANUAL (MBSM) 2012
   - H. STEEL DECK INSTITUE (SDI) DESIGN MANUAL, STANDARDS & CODE OF STANDARD PRACTICE
   - I. STEEL JOIST INSTITUTE (SJI) STANDARD SPECIFICATIONS LOAD TABLE AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS.
   - J. FM GLOBAL DATA SHEET: 1-28R (ROOF SYSTEMS), 1-54 (ROOF LOADS FOR NEW CONSTRUCTION), TMS 402 / ACI 530 / ASCE 5 - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES. TMS 602 / ACI 530.1 / ASCE 6 - SPECIFICATION FOR MASONRY STRUCTURES. (Q)
3. SPECIAL INSPECTIONS
   - A. REQUIRED IN ACCORDANCE WITH IBC 2012 SECTION 1704. SEE SHEETS S-004 AND S-005.
4. DESIGN LOADS PRE-ENGINEERED METAL BUILDING SUPER STRUCTURE
   - A. OCCUPANCY CLASSIFICATION: CATEGORY II
   - B. DEAD LOAD:
     1. ESTIMATED ACTUAL WEIGHTS OF STRUCTURE.
     2. ROOFING DEAD LOAD: 5 PSF
     3. WEIGHT OF PERMANENT MEP ROOF EQUIPMENT: 5 PSF (LIGHTS, HEATERS, FIRE PROTECTION, DUCTS, SMOKE/HEAT VENTS).
     4. 10" DIAMETER MAIN FIRE WATER LINE WHERE INDICATED.
     5. ROOF COLLATERAL LOADS: 10 PSF (ON ALL ROOF MEMBERS)
     6. ROOF LIVE LOADS: 20 PSF – NOT REDUCBLE PER MABCD AND FM GLOBAL.
     7. LOAD 4.B.3 PLUS LOAD 4.B.5 = 15 PSF. APPLY 7 PSF FOR SEISMIC COMBINATIONS TO ACCOUNT FOR NOT LOADING ENTIRE ROOF WITH 15 PSF.
   - C. MEZZANINE FLOOR:
     1. FLOOR LIVE LOAD: 125 PSF
     2. FLOOR COLLATERAL LOAD: 10 PSF (ON ALL FLOOR MEMBERS)
   - D. MEZZANINE ROOF/CEILING GRID:
     1. LIVE LOAD: 150 PSF.
     2. COLLATERAL LOAD: 10 PSF (ON ALL ROOF/CEILING MEMBERS)
   - E. SNOW LOAD:
     1. GROUND SNOW, Pg: 15 PSF
     2. EXPOSURE FACTOR, Ce: 1.0 (FM GLOBAL DATA SHEET 1-54, PARA. 2.8.1).
     3. IMPORTANCE FACTOR, Is: 1.1 (FM GLOBAL DATA SHEET 1-54, PARA. 2.8.1).
     4. THERMAL FACTOR, Ct: 1.1 (FM GLOBAL DATA SHEET 1-54, PARA. 2.8.1).
     5. ROOF SLOPE FACTOR, Cs: 1.0.
     6. BALANCED, UNBALANCED AND DRIFTING: ASCE 7 & FM GLOBAL DATA SHEET 1-54, PARA. 2.8.2).
     7. RAIN ON SNOW: ASCE 7.
   - F. RAIN, PONDING AND PONDING INSTABILITY: ASCE 7, RAIN INTENSITY = 11.3 INCHES/HOUR (100 YEAR EVENT, 5 MIN DURATION).
   - G. WIND LOAD:
     1. RISK CATEGORY: II
     2. BASIC WIND SPEED (BASED ON MABCD FASTEST MILE = 76 MPH AND ASCE 7 CHAPTER C26): Vult = 115 MPH (3 SECOND GUST). NOMINAL DESIGN WIND SPEED, Vasd = 89 MPH (IBC TABLE 1609.3.1). (M)
     3. EXPOSURE CATEGORY: C.
     4. BUILDING CONDITION: ENCLOSED.
     5. TOPOGRAPHIC FACTOR, Kzt: 1.0
     6. COMPONENTS AND CLADDING: ASCE 7 AND FM GLOBAL 1-28 AND 1-28R.
   - H. SEISMIC LOAD:
     1. MAPPED SPECTRAL RESPONSE PARAMETERS: Ss = 0.110 g, S1 = 0.054 g.
     2. DESIGN SPECTRAL ACCELERATIOIN PARAMETERS: Sds = 0.117 g, Sd1 = 0.087 g.
     3. SITE CLASS: D.
     4. SEISMIC DESIGN CATEGORY: B.
     5. IMPORTANCE FACTOR, Ie = 1.0.
   - I. EXTERIOR WALL-MOUNTED SIGNAGE FROM WALL GIRTS: 2,000 POUND, 47' WIDE X 21' TALL LOGO SIGNS AT EAVES WHERE INDICATED.
   - J. ROOFING SYSTEM ASSUMED FALL ARREST SYSTEM: SSRA1 STANDING SEAM ROOF ANCHOR BY FALL PROTECTION DISTRIBUTORS, LLC.
     1. FALL ARREST EQUIPMENT NOT INCLUDED IN CONTRACT
   - K. SIX (6) 400# LARGE DIAMETER FANS WHERE INDICATED.
   - L. LOAD COMBINATIONS: IBC 2012.
     *BUILDING FOOTINGS ARE DESIGNED PER PRELIMINARY REACTIONS OBTAINED FROM VP BUILDINGS ON APRIL 23,2018. REACTIONS MUST BE VERIFIED BY THE FOUNDATION ENGINEER WITH SEALED PEMB FINAL REACTIONS PRIOR TO PLACEMENT OF FOOTINGS.
5. SERVICEABILITY:PRE-ENGINEERED SUPER STRUCTURE
   L = CENTERLINE COLUMN TO CENTERLINE COLUMN SPAN LENGTH, H = EAVE HEIGHT.
   - A. FRAMES:
     1. VERTICAL: L/240
     2. HORIZONTAL: H/100
   - B. PURLINS/BAR JOISTS:
     1. VERTICAL: L/240 (LIVE LOADS)
     2. VERTICAL: L/180 (WIND OR SEISMIC LOADS)
   - C. GIRTS: HORIZONTAL: L/180 (WIND OR SEISMIC)
   - D. MEZZANINE FLOOR: L/240 (DEAD + LIVE), L/360 (LIVE LOADS)
6. GEOTECHNICAL INFORMATION
   - A. FOUNDATIONS HAVE BEEN DESIGNED PER THE RECOMMENDATIONS OF THE FOLLOWING GEOTECHNICAL INVESTIGATION AND REPORT PROVIDED BY THE OWNER.
   - B. GEOTECHNICAL INFORMATION PRESENTED ON THESE DRAWINGS IS AS PROVIDED BY THE SOURCE REPORT BELOW AND PRESENTED FOR INFORMATION ONLY.
   - C. SOURCE REPORT:
     1. TITLE: GEOTECHNICAL EXPLORATION REPORT - AUTOMATED WAREHOUSE SPIRIT AEROSYSTEMS CAMPUS
     2. LOCATION: WICHITA, KANSAS
     3. DATE: MARCH 2, 2018, REVISED MARCH 16, 2018
     4. REPORT PREPARED BY: GSI ENGINEERING, LLC WICHITA, KANSAS
        a. GSI PROJECT NUMBER 1873018
     5. REPORT PREPARED FOR: SPIRIT AEROSYSTEMS,INC WICHITA, KANSAS
   - D. SOIL CHARACTERISTICS FROM SOURCE REPORT:
     1. UNIT WEIGHT: 125PCF
     2. WATER TABLE DEPTH: GREATER THAN 10 FT BELOW EXISTING GRADE
   - E. LATERAL EARTH PRESSURE FROM SOURCE REPORT:
     1. FAT CLAY(UNIT WT=125 PCF):
        a. AT REST: (Ko: 0.63)
        b. ACTIVE: (Ka: 0.45)
        c. PASSIVE: (Kp: 2.20)
     2. GRANUALR BACKFILL (UNIT WT=115):
        a. AT REST: (Ko: 0.47)
        b. ACTIVE: (Ka: 0.31)
        c. PASSIVE: (Kp:3.25)
   - F. FOOTING DESIGN PARAMETERS FROM SOURCE REPORT:
     1. NET ALLOWABLE BEARING CAPACITIES
        a. GRAVITY LOADS, INDIVIDUAL FOOTING: 3000 PSF
        b. GRAVITY LOADS, CONTINUOUS FOOTING: 3000 PSF
        c. TRANSIENT LOADS: UNDER WIND OR SEISMIC LOADING, THE ABOVE BEARING CAPACITY MAY BE INCREASED BY ONE-THIRD.
   - G. SUBGRADE MODULUS = 125 PCI
   - H. SEISMIC SITE CLASS: D (M)
7. MATERIALS: SEE THE CONTRACT SPECIFICATIONS FOR COMPLETE REQUIREMENTS AND COMPLY WITH ALL APPLICABLE OSHA REGULATIONS
   - A. REINFORCED CONCRETE: SECTIONS 03100, 03275, 03300
     1. REINFORCED CONCRETE SHALL BE PREPARED AND PLACED IN ACCORDANCE WITH ACI MANUAL OF CONCRETE PRACTICE.
     2. CONCRETE
        a. UNLESS NOTED OTHERWISE: MINIMUM 28-DAY COMPRESSIVE STRENGTH f'c = 4500 PSI, NORMAL WEIGHT. MAX W/C (WATER CEMENT RATIO)= 0.45 TOTAL AIR CONTENT FOR AIR ENTRAINED CONCRETE= 5-7% SLUMP= 2 TO 4" PRIOR TO ADDING ADMIXTURES.
        b. REF SPEC FLOOR LEVELNESS AND FLATTNESS REQUIREMENT.
        c. CONCRETE FLOOR SEALER:- SEAL HARD BY L& M CONSTRUCTION CHEMICALS, INC
     3. FORMWORK
        a. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, ENGINEERING, STRUCTURAL ADEQUACY, AND CONSTRUCTION OF ALL CONCRETE FORMWORK IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
        b. COORDINATE ALL CONCRETE WORK WITH THE PLACEMENT OF PIPING, INSERTS, FLOOR DRAINS, AND OTHER EMBEDDED ITEMS INDICATED ON THE CONTRACT DRAWINGS OR IN THE CONTRACT SPECIFICATIONS.
        c. ALL NEW OR EXISTING PIPING OR UTILITIES PASSING THROUGH NEW CONCRETE SHALL BE SLEEVED 1/2" CLEAR ALL AROUND, UNLESS NOTED OTHERWISE. SEE OTHER DISCIPLINE DRAWINGS FOR SLEEVE DETAILS. SUBCONTRACTOR SHALL PROVIDE MEASURES TO ENSURE THAT SLEEVES REMAIN FREE OF DEBRIS AND WATER DURING CONSTRUCTION.
        d. PROVIDE 3/4" CHAMFER STRIPS ON ALL EDGES OF EXPOSED CONCRETE, UNLESS NOTED OTHERWISE.
        e. WITH THE EXPLICIT PRIOR APPROVAL IN WRITING OF THE ENGINEER, COLUMN AND WALL FOOTINGS MAY BE EARTH-FORMED USING UNDISTURBED NATIVE SOIL. PROVIDE A MINIMUM EXCAVATION WIDTH 4" GREATER THAN INDICATED, AND A DEPTH 2" GREATER THAN INDICATED.
   4. REINFORCING STEEL
      a. BARS: ASTM A615 GRADE 60.
      b. ALL CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY MARKED "NOT REINFORCED" OR "UNREINFORCED".
      c. SUBCONTRACTOR SHALL DETAIL AND PLACE ALL REINFORCEMENT IN ACCORDANCE WITH ACI SP-66, ACI 301, ACI 318, AND CRSI MANUAL OF STANDARD PRACTICE.
      d. MINIMUM CONCRETE CLEAR COVER OVER REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
         (1) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3".
         (2) CONCRETE EXPOSED TO EARTH OR WEATHER: #6 THROUGH #11 BARS - 2"; #5 AND SMALLER BARS, WELDED WIRE FABRIC - 1 1/2".
         (3) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND: SLABS AND WALLS - 3/4"; BEAMS AND COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS - 1 1/2".
      e. EMBEDMENT AND LAP SPLICE LENGTHS FOR ALL REINFORCING STEEL BARS SHALL CONFORM TO THE FOLLOWING PROVISIONS, UNLESS NOTED OTHERWISE.
         (1) MINIMUM STRAIGHT EMBEDMENT LENGTHS:
             (a) #3 - 12" #6 - 22" #9 - 60"
             (b) #4 - 15" #7 - 34" #10 - 72"
             (c) #5 - 18" #8 - 48" #11 - 88"
         (2) MINIMUM LAP SPLICE LENGTHS:
             (a) #3 - 14" #6 - 28" #9 - 74"
             (b) #4 - 19" #7 - 44" #10 - 92"
             (c) #5 - 24" #8 - 58" #11 - 114"
         (3) MINIMUM HOOK EMBEDMENT LENGTHS:
             (a) #3 - 8" #6 - 15" #9 - 22"
             (b) #4 - 10" #7 - 17" #10 - 25"
             (c) #5 - 12" #8 - 19" #11 - 27"
         (4) HORIZONTAL BARS HAVING MORE THAN 12" OF CONCRETE PLACED BELOW THEM SHALL BE CONSIDERED TOP REINFORCEMENT AND SHALL HAVE MINIMUM STRAIGHT EMBEDMENT AND LAP SPLICE LENGTHS INCREASED BY NOT LESS THAN 30% OVER THOSE GIVEN ABOVE.
         (5) HOOK EMBEDMENT IS THE MINIMUM STRAIGHT LINE DISTANCE FROM THE CRITICAL SECTION OF THE BAR TO THE FARTHEST EDGE OF THE HOOK.
         (6) EPOXY GROUT: CONFORM TO ASTM C881, TYPE IV, GRADE 3, EXCEPT GEL TIMES. PROVIDE MINIMUM EMBEDMENT LENGTH REQUIRED TO DEVELOP ULTIMATE STRENGTH OF BAR.
      f. PROVIDE ADDITIONAL REINFORCEMENT AT ALL OPENINGS AND CORNER BARS AT ALL INTERSECTING GRADE BEAMS, WALLS, AND CURBS IN ACCORDANCE WITH THE STANDARD DETAILS , UNLESS NOTED OTHERWISE.

(GENERAL NOTES CONTINUED ON NEXT SHEET)

△	DATE	DESCRIPTION	BY	APPROVED
L	06/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
M	06/13/2018	PKG 2A FOUNDATION & SOG - REV M	BMJ	PCT
6	06/15/2018	PKG 2B MEP, FP, FINISHES - 60% REVIEW	BMJ	PCT
9	06/29/2018	PKG 2B MEP, FP, FINISHES - 90% REVIEW	BMJ	PCT
O	11/02/2018	PKG 2A FOUNDATION & SOG - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP E. SNOW — REGISTERED — 9857 — KANSAS — PROFESSIONAL ENGINEER — 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

Project No. 6936
Sheet Name: GENERAL NOTES
Sheet S-001 of XX
Drawing No. 108M-XXX-XXX

GENERAL NOTES CONTINUED

5. JOINTS
   a. LOCATE ALL CONSTRUCTION, CONTRACTION, ISOLATION, EXPANSION, AND OTHER JOINTS AS INDICATED OR SPECIFIED, OR OTHERWISE APPROVED BY THE ENGINEER.
   b. SURFACES OF ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHALL BE CLEANED OF LAITANCE AND SHALL EXPOSE CLEAN COARSE AGGREGATE SOLIDLY EMBEDDED IN MORTAR MIX. JUST PRIOR TO DEPOSITING CONCRETE, SURFACE OF CONSTRUCTION JOINT SHALL BE THOROUGHLY CLEANED AND WETTED.
   c. THESE PROVISIONS SHALL ALSO APPLY WHEN NEW CONCRETE IS PLACE AGAINST EXISTING CONCRETE. IN ADDITION, EXISTING CONCRETE SURFACE SHALL BE ADEQUATELY PREPARED BY APPLICATION OF A BONDING AGENT.
   d. PROVIDE WATERSTOPS AT CONCRETE JOINTS WHERE INDICATED.

B. STRUCTURAL STEEL: SECTIONS 05120
1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL.
2. TEMPORARY ERECTION BRACING SHALL BE DESIGNED AND PROVIDED BY THE SUBCONTRACTOR AS REQUIRED AND SHALL NOT BE REMOVED UNTIL ALL PERMANENT LATERAL-LOAD-RESISTING ELEMENTS AND CONNECTIONS ARE COMPLETELY INSTALLED.
3. WIDE FLANGE SHAPES AND TEES: ASTM A992, Fy = 50 KSI.
4. OTHER SHAPES, PLATES, AND THREADED RODS
   a. ASTM A36, Fy = 36 KSI, UNLESS NOTED OTHERWISE.
   b. ASTM A572 GRADE 50, Fy = 50 KSI, WHERE INDICATED AS "(50)".
5. SQUARE AND RECTANGULAR HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE B, Fy = 46 KSI OR ASTM A1085.
6. ROUND HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE B, Fy = 42 KSI OR ASTM A1085.
7. PIPE: ASTM A53 TYPE E OR S, GRADE B, Fy = 35 KSI.
8. BOLTS
   a. 3/4" DIAMETER ASTM A325, UNLESS NOTED OTHERWISE.
   b. FRAMING CONNECTIONS: PRETENSIONED JOINTS WITH STANDARD HOLES, UNLESS NOTED OTHERWISE.
   c. BRACING CONNECTIONS: PRETENSIONED JOINTS WITH STANDARD HOLES, UNLESS NOTED OTHERWISE.
   d. SLIP-CRITICAL JOINTS SHALL HAVE CLASS A FAYING SURFACES WITH SLIP CHECKED AT THE SERVICE LOAD LEVEL.
   e. ON ONE SIDE OF EACH DOUBLE CONNECTION OF BEAMS TO A COLUMN WEB OR A GIRDER WEB DIRECTLY OVER A COLUMN, PROVIDE A TEMPORARY SEAT ANGLE ATTACHED TO COLUMN OR GIRDER WEB AND TO BOTTOM FLANGE OF BEAM. MINIMUM SEAT CONNECTION SHALL BE L4x3x3/8 LLH WITH TWO 3/4" DIAMETER A307 OR A325-ST BOLTS EACH LEG. SINGLE AND DOUBLE STAGGERED CONNECTIONS ARE PROHIBITED WITHOUT THE EXPLICIT PRIOR APPROVAL IN WRITING OF THE STRUCTURAL ENGINEER OF RECORD.
9. WELDING: IN ACCORDANCE WITH AWS D1.1 USING E70 ELECTRODE WITH LOW HYDROGEN.
10. ALL DOUBLE ANGLE MEMBERS SHALL HAVE SPACER PLATES TO COMPLY WITH AISC PARAGRAPH E6.2.
    a. THICKNESS: TO MATCH END GUSSET PLATES.
    b. MINIMUM ATTACHMENT: CONNECT TO BACK-TO-BACK LEGS OF ANGLES USING ONE 3/4" DIAMETER A325-ST BOLT.
11. ANCHOR BOLTS
    a. ASTM F1554 GRADE 36 UNLESS NOTED OTHERWISE.
    b. LOCATE ANCHOR BOLTS ACCURATELY, SET WITH TEMPLATES, AND SECURELY HOLD IN POSITION WHILE PLACING CONCRETE. PROTECT IN-PLACE ANCHOR BOLTS FROM CONSTRUCTION ACTIVITY.
    c. THE FOLLOWING ARE PROHIBITED WITHOUT THE EXPLICIT PRIOR APPROVAL IN WRITING OF THE STRUCTURAL ENGINEER OF RECORD:
       (1) INSERTING ANCHOR BOLTS INTO FRESH OR PARTIALLY HARDENED CONCRETE.
       (2) SUBSTITUTING POST-INSTALLED ANCHORS WHERE EMBEDDED ANCHOR BOLTS ARE INDICATED.
       (3) REPAIRING, REPLACING, OR MODIFYING INSTALLED ANCHOR BOLTS.
12. POST-INSTALLED ANCHORS
    a. BASIS OF DESIGN: HILTI ANCHORS AS INDICATED BELOW.
    b. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.
       (1) ANCHORAGE TO CONCRETE
          (a) ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE: HILTI HIT-HY 200 SAFE SET EPOXY ADHESIVE ANCHORING SYSTEM PER ICC ESR 3187.
          (b) ANCHOR RODS SHALL BE CARBON STEEL THREADED RODS WITH 0.0002 INCH THICK ELECTROPLATED COATING COMPLYING WITH ASTM B633 SC1 OR MUST BE HOT-DIPPED GALVANIZED COMPLYING WITH ASTM A153, CLASS C OR D, UNO.
          (c) MINIMUM ANCHOR STRENGTH: Fy = 36 KSI, Fu = 58 KSI, UNLESS NOTED OTHERWISE.
    c. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBCONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
    d. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
    e. THE SUBCONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE SUBCONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
    f. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
13. GROUT: CEMENTITIOUS NONSHRINK.

C. METAL BUILDING SYSTEM: SECTION 13 34 19
A. SEE SPECIFICATION SECTION 13 34 19 - METAL BUILDING SYSTEMS ISSUE

D. CONCRETE MASONRY UNIT (CMU) NOTES: SECTION 04 20 00.
1. GENERAL
   a. ENGINEERED MASONRY IS DESIGNED IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530/ ASCE 5/ TMS 402, 2013.
   b. UNITS: ASTM C90, NORMAL WEIGHT EXCEPT OVEN-DRY WEIGHT SHALL NOT BE LESS THAN 125 PCF. COMPRESSIVE STRENGTH = 2,800 (NET AREA) PSI MINIMUM MORTAR: ASTM C270 TYPE S, PROPORTION METHOD ASSEMBLY/PRISM MINIMUM COMPRESSIVE STRENGTH, f'm = 2000 PSI GROUT: ASTM C476, MINIMUM COMPRESSIVE STRENGTH = 2000 PSI REINFORCING STEEL BARS: Fy = 60,000 PSI
   c. ALL CELLS IN 8" CONCRETE MASONRY UNITS SHALL BE SOLID GROUTED. FOR 12" CMU GROUT ONLY CELLS WITH REINFORCEMENT.
   d. CONSOLIDATE GROUT IN ASSEMBLED WALLS.
   e. USE FULL CONTACT LAP SPLICES FOR REINFORCING STEEL IN CMU WALLS AS FOLLOWS:
      #4 BARS: MINIMUM 24 INCHES
      #5 BARS: MINIMUM 30 INCHES
      #6 BARS: MINIMUM 44 INCHES
   f. USE RUNNING BOND PATTERN, UNLESS INDICATED OTHERWISE.
   g. PROVIDE LATERAL SUPPORT AT THE TOP OF WALLS, UNLESS INDICATED OTHERWISE.
   h. FULL MORTAR BEDDING SHALL BE EMPLOYED WHEN CONSTRUCTING PARTIALLY GROUTED MASONRY WALLS.
   i. ARCHITECTURAL COMPONENTS SUCH AS SEALANT, FLASHING, ETC, ARE NOT ILLUSTRATED IN THESE DETAILS. SEE ARCHITECTURAL DRAWINGS FOR THESE COMPONENTS.
   j. SEE SPECIAL INSPECTION NOTES ON S005 FOR MASONRY SPECIAL
   k. MASONRY UNITS SHALL NOT BE FIELD MODIFIED UNLESS INTENDED TO BE MODIFIED.
   l. U SHAPED BOND BEAMS SHALL BE USED AT WALL OPENING HEAD LOCATIONS.
   m. KNOCK OUT BOND BEAMS SHALL BE USED AT WALL BOND BEAM LOCATIONS.
   n. OPEN END MASONRY UNITS MAY BE USED TO FACILITATE WALL CONSTRUCTION.
   o. DOUBLE OPEN END UNITS MAY BE USED WHEN WALL IS SOLID GROUTED.
2. VERTICAL REINFORCING
   a. UNLESS NOTED OTHERWISE INDICATED, PROVIDE (1) #5 VERTICAL CENTERED IN THE WALL AT THE FOLLOWING SPACING: 16"
   b. PROVIDE ADDITIONAL VERTICAL REINFORCEMENT AT EACH SIDE OF CONTROL JOINTS, AT INTERSECTION OF EXTERIOR WALLS, AND AT EACH SIDE OF ALL MASONRY OPENINGS GREATER THAN 10" IN WIDTH. IN OPENINGS MORE THAN 24" PROVIDE ADDITIONAL VERTICAL REINFORCEMENT IN TWO ADJACENT CELLS ON EACH SIDE OF THE OPENING. ADDED VERTICAL REINFORCEMENT SHALL BE CONTINUOUS FOR THE FULL HEIGHT OF WALL UNO. SEE ADD BAR DETAIL ON THIS DWG.
   c. PROVIDE CAST-IN FOUNDATION DOWEL SAME SIZE AND LOCATION AS VERTICAL BARS IN THE WALL ABOVE. SHALL BE LOCATED AT EACH VERTICAL WALL REINFORCEMENT AND SHALL EXTEND A MINIMUM OF 18" (450mm) INTO THE CONCRETE FOUNDATION WALL, UNO. AT SLABS, EXTEND DOWELS TO WITHIN 2" (50mm) OF THE BOTTOM OF SLAB AND PROVIDE A STANDARD 90° HOOK. ALTERNATIVE DOWEL FOR SLAB-ON-GRADE: SEE TYPICAL DETAIL ON S-505.
   d. EXTEND ALL VERTICAL BARS FROM THE BOTTOM COURSE THROUGH THE TOP MOST BOND BEAM.
   e. PROVIDE VERTICAL REINFORCEMENT IN ALL CELLS UNDER AND ONE ON EACH SIDE IF A CONCRETE BEAM IS SUPPORTED BY MASONRY WALL (LOAD BEARING WALLS ONLY).
3. HORIZONTAL REINFORCING
   a. CONSTRUCT BOND BEAMS USING (2) #5 HORIZONTAL UNO.
   b. PROVIDE BOND BEAMS AT 4'-0" MAX VERTICAL SPACING WHERE NOT INDICATED ON DRAWING, OR AT OTHER ELEVATIONS AS INDICATED.
   c. LOCATE BOND BEAMS AT THE BOTTOM-MOST COURSE AND THE TOP-MOST OR AT THE SECOND FROM TOP-MOST COURSE AS PRACTICAL TO PROVIDE CONT BEAM.
   d. PROVIDE BOND BEAM BELOW ALL MASONRY OPENINGS AND EXTEND A MINIMUM OF 16" BEYOND EACH SIDE OF OPENING.
   e. DISCONTINUE BOND BEAM REINFORCEMENT AT WALL CONTROL JOINTS EXCEPT AT ELEVATED FLOOR AND ROOF LEVELS.
   f. PROVIDE HORIZONTAL JOINT REINFORCEMENT AT EVERY OTHER COURSE OR A MAXIMUM 16" SPACING. BEGIN JOINT REINFORCING AT THE TOP OF SECOND BLOCK COURSE ABOVE FLOOR SLAB.
   g. DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINTS.
4. CONTROL JOINT
   a. USE PREMOLDED CONTROL JOINT KEY INSERTS WITH SASH BLOCK; USE CORRUGATED METAL SEPARATOR AT BOND BEAM LOCATIONS.
   b. LOCATE CONTROL JOINT WHERE INDICATED ON THE ARCHITECTURAL FLOOR PLANS; OR WHEN NOT INDICATED AS LISTED BELOW:
      (a). 1.5 X WALL HEIGHT OR 25'-0" O.C., WHICHEVER IS LESS.
      (b). AVOID CREATING SLIP PLANES AT DOOR OR WINDOW LOCATIONS.
      (c). LOCATE ABOVE EXPANSION AND CONTROL JOINTS IN SUPPORTING CONCRETE FLOOR, BEAMS, OR WALLS.
      (d). DO NOT PROVIDE INTERMEDIATE CONTROL JOINTS IN PARAPET WALLS UNLESS SO INDICATED ON THE ARCHITECTURAL DRAWINGS.
      (e). CHANGES IN WALL HEIGHTS.
      (f). ADJACENT TO CORNERS OR WALL INTERSECTIONS WITHIN A DISTANCE OF ONE HALF THE CONTROL JOINT SPACING.
   c. EXPANSION / CONTRACTION JOINTS:
      (a). PROVIDE A MINIMUM 3/4" GAP BETWEEN THE TOP OF THE CMU WALL AND THE BOTTOM OF THE STRUCTURE, EXCEPT AT LOAD BEARING WALLS.
      (b). PROVIDE A MINIMUM 3/4" GAP BETWEEN THE END OF AN INTERIOR CMU WALL AND THE SIDE OF A BEAM.
      (c). PROVIDE CONTINUOUS COMPRESSIBLE FILLER OR FIRE SAFEING INSULATION AS REQUIRED (FULL WIDTH AND FULL LENGTH) OF THE SAME THICKNESS AS THE JOINT.
5. LINTELS:
   a. PROVIDE MASONRY LINTELS ABOVE OPENINGS IN MASONRY WALLS AS REQUIRED.

E. METAL STAIRS: SECTION 05 50 00
1. METAL STAIRS ARE A PRE-ENGINEERED SYSTEM THAT SHALL BE DESIGNED AND ENGINEERED BY THE SUPPLIER. METAL STAIRS ARE DEFERRED SUBMITTAL AND TO BE HANDLED PER IBC 107.3.4.2. THE METAL STAIR SYSTEM INCLUDES ALL COMPONENTS OF THE STAIRS (TREADS, STRINGERS, LANDINGS, RAILINGS, ETC.), AND ALL SUPPORT/CONNECTION DEVICES (HANGERS, POSTS, CLIPS, ANCHORAGES, ETC.).
2. THE STRUCTURAL DESIGN SHALL BE PERFORMED BY AN ENGINEER THAT IS LEGALLY QUALIFIED (LICENSED OR REGISTERED) TO PRACTICE IN KANSAS, AND WHO IS EXPERIENCED IN THE DESIGN OF METAL STAIRS, GUARD RAILS AND HAND RAIL SYSTEMS.
3. THE STRUCTURAL DESIGN SHALL BE IN CONFORMANCE WITH THE LOCAL BUILDING CODE AS NOTED IN THE GENERAL NOTES FOR THIS PROJECT, WITH THE AISC SPECIFICATI ON FOR STRUCTURAL STEEL BUILDINGS, AND WITH THE AISC CODE OF STANDARD PRACTICE.
4. THE STAIR SYSTEM SHALL BE DESIGNED TO MEET THE FOLLOWING MINIMUM PERFORMANCE CRITERIA (REFER TO SPECIFICATIONS FOR ADDITIONAL, SPECIAL OR MORE RESTRICTIVE CRITERIA):
   a. UNIFORM LIVE LOAD: ---------- 100 PSF
   b. CONCENTRATED LIVE LOAD: ---------- 300 POUNDS (OVER 4 SQ. IN.)
   c. MAX. LIVE LOAD DEFLECTION: ---------- L/480 OR 1/4 INCH, WHICHEVER IS LESS.
   d. MAX. TOTAL LOAD DEFLECTION: ---------- L/360 OR 1/4 INCH, WHICHEVER IS LESS.
5. EXPANSION ANCHORS WILL BE ALLOWED IN CONCRETE ONLY. ANCHORS SHALL BE CLOSELY COORDINATED WITH THE PLACEMENT OF REINFORCING STEEL. TO THE GREATEST EXTENT POSSIBLE, ANCHORAGES SHALL BE LIMITED TO SHEAR CONDITIONS ONLY. ANCHORAGES IN TENSION SHALL BE AVOIDED.
6. ENGINEER'S REVIEW OF STAIR SHOP DRAWINGS WILL BE LIMITED TO THE INTERFACE BETWEEN STAIR SYSTEM AND BUILDING STRUCTURE. THIS REVIEW WILL CHECK THE COMPATIBILITY OF LOADS AND POSITIONS OF LOADS IMPARTED ONTO THE BUILDING STRUCTURE, AND COMPATIBILITY OF THE CONNECTIONS WITH THE BUILDING STRUCTURE. THE STRUCTURAL ENGINEER RESPONSIBLE FOR THE DESIGN OF THE STAIR SYSTEM WILL RETAIN ALL RIGHTS AND RESPONSIBILITIES FOR THE DESIGN OF THE STAIRS AND THE CONNECTIONS TO THE BUILDING STRUCTURE. SHOP DRAWINGS SHALL CLEARLY IDENTIFY THE FOLLOWING:
   a. PROJECT IDENTITY AND LOCATION
   b. SUPPLIER/FABRICATOR IDENTITY AND ADDRESS
   c. ENGINEERS IDENTITY AND ADDRESS
   d. CONFORMANCE WITH THE APPLICABLE BUILDING CODES.
   e. DESIGN LOADING CRITERIA,
   f. DESIGN DEFLECTION CRITERIA.
   g. CONNECTIONS TO THE STRUCTURE CLEARLY IDENTIFIED AND DETAILED.
   h. SHOP DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE STAIR SYSTEM
7. ALL STAIRS, GUARD RAIL, HAND RAIL, PLATFORM LANDINGS, TOE BOARDS, TREADS, RISERS, ACCESSORIES AND CONNECTIONS SHALL BE HOT-DIPPED GALVANIZED.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

△	DATE	DESCRIPTION	BY	APPROVED
11	09/11/2018	PKG 2A: FOUNDATION & SOG - REV J	BMJ	PCT
10	08/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	BMJ	PCT
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	BMJ	PCT
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	BMJ	PCT
N	07/13/2018	PKG 2A: FOUNDATION & SOG - REV N	BMJ	PCT
Z	11/16/2018	PKG 2A: FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. TWIST REGISTERED 8887 PROFESSIONAL ENGINEER 11/15/2018

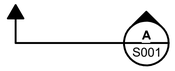
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by B. ELDER | Designed by B. JEMAL

Project No. 6936
Sheet Name: GENERAL NOTES
Sheet S-002 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

STRUCTURAL ABBREVIATIONS

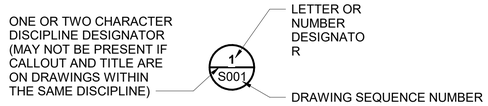
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AGGR	AGGREGATE
AISI	AMERICAN IRON AND STEEL INSTITUTE
AL	ALUMINUM
ALTN	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASTM	AMERICAN SOCIETY FOR TESTING OF MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
B/STL	BOTTOM OF STEEL
BC	BOLT CIRCLE
BETW	BETWEEN
BLDG	BUILDING
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BRKT	BRACKET
C.O.	CLEAR OPENING
C/C	CENTER TO CENTER
CAP	CAPACITY
CF	CUBIC FEET
CHKR	CHECKER
CIR	CIRCLE
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLJ	CONTROL JOINT
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CONCRETE OPENING
COL	COLUMN
COMP	COMPRESSION
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
COORD	COORDINATE
COR	CORNER
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CTR	CENTER
CTRD	CENTERED
CY	CUBIC YARD
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
EMBED	EMBEDMENT
EQ	EQUAL
EQ SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FAB	FABRICATE
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FAR FACE
FL	FLOOR
FLG	FLANGE
FNSH	FINISH
FS	FAR SIDE
FT	FEET
FUT	FUTURE
GA	GAGE
GALV	GALVANIZE
GB	GRADE BEAM
GND	GROUND
GR	GRADE
GRTG	GRATING
H	SLAB THICKNESS
HEF	HORIZONTAL EACH FACE
HEX	HEXAGON
HK	HOOK
HORIZ	HORIZONTAL
HPT	HIGH POINT
HR	HAND RAIL
HS	HIGH STRENGTH
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IJ	ISOLATION JOINT
IN	INCHES
INTR	INTERIOR
INVT	INVERT
IR	INSIDE RADIUS
JT	JOINT
KSI	KIPS PER SQUARE INCH
L	ANGLE
LAD	LADDER
LB	POUND
LD	DEVELOPMENT LENGTH
LG	LONG
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LPT	LOW POINT
LS	LAP SPLICE
LVL	LEVEL
MATL	MATERIAL
MAX	MAXIMUM
MC	MOMENT CONNECTION
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MK	MARK
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
NW	NORTHWEST
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OZ	OUNCE
PCF	POUNDS PER CUBIC FOOT
PED	PEDESTAL
PEMB	PRE-ENGINEERED METAL BUILDING
PERIM	PERIMETER
PERP	PERPENDICULAR
PL	PLATE
PLC	PLACES
PREFAB	PREFABRICATED
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRETENSIONED
PVC	POLYVINYL CHLORIDE
R	RISER
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE
REQD	REQUIRED
REV	REVISION
RM	ROOM
SB	SHEAR BAR
SC	SLIP-CRITICAL
SCHED	SCHEDULE
SECT	SECTION
SF	SWAY FRAME
SH	SHEET
SIM	SIMILAR
SLO	SHORT LEG OUTSTANDING
SLP	SLOPE
SLV	SLEEVE
SP	SPACE
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
ST	SNUG-TIGHTENED
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STR	STRAIGHT
STRUC	STRUCTURAL
SYMM	SYMMETRICAL
T	TON
T&B	TOP AND BOTTOM
T/	TOP OF
T/CONC	TOP OF CONCRETE
T/STL	TOP OF STEEL
TB	TIE BEAM
TEMP	TEMPORARY
THD	THREAD
THK	THICK
THRU	THROUGH
TOB	TOP OF BOLT
TOG	TOP OF GRATING
TRD	TREAD
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAR	VARIES
VEF	VERTICAL EACH FACE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WD	WIDE
WDT	WIDTH
WP	WORK POINT
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC



SECTION CALLOUT EXAMPLE



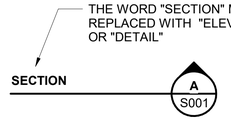
DETAIL CALLOUT EXAMPLE



SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS



ELEVATION CALLOUT EXAMPLE



SECTION, DETAIL, OR ELEVATION TITLE EXAMPLE

SECTION, DETAIL, AND ELEVATION IDENTIFICATION SYSTEM

△	DATE	DESCRIPTION	BY	APPROVED
7	09/11/2018	PKG 2A: FOUNDATION & SOG - REV J	BMJ	PCT
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	BMJ	PCT
5	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	BMJ	PCT
P	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV P	BMJ	PCT
O	07/13/2018	PKG 2A: FOUNDATION & SOG - REV X	BMJ	PCT
Z	11/16/2018	PKG 2A: FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. BRADY
REGISTERED
8887
PROFESSIONAL ENGINEER
11/15/2018

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: B. ELDER
Designed by: B. JEMAL

Project No.
6936

Sheet Name:
LEGENDS AND ABBREVIATIONS

Sheet S-003 of XX

Drawing No.
108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

NOTES:

1. STATEMENT OF SPECIAL INSPECTIONS.
   - A. THE "STATEMENT OF SPECIAL INSPECTIONS" HAS BEEN PREPARED IN ACCORDANCE WITH IBC 2012, SECTION 1704 AND 1705. △L
   - B. THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTOR(S) TO PROVIDE "SPECIAL INSPECTIONS" DURING CONSTRUCTION.
   - C. THE SPECIAL INSPECTOR SHALL BE QUALIFIED PER IBC 2012 AND MABCD SECTION 1704.2.1.
   - D. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT INSPECTION REPORTS TO THE ENGINEER DURING CONSTRUCTION FOR VERIFICATION INCLUDING FINAL REPORTS IN ACCORDANCE WITH IBC SECTION 1704.2.1.
   - E. THE SPECIAL INSPECTOR SHALL USE THE LATEST ISSUE OF THE STRUCTURAL DRAWINGS FOR THE INSPECTION OF THIS STRUCTURE. SHOP FABRICATION DRAWINGS SHALL NOT BE USED FOR INSPECTION PURPOSES.
   - F. THE "YES" COLUMN IN THE FOLLOWING TABLES IDENTIFY THE MATERIALS, SYSTEMS, AND COMPONENTS, WHICH ARE TO HAVE SPECIAL INSPECTION PER IBC 2012 SECTION 1704.2.1.
2. REQUIRED VERIFICATION AND INSPECTION.
   - A. REFER TO IBC 2012 SECTION 1705.
   - B. STRUCTURAL STEEL: SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.
   - C. STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL: SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH TABLE 1705.2.2 AND THIS PARAGRAPH.
     1. WELDING: WELDING INSPECTION AND WELDING INSPECTOR QUALIFICIATION SHALL BE IN ACCORDANCE WITH THIS SECTION.
        - a. WELDING INSPECTION AND WELDING INSPECTOR QUALIFICATION FOR COLD-FORMED STEEL FLOOR AND ROOF DECKS SHALL BE IN ACCORDANCE WITH AWS D1.3.
        - b. REINFORCING STEEL: N/A
   - D. CONCRETE CONSTRUCTION: SPECIAL INSPECTIONS AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY THIS SECTION AND TABLE 1705.3.
     1. MATERIALS: IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIALS IN CHAPTER 3 OF ACI 318, THE BUILDING OFFICIAL SHALL REQUIRE TESTING OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN CHAPTER 3 OF ACI 318. WELDABILITY OF REINFORCEMENT, EXCEPT THAT WHICH CONFORMS TO ASTM A 706, SHALL BE DETERMINED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 3.5.2 OF ACI 318.
     2. CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION OF POST-INSTALLED ADHESIVE ANCHORS. THE ENGINEER OF RECORD SHALL DETERMINE THE PROOF LOAD TO BE USED FOR FIELD TESTING AND SHALL INDICATE ON THE DRAWINGS WHICH ANCHORS ARE CONSIDERED CRITICAL FOR TESTING.
   - E. MASONRY CONSTRUCTION: N/A
   - F. WOOD CONSTRUCTIONS: N/A
   - G. SOILS: SPECIAL INSPECTIONS FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE AS REQUIRED BY THIS SECTION AND TABLE 1705.6. THE APPROVED GEOTECHNICAL REPORT, AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS SHALL BE USED TO DETERMINE COMPLIANCE. DURING FILL PLACEMENT, THE SPECIAL INSPECTOR SHALL DETERMINE THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.
   - H. DRIVEN DEEP FOUNDATIONS: N/A
   - I. CAST-IN-PLACE DEEP FOUNDATION: N/A
   - J. HELICAL PILE FOUNDATIONS: N/A
   - K. SPECIAL INSPECTIONS FOR WIND RESISTANCE: N/A
   - L. SPECIAL INSPECTION FOR SEISMIC RESISTANCE: N/A
   - M. TESTING AND QUALIFICATION FOR SEISMIC RESISTANCE: N/A
   - N. SPRAYED FIRE-RESISTANT MATERIALS: N/A
   - O. MASTIC AND INTUMESCENT FIRE RESISTANT COATINGS: N/A
   - P. EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS): N/A
   - Q. FIRE-RESISTANT PENETRATIONS AND JOINTS: N/A
3. IN ACCORDANCE WITH IBC 2012 SECTION 1704.4, EACH CONTRACTOR OR SUBCONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND OR SEISMIC RESISTANT SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND OR SEISMIC-RESISTING COMPONENT LISTED IN NOTE 4 SHALL SUBMIT A WRITTEN "STATEMENT OF RESPONSIBILITY" TO THE BUILDING OFFICIAL AND OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE "STATEMENT OF RESPONSIBILITY" SHALL INCLUDE:
   - A. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.
4. STRUCTURAL OBSERVATIONS:
   - A. WHERE REQUIRED BY THE PROVISIONS OF IBC SECTION 1704.5.1 OR 1704.5.2, THE CONTRACTOR SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS AS DEFINED IN IBC SECTION 1702.
     1. STRUCTURAL OBSERVATIONS FOR SEISMIC RESISTANCE: N/A.
     2. STRUCTURAL OBSERVATIONS FOR WIND RESISTANCE: N/A.
   - B. SPECIAL INSPECTOR OF RECORD: N/A
     1. DUTIES OF SPECIAL INSPECTOR OF RECORD: N/A.
     2. FINAL INSPECTION REPORT: N/A.
   - C. TABLE 1 IDENTIFIES THE STRUCTURAL TESTS REQUIRED FOR THIS PROJECT.

TABLE 1 SUMMARY OF REQUIRED STRUCTURAL TESTS

TEST	FREQUENCY OF INSPECTION: CONTINUOUS	FREQUENCY OF INSPECTION: PERIODIC	REFERENCED STANDARD[a]	IBC REFERENCE	YES	NO	N/A
1. CONCRETE							
a. CYLINDER COMPRESSION TESTING	--	X	ASTM C39	--	X		
b. FLEXTURAL TEST & SHRINKAGE TEST	--	X	ASTM C78 & C157 MODIFIED BY ACI 364.3R	--	X		
c. PRECONSTRUCTION TESTING OF SHOTCRETE	--	X	--	1910			X
2. MASONRY							
a. HOLLOW UNIT BLOCK COMPRESSION TEST (UNIT STRENGTH METHOD)	X △L	--	ASTM C90	2105	X	△L	
b. PRISM COMPRESSION TESTS (PRISM TEST METHOD)	X	--	ASTM C1314	2105	X		
3. POST-INSTALLED CONCRETE ANCHORS **							
a. EXPANSION ANCHORS	--	X	ICC-ES-AC 193	1909	X		
b. ADHESIVE ANCHORS	X	--	ICC-ES-AC 193	1909	X		
4. GROUT							
NS GROUT	--	X	ASTM C1019	--	X		

** WHEN DIRECTED BY THE ENGINEER TO PROVIDE POST-INSTALLED ANCHORAGES THE FOLLOWING GUIDELINES SHALL BE FOLLOWED:

1. THE SPECIAL INSPECTOR MUST BE ON THE JOBSITE INITIALLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ADHESIVE IDENTIFICATION AND EXPIRATION DATE, HOLE DIMENISONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, CONCRETE THICKNESS, ANCHOR EMBEDMENT, TIGHTENING TORQUE AND ADHERENCE TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
2. THE SPECIAL INSPECTOR MUST VERIFY THE INITIAL INSTALLATIONS OF EACH TYPE AND SIZE OF ADHESIVE ANDHOR BY CONSTRUCTION PERSONNEL ON SITE. SUBSEQUENT INSTALLATIONS OF THE SAME ANCHOR TYPE AND SIZE BY THE SAME CONSTRUCTION PERSONNEL ARE PERMITTED TO BE PERFORMED IN THE ABSENCE OF THE SPECIAL INSPECTOR. ANY CHANGE IN THE ANCHOR PRODUCT BEING INSTALLED OR THE PERSONNEL PERFORMING THE INSTALLATION REQUIRES AN INITIAL INSPECTION. FOR ONGOING INSTALLATIONS OVER AN EXTENDED PERIOD, THE SPECIAL INSPECTOR MUST MAKE REGULAR INSPECTIONS TO CONFIRM CORRECT HANDLING AND INSTALLATION OF THE PRODUCT.
3. CONTINUOUS SPECIAL INSPECTIONS OF ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318 17.8.2.4.
4. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI 355.2 OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

IBC 2012 TABLE 1705.3 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD[a]	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL.	—	X	ACI 318: 3.5, 7.1-7.7	1910.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 2b.	—	—	AWS D1.4 ACI 318: 3.5.2	—
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	—	X	ACI 318: 8.1.3, 21.2.8	1908.5, 1909.1
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	—	X	ACI 318: 3.8.6, 8.1.3, 21.2.8	1909.1
5. VERIFYING USE OF REQUIRED DESIGN MIX.	—	X	ACI 318: CH. 4, 5.2-5.4	1904.2, 1910.2, 1910.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1910.10
7. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	—	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	—	X	ACI 318: 5.11- 5.13	1910.9
9. INSPECTION OF PRECAST CONCRETE :				
a. APPLICATION OF PRESTRESSING FORCES.	X	—	ACI 318: 18.20	—
10. ERECTION OF PRECAST CONCRETE MEMBERS.	—	X	ACI 318: CH. 16	—
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	—	X	ACI 318: 6.2	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	—	X	ACI 318: 6.1.1	

FOR SI: 1 INCH = 25.4 MM

a. WHERE APPLICABLE, SEE ALSO SECTION 1705.11, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI 355.2 OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

c. WHEN DIRECTED BY THE CONTRACT DOCUMENTS TO PROVIDE POST-INSTALLED ANCHORAGES THE FOLLOWING GUIDELINES SHALL BE FOLLOWED:
   1. A REPRESENTATIVE OF THE ANCHOR MANUFACTURER OR PROJECT SPECIAL INSPECTOR SHALL BE ON SITE TO OVERSEE THE INSTALLATION OF THE FIRST FOUR ANCHORS FOR EACH TYPE OF ANCHOR INSTALLED. THIS MEASURE SHALL BE TAKEN FOR EACH INSTALLER OF THE ANCHORS. THIS SERVICE IS TYPICALLY PROVIDED FREE BY THE LOCAL ANCHOR REPRESENTATIVE.
   2. THE FIRST FOUR ANCHORS SHALL BE TENSION TESTED ONCE INSTALLATION IS COMPLETE FOR 200% OF THE SERVICE LEVEL LOAD CAPACITY AS SPECIFIED BY THE MANUFACTURER.

IBC 2012 TABLE 1705.2.2 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD[a]
1. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:			
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	—	X	APPLICABLE ASTM MATERIAL STANDARDS
b. MANUFACTURER'S CERTIFIED TEST REPORTS.	—	X	
2. INSPECTION OF WELDING:			
a. COLD-FORMED STEEL DECK:			
1) FLOOR AND ROOF DECK WELDS.	—	X	AWS D1.3
b. REINFORCING STEEL:			
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	—	X	AWS D1.4 ACI 318: SECTION 3.5.2
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	–	
3) SHEAR REINFORCEMENT	—	X	
4) OTHER REINFORCING STEEL.	—	X	

△	DATE	DESCRIPTION	BY	APPROVED
K	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
6	06/15/2018	PKG 2B MEP, FP, FINISHES - 60% REVIEW	BMJ	PCT
7	06/29/2018	PKG 2B MEP, FP, FINISHES - 90% REVIEW	BMJ	PCT
8	07/13/2018	PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. TWILSON 8887 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEWAL
Drawn by B. ELDER

Project No. 6936
Sheet Name: STATEMENT OF SPECIAL INSPECTIONS
Sheet S-004 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

IBC 2012 TABLE 1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	—
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	—	X

ACI 530-11 TABLE 1.19.2 - LEVEL B QUALITY ASSURANCE - MASONRY

MINIMUM TESTS
VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1b.3 FOR SELF-CONSOLIDATING GROUT
VERIFICATION OF f' m IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE

MINIMUM INSPECTION

INSPECTION TASK	FREQUENCY (a)		REFERENCE FOR CRITERIA	
	CONTINUOUS	PERIODIC	TMS 402/ ACI 530/ ASCE 5	TMS 602/ ACI 530.1/ ASCE 6
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	—	X		ART. 1.5
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR	—	X		ART. 2.1, 2.6 A
b. CONSTRUCTION OF MORTAR JOINTS	—	X		ART. 3.3 B
c. LOCATION OF REINFORCEMENT, CONNECTORS	—	X		ART. 3.4, 3.6 A
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE	—	X		ART. 3.2 D, 3.2 F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS	—	X	SEC. 1.16	ART. 2.4, 3.4
c. PLACEMENT OF REINFORCEMENT, CONNECTORS	—	X	SEC. 1.16	ART. 3.2 E, 3.4, 3.6 A
d. PROPORTIONS OF SITE-PREPARED GROUT	—	X		ART. 2.6 B, 2.4 G.1.b
e. CONSTRUCTION OF MORTAR JOINTS	—	X		ART. 3.3 B
4. VERIFY DURING CONSTRUCTION:				
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	—	X		ART. 3.2 D, 3.2 F
b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	—	X	SEC. 1.16	ART. 2.4, 3.4
c. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))	—	X	SEC. 1.16	ART. 3.2 E, 3.4, 3.6 A
d. PLACEMENT OF GROUT	—	X		ART. 2.6 B, 2.4 G.1.b
3. OBSERVE PERPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	—	X		ART. 1.4 B32.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4

(a) FREQUENCY REFERS TO THE FREQUENCY OF INSPECTION, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE.

	DATE	DESCRIPTION	BY	APPROVED
1	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
6	06/15/2018	PKG 2B MEP, FP, FINISHES - 60% REVIEW	BMJ	PCT
9	06/29/2018	PKG 2B MEP, FP, FINISHES - 90% REVIEW	BMJ	PCT
O	07/13/2018	PKG 2B MEP, FP, FINISHES - REV Q	BMJ	PCT
X	11/1/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. BOSE 8857 REGISTERED PROFESSIONAL ENGINEER KANSAS 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: B. ELDER
Designed by: B. JEMAL

Project No. 6936
Sheet Name: STATEMENT OF SPECIAL INSPECTIONS
Sheet S-005 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

KEYED NOTES

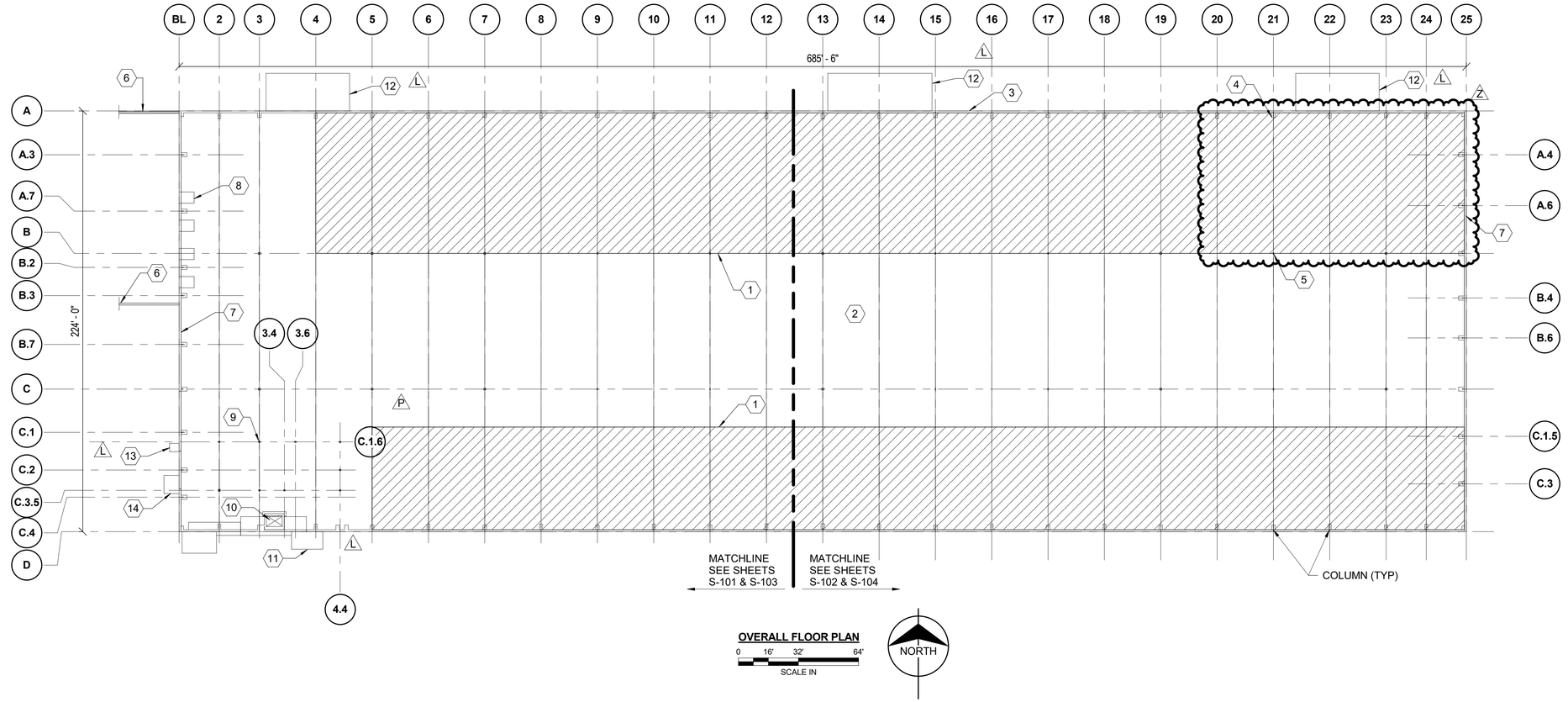
Z

1. 12" THICK STEEL FIBER-REINFORCED CONCRETE SLAB-ON-GRADE.
2. 8" THICK STEEL FIBER-REINFORCED CONCRETE SLAB-ON-GRADE.
3. 12" THICK STEM WALL REINFORCED W/ #4 @12" OC EW, EF.
4. PEMB STEEL FRAME COLUMN, TYP
5. PEMB STEEL INTERIOR COLUMN, TYP
6. 12" THICK CONCRETE SITE WALL
7. 12" THICK CONCRETE WALL WITH CONCRETE PILASTERS
8. LOADING DOCKS WITH DOCK LEVELERS (4 PLACES)
9. MEZZANINE COLUMNS
10. ELEVATOR PIT
11. STAIR FOOTING (SIMILAR TO B / S-504)
12. MEP PAD (SEE TYPICAL EXTERIOR EQUIPMENT PAD ON S-502) L
13. DOOR STOOP (SEE S-502)
14. VESTIBULE SLAB (SEE B / S-504)

ASSUMED CONCENTRATED LOAD

CONCENTRATED LOAD = 32,000 LB (MAX) BASE PLATE SIZE = 12"x12"

CONCENTRATED LOAD = 16,000 LB (MAX) BASE PLATE SIZE = 12"x12"



OVERALL FLOOR PLAN

0 16' 32' 64'

SCALE IN

NORTH

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
J.	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L.	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P.	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z.	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW

☐ APPROVED ☐ NOT REQUIRED DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP E. ZERO 8857 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering

AUTOMATED WAREHOUSE WICHITA, KS

BLDG-1-338G

Designed by B. JEMAL

Drawn by B. ELDER

Project No. 6936

Sheet Name: OVERALL FLOOR PLAN

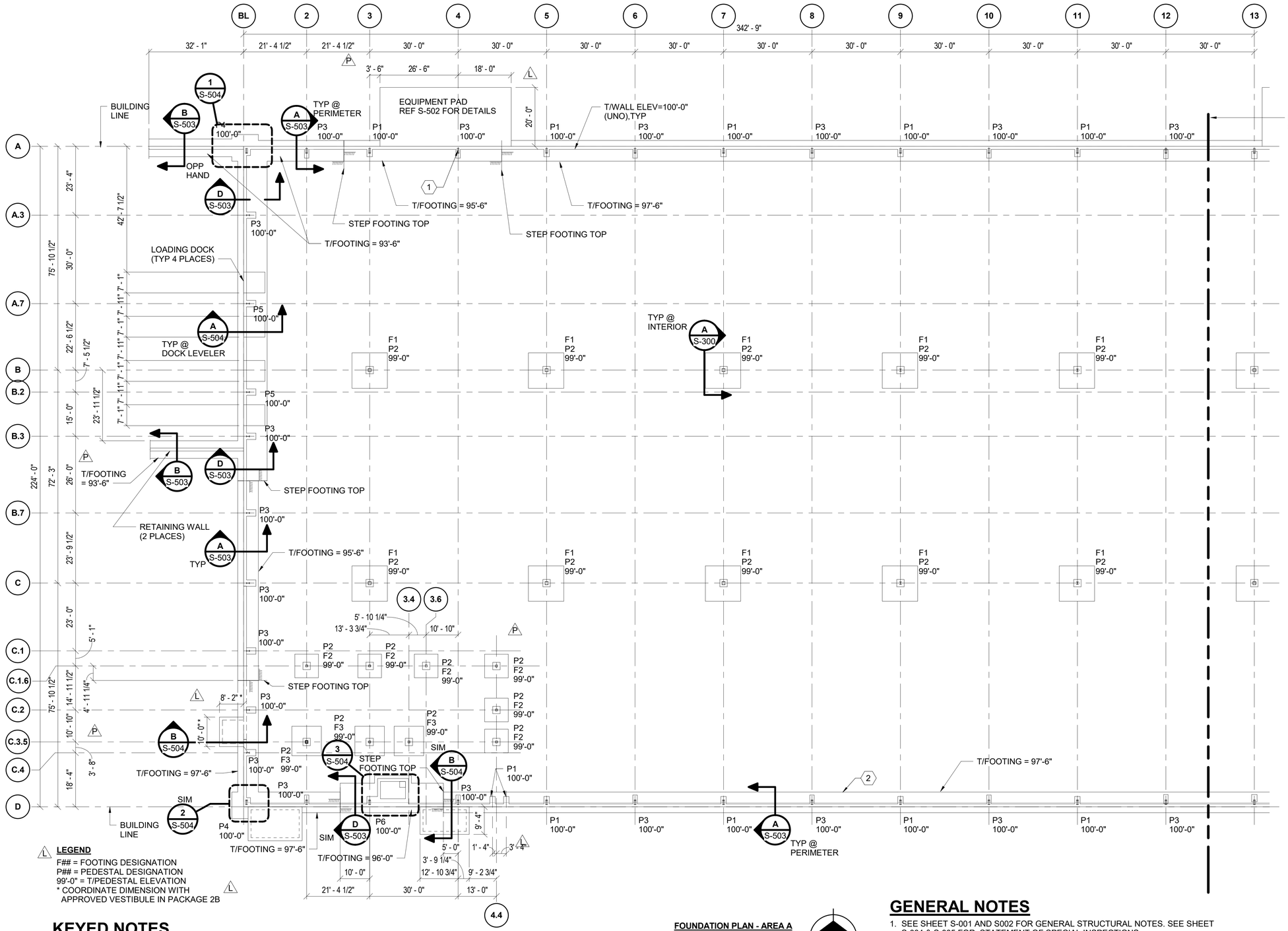
Sheet S-100 of XX

Drawing No. 108M-306-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\Struc\104543_S_tjwilson.rvt

11/15/2018 2:24:02 PM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

F## = FOOTING DESIGNATION
P## = PEDESTAL DESIGNATION
99'-0" = T/PEDESTAL ELEVATION
* COORDINATE DIMENSION WITH APPROVED VESTIBULE IN PACKAGE 2B

KEYED NOTES

1. PIPE PENTERATION THROUGH FOUNDATION. PROVIDE 2" MIN CLEAR ALL AROUND PIPE WITH OPENING OR SLEEVE. COORDINATE FINAL LOCATION AND ELEVATION WITH MECHANICAL. SEE TYPICAL SLEEVE THROUGH WALL/ SLAB DETAIL ON SHEET S-502.
2. UFER GROUNDING CONNECTION TO PERIMETER FOOTING REBAR TO BE INSTALLED BY ELECTRICAL SUBCONTRACTOR. COORDINATE INSTALLATION OF GROUNDING CONNECTION TO REBAR PRIOR TO POURING CONCRETE WITH ELECTRICAL SUBCONTRACTOR. REFER TO ELECTRICAL UNDERGROUND DRAWINGS FOR INFORMATION

FOUNDATION PLAN - AREA A

0 8' 16' 32'
SCALE IN FEET

NORTH

GENERAL NOTES

1. SEE SHEET S-001 AND S002 FOR GENERAL STRUCTURAL NOTES. SEE SHEET S-004 & S-005 FOR STATEMENT OF SPECIAL INSPECTIONS.
2. EXCAVATION, FILL, AND BACKFILL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 31 20 00.
3. SEE S-300 FOR FOUNDATION SCHEDULE AND TYPICAL DETAILS
4. STEPS IN FOOTINGS SHALL BE LOCATED AT MIDSPAN OF WALL BETWEEN COLUMNS.
5. REFER S-503 FOR PERIMETER FOUNDATION INSUALTION NOTES.

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
J.	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L.	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P.	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z.	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

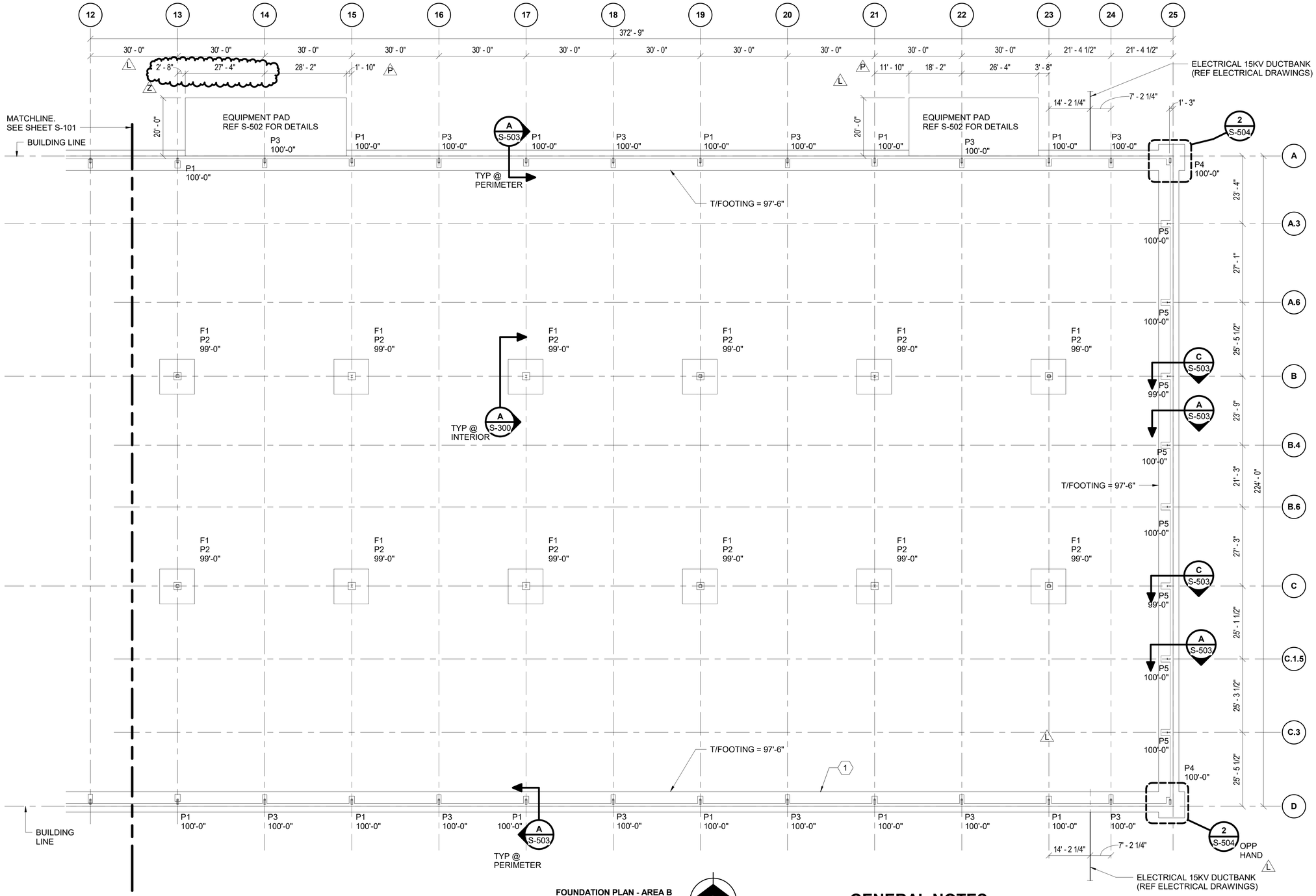
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. HEDDY REGISTERED 8887 KANSAS PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

Project No. 6936
Sheet Name: FOUNDATION PLAN - AREA A
Sheet S-101 of XX
Drawing No. 108M-307-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

F## = FOOTING DESIGNATION
P## = PEDESTAL DESIGNATION
L 99'-0" = T/PEDESTAL ELEVATION

FOUNDATION PLAN - AREA B

0 8' 16' 32'
SCALE IN FEET

NORTH

KEYED NOTES

1. UFER GROUNDING CONNECTION TO PERIMETER FOOTING REBAR TO BE INSTALLED BY ELECTRICAL SUBCONTRACTOR. COORDINATE INSTALLATION OF GROUNDING CONNECTION TO REBAR PRIOR TO POURING CONCRETE WITH ELECTRICAL SUBCONTRACTOR. REFER TO ELECTRICAL UNDERGROUND DRAWINGS FOR INFORMATION

GENERAL NOTES

1. SEE SHEET S-001 AND S002 FOR GENERAL STRUCTURAL NOTES. SEE SHEET S-004& S-005 FOR STATEMENT OF SPECIAL INSPECTIONS.
2. EXCAVATION, FILL, AND BACKFILL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 312000.
3. SEE S-300 FOR FOUNDATION SCHEDULE AND TYPICAL DETAILS.
4. STEPS IN FOOTINGS SHALL BE LOCATED AT MIDSPAN OF WALL BETWEEN COLUMNS.
5. REFER S-503 FOR PERIMETER FOUNDATION INSUALTION NOTES. L

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
J	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

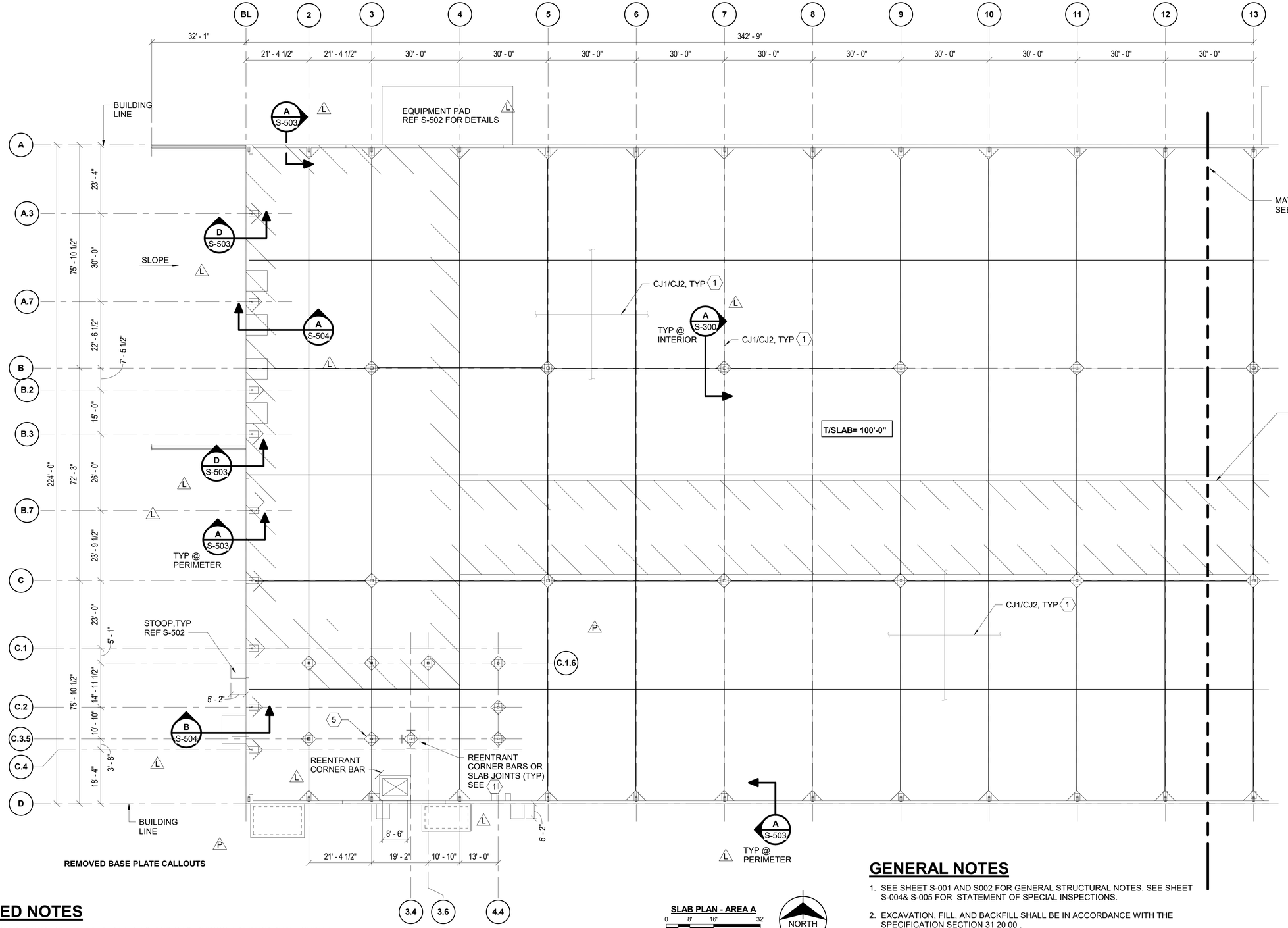
BURNS MSDONNELL
9400 Ward Parkway
Kansas City, MO 84114
www.burnsmcd.com
BMCD #104543

PHILIP C. HENRY 8887 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

Project No. 6936
Sheet Name: FOUNDATION PLAN - AREA B
Sheet S-102 of XX
Drawing No. 108M-308-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



REMOVED BASE PLATE CALLOUTS

KEYED NOTES

1. SLAB JOINTS. SEE DETAILS CJ-1, CJ-2, AND CJ-3. SUBCONTRACTOR SHALL SUBMIT JOINT LAYOUT AND PLACING SEQUENCE PLAN FOR REVIEW. SLAB JOINTS TO BE LOCATED MIDWAY BETWEEN COLUMN LINES
2. ELEVATOR PIT. SEE SHEET S-504 FOR DETAILS.

SLAB PLAN - AREA A

0 8' 16' 32'

SCALE IN FEET

NORTH

GENERAL NOTES

1. SEE SHEET S-001 AND S002 FOR GENERAL STRUCTURAL NOTES. SEE SHEET S-004& S-005 FOR STATEMENT OF SPECIAL INSPECTIONS.
2. EXCAVATION, FILL, AND BACKFILL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 31 20 00 .
3. SEE SHEETS S-501 AND S-502 FOR TYPICAL SLAB ON GRADE DETAILS.
4. SEAL ALL CONCRETE SLAB ON GRADE WITH L&M SEAL HARD PER 03 30 00
5. REINFORCE 12" THICK SLAB-ON-GRADE WITH #4@16" O.C. EW TOP & BOTTOM. REF S-100 FOR LOCATION.
   REINFORCE 8" THICK SLAB-ON-GRADE WITH #5@12" O.C. EW. REF OVERALL FLOOR PLAN FOR LOCATION. REFER KEYED NOTES ON S-100 FOR ADDITIONAL BID OPTIONS.
6. PROVIDE (2) #4 BARS, 4'-0" LONG AT ALL RE-ENTRANT CORNERS. L
7. REF SPEC 03 30 00 FOR FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. L

	DATE	DESCRIPTION	BY	APPROVED
J	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

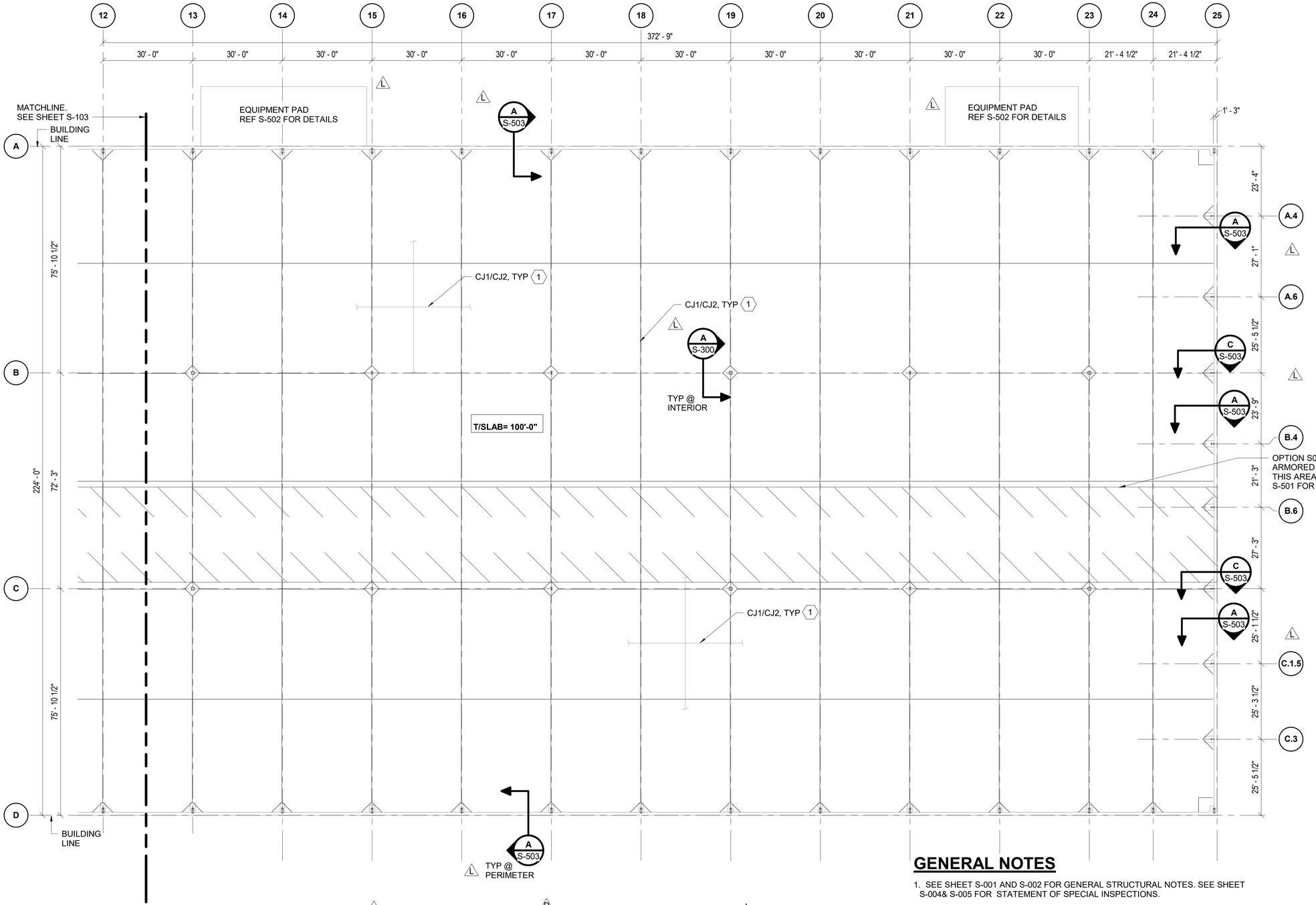
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP E. BURNS 8857 LICENSED PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

Project No. 6936
Sheet Name: SLAB PLAN - AREA A
Sheet S-103 of XX
Drawing No. 108M-309-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



KEYED NOTES

1. SLAB JOINTS. SEE DETAILS CJ-1, CJ-2, AND CJ-3. SUBCONTRACTOR SHALL SUBMIT JOINT LAYOUT AND PLACING SEQUENCE PLAN FOR REVIEW. SLAB JOINTS TO BE LOCATED MIDWAY BETWEEN COLUMN LINES.

M P **REMOVED BASE PLATE CALLOUTS**

SLAB PLAN - AREA B

0 8' 16' 32'
SCALE IN FEET

NORTH

GENERAL NOTES

1. SEE SHEET S-001 AND S-002 FOR GENERAL STRUCTURAL NOTES. SEE SHEET S-004& S-005 FOR STATEMENT OF SPECIAL INSPECTIONS.
2. EXCAVATION, FILL, AND BACKFILL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION SECTION 312000.
3. SEE SHEETS S-501 AND S-502 FOR TYPICAL SLAB ON GRADE DETAILS.
4. SEAL ALL CONCRETE SLAB ON GRADE WITH L&M SEAL HARD PER 033000
5. REINFORCE 12" THICK SLAB-ON-GRADE WITH #4@16" O.C. EW TOP & BOTTOM. REF S-100 FOR LOCATION.
   REINFORCE 8" THICK SLAB-ON-GRADE WITH #5@12" O.C. EW. REF OVERALL . FLOOR PLAN FOR LOCATION ON S-100.REFER KEYED NOTES ON S-100 FOR ADDITIONAL BID OPTIONS. L
6. PROVIDE (2) #4 BARS, 4'-0" LONG AT ALL RE-ENTRANT CORNERS.
7. REF SPEC 03 30 00 FOR FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. L

△	DATE	DESCRIPTION	BY	APPROVED
-	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
M	06/13/2018	PKG 2A FOUNDATION & SOG - REV M	BMJ	PCT
P	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

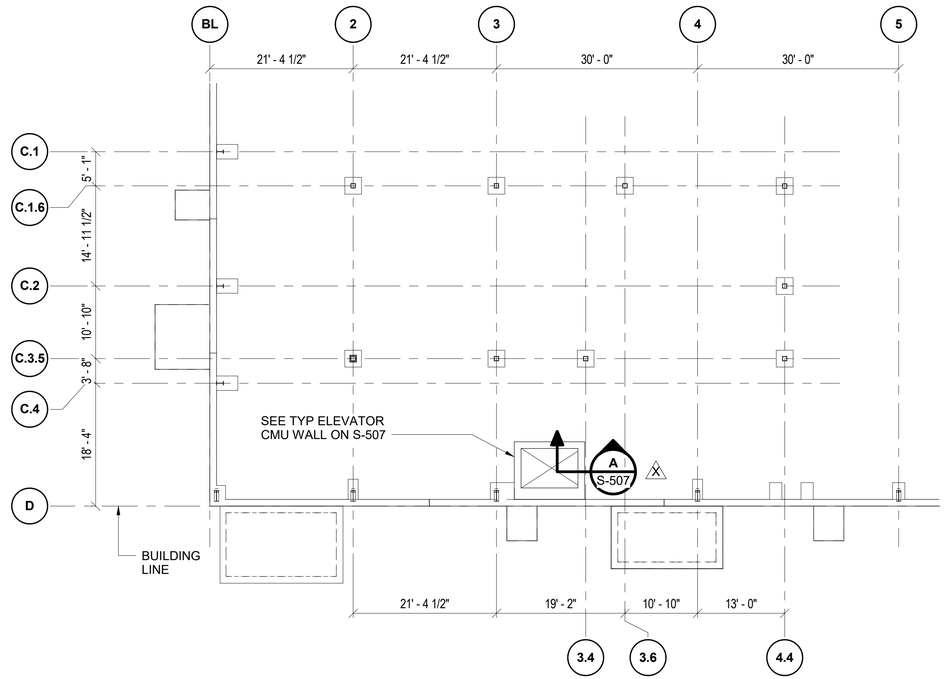
PHILIP C. TERRY
REGISTERED
8857
PROFESSIONAL ENGINEER
11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: B. ELDER
Designed by: B. JEMAL

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Project No. 6936
Sheet Name: SLAB PLAN - AREA B
Sheet S-104 of XX
Drawing No. 108M-310-XXX

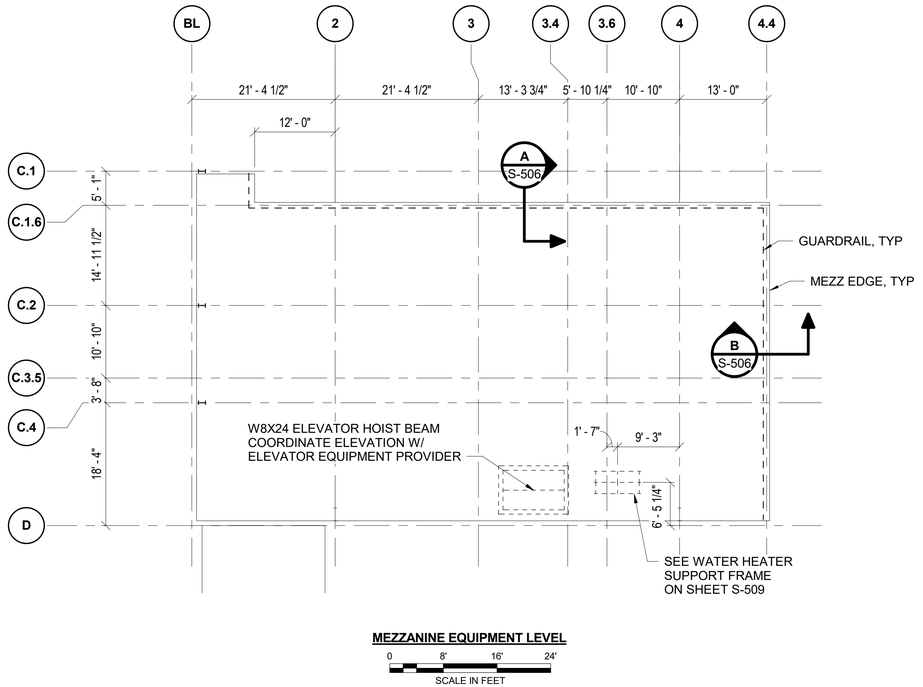
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



MEZZANINE AREA CMU WALL PLAN

0 8' 16' 24'

SCALE IN FEET



MEZZANINE EQUIPMENT LEVEL

0 8' 16' 24'

SCALE IN FEET

NOTES

1. SEE SHEET S-001 AND S-002 FOR GENERAL STRUCTURAL NOTES. SEE SHEET S-004 & S-005 FOR STATEMENT OF SPECIAL INSPECTIONS.
2. SEE SHEET S-505 FOR STANDARD MASONRY DETAILS.
3. COORDINATE MASONRY WITH ARCHITECTURAL DRAWINGS.
4. JOIST AND DECKING NOT SHOWN ON THIS SHEET FOR CLARITY.
5. FOR WALL DIMENSIONS SEE ARCHITECTURAL DRAWINGS.

△	DATE	DESCRIPTION	BY	APPROVED
O	07/13/2018	PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2B MEP, FP, FINISHES - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP E. BRUNS 8887 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by T. WILSON

Project No. 6936
Sheet Name: FINISHES PLANS
Sheet S-105 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

FOOTING SCHEDULE

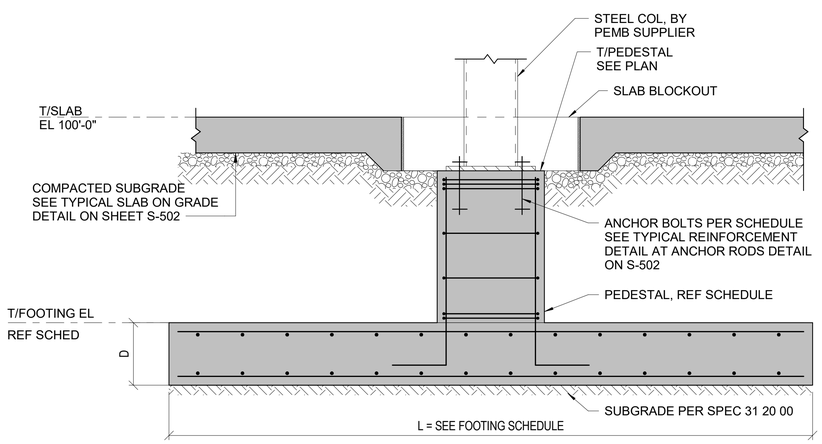
TYPE	WIDTH (W)	LENGTH (L)	THICKNESS (D)	REINFORCEMENT	T/FTG EL
F1	12' - 0"	12' - 0"	1' - 6"	#6@12" O.C. EW TOP, #6@6" O.C. EW BOT	97'-6"
F2	8' - 0"	8' - 0"	2' - 0"	#6@8" O.C. EW TOP & BOT	97'-6"
F3	10' - 0"	10' - 0"	2' - 0"	#6@8" O.C. EW TOP & BOT	97'-6"

PEDESTAL SCHEDULE

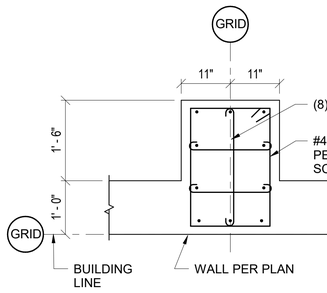
TYPE	WIDTH (W)	LENGTH (L)	VERTICAL REINFORCEMENT	TIES
P1	1'-10"	2'-6"	(8) #6	#4-6@2" TOP, 2@2" BOT,REM @ 6" OC
P2	2'-6"	2'-6"	(12) #6	#4-6@2" TOP, 2@2" BOT,REM @ 6" OC
P3	1'-6"	3'-0"	(10) #6	#4-6@2" TOP, 2@2" BOT,REM @ 6" OC
P4	2'-4"	2'-8"	(10) #6	#4-6@2" TOP, 2@2" BOT,REM @ 6" OC
P5	2'-2"	3'-0"	(12) #6	#4-6@2" TOP, 2@2" BOT,REM @ 6" OC
P6	3'-7"	4'-6"	(20) #6	#4-6@2" TOP, 2@2" BOT,REM @ 6" OC

* WIDTH (W) = SHORTEST DIMENSION. REF DETAILS ON S-300.

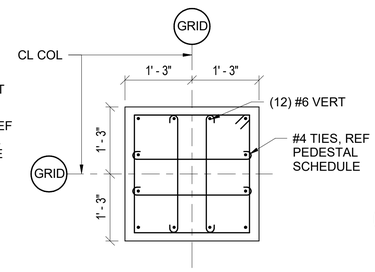
NOTE:
REFER TO TYPICAL REINFORCEMENT AT ANCHOR ROD DETAIL ON S-502
FOR ADDITIONAL REINFORCING REQUIRED AROUND ANCHORS.



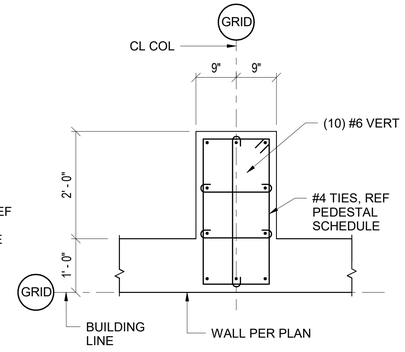
TYPICAL INTERIOR FOOTING (A)
S-101
S-102
S-103
S-104



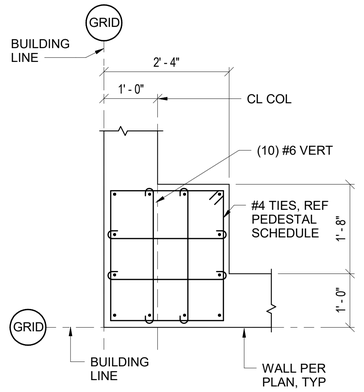
PEDESTAL TYPE 1 (P1)
0 1' 2' 3'
SCALE IN FEET



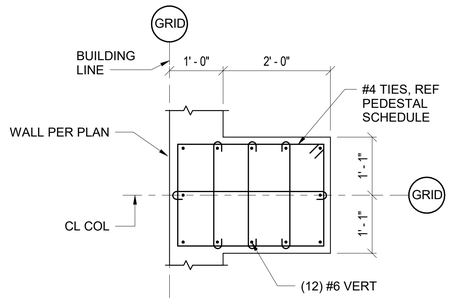
PEDESTAL TYPE 2 (P2)
0 1' 2' 3'
SCALE IN FEET



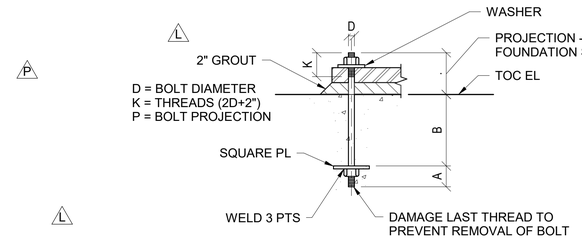
PEDESTAL TYPE 3 (P3)
0 1' 2' 3'
SCALE IN FEET



PEDESTAL TYPE 4 (P4)
0 1' 2' 3'
SCALE IN FEET



PEDESTAL TYPE 5 (P5)
0 1' 2' 3'
SCALE IN FEET

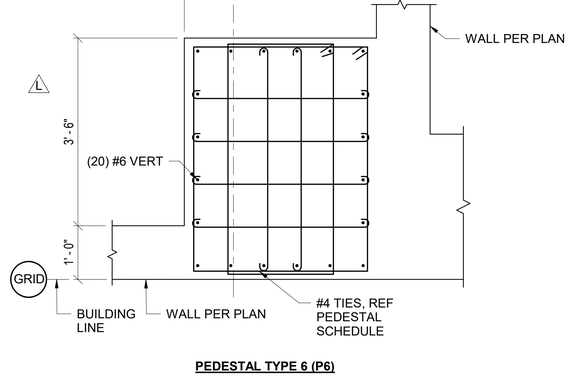


ANCHOR BOLT (AB) SCHEDULE

D	A	B	P	SQUARE PL	WASHER	REMARKS
3/4"	2"	1'-2"	6"	PL1/2"x3"x3"	PL1/4" x 2" DIA	F1554 GR 36
1"	3"	1'-2"	6"	PL3/4"x4 1/2"x4 1/2"	PL1/2" x 3" DIA	F1554 GR 36
1 1/4"	3"	1'-2"	6"	PL3/4"x4 1/2"x4 1/2"	PL1/2" x 3" DIA	F1554 GR 36
1 1/2"	3"	1'-2"	6"	PL3/4"x4 1/2"x4 1/2"	PL1/2" x 3" DIA	F1554 GR 36

NOTE:
SEE PEMB ANCHOR BOLT AND BASE PLATE PLAN AND DETAILS SHEETS.

TYPE II ANCHOR BOLT UNSLEEVED BOLT 1



PEDESTAL TYPE 6 (P6)
0 1' 2' 3'
SCALE IN FEET

△	DATE	DESCRIPTION	BY	APPROVED
J.	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L.	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P.	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z.	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

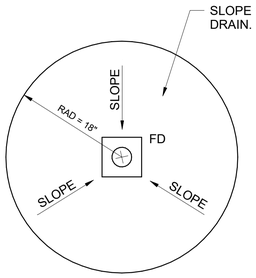
PHILIP E. BENZ NUMBER 8567 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

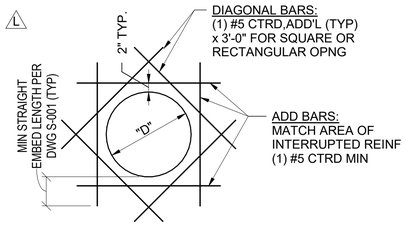
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by B. JEMAL
Drawn by B. ELDER

Project No. 6936
Sheet Name: FOUNDATION SCHEDULES
Sheet S-300 of XX
Drawing No. 108M-311-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

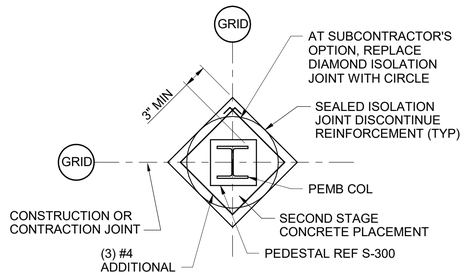


TYPICAL FLOOR DRAIN DETAIL
NOT TO SCALE



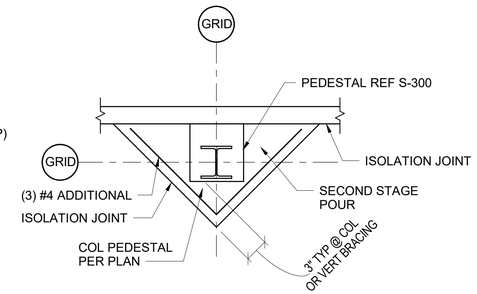
NOTES:
1. DETAIL APPLIES TO BOTH ROUND AND SQUARE OR RECTANGULAR OPNGS ("D" = HEIGHT OR WIDTH, 8" MAX).
2. DIAG BARS ARE REQD FOR ALL OPNGS EXCEPT FLR DRAINS, BUT ADD BARS ARE NOT REQD WHERE NO REINF OR DECK FLUTES INTERRUPTED BY OPENING.

WALL/SLAB OPENING CO-1
NOT TO SCALE

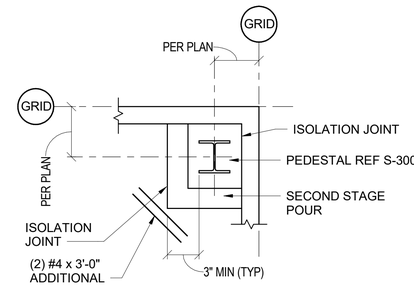


TYPICAL INTERIOR COLUMN ISOLATION JOINT
NOT TO SCALE

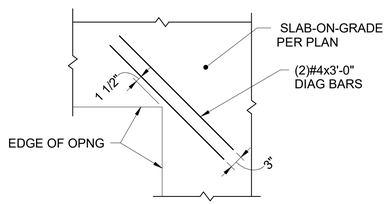
NOTE:
SUBCONTRACTOR SHALL PROVIDE CIRCULAR OPTION WHERE NO FLOOR JOINTS INTERSECT.



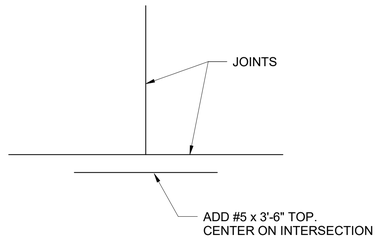
TYPICAL PERIMETER COLUMN ISOLATION JOINT
NOT TO SCALE



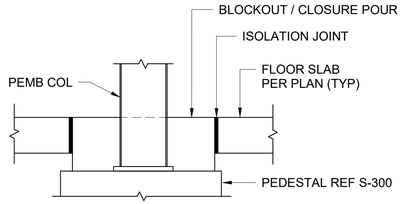
TYPICAL CORNER COLUMN ISOLATION JOINT
NOT TO SCALE



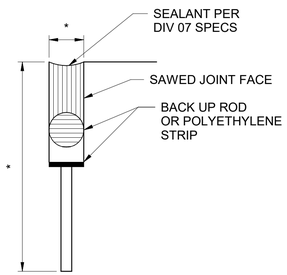
TYPICAL REENTRANT BAR
NOT TO SCALE



TYPICAL ADD BARS AT INTERSECTING JOINTS

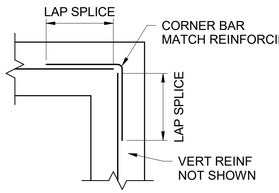


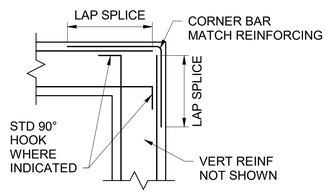
TYPICAL CLOSURE POUR DETAIL

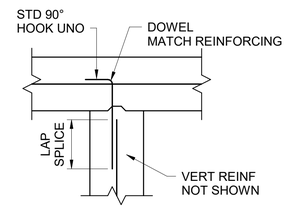


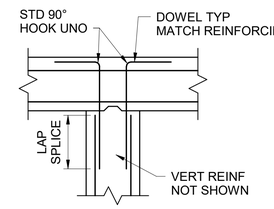
* SEE SLAB JOINT DETAIL

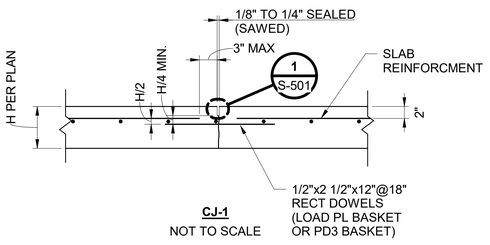
DETAIL 1 / S-501



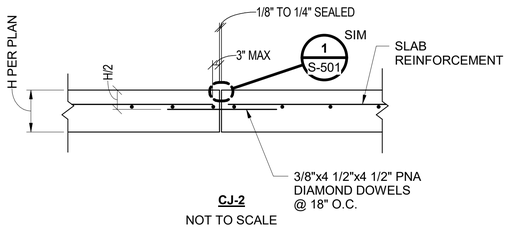




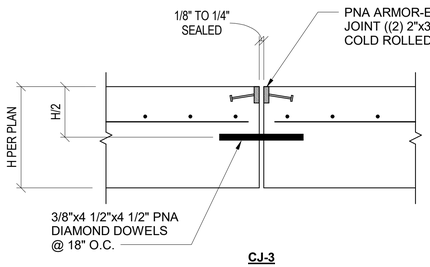




CJ-1
NOT TO SCALE

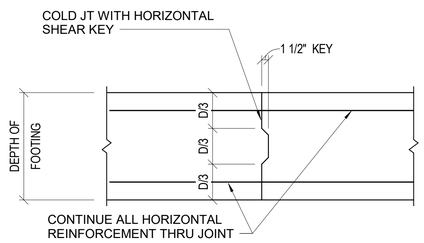


CJ-2
NOT TO SCALE

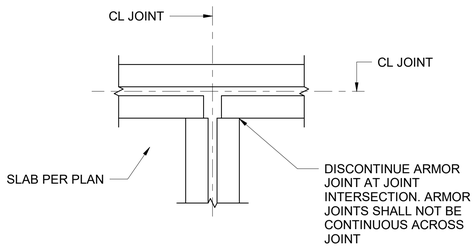


CJ-3
NOT TO SCALE

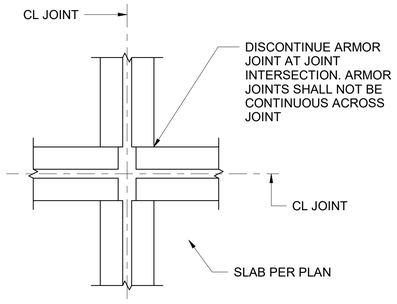
TYPICAL CORNER DETAILS



TYPICAL FOOTING CONSTRUCTION JOINT

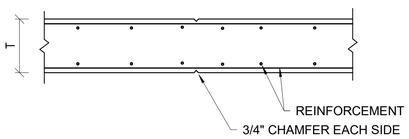


ARMOR JOINT "T" INTERSECTION DETAIL



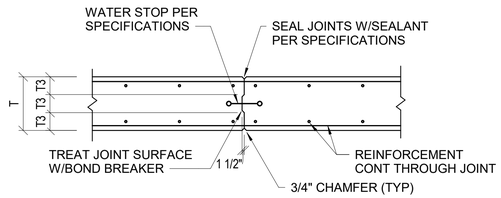
ARMOR JOINT INTERSECTION DETAIL

BID OPTION S01



NOTE:
- CUT ALTERNATE HORIZ BARS (DO NOT CUT TOP AND BOTTOM BARS)
- LOCATE AT 30'-0" MAX

TYPICAL WALL CONTROL JOINT



TYPICAL WALL CONSTRUCTION JOINT

△	DATE	DESCRIPTION	BY	APPROVED
-	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

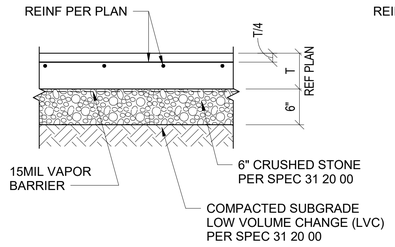
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

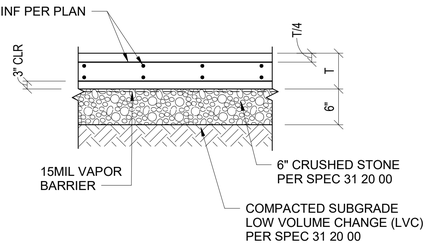
PHILIP C. HERBERT — 8867 — REGISTERED PROFESSIONAL ENGINEER — 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

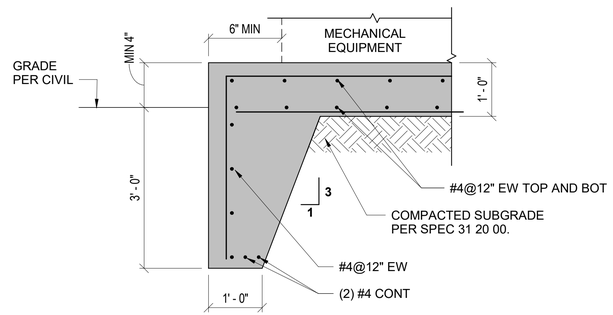
Project No. 6936
Sheet Name: STANDARD CONCRETE DETAILS
Sheet S-501 of XX
Drawing No. 108M-312-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



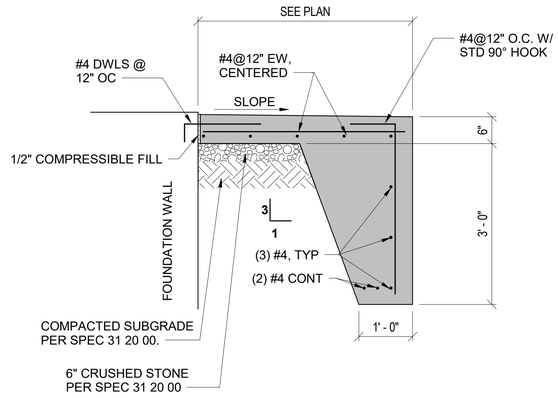


TYPICAL SLAB ON GRADE DETAIL

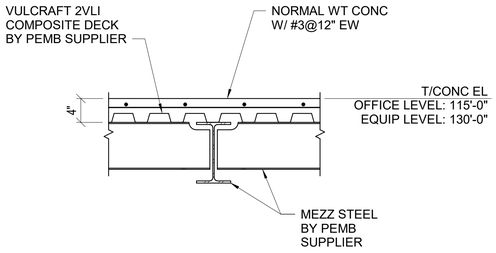


TYPICAL EXTERIOR EQUIPMENT PAD



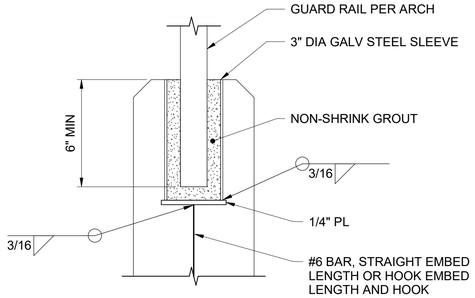


NOTE:
EXTEND 1'-6" EACH SIDE OF DOOR, MINIMUM, UNO.

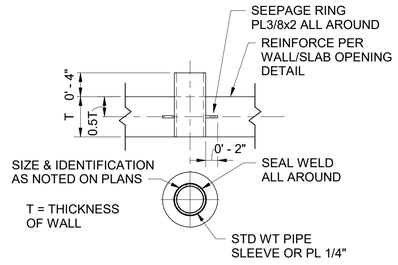


NOTE:
DECK, ACCESSORIES, CLOSURES, COLUMN CLOSURES, AND POURSTOPS PROVIDED BY PEMB SUPPLIER.

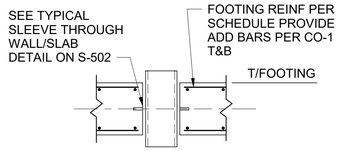
TYPICAL MEZZANINE DECK DETAIL



TYPICAL GUARDRAIL SLEEVE DETAIL
NOT TO SCALE

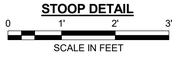


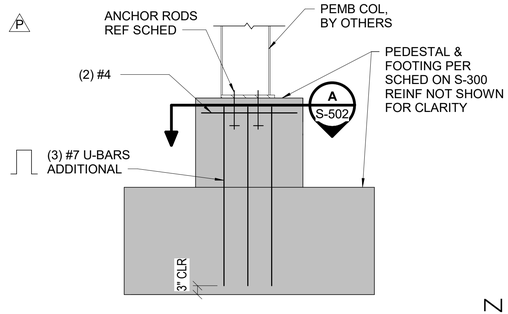
TYPICAL SLEEVE THROUGH WALL/SLAB
NOT TO SCALE



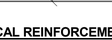
TYPICAL SLEEVE THROUGH FOOTING
NOT TO SCALE

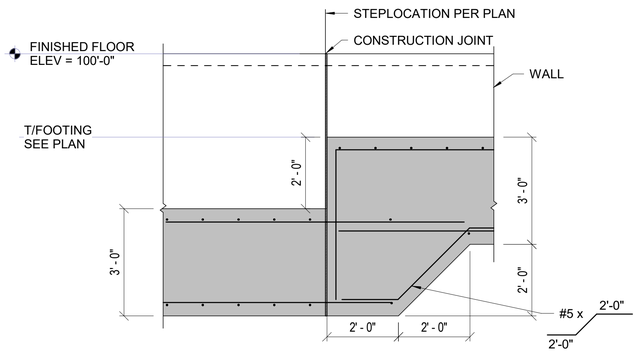
STOOP DETAIL





TYPICAL REINFORCEMENT AT ANCHOR RODS

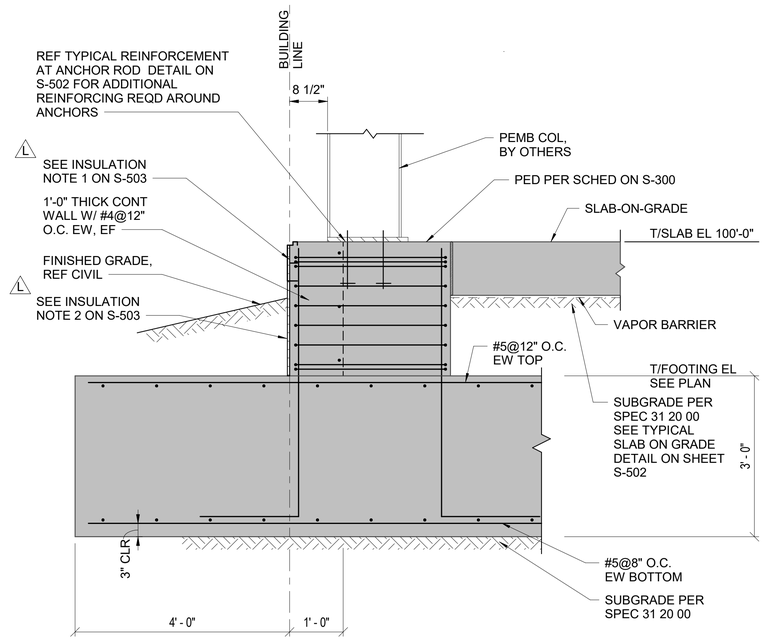




TYPICAL TOP OF FOOTING STEP DETAIL

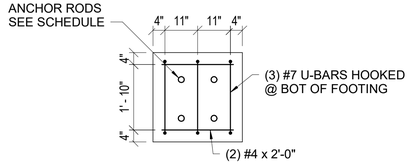
TYPICAL BOTTOM OF FOOTING STEP DETAIL



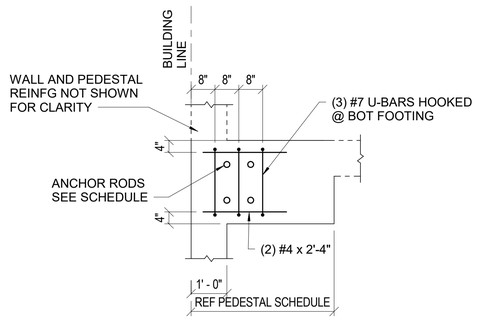


SECTION B S-504





INTERIOR PEDESTAL



PERIMETER AND CORNER PEDESTAL

SECTION A S-502



16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
J.	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L.	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P.	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z.	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

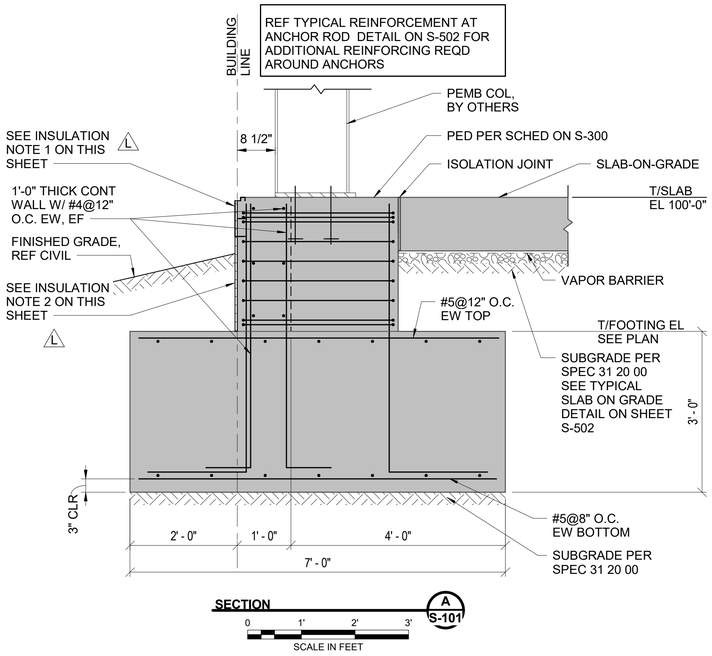


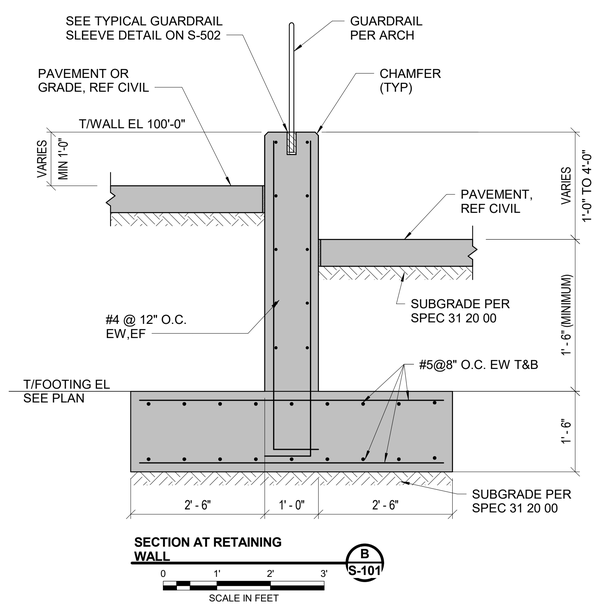
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

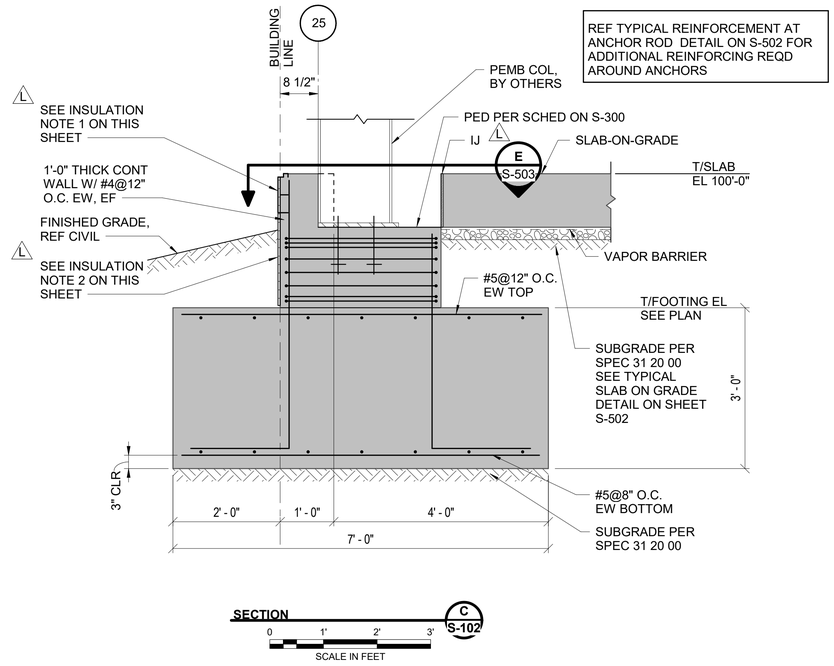
Project No. 6936
Sheet Name: STANDARD CONCRETE DETAILS
Sheet S-502 of XX
Drawing No. 108M-313-XXX

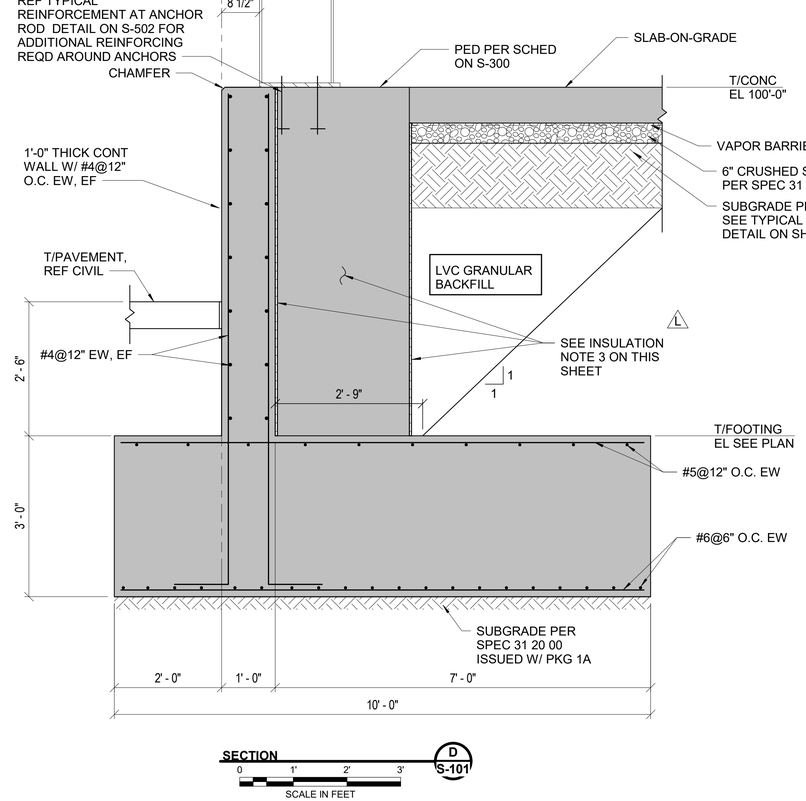
C:\Revit_Projects\104543_WICHAutoWrhs\Models\Struc\104543_S_tjwilson.rvt
11/15/2018 2:24:12 PM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.









INSULATION NOTES

1. CAST INTO CONCRETE, ABOVE GRADE PROTECTION, 2" XPS INSULATION. BASIS OF DESIGN IS MB RAIL PROFILE WITH 1-½" TOP BLOCKOUT BY ENERGYEDGE LLC, WWW.ENERGYEDGEFORM.COM, OR APPROVED EQUAL. INSTALL ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.
2. R-10, 2" XPS RIGID INSULATION BOARD, ASTM C 578, TYPE IV MINIMUM, TO A MINIMUM OF 2'-0" BELOW GRADE. BASIS OF DESIGN IS FOAMULAR 250 BY OWNES CORNING OR APPROVED EQUAL. INSTALL AND ADHERE ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.
3. R-10, 2" XPS RIGID INSULATION BOARD, ASTM C 578, TYPE IV MINIMUM. BASIS OF DESIGN IS FOAMULAR 250 BY OWNES CORNING OR APPROVED EQUAL. INSTALL AND ADHERE ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
K	05/11/2018	PKG 2A FOUNDATION & SOG - REV J	BMJ	PCT
L	06/01/2018	PKG 2A FOUNDATION & SOG - REV L	BMJ	PCT
P	07/02/2018	PKG 2A FOUNDATION & SOG - REV P	BMJ	PCT
Z	11/16/2018	PKG 2A FOUNDATION & SOG - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

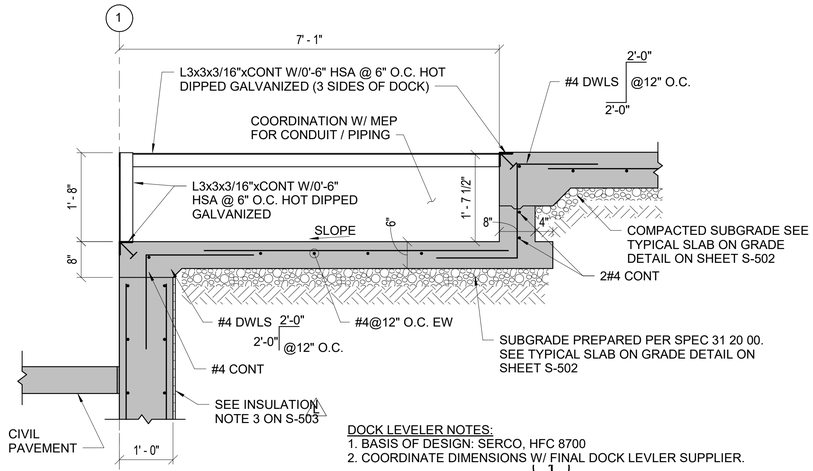
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. HERBERT REGISTERED 8867 PROFESSIONAL ENGINEER 11/15/2018

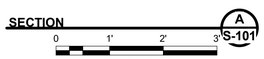
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by B. JEMAL
Drawn by B. ELDER

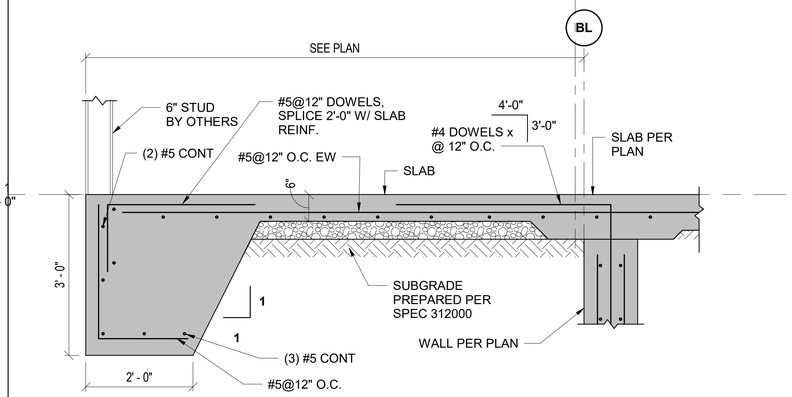
Project No. 6936
Sheet Name: FOUNDATION DETAILS
Sheet S-503 of XX
Drawing No. 108M-314-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. ALL DRAWINGS AND DOCUMENTS SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



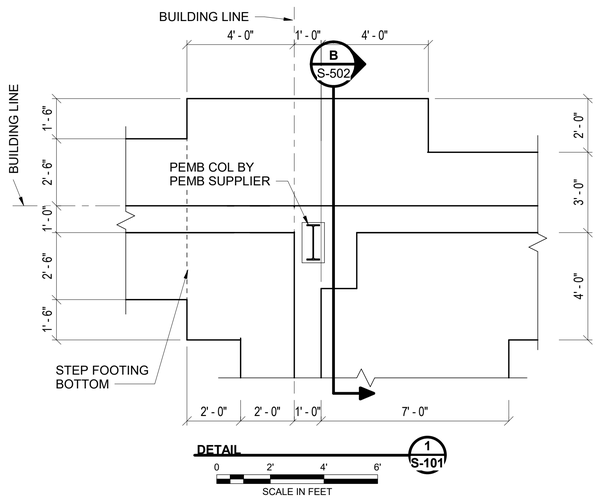
DOCK LEVELER NOTES:
1. BASIS OF DESIGN: SERCO, HFC 8700
2. COORDINATE DIMENSIONS W/ FINAL DOCK LEVLER SUPPLIER.





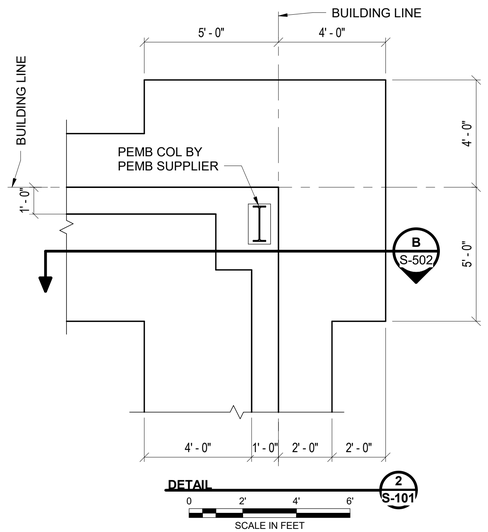
* COORDINATE WITH APPROVED VESTIBULE





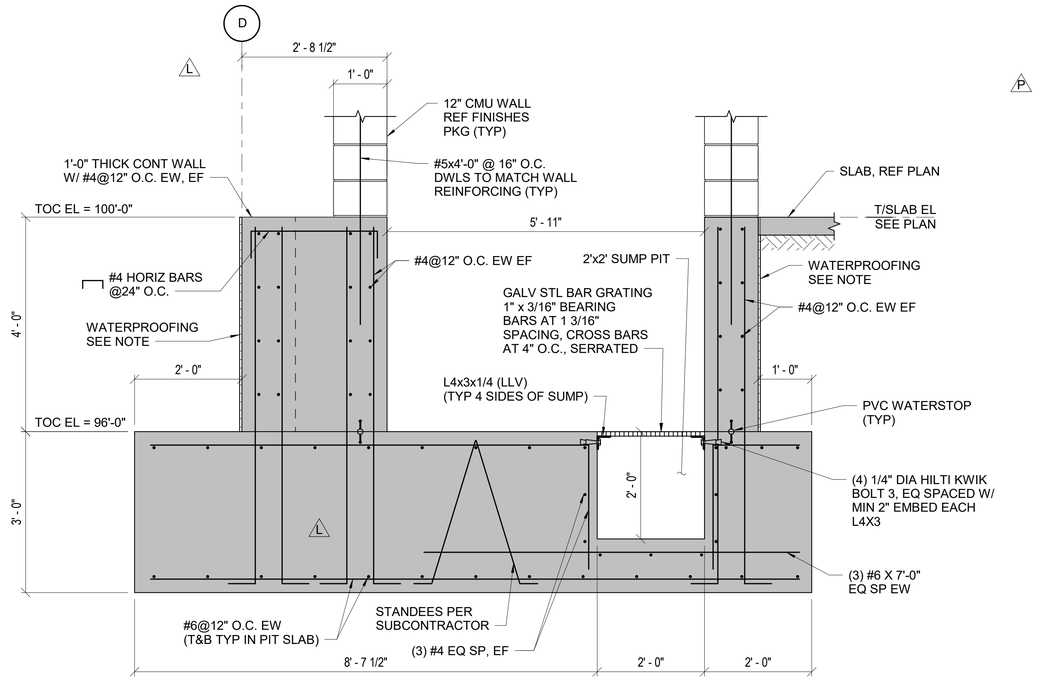
DETAIL 1 S-101

SCALE IN FEET

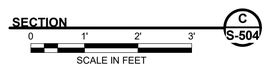


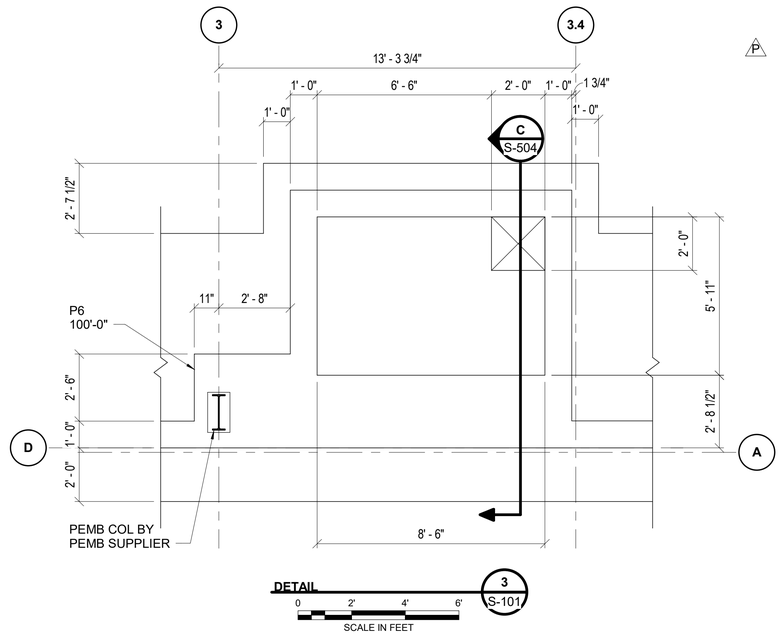
DETAIL 2 S-101

SCALE IN FEET



NOTE:
PROVIDE FLUID-APPLIED ASPHALT EMULSION BELOW GRADE WATERPROOFING MEMBRANE AROUND FULL EXTERIOR SIDES OF ELEVATOR PIT. TREMPROOF 260 BY TREMCO





DETAIL 3 S-101

SCALE IN FEET

BY	APPROVED	DESCRIPTION	DATE
BMJ	PCT	PKG 2A FOUNDATION & SOG - REV J	09/11/2018
BMJ	PCT	PKG 2A FOUNDATION & SOG - REV L	09/01/2018
BMJ	PCT	PKG 2A FOUNDATION & SOG - REV P	07/02/2018
BMJ	PCT	PKG 2A FOUNDATION & SOG - REV Z	11/16/2018

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

16NOV2018 - PKG 2A - FOUNDATION & SOG - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. HENRY — 8887 — REGISTERED PROFESSIONAL ENGINEER — 11/15/2018

Facilities Engineering

AUTOMATED WAREHOUSE WICHITA, KS

BLDG-1-338G

Designed by B. JEMAL

Drawn by B. ELDER

Project No. 6936

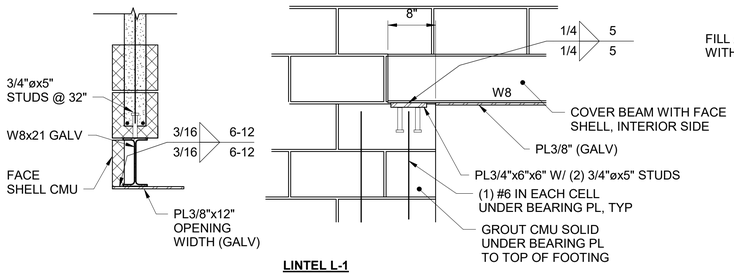
Sheet Name: FOUNDATION DETAILS

Sheet S-504 of XX

Drawing No. 108M-315-XXX

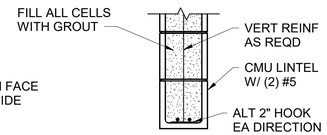
Level 1
100' - 0"

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



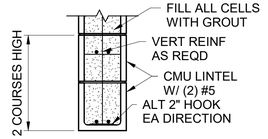
LINTEL L-1

TYPICAL AT MASONRY OPENINGS UP TO 12' WIDE IN MASORY WALLS. PROVIDE 8" BEARING MIN.



LINTEL L-2

TYPICAL FOR MASONRY OPENINGS UP TO 4'-8" WIDE. PROVIDE 8" BEARING AT EACH END.

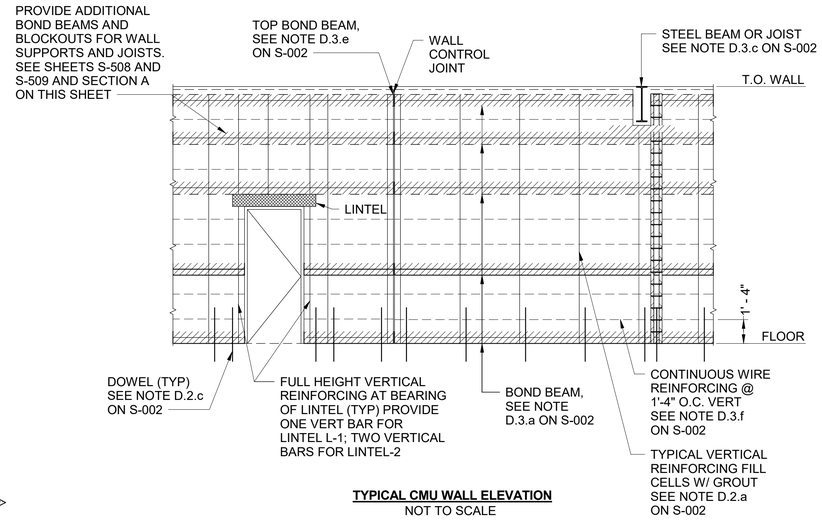


LINTEL L-3

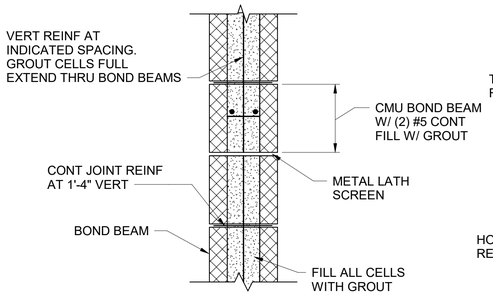
TYPICAL FOR MASONRY OPENINGS GREATER THAN 4'-8" TO 10'-0" WIDE. PROVIDE 2'-0" BEARING AT EACH END.

TYPICAL MASONRY LINTEL DETAILS
NOT TO SCALE

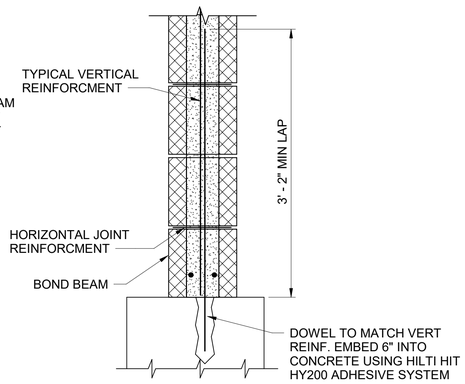
NOTE:
NOT ALL LINTEL LOCATIONS ARE SHOWN ON STRUCTURAL PLANS. REFERENCE ARCH AND MECH FOR WALL PENETRATIONS AND OPENING WIDTHS.



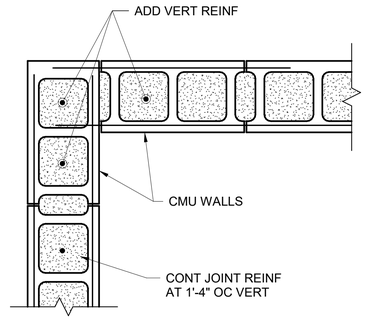
TYPICAL CMU WALL ELEVATION
NOT TO SCALE



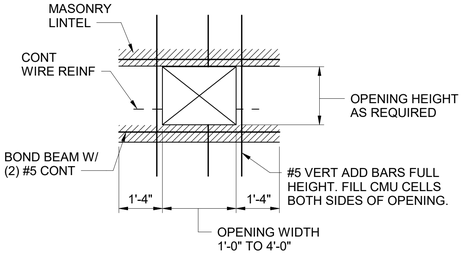
TYPICAL BOND BEAM
NOT TO SCALE



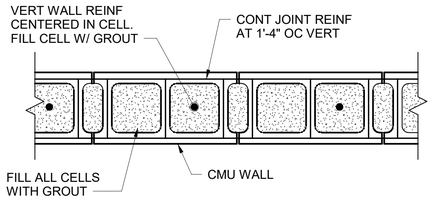
TYPICAL ALTERNATIVE DOWEL DETAIL AT SLAB-ON-GRADE
NOT TO SCALE



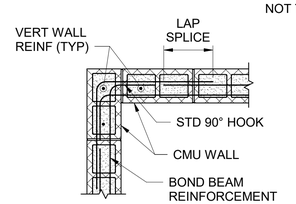
TYPICAL CMU WALL CORNER DETAIL
NOT TO SCALE



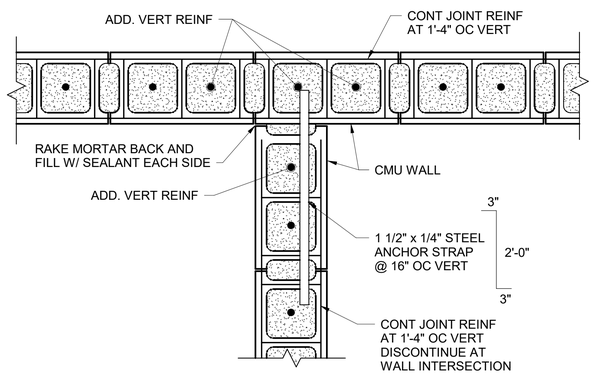
ADD BAR DETAIL AT CMU OPENING
NOT TO SCALE



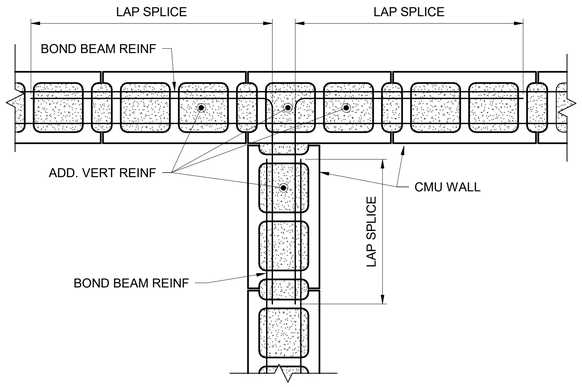
TYPICAL CMU WALL REINFORCING
NOT TO SCALE



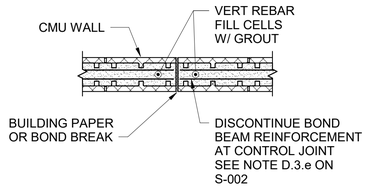
TYPICAL CMU WALL CORNER DETAIL AT BOND BEAMS
NOT TO SCALE



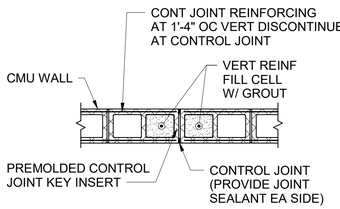
TYPICAL CMU WALL INTERSECTION DETAIL
NOT TO SCALE



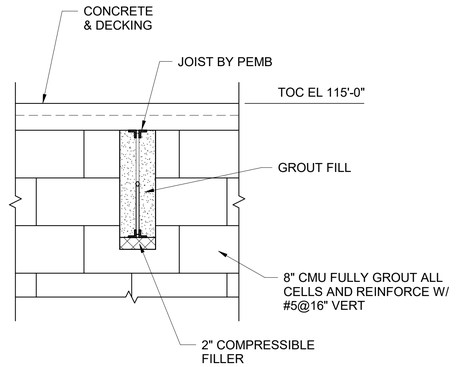
TYPICAL WALL TO WALL T-INTERSECTIONS
NOT TO SCALE



TYPICAL CONTROL JOINT DETAIL AT BOND BEAMS
NOT TO SCALE



TYPICAL CONTROL JOINT DETAIL
NOT TO SCALE



TYPICAL CMU BLOCKOUT AT JOIST

SECTION A / S-508
NOT TO SCALE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
O	07/13/2018	PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2B MEP, FP, FINISHES - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. TERRY REGISTERED 8867 PROFESSIONAL ENGINEER 11/15/2018

WICHITA, KS

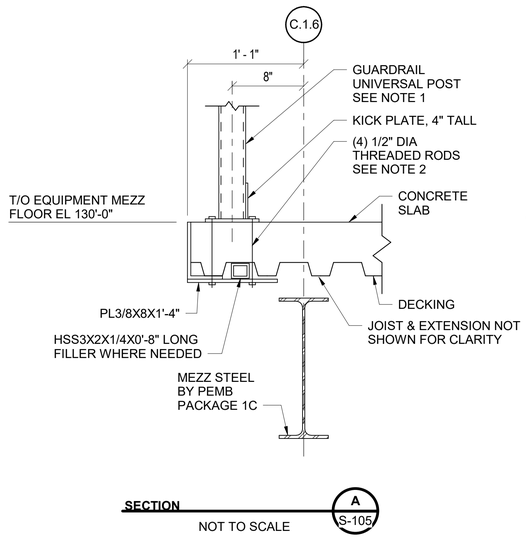
AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

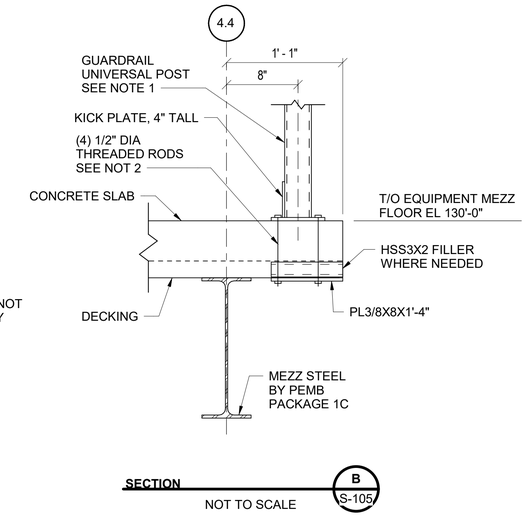
Designed by P. TERRY
Drawn by T. WILSON

Project No. 6936
Sheet Name: STANDARD MASONRY DETAILS
Sheet S-505 of XX
Drawing No. 108M-XXX-XXX



SECTION A S-105

NOT TO SCALE



SECTION B S-105

NOT TO SCALE

NOTES

1. GUARDRAIL: FS INDUSTRIES, XTRA HEAVY DUTY INDEPENDENT RAIL SYSTEM WITH KICK PLATE AND BASE. SUBCONTRACTOR SHALL COORDINATE RAIL LENGTHS WITH JOIST LOCATIONS (BY PEMB) TO AVOID CONFLICTS WITH POST ANCHORAGE.
2. 1/2" DIAMETER HILTI HAS-E THREADED ROD, CARBON STEEL, GALVANIZED, WITH SAE J995 GRADE 5 GALVANIZED NUTS AND ASTM F884 GALVANIZED WASHERS.

△	DATE	DESCRIPTION	BY	APPROVED
O	07/13/2018	PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2B MEP, FP, FINISHES - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. TERRY 8887 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by T. WILSON | Designed by P. TERRY

Project No. 6936

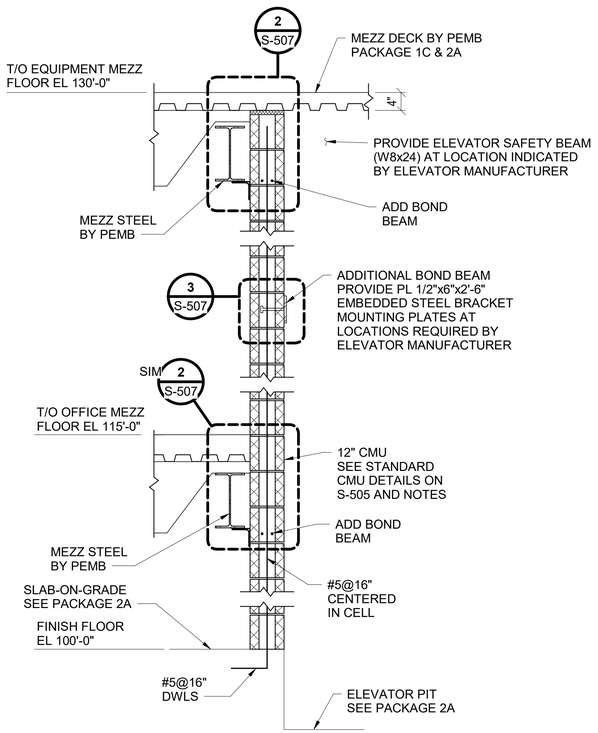
Sheet Name: STANDARD GUARDRAIL DETAILS

Sheet S-506 of XX

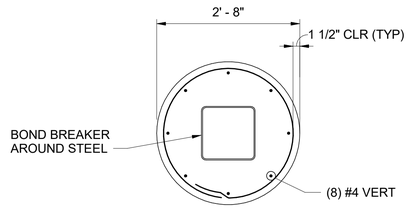
Drawing No. 108M-XXX-XXX

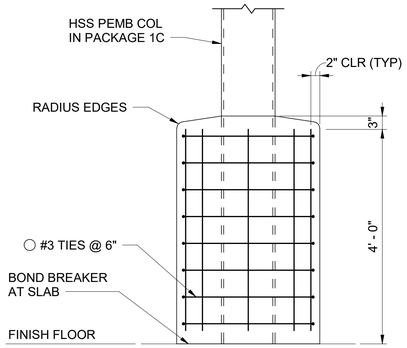
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



TYPICAL ELEVATOR CMU WALL
NOT TO SCALE

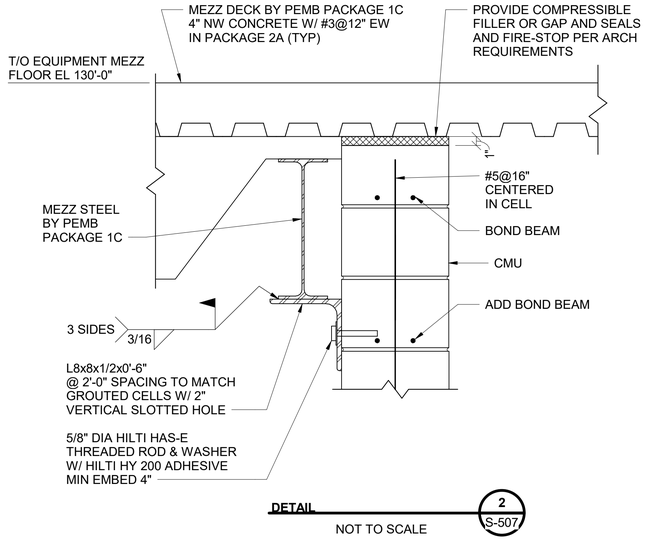




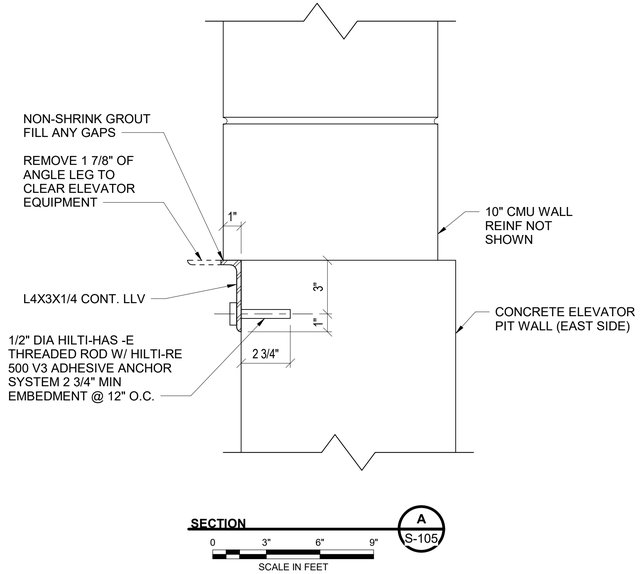
COLUMN PROTECTION AT FOLLOWING COLUMNS:
B3, B13 THRU B23, C3 THRU C23 (TOTAL 18 PLACES)

TYPICAL BUILDING COLUMN CONCRETE PROTECTION

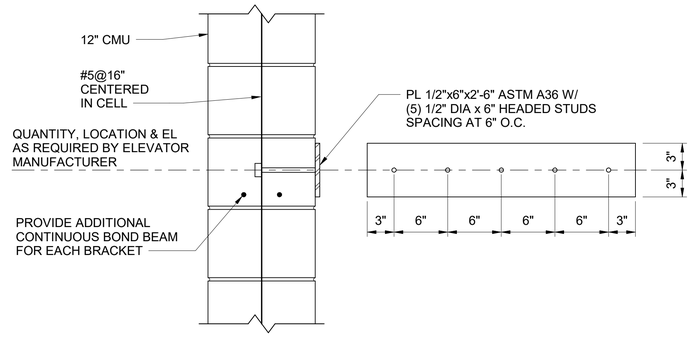
0 1' 2' 3'
SCALE IN FEET



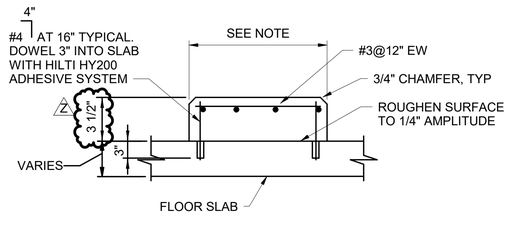
DETAIL 2 S-507
NOT TO SCALE



SECTION A S-105
0 3" 6" 9"
SCALE IN FEET



DETAIL 3 S-507
0 1/2' 1' 1 1/2'
SCALE IN FEET



NOTE:
EQUIPMENT PADS TO BE SIZED FOR EQUIPMENT FURNISHED. EQUIPMENT PADS TO EXTEND A MINIMUM OF 6" BEYOND EQUIPMENT BASE ON ALL SIDES.

TYPICAL EQUIPMENT PAD AT SLAB ON GRADE
NOT TO SCALE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
O	07/13/2018	PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2B MEP, FP, FINISHES - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

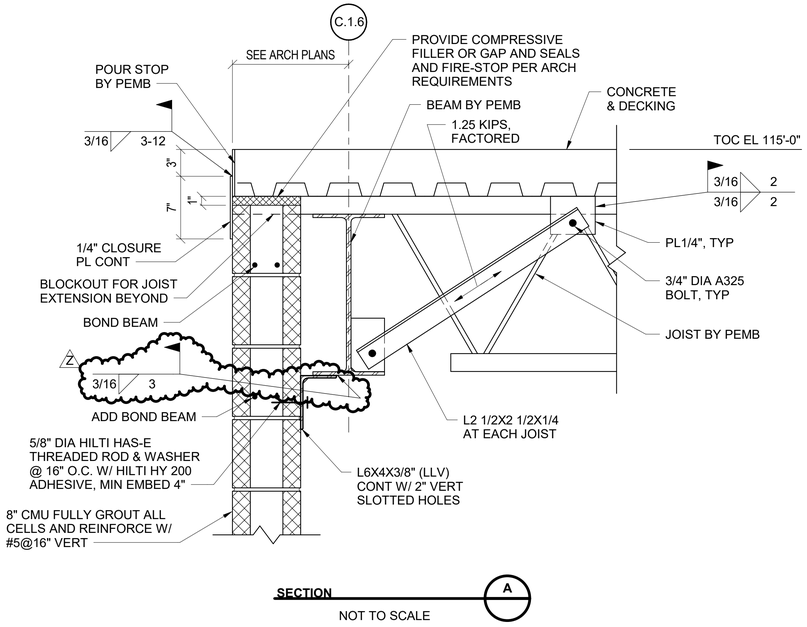
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. TERRY 8867 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: T. WILSON
Designed by: P. TERRY

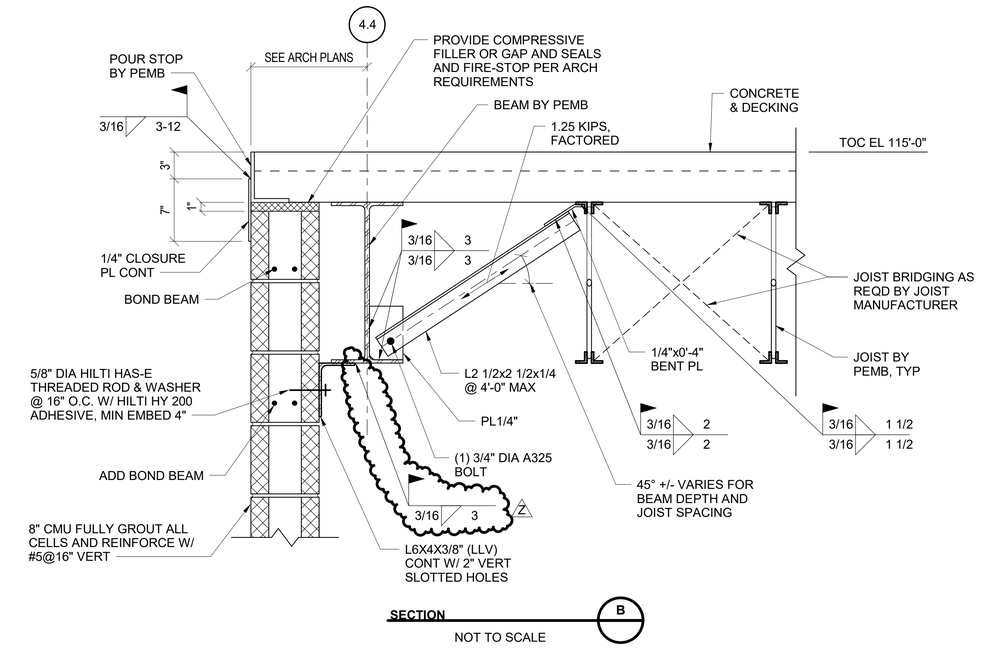
Project No. 6936
Sheet Name: FRAMING SECTIONS & DETAILS
Sheet S-507 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



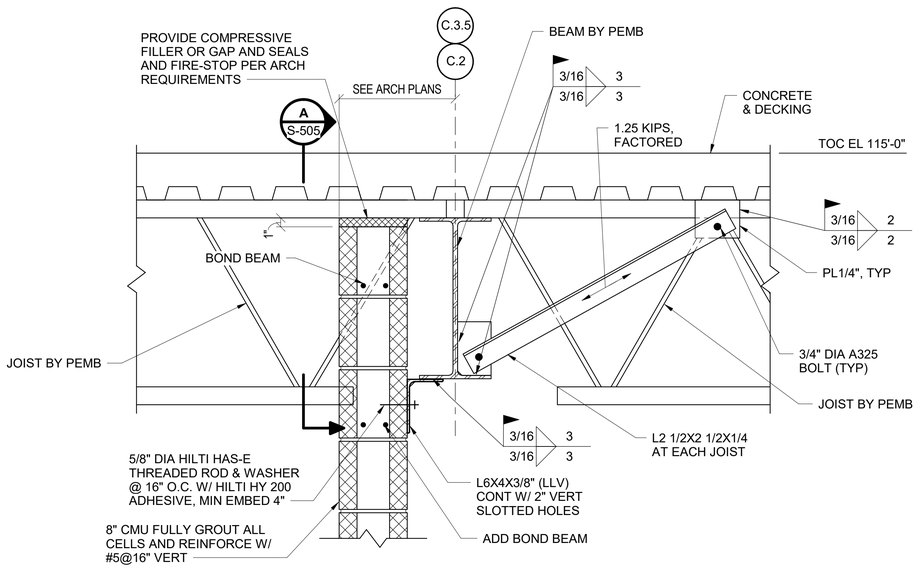
SECTION A

NOT TO SCALE



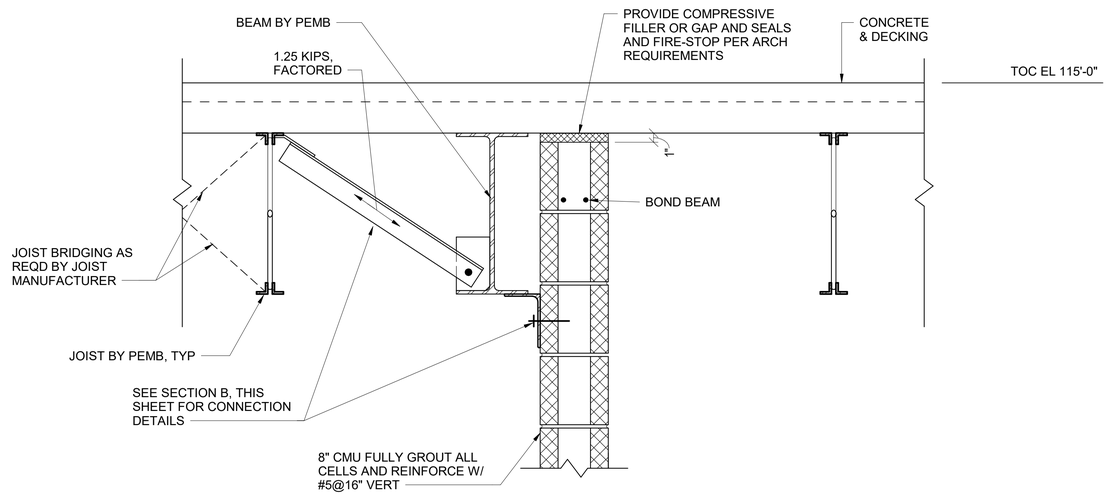
SECTION B

NOT TO SCALE



SECTION C

NOT TO SCALE



SECTION D

NOT TO SCALE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: WAYNE HERBERT @ 316-523-2359

△	DATE	DESCRIPTION	BY	APPROVED
O	07/13/2018	PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X	11/02/2018	PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z	11/16/2018	PKG 2B MEP, FP, FINISHES - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP E. SMITH 8887 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by B. JEMAL

Drawn by T. WILSON

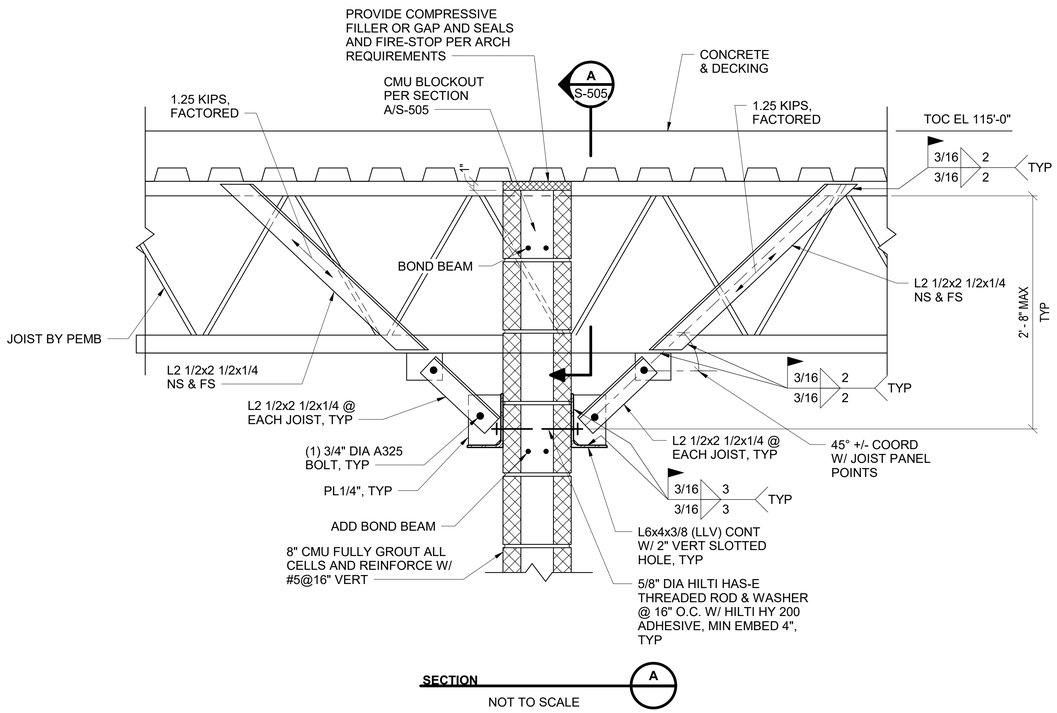
Project No. 6936

Sheet Name: FRAMING SECTIONS & DETAILS

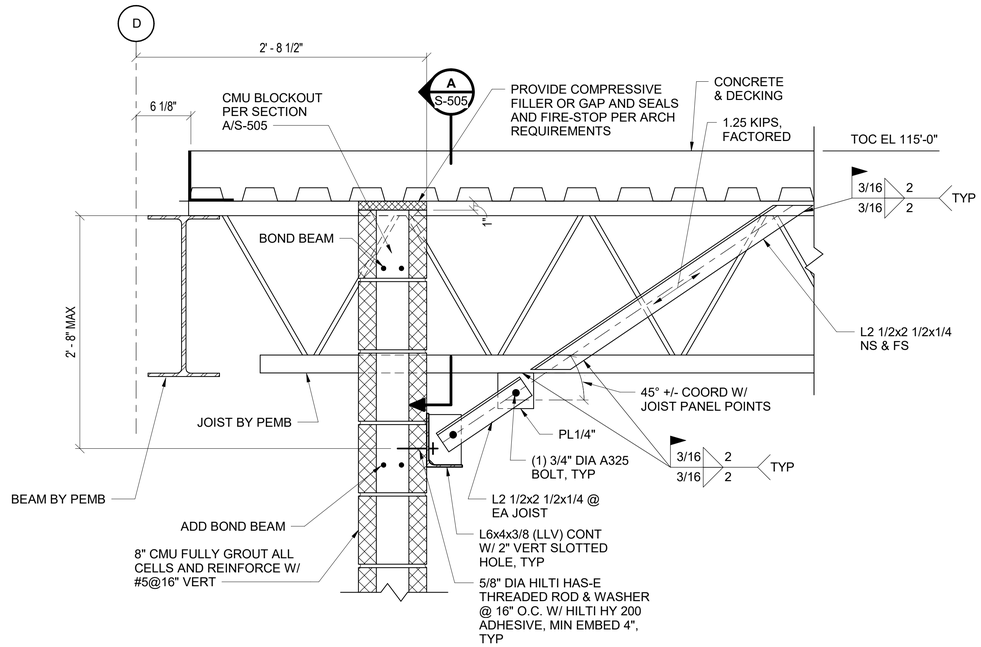
Sheet S-508 of XX

Drawing No. 108M-XXX-XXX

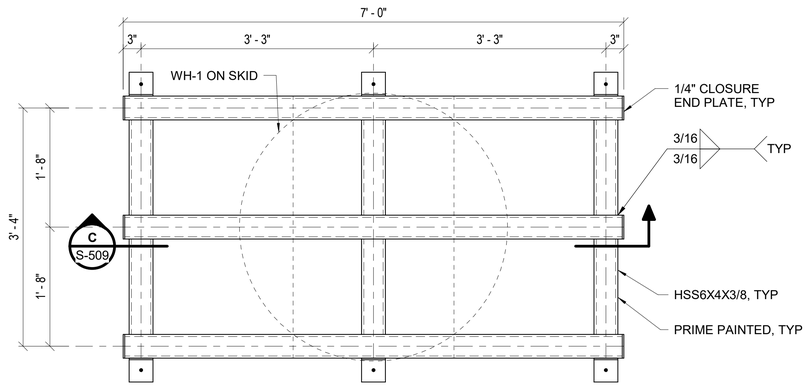
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



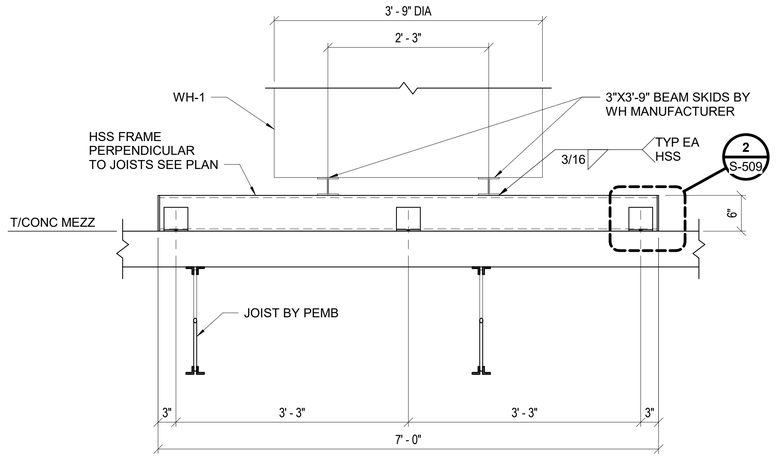
SECTION A (S-505)
NOT TO SCALE



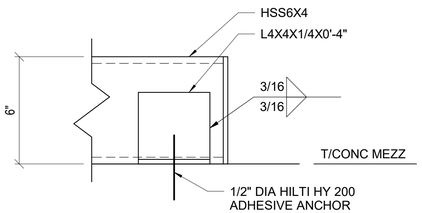
SECTION B (S-505)
NOT TO SCALE



WATER HEATER SUPPORT FRAME
0 1/2' 1' 2'
SCALE IN FEET



SECTION C (S-509)
0 1/2' 1' 2'
SCALE IN FEET



DETAIL 2 (S-509)
0 3" 6" 9"
SCALE IN FEET

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
DATE		
O 07/13/2018 PKG 2B MEP, FP, FINISHES - REV O	BMJ	PCT
X 11/02/2018 PKG 2B MEP, FP, FINISHES - REV X	BMJ	PCT
Z 11/16/2018 PKG 2B MEP, FP, FINISHES - REV Z	BMJ	PCT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

PHILIP C. HENRY 8867 REGISTERED PROFESSIONAL ENGINEER 11/15/2018

WICHITA, KS

AUTOMATED WAREHOUSE

Facilities Engineering

BLDG-1-338G

Designed by B. JEMAL
Drawn by T. WILSON

Project No. 6936

Sheet Name: FRAMING SECTIONS & DETAILS

Sheet S-509 of XX

Drawing No. 108M-XXX-XXX

HVAC LEGEND

CONTROL DAMPER, MOTOR OPERATED	SUPPLY AIR OR OUTSIDE AIR ROUND DUCT SECTION
MANUAL BALANCE DAMPER	RETURN AIR ROUND DUCT SECTION
BACKDRAFT DAMPER	EXHAUST AIR ROUND DUCT SECTION
ACCESS DOOR (AD) ACCESS PANEL (AP)	ROUND FLEXIBLE DUCT (5'-0" MAX LENGTH)
DAMPERS: FIRE (F) - SMOKE (S) - FIRE SMOKE (F/S) -	SQUARE OR RECTANGULAR SUPPLY DIFFUSER
SECURITY BARS	RETURN AIR DIFFUSER
FLEXIBLE DUCT CONNECTION	EXHAUST AIR DIFFUSER
RECTANGLUAR ELBOW WITH TURNING VANES	THERMOSTAT
RECTANGULAR TEE WITH TURNING VANES	HUMIDISTAT
RECTANGULAR RADIUS ELBOW	CARBON DIOXIDE SENSOR
ROUND & RECTANGULAR DUCT TAKEOFF	CARBON MONOXIDE SENSOR
RISE IN RESPECT TO AIR-FLOW	MOTOR
DROP IN RESPECT TO AIR-FLOW	OCCUPANCY SENSOR
SQUARE OR RECTANGULAR TO ROUND TRANSITION	EMERGENCY SHUT-OFF SWITCH
SUPPLY AIR OR OUTSIDE AIR RECTANGULAR DUCT SECTION	FAN CONTROL PANEL
RETURN AIR RECTANGULAR DUCT SECTION	STATIC PRESSURE SENSOR
EXHAUST AIR RECTANGULAR DUCT SECTION	DIFFERENTIAL PRESSURE SENSOR
	BREATHING AIR DROP
	COMPRESSED AIR DROP
	LINEAR SLOT DIFFUSER
	VARIABLE AIR VOLUME TERMINAL BOX
	FINNED TUBE RADIATION. LENGTH OF ELEMENT SHOWN IN PARENTHESIS
	AIRFLOW ARROW

PIPE LINE ACCESSORIES

GATE VALVE	PUMP
OUTSIDE SCREW & YOKE VALVE	THERMOMETER
BUTTERFLY VALVE	BACKFLOW PREVENTION ASSEMBLY
CHECK VALVE	SUCTION DIFFUSER
2-WAY VALVE	PRESSURE GUAGE
3-WAY VALVE	Y-TYPE STRAINER
BALL VALVE	REMOVABLE CAP
BALANCING VALVE / CIRCUIT SETTER	REMOVABLE PLUG
RELIEF, SAFETY OR THERMAL RELIEF VALVE	REDUCER (CONCENTRIC)
MOTORIZED CONTROL VALVE	UNION
HOSE GATE DRAIN VALVE	BLIND FLANGE
GLOBE VALVE	TEST CONNECTION
PLUG VALVE	METER
SPRING RETURN CLOSED BALL VALVE	FLOW METER
ANGLE VALVE	STRAINER
SELF CONTAINED PRESSURE REDUCING (REGULATING) VALVE	INSULATING FLANGE
AUTOMATIC AIR VENT ASSEMBLY	PIPE WITH HEAT TRACE
MANUAL AIR VENT ASSEMBLY - SEE SPECIFICATIONS FOR APPROPRIATE VALVE TYPE	FLOW ARROW
FLEX CONNECTION	

MECHANICAL ABBREVIATIONS

12"Ø	ROUND DUCT DIMENSION
24x12	RECTANGULAR DUCT DIMENSION (INCHES)
ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
ARF	ABOVE RAISED FLOOR
AS	AIR SEPARATOR
BBO	BOILER BLOW-OFF
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BP	BOOSTER PUMP
BS	BRANCH SELECTOR (VRF SYSTEM)
CF	CEILING FAN
CFM	CUBIC FEET PER MINUTE
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CL	CENTER LINE OF PIPE ELEVATION
CONC	CONCENTRIC
COND	COOLING COIL CONDENSATE DRAIN
CRAC	COMPUTER ROOM AIR CONDITIONER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
DB	DRY BULB
DH	DEHUMIDIFIER
DN	DOWN
DRG	DIFFUSER, REGISTER, GRILLE
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EL	ELEVATION
ELL	ELBOW
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
FCU	FAN COIL UNIT
FD	FEEDWATER
FF	FLAT FACED
FO	FLAT OVAL
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
HVF	HIGH VOLUME LOW SPEED FAN
HWB	HEATING HOT WATER BOILER
HWP	HEATING HOT WATER PUMP
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
I.E.	INVERT ELEVATION
IA	INSTRUMENT AIR
IH	INFRARED HEATER
IN. W.C	INCHES WATER COLUMN
L	LOUVER
LAT	LEAVING AIR TEMPERATURE
LR	LONG RADIUS
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAU	MAKEUP AIR UNIT
MFR	MANUFACTURER
MJ	MECHANICAL JOINT
MW	MAKE-UP WATER (AFTER BACKFLOW PREVENTER)
NC	NORMALLY CLOSED (FAIL POSITION)
NG	NATURAL GAS
NO	NORMALLY OPEN (FAIL POSITION)
OA	OUTSIDE AIR
OB	OPPOSED BLADE
OD	OVERFLOW DRAIN
PB	PARALLEL BLADE
PCW	PROCESS COLD WATER
PFX	PLATE AND FRAME HEAT EXCHANGER
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RED	REDUCER-REDUCING
RG	REFRIGERANT HOT GAS DISCHARGE
RL	REFRIGERANT LIQUID
RMJ	RESTRAINED MECHANICAL JOINT
RS	REFRIGERANT SUCTION
SA	SUPPLY AIR
SCH	SCHEDULE
SCR	SPRING RETURN CLOSED
SHR	SHORT RADIUS
SIM	SIMILAR
SP	STATIC PRESSURE SENSOR
SR	SUPPLY REGISTER
ST	STEAM TRAP
STM	STEAM
SW	SOCKET WELD
TA	TRANSFER AIR
TOA	TREATED OUTSIDE AIR
TOC	TOP OF CONCRETE
TOD	TOP OF DUCT
TOS	TOP OF STEEL
UH	UNIT HEATER
V	VENT
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
WB	WET BULB
WE	WELD END
WN	WELD NECK

PIPE SYMBOLS

- PIPE ELBOW
- PIPE DOWN
- PIPE UP
- PIPE CONTINUATION
- PIPE SLOPE DIRECTION

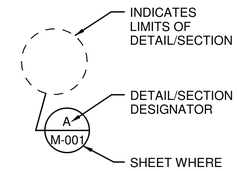
PIPELINE ABBREVIATIONS

BLWDN	BLOWDOWN
CD	CONDENSATE DRAIN
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CR	CONDENSATE RETURN
CT	CHEMICAL TREATMENT
CTB	COOLING TOWER BLOWDOWN
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DRAIN
DI	DEIONIZED WATER
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
HPS	HIGH PRESSURE STEAM
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
LPS	LOW PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
MW	MAKEUP WATER (AFTER BACKFLOW PREVENTER)
N	NITROGEN
NG	NATURAL GAS
O	OXYGEN
PCR	PUMPED CONDENSATE RETURN
V	VACUUM

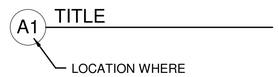
GENERAL NOTES:

1. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THIS PROJECT IS PROHIBITED.
2. LEGEND IS GENERAL IN NATURE AND MAY INDICATE MORE INFORMATION THAN IS APPLICABLE TO PROJECT. SEE PLANS FOR SPECIFIC SYMBOLS AND ABBREVIATIONS.
3. PROVIDE ALL MATERIALS, VALVES, HANGERS, ETC. AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE.
4. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
5. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
6. UNLESS OTHERWISE INDICATED MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO UNDERSIDE OF PIPES, CONDUITS, ETC., THROUGHOUT ACCESS ROUTES AND IN MECHANICAL ROOMS.
7. LOCATE ALL MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
8. VERIFY DIMENSIONS AND CONNECTION SIZE WITH FURNISHED EQUIPMENT.
9. ALL ELEVATIONS ARE ABOVE FINISHED FLOOR TO BOTTOM OF DUCT, PIPE, OR PIPE INSULATION UNLESS NOTED OTHERWISE.
10. DUCT DIMENSIONS INDICATED REFER TO SHEET METAL DIMENSIONS. SHEET METAL SIZE SHALL BE AIR OPENING DIMENSION PLUS THE THICKNESS OF ACOUSTICAL LINER WHERE LINER IS INSTALLED. WHERE LINER IS NOT INSTALLED, AIR OPENING SIZE AND SHEET METAL SIZE SHALL BE THE SAME.
11. DUCT STATIC PRESSURE CLASSIFICATION: UNLESS OTHERWISE INDICATED, CONSTRUCT DUCTS ON THE DISCHARGE SIDE OF FANS AND VAV BOXES TO HAVE 1.0 IN. W.C. POSITIVE PRESSURE AND DUCTS ON THE INLET SIDE OF EQUIPMENT TO HAVE 1.0 IN. W.C. NEGATIVE PRESSURE CLASSIFICATIONS. DUCTS ON OUTLET SIDE OF AHU'S SHALL HAVE 3.0 INCH POSITIVE PRESSURE CLASS DUCT.
12. LOCATE TRANSFER AIR DUCTS AND OPENINGS 24" ABOVE HIGHEST CEILING ELEVATION UNLESS OTHERWISE NOTED.
13. COORDINATE ALL WALL AND ROOF PENETRATIONS WITH STRUCTURAL AND ARCHITECTURAL PLANS.
14. INSTALL TEMPERATURE CONTROLS AT 48" ABOVE FINISHED FLOOR AND COORDINATE WITH OTHER DEVICES LOCATED ON WALLS. COORDINATE WITH ARCHITECTURAL WALL FINISHES.
15. PROVIDE STRUCTURAL EQUIPMENT PADS IN ACCORDANCE WITH STRUCTURAL DRAWINGS AND SPECIFICATIONS.
16. SUBCONTRACTOR SHALL AIR BALANCE ALL GRILLES TO CFM'S SHOWN ON PLANS.
17. MOUNT ALL OVERHEAD MECHANICAL EQUIPMENT AND FIXTURES WEIGHING 31 POUNDS OR MORE TO SUPPORTS THAT SHALL RESIST FORCES OF 0.5 TIMES THE EQUIPMENT WEIGHT IN ANY HORIZONTAL DIRECTION AND 1.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION.

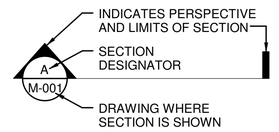
DETAIL / ENLARGED CALLOUT SYMBOL



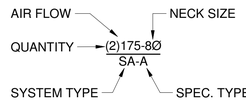
DETAIL TITLE



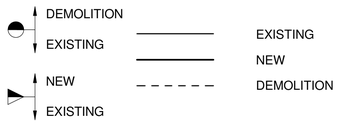
SECTION CUT SYMBOL



AIR DISTRIBUTION DEVICE IDENTIFICATION



CONSTRUCTION INTERFACE



△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

KANSAS REGISTERED PROFESSIONAL ENGINEER 20805 — 2018-11-26 1:52 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

Project No. 6936

Sheet Name: MECHANICAL LEGEND AND NOTES

Sheet M-001 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

BASIS OF DESIGN

A. APPLICABLE STANDARDS (WITH LOCAL AMENDMENTS)

1. CODES
   - A. ASHRAE 62.1 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY (2013)
   - B. 2012 INTERNATIONAL BUILDING CODE
   - C. 2017 NATIONAL ELECTRIC CODE
   - D. 2015 INTERNATIONAL FULE GAS CODE
   - E. 2015 INTERNATIONAL MECHANICAL CODE
   - F. 2015 UNIFORM PLUMBING CODE

2. CRITERIA
   - A. AUTOMATION EQUIPMENT MANUFACTURER AND RACKING SUPPLIER
   - B. DEVELOPED WORKFLOW FOR WAREHOUSE OPERATION AS DEVELOPED BY THE ENGINEERING DESIGN TEAM IN COOPERATION WITH SPIRIT.
   - C. SPIRIT AEROSYSTEMS STATEMENT OF WORK
   - D. CLIENT MEETINGS AND SITE VISITS.

3. STANDARDS
   - A. AABC ASSOCIATED AIR BALANCE COUNCIL
   - B. ADA AMERICANS WITH DISABILITIES ACT
   - C. AMCA AIR MOVING AND CONDITIONING ASSOCIATION
   - D. ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
   - E. ARI AIR CONDITIONING AND REFRIGERATION INSTITUTE
   - F. ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS
   - G. ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
   - H. ASSE AMERICAN SOCIETY OF SANITARY ENGINEERING
   - I. ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS
   - J. AWS AMERICAN WELDING SOCIETY
   - K. AWWA AMERICAN WATTER WORKS ASSOCIATION
   - L. CFR CODE OF FEDERAL REGULATIONS
   - M. CISPI CAST-IRON SOIL PIPE INSTITUTE
   - N. FM FACTORY MUTUAL
   - O. HI HYDRAULIC INSTITUTE
   - P. IAPMO THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFFICIALS
   - Q. IAS INTERNATIONAL APPROVAL SERVICES
   - R. IEEE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
   - S. IRI INDUSTRIAL RISK INSURERS
   - T. ISA INSTRUMENT SOCIETY OF AMERICA
   - U. IV INDUSTRIAL VENTILATION
   - V. MFMA METAL FRAMING MANUFACTURERS ASSOCIATION
   - W. MSS MANUFACTURER'S STADNARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY
   - X. NAIMA NORTH AMERICAN INSULATION MANUFACTURER'S ASSOCIATION
   - Y. NEBB NATIONAL ENVIRONMENTAL BALANCING BUREAU
   - Z. NEMA NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION
   - AA. NFPA NATIONAL FIRE PROTECTION ASSOCIATION
   - BB. PDI PLUMBING AND DRAINAGE INSTITUTE
   - CC. SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
   - DD. SSPC STEEL STRUCTURES PAINTING COUNCIL
   - EE. UFAS UNIFORM FEDERAL ACCESSIBILITY STANDARDS
   - FF. UL UNDERWRITERS LABORATORIES

B. ABBREVIATIONS

AC/HR	AIR CHANGES PER HOUR
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB
DEG F	DEGREE FAHRENHEIT
FT2	SQUARE FOOT
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
IN	INCH
KS	KANSAS
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCWB	MEAN COINCIDENT WET BULB
PEMB	PRE-ENGINEERED METAL BUILDING
SCFH	STANDARD CUBIC FEET PER HOUR
SCFM	STANDARD CUBIT FEET PER MINUTE
VFD	VARIABLE FREQUENCY DRIVE
WC	WATER COLUMN

C. SCOPE OF WORK

1. GENERAL
   A NEW PRE-ENGINEERED METAL BUILDING WILL BE ADDED TO THE SPIRIT CAMPUS IN WICHITA, KS IN ORDER TO HOUSE THE NEW AUTOMATED WAREHOUSE OPERATIONS. THE NEW BUILDING WILL BE LOCATED BETWEEN OLIVER AND TURNPIKE DRIVE JUST NORTH OF COLFAX AND THE PLANT 1 WAREHOUSE (ABLAH BUILDING).
2. **THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED**.

D. HVAC SYSTEMS

1. DESIGN CONDITIONS
   A. CALCULATIONS WERE BASED ON INDUSTRY ACCEPTED PRACTICES FOUND IN THE 2017 ASHRAE FUNDAMENTALS HANDBOOK. ALL VENTILATION RATES WERE TAKEN FROM 2012 INTERNATIONAL MECHNANICAL CODE VENTILATION STANDARD. FOR COOLING, 0.4% OUTDOOR AIR CONDITIONS WERE TAKEN FORM THE 2017 ASHRAE FUNDAMENTALS HANDBOOK FOR THE LOCATION OF WICHITA EISENHOWER NATIONAL AIRPORT, KS. FOR HEATING, THE 50-YEAR EXTREME AND 99.6% OUTDOOR AIR CONDITIONS WERE TAKEN FROM THE 2017 ASHRAE FUNDAMENTALS HANDBOOK FOR THE LOCATION OF WICHITA EISENHOWER NATIONAL AIRPORT, KS.

B. 2017 ASHRAE FUNDAMENTALS CLIMATIC DATA – KANSAS – WICHITA EISENHOWER NATIONAL AIRPORT, KS
   DESIGN COOLING (0.4%): 101.1 DEG F DB/ 73.2 DEG F MCWB
   HEATING (99.6%): 7.6 DEG F DB
   HEATING (50-YEAR EXTREME): -1.7 DEG F DB
   DESIGN HEATING (AVG. OF 50-YEAR EXTREME AND 99.6%):

C. ENVELOPE VALUES:
   SLAB U-VALUE: 0.076
   WALL U-VALUE: 0.0526
   ROOF U-VALUE: 0.04

D. INDOOR DESIGN SPACE CONDITIONS
   WAREHOUSE SPACE -
      COOLING: 85 DEG F
      HEATING: 65 DEG F
   OFFICE -
      COOLING: 72 DEG F
      HEATING: 68 DEG F

2. VENTILATION
CONTINUOUS VENTILATION WILL BE PROVIDED TO THE NEW AUTOMATED WAREHOUSE FACILITY IN COMPLIANCE WITH THE 2015 INTERNATIONAL MECHANICAL CODE FOR A WAREHOUSE SPACE TYPE.

A. GENERAL
A NEW PAD-MOUNTED ROOFTOP UNIT WILL PROVIDE PRE-CONDITIONED VENTILATION AIR TO THE NEW AUTOMATED WAREHOUSE SPACE WILL PROVIDE 0.06CFM/SQ-FT OF OUTSIDE AIR. THE AREA-BASED VENTIALATION REQUIREMENT EXCEEDS THE 10CFM/PER PERSON VENTILATION REQUIREMENT FOR THE ASSUMED OCCUPANCY OF 100 PEOPLE. VEHICLES' EXHAUST DRIVING WITHIN THE SPACE MUST BE CONSIDERED AS WELL.

B. THE OFFICES ARE VENTILATED ACCORDING TO AREA PLUS OCCUPANCY BASED CALCULATIONS. EACH VAV ZONE WAS EVALUATED SEPARATELY AND ACCOUNTED TO ONE OF THE TWO SPLIT-SYSTEM UNITS LOCATED ABOVE THE OFFICE AREA ON THE MECHANICAL MEZZANINE.

3. COOLING
A. THE NEW AUTOMATED WAREHOUSE WILL BE SERVED BY THREE MAIN MECHANICAL UNITS - THE PAD-MOUNTED ROOFTOP UNIT (RTU-1) AND TWO ADDITIONAL AIR TURNOVER UNITS (ATU-1 & ATU-2) TO PROVIDE AIR TEMPERING. AIR CURTAINS ARE LOCATED AT THE MAIN TRUCK, AND TUG OVERHEAD DOORS TO HELP MINIMIZE INFILTRATION.

B. THE OFFICE SPACE WILL BE CONDITIONED BY THE TWO SPLIT-SYSTEM AIR HANDLERS WITH VAV BOXES THAT CONTROLS THE AIRFLOW TO EACH ZONE.

C. A DDC ROOM ON THE SECOND FLOOR OF THE OFFICE SPACE WILL BE CONDITIONED BY REDUNDANT CEILING-MOUNTED SPLIT SYSTEM AIR CONDITIONING UNITS WITH THEIR CONDENSING UNITS LOCATED ON THE MECHANICAL MEZZANINE ABOVE THE OFFICES.

4. HEATING
A. THE NEW AUTOMATED WAREHOUSE WILL BE HEATED PRIMARILY BY THE THREE MECHANICAL UNITS (RTU-1, ATU-1 AND ATU-2) WHICH WILL ALL BE EQUIPPED WITH GAS-HEAT. SIX HVLS FANS WHICH WILL HAVE THREE MODES OF OPERATION WILL HELP IN THE HEATING SEASONS TO CIRCULATE THE AIR AND PREVENT STRATIFICATION.
B. THE OFFICE AREA WILL PROVIDE ELECTRIC HEAT FROM THE MAIN AIR HANDLERS AND REHEAT AS NEEDED AT EACH VAV BOX SERVING EACH ZONE.

E. PLUMBING SYSTEMS

1. DOMESTIC WATER SUPPLY
THE DOMESTIC WATER WILL ENTER THE BUILDING NEAR THE NORTHWEST SIDE OF THE BUILDING AND PROVIDES DOMESTIC WATER FOR BOTH THE OFFICE BREAK ROOM AND BATHROOMS, AND THE EMERGENCY SHOWER AND EYEWASH STATION NEAR THE FORKLIFT BATTERY CHARGING STATION. A NATURAL GAS HOT WATER HEATER LOCATED ON THE MECHANICAL MEZZANINE ABOVE THE OFFICE AREA WILL SERVE THE BUILDING'S HOT WATER NEEDS.

2. COMPRESSED AIR SYSTEM
A NEW COMPRESSED AIR LINE WILL BE TAPPED OFF OF THE EXISTING MAIN (100 PSIG) TO SERVE THE NEW AUTOMATION EQUIPMENT WITHIN THE WAREHOUSE. THE COMPRESSED AIR WILL BE BROUGHT INTO THE BUILDING FROM THE SOUTH AND ROUTED TO THE NORTH SIDE OF THE BUILDING FOR CONNECTION INTO THE AUTOMATED EQUIPMENT.

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:53 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: BASIS OF DESIGN
Sheet M-003 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

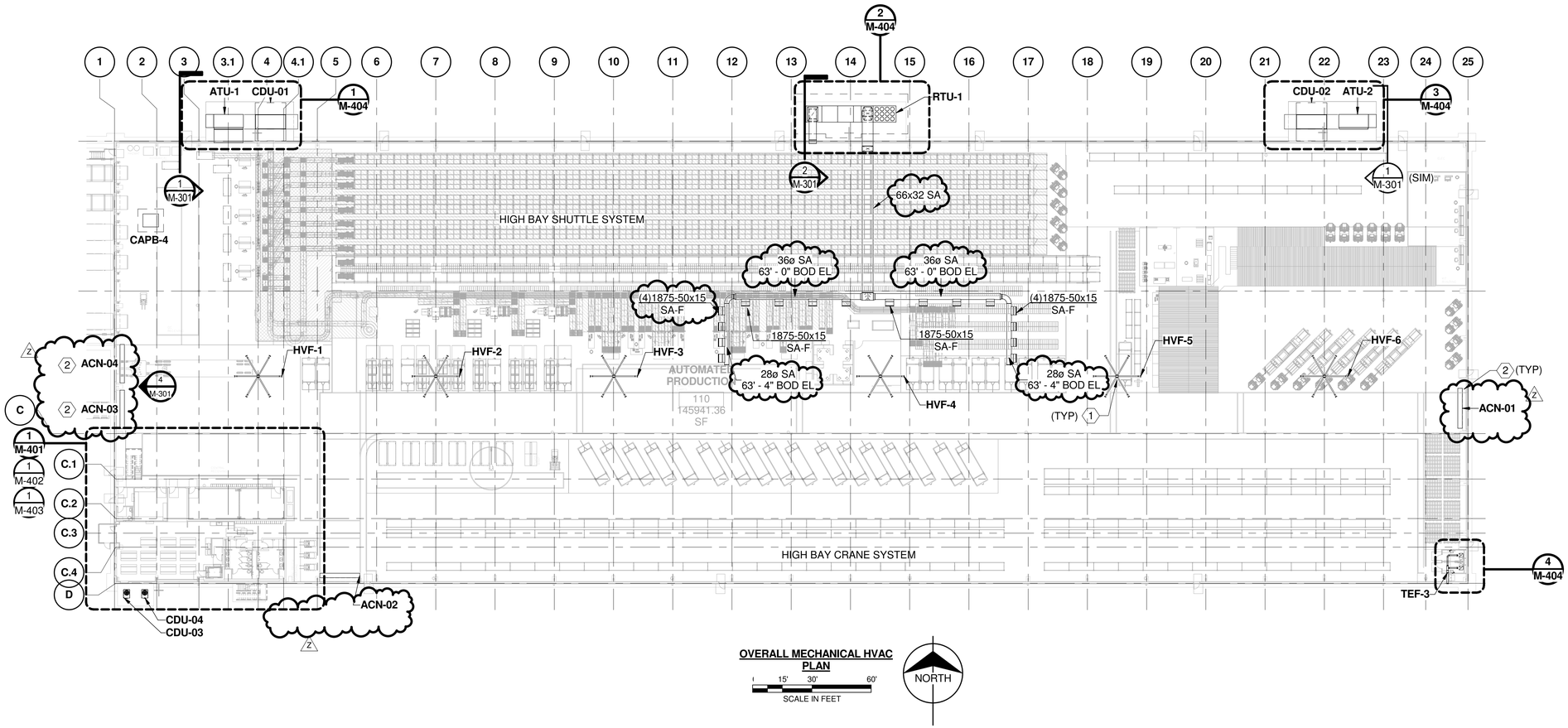
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS REFER TO SHEET M-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
3. INSTALL RTU-1 DUCTWORK AND AIR BALANCE SYSTEM PRIOR TO INSTALLATION OF THE HIGH BAY SHUTTLE SYSTEM.

KEYED NOTES: ⟨#⟩

1. HVF MOUNTED AT 61'-0"AFF TO FAN HUB.
2. BOTTOM OF AIR CURTAINS INSTALLED FLUSH TO BOTTOM OF OVERHEAD DOORS ON METAL HANGERS ATTACHED TO BUILDING WALL. COORDINATE WITH SUPPORTS PROVIDED BY PRE-ENGINEERED METAL BUILDING MANUFACTURER.



OVERALL MECHANICAL HVAC PLAN

SCALE IN FEET 15' 30' 60'

NORTH

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:53 PM

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

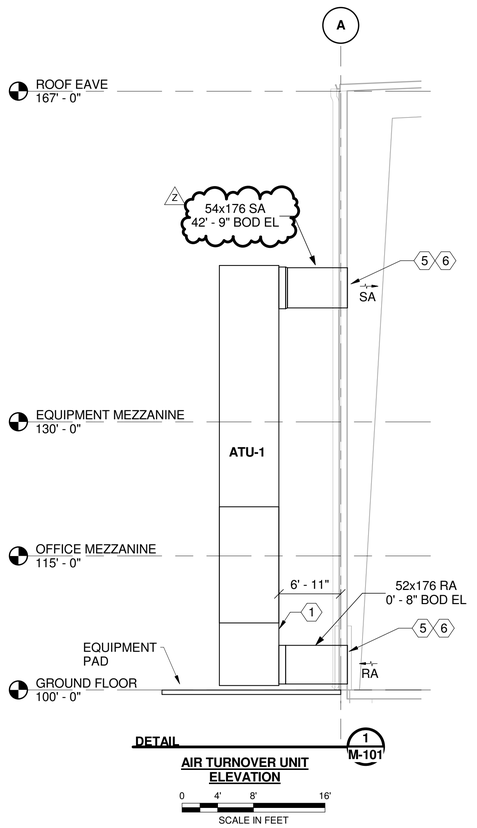
Drawn by K. BECKER

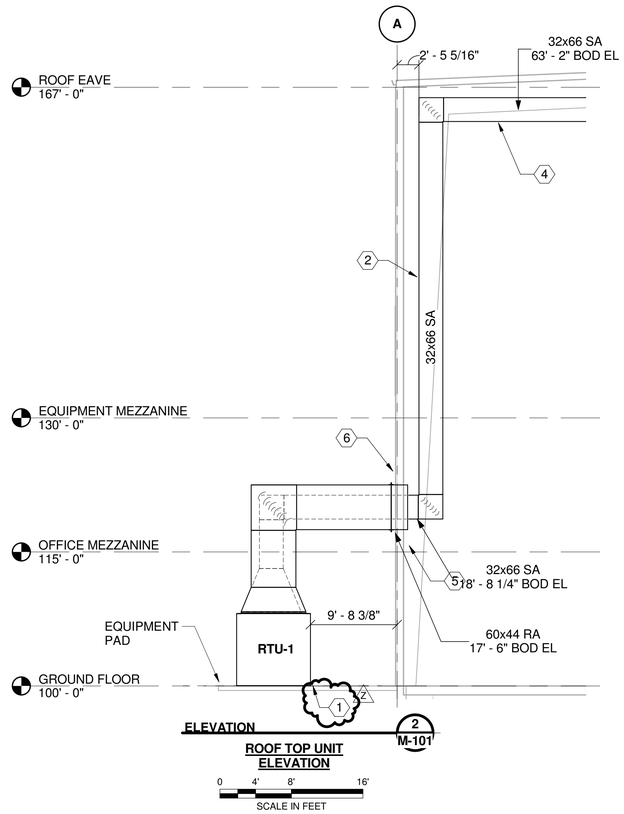
Project No. 6936

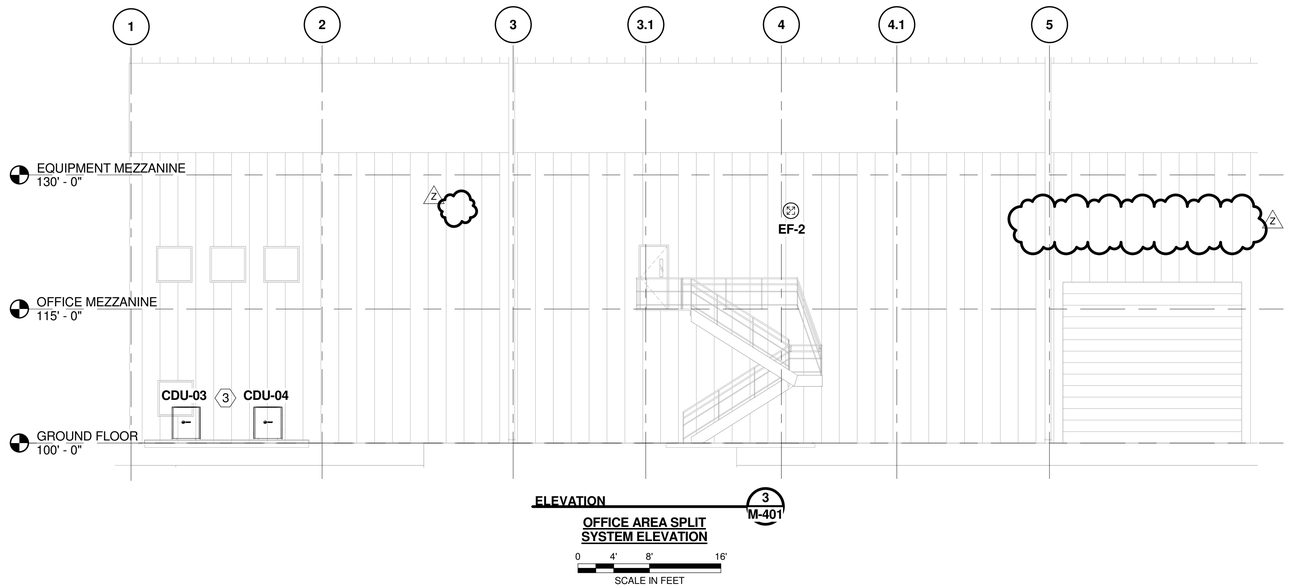
Sheet Name: OVERALL MECHANICAL HVAC PLAN

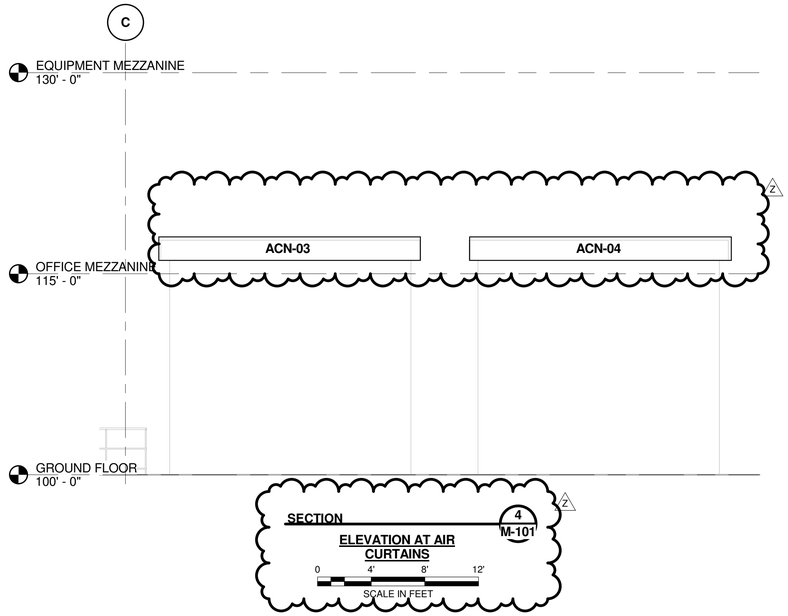
Sheet M-101 of XX

Drawing No. 108M-XXX-XXX









GENERAL NOTES

1. FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS REFER TO SHEET M-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

KEYED NOTES: (#)

1. SEE 3/M-503 FOR NATURAL GAS PIPING CONNECTION TO ATU. (Z)
2. SUPPORT VERTICAL DUCTWORK FROM WALL GIRTS AND ROOF CROSS BEAMS VIA ANGLE FRAMING AND I-BEAM BETWEEN MAIN ROOF MEMBERS. REFER TO PEMB PACKAGE 1C - SHEET A-006 DETAIL 4. (Z)
3. CONDENSING UNITS SERVING TWO (2) SPLIT-SYSTEM AIR HANDLERS LOCATED ON MECHANICAL MEZZANINE ABOVE OFFICE AREA.
4. SUPPORT HORIZONTAL DUCTWORK FROM ROOF CROSS BEAMS VIA I-BEAM BETWEEN MAIN ROOF MEMBERS AND ANGLE FRAME. REFER TO PEMB PACKAGE 1C DRAWINGS, SEET A-006, DETAIL 4.
5. SIDEWALL DIFFUSER AND SIDEWALL RETURN GRILL ON BUILDING INSIDE SURFACE.
6. REFER TO ARCHITECTURAL DRAWING FOR FLASHING REQUIREMENTS AT DUCT PENETRATIONS. PROVIDE DUCT WITH FLANGED CONNECTION OUTSIDE OF BUILDING. (Z)

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED ☐
NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

KANSAS 30805 REGISTERED PROFESSIONAL ENGINEER

2018-11-26 1:53 PM

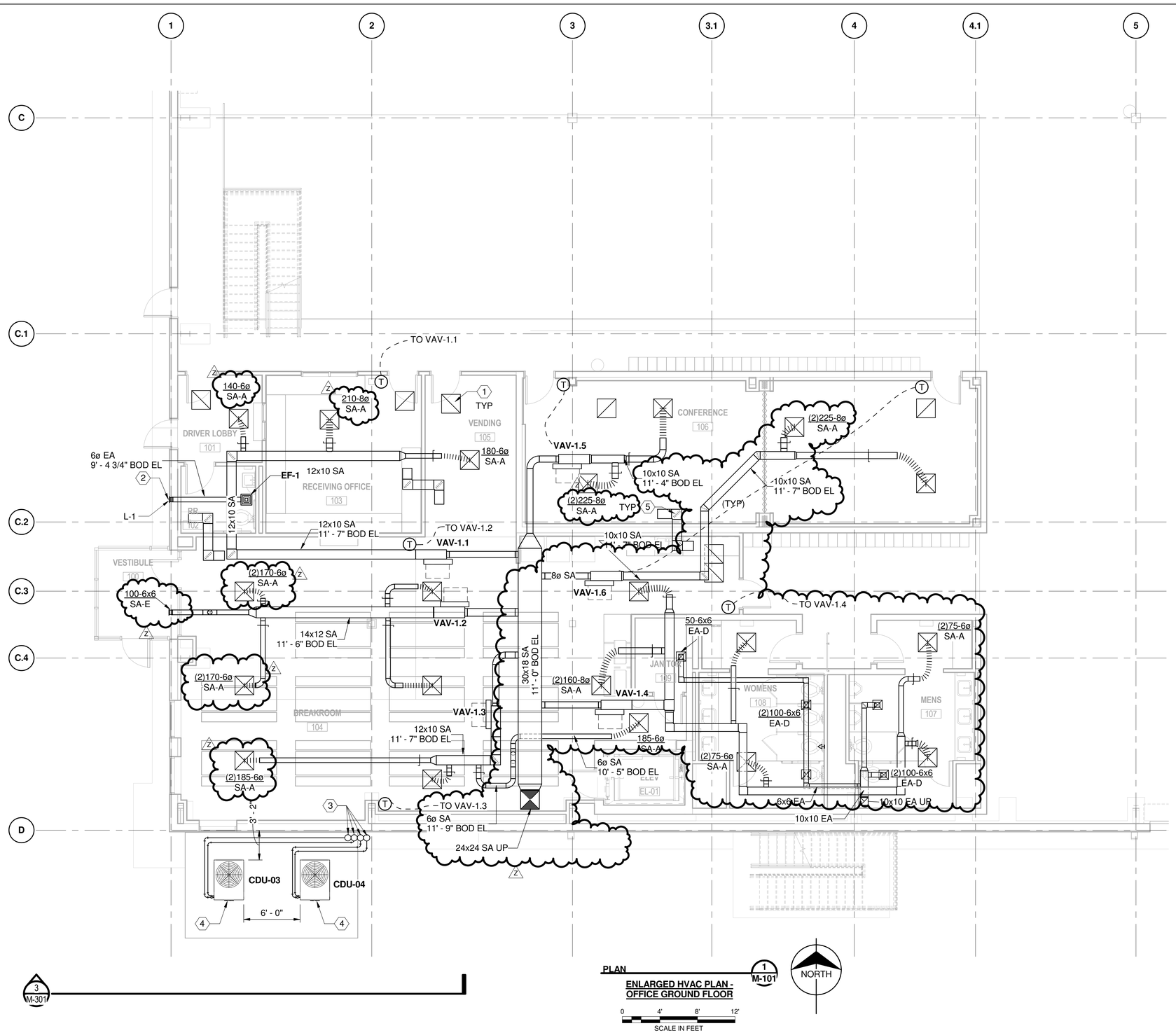
16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL SECTIONS
Sheet M-301 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS REFER TO SHEET M-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
3. ALL RIGID HVAC DUCTWORK SHALL BE LOCATED BETWEEN 10'-6" AND 12'-6" AFF OF THE LEVEL IT SERVES.

KEYED NOTES: (#)

1. ALL RETURN GRILLES SHALL BE TYPE C UNLESS NOTED OTHERWISE.
2. EXHAUST LOUVER L-1, SEE 4/M-503 FOR DETAIL.
3. RS/RL UP TO MEZZANINE LEVEL (SERVES ACU-01 AND ACU-02).
4. SEE 2/M-501 FOR PIPING CONNECTION DETAILS.
5. 12x12 RA TRANSFER GRILLE WITH LINER.

3 / M-301

PLAN — 1 / M-101

ENLARGED HVAC PLAN - OFFICE GROUND FLOOR

0 4' 8' 12'

SCALE IN FEET

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:53 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

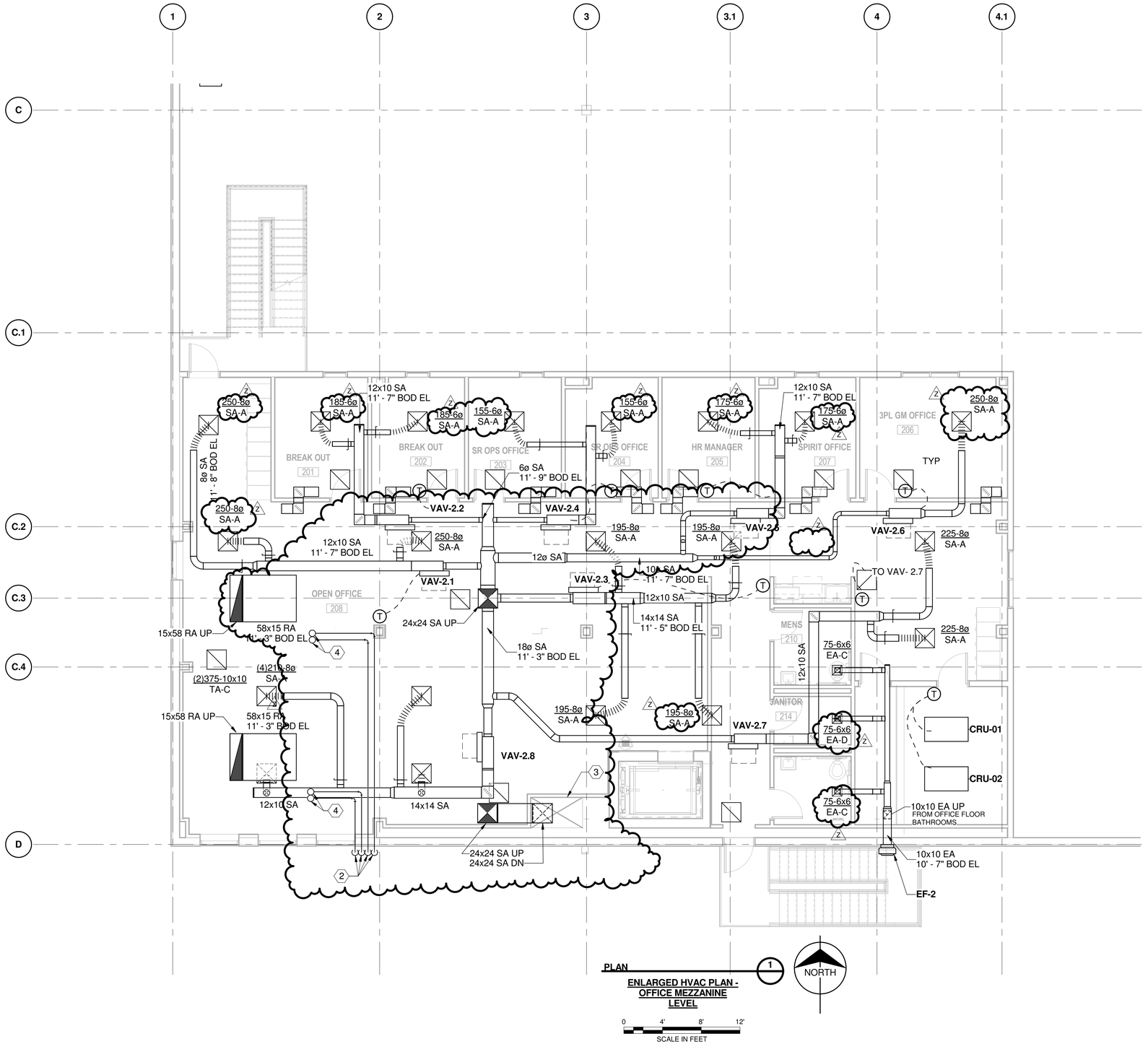
Project No. 6936

Sheet Name: ENLARGED HVAC PLAN - OFFICE GROUND FLOOR

Sheet M-401 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1

ENLARGED HVAC PLAN - OFFICE MEZZANINE LEVEL

NORTH

0 4' 8' 12'

SCALE IN FEET

GENERAL NOTES

1. FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS REFER TO SHEET M-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
3. ALL RIGID HVAC DUCTWORK SHALL BE LOCATED BETWEEN 10'-6" AND 12'-6" AFF OF THE LEVEL IT SERVES.

KEYED NOTES: (#)

1. ALL RETURN GRILLES SHALL BE TYPE C UNLESS NOTED OTHERWISE.
2. ACU-01 AND ACU-02 REFRIGERATION LINES RS/RL DOWN TO CDU-03 AND CDU-04.
3. PROVIDE SIGNAGE IN PLENUM SPACE: "DO NOT BLOCK CHASE. CHASE IS USED FOR RETURN AIR PATH TO ACU-02".
4. ACU-01 AND ACU-02 REFRIGERATION LINES RS/RL UP EQUIPMENT MEZZANINE.

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:54 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

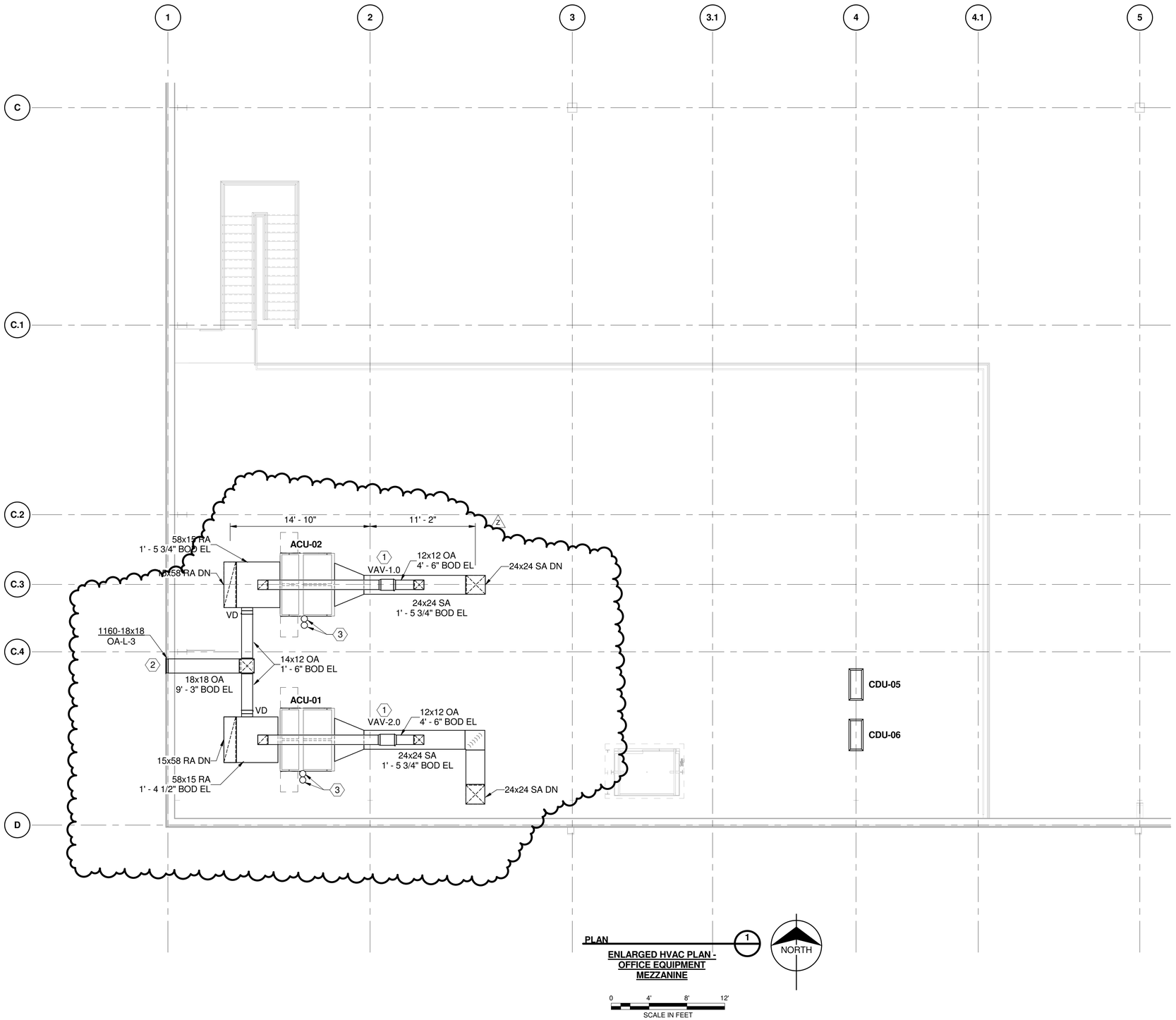
Project No. 6936

Sheet Name: ENLARGED HVAC PLAN - OFFICE SECOND FLOOR

Sheet M-402 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1

ENLARGED HVAC PLAN - OFFICE EQUIPMENT MEZZANINE

NORTH

0 4' 8' 12'

SCALE IN FEET

GENERAL NOTES

1. FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS REFER TO SHEET M-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
3. ALL RIGID HVAC DUCTWORK SHALL BE LOCATED BETWEEN 10'-6" AND 12'-6" AFF OF THE LEVEL IT SERVES. Z

KEYED NOTES: (#)

1. PROVIDE MOTORIZED MODULATING DAMPER FOR BYPASS DUCT TO AIR CONDITIONG UNITS ACU-01 AND ACU-02.
2. OUTSIDE AIR INTAKE LOUVER L-3, REFER TO ARCH FOR FLASHING REQUIREMENTS AT DUCT PENETRATIONS.
3. RS/RL PIPING UP FROM OFFICE SECOND FLOOR PLENUM. CONNECT PIPING TO ACU'S. Z

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:54 PM

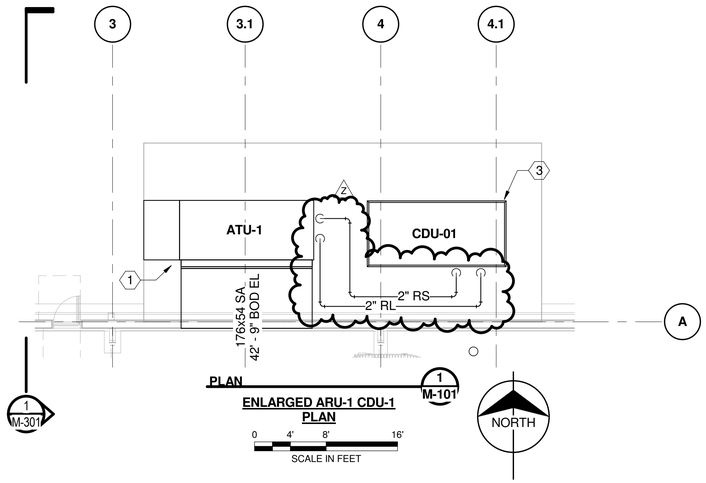
16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

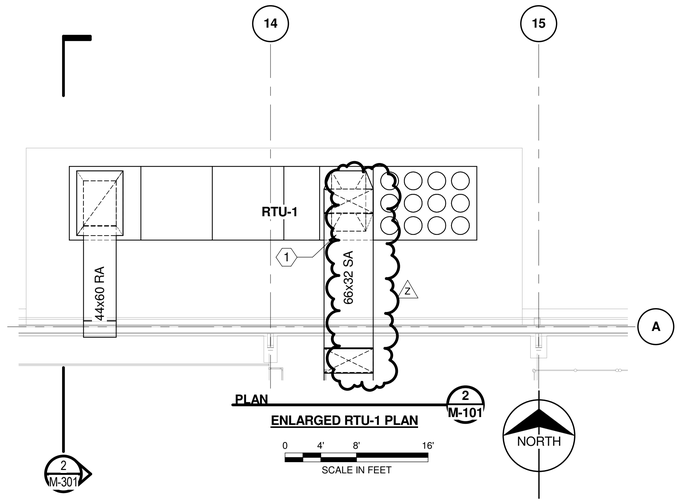
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

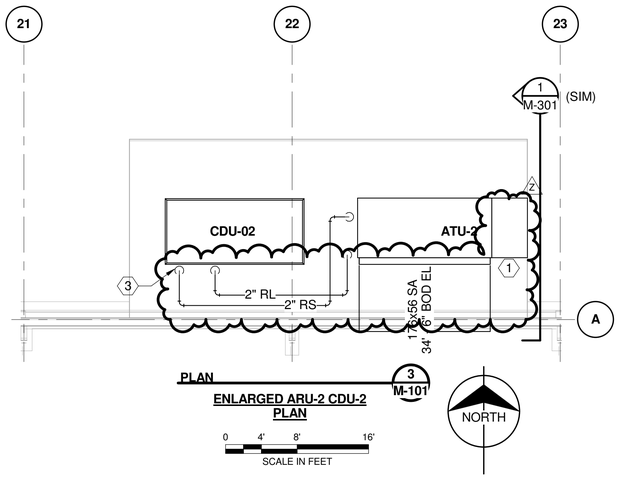
Project No. 6936
Sheet Name: ENLARGED HVAC PLAN - EQUIPMENT MEZZANINE
Sheet M-403 of XX
Drawing No. 108M-XXX-XXX

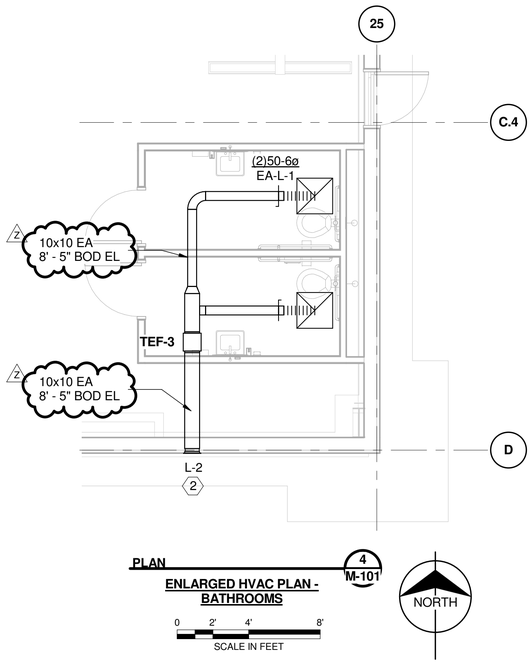
C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_M_kjbecker.rvt
11/26/2018 12:52:39 PM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.









GENERAL NOTES

1. FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS REFER TO SHEET M-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

KEYED NOTES: (#)

1. NATURAL GAS PIPING UP THROUGH EQUIPMENT PAD. SEE DETAILS 3/M-503 FOR EQUIPMENT CONNECTION REQUIREMENTS.
2. EXHAUST LOUVER L-2, REFER TO ARCH FOR FLASHING REQUIREMENTS AT DUCT.
3. SEE 2/M-501 FOR PIPING CONNECTION DETAILS.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

JASON RANDALL BECKER LICENSED 20805 PROFESSIONAL ENGINEER KANSAS

2018-11-26 1:54 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by: C. BOALDIN
Drawn by: K. BECKER

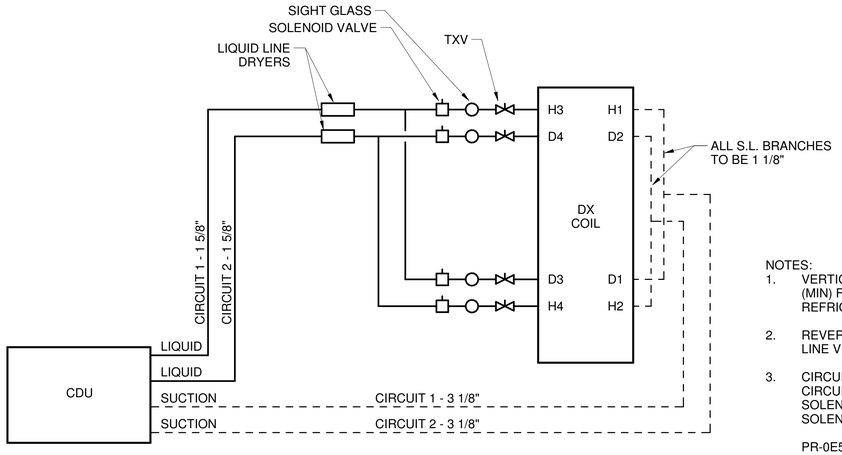
Project No.
6936

Sheet Name:
ENLARGED MECHANICAL PLANS

Sheet M-404 of XX

Drawing No.
108M-XXX-XXX

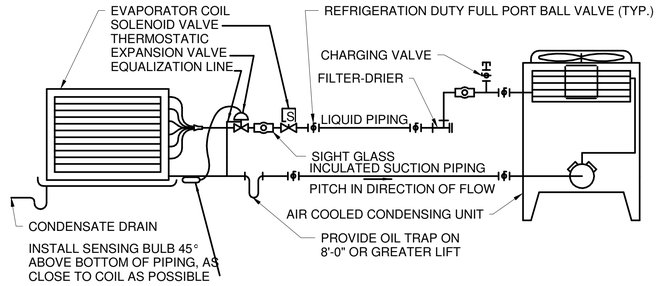
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



NOTES:
1. VERTICAL SUCTION LINES TO BE SIZED AT 2 5/8" (MIN) FOR CIRCUITES 1 & 2 FOR PROPER REFRIGERANT VELOCITY.
2. REVERSE TRAPS RECOMMENDED ON SUCTION LINE VERTICAL DROPS.
3. CIRCUIT #1 TXV - PR-0E50ZX200
   CIRCUIT #2 TXV - PR-0E35ZX200
   SOLENOID VALVES - PR-R46E259M
   SOLENIOD COILS - 120V

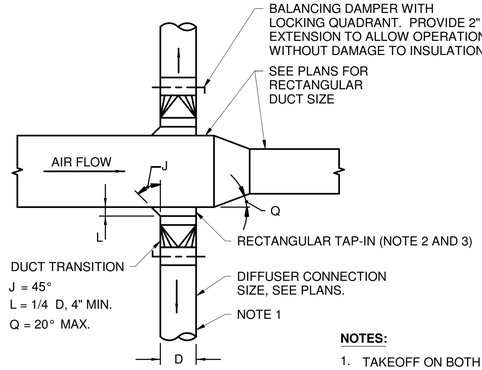
   PR-0E50ZX200: 1 1/8" IN X 1 3/8" OUT
   PR-0E35ZX200: 1 1/8" IN X 1 3/8" OUT
   PR-R46E259M: 1 1/8"

1 ATU REFRIGERANT PIPING DETAIL
SCALE:NTS



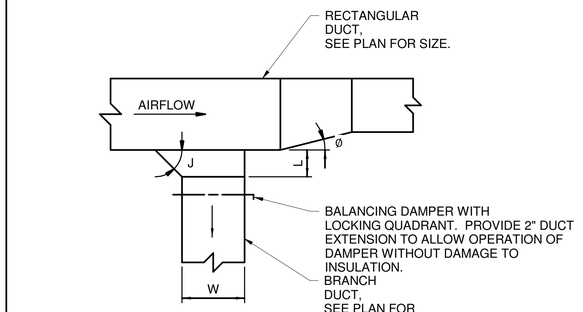
NOTES:
1. SUBCONTRACTOR IS RESPONSIBLE FOR COORDINATING REFRIGERANT LIQUID AND SUCTION PIPING, SIZES, ROUTING, AND ALL ACCESSORIES WITH EQUIPMENT MANUFACTURER. MAINTAIN UNIFORM SLOPE TO PREVENT OIL FROM POOLING IN LOW POINTS IN THE REFRIGERANT PIPING SYSTEM.

2 ACU - DX SPLIT SYSTEM PIPING AND HEAT PUMPS WHERE APPLICABLE
SCALE:NTS



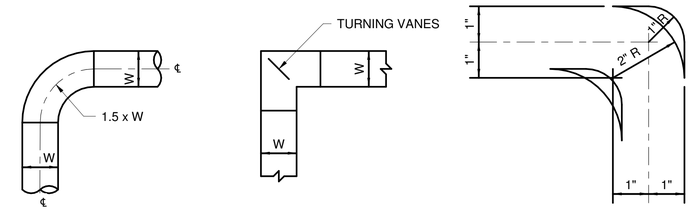
NOTES:
1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS (SEE SMACNA MANUAL).
3. EXTRACTORS, SCOOPS, DEFLECTORS OR DAMPERS THAT PROTRUDE INTO THE MAIN DUCT SHALL NOT BE USED. BALANCING DAMPERS SHALL BE LOCATED TO PREVENT PROTRUSION INTO THE MAIN DUCT AND TO PROVIDE STABLE AIR FLOW AND MINIMAL NOISE WHEN ADJUSTED.

3 DIFFUSER W/ 2 TAKEOFFS
SCALE:NTS

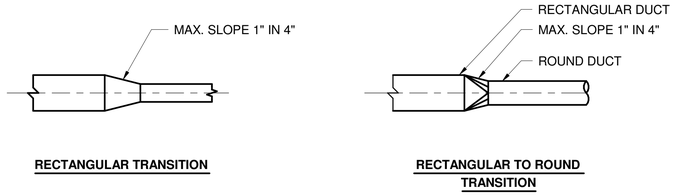


NOTES:
1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. SEE SMACNA MANUAL FOR TAP-IN DETAILS.
3. WHEN FITTING HAS ONLY ONE SIDE SLOPED FOR A SINGLE SIDE TAKE-OFF, THE TAP-IN SHALL BE INSTALLED IN SLOPED SIDE.
4. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS. (SEE SMACNA MANUAL).
5. EXTRACTORS, SCOOPS, DEFLECTORS OR DAMPERS THAT PROTRUDE INTO THE MAIN DUCT SHALL NOT BE USED. BALANCING DAMPERS SHALL BE LOCATED TO PREVENT PROTRUSION INTO THE MAIN DUCT AND TO PROVIDE STABLE AIR FLOW AND MINIMAL NOISE WHEN ADJUSTED.

4 BRANCH DUCT TAKE-OFF
SCALE:NTS



NOTE:
1. USE THIS DESIGN WHERE SQUARE 90° ELBOWS ARE SHOWN ON DRAWINGS OR IF SPACE DOES NOT PERMIT ROUND 90° ELBOWS.



5 LOW VELOCITY DUCT LAYOUT
SCALE:NTS

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
5	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
4	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV 4	CDB	AWS
2	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV 2	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

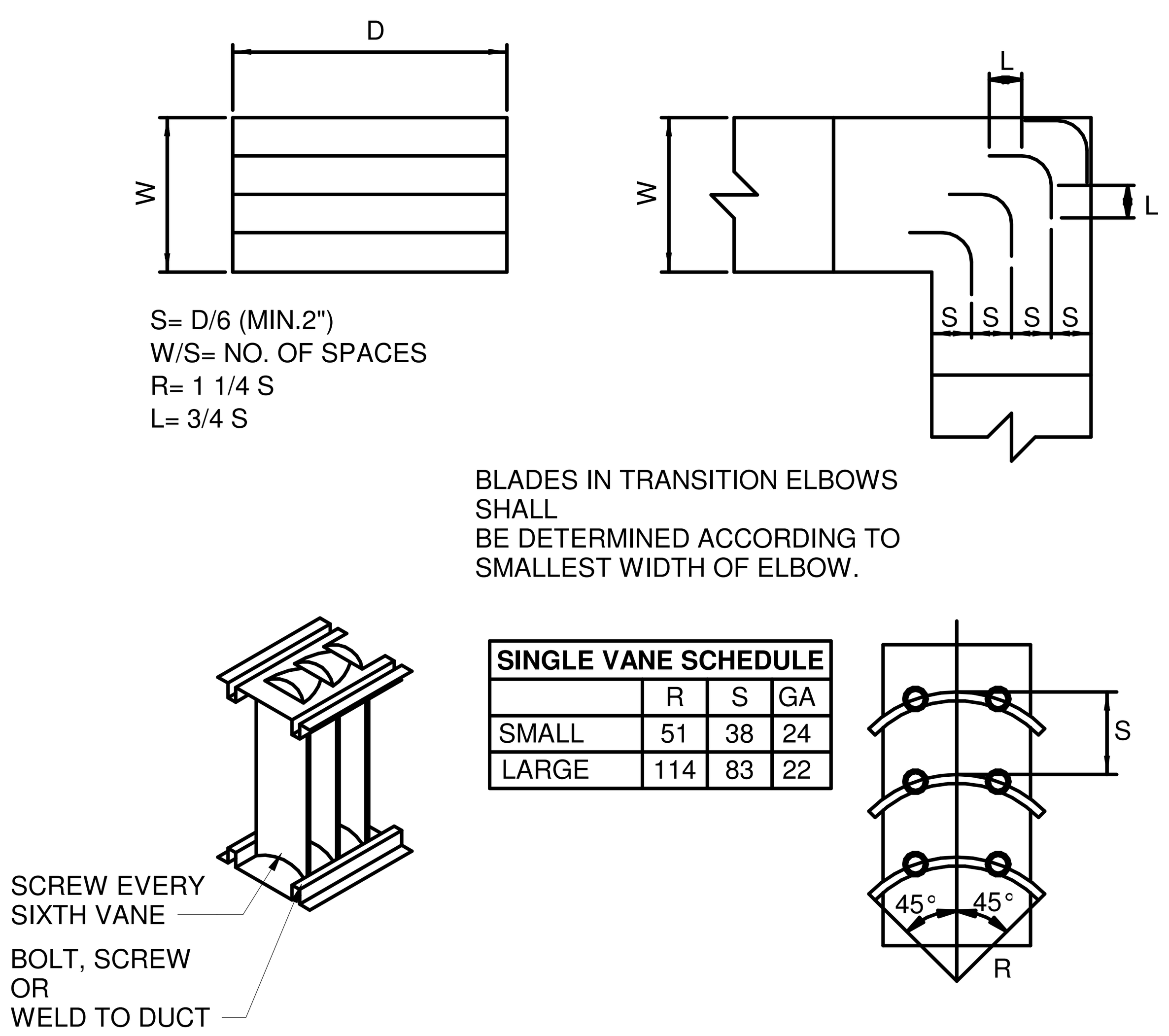


2018-11-26 1:54 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

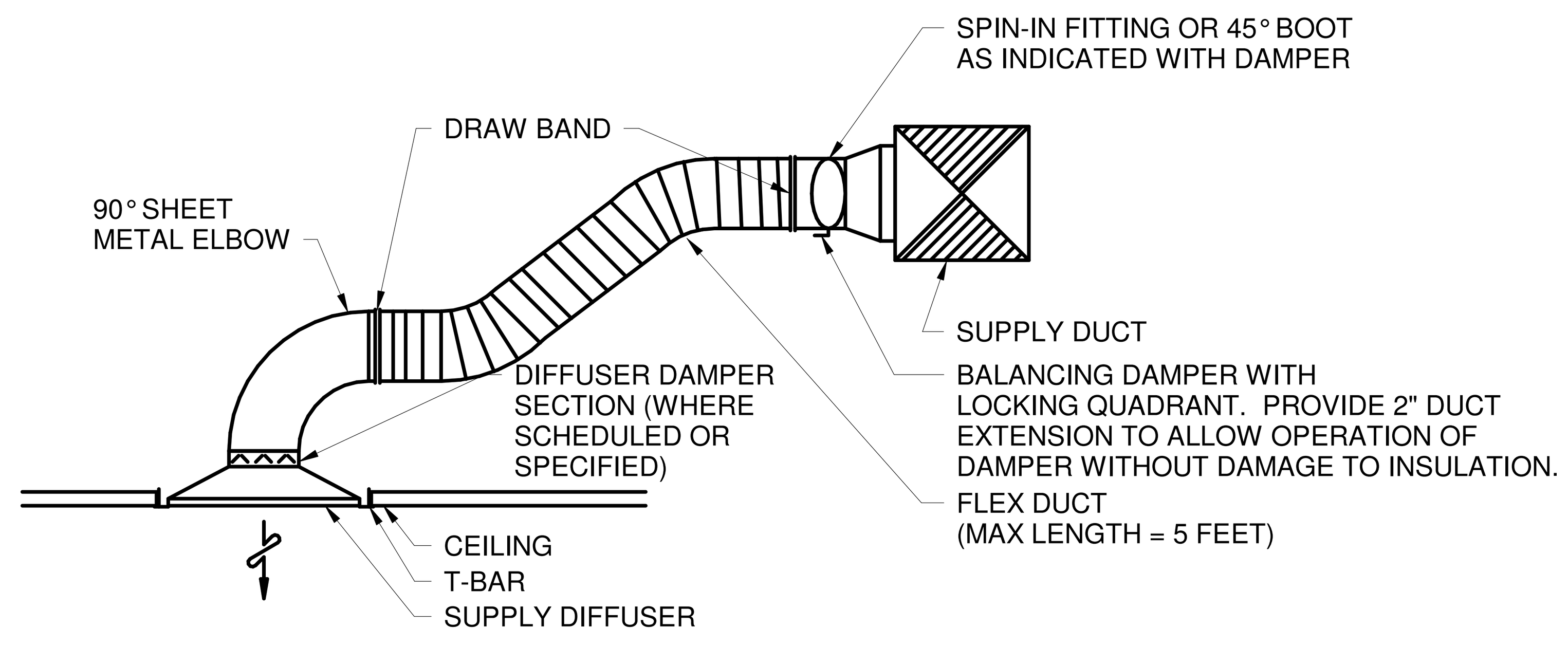
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL DETAILS
Sheet M-501 of XX
Drawing No. 108M-XXX-XXX

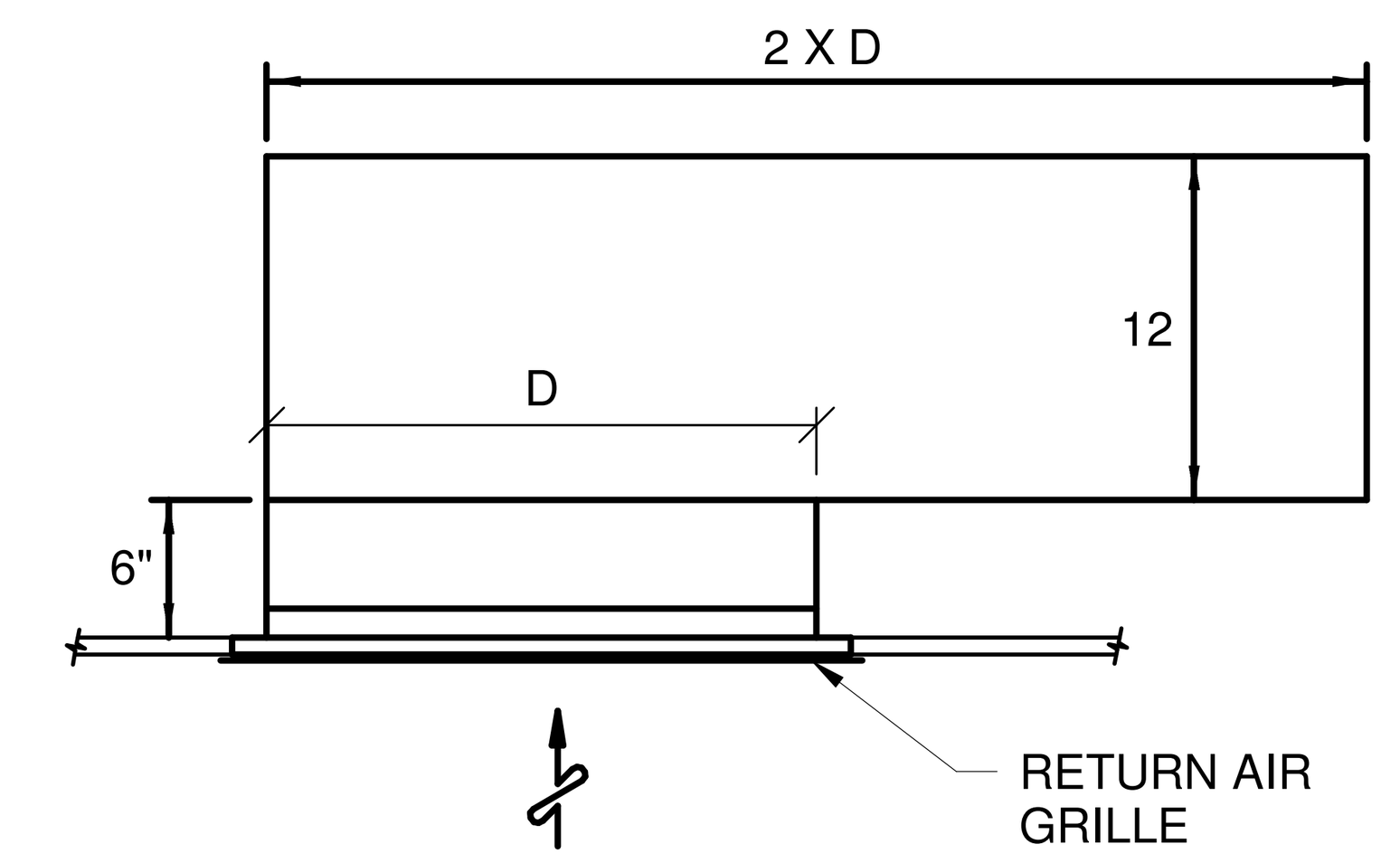


SINGLE VANE SCHEDULE			
	R	S	GA
SMALL	51	38	24
LARGE	114	83	22

1 RECTANGULAR AIR DUCT ELBOW TURNING VANES
SCALE:NTS



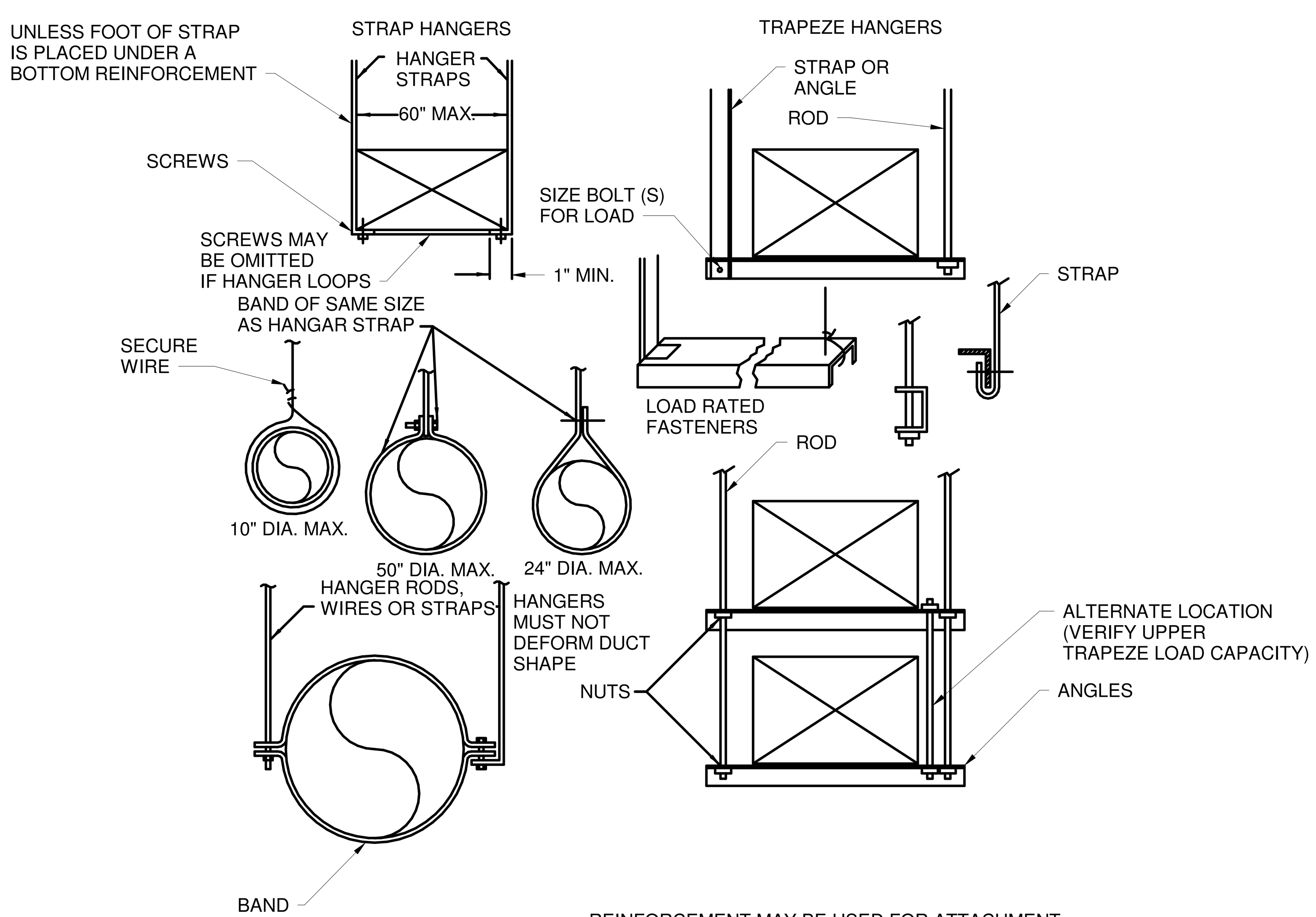
2 FLEXIBLE DUCT AT DIFFUSER
SCALE:NTS



NOTES:

1. PROVIDE ACOUSTICAL BOOT FOR ALL RETURN AIR GRILLES.
2. BOOT SHALL BE SAME RECTANGULAR SIZE AS GRILLE (D).
3. BOOT SHALL BE CONSTRUCTED OF GALVANIZED STEEL WITH 1 INCH THICK DUCT LINER.
4. DIRECT RETURN BOOT OPENING AWAY FROM ADJACENT FAN-POWERED VAV BOXES.

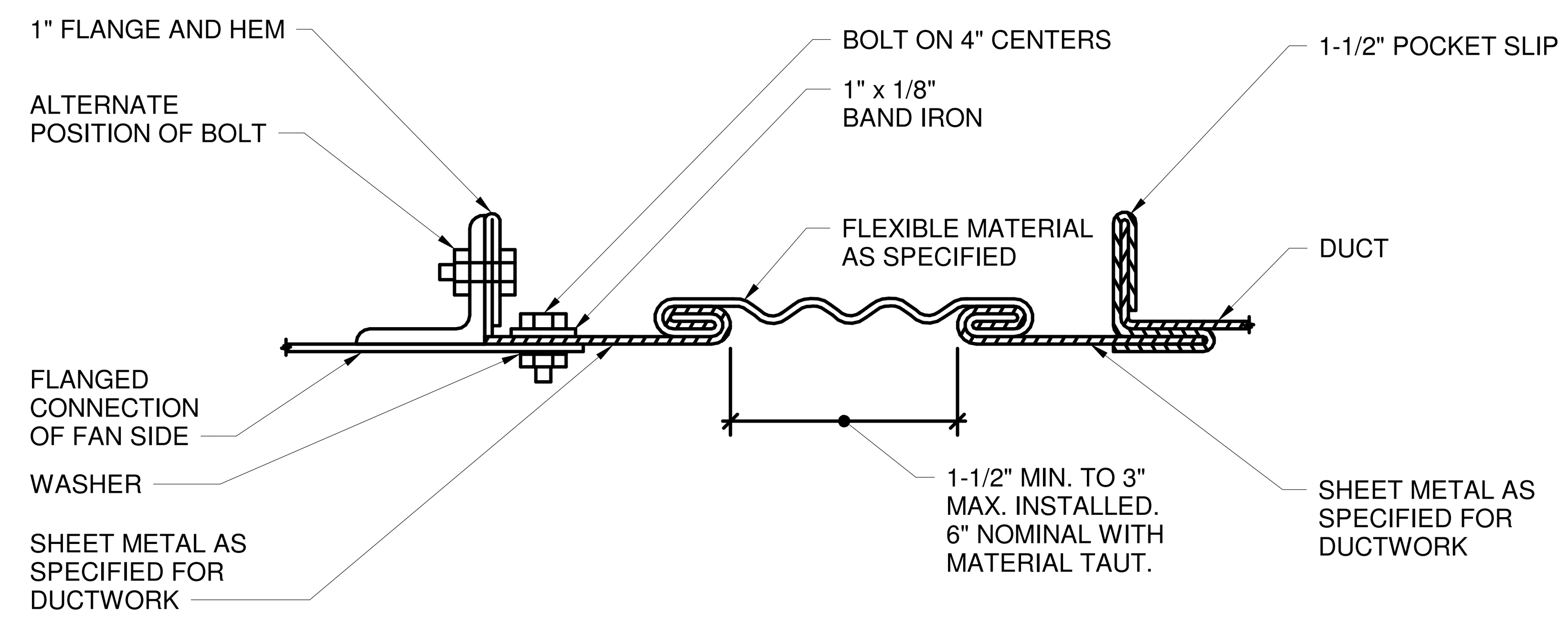
3 RETURN AIR GRILLE/BOOT
SCALE:NTS



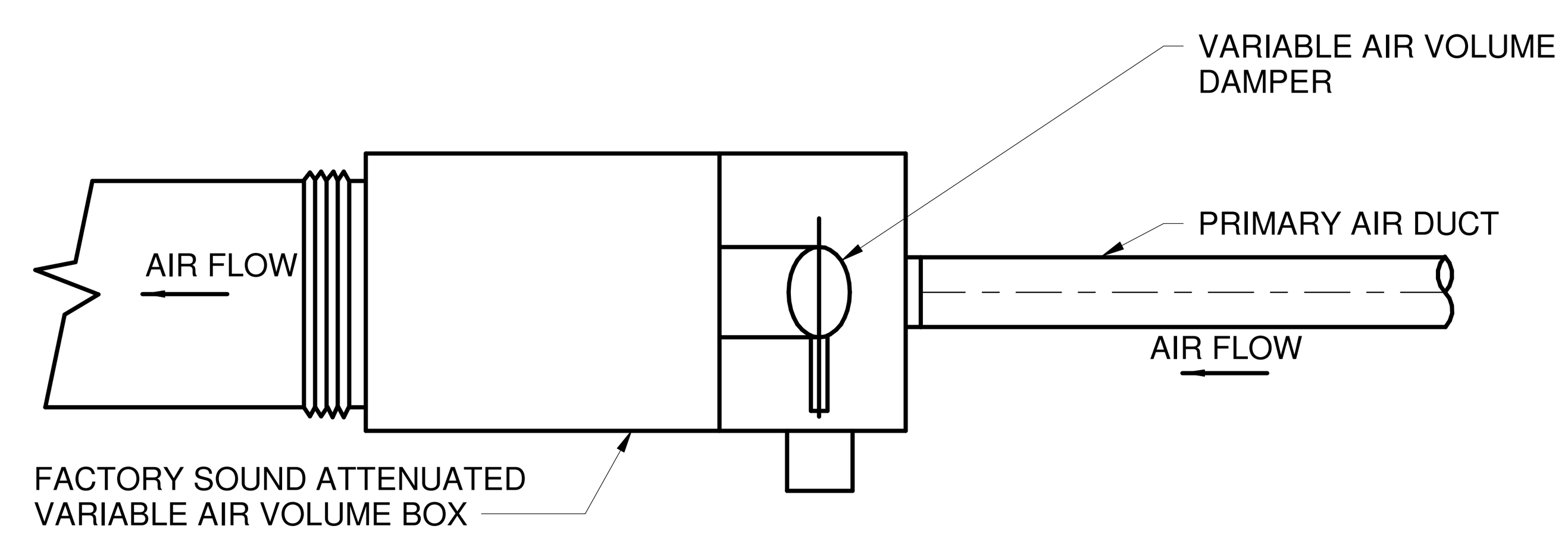
ONE HALF-ROUND MAY BE USED IF DUCT SHAPE IS MAINTAINED.

REINFORCEMENT MAY BE USED FOR ATTACHMENT IF IT QUALIFIES FOR BOTH DUTIES DO NOT EXCEEED ALLOWABLE LOAD LIMITS

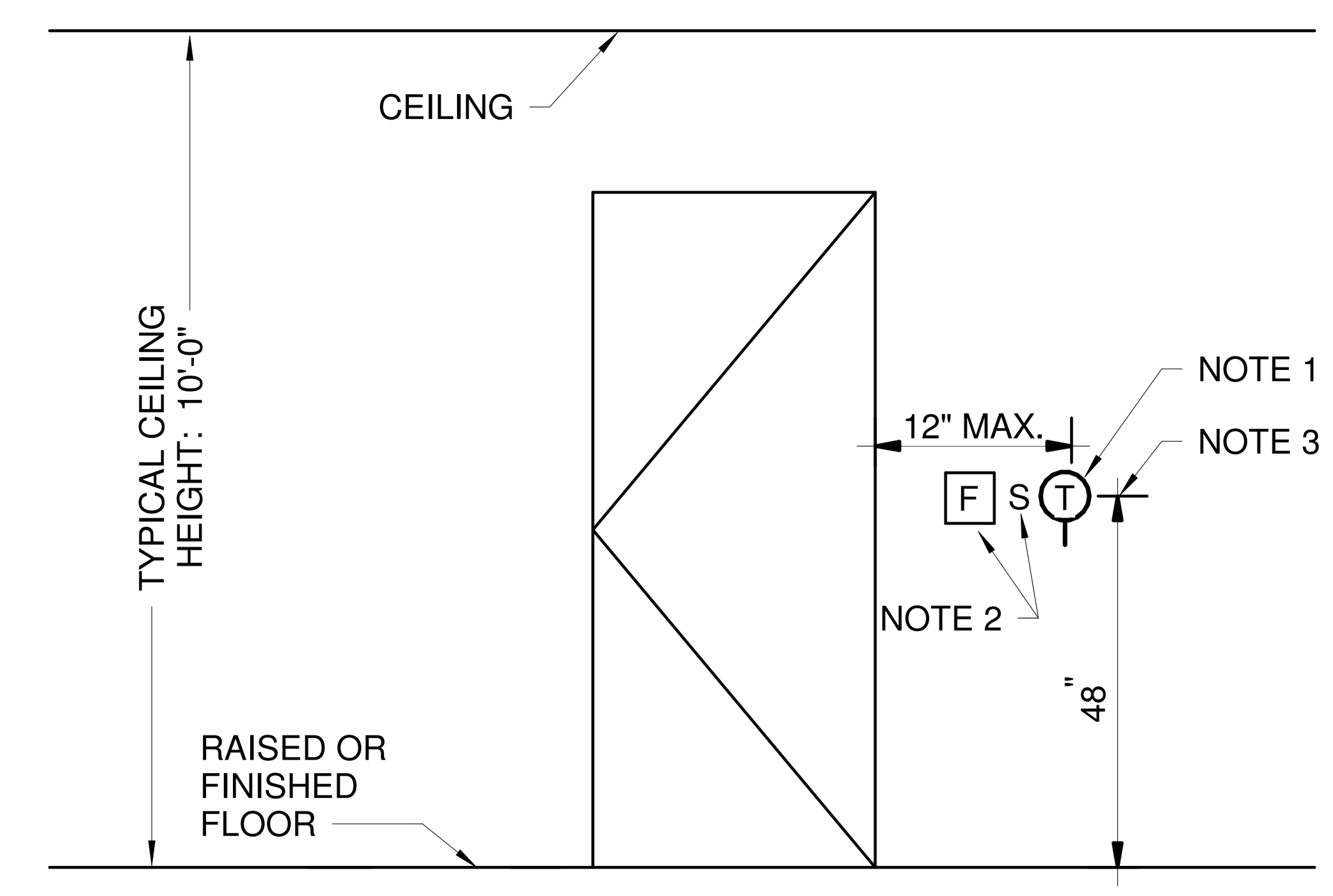
4 LOWER DUCT HANGAR ATTACHMENTS
SCALE:NTS



5 RECTANGULAR FLEXIBLE CONNECTION
SCALE:NTS



6 VARIABLE AIR VOLUME BOX CONNECTION
SCALE:NTS



DEVICE MOUNTING NOTES:

1. THERMOSTATS AND OTHER WALL-MOUNTED DEVICES SHALL BE MOUNTED WITHIN 12" OF DOOR FRAME. COORDINATE WITH ARCHITECTURAL DRAWING A-521. WHERE DEVICES ARE SHOWN ADJACENT TO THE DOOR ON THE HINGE-SIDE OF THE DOOR, AND THE DOOR SWINGS IN A MANNER THAT SHALL BLOCK THE DEVICE, MOUNT THE DEVICE 12" BEYOND THE DOOR SWING.
2. COORDINATE MOUNTING LOCATION WITH OTHER TRADES TO PROVIDE A UNIFORM MOUNTING AND AESTHETICALLY-PLEASING APPEARANCE. DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS SHALL GOVERN.
3. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE DRAWINGS SHALL BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR.

7 TYPICAL DEVICE MOUNTING DETAIL
SCALE:NTS

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS ™

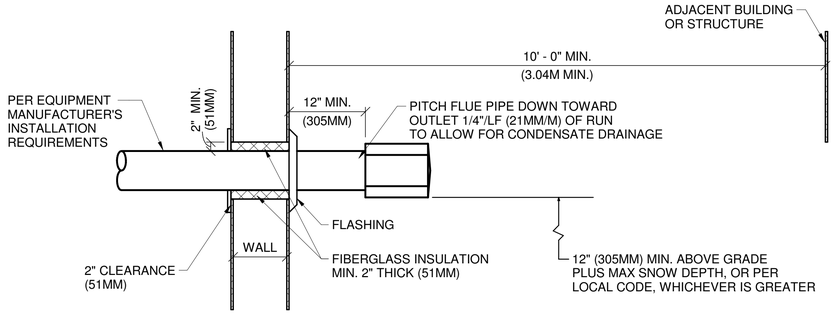
BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

NATHAN RANDALL FRYMIRE LICENSED 20605 KANSAS PROFESSIONAL ENGINEER
2018-11-26 1:54 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

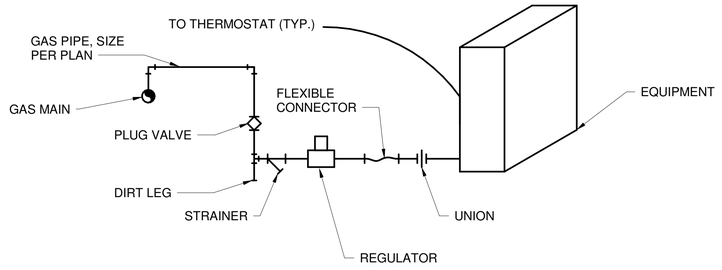
Project No. 6936
Sheet Name: MECHANICAL DETAILS
Sheet M-502 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



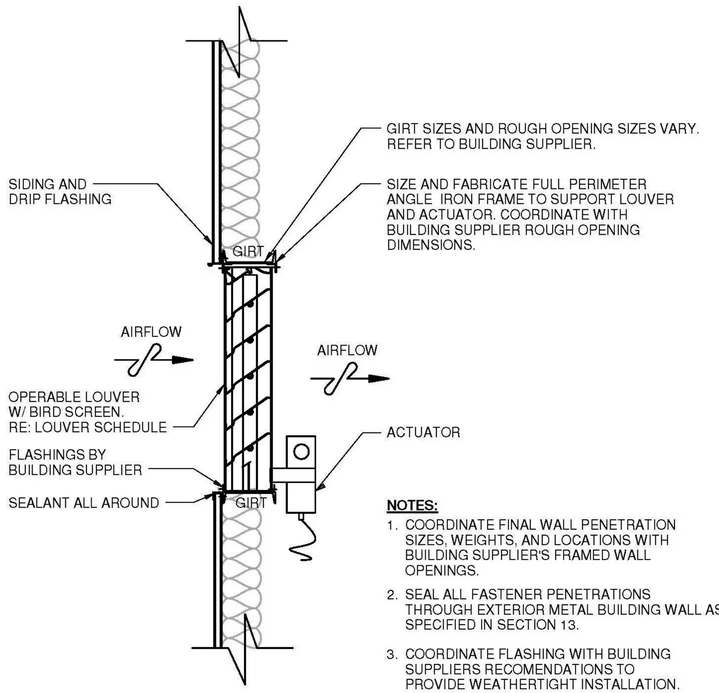
1 GAS FIRED EQUIPMENT HORIZONTAL VENTING

SCALE:NTS



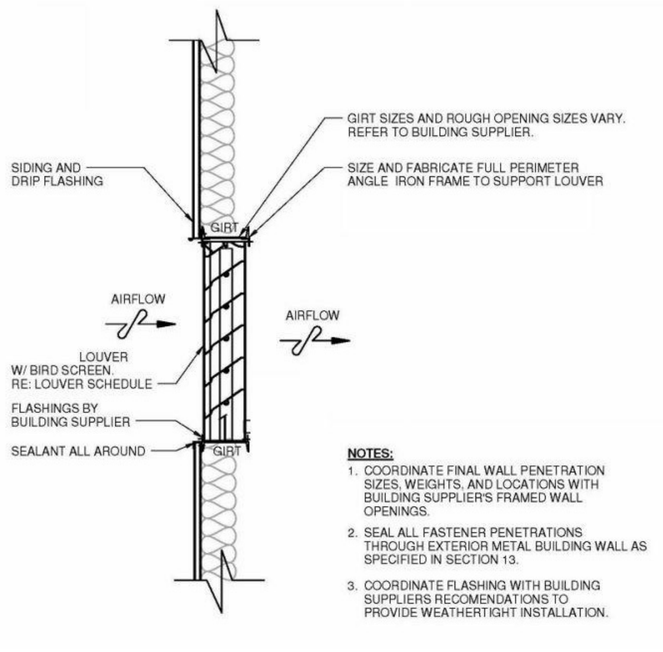
3 GAS CONNECTION DETAIL AT EQUIPMENT

SCALE:NTS



2 LOUVER - OPERABLE

SCALE:NTS



4 LOUVER - NON-OPERABLE

SCALE:NTS

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

	DATE	DESCRIPTION	BY	APPROVED
0	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV 0	CDB	AWS
1			CDB	AWS
2	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z		

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:54 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL DETAILS
Sheet M-503 of XX
Drawing No. 108M-XXX-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_M_kjbecker.rvt
11/26/2018 12:52:53 PM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

AIR CONDITIONING UNIT SCHEDULE (ACU)

TAG NO.	MANUFACTURER	Model	COOLING COIL: COIL AIR QUANTITY (CFM)	EAT DB (DEG. F.)	EAT WB (DEG. F.)	LAT DB (DEG. F)	LAT WB (DEG. F.)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	MAX. FACE VELOCITY (FPM)	MIN. ROWS / MAX. FPI	MAX. AIR PRESSURE DROP (IN. W.C.)	HEATING (BTUH)	HEATING COIL: STAGES	FINAL FILTER: TYPE	FINAL FILTER: EFFICIENCY	FINAL FILTER: PRESSURE DROP (IN. W.C.)	DIRTY FILTER PRESSURE DROP (IN. W.C.)	VOLTS	PH	APPROX. UNIT WEIGHT (LBS)
ACU-01	TRANE	TWE120E3	4110	80	67	58.9	55.1	122.2	122.2	367	2/18	2.02	62000	2	THROWAWAY	0.3	0.1	0.32	460	3	441
ACU-02	TRANE	TWE120E3	3400	80	67	58.9	55.1	118.5	118.5	304	2/18	2.02	62000	2	THROWAWAY	0.3	0.1	0.32	460	3	441

COMPUTER ROOM UNIT SCHEDULE (CRU)

TAG NO.	MODEL	SERVICE	LOCATION	ALTITUDE (FT)	NOM. AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. W.C.)	TOTAL COOLING CAPACITY (MBH)	SUPPLY FAN: MAX OUTLET VELOCITY (FPM)	SUPPLY FAN: FAN RPM	SUPPLY FAN: TYPE	SUPPLY FAN: VOLUME CONTROL	SUPPLY FAN MOTOR: MIN. MOTOR HP / MIN. VFD	SUPPLY FAN MOTOR: MOTOR RPM	SUPPLY FAN MOTOR: VOLTS	SUPPLY FAN MOTOR: PHASE	MANUFACTURER	WEIGHT (LB)
CRU-01	MMD24K/PFH027A7	DDC ROOM	DDC ROOM CEILING	1300	885	800	0.3	19.5	277	0	PROP	HI / LOW	0.5	1050	208	1	VERTIV	476
CRU-02	MMD24K/PFH027A7	DDC ROOM	DDC ROOM CEILING	1300	885	800	0.3	19.5	277	0	PROP	HI / LOW	0.5	1050	208	1	VERTIV	476

CONDENSING UNIT AND HEAT PUMP SCHEDULE (CDU)

TAG NO.	SERVICE	Model	TOTAL COOLING CAPACITY (BTU/H)	HEATING CAPACITY (BTU/H)	COMPRESSOR TYPE	EFFICIENCY (EER)	REFRIGERANT TYPE	UNIT ELECTRICAL: VOLT	PH.	MCA	MOCP	WEIGHT (LBS)	SIZE (H X W X D) (IN)	REMARKS
CDU-01	ATU-01	YLUA0148ZE46	1,580,400	0	SCROLL	9.741	R410A	460	3	291	400	7100	90 X 187 X 86	A,B,C,D,E
CDU-02	ATU-02	YLUA0148ZE46	1,580,400	0	SCROLL	9.741	R410A	460	3	291	400	7100	90 X 187 X 86	A,B,C,D,E
CDU-03	ACU-01	TWA120E3	120,000	62,000	SCROLL	12	R410A	230	1		50	496	52.1 X 55 X 42	B,C
CDU-04	ACU-02	TWA120E3	120,000	62,000	SCROLL	12	R410A	230	1		50	496	52.1 X 55 X 42	B,C
CDU-05	CRU-01	PUY-A24NHA6	19,500	0	SCROLL	0	R407C	208	1		15	200	24 X 58 X30	C,D,F
CDU-06	CRU-02	PUY-A24NHA6	19,500	0	SCROLL	0	R407C	208	1		15	200	24 X 58 X 30	C,D,F

A. STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
B. EQUIPMENT SIZED FOR 100 F AMBIENT TEMPERATURE.
C. PROVIDE WITH A SINGLE POINT POWER CONNECTION.
D. PROVIDE WITH R410A REFRIGERANT.
E. CONCRETE PAD SIZED BY STRUCTURAL ENGINEERS PROVIDED BY OTHERS.
F. EQUIPMENT SIZED FOR 100 F AMBIENT TEMPERATURE

VARIABLE AIR VOLUME BOX SCHEDULE (VAV)

TAG NO.	AHU CONNECTION	TERMINAL SPEC. TYPE	MAX DESIGN AIRFLOW (CFM)	MIN DESIGN AIRFLOW (CFM)	MAX. HEATING DESIGN AIRFLOW (CFM)	HEATING COIL: MINIMUM INLET AIR TEMP. (DEG. F.)	HEATING COIL: DISCHARGE AIR TEMP. (DEG. F.)	HEATING COIL: AIR PRESSURE DROP (IN. W.C.)	HEATING COIL: CAPACITY (KW)	HEATING COIL: HTG. COIL TYPE	VOLTS	PHASE	VAV BOX INLET DIAMETER (IN.)	MIN. INLET PRESS	REMARKS
VAV-1.1	ACU-01	DESV	530	265	290	55	100	0.50	4.1	SCR	480	3	8	0.75	
VAV-1.2	ACU-01	DESV	780	475	460	55	95	0.50	5.8	SCR	480	3	10	0.75	
VAV-1.3	ACU-01	DESV	560	355	315	55	100	0.50	4.5	SCR	480	3	8	0.75	
VAV-1.4	ACU-01	DESV	620	185	310	55	100	0.50	4.4	SCR	480	3	8	0.75	
VAV-1.5	ACU-01	DESV	455	160	375	55	100	0.50	3.8	SCR	480	3	8	0.75	
VAV-1.6	ACU-01	DESV	455	165	375	55	100	0.50	5.3	SCR	480	3	8	0.75	
VAV-2.1	ACU-02	DESV	750	300	375	55	100	0.50	5.3	SCR	480	3	8	0.75	
VAV-2.2	ACU-02	DESV	370	230	150	55	100	0.50	2.1	SCR	480	3	6	0.75	
VAV-2.3	ACU-02	DESV	780	235	490	55	95	0.50	6.2	SCR	480	3	10	0.75	
VAV-2.4	ACU-02	DESV	310	100	150	55	100	0.50	2.1	SCR	480	3	6	0.75	
VAV-2.5	ACU-02	DESV	350	150	150	55	100	0.50	2.1	SCR	480	3	6	0.75	
VAV-2.6	ACU-02	DESV	250	100	120	55	100	0.50	1.7	SCR	480	3	5	0.75	
VAV-2.7	ACU-02	DESV	450	135	225	55	100	0.50	3.2	SCR	480	3	8	0.75	
VAV-2.8	ACU-02	DESV	840	255	420	55	95	0.50	5.3	SCR	480	3	10	0.75	

EXHAUST FAN SCHEDULE

TAG NO.	AREA SERVED	FAN TYPE	MANUFACTURER	MODEL NUMBER	ALTITUDE (FT.)	AIRFLOW (CFM)	FAN SPEED (RPM)	EXTERNAL STATIC PRESSURE (IN. W.G.)	SOUND LEVEL (LWA)	MIN. MOTOR HP	OPERATING BHP	MOTOR TYPE	STARTER / DISCONNECT PROVIDED BY	VOLTS	PHASE	DRIVE TYPE	WEIGHT (LBS)	REMARKS
EF-1	RR-102	CEILING MOUNTED	GREENHECK	SP-B150	1306	150	1050	0.26	55	0.17	0.17	ODP	MFR	115	1	DIRECT	14	
EF-2	OFFICE RESTROOMS	CENTRIFUGAL	GREENHECK	CW-085-VG	1306	800	1648	0.25	72	0.1	0.1	TENV	MFR	115	1	DIRECT	34	
TEF-3	SOUTHEAST RESTROOM	IN-LINE	GREENHECK	CSP-B150	1306	150	1050	0.24	55	0.01	0.01	ODP	MFR	115	1	DIRECT	70	

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:54 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL SCHEDULES
Sheet M-601 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

AIR TURNOVER UNIT SCHEDULE 1 (ATU)

TAG NO.	Manufacturer	AREA SERVED	Model	LOCATION	ALTITUDE (FT)	MAX. AIRFLOW (CFM)	TOTAL STATIC PRESSURE (IN. W.C.)	SUPPLY FAN			
								# OF FANS	MOTOR HP	VOLTS	PHASE
ATU-1	APPLIED AIR	WAREHOUSE	GMIFA-600	EXT. GRND.	1300	76000	2.77	3	60	460	3
ATU-2	APPLIED AIR	WAREHOUSE	GMIFA-600	EXT. GRND.	1300	76000	2.77	3	60	460	3

AIR TURNOVER UNIT SCHEDULE 2 (ATU) Z

TAG NO.	COOLING COIL										HEATING COIL				FINAL FILTER				APPROX. UNIT WEIGHT (LBS)
	COIL AIR QUANTITY (CFM)	EAT DB (DEG. F.)	EAT WB (DEG. F.)	LAT DB (DEG. F)	LAT WB (DEG. F.)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	MAX. FACE VELOCITY (FPM)	MAX. FPI	MAX. AIR PRESSURE DROP (IN. W.C.)	HEATING COIL TYPE	TOTAL OUTPUT CAPACITY (BTUH)	COIL FACE VELOCITY (FPM)	HEATING STAGES	TYPE	EFFICIENCY	PRESSURE DROP (IN. W.C.)	DIRTY FILTER PRESSURE DROP (IN. W.C.)	
ATU-1	76000	85	70.8	72.5	64.6	1614	1027	492.1	10	0.3	NATURAL GAS	2400000	492.1	4	THROWAWAY	90	0.1	0.32	17000
ATU-2	76000	85	70.8	72.5	64.6	1614	1027	492.1	10	0.3	NATURAL GAS	2400000	492.1	4	THROWAWAY	90	0.1	0.32	17000

NOTES:
1. STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
2 EQUIPMENT SIZED FOR 97F AMBIENT TEMPERATURE.
3. PROVIDE (90) 20x25x2 PLEATED FILTERS FOR FILTER BANK.
4. DIVISION 16 CONTRACTOR TO FURNISH AND INSTALL SMOKE DETECTORS IN RETURN AIR DUCT.
5. FIRE ALARM CONTRACTOR TO PROIVIDE AND TERMINATE ALL SHUTDOWN WIRING.
6. PROVIDE CONCRETE PAD FOR UNIT MOUNTING. THICKNESS DETERMINED BY STRUCTURAL ENGINEER.
7. PROVIDE FACTOR MOUNTED DISCONNECT SWITCH.
8. PROVIDE WITH STAND ALONE THERMOSTAT.
9. PROVIDE MODULATING VALVE ON GAS FIRED HEAT EXCHANGER.

DIFFUSER, REGISTER, & GRILLE SCHEDULE (DRG) Z

TYPE	DESCRIPTION	MOUNTING	THROW PATTERN	DAMPER REQUIRED	MATERIAL	FINISH	BASIS OF DESIGN: MFR.	BASIS OF DESIGN: MODEL NO.	REMARKS
A	24"x24" SQUARE CEILING SUPPLY AIR DIFFUSER	LAY-IN	4W,3W,2W	NONE	ALUMINUM	WHITE	TITUS	TMS	Z
C	24"x24" SQUARE RETURN OR EXHAUST AIR	LAY-IN	EGGCRATE	NONE	ALUMINUM	WHITE	TITUS	50F	
D	24" LINEAR SLOT RETURN OR EXHAUST AIR DIFFUSER	SURFACE	EGGCRATE	NONE	ALUMINUM	WHITE	TITUS	50F	
E	6 X 6 RETANGULAR SUPPLY GRILLE	WALL SURFACE	-	NONE	ALUMINUM	WHITE	TITUS	DL	
F	50X15 RETANGULAR SUPPLY GRILLE LONG THROW	DUCT	-	YES	ALUMINUM	WHITE	TITUS	DL-SV	
H	RECTANGULAR RETURN OR EXHAUST AIR GRILLE	DUCT	-	NONE	ALUMINUM	3/4"	TITUS	350-FL	
L-1	6 X 6 EXHAUST LOUVER	WALL SURFACE	EXHAUST	NONE	ALUMINUM	WHITE	GREENHECK	EHH-201	
L-3	OUTDOOR AIR SUPPLY LOUVER	WALL SURFACE	INTAKE	NONE	ALUMINUM	WHITE	GREENHECK	EHH-201	

AIR CURTAIN UNIT SCHEDULE Z

Mark	Area Served	MANUFACTURER	MODEL	SUPPLY AIRFLOW (CFM)	NUMBER OF FAN MOTORS	FAN MOTOR HP	ELECTRICAL: POWER (FLA)	ELECTRICAL: VOLTS	ELECTRICAL: PHASE	ELECTRICAL: FREQ.	OPERATING WEIGHT
ACN-01	DOOR110K	TMI	TMI S-XHD-240-4	29120	4	5	31.6	460 V	3	60	1645
ACN-02	DOOR 110Q	TMI	TMI S-XHD-240-4	29120	4	5	31.6	460 V	3	60	1645
ACN-03	DOOR 112B	TMI	TMI S-XHD-216-3	24570	3	5	23.7	460 V	3	60	1268
ACN-04	DOOR 112C	TMI	TMI S-XHD-216-3	24570	3	5	23.7	460 V	3	60	1268

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543



2018-11-26 1:55 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL SCHEDULES
Sheet M-602 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

HIGH VELOCITY / LOW SPEED FAN SCHEDULE (CF)

TAG	BLADE TYPE	DIAMETER (INCHES)	FAN SPEED CONTROL	MOTOR TYPE	MOTOR RPM	VOLTS	PHASE	FULL LOAD AMPS	SOUND LEVEL (DBA)	WEIGHT (LBS)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	NOTES
HVF-1	AIR FOIL	288	VFD	HELICAL	61	480	3	10	55	231	BAF	Basic 6	
HVF-2	AIR FOIL	288	VFD	HELICAL	61	480	3	10	55	231	BAF	Basic 6	
HVF-3	AIR FOIL	288	VFD	HELICAL	61	480	3	10	55	231	BAF	Basic 6	
HVF-4	AIR FOIL	288	VFD	HELICAL	61	480	3	10	55	231	BAF	Basic 6	
HVF-5	AIR FOIL	288	VFD	HELICAL	61	480	3	10	55	231	BAF	Basic 6	
HVF-6	AIR FOIL	288	VFD	HELICAL	61	480	3	10	55	231	BAF	Basic 6	

ROOFTOP UNIT SCHEDULE 1 (RTU)

												SUPPLY FAN							SUPPLY FAN MOTOR				
TAG NO.	SERVICE	MANUFACTURER	MODEL	LOCATION	ALTITUDE (FT)	MAX. AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	MIN. OUTSIDE AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. W.C.)	INTERNAL STATIC PRESSURE (IN. W.C.)	TOTAL STATIC PRESSURE (IN. W.C.)	MAX BHP	MAX OUTLET VELOCITY (FPM)	FAN RPM	TYPE	WHEEL DIAMETER (IN.)	CONSTRUCTION	VOLUME CONTROL	MIN. MOTOR HP / MIN. VFD	MOTOR RPM	MOTOR TYPE	VOLTS	PHASE
RTU-1	WAREHOUSE	TRANE	SFHKD134	PAD MOUNTED	1306	30000	10000	9200	1.25	1.5	3.5	20	0	1250	FORWARD CURVE	36	ALUMINUM	VFD	30	1250	ODP	480	3

ROOFTOP UNIT SCHEDULE 2 (RTU)

	COOLING COIL								HEATING COIL				FINAL FILTER				
TAG NO.	COIL AIR QUANTITY (CFM)	EAT DB (DEG. F.)	EAT WB (DEG. F.)	LAT DB (DEG. F)	LAT WB (DEG. F.)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	MIN. ROWS / MAX. FPI	MAX. AIR PRESSURE DROP (IN. W.C.)	HEATING COIL TYPE	HEATING COIL AIRFLOW (CFM)	INPUT CAPACITY (BTUH)	OUTPUT CAPACITY (BUTH)	TYPE	EFFICIENCY	PRESSURE DROP (IN. W.C.)	DIRTY FILTER PRESSURE DROP (IN. W.C.)	APPROX. UNIT WEIGHT (LBS)
RTU-1	30000	91	66.7	55	48	1334	1267.8	2/276	1.86	NATURAL GAS	30000	1750000	1400000	2	30	0.2	0.3	15829

NOTES:

A. STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
B. EQUIPMENT SIZED FOR 101 DEG. F AMBIENT TEMPERATURE
C. DIVISION 16 CONTRACTOR TO FURNISH AND INSTALL SMOKE DETECTORS IN RETURN AIR DUCT.
D. FIRE ALARM CONTRACTOR TO WIRE OUTSIDE AIR UNIT TO SHUT DOWN UPON FIRE ALARM.
E. FIRE ALARM CONTRACTOR TO PROVIDE AND TERMINATE ALL SHUT DOWN WIRING.
F. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
G. PROVIDE CONTROL WIRING CONNECTIONS FOR INCORPORATION INTO BUILDING MANAGEMENT SYSTEM CONTROLS.

	DESCRIPTION	DATE	BY	APPROVED
A	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	06/29/2018	CDB	AWS
O	PKG 2B: MEP, FP, FINISHES - REV O	07/13/2018	CDB	AWS
Z	PKG 2B: MEP, FP, FINISHES - REV Z	11/16/2018	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:55 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by K. BECKER
Designed by C. BOALDIN

Project No. 6936
Sheet Name: MECHANICAL SCHEDULES
Sheet M-603 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

SEQUENCE OF OPERATION
ACN-01 THRU 12
AIR CURTAINS

PART 1 - GENERAL

THE AIR CURTAINS SHALL BE CONTROLLED AUTOMATICALLY FROM THE LOCAL CONTROL PANEL AND MONITORED BY THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMS). ALL HARD WIRE INTERLOCKS SHALL BE BY DIVISION 16.

THE ACN SYSTEMS SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, AUTO, AND FAILURE (CONTROLS OUTAGE). MODES SHALL BE INITIATED BY THE LOCAL CONTROL PANEL.

AIR CURTAINS SHALL OPERATE IN GROUPS ASSOCIATED TO INDIVIDUAL DOORS PER PLAN. EACH GROUP OF AIR CURTAINS SHALL HAVE A COMMON MOTOR CONTROL PANEL

PART 2 - MODE OF OPERATION DESCRIPTIONS

2.01 OFF MODE:
THE LOCAL CONTROL PANEL SHALL BE USED TO MANUALLY INITIATE THE OFF MODE.

2.02 AUTOMATIC OPERATION MODE:
GROUPS OF AIR CURTAINS SHALL BE ENABLED BY A DOOR SWITCH LOCATED AT THE ASSOCIATED DOOR. WHEN THE DOOR BEGINS TO OPEN, THE ACN FANS SHALL BE ENERGIZED.

Z

SEQUENCE OF OPERATION
CRU-01, 02 | CDU-05, 06

PART 1 - GENERAL

THE COMPUTER ROOM AIR CONDITIONING (HVAC) SYSTEMS SHALL BE CONTROLLED AUTOMATICALLY FROM THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMS). ALL SET POINTS SHALL BE ADJUSTABLE (ADJ.). EQUIPMENT IDENTIFIED AS BEING INTERLOCKED SHALL BE SOFTWARE INTERLOCKED THROUGH THE FMS UNLESS NOTED OTHERWISE OR INDICATED ON THE ELECTRICAL DRAWINGS. ALL HARD WIRE INTERLOCKS SHALL BE BY DIVISION 16.

THE CRU "SERVICE" ALARMS SIGNALED TO THE FMS SHALL CONSIST OF, BUT NOT BE LIMITED TO, HIGH FILTER DIFFERENTIAL PRESSURES, HIGH/LOW AIR TEMPERATURES, EQUIPMENT FAILURES, ETC., UNLESS NOTED OTHERWISE.

THE CRU COOLING SYSTEMS SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, AUTO, AND FAILURE (CONTROLS OUTAGE). MODES SHALL BE INITIATED BY THE FMS, OR BY MANUAL OVERRIDE FROM THE LOCAL UNIT CONTROL PANEL.

PART 2 - MODE OF OPERATION DESCRIPTIONS

THE COMPUTER ROOM UNIT SHALL OPERATE CONTINUOUSLY AS SIGNALED THROUGH THE FMS. THE UNIT SHALL HAVE ABILITY TO BE DEENERGIZED VIA MANUAL COMMAND THROUGH THE FMS FOR MAINTENANCE ACTIVITIES.

2.01 OFF MODE:
THE FMS SHALL BE USED TO INITIATE THE OFF MODE. WHEN THE UNIT IS DEENERGIZED, THE ELECTRIC HEATING COIL BURNER SHALL BE DEACTIVATED, AND THE CONDENSING UNIT SHALL BE DEENERGIZED. THE SUPPLY FAN SHALL BE DEENERGIZED AND DAMPER SHALL RETURN TO ITS NORMAL POSITION. RETURN DAMPER NORMAL POSITION SHALL BE FULL OPEN.

2.02 AUTOMATIC OPERATION MODE:
THE FMS SHALL BE USED TO INITIATE THE AUTOMATIC ("ON") MODE. WHEN THE UNIT IS ENABLED, THE FMS SHALL COMMAND THE SUPPLY FAN TO ENERGIZE AND COMMAND THE RETURN DAMPER TO ITS OPERATING POSITION. MODULATING DAMPER OPERATING POSITION SHALL BE DETERMINED DURING UNIT AIR BALANCE. WHEN THE SUPPLY FAN PROVES OPERATING STATUS, THE FMS SHALL MODULATE ELECTRIC HEATING AND COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINTS AS FOLLOWS:
COOLING: 75 DEG F (ADJ.)
HEATING: 68 DEG F (ADJ.)

2.03 LEAD/STAND-BY SYSTEM OPERATION:
THE COMPUTER ROOM UNITS SHALL OPERATE IN A LEAD/STAND-BY ARRANGEMENT. THE LEAD UNIT SHALL OPERATE CONTINUOUSLY, AND THE STAND-BY UNIT SHALL OPERATE WHEN THERE IS A FAILURE OF THE LEAD. LEAD/STAND-BY DESIGNATION SHALL ALTERNATE BY A FMS SYSTEM OPERATOR.

A. FAILURE LOGIC:
IF ANY COMPUTER ROOM UNIT FAILS, THE STAND-BY WILL BE STARTED AND THE FAILED EQUIPMENT SHALL BE "LOCKED-OUT" THROUGH THE FMS SYSTEM. A MANUAL "KEYBOARD" RESET THROUGH THE FMS SYSTEM SHALL BE REQUIRED IN ORDER TO RESTART THE FAILED EQUIPMENT. HOWEVER, IF THE STANDBY EQUIPMENT FAILS, THEN AN AUTOMATIC RESTART SEQUENCE SHALL BE ENABLED. DURING THIS SEQUENCE, A RESET AND RESTART SHALL BE ATTEMPTED EVERY 20 MINUTES (ADJ.) UNTIL THE EFFECTED EQUIPMENT BECOMES OPERATIONAL.

PART 3 - EQUIPMENT COMPONENT CONTROL

3.01 CRU TEMPERATURE CONTROL:

A. GENERAL TEMPERATURE CONTROL:
SPACE TEMPERATURE SHALL BE AVERAGED FROM THE TEMPERATURE SENSOR LOCATED IN THE DDC ROOM. SUPPLY AIR TEMPERATURE SHALL BE MAINTAINED BY THE SEQUENCE BELOW.

B. COOLING COIL CONTROL:
UPON A CALL FOR COOLING IN THE SPACE, THE FMS SHALL ENABLE THE DX CONDENSING UNIT. THE DX CONDENSING UNIT SHALL STAGE ITS COMPRESSORS TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT OF 55 DEG F (ADJ.). IF COOLING MODE HAS BEEN ENABLED FOR AT LEAST 30 MIN (ADJ.) AND THE ZONE TEMPERATURE REMAINS ABOVE THE COOLING SETPOINT, THE FMS SHALL COMMAND THE DISCHARGE AIR TEMPERATURE SETPOINT DOWN TO 45 DEG F (ADJ.).

C. HEATING COIL CONTROL:
UPON A CALL FOR HEAT IN THE SPACE, THE FMS SHALL ENABLE THE ELECTRIC HEAT AND MODULATE ITS STAGES. THE FMS SHALL PERFORM A DISCHARGE AIR TEMPERATURE SETPOINT RESET BASED ON THE ZONE TEMPERATURE, AND CONTROL THE ELECTRIC HEATING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL RESET FROM THE ZONE HEATING SETPOINT (65 DEG F, ADJ.) TO A MAXIMUM OF 110 DEG F (ADJ.).

3.02 ALARMS AND INDICATIONS:
ALL SERVICE ALARMS SHALL BE SENT TO THE FMS.
IF THE SUPPLY FAN FAILS TO PROVE STATUS, AN ALARM SHALL BE GENERATED IN THE FMS.

SEQUENCE OF OPERATIONS

SEQUENCE OF OPERATION
ATU-01, 02 | CDU-01, 02

PART 1 - GENERAL

THE VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS SHALL BE CONTROLLED AUTOMATICALLY FROM THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMS). ALL SET POINTS SHALL BE ADJUSTABLE (ADJ.). EQUIPMENT IDENTIFIED AS BEING INTERLOCKED SHALL BE SOFTWARE INTERLOCKED THROUGH THE FMS UNLESS NOTED OTHERWISE OR INDICATED ON THE ELECTRICAL DRAWINGS. ALL HARD WIRE INTERLOCKS SHALL BE BY DIVISION 16.

THE ATU "SERVICE" ALARMS SIGNALED TO THE FMS SHALL CONSIST OF, BUT NOT BE LIMITED TO, HIGH FILTER DIFFERENTIAL PRESSURES, HIGH/LOW AIR TEMPERATURES, EQUIPMENT FAILURES, ETC., UNLESS NOTED OTHERWISE.

THE ATU COOLING SYSTEMS SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, AUTO, AND FAILURE (CONTROLS OUTAGE). MODES SHALL BE INITIATED BY THE FMS, OR BY MANUAL OVERRIDE FROM THE LOCAL UNIT CONTROL PANEL.

PART 2 - MODE OF OPERATION DESCRIPTIONS

THE AIR TURNOVER UNIT SHALL OPERATE CONTINUOUSLY AS SIGNALED THROUGH THE FMS. THE UNIT SHALL HAVE ABILITY TO BE DEENERGIZED VIA MANUAL COMMAND THROUGH THE FMS FOR MAINTENANCE ACTIVITIES.

2.01 OFF MODE:
THE FMS SHALL BE USED TO INITIATE THE OFF MODE. WHEN THE UNIT IS DEENERGIZED, THE HEATING COIL BURNER SHALL BE DEACTIVATED, AND THE CONDENSING UNIT SHALL BE DEENERGIZED. THE SUPPLY FAN SHALL BE DEENERGIZED AND ALL DAMPERS SHALL RETURN TO THEIR NORMAL POSITIONS. RETURN DAMPER NORMAL POSITION SHALL BE FULL OPEN. OUTSIDE AIR DAMPER NORMAL POSITION SHALL BE FULL CLOSED.

2.02 AUTOMATIC OPERATION MODE:
THE FMS SHALL BE USED TO INITIATE THE AUTOMATIC ("ON") MODE. WHEN THE UNIT IS ENABLED, THE FMS SHALL COMMAND THE SUPPLY FAN TO ENERGIZE AND COMMAND THE OUTSIDE AND RETURN DAMPERS TO THEIR OPERATING POSITIONS. MODULATING DAMPER OPERATING POSITIONS SHALL BE DETERMINED DURING UNIT AIR BALANCE. WHEN THE SUPPLY FAN PROVES OPERATING STATUS, THE FMS SHALL MODULATE HEATING AND COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINTS AS FOLLOWS:

COOLING: 85 DEG F (ADJ.)

HEATING: 65 DEG F (ADJ.)

PART 3 - EQUIPMENT COMPONENT CONTROL

3.01 ATU TEMPERATURE CONTROL:

A. GENERAL TEMPERATURE CONTROL:
SPACE TEMPERATURE SHALL BE AVERAGED FROM THE NEW TEMPERATURE SENSORS LOCATED IN THE SPACE. SUPPLY AIR TEMPERATURE SHALL BE MAINTAINED BY THE SEQUENCE BELOW.

B. COOLING COIL CONTROL:
UPON A CALL FOR COOLING IN THE SPACE, THE FMS SHALL ENABLE THE DX CONDENSING UNIT. THE DX CONDENSING UNIT SHALL STAGE ITS COMPRESSORS TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT OF 55 DEG F (ADJ.). IF COOLING MODE HAS BEEN ENABLED FOR AT LEAST 30 MIN (ADJ.) AND THE ZONE TEMPERATURE REMAINS ABOVE THE COOLING SETPOINT, THE FMS SHALL COMMAND THE DISCHARGE AIR TEMPERATURE SETPOINT DOWN TO 45 DEG F (ADJ.).

C. HEATING COIL CONTROL:
UPON A CALL FOR HEAT IN THE SPACE, THE FMS SHALL ENABLE THE GAS HEAT AND MODULATE ITS FIRING RATE. THE FMS SHALL PERFORM A DISCHARGE AIR TEMPERATURE SETPOINT RESET BASED ON THE ZONE TEMPERATURE, AND CONTROL THE GAS HEATING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL RESET FROM THE ZONE HEATING SETPOINT (65 DEG F, ADJ.) TO A MAXIMUM OF 110 DEG F (ADJ.).

Z

3.04 ALARMS AND INDICATIONS:
ALL SERVICE ALARMS SHALL BE SENT TO THE FMS.
IF THE SUPPLY FAN FAILS TO PROVE STATUS, AN ALARM SHALL BE GENERATED IN THE FMS.
THE ALARM OUTPUT OF THE GAS FIRE HEATING CONTROLLER IN THE ATU SHALL BE MONITORED FOR REPORTING AND ALARMING IN THE FMS.

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:55 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL CONTROLS SEQUENCES
Sheet M-701 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

SEQUENCE OF OPERATION
RTU-01, INTEGRAL CDU

PART 1 - GENERAL

THE VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS SHALL BE CONTROLLED AUTOMATICALLY FROM THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMS). ALL SET POINTS SHALL BE ADJUSTABLE (ADJ.). EQUIPMENT IDENTIFIED AS BEING INTERLOCKED SHALL BE SOFTWARE INTERLOCKED THROUGH THE FMS UNLESS NOTED OTHERWISE OR INDICATED ON THE ELECTRICAL DRAWINGS. ALL HARD WIRE INTERLOCKS SHALL BE BY DIVISION 16.

THE RTU "SERVICE" ALARMS SIGNALED TO THE FMS SHALL CONSIST OF, BUT NOT BE LIMITED TO, HIGH FILTER DIFFERENTIAL PRESSURES, HIGH/LOW AIR TEMPERATURES, EQUIPMENT FAILURES, FREEZE STAT, ETC., UNLESS NOTED OTHERWISE.

THE RTU SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, AUTO, AND FAILURE (CONTROLS OUTAGE). MODES SHALL BE INITIATED BY THE FMS, OR BY MANUAL OVERRIDE FROM THE LOCAL UNIT CONTROL PANEL.

PART 2 - MODE OF OPERATION DESCRIPTIONS

THE ROOFTOP UNIT (RTU) UNIT SHALL OPERATE CONTINUOUSLY AS SIGNALED THROUGH THE FMS. THE UNIT SHALL HAVE ABILITY TO BE DEENERGIZED VIA MANUAL COMMAND THROUGH THE FMS FOR MAINTENANCE ACTIVITIES.

2.01 OFF MODE:
THE FMS SHALL BE USED TO INITIATE THE OFF MODE. WHEN THE UNIT IS DEENERGIZED, THE HEATING COIL BURNER SHALL BE DEACTIVATED, AND THE CONDENSING UNIT SHALL BE DEENERGIZED. THE SUPPLY FAN SHALL BE DEENERGIZED AND ALL DAMPERS SHALL RETURN TO THEIR NORMAL POSITIONS. RETURN DAMPER NORMAL POSITION SHALL BE FULL OPEN. OUTSIDE AIR DAMPER NORMAL POSITION SHALL BE FULL CLOSED.

2.02 AUTOMATIC OPERATION MODE:
THE FMS SHALL BE USED TO INITIATE THE AUTOMATIC ("ON") MODE. WHEN THE UNIT IS ENABLED, THE FMS SHALL COMMAND THE SUPPLY FAN TO ENERGIZE AND COMMAND THE OUTSIDE AND RETURN DAMPERS TO THEIR OPERATING POSITIONS. DAMPER OPERATING POSITIONS SHALL BE DETERMINED DURING UNIT AIR BALANCE. WHEN THE SUPPLY FAN PROVES OPERATING STATUS, THE FMS SHALL MODULATE HEATING AND COOLING TO MAINTAIN THE SPACE TEMPERATURE SETPOINTS AS FOLLOWS:

COOLING: 85 DEG F (ADJ.)

HEATING: 65 DEG F (ADJ.)

PART 3 - EQUIPMENT COMPONENT CONTROL

3.01 RTU TEMPERATURE CONTROL:
A. GENERAL TEMPERATURE CONTROL:
SPACE TEMPERATURE SHALL BE AVERAGED FROM THE NEW TEMPERATURE SENSORS LOCATED IN THE SPACE. SUPPLY AIR TEMPERATURE SHALL BE MAINTAINED BY THE SEQUENCE BELOW.

B. COOLING COIL CONTROL:
UPON A CALL FOR COOLING IN THE SPACE, THE FMS SHALL ENABLE THE INTEGRAL DX CONDENSING UNIT. THE DX CONDENSING UNIT SHALL STAGE ITS COMPRESSORS TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT OF 55 DEG F (ADJ.). IF COOLING MODE HAS BEEN ENABLED FOR AT LEAST 30 MIN (ADJ.) AND THE ZONE TEMPERATURE REMAINS ABOVE THE COOLING SETPOINT, THE FMS SHALL COMMAND THE DISCHARGE AIR TEMPERATURE SETPOINT DOWN TO 45 DEG F (ADJ.).

C. HEATING COIL CONTROL:
UPON A CALL FOR HEAT IN THE SPACE, THE FMS SHALL ENABLE THE GAS HEAT AND MODULATE ITS FIRING RATE. THE FMS SHALL PERFORM A DISCHARGE AIR TEMPERATURE SETPOINT RESET BASED ON THE SPACE TEMPERATURE, AND CONTROL THE GAS HEATING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL RESET FROM THE ZONE HEATING SETPOINT (65 DEG F, ADJ.) TO A MAXIMUM OF 110 DEG F (ADJ.).

△2

3.04 ALARMS AND INDICATIONS:
ALL SERVICE ALARMS SHALL BE SENT TO THE BMS.
IF THE SUPPLY FAN FAILS TO PROVE STATUS, AN ALARM SHALL BE GENERATED IN THE FMS.
THE ALARM OUTPUT OF THE GAS FIRE HEATING CONTROLLER IN THE RTU SHALL BE MONITORED FOR REPORTING AND ALARMING IN THE FMS.

SEQUENCE OF OPERATION
△Z ACU-01, 02 | CDU-03, 04

VAV 1.1, 1.2, 1.3, 1.4, 1.5, 1.6

VAV 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8

PART 1 - GENERAL

THE VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS SHALL BE CONTROLLED AUTOMATICALLY FROM THE FACILITY MANAGEMENT AND CONTROL SYSTEM (FMS). ALL SET POINTS SHALL BE ADJUSTABLE (ADJ.). EQUIPMENT IDENTIFIED AS BEING INTERLOCKED SHALL BE SOFTWARE INTERLOCKED THROUGH THE FMS UNLESS NOTED OTHERWISE OR INDICATED ON THE ELECTRICAL DRAWINGS. ALL HARD WIRE INTERLOCKS SHALL BE BY DIVISION 16.

THE ACU "SERVICE" ALARMS SIGNALED TO THE FMS SHALL CONSIST OF, BUT NOT BE LIMITED TO, HIGH FILTER DIFFERENTIAL PRESSURES, HIGH/LOW AIR TEMPERATURES, EQUIPMENT FAILURES, ETC., UNLESS NOTED OTHERWISE.

THE ACU SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, AUTO (OCCUPIED/UNOCCUPIED), AND FAILURE (CONTROLS OUTAGE). MODES SHALL BE INITIATED BY THE FMS, OR BY MANUAL OVERRIDE FROM THE LOCAL UNIT CONTROL PANEL.

PART 2 - MODE OF OPERATION DESCRIPTIONS

THE AIR CONDITIONING UNIT (ACU) UNIT SHALL OPERATE CONTINUOUSLY AS SIGNALED THROUGH THE FMS. THE UNIT SHALL HAVE ABILITY TO BE DEENERGIZED VIA MANUAL COMMAND THROUGH THE FMS FOR MAINTENANCE ACTIVITIES.

2.01 OFF MODE:
THE FMS SHALL BE USED TO INITIATE THE OFF MODE. WHEN THE UNIT IS DEENERGIZED, THE HEAT PUMP SHALL BE DEACTIVATED, THE SUPPLY FAN SHALL BE DEENERGIZED AND ALL DAMPERS SHALL RETURN TO THEIR NORMAL POSITIONS. RETURN DAMPER NORMAL POSITION SHALL BE FULL OPEN. OUTSIDE AIR DAMPER NORMAL POSITION SHALL BE FULL CLOSED.

2.02 AUTOMATIC OPERATION MODE:
THE FMS SHALL BE USED TO INITIATE THE AUTOMATIC MODE. THE ON MODE SHALL PROVIDE FOR OCCUPIED AND UNOCCUPIED OPERATION WHEN THE UNIT IS ENABLED. THE FMS SHALL COMMAND THE SUPPLY FAN TO ENERGIZE AND COMMAND THE OUTSIDE AND RETURN MODULATING DAMPERS TO THEIR OPERATING POSITIONS. MODULATING DAMPER OPERATING POSITIONS SHALL BE DETERMINED DURING UNIT AIR BALANCE.

A. OCCUPIED MODE:
SUPPLY AIR TEMPERATURE IS MONITORED AND COOLING/HEATING CAPACITY IS ADJUSTED TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINTS OF:

55 DEG F (ADJ.) – COOLING

80 DEG F (ADJ.) – HEATING

OUTSIDE AIR DAMPER SHALL BE OPEN TO BALANCED POSITION TO PROVIDE CODE REQUIRED VENTILATION TO SPACE. LOSS OF HEAT PUMP DURING WINTER SHALL TRIGGER ENABLING OF BACKUP ELECTRIC HEAT IN ACU.

B. UNOCCUPIED MODE:
SPACE TEMPERATURE SENSORS ARE MONITORED AND IF ANY ROOM HAS A TEMPERATURE OF LESS THAN 62 DEG F (ADJ.) FOR HEATING MODE OR GREATER THAN 85 DEG F (ADJ.) FOR COOLING MODE, THE SYSTEM SHALL BE ENABLED AND SHALL RUN UNTIL THE SPACE TEMPERATURE SETPOINT IS SATISFIED AND THEN SHALL BE DEENERGIZED. THE SUPPLY FAN SHALL BE ENABLED ON A CALL FOR HEATING OR COOLING.

SUPPLY AIR TEMPERATURE SHALL BE MONITORED AND THE COOLING OR HEATING CAPACITY SHALL BE ADJUSTED TO SATISFY THE SUPPLY AIR TEMPERATURE SETPOINTS OF:

55 DEG F (ADJ.) – COOLING

80 DEG F (ADJ.) – HEATING

WHEN THE COOLING/HEATING LOAD IS SATISFIED, THE HEAT PUMP AND SUPPLY FAN SHALL BE DEENERGIZED. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AT ALL TIMES DURING THE UNOCCUPIED MODE.

PART 3 - EQUIPMENT COMPONENT CONTROL

3.01 TEMPERATURE CONTROL:
A. VAV CONTROL:
UPON A CALL FOR COOLING IN THE SPACE, THE FMS SHALL ADJUST THE ZONE DAMPER TO SATISFY THE ROOM SETPOINT OF 85 DEG F (ADJ) FOR COOLING AND 65 DEG F (ADJ) FOR HEATING. IF THE ZONE DAMPER IS IN ITS MINIMUM POSITION, AND THE ROOM TEMPERATURE IS BELOW SETPOINT, THE VAV BOX ELECTRIC HEAT SHALL BE ENABLED AND SHALL MODULATE STAGES TO SATISFY ROOM SETPOINT.

A. DUCT BYPASS DAMPER CONTROL:
AS THE SYSTEM VAV BOXES MODULATE FLOWS IN RESPONSE TO THE SPACE HEATING AND COOLING LOADS, THE STATIC PRESSURE IN THE SUPPLY DUCT VARIES. AS COOLING LOADS INCREASE, THE VAV BOXES OPEN TO INCREASE SPACE SUPPLY AIR, AND THE SUPPLY DUCT PRESSURE DECREASES. AS COOLING LOADS DECREASE, THE VAV BOXES CLOSE TO REDUCE SPACE SUPPLY AIR, AND THE SUPPLY DUCT PRESSURE INCREASES. DURING HEATING SEASON, OR PERIODS OF NO COOLING LOAD, THE VAV BOXES MODULATE TO MINIMUM FLOWS.

SEQUENCE OF OPERATION CONTINUED
△Z ACU-01, 02 | CDU-03, 04

VAV 1.1, 1.2, 1.3, 1.4, 1.5, 1.6

VAV 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8

A STATIC PRESSURE DP TRANSMITTER SENSING THE SUPPLY DUCT'S STATIC PRESSURE (SET POINT IS ADJ.) SHALL BE USED TO MODULATE THE BYPASS DAMPER AND MAINTAIN A RELATIVELY CONSTANT STATIC PRESSURE AT THE SENSOR LOCATION. THE SENSOR SHALL BE LOCATED 2/3 DOWNSTREAM IN THE DUCT SYSTEM.

3.02 FIRE ALARM SHUTDOWN:
UPON SIGNAL FROM THE FIRE ALARM SYSTEM, THE ACU FAN SHALL SWITCH TO OFF MODE VIA SAFETY SHUT DOWN. FIRE ALARM SHALL UTILIZE MANUAL (HARDWARE) RESET FOR VFD'S. THIS SHALL GENERATE A SUPPLY FAN ALARM AND TRIGGER THE ACU OFF MODE.

3.03 SMOKE DETECTION:
UPON DETECTION OF SMOKE IN THE SUPPLY AIR AND/OR RETURN AIR STREAMS (PER NFPA 90A) BY THE DIVISION 16 SMOKE DETECTOR, THE ACU SHALL SWITCH TO OFF MODE AND AN ALARM SHALL BE SENT BY DIVISION 16 TO THE FIRE ALARM SYSTEM.

3.04 ALARMS AND INDICATIONS:
ALL SERVICE ALARMS SHALL BE SENT TO THE BMS.

IF THE SUPPLY FAN FAILS TO PROVE STATUS, AN ALARM SHALL BE GENERATED IN THE FMS.

THE ALARM OUTPUT OF THE GAS FIRE HEATING CONTROLLER IN THE ATU SHALL BE MONITORED FOR REPORTING AND ALARMING IN THE FMS.

SEQUENCE OF OPERATIONS

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:55 PM

AUTOMATED WAREHOUSE
WICHITA, KS
Facilities Engineering
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: MECHANICAL CONTROLS SEQUENCES
Sheet M-702 of XX
Drawing No. 108M-XXX-XXX

PIPE LINE ACCESSORIES

- GATE VALVE
- OS&Y OUTSIDE SCREW & YOKE VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- 2-WAY VALVE
- 3-WAY VALVE
- BALL VALVE
- BALANCING VALVE / CIRCUIT SETTER
- RELIEF, SAFETY OR THERMAL RELIEF VALVE
- M MOTORIZED CONTROL VALVE
- HOSE GATE DRAIN VALVE
- GLOBE VALVE
- PLUG VALVE
- SRC SPRING RETURN CLOSED BALL VALVE
- ANGLE VALVE
- SELF CONTAINED PRESSURE REDUCING (REGULATING) VALVE
- AV AUTOMATIC AIR VENT ASSEMBLY
- MV MANUAL AIR VENT ASSEMBLY - SEE SPECIFICATIONS FOR APPROPRIATE VALVE TYPE
- FLEX CONNECTION
- PUMP
- THERMOMETER
- BFP BACKFLOW PREVENTION ASSEMBLY
- SUCTION DIFFUSER
- PRESSURE GUAGE
- Y-TYPE STRAINER
- REMOVABLE CAP
- REMOVABLE PLUG
- REDUCER (CONCENTRIC)
- UNION
- BLIND FLANGE
- TEST CONNECTION
- M METER
- FM FLOW METER
- S STRAINER
- IF INSULATING FLANGE
- PIPE WITH HEAT TRACE
- FLOW ARROW

PIPE LINE DESIGNATIONS

- V VENT
- S STORM (ABOVE GRADE)
- S STORM (BELOW GRADE)
- OD STORM OVERFLOW
- DCW DOMESTIC COLD WATER
- DHW DOMESTIC HOT WATER
- DHWR DOMESTIC HOT WATER RECIRCULATION
- SS SANITARY SEWER (ABOVE GRADE)
- SS SANITARY SEWER (BELOW GRADE)
- COND CONDENSATE DRAIN
- CA COMPRESSED AIR
- NG NATURAL GAS
- FW FIRE WATER
- PSAN PUMPED SANITARY
- CO CLEANOUT IN RISER
- WCO CLEANOUT IN WALL
- FCO CLEANOUT IN FLOOR

BASIS OF DESIGN - WASTE AND VENT SYSTEM

THE WASTE AND VENT SYSTEM IS DESIGNED IN ACCORDANCE WITH THE 2015 UNIFORM PLUMBING CODE, SEDGEWICK COUNTY CODE, AND THE CITY OF WICHITA CODE.

BASIS OF DESIGN - DOMESTIC WATER SYSTEM

THE DOMESTIC WATER SYSTEM IS DESIGNED IN ACCORDANCE WITH THE 2015 UNIFORM PLUMBING CODE, SEDGEWICK COUNTY CODE, AND THE CITY OF WICHITA CODE.

BASIS OF DESIGN - NATURAL GAS SYSTEM

THE NATURAL GAS SYSTEM IS DESIGNED IN ACCORDANCE WITH THE 2015 INTERNATIONAL FUEL GAS CODE, SEDGEWICK COUNTY CODE, AND THE CITY OF WICHITA CODE.

BASIS OF DESIGN - COMPRESSED AIR SYSTEM

THE DOMESTIC WATER SYSTEM IS DESIGNED IN ACCORDANCE WITH THE 2015 INTERNATIONAL FIRE CODE, NFPA 55 SEDGEWICK COUNTY CODE, AND THE CITY OF WICHITA CODE.

PLUMBING SYMBOLS LEGEND

WC-1	WATER CLOSET
WC-2	WATER CLOSET - ACCESSIBLE
U-1	URINAL
U-2	URINAL, ACCESSIBLE
LAV-1	LAVATORY, COUNTER MOUNTED
LAV-2	LAVATORY, WALL MOUNTED
JS-1	JANITOR SINK
MB-1	MOP BASIN
SH-1	SHOWER
SK-1	KITCHEN SINK
SK-2	SINK
SK-3	UNDER MOUNT SINK
EWC-1	DUAL ELECTRIC WATER COOLER
EEWS-1	EMERGENCY EYEWASH / SHOWER
4" FD-A	SIZE - FLOOR DRAIN
	PRESSURE/TEMPERATURE RELIEF VALVE
HB	HOSE BIBB
WH	WALL HYDRANT

RISER DIAGRAM LEGEND

CO	CLEANOUT (CO) IN RISER
FCO	CLEANOUT (FCO) IN FLOOR
	VENT THRU ROOF (VTR)
	FLOOR OR WALL PENETRATION
	PLUMBING FIXTURE TRAP
	FLOOR DRAIN / EQUIPMENT DRAIN
WHA-A	WATER HAMMER ARRESTOR
WCO	WALL CLEANOUT (WCO)
UP / DN	ISOMETRIC DIRECTION ARROW

PIPE SYMBOLS

- PIPE ELBOW
- PIPE DOWN
- PIPE UP
- PIPE CONTINUATION
- PIPE SLOPE DIRECTION

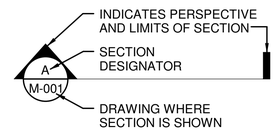
PLUMBING ABBREVIATIONS

AC	AIR COCK
AFF	ABOVE FINISHED FLOOR
AG	AIR GAP
ARV	AIR RELEASE VALVE
BF	BLIND FLANGE
BOP	BOTTOM OF PIPE
BW	BUTT WELD
CH OP	CHAIN WHEEL OPERATOR
CL	CENTERLINE
CO	CLEANOUT
CONC	CONCENTRIC
CORP STOP	CORPORATION STOP
CPVC	CHLORINATED POLYVINYL CHLORIDE
D	DRAIN
DI	DUCTILE IRON
DN	DOWN
DWH	DOMESTIC WATER HEATER
ELL	ELBOW
EXIST	EXISTING
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FE	FLANGED END
FF	FLAT FACED
FI	FLOW INDICATOR
FLGD	FLANGED
FM	FLOW METER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FOV	FLOAT OPERATED VALVE
FRP	FIBERGLASS REINFORCED PIPE
FW	FIELD WELD
HD	HUB DRAIN
I.E.	INVERT ELEVATION
IF	INSULATED FLANGE
LC	LOCK CLOSED
LO	LOCK OPEN
LR	LONG RADIUS
NPSH	NET POSITIVE SUCTION HEAD
NRS	NON-RISING STEM
NWL	NORMAL WATER LEVEL
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
RED	REDUCER-REDUCING
RS	RISING STEM
SCH	SCHEDULE
SCRD	SCREWED
SR	SHORT RADIUS
TD	TRENCH DRAIN
TOC	TOP OF CONCRETE
TOG	TOP OF GRATING
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TP	TRAP PRIMER
VTW	VENT THROUGH WALL
WCO	WALL CLEANOUT

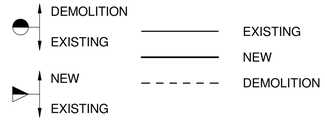
GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE CIVIL AND MECHANICAL INTERFACE POINT IS 5 FEET OUTSIDE OF THE BUILDING WALL.
2. COORDINATE ALL PIPE SLEEVE REQUIREMENTS WITH FOUNDATION SUBCONTRACTOR.
3. COORDINATE MECHANICAL ROOM FLOOR DRAINS WITH ACTUAL EQUIPMENT LOCATIONS AND DRAINAGE REQUIREMENTS.
4. LEGEND IS GENERAL IN NATURE AND NOT ALL ITEMS SHOWN MAY BE USED ON THIS PROJECT.
5. INSTALL SANITARY PIPING WITH 1% SLOPE DOWNWARD IN DIRECTION OF FLOW. INSTALL VENT PIPING WITH 1% SLOPE DOWNWARD TOWARD FIXTURE OR STACK.
6. ALL FIXTURES SHALL HAVE A P-TRAP INSTALLED.
7. PROVIDE ALL MATERIALS, VALVES, HANGERS, ETC. AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
8. INSTALL ALL PLUMBING FIXTURES, EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
9. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH STRUCTURAL, CIVIL, ELECTRICAL WORK ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
10. MAINTAIN A MINIMUM OF 6' - 8" CLEARANCE TO UNDERSIDE OF PIPES, CONDUITS, ETC., THROUGHOUT ACCESS ROUTES AND IN MECHANICAL ROOMS.
11. LOCATE ALL PLUMBING EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
12. VERIFY DIMENSIONS AND CONNECTION SIZE WITH FURNISHED EQUIPMENT.
13. ALL ELEVATIONS ARE ABOVE FINISHED FLOOR TO BOTTOM OF PIPE UNLESS NOTED OTHERWISE.
14. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THIS PROJECT IS PROHIBITED.

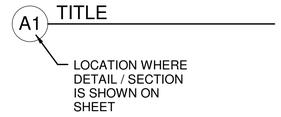
SECTION CUT SYMBOL



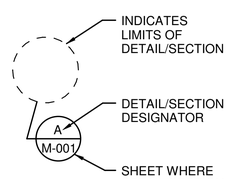
CONSTRUCTION INTERFACE



DETAIL/SECTION TITLE



DETAIL / ENLARGED CALLOUT SYMBOL



THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

	DATE	DESCRIPTION	BY	APPROVED
G	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
P	07/02/2018	PKG 2A: FOUNDATION & SOG - REV P	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2A: FOUNDATION & SOG - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543



2018-11-26 1:06 PM

16NOV2018 - PKG 2A: FOUNDATION & SOG - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

Project No. 6936

Sheet Name: PLUMBING GENERAL NOTES AND SYMBOLS

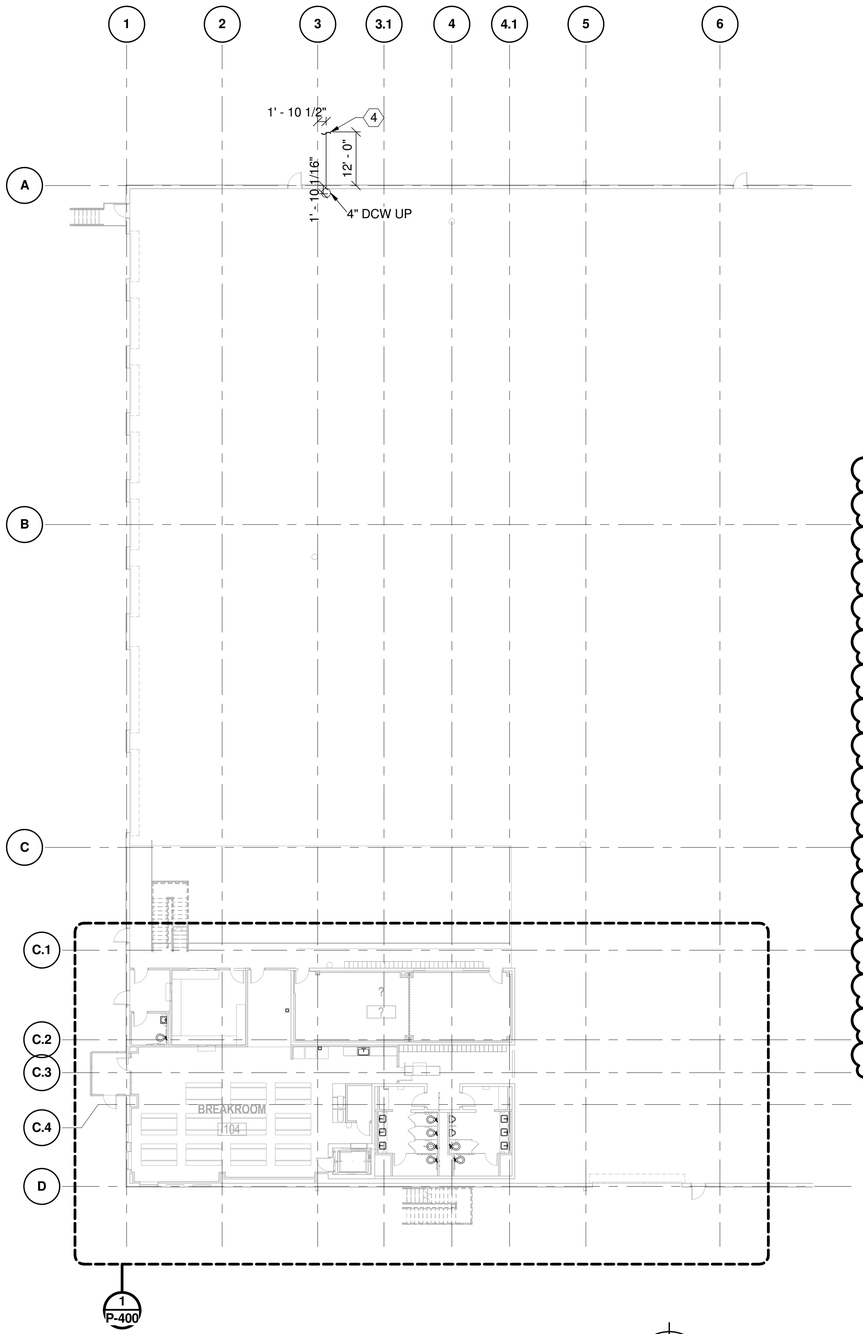
Sheet P-001 of XX

Drawing No. 108M-XXX-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_M_kjbecker.rvt

11/26/2018 10:45:27 AM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

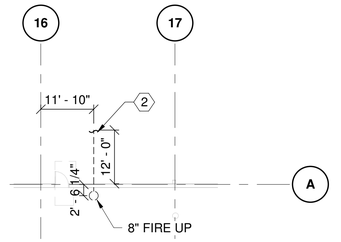


GROUND FLOOR - UNDER SLAB PLUMBING PLAN - AREA A

0 8' 16' 32'

SCALE IN FEET

NORTH

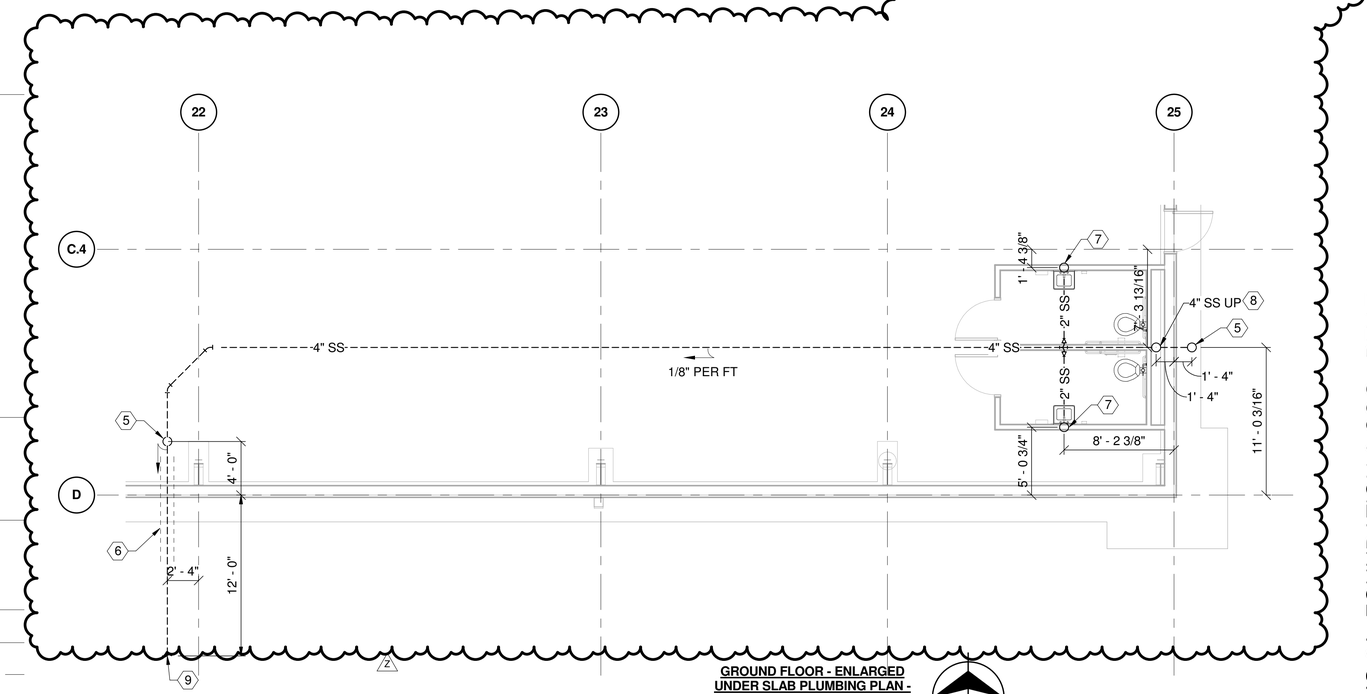


GROUND FLOOR - UNDER SLAB PLUMBING PLAN - AREA B FIRE WATER ENTRANCE

0 8' 16' 32'

SCALE IN FEET

NORTH



GROUND FLOOR - ENLARGED UNDER SLAB PLUMBING PLAN - EAST RESTROOMS

0 4' 8' 12'

SCALE IN FEET

NORTH

GENERAL NOTES:

1. PIPING ON THIS DRAWING IS FOR UNDER SLAB ONLY.
2. SANITARY PIPING IS TO BE SLOPED AT A MINIMUM OF 1/8" PER 1'-0". SEE SPECIFICATIONS.
3. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

KEYED NOTES: (#)

1. NOT USED.
2. CONNECT TO 8" PVC FIRE WATER MAIN PROVIDED BY DIVISION 33. APPROXIMATELY 10'-0" OUTSIDE OF BUILDING. EXTEND TO INTERIOR OF BUILDING, CAP 12" ABOVE FINISHED FLOOR.
3. NOT USED.
4. 4" DCW PIPING. SEE CIVIL UTILITY PLAN CU101 FOR INFORMATION. EXTEND TO INTERIOR OF BUILDING AND CAP 12" ABOVE FINISHED FLOOR.
5. 4" SS UP TO 4" FLOOR CLEAN OUT. FLOOR CLEAN OUT SHALL HAVE HEAVY DUTY RATED COVER.
6. PROVIDE STEEL SLEEVE EXTENDING 12" ON EITHER SIDE OF THE FOOTING FOR 4" SANITARY SEWER PIPE.
7. FUTURE CONNECTION TO 2" SANITARY PIPING TO LAVATORY DRAIN, CAP 12" ABOVE FINISHED FLOOR. COORDINATE PIPE STUP UP WITH WALL LOCATION.
8. 4" SS UP TO FUTURE CONNECTION TO WATER CLOSET DRAIN IN CHASE, CAP 12" ABOVE FINISHED FLOOR.
9. 4" SANITARY PIPING. SEE CIVIL UTILITY PLAN, CU101 FOR INFORMATION (INVERT ELEVATION 1357.18).

△	DATE	DESCRIPTION	BY	APPROVED
J	06/11/2018	PKG 2A: FOUNDATION & SOG - REV J	CDB	AWS
P	07/02/2018	PKG 2A: FOUNDATION & SOG - REV P	CDB	AWS
Z	11/16/2018	PKG 2A: FOUNDATION & SOG - REV Z	CDB	AWS

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2A: FOUNDATION & SOG - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:06 PM

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

Project No. 6936

Sheet Name: UNDER SLAB PLUMBING PLAN - AREA A

Sheet P-100 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

KEYED NOTES CONTINUED: (#)

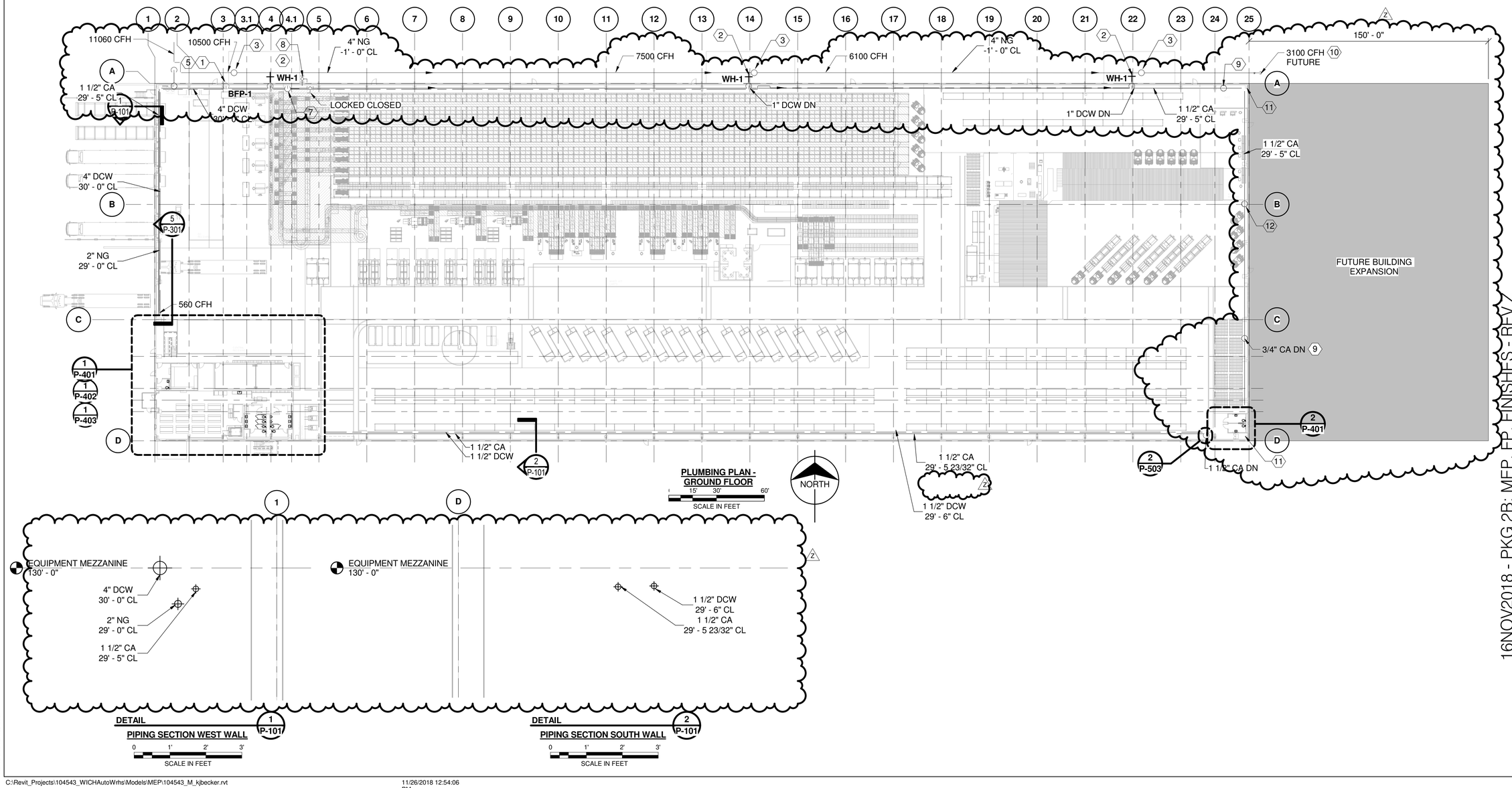
7. 1 1/2" CA DOWN ALONG WALL TO SERVE DEMATIC EQUIPMENT. TERMINATE PIPE AT 48" AFF WITH PRESSURE GAUGE, COMBINATION FILTER/REGULATOR, AND BALL VALVE. CAP PIPE FOR DEMATIC CONNECTION.
8. (Z) 1 1/2" CA THRU WALL AT 5'-0" AFF FOR TEMPORARY DEMATIC EQUIPMENT CONNECTION. TERMINATE PIPE WITH BALL VALVE AND THREADED MALE CONNECTION FOR FUTURE HOSE CONNECTION. SEAL PENETRATION AIR AND WATER TIGHT.
9. REFER TO DETAIL 3, SHEET P-502 FOR DROP DETAIL AT THIS LOCATION.
10. TERMINATE NG PIPE AT THIS LOCATION FOR CONNECTION TO BUILDING EXPANSION LOADS. TERMINATE PIPE WITH VALVE AND CAP.
11. TEE WITH VALVE AND CAP FOR CA LOOP CONNECTION IN FUTURE BUILDING EXPANSION.
12. 1" CA DN. TERMINATE WITH VALVE AND CAP FOR FUTURE CONNECTION TO MAINTENANCE CRIB AREA.

GENERAL NOTES

1. REFER TO PLUMBING NOTES AND DEFINITIONS ON P-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

KEYED NOTES: (#)

1. BUILDING DOMESTIC WATER LINE ENTRANCE. REFER TO CIVIL SITEWORK PACKAGE 1A.
2. FREEZE-PROOF WALL HYDRANT FOR EQUIPMENT MAINTENANCE.
3. NATURAL GAS LINE UP THROUGH SLAB ON GRADE TO SERVE MECHANICAL EQUIPMENT. (Z)
4. NOT USED.
5. INSTALL BACKFLOW PREVENTER, BFP-1, AT DOMESTIC WATER LINE ENTRANCE. SEE SHEET P-503 DETAIL 3 FOR RISER SEQUENCE. SEE SHEET P-601 FOR BACKFLOW PREVENTER SCHEDULE.
6. NOT USED.



PLUMBING PLAN - GROUND FLOOR
SCALE IN FEET 0 15' 30' 60'

NORTH

DETAIL 1 P-101
PIPING SECTION WEST WALL
SCALE IN FEET 0 1' 2' 3'

DETAIL 2 P-101
PIPING SECTION SOUTH WALL
SCALE IN FEET 0 1' 2' 3'

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

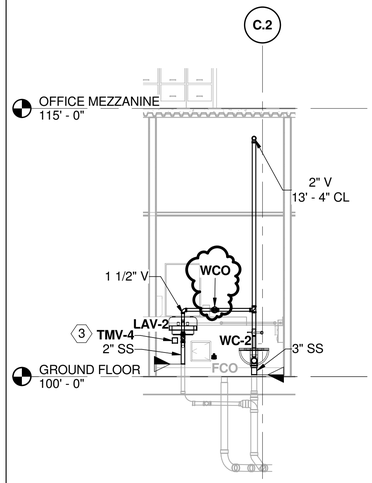
KANSAS LICENSED PROFESSIONAL ENGINEER 20895 RANDALL K. ALLEN
2018-11-26 1:59 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name/s: PLUMBING PLAN - ABOVE GROUND PLUMBING
Sheet P-101 of XX
Drawing No. 108M-XXX-XXX

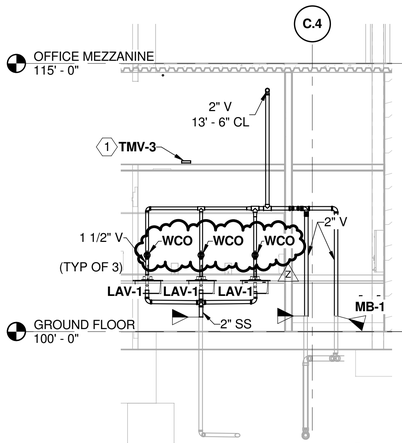
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SECTION 1 P-401

PLUMBING SECTION RR 102

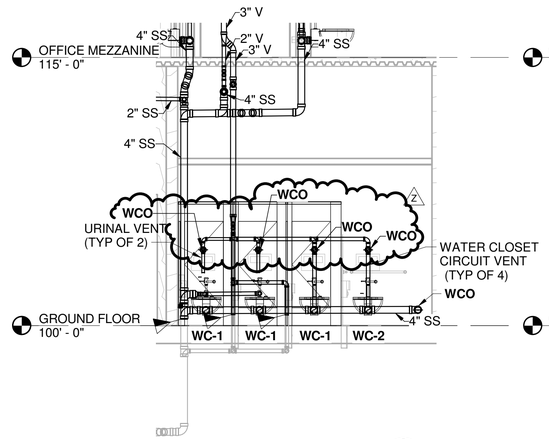
0 2' 4' 8'
SCALE IN FEET



SECTION 2 P-401

PLUMBING SECTION WOMENS LAVS 108

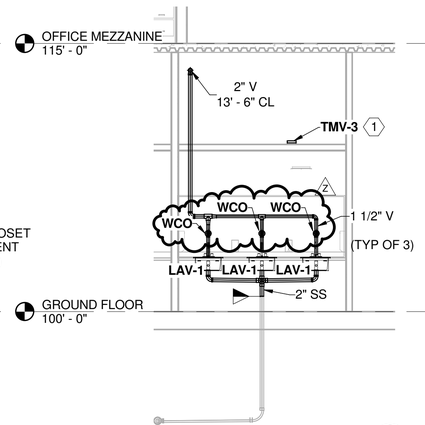
0 2' 4' 8'
SCALE IN FEET



SECTION 3 P-401

PLUMBING SECTION WOMENS 108

0 2' 4' 8'
SCALE IN FEET



SECTION 4 P-401

PLUMBING SECTION MENS LAVS 107

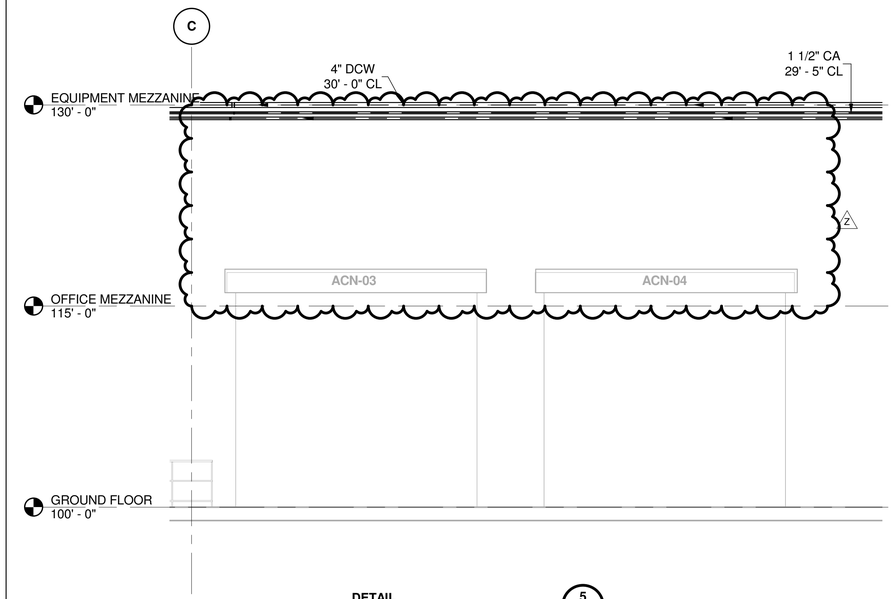
0 2' 4' 8'
SCALE IN FEET

GENERAL NOTES

1. REFER TO PLUMBING NOTES AND DEFINITIONS ON P-001.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

KEYED NOTES: (#)

1. INSTALL TMV ABOVE GYPSUM CEILING ACCESS PANEL (PROVIDED BY ARCH.). COORDINATE LOCATION WITH ARCH.
2. INSTALL TMV BELOW SINK. COORDINATE LOCATION WITH ACCESS PANEL (PROVIDED BY ARCH.).

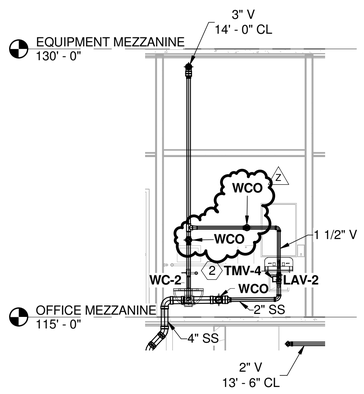


DETAIL 5 P-101

ELEVATION AT ACN

0 4' 8' 12'
SCALE IN FEET

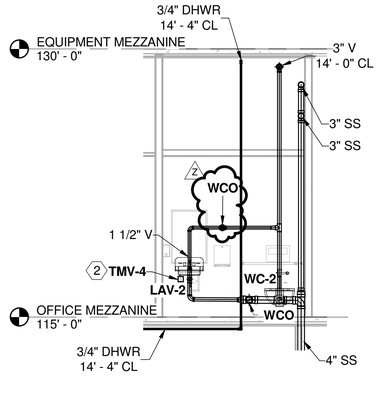
0 4' 8' 12'
SCALE IN FEET



SECTION 7 P-402

PLUMBING SECTION MENS 210

0 2' 4' 8'
SCALE IN FEET



SECTION 8 P-402

PLUMBING SECTION WOMENS 211

0 2' 4' 8'
SCALE IN FEET

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

2018-11-26 1:59 PM

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: PLUMBING SECTIONS
Sheet P-301 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PKG 2A: PLUMBING FIXTURE SCHEDULE									
"P" NO.	FIXTURE	WATER				WASTE		VENT	REMARKS
		COLD		HOT		RUNOUT	CONN.		
		RUNOUT	CONN.	RUNOUT	CONN.				
FS-1	FLOOR SINK					4"	2"	2"	

FLOOR SINK:
JOSAM MODEL 49300-NB CAST IRON FLOOR SINK, 8" SQUARE x 5-7/8" DEEP WITH DOUBLE DRAINAGE FLANGE, BOTTOM OUTLET, ½ INCH PRIMER TAP, AND SATIN NIKALOY GRATE.

FD (FLOOR DRAIN):
JOSAM MODEL 30000-A CAST IRON FLOOR DRAIN, TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, INVERTIBLE NON PUNCTUING FLASHING COLLAR, 1/2" TRAP PRIMER TAP, NEOPRENE GASKETED PUSH-ON OUTLET, AND 5" ROUND ADJ. STAIN NIKLOY STRAINER.

FCO (FLOOR CLEANOUT):
JOSAM MODEL 56000 SERIES HEAVY DUTY CAST IRON FLOOR CLEANOUT WITH THREADED BRASS COUNTERSUNK PLUG AND...

GENERAL NOTES:

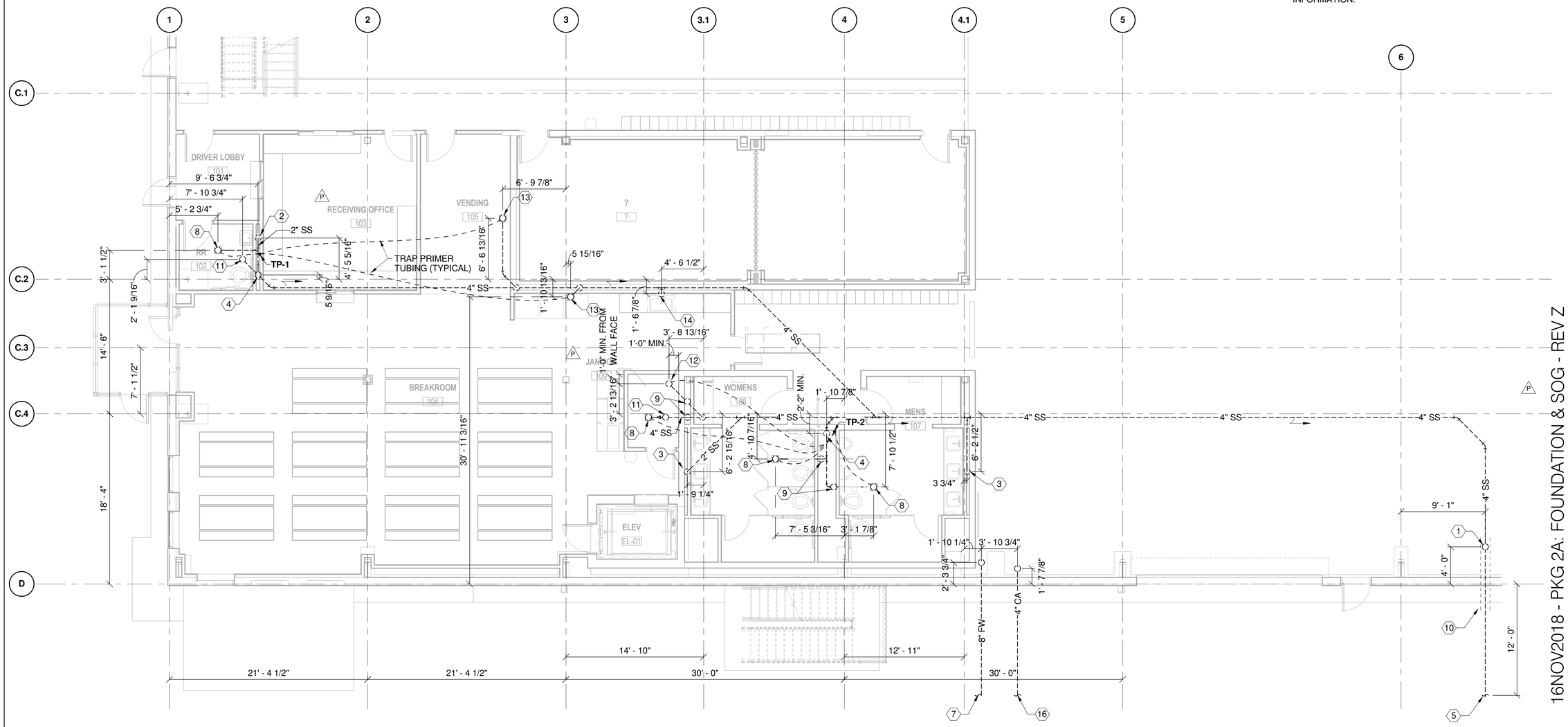
1. PIPING ON THIS DRAWING IS FOR UNDER SLAB ONLY.
2. SANITARY PIPING IS TO BE SLOPED AT A MINIMUM OF 1/8" PER 1'-0". SEE SPECIFICATIONS.
3. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.

KEYED NOTES: (#)

1. 4" SS UP TO 4" FLOOR CLEAN OUT. FLOOR CLEAN OUT SHALL HAVE HEAVY DUTY RATED COVER.
2. 2" SS STUB UP FOR FUTURE CONNECTION TO LAVATORY DRAIN IN PLUMBING CHASE (RR-102), CAP 12" ABOVE FINISHED FLOOR.
3. FUTURE CONNECTION TO 2" SANITARY PIPING AT LAVATORIES, 12" ABOVE FINISHED FLOOR. COORDINATE PIPE STUB UP WITH CHASE LOCATION.
4. 4" SS UP TO FUTURE CONNECTION TO WATER CLOSET DRAIN IN CHASE, CAP 12" ABOVE FINISHED FLOOR.
5. 4" SANITARY PIPING TO SSMH6. SEE CIVIL UTILITY PLAN, CU101 FOR INFORMATION (INVERT ELEVATION 1353.93').
6. NOT USED.

KEYED NOTES (CONT'D): (#)

7. CONNECT TO 8" PVC FIRE WATER MAIN PROVIDED BY DIVISION 33. APPROXIMATELY 10'-0" OUTSIDE BUILDING. EXTEND TO INTERIOR OF BUILDING, CAP 12" ABOVE FINISHED FLOOR.
8. 2" SS UP TO FLOOR DRAIN. ROUTE COPPER TUBING FOR TRAP PRIMER CONNECTION INTO CHASE CAVITY FOR FUTURE CONNECTION TO TRAP PRIMER. CAP TRAP PRIMER TUBING.
9. 2" V STUB UP FOR FUTURE CONNECTION, CAP 12" ABOVE FINISHED FLOOR.
10. PROVIDE STEEL SLEEVE EXTENDING 12" ON EITHER SIDE OF THE FOOTING FOR 4" SANITARY SEWER PIPE.
11. 4" SS UP TO 4" FLOOR CLEANOUT.
12. 3" SS UP TO FUTURE MOP BASIN, CAP 12" ABOVE FINISHED FLOOR.
13. 2" SS UP TO 8" X 6" FLOOR SINK, CAP 12" ABOVE FINISHED FLOOR.
14. 2" SS UP IN FURRED OUT WALL TO FUTURE SINK WASTE CONNECTION.
15. NOT USED.
16. 4" COMPRESSED AIR LINE. SEE CIVIL UTILITY PLAN, CU101 FOR INFORMATION.



LEVEL 01 - ENLARGED UNDER SLAB PLUMBING PLAN

0 4' 8' 12'
SCALE IN FEET

NORTH

16NOV2018 - PKG 2A: FOUNDATION & SOG - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
J	09/11/2018	PKG 2A: FOUNDATION & SOG - REV J	CDB	AWS
P	07/02/2018	PKG 2A: FOUNDATION & SOG - REV P	CDB	AWS
Z	11/16/2018	PKG 2A: FOUNDATION & SOG - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

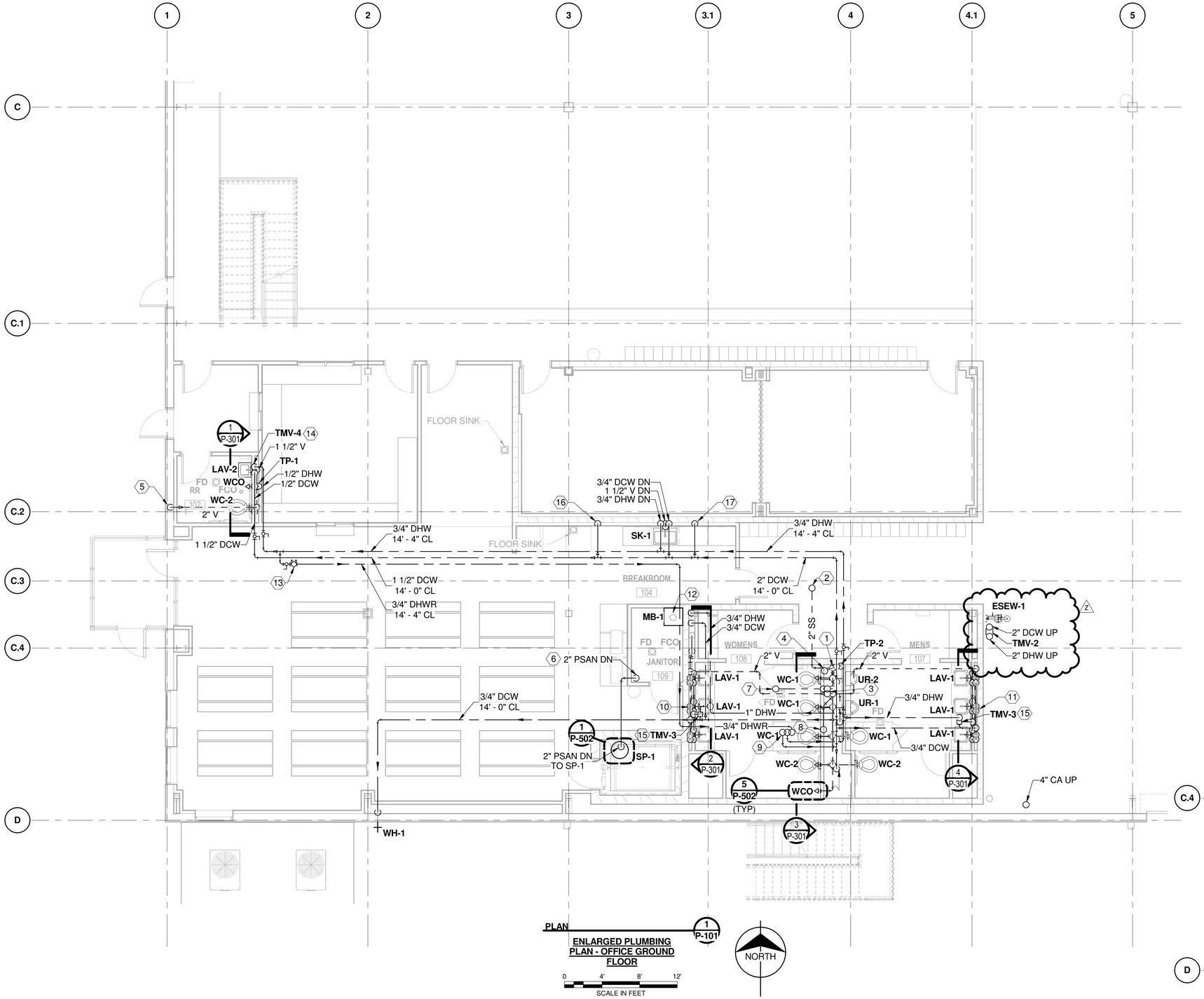
KRISTIAN RANDALL BECKER 30805 KANSAS PROFESSIONAL ENGINEER

2018-11-26 1:06 PM

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: ENLARGED UNDER SLAB PLAN - OFFICE
Sheet P-400 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 P-101
ENLARGED PLUMBING PLAN - OFFICE GROUND FLOOR
0 4' 8' 12'
SCALE IN FEET

PLAN 2 P-101
ENLARGED PLUMBING PLAN - GROUND FLOOR EAST RESTROOMS
0 4' 8' 12'
SCALE IN FEET

GENERAL NOTES

1. THIS IS THE ENLARGED GROUND FLOOR PLAN OF THE OFFICE AREA. THE SECOND FLOOR PLAN IS ON SHEET P-402 AND THE EQUIPMENT MEZZANINE PLAN IS ON SHEET P-403.
2. SANITARY SEWER PIPING SHOWN ON THIS SHEET IS BELOW THE 2ND FLOOR OF THE OFFICE AREA.
3. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
4. SEE PLUMBING FIXTURE SCHEDULE ON P-601 FOR PIPE CONNECTION SIZE TO FIXTURES.
5. FLOOR DRAINS, FLOOR CLEANOUTS, AND FLOOR SINKS IN SLAB WERE INSTALLED AS PART OF THE FOUNDATIONS/SLAB PACKAGE.

KEYED NOTES: (#)

1. 4" SANITARY SEWER PIPING DOWN. CONNECT TO 4" STUB UP PROVIDED BY PACKAGE 2A.
2. 2" SANITARY SEWER PIPING UP. SERVES SINK IN "OFFICE 208" ON SECOND FLOOR OFFICE LEVEL.
3. 3" VENT PIPING UP TO SECOND FLOOR OFFICE LEVEL.
4. 4" SANITARY SEWER PIPING UP TO SANITARY PIPING FROM "MENS 210" ON SECOND FLOOR OFFICE LEVEL.
5. 2" VENT TO 3" VTW; TERMINATE WITH ELBOW DOWN AND MESH SCREEN, MINIMUM 13' AFF.
6. ROUTE SUMP PUMP DISCHARGE PIPING FROM SUMP PUMP IN ELEVATOR PIT TO TRANSPARENT 55 GALLON DRUM LOCATED IN JANITORS CLOSET. SEE DETAIL 1 ON SHEET P502.
7. 3" SANITARY SEWER PIPING UP TO FLOOR DRAIN IN "JANITOR 214" ON SECOND FLOOR OFFICE LEVEL.
8. 4" SANITARY SEWER PIPING UP TO SANITARY PIPING FROM "WOMENS 211" ON SECOND FLOOR OFFICE LEVEL.
9. 2 1/2" DCW, 1" DHW, AND 3/4" DHWR UP TO SECOND FLOOR.
10. 2" SANITARY SEWER IN PLUMBING CHASE SERVES (3) LAVATORIES IN "WOMENS 108" AND CONNECTS TO 2" SANITARY SEWER STUB UP INSTALLED IN SLAB PIPING PACKAGE.
11. 2" SANITARY SEWER IN PLUMBING CHASE SERVES (3) LAVATORIES IN "MENS 107" AND CONNECTS TO 2" SANITARY SEWER STUB UP INSTALLED IN SLAB PIPING PACKAGE.
12. MOP BASIN DRAIN. CONNECT TO STUB UP PROVIDED BY SLAB PIPING PACKAGE.
13. PROVIDE CHECK VALVE AND BALANCE VALVE; CALIBRATE BALANCE VALVE TO 1.5 GPM.
14. INSTALL TMV BELOW SINK. COORDINATE LOCATION WITH ACCESS PANEL (PROVIDED BY ARCH.).
15. INSTALL TMV ABOVE GYPSUM CEILING ACCESS PANEL (PROVIDED BY ARCH.). COORDINATE LOCATION WITH ARCH.
16. 1/2" DCW DOWN TO WATER SUPPLY OUTLET BOX, 36" AFF, FOR CONNECTION TO ICE MACHINE.
17. 1/2" DCW DOWN TO WATER SUPPLY OUTLET BOX, 48" AFF, FOR CONNECTION TO COFFEE MAKER.
18. TEE WITH VALVE AND CAP FOR CA LOOP CONNECTION IN FUTURE BUILDING EXPANSION.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED ☐
NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

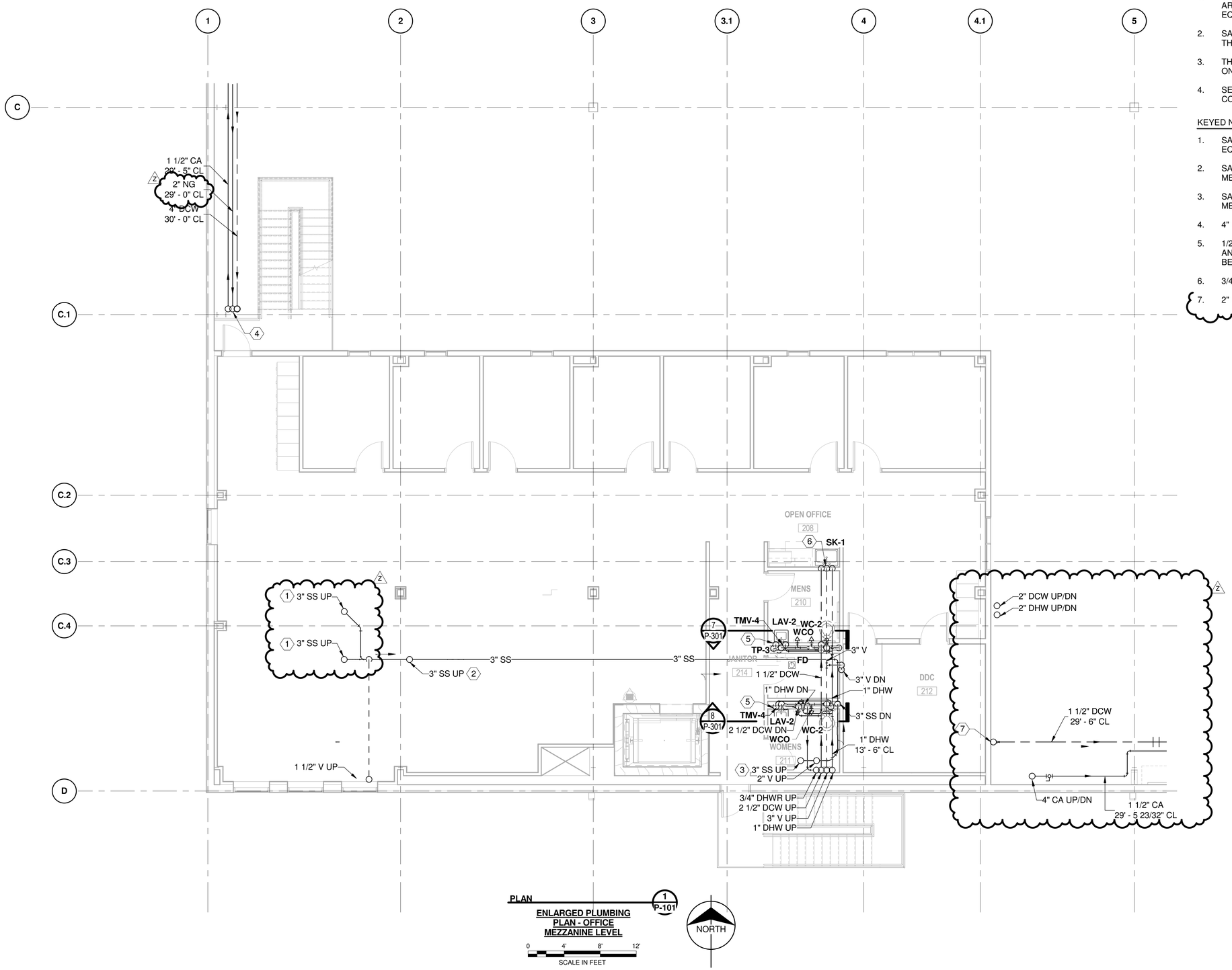
KANSAS REGISTERED PROFESSIONAL ENGINEER 30805 RANDALL K. ALLEN 11-26-18

2018-11-26 1:59 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: ENLARGED PLUMBING PLAN - OFFICE
Sheet P-401 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. THIS IS THE ENLARGED SECOND FLOOR PLAN OF THE OFFICE AREA. THE GROUND FLOOR PLAN IS ON SHEET P-401 AND THE EQUIPMENT MEZZANINE PLAN IS ON SHEET P-403.
2. SANITARY SEWER PIPING SHOWN ON THIS SHEET IS BELOW THE EQUIPMENT MEZZANINE LEVEL.
3. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
4. SEE PLUMBING FIXTURE SCHEDULE ON P-601 FOR PIPE CONNECTION SIZE TO FIXTURES.

KEYED NOTES: (#)

1. SANITARY SEWER PIPING UP TO FLOOR DRAIN ON EQUIPMENT MEZZANINE LEVEL.
2. SANITARY SEWER PIPING UP TO CLEAN OUT ON EQUIPMENT MEZZANINE LEVEL.
3. SANITARY SEWER PIPING UP TO HUB DRAIN ON EQUIPMENT MEZZANINE LEVEL.
4. 4" DCW, 1 1/2" CA, AND 2" NG UP TO EQUIPMENT MEZZANINE.
5. 1/2" DHW, 1/2" DCW, AND 1 1/2" V DN TO LAVATORY. TIE DHW AND DCW INTO TMV AND COORDINATE LOCATION OF TMV TO BE ACCESSIBLE VIA ACCESS PANEL IN JANITOR'S CLOSET.
6. 3/4" DHW, 3/4" DCW, AND 1 1/2" V DN TO SINK.
7. 2" DCW UP TO EQUIPMENT MEZZANINE.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

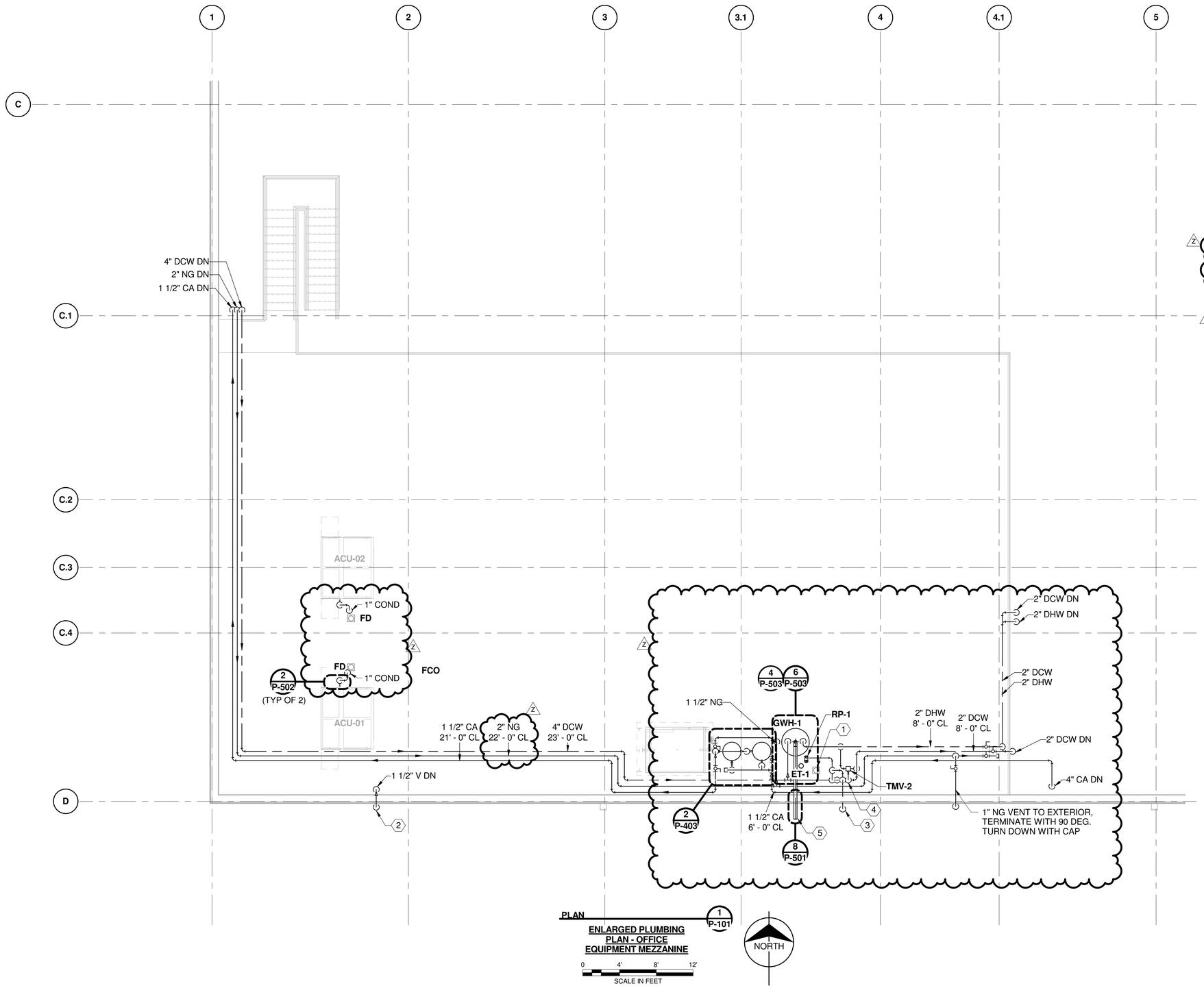
KANSAS LICENSED PROFESSIONAL ENGINEER — RANDALL P. KAMRADT — 20805

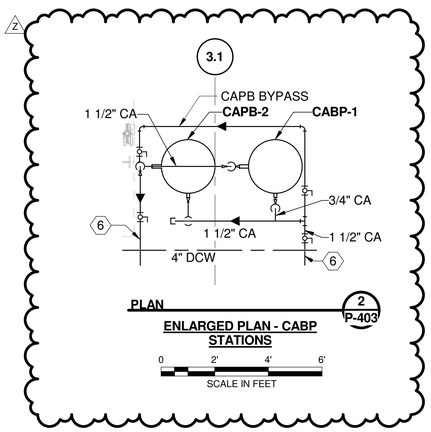
2018-11-26 1:59 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: ENLARGED PLUMBING PLAN - SECOND FLOOR
Sheet P-402 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.





GENERAL NOTES

1. THIS IS THE ENLARGED EQUIPMENT MEZZANINE FLOOR PLAN OF THE OFFICE AREA. THE GROUND FLOOR PLAN IS ON SHEET P-401 AND THE SECOND FLOOR PLAN IS ON SHEET P-402.
2. THE USE OF SILICONE CAULKS, SEALANTS, AND ADHESIVES ON THE PROJECT IS PROHIBITED.
3. SEE PLUMBING FIXTURE SCHEDULE ON P-601 FOR PIPE CONNECTION SIZE TO FIXTURES.

KEYED NOTES: (#)

1. 3" OUTLET HUB DRAIN FOR WATER HEATER PRESSURE AND TEMPERATURE RELIEF VALVE.
2. 1 1/2" VENT TO 3" VTW; TERMINATE WITH ELBOW DOWN AND MESH SCREEN.
3. 3" VTW; TERMINATE WITH ELBOW DOWN AND MESH SCREEN.
4. 3/4" DHWR, 2 1/2" DCW, 3" VENT, AND 1" DHW DOWN TO SECOND FLOOR.
5. 4" FLUE OUT THROUGH WALL, MINIMUM 10'-0" AFF.
6. PROVIDE PRESSURE TRANSMITTER AND PRESSURE GAUGE AT THIS LOCATION.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

JOSHUA RANDALL FINCH — LICENSED — 30805 — KANSAS — PROFESSIONAL ENGINEER

2018-11-26 1:59 PM

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by: C. BOALDIN

Drawn by: K. BECKER

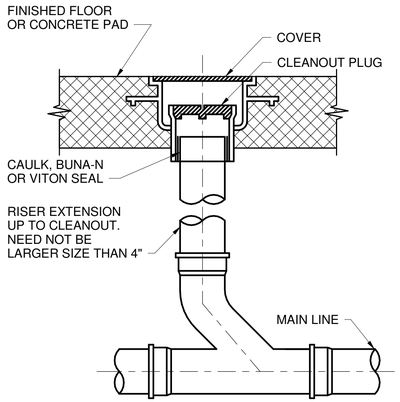
Project No. 6936

Sheet Name: ENLARGED PLUMBING PLAN - MEZZANINE

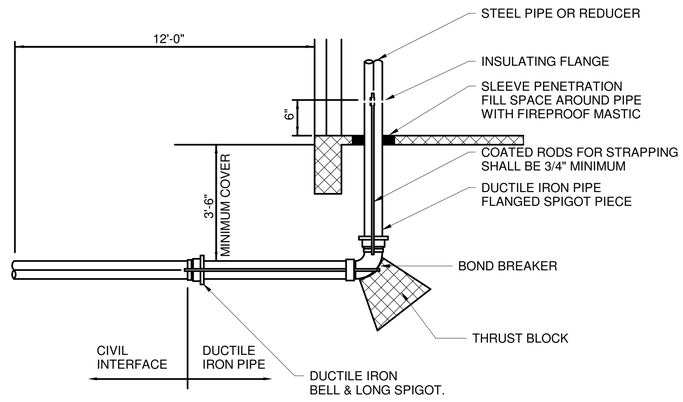
Sheet P-403 of XX

Drawing No. 108M-XXX-XXX

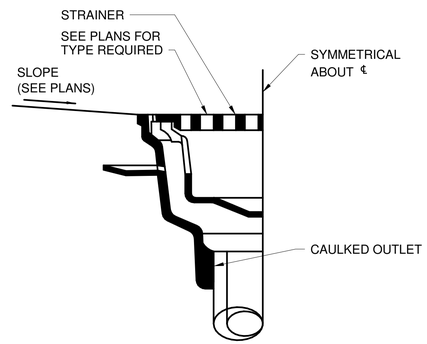
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



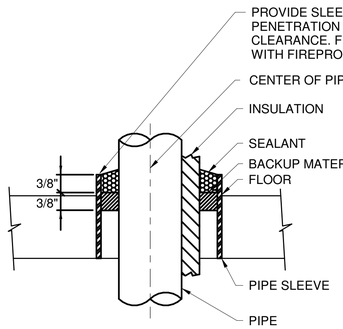
1 FCO FLOOR CLEANOUT
SCALE:NTS

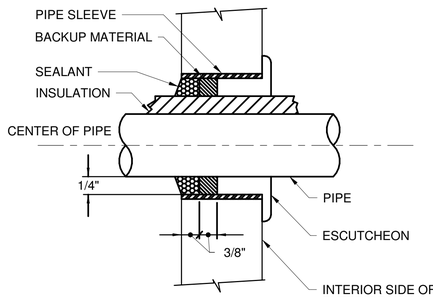


2 WATER SUPPLY CONNECTION
SCALE:NTS

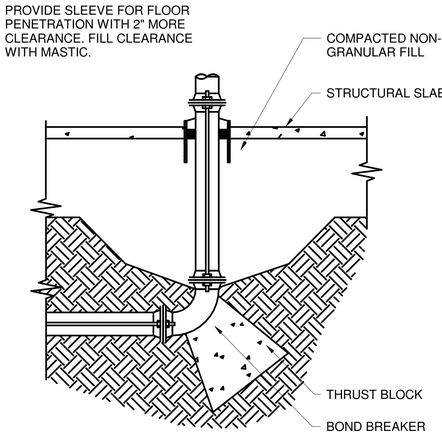


3 FLOOR DRAIN INSTALLED IN GROUND FLOOR
SCALE:NTS

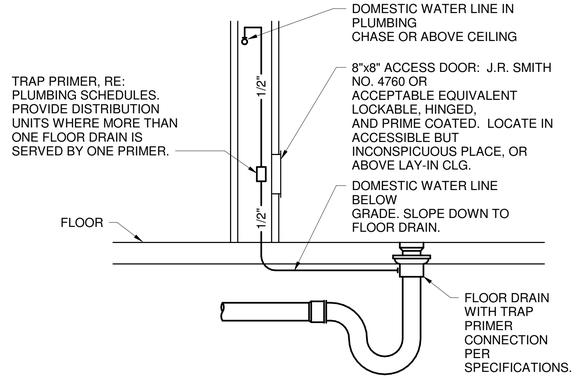




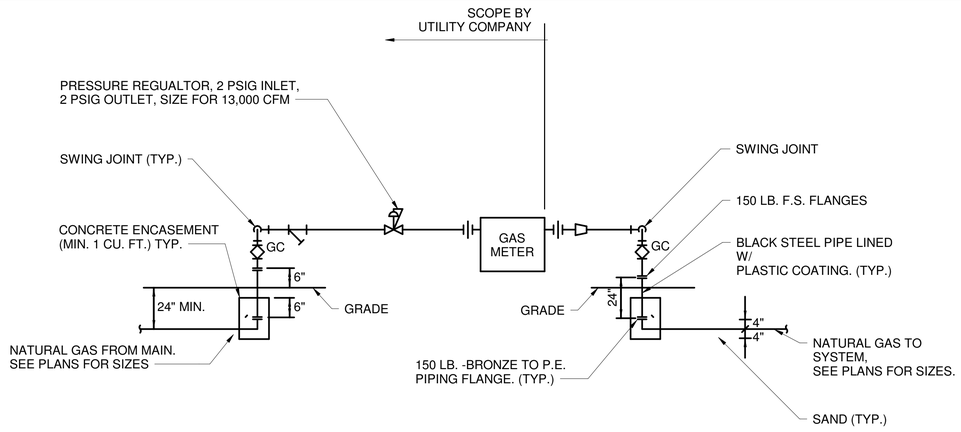
4 PIPE PENETRATIONS THROUGH VARIOUS STRUCTURES
SCALE:NTS



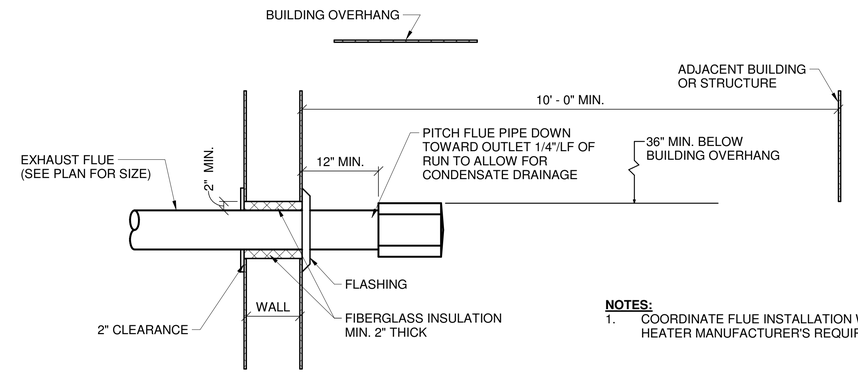
5 PIPES AT THRUST BLOCK UNDER STRUCTURAL SLABS
SCALE:NTS



6 TRAP PRIMER PIPING
SCALE:NTS



7 NATURAL GAS PRESSURE REGULATOR/METER DETAIL
SCALE:NTS



NOTES:
1. COORDINATE FLUE INSTALLATION WITH WATER HEATER MANUFACTURER'S REQUIREMENTS.

8 WATER HEATER HORIZONTAL FLUE
SCALE:NTS

△	DATE	DESCRIPTION	BY	APPROVED
5	05/11/2018	PKG 2A: FOUNDATION & SOG - REV J	CDB	AWS
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
P	07/02/2018	PKG 2A: FOUNDATION & SOG - REV P	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
APPROVED ☐ ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

JASON RANDALL PETERSEN
LICENSED
20895
KANSAS
PROFESSIONAL ENGINEER

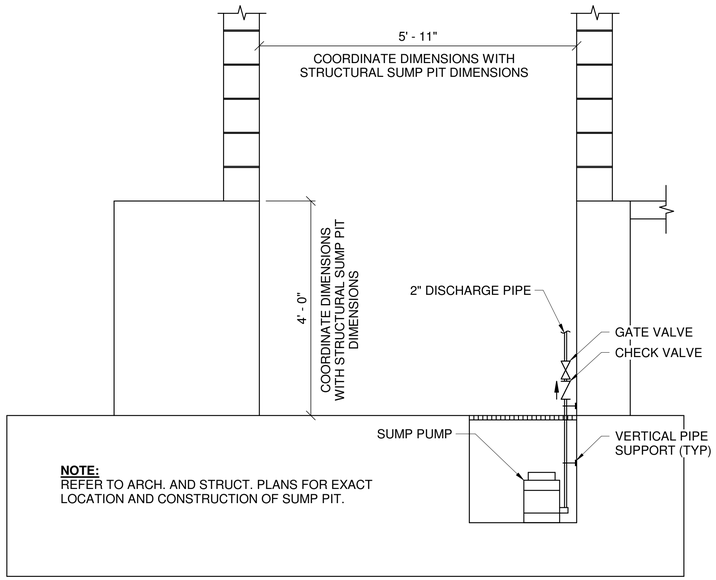
2018-11-26 1:59 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

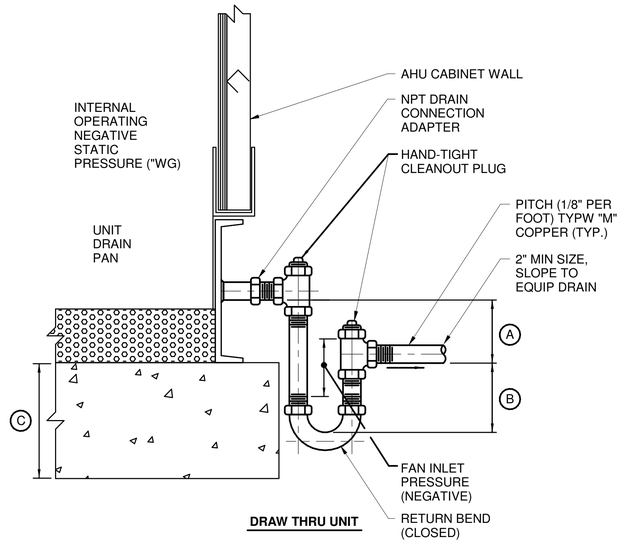
Project No. 6936
Sheet Name: PLUMBING DETAILS
Sheet P-501 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



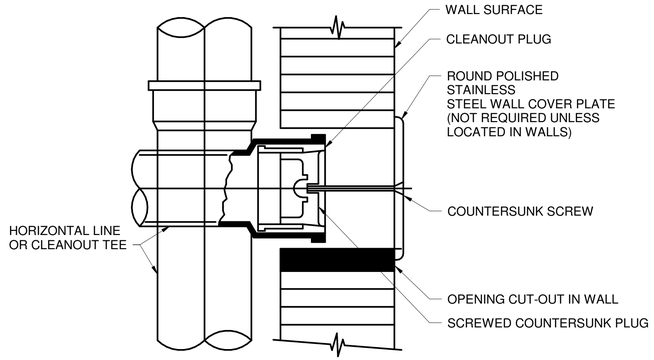
NOTE:
REFER TO ARCH. AND STRUCT. PLANS FOR EXACT LOCATION AND CONSTRUCTION OF SUMP PIT.

1 SUMP PUMP DETAIL
SCALE:NTS

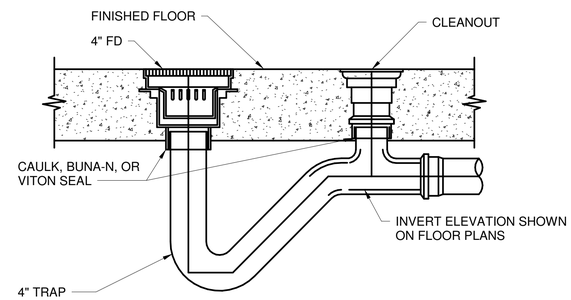


NOTES:
1. (A) DIMENSION EQUAL TO MAXIMUM FAN INLET PRESSURE (INCH WC) +1" (MIN.)
2. (B) DIMENSION EQUAL TO (A) /2 (MIN.)
3. (C) INCREASE PAD THICKNESS AS REQUIRED TO ACHIEVE REQUIRED TRAP DEPTH (4" MINIMUM)

2 HVAC CONDENSATE TRAP DRAIN
SCALE:NTS



5 WALL C/O CONCEALED WITHIN WALL OR END OF PIPE
SCALE:NTS



6 FLOOR DRAIN W/ CLEANOUT (FINISHED FLOOR)
SCALE:NTS

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
P	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

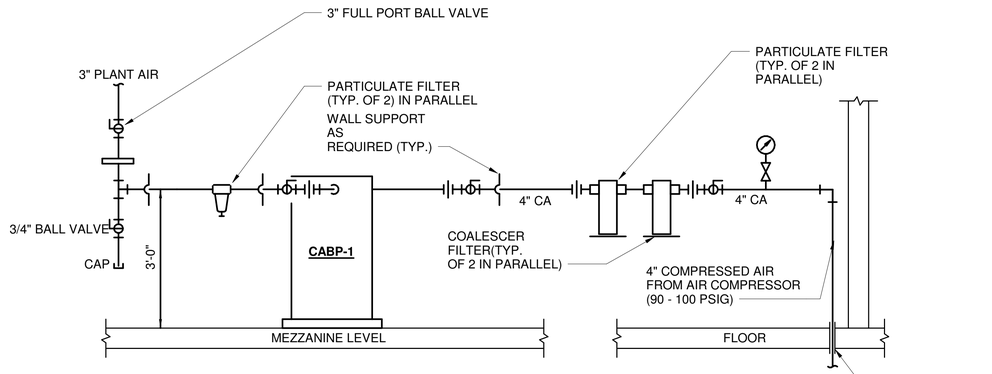
KANSAS REGISTERED PROFESSIONAL ENGINEER 20805 KANSAS REGISTERED PROFESSIONAL ENGINEER

2018-11-26 2:00 PM

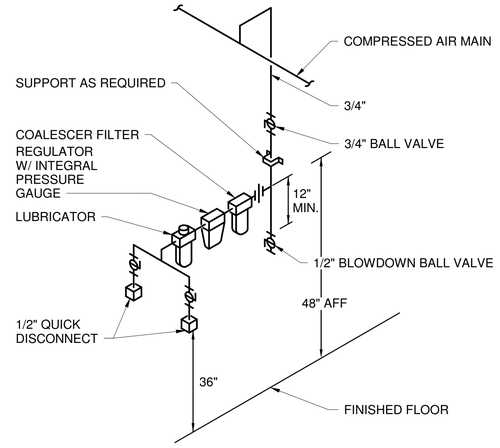
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: PLUMBING DETAILS
Sheet P-502 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



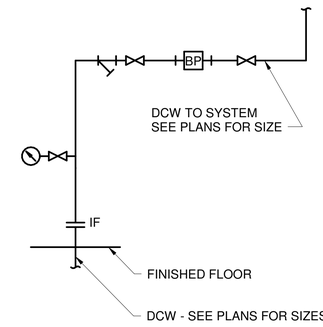
1 CA SERVICE ENTRANCE
SCALE:NTS



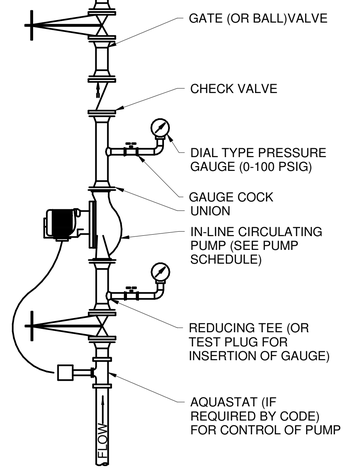
NOTE:

1. ALL COMPRESSED AIR PIPING TAKE-OFFS SHALL BE FROM THE TOP OF THE HEADER.

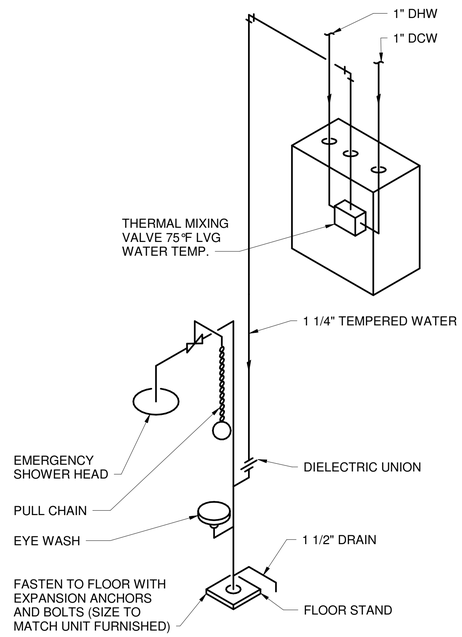
2 COMPRESSED AIR SERVICE DROP
SCALE:NTS



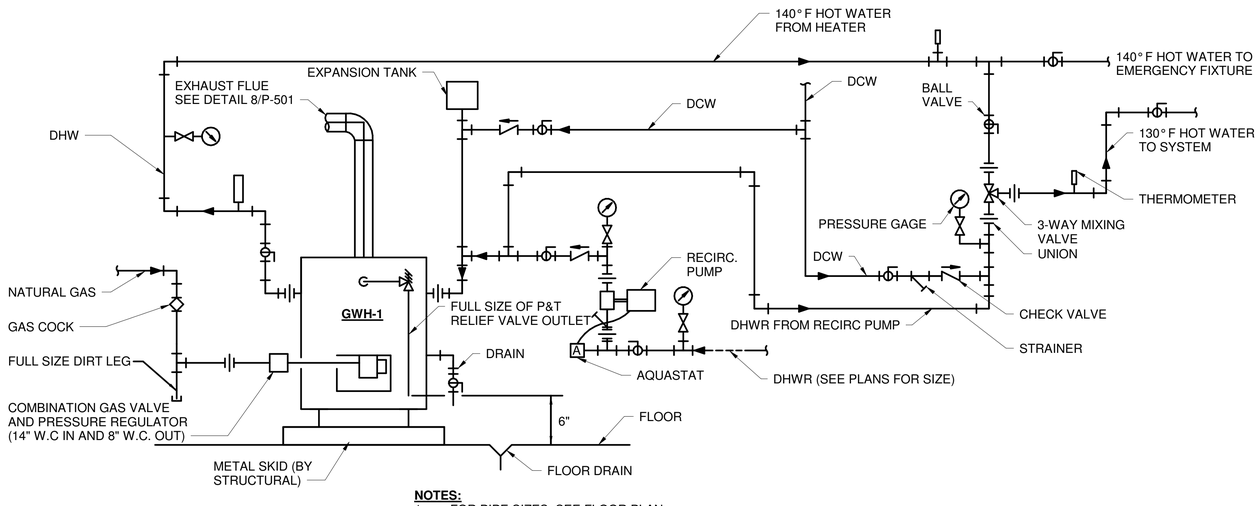
3 WATER SERVICE ENTRANCE
SCALE:NTS



4 CIRCULATING PUMP
SCALE:NTS



5 EMERGENCY SHOWER/EYEWASH W/ MIXING VALVE
SCALE:NTS



NOTES:

1. FOR PIPE SIZES, SEE FLOOR PLAN.
2. FOR HEATER SELECTION, SEE SCHEDULE AND SPECIFICATIONS.
3. HOT WATER PIPED TO NORMALLY CLOSED PORT OF MIXING VALVE.
4. MIXING VALVE TO OPEN TO COLD WATER FLOW ON THERMOSTAT FAILURE.
5. EXHAUST FLUE TERMINATES THROUGH WALL; SEE FLOOR PLAN FOR SIZE.
6. INTAKE COMBUSTION AIR TO BE PULLED FROM SURROUNDING SPACE.

6 GAS FIRED WATER HEATER W/MIXING VALVE PIPING
SCALE:NTS

△	DATE	DESCRIPTION	BY	APPROVED
R	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS™

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

KEVIN RANDALL PFEIFER LICENSED PROFESSIONAL ENGINEER 20895 KANSAS

2018-11-26 2:00 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: PLUMBING DETAILS
Sheet P-503 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	FIXTURE TYPE	FIXTURE SIZE	FIXTURE MFR	FIXTURE MODEL	FITTING TYPE	FITTING SUPPLY	FITTING MFR	FITTING MODEL	TRAP	CARRIER	REMARKS	MOUNTING HEIGHT	CONNECTION SIZE C.W.	CONNECTION SIZE H.W.	CONNECTION SIZE WASTE	CONNECTION SIZE VENT	NOTES
ESEW-1	EMERGENCY SHOWER / EYE WASH	DRENCH SHOWER/EYE/FACE WASH COMBINATION	N/A	GUARDIAN	G1902P	11-1/2" ABS PLASTIC BOWL WITH FLIP TOP SPRAY HEADS, FULL FLOW STAY-OPEN BALL VALVE, 3 GPM EYE/FACE WASH AND 20 GPM DRENCH SHOWER	1-1/4"	BRADLEY	S19-2000	N/A	N/A	FLOOR MOUNTED, PROVIDE WITH OPTIONAL HORN AND STROBE & EMERGENCY FIXTURE THERMOSTATIC MIXING VALVE	N/A	1-1/4"	N/A	N/A	N/A	
LAV-1	COUNTER MOUNTED LAVATORY	UNDERCOUNTER MOUNTED STAINLESS STEEL	19" DIA.	ELKAY	ELUH16LV	4" CENTERSET, DOUBLE BLADE HANDLES, MANUAL 0.5 GPM FAUCET AND PERFORATED GRID STRAINER	1/2"	DELTA	21C154	2" W/CLEAN OUT PLUG	WALL CARRIER	PROVIDE WITH OVERFLOW	REFER TO ARCH. WALL ELEVATIONS	1/2"	1/2"	2"	1-1/2"	5
LAV-2	ADA WALL MOUNTED LAVATORY	PORCELAIN WALL MOUNTED WITH BACKSPLASH	20" X 18" X 12"	AMERICAN STANDARD	0355.012	4" CENTERSET, DOUBLE BLADE HANDLES, MANUAL 0.5 GPM FAUCET AND PERFORATED GRID STRAINER	1/2"	DELTA	21C154	2" W/CLEAN OUT PLUG	WALL CARRIER	PROVIDE WITH PIPE INSULATION COVER AND OVERFLOW	REFER TO ARCH. WALL ELEVATIONS	1/2"	1/2"	2"	1-1/2"	6
MB-1	CORNER MOP BASIN	PRECAST TERRAZO, MOLDED MARBLE CHIPS AND PORTLAND CEMENT BASIN WITH DROPPED THRESHOLD AND SS SPLASH PANELS	24" X 24" X 12" DEEP	STERN WILLIAMS	SBC-1700	WALL-MOUNTED FAUCET, 8" CENTERS, VACCUUM BREAKER SPOUT, PAIL HOOK WALL BRACE, AND 3/4" MALE THREAD HOSE CONNECTION, 36" HOSE, AND SS WALL HOOK	3/4"	CHICAGO FAUCETS	815-VBCP	3"	N/A	INTEGRAL CORROSION-RESISTANT METAL DRAIN WITH REMOVABLE STRAINER AND 3" BOTTOM OUTLET	FAUCET: 36" AFF & BASIN - FLOOR MOUNTED	3/4"	3/4"	3"	1-1/2"	
SK-1	SINGLE SINK	SINGLE BOWL, TYPE 304 18 GA SS, UNDERCOUNTER MOUNTED, WITH SOUND DEADENING	18 1/2" X 18 1/2" X 9" DEEP	ELKAY	ECTRU17179	SINGLE HOLE FAUCET, 8" SWIVEL SPOUT, SINGLE METAL LEVER HANDLE, AND 1.5 GPM AERATOR	1/2"	MOEN	7365	1-1/2"	N/A	PROVIDE SS BASKET STRAINER	HT. SET BY COUNTER TOP	1/2"	1/2"	2	1-1/2"	7
UR-1	URINAL	0.125 GPF, BACK OUTLET, WHITE VITEROUS CHINA	3/4" SPUD	KOHLER	K-5016-ET	AUTOMATIC FLUSHOMETER	3/4"	SLOAN	186-0125	INTEGRAL	WALL CARRIER	NONE	RIM 24" AFF	3/4"	N/A	2"	1-1/2"	3
UR-2	ADA URINAL	0.125 GPF, BACK OUTLET, WHITE VITEROUS CHINA	3/4" SPUD	KOHLER	K-5016-ET	AUTOMATIC FLUSHOMETER	3/4"	SLOAN	186-0125	INTEGRAL	WALL CARRIER	NONE	RIM 17" AFF	3/4"	N/A	2"	1-1/2"	4
WC-1	WATER CLOSET	1.28 GPF, ELONGATED BOWL, WALL MOUNT BACK DISCHARGE WHITE VITEROUS CHINA	1-1/2" SPUD	KOHLER	K-4325	AUTOMATIC FLUSHOMETER	1"	SLOAN	111-1.28	INTEGRAL	WATER CLOSET CARRIER	PROVIDE SOLID PLASTIC, OPEN FRONT SEAT (LESS COVER)	RIM 15" AFF	1"	N/A	4	2	1
WC-2	WATER CLOSET ACCESSIBLE	1.28 GPF, ELONGATED BOWL, WALL MOUNT BACK DISCHARGE WHITE VITEROUS CHINA. ABA/ADA	1-1/2" SPUD	KOHLER	K-4325	MANUAL FLUSHOMETER	1"	SLOAN	111-1.28	INTEGRAL	WATER CLOSET CARRIER	PROVIDE SOLID PLASTIC, OPEN FRONT SEAT (LESS COVER)	RIM 17" AFF	1"	N/A	4	2	2
WH-1	WALL HYDRANT	EXTERIOR, FREEZE-PROOF WALL HYDRANT	N/A	WOODFORD	B65	BRASS AUTOMATIC DRAINING, FREEZELESS, WITH ANTI-SIPHON VACUUM BREAKER, TEE KEY HANDLE, AND HOSE CONNECTION	3/4"	N/A	N/A	N/A	N/A	WALL SURFACE MOUNTED W/BRASS FINISH	36" AFF	3/4"	N/A	N/A	N/A	

GAS WATER HEATER SCHEDULE (GWH)

TAG	TYPE	LOCATION	HEATING SOURCE	INPUT (BTU/HR)	CAPACITY (GAL)	RECOVERY (GAL/HR AT 140 DEG F.)	HOT WATER TEMP. SETTING (DEG. F.)	INLET WATER CONNECTION SIZE (IN)	OUTLET WATER CONNECTION SIZE (IN)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	REMARKS
GWH-1	TANK	MEZZANINE	NATURAL GAS	500,000	250	504	140	2	2	PVI	50 L 250A-MXIF	1,2,3

RECIRCULATION PUMP SCHEDULE (RP)

TAG NO.	TYPE	LOCATION	SERVICE	CAPACITY - GPM	HEAD - TDH	SUCTION / DISCHARGE SIZE (IN)	MOTOR - RPM	NOMINAL MOTOR - HP	MOTOR TYPE	ELECTRICAL VOLTS	ELECTRICAL PHASE	MFR	MODEL	REMARKS
RP-1	IN-LINE CIRCULATOR	EQUIPMENT MEZZANINE	DHW	6.5	25.0	1 1/2	3138	1/2	ODP	208	1	BELL & GOSSETT	ECOCIRC-XL 55-45	1

REMARKS:
1. PROVIDE PUMP WITH SELF-CONTAINED CONTROL UNIT AND ADJUSTABLE AQUASTAT TO MAINTAIN RETURN TEMPERATURE AT MINIMUM 122 DEG. F.

zm - BACKFLOW PREVENTER SCHEDULE

TAG	TYPE	LOCATION	SERVICE	SIZE (INCHES)	DESIGN FLOW (GPM)	PRESSURE LOSS AT DESIGN FLOW RATE (PSIG)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	REMARKS
BFP-1	RPZ	AUTOMATED PRODUCTION 110	DOMESTIC WATER	4"	0	10.00			1

REMARKS:
1. PROVIDE WITH INLET STRAINER AND INLET AND OUTLET ISOLATION VALVES.

MIXING VALVE SCHEDULE

TAG	SYSTEM SERVED	MAX FLOW (GPM)	COLD EWT (DEG. F.)	HOT EWT (DEG. F.)	TEMPERED WATER SET POINT (DEG. F.)	COLD WATER CONNECTION SIZE (IN.)	HOT WATER CONNECTION SIZE (IN.)	TEMPERED WATER CONNECTION SIZE (IN.)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	REMARKS
TMV-1	EMERGENCY EYE WASH SHOWER MIXING VALVE	23.0	50	140	75	1	1	1 1/4	GUARDIAN	G3800LF	
TMV-2	MASTER HOT WATER MIXING VALVE	15.0	50	140	130	1	1	1	WATTS	LNF170	
TMV-3	LAV GROUP MIXING VALVE	1.5	50	130	110	3/4	3/4	3/4	WATTS	LF1170	
TMV-4	SINGLE LAV MIXING VALVE	0.5	50	130	110	1/2	1/2	1/2	WATTS	LFUSG	

SUMP PUMP SCHEDULE (SP)

TAG	FLOW (GPM)	STATIC PRESSURE (IN. W.C.)	HP	VOLTS	PH	BASIS OF DESIGN	REMARKS
SP-1	53	30	4/10	115	1	ZOELLER MODEL 152-0028	1, 2

REMARKS:
1. PROVIDE WITH "OIL SMART" SWITCH AND ALARM PANEL.
2. PANEL TO BE INSTALLED IN ADJACENT JANITOR CLOSET.

PLUMBING EXPANSION TANK SCHEDULE

TAG	TYPE	LOCATION	SYSTEM	MIN. TANK VOLUME (GAL)	MIN. TANK ACCEPTANCE VOLUME (GAL)	PRECHARGE (PSI)	MAX TEMP. (DEG. F.)	MAX. WORKING PRESS. (PSI)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	REMARKS
ET-1	DIAPHRAM EXPANSION TANK	EQUIPMENT MEZZANINE	DHW	3.5	1.6	20	200	150	WATTS	PLT-12	

POINT OF USE WATER HEATER (EWH)

TAG NO.	LOCATION	TYPE	CAPACITY GPM	LVG. WATER TEMP (DEG. F.)	ENT. WATER TEMP (DEG. F.)	FUEL SOURCE	VOLTS	PHASE	MODEL
EWH-1	MENS 113	TANKLESS	0.5	129	50	ELECTRIC	208	1	REMAX PR008240
EWH-2	WOMENS 114	TANKLESS	0.5	129	50	ELECTRIC	208	1	REMAX PR008240

TRAP PRIMER SCHEDULE (TP)

TAG	TRAP PRIMER TYPE	TRAP PRIMER LOCATION	NUMBER OF DRAINS	PIPE SIZE	MIN DIFF PRESSURE (PSIG)	REMARKS
TP-1	ATP	PLUMBING CHASE	3	0.5	10.00	1
TP-2	ATP	PLUMBING CHASE	4	0.5	10.00	1
TP-3	ATP	PLUMBING CHASE	1	0.5	10.00	

REMARKS:
1. CONNECT TO COPPER TUBING STUB UPS INSTALLED IN UNDER SLAB PACKAGE 2A.

CLEANOUT SCHEDULE

TAG	BASIS OF DESIGN: MFR	BASIS OF DESIGN: MODEL	DESCRIPTION	COVER / STRAINER	REMARKS
FD	JOSAM	30000-A			

COMPRESSED AIR PRESSURE BOOSTER SCHEDULE (CABP)

TAG	TYPE	LOCATION	INPUT PRESSURE (PSIG)	OUTLET PRESSURE (PSIG)	INLET AIRFLOW (SCFM)	OUTLET AIRFLOW (SCFM)	INLET AIR CONNECTION SIZE (IN)	OUTLET AIR CONNECTION SIZE (IN)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	REMARKS
CABP-1	MECHANICAL	MEZZANINE	115	130	190	125	1-1/4"	1"	MPS	R60Q	

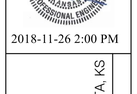
△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B, MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B, MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — ☐ APPROVED ☐ NOT REQUIRED — DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543



2018-11-26 2:00 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

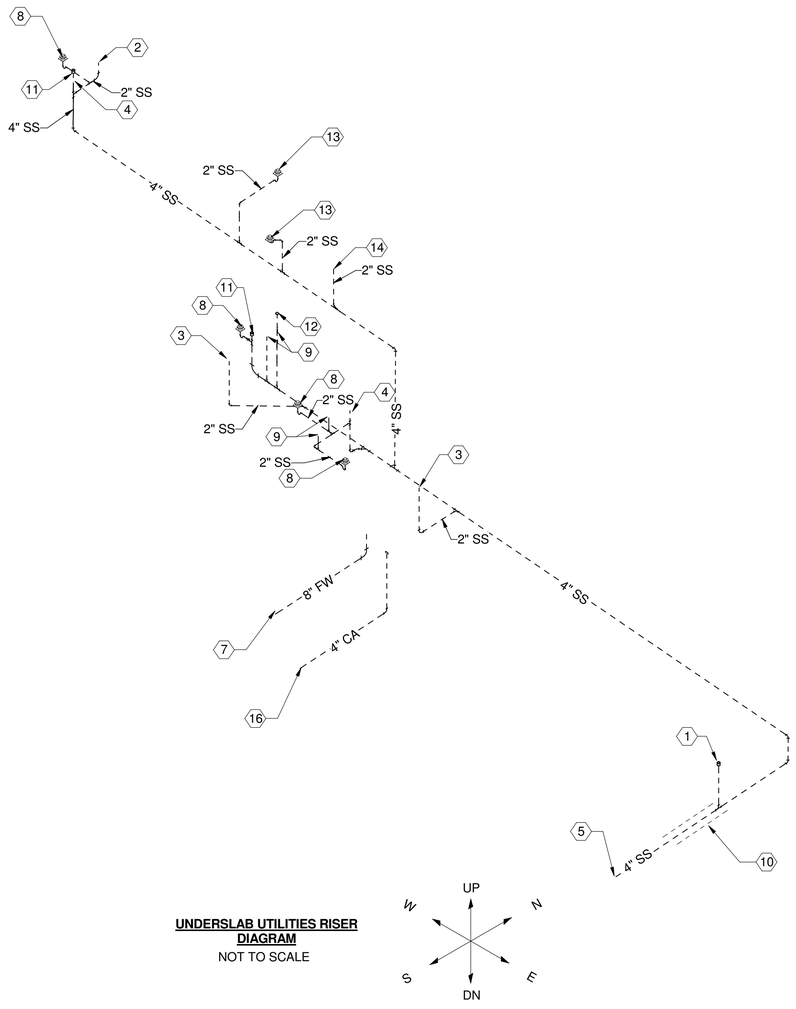
Project No. 6936

Sheet Name: PLUMBING SCHEDULES

Sheet P-601 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



UNDERSLAB UTILITIES RISER DIAGRAM
NOT TO SCALE

GENERAL NOTES

1. PIPING ON THIS DRAWING IS FOR UNDER SLAB ONLY.
2. SANITARY PIPING IS TO BE SLOPED AT A MINIMUM OF 1/8" PER 1'-0". SEE SPECIFICATIONS.

KEYED NOTES: (#)

1. 4" SS UP TO 4" FLOOR CLEAN OUT. FLOOR CLEAN OUT SHALL HAVE HEAVY DUTY RATED COVER.
2. 2" SS STUB UP FOR FUTURE CONNECTION TO LAVATORY DRAIN IN PLUMBING CHASE (RR-102), CAP 12" ABOVE FINISHED FLOOR.
3. FUTURE CONNECTION TO 2" SANITARY PIPING AT LAVATORIES, 12" ABOVE FINISHED FLOOR. COORDINATE PIPE STUP UP WITH CHASE LOCATION.
4. 4" SS UP TO FUTURE CONNECTION TO WATER CLOSET DRAIN IN CHASE, CAP 12" ABOVE FINISHED FLOOR.
5. 4" SANITARY PIPING TO SSMH6. SEE CIVIL UTILITY PLAN, CU101 FOR INFORMATION (INVERT ELEVATION 1353.93').
6. NOT USED.
7. CONNECT TO 8" PVC FIRE WATER MAIN PROVIDED BY DIVISION 33. APPROXIMATELY 10'-0" OUTSIDE BUILDING. EXTEND TO INTERIOR OF BUILDING, CAP 12" ABOVE FINISHED FLOOR.
8. 2" SS UP TO FLOOR DRAIN. ROUTE COPPER TUBING FOR TRAP PRIMER CONNECTION INTO CHASE CAVITY FOR FUTURE CONNECTION TO TRAP PRIMER. CAP TRAP PRIMER TUBING.
9. 2" V STUB UP FOR FUTURE CONNECTION, CAP 12" ABOVE FINISHED FLOOR.
10. PROVIDE STEEL SLEEVE EXTENDING 12" ON EITHER SIDE OF THE FOOTING FOR 4" SANITARY SEWER PIPE.
11. 4" SS UP TO 4" FLOOR CLEANOUT.
12. 3" SS UP TO FUTURE MOP BASIN, CAP 12" ABOVE FINISHED FLOOR.
13. 2" SS UP TO 8" X 6" FLOOR SINK, CAP 12" ABOVE FINISHED FLOOR.
14. 2" SS UP IN FURRED OUT WALL TO FUTURE SINK WASTE CONNECTION.
15. NOT USED.
16. 4" COMPRESSED AIR LINE. SEE CIVIL UTILITY PLAN, CU101 FOR INFORMATION.

16NOV2018 - PKG 2A: FOUNDATION & SOG - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
J	09/11/2018	PKG 2A: FOUNDATION & SOG - REV J	CDB	AWS
P	07/02/2018	PKG 2A: FOUNDATION & SOG - REV P	CDB	AWS
Z	11/16/2018	PKG 2A: FOUNDATION & SOG - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

KANSAS — RANDALL K. MILLER — 20895 — LICENSED PROFESSIONAL ENGINEER
2018-11-26 1:06 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: K. BECKER
Designed by: C. BOALDIN

Project No. 6936
Sheet Name: UNDERSLAB WASTE RISER DIAGRAM
Sheet P-701 of XX
Drawing No. 108M-XXX-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_M_kjbecker.rvt
11/26/2018 10:45:35 AM

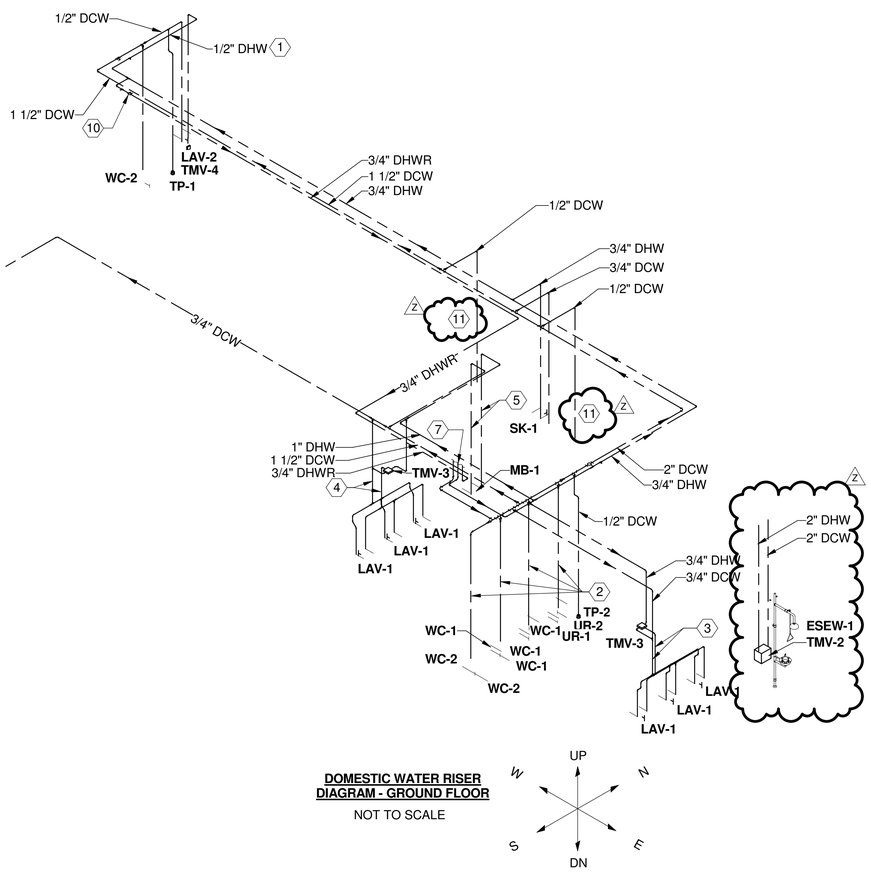
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. FOR FIXTURE CONNECTION SIZES, REFER TO PLUMBING FIXTURE SCHEDULE ON P-601.

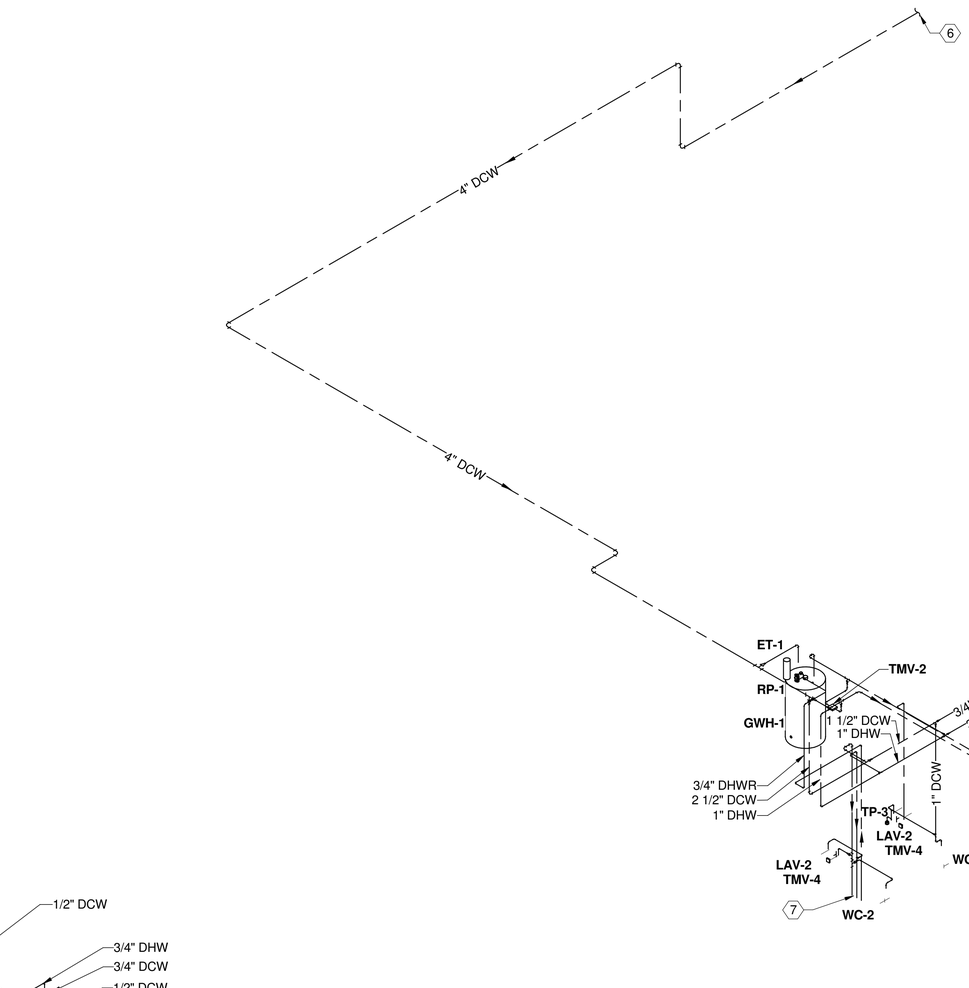
KEYED NOTES: (#)

1. 1/2" DCW/DHW PIPING DOWN IN CHASE OF R-102.
2. DCW PIPING DOWN IN TOILET/URINAL CHASE OF WOMENS 107/MENS 108.
3. 3/4" DCW/DHW PIPING DOWN IN LAVATORY CHASE OF MENS 108.
4. 3/4" DCW/DHW PIPING DOWN IN LAVATORY CHASE OF WOMENS 107.
5. 3/4" DCW/DHW PIPING DOWN IN CHASE OF JANITOR 109.
6. 4" DCW. SEE P-101 FOR CONTINUATION.
7. 2 1/2" DCW, 1" DHW, AND 3/4" DHWR PIPING UP/DN TO GROUND/2ND FLOOR.
8. 2" DCW PIPING TO RESTROOMS AND EMERGENCY EYE WASH/SHOWER AND MIXING VALVE IN S/E CORNER OF BUILDING.
9. 1 1/2" DCW UP TO DCW MAIN. SEE P-401 FOR CONTINUATION.
10. PROVIDE CHECK VALVE AND BALANCE VALVE; CALIBRATE BALANCE VALVE TO 1.5 GPM.
11. 1/2" DCW DOWN TO WATER SUPPLY OUTLET BOX, 48" AFF, FOR CONNECTION TO COFFEE MAKER.



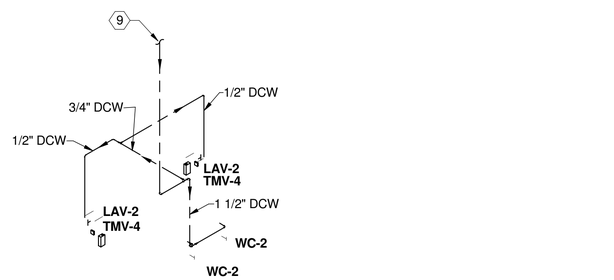
DOMESTIC WATER RISER DIAGRAM - GROUND FLOOR

NOT TO SCALE



DOMESTIC WATER RISER DIAGRAM - SECOND FLOOR

NOT TO SCALE



DOMESTIC WATER RISER DIAGRAM - GROUND FLOOR - EAST RESTROOMS

NOT TO SCALE

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CDB	AWS
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW — APPROVED / NOT REQUIRED — DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

KANSAS REGISTERED PROFESSIONAL ENGINEER — 30895 — KANSAS

2018-11-26 2:00 PM

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by C. BOALDIN

Drawn by K. BECKER

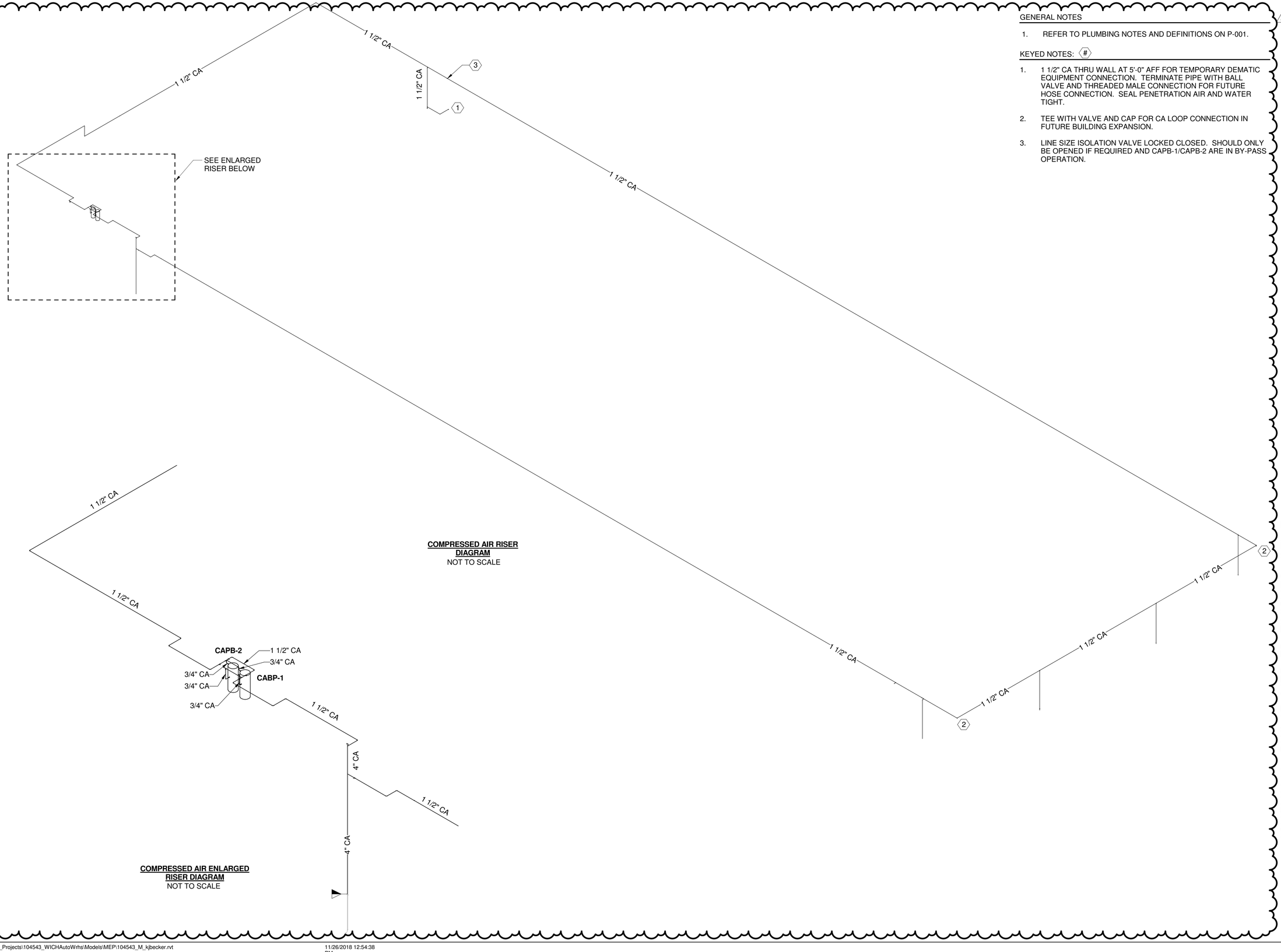
Project No. 6936

Sheet Name: DOMESTIC WATER RISER DIAGRAM

Sheet P-702 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



COMPRESSED AIR RISER DIAGRAM
NOT TO SCALE

COMPRESSED AIR ENLARGED RISER DIAGRAM
NOT TO SCALE

GENERAL NOTES

1. REFER TO PLUMBING NOTES AND DEFINITIONS ON P-001.

KEYED NOTES: (#)

1. 1 1/2" CA THRU WALL AT 5'-0" AFF FOR TEMPORARY DEMATIC EQUIPMENT CONNECTION. TERMINATE PIPE WITH BALL VALVE AND THREADED MALE CONNECTION FOR FUTURE HOSE CONNECTION. SEAL PENETRATION AIR AND WATER TIGHT.
2. TEE WITH VALVE AND CAP FOR CA LOOP CONNECTION IN FUTURE BUILDING EXPANSION.
3. LINE SIZE ISOLATION VALVE LOCKED CLOSED. SHOULD ONLY BE OPENED IF REQUIRED AND CAPB-1/CAPB-2 ARE IN BY-PASS OPERATION.

△	DATE	DESCRIPTION	BY	APPROVED
P	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

SPIRIT AEROSYSTEMS

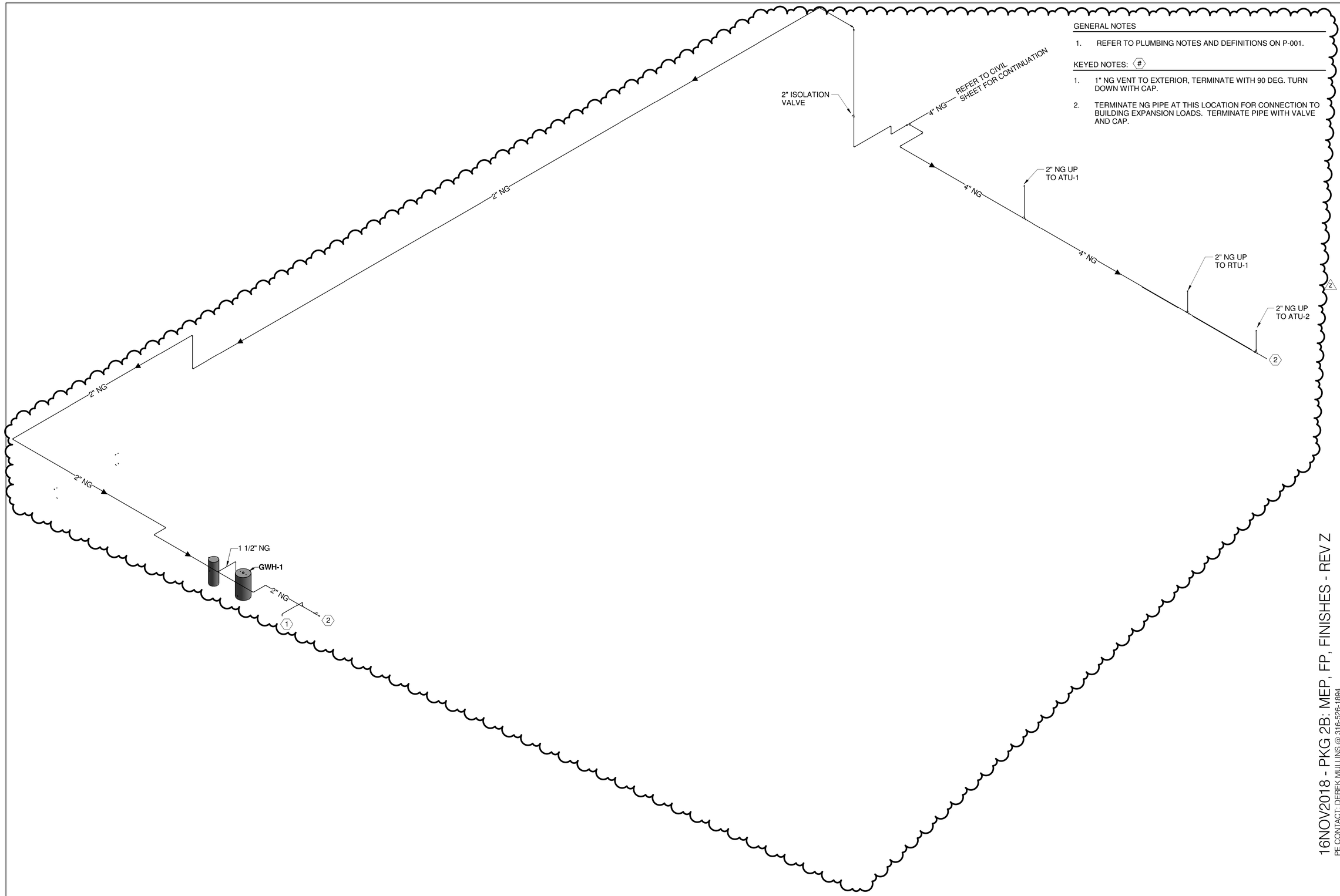
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

JASON RANDALL PRICE LICENSED PROFESSIONAL ENGINEER 20805 KANSAS
2018-11-26 2:00 PM

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Drawn by: K. BECKER
Designed by: C. BOALDIN

Project No. 6936
Sheet Name: COMPRESSED AIR RISER DIAGRAM
Sheet P-703 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO PLUMBING NOTES AND DEFINITIONS ON P-001.

KEYED NOTES: (#)

1. 1" NG VENT TO EXTERIOR, TERMINATE WITH 90 DEG. TURN DOWN WITH CAP.
2. TERMINATE NG PIPE AT THIS LOCATION FOR CONNECTION TO BUILDING EXPANSION LOADS. TERMINATE PIPE WITH VALVE AND CAP.

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z

PE CONTACT: DEREK MULLINS @ 316-526-1894

△	DATE	DESCRIPTION	BY	APPROVED
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CDB	AWS
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW

☐ APPROVED ☐ NOT REQUIRED

DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543

JONATHAN RANDALL PHILLIPS LICENSED 20805 PROFESSIONAL ENGINEER KANSAS

2018-11-26 2:00 PM

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Drawn by: K. BECKER

Designed by: C. BOALDIN

Project No.
6936

Sheet Name:
NATURAL GAS RISER DIAGRAM

Sheet P-704 of XX

Drawing No.
108M-XXX-XXX

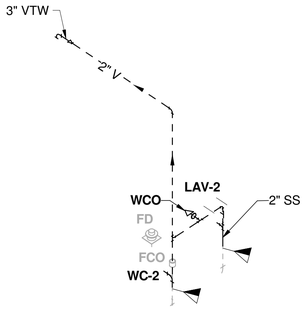
C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_M_kjbecker.rvt

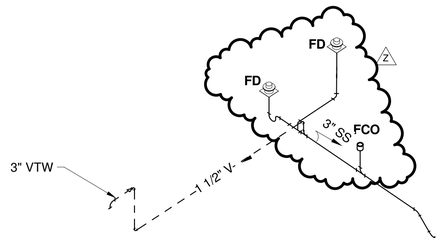
11/26/2018 12:54:41 PM

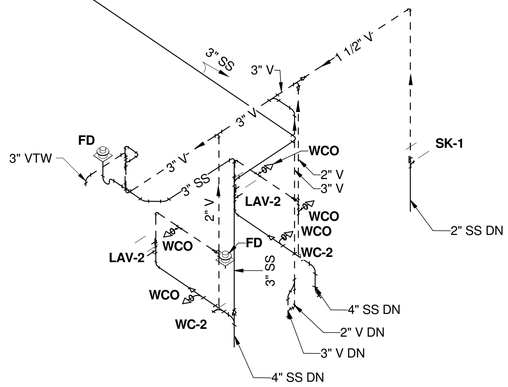
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

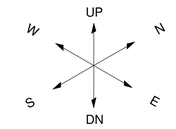
1. SANITARY PIPING IS TO BE SLOPED AT A MINIMUM OF 1/8" PER 1'-0". SEE SPECIFICATIONS.
2. FOR FIXTURE CONNECTION SIZES, REFER TO PLUMBING FIXTURE SCHEDULE ON P-601.

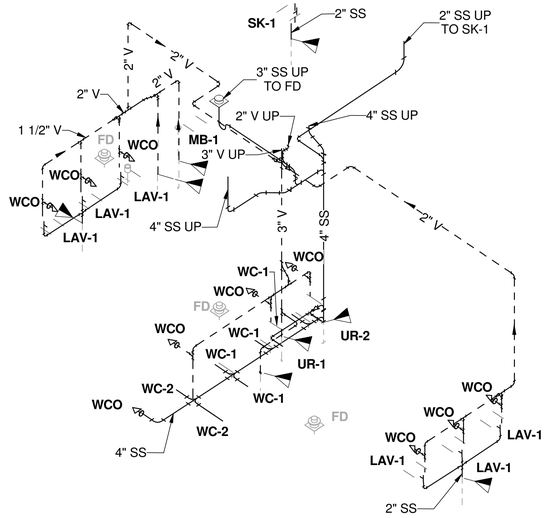




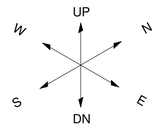


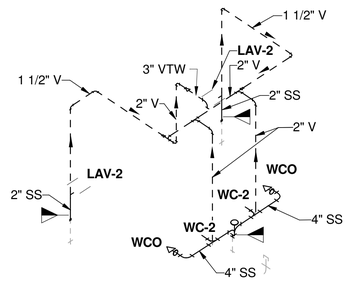
WASTE RISER DIAGRAM SECOND FLOOR / MEZZANINE
NOT TO SCALE



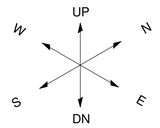


WASTE RISER DIAGRAM GROUND FLOOR
NOT TO SCALE





WASTE RISER DIAGRAM GROUND FLOOR - EAST RESTROOMS
NOT TO SCALE



KEY PLAN
NOT TO SCALE



△	DATE	DESCRIPTION	BY	APPROVED
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	CDB	AWS
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	CDB	AWS

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #: 104543



2018-11-26 2:01 PM

16NOV2018 - PKG 2B: MEP, FP, FINISHES - REV Z
PE CONTACT: DEREK MULLINS @ 316-526-1894

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by C. BOALDIN
Drawn by K. BECKER

Project No. 6936
Sheet Name: WASTE RISER DIAGRAM
Sheet P-705 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC.. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

CONDUIT

- WIRE IN CONDUIT, RUN CONCEALED ABOVE CEILING OR IN WALL (WHEN INDICATED)
- WIRE IN CONDUIT, ROUTE EXPOSED (WHEN INDICATED)
- WIRE IN CONDUIT ROUTE BELOW GRADE OR FLOOR SLAB
- EXISTING WIRE IN CONDUIT TO BE DEMOLISHED AND REPLACED WITH NEW
- E — ELECTRICAL DUCTBANK
- C — COMMUNICATIONS DUCTBANK
- CATV — CABLE COMPANY COMMUNICATION DUCTBANK
- L — LIGHTNING PROTECTION CONDUCTOR
- CONTINUATION

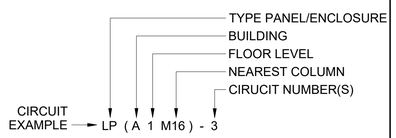
SYMBOL MODIFIERS

C	RECESSED IN CEILING
EP OR EXP	EXPLOSION PROOF
F	RECESSED IN FLOOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
IG	ISOLATED GROUND
P	PILOT LIGHT (INDICATING SWITCH IS ON)
W	WALL MOUNTED, 48" AFF
WP	WEATHERPROOF IN USE

SYMBOLS - SPECIAL SYSTEMS

- S — SPEAKER, CEILING MOUNTED
- SMOKE DETECTOR
- FIRE ALARM HORN AND STROBE
- DM — DUAL INPUT MODULE
- FLOW SWITCH
- TAMPER SWITCH
- CR — CONTROL RELAY
- DC — DOOR CONTACT

CIRCUIT DESIGNATIONS



NOTE: LETTERS "I" AND "O" NOT USED

TYPE PANEL	LETTER
DATA DISTRIBUTION CABINET	DDC
208V/120 DISTRIBUTION	DP
480V/277 LIGHTING	LP
480V/277 MOTOR CONTROL CENTER	MC
480V/277 MAIN DISTRIBUTION > 1200 AMPS	SB
480V/277 POWER	PP
480V UNIT SUBSTATION	SS
208V/120 EMERGENCY DISTRIBUTION	EDP
480V/277 EMERGENCY LIGHTING	ELP
480V/277 EMERGENCY POWER	EPP

SYMBOLS - LIGHTING PLAN

CLASSROOM 101 — ROOM / SPACE TAG

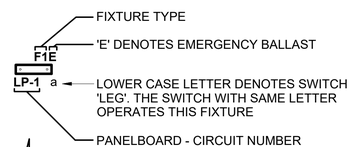
CTRL: DM/OC — LIGHTING CONTROLS REQUIRED FOR A PARTICULAR SPACE:
DM=DIMMING, OC=OCC. SENSOR, SW=SWITCH ONLY, TM=TIMER/CLOCK

LIGHTING FIXTURES (REFER TO DRAWINGS FOR SIZES)

LIGHTING FIXTURE SHAPES VARY ON DRAWINGS
REFER TO FIXTURE SCHEDULE FOR FIXTURE TYPE DIMENSIONS

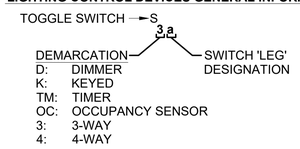
- LINEAR FLUORESCENT OR LED FIXTURE
- LINEAR PENDANT LIGHT FIXTURE
- EXTERIOR WALL MOUNTED FIXTURE
- DOWNLIGHT OR PENDANT FIXTURE
- EXTERIOR POLE-MTD FIXTURE
- EXIT SIGNS, CEILING: ARROW INDICATES EGRESS
- EXIT SIGNS, WALL: ARROW INDICATES EGRESS

FIXTURE GENERAL INFORMATION



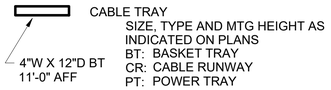
- GW — LIGHTING GATEWAY
- LWS — LUMAWATT PRO BATTERY-POWERED WALL STATION
- LWES — LUMAWATT PRO POWER-OVER-ETHERNET SWITCH
- LWEM — LUMAWATT PRO ENERGY MANAGER
- CU — LUMAWATT PRO CONTROL UNIT
- RS — LUMAWATT PRO RUGGEDIZED SENSOR

LIGHTING CONTROL DEVICES GENERAL INFORMATION



NOTE: NO DEMARCATION OR SWITCH 'LEG' INDICATES THAT THE SWITCH CONTROLS ALL OF THE FIXTURES WITHIN THE SAME ROOM

SYMBOLS - COMMUNICATIONS PLAN



COMMUNICATIONS DEVICES

- S — SPEAKER, WALL
- S — SPEAKER, CEILING
- COMM OUTLET
- FLOORBOX: POWER/COMM
- D — FURNITURE FEED, WALL
- D — FURNITURE FEED, FLOOR
- J — JUNCTION BOX, CEILING
- J — JUNCTION BOX, WALL

COMMUNICATIONS GENERAL INFORMATION



SYMBOLS - POWER PLAN

- START/STOP, MOMENTARY CONTACT PUSHBUTTON SWITCH
- GROUND ROD
- FLOOR RECESSED STATIC GROUND
- LIGHTNING PROTECTION AIR TERMINAL
- CONDUCTOR DOWN
- CONDUCTOR UP

RECEPTACLES (NEMA 5-20R UON)

- RECESSED SIMPLEX
- SURFACE SIMPLEX
- RECESSED DUPLEX
- SURFACE DUPLEX
- RECESSED QUAD
- SURFACE QUAD
- DUPLEX, CEILING MTD
- SPECIAL (REFER TO DRAWINGS FOR NEMA CONFIGURATION)
- FLOORBOX: QUAD RECEPT. / COMM (REFER TO COMM DETAILS FOR FACEPLATE TYPE)

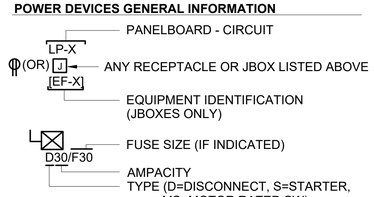
JUNCTION BOXES

- J — RECESSED JBOX, WALL MTD
- J — SURFACE JBOX, WALL MTD
- J — JBOX RECESSED IN FLOOR D: INDICATES DOGHOUSE
- J — JBOX MTD ABOVE CEILING (UNLESS OTHERWISE INDICATED)
- M — MECHANICAL EQUIPMENT CONNECTION

DISCONNECT SWITCHES (NEMA 1, 30A/3P, 480V UON)

- FUSED DISCONNECT SWITCH
- COMBO MOTOR STARTER/DISCONNECT
- SM — MOTOR-RATED SWITCH (120V ONLY)

POWER DEVICES GENERAL INFORMATION



SYMBOLS - ONE-LINE DIAGRAM

- CONNECTION
- CONTINUATION
- SEPARABLE CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
- MH — MANHOLE
- FUSED DISCONNECT SWITCH
- TRANSFORMER
- GROUND
- DELTA - WYE TRANSFORMER CONNECTION
- DM — DIGITAL METER
- SPD — SURGE PROTECTION DEVICE
- VFD — VARIABLE FREQUENCY DRIVE
- ST — SHUNT TRIP
- KWH — KILOWATT HOUR METER
- VS — VOLTMETER SELECTOR SWITCH
- AS — AMMETER SELECTOR SWITCH
- V — VOLTMETER
- A — AMMETER
- CIRCUIT BREAKER
- SWITCH
- DISCONNECT SWITCH
- SPECIAL RECEPTACLE
- M — PANELBOARD (PANELBOARD NAMED 'M')
- LIGHTNING ARRESTOR

GROUNDING DEVICES

- 3/4" X 10' GROUND ROD
- GROUND TEST WELL
- GROUND PLATE CONNECTION (TO BUILDING STEEL OR EQUIPMENT)
- CONDUIT SLEEVE AND ELBOW FOR SLAB PENETRATION FOR GROUNDING WIRE (REFER TO UNDERGROUND ELECTRICAL DETAILS)

GENERAL NOTES

1. THE USE OF SILICONE CAULK, SEALANTS AND ADHESIVES ION THE PROJECT IS PROHIBITED.
2. NOT ALL SYMBOLS ON LEGEND ARE USED IN SUBMITTED PACKAGE.

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL	MOUNTING	LAMP INFORMATION				VOLTAGE	PHASE	DESIGN LOAD	DESCRIPTION
				TYPE	WATTAGE	COLOR TEMP	LUMENS				
P	EATON	NAV-AF-06-D-UNV-T4W-10K-PER-A15-AP WITH RTS9A39SVMG POLE	40' POLE	LED	333	4000K	35,596	120-277	1	370 VA	FULL CUTOFF, 40' POLE MOUNTED, AREA LIGHT FIXTURE

N

16NOV2018 - PKG 1A -SITE WORK - REV Z
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

BY	DESCRIPTION	DATE
JMC	PKG 1A SITE WORK - IFC	03/09/2018
CAJ	PKG 1A SITE WORK - REV L	06/01/2018
CAJ	PKG 1A SITE WORK - REV N	06/22/2018
CAJ	PKG 1A SITE WORK - REV Z	11/16/2018

APPROVED: DH

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

DONALD WILLIAM HATTON JR. LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

Facilities Engineering
AUTOMATED WAREHOUSE - WICHITA, KS
BLDG-1-338G
Designed by: D. HATTON 02/21/2018
Drawn by: J. CHASE 02/21/2018

Project No. 6936
Sheet Name: ELECTRICAL LEGEND
Sheet E-001 of XX
Drawing No. 108M-501-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

CONDUIT

- POWER CONDUIT BELOW GRADE OR FLOOR SLAB
- CONDUIT ABOVE GRADE ROUTED CONCEALED ABOVE CEILING OR IN WALL WHERE POSSIBLE
- TELECOMMUNICATION CONDUIT ROUTED BELOW GRADE OR FLOOR SLAB
- E — ELECTRICAL DUCTBANK
- C — COMMUNICATIONS DUCTBANK
- L — LIGHTNING PROTECTION CONDUCTOR
- CONTINUATION

SYMBOL MODIFIERS

C	RECESSED IN CEILING
EP OR EXP	EXPLOSION PROOF
F	RECESSED IN FLOOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
IG	ISOLATED GROUND
P	PILOT LIGHT (INDICATING SWITCH IS ON)
W	WALL MOUNTED, 48" AFF
WP	WEATHERPROOF IN USE

SYMBOLS - SPECIAL SYSTEMS (COMMUNICATIONS)

CABLE TRAY
SIZE, TYPE AND MTG HEIGHT AS INDICATED ON PLANS
BT: BASKET TRAY
CR: CABLE RUNWAY
PT: POWER TRAY
4"W X 12"D BT 11'-0" AFF

COMMUNICATIONS DEVICES

- (S) SPEAKER, WALL
- (S) SPEAKER, CEILING
- COMM OUTLET
- FLOORBOX: POWER/COMM
- (D) FURNITURE FEED, WALL
- (D) FURNITURE FEED, FLOOR
- (J) JUNCTION BOX, CEILING
- (J) JUNCTION BOX, WALL

COMMUNICATIONS GENERAL INFORMATION

▼1 (OR) ▯1 — FACEPLATE TYPE

SYMBOLS - SPECIAL SYSTEMS (SECURITY)

- DS — DOOR SWITCH
- CR — PROXIMITY CARD READER
- REX — REQUEST TO EXIT SENSOR
- EH — ELECTRIFIED DOOR HARDWARE
- ML — MAGNETIC LOCKS
- SURFACE MOUNTED FIXED SECURITY CAMERA
- SURFACE MOUNTED PTZ SECURITY CAMERA
- CEILING MOUNTED FIXED SECURITY CAMERA
- I — INTERCOM/VIDEO/KEYPAD DEVICE
- (S) — INTRUSION HORN/SIREN DEVICE

DETAIL NUMBER
1
ARROW INDICATES SECURE SIDE OF DOOR
DOOR NUMBER

SYMBOLS - LIGHTING PLAN

CLASSROOM — ROOM / SPACE TAG
101

CTRL: DM/OC — LIGHTING CONTROLS REQUIRED FOR A PARTICULAR SPACE:
DM=DIMMING, OC=OCC. SENSOR, SW=SWITCH ONLY, TM=TIMER/CLOCK

LIGHTING FIXTURES (REFER TO DRAWINGS FOR SIZES)
LIGHTING FIXTURE SHAPES VARY ON DRAWINGS
REFER TO FIXTURE SCHEDULE FOR FIXTURE TYPE DIMENSIONS

- LINEAR FLUORESCENT FIXTURE
- LINEAR PENDANT LIGHT FIXTURE
- EXTERIOR WALL MOUNTED FIXTURE
- DOWNLIGHT OR PENDANT FIXTURE
- EXTERIOR POLE-MTD FIXTURE
- EXIT SIGNS, CEILING: ARROW INDICATES EGRESS
- EXIT SIGNS, WALL: ARROW INDICATES EGRESS

FIXTURE GENERAL INFORMATION

F1E — FIXTURE TYPE
'E' DENOTES EMERGENCY BALLAST
LP-1 a — LOWER CASE LETTER DENOTES SWITCH 'LEG'. THE SWITCH WITH SAME LETTER OPERATES THIS FIXTURE
PANELBOARD - CIRCUIT NUMBER

- GW — LIGHTING GATEWAY
- LWS — LUMAWATT PRO BATTERY-POWERED WALL STATION
- LWES — LUMAWATT PRO POWER-OVER-ETHERNET SWITCH
- LWEM — LUMAWATT PRO ENERGY MANAGER
- CU — LUMAWATT PRO CONTROL UNIT
- LS — LUMAWATT PRO SENSOR

LIGHTING CONTROL DEVICES GENERAL INFORMATION

TOGGLE SWITCH — S 3,a — SWITCH 'LEG' DESIGNATION

DEMARCATION
D: DIMMER
K: KEYED
TM: TIMER
OC: OCCUPANCY SENSOR
3: 3-WAY
4: 4-WAY

NOTE: NO DEMARCATION OR SWITCH 'LEG' INDICATES THAT THE SWITCH CONTROLS ALL OF THE FIXTURES WITHIN THE SAME ROOM

SYMBOLS - POWER PLAN

- START/STOP, MOMENTARY CONTACT PUSHBUTTON SWITCH
- GROUND ROD
- TEST WELL
- FLOOR RECESSED STATIC GROUND
- LIGHTNING PROTECTION AIR TERMINAL
- CONDUCTOR DOWN
- CONDUCTOR UP

RECEPTACLES (NEMA 5-20R UON)

- RECESSED SIMPLEX
- RECESSED DUPLEX
- RECESSED QUAD
- SURFACE SIMPLEX
- SURFACE DUPLEX
- SURFACE QUAD
- DUPLEX, CEILING MTD
- SPECIAL (REFER TO DRAWINGS FOR NEMA CONFIGURATION)
- FLOORBOX: QUAD RECEPT. / COMM (REFER TO COMM DETAILS FOR FACEPLATE TYPE)

TYPICAL DEVICE MOUNTING HEIGHTS:

REF	REFRIGERATOR, +48" AFF
VM	VENDING MACHINE, +24" AFF
CO	COPIER, +18" AFF
AC	ABOVE COUNTER

JUNCTION BOXES

- (J) RECESSED JBOX, WALL MTD
- J SURFACE JBOX, WALL MTD
- J JBOX RECESSED IN FLOOR D: INDICATES DOGHOUSE
- (J) JBOX MTD ABOVE CEILING (UNLESS OTHERWISE INDICATED)
- (M) MECHANICAL EQUIPMENT CONNECTION

DISCONNECT SWITCHES (NEMA 1, 30A/3P, 480V UON)

- FUSED DISCONNECT SWITCH
- COMBO MOTOR STARTER/DISCONNECT
- S_M MOTOR-RATED SWITCH (120V ONLY)

POWER DEVICES GENERAL INFORMATION

PANELBOARD - CIRCUIT
LP-X
(OR) J — ANY RECEPTACLE OR JBOX LISTED ABOVE
EF-X
EQUIPMENT IDENTIFICATION (JBOXES ONLY)

200/3/FM/3R
NEMA ENCLOSURE RATING
FUSE SIZE
FM = FUSED PER MANUFACTURER RECOMMENDATION
NF = NOT FUSED
POLES
AMPACITY

GROUNDING DEVICES

- 3/4" X 10' GROUND ROD
- GROUND TEST WELL
- GROUND PLATE CONNECTION (TO BUILDING STEEL OR EQUIPMENT)
- CONDUIT SLEEVE AND ELBOW FOR SLAB PENETRATION FOR GROUNDING WIRE (REFER TO UNDERGROUND ELECTRICAL DETAILS)
- UFER GROUNDING CONNECTION AND CONDUIT SLEEVE FOR GROUNDING CONNECTION TO STRUCTURAL PERIMETER FOOTING (REFER TO UNDERGROUND ELECTRICAL DETAILS)

GENERAL NOTES

1. THE USE OF SILICONE CAULK, SEALANTS AND ADHESIVES ON THE PROJECT IS PROHIBITED.
2. NOT ALL SYMBOLS ON LEGEND ARE USED IN SUBMITTED PACKAGE.

SYMBOLS - ONE-LINE DIAGRAM

- CONNECTION
- CONTINUATION
- SEPARABLE CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
- MH — MANHOLE
- FUSED DISCONNECT SWITCH
- TRANSFORMER
- GROUND
- Y — DELTA - WYE TRANSFORMER CONNECTION
- DM — DIGITAL METER
- SPD — SURGE PROTECTION DEVICE
- VFD — VARIABLE FREQUENCY DRIVE
- ST — SHUNT TRIP
- KWH — KILOWATT HOUR METER
- VS — VOLTMETER SELECTOR SWITCH
- AS — AMMETER SELECTOR SWITCH
- (V) — VOLTMETER
- (A) — AMMETER
- CIRCUIT BREAKER
- SWITCH
- DISCONNECT SWITCH
- SPECIAL RECEPTACLE
- M — PANELBOARD (PANELBOARD NAMED 'M')
- LIGHTNING ARRESTOR
- 50/51 — ANSI OVERCURRENT PROTECTION RELAY
- 87 — DIFFERENTIAL PROTECTIVE RELAY
- BATTERY RACK
- ARMS — ARC FLASH REDUCTION MAINTENANCE
- CURRENT TRANSFORMER
- K — KIRK KEY
- LOAD BANK
- (PM) — POWER METERING
- --T-- — BREAKER TRIP

ACRONYMS/ABBREVIATIONS

3PL	3RD PARTY LOGISTICS
A	AMPERES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAT	CATEGORY
COMM	COMMUNICATIONS
CU	COPPER
DDC	COMMUNICATION NODE TERMINAL
EMT	ELECTRICAL METALLIC TUBING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FT	FEET OR FOOT
GFI / GFCI	GROUND FAULT CIRCUIT INTERRUPTER
G OR GND	GROUND
GRS	GALVANIZED RIGID STEEL CONDUIT
HZ	HERTZ
IDF	INTERMEDIATE DISTRIBUTION FRAME
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MM	MULTIMODE
N	NEUTRAL CONDUCTOR
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE
PDP	POWER DISTRIBUTION PANEL
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL CONDUIT
RMC	RIGID METAL CONDUIT
SM	SINGLE MODE
SPD	SURGE PROTECTION DEVICE
STP	SHIELDED TWISTED PAIR
TFX	TRANSFORMER
TYP	TYPICAL
UL	UNDERWRITERS' LABORATORIES
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WAP	WIRELESS ACCESS POINT
WPIU	WEATHERPROOF WHILE IN USE
Z	IMPEDANCE

CIRCUIT DESIGNATIONS

CIRCUIT EXAMPLE → PP (1 A24) - 1,3,5
- PP — TYPE PANEL/ENCLOSURE
- 1 — FLOOR LEVEL
- A24 — NEAREST COLUMN
- 1,3,5 — CIRCUIT NUMBER(S)

TYPE PANEL	LETTER
ENCLOSED CIRCUIT BREAKER	CB
COMBINATION STARTER	CS
DISTRIBUTION PANEL (208/120V)	DP
FUSED SWITCH	FS
GENERATOR	GN
LIGHTING INVERTER	INV
MAGNETIC STARTER	MG
MANUAL MOTOR STARTER	MS
NON-FUSED SWITCH	NS
POWER PANEL (480V)	PP
SWITCHBOARD	SB
SWITCHGEAR	SG
TRANSFORMER	TX
UNINTERRUPTIBLE POWER SUPPLY	UP
VARIABLE FREQUENCY DRIVE	VF

FLOOR	NUMBER/ LETTER
FIRST FLOOR	1
OFFICE MEZZANINE	2
EQUIPMENT MEZZANINE	3
OUTDOORS WITHIN 15' OF BUILDING	X

16NOV2018 - PKG 2A: FOUNDATIONS & SOG - REV Z
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
J	05/11/18	PKG 2A: FOUNDATION & SOG - REV J	CAJ	DWH
P	07/02/18	PKG 2A: FOUNDATION & SOG - REV P	CAJ	DWH
W	11/02/18	PKG 2A: CONFORMING TO CONSTRUCTION RECORDS	CAJ	DWH
Z	11/16/18	PKG 2A: FOUNDATION & SOG - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

WICHITA, KS
AUTOMATED WAREHOUSE
Facilities Engineering
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: ELECTRICAL LEGEND
Sheet E-002 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

CONDUIT

- POWER CONDUIT BELOW GRADE OR FLOOR SLAB
- CONDUIT ABOVE GRADE ROUTED CONCEALED ABOVE CEILING OR IN WALL WHERE POSSIBLE
- TELECOMMUNICATION CONDUIT ROUTED BELOW GRADE OR FLOOR SLAB
- E — ELECTRICAL DUCTBANK
- C — COMMUNICATIONS DUCTBANK
- L — LIGHTNING PROTECTION CONDUCTOR
- CONTINUATION

SYMBOL MODIFIERS

C	RECESSED IN CEILING
EP OR EXP	EXPLOSION PROOF
F	RECESSED IN FLOOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
IG	ISOLATED GROUND
P	PILOT LIGHT (INDICATING SWITCH IS ON)
W	WALL MOUNTED, 48" AFF
WP	WEATHERPROOF IN USE

SYMBOLS - SPECIAL SYSTEMS (COMMUNICATIONS)

- CABLE TRAY
  SIZE, TYPE AND MTG HEIGHT AS INDICATED ON PLANS
  BT: BASKET TRAY
  CR: CABLE RUNWAY
  PT: POWER TRAY
  (4"W X 12"D BT 11'-0" AFF)

COMMUNICATIONS DEVICES

- SPEAKER, WALL
- SPEAKER, CEILING
- COMM OUTLET
- FLOORBOX: POWER/COMM
- FURNITURE FEED, WALL
- FURNITURE FEED, FLOOR
- JUNCTION BOX, CEILING
- JUNCTION BOX, WALL
- WIRELESS ACCESS POINT, CEILING

COMMUNICATIONS GENERAL INFORMATION

(OR)

FACEPLATE TYPE

COMMUNICATION CABLING TERMINATED AT 3PL AND SPIRIT RACKS. ONE CABLE TO EACH RACK.

SYMBOLS - SPECIAL SYSTEMS (SECURITY)

- DS — PEDESTRIAN DOOR POSITION SWITCH
- CR — PROXIMITY CARD READER
- REX — REQUEST TO EXIT SENSOR
- ES — DOOR ELECTRIC STRIKE
- EL — MAGNETIC LOCKS
- SURFACE MOUNTED FIXED SECURITY CAMERA
- SURFACE MOUNTED PTZ SECURITY CAMERA
- CEILING MOUNTED FIXED SECURITY CAMERA
- I — INTERCOM/VIDEO/KEYPAD DEVICE
- INTRUSION HORN/SIREN DEVICE
- PB — REMOTE PUSHBUTTON OVERRIDE
- B — OVERHEAD DOOR POSITION SWITCH
- MH — MAGNETIC HOLD
- OR — OVERRIDE SWITCH

DETAIL NUMBER

ARROW INDICATES SECURE SIDE OF DOOR

DOOR NUMBER

SYMBOLS - LIGHTING PLAN

- CLASSROOM / 101 — ROOM / SPACE TAG
- CTRL: DM/OC — LIGHTING CONTROLS REQUIRED FOR A PARTICULAR SPACE: DM=DIMMING, OC=OCC. SENSOR, SW=SWITCH ONLY, TM=TIMER/CLOCK

LIGHTING FIXTURES (REFER TO DRAWINGS FOR SIZES)

LIGHTING FIXTURE SHAPES VARY ON DRAWINGS
REFER TO FIXTURE SCHEDULE FOR FIXTURE TYPE DIMENSIONS

- LINEAR FLUORESCENT FIXTURE
- LINEAR PENDANT LIGHT FIXTURE
- EXTERIOR WALL MOUNTED FIXTURE
- DOWNLIGHT OR PENDANT FIXTURE
- EXTERIOR POLE-MTD FIXTURE
- EXIT SIGNS, CEILING: ARROW INDICATES EGRESS
- EXIT SIGNS, WALL: ARROW INDICATES EGRESS

FIXTURE GENERAL INFORMATION

- FIXTURE TYPE
- 'E' DENOTES EMERGENCY BALLAST
- LP-1 a — LOWER CASE LETTER DENOTES SWITCH 'LEG'. THE SWITCH WITH SAME LETTER OPERATES THIS FIXTURE
- PANELBOARD - CIRCUIT NUMBER
- GW — LIGHTING GATEWAY
- LWS — LUMAWATT PRO BATTERY-POWERED WALL STATION
- LWES — LUMAWATT PRO POWER-OVER-ETHERNET SWITCH
- LWEM — LUMAWATT PRO ENERGY MANAGER
- CU — LUMAWATT PRO CONTROL UNIT
- LS — LUMAWATT PRO SENSOR
- PC — LUMAWATT PLUG LOAD CONTROLLER

LIGHTING CONTROL DEVICES GENERAL INFORMATION

TOGGLE SWITCH — S 3,a

DEMARCATION
- D: DIMMER
- K: KEYED
- LV: LOW VOLTAGE
- TM: TIMER
- OC: OCCUPANCY SENSOR
- 3: 3-WAY
- 4: 4-WAY

SWITCH 'LEG' DESIGNATION

NOTES:
- NO DEMARCATION OR SWITCH 'LEG' INDICATES THAT THE SWITCH CONTROLS ALL OF THE FIXTURES WITHIN THE SAME ROOM
- LUMAWATT WALL SWITCHES ARE WIRELESS AND DO NOT REQUIRE WIRING. SYMBOLOGY USED TO INDICATE DESIRED SWITCH FUNCTION WHERE SHOWN. LV INDICATES LUMAWATT WIRELESS WALL SWITCH WHERE INDICATED.

SYMBOLS - POWER PLAN

- START/STOP, MOMENTARY CONTACT PUSHBUTTON SWITCH
- GROUND ROD
- TEST WELL
- FLOOR RECESSED STATIC GROUND
- LIGHTNING PROTECTION AIR TERMINAL
- CONDUCTOR DOWN
- CONDUCTOR UP

RECEPTACLES (NEMA 5-20R UON)

RECESSED SIMPLEX	SURFACE SIMPLEX
RECESSED DUPLEX	SURFACE DUPLEX
RECESSED QUAD	SURFACE QUAD

- DUPLEX, CEILING MTD
- SPECIAL (REFER TO DRAWINGS FOR NEMA CONFIGURATION)
- FLOORBOX: QUAD RECEPT. / COMM (REFER TO COMM DETAILS FOR FACEPLATE TYPE)

TYPICAL DEVICE MOUNTING HEIGHTS:

REF	REFRIGERATOR, +48" AFF
VM	VENDING MACHINE, +24" AFF
CO	COPIER, +18" AFF
AC	ABOVE COUNTER

JUNCTION BOXES

- RECESSED JBOX, WALL MTD
- SURFACE JBOX, WALL MTD
- JBOX RECESSED IN FLOOR D: INDICATES DOGHOUSE
- JBOX MTD ABOVE CEILING (UNLESS OTHERWISE INDICATED)
- MECHANICAL EQUIPMENT CONNECTION

DISCONNECT SWITCHES (NEMA 1, 30A/3P, 480V UON)

- FUSED DISCONNECT SWITCH
- COMBO MOTOR STARTER/DISCONNECT
- S_M MOTOR-RATED SWITCH (120V ONLY)
- VFD — VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT SWITCH

POWER DEVICES GENERAL INFORMATION

- PANELBOARD - CIRCUIT (LP-X)
- (OR) J — ANY RECEPTACLE OR JBOX LISTED ABOVE (EF-X)
- EQUIPMENT IDENTIFICATION (JBOXES ONLY)
- 200/3/FM/3R
  - NEMA ENCLOSURE RATING
  - FUSE SIZE
    - FM = FUSED PER MANUFACTURER RECOMMENDATION
    - NF = NOT FUSED
  - POLES
  - AMPACITY

GROUNDING DEVICES

- 3/4" X 10' GROUND ROD
- GROUND TEST WELL
- GROUND PLATE CONNECTION (TO BUILDING STEEL OR EQUIPMENT)
- CONDUIT SLEEVE AND ELBOW FOR SLAB PENETRATION FOR GROUNDING WIRE (REFER TO UNDERGROUND ELECTRICAL DETAILS)
- UFER GROUNDING CONNECTION AND CONDUIT SLEEVE FOR GROUNDING CONNECTION TO STRUCTURAL PERIMETER FOOTING (REFER TO UNDERGROUND ELECTRICAL DETAILS)

GENERAL NOTES

1. THE USE OF SILICONE CAULK, SEALANTS AND ADHESIVES ON THE PROJECT IS PROHIBITED.
2. NOT ALL SYMBOLS ON LEGEND ARE USED IN SUBMITTED PACKAGE.

SYMBOLS - ONE-LINE DIAGRAM

- CONNECTION
- CONTINUATION
- SEPARABLE CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
- MH — MANHOLE
- FUSED DISCONNECT SWITCH
- TRANSFORMER
- GROUND
- Y — DELTA - WYE TRANSFORMER CONNECTION
- DM — DIGITAL METER
- SPD — SURGE PROTECTION DEVICE
- VFD — VARIABLE FREQUENCY DRIVE
- ST — SHUNT TRIP
- KWH — KILOWATT HOUR METER
- VS — VOLTMETER SELECTOR SWITCH
- AS — AMMETER SELECTOR SWITCH
- V — VOLTMETER
- A — AMMETER
- CIRCUIT BREAKER
- SWITCH
- DISCONNECT SWITCH
- SPECIAL RECEPTACLE
- M — PANELBOARD (PANELBOARD NAMED 'M')
- LIGHTNING ARRESTOR
- 50/51 — ANSI OVERCURRENT PROTECTION RELAY
- 87 — DIFFERENTIAL PROTECTIVE RELAY
- BATTERY RACK
- ARMS — ARC FLASH REDUCTION MAINTENANCE
- CURRENT TRANSFORMER
- K — KIRK KEY
- LOAD BANK
- PM — POWER METERING
- --T-- — BREAKER TRIP

ACRONYMS/ABBREVIATIONS

3PL	3RD PARTY LOGISTICS
A	AMPERES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAT	CATEGORY
COMM	COMMUNICATIONS
CU	COPPER
DDC	COMMUNICATION NODE TERMINAL
EMT	ELECTRICAL METALLIC TUBING
ESS	ELECTRONIC SECURITY SYSTEM
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FT	FEET OR FOOT
GFI / GFCI	GROUND FAULT CIRCUIT INTERRUPTER
G OR GND	GROUND
GRS	GALVANIZED RIGID STEEL CONDUIT
HZ	HERTZ
IDF	INTERMEDIATE DISTRIBUTION FRAME
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MM	MULTIMODE
N	NEUTRAL CONDUCTOR
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE
PDP	POWER DISTRIBUTION PANEL
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL CONDUIT
RMC	RIGID METAL CONDUIT
SM	SINGLE MODE
SPD	SURGE PROTECTION DEVICE
STP	SHIELDED TWISTED PAIR
TFX	TRANSFORMER
TYP	TYPICAL
UL	UNDERWRITERS' LABORATORIES
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WAP	WIRELESS ACCESS POINT
WPIU	WEATHERPROOF WHILE IN USE
Z	IMPEDANCE

CIRCUIT DESIGNATIONS

CIRCUIT EXAMPLE → PP (1 A24) - 1,3,5

- PP — TYPE PANEL/ENCLOSURE
- 1 — FLOOR LEVEL
- A24 — NEAREST COLUMN
- 1,3,5 — CIRCUIT NUMBER(S)

TYPE PANEL	LETTER
ENCLOSED CIRCUIT BREAKER	CB
COMBINATION STARTER	CS
DISTRIBUTION PANEL (208/120V)	DP
FUSED SWITCH	FS
GENERATOR	GN
LIGHTING INVERTER	INV
MAGNETIC STARTER	MG
MANUAL MOTOR STARTER	MS
NON-FUSED SWITCH	NS
POWER PANEL (480V)	PP
SWITCHBOARD	SB
SWITCHGEAR	SG
TRANSFORMER	TX
UNINTERRUPTIBLE POWER SUPPLY	UP
VARIABLE FREQUENCY DRIVE	VF

FLOOR	NUMBER/ LETTER
FIRST FLOOR	1
OFFICE MEZZANINE	2
EQUIPMENT MEZZANINE	3
OUTDOORS WITHIN 15' OF BUILDING	X

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

WICHITA, KS

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936

Sheet Name: ELECTRICAL LEGEND AND NOTES

Sheet E-003 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

AUTOMATED WAREHOUSE ELECTRICAL AND COMMUNICATIONS SYSTEM BASIS OF DESIGN

1. POWER

A. 15 KV POWER SUPPLY

(1) THE DESIGN REVIEWED OPTIONS TO POWER FROM WESTAR UTILITY AND SPIRIT NORTHWEST SUB. REVIEWED SOURCING FROM EXISTING LINES ADJACENT TO NEW BUILDING AND OPTIONS FOR REDUNDANCY FROM ALTERNATE SUBSTATIONS.
(2) THE INCOMING HIGH VOLTAGE CIRCUITS TO SPIRIT CAMPUS ALONG WITH THE DUAL PATH REDUNDANCY ON SPIRIT CAMPUS RESULTS IN THAT THE SPIRIT RELIABILITY IS MUCH GREATER THAN THE AVAILABLE 15 KV WESTAR RELIABILITY.
(3) SPIRIT DECIDED TO USE AN AVAILABLE FUSED SWITCHGEAR 1-334B SOUTH OF ABLAH BUILDING. THIS FUSED SWITCH IS SINGLE FED FROM A DUAL FED SOURCE (PDC-6)
(4) FUTURE PROJECTS MAY ADD A SECOND SOURCE TO EITHER THE 1-334B SWITCHGEAR OR TO THE AUTOMATED WAREHOUSE. ADDITIONAL 6" CONDUITS ARE ROUGHED OUT OF THE TRANSFORMER.
(5) 15 KV POWER IS FROM THE 1-334B FEEDER1 FUSED SWITCH.

B. 480 VOLT SWITCHGEAR LOCATION

(1) SWITCHGEAR IS LOCATED AT THE NORTH EAST INTERIOR CORNER OF THE AWS.
(2) SEVERAL LOCATIONS WERE CONSIDERED.
(a) INSIDE NW CORNER – VERY BUSY WITH TRASH COMPACTOR AND CONVEYOR
(b) OUTSIDE NE CORNER – WAS GOOD OPTION BUT OUTDOOR SWITCHGEAR SUBJECT TO ENVIRONMENTAL CONDITIONS
(c) INSIDE SE CORNER – IMPACTED FOR FUTURE ASRS EXPANSION
(d) INSIDE NE CORNER WAS CHOSEN LOCATION. DMS WOULD NOT EXPAND INTO THE AREA. FUTURE STORAGE RACKS COULD BE BUILT AROUND THE SWITCHGEAR. SWITCHGEAR NOT EXPOSED TO ENVIRONMENTAL CONDITIONS.
(e) 480 VOLT SWITCHGEAR IS LOCATED AT THE INTERIOR NE CORNER.

C. 15 KV POWER ROUTING FROM FUSED SWITCH 1-334B TO NEW 15 KV BREAKER LOCATED AT AWS EXTERIOR NE CORNER.

(1) EXISTING FUSED SWITCHGEAR 1-334B FEEDER #1 CONNECTS TO EXISTING SUBSTATION 108 IN ABLAH BUILDING. THIS FEED IS NOT CURRENTLY IN USE. SUB 108 IS SOURCED FROM SUB 109 AT 480 VOLTS.
(2) EXISTING FEEDER FROM 1-334B FUSED SWITCH #1 TO BE DEMOLISHED TO SUB 108.
(3) 4" CONDUIT IS ROUTED BELOW GRADE UNDER RAILROAD TRACKS TO THE SOUTH SIDE OF ABLAH. CONDUIT RUNS VERTICALLY UP EXTERIOR WALL AND ENTERS INTO CEILING AREA OF ABLAH.
(4) A PULL BOX IS AT THE SOUTH CENTER AISLE.
(5) THIS CONDUIT AND PULL BOX IS REUSED FOR NEW 15KV CABLE INSTALLATION.
(6) NEW 4" CONDUIT IS ROUTED NORTH IN ABLAH BUILDING CEILING FROM THE EXISTING PULL BOX.
(7) AT NORTH END OF ABLAH THE CONDUIT IS ROUTED DOWN THE EXTERIOR NORTH WALL TO A NEW PULL BOX.
(8) VARIOUS ROUTING CONSIDERATIONS WERE MADE TO ROUTE FROM NORTH EDGE OF ABLAH TO THE NEW 15KV BREAKER.
(a) AROUND FUTURE BUILDING PAD
(b) UNDER FUTURE BUILDING PAD
(c) AT CEILING OF AWS
(d) UNDER SLAB OF AWS
(e) THE DECISION WAS MADE TO ROUTE THE 15 KV DUCTBANK UNDER THE SLAB OF AWS.
(9) FROM NEW PULL BOX ON ABLAH NORTH WALL, A CONCRETE ENCASED 2-6" DUCTBANK WITH REBAR IS INSTALLED BENEATH THE ROADWAY TO THE SOUTH FACE OF AUTOMATED WAREHOUSE (AWS).
(10) CONCRETE ENCASED DUCTBANK ROUTED UNDER AWS SLAB TO THE NORTH FACE OF AWS. DUCTBANK ROUTED TO 15 KV BREAKER.
(11) PROVIDE 15 KV CABLE FROM 15 KV BREAKER TO TRANSFORMER PRIMARY.

D. STEPDOWN TRANSFORMER TO 480 V SWITCHGEAR WITH DIFFERENTIAL PROTECTION

(1) 4000 AMP FEEDER FROM TRANSFORMER SECONDARY TO 480 VOLT SWITCHGEAR
(2) TRANSFORMER IS SPECIFIED AS PAD MOUNTED WITH HIGHER TEMPERATURE OIL RATING OF 2500 KVA + 22% (3050 KVA)
(3) DIFFERENTIAL PROTECTION RELAYING STRATEGY REDUCES AVAILABLE ARC FLASH ENERGY. DIFFERENTIAL PROTECTION ZONE COVERS THE 15 KV CABLE, THE TRANSFORMER, THE 480 VOLT CABLE TO SWITCHGEAR AND 480 VOLT MAIN BREAKER.
(4) SEL787 DIFFERENTIAL PROTETION RELAY REQUIRES DC POWER. PROVIDE 48 V DC BATTERIES INSIDE THE WAREHOUSE AT NE CORNER.

E. 480 V SWITCHGEAR AND DISTRIBUTION TO POWER PANELS, STEPDOWN 120/208 TRANSFORMERS, AND PANELBOARDS

(1) 480 VOLT PANELBOARDS DISTRIBUTED IN LOAD AREAS OF THE FACILITY.

F. 480V SWITCHGEAR HAS TEMPORARY GENERATOR CONNECTION CAPABILITY

(1) REVIEWED STRATEGIES FOR IN PLACE EMERGENCY GENERATOR VERSUS TEMPORARY GENERATOR
(2) AS NEARLY THE ENTIRE FACILITY NEEDS TO HAVE POWER FOR OPERATIONS TO OCCUR DURING A NORMAL POWER OUTAGE, THE ENTIRE SWITCHGEAR NEEDS TO BE ENERGIZED TO PROVIDE POWER TO THE VARIOUS FACILITY COMPONENTS.
(3) SPIRIT HAS ONGOING CONTRACTS WITH OUTSIDE VENDORS TO PROVIDE GENERATORS IN CASE OF POWER OUTAGE.
(4) ESTIMATED GENERATOR SIZE TO RUN FACILITY DURING POWER OUTAGE IS 1500 KW.

G. 480 VOLT FEEDERS LARGER THAN 200 AMPS ROUTED BELOW FLOOR SLAB.

H. 480 VOLT FEEDERS 200 AMPS AND SMALLER ROUTED IN CABLE TRAY. PROVIDE POWER CABLE TRAY ALONG WAREHOUSE NORTH AND SOUTH WALLS TO SPAN BETWEEN COLUMNS WHICH ARE 30' ON CENTER.

I. BRANCH CIRCUITS TO MECHANICAL EQUIPMENT

(1) MAKEUP AIR UNITS
(2) AIR ROTATION UNIT
(3) HVLF FANS
(4) SPLIT SYSTEM AIR CONDITIONING

J. POWER OUTLETS

(1) GFCI OUTLETS
(2) RECEPTACLES IN OFFICE AREA, KITCHEN AREAS WITH COFFEE MAKERS, MICROWAVES, VENDING MACHINES.
(3) RECEPTACLES IN WAREHOUSE AREAS IN GENERAL AND SPECIFIC WORK LOCATIONS.
(4) RECEPTACLES IN TOOL SHOP. COORDINATE LAYOUT WITH OWNER.
(5) RECEPTACLES AT KITTING AND DECANT STATIONS FOR GENERAL PURPOSE, COMPUTERS, MONITORS.

K. OVERHEAD DOORS, DOCK LEVELERS, DOCK MANAGEMENT SYSTEMS

L. 480 VOLT SWITCHGEAR LOCATION

M. AUTOMATION EQUIPMENT

(1) DEMATIC MULTISHUTTLE (DMS)
(a) CONVEYORS. 4 EACH AT 200 AMP, 480V, 3PH
(b) MULTISHUTTLE.
1). FRONT END 6 EACH AT 60AMP, 480V, 3PH
2). MIDDLE. 9 EACH AT 30 AMP, 480V, 3PH. 3 LOWER CONNECTIONS, 6 HIGHER CONNECTIONS.

△Z

N. AN OVERHEAD MOUNTING SYSTEM WILL BE PROVIDED BY DEMATIC AT THE DECANT AND KITTING STATIONS. THIS WILL BE USED TO ROUTE POWER CONDUITS, COMMUNICATION TRAY WITH CABLING, RECEPTACLES, HANGING TASK LGITHING, ETC.

2. GROUNDING SYSTEMS AND ELECTRODES INCLUDING PERIMETER GROUND COUNTERPOISE, CONCRETE UFER FOUNDATION CONNECTION. PROVIDE GROUNDING CONNECTIONS TO ELECTRICAL DISTRIBUTION EQUIPMENT, GROUND BARS, STEPDOWN TRANSFORMERS AND TO BUILDING STEEL.

A. PROVIDE #4/0 BARE COPPER GROUND COUNTERPOISE WITH GROUND RODS.

B. BOND METAL PIPING SYSTEMS

3. LIGHTNING PROTECTION SYSTEMS IS PERFORMANCE SPECIFIED. PROVIDE UL LABEL.

A. UTILIZE METAL BUILDING COLUMNS AS DOWN CONDUCTOR

B. CONNECT ROOF CONDUCTOR TO METAL BUILDING COLUMNS WITH THRU WALL CONNECTION INSTEAD OF THRU ROOF CONNECTION TO MINIMIZE WATER INGRESS FROM ROOF PENETRATION.

4. LIGHTING SYSTEMS

A. INTERIOR FIXTURES WILL UTILIZE LUMAWATT WIRELESS CONTROL SYSTEM WITH AN EXISTING HEAD END SYSTEM.

B. EXTERIOR FIXTURES WILL UTILIZE LIGHTING CONTACTOR WITH PHOTOCELL CONTROL.

C. HIGH BAY LIGHTING

D. OFFICE AREA LIGHTING

E. TASK LIGHTING AT DECANT, KITTING, LASER KITTING.

F. EXTERIOR AREA LIGHTING LOCATED ON BUILDING AND AT EGRESS DOORS.

G. EMERGENCY LIGHTING USING NORMALLY POWERED FIXTURES

(1) PROVIDE EMERGENCY SHUNT RELAY DEVICES TO USE NORMAL LIGHTING FIXTURES AS EMERGENCY POWERED EGRESS LIGHTS. PROVIDE GATEWAYS TO ENABLE WIRELESS COMMUNICATIONS. PROVIDE WIRELESS LIGHTING CONTROL SWITCHES.
(2) EMERGENCY LIGHTING INVERTERS TO PROVIDE EMERGENCY POWER SOURCE TO EMERGENCY EGRESS LIGHTING.
(3) EXIT LIGHTING

H. CONNECTION TO BUILDING SIGNAGE

5. COMMUNICATIONS SYSTEMS

A. AUTOMATED WAREHOUSE BUILDING NUMBER IS 1-338G. IDENTIFY DDC AS 1-338G.

B. ACTIVE NETWORKING EQUIPMENT PROVIDED BY OWNER INCLUDING NETWORK SWITCHES AND WIRELESS ACCESS POINTS.

C. SERVERS PROVIDED BY OWNER IN COORDINATION WITH AUTOMATION SUPPLIER (DEMATIC)

D. PASSIVE INFRASTRUCTURE BY THIS CONTRACT INCLUDING BUT NOT LIMITED TO:

(1) CONNECTION TO SPIRIT CAMPUS NETWORK NODES
(a) EAST SIDE NODE 2AA-16 IN BLDG 1-271A
(b) EAST SIDE NODE 1F21 IN BLDG 1-335C (ABLAH WAREHOUSE)
(c) WEST SIDE NODE 1D15 IN BLDG 1-255K
(d) TELEPHONE CABLE NODE IN TOOL FAB BLDG 5-5064
(e) PROVIDE SITE COMMUNICATIONS FIBER OPTIC SINGLE MODE AND MULTIMODE CABLING (62.5 MICRON OM1) VIA TWO DISPARATE PATHWAYS
1). SINGLE MODE FROM 1D15 TO 1-338G = 48 STRAND
2). MULTIMODE FROM 1D15 TO 1-338G = 12 STRAND
3). SINGLE MODE FROM 2AA-16 TO 1-338G = 48 STRAND
4). MULTIMODE FROM 2AA-16 TO 1F21= 24 STRAND
5). MULTIMODE FROM 1F21 TO 1-336G = 12 STRAND
(f) PROVIDE TELEPHONE 25-PAIR COPPER TO TOOL FAB NODE
(2) PROVIDE EXTERIOR RACEWAY FOR THIRD PARTY LOGISTICS PROVIDER (3PL). PROVIDE HANDHOLE AT EASTERN EDGE OF UTILITY EASEMENT AND ROUTE (1) 4" CONDUIT INTO BUILDING.
(3) PROVIDE ALL RACEWAYS AND CABLE TRAYS CONNECTING DDC TO IDF CABINETS TO WORK AREA OUTLETS.
(4) PROVIDE FIBER OPTIC HORIZONTAL CABLING TO IDF'S

△Z

(5) PROVIDE COPPER HORIZONTAL CAT 6A CABLING TO WORK AREA OUTLETS
(a) IN OFFICE AREA, WORK AREA OUTLETS SHALL HAVE ONE JACK ROUTED TO 3PL RACK AND ONE JACK ROUTED TO SPIRIT RACK.
(6) PROVIDE COMMUNICATIONS RACKS, COMMUNICATION CABINETS, HORIZONTAL AND VERTICAL CABLE MANAGEMENT.
(7) IN DDC ROOM, PROVIDE CABLE LADDER, GROUNDING BAR, BONDING OF RACKS.
(a) CABINET #1: PROVIDE 19" WIDE, 42 RU CABINET BY APC.
(b) RACKS #2 & #3: PROVIDE TWO 19" TWO-POST RACKS
(c) 3PL: PROVIDE ONE 19" TWO POST RACK.
(8) PROVIDE IDF'S IN WAREHOUSE WHICH ARE 42 RU CABINETS.
(a) NEAR COLUMN 4/B
(b) NEAR COLUMN 14/B
(c) NEAR COLUMN 25/D
(9) CABLE TRAY IN WAREHOUSE ALONG NORTH AND SOUTH WALLS, SIZED TO SPAN BETWEEN COLUMNS 30' ON CENTER.

E. PROVIDE UPS AND POWER DISTRIBUTION UNITS.

(1) IN DDC PROVIDE STAND ALONE UPS, BATTERY CABINET AND MAINTENACE BYPASS PANEL. IN CABINET PROVIDE VERTICAL PDU. IN RACKS PROVIDE HORIZONTAL PDU.
(2) IN IDF'S, PROVIDE IN RACK UPS AND HORIZONTAL POWER DISTRUBITION UNITS.
(3) IN DDC ROOM: 15 KVA BY EATON WITH 96 BATTERY EXPANSION MODULE (1 EACH)
(4) IN IDF CABINETS: 3 KVA BY EATON WITH 2 EXPANSION BATTERY MODULES. (1 IN EACH, TOTAL 3)
(5) PROVIDE TWIST LOCK PLUG FOR UPS POWER CORD TO PLUG INTO
(6) HORIZONTAL POWER DISTRIBUTION UNITS TO PLUG IN TO UPS AND HAVE 13 NEMA 5-15R OUTLETS.

6. LOW VOLTAGE SYSTEMS

A. AUDIO VISUAL

(1) PROVIDE POWER WIRING, OUTLETS, RACEWAYS AND BACK BOXES FOR OWNER PROVIDED AND INSTALLED AUDIO VISUAL SYSTEMS IN THE CONFERENCE ROOM AND BREAK ROOM.
(2) OWNER TO PROVIDE EQUIPMENT AND CONTROL/SIGNAL/AUDIO CABLING.

B. ACCESS CONTROL

(1) PROVIDE ACCESS CONTROL CARD READERS AND INTERFACING TO DOOR CONTROLS WITH HONEYWELL ENTERPRISE BUILDING INTEGRATOR (EBI) COMPATIBLE DEVICES.
(2) PROVIDE RECEPTION DESK OVERRIDE BUTTON.

C. CCTV

(1) PROVIDE IP BASED CCTV SYSTEM WHICH MEET SPIRIT REQUIREMENTS.
(a) EXTERNAL BUILDING CORNERS
(b) ENTRY DOORS FOR TRUCKER ENTRY AND PERSONNEL.
(c) OUTSIDE DDC ROOMS

D. EMERGENCY NOTIFICATION SYSTEM

(1) PROVIDE INTERAL AND EXTERNAL EMERGENCY NOTIFICATION SYSTEM SPEAKERS AND AMPLIFIERS WITH INTERCONNECTING WIRING.
(2) INTERNAL SPHERES
(a) COL B-3 THRU B-23 AND C-3 THRU C-23: SOUNDSPEHERE 110B-TX30 WITH TRANSFORMER AND MOUNTING KIT. MOUNTED 20' AFF. 22 EACH.
(b) COL A-2 THRU A-4, A-19 THRU A-24, D-5, D-6, D-13 THRU D-15, D-24 THRU D-24: CLARITY XS15-T-GY AT 25'. 16 EACH
(c) AMPLIFIERS: QSC 602V. 2 EACH. LOCATE IN DDC RACK.
(3) EXTERNAL SPEAKERS
(a) ATLAS APC-30T. MOUNTED 50' AFF. PROJECT 45 DEGREES OUTWARD. 14 EACH.
(b) SPACE 175' APART ON WEST WALL, SOUTH WALL, EAST WALL, AND NORTH WALL.
(c) DIVIDE INTO 2 EQUALLY LOADED CIRCUITS WIRED WITH 12 AWG SHIELDED SPEAKER WIRE.
(d) DO NOT CONNECT TO INTERNAL SPEAKER SYSTEM
(e) AMPLIFIER QSC-602V. LOCATE IN DDC RACK.

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 KANSAS 11/16/18

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: BASIS OF DESIGN
Sheet E-004 of XX
Drawing No. 108M-XXX-XXX

	CONNECTED	FACTOR	DEMAND	
NORMAL POWER	**2,364**	**0.70**	**1,655**	**KVA**
STANDBY POWER	**2,313**	**0.85**	**1,964**	**KVA**
Dematic ASRS	1472	0.93	1370	KVA
Overhead Doors	152	0.15	23	KVA
Air Tempering HVAC	590	0.80	472	KVA
IT Requirements	21	1.00	21	KVA
Lights	78	1.00	78	KVA
NON-STANDBY	**400**	**0.66**	**263**	**KVA**
Additional HVAC	85	0.80	68	KVA
Office Mezzanine	53	1.00	53	KVA
Misc. Power	262	0.54	142	KVA
FUTURE ASRS	**956**	**0.95**	**911**	**KVA**
Future ASRS Standby	854	0.95	809	KVA
Future ASRS Non-Standby	102	1.00	102	KVA

480V SWITCHGEAR SG(1-A24) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
PP(1-A24)	1	--	550	480	3	800	--	--	457	1.0	457	
PP(1-A24)A	1	--	66	480	3	400	--	--	55	1.0	55	
PP(1-D24)	1	--	115	480	3	400	--	--	96	1.0	96	
PP(1-D14)	1	--	506	480	3	800	--	--	421	1.0	421	
PP(1-D4)	1	--	302	480	3	400	--	--	251	1.0	251	
PP(1-A1)	1	--	161	480	3	800	--	--	134	1.0	134	
PP(1-B13)	1	--	53	480	3	400	--	--	44	1.0	44	
PP(1-B13)A	1	--	159	480	3	800	--	--	132	1.0	132	
PP(1-B5)	1	--	931	480	3	1200	--	--	774	1.0	774	
									SUBTOTAL DEMAND KVA		**2364**	
									UTILIZATION FACTOR		**0.7**	
									DEMAND KVA		**1655**	**2500/3050 KVA Transformer**
									DEMAND AMPS		**1991**	
									FUTURE ASRS KVA		**911**	
									FUTURE ASRS AMPS		**1096**	Based on W/SF of Phase 1 & DMS Exp

PP(1-A24) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
ATU-2	1	60&5	84.6	480	3	150	--	--	70	0.8	56	
CDU-01 & 02	2	--	232.8	480	3	400	--	--	387	0.8	309.6	
RTU-1	1	30&25	74	480	3	150	--	--	62	0.8	49.6	
HVF-4 THRU 6	3	2	10	480	3	15	--	--	25	0.8	20	
DP(1-A24) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
									SUBTOTAL DEMAND KVA		**457**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**457**	
									DEMAND AMPS		**550**	

PP(1-A24)A LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
LIGHTING - NORTHEAST	26	--	2.7	277	1	20	--	--	19	1.0	19	
PP(1-B19) TOOLSHOP PANEL	1	--	--	--	--	--	30	1,210	36	1.0	36	
									SUBTOTAL DEMAND KVA		**55**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**55**	
									DEMAND AMPS		**66**	

PP(1-D24) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
LIGHTING - SOUTHEAST	26	--	2.7	277	1	20	--	--	19	1.0	19	
BATTERY CHARGERS	8	--	24	480	3	30	--	--	160	0.25	40	assumed 2 of 8 operating
OVERHEAD DOOR	1	5	7.6	480	3	15	--	--	6	0.5	3	Not all operating simultaneously
OH DOOR AIR CURTAINS	3	--	9.6	480	3	20	--	--	24	0.5	12	Not all operating simultaneously
DP(1-D24) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
									SUBTOTAL DEMAND KVA		**96**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**96**	
									DEMAND AMPS		**115**	

PP(1-D14) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
ASRS PDP	2	--	160	480	3	200	--	--	266	1.0	266	
ASRS#1 CRANE	1	--	80	480	3	100	--	--	67	1.0	67	
ASRS#2 CRANE	1	--	80	480	3	100	--	--	67	1.0	67	
DP(1-D14) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	21.6	
									SUBTOTAL DEMAND KVA		**421**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**421**	
									DEMAND AMPS		**506**	

PP(1-D4) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
LIGHTING - SOUTHWEST	26	--	2.7	277	1	20	--	--	19	1.0	19	
LIGHTING - OFFICE MEZZ	1	--	--	--	--	--	1	9,790	10	1.0	10	
OVERHEAD DOOR	1	5	7.6	480	3	15	--	--	6	0.25	2	
OH DOOR AIR CURTAINS	8	--	9.6	480	3	20	--	--	64	0.5	32	
OFFICE MEZZ CONDENSER	2	--	16	480	3	25	--	--	27	0.8	21	Assumes 2 comp plus fan ea.
OFFICE MEZZ AIR HANDLER	2	--	4.6	480	3	15	--	--	8	0.8	6	Assumes 2 ckt w/ Elec Heat ea.
OFFICE MEZZ VAVS	1	--	62.7	480	3	20	--	--	52	0.8	42	
IT ROOM CONDENSERS	2	--	13.4	480	3	25	--	--	22	0.8	18	
IT ROOM EVAPORATORS	2	--	27.8	480	3	35	--	--	46	0.8	37	
IT LOADS	1	--	100	208	1	20	--	--	21	1.0	20.8	
DP(1-D4) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
DP(2-D4) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
									SUBTOTAL DEMAND KVA		**251**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**251**	
									DEMAND AMPS		**302**	

PP(1-A1) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND KVA	COMMENTS
LIGHTING - NORTHWEST	26	--	2.7	277	1	20	--	--	19	1.0	19	
ATU-1	1	60&5	84.6	480	3	150	--	--	70	0.8	56.0	
OVERHEAD DOORS	8	5	7.6	480	3	15	--	--	51	0.25	13	Not all operating simultaneously
DOCK LEVELERS	4	5	7.6	480	3	15	--	--	25	0.17	4	Not all operating simultaneously
HVF-1 THRU 3	3	2	10	480	3	15	--	--	25	0.8	20	
DP(1-A1) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
									SUBTOTAL DEMAND KVA		**134**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**134**	
									DEMAND AMPS		**161**	

STANDBY LOAD CALCULATION

LOAD TYPE	SOURCE PANEL	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	COMMENTS
DEMATIC ASRS	--	--	--	--	--	--	--	--	--	--	--	--	--
DMS AISLE - FRONT	PP(1-B5)	6	--	42	480	3	60	--	--	210	0.8	168	6 installed plus 4 future
DMS AISLE - MIDDLE LEVELS 1-3	PP(1-B13)A	6	--	12.5	480	3	30	--	--	62	1.0	62	9 installed plus 6 future
DMS AISLE - MIDDLE LEVEL 4	PP(1-B13)A	3	--	4.7	480	3	30	--	--	12	1.0	12	3 installed plus 2 future
DMS CONVEYOR PDP	PP(1-B5)	4	--	160	480	3	200	--	--	532	1.0	532	
DMS CONVEYOR CABINET	PP(1-B5)	6	--	6	480	3	30	--	--	30	0.8	24	
DMS BAILER	PP(1-B5)	1	--	60	480	3	100	--	--	50	1.0	50	
DMS AISLE - END	PP(1-B13)A	3	--	12.5	480	3	30	--	--	31	1.0	31	3 installed plus 2 future
DMS HEAT SHRINK	PP(1-B13)A	6	--	16	480	3	20	--	--	80	0.33	27	6 installed plus 2 future
DMS STATIONS VIA DP(1-B5) &...	PP(1-B13)	240	--	1.5	120	1	20	--	--	43	1.0	43	
ASRS PDP	PP(1-D14)	2	--	160	480	3	200	--	--	266	1.0	266	
ASRS#1 CRANE	PP(1-D14)	1	--	80	480	3	100	--	--	67	1.0	67	
ASRS#2 CRANE	PP(1-D14)	1	--	80	480	3	100	--	--	67	1.0	67	
ASRS STATIONS VIA DP(1-D14)	PP(1-D14)	120	--	1.5	120	1	20	--	--	22	1.0	22	
OVERHEAD DOORS	--	--	--	--	--	--	--	--	--	--	--	--	--
OVERHEAD DOORS	PP(1-D24), (1-D4), & (1-A1)	10	5	7.6	480	3	15	--	--	63	0.18	11	Assumed 2 of 11 operating
DOCK LEVELERS	PP(1-A1)	4	5	7.6	480	3	15	--	--	25	0.0	0	Assumed either Doors or Levelers operating
DOCK DOOR AIR CURTAINS	PP(1-D24), (1-D4), & (1-A1)	11	--	9.6	480	3	20	--	--	64	0.18	12	Assumed 2 of 11 operating
AIR TEMPERING HVAC UNITS	--	--	--	--	--	--	--	--	--	--	--	--	--
ATU-1 & 2	PP(1-A24) & (1-A1)	2	60&5	84.6	480	3	150	--	--	141	0.8	113	
CDU-01 & 02	PP(1-A24)	2	--	232.8	480	3	400			387	0.8	310	
RTU-1	PP(1-A24)	1	--	74	480	3	150	--	--	62	0.8	50	
IT REQUIREMENTS	--	--	--	--	--	--	--	--	--	--	--	--	--
IT LOADS	PP(1-D4)	1	--	100	208	1	20	--	--	21	1.0	21	
IT ROOM SPLIT SYSTEM COND	PP(1-D4)	2	--	13.4	480	3	25	--	--	22	0.8	18	
IT ROOM SPLIT SYSTEM EVAP	PP(1-D4)	2	--	27.8	480	3	35	--	--	46	0.8	37	
LIGHTS	--	--	--	--	--	--	--	--	--	--	--	--	--
HIGH BAY LIGHTING	PP(1-A24)A, (1-D24), (1-D4), & (1-A1)	104	--	2.7	277	1	20	--	--	78	1.0	78	
FUTURE	--	--	--	--	--	--	--	--	--	--	--	--	--
FUTURE ASRS PHASE 2	FUTURE	1	--	--	--	--	--	13.3	45,000	596	1.0	596	Based on Standby W/SF of Phase 1
DMS AISLE - FRONT	FUTURE	4	--	42	480	3	60	--	--	140	0.8	112	6 installed plus 4 future
DMS CONVEYOR CABINET	FUTURE	4	--	6	480	3	30	--	--	20	0.8	16	6 installed plus 4 future
DMS AISLE - MIDDLE LEVELS 1-3	FUTURE	4	--	12.5	480	3	30	--	--	42	1.0	42	6 installed plus 4 future
DMS AISLE - MIDDLE LEVEL 4	FUTURE	2	--	4.7	480	3	30	--	--	8	1.0	8	3 installed plus 2 future
DMS AISLE - END	FUTURE	2	--	12.5	480	3	30	--	--	21	1.0	21	3 installed plus 2 future
DMS HEAT SHRINK	FUTURE	2	--	16	480	3	20	--	--	27	0.5	13.5	6 installed plus 2 future
										SUBTOTAL DEMAND KVA		**2828**	
										UTILIZATION FACTOR		**0.7**	
										DEMAND KVA		**1980**	
										DEMAND KW (PF=0.8)		**1584**	
										DEMAND AMPS		**2382**	

NON-STANDBY LOAD SUMMARY

LOAD TYPE	SOURCE PANEL	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	COMMENTS
AIR TEMPERING HVAC UNITS	--	--	--	--	--	--	--	--	--	--	--	--	--
HVF-1 THRU 6	PP(1-A24) & (1-A1)	6	2	10	480	3	15	--	--	50	0.8	40	
A/C OFFICE MEZZ CONDENSER	PP(1-D4)	2	--	16	480	3	25	--	--	27	0.8	21.6	
A/C OFFICE MEZZ AIR HANDLER	PP(1-D4)	2	--	4.6	480	3	15	--	--	8	0.8	6.4	
OFFICE MEZZ VAVS	PP(1-D4)	1	--	62.67	480	3	20	--	--	52	0.8	42	
OFFICE MEZZANINE	--	--	--	--	--	--	--	--	--	--	--	--	--
OFFICE MEZZ LIGHTING	PP(1-D4)	1	--	--	--	--	--	1	9790	9.79	1.0	9.79	
OFFICE LOADS VIA DP(1-D4) & DP(2-D4)	PP(1-D4)	240	--	1.5	120	1	20	--	--	43	1.0	43	
MISCELLANEOUS POWER	--	--	--	--	--	--	--	--	--	--	--	--	--
BATTERY CHARGERS	PP(1-D24)	8	--	24	480	3	30	--	--	160	0.25	40	Assumed 2 of 8 operating
GEN RECS VIA DP(1-A24)	PP(1-A24)	120	--	1.5	120	1	20	--	--	22	1.0	22	
TOOLSHOP LOADS VIA PP(1-B19)	PP(1-A24)A	1	--	--	--	--	--	30	1210	36.3	1.0	36.3	
GEN RECS VIA DP(1-D24)	PP(1-D24)	120	--	1.5	120	1	20	--	--	22	1.0	22	
GEN RECS VIA DP(1-A1)	PP(1-A1)	120	--	1.5	120	1	20	--	--	22	1.0	22	
FUTURE	--	--	--	--	--	--	--	--	--	--	--	--	--
REMAINING FUTURE ASRS PHASE 2	FUTURE	1	--	--	--	--	--	2.3	45,000	102	1.0	102	Total less Standby Future
										SUBTOTAL DEMAND KVA		**407**	
										UTILIZATION FACTOR		**0.7**	
										DEMAND KVA		**285**	
										DEMAND KW (PF=0.8)		**228**	
										DEMAND AMPS		**343**	

PP(1-B13) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	COMMENTS
DP(1-B14) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
DP(1-B5) BRANCH PANEL	120	--	1.5	120	1	20	--	--	22	1.0	22	
									SUBTOTAL DEMAND KVA		**44**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**44**	
									DEMAND AMPS		**53**	

PP(1-B13)A LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	COMMENTS
DMS AISLE - MIDDLE LEVELS 1-3	6	--	12.5	480	3	30	--	--	62	1.0	62	6 installed plus 4 future
DMS AISLE - MIDDLE LEVEL 4	3	--	4.7	480	3	30	--	--	12	1.0	12	3 installed plus 2 future
DMS AISLE - END	3	--	12.5	480	3	30	--	--	31	1.0	31	3 installed plus 2 future
DMS HEAT SHRINK	6	--	16	480	3	20	--	--	80	0.3	27	6 installed plus 2 future
									SUBTOTAL DEMAND KVA		**132**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**132**	
									DEMAND AMPS		**159**	

PP(1-B5) LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	COMMENTS
DMS AISLE - FRONT	6	--	42	480	3	60	--	--	210	0.8	168	6 installed plus 4 future
DMS BAILER	1	--	60	480	3	100	--	--	50	1.0	50	
DMS CONVEYOR CABINET	6	--	6	480	3	30	--	--	30	0.8	24	6 installed plus 4 future
DMS CONVEYOR PDP	4	--	160	480	3	200	--	--	532	1.0	532	
									SUBTOTAL DEMAND KVA		**774**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**774**	
									DEMAND AMPS		**931**	

FUTURE ASRS EXPANSION - PHASE 2 LOAD CALCULATION

LOAD TYPE	QTY	HP	FLA	VOLTAGE	PHASE	OCPD	VA/SF	SF	LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)	COMMENTS
FUTURE ASRS PHASE 2	1	--	--	--	--	--	15.5	45,000	698	1.0	698	Based on W/SF of Phase 1
DMS AISLE - MIDDLE LEVELS 1-3	4	--	12.5	480	3	30	--	--	42	1.0	42	6 installed plus 4 future
DMS AISLE - MIDDLE LEVEL 4	2	--	4.7	480	3	30	--	--	8	1.0	8	3 installed plus 2 future
DMS AISLE - END	2	--	12.5	480	3	30	--	--	21	1.0	21	3 installed plus 2 future
DMS HEAT SHRINK	2	--	16	480	3	20	--	--	27	0.8	14	6 installed plus 2 future
DMS AISLE - FRONT	4	--	42	480	3	60	--	--	140	0.8	112	6 installed plus 4 future
DMS CONVEYOR CABINET	4	--	6	480	3	30	--	--	20	0.8	16	6 installed plus 4 future
									SUBTOTAL DEMAND KVA		**911**	
									UTILIZATION FACTOR		**1.0**	
									DEMAND KVA		**911**	
									DEMAND AMPS		**1096**	

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

BY	APPROVED
CAJ	DWH
CAJ	DWH
CAJ	DWH

NO	DATE	DESCRIPTION
9	06/26/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV O
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON

Drawn by C. JOHNSON

Project No. 6936

Sheet Name: LOAD CALCULATIONS

Sheet E-005 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. REFER TO SHEET E-603 FOR COMMUNICATION SYSTEM RISER DIAGRAM FOR COMMUNICATION WIRING INTERCONNECTIVITY, FOC AND TELEPHONE CABLE INFORMATION.

NOTES BY SYMBOL "⬡"

1. PULL 3-1/C 15KV CABLES IN FULL RUN FROM SWITCHGEAR 1-334B TO NEW MV BREAKER, CB(X-A24). REFER TO PACKAGES 1A AND 2A FOR CONDUIT INFORMATION.

NEW TRANSFORMER TX(X-A24)
NEW MV BREAKER CB(X-A24)
NEW 480V SWITCHGEAR SG(1-A24)
(2) 6" CONDUIT ROUTED UNDER SLAB (REFER TO PACKAGE 2A)
4"C FOR FUTURE 3PL INTERNET SERVICE (REFER TO PACKAGE 1A)
3PL INTERNET SERVICE HANDHOLE (REFER TO PACKAGE 1A)
DDC-1-338G
FIBER IN TRAY TO DDC-1-338G
COMM ENTRY #2 INTO BLDG (2-4"C)
COMM ENTRY #1 INTO BLDG (2-4"C)
15KV RACEWAY EXISTS FROM PREVIOUS PACKAGES 1A AND 2A
DUCTBANK EXISTS UNDER ROADWAY FROM PREVIOUS PACKAGES 1A AND 2A
EXTEND RACEWAY FROM EXTERIOR JUNCTION BOX, STUB INTO BUILDING INTERIOR FOR CABLE ROUTING ALONG CEILING AND PROVIDE OPEN CONDUIT WITH BUSHING. TRANSITION CABLES TO J-HOOK SUPPORTS FOR ROUTING INTERIOR THROUGH BUILDING.
25 PAIR TELEPHONE WIRE FROM TOOL FABRICATION COMM ROOM TO DDC 1-338G
DUCTBANK EXISTS FROM PREVIOUS PACKAGES 1A AND 2A
TOOL FAB COMM NODE
1R
5-5064 TOOL FABRICATION
EXISTING DUCTBANK TO BUILDING 5-5064
48 STRAND SM FIBER TO NODE 1D15
12 STRAND MM 62.5, OM1 FIBER OPTIC CABLE TO NODE 1D15
1--355C PLANT 1 WAREHOUSE (ABLAH BUILDING)
12 STRAND MM CABLE FROM 1F21 TO DDC1-338G
1 E-011
CABLE ROUTED UNDERGROUND INTO ABLAH BUILDING IN EXISTING BELOW GRADE RACEWAYS
ABLAH 1F21 COMM NODE
EXISTING 15KV SWITCHGEAR 1-334B (NEW POWER SOURCE FOR AWS MV BREAKER)
1Q
1P
1-290D RAIL REPAIR NORTH
1-315C BLDG 4
ROUTE FROM SWITCH TO ABOVE ROOF AND ACROSS TO 1-269B IN EXISTING OVERHEAD RACEWAY
1-297C BLDG7
48 STRAND SM FIBER OPTIC CABLE FROM 2AA-16 TO DCC 1-338G
TRANSITION FROM ROOF TO 1-269B INTERIOR IN EXISTING RACEWAY AND CABLE TRAY
24 STRAND MM FIBER OPTIC CABLE FROM 2AA-16 TO 1F21
5-5029 MASTER MODEL
1-283F MASTER MIX KIT
1-260F FUEL STN
EXISTING DUCTBANK
1M
1-269D TOOLING
1-271A PLANT 1 ADMIN
PLANT 1 COMM NODE 2AA-16
1-269B PLANT 1 (STEARMAN)
CT
1-263H
NORTHWEST SUBSTATION
1-254F PUMP HOUSE
1-258H REGULATED MATERIALS STORAGE
EXISTING MANHOLES (TYP)
1-255K (5-5013) STRUT NACELLE WEST
1L
1T
1-255G REGULATED MATERIAL STAGING
EXISTING DUCTBANK TO BUILDING 1-255K
1D15 DDC COMM NODE
ROUTE CABLES IN EXISTING 4" RACEWAY AND CABLE TRAY TO 1D15 DDC COMM NODE
1-245G
1-198D STRUT NACELLE EAST
1-198D STRUT NACELLE EAST OFFICE EXPANSION
1--243J PSB
1-240H PROCESSED MATERIAL STG

PLAN
OVERALL SITE UTILITY PLAN
1 E-506
50' 100' 200'
SCALE IN FEET
N

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

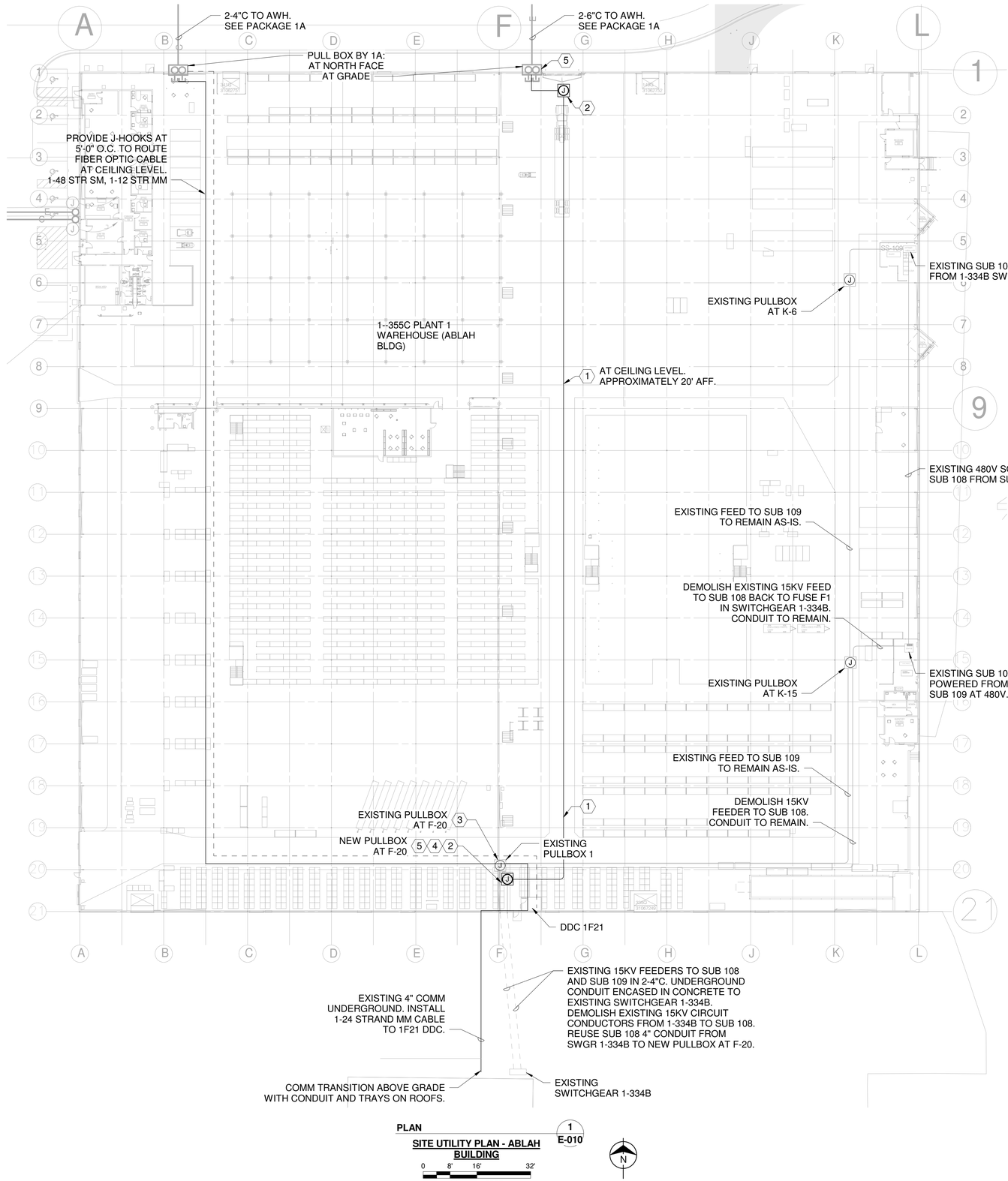
LICENSED PROFESSIONAL ENGINEER
DONALD WILLIAM HATTON III
16755
11/16/18
KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: SITE UTILITY PLAN
Sheet E-010 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1
SITE UTILITY PLAN - ABLAH BUILDING E-010

0 8' 16' 32'
SCALE IN FEET

N

NOTES BY SYMBOL "⬡"

1. PROVIDE 4" EMT WITH (3) 1/C #1/0 15KV CABLES AND (1) #1/0 EGC CABLE.
2. PROVIDE 48"x48"x8" DEEP NEMA 1 PULL BOX FOR ANGLE PULL.
3. FROM EXISTING PULL BOX AT F-20, REMOVE EXISTING SUB 108 CONDUIT BACK TO ALLOW FOR NEW PULL BOX AT F-20. FROM EXISITING PULL BOX AT F-20, REMOVE EXISTING 15KV CABLE FROM THE PULL BOX BACK TO EXISTING SWITCHGEAR 1-334B FUSED SWITCH #1. REFER TO ONE-LINES FOR CONNECTION BETWEEN EXISTING SWITCHGEAR 1-334B AND NEW AWH BUILDING.
4. INTERCEPT EXISTING SUB 108 CONDUIT AND INSTALL NEW PULL BOX AT F-20.
5. ANTICIPATED IN-LINE SPLICE POINTS AS SHOWN IN PULL BOXES.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

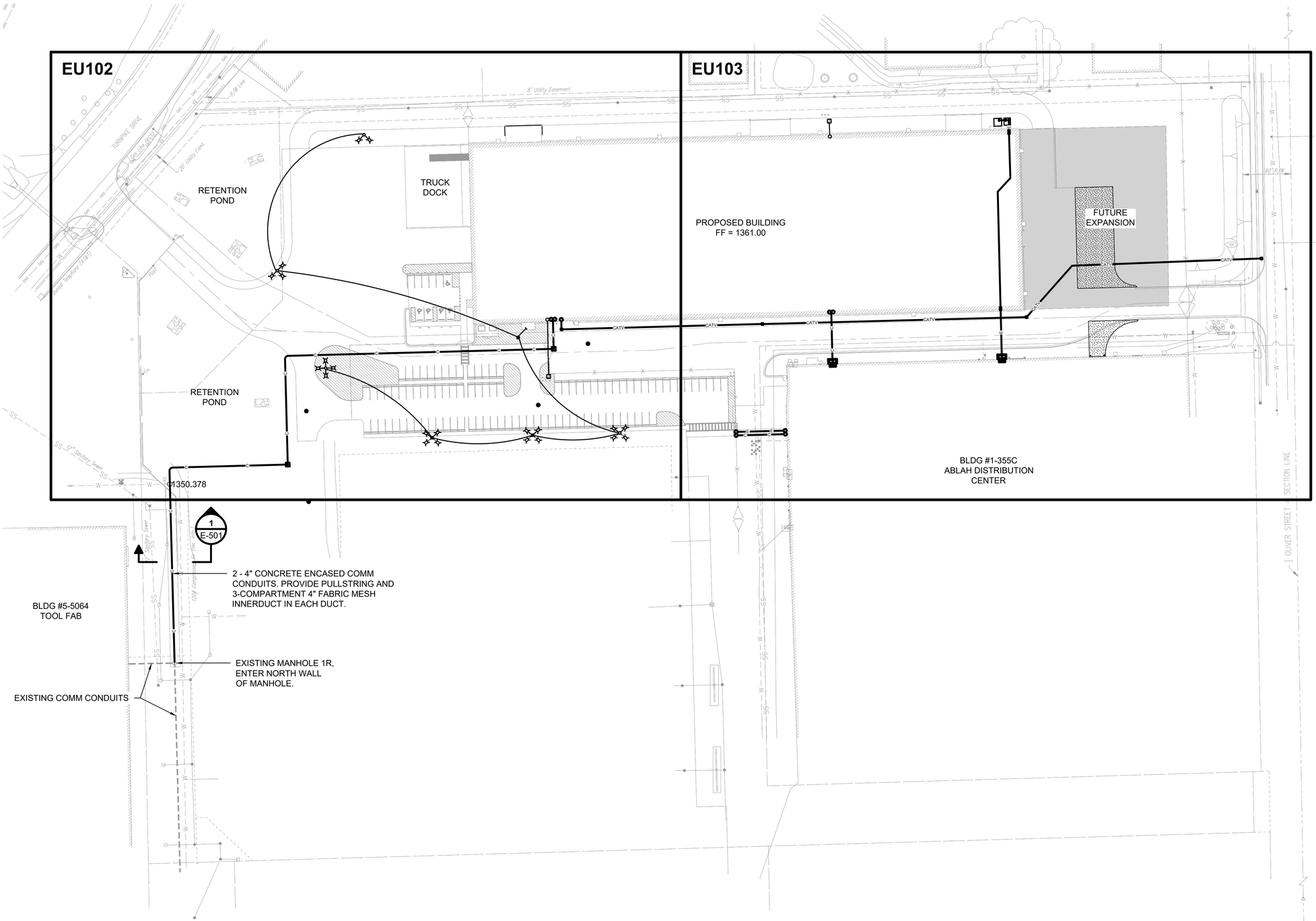
DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: SITE UTILITY PLAN - ABLAH BUILDING
Sheet E-011 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



OVERALL ELECTRICAL UTILITY PLAN

0 60' 120'

SCALE IN FEET

NORTH

16NOV2018 - PKG 1A -SITE WORK - REV Z

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A SITE WORK - IFC	JMC	DH
L 06/01/2018 PKG 1A SITE WORK - REV L	CAJ	DH
N 06/22/2018 PKG 1A SITE WORK - REV N	CAJ	DH
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAJ	DH

FIRE PROTECTION REVIEW

☐ APPROVED ☐ NOT REQUIRED

DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

DONALD WILLIAM HATTON JR. LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G - WICHITA, KS

Drawn by J. CHASE 03/05/18 | Designed by D. HATTON 03/05/18

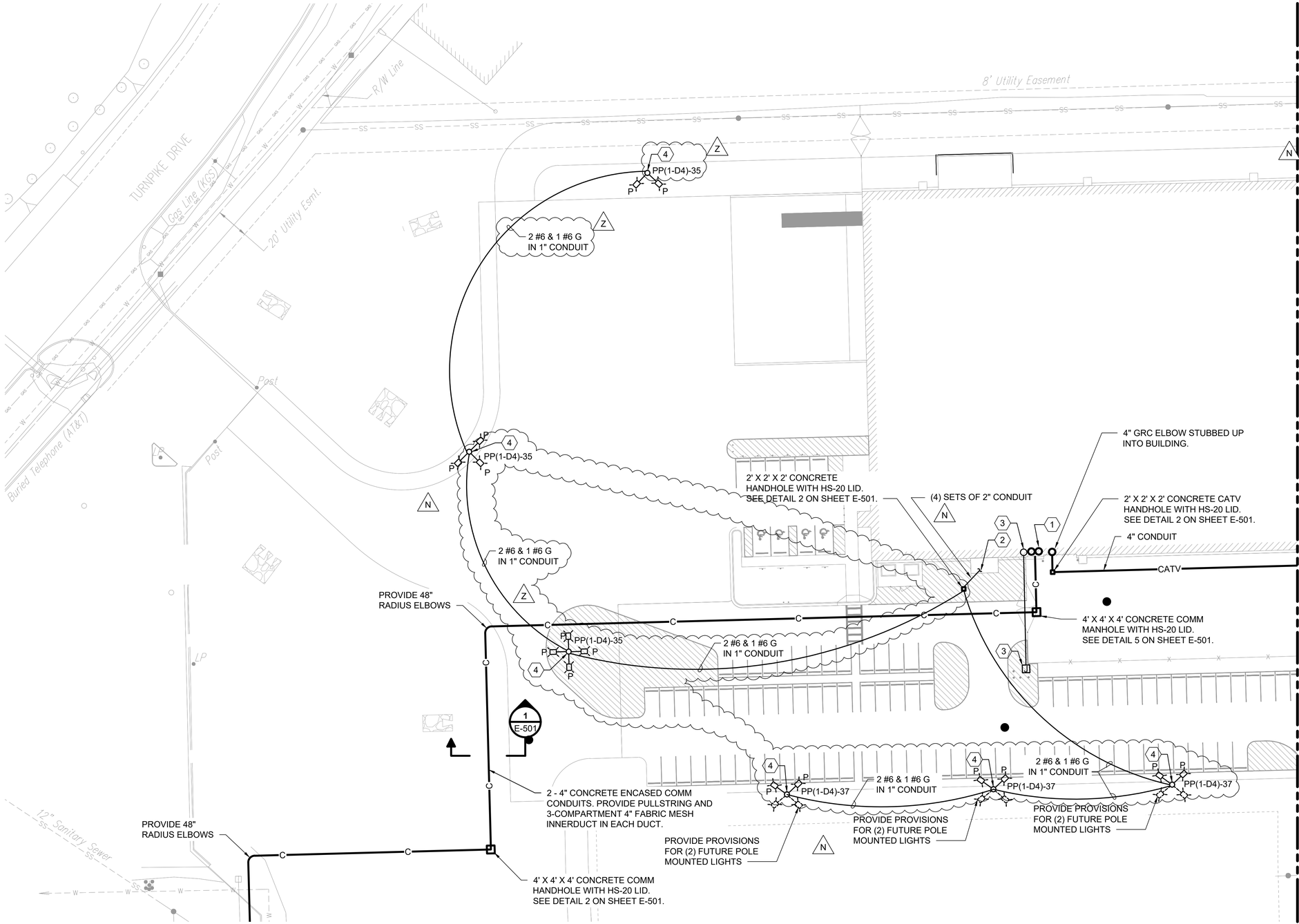
Project No. 6936

Sheet Name: ELEC UTILITY PLAN

Sheet EU101 of XX

Drawing No. 108M-504-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



ELECTRICAL UTILITY PLAN 1

0 15' 30' 60'
SCALE IN FEET

GENERAL NOTES

1. WIRING TO DEVICES AND FACILITY SPECIFIED IN PACKAGE 2B.
2. FOR SITE LIGHT POLE FOUNDATION INFORMATION REFER TO DETAIL 7 ON SHEET E-501.

NOTES BY SYMBOL "⬡"

1. PROVIDE 2 - 4" GRC ELBOWS TO TURN VERTICALLY INTO BUILDING. STUB CONDUIT 12" AFF. PROVIDE 30" MINIMUM RADIUS. ROUTE CONDUIT ABOVE PERIMETER FOOTING AND BEND VERTICALLY TO STUB INTO BUILDING INTERIOR. REFER TO DETAIL 4 ON SHEET E-501.
2. CONDUIT BETWEEN BUILDING AND HANDHOLE SHOWN IN PACKAGE 2A.
3. PROVIDE 1" CONDUIT FOR CONNECTION TO FIRE WATER POST-INDICATOR VALVE. COORDINATE WITH FIRE WATER LINE LOCATION. REFER TO FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION. FIELD COORDINATE EXACT STUB-UP LOCATION AND CONNECTION REQUIREMENTS WITH VALVES TO BE INSTALLED.
4. 2 #10 AND 1 #10 G. FROM FUSE IN J-BOX TO FIXTURES AT TOP OF POLES (40").

	BY	APPROVED
DESCRIPTION		
A — 03/09/2018 — PKG 1A SITE WORK - IFC	JMC	DH
L — 06/01/2018 — PKG 1A- SITE WORK - REV L	CAJ	DH
N — 06/22/2018 — PKG 1A- SITE WORK - REV N	CAJ	DH
Z — 11/16/2018 — PKG 1A SITE WORK - REV Z	CAJ	DH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

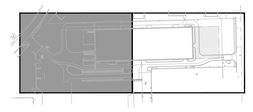
DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G — WICHITA, KS

Designed by D. HATTON 02/20/18
Drawn by J. CHASE 02/20/18

16NOV2018 - PKG 1A -SITE WORK - REV Z
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

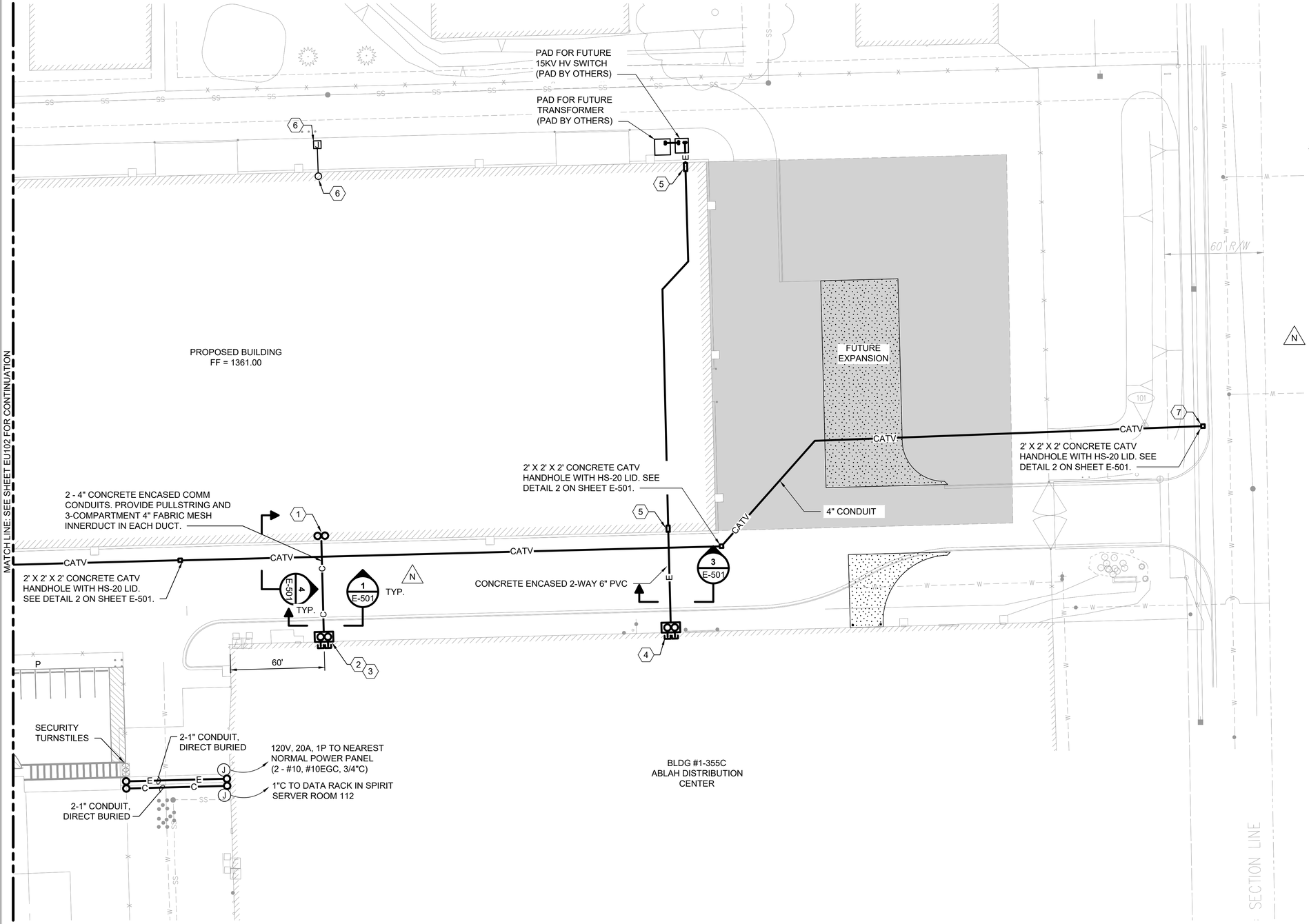
Project No. 6936
Sheet Name: ELEC UTILITY PLAN 1
Sheet EU102 of XX
Drawing No. 108M-505-XXX



KEY PLAN
NOT TO SCALE
NORTH

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET EU102 FOR CONTINUATION



GENERAL NOTES

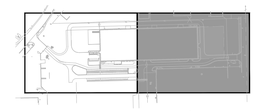
1. WIRING TO DEVICES AND FACILITY SPECIFIED IN PACKAGE 2B.

NOTES BY SYMBOL "⬡"

1. PROVIDE 2 - 4" GRC ELBOWS TO TURN VERTICALLY INTO BUILDING. STUB CONDUIT 12" AFF. PROVIDE 30" MINIMUM RADIUS. ROUTE CONDUIT ABOVE PERIMETER FOOTING AND BEND VERTICALLY TO STUB INTO BUILDING INTERIOR. REFER TO DETAIL 4 ON SHEET E-501.
2. PROVIDE 2-4" GRC ELBOWS TO TURN VERTICALLY INTO JUNCTION BOX. PROVIDE 48" RADIUS.
3. PROVIDE JUNCTION BOX. NEMA 3R, 16" WIDE x 36" TALL x 8" DEEP. MOUNT BOTTOM AT 36" AFF. EXTENSION OF CONDUIT INTO ABLAH BUILDING WILL BE INCLUDED IN FUTURE PACKAGE 2B.
4. PROVIDE JUNCTION BOX. NEMA 3R, 60" WIDE x 60" TALL x 12" DEEP. MOUNT BOTTOM AT 36" AFF. TERMINATE UNDERGROUND RACEWAY INTO JUNCTION BOX. EXTENSION OF CONDUIT INTO ABLAH BUILDING WILL BE INCLUDED IN FUTURE PACKAGE 2B.
5. ROUTE THE (2) 6" CONDUITS ENCASED IN CONCRETE UNDER THE PERIMETER FOOTING. REFER TO STRUCTURAL DRAWINGS FOR DEPTHS AND FOOTING INFORMATION.
6. PROVIDE 1" CONDUIT FOR CONNECTION TO FIRE WATER POST-INDICATOR VALVE. COORDINATE WITH FIRE WATER LINE LOCATION. REFER TO FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION. FIELD COORDINATE EXACT STUB-UP LOCATION AND CONNECTION REQUIREMENTS WITH VALVES TO BE INSTALLED.
7. HANDHOLE FOR FUTURE USE BY CABLE COMPANY TO ROUTE SERVICE INTO NEW AWH BUILDING. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS.

ELECTRICAL UTILITY PLAN 2

0 15' 30' 60'
SCALE IN FEET



KEY PLAN
NOT TO SCALE

	BY	DESCRIPTION	DATE
A	APPROVED		
L	DH	PKG 1A SITE WORK - IFC	03/09/2018
N	JMC	PKG 1A SITE WORK - REV L	06/01/2018
Z	CAJ	PKG 1A SITE WORK - REV N	06/22/2018
	DH	PKG 1A SITE WORK - REV Z	11/16/2018
	CAJ		
	DH		

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

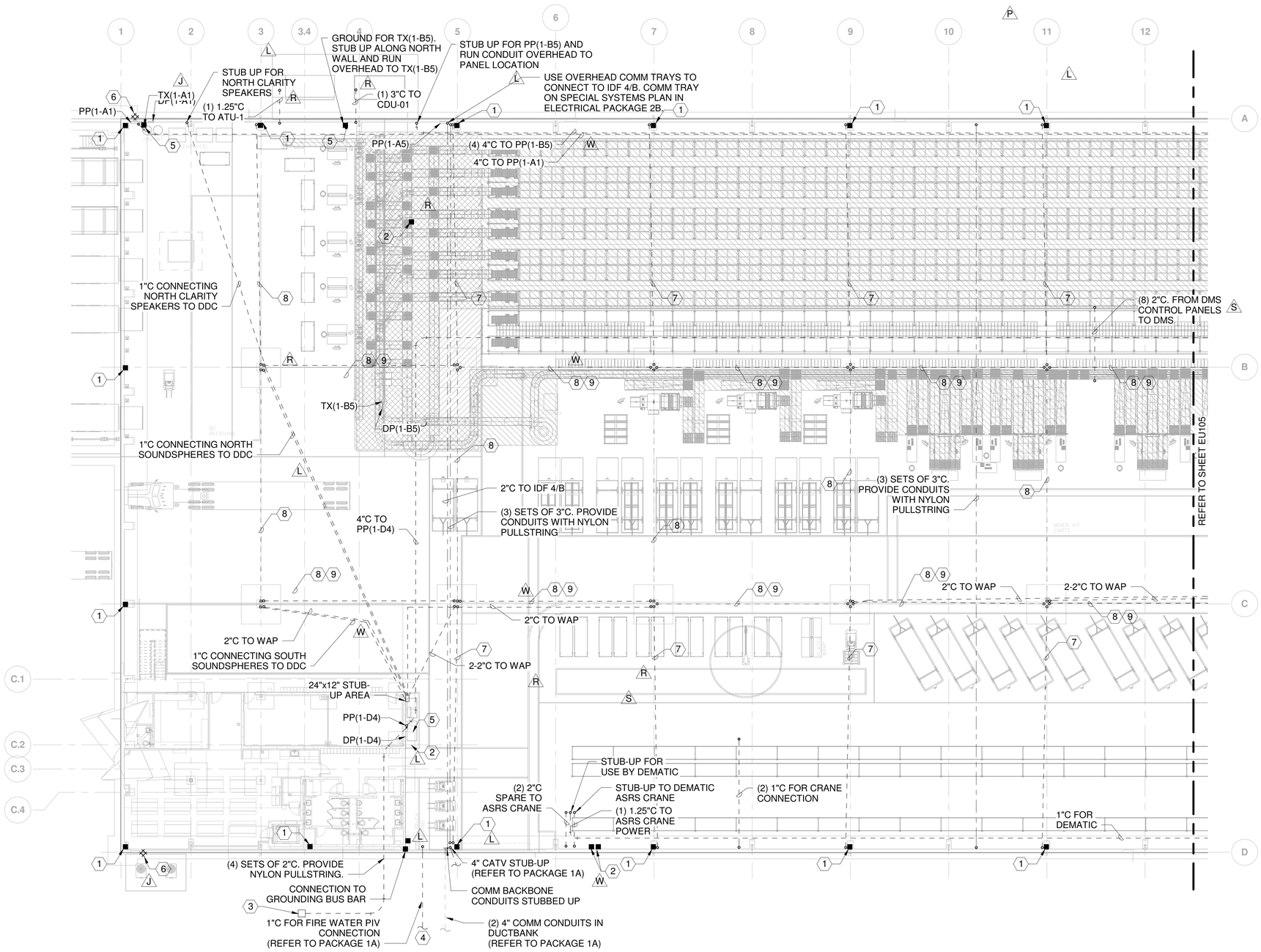
16NOV2018 - PKG 1A -SITE WORK - REV Z
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G - WICHITA, KS

Drawn by J. CHASE 02/20/18 | Designed by D. HATTON 02/20/18

Project No. 6936
Sheet Name: ELEC UTILITY PLAN 2
Sheet EU103 of XX
Drawing No. 108M-506-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



UNDERGROUND ELECTRICAL PLANS - AREA A

0 8' 16' 32'
SCALE IN FEET

NOTES BY SYMBOL "⬡"

1. 1.5" PENETRATION SLEEVE FOR FUTURE GROUNDING CONNECTION TO BUILDING STEEL. SEE TYPICAL EXOTHERMIC CONNECTION TO BUILDING STEEL DETAIL ON UNDERGROUND DETAIL SHEET.
2. 1.5" PENETRATION SLEEVE FOR FUTURE GROUNDING CONNECTION. EXTEND CONDUIT TO NEAREST POINT OUTSIDE OF THE BUILDING FOOTPRINT FOR FUTURE CONNECTION TO FUTURE GROUNDING COUNTERPOISE. EXTENDED CONDUIT IS NOT SHOWN GRAPHICALLY ON THIS SHEET. SEE TYPICAL GROUNDING CONDUIT STUB-UP DETAIL ON UNDERGROUND DETAIL SHEET.
3. CONDUIT TO SITE POLE LIGHTING EXTERIOR HANDHOLE. REFER TO PACKAGE 1A FOR HANDHOLE INFORMATION AND ADDITIONAL BRANCH CIRCUIT CONDUIT TO LIGHT POLES.
4. CONDUIT TO FIRE ALARM SYSTEM POST INDICATOR VALVE APPROXIMATELY 20 FEET FROM THE BUILDING. REFER TO FIRE ALARM DRAWINGS.
5. 1.5" PENETRATION SLEEVE FOR FUTURE GROUNDING CONNECTION TO TRANSFORMER. EXTEND CONDUIT TO NEAREST POINT OUTSIDE OF THE BUILDING FOOTPRINT FOR FUTURE CONNECTION TO FUTURE GROUNDING COUNTERPOISE. EXTENDED CONDUIT IS NOT SHOWN GRAPHICALLY ON THIS SHEET. SEE TYPICAL GROUNDING CONDUIT STUB-UP DETAIL ON UNDERGROUND DETAIL SHEET.
6. UFER GROUND CONNECTION TO PERIMETER FOOTING REBAR FOR CONNECTION TO FUTURE GROUNDING COUNTERPOISE. REFER TO ELECTRICAL GROUND TO REBAR DETAIL ON UNDERGROUND DETAIL SHEET. SEE STRUCTURAL DRAWINGS FOR COORDINATION.
7. PROVIDE (4) SETS OF SPARE 1"C & (4) SETS OF SPARE 1.5"C. PROVIDE CONDUITS WITH NYLON PULLSTRING.
8. PROVIDE (2) SETS OF SPARE 1"C & (2) SETS OF SPARE 1.5"C. PROVIDE CONDUITS WITH NYLON PULLSTRING.
9. PROVIDE ADDITIONAL (1) 1"C FOR CONNECTION TO SOUNDSPHERE SPEAKERS. SPEAKERS AND WIRING SCOPE INDICATED ON SPECIAL SYSTEMS PLANS IN ELECTRICAL PACKAGE 2B.

△	DATE	DESCRIPTION	BY	APPROVED
J	05/11/18	PKG 2A: FOUNDATION & SOG - REV J	CAJ	DWH
L	06/01/18	PKG 2A: FOUNDATION & SOG - REV L	CAJ	DWH
P	07/02/18	PKG 2A: FOUNDATION & SOG - REV P	CAJ	DWH
R	07/18/18	PKG 2A: FOUNDATION & SOG - REV R	CAJ	DWH
S	08/31/18	PKG 2A: FOUNDATION & SOG - REV S	CAJ	DWH
W	11/02/18	PKG 2A: CONFORMING TO CONSTRUCTION RECORDS	CAJ	DWH
Z	11/14/18	PKG 2A: FOUNDATION & SOG - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

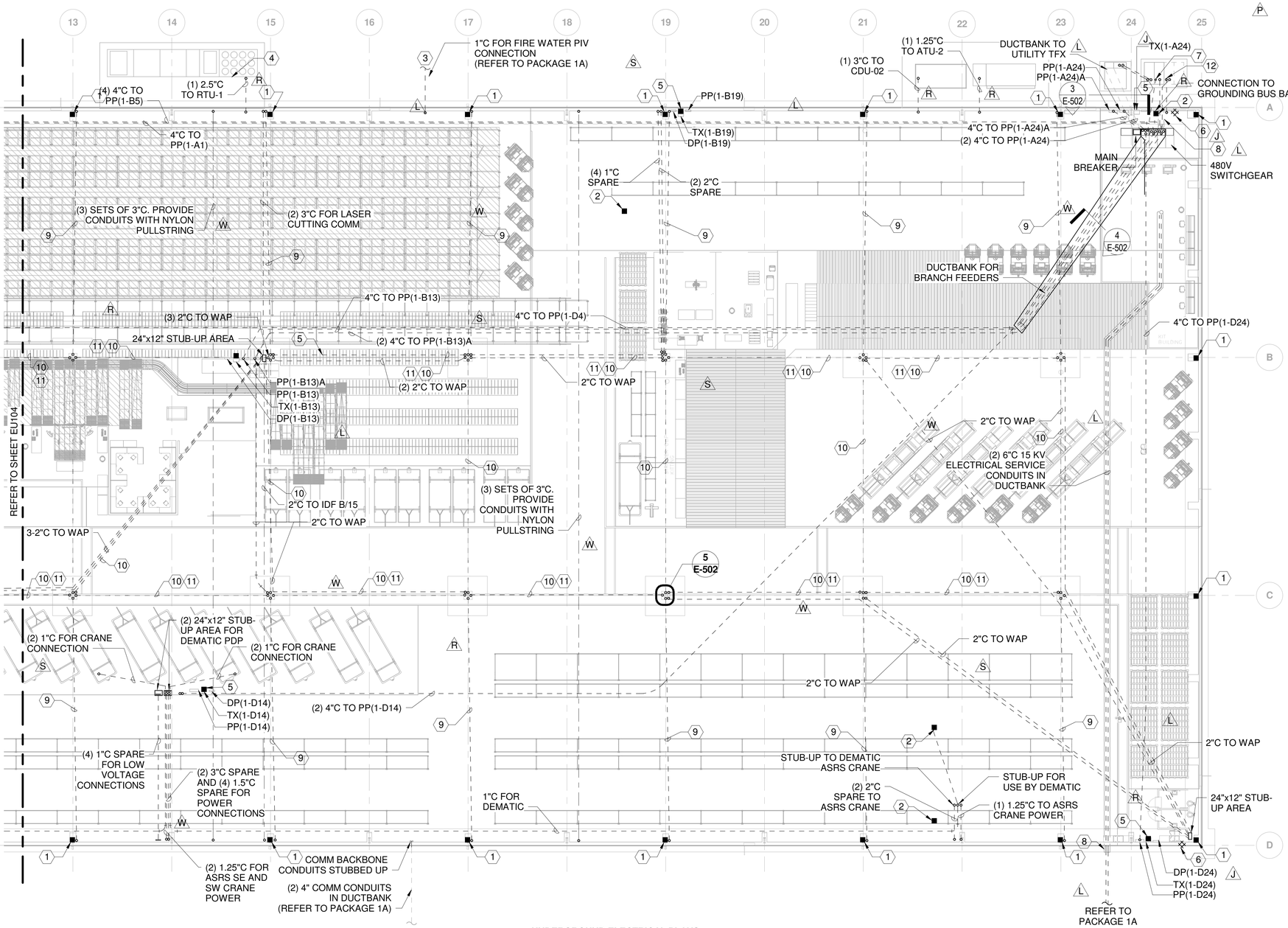
DONALD WILLIAM HATTON LICENSED 16755 11/14/18 KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 2A: FOUNDATIONS & SOG - REV Z
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: UG ELEC PLAN - AREA A
Sheet EU104 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



UNDERGROUND ELECTRICAL PLANS - AREA B

0 8' 16' 32'

SCALE IN FEET

NOTES BY SYMBOL "⬡"

1. (J) 1.5" PENETRATION SLEEVE FOR FUTURE GROUNDING CONNECTION TO BUILDING STEEL. SEE TYPICAL EXOTHERMIC CONNECTION TO BUILDING STEEL DETAIL ON UNDERGROUND DETAIL SHEET.
2. (J) 1.5" PENETRATION SLEEVE FOR FUTURE GROUNDING CONNECTION. EXTEND CONDUIT TO NEAREST POINT OUTSIDE OF THE BUILDING FOOTPRINT FOR FUTURE CONNECTION TO FUTURE GROUNDING COUNTERPOISE. EXTENDED CONDUIT IS NOT SHOWN GRAPHICALLY ON THIS SHEET. SEE TYPICAL GROUNDING CONDUIT STUB-UP DETAIL ON UNDERGROUND DETAIL SHEET.
3. CONDUIT TO FIRE ALARM SYSTEM POST INDICATOR VALVE APPROXIMATELY 20 FEET FROM THE BUILDING. REFER TO FIRE ALARM DRAWINGS.
4. COORDINATE EXACT EQUIPMENT CONNECTION POINT LOCATION WITH MECHANICAL EQUIPMENT VENDOR PRIOR TO INSTALLATION.
5. (J) 1.5" PENETRATION SLEEVE FOR FUTURE GROUNDING CONNECTION TO TRANSFORMER. EXTEND CONDUIT TO NEAREST POINT OUTSIDE OF THE BUILDING FOOTPRINT FOR FUTURE CONNECTION TO FUTURE GROUNDING COUNTERPOISE. EXTENDED CONDUIT IS NOT SHOWN GRAPHICALLY ON THIS SHEET. SEE TYPICAL GROUNDING CONDUIT STUB-UP DETAIL ON UNDERGROUND DETAIL SHEET.
6. (J) UFER GROUND CONNECTION TO PERIMETER FOOTING REBAR FOR CONNECTION TO FUTURE GROUNDING COUNTERPOISE. REFER TO ELECTRICAL GROUND TO REBAR DETAIL ON UNDERGROUND DETAIL SHEET. SEE STRUCTURAL DRAWINGS FOR COORDINATION.
7. PROVIDE 1.5" CONDUIT WITH NYLON PULL STRING FROM HV SWITCH WINDOW TO STUB UP INTO 480V SWITCHGEAR. CONDUIT WILL BE USED FOR FUTURE CT WIRING BETWEEN THE MEDIUM VOLTAGE RELAY TO THE SWITCHGEAR MAIN BREAKER.
8. (P) PROVIDE (2) 6" PVC CONDUITS ENCASED IN CONCRETE BELOW SLAB. ROUTE DUCTBANK BELOW 480V CONDUITS FROM SWITCHGEAR.
9. PROVIDE (4) SETS OF SPARE 1"C & (4) SETS OF SPARE 1.5"C. PROVIDE CONDUITS WITH NYLON PULLSTRING.
10. PROVIDE (2) SETS OF SPARE 1"C & (2) SETS OF SPARE 1.5"C. PROVIDE CONDUITS WITH NYLON PULLSTRING.
11. (R) PROVIDE ADDITIONAL (1) 1"C FOR CONNECTION TO SOUNDSPHERE SPEAKERS. SPEAKERS AND WIRING SCOPE INDICATED ON SPECIAL SYSTEMS PLANS IN ELECTRICAL PACKAGE 2B.
12. PROVIDE 2"C FOR CONNECTION TO BATTERY RACK FROM MV BREAKER CPT.

	DATE	DESCRIPTION	BY	APPROVED
J	05/11/18	PKG 2A: FOUNDATION & SOG - REV J	CAJ	DWH
L	06/01/18	PKG 2A: FOUNDATION & SOG - REV L	CAJ	DWH
P	07/02/18	PKG 2A: FOUNDATION & SOG - REV P	CAJ	DWH
R	07/18/18	PKG 2A: FOUNDATION & SOG - REV R	CAJ	DWH
S	08/30/18	PKG 2A: FOUNDATION & SOG - REV S	CAJ	DWH
W	11/02/18	PKG 2A: CONFORMING TO CONSTRUCTION RECORDS	CAJ	DWH
Z	11/16/18	PKG 2A: FOUNDATION & SOG - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

LICENSED PROFESSIONAL ENGINEER — DONALD WILLIAM HATTON JR. — 16755 — 11/16/18 — KANSAS

16NOV2018 - PKG 2A: FOUNDATIONS & SOG - REV Z

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON

Drawn by C. JOHNSON

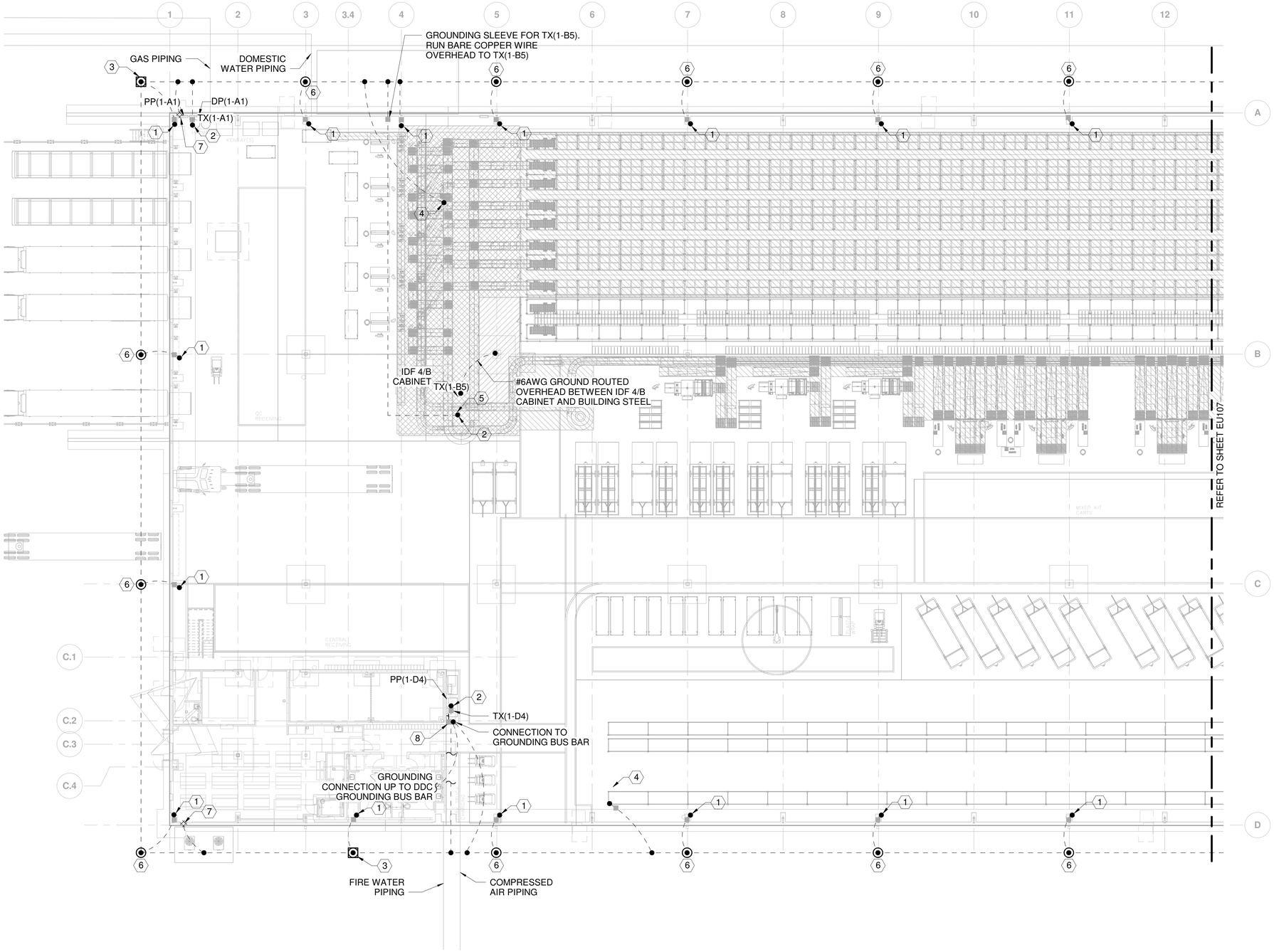
Project No. 6936

Sheet Name: UG ELEC PLAN - AREA B

Sheet EU105 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO GROUNDING RISER DIAGRAM ON SHEET E-504 FOR GROUND WIRE SIZES AND CONNECTION INFORMATION.
2. INSTALL GROUNDING SYSTEM FOR BUILDING IN ACCORDANCE WITH NEC ARTICLE 250. NEC ARTICLE 250 REQUIREMENTS SHALL SUPERCEDE REQUIREMENTS ON THIS DRAWINGS WHERE CONFLICTS ARE SHOWN.

NOTES BY SYMBOL "⬡"

1. BARE COPPER GROUNDING CONNECTION TO BUILDING STEEL. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A. REFER TO TYPICAL EXOTHERMIC CONNECTION TO BUILDING STEEL DETAIL ON SHEET E-504.
2. BARE COPPER GROUNDING CONNECTION TO TRANSFORMER. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A. REFER TO DRY-TYPE TRANSFORMER GROUNDING DETAIL ON SHEET E-504.
3. GROUNDING TEST WELL. REFER TO TYPICAL GROUND TEST WELL DETAIL ON SHEET E-504.
4. STATIC GROUND CONNECTION TO DEMATIC VENDOR PROVIDED EQUIPMENT. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A. COORDINATE EXACT LOCATION OF STATIC GROUND WITH VENDOR DRAWINGS.
5. LOCATION OF TRANSFORMER IS SUBJECT TO CHANGE BASED ON DEMATIC EQUIPMENT LAYOUT. CONFIRM PLAN TO GROUND TRANSFORMER PRIOR TO INSTALLING STUB-UP THROUGH FLOOR.
6. GROUND ROD. REFER TO TYPICAL GROUND ROD CONNECTION DETAIL ON SHEET E-504.
7. BARE COPPER GROUNDING CONNECTION TO CONCRETE ENCASED ELECTRODE. BARE COPPER WIRE SHALL BE CONNECTED TO 20' MINIMUM LENGTH OF REBAR IN BUILDING FOUNDATION FOOTING.
8. BARE COPPER GROUNDING CONNECTION TO GROUNDING BUS BAR. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A.

GROUNDING ELECTRICAL PLANS - AREA A

0 8' 16' 32'
SCALE IN FEET

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 ME22	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

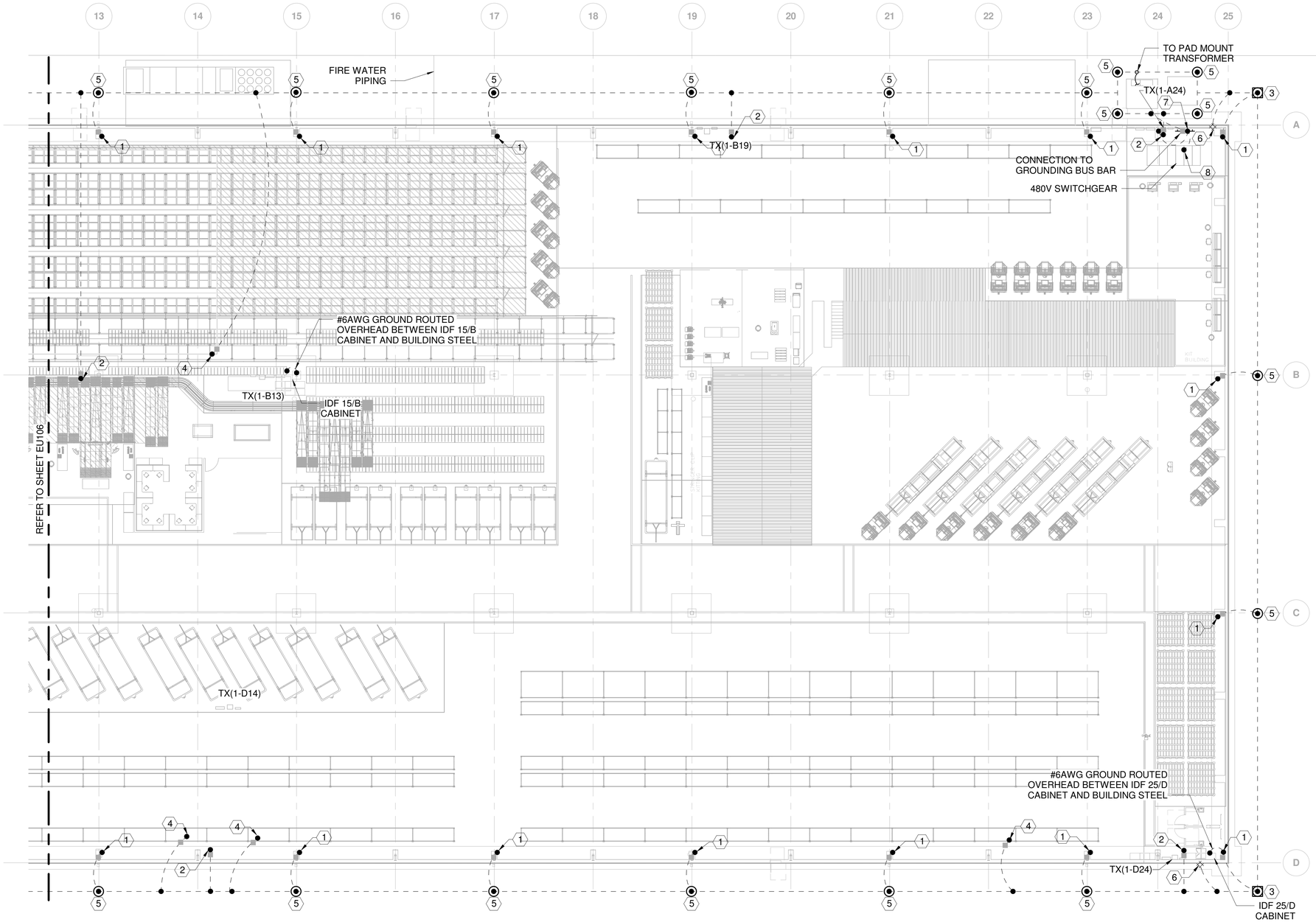
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: UG ELEC PLAN - AREA A
Sheet EU106 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO GROUNDING RISER DIAGRAM ON SHEET E-504 FOR GROUND WIRE SIZES AND CONNECTION INFORMATION.
2. INSTALL GROUNDING SYSTEM FOR BUILDING IN ACCORDANCE WITH NEC ARTICLE 250. NEC ARTICLE 250 REQUIREMENTS SHALL SUPERCEDE REQUIREMENTS ON THIS DRAWINGS WHERE CONFLICTS ARE SHOWN.

NOTES BY SYMBOL "⬡"

1. BARE COPPER GROUNDING CONNECTION TO BUILDING STEEL. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A. REFER TO TYPICAL EXOTHERMIC CONNECTION TO BUILDING STEEL DETAIL ON SHEET E-505.
2. BARE COPPER GROUNDING CONNECTION TO TRANSFORMER. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A. REFER TO DRY-TYPE TRANSFORMER GROUNDING DETAIL ON SHEET E-505.
3. GROUNDING TEST WELL. REFER TO TYPICAL GROUND TEST WELL DETAIL ON SHEET E-505.
4. STATIC GROUND CONNECTION TO DEMATIC VENDOR PROVIDED EQUIPMENT. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A. COORDINATE EXACT LOCATION OF STATIC GROUND WITH VENDOR DRAWINGS.
5. GROUND ROD. REFER TO TYPICAL GROUND ROD CONNECTION DETAIL ON SHEET E-505.
6. BARE COPPER GROUNDING CONNECTION TO CONCRETE ENCASED ELECTRODE. BARE COPPER WIRE SHALL BE CONNECTED TO 20' MINIMUM LENGTH OF REBAR IN BUILDING FOUNDATION FOOTING.
7. BARE COPPER GROUNDING CONNECTION TO GROUNDING BUS BAR. ROUTE WIRE THROUGH CONDUIT AND SLEEVE PROVIDED IN PACKAGE 2A.
8. COPPER GROUND CONNECTION FROM GROUNDING BUS BAR TO SWITCHGEAR GROUND BUS.

GROUNDING ELECTRICAL PLANS - AREA B

0 8' 16' 32'
SCALE IN FEET

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZ2			

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

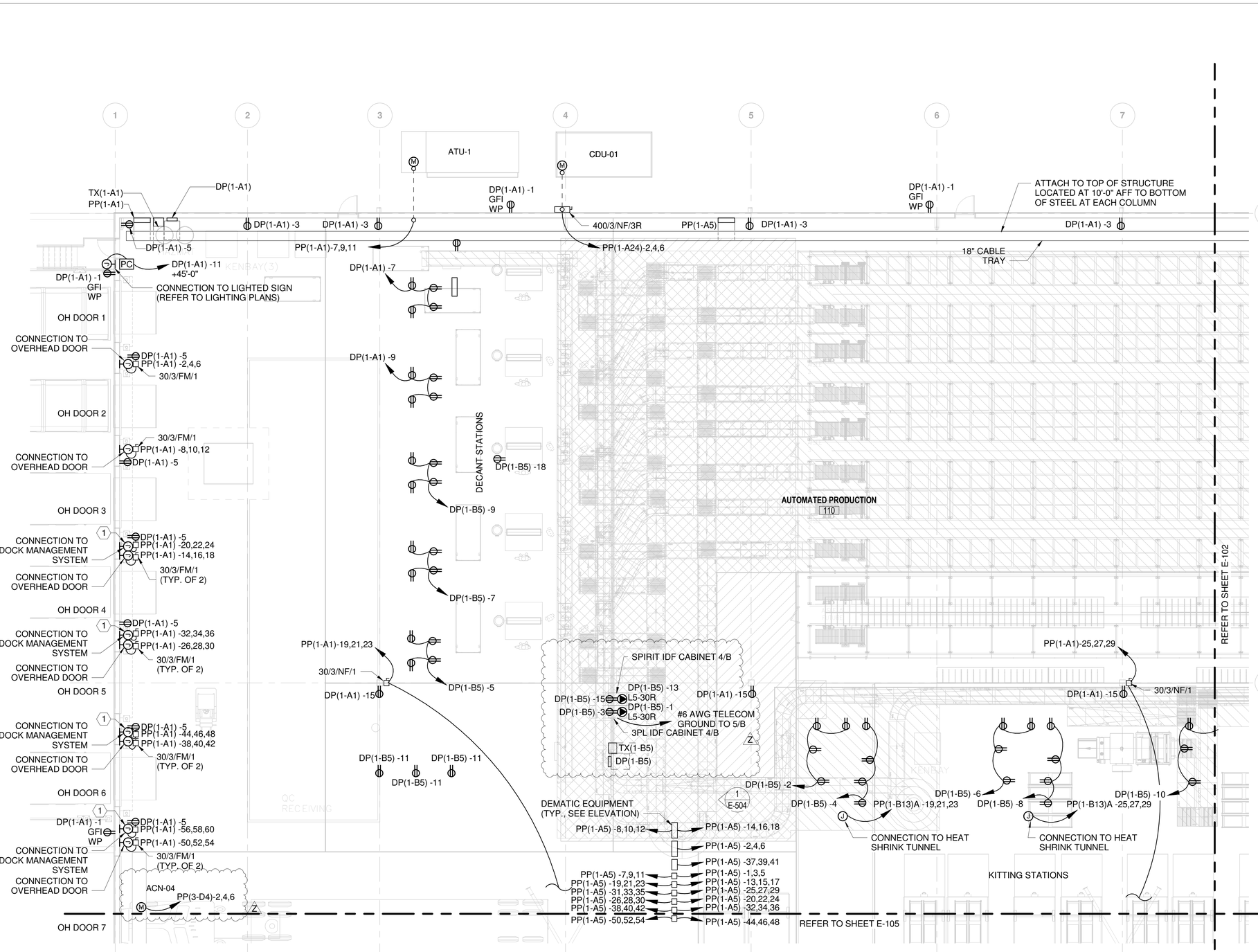
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: UG ELEC PLAN - AREA B
Sheet EU107 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



POWER PLAN - AREA 1

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. DEMATIC SHALL PROVIDE AN OVERHEAD SUPPORT SYSTEM AT DECANT STATIONS AND AT KITTING STATIONS FOR ELECTRICAL DEVICE SUPPORT. COORDINATE LOCATION OF STRUCTURE WITH DEMATIC EQUIPMENT VENDOR DRAWINGS.
3. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.

NOTES BY SYMBOL "⬡"

1. JUNCTION BOX FOR CONNECTION TO MASTER CONTROL PANEL. FURNISH AND INSTALL 3/4" CONDUIT FROM THE CONTROLLER TO DOCK LEVELER, TRUCK LIGHTS, TRUCK RESTRAINT, AND OVERHEAD DOCK DOOR. OVERHEAD DOCK DOOR WILL BE POWERED SEPARATELY FROM THE MASTER CONTROLLER BUT CONTROLLED BY THE MASTER CONTROLLER. COORDINATE INSTALLATION WITH DOCK EQUIPMENT VENDOR.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV O	CAJ	DWH
T	08/01/18	PKG 2B, MEP, FP, FINISHES - REI		
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

WILLIAM DONALD HATTON LICENSED PROFESSIONAL ENGINEER 16755 KANSAS 11/16/18

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

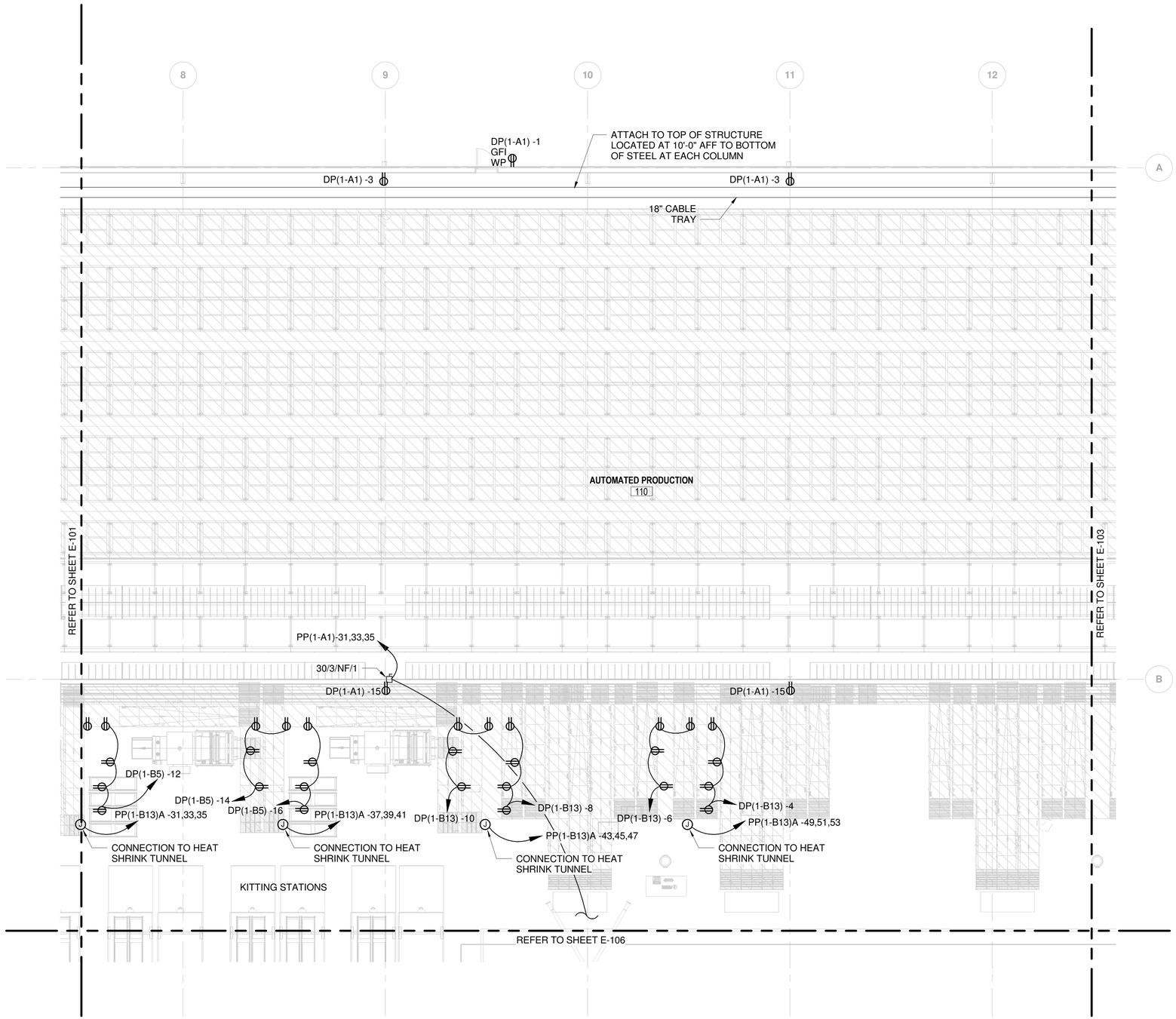
AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

Project No. 6936
Sheet Name: POWER PLAN - AREA 1
Sheet E-101 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



POWER PLAN - AREA 2

0 4' 8' 16'
SCALE IN FEET

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. DEMATIC SHALL PROVIDE AN OVERHEAD SUPPORT SYSTEM AT KITTING STATIONS FOR ELECTRICAL DEVICE SUPPORT. COORDINATE LOCATION OF STRUCTURE WITH DEMATIC EQUIPMENT VENDOR DRAWINGS.
3. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
T	08/01/18	PKG 2B, MEP, FP, FINISHES - REI		
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE
NORTH

SPIRIT AEROSYSTEMS™

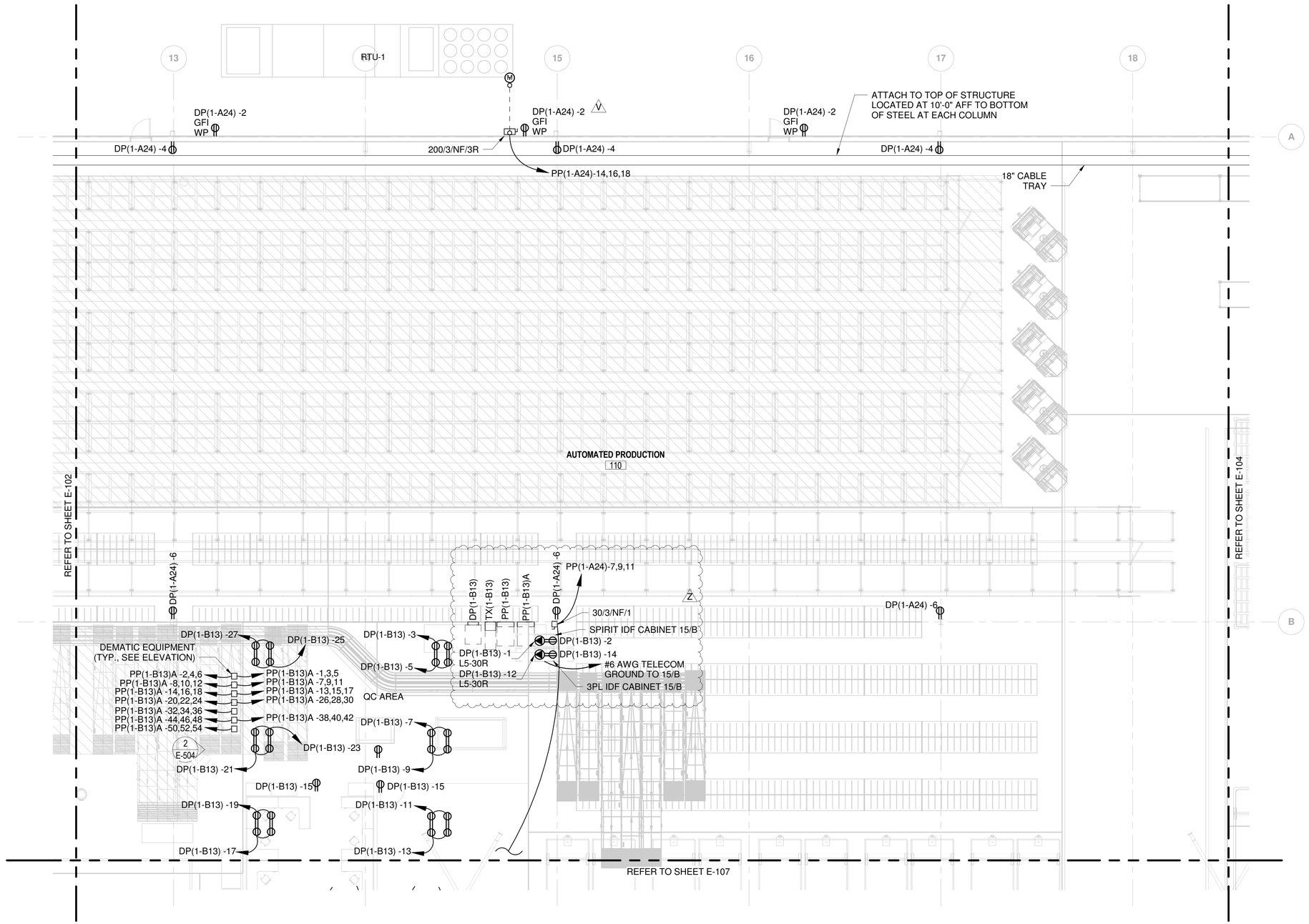
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON JR. LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: POWER PLAN - AREA 2
Sheet E-102 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



POWER PLAN - AREA 3

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. DEMATIC SHALL PROVIDE AN OVERHEAD SUPPORT SYSTEM AT QC AREA FOR ELECTRICAL DEVICE SUPPORT. COORDINATE LOCATION OF STRUCTURE WITH DEMATIC EQUIPMENT VENDOR DRAWINGS.
3. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
T	08/01/18	PKG 2B, MEP, FP, FINISHES - REV T	CAJ	DWH
Y	09/28/18	PKG 2B, MEP, FP, FINISHES - REV Y	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON
LICENSED
16755
11/16/18
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936

Sheet Name: POWER PLAN - AREA 3

Sheet E-103 of XX

Drawing No. 108M-XXX-XXX

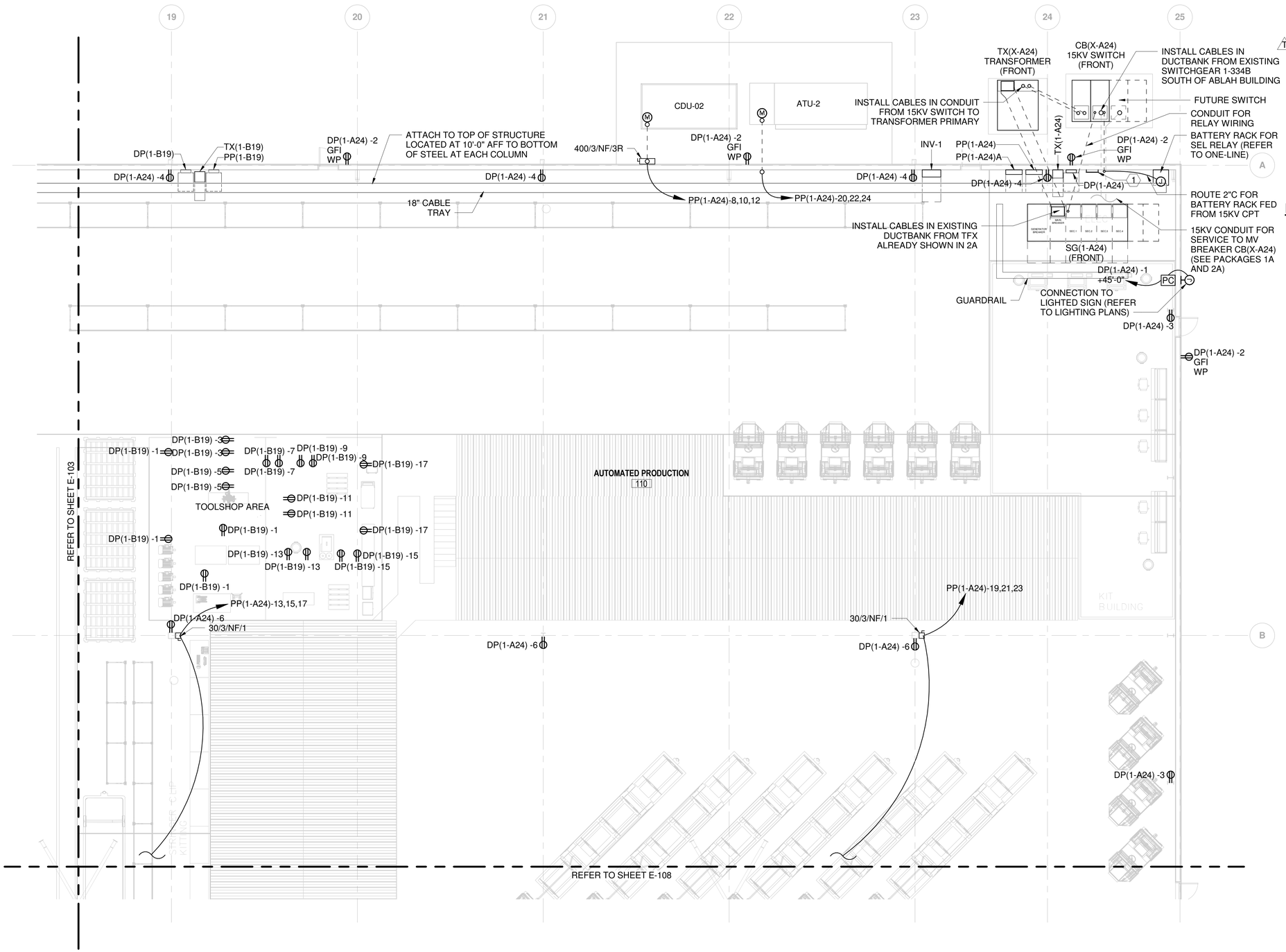
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. DEMATIC SHALL PROVIDE AN OVERHEAD SUPPORT SYSTEM AT TOOLSHOP AREA FOR ELECTRICAL DEVICE SUPPORT. COORDINATE LOCATION OF STRUCTURE WITH DEMATIC EQUIPMENT VENDOR DRAWINGS.
3. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.

NOTES BY SYMBOL "⬡"

1. NORTHEAST GROUNDING BUS BAR. REFER TO GROUNDING RISER DIAGRAM ON SHEET E-504.



POWER PLAN - AREA 4

0 4' 8' 16'

SCALE IN FEET

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
T	08/01/18	PKG 2B, MEP, FP, FINISHES - REV T	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

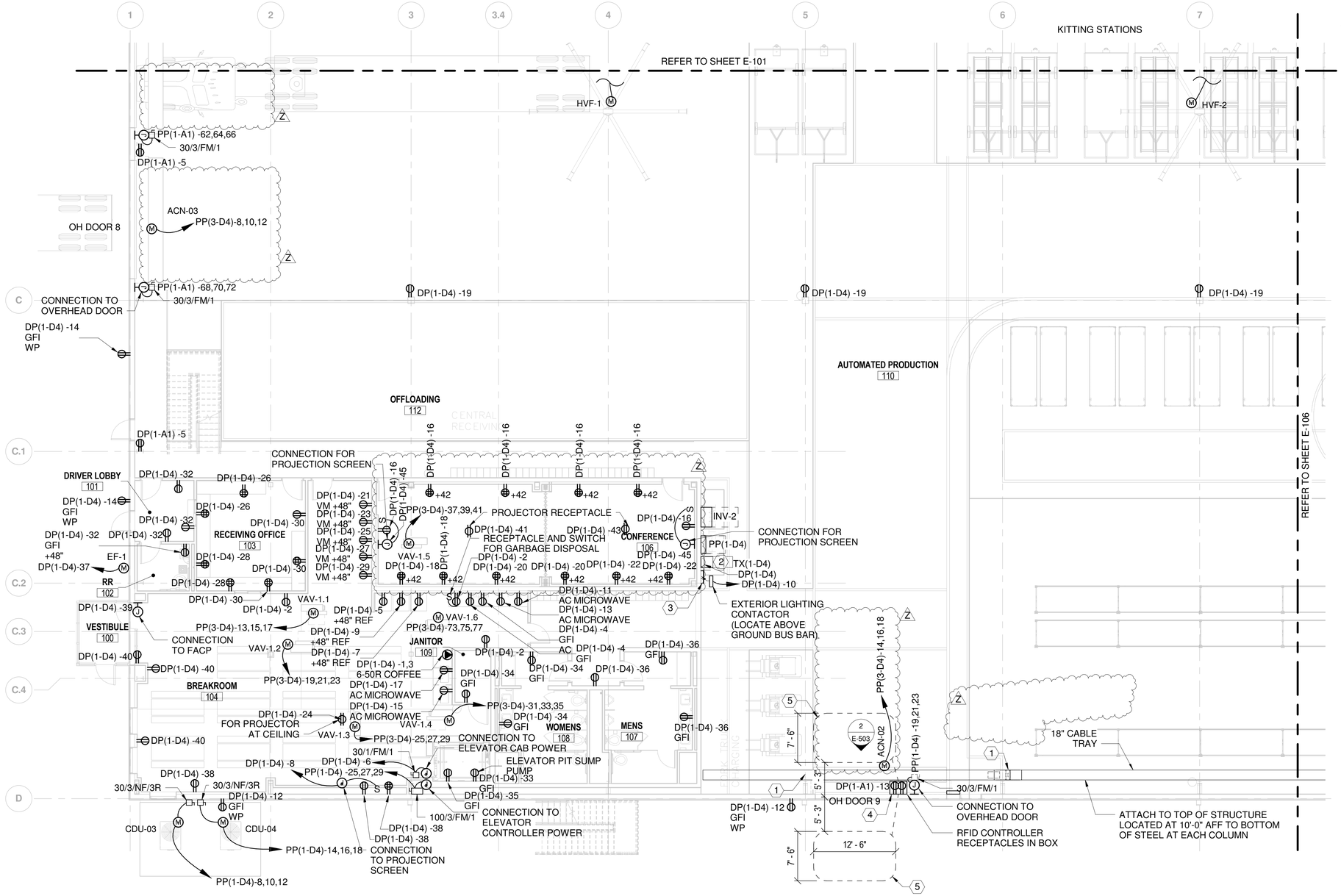
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON
LICENSED
16755
11/16/18
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: POWER PLAN - AREA 4
Sheet E-104 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



POWER PLAN - AREA 5

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.

NOTES BY SYMBOL "⬡"

1. ROUTE CABLE TRAY UP ALONG COLUMN FOR ROUTING ABOVE OVERHEAD DOOR CLEAR SPACE. PROVIDE STRUCTURAL SUPPORT TO STEEL COLUMN PER CABLE TRAY MANUFACTURER RECOMMENDATION.
2. TRANSFORMER SHALL BE SUPPORTED BY WALL STRUCTURE AND SUSPENDED AT 9'-0" AFF. PROVIDE SUPPORTS SUITABLE FOR SUPPORTING TRANSFORMER THROUGH TRANSFORMER MANUFACTURER. MAINTAIN ALL NEC CLEARANCES.
3. SOUTHWEST GROUNDING BUS BAR. REFER TO GROUNDING RISER DIAGRAM ON SHEET E-504.
4. PROVIDE INTERFACE CONTROLS WIRING WITH OWNER'S RFID SYSTEM. PROVIDE RACEWAY AND WIRING TO DOOR CONTROL PANEL, MOTOR SAFETY CONTROLS, AND FLOOR LOOPS.
5. PROVIDE 1/2" RIGID CONDUIT (ABOVE GRADE). CONTINUE RACEWAY FROM GROUND LOOP STUB UP LOCATIONS TO DOOR CONTROLLER. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FLOOR LOOP CABLING. SEE ELECTRICAL DETAIL 8 ON SHEET E-505 FOR GROUND LOOP INSTALLATION INSTRUCTIONS.

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
T	08/01/18	PKG 2B, MEP, FP, FINISHES - REI		
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Designed by D. HATTON

Drawn by C. JOHNSON

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

Project No. 6936

Sheet Name: POWER PLAN - AREA 5

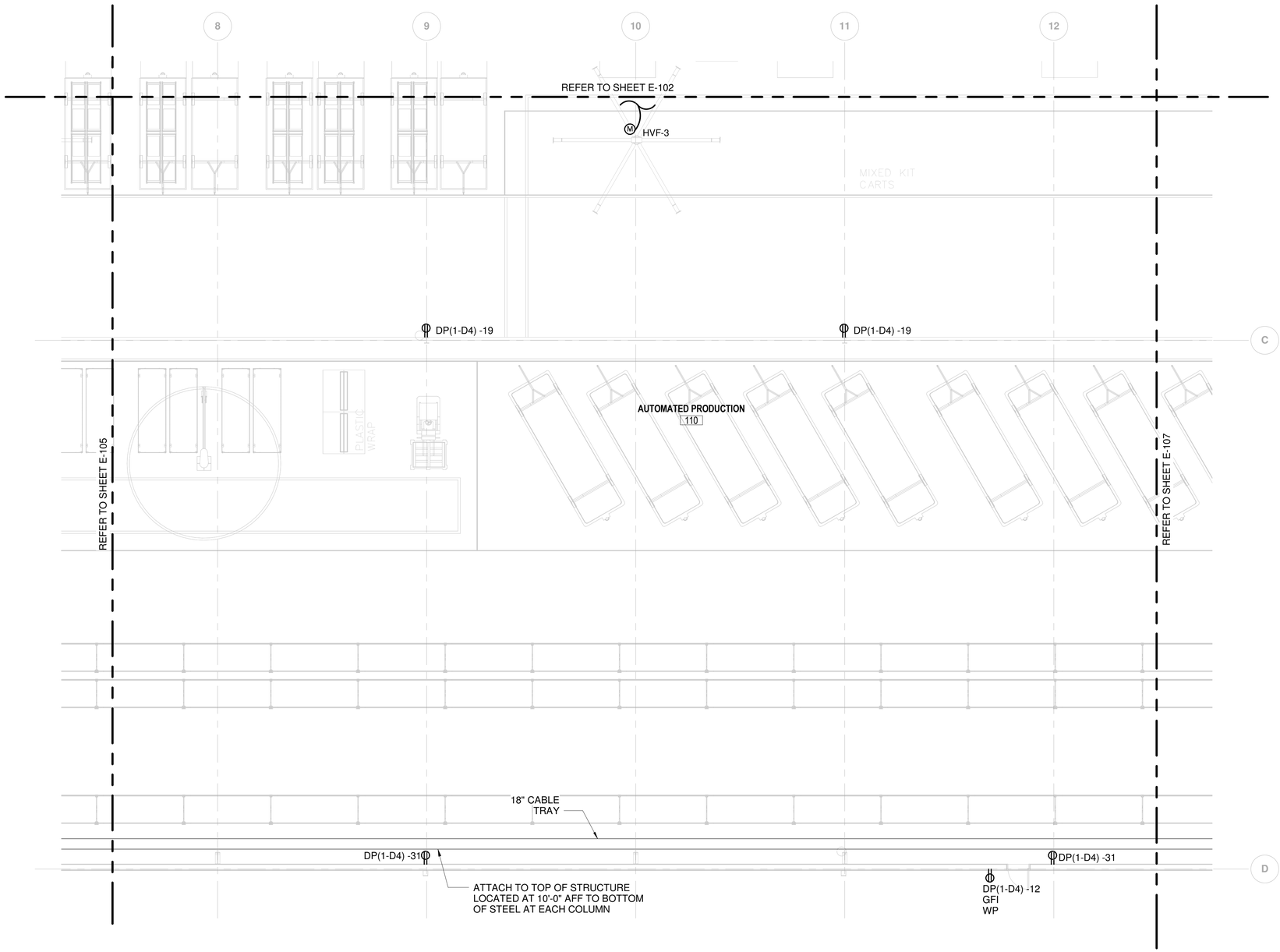
Sheet E-105 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.



POWER PLAN - AREA 6

0 4' 8' 16'

SCALE IN FEET

BY	APPROVED
CAJ	DWH
CAJ	DWH
CAJ	DWH
CAJ	DWH

△	DATE	DESCRIPTION
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q
T	08/01/18	PKG 2B: MEP, FP, FINISHES - REI
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐

DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON

Drawn by C. JOHNSON

Project No. 6936

Sheet Name: POWER PLAN - AREA 6

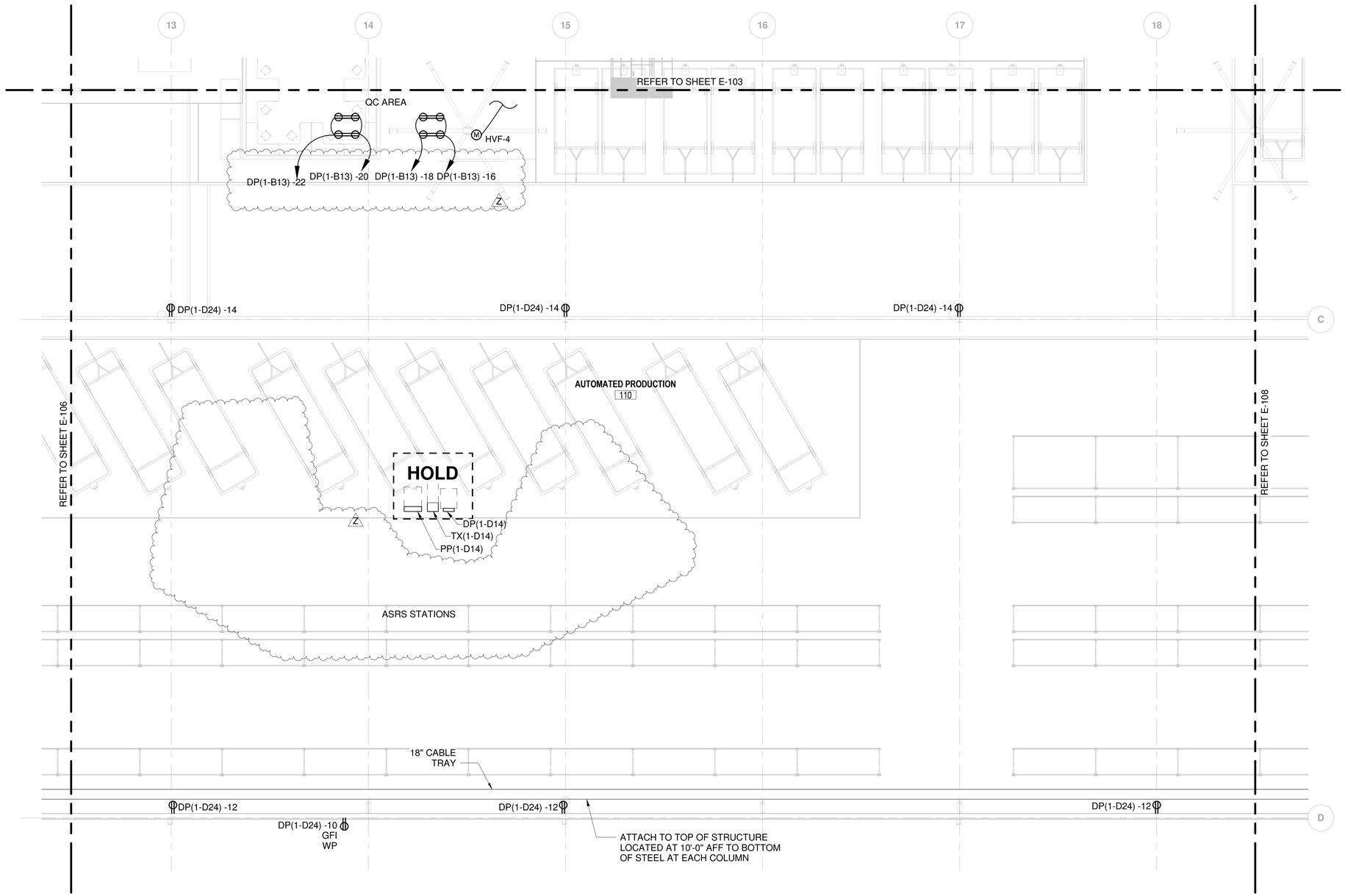
Sheet E-106 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. DEMATIC SHALL PROVIDE AN OVERHEAD SUPPORT SYSTEM AT QC AREA AND AT ASRS STATIONS FOR ELECTRICAL DEVICE SUPPORT. COORDINATE LOCATION OF STRUCTURE WITH DEMATIC EQUIPMENT VENDOR DRAWINGS.
3. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.



POWER PLAN - AREA 7

0 4' 8' 16'

SCALE IN FEET

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
T	08/01/18	PKG 2B: MEP, FP, FINISHES - REI		
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐
NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON
LICENSED
16755
11/16/18
KANSAS
PROFESSIONAL ENGINEER

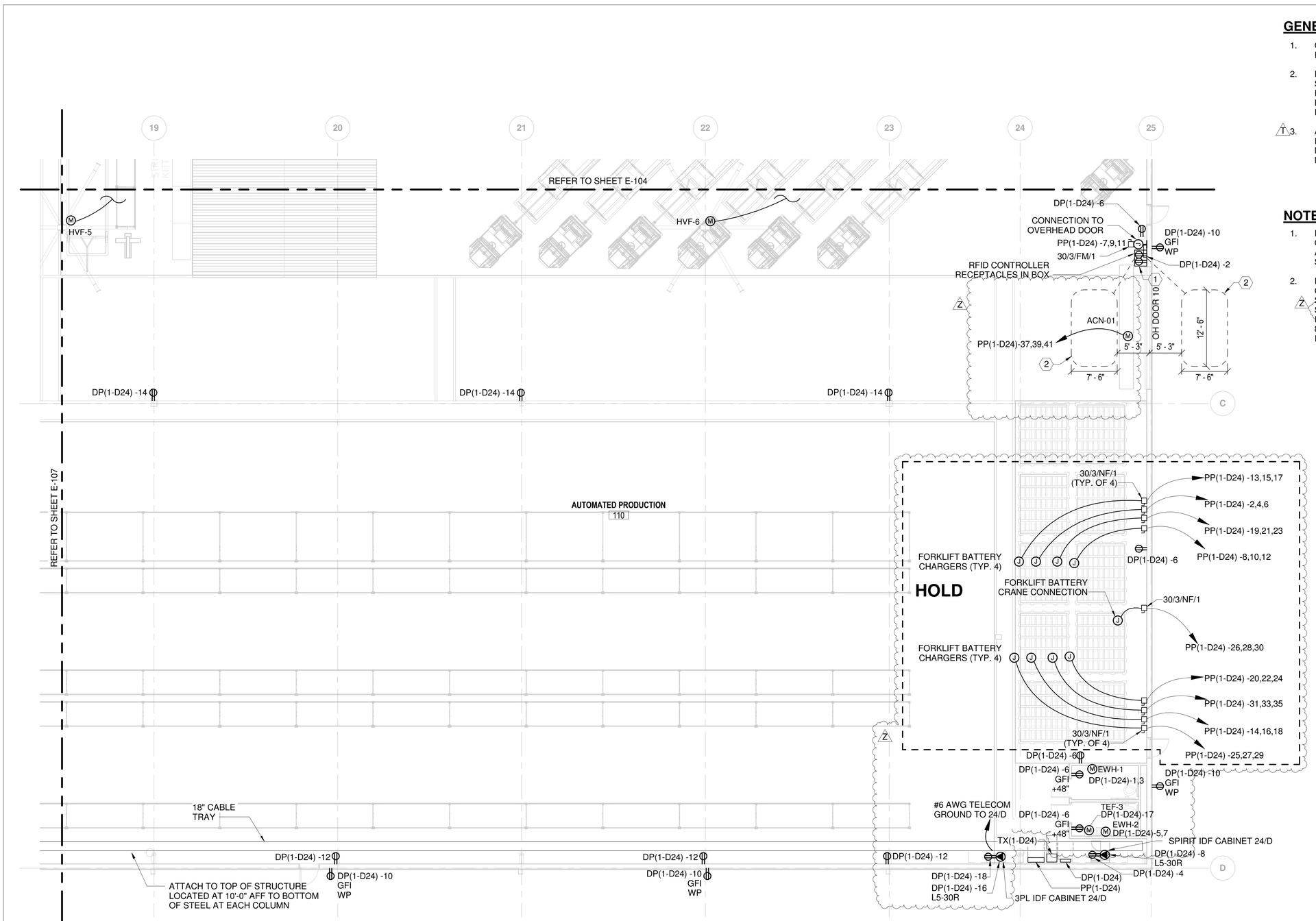
16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: POWER PLAN - AREA 7
Sheet E-107 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
2. DEMATIC SHALL PROVIDE AN OVERHEAD SUPPORT SYSTEM AT LASER KITTING STATIONS FOR ELECTRICAL DEVICE SUPPORT. COORDINATE LOCATION OF STRUCTURE WITH DEMATIC EQUIPMENT VENDOR DRAWINGS.
3. ALL 120V DUPLEX RECEPTACLES AUTOMATED PRODUCTION AREA SHALL BE LEVITON MODEL NUMBER M5262-SGG WITH LEV-LOK WIRING MODULE, UON.

NOTES BY SYMBOL "⬡"

1. PROVIDE INTERFACE CONTROLS WIRING WITH OWNER'S RFID SYSTEM. PROVIDE RACEWAY AND WIRING TO DOOR CONTROL PANEL, MOTOR SAFETY CONTROLS, AND FLOOR LOOPS.
2. PROVIDE 1/2" RIGID CONDUIT (ABOVE GRADE). CONTINUE RACEWAY FROM GROUND LOOP STUB UP LOCATIONS TO DOOR CONTROLLER. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FLOOR LOOP CABLING. SEE ELECTRICAL DETAIL 8 ON SHEET E-505 FOR GROUND LOOP INSTALLATION INSTRUCTIONS.

POWER PLAN - AREA 8

0 4' 8' 16'
SCALE IN FEET

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
T	08/01/18	PKG 2B, MEP, FP, FINISHES - REI	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G — WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

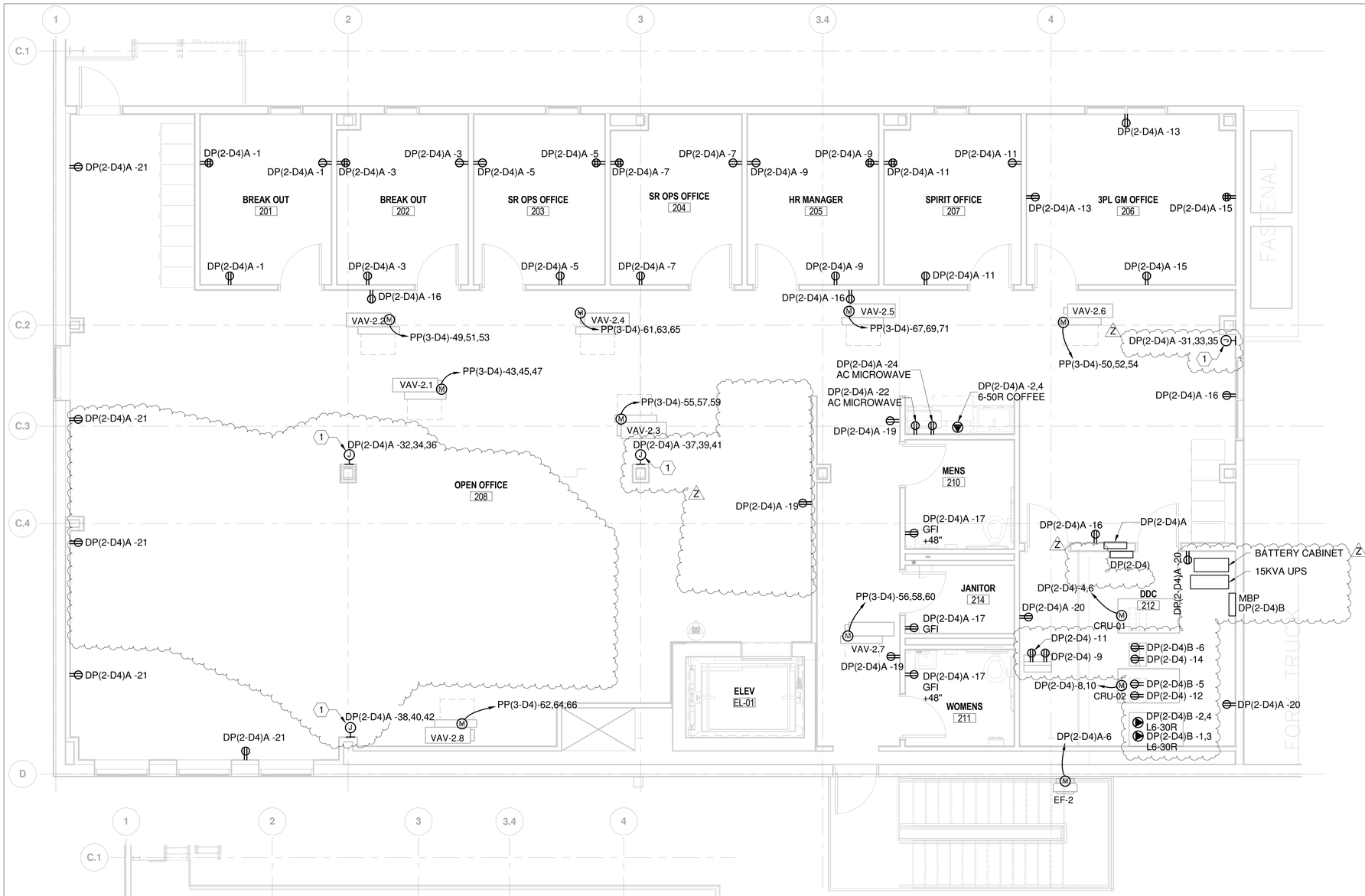
SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

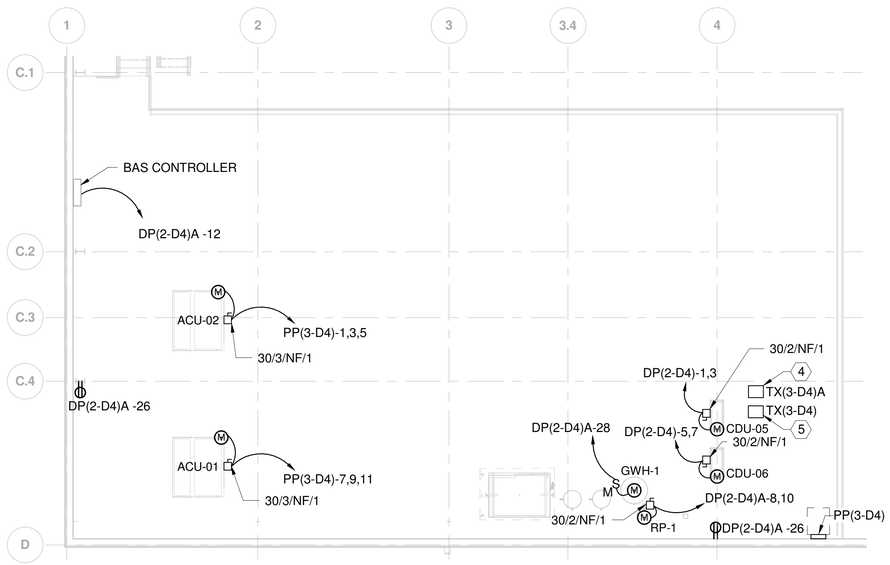
Project No. 6936
Sheet Name: POWER PLAN - AREA 8
Sheet E-108 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



POWER PLAN - OFFICE MEZZANINE

0 2' 4' 8'
SCALE IN FEET



POWER PLAN - EQUIPMENT MEZZANINE

0 4' 8' 16'
SCALE IN FEET

NOTES BY SYMBOL "⬡"

1. PROVIDE JUNCTION BOX FOR CONNECTION TO PREWIRED POWERED FURNITURE WHIP. COORDINATE REQUIREMENTS WITH POWERED FURNITURE VENDOR. PROVIDE (3) 120V CIRCUITS AND A SHARED GROUND FOR EACH CONNECTION.
2. PROVIDE COMBINATION POWER AND COMMUNICATIONS POKE-THRU TYPE FLOOR BOX FOR CONNECTION TO PREWIRED POWERED FURNITURE WHIP. COORDINATE REQUIREMENTS WITH POWERED FURNITURE VENDOR. PROVIDE (4) ETHERNET CABLES WITH A DIVIDER AND (3) 120V CIRCUITS AND A SHARED GROUND FOR EACH CONNECTION.
3. COMBINED POWER AND DATA FLOORBOX. PROVIDE A POKE-THRU TYPE ASSEMBLY, MINIMUM OF (4) DATA JACKS AND A DUPLEX RECEPTACLE WITH DIVIDER BETWEEN POWER AND COMM.
4. MOUNT TRANSFORMER ON TOP OF EQUIPMENT MEZZANINE FOR SERVICE DOWN TO DP(2-D4)A.
5. MOUNT TRANSFORMER ON TOP OF EQUIPMENT MEZZANINE FOR SERVICE DOWN TO DP(2-D4).

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

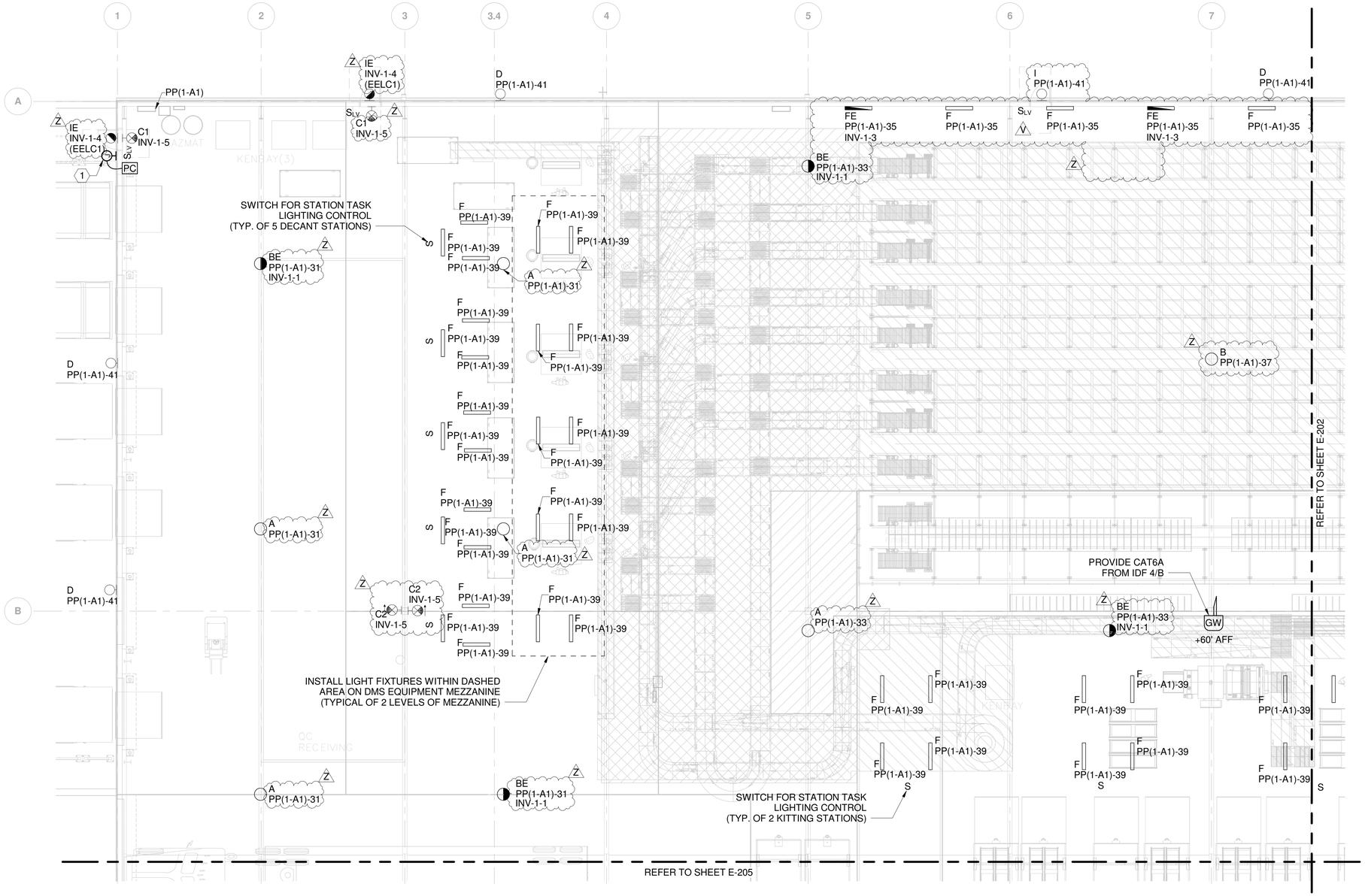
AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

Project No. 6936
Sheet Name: POWER PLAN - OFFICE MEZZANINE
Sheet E-121 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.

NOTES BY SYMBOL "⬡"

1. BUILDING MOUNTED SIGN AT 45'-0" AFF. SIGN IS WIRED THROUGH A PLUG LOAD CONTROLLER. REFER TO POWER PLANS FOR CIRCUITING INFORMATION.

LIGHTING PLAN - AREA 1

0 4' 8' 16'

SCALE IN FEET

V

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

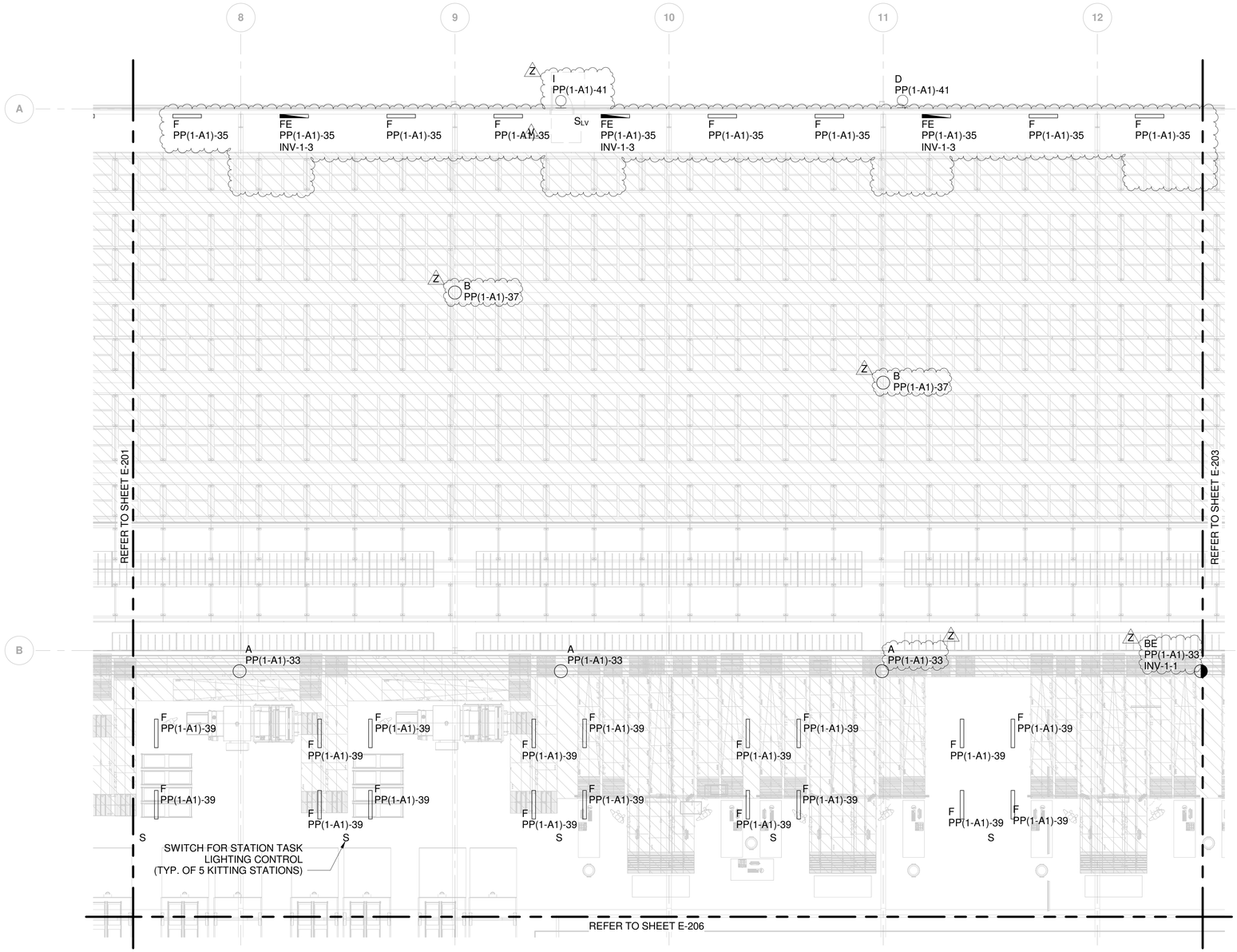
16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 1
Sheet E-201 of XX
Drawing No. 108M-XXX-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_E_jchase.rvt
11/21/2018 11:22:54 AM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. Z HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.

LIGHTING PLAN - AREA 2

0 4' 8' 16'
SCALE IN FEET

V EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B, MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

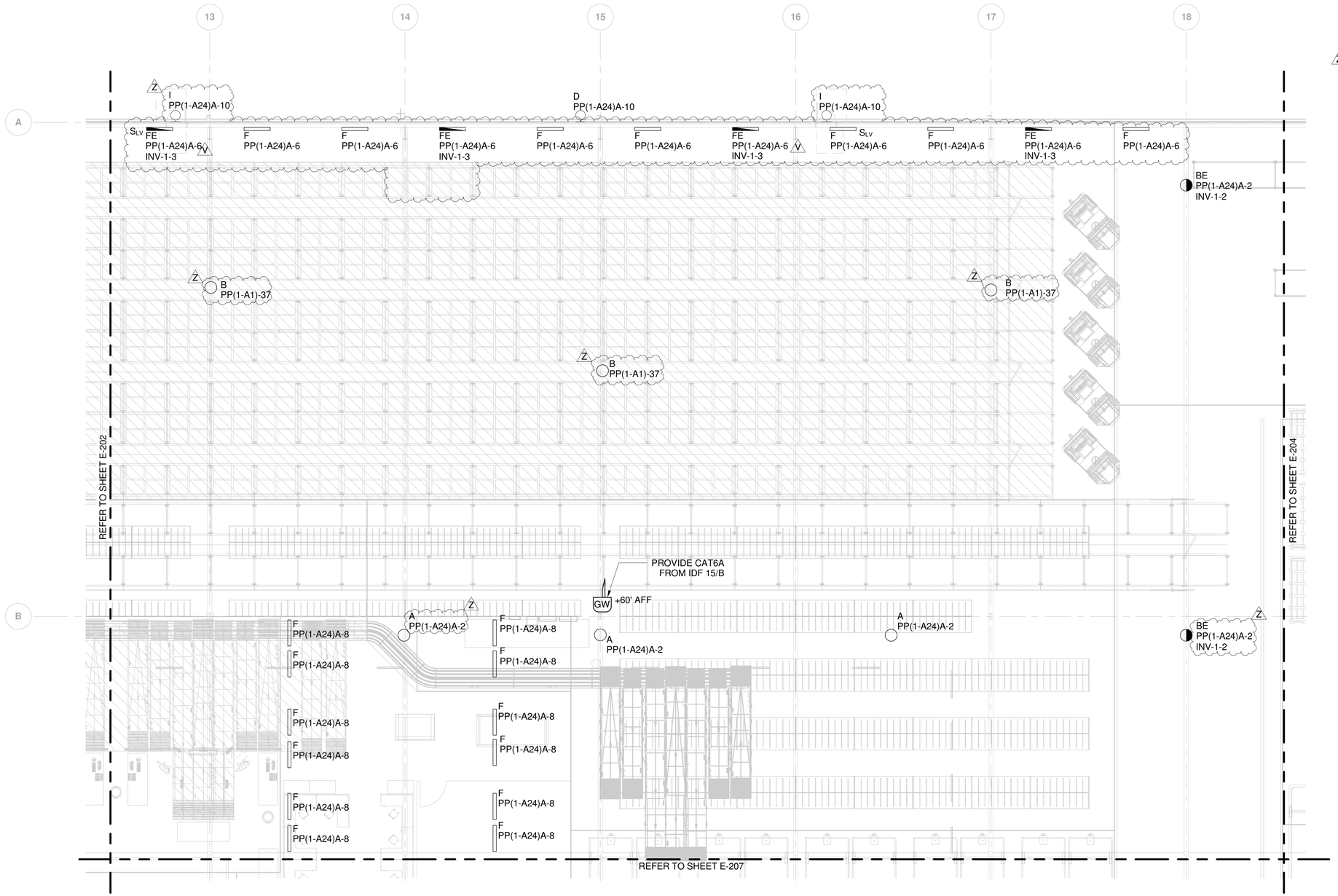
DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 2
Sheet E-202 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LIGHTING PLAN - AREA 3

0 4' 8' 16'

SCALE IN FEET

V EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. Z HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B, MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

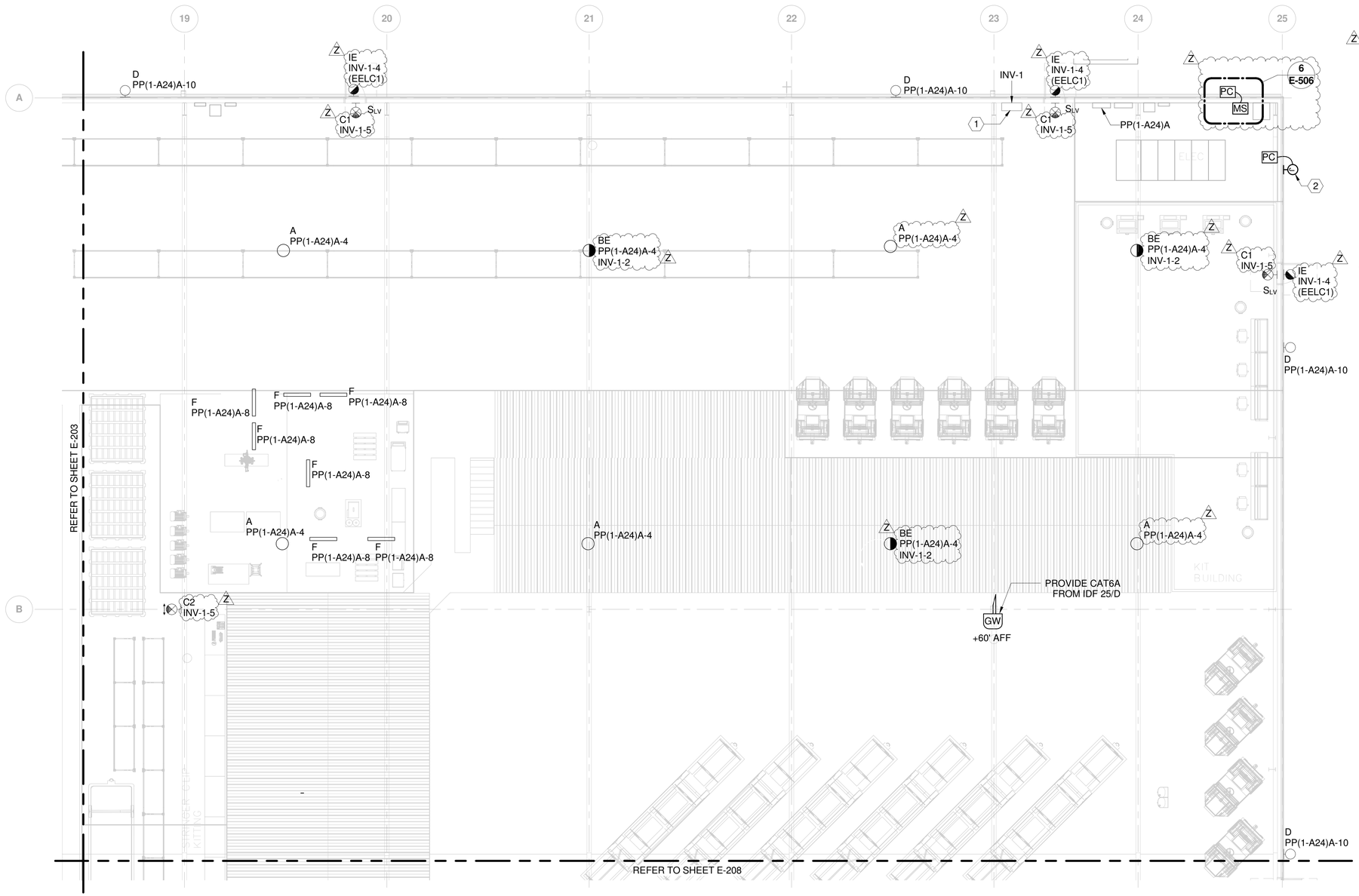
DONALD WILLIAM HATTON JR. LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 3
Sheet E-203 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.

NOTES BY SYMBOL "⬡"

1. INVERTER BASIS OF DESIGN IS MYERS ILLUMINATOR CIII 10KVA. REFER TO POWER PLANS FOR CIRCUITING INFORMATION SERVING INVERTER.
2. BUILDING MOUNTED SIGN AT 45'-0" AFF. SIGN IS WIRED THROUGH A PLUG LOAD CONTROLLER. REFER TO POWER PLANS FOR CIRCUITING INFORMATION.

LIGHTING PLAN - AREA 4

0 4' 8' 16'
SCALE IN FEET

V

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B: MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

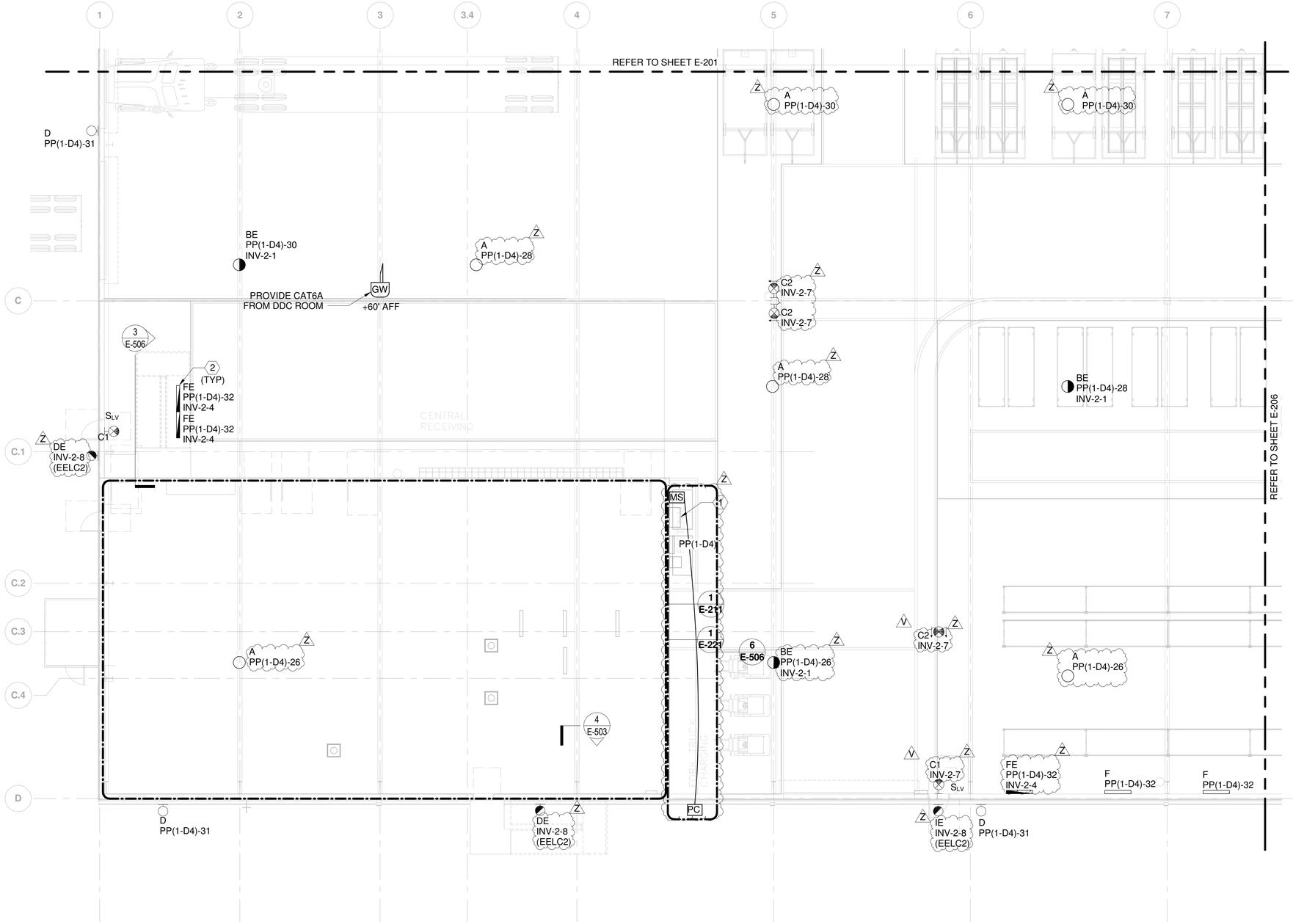
DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 4
Sheet E-204 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LIGHTING PLAN - AREA 5

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.

NOTES BY SYMBOL "⬡"

1. INVERTER BASIS OF DESIGN IS MYERS ILLUMINATOR CIII 10KVA. REFER TO POWER PLANS FOR CIRCUITING INFORMATION SERVING INVERTER.
2. MOUNT STRIP LIGHTS FOR STAIRS ON STAIR STRUCTURE ABOVE. PROVIDE A STRIP LIGHT ABOVE EACH LANDING AND ALONG MIDDLE OF STAIRS WHERE STRUCTURE ABOVE ALLOWS. COORDINATE WITH SECTION 3 ON SHEET E-506.

V

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 ME22	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B: MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 KANSAS 11/16/18

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

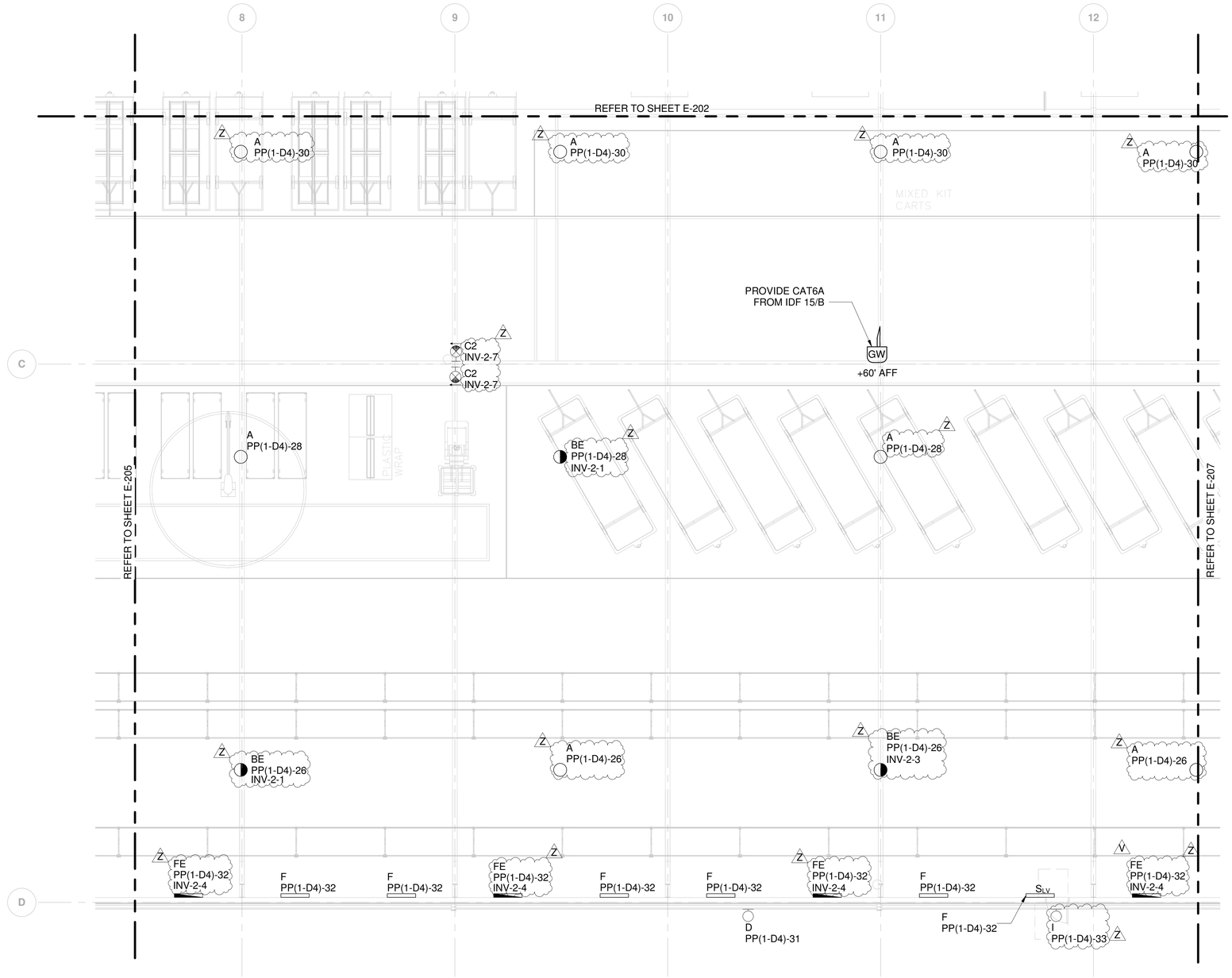
AUTOMATED WAREHOUSE

BLDG-1-338G WICHITA, KS

Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 5
Sheet E-205 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.

LIGHTING PLAN - AREA 6

0 4' 8' 16'
SCALE IN FEET

V

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B: MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 KANSAS 11/16/18

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

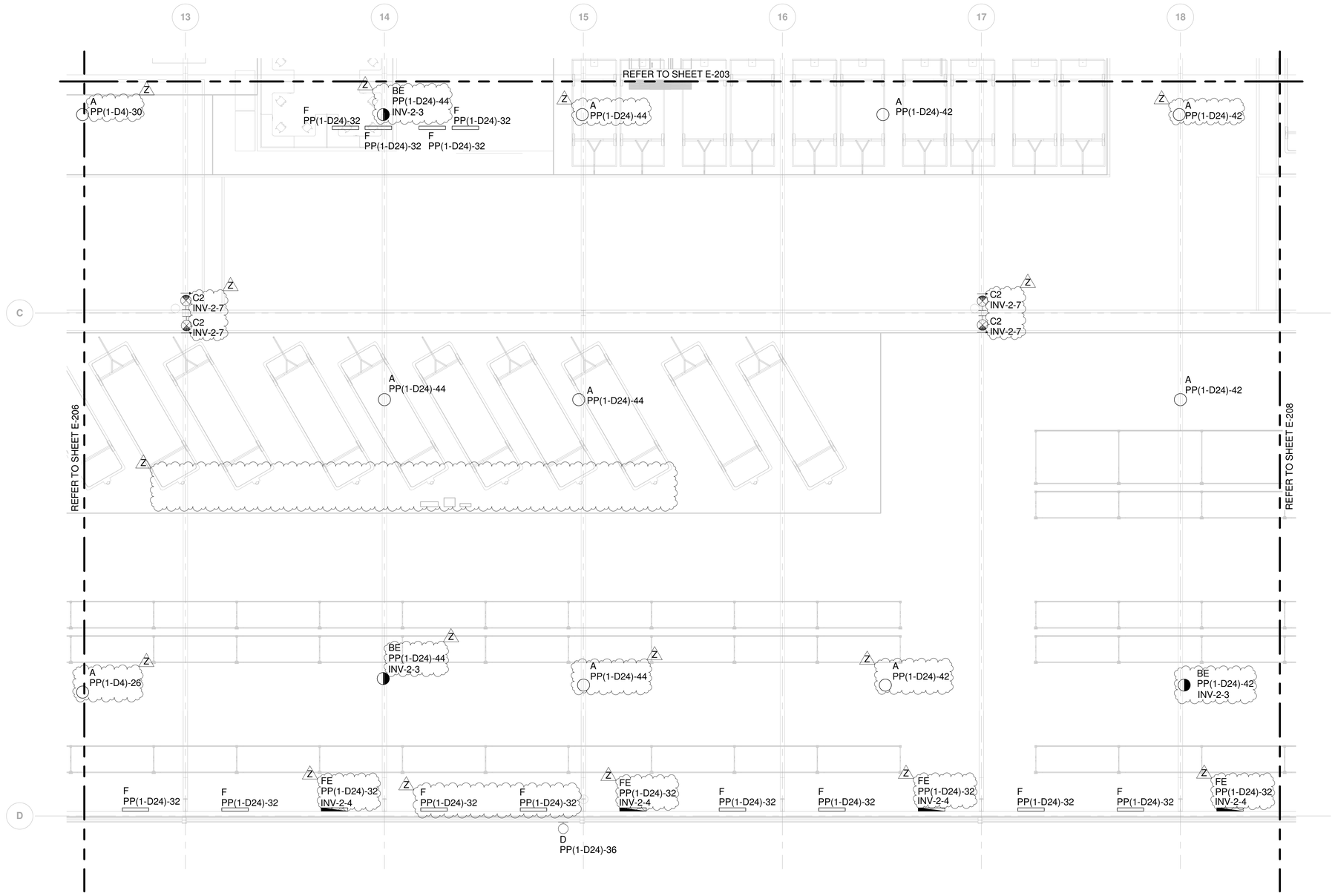
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 6
Sheet E-206 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. Z HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.



LIGHTING PLAN - AREA 7

0 4' 8' 16'
SCALE IN FEET

V EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B: MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

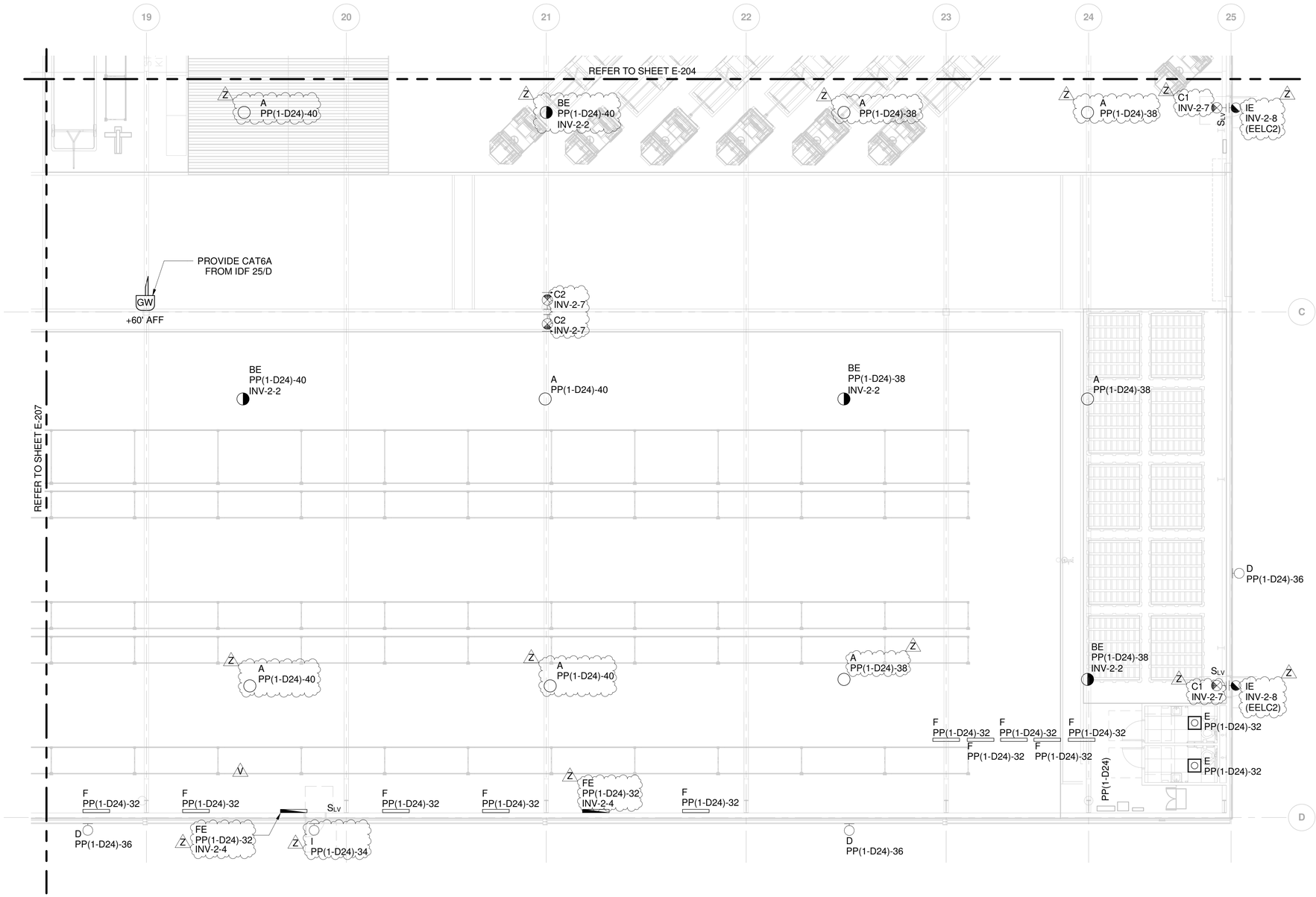
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - AREA 7
Sheet E-207 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. HIGH BAY PENDANT LIGHTING HOMERUNS SHALL USE 6AWG WIRING. BRANCHING AND TEES TO FIXTURES CAN BE 10AWG WIRING.



LIGHTING PLAN - AREA 8

0 4' 8' 16'

SCALE IN FEET

V

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B, MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G WICHITA, KS

Designed by D. HATTON

Drawn by C. JOHNSON

Project No. 6936

Sheet Name: LIGHTING PLAN - AREA 8

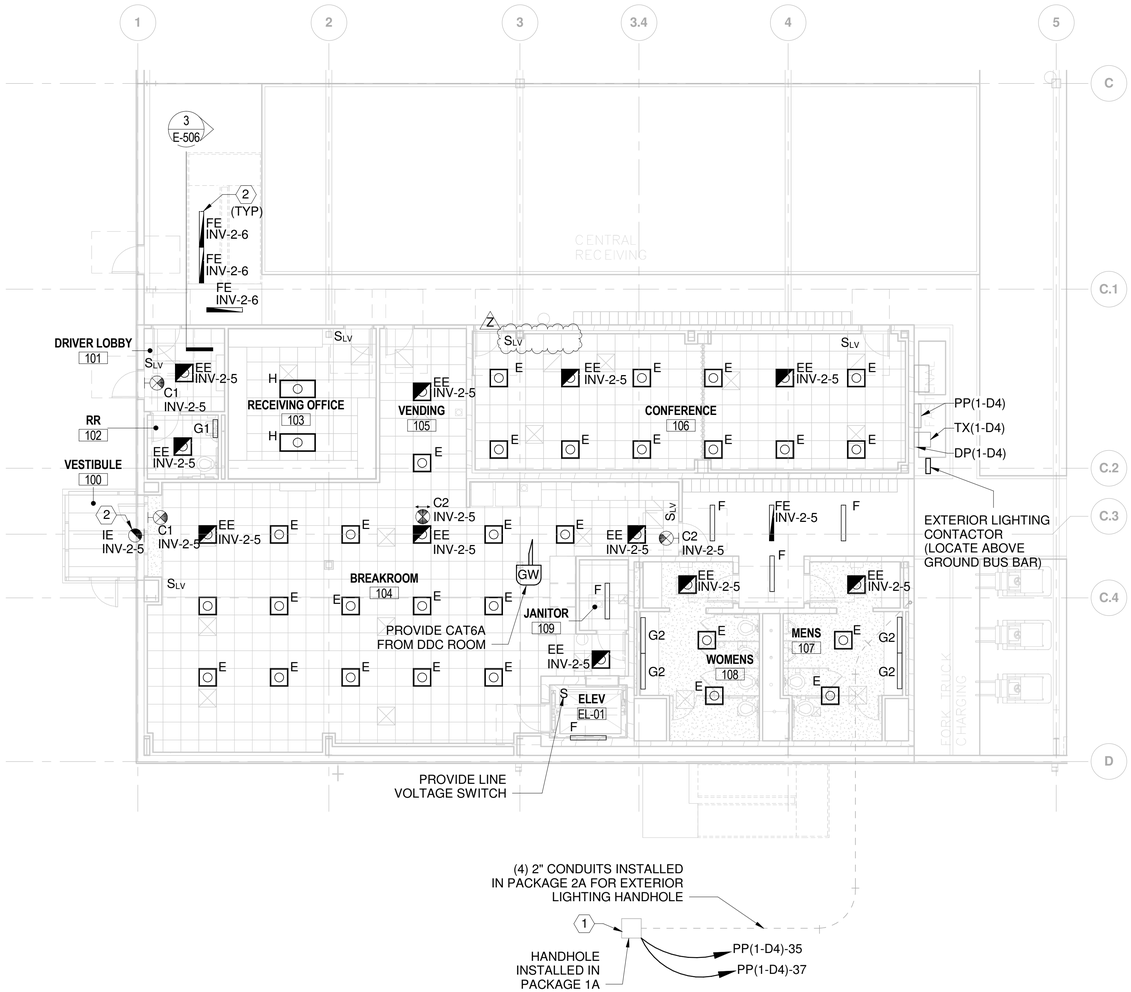
Sheet E-208 of XX

Drawing No. 108M-XXX-XXX

C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_E_jchase.rvt

11/21/2018 11:23:20 AM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LIGHTING PLAN - GROUND FLOOR AT MEZZANINE

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. ALL LIGHT FIXTURES WITH THE EXCEPTION OF FIXTURE C ARE CIRCUITED TO PP(1-D4) - 20.

NOTES BY SYMBOL "⬡"

1. ROUTE CONDUCTORS FROM SOURCE PANEL THROUGH CONDUIT FROM PACKAGE 1A AND 2A TO EXTERIOR POLE FIXTURES. EXTERIOR POLE FIXTURES PROVIDED IN PACKAGE 1A, PROVIDE ENOUGH 277V CIRCUITS TO SERVE POLE LIGHTS. ROUTE EXTERIOR LIGHTING THROUGH PHOTOCELL CONTROLLED CONTACTOR. POLE LIGHTS CIRCUITED TO PP(1-D4)-39 AND PP(1-D4)-40.
2. MOUNT STRIP LIGHTS FOR STAIRS ON STAIR STRUCTURE ABOVE. PROVIDE A STRIP LIGHT ABOVE EACH LANDING AND ALONG MIDDLE OF STAIRS WHERE STRUCTURE ABOVE ALLOWS. COORDINATE WITH SECTION 3 ON SHEET E-506.
3. PROVIDE ESR RELAY WITH FIXTURE TO SHUNT DIMMING CONTROLS FOR FULL ON UPON LOSS OF NORMAL POWER.

Z

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - GROUND FLOOR MEZZ
Sheet E-211 of XX
Drawing No. 108M-XXX-XXX

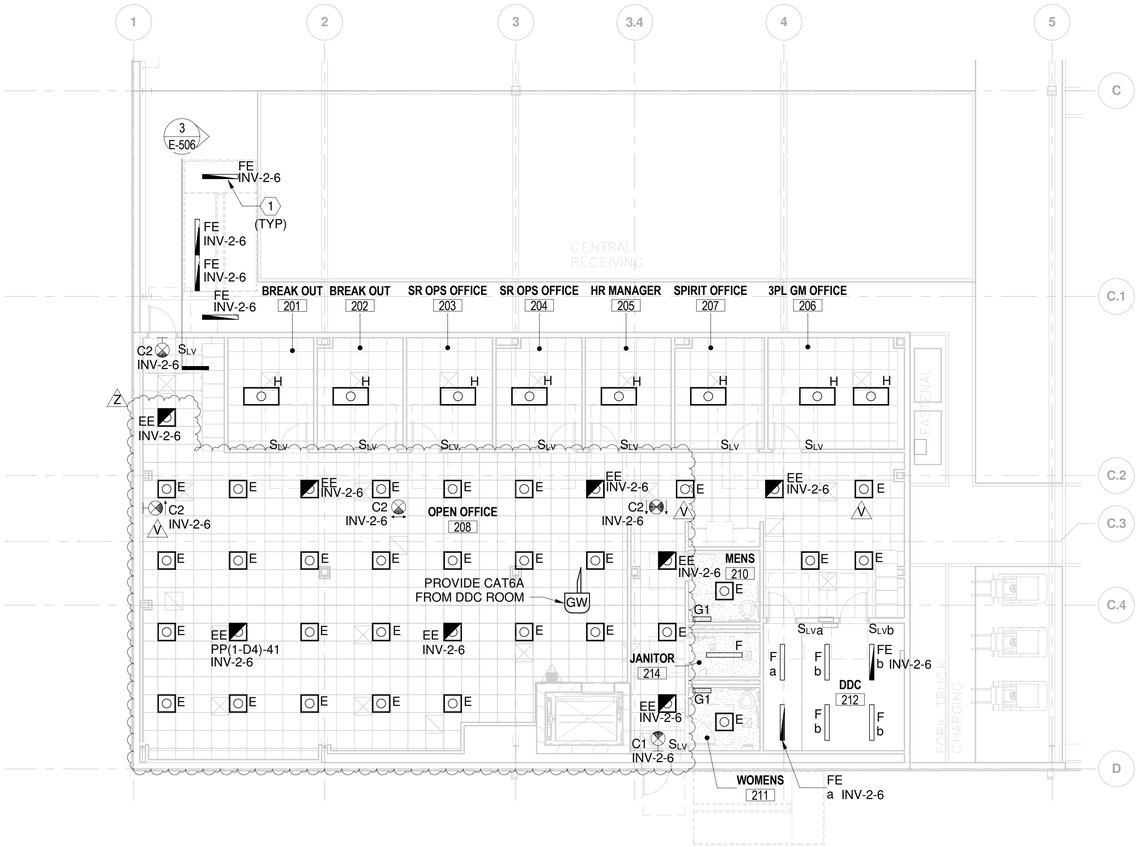
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. REFER TO LIGHTING CONTROL SCHEMATICS ON LIGHTING DETAILS SHEET E-506.
2. EXTERIOR MOUNTED LIGHT FIXTURES SHALL BE SEPARATELY CIRCUITED AND ROUTED THROUGH A LIGHTING CONTACTOR CONTROLLED BY A PHOTOCELL.
3. ALL LIGHT FIXTURES WITH THE EXCEPTION OF FIXTURE C ARE CIRCUITED TO PP(1-D4) - 22.

NOTES BY SYMBOL "⬡"

1. MOUNT STRIP LIGHTS FOR STAIRS ON STAIR STRUCTURE ABOVE. PROVIDE A STRIP LIGHT ABOVE EACH LANDING AND ALONG MIDDLE OF STAIRS WHERE STRUCTURE ABOVE ALLOWS. COORDINATE WITH SECTION 3 ON SHEET E-506.



LIGHTING PLAN - OFFICE MEZZANINE LEVEL 2

0 4' 8' 16'

SCALE IN FEET

Z

EMERGENCY LIGHTING IS ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE AND A MINIMUM OF 0.1 FOOTCANDLE MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE EMERGENCY INVERTER CENTRAL BATTERY SYSTEM PROVIDES FULL OUTPUT FOR 90 MINUTES. THE ILLUMINATION LEVELS ARE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. THE MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. THE DESIGN MEETS I.B.C. 2012 1006.3.1.

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
V	09/28/18	PKG 2B, MEP, FP, FINISHES - REV V	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

SPIRIT AEROSYSTEMS™

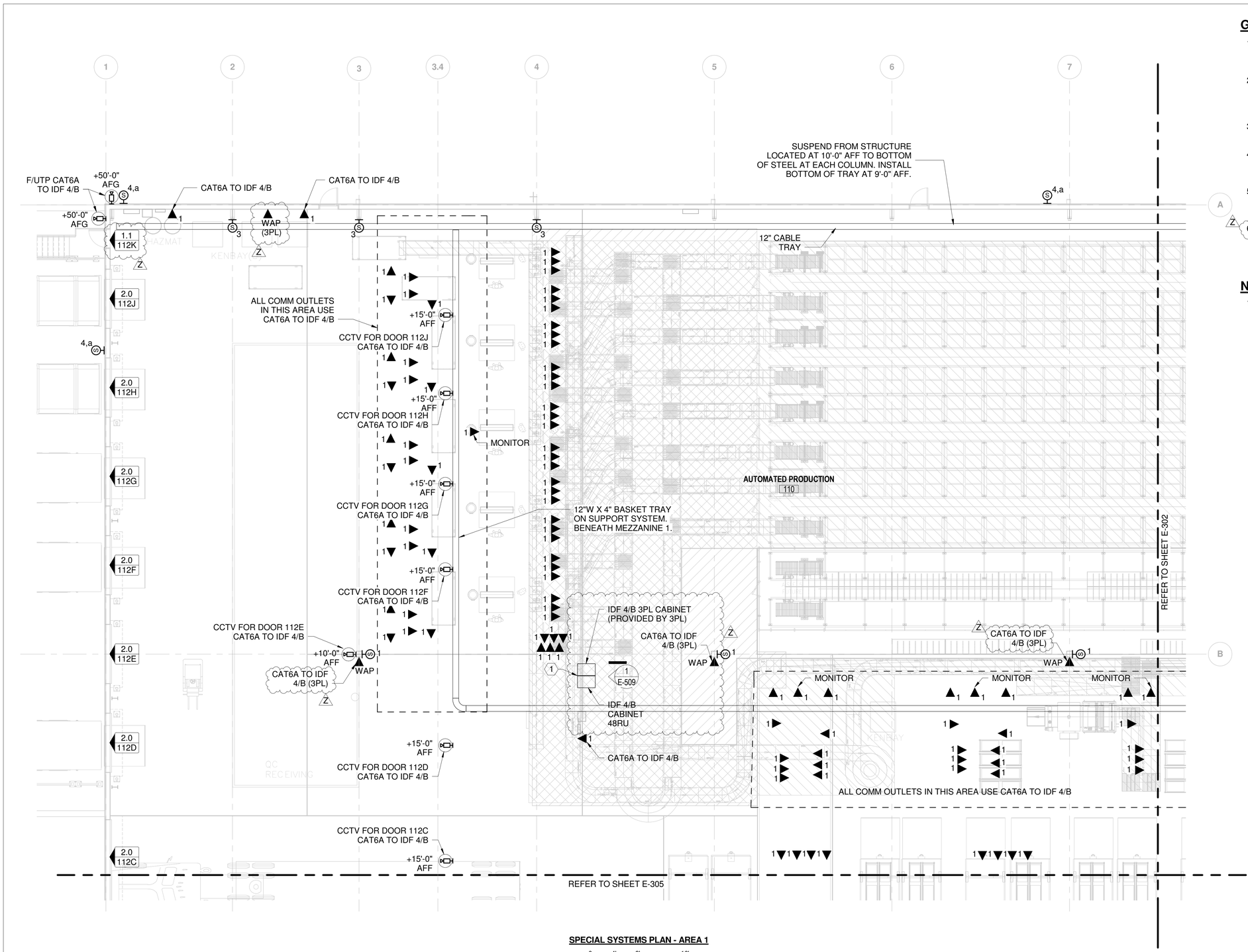
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHTING PLAN - OFFICE MEZZANINE
Sheet E-221 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SPECIAL SYSTEMS PLAN - AREA 1

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. SUBCONTRACTOR SHALL FURNISH AND INSTALL COMMUNICATION DEVICES WITHIN RACKS. COORDINATE EQUIPMENT TO BE FURNISHED WITH OWNER.
5. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE SPEAKER SCHEDULE ON SHEET E-604.
6. WAPS SHALL BE TERMINATED IN 3PL RACK.

NOTES BY SYMBOL "⬡"

1. FOR FIBER ROUTING TO IDF REFER TO PACKAGE 2A FOR CONDUIT ROUTING UNDERSLAB. REFER TO COMMUNICATION RISER DIAGRAM ON SHEET E-603 FOR MORE INFORMATION.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Designed by D. HATTON

Drawn by C. JOHNSON

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN NOT TO SCALE — NORTH

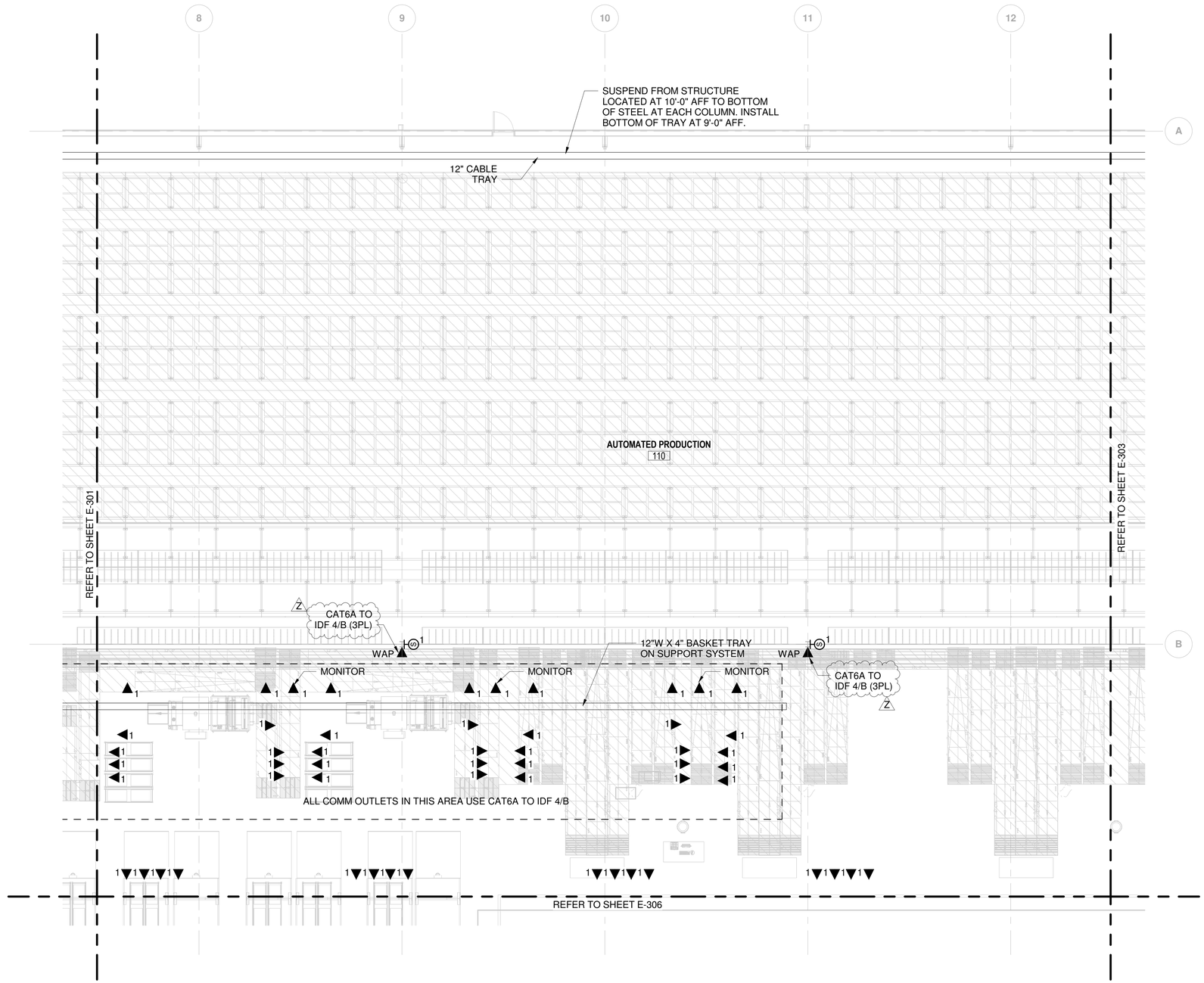
Project No. 6936

Sheet Name: SPECIAL SYSTEMS PLAN - AREA 1

Sheet E-301 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SPECIAL SYSTEMS PLAN - AREA 2

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
5. WAPS SHALL BE TERMINATED IN 3PL RACK.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Designed by D. HATTON
Drawn by C. JOHNSON

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

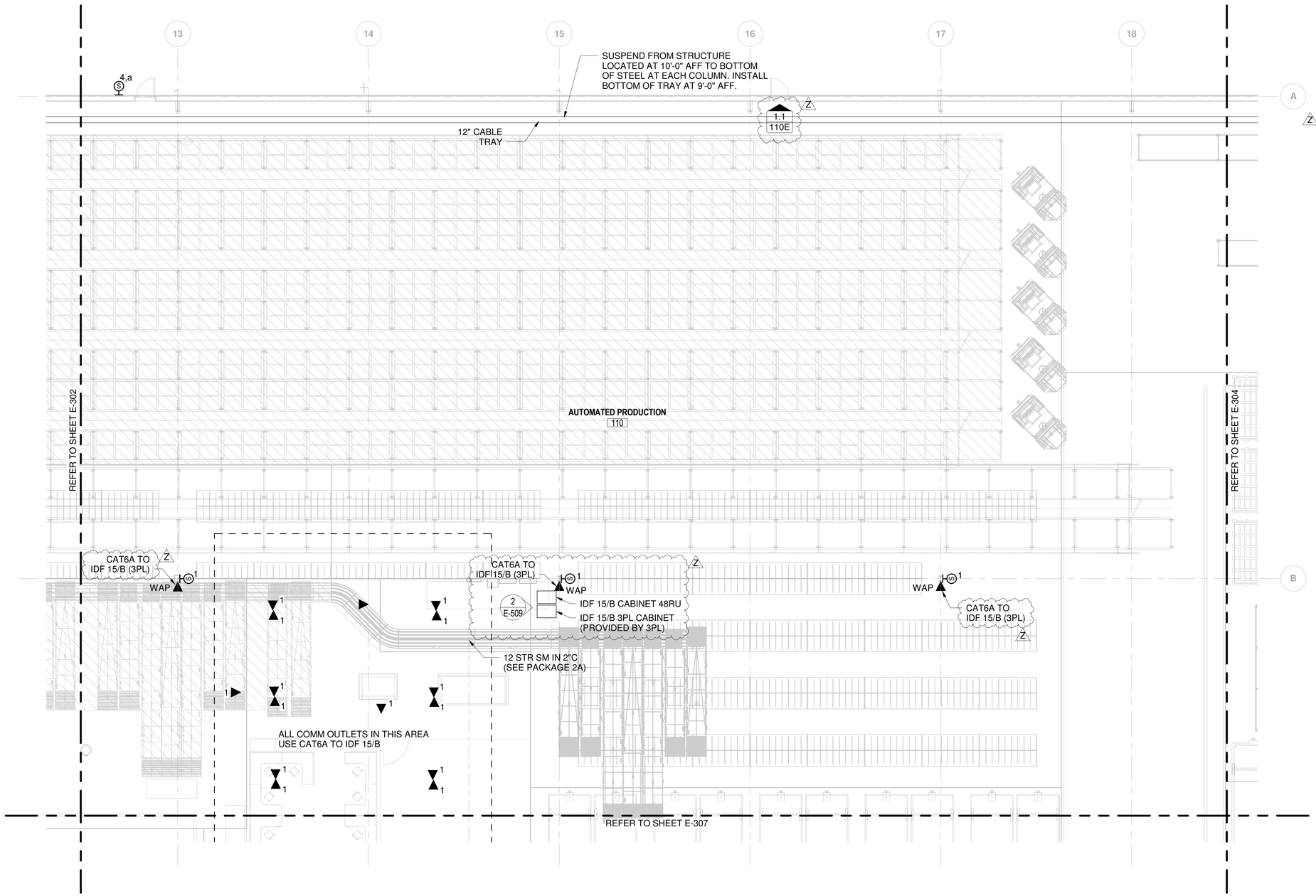
Project No. 6936

Sheet Name: SPECIAL SYSTEMS PLAN - AREA 2

Sheet E-302 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SPECIAL SYSTEMS PLAN - AREA 3

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. SUBCONTRACTOR SHALL FURNISH AND INSTALL COMMUNICATION DEVICES WITHIN RACKS. COORDINATE EQUIPMENT TO BE FURNISHED WITH OWNER.
5. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
6. WAPS SHALL BE TERMINATED IN 3PL RACK.

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Designed by D. HATTON

Drawn by C. JOHNSON

Project No. 6936

Sheet Name: SPECIAL SYSTEMS PLAN - AREA 3

Sheet E-303 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
5. WAPS SHALL BE TERMINATED IN 3PL RACK.

19 20 21 22 23 24 25 A B

CAT6A TO IDF 25/D (3PL)
SUSPEND FROM STRUCTURE LOCATED AT 10'-0" AFF TO BOTTOM OF STEEL AT EACH COLUMN. INSTALL BOTTOM OF TRAY AT 9'-0" AFF.
WAP
1.1 110F
12" CABLE TRAY
CAT6A TO IDF 25/D
F/UTP CAT6A TO IDF 25/D ON BUILDING STEEL
+50'-0" AFG
4,a
4,b
ELEC
ALL COMM OUTLETS IN THIS AREA USE CAT6A TO IDF 15/B
REFER TO SHEET E-303
AUTOMATED PRODUCTION
110
KIT BUILDING
CAT 6A TO IDF 15/B (3PL)
CAT6A TO IDF 25/D (3PL)
STAGING & KITTING
REFER TO SHEET E-308

SPECIAL SYSTEMS PLAN - AREA 4

0 4' 8' 16'
SCALE IN FEET

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE
NORTH

SPIRIT AEROSYSTEMS

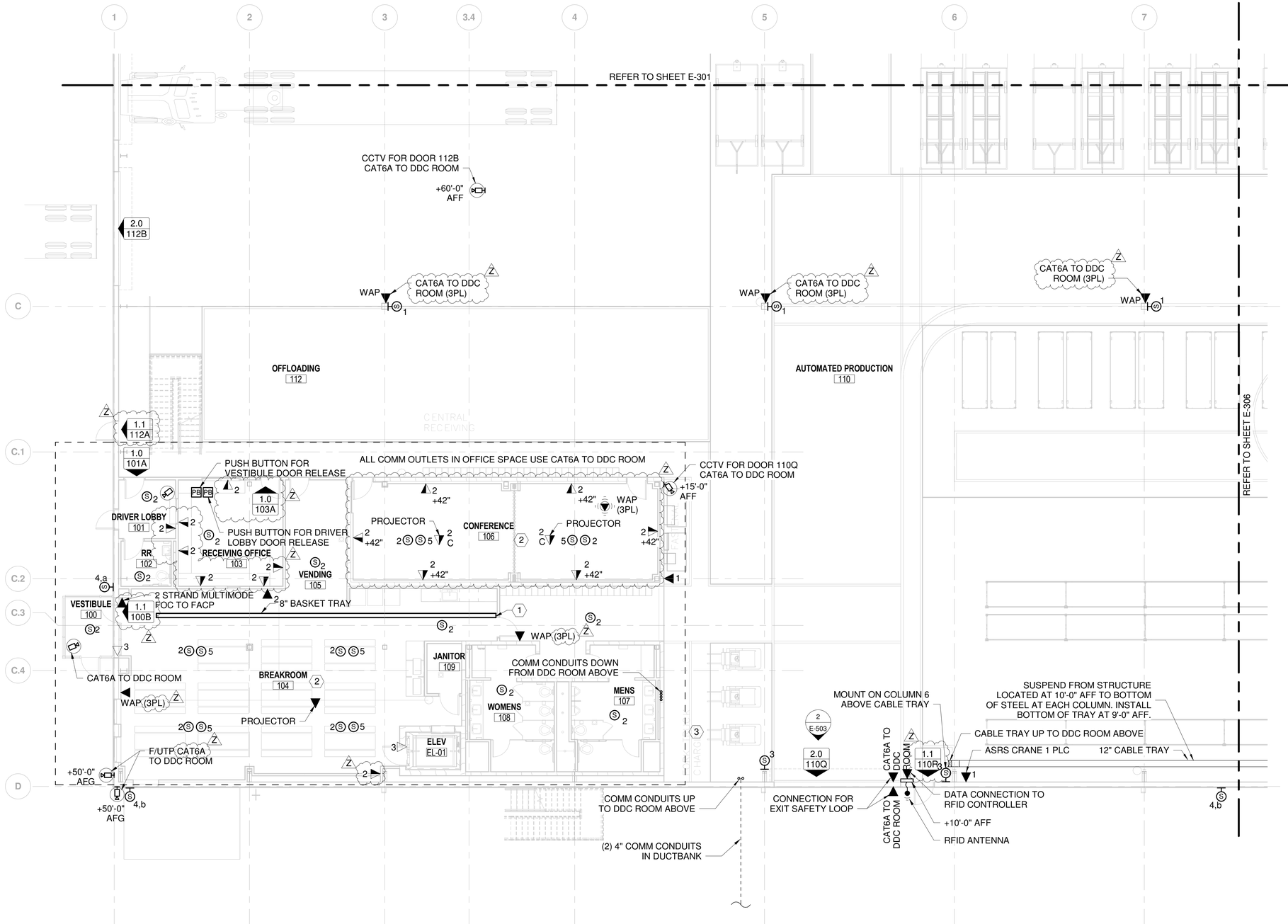
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: SPECIAL SYSTEMS PLAN - AREA 4
Sheet E-304 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SPECIAL SYSTEMS PLAN - AREA 5

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. SECURITY DEVICES AND WIRING SHALL BE PROVIDED BY CONTRACTOR. COORDINATE DEVICES AND WIRING TO BE PROVIDED WITH OWNER.
3. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
4. CABLE TRAY ROUTED ALONG EXTERIOR WALLS IN THE WAREHOUSE SPACE SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
5. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.

Z 6. WAPS SHALL BE TERMINATED IN 3PL RACK.

NOTES BY SYMBOL "⬡"

1. PROVIDE (2) 4" CONDUITS FROM CABLE TRAY ABOVE ACCESSIBLE CEILING TO DDC ROOM ON MEZZANINE ABOVE.
2. FOR A/V EQUIPMENT IN THIS ROOM, SUBCONTRACTOR SHALL PROVIDE ROUGH-IN OF BACK BOXES AND CONDUIT. COORDINATE DEVICE LOCATIONS AND SIZES REQUIRED FOR WIRING AND DEVICES WITH OWNER. OWNER TO PROVIDE AND INSTALL WIRING AND AV EQUIPMENT.
3. OWNER TO PROVIDE RFID ANTENNA CONTROLLER, ANTENNA WIRE, AND ANTENNA. PROVIDE CONDUIT, DATA CONTROLLER, AND INTERFACE WIRING TO DOOR CONTROLLER. PROVIDE 24"x24"x6" HOFFMAN BOX, NEMA 12, WITH BACKPLANE. MOUNT TWO DUPLEX POWER RECEPTACLES INSIDE BOX.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 KANSAS 11/16/18

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON

Drawn by C. JOHNSON

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE

NORTH

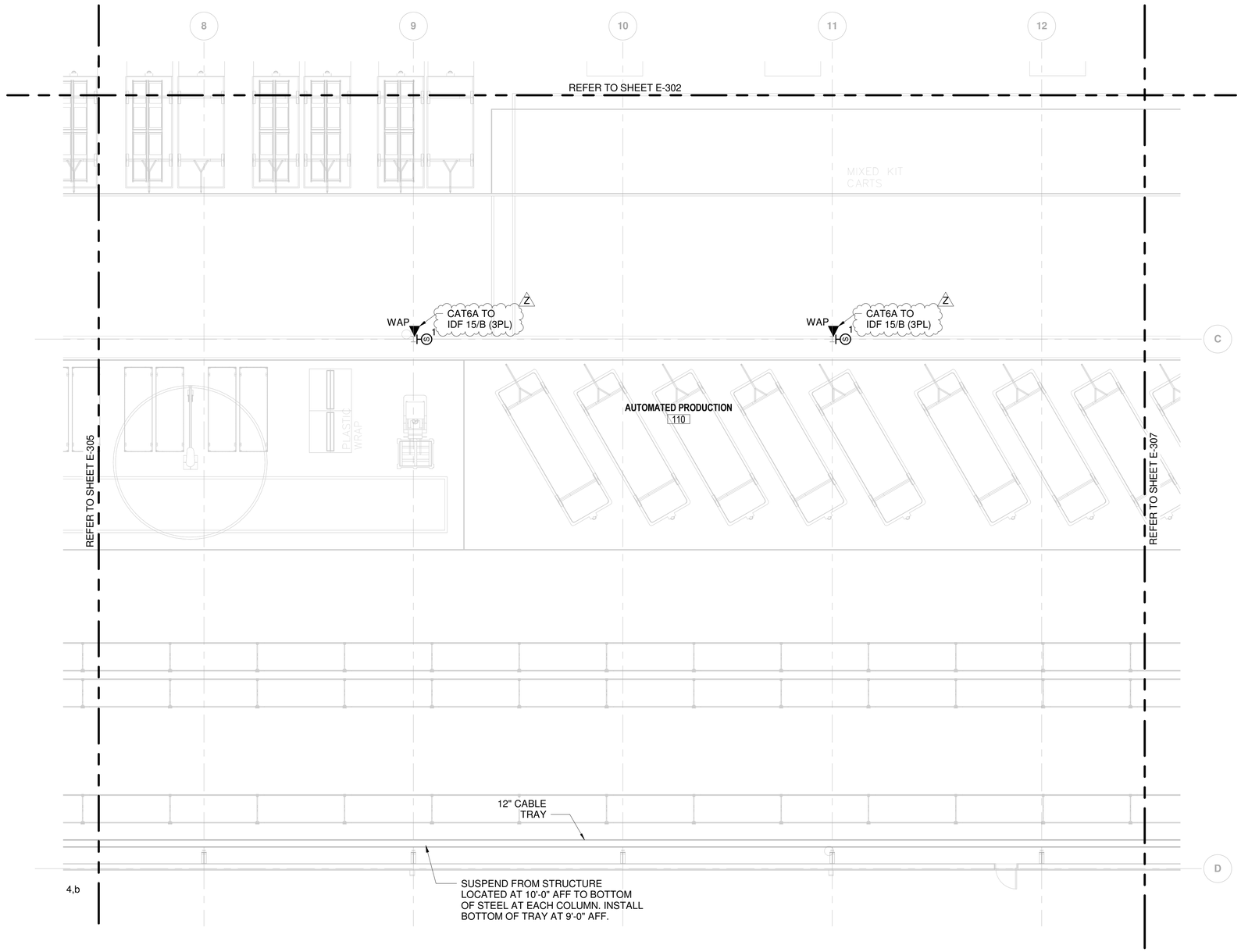
Project No. 6936

Sheet Name: SPECIAL SYSTEMS PLAN - AREA 5

Sheet E-305 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SPECIAL SYSTEMS PLAN - AREA 6

0 4' 8' 16'

SCALE IN FEET

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
5. Z WAPS SHALL BE TERMINATED IN 3PL RACK.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

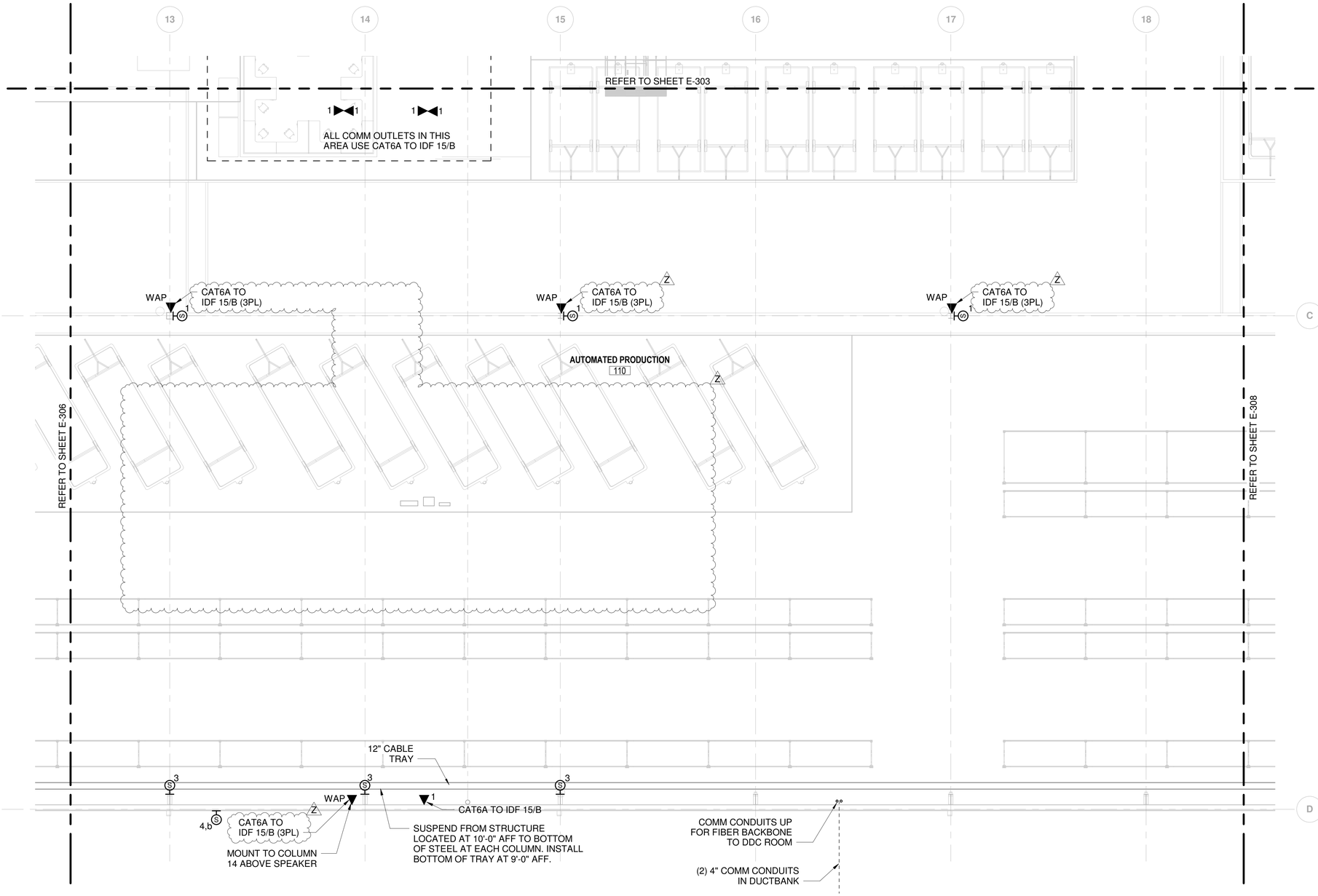
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: SPECIAL SYSTEMS PLAN - AREA 6
Sheet E-306 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
5. Z WAPS SHALL BE TERMINATED IN 3PL RACK.



SPECIAL SYSTEMS PLAN - AREA 7

0 4' 8' 16'
SCALE IN FEET

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5	AREA 6	AREA 7	AREA 8
MEZZ			

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

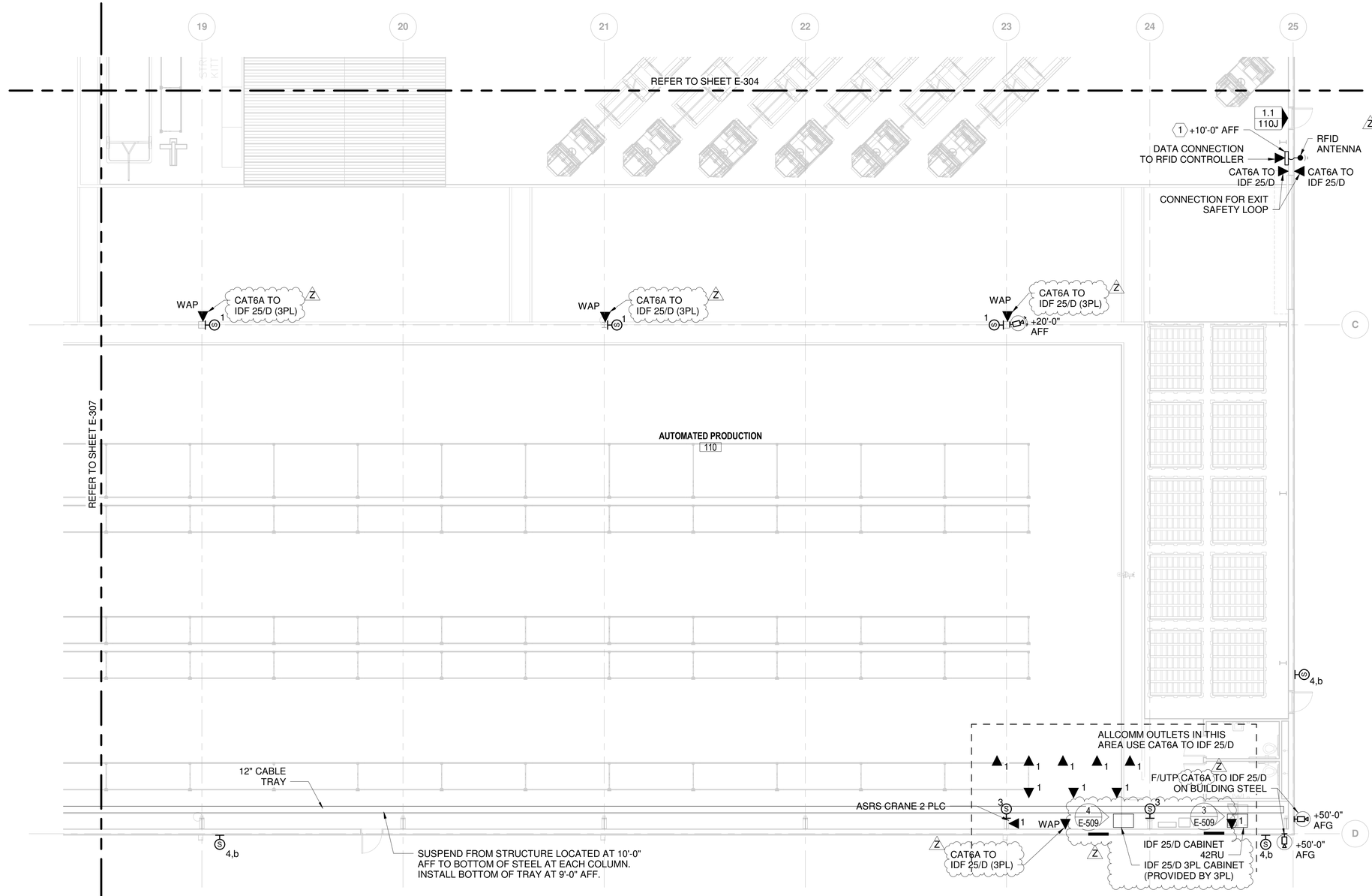
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: SPECIAL SYSTEMS PLAN - AREA 7
Sheet E-307 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED.



GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
3. CABLE TRAY SHALL BE PROVIDED WITH MINIMUM 6" RAILS AND BE SIZED TO SPAN 30' OC COLUMNS.
4. Z SUBCONTRACTOR SHALL FURNISH AND INSTALL COMMUNICATION DEVICES WITHIN RACKS. COORDINATE EQUIPMENT TO BE FURNISHED WITH OWNER.
5. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
6. Z WAPS SHALL BE TERMINATED IN 3PL RACK.

NOTES BY SYMBOL "⬡"

1. OWNER TO PROVIDE RFID ANTENNA CONTROLLER, ANTENNA WIRE, AND ANTENNA. PROVIDE CONDUIT, DATA CONTROLLER, AND INTERFACE WIRING TO DOOR CONTROLLER. PROVIDE 24"x24"x6" HOFFMAN BOX, NEMA 12, WITH BACKPLANE. MOUNT TWO DUPLEX POWER RECEPTACLES INSIDE BOX.

SPECIAL SYSTEMS PLAN - AREA 8

0 4' 8' 16'
SCALE IN FEET

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 / MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN
NOT TO SCALE
NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

SPIRIT AEROSYSTEMS™

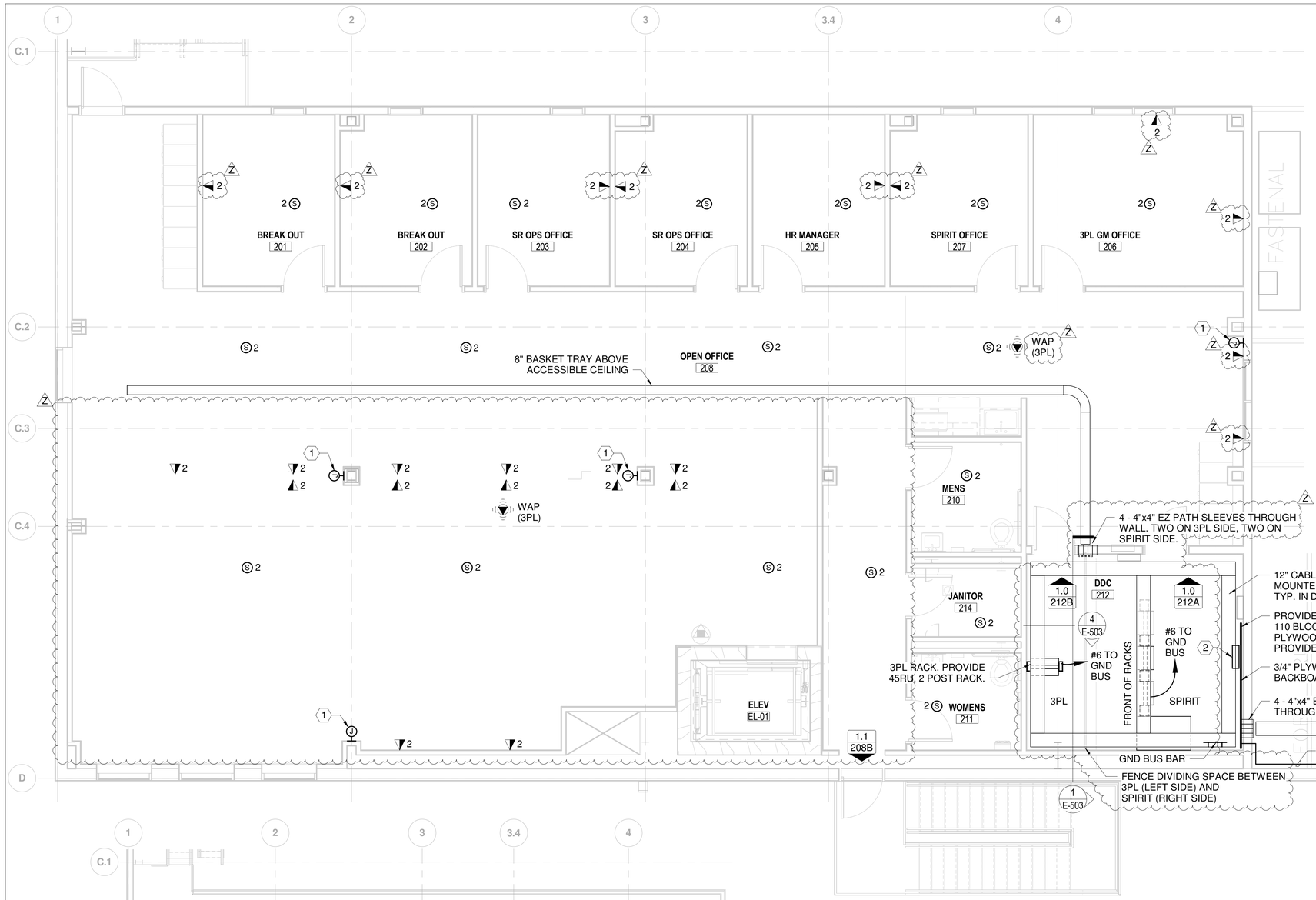
BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

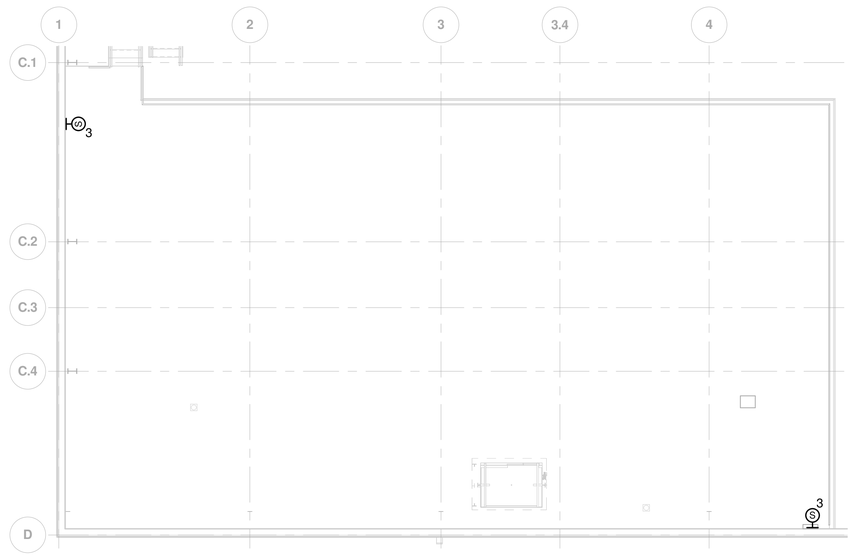
Project No. 6936
Sheet Name: SPECIAL SYSTEMS PLAN - AREA 8
Sheet E-308 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SPECIAL SYSTEMS PLAN - OFFICE MEZZANINE

0 2' 4' 8'
SCALE IN FEET



SPECIAL SYSTEMS PLAN - EQUIPMENT MEZZANINE

0 4' 8' 16'
SCALE IN FEET

GENERAL NOTES

1. CONDUIT INTENDED TO ROUTE UNDERGROUND SHALL BE IDENTIFIED WITH DESTINATION COLUMN/ROW SUCH AS "TO A-3.1".
2. SECURITY DEVICES AND WIRING SHALL BE PROVIDED BY CONTRACTOR. COORDINATE DEVICES AND WIRING TO BE PROVIDED WITH OWNER.
3. PROVIDE SPEAKER SYSTEM AND WIRING ACCORDING TO VENDOR RECOMMENDATIONS. PROVIDE AMPLIFIERS FOR SYSTEM IN ACCORDANCE WITH VENDOR AND OWNER. LOCATE AMPLIFIERS AS DIRECTED BY OWNER.
4. SUBCONTRACTOR SHALL FURNISH AND INSTALL COMMUNICATION DEVICES WITHIN RACKS. COORDINATE EQUIPMENT TO BE FURNISHED WITH OWNER.
5. FOR MORE INFORMATION ON SPEAKER TYPES AND WIRE SIZES SEE THE ENS SCHEDULE ON SHEET E-604.
6. WAPS SHALL BE TERMINATED IN 3PL RACK.

NOTES BY SYMBOL "⬡"

1. PROVIDE COMM JUNCTION BOX FOR POWERED FURNITURE. COORDINATE WITH MANUFACTURER. 4 CONNECTIONS PER FURNITURE PIECE.
2. WALL MOUNTED FOC SPLICE ENCLOSURE. RUN FIBER END CONNECTION TO RACK MOUNTED FOC PATCH PANEL.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B: MEP, FP, FINISHES - REV O	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

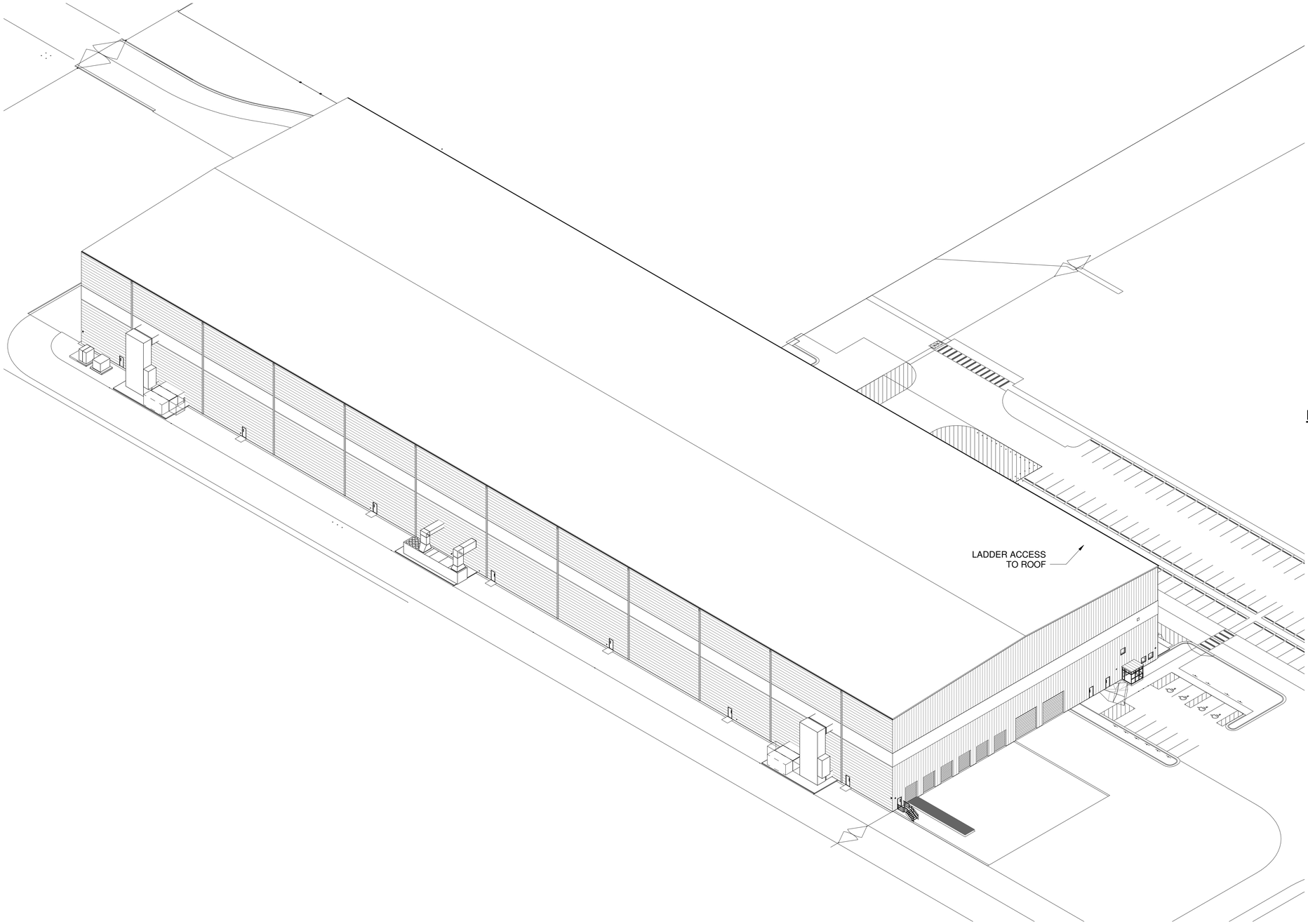
Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

AREA 1	AREA 2	AREA 3	AREA 4
AREA 5 MEZZ	AREA 6	AREA 7	AREA 8

KEY PLAN NOT TO SCALE — NORTH

Project No. 6936
Sheet Name: SPECIAL SYSTEMS PLAN - OFFICE MEZZANINE
Sheet E-321 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



GENERAL NOTES

1. LIGHTNING PROTECTION SYSTEM SHALL BE PROVIDED AS A PERFORMANCE BASED SYSTEM.
2. PROVIDE ROOF MOUNTED LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH UL96, AND NFPA 780 FOR A CLASS 1 SYSTEM FOR ENTIRE BUILDING WITH 3/8" DIAMETER SOLID METAL AIR TERMINALS. METAL SHALL BE COMPATIBLE WITH ROOF MATERIAL.
3. LIGHTNING PROTECTION CONTRACTOR SHALL PROVIDE A COMPLETE LIGHTNING PROTECTION SYSTEM COMPLIANT WITH NFPA 780. THE VIEW ON THIS SHEET IS FOR REFERENCE ONLY. THE LIGHTNING PROTECTION CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SHOWING FULL DESIGN OF SYSTEM.
4. INSTALLATION SHALL BE MADE BY OR UNDER THE SUPERVISION OF A CERTIFIED MASTER INSTALLER.
5. SECURE AIR TERMINALS AND ROOF CONDUCTORS WITH ADHESIVE BASES COMPATIBLE WITH ROOF AND BUILDING MATERIAL.
6. PROVIDE AIR TERMINALS FOR ROOFTOP UNITS, ANTENNAS, LADDERS, AND ANY OTHER ROOF MOUNTED EQUIPMENT PROVIDED BY OTHER DISCIPLINES.
7. GROUND RODS SHALL BE LOCATED A MINIMUM OF 3 FEET FROM THE BUILDING'S WALLS OR FOOTINGS.
8. PROVIDE #4/0 BARE COPPER COUNTERPOISE.
9. UTILIZE BUILDING COLUMNS AS DOWN CONDUCTORS. CONNECT ROOF CONDUCTOR TO COLUMN WITH THRU-WALL CONNECTOR AND ROUTING OVER ROOF EDGE.

FACILITY DIMENSIONS

1. RIDGE HEIGHT: 72' 4"
2. EAVE HEIGHT: 67' 8"
3. WIDTH X LENGTH: 224' 0" X 685' 10"

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

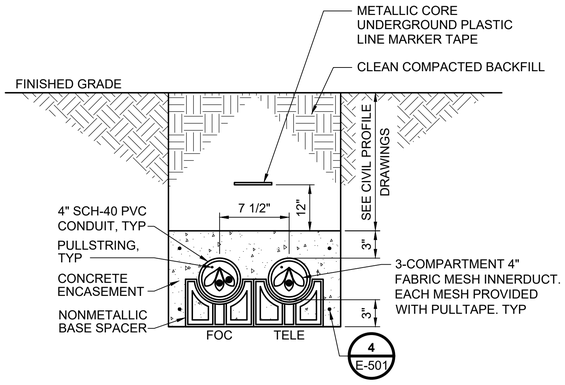
DONALD WILLIAM HATTON
LICENSED
16755
11/16/18
KANSAS
PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

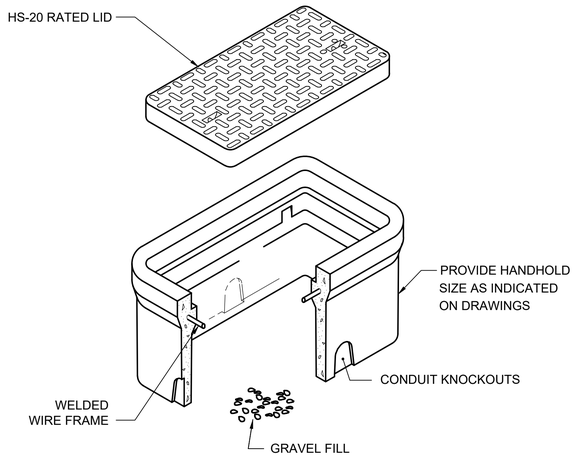
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by C. JOHNSON
Designed by D. HATTON

Project No. 6936
Sheet Name: LIGHTNING PROTECTION
Sheet E-401 of XX
Drawing No. 108M-XXX-XXX

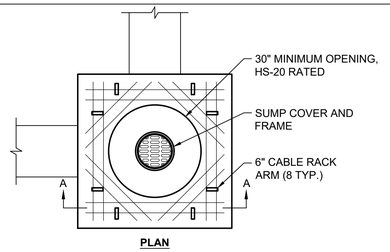
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



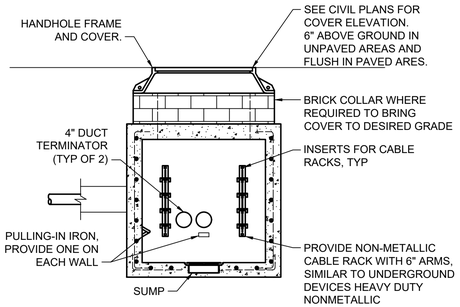
DETAIL 1
CONCRETE-ENCASED DUCTS
NOT TO SCALE



DETAIL 2
TYPICAL HANDHOLE
NOT TO SCALE



PLAN

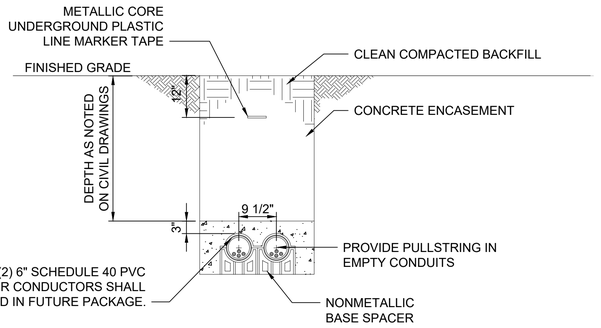


SECTION A-A

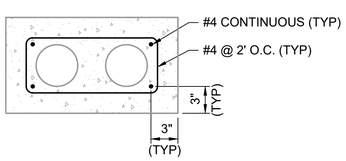
CONSTRUCTION REQUIREMENTS			
CLEAR MINIMUM INSIDE DIMENSIONS FOR INSTALLATION AND MAINTENANCE PURPOSES			
HEIGHT	LENGTH	WIDTH	SUMP DEPTH
4 FEET	4 FEET	4 FEET	3 INCHES
MINIMUM CONCRETE THICKNESS HANDHOLE WALLS, TOP AND FLOOR			
4 INCHES			
MINIMUM REINFORCING			

1. BARS WILL BE A MINIMUM OF NO. 4 ROUND DEFORMED.
2. WALLS AND FLOOR WILL HAVE BARS AT 8 INCHES MAXIMUM ON CENTERS WITH A MINIMUM 12 INCH HOOK AT CORNERS AND INTERSECTIONS.
3. THE TOP WILL HAVE BARS INSTALLED AS SHOWN AT A MINIMUM OF 2 INCHES FROM THE OPENING AND WITH A MINIMUM 4 INCHES SPACING BETWEEN BARS.

DETAIL 5
TYPICAL ELECTRIC AND COMMUNICATIONS DUCTBANK MANHOLE
NOT TO SCALE

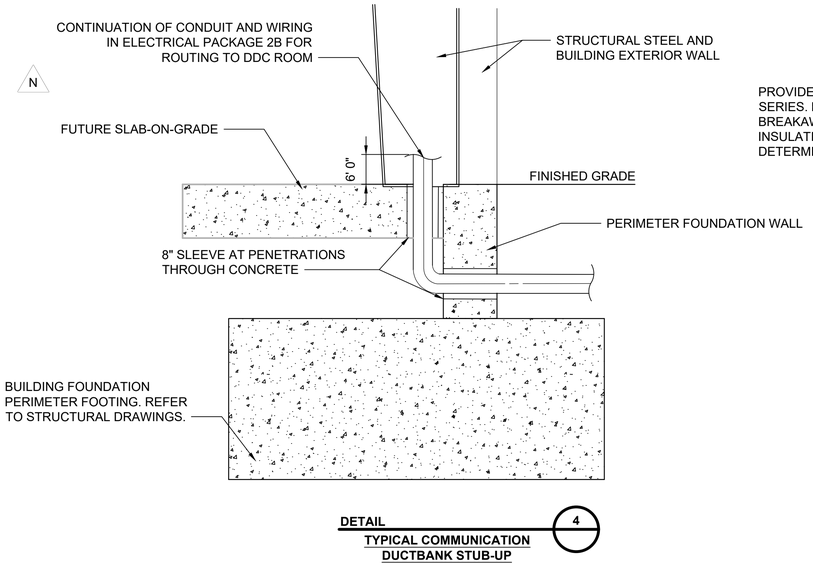


DETAIL 3
POWER DUCTBANK SECTION
NOT TO SCALE

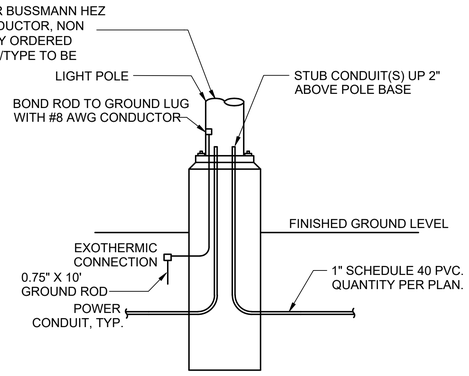


DETAIL 6
DUCTBANK REBAR
NOT TO SCALE

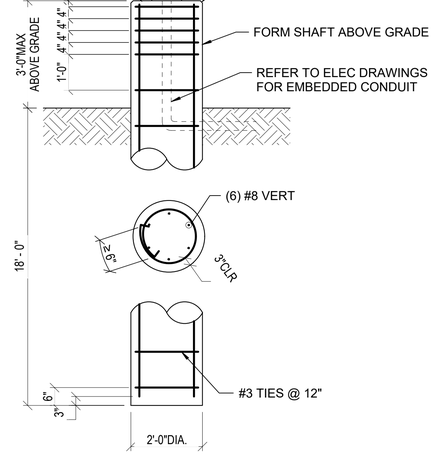
N



DETAIL 4
TYPICAL COMMUNICATION DUCTBANK STUB-UP
NOT TO SCALE



DETAIL 7
SITE LIGHTING POLE FOUNDATION - ELECTRICAL
NOT TO SCALE



NOTE:
LIGHT POLE FOUNDATION DESIGN IS BASED ON THE FOLLOWING CRITERIA NOTIFY ENGINEER IF ACTUAL PRODUCTS DIFFER (BASIS OF DESIGN: EATON, RTS ROUND TAPERED STEEL, RTS9A395).

1. BASIC WIND SPEED: 115 MPH, ASCE 7-10, 90 MPH (ASCE 7-05)
2. DESIGN EXPOSURE CATEGORY: C
3. LIGHT POLE HEIGHT = 40'-0"
4. ROUND LIGHT POLE POLE DIAMETER = 9"
5. LIGHT FIXTURE: ONE (1) FIXTURE WITH EPA = 1.7 FT^2. MAXIMUM OF FOUR (4) FIXTURES PER POLE.
6. CONCRETE F'c: 4500 PSI, REBAR: ASTM A615, Fy = 60 KSI.
7. ANCHOR BOLTS (4 MIN) AND TEMPLATE FURNISHED WITH POLE. ALL ANCHOR BOLTS TO FIT WITHIN THE REINFORCEMENT CAGE. HOT DIP GALVANIZE THE BASE PLATE, ANCHOR BOLTS AND LEVELING NUTS. ANCHOR BOLTS INSTALLED BY CONCRETE SUBCONTRACTOR.

DETAIL 7
SITE LIGHTING POLE FOUNDATION - STRUCTURAL

16NOV2018 - PKG 1A -SITE WORK - REV Z
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

BY	DATE	DESCRIPTION
APPROVED		
DH		
JMC	03/09/2018	PKG 1A SITE WORK - IFC
DH		
CAJ	08/01/18	PKG 1A SITE WORK - REV L
DH		
CAJ	08/22/18	PKG 1A SITE WORK - REV N
DH		
CAJ	11/16/2018	PKG 1A SITE WORK - REV Z
DH		

FIRE PROTECTION REVIEW
APPROVED
NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

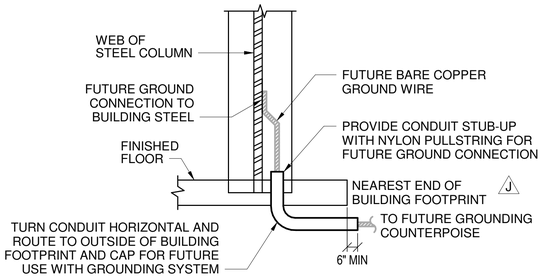
SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS PROFESSIONAL ENGINEER

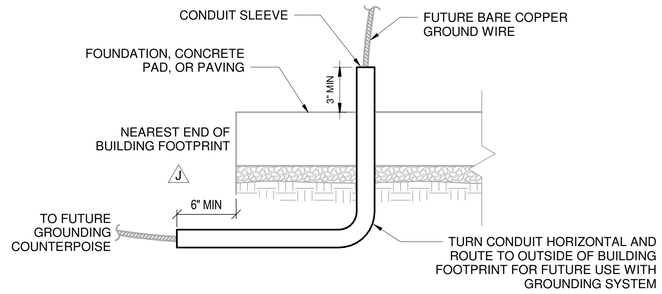
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by J. CHASE | 03/05/2018
Designed by D. HATTON | 03/05/2018

Project No.
6936
Sheet Name:
ELECTRICAL DETAILS
Sheet E-501 of XX
Drawing No.
108M-536-XXX



DETAIL 1

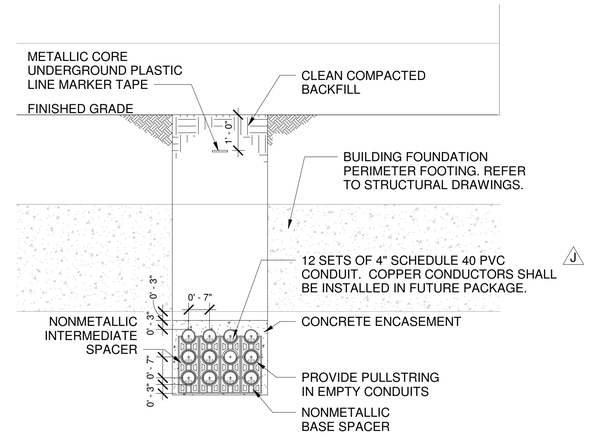
TYPICAL CONDUIT STUB-UP FOR FUTURE STEEL GROUNDING CONNECTION



NOTES:
1. FOR CONCRETE SLAB, FOUNDATION OR PAVING, EXTEND SLEEVE 3" BELOW CONCRETE OR PAVING.
2. PROVIDE 1.5" SCHEDULE 40 PVC SLEEVE.

DETAIL 2

TYPICAL CONDUIT STUB-UP FOR FUTURE GROUNDING CONNECTION

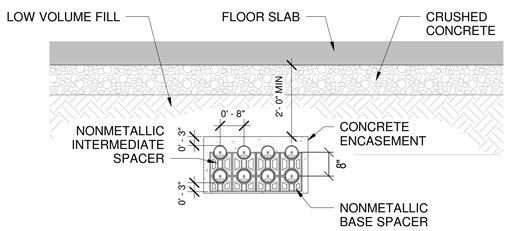


SECTION 3 / EU105

SWITCHGEAR DUCTBANK

0 1' 2' 4'

SCALE IN FEET



GENERAL NOTE:

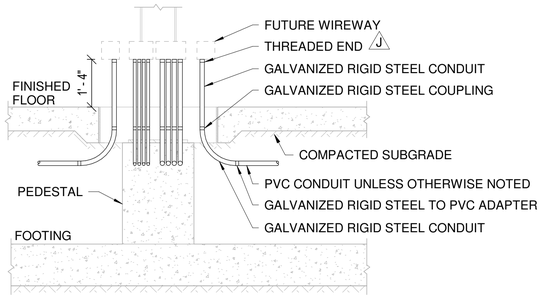
1. PROVIDE CONCRETE ENCASEMENT WHEN FOUR OR MORE CONDUITS AT 4" OR LARGER ARE ROUTED IN PARALLEL. QUANTITIES AND SIZES SHOWN ARE DIAGRAMMATIC ONLY. PROVIDE QUANTITY AND SIZES AS REQUIRED PER UNDERGROUND PLANS.

SECTION 4 / EU105

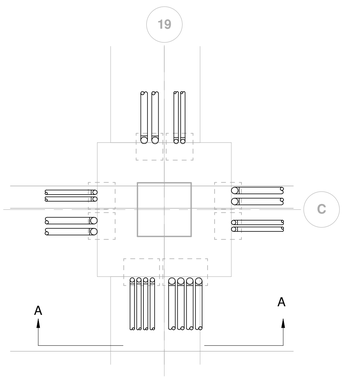
UNDER SLAB DUCTBANK

0 1' 2' 4'

SCALE IN FEET

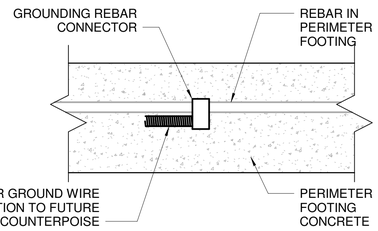


A - A



DETAIL 5 / EU105

TYPICAL CONDUIT STUB-UP AT COLUMNS



NOTES:

1. GROUNDING REBAR CONNECTOR SHALL BE EXOTHERMIC, CALDWELD TYPE RR, OR APPROVED EQUAL.
2. COMBINED LENGTH OF GROUND REBAR WITHIN FOUNDATION SHALL BE A MINIMUM OF 20'. REBAR SHALL BE TIGHTLY WIRED TOGETHER TO ENSURE CONNECTION. REBAR SHALL BE A MINIMUM 1/2" THICKNESS.

DETAIL 6

ELECTRICAL GROUND TO REBAR

16NOV2018 - PKG 2A: FOUNDATIONS & SOG - REV Z

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
J	05/11/18	PKG 2A: FOUNDATION & SOG - REV J	CAJ	DWH
P	07/02/18	PKG 2A: FOUNDATION & SOG - REV P	CAJ	DWH
W	11/02/18	PKG 2A: CONFORMING TO CONSTRUCTION RECORDS	CAJ	DWH
Z	11/16/18	PKG 2A: FOUNDATION & SOG - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON JR. LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON

Drawn by C. JOHNSON

Project No. 6936

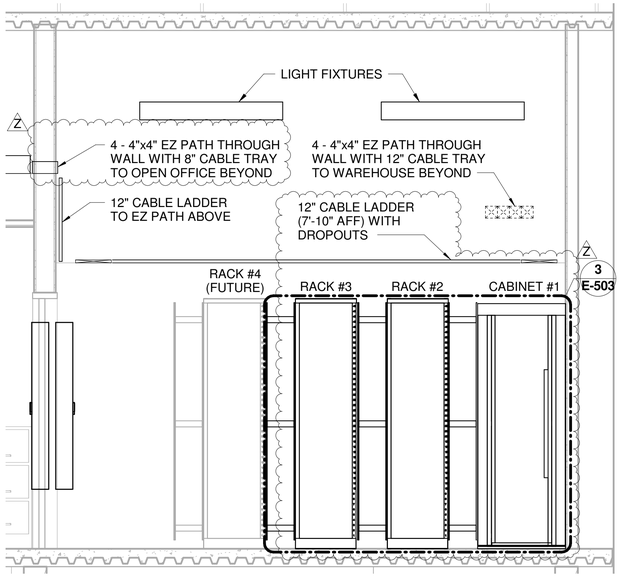
Sheet Name: ELECTRICAL DETAILS

Sheet E-502 of XX

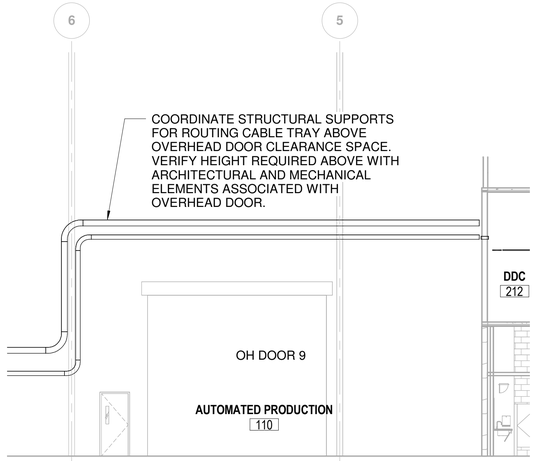
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



SECTION
DDC ROOM RACK ELEVATION 1 E-321



ELEVATION
OH DOOR 9 ELEVATION 2 E-105

ELEVATION
DDC ROOM RACK 1 & 2 ARRANGEMENT 3 E-503

ELEVATION
DDC ROOM 3PL RACK ARRANGEMENT 4 E-321

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

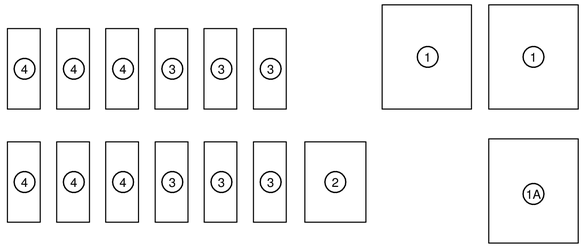
BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

RONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: ELECTRICAL DETAILS ELEVATIONS & SECTIONS
Sheet E-503 of XX
Drawing No. 108M-XXX-XXX



DEMATIC EQUIPMENT GENERAL NOTES:

1. PROVIDE STRUCTURAL STAND FOR EQUIPMENT SHOWN IN THIS AREA.
2. DEMATIC EQUIPMENT SHOWN FOR GENERAL CONNECTIVITY REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL PROVIDE FEEDER TO DEMATIC CONTROL PANELS. CONTROL PANEL PHYSICAL LOCATION TO BE DETERMINED BY DEMATIC.

DEVICE SYMBOL LEGEND:

(1) KITTING AREA PANELS
(1A) DECANT AND TRASH PANEL
(2) BAILER EQUIPMENT
(3) SHUTTLE LIFT CABINET
(4) DMS CONVEYOR CABINETS

ELEVATION 1 / E-101

DEMATIC EQUIPMENT AND COMMUNICATIONS ELEVATION AT COLUMN B-4

DEMATIC EQUIPMENT GENERAL NOTES:

1. PROVIDE STRUCTURAL STAND FOR EQUIPMENT SHOWN IN THIS AREA.
2. DEMATIC EQUIPMENT SHOWN FOR GENERAL CONNECTIVITY REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL PROVIDE FEEDER TO DEMATIC CONTROL PANELS. CONTROL PANEL PHYSICAL LOCATION TO BE DETERMINED BY DEMATIC.

DEVICE SYMBOL LEGEND:

(1) MID POINT POWER RAIL FEED PANELS
(2) MID POINT POWER RAIL FEED PANELS
(3) END OF DMS AISLE POWER DROP PANELS

ELEVATION 2 / E-103

DEMATIC EQUIPMENT AND COMMUNICATIONS ELEVATION AT COLUMN B-13



△	DATE	DESCRIPTION	BY	APPROVED
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON II LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

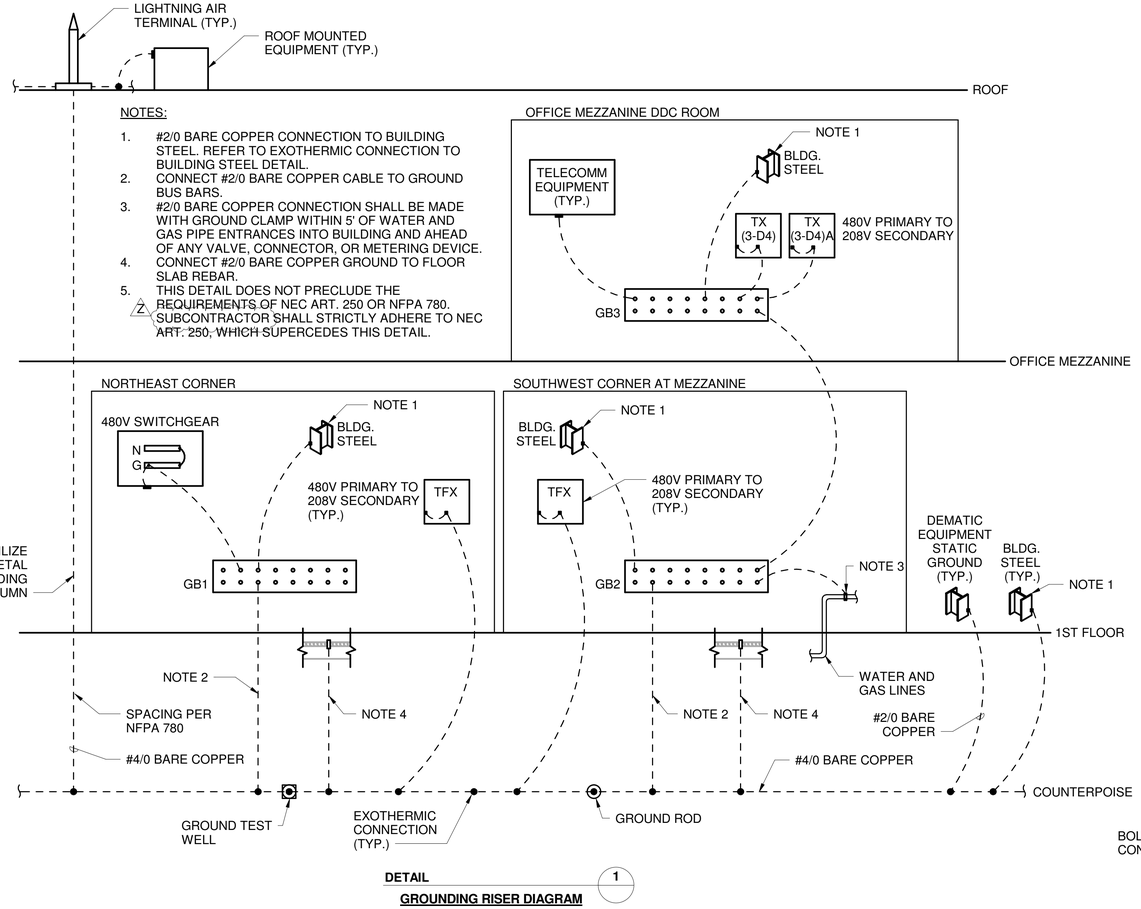
16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by C. JOHNSON
Designed by D. HATTON

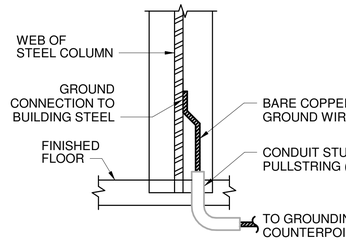
Project No. 6936
Sheet Name: ELECTRICAL DETAILS DEMATIC ELEVATIONS
Sheet E-504 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

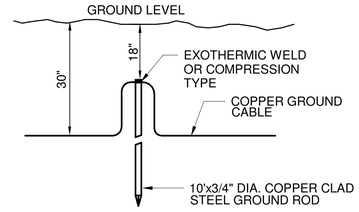
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



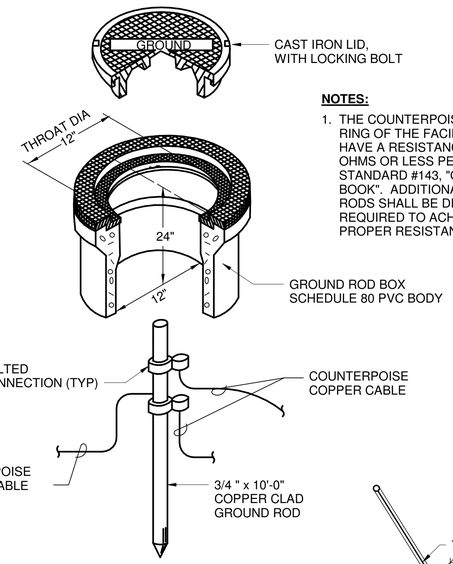
DETAIL 1
GROUNDING RISER DIAGRAM



DETAIL 2
TYPICAL EXOTHERMIC CONNECTION TO BUILDING STEEL

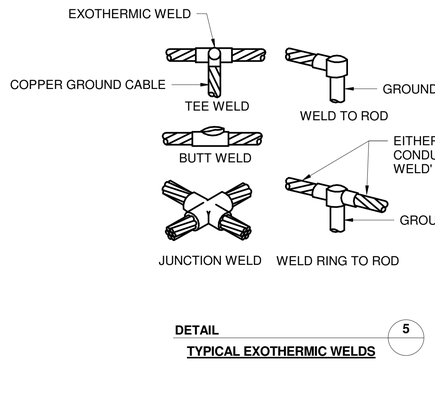


DETAIL 3
TYPICAL GROUND ROD CONNECTION

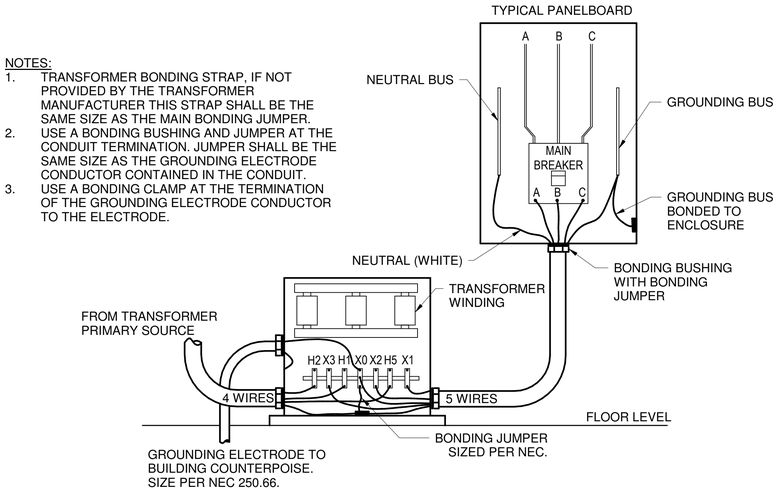


NOTES:
1. THE COUNTERPOISE GROUND RING OF THE FACILITY SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS PER IEEE STANDARD #143, "GREEN BOOK". ADDITIONAL GROUND RODS SHALL BE DRIVEN AS REQUIRED TO ACHIEVE THE PROPER RESISTANCE.

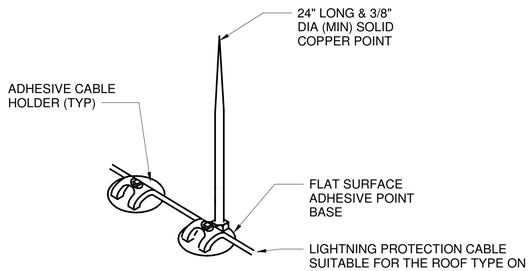
DETAIL 4
TYPICAL GROUND TEST WELL



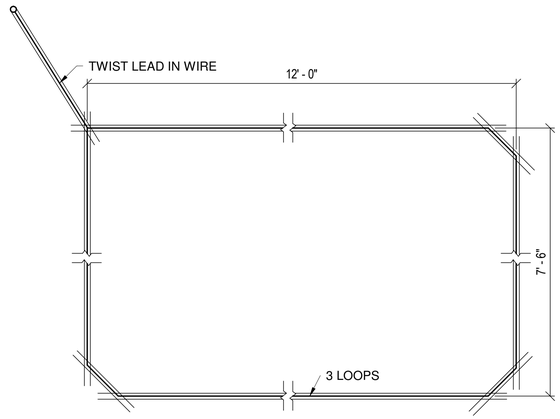
DETAIL 5
TYPICAL EXOTHERMIC WELDS



DETAIL 6
DRY-TYPE TRANSFORMER GROUNDING DETAIL



DETAIL 7
TYPICAL LIGHTNING PROTECTION AIR TERMINAL



NOTES:
1. SAWCUT 1" DEEP x 3/16" WIDE.
2. USE #14 XHHW STRANDED SINGLE CONDUCTOR. TWIST LEAD IN WIRE (5-7 TWISTS PER FOOT). PROVIDE 3 LOOPS AROUND SAWCUT.
3. FILL SAWCUT WITH SEALANT THEN SEAT WIRES INTO SEALANT.

DETAIL 8
VEHICLE DETECTION LOOP

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

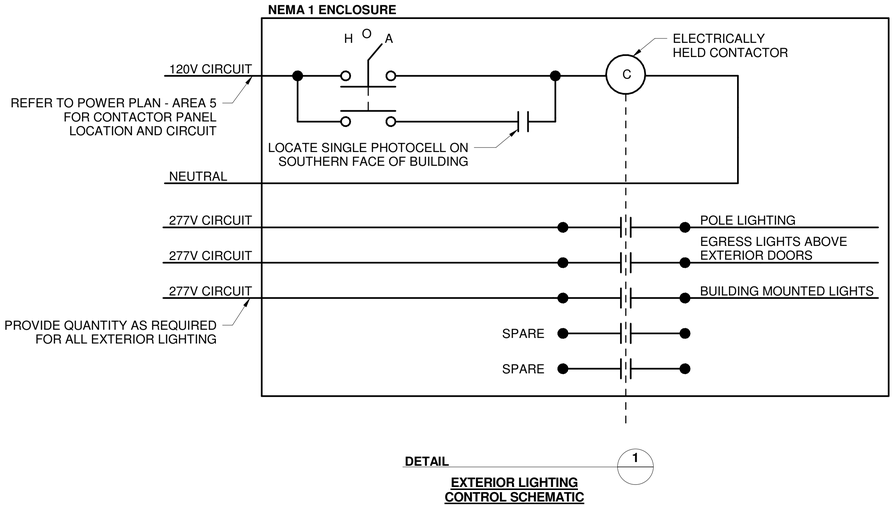
DONALD WILLIAM HATTON LICENSED 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

WICHITA, KS
Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

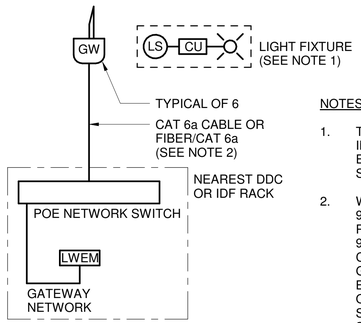
Project No. 6936
Sheet Name: ELECTRICAL DETAILS POWER & GROUNDING
Sheet E-505 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



DETAIL 1

EXTERIOR LIGHTING CONTROL SCHEMATIC

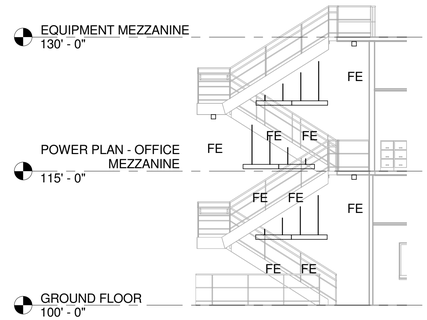


NOTES:

1. TYPICAL FOR LUMAWATT PRO ENABLED INTERIOR LIGHT FIXTURES. REFER TO EMERGENCY HIGHBAY LIGHTING CONTROL SCHEMATIC FOR EGRESS FIXTURES.
2. WHERE GATEWAYS ARE LOCATED WITHIN 90M OF NEAREST DDC OR IDF RACK, PROVIDE CAT6A CABLE. WHERE BEYOND 90M, PROVIDE BOTH FIBER AND CAT6A CABLE AND PROVIDE A LOCAL SWITCH AT GATEWAY LOCATION. LOCAL SWITCH SHALL BE PROVIDED BY CONTRACTOR BASED ON OWNER'S PREFERRED EQUIPMENT. FIBER SHALL BE USED FOR DATA AND CAT 6A SHALL BE USED AS POWER IF BEYOND 90M.

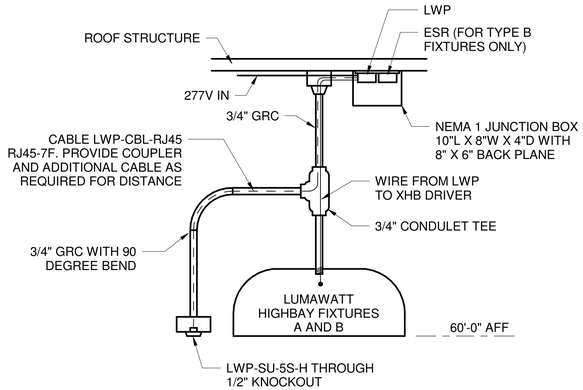
DETAIL 2

LUMAWATT LIGHTING CONTROL SCHEMATIC



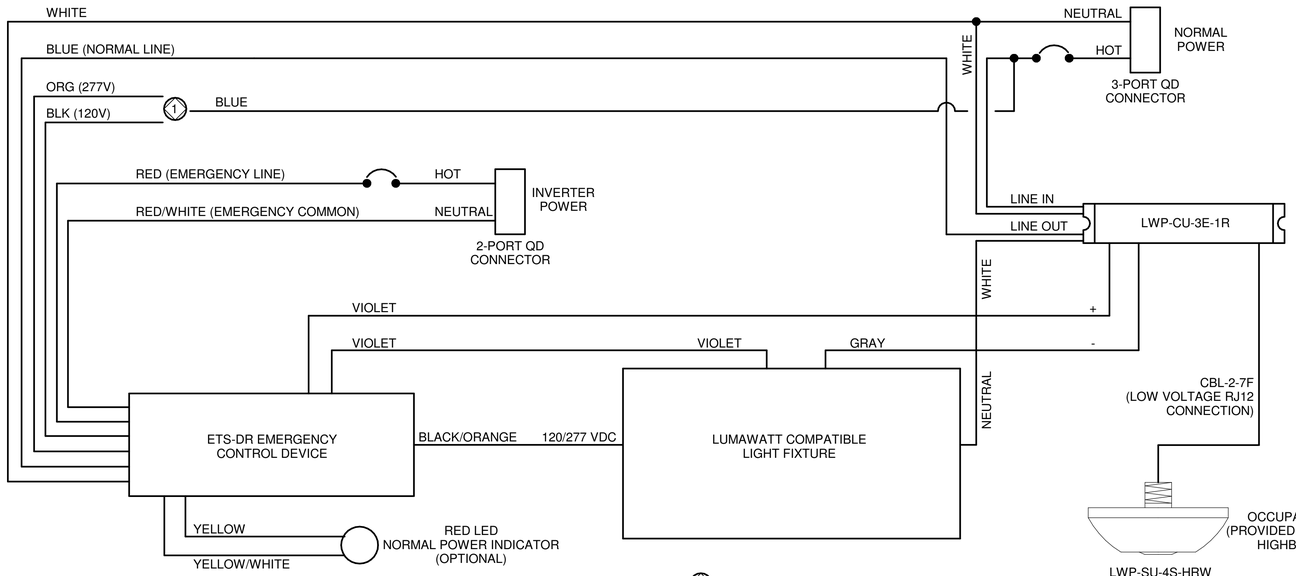
SECTION 3 **E-205**

INDOOR STAIRWELL LIGHTING SECTION



DETAIL 5

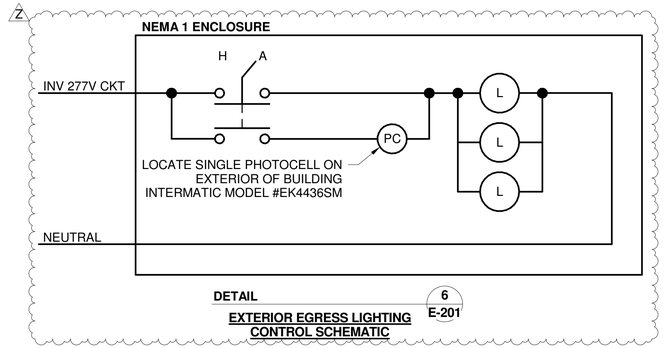
LIGHT FIXTURE A AND B MOUNTING DETAIL



1 NORMAL POWER SENSE. SELECT PROPER VOLTAGE LEAD. CAP UNUSED LEAD.

DETAIL 4

EMERGENCY HIGHBAY LIGHTING CONTROL SCHEMATIC



DETAIL 6 **E-201**

EXTERIOR EGRESS LIGHTING CONTROL SCHEMATIC

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON JR. LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Designed by D. HATTON

Drawn by C. JOHNSON

Project No. 6936

Sheet Name: ELECTRICAL DETAILS LIGHTING

Sheet E-506 of XX

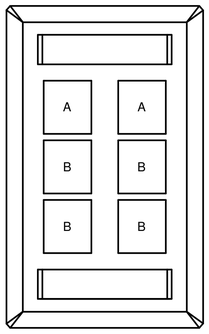
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MODULAR JACK AND CABLING SCHEDULE					
APPEARANCE	DESIGNATOR	MODULAR JACK	COLOR	CABLING	COLOR
	A	CAT 6A RJ-45 NON-KEYED DATA/VOIP	IVORY	4-PAIR CATEGORY 6A UTP	SEE NOTE BELOW
	B	BLANK INSERT	IVORY	NOT APPLICABLE	SEE NOTE BELOW
	C	CAT 6A RJ-45 NON-KEYED LEGACY TELEPHONE	IVORY	4-PAIR CATEGORY 6A UTP	SEE NOTE BELOW
	D	1-DUPLEX SC PORT KEYED	IVORY	2-STRAND SM FO CABLE	SEE NOTE BELOW
	E	1-DUPLEX SC PORT KEYED	IVORY	2-STRAND MM FO CABLE	SEE NOTE BELOW
Z CAT6A CABLE JACKET COLOR (MATCH CABLE, JACKS, AND PATCH CABLE) 3PL CABLE: GRAY SHIELDED CCTV CAMERA: PURPLE OTHER: YELLOW (DATA, PHONE, WAP, ETC.)					

DETAIL 2

COMM OUTLET SCHEDULE

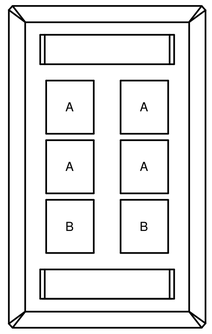


▼1 COMMUNICATIONS WALL FACEPLATE

▮1 FLOORBOX WITH COMMUNICATIONS FACEPLATE

DETAIL 3

COMM OUTLET TYPE 1

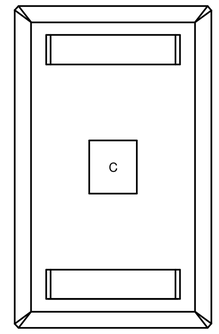


▼2 COMMUNICATIONS WALL FACEPLATE

▮2 FLOORBOX WITH COMMUNICATIONS FACEPLATE

DETAIL 4

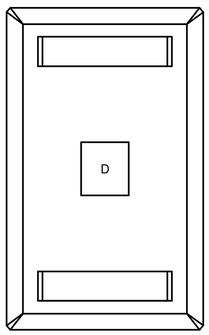
COMM OUTLET TYPE 2



▼3 COMMUNICATIONS WALL FACEPLATE

DETAIL 8

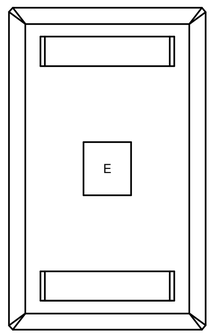
COMM OUTLET TYPE 3



▼4 COMMUNICATIONS WALL FACEPLATE

DETAIL 5

COMM OUTLET TYPE 4

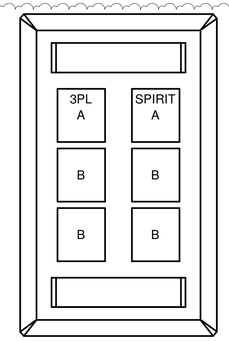


▼5 COMMUNICATIONS WALL FACEPLATE

DETAIL 6

COMM OUTLET TYPE 5

Z



▼2 COMMUNICATIONS WALL FACEPLATE WIRING TO 3PL AND SPIRIT RACKS

DETAIL 7

COMM OUTLET TYPE 2 3PL/SPIRIT

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ

PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON III — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by D. HATTON

Drawn by C. JOHNSON

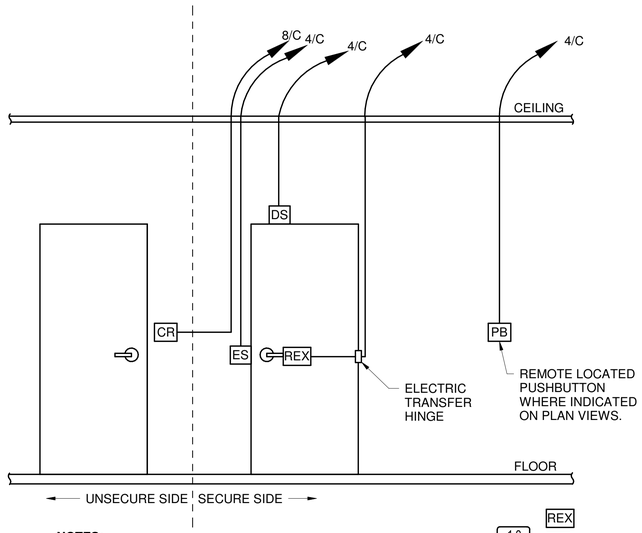
Project No. 6936

Sheet Name: ELECTRICAL DETAILS SPECIAL SYSTEMS

Sheet E-507 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



NOTES:

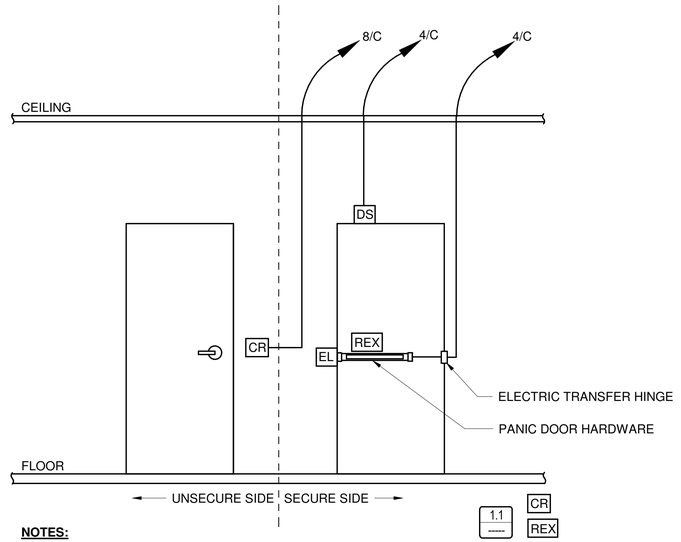
1. MIRROR DEVICE LAYOUT FOR OPPOSITE DOOR SWING.
2. CONNECTION TO THE REQUEST TO EXIT SHALL BE MADE THROUGH THE ELECTRIC TRANSFER HINGE

DOOR OPERATION:

1. ESS SHALL CONTROL LOCK POWER TO UNLOCK DOOR

1.0 → REX, CR, PB, DS, ES

DETAIL 1
1.0 - ACCESS SINGLE DOOR



NOTES:

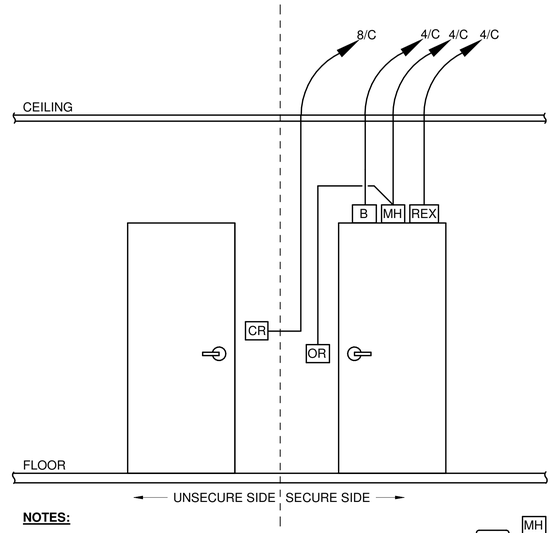
1. MIRROR DEVICE LAYOUT FOR OPPOSITE DOOR SWING
2. CONNECTION TO THE ELECTRIFIED LOCKSET(S) SHALL BE MADE THROUGH THE ELECTRIC TRANSFER HINGE

DOOR OPERATION:

1. ESS SHALL CONTROL LOCK POWER TO UNLOCK DOOR

1.1 → CR, REX, DS, EL

DETAIL 2
1.1 - ALARM SINGLE DOOR EMERGENCY EXIT ONLY



NOTES:

1. MIRROR DEVICE LAYOUT FOR OPPOSITE DOOR SWING

DOOR OPERATION:

1. ESS SHALL CONTROL LOCK POWER TO UNLOCK DOOR

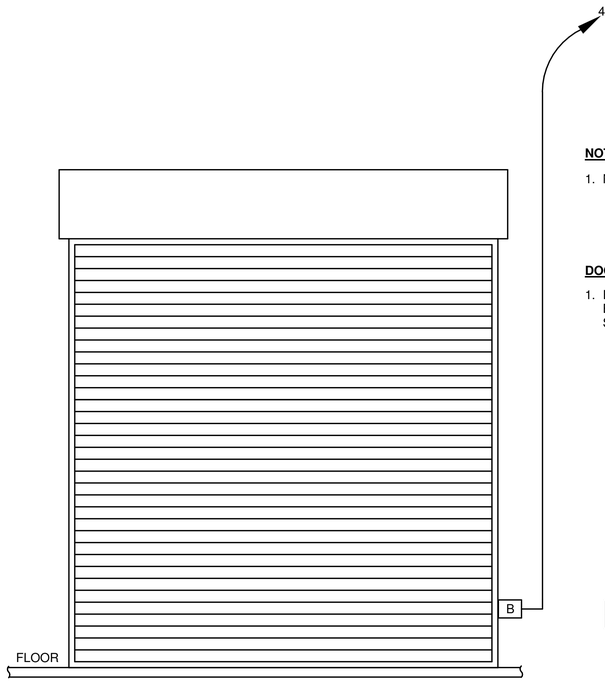
1.2 → MH, DS, CR, OR, REX

DETAIL 3
1.2 - ALARM/ACCESS SINGLE DOOR

ACCESS DOOR HARDWARE SCHEDULE	
SYMBOL	DESCRIPTION
CR	BADGE READER: HID CORPORATION MINI-PROX #5365EKP00. MOUNT AT 48" AFF, VERIFY WITH SPIRIT. (NO SUBSTITUTION)
B	DOOR POSITION SWITCH: 30V, AC OR DC, 0.25A SWITCHING CURRENT, CONTAINING TWO SINGLE-POLED DOUBLE THROW REED SWITCHES, MAGNETIC FIELD TAMPER RESISTANT, WIDE GAP (3/4" TO 2-1/2"), FACTORY COMPENSATED FOR EFFECTS OF STEEL, SUITABLE FOR OUTSIDE GATE USE, ANODIZED ALUMINUM ENCLOSURE, HERMETICALLY SEALED AND ENCAPSULATED IN POLYURETHANE, NEMA 4X, SENT WITH 3 FEET LONG FLEX STAINLESS STEEL ARMORED CABLE WITH # 22 WIRE, SUITABLE FOR -20 - 150 DEGREES F. GE SENTRON #2707 AD-L (NO SUBSTITUTION).
ES	DOOR ELECTRIC STRIKE: SURFACE MOUNTED, WINDSTORM RATED, CONTINUOUS DUTY 12 OR 24VDC (RESISTANCE 24/96 OHMS, 0.5/0.25 AMPS RESPECTIVELY), STAINLESS STEEL, 120 FT-LBS DYNAMIC STRENGTH, 2,000 LBS STATIC STRENGTH, 1 MILLION CYCLES ENDURANCE, FIELD SELECTABLE FAIL SECURE/FAIL SAFE, SEPARATE BASE AND DECORATIVE COVER FOR EASY ADJUSTMENTS, INSTALLS IN METAL OR WOOD FRAMES. HES #9600-12/24-630.
MH	MAGNETIC HOLD
DS	DOOR POSITION SWITCH: 3/4" HERMETICALLY SEALED REED SWITCH IN DOOR HEADER. GE INTERLOGIX 1078 SERIES OR EQUIVALENT.
PB	REMOTE PUSHBUTTON OVERRIDE
REX	REQUEST TO EXIT
OR	OVERRIDE SWITCH
EL	ELECTRIFIED LOCKSET
8/C	CABLE TO BADGE READER: 8 CONDUCTOR #22 AWG COPPER STRANDED WIRE WITH OVERALL SHIELD AND JACKET CABLE, PLENUM RATED, FROM WEST PENN #253271B. (0.027 SQUARE INCH CROSS SECTION) ROUTE CABLE IN CONDUIT. COORDINATE WITH ARCHITECT SPECIFIED DEVICES AND WIRE DEVICE IN THE FIELD.
4/C	DOOR STRIKE OR MAGNETIC DOOR SWITCH CABLE: 4 CONDUCTOR STRANDED #18 AWG, SHIELDED WITH #20 AWG DRAIN WIRE. BELDEN #9418. (0.047 SQUARE INCH CROSS SECTION) ROUTE CABLE IN CONDUIT. COORDINATE WITH ARCHITECT SPECIFIED DEVICES AND WIRE DEVICE IN THE FIELD.

ACCESS CONTROL SYSTEM RESPONSIBILITY MATRIX	
ACCESS CONTROL HEAD END, TEMA SERVER, A08 DOOR/SERVER INTERFACE	HFHI
SECURITY SYSTEM HEAD END PROGRAMMING, GRAPHICS, POINTS PROGRAMMING	HFHI
WIRE TERMINATIONS AT SECURITY PANEL	HFHI
BACKBOXES / CABLE TRAY / CONDUIT/CABLING	CFCI
BADGE READER / BALANCED MAGNETIC SWITCH (DOOR CONTACT) DEVICES	HFHI
WIRE TERMINATIONS AT DEVICES	CFCI

CFCI - CONTRACTOR FURNISH CONTRACTOR INSTALL
HFCI - HONEYWELL FURNISH CONTRACTOR INSTALL
HFHI - HONEYWELL FURNISH HONEYWELL INSTALL



NOTES:

1. NONE

DOOR OPERATION:

1. ESS SHALL MONITOR BALANCED MAGNETIC SWITCH.

2.0 → B

DETAIL 4
2.0 - ALARM OVERHEAD DOOR

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

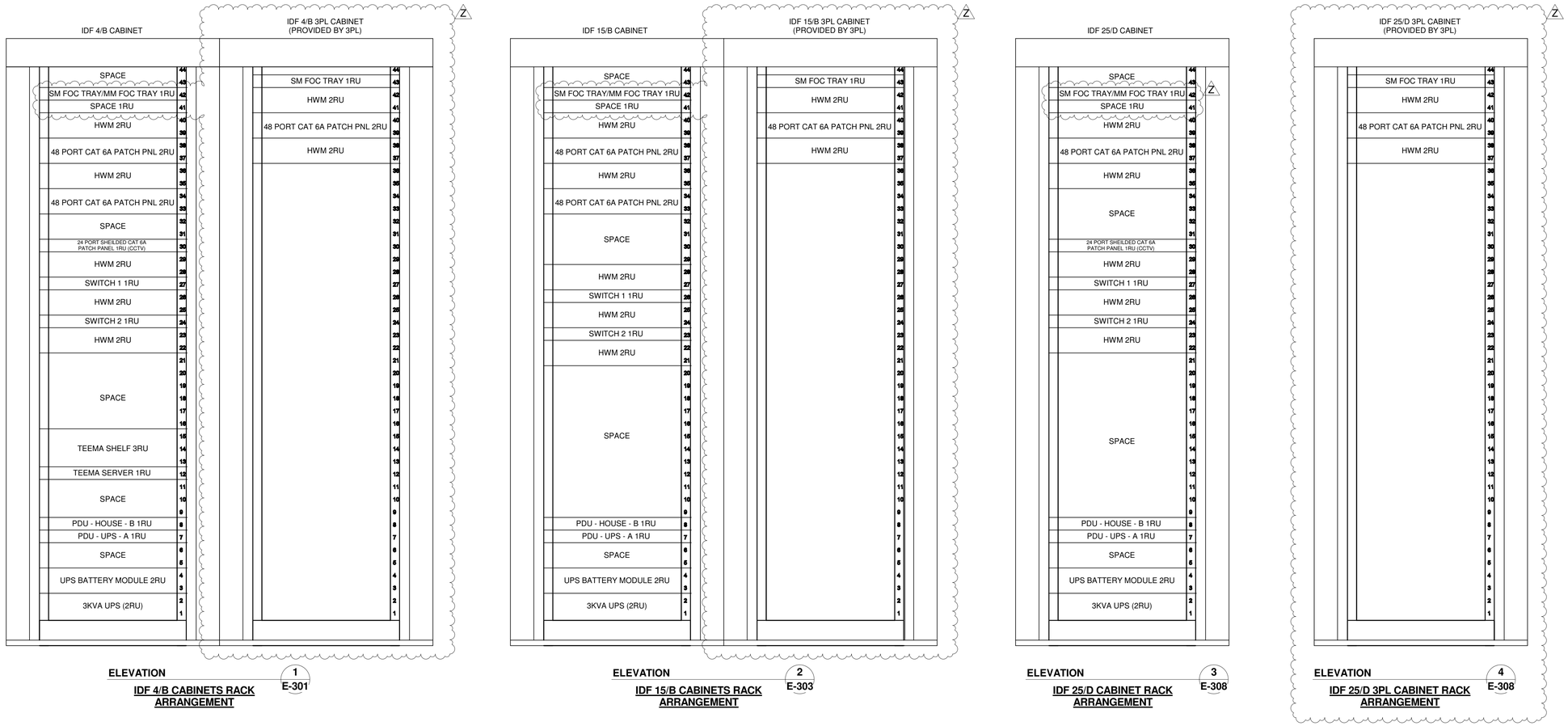
SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED Architect 16755 11/16/18 KANSAS PROFESSIONAL ENGINEER

WICHITA, KS
AUTOMATED WAREHOUSE
BLDG-1-338G
Facilities Engineering
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: ELECTRICAL DETAILS SPECIAL SYSTEMS
Sheet E-508 of XX
Drawing No. 108M-XXX-XXX



ELEVATION 1 **E-301**
IDF 4/B CABINETS RACK ARRANGEMENT

ELEVATION 2 **E-303**
IDF 15/B CABINETS RACK ARRANGEMENT

ELEVATION 3 **E-308**
IDF 25/D CABINET RACK ARRANGEMENT

ELEVATION 4 **E-308**
IDF 25/D 3PL CABINET RACK ARRANGEMENT

UNIT	UNIT MEASURE		RESPONSIBILITY
		IDF CABINETS 4/B, 15/B, 25/D	
UNIT	UNIT MEASURE		RESPONSIBILITY
3	EA	4 POST CABINET, NEMA 12. 45 RU. 78.7" X 31.5" X 31.5". RITTAL TS8, 9969.894.	CFCI
6	EA	SIDE PANELS, SCREW FASTENED, CARBON STEEL FOR TS, TS IT. RITTAL 8108.235	CFCI
2 IN 4/B, 2 IN 15/B, 1 IN 25/D	EA	TOOLLESS BRUSH RING. RITTAL 9961.334	CFCI
2 IN 4/B, 2 IN 15/B, 1 IN 25/D	EA	TOOLLESS SNAP RING. RITTAL 9961.326	CFCI
3	EA	3" VERTICAL MANAGER RING. LEVITON 49260-MR3.	CFCI
		*****FAN KIT*****	
3	EA	TOPTHERM FILTER FAN UNITS. NEMA 12. PROVIDE RHEOSTAT FOR SPEED CONTROL. INSTALL HIGH ON SIDE OF CABINET. RITTAL 3244.110.	CFCI
3	EA	OUTLET FILTER STANDARD. FOR INTAKE AIR, INSTALL LOW ON SIDE PANEL. RITTAL 3243.200	CFCI
		*****UPS AND PDU*****	
3	EA	EATON 9PX3000RTN, 3 KVA 2 RU, INCOMING PLUG L5-30P.	CFCI
6	EA	BATTERY EXTENSION MODULES 2 RU	CFCI
3	EA	PDU-TRIPPLITE PDU1220. (1) FRONT AND (12) REAR NEMA 5-15R. PLUG INTO UPS OUTPUT.	CFCI
3	EA	PDU-TRIPPLITE PDU1220. (1) FRONT AND (12) REAR NEMA 5-15R. PLUG INTO NORMAL HOUSE POWER NEMA 5-20R RECEPTACLE.	CFCI
		*****CAT 6A TERMINATION*****	
1 IN 4/B, 1 IN 25/D	EA	FLAT PATCH PANEL. SHIELDED QUICKPORT. 24-PORT, 1RU. CABLE MANAGEMENT BAR INCLUDED. LEVITON 4S255-S24	CFCI
2 IN 4/B, 2 IN 15/B, 1 IN 25/D	EA	FLAT PATCH PANEL. UNSHIELDED QUICKPORT, 48-PORT 2 RU, CABLE MANAGEMENT BAR INCLUDED. LEVITON 49255-H48	CFCI
15	EA	5-RING HORIZONAL MANAGER, 2 RU, 4" METAL RINGS. LEVITON 49253-BCM	CFCI
3	EA	SM FIBER OPTIC TRAY. 1 RU. 1000I SDX DISTRIBUTION AND SPLICE ENCLOSURE, EMPTY, WITH SLIDING TRAY. ACCEPTS UP TO 3 SDX ADPATER PLATES OR 3 SDX MTP CASSETTES AND ACCEPTS UP TO 3 SPLICE TRAYS.LEVITON 5R1UM-S03.	CFCI
3	EA	MM FIBER OPTIC TRAY. 1 RU	CFCI
3	EA	OPT-X ADAPTOR PLATE, SM BLUE, 6 FIBERS, DUPLEX SC. LEVITON 5S100-6LC	CFCI
3	EA	LGX 6-PACK PLATE W/ SC DUPLEX CONNECTORS (BLUE) ZIRCONIA CERAMIC SLEEVE, 12 FIBERS, WHITE. LEVITON APLW6-SLS	CFCI
6	EA	CABLE CLAMP KIT. SINGLE GROMMET FOR 0.31 TO 1.13" DIAMTER CABLE, MULTIPLE ANGLE POSITIONS. LEVITON 5RCMP-KIT.	CFCI
1 IN 4/B	EA	RACK SHELF. 1 RU, CHATSWORTH 15245-703	CFCI
		*****MARKING / LABELING*****	
AS REQ	EA	RIBBONS: BLACK ON WHITE, 3/8" WIDE, EXTRA-STRENGTH ADHESIVE, BROTHER #TZS-121	CFCI
AS REQ	EA	RIBBONS: BLACK ON WHITE, 1/2" WIDE, FLEXIBLE ADHESIVE, BROTHER #TZFX-231	CFCI
AS REQ	EA	RIBBONS: BLACK ON WIDE, 3/4" WIDE, FLEXIBLE ADHESIVE. BROTHER # 5ZFX-241	CFCI
AS REQ	EA	ONE WRAP CABLE TIE, CONTINUOUS ROLL, VELCRO COMPANIES, 189645	CFCI
		*****ACTIVE EQUIPMENT*****	
2 IN 4/B, 2 IN 15/B, 2 IN 25/D	EA	CAT 6A SWITCH. CISCO 9300. 60 WATT POE. 1100 W POWER SUPPLY. 48 PORT. 1 RU.	OFOI
AS RQD		CAT 6A PATCH CORDS FOR IN RACK CONNECTIVITY. UNSHIELDED	CFOI
AS RQD		CAT 6A PATCH CORDS FOR IN RACK CONNECTIVITY. SHIELDED. FOR POE CCTV	CFOI
AS RQD		FOC PATCH CORDS FOR IN RACK CONNECTIVITY	CFOI

RESPONSIBILITY LEGEND

OFOI	OWNER FURNISH / OWNER INSTALL
CFCI	CONTRACTOR FURNISH / CONTRATOR INSTALL
OFCI	OWNER FURNISH / CONTRACTOR INSTALL
CFOI	CONTRACTOR FURNISH / OWNER INSTALL

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

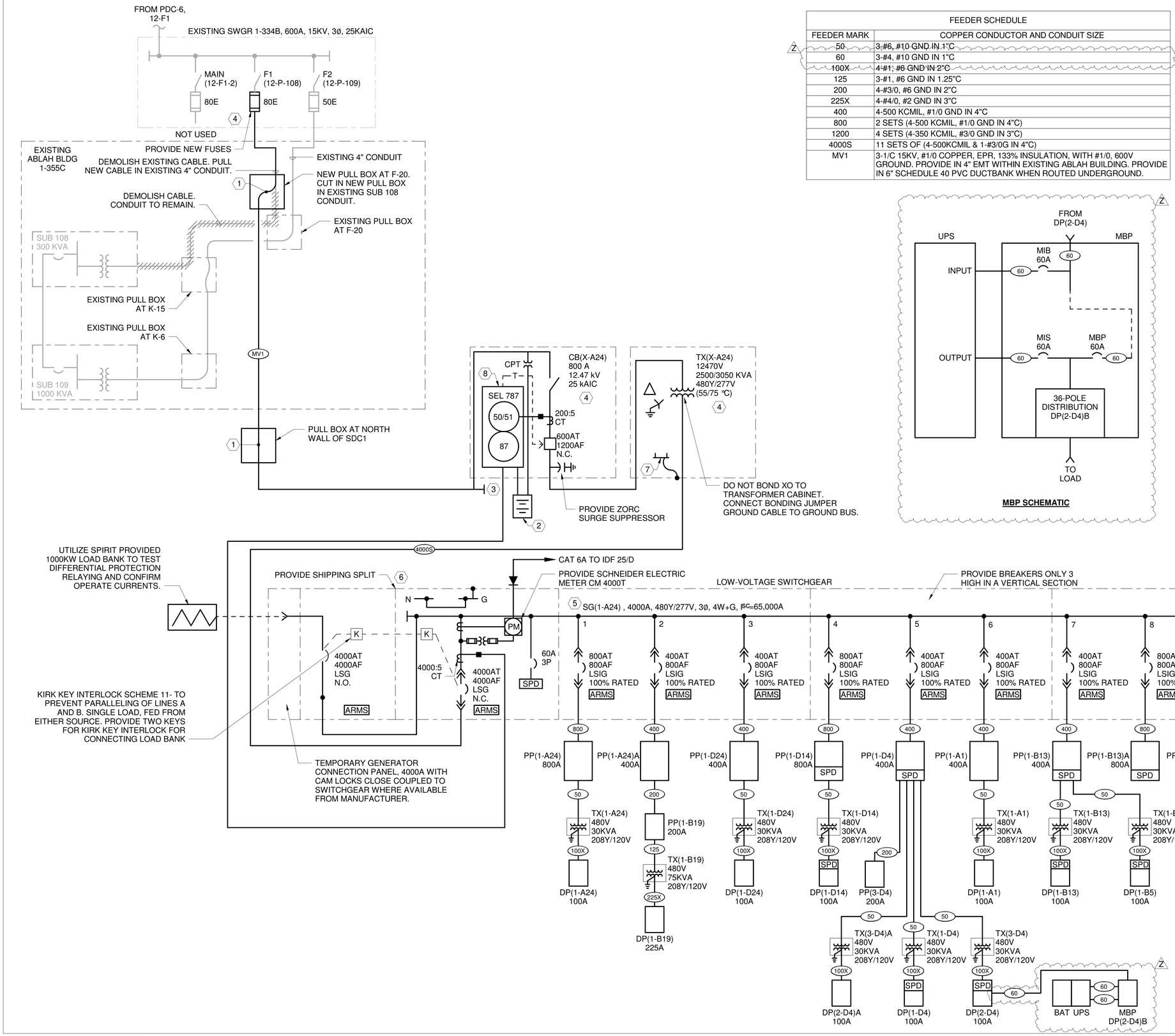
16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G

Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Z
Sheet Name: IDF CABINET RACK ARRANGEMENTS
Sheet E-509 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



FEEDER SCHEDULE	
FEEDER MARK	COPPER CONDUCTOR AND CONDUIT SIZE
50	3-#6, #10 GND IN 1"C
60	3-#4, #10 GND IN 1"C
100X	4-#1, #6 GND IN 2"C
125	3-#1, #6 GND IN 1.25"C
200	4-#3/0, #6 GND IN 2"C
225X	4-#4/0, #2 GND IN 3"C
400	4-500 KCMIL, #1/0 GND IN 4"C
800	2 SETS (4-500 KCMIL, #1/0 GND IN 4"C)
1200	4 SETS (4-350 KCMIL, #3/0 GND IN 3"C)
4000S	11 SETS OF (4-500KCMIL & 1-#3/0G IN 4"C)
MV1	3-1/C 15KV, #1/0 COPPER, EPR, 133% INSULATION, WITH #1/0, 600V GROUND. PROVIDE IN 4" EMT WITHIN EXISTING ABLAH BUILDING. PROVIDE IN 6" SCHEDULE 40 PVC DUCTBANK WHEN ROUTED UNDERGROUND.

MBP SCHEMATIC

GENERAL NOTES

1. SEE SHEET E-005 FOR POWER DEMAND AND STANDBY LOAD CALCULATIONS.

NOTES BY SYMBOL "⬡"

1. EXPECTED 15KV CABLE SPLICE IN PULL BOX.
2. PROVIDE INTERIOR LOCATED BATTERY CABINET, NEMA 1, FOR RELAY AND 15KV BREAKER OPERATION. 48VDC WITH AN AMP HOUR MINIMUM TO BE DETERMINED. BASIS OF DESIGN: ENERSYS G26EP. PROVIDE WITH RACK, RACK ACCESSORIES, AND BATTERY CHARGERS. BATTERY CHARGER TO BE POWERED FROM 15KV CPT'S.
3. AT NORTH SIDE OF WAREHOUSE, SPLIT THE 6" DUCTBANK TO A FUTURE ADJACENT 15KV SWITCH CUBICLE. ROUGH CONDUIT IN ABOVE SLAB AND CAP.
4. PROVIDE AB CHANCE GROUNDING BALL STUD AT 15KV CABLE TERMINATIONS. PROVIDE INSULATING CAP.
5. 480V FEEDER BREAKER TRIP UNIT TO PROVIDE GRAPHICAL READOUT FOR DEMAND AND POWER PARAMETERS. DOES NOT REQUIRE COMMUNICATION TO SCHNEIDER METER. FOR LOCAL DISPLAY ONLY.
6. GENERATOR BREAKER MAY BE CONFIGURED AS A MAIN IN FUTURE.
7. PROVIDE GROUND BUS IN SECONDARY COMPARTMENT. 24"L x 4"H x 1/4" WITH STANDOFF ISOLATORS.
8. TRANSFORMER DIFFERENTIAL PROTECTION RELAY. PROVIDE SEL 787 RELAY WITH 50/51 AND 87 PROGRAMMED AND COORDINATED TO REDUCE ARC FLASH CURRENT ON LV SWITCHGEAR MAIN. PROVIDE SUFFICIENT INPUT/OUTPUT FOR ARC FLASH REDUCTION SWITCH/LIGHT AND PROGRAM ACCORDINGLY. TEST LINKS ARE NOT REQUIRED.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

WILLIAM HATTON — LICENSED PROFESSIONAL ENGINEER — 16755 — 11/16/18 — KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: ELECTRICAL ONE-LINE DIAGRAM
Sheet E-601 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL	MOUNTING	LAMP INFORMATION				VOLTAGE	POLES	DESIGN LOAD	DESCRIPTION
				TYPE	WATTAGE	COLOR TEMP	LUMENS				
A	EATON	XHB-LD1-85-W-V2-L850-MM-BLK	PENDANT MOUNTED	LED	678	5000 K	87170 lm	277 V	1	746 VA	LED HIGH BAY PENDANT MOUNTED AT 60'-0" AFF UNLESS OTHERWISE NOTED AND PROVIDE WITH SAFETY CHAIN. PROVIDE 3/4" GRC FOR FIXTURE PENDANT MOUNT. PROVIDE ACCESSORY JUNCTION BOX NEMA 1 10" X 8" X 4" WITH BACK PANEL WITH SCREW COVER. MOUNT LWP CONTROL MODULE IN BOX. J-BOX TO BE MOUNTED ADJACENT TO STEM MOUNT AT FIXTURE PENDANT SUSPENSION POINT. PROVIDE 3/4" CONDULET TEE IN PENDANT MOUNT STEM. PROVIDE 3/4" GRC FOR SUPPORTING OCCUPANCY SENSOR ADJACENT TO LIGHT FIXTURE. PROVIDE FIXTURE MOCKUP WITH CONTROLS AND POWER OUTAGE SIMULATION.
B	EATON	XHB-LD1-85-EW-V2-L850-MM-BLK	PENDANT MOUNTED	LED	678	5000 K	87170 lm	277 V	1	746 VA	LED HIGH BAY PENDANT MOUNTED AT 60'-0" AFF UNLESS OTHERWISE NOTED AND PROVIDE WITH SAFETY CHAIN. PROVIDE 3/4" GRC FOR FIXTURE PENDANT MOUNT. PROVIDE ACCESSORY JUNCTION BOX NEMA 1 10" X 8" X 4" WITH BACK PANEL WITH SCREW COVER. MOUNT LWP CONTROL MODULE IN JUNCTION BOX NEXT TO FIXTURE. FOR EMERGENCY FIXTURE "BE" MOUNT LWP CONTROL MODULE AND EMERGENCY SHUNT RELAY IN JUNCTION BOX NEXT TO FIXTURE.
C1	EATON	APLX7RG7RBK	CEILING, SURFACE, WALL	RED LED	1.74	3200 K	258 lm	277 V	1	2 VA	LED EXIT SIGN, MOUNTED AT 8'-0" AFF FIELD CONFIGURED FOR RED EXIT LIGHTING
C2	EATON	APLX7RG7RBK	CEILING, SURFACE, WALL	GREEN LED	1.74	3200 K	258 lm	277 V	1	2 VA	LED EXIT SIGN, MOUNTED AT 8'-0" AFF FIELD CONFIGURED FOR GREEN EXIT LIGHTING
D	EATON	GLEON-AF-05-LED-E1-T4W-BK-WM-LWR	WALL	LED	279	4000 K	29543 lm	277 V	1	310 VA	WALL MOUNTED AREA LIGHT WITH FORWARD THROW WIDE OPTICS MOUNTED AT 30'-0" AFF UNLESS OTHERWISE NOTED
E	EATON	22CZ-LD5-34-UNV-L840-CD1-U	CEILING, RECESSED	LED	29.4	4000 K	2400 lm	277 V	1	33 VA	2' X 2' VOLUMETRIC TROFFER, MINIMUM 80% OPTICAL EFFICIENCY, PROVIDED WITH DRYWALL FRAME KIT WHERE INSTALLED IN GYPSUM BOARD CEILINGS. PROVIDE ESR RELAY FOR EGRESS FIXTURES TO SHUNT DIMMING CAPABILITY UPON LOSS OF NORMAL POWER.
F	EATON	4SRL-LD5-41SL-LW-UNV-L840-CD1-U	CEILING, SURFACE, WALL	LED	33.7	4000 K	4188 lm	277 V	1	38 VA	LED SRL STRIP LIGHT, HIGHLY REFLECTIVE FINISH, FROSTED LENS, PROVIDED WITH ESR RELAY FOR EGRESS FIXTURES TO SHUNT DIMMING CAPABILITY UPON LOSS OF NORMAL POWER.
G1	EATON	2SWLED-8SL-LW-UNV-L840-CD1-U	WALL SURFACE	LED	9	4000 K	914 lm	277 V	1	10 VA	LED DIRECT WALL MOUNTED 2' STRIP LIGHT, VANITY, FROSTED LENS MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED
G2	EATON	4SWLED-16SL-LW-UNV-L840-CD1-U	WALL SURFACE	LED	14.3	4000 K	1626 lm	277 V	1	16 VA	LED DIRECT WALL MOUNTED 4' STRIP LIGHT, VANITY, FROSTED LENS MOUNTED AT 8'-0" AFF UNLESS OTHERWISE NOTED
H	EATON	24CZ-LD5-50-UNV-L840-CD1-U	CEILING, RECESSED	LED	40.6	4000 K	4988 lm	277 V	1	45 VA	2' X 4' LED RECESSED TROFFER, 90% WHITE REFLECTIVE HOUSING, ACRYLIC FROSTED LENS
I	EATON	WKP6BLEDEDGL-7040	WALL	LED	46	4000 K	5828 lm	277 V	1	51 VA	WKP LED WALL PACK, DIE CAST ALUMINUM, HIGHLY REFLECTIVE ANODIZED REFLECTORS MOUNTED AT 9'-0" AFF UNLESS OTHERWISE NOTED

LIGHTING CONTROLS ORDER OF OPERATION

HIGHBAY LIGHTING (NORMAL):
- FIRST SHIFT SHALL ILLUMINATE ALL HIGHBAY FIXTURES WITH 5% DIMMING.
- SECOND SHIFT SHALL ILLUMINATE ALL HIGHBAY FIXTURES WITH 5% DIMMING.
- THIRD SHIFT SHALL ILLUMINATE ALL HIGHBAY FIXTURES WITH 5% DIMMING.
- LOW VOLTAGE SWITCHES NEAR ENTRANCES TO THE WAREHOUSE SHALL ALLOW OVERRIDE OF CONTROLS TO FULL ON, 25% DIMMING, 50% DIMMING, AND 75% DIMMING OF ALL HIGHBAY FIXTURES.

INTERIOR TASK LIGHTING (NORMAL):
- FIRST SHIFT TASK LIGHTING AT DECANT, KITTING, ASRS, AND LASER KITTING STATIONS SHALL ILLUMINATE WITH 5% DIMMING.
- SECOND SHIFT TASK LIGHTING AT DECANT, KITTING, ASRS, AND LASER KITTING STATIONS SHALL ILLUMINATE WITH 5% DIMMING.
- THIRD SHIFT TASK LIGHTING AT DECANT, KITTING, ASRS, AND LASER KITTING STATIONS SHALL ILLUMINATE WITH 5% DIMMING.
- LOW VOLTAGE SWITCHES AT EACH STATION SHALL ALLOW FOR OVERRIDE OF CONTROLS TO FULL ON, 25% DIMMING, 50% DIMMING, AND 75% DIMMING OF TASK LIGHTING.

INTERIOR STAIR AND NON-TASK WAREHOUSE STRIP LIGHTING (NORMAL):
- FIRST SHIFT STRIP LIGHTING AT INTERIOR STAIRS, ALONG THE SOUTH WALL BEHIND ASRS RACKS, AND AT THE HALLWAY INTO THE OFFICE MEZZANINE GROUND FLOOR SHALL ILLUMINATE WITH 5% DIMMING.
- SECOND SHIFT STRIP LIGHTING AT INTERIOR STAIRS, ALONG THE SOUTH WALL BEHIND ASRS RACKS, AND AT THE HALLWAY INTO THE OFFICE MEZZANINE GROUND FLOOR SHALL ILLUMINATE WITH 5% DIMMING.
- THIRD SHIFT STRIP LIGHTING AT INTERIOR STAIRS, ALONG THE SOUTH WALL BEHIND ASRS RACKS SHALL ILLUMINATE WITH 5% DIMMING.
- THIRD SHIFT STRIP LIGHTING AT THE HALLWAY INTO THE OFFICE MEZZANINE GROUND FLOOR SHALL ILLUMINATE WITH 20% DIMMING.

OFFICE MEZZANINE LIGHTING (NORMAL):
- FIRST SHIFT OFFICE GROUND FLOOR AND OFFICE MEZZANINE LIGHTS SHALL ILLUMINATE WITH 5% DIMMING. OCCUPANCY SENSOR SHALL BE CAPABLE OF TURNING LIGHTS OFF WHEN NO ACTIVITY IS DETECTED FOR A MINIMUM OF 15 MINUTES. LIGHTS SHALL TURN BACK ON TO FIRST SHIFT SETPOINT WHEN ACTIVITY IS DETECTED. SEE OCCUPANCY CONTROLS ORDER OF OPERATION.
- SECOND SHIFT OFFICE GROUND FLOOR AND OFFICE MEZZANINE LIGHTS SHALL ILLUMINATE WITH 5% DIMMING. OCCUPANCY SENSOR SHALL BE CAPABLE OF TURNING LIGHTS OFF WHEN NO ACTIVITY IS DETECTED FOR A MINIMUM OF 15 MINUTES. LIGHTS SHALL TURN BACK ON TO SECOND SHIFT SETPOINT WHEN ACTIVITY IS DETECTED. SEE OCCUPANCY CONTROLS ORDER OF OPERATION.
- THIRD SHIFT OFFICE GROUND FLOOR LIGHTS SHALL ILLUMINATE WITH 20% DIMMING. OCCUPANCY SENSOR SHALL BE CAPABLE OF TURNING LIGHTS OFF WHEN NO ACTIVITY IS DETECTED FOR A MINIMUM OF 15 MINUTES. LIGHTS SHALL TURN BACK ON TO THIRD SHIFT SETPOINT WHEN ACTIVITY IS DETECTED. SEE OCCUPANCY CONTROLS ORDER OF OPERATION.
- THIRD SHIFT OFFICE MEZZANINE LIGHTS SHALL BE SWITCHED OFF. OCCUPANCY SENSOR SHALL BE CAPABLE OF TURNING LIGHTS ON UPON DETECTION OF MOTION. SEE OCCUPANCY CONTROLS ORDER OF OPERATION.
- EACH ROOM SHALL BE PROVIDED WITH A SINGLE CONTROL ZONE. THE DDC ROOM SHALL BE PROVIDED WITH TWO CONTROL ZONES.
- LOW VOLTAGE SWITCHES IN EACH SPACE SHALL ALLOW OVERRIDE OF CONTROLS TO FULL ON, 33% DIMMING, 66% DIMMING, AND FULL OFF.

OCCUPANCY CONTROLS:
- OCCUPANCY SENSOR SHALL TURN LIGHTS IN ZONE OFF WHEN NO OCCUPANCY IS DETECTED FOR A MINIMUM OF 15 MINUTES CONTINUOUSLY.
- OCCUPANCY SENSOR SHALL TURN LIGHTS IN ZONE ON TO PRESET DIMMING SETTING WHEN OCCUPANCY IS DETECTED.

INTERIOR EGRESS LIGHTING (EMERGENCY):
- WHEN NORMAL POWER IS LOST, EGRESS LIGHT FIXTURES ILLUMINATE TO FULL OUTPUT THROUGH EMERGENCY RELAY UNTIL NORMAL POWER IS RESTORED AND HAS STABILIZED FOR 5 MINUTES.
- WHEN FIRE ALARM SYSTEM IS INITIATED, EGRESS LIGHT FIXTURES ILLUMINATE TO FULL OUTPUT THROUGH EMERGENCY RELAY UNTIL FIRE ALARM SYSTEM IS RETURNED TO NORMAL STATE FOR 5 MINUTES.

EXTERIOR POLES & BUILDING MOUNTED FIXTURES (NORMAL):
- PHOTOCELL MOUNTED ON SOUTH EXTERIOR WALL REACHES A LOW LIGHT SET POINT. COIL IN LIGHTING CONTACTOR PANEL CLOSES CONTACTS FOR EXTERIOR LIGHTING CIRCUITS TO ILLUMINATE.
- PHOTOCELL REACHES A HIGH LIGHT SET POINT. COIL IN LIGHTING CONTACTOR PANEL OPENS CONTACTS TO TURN OFF EXTERIOR LIGHTING CIRCUITS.
- CONTROLS SHALL NOT BE LUMAWATT CONTROLS SYSTEM.

EXTERIOR BUILDING MOUNTED EGRESS FIXTURES (EMERGENCY):
- FIXTURES SHALL FUNCTION SIMILAR TO THE FIXTURES UNDER A NORMAL STATE. INVERTER CONNECTED LIGHTS SHALL ILLUMINATE UPON LOSS OF POWER.
- CONTROLS SHALL NOT BE LUMAWATT CONTROLS SYSTEM.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: LIGHT FIXTURE SCHEDULE
Sheet E-602 of XX
Drawing No. 108M-XXX-XXX

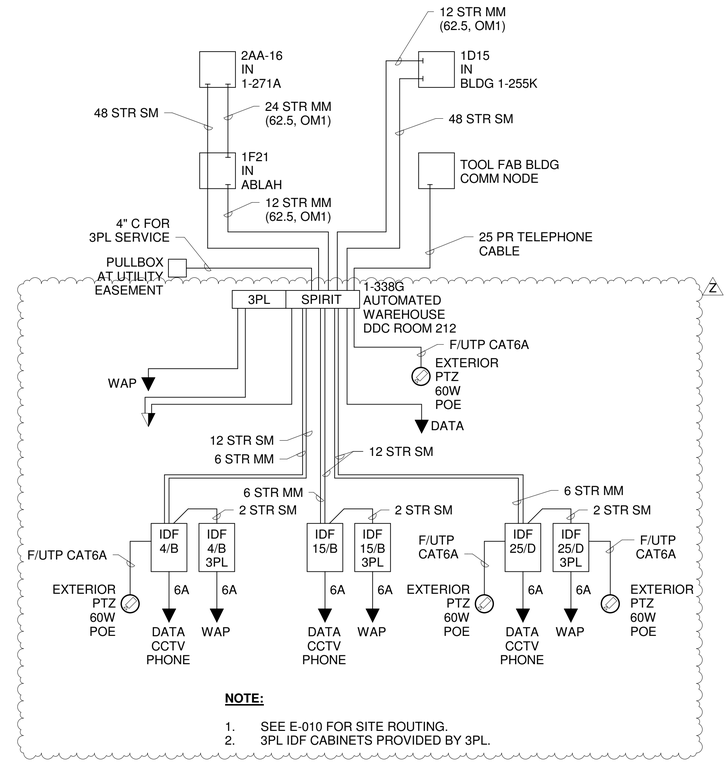
UNIT	UNIT MEASURE		RESPONSIBILITY
		OUTSIDE PLANT	
		*****TELCO BACKBONE*****	
AS REQ	FT	24 AWG, 25 PAIR, SOLID ANNEALED COPPER CONDUCTOR, CORRUGATED COPOLYMER COATED, 8MM ALUMINUM TAPE SHIELD, SUPERIOR ESSEX 09-097-02	CFCI
1	EA	PROTECTOR UNITS, SOLID STATE FOR 1880ENA/NSC-12E. CIRCA # 4B6FS-240E	CFCI
		*****INDOOR/OUTDOOR SINGLE MODE*****	
AS REQ	FT	CABLE: FIBER OPTIC, SINGLE MODE, 48-STRAND, LOOSE TUBE, INDOOR/OUTDOOR. RISER RATED. CORNING 048EUF-T4101D20	CFCI
		***** MULTIMODE INDOOR/OUTDOOR*****	
AS REQ	FT	CABLE: FIBER OPTIC, MULTIMODE 62.5MM (OM1). 12 OR 24 STRAND. LOOSE TUBE, GEL-FREE. INDOOR OUTDOOR. RISER RATED. 12 STR - CORNING 024KSF-T4130D20. 24 STR - CORNING 012KSF-T4130D20	CFCI
		DDC ROOM EQUIPMENT	
1	EA	RELAY RACK CABINET: APC AR3340 NETSHELTER SX 42U 750MM WIDE X 1200MM DEEP NETWORKING ENCLOSURE WITH SIDES, BLACK.	CFCI
3	EA	RELAY RACK: ALUMINUM, 19" W X 7' HIGH (45 RU). UNIVERSAL EIA, 12-24 ROLLED THREADS IN BOTH FLANGES. CHATSWORTH PRODUCTS INC, #46353 BLACK.	CFCI
3	EA	RACK SHELF. 1 RU, CHATSWORTH 15245-703	CFCI
		EATON MAINTENANCE BYPASS PANEL - 3CB 15KVA. PART # 1241000027-003	
		*****FIBER PATCH PANELS*****	
3	EA	PATCH PANEL: (REPLACEMENT FOR LST1U-072/7) 72-PORT SINGLE, 144 DUPLEX. DP-700 4RU ENCLOSURE, EMPTY. LEVITON # 000-DPO4U-STD	CFCI
3	EA	LEVITON 000-OCS18-STD WALL MOUNT SPLICE ENCLOSURE	CFCI
12	EA	PREFORMED LINE PRODUCTS SPLICE TRAY FOR ENCLOSURE 80805514	CFCI
		*****FIBER SC TERMINATION*****	
20	EA	FIBER END CONNECTION: FOR SINGLE MODE, 50' LENGTH, WITH SC CONNECTORS, 12 STRAND CABLE WITH 36" BREAKOUT. TEST RESULTS. QUICKTRON #812-0410050S.	CFCI
18	EA	FIBER END CONNECTION: FOR MULTIMODE, 50' LENGTH, WITH SC CONNECTORS, 12 STRAND CABLE WITH 36" BREAKOUT. TEST RESULTS. QUICKTRON #812-041-050	CFCI
AS REQ	EA	ADAPTER PLATE: 6 DUPLEX MM, SC WITH ADAPTER PLATE, BEIGE. LEVITON APLW6-SDM SAN 014	CFCI
AS REQ	EA	ADAPTER PLATE: 6 DUPLEX SM, SC WITH ADAPTER PLATE, BLUE. LEVITON APLW6-SDS SAN 013	CFCI
AS REQ	EA	FUSE CONNECT FIBER CONNECTOR SM SC 900 UM BOOT. AFL# CS010247	CFCI
AS REQ	EA	FUSE CONNECT FIBER CONNECTOR MM SC 62.5 900 UM BOOT. AFL # CS010249	CFCI
		*****CAT 6A TERMINATION*****	
1	EA	FLAT PATCH PANEL. SHIELDED QUICKPORT. 24-PORT, 1RU. CABLE MANAGEMENT BAR INCLUDED. LEVITON 4S255-S24	CFCI
2	EA	FLAT PATCH PANEL. UNSHIELDED QUICKPORT, 48-PORT 2 RU, CABLE MANAGEMENT BAR INCLUDED. LEVITON 49255-H48	CFCI
7	EA	5-RING HORIZONAL MANAGER, 2 RU, 4" METAL RINGS. LEVITON 49253-BCM	CFCI
1	EA	SM FIBER OPTIC TRAY. 1 RU. 1000I SDX DISTRIBUTION AND SPLICE ENCLOSURE, EMPTY, WITH SLIDING TRAY. ACCEPTS UP TO 3 SDX ADPATER PLATES OR 3 SDX MTP CASSETTES AND ACCEPTS UP TO 3 SPLICE TRAYS.LEVITON 5R1UM-S03.	CFCI
		*****UPS AND PDU*****	
1	EA	UPS: EATON 9355 15KVA UPS PART #: KA1512100000010 W/ THREE-HIGH LINE AND MATCH BATTERY MODULE (96 BATTIERES) PART #: 103004193-5501	CFCI
2	EA	PDU-APC AP8841 RACK PDUS 2G, METERED, ZEROU, 30A, 200/208V, (36) C13 & (6) C19. PLUG ONE INTO UPS OUTPUT, ONE INTO NORMAL HOUSE POWER.	CFCI
2	EA	PDU-TRIPPLITE PDU1220. (1) FRONT AND (12) REAR NEMA 5-15R. PLUG INTO UPS OUTPUT.	CFCI
2	EA	PDU-TRIPPLITE PDU1220. (1) FRONT AND (12) REAR NEMA 5-15R. PLUG INTO NORMAL HOUSE POWER NEMA 5-20R RECEPTACLE.	CFCI
		*****MARKING / LABELING*****	
AS REQ	EA	RIBBONS: BLACK ON WHITE, 3/8" WIDE, EXTRA-STRENGTH ADHESIVE, BROTHER #TZS-121	CFCI
AS REQ	EA	RIBBONS: BLACK ON WHITE, 1/2" WIDE, FLEXIBLE ADHESIVE, BROTHER #TZFX-231	CFCI
AS REQ	EA	RIBBONS: BLACK ON WIDE, 3/4" WIDE, FLEXIBLE ADHESIVE. BROTHER # 5ZFX-241	CFCI
AS REQ	EA	ONE WRAP CABLE TIE, CONTINUOUS ROLL, VELCRO COMPANIES, 189645	CFCI
		*****ACTIVE EQUIPMENT*****	
2	EA	FIBER SWITCH. CISCO 9500. 2x 950 W POWER SUPPLY. 1 RU	OFOI
2	EA	SERVER. CISCO C220. 2x 770 W POWER SUPPLY. 1 RU.	OFOI
1	EA	SHARED STORAGE. M20. 2x 900 W POWER SUPPLY. 3 RU.	OFOI
1	EA	BACKUP ARRAY. 2x 800 W POWER SUPPLY. 3 RU	OFOI
2	EA	CAT 6A SWITCH. CISCO 9300. 60 WATT POE. 1100 W POWER SUPPLY. 48 PORT. 1 RU.	OFOI
1	EA	TEMA SERVER.	OFOI
4	EA	ENS AMPLIFIER. QSC 602V. 2 CHANNEL.	OFOI

		*****PATCH CABLES*****	
AS RQD	EA	CAT 6A PATCH CORDS FOR IN RACK CONNECTIVITY. UNSHIELDED	CFOI
AS RQD	EA	CAT 6A PATCH CORDS FOR IN RACK CONNECTIVITY. SHIELDED. FOR POE CCTV	CFOI
AS RQD	EA	FOC PATCH CORDS FOR IN RACK AND INTRARACK CONNECTIVITY	CFOI

		INSIDE PLANT	
		***** SINGLE MODE*****	
AS RQD TO IDF 4/B AND 15/B	LF	CABLE: FIBER OPTIC, SINGLE MODE,12-STRAND, LOOSE TUBE, GEL-FREE. INDOOR/OUTDOOR. PLENUM RATED. ARMORED. CORNING TBD	CFCI
AS RQD TO IDF 25/D	LF	CABLE: FIBER OPTIC, SINGLE MODE,12-STRAND, LOOSE TUBE, GEL-FREE. INDOOR. PLENUM RATED. ARMORED. CORNING TBD	CFCI
		***** MULTIMODE*****	
AS RQD	LF	CABLE: FIBER OPTIC, MULTIMODE 62.5MM (OM1). 6 STRAND. LOOSE TUBE, GEL-FREE. INDOOR/OUTDOOR. PLENUM RATED. CORNING TBD	CFCI
AS RQD	LF	CAT 6A UNSHIELDED TWISTED PAIR (UTP). INDOOR TYPE FOR ABOVE GRADE ROUTING. PART#	CFCI
AS RQD	LF	CAT 6A UNSHIELDED TWISTED PAIR (UTP). OUTDOOR TYPE FOR CABLE WHICH IS ROUTED BELOW SLAB OR OUTDOORS. PART #	CFCI
AS RQD	LF	CAT 6A SHIELDED TWISTED PAIR (F/UTP). INDOOR RATED FOR EXTERIOR CCTV POE CAMERAS. PART #	CFCI
		*****WIRELESS ACCESS POINTS*****	
PER PLANS	EA	WAP SURVEY TO BE COMPLETED BY SPIRIT TO DETERMINE LOCATIONS AND QUANTITY. CONTRACTOR TO ASSUME QUANTITY OF DEVICES PER PLANS FOR BIDDING...	OFCI
		*****USER END DEVICES*****	
PER SPIRIT		COMPUTERS, PRINTERS, COPIERS, TELEPHONES	OFOI
AS RQD	EA	6' PATCH CORDS FOR END DEVICES. UNSHIELDED.	CFOI

RESPONSIBILITY LEGEND

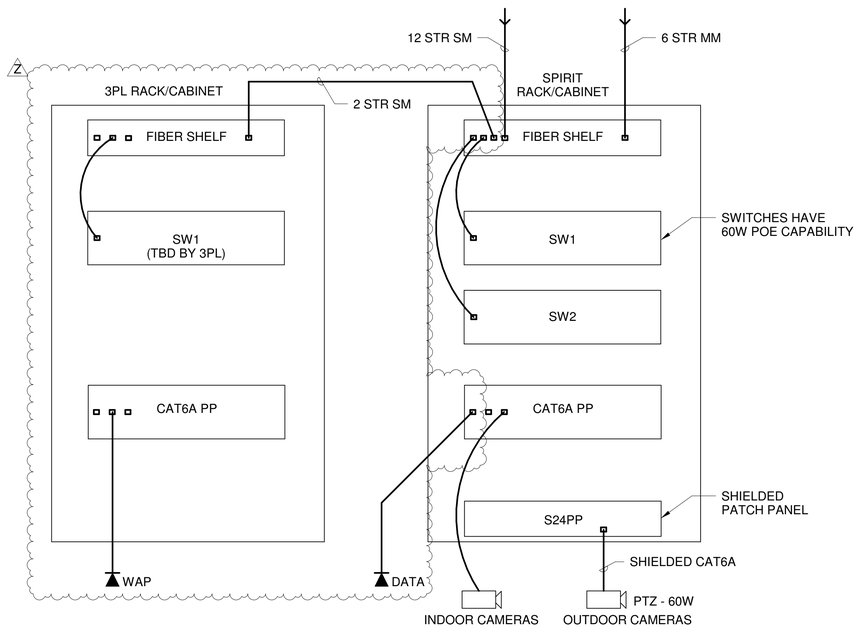
OFOI	OWNER FURNISH / OWNER INSTALL
CFCI	CONTRACTOR FURNISH / CONTRATOR INSTALL
OFCI	OWNER FURNISH / CONTRACTOR INSTALL
CFOI	CONTRACTOR FURNISH / OWNER INSTALL



NOTE:

1. SEE E-010 FOR SITE ROUTING.
2. 3PL IDF CABINETS PROVIDED BY 3PL.

TELECOMMUNICATION RISER DIAGRAM



SECURITY RISER DIAGRAM

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936

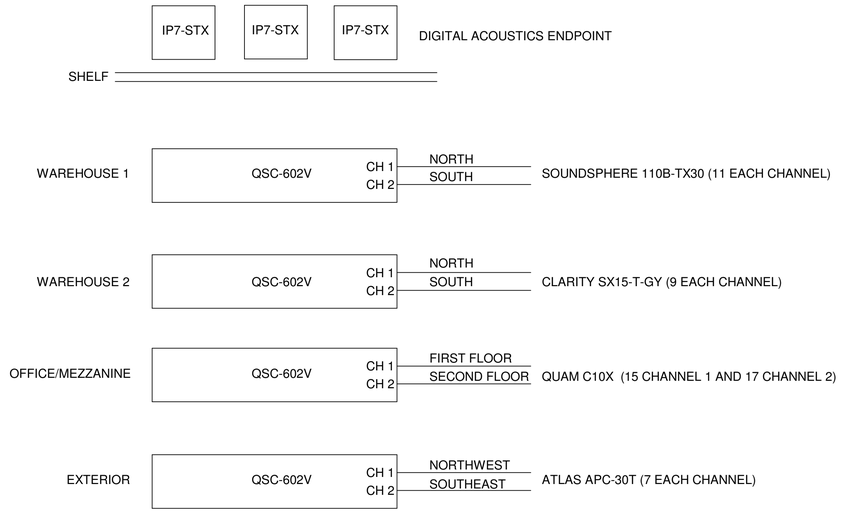
Sheet Name: COMMUNICATIONS RISER DIAGRAM

Sheet E-603 of XX

Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

THIS DOCUMENT, AND ALL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED.



AMPLIFIER SCHEMATIC CONNECTIVITY

ENS COORDINATION / RESPONSIBILITY		
	CONTRACTOR	OWNER
BACK BOXES RACEWAY TRAY	PROVIDE INSTALL	INFORM REVIEW
SPEAKERS CABLE	INSTALL TERMINATE WIRE	PROVIDE
AMPLIFIERS	NONE	PROVIDE INSTALL TERMINATE WIRES

SPEAKER SCHEDULE						
APPEARANCE	DESIGNATOR	SPEAKER TYPE	SPEAKER LOCATION	CABLING	WIRE SPEC	MISCELLANEOUS
Ⓢ	1	SOUNDSPHERE 110B-TX30	INDOOR +20'-0" AFF	WEST PENN WP-25226B	14-2,PLENUM RATED, UNSHIELDED	PROVIDE TRANSFORMER AND MOUNTING KIT
Ⓢ	2	QUAM C10X	INDOOR CEILING RECESSED	WEST PENN WP-25226B	14-2,PLENUM RATED, UNSHIELDED	
Ⓚ Ⓢ	3	CLARITY SX15-T-GY	INDOOR +25'-0" AFF (TYP. 16) +10'-0" ABOVE EQUIPMENT MEZZANINE (TYP. 2)	WEST PENN WP-25226B	14-2, PLENUM RATED, UNSHIELDED	
Ⓚ Ⓢ	4,a,b	ATLAS APC-30T CIRCUIT a - NORTH CIRCUIT b - SOUTH	OUTDOOR +50'-0" AFF PROJECT 45° OUTWARD	WEST PENN WP-25227B	12-2, PLENUM RATED, UNSHIELDED	
Ⓢ	5	AV SPEAKER	INDOOR CEILING RECESSED	BY OWNER	BY OWNER	

SPEAKER SCHEDULE

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

△	DATE	DESCRIPTION	BY	APPROVED
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B: MEP, FP, FINISHES - REV O	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED 16755 KANSAS PROFESSIONAL ENGINEER 11/16/18

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: COMMUNICATIONS SCHEDULES
Sheet E-604 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PANELBOARD: PP(1-A24)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4
A.I.C. RATING: 65KAIC
MAINS TYPE: MCB
MAINS RATING: 800 A
MCB RATING: 800 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	3	TX(1-A24)	SEE ONE-LINE DIAGRAM	1760	64515					3-350KCMIL AND 1-#3G IN 3"C	CDU-01	3	350	2
3	--	--	--	--			1620	64515			--	--	--	--	4
5	--	--	--	--					1080	64515	--	--	--	--	6
7	20	3	HVF-4	3-#12 AND 1-#12G IN 3/4"C	2771	64515					3-350KCMIL AND 1-#3G IN 3"C	CDU-02	3	400	8
9	--	--	--	--			2771	64515			--	--	--	--	10
11	--	--	--	--					2771	64515	--	--	--	--	12
13	20	3	HVF-5	3-#12 AND 1-#12G IN 3/4"C	2771	20507					3-#2 AND 1-#6G IN 1.25"C	RTU-1	3	150	14
15	--	--	--	--			2771	20507			--	--	--	--	16
17	--	--	--	--					2771	20507	--	--	--	--	18
19	20	3	HVF-6	3-#12 AND 1-#12G IN 3/4"C	2771	23445					3-#2 AND 1-#6G IN 1.25"C	ATU-2	3	150	20
21	--	--	--	--			2771	23445			--	--	--	--	22
23	--	--	--	--					2771	23445	--	--	--	--	24
25	--	--	SPACE	--	0	0					--	SPACE	--	--	26
27	--	--	SPACE	--			0	0			--	SPACE	--	--	28
29	--	--	SPACE	--					0	0	--	SPACE	--	--	30
31	--	--	SPACE	--	0	0					--	SPACE	--	--	32
33	--	--	SPACE	--			0	0			--	SPACE	--	--	34
35	--	--	SPACE	--					0	0	--	SPACE	--	--	36
37	--	--	SPACE	--	0	0					--	SPACE	--	--	38
39	--	--	SPACE	--			0	0			--	SPACE	--	--	40
41	--	--	SPACE	--					0	0	--	SPACE	--	--	42
				TOTAL LOAD:	183055 VA		182915 VA		182375 VA						
				TOTAL AMPS:	661 A		661 A		658 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	548345 VA
TOTAL ESTIMATED DEMAND LOAD:	439568 VA
TOTAL CONNECTED CURRENT:	660 A
TOTAL ESTIMATED DEMAND...	529 A
DEMAND WITH EXPANSION:	634 A

PANELBOARD: PP(1-A24)A

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4
A.I.C. RATING: 65KAIC
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	200	3	PP(1-B19)	SEE ONE-LINE DIAGRAM	1440	3730					2-#6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	2
3	--	--	--	--			1080	5968			2-#6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	4
5	--	--	--	--					1080	418	2-#12 AND 1-#12G IN 3/4"C	NORTH WALL-TASK LIGHTING	1	20	6
7	20	3	STANDARD		8073	722					2-#12 AND 1 #12G IN 3/4"C	TASK LIGHTING	1	20	8
9	--	--	--	--			0	1642			2-#10 AND 1 #10G IN 3/4"C	EXTERIOR LIGHTING	1	20	10
11	--	--	--	--					0	0	--	SPACE	--	--	12
13	--	--	SPACE	--	0	0					--	SPACE	--	--	14
15	--	--	SPACE	--			0	0			--	SPACE	--	--	16
17	--	--	SPACE	--					0	0	--	SPACE	--	--	18
19	--	--	SPACE	--	0	0					--	SPACE	--	--	20
21	--	--	SPACE	--			0	0			--	SPACE	--	--	22
23	--	--	SPACE	--					0	0	--	SPACE	--	--	24
25	--	--	SPACE	--	0	0					--	SPACE	--	--	26
27	--	--	SPACE	--			0	0			--	SPACE	--	--	28
29	--	--	SPACE	--					0	0	--	SPACE	--	--	30
31	--	--	SPACE	--	0	0					--	SPACE	--	--	32
33	--	--	SPACE	--			0	0			--	SPACE	--	--	34
35	--	--	SPACE	--					0	0	--	SPACE	--	--	36
37	--	--	SPACE	--	0	0					--	SPACE	--	--	38
39	--	--	SPACE	--			0	0			--	SPACE	--	--	40
41	--	--	SPACE	--					0	0	--	SPACE	--	--	42
				TOTAL LOAD:	13965 VA		8572 VA		1498 VA						
				TOTAL AMPS:	54 A		35 A		5 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	24018 VA
TOTAL ESTIMATED DEMAND LOAD:	24018 VA
TOTAL CONNECTED CURRENT:	29 A
TOTAL ESTIMATED DEMAND...	29 A
DEMAND WITH EXPANSION:	35 A

HOLD

PANELBOARD: PP(1-D24)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4
A.I.C. RATING: 35KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	3	TX(1-D24)	SEE ONE-LINE DIAGRAM	7241	4157					3-#10 AND 1-#10G IN 3/4"C	FORKLIFT BATTERY CHARGER	3	30	2
3	--	--	--	--			3981	4157			--	--	--	--	4
5	--	--	--	--					5260	4157	--	--	--	--	6
7	20	3	OVERHEAD DOOR 10	3-#12 AND 1-#12G IN 3/4"C	0	4157					3-#10 AND 1-#10G IN 3/4"C	FORKLIFT BATTERY CHARGER	3	30	8
9	--	--	--	--			0	4157			--	--	--	--	10
11	--	--	--	--					0	4157	--	--	--	--	12
13	30	3	FORKLIFT BATTERY CHARGER	3-#10 AND 1-#10G IN 3/4"C	4157	4157					3-#10 AND 1-#10G IN 3/4"C	FORKLIFT BATTERY CHARGER	3	30	14
15	--	--	--	--			4157	4157			--	--	--	--	16
17	--	--	--	--					4157	4157	--	--	--	--	18
19	30	3	FORKLIFT BATTERY CHARGER	3-#10 AND 1-#10G IN 3/4"C	4157	4157					3-#10 AND 1-#10G IN 3/4"C	FORKLIFT BATTERY CHARGER	3	30	20
21	--	--	--	--			4157	4157			--	--	--	--	22
23	--	--	--	--					4157	4157	--	--	--	--	24
25	30	3	FORKLIFT BATTERY CHARGER	3-#10 AND 1-#10G IN 3/4"C	4157	2550					3-#10 AND 1-#10G IN 3/4"C	FORKLIFT BATTERY CRANE CONN.	3	30	26
27	--	--	--	--			4157	2550			--	--	--	--	28
29	--	--	--	--					4157	2550	--	--	--	--	30
31	30	3	FORKLIFT BATTERY CHARGER	3-#10 AND 1-#10G IN 3/4"C	4157	1130					2-#12 AND 1-#12G IN 3/4"C	TASK LIGHTING	1	20	32
33	--	--	--	--			4157	51			2-#12 AND 1-#12G IN 3/4"C	EXTERIOR LIGHTING	1	20	34
35	--	--	--	--					4157	1240	2-#12 AND 1-#12G IN 3/4"C	EXTERIOR LIGHTING	1	20	36
37	60	3	AIR CURTAIN ACN-01 OH#10	3-#4 AND 1-#10G IN 1"C	8757	4476					2-#6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	38
39	--	--	--	--			8757	4476			2-#6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	40
41	--	--	--	--					8757	4476	2-#6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	42
43	--	--	SPACE	--	0	4476					2-#6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	44
45	--	--	SPACE	--			0	0			--	SPACE	--	--	46
47	--	--	SPACE	--					0	0	--	SPACE	--	--	48
49	--	--	SPACE	--	0	0					--	SPACE	--	--	50
51	--	--	SPACE	--			0	0			--	SPACE	--	--	52
53	--	--	SPACE	--					0	0	--	SPACE	--	--	54
				TOTAL LOAD:	61886 VA		53071 VA		55418 VA						
				TOTAL AMPS:	225 A		192 A		201 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	170374 VA
TOTAL ESTIMATED DEMAND LOAD:	165079 VA
TOTAL CONNECTED CURRENT:	205 A
TOTAL ESTIMATED DEMAND...	199 A
DEMAND WITH EXPANSION:	238 A

PANELBOARD: PP(1-D14)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4
A.I.C. RATING: 35KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 800 A
MCB RATING: 800 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	3	TX(1-D14)	SEE ONE-LINE DIAGRAM	0	0						SPARE	1	20	2
3	--	--	--	--			0	0				SPARE	1	20	4
5	--	--	--	--					0	0	Z	SPARE	1	20	6
7	20	1	SPARE		0	0						SPARE	1	20	8
9	20	1	SPARE				0	0				SPARE	1	20	10
11	20	1	SPARE						0	0		SPARE	1	20	12
13	20	1	SPARE		0	0					--	SPACE	--	--	14
15	20	1	SPARE				0	0			--	SPACE	--	--	16
17	20	1	SPARE						0	0	--	SPACE	--	--	18
19	--	--	SPACE	--	0	0					--	SPACE	--	--	20
21	--	--	SPACE	--			0	0			--	SPACE	--	--	22
23	--	--	SPACE	--					0	0	--	SPACE	--	--	24
25	--	--	SPACE	--	0	0					--	SPACE	--	--	26
27	--	--	SPACE	--			0	0			--	SPACE	--	--	28
29	--	--	SPACE	--					0	0	--	SPACE	--	--	30
31	--	--	SPACE	--	0	0					--	SPACE	--	--	32
33	--	--	SPACE	--			0	0			--	SPACE	--	--	34
35	--	--	SPACE	--					0	0	--	SPACE	--	--	36
37	--	--	SPACE	--	0	0					--	SPACE	--	--	38
39	--	--	SPACE	--			0	0			--	SPACE	--	--	40
41	--	--	SPACE	--					0	0	--	SPACE	--	--	42
				TOTAL LOAD:	0 VA		0 VA		0 VA						
				TOTAL AMPS:	0 A		0 A		0 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	0 VA
TOTAL ESTIMATED DEMAND LOAD:	0 VA
TOTAL CONNECTED CURRENT:	0 A
TOTAL ESTIMATED DEMAND...	0 A
DEMAND WITH EXPANSION:	0 A

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
O	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON LICENSED PROFESSIONAL ENGINEER 16755 11/16/18 KANSAS

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: PANEL SCHEDULES
Sheet E-701 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PANELBOARD: PP(1-A1)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 14KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	3	TX(1A-1)	SEE ONE-LINE DIAGRAM	1980	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 1	3	20	2
3	--	--	--	--			2700	942			--	--	--	--	4
5	--	--	--	--					1800	942	--	--	--	--	6
7	150	3	ATU-1	3-#2 AND 1-#6G IN 1.25"C	23445	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 2	3	20	8
9	--	--	--	--			23445	942			--	--	--	--	10
11	--	--	--	--					23445	942	--	--	--	--	12
13	20	3	HVF-1	3-#12 AND 1-#12G IN 3/4"C	2771	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 3	3	20	14
15	--	--	--	--			2771	942			--	--	--	--	16
17	--	--	--	--					2771	942	--	--	--	--	18
19	20	3	HVF-2	3-#12 AND 1-#12G IN 3/4"C	2771	2106					3-#12 AND 1-#12G IN 3/4"C	DOCK MANAGEMENT OH#3	3	20	20
21	--	--	--	--			2771	2106			--	--	--	--	22
23	--	--	--	--					2771	2106	--	--	--	--	24
25	20	3	HVF-3	3-#12 AND 1-#12G IN 3/4"C	2771	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 4	3	20	26
27	--	--	--	--			2771	942			--	--	--	--	28
29	--	--	--	--					2771	942	--	--	--	--	30
31	30	1	HIGH BAY LIGHTING	2- #6 AND 1 - #10G IN 3/4"C	4476	2106					3-#12 AND 1-#12G IN 3/4"C	DOCK MANAGEMENT OH#4	3	20	32
33	30	1	HIGH BAY LIGHTING	2- #6 AND 1 - #10G IN 3/4"C			5222	2106			--	--	--	--	34
35	20	1	NORTH WALL TASK LIGHTING	2- #12 AND 1 - #12G IN 3/4"C					570	2106	--	--	--	--	36
37	30	1	DMS HIGH BAY LIGHTING	2- #6 AND 1 - #10G IN 3/4"C	4476	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 5	3	20	38
39	20	1	TASK LIGHTING	2- #12 AND 1 - #12G IN 3/4"C			2394	942			--	--	--	--	40
41	20	1	EXTERIOR LIGHTING	2- #10 AND 1 - #10G IN 3/4"C					1642	942	--	--	--	--	42
43	--	--	SPACE	--	0	2106					3-#12 AND 1-#12G IN 3/4"C	DOCK MANAGEMENT OH#5	3	20	44
45	--	--	SPACE	--			0	2106			--	--	--	--	46
47	--	--	SPACE	--					0	2106	--	--	--	--	48
49	--	--	SPACE	--	0	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 6	3	20	50
51	--	--	SPACE	--			0	942			--	--	--	--	52
53	--	--	SPACE	--					0	942	--	--	--	--	54
55	--	--	SPACE	--	0	2106					3-#12 AND 1-#12G IN 3/4"C	DOCK MANAGEMENT OH#6	3	20	56
57	--	--	SPACE	--			0	2106			--	--	--	--	58
59	--	--	SPACE	--					0	2106	--	--	--	--	60
61	--	--	SPACE	--	0	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 7	3	20	62
63	--	--	SPACE	--			0	942			--	--	--	--	64
65	--	--	SPACE	--					0	942	--	--	--	--	66
67	--	--	SPACE	--	0	942					3-#12 AND 1-#12G IN 3/4"C	OVERHEAD DOOR 8	3	20	68
69	--	--	SPACE	--			0	942			--	--	--	--	70
71	--	--	SPACE	--					0	942	--	--	--	--	72
73	--	--	SPACE	--	0	0					--	SPACE	--	--	74
75	--	--	SPACE	--			0	0			--	SPACE	--	--	76
77	--	--	SPACE	--					0	0	--	SPACE	--	--	78
79	--	--	SPACE	--	0	0					--	SPACE	--	--	80
81	--	--	SPACE	--			0	0			--	SPACE	--	--	82
83	--	--	SPACE	--					0	0	--	SPACE	--	--	84
				TOTAL LOAD:	58651 VA		58035 VA		51591 VA						
				TOTAL AMPS:	215 A		213 A		186 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	168274 VA
TOTAL ESTIMATED DEMAND LOAD:	149220 VA
TOTAL CONNECTED CURRENT:	202 A
TOTAL ESTIMATED DEMAND...	179 A
DEMAND WITH EXPANSION:	215 A

PANELBOARD: PP(1-B13)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 35KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	3	TX(1-B13)	SEE ONE-LINE DIAGRAM	3060	0					--	SPACE	--	--	2
3	--	--	--	--			3960	0			--	SPACE	--	--	4
5	--	--	--	--					2700	0	--	SPACE	--	--	6
7	50	3	TX(1-B5)	SEE ONE-LINE DIAGRAM	3240	0					--	SPACE	--	--	8
9	--	--	--	--			3240	0			--	SPACE	--	--	10
11	--	--	--	--					2880	0	--	SPACE	--	--	12
13	--	--	SPACE	--	0	0					--	SPACE	--	--	14
15	--	--	SPACE	--			0	0			--	SPACE	--	--	16
17	--	--	SPACE	--					0	0	--	SPACE	--	--	18
19	--	--	SPACE	--	0	0					--	SPACE	--	--	20
21	--	--	SPACE	--			0	0			--	SPACE	--	--	22
23	--	--	SPACE	--					0	0	--	SPACE	--	--	24
25	--	--	SPACE	--	0	0					--	SPACE	--	--	26
27	--	--	SPACE	--			0	0			--	SPACE	--	--	28
29	--	--	SPACE	--					0	0	--	SPACE	--	--	30
31	--	--	SPACE	--	0	0					--	SPACE	--	--	32
33	--	--	SPACE	--			0	0			--	SPACE	--	--	34
35	--	--	SPACE	--					0	0	--	SPACE	--	--	36
37	--	--	SPACE	--	0	0					--	SPACE	--	--	38
39	--	--	SPACE	--			0	0			--	SPACE	--	--	40
41	--	--	SPACE	--					0	0	--	SPACE	--	--	42
				TOTAL LOAD:	6300 VA		7200 VA		5580 VA						
				TOTAL AMPS:	23 A		26 A		20 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	19080 VA
TOTAL ESTIMATED DEMAND LOAD:	14900 VA
TOTAL CONNECTED CURRENT:	23 A
TOTAL ESTIMATED DEMAND...	18 A
DEMAND WITH EXPANSION:	22 A

PANELBOARD: PP(1-D4)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 14KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	3	TX(1-D4)	SEE ONE-LINE DIAGRAM	14270	43575					SEE ONE-LINE DIAGRAM	PP(3-D4)	3	200	2
3	--	--	--	--			15940	43575			--	--	--	--	4
5	--	--	--	--					13580	43575	--	--	--	--	6
7	50	3	TX(3-D4)	SEE ONE-LINE DIAGRAM	11477	4434					3-#10 AND 1-#10G IN 3/4"C	CDU-03 OFFICE A/C	3	25	8
9	--	--	--	--			12975	4434			--	--	--	--	10
11	--	--	--	--					11484	4434	--	--	--	--	12
13	50	3	TX(3-D4)A	SEE ONE-LINE DIAGRAM	8023	4434					3-#10 AND 1-#10G IN 3/4"C	CDU-04 OFFICE A/C	3	25	14
15	--	--	--	--			10383	4434			--	--	--	--	16
17	--	--	--	--					5793	4434	--	--	--	--	18
19	20	3	OVERHEAD DOOR 9	3-#12 AND 1-#12G IN 3/4"C	942	13803					--	STANDARD	3	20	20
21	--	--	--	--			942	0			--	--	--	--	22
23	--	--	--	--					942	0	--	--	--	--	24
25	100	3	ELEVATOR	3-#1 AND 1-#8G IN 1.25"C	16627	5222					2- #6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	26
27	--	--	--	--			16627	5222			2- #6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	28
29	--	--	--	--					16627	5222	2- #6 AND 1-#10G IN 3/4"C	HIGH BAY LIGHTING	1	30	30
31	20	1	EXTERIOR LIGHTING	2- #10 AND 1 - #10G IN 3/4"C	1240	570					2-#12 AND 1-#12G IN 3/4"C	TASK LIGHTING	1	20	32
33	20	1	EXTERIOR LIGHTING	2- #10 AND 1 - #10G IN 3/4"C			51	0			--	SPACE	--	--	34
35	20	1	EXTERIOR SITE POLE LIGHTING	2- #6 AND 1 - #6G IN 1"C					3330	0	--	SPACE	--	--	36
37	20	1	EXTERIOR SITE POLE LIGHTING	2- #6 AND 1 - #6G IN 1"C	4440	0					--	SPACE	--	--	38
39	20	1	OFFICE GROUND FLOOR LIGHTING	2-#12 AND 1-#12G IN 3/4"C			1712	0			--	SPACE	--	--	40
41	20	1	OFFICE MEZZANINE LIGHTING	2-#12 AND 1-#12G IN 3/4"C					1981	0	--	SPACE	--	--	42
				TOTAL LOAD:	128934 VA		116295 VA		111402 VA						
				TOTAL AMPS:	468 A		423 A		402 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	356630 VA
TOTAL ESTIMATED DEMAND LOAD:	293766 VA
TOTAL CONNECTED CURRENT:	429 A
TOTAL ESTIMATED DEMAND...	353 A
DEMAND WITH EXPANSION:	424 A

PANELBOARD: PP(1-B13)A

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 35KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 800 A
MCB RATING: 800 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	30	3	DMS - MIDDLE SHUTTLE LEVELS 1-3	3-#10 AND 1-#10G IN 3/4"C	3464	3464					3-#10 AND 1-#10G IN 3/4"C	DMS - MIDDLE SHUTTLE LEVELS 1-3	3	30	2
3	--	--	--	--			3464	3464			--	--	--	--	4
5	--	--	--	--					3464	3464	--	--	--	--	6
7	30	3	DMS - MIDDLE SHUTTLE LEVELS 1-3	3-#10 AND 1-#10G IN 3/4"C	3464	3464					3-#10 AND 1-#10G IN 3/4"C	DMS - MIDDLE SHUTTLE LEVELS 1-3	3	30	8
9	--	--	--	--			3464	3464			--	--	--	--	10
11	--	--	--	--					3464	3464	--	--	--	--	12
13	30	3	DMS - MIDDLE SHUTTLE LEVELS 1-3	3-#10 AND 1-#10G IN 3/4"C	3464	3464					3-#10 AND 1-#10G IN 3/4"C	DMS - MIDDLE SHUTTLE LEVELS 1-3	3	30	14
15	--	--	--	--			3464	3464			--	--	--	--	16
17	--	--	--	--					3464	3464	--	--	--	--	18
19	20	3	HEAT SHRINK TUNNEL 1	3-#12 AND 1-#12G IN 3/4"C	640	1302					3-#10 AND 1-#10G IN 3/4"C	DMS - MIDDLE SHUTTLE LEVEL 4	3	30	20
21	--	--	--	--			640	1302			--	--	--	--	22
23	--	--	--	--					640	1302	--	--	--	--	24
25	20	3	HEAT SHRINK TUNNEL 2	3-#12 AND 1-#12G IN 3/4"C	640	1302					3-#10 AND 1-#10G IN 3/4"C	DMS - MIDDLE SHUTTLE LEVEL 4	3	30	26
27	--	--	--	--			640	1302			--	--	--	--	28
29	--	--	--	--					640	1302	--	--	--	--	30
31	20	3	HEAT SHRINK TUNNEL 3	3-#12 AND 1-#12G IN 3/4"C	640	1302					3-#10 AND 1-#10G IN 3/4"C	DMS - MIDDLE SHUTTLE LEVEL 4	3	30	32
33	--	--	--	--			640	1302			--	--	--	--	34
35	--	--	--	--					640	1302	--	--	--	--	36
37	20	3	HEAT SHRINK TUNNEL 4	3-#12 AND 1-#12G IN 3/4"C	640	3464					3-#10 AND 1-#10G IN 3/4"C	DMS - END SHUTTLE CONNECTION	3	30	38
39	--	--	--	--			640	3464			--	--	--	--	40
41	--	--	--	--					640	3464	--	--	--	--	42
43	20	3	HEAT SHRINK TUNNEL 5	3-#12 AND 1-#12G IN 3/4"C	640	3464					3-#10 AND 1-#10G IN 3/4"C	DMS - END SHUTTLE CONNECTION	3	30	44
45	--	--	--	--			640	3464			--	--	--	--	46
47	--	--	--	--					640	3464	--	--	--	--	48
49	20	3	HEAT SHRINK TUNNEL 6	3-#12 AND 1-#12G IN 3/4"C	640	3464					3-#10 AND 1-#10G IN 3/4"C	DMS - END SHUTTLE CONNECTION	3	30	50
51	--	--	--	--			640	3464			--	--	--	--	52
53	--	--	--	--					640	3464	--	--	--	--	54
55	--	--	SPACE	--	0	0					--	SPACE	--	--	56
57	--	--	SPACE	--			0	0			--	SPACE	--	--	58
59	--	--	SPACE	--					0	0	--	SPACE	--	--	60
61	--	--	SPACE	--	0	0					--	SPACE	--	--	62
63	--	--	SPACE	--			0	0			--	SPACE	--	--	64
65	--	--	SPACE	--					0	0	--	SPACE	--	--	66
67	--	--	SPACE	--	0	0					--	SPACE	--	--	68
69	--	--	SPACE	--			0	0			--	SPACE	--	--	70
71	--	--	SPACE	--					0	0	--	SPACE	--	--	72
73	--	--	SPACE	--	0	0					--	SPACE	--	--	74
75	--	--	SPACE	--			0	0			--	SPACE	--	--	76
77	--	--	SPACE	--					0	0	--	SPACE	--	--	78
79	--	--	SPACE	--	0	0					--	SPACE	--	--	80
81	--	--	SPACE	--			0	0			--	SPACE	--	--	82
83	--	--	SPACE	--					0	0	--	SPACE	--	--	84
				TOTAL LOAD:	38922 VA		38922 VA		38922 VA						
				TOTAL AMPS:	141 A		141 A		141 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	116766 VA
TOTAL ESTIMATED DEMAND LOAD:	116766 VA
TOTAL CONNECTED CURRENT:	140 A
TOTAL ESTIMATED DEMAND...	140 A
DEMAND WITH EXPANSION:	169 A

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B: MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: PANEL SCHEDULES
Sheet E-702 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT

PANELBOARD: PP(1-A5)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: SG(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 35KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 1200 A
MCB RATING: 1200 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	60	3	DMS FRONT SHUTTLE CONNECTION	3-#4 AND 1-#10G IN 1"C	13302	44340					3-#4/0 AND 1-#6G IN 2"C	PDP - DMS SPIRAL CONVEYORS	3	200	2
3	--	--	--	--			13302	44340			--	--	--	--	4
5	--	--	--	--					13302	44340	--	--	--	--	6
7	60	3	DMS FRONT SHUTTLE CONNECTION	3-#4 AND 1-#10G IN 1"C	13302	44340					3-#4/0 AND 1-#6G IN 2"C	PDP - DMS DECANT STA CONVEYORS	3	200	8
9	--	--	--	--			13302	44340			--	--	--	--	10
11	--	--	--	--					13302	44340	--	--	--	--	12
13	60	3	DMS FRONT SHUTTLE CONNECTION	3-#4 AND 1-#10G IN 1"C	13302	44340					3-#4/0 AND 1-#6G IN 2"C	PDP - DMS KITTING STA CONVEYORS	3	200	14
15	--	--	--	--			13302	44340			--	--	--	--	16
17	--	--	--	--					13302	44340	--	--	--	--	18
19	60	3	DMS FRONT SHUTTLE CONNECTION	3-#4 AND 1-#10G IN 1"C	13302	1662					3-#10 AND 1-#10G IN 3/4"C	DMS CONVEYOR CABINET	3	30	20
21	--	--	--	--			13302	1662			--	--	--	--	22
23	--	--	--	--					13302	1662	--	--	--	--	24
25	60	3	DMS FRONT SHUTTLE CONNECTION	3-#4 AND 1-#10G IN 1"C	13302	1662					3-#10 AND 1-#10G IN 3/4"C	DMS CONVEYOR CABINET	3	30	26
27	--	--	--	--			13302	1662			--	--	--	--	28
29	--	--	--	--					13302	1662	--	--	--	--	30
31	60	3	DMS FRONT SHUTTLE CONNECTION	3-#4 AND 1-#10G IN 1"C	13302	1662					3-#10 AND 1-#10G IN 3/4"C	DMS CONVEYOR CABINET	3	30	32
33	--	--	--	--			13302	1662			--	--	--	--	34
35	--	--	--	--					13302	1662	--	--	--	--	36
37	100	3	DMS BAILER	3-#1 AND 1-#8G IN 1.25"C	16627	1662					3-#10 AND 1-#10G IN 3/4"C	DMS CONVEYOR CABINET	3	30	38
39	--	--	--	--			16627	1662			--	--	--	--	40
41	--	--	--	--					16627	1662	--	--	--	--	42
43	--	--	SPACE	--	0	1662					3-#10 AND 1-#10G IN 3/4"C	DMS CONVEYOR CABINET	3	30	44
45	--	--	SPACE	--			0	1662			--	--	--	--	46
47	--	--	SPACE	--					0	1662	--	--	--	--	48
49	--	--	SPACE	--	0	1662					3-#10 AND 1-#10G IN 3/4"C	DMS CONVEYOR CABINET	3	30	50
51	--	--	SPACE	--			0	1662			--	--	--	--	52
53	--	--	SPACE	--					0	1662	--	--	--	--	54
55	--	--	SPACE	--	0	0						SPARE	1	20	56
57	--	--	SPACE	--			0	0				SPARE	1	20	58
59	--	--	SPACE	--					0	0		SPARE	1	20	60
61	--	--	SPACE	--	0	0					--	SPACE	--	--	62
63	--	--	SPACE	--			0	0			--	SPACE	--	--	64
65	--	--	SPACE	--					0	0	--	SPACE	--	--	66
67	--	--	SPACE	--	0	0					--	SPACE	--	--	68
69	--	--	SPACE	--			0	0			--	SPACE	--	--	70
71	--	--	SPACE	--					0	0	--	SPACE	--	--	72
73	--	--	SPACE	--	0	0					--	SPACE	--	--	74
75	--	--	SPACE	--			0	0			--	SPACE	--	--	76
77	--	--	SPACE	--					0	0	--	SPACE	--	--	78
79	--	--	SPACE	--	0	0					--	SPACE	--	--	80
81	--	--	SPACE	--			0	0			--	SPACE	--	--	82
				TOTAL LOAD:	239431 VA		239431 VA		239431 VA						
				TOTAL AMPS:	864 A		864 A		864 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	718293 VA
TOTAL ESTIMATED DEMAND LOAD:	718293 VA
TOTAL CONNECTED CURRENT:	864 A
TOTAL ESTIMATED DEMAND...	864 A
DEMAND WITH EXPANSION:	1037 A

PANELBOARD: DP(1-A24)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: TX(1-A24)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	LIGHTING BUILDING SIGN	2 - #12 AND 1 - #12G IN 3/4"C	500	1260					2 - #10 AND 1 - #10G IN 3/4"C	EXTERIOR RECEPT - NE CORNER	1	20	2
3	20	1	RECEPT - NE WALL	2 - #10 AND 1 - #10G IN 3/4"C			360	1260			2 - #10 AND 1 - #10G IN 3/4"C	RECEPT - NORTH WALL	1	20	4
5	20	1	SPARE						0	1080	2 - #10 AND 1 - #10G IN 3/4"C	RECEPT - COL B-13,15,17,19,21,23	1	20	6
7	20	1	SPARE		0	0						SPARE	1	20	8
9	20	1	SPARE				0	0				SPARE	1	20	10
11	20	1	SPARE						0	0		SPARE	1	20	12
13	20	1	SPARE		0	0						SPARE	1	20	14
15	20	1	SPARE				0	0				SPARE	1	20	16
17	20	1	SPARE						0	0		SPARE	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	1760 VA		1620 VA		1080 VA						
				TOTAL AMPS:	15 A		14 A		9 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	4460 VA
TOTAL ESTIMATED DEMAND LOAD:	4460 VA
TOTAL CONNECTED CURRENT:	12 A
TOTAL ESTIMATED DEMAND...	12 A
DEMAND WITH EXPANSION:	15 A

PANELBOARD: PP(1-B19)

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: PP(1-A24)A
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 35KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 200 A
MCB RATING: 200 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	125	3	TX(1-B19)	SEE ONE-LINE DIAGRAM	1440	0					--	SPACE	--	--	2
3	--	--	--	--			1080	0			--	SPACE	--	--	4
5	--	--	--	--					1080	0	--	SPACE	--	--	6
7	--	--	SPACE	--	0	0					--	SPACE	--	--	8
9	--	--	SPACE	--			0	0			--	SPACE	--	--	10
11	--	--	SPACE	--					0	0	--	SPACE	--	--	12
13	--	--	SPACE	--	0	0					--	SPACE	--	--	14
15	--	--	SPACE	--			0	0			--	SPACE	--	--	16
17	--	--	SPACE	--					0	0	--	SPACE	--	--	18
19	--	--	SPACE	--	0	0					--	SPACE	--	--	20
21	--	--	SPACE	--			0	0			--	SPACE	--	--	22
23	--	--	SPACE	--					0	0	--	SPACE	--	--	24
25	--	--	SPACE	--	0	0					--	SPACE	--	--	26
27	--	--	SPACE	--			0	0			--	SPACE	--	--	28
29	--	--	SPACE	--					0	0	--	SPACE	--	--	30
31	--	--	SPACE	--	0	0					--	SPACE	--	--	32
33	--	--	SPACE	--			0	0			--	SPACE	--	--	34
35	--	--	SPACE	--					0	0	--	SPACE	--	--	36
37	--	--	SPACE	--	0	0					--	SPACE	--	--	38
39	--	--	SPACE	--			0	0			--	SPACE	--	--	40
41	--	--	SPACE	--					0	0	--	SPACE	--	--	42
				TOTAL LOAD:	1440 VA		1080 VA		1080 VA						
				TOTAL AMPS:	5 A		4 A		4 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	3600 VA
TOTAL ESTIMATED DEMAND LOAD:	3600 VA
TOTAL CONNECTED CURRENT:	4 A
TOTAL ESTIMATED DEMAND...	4 A
DEMAND WITH EXPANSION:	5 A

PANELBOARD: PP(3-D4)

LOCATION: EQUIPMENT MEZZANINE 301
SUPPLY FROM: PP(1-D4)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 14KAIC MINIMUM
MAINS TYPE: MCB
MAINS RATING: 200 A
MCB RATING: 200 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	15	3	ACU-01 OFFICE A/C	3-#12 AND 1-#12G IN 3/4"C	1274	6568					3-#6 AND 1-#10G IN 3/4"C	AIR CURTAIN ACN-04 OH#7	3	45	2
3	--	--	--	--			1274	6568			--	--	--	--	4
5	--	--	--	--					1274	6568	--	--	--	--	6
7	15	3	ACU-02 OFFICE A/C	3-#12 AND 1-#12G IN 3/4"C	1274	6568					3-#6 AND 1-#10G IN 3/4"C	AIR CURTAIN ACN-03 OH#8	3	45	8
9	--	--	--	--			1274	6568			--	--	--	--	10
11	--	--	--	--					1274	6568	--	--	--	--	12
13	20	3	VAV-1.1	3-#12 AND 1-#12G IN 3/4"C	1367	8757					3-#4 AND 1-#10G IN 1"C	AIR CURTAIN ACN-02 OH#9	3	60	14
15	--	--	--	--			1367	8757			--	--	--	--	16
17	--	--	--	--					1367	8757	--	--	--	--	18
19	20	3	VAV-1.2	3-#12 AND 1-#12G IN 3/4"C	1933	0					--	SPACE	--	--	20
21	--	--	--	--			1933	0			--	SPACE	--	--	22
23	--	--	--	--					1933	0	--	SPACE	--	--	24
25	20	3	VAV-1.3	3-#12 AND 1-#12G IN 3/4"C	1500	0					--	SPACE	--	--	26
27	--	--	--	--			1500	0			--	SPACE	--	--	28
29	--	--	--	--					1500	0	--	SPACE	--	--	30
31	20	3	VAV-1.4	3-#12 AND 1-#12G IN 3/4"C	1467	0					--	SPACE	--	--	32
33	--	--	--	--			1467	0			--	SPACE	--	--	34
35	--	--	--	--					1467	0	--	SPACE	--	--	36
37	20	3	VAV-1.5	3-#12 AND 1-#12G IN 3/4"C	1767	0					--	SPACE	--	--	38
39	--	--	--	--			1767	0			--	SPACE	--	--	40
41	--	--	--	--					1767	0	--	SPACE	--	--	42
43	20	3	VAV-2.1	3-#12 AND 1-#12G IN 3/4"C	1767	0					--	SPACE	--	--	44
45	--	--	--	--			1767	0			--	SPACE	--	--	46
47	--	--	--	--					1767	0	--	SPACE	--	--	48
49	20	3	VAV-2.2	3-#12 AND 1-#12G IN 3/4"C	700	567					3-#12 AND 1-#12G IN 3/4"C	VAV-2.6	3	20	50
51	--	--	--	--			700	567			--	--	--	--	52
53	--	--	--	--					700	567	--	--	--	--	54
55	20	3	VAV-2.3	3-#12 AND 1-#12G IN 3/4"C	2067	1067					3-#12 AND 1-#12G IN 3/4"C	VAV-2.7	3	20	56
57	--	--	--	--			2067	1067			--	--	--	--	58
59	--	--	--	--					2067	1067	--	--	--	--	60
61	20	3	VAV-2.4	3-#12 AND 1-#12G IN 3/4"C	700	1767					3-#12 AND 1-#12G IN 3/4"C	VAV-2.8	3	20	62
63	--	--	--	--			700	1767			--	--	--	--	64
65	--	--	--	--					700	1767	--	--	--	--	66
67	20	3	VAV-2.5	3-#12 AND 1-#12G IN 3/4"C	700	0					--	SPACE	--	--	68
69	--	--	--	--			700	0			--	SPACE	--	--	70
71	--	--	--	--					700	0	--	SPACE	--	--	72
73	20	3	VAV-1.6	3-#12 AND 1-#12G IN 3/4"C	1767	0					--	SPACE	--	--	74
75	--	--	--	--			1767	0			--	SPACE	--	--	76
77	--	--	--	--					1767	0	--	SPACE	--	--	78
79	--	--	SPACE	--	0	0					--	SPACE	--	--	80
81	--	--	SPACE	--			0	0			--	SPACE	--	--	82
83	--	--	SPACE	--					0	0	--	SPACE	--	--	84
				TOTAL LOAD:	43575 VA		43575 VA		43575 VA						
				TOTAL AMPS:	157 A		157 A		157 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	130724 VA
TOTAL ESTIMATED DEMAND LOAD:	104579 VA
TOTAL CONNECTED CURRENT:	157 A
TOTAL ESTIMATED DEMAND...	126 A
DEMAND WITH EXPANSION:	151 A

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/18	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	CAJ	DWH
9	06/29/18	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	CAJ	DWH
Q	07/13/18	PKG 2B, MEP, FP, FINISHES - REV Q	CAJ	DWH
Z	11/16/18	PKG 2B, MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Facilities Engineering
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: PANEL SCHEDULES
Sheet E-703 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PANELBOARD: DP(1-D24)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-D24) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	35	2	WATER HEATER EWH-1	2-#8 AND 1-#10G IN 3/4"C	2900	360					2-#12 AND 1-#12G IN 3/4"C	RFID CONTROLLER	1	20	2
3	--	--	--	--			2900	180			2-#12 AND 1-#12G IN 3/4"C	IDF RECEPT	1	20	4
5	35	2	WATER HEATER EWH-2	2-#8 AND 1-#10G IN 3/4"C					2900	900	2-#10 AND 1-#10G IN 3/4"C	RECEPT - SE WALL/BATHROOMS	1	20	6
7	--	--	--	--	2900	1					2-#10 AND 1-#10G IN 3/4"C	L5-30R FOR IDF	1	30	8
9	20	1	SPARE				0	900			2-#10 AND 1-#10G IN 3/4"C	EXTERIOR RECEPT - SE CORNER	1	20	10
11	20	1	SPARE						0	1080	2-#10 AND 1-#10G IN 3/4"C	RECEPT - SOUTH WALL	1	20	12
13	20	1	SPARE		0	1080					2-#10 AND 1-#10G IN 3/4"C	RECEPT - COL C-13,15,17,19,21,23	1	20	14
15	20	1	SPARE				0	1			2-#10 AND 1-#10G IN 3/4"C	L5-30R FOR 3PL IDF CABINET 24/D	1	30	16
17	20	1	EXHAUST FAN TEF-3	2-#12 AND 1-#12G IN 3/4"C					200	180	2-#12 AND 1-#12G IN 3/4"C	3PL IDF CABINET 24/D	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	7241 VA		3981 VA		5260 VA						
				TOTAL AMPS:	62 A		33 A		45 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	16482 VA
TOTAL ESTIMATED DEMAND LOAD:	16442 VA
TOTAL CONNECTED CURRENT:	46 A
TOTAL ESTIMATED DEMAND CURRENT:	46 A
DEMAND WITH EXPANSION:	55 A

PANELBOARD: DP(1-D14)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-D14) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	SPARE		0	0						SPARE	1	20	2
3	20	1	SPARE				0	0				SPARE	1	20	4
5	20	1	SPARE						0	0		SPARE	1	20	6
7	20	1	SPARE		0	0						SPARE	1	20	8
9	20	1	SPARE				0	0				SPARE	1	20	10
11	20	1	SPARE						0	0		SPARE	1	20	12
13	20	1	SPARE		0	0						SPARE	1	20	14
15	20	1	SPARE				0	0				SPARE	1	20	16
17	20	1	SPARE						0	0		SPARE	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	0 VA		0 VA		0 VA						
				TOTAL AMPS:	0 A		0 A		0 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	0 VA
TOTAL ESTIMATED DEMAND LOAD:	0 VA
TOTAL CONNECTED CURRENT:	0 A
TOTAL ESTIMATED DEMAND CURRENT:	0 A
DEMAND WITH EXPANSION:	0 A

PANELBOARD: DP(2-D4)

LOCATION: DDC 212 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(3-D4) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	25	2	CDU-05 - EQUIPEMENT MEZZ	2-#10 AND 1-#10G IN 3/4"C	1393	0						SPARE	1	20	2
3	--	--	--	--			1393	2891			2-#8 AND 1-#10G IN 3/4"C	CRU-01	2	35	4
5	25	2	CDU-06 - EQUIPEMENT MEZZ	2-#10 AND 1-#10G IN 3/4"C					1393	2891	--	--	--	--	6
7	--	--	--	--	1393	2891					2-#8 AND 1-#10G IN 3/4"C	CRU-02	2	35	8
9	20	1	DDC RM - 3PL RACK RECEPT	2-#12 AND 1-#12G IN 3/4"C			1800	2891					--	--	10
11	20	1	DDC RM - 3PL RACK RECEPT	2-#12 AND 1-#12G IN 3/4"C					1800	1800		DDC RM - RACK #2 RECEPT	1	20	12
13	20	1	SPARE		0	1800					2-#12 AND 1-#12G IN 3/4"C	DDC RM - RACK #3 RECEPT	1	20	14
15	20	1	SPARE				0	0				SPARE	1	20	16
17	20	1	SPARE						0	0		SPARE	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	60	3	MBP DP(2-D4)B	SEE ONE-LINE DIAGRAM	4000	0						SPARE	1	20	38
39	--	--	--	--			4000	0				SPARE	1	20	40
41	--	--	--	--					3600	0		SPARE	1	20	42
				TOTAL LOAD:	11477 VA		12975 VA		11484 VA						
				TOTAL AMPS:	96 A		108 A		96 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	35936 VA
TOTAL ESTIMATED DEMAND LOAD:	32109 VA
TOTAL CONNECTED CURRENT:	100 A
TOTAL ESTIMATED DEMAND CURRENT:	89 A
DEMAND WITH EXPANSION:	107 A

PANELBOARD: DP(1-D4)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-D4) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	50	2	6-50R COFFEE REC BREAK ROOM	2-#6 AND 1-#10G IN 3/4"C	2500	540					2-#10 AND 1-#10G IN 3/4"C	RECEPT - BREAKROOM/DISPOSAL	1	20	2
3	--	--	--	--			2500	360			2-#12 AND 1-#12G IN 3/4"C	RECEPT - BREAKROOM SINK	1	20	4
5	20	1	REFRIGERATOR REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C					1200	1500	2-#12 AND 1-#12G IN 3/4"C	ELEVATOR CAB POWER	1	20	6
7	20	1	REFRIGERATOR REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C	1200	1000					2-#12 AND 1-#12G IN 3/4"C	PROJECTION SCREEN	1	20	8
9	20	1	REFRIGERATOR REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C			1200	1000			2-#12 AND 1-#12G IN 3/4"C	EXTERIOR LIGHTING CONTACTOR	1	20	10
11	20	1	MICROWAVE REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C					1500	540	2-#10 AND 1-#10G IN 3/4"C	EXTERIOR RECEPT - SW CORNER	1	20	12
13	20	1	MICROWAVE REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C	1500	360					2-#10 AND 1-#10G IN 3/4"C	EXTERIOR RECEPT - WEST WALL	1	20	14
15	20	1	MICROWAVE REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C			1500	1800			2-#12 AND 1-#12G IN 3/4"C	RECEPT - MANAGERS 106	1	20	16
17	20	1	MICROWAVE REC BREAK ROOM	2-#12 AND 1-#12G IN 3/4"C					1500	720	2-#12 AND 1-#12G IN 3/4"C	RECEPT - MANAGERS 106	1	20	18
19	20	1	RECEPT - COL C-3,5,7,9,11	2-#10 AND 1-#10G IN 3/4"C	900	720					2-#12 AND 1-#12G IN 3/4"C	RECEPT - MANAGERS 106	1	20	20
21	20	1	VENDING MACHINE REC	2-#12 AND 1-#12G IN 3/4"C			1500	720			2-#12 AND 1-#12G IN 3/4"C	RECEPT - MANAGERS 106	1	20	22
23	20	1	VENDING MACHINE REC	2-#12 AND 1-#12G IN 3/4"C					1500	1000	2-#12 AND 1-#12G IN 3/4"C	PROJECTOR BREAK RM	1	20	24
25	20	1	VENDING MACHINE REC	2-#12 AND 1-#12G IN 3/4"C	1500	720					2-#12 AND 1-#12G IN 3/4"C	RECEPT - RECEIVING 103	1	20	26
27	20	1	VENDING MACHINE REC	2-#12 AND 1-#12G IN 3/4"C			1500	720			2-#12 AND 1-#12G IN 3/4"C	RECEPT - RECEIVING 103	1	20	28
29	20	1	VENDING MACHINE REC	2-#12 AND 1-#12G IN 3/4"C					1500	900	2-#12 AND 1-#12G IN 3/4"C	RECEPT - RECEIVING 103	1	20	30
31	20	1	RECEPT - SW WALL	2-#12 AND 1-#12G IN 3/4"C	360	720					2-#12 AND 1-#12G IN 3/4"C	RECEPT - DRIVER LOBBY/RESTROOM	1	20	32
33	20	1	RECEPT - ELEVATOR SUMP PUMP	2-#12 AND 1-#12G IN 3/4"C			1200	540			2-#12 AND 1-#12G IN 3/4"C	RECEPT - JANITOR/WOMEN'S RR	1	20	34
35	20	1	RECEPT - ELEVATOR	2-#12 AND 1-#12G IN 3/4"C					180	540	2-#12 AND 1-#12G IN 3/4"C	RECEPT - HALLWAY/MEN'S RR	1	20	36
37	20	1	EXHAUST FAN EF-1	2-#12 AND 1-#12G IN 3/4"C	530	720					2-#12 AND 1-#12G IN 3/4"C	RECEPT - BREAKROOM SOUTH	1	20	38
39	20	1	FACP	2-#12 AND 1-#12G IN 3/4"C			500	540			2-#12 AND 1-#12G IN 3/4"C	RECEPT - BREAKROOM WEST	1	20	40
41	20	1	PROJECTOR RECEPTACLE RM 106	2-#12 AND 1-#12G IN 3/4"C					1000	0		SPARE	1	20	42
43	20	1	PROJECTOR RECEPTACLE RM 106	2-#12 AND 1-#12G IN 3/4"C	1000	0						SPARE	1	20	44
45	20	1	PROJECTOR SCREENS RM 106	2-#12 AND 1-#12G IN 3/4"C			360	0				SPARE	1	20	46
47	20	1	SPARE						0	0		SPARE	1	20	48
49	20	1	SPARE		0	0						SPARE	1	20	50
51	20	1	SPARE				0	0				SPARE	1	20	52
53	20	1	SPARE						0	0		SPARE	1	20	54
55	20	1	SPARE		0	0						SPARE	1	20	56
57	20	1	SPARE				0	0				SPARE	1	20	58
59	20	1	SPARE						0	0		SPARE	1	20	60
61	20	1	SPARE		0	0						SPARE	1	20	62
63	20	1	SPARE				0	0				SPARE	1	20	64
65	20	1	SPARE						0	0		SPARE	1	20	66
67	20	1	SPARE		0	0						SPARE	1	20	68
69	20	1	SPARE				0	0				SPARE	1	20	70
71	20	1	SPARE						0	0		SPARE	1	20	72
73	20	1	SPARE		0	0						SPARE	1	20	74
75	20	1	SPARE				0	0				SPARE	1	20	76
77	20	1	SPARE						0	0		SPARE	1	20	78
79	20	1	SPARE		0	0						SPARE	1	20	80
81	20	1	SPARE				0	0				SPARE	1	20	82
83	20	1	SPARE						0	0		SPARE	1	20	84
				TOTAL LOAD:	14270 VA		15940 VA		13580 VA						
				TOTAL AMPS:	120 A		134 A		113 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	43790 VA
TOTAL ESTIMATED DEMAND LOAD:	33234 VA
TOTAL CONNECTED CURRENT:	122 A
TOTAL ESTIMATED DEMAND...	92 A
DEMAND WITH EXPANSION:	111 A

PANELBOARD: DP(2-D4)A

LOCATION: PRINT/COPY 208A | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(3-D4)A | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: FLUSH | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	RECEPT - BREAK OUT 201	2-#12 AND 1-#12G IN 3/4"C	720	2500					2-#6 AND 1-#10G IN 3/4"C	6-50R COFFEE REC OFFICE MEZZ	2	50	2
3	20	1	RECEPT - BREAK OUT 202	2-#12 AND 1-#12G IN 3/4"C			720	2500			--	--	--	--	4
5	20	1	RECEPT - SR OPS OFFICE 203	2-#12 AND 1-#12G IN 3/4"C					720	530	2-#12 AND 1-#12G IN 3/4"C	EXHAUST FAN EF-2	1	20	6
7	20	1	RECEPT - SR OPS OFFICE 204	2-#12 AND 1-#12G IN 3/4"C	720	510					2-#12 AND 1-#12G IN 3/4"C	RECIRC PUMP RP-1	2	20	8
9	20	1	RECEPT - HR MANAGER 205	2-#12 AND 1-#12G IN 3/4"C			720	510			--	--	--	--	10
11	20	1	RECEPT - SPIRIT OFFICE 207	2-#12 AND 1-#12G IN 3/4"C					720	10	2-#12 AND 1-#12G IN 3/4"C	BAS PANEL	1	20	12
13	20	1	RECEPT - 3PL GM OFFICE 206 NW	2-#12 AND 1-#12G IN 3/4"C	360	0						SPARE	1	20	14
15	20	1	RECEPT - 3PL GM OFFICE 206 SE	2-#12 AND 1-#12G IN 3/4"C			540	720			2-#12 AND 1-#12G IN 3/4"C	RECEPT - HALLWAY NE	1	20	16
17	20	1	RECEPT - RESTROOMS AND JANITOR	2-#12 AND 1-#12G IN 3/4"C					540	0		SPARE	1	20	18
19	20	1	RECEPT - ELEVATOR LOBBY	2-#12 AND 1-#12G IN 3/4"C	540	540					2-#12 AND 1-#12G IN 3/4"C	RECEPT - DDC ROOM CONVENIENCE	1	20	20
21	20	1	RECEPT - CONFERENCE SW	2-#12 AND 1-#12G IN 3/4"C			900	1500			2-#12 AND 1-#12G IN 3/4"C	RECEPT - AC MICROWAVE OFFICE...	1	20	22
23	20	1	SPARE						0	1500	2-#12 AND 1-#12G IN 3/4"C	RECEPT - AC MICROWAVE OFFICE...	1	20	24
25	20	1	SPARE		0	360					2-#12 AND 1-#12G IN 3/4"C	RECEPT - EQUIPMENT MEZZ	1	20	26
27	20	1	SPARE				0	500			2-#12 AND 1-#12G IN 3/4"C	WH-1 - EQUIPMENT MEZZ	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	3	POWERED FURNITURE	4-#12 AND 1-#12G IN 3/4"C.	333	480					4-#12 AND 1-#12G IN 3/4"C.	POWERED FURNITURE	3	20	32
33	--	--	--	--			333	480			--	--	--	--	34
35	--	--	--	--					333	480	--	--	--	--	36
37	20	3	POWERED FURNITURE	4-#12 AND 1-#12G IN 3/4"C.	480	480					4-#12 AND 1-#12G IN 3/4"C.	POWERED FURNITURE	3	20	38
39	--	--	--	--			480	480			--	--	--	--	40
41	--	--	--	--					480	480	--	--	--	--	42
				TOTAL LOAD:	8023 VA		10383 VA		5793 VA						
				TOTAL AMPS:	70 A		89 A		48 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	24200 VA
TOTAL ESTIMATED DEMAND LOAD:	22684 VA
TOTAL CONNECTED CURRENT:	67 A
TOTAL ESTIMATED DEMAND...	63 A
DEMAND WITH EXPANSION:	76 A

#	DESCRIPTION	DATE	BY	APPROVED
6	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	06/15/18	CAJ	DWH
9	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	06/29/18	CAJ	DWH
Q	PKG 2B, MEP, FP, FINISHES - REV Q	07/13/18	CAJ	DWH
Z	PKG 2B, MEP, FP, FINISHES - REV Z	11/16/18	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED / NOT REQUIRED — DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME — DEPT. — DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: PANEL SCHEDULES
Sheet E-704 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PANELBOARD: DP(1-A1)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-A1) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	EXTERIOR RECEPT - NW CORNER	2 - #10 AND 1 - #10G IN 3/4"C	900	0						SPARE	1	20	2
3	20	1	PERIMETER RECEPT - NORTH WALL	2 - #10 AND 1 - #10G IN 3/4"C			1080	0				SPARE	1	20	4
5	20	1	DOCK DOOR RECEPT - EAST WALL	2 - #12 AND 1 - #12G IN 3/4"C					1620	0		SPARE	1	20	6
7	20	1	DECANT STATION RECEPT	2 - #12 AND 1 - #12G IN 3/4"C	720	0						SPARE	1	20	8
9	20	1	DECANT STATION RECEPT	2 - #12 AND 1 - #12G IN 3/4"C			720	0				SPARE	1	20	10
11	20	1	LIGHTED EXTERIOR SIGN	2 - #12 AND 1 - #12G IN 3/4"C					180	0		SPARE	1	20	12
13	20	1	RFID CTRL OH#9	2 - #12 AND 1 - #12G IN 3/4"C	360	0						SPARE	1	20	14
15	20	1	RECEPT -COL B-3,5,7,9,11	2 - #10 AND 1 - #10G IN 3/4"C			900	0				SPARE	1	20	16
17	20	1	SPARE						0	0		SPARE	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	1980 VA		2700 VA		1800 VA						
				TOTAL AMPS:	17 A		23 A		15 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	6480 VA
TOTAL ESTIMATED DEMAND LOAD:	6480 VA
TOTAL CONNECTED CURRENT:	18 A
TOTAL ESTIMATED DEMAND...	18 A
DEMAND WITH EXPANSION:	22 A

PANELBOARD: DP(1-B19)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-B19) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 225 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 225 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	RECEPT - TOOLSHOP WEST	2-#12 AND 1-#12G IN 3/4"C	720	0						SPARE	1	20	2
3	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C			360	0				SPARE	1	20	4
5	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C					360	0		SPARE	1	20	6
7	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C	360	0						SPARE	1	20	8
9	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C			360	0				SPARE	1	20	10
11	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C					360	0		SPARE	1	20	12
13	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C	360	0						SPARE	1	20	14
15	20	1	RECEPT - TOOLSHOP BENCH	2-#12 AND 1-#12G IN 3/4"C			360	0				SPARE	1	20	16
17	20	1	RECEPT - TOOLSHOP EAST	2-#12 AND 1-#12G IN 3/4"C					360	0		SPARE	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	1440 VA		1080 VA		1080 VA						
				TOTAL AMPS:	12 A		9 A		9 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	3600 VA
TOTAL ESTIMATED DEMAND LOAD:	3600 VA
TOTAL CONNECTED CURRENT:	10 A
TOTAL ESTIMATED DEMAND...	10 A
DEMAND WITH EXPANSION:	12 A

PANELBOARD: DP(1-B13)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-B13) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	30	1	L5-30R FOR IDF	2-#10 AND 1-#10G IN 3/4"C	180	180					2-#10 AND 1-#10G IN 3/4"C	IDF RECEPT	1	20	2
3	20	1	RECEPT - QC STATION 1	2-#12 AND 1-#12G IN 3/4"C			360	720			2-#10 AND 1-#10G IN 3/4"C	KITTING STATION RECEPT	1	20	4
5	20	1	RECEPT - QC STATION 2	2-#12 AND 1-#12G IN 3/4"C					360	720	2-#10 AND 1-#10G IN 3/4"C	KITTING STATION RECEPT	1	20	6
7	20	1	RECEPT - QC STATION 3	2-#12 AND 1-#12G IN 3/4"C	360	720					2-#10 AND 1-#10G IN 3/4"C	KITTING STATION RECEPT	1	20	8
9	20	1	RECEPT - QC STATION 4	2-#12 AND 1-#12G IN 3/4"C			360	720			2-#10 AND 1-#10G IN 3/4"C	KITTING STATION RECEPT	1	20	10
11	20	1	RECEPT - QC STATION 5	2-#12 AND 1-#12G IN 3/4"C					360	180	2-#10 AND 1-#10G IN 3/4"C	L5-30R FOR IDF	1	30	12
13	20	1	RECEPT - QC STATION 6	2-#12 AND 1-#12G IN 3/4"C	360	180					2-#12 AND 1-#12G IN 3/4"C	IDF RECEPT	1	20	14
15	20	1	RECEPT - QC AREA	2-#12 AND 1-#12G IN 3/4"C			360	360			2-#10 AND 1-#10G IN 3/4"C	RECEPT - QC STATION 7	1	20	16
17	20	1	RECEPT - QC STATION 11	2-#12 AND 1-#12G IN 3/4"C					360	360	2-#10 AND 1-#10G IN 3/4"C	RECEPT - QC STATION 8	1	20	18
19	20	1	RECEPT - QC STATION 12	2-#12 AND 1-#12G IN 3/4"C	360	360					2-#10 AND 1-#10G IN 3/4"C	RECEPT - QC STATION 9	1	20	20
21	20	1	RECEPT - QC STATION 13	2-#12 AND 1-#12G IN 3/4"C			360	360			2-#10 AND 1-#10G IN 3/4"C	RECEPT - QC STATION 10	1	20	22
23	20	1	RECEPT - QC STATION 14	2-#12 AND 1-#12G IN 3/4"C					360	0		SPARE	1	20	24
25	20	1	RECEPT - QC STATION 15	2-#12 AND 1-#12G IN 3/4"C	360	0						SPARE	1	20	26
27	20	1	RECEPT - QC STATION 16	2-#12 AND 1-#12G IN 3/4"C			360	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	3060 VA		3960 VA		2700 VA						
				TOTAL AMPS:	26 A		33 A		23 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	9720 VA
TOTAL ESTIMATED DEMAND LOAD:	9720 VA
TOTAL CONNECTED CURRENT:	27 A
TOTAL ESTIMATED DEMAND...	27 A
DEMAND WITH EXPANSION:	32 A

PANELBOARD: DP(1-B5)

LOCATION: AUTOMATED PRODUCTION 110 | **VOLTAGE:** 208Y/120V | **A.I.C. RATING:** 10KAIC MINIMUM
SUPPLY FROM: TX(1-B5) | **PHASE:** 3 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 4 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:
PROVIDE IN-LINE SURGE PROTECTION

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	30	1	L5-30R FOR IDF	2-#10 AND 1-#10G IN 3/4"C	180	720					2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	2
3	20	1	IDF RECEPT	2-#12 AND 1-#12G IN 3/4"C			180	720			2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	4
5	20	1	DECANT STATION RECEPT	2-#12 AND 1-#12G IN 3/4"C					720	720	2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	6
7	20	1	DECANT STATION RECEPT	2-#12 AND 1-#12G IN 3/4"C	720	720					2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	8
9	20	1	DECANT STATION RECEPT	2-#12 AND 1-#12G IN 3/4"C			720	720			2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	10
11	20	1	DECANT RECEPT	2-#12 AND 1-#12G IN 3/4"C					540	720	2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	12
13	30	1	L5-30R FOR IDF	2-#10 AND 1-#10G IN 3/4"C	180	720					2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	14
15	20	1	IDF RECEPT	2-#12 AND 1-#12G IN 3/4"C			180	720			2-#12 AND 1-#12G IN 3/4"C	KITTING STATION RECEPT	1	20	16
17	20	1	SPARE						0	180	2-#12 AND 1-#12G IN 3/4"C	DECANT MONITOR RECEPT	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	20	1	SPARE						0	0		SPARE	1	20	24
25	20	1	SPARE		0	0						SPARE	1	20	26
27	20	1	SPARE				0	0				SPARE	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0						SPARE	1	20	38
39	20	1	SPARE				0	0				SPARE	1	20	40
41	20	1	SPARE						0	0		SPARE	1	20	42
				TOTAL LOAD:	3240 VA		3240 VA		2880 VA						
				TOTAL AMPS:	27 A		27 A		24 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	9360 VA
TOTAL ESTIMATED DEMAND LOAD:	9360 VA
TOTAL CONNECTED CURRENT:	26 A
TOTAL ESTIMATED DEMAND...	26 A
DEMAND WITH EXPANSION:	31 A

BY	APPROVED	DESCRIPTION	DATE	△
CAJ	DWH	PKG 2B, MEP, FP, FINISHES - 60% REVIEW	06/15/18	6
CAJ	DWH	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	06/29/18	9
CAJ	DWH	PKG 2B, MEP, FP, FINISHES - REV Q	07/13/18	Q
CAJ	DWH	PKG 2B, MEP, FP, FINISHES - REV Z	11/16/18	Z

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS — PROFESSIONAL ENGINEER

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: PANEL SCHEDULES
Sheet E-705 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

PANELBOARD: DP(2-D4)B

LOCATION: DDC 212
SUPPLY FROM: DP(2-D4)
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING:
MAINS TYPE: MCB
MAINS RATING: 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	30	2	DDC RM - CABINET #1 L6-30R RECEPT	2-#10 AND 1-#10G IN 3/4"C	2000	2000					2-#10 AND 1-#10G IN 3/4"C	DDC RM - CABINET #1 L6-30R RECEPT	2	30	2
3	--	--		--			2000	2000			--		--	--	4
5	20	1	DDC RM - RACK #2 RECEPT	2-#12 AND 1-#12G IN 3/4"C					1800	1800	2-#12 AND 1-#12G IN 3/4"C	DDC RM - RACK #3 RECEPT	1	20	6
7	--	--	SPACE	--	0	0					--	SPACE	--	--	8
9	--	--	SPACE	--			0	0			--	SPACE	--	--	10
11	--	--	SPACE	--					0	0	--	SPACE	--	--	12
13	--	--	SPACE	--	0	0					--	SPACE	--	--	14
15	--	--	SPACE	--			0	0			--	SPACE	--	--	16
17	--	--	SPACE	--					0	0	--	SPACE	--	--	18
19	--	--	SPACE	--	0	0					--	SPACE	--	--	20
21	--	--	SPACE	--			0	0			--	SPACE	--	--	22
23	--	--	SPACE	--					0	0	--	SPACE	--	--	24
25	--	--	SPACE	--	0	0					--	SPACE	--	--	26
27	--	--	SPACE	--			0	0			--	SPACE	--	--	28
29	--	--	SPACE	--					0	0	--	SPACE	--	--	30
31	--	--	SPACE	--	0	0					--	SPACE	--	--	32
33	--	--	SPACE	--			0	0			--	SPACE	--	--	34
35	--	--	SPACE	--					0	0	--	SPACE	--	--	36
				TOTAL LOAD:	4000 VA		4000 VA		3600 VA						
				TOTAL AMPS:	34 A		34 A		30 A						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	11600 VA
TOTAL ESTIMATED DEMAND LOAD:	11600 VA
TOTAL CONNECTED CURRENT:	32 A
TOTAL ESTIMATED DEMAND...	32 A
DEMAND WITH EXPANSION:	39 A

INVERTER: INV-1

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: PP(1-A24)A
MOUNTING: FLOOR
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASES: 3
WIRES: 4
AIC: 65,000

KVA RATING: 10

NOTES:

CKT	LOAD NAME	DESIGN WIRE AND CONDUIT	POLES	TRIP RATING	FRAME SIZE	LOAD	COMMENTS
1	NORTH HIGH BAY EGRESS LIGHTING		1	20 A	400 A	3730 VA	
2	NORTH HIGH BAY EGRESS LIGHTING		1	20 A	400 A	3730 VA	
3	NORTH WALL EGRESS TASK LIGHTING		1	20 A	400 A	342 VA	
4	EXTERIOR EGRESS EXIT SIGNS		1	20 A	400 A	255 VA	
5	INTERIOR EGRESS EXIT SIGNS		1	20 A	400 A	16 VA	
6							

SWITCHBOARD TOTALS	
TOTAL CONNECTED LOAD:	8073 VA
TOTAL ESTIMATED DEMAND LOAD:	8073 VA
TOTAL CONNECTED CURRENT:	10 A
TOTAL ESTIMATED DEMAND CURRENT:	10 A
DEMAND WITH EXPANSION:	12 A

INVERTER: INV-2

LOCATION: AUTOMATED PRODUCTION 110
SUPPLY FROM: PP(1-D4)
MOUNTING: FLOOR
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASES: 3
WIRES: 4
AIC: 65,000

KVA RATING: 16.7

NOTES:

CKT	LOAD NAME	DESIGN WIRE AND CONDUIT	POLES	TRIP RATING	FRAME SIZE	Load	COMMENTS
1	SOUTH HIGH BAY EGRESS LIGHTING		1	20 A	400 A	3730 VA	
2	SOUTH HIGH BAY EGRESS LIGHTING		1	20 A	400 A	2984 VA	
3	SOUTH HIGH BAY EGRESS LIGHTING		1	20 A	400 A	2984 VA	
4	SOUTH WALL EGRESS TASK LIGHTING		1	20 A	400 A	418 VA	
5	GROUND FLOOR MEZZ EGRESS LIGHTING		1	20 A	400 A	460 VA	
6	OFFICE MEZZ EGRESS LIGHTING		1	20 A	400 A	692 VA	
7	INTERIOR EGRESS EXIT SIGNS		1	20 A	400 A	28 VA	
8	EXTERIOR WALL MOUNTED EGRESS		1	20 A	400 A	773 VA	
9	INTERIOR SOUTH RACK ISLE EGRESS		1	20 A	--	1734 VA	
10	SPARE		1	20 A	--	0 VA	

SWITCHBOARD TOTALS	
TOTAL CONNECTED LOAD:	13803 VA
TOTAL ESTIMATED DEMAND LOAD:	13803 VA
TOTAL CONNECTED CURRENT:	17 A
TOTAL ESTIMATED DEMAND CURRENT:	17 A
DEMAND WITH EXPANSION:	20 A

16NOV2018 - PKG 2B - MEP, FP, FINISHES -REVZ
PE CONTACT: KEVIN HOLLAND @ 316-523-0061

	DATE	DESCRIPTION	BY	APPROVED
Z	11/16/18	PKG 2B: MEP, FP, FINISHES - REV Z	CAJ	DWH

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY — THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME / DEPT. / DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

DONALD WILLIAM HATTON — LICENSED — 16755 — 11/16/18 — KANSAS PROFESSIONAL ENGINEER

AUTOMATED WAREHOUSE
BLDG-1-338G
Facilities Engineering
WICHITA, KS
Designed by D. HATTON
Drawn by C. JOHNSON

Project No. 6936
Sheet Name: PANEL SCHEDULES
Sheet E-706 of XX
Drawing No. 108M-XXX-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

FIRE ALARM SYSTEM LEGEND

FACU	FIRE ALARM CONTROL UNIT (HONEYWELL XLS3000)
BATT	SECONDARY POWER SUPPLY (BATTERY)
SS	SURGE SUPPRESSOR (TRANSIENT VOLTAGE SURGE SUPPRESSOR)
VS	VALVE SUPERVISORY SWITCH (PROVIDED BY DIVISION 21)
WF	WATER FLOW DETECTOR / SWITCH (PROVIDED BY DIVISION 21)
RL	NON-ADDRESSABLE OUTPUT RELAY
F	HEAT DETECTOR - FIXED TEMPERATURE F = FIXED TEMPERATURE
S/R	SMOKE DETECTOR / SENSOR FOR DUCT S = SUPPLY R = RETURN
P	CEILING MOUNTED SMOKE DETECTOR P = PHOTOELECTRIC
	HORN / STROBE COMBINATION
AOM	ADDRESSABLE OUTPUT CONTROL MODULE
AIM	ADDRESSABLE INPUT MONITOR MODULE
F	MANUAL FIRE ALARM PULL STATION
	GROUND
ESR	ELEVATOR SYSTEM RECALL PANEL (BY DIVISION 14)
ST	SHUNT TRIP BREAKER (BY DIVISION 26)

ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
ASRS	AUTOMATED STORAGE AND RETRIEVAL SYSTEM
AWG	AMERICAN WIRE GAGE
CD	CANDELA
CFM	CUBIC FEET PER MINUTE
DDC	DIRECT DIGITAL CONTROL
EMCS	ENERGY MONITORING AND CONTROL SYSTEM
FA	FIRE ALARM
FDC	FIRE DEPARTMENT CONNECTION
FM	FM GLOBAL
FX	FIRE SUPPRESSION
HBC	HIGH BAY CRANE
HBS	HIGH BAY SHUTTLE
HVLS	HIGH VOLUME LOW SPEED
IAW	IN ACCORDANCE WITH
IDC	INITIATING DEVICE CIRCUIT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PIV	POST INDICATOR VALVE
RTS	REMOTE TEST SWITCH
SLC	SIGNALING LINE CIRCUIT
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
WP	WEATHER PROOF (NEMA 250, TYPE 3R)

GENERAL NOTES:

1. PROVIDE AN ADDRESSABLE FIRE ALARM SYSTEM AS INDICATED ON THE DRAWINGS.
2. COORDINATE ALL REQUIRED SYSTEMS TO THE SATISFACTION OF THE CONTRACTOR AND AUTHORITY HAVING JURISDICTION. ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS SHALL BE CORRECTED BY THE SUB-CONTRACTOR AT NO ADDITIONAL COST.
3. THE FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE AND SHOW A MINIMAL QUANTITY OF DEVICES. DETERMINE THE FINAL QUANTITY AND LOCATION OF ALL DEVICES IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACT DRAWINGS, AND MANUFACTURER'S WRITTEN RECOMMENDATIONS TO BE COMPLIANT WITH ALL APPLICABLE CODES AND STANDARDS. PROVIDE ADDITIONAL DEVICES WHEN REQUIRED FOR A FULLY FUNCTIONING FIRE ALARM SYSTEM AS REQUIRED BY NFPA 72.
4. CONCEAL ALL CONDUITS IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE INDICATED. EXCEPTION: CONDUIT IS ALLOWED TO BE SURFACE MOUNTED ON WALLS AND CEILINGS IN UNFINISHED AREAS (SUCH AS MECHANICAL ROOM AND ELECTRICAL ROOM). WHERE A CONDUIT SUPPLIES A DEVICE NOT MOUNTED DIRECTLY ON THE WALL OR CEILING, ROUTE THE CONDUIT AS A SINGLE PENDENT DROP TO EACH DEVICE FROM THE CEILING SURFACE ABOVE. DO NOT TRAPEZE CONDUIT ACROSS AN OPEN SPACE.
5. DO NOT USE FIRE ALARM EQUIPMENT PANELS AS RACEWAY FOR ROUTING POWER WIRING OR LOW VOLTAGE WIRING. ONLY ROUTE WIRING TERMINATING WITHIN THE PANEL INTO THE PANEL. PROVIDE 1/4 INCH SEPARATION BETWEEN POWER-LIMITED FIRE ALARM CIRCUITS AND POWER CIRCUITS.
6. MOUNTING DEVICES IN THE FACU, INCLUDING ANY SUBPANELS, WHICH ARE NOT UL LISTED OR FM APPROVED AS PART OF THE UNIT IS PROHIBITED.
7. PROVIDE SURGE SUPPRESSORS TO PROTECT ALL POWER SUPPLY CIRCUITS TO THE FACU. MOUNT SURGE SUPPRESSORS IN A SEPARATE ENCLOSURE, UNLESS IT IS UL LISTED OR FM APPROVED AND INSTALLED IN THE CONTROL UNIT BY THE FACTORY.
8. INSTALL FIRE ALARM BATTERIES IN THE ENCLOSURE OF THE DEVICE/UNIT IT SUPPORTS SUCH AS FACU ENCLOSURE OR IN AN INDEPENDENT DEDICATED ENCLOSURE.

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLOTT
LICENSED
21081
KANSAS
PROFESSIONAL ENGINEER
11/16/2018

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G WICHITA, KS

Drawn by A. SCHNECKLOTH | Designed by J. GINSBURG

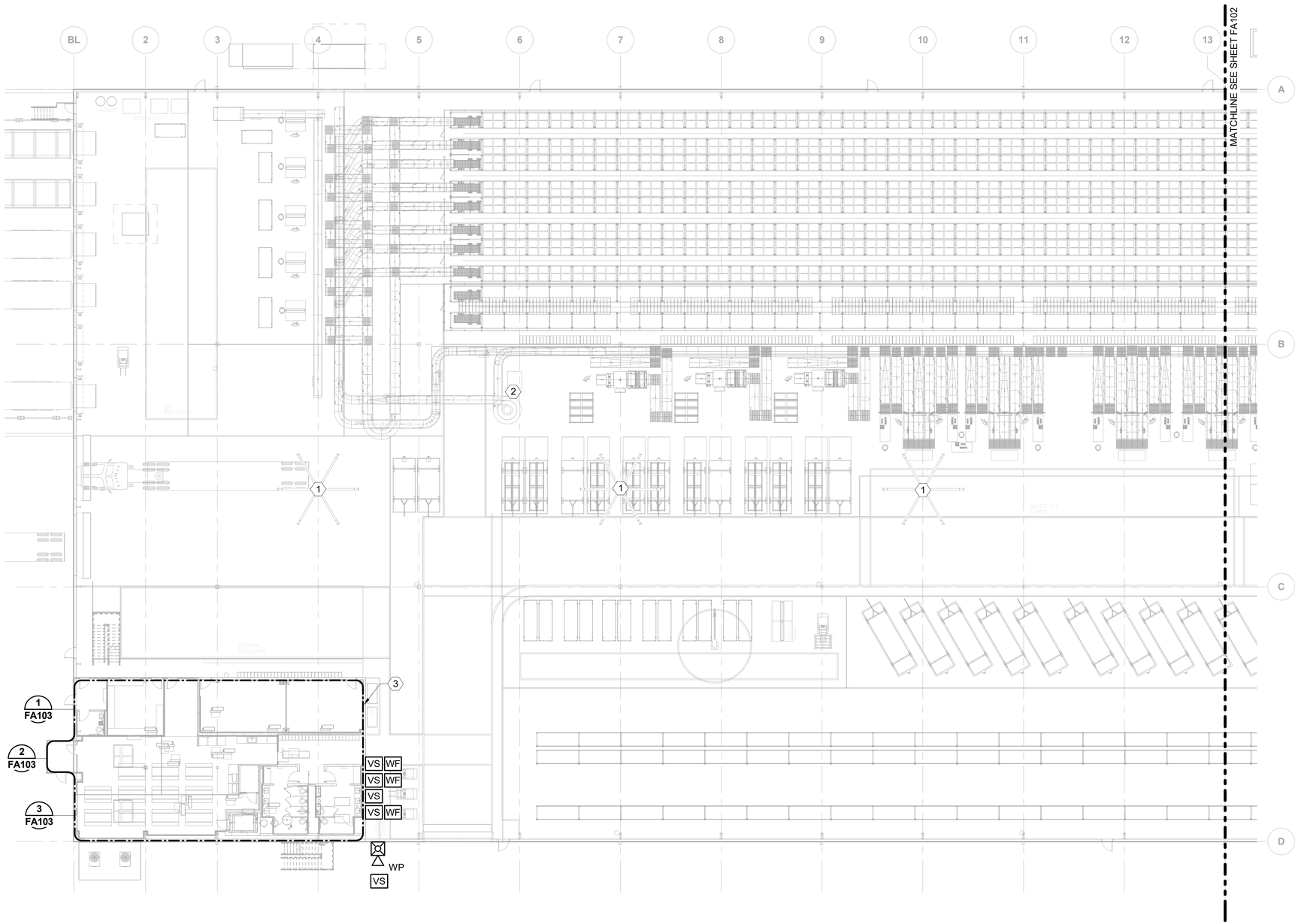
Project No. 6936

Sheet Name: FIRE ALARM NOTES, LEGEND, & ABBR.

Sheet FA001 of XX

Drawing No. 108M-601-152

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 FA101

FIRE ALARM PLAN - WEST

0 8' 16' 32'

SCALE IN FEET

NORTH

NOTES:

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

KEYED NOTES:

1. PROVIDE DIRECT SHUTDOWN FOR ALL HVLS FANS. REFER TO MECHANICAL PLANS FOR QUANTITY AND LOCATION OF DEVICE(S).
2. PROVIDE ADDRESSABLE OUTPUT MODULE(S) FOR INTERFACE WITH MULTI-SHUTTLE FOR SHUTDOWN OF RETRIEVAL SYSTEM.
3. GROUND SURGE SUPPRESSOR TO GROUND BAR. SEE ELECTRICAL FOR LOCATION.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW

APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLOTT LICENSED 24081 KANSAS PROFESSIONAL ENGINEER

11/16/2018

WICHITA, KS

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Designed by J. GINSBURG

Drawn by A. SCHNECKLOTH

Project No. 6936

Sheet Name: FIRE ALARM PLAN - WEST

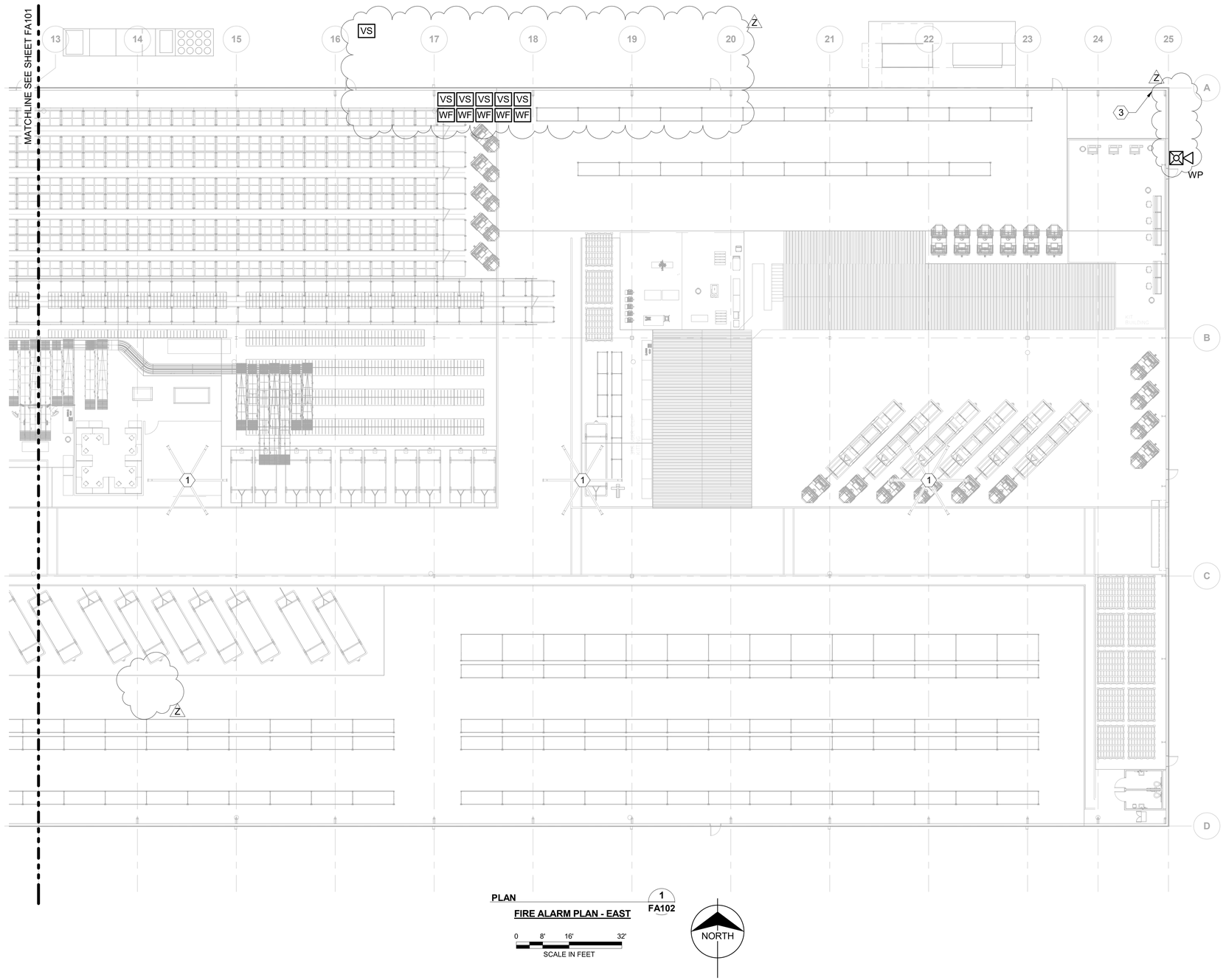
Sheet FA101 of XX

Drawing No. 108M-602-152

C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_F_adegroff.rvt

11/23/2018 10:23:49 PM

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 / FA102

FIRE ALARM PLAN - EAST

0 8' 16' 32'

SCALE IN FEET

NORTH

NOTES:

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

KEYED NOTES:

1. PROVIDE DIRECT SHUTDOWN FOR ALL HVLS FANS. REFER TO MECHANICAL PLANS FOR QUANTITY AND LOCATION OF DEVICE(S).
2. NOT USED
3. GROUND SURGE SUPPRESSOR TO GROUND BAR. SEE ELECTRICAL FOR LOCATION.

KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW
APPROVED ☐ ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLOTT
LICENSED
21081
KANSAS
PROFESSIONAL ENGINEER
11/16/2018

Facilities Engineering

AUTOMATED WAREHOUSE

WICHITA, KS

BLDG-1-338G

Designed by J. GINSBURG
Drawn by A. SCHNIECKLOTH

Project No.
6936

Sheet Name:
FIRE ALARM PLAN - EAST

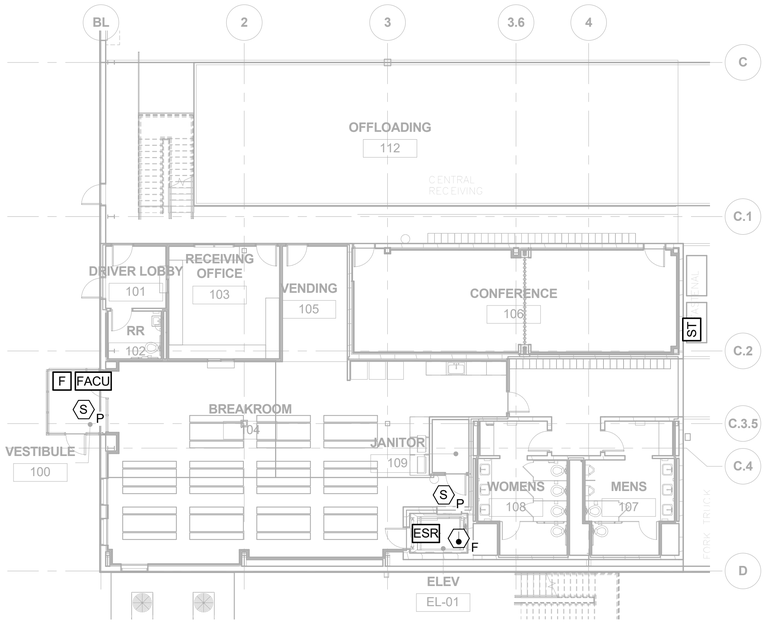
Sheet FA102 of XX

Drawing No.
108M-603-152

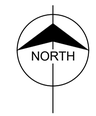
C:\Revit_Projects\104543_WICHAutoWrhs\Models\MEP\104543_F_adegroff.rvt

11/23/2018 10:24:08 PM

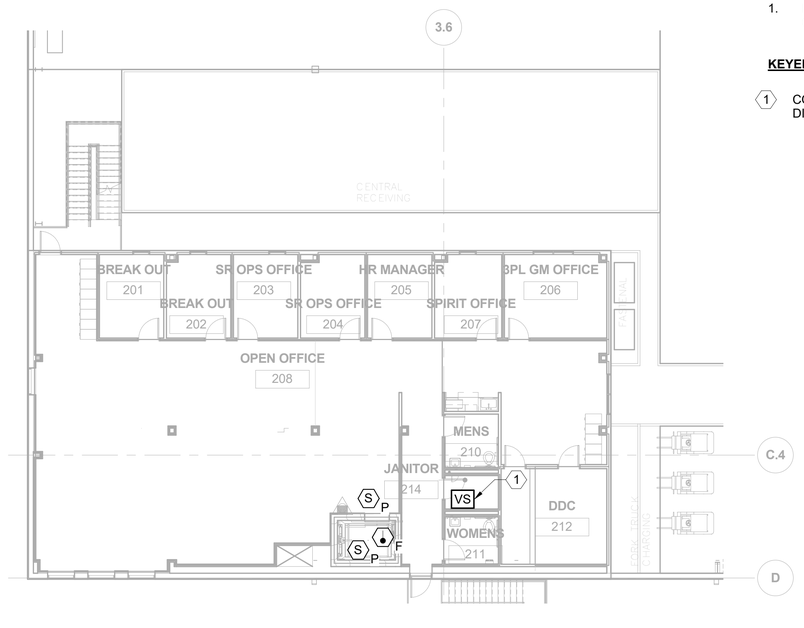
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 FA101
ENLARGED FIRE ALARM OFFICE PLAN



0 8' 16' 24'
SCALE IN FEET



PLAN 2 FA101
ENLARGED FIRE ALARM MEZZANINE PLAN



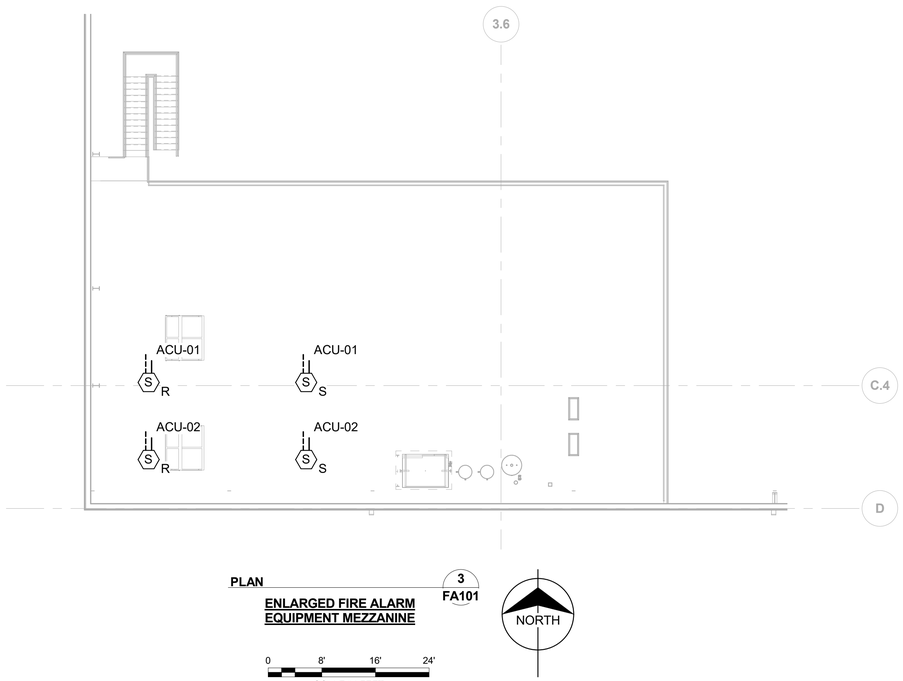
0 8' 16' 24'
SCALE IN FEET

NOTES:

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

KEYED NOTES:

(1) COORDINATE LOCATION OF VALVE TAMPER SWITCH WITH DIVISION 21.



PLAN 3 FA101
ENLARGED FIRE ALARM EQUIPMENT MEZZANINE

0 8' 16' 24'
SCALE IN FEET

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLOTT
LICENSED
24081
KANSAS
PROFESSIONAL ENGINEER
11/16/2018

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by J. GINSBURG
Drawn by A. SCHNECKLOTH

Project No. 6936
Sheet Name: ENLARGED FIRE ALARM OFFICE & MEZZ. PLANS
Sheet FA103 of XX
Drawing No. 108M-604-152

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

FIRE ALARM CONTROL UNIT (FACU) FUNCTIONAL MATRIX

	ANNUNCIATION AT FACU			NOTIFICATION				AUXILIARY FUNCTION						
ALARM SIGNALS	AUDIO-VISIBLE FIRE ALARM INDICATION BY DEVICE	AUDIO-VISIBLE TROUBLE INDICATION BY DEVICE	AUDIO-VISIBLE SUPERVISORY INDICATION BY DEVICE	FIRE ALARM SIGNAL TO SPIRIT DISPATCH	COMMON TROUBLE SIGNAL TO SPIRIT DISPATCH	COMMON SUPERVISORY SIGNAL TO SPIRIT DISPATCH	ACTIVATE HORN/STROBE OVER FIRE DEPARTMENT CONNECTION FOR ASSOCIATED SPRINKLER SYSTEM	SHUT-DOWN ASSOCIATED AIR HANDLING EQUIPMENT	SHUTDOWN HVLS FANS	ELEVATOR RECALL TO PRIMARY RECALL FLOOR	ELEVATOR RECALL TO SECONDARY RECALL FLOOR	ELEVATOR WARNING SIGNAL (FIRE FIGHTERS HAT)	INITIATE ELEVATOR SHUNT TRIP (SUITABLE TIME DELAY REQUIRED)	ALARM SIGNAL TO AUTOMATED RETRIEVAL SYSTEMS
SMOKE DETECTOR	X			X										
WATER FLOW SWITCH	X			X			X		X					X
HEAT DETECTOR - ELEVATOR PIT	X			X									X	
HEAT DETECTOR - TOP OF ELEVATOR SHAFT	X			X									X	
SMOKE DETECTOR - TOP OF ELEVATOR SHAFT	X			X						X		X		
SMOKE DETECTOR - ELEVATOR MAIN LOBBY	X			X							X			
SMOKE DETECTOR - ELEVATOR SECOND FLOOR LOBBY	X			X						X				
TROUBLE SIGNALS														
AC POWER FAILURE		X			X									
LOW BATTERY		X			X									
OPEN CIRCUIT FAULT		X			X									
GROUND FAULT		X			X									
COMPONENT TROUBLE		X			X									
NOTIFICATION APPLIANCE CIRCUIT SHORT		X			X									
SUPERVISORY SIGNALS														
IN-DUCT SMOKE DETECTORS			X			X	X	X						
VALVE SUPERVISORY			X			X	X							

FIRE ALARM MATRIX

CIRCUIT LEGEND:

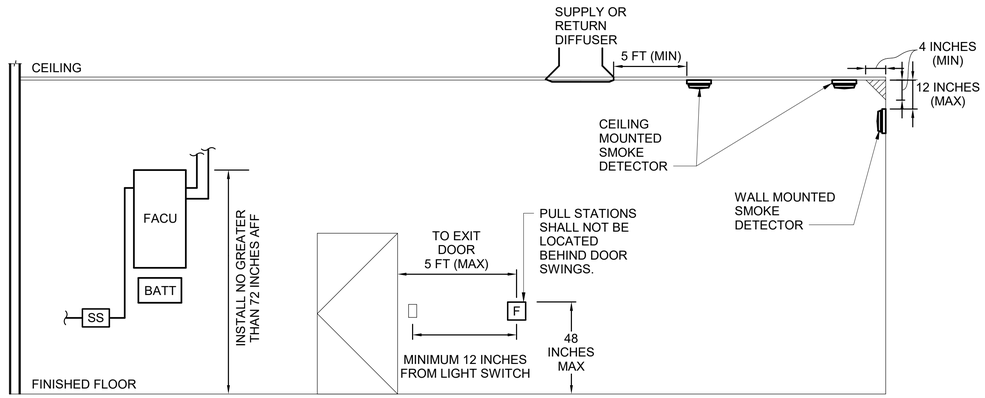
- SIGNALING LINE CIRCUIT (CLASS B)
- NOTIFICATION APPLIANCE CIRCUIT (CLASS B)
- FIBER NETWORK
- 24 VDC OR 120 VAC POWER CIRCUIT

NOTES:

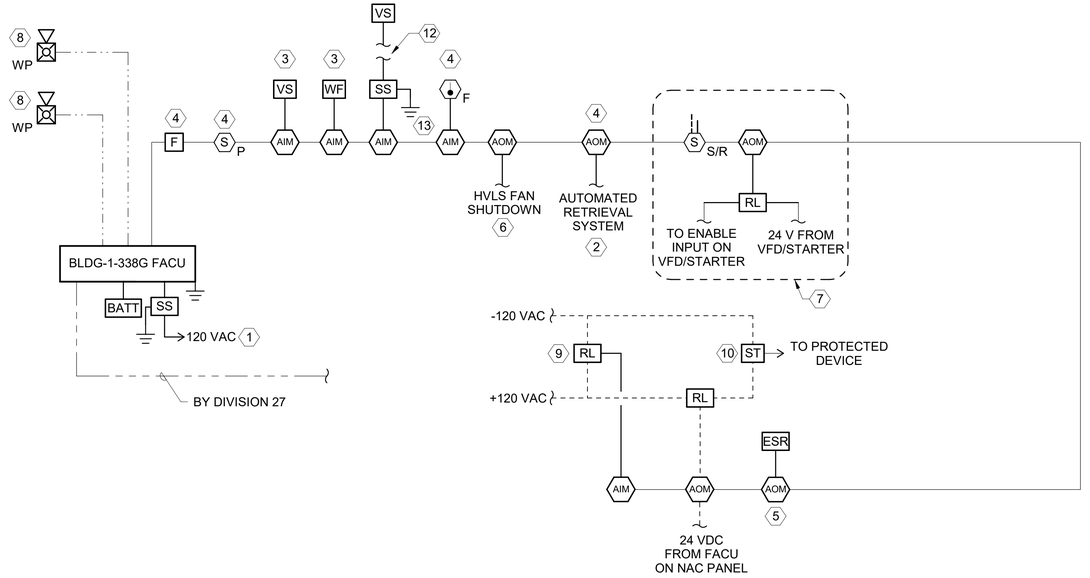
1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS, AND SYMBOLS.
2. THE FIRE ALARM RISER SHOWS THE INTENT OF THE FIRE ALARM INFRASTRUCTURE. NOT ALL DEVICES ARE SHOWN. SUB-CONTRACTOR SHALL PROVIDE THE QUANTITY OF DEVICES AS REQUIRED TO COMPLY WITH NFPA 72, AND CONTRACT DOCUMENTS.
3. EACH FLOW AND TAMPER SWITCH SHALL REPORT BACK TO THE FIRE ALARM CONTROL PANEL WITH A SEPARATE ADDRESS. GROUPED SWITCHES ON ONE ADDRESS ARE NOT ACCEPTABLE.

KEYED NOTES:

1. LOCK, LABEL "FIRE ALARM", AND PROVIDE RED IDENTIFICATION ON CIRCUIT BREAKERS SUPPLYING POWER TO FIRE ALARM EQUIPMENT.
2. PROVIDE OUTPUT MODULES FOR SHUTDOWN SIGNAL TO THE HIGH BAY SHUTTLE SYSTEM AS INDICATED IN THE FIRE ALARM MATRIX.
3. REFER TO FIRE SUPPRESSION DRAWINGS FOR QUANTITY AND LOCATION OF DEVICE(S).
4. REFER TO FIRE ALARM PLANS FOR QUANTITY AND LOCATION OF DEVICE(S).
5. PROVIDE ADDRESSABLE INPUT AND OUTPUT MODULE(S) AS REQUIRED TO ACHIEVE THE FUNCTIONALITY INDICATED IN THE FIRE ALARM MATRIX.
6. PROVIDE DIRECT SHUTDOWN FOR ALL HVLS FANS. REFER TO MECHANICAL PLANS FOR QUANTITY AND LOCATION OF DEVICE(S).
7. PROVIDE SUPPLY AND RETURN DUCT SMOKE DETECTORS FOR DIRECT SHUT DOWN FOR ACU-01 AND ACU-02. SHUTDOWN THROUGH THE EMCS/DDC IS NOT PERMITTED.
8. EXTERIOR WP HORN STROBE OVER FDC.
9. RELAY TO MONITOR INTEGRITY OF POWER SUPPLY TO ELEVATOR SHUNT.
10. ELEVATOR SHUNT TRIP BREAKER (BY DIVISION 26)
11. PROVIDE ADDRESSABLE INPUT MODULES FOR MONITORING PIV TAMPER SWITCHES. SEE CIVIL DRAWINGS FOR QUANTITY AND LOCATION.
12. PROVIDE CABLES LISTED FOR WET LOCATIONS TO PIV TAMPER SWITCH(ES).
13. PROVIDE GROUND CONDUCTOR IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO GROUND BAR. SEE ELECTRICAL PLANS FOR LOCATIONS.



TYPICAL MOUNTING DETAIL



FIRE ALARM RISER

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
8	06/29/2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
9	07/13/2018	PKG 2B, MEP, FP, FINISHES - REV Q	JGG	ABD
Z	11/16/2018	PKG 2B, MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL — 9400 Ward Parkway, Kansas City, MO 64114, www.burnsmcd.com, BMCD #104543

ERIC ALAN ALLEN — LICENSED — 24081 — KANSAS — PROFESSIONAL ENGINEER — 11/16/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G — WICHITA, KS

Designed by J. GINSBURG — Drawn by A. SCHNECKLOTH

Project No. 6936

Sheet Name: FIRE ALARM RISER & MATRIX

Sheet FA601 of XX

Drawing No. 108M-605-152

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

FIRE SUPPRESSION LEGEND

- PRESSURE RELIEF VALVE
- INDICATING BUTTERFLY VALVE
- VALVE
- ALARM CHECK VALVE
- CHECK VALVE
- PIPE CAP
- AUTOMATIC DRAIN VALVE
- FIRE DEPARTMENT CONNECTION
- PRESSURE GAUGE
- PRESSURE SWITCH
- THRUST BLOCK
- AUTOMATIC AIR RELEASE VALVE
- POST INDICATING VALVE (BY DIVISION 33)
- FHV — FIRE HOSE VALVE

FIRE SUPPRESSION SYSTEM

- WET PIPE SPRINKLER SYSTEM

PIPING SYMBOLS

- DRAIN PIPING
- SYSTEM PIPING

FIRE SUPPRESSION ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AS	AUTOMATIC SPRINKLER
EC	EXTENDED COVERAGE
ESFR	EARLY SUPPRESSION FAST RESPONSE
FP	FIRE PROTECTION
FM	FM GLOBAL
HBC	HIGH BAY CRANE SYSTEM
HBS	HIGH BAY SHUTTLE SYSTEM
(M)	MECHANICALLY SUPERVISED
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OC	ON CENTER
PIV	POST INDICATING VALVE
RN	RISER NIPPLE
(S)	ELECTRICALLY SUPERVISED
SPR	SPRINKLER PIPE
SQ FT	SQUARE FOOT
WP	WATERPROOF (NEMA 250, TYPE 3R)

DETAIL/SECTION TITLE

SECTION, DETAIL OR ELEVATION IDENTIFICATION MARK

SECTION, DETAIL OR ELEVATION TITLE

PLATE NUMBER WHERE SECTION, DETAIL OR ELEVATION IS TAKEN

DETAIL CALLOUT SYMBOL

DETAIL NUMBER

PLATE NUMBER WHERE DETAIL IS DRAWN

SECTION CUT SYMBOL

SECTION LETTER

PLATE NUMBER WHERE SECTION IS DRAWN

VIEW SECTION

FIRE SUPPRESSION GENERAL NOTES

1. PROVIDE ALL NECESSARY COMPONENTS FOR THE FIRE SUPPRESSION SYSTEMS INDICATED ON THE DRAWINGS. AT A MINIMUM PROVIDE COMPONENTS AS INDICATED ON THESE DRAWINGS. PROVIDE ADDITIONAL COMPONENTS AND MODIFICATIONS AS REQUIRED TO PROVIDE FULLY FUNCTIONING FIRE SUPPRESSION SYSTEMS.
2. FLOW TEST INFORMATION FOR HYDRAULIC DESIGN IS AS FOLLOWS:

   STATIC: 110 PSI
   RESIDUAL: 75 PSI
   FLOW: 2250 PSI
   LOCATION: ASSUME THIS FLOW AND PRESSURE ARE AVAILABLE AT THE CONNECTION TO THE LOOPED UNDERGROUND MAIN
3. COORDINATE ALL REQUIRED SYSTEMS TO THE SATISFACTION OF THE CONTRACTOR AND AUTHORITY HAVING JURISDICTION. ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS SHALL BE CORRECTED BY THE SUB-CONTRACTOR AT NO ADDITIONAL COST.
4. FINAL DESIGN REQUIREMENTS (DEVICE QUANTITY, SIZE, AND LOCATIONS) ARE THE SOLE RESPONSIBILITY OF THE FIRE SUPPRESSION SUB-CONTRACTOR. DRAWINGS INDICATE MINIMUM REQUIREMENTS; THE FIRE SUPPRESSION SUB-CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING AND COORDINATING FINAL DESIGN REQUIREMENTS WITH THESE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, REFERENCE DOCUMENTS, APPLICABLE CODES, AND FACILITY USER REQUIREMENTS.
5. INSTALL FIRE PROTECTION PIPE HANGERS PER THE FOLLOWING LIMITATIONS:
   A. THE SINGLE POINT DEAD LOAD APPLIED TO ANY STRUCTURAL MEMBER SHALL NOT EXCEED 300 LBS. PROVIDE TRAPEZE HANGERS TO DISTRIBUTE THE LOAD BETWEEN STRUCTURAL MEMBERS WHERE A SINGLE HANGER EXCEEDS THE LIMITATIONS.
6. PROVIDE INSPECTOR'S TEST CONNECTION PIPED FROM THE REMOTE BRANCHLINE. TEST CONNECTIONS PIPED FROM A CROSS MAIN OR RISER ARE NOT ACCEPTABLE. PIPE DISCHARGE FROM ALL CONNECTIONS TO BUILDING EXTERIOR.

FIRE PROTECTION SPRINKLER SYSTEM DESIGN CRITERIA

MARK	HAZARD CLASSIFICATION	SYSTEM TYPE	DENSITY GPM/SF	REMOTE AREA SQ FT	MAXIMUM AREA PER HEAD SQ FT	HOSE DEMAND GPM	SPRINKLER CHARACTERISTICS				ADDITIONAL CODE REFERENCE	NOTES
							TEMP RATING	TYPE	K-FACTOR	FINISH		
	ORDINARY HAZARD	WET PIPE	0.17	3000	130	500	155°F	QUICK RESPONSE RECESSED PENDENT	8.0	WHITE		1,2,4
	EXTRA HAZARD (FM HC-3 CEILING HEIGHTS UP TO 100FT)	WET PIPE	K25.2 EC @ 27 PSI Z	6 SPRINKLERS	196	500	165°F	QUICK RESPONSE EC UPRIGHT	25.2	BRASS	FM 2-0 FM 3-26	
SEE PLANS	RACK STORAGE UNCARTONED UNEXPANDED PLASTIC < 40FT Z	WET PIPE	K 22.4/25.2 @ 60 PSI	4 SPRINKLERS	MAX 10'-0" OC	250	165°F	PENDENT ESFR	22.4 OR 25.2 Z	BRASS	FM 2-0 FM 8-9	3

NOTE 1: PROVIDE 200º F RATED SPRINKLERS IN MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS.
NOTE 2: WHERE CEILINGS ARE NOT PROVIDED USE BRASS UPRIGHT SPRINKLERS.
NOTE 3: ESFR SPRINKLERS INSTALLED ON RETURN BENDS UNDER HORIZONTAL BARRIER AT TOP OF RACKS.
NOTE 4: PROVIDE STANDARD RESPONSE SPRINKLERS IN ELEVATOR HOISTWAY AND PIT.

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B, MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B, MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
Q	07/13/2018	PKG 2B, MEP, FP, FINISHES - REV Q	JGG	ABD
Z	11/16/2018	PKG 2B, MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED — NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

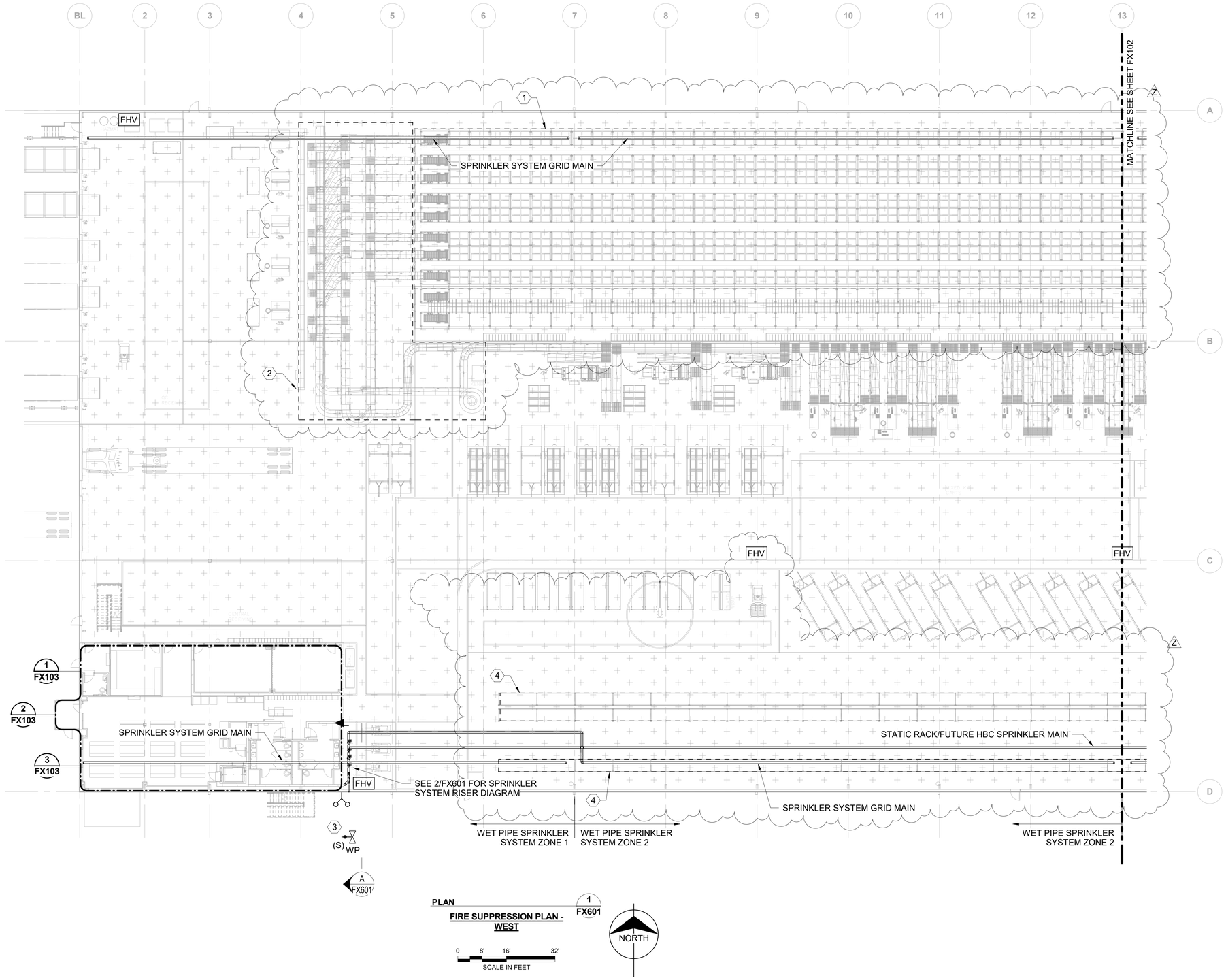
ERIC ALAN ALLISON — LICENSED — 24081 — KANSAS — PROFESSIONAL ENGINEER
11/16/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G — WICHITA, KS
Drawn by A. SCHNECKLOTH — Designed by J. GINSBURG

Project No. 6936
Sheet Name: FIRE SUPPRESSION NOTES, LEGEND & ABBR.
Sheet FX001 of XX
Drawing No. 108M-606-152

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. AND THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED.



PLAN 1 FX601

FIRE SUPPRESSION PLAN - WEST

0 8' 16' 32'

SCALE IN FEET

NORTH

NOTES:

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

KEYED NOTES:

1. IN-RACK SPRINKLERS FOR HIGH BAY SHUTTLE (HBS) SYSTEM WILL BE PROVIDED BY OTHERS.
2. PROVIDE SPRINKLER PROTECTION UNDER MEZZANINE AT ~20'-0" AFF USING ORDINARY HAZARD DESIGN CRITERIA. COORDINATE DETAILS WITH EQUIPMENT SUPPLIER.
3. PROVIDE VALVE SUPERVISORY SWITCH FOR PIV. SEE CIVIL DRAWINGS FOR EXACT LOCATION.
4. A HORIZONTAL BARRIER WILL BE PROVIDED AT THE TOP LEVEL OF THE SINGLE AND DOUBLE-ROW RACKS. PROVIDE ESFR SPRINKLER PROTECTION UNDER HORIZONTAL BARRIER FOR AN UNCARTONED, UNEXPANDED PLASTIC COMMODITY.

HAZARD SCHEDULE

MARK	HAZARD CLASSIFICATION
	ORDINARY HAZARD
	EXTRA HAZARD (FM HC-3 CEILING HEIGHTS UP TO 100 FT)

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLISON LICENSED 24081 KANSAS PROFESSIONAL ENGINEER

11/16/2018

WICHITA, KS

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z

PE CONTACT: QUENTIN MORFORD @ 316-262-2691

Facilities Engineering

AUTOMATED WAREHOUSE

BLDG-1-338G

Designed by J. GINSBURG

Drawn by A. SCHNECKLOTH

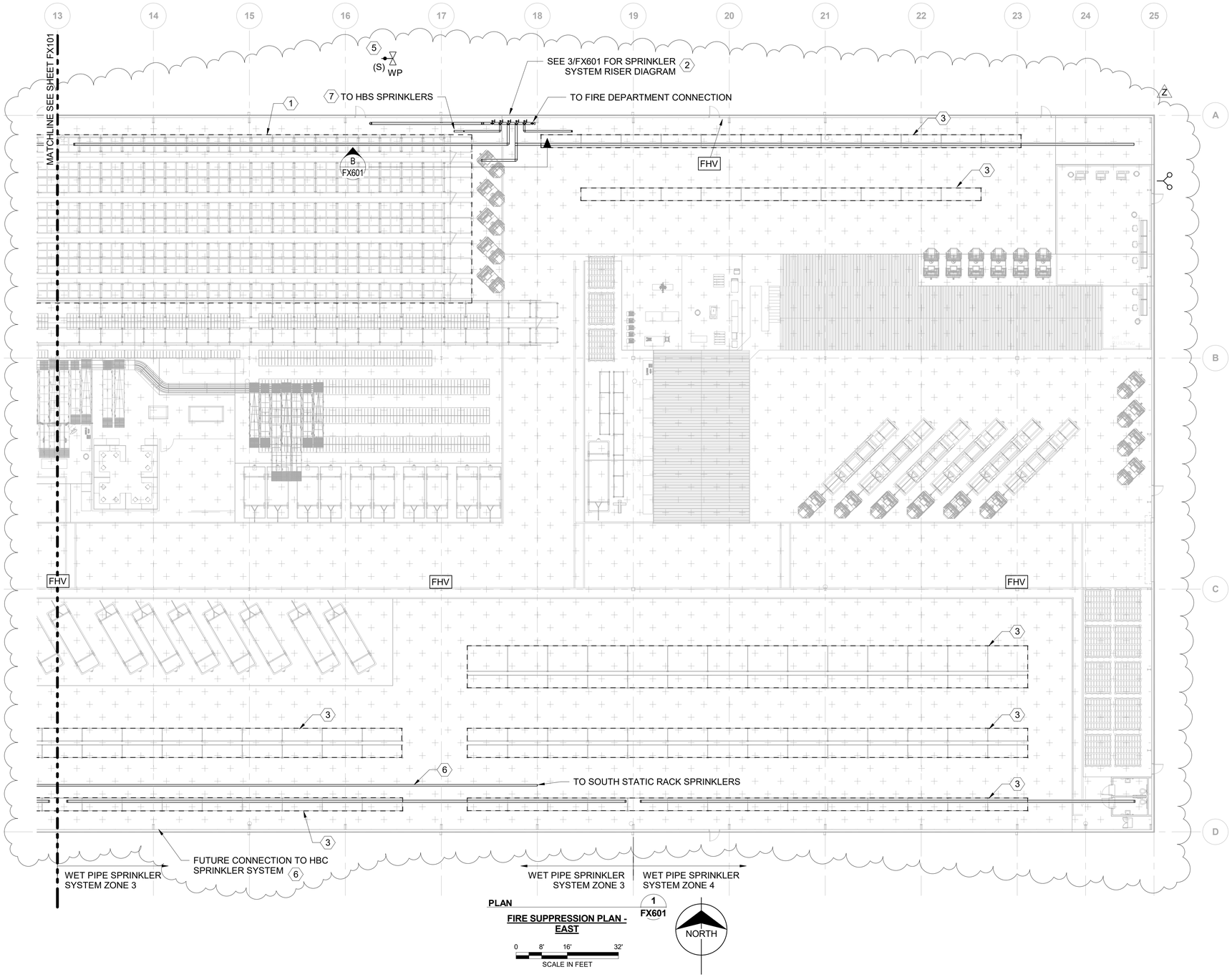
Project No. 6936

Sheet Name: FIRE SUPPRESSION PLAN - WEST

Sheet FX101 of XX

Drawing No. 108M-607-152

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



NOTES:

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

KEYED NOTES:

1. IN-RACK SPRINKLERS FOR HIGH BAY SHUTTLE (HBS) SYSTEM WILL BE PROVIDED BY OTHERS.
2. INSTALL HEADER TIGHT TO COLUMN 18.
3. A HORIZONTAL BARRIER WILL BE PROVIDED AT THE TOP LEVEL OF THE SINGLE AND DOUBLE-ROW RACKS. PROVIDE ESFR SPRINKLER PROTECTION UNDER HORIZONTAL BARRIER FOR AN UNCARTONED, UNEXPANDED PLASTIC COMMODITY.
4. A FALSE CEILING WILL BE PROVIDED 35 FT AFF ABOVE THE STRINGER STORAGE AREA. PROVIDE STORAGE - CLASS 3 DESIGN CRITERIA BELOW FALSE CEILING.
5. PROVIDE VALVE SUPERVISORY SWITCH FOR PIV. SEE CIVIL DRAWINGS FOR EXACT LOCATION.
6. SUPPLY STATIC RACKS AND SIZE MAIN FOR FUTURE HBC SPRINKLER SYSTEM. SIZE MAIN PIPING FOR GREATEST DEMAND. FUTURE HBC SPRINKLER SYSTEM REQUIRES 450GPM AT 45 PSI AT 60' ELEVATION. BALANCE HBC SPRINKLR SYSTEM WITH OVERHEAD SPRINKLER SYSTEM.
7. PROVIDE 450 GPM AT 45 PSI AT 60' ELEVATION FOR SUPPLY TO HBS SPRINKLER SYSTEM.

HAZARD SCHEDULE

MARK	HAZARD CLASSIFICATION
	ORDINARY HAZARD
	EXTRA HAZARD (FM HC-3 CEILING HEIGHTS UP TO 100 FT)

△	DATE	DESCRIPTION	BY	APPROVED
Z	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW — APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS™

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

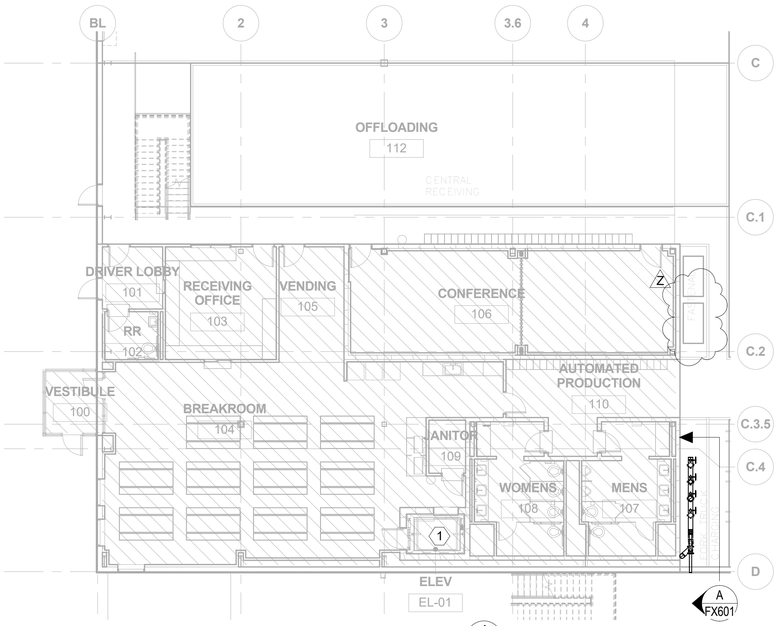
ERIC ALAN ALLOU — LICENSED — 24081 — KANSAS — PROFESSIONAL ENGINEER
11/16/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

Facilities Engineering
AUTOMATED WAREHOUSE
WICHITA, KS
BLDG-1-338G
Designed by J. GINSBURG
Drawn by A. SCHNIECKLOTH

Project No. 6936
Sheet Name: FIRE SUPPRESSION PLAN - EAST
Sheet FX102 of XX
Drawing No. 108M-608-152

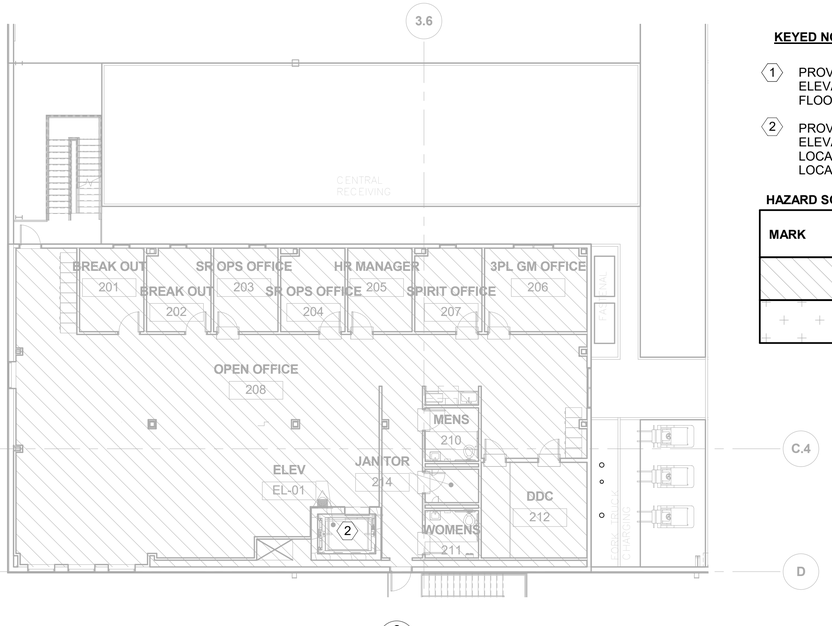
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PLAN 1 FX101
ENLARGED FIRE SUPPRESSION OFFICE PLAN

0 8' 16' 24'
SCALE IN FEET

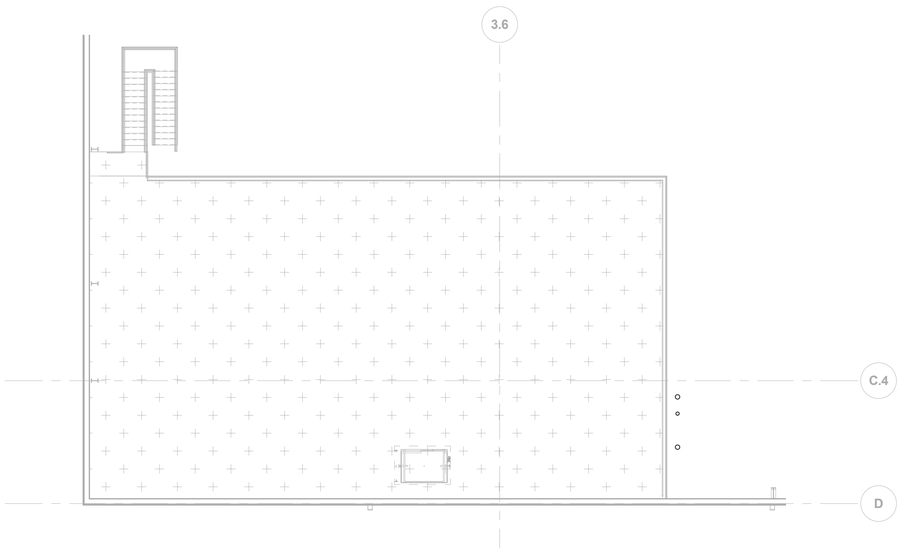
NORTH



PLAN 2 FX101
ENLARGED FIRE SUPPRESSION MEZZANINE PLAN

0 8' 16' 24'
SCALE IN FEET

NORTH



PLAN 3 FX101
ENLARGED FIRE SUPPRESSION EQUIPMENT MEZZANINE

0 8' 16' 24'
SCALE IN FEET

NORTH

NOTES:

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

KEYED NOTES:

1. PROVIDE A SIDEWALL SPRINKLER WITH GUARD IN ELEVATOR PIT NO MORE THAN 24 INCHES ABOVE PIT FLOOR.
2. PROVIDE SUPERVISED BALL VALVE IN SUPPLY TO ELEVATOR PIT AND TOP OF HOISTWAY SPRINKLERS. LOCATE VALVE ADJACENT TO SHAFT IN ACCESSIBLE LOCATION.

HAZARD SCHEDULE

MARK	HAZARD CLASSIFICATION
	ORDINARY HAZARD
	EXTRA HAZARD (FM HC-3 CEILING HEIGHTS UP TO 100 FT)

	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
Q	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV Q	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLOCCA
LICENSED
21081
KANSAS
PROFESSIONAL ENGINEER
11/16/2018

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: PE CONTACT: QUENTIN MORFORD @ 316-262-2691

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by J. GINSBURG
Drawn by A. SCHNECKLOTH

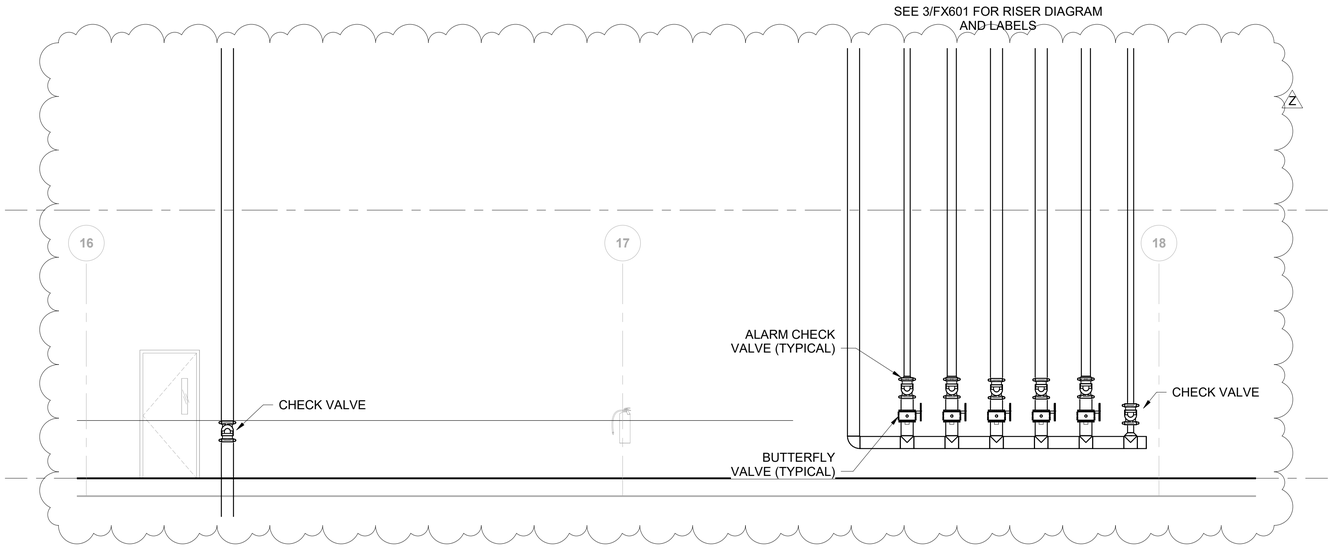
Project No.
6936

Sheet Name:
ENLARGED FIRE SUPPRESSION PLANS

Sheet FX103 of XX

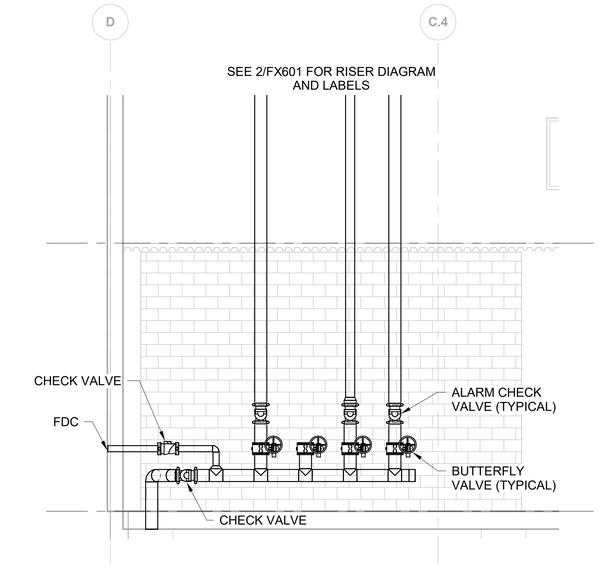
Drawing No.
108M-609-152

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



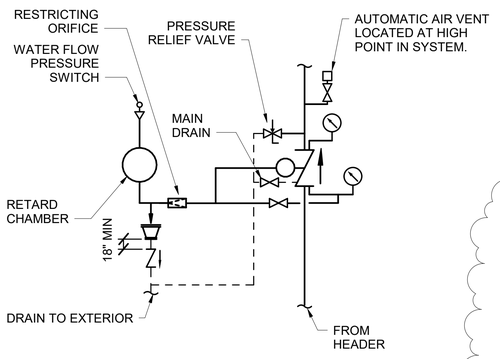
SECTION B FX101
NORTH RISER ELEVATION

0 2' 4' 8'
SCALE IN FEET

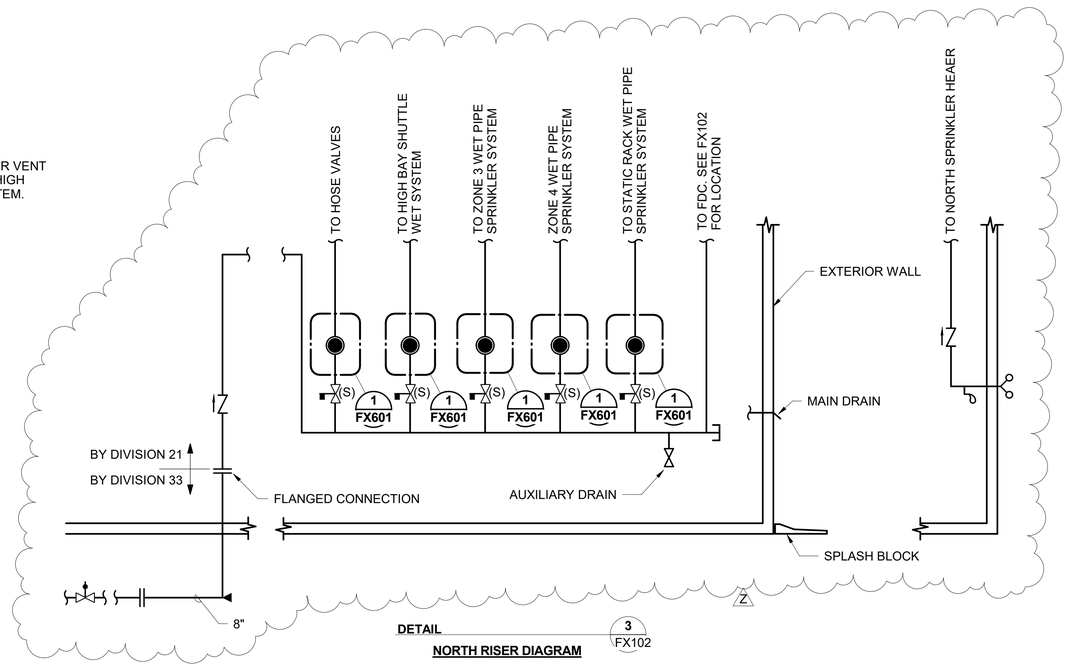


SECTION A FX101
SOUTH RISER ELEVATION

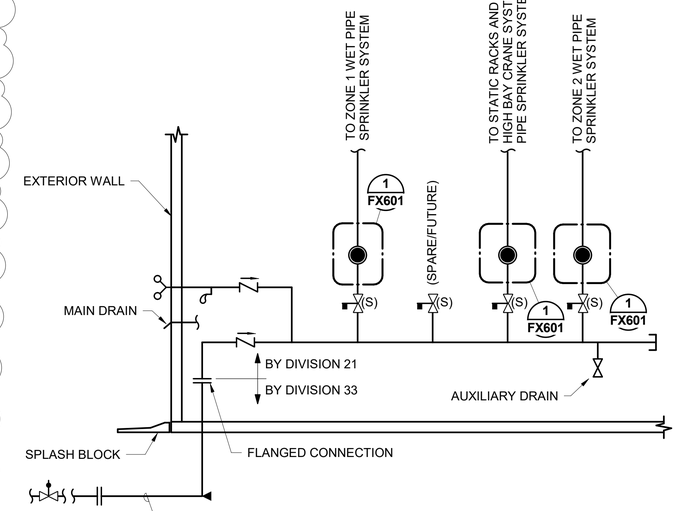
0 2' 4' 8'
SCALE IN FEET



DETAIL 1 FX601
ALARM CHECK VALVE DETAIL



DETAIL 3 FX102
NORTH RISER DIAGRAM



DETAIL 2 FX101
SOUTH RISER DIAGRAM

16NOV2018 - PKG 2B - MEP, FP, FINISHES - REV Z
PE CONTACT: QUENTIN MORFORD @ 316-262-2691

△	DATE	DESCRIPTION	BY	APPROVED
6	06/15/2018	PKG 2B: MEP, FP, FINISHES - 65% REVIEW	JGG	ABD
9	06/29/2018	PKG 2B: MEP, FP, FINISHES - 90% REVIEW	JGG	ABD
O	07/13/2018	PKG 2B: MEP, FP, FINISHES - REV O	JGG	ABD
Z	11/16/2018	PKG 2B: MEP, FP, FINISHES - REV Z	JGG	ABD

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐ DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com
BMCD #104543

ERIC ALAN ALLOTT
LICENSED
21081
KANSAS
PROFESSIONAL ENGINEER
11/16/2018

WICHITA, KS

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G

Designed by J. GINSBURG
Drawn by A. SCHNECKLOTH

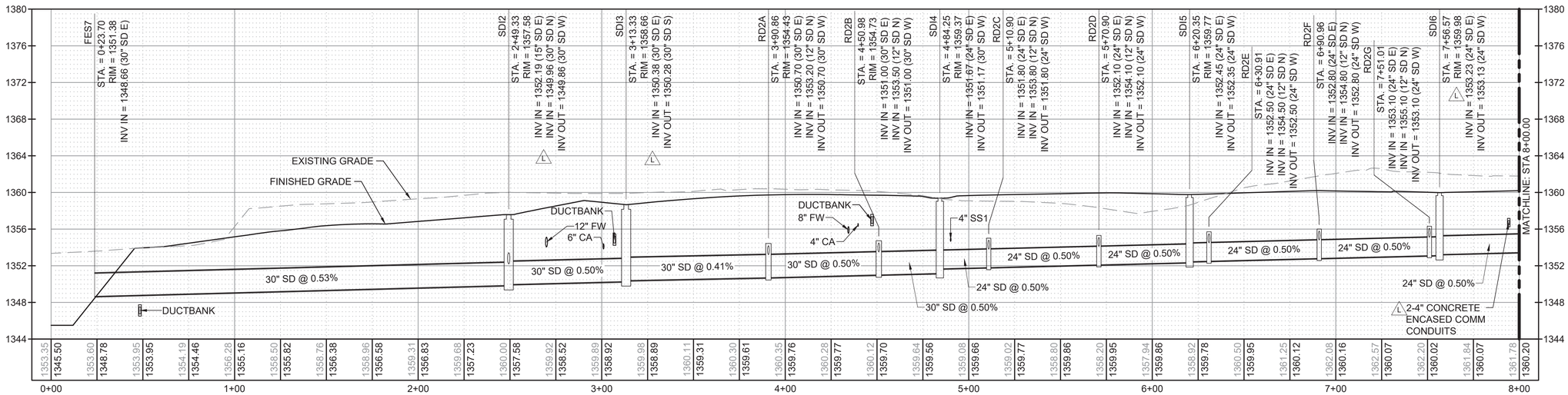
Project No.
6936

Sheet Name:
FIRE SUPPRESSION ONE LINE DIAGRAM

Sheet FX601 of XX

Drawing No.
108M-610-152

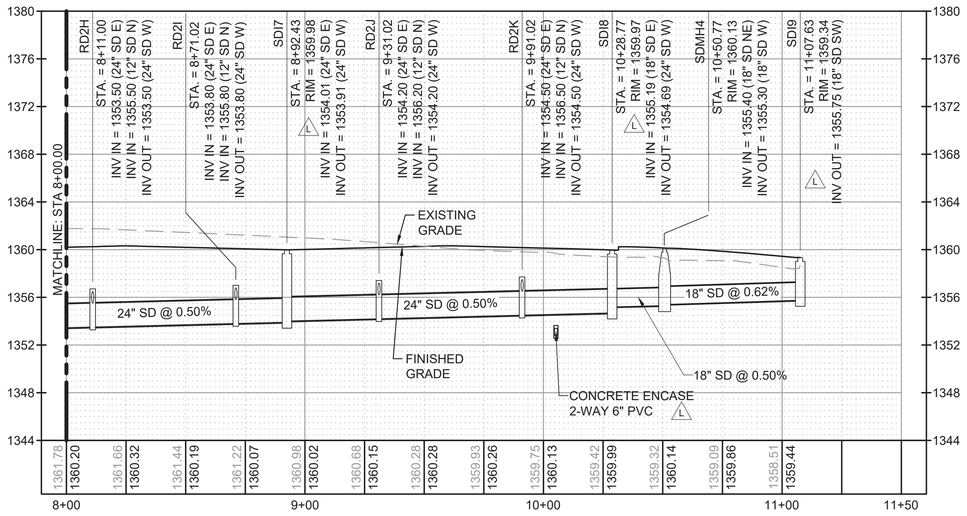
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PROFILE VIEW SD2

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

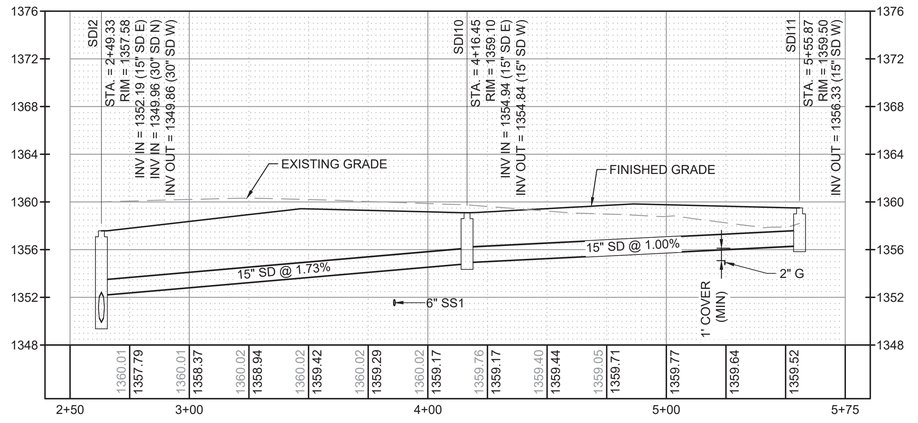
VERTICAL: 0 3' 6' 12' — SCALE IN FEET



PROFILE VIEW SD2

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET



PROFILE VIEW SD3

HORIZONTAL: 0 15' 30' 60' — SCALE IN FEET

VERTICAL: 0 3' 6' 12' — SCALE IN FEET

NOTES:

1. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.

AS BUILTS

KEMILLER ENGINEERING PA
117 E. Lewis,
Wichita, KS 67202
(316)264-0242

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
I	03/27/2018	PKG 1A SITE WORK - IFC - ECN02	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
WDH	PE	6-8-2018

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

WICHITA, KS

Facilities Engineering

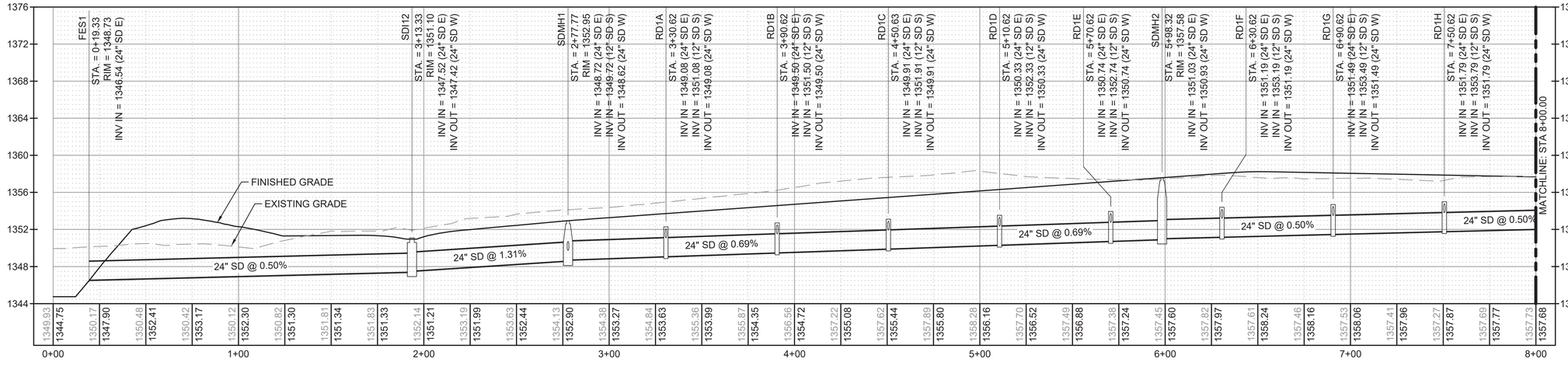
AUTOMATED WAREHOUSE

BLDG-1-338G

Designed by C. KINGSLAND 02/20/18
Drawn by J. JENKINS 02/20/18

Project No. 6936
Sheet Name: STORM PROFILES 2
Sheet CU202 rev XX
Drawing No. 108M-138-XXX

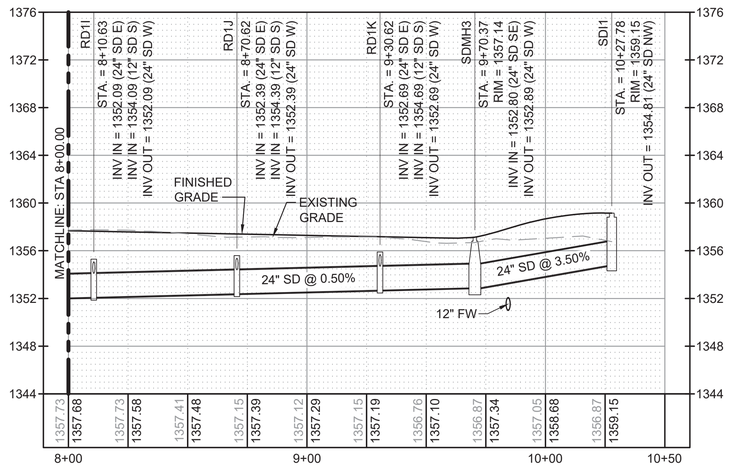
THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



PROFILE VIEW SD1

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

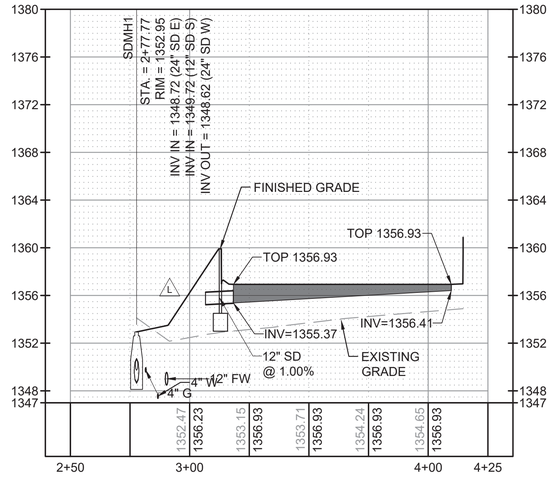
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD1

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

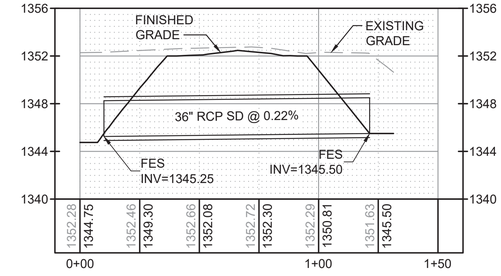
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD1A - TRENCH DRAIN

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

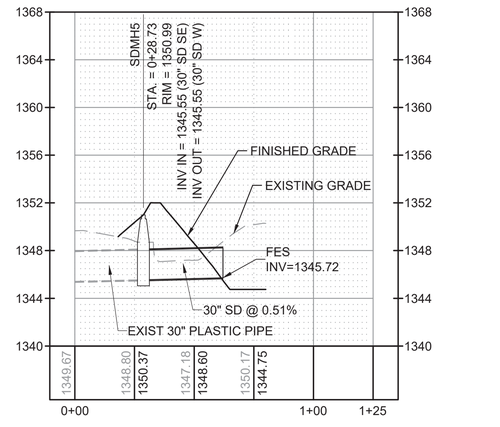
VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD4

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET



PROFILE VIEW SD5

HORIZONTAL: 0 15' 30' 60' SCALE IN FEET

VERTICAL: 0 3' 6' 12' SCALE IN FEET

NOTES:

1. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.

	DATE	DESCRIPTION	BY	APPROVED
A	03/09/2018	PKG 1A SITE WORK - IFC	CAK	NT
E	03/26/2018	PKG 1A SITE WORK - IFC - ADD2	CAK	NT
I	03/27/2018	PKG 1A SITE WORK - IFC - ED/N02	CAK	NT
L	06/01/2018	PKG 1A SITE WORK - REV L	CAK	NT
Z	11/16/2018	PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW

☐ APPROVED

☐ NOT REQUIRED

DATE _____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
WDH	PE	6-8-2018

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



Facilities Engineering

AUTOMATED WAREHOUSE - WICHITA, KS

BLDG-1-338G

Drawn by J. JENKINS 02/20/18 | Designed by C. KINGSLAND 02/20/18

Project No. 6936

Sheet Name: STORM PROFILES 1

Sheet CU201 of XX

Drawing No. 108M-137-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CU101 FOR CONTINUATION

RD1E
STA. 5+70.62
N 1666863.31
E 1664721.14

RD1G
STA. 6+90.62
N 1666866.44
E 1664841.49

RD1I
STA. 8+10.63
N 1666869.57
E 1664961.08

RD1H
STA. 7+50.62
N 1666868.01
E 1664901.08

RD1J
STA. 8+70.62
N 1666871.14
E 1665021.04

RD1K
STA. 9+30.62
N 1666872.70
E 1665081.02

SDMH3
STA. 9+70.37
INV IN = 1352.80 (24" SD SE)
INV OUT = 1352.89 (24" SD W)
RIM = 1357.14
N 1666873.74
E 1665120.76

RD1F
STA. 6+30.62
N 1666864.88
E 1664781.12

24" SD
12" FW
8" FW
17.91'

SDMH2
STA. 5+98.32
INV IN = 1351.03 (24" SD E)
INV OUT = 1350.93 (24" SD W)
RIM = 1357.58
N 1666864.04
E 1664748.84

JBOX
(SEE ELECTRICAL
PLANS FOR DETAILS)

TRANSFORMER

15 KV BREAKER WITH
RELAYING TO SWITCHGEAR

SDI1
STA. 10+27.78
INV OUT = 1354.81 (24" SD NW)
RIM = 1359.15
N 1666839.93
E 1665167.16

SDI9
STA. 11+07.63
INV OUT = 1355.75 (18" SD SW)
RIM = 1359.34
N 1666641.83
E 1665185.83

SDI5
STA. 6+20.35
INV IN = 1352.45 (24" SD E)
INV OUT = 1352.35 (24" SD W)
RIM = 1359.77
N 1666582.62
E 1664717.92

RD2G
STA. 7+51.01
N 1666591.39
E 1664848.28

SDI6
STA. 7+56.57
INV IN = 1353.23 (24" SD E)
INV OUT = 1353.13 (24" SD W)
RIM = 1359.98
N 1666591.76
E 1664853.83

RD2J
STA. 9+31.02
N 1666596.33
E 1665028.21

N 1666670.54
E 1665190.98

SS2 - BUILDING CONNECTION
INV = 1357.18 (6" SS S)
N 1666602.12
E 1665055.91

END CONDUIT
N 1666672.56
E 1665244.06

CABLE TV HANDHOLE 2
TOP = 1352.83
N 1666679.51
E 1665426.90

1/2" Rebar
w/CP Cap

BEGIN CONDUIT
N 1666670.77
E 1665197.09

RD2E
STA. 6+30.91
N 1666583.33
E 1664728.45

RD2F
STA. 6+90.96
N 1666587.36
E 1664788.37

RD2H
STA. 8+11.00
N 1666593.19
E 1664908.24

RD2I
STA. 8+71.02
N 1666594.77
E 1664968.23

RD2K
STA. 9+91.02
N 1666597.88
E 1665088.19

18" SD
6" SS
6" CA
18.18'

PROPOSED 2 - 4" CONCRETE
ENCASED COMM CONDUITS
N 1666548.27
E 1664892.66

SDI7
STA. 8+92.43
INV IN = 1354.01 (24" SD E)
INV OUT = 1353.91 (24" SD W)
RIM = 1359.98
N 1666595.33
E 1664989.64

CONNECT TO EXISTING
COMPRESSED AIR LINE
N 1666574.76
E 1665079.66

SSMH7
INV IN = 1357.01 (6" SS N)
INV OUT = 1357.01 (6" SS W)
TOP = 1360.55
N 1666585.57
E 1665056.34

CONCRETE ENCASE
2-WAY 6" PVC

SDMH4
STA. 10+50.77
INV IN = 1355.40 (18" SD NE)
INV OUT = 1355.30 (18" SD W)
RIM = 1360.13
N 1666599.44
E 1665147.92

N 1666606.38
E 1665134.20

SDI8
STA. 10+28.77
INV IN = 1355.19 (18" SD E)
INV OUT = 1354.69 (24" SD W)
RIM = 1359.97
N 1666598.86
E 1665125.93

Building
Roof Drain
Chain Link Fence
Asphalt Parking
Overhead Elec
Sign
Concrete Sidewalk
60' R/W
Asphalt
Berm
Std. C&G
#B-22
#N9998
top of nut=
full of mud
top of
box=1354.47
#20169
top of nut=
full of mud
top of
box=1355.13
16" CI Waterline (rec. info.)
TMH
BM#201
Garden-2" Rose Bushes
FH 1
Spirit Sign
PIV S-1018
8" FPW (rec. info.)
top of nut= 1357.36
top of box=1360.31
Cedar
Conc
12' Door
3' Door
Roof Drain
BFF= 1363.68
BFF= 1363.54
NE Cor. Lot 1,
Blk. A,
Bradley Addition,
Found Chiseled +
WV (rec. info.)
#33138
SECTION LINE
2- AC
3' Door
BFF= 1363.62
Building
1-335C
BFF= 1363.60
Roof Drain
3' Door
BFF= 1363.70
Heat Pumps
on Conc. Pads
Post
4- 4" Steel Columns
WV (Roll Mount)
PIV
CA Riser
2- 6" Post
20' Door
BFF= 1363.68
SS
WV full of water
Guard Rail
CATV

KEYED NOTES:

1. COORDINATE COMM LOCATION AND BUILDING CONNECTION WITH THE ELECTRICAL PLANS AND THE ELECTRICAL CONTRACTOR.

UTILITY PLAN 2

0 15' 30' 60'
SCALE IN FEET

NORTH

LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT
FH	FIRE HYDRANT
PVI	POST INDICATOR VALVE
SD	STORM DRAIN
SDAI	STORM DRAIN AREA INLET

NOTES:

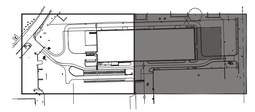
1. SEE ELECTRICAL PLANS FOR HANDHOLE AND DUCTBANK DETAILS.
2. CIVIL SUBCONTRACTOR SCOPE SHALL EXTEND TO 12 FEET OUTSIDE THE BUILDING FOR ALL UTILITIES UNLESS NOTED OTHERWISE. CIVIL SUBCONTRACTOR SHALL PROVIDE TEMPORARY STUB-UP UNLESS OTHERWISE COORDINATED WITH PLUMBING SUBCONTRACTOR.
3. SEE MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR CONTINUATION OF ALL UTILITIES AT THE 12 FOOT LINE.
4. ALL MANHOLES SHALL BE PRECAST STANDARD MANHOLE TYPE A PER THE CITY OF WICHITA STANDARD SPECIFICATIONS, OR APPROVED EQUAL. SUBCONTRACTOR SHALL SUBMIT MANHOLE PRODUCT DATA, DESIGN CALCULATIONS, AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. (E)
6. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC, AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION. (1)

AS BUILTS

KEMILLER ENGINEERING PA
117 E. Lewis, Wichita, KS 67202 (316)264-0242

LEGEND

SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
I 04/27/2018 PKG 1A SITE WORK - IFC - ECN02	CAK	NT
L 06/01/2018 PKG 1A SITE WORK - REV L	CAK	NT
N 06/22/2018 PKG 1A SITE WORK - REV N	CAK	NT
U 09/13/2018 PKG 1A SITE WORK - REV U	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

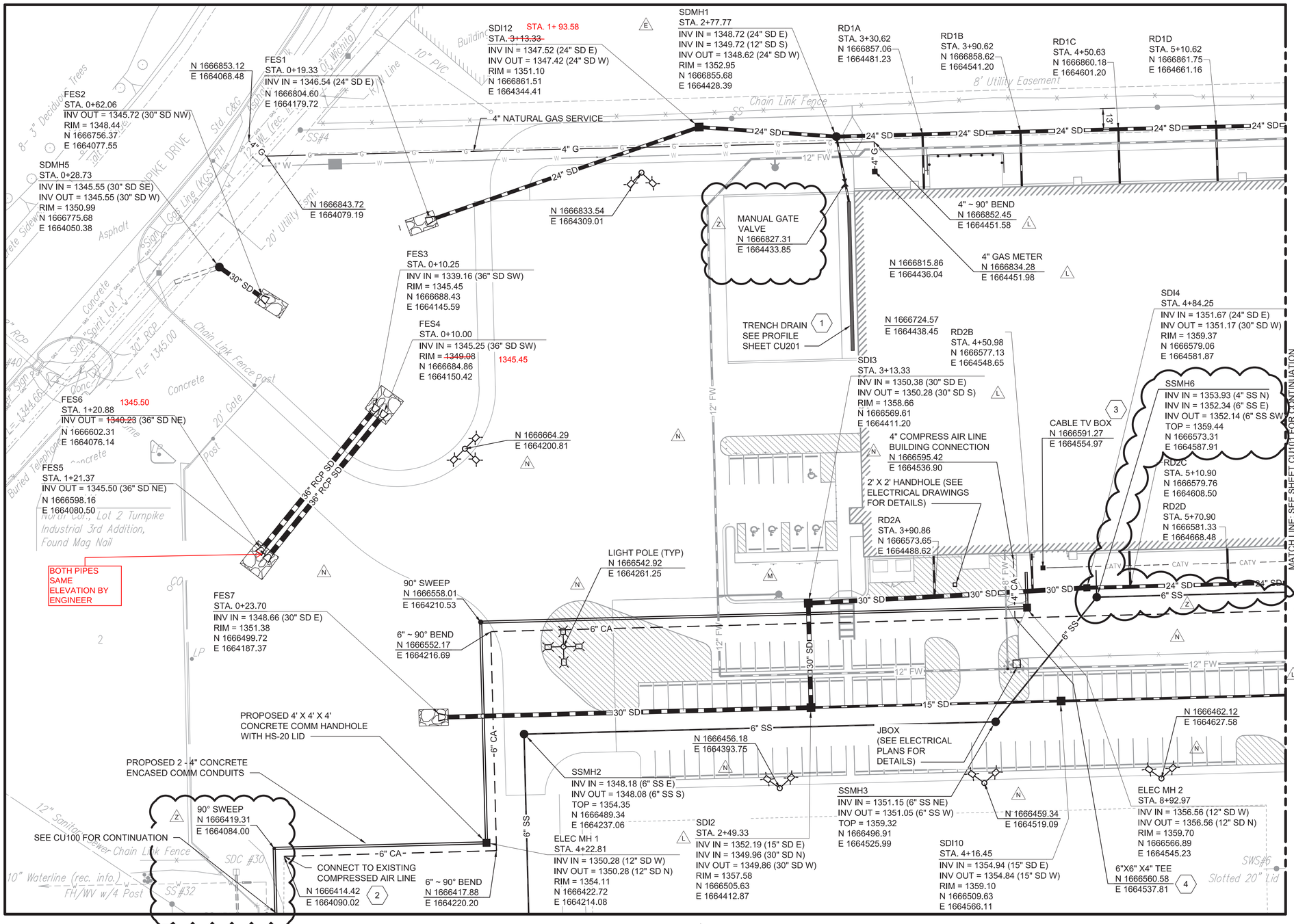
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS REGISTERED ENGINEER
19889
11/16/2018
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE - BLDG-1-338G
WICHITA, KS
Designed by C. KINGSLAND 02/20/18
Drawn by J. JENKINS 02/20/18

Project No. 6936
Sheet Name: UTILITY PLAN 2
Sheet CU102 of XX
Drawing No. 108M-136-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



KEYED NOTES:

1. SUBCONTRACTOR SHALL INSTALL ZURN Z812-HDG TRENCH DRAIN WITH CLASS C GRATE OR APPROVED EQUAL.
2. SEE KEYED NOTE 1 ON CD102. INSTALL NEW ABOVE GROUND SHUT-OFF VALVE MATCHING EXISTING VALVE TYPE AND SIZE.
3. SEE ELECTRICAL DRAWINGS FOR TRAFFIC-RATED CABLE BOX DETAIL.
4. ADD REDUCERS TO 1 ¼" COMPRESS AIR LINE

UTILITY PLAN 1

0 15' 30' 60'
SCALE IN FEET

NORTH

LEGEND

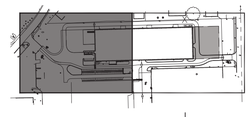
SS	PROPOSED SANITARY LINE
SD	PROPOSED STORM LINE
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
CA	PROPOSED COMPRESSED AIR LINE
	PROPOSED ELECTRICAL CONDUIT
FH	FIRE HYDRANT
PVI	POST INDICATOR VALVE
SD	STORM DRAIN
SDAI	STORM DRAIN AREA INLET

NOTES:

1. SEE ELECTRICAL PLANS FOR HANDHOLE AND DUCTBANK DETAILS.
2. CIVIL SUBCONTRACTOR SCOPE SHALL EXTEND TO 12 FEET OUTSIDE THE BUILDING FOR ALL UTILITIES UNLESS NOTED OTHERWISE. CIVIL SUBCONTRACTOR SHALL PROVIDE TEMPORARY STUB-UP UNLESS OTHERWISE COORDINATED WITH PLUMBING SUBCONTRACTOR.
3. SEE MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR CONTINUATION OF ALL UTILITIES AT THE 12 FOOT LINE.
4. ALL MANHOLES SHALL BE PRECAST STANDARD MANHOLE TYPE A PER THE CITY OF WICHITA STANDARD SPECIFICATIONS, OR APPROVED EQUAL. SUBCONTRACTOR SHALL SUBMIT MANHOLE PRODUCT DATA, DESIGN CALCULATIONS, AND BUOYANCY CALCULATIONS SEALED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
5. DOMESTIC WATER AND NATURAL GAS LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION DISTANCE OF 3'.
6. STORM SEWER PIPES OF 12" DIAMETER OR GREATER SHALL BE HIGH DENSITY POLYETHYLENE, DOWNSPOUT CONNECTION PIPES SHALL BE PVC, AND STORM CULVERTS SHALL BE RCP. SEE THE SPECIFICATIONS FOR MORE INFORMATION.
7. NATURAL GAS TAP PIPE ROUTING AND METER BY GAS UTILITY COMPANY. REFER TO MECHANICAL PLANS FOR NG ROUTING FROM THE METER TO THE BUILDING

AS BUILTS

KEMILLER ENGINEERING PA
117 E. Lewis,
Wichita, KS 67202
(316)264-0242



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2339

	BY	DESCRIPTION	DATE	
I	CAK	PKG 1A: SITE WORK - IFC - ECN02	04/27/2018	APPROVED
L	CAK	PKG 1A: SITE WORK - REV L	06/01/2018	NT
M	CAK	PKG 1A: SITE WORK - REV M	06/13/2018	NT
N	CAK	PKG 1A: SITE WORK - REV N	06/22/2018	NT
Z	CAK	PKG 1A: SITE WORK - REV Z	11/16/2018	NT

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

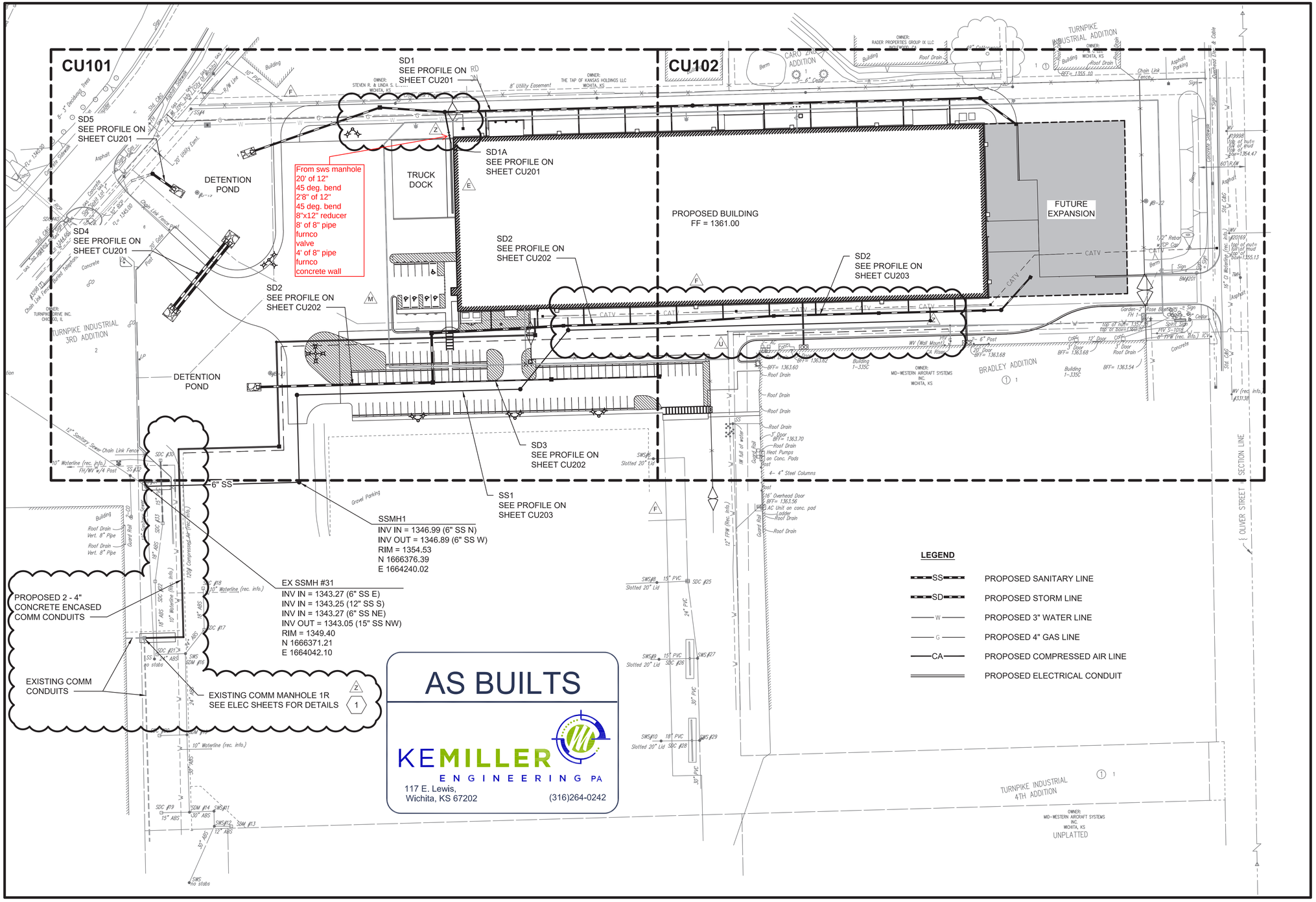
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

COMMONWEALTH OF KANSAS
WAYNE A. HERBERT
19889
11/16/2018
PROFESSIONAL ENGINEER

AUTOMATED WAREHOUSE
Facilities Engineering
WICHITA, KS
BLDG-1-338G
Drawn by J. JENKINS 02/2018
Designed by C. KINGSLAND 02/20/18

Project No. 6936
Sheet Name: UTILITY PLAN 1
Sheet CU101 of XX
Drawing No. 108M-135-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



KEYED NOTE:

1. SUBCONTRACTOR SHALL FIELD-CONFIRM EXISTING COMM MANHOLE LOCATION AND DUCTBANK ROUTING PRIOR TO CONSTRUCTION. REFER TO THE CIVIL UTILITY BASE MAP REFERENCE DRAWING FOR ADDITIONAL INFORMATION.
2.

OVERALL UTILITY PLAN

0 60' 120'
SCALE IN FEET

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	DATE	DESCRIPTION	APPROVED
CAK	04/12/2018	F PKG 1A SITE WORK - IFC - ADD3	NT
CAK	06/01/2018	L PKG 1A SITE WORK - REV L	NT
CAK	06/22/2018	N PKG 1A SITE WORK - REV N	NT
CAK	09/13/2018	U PKG 1A SITE WORK - REV U	NT
CAK	11/16/2018	Z PKG 1A SITE WORK - REV Z	NT

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED.

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

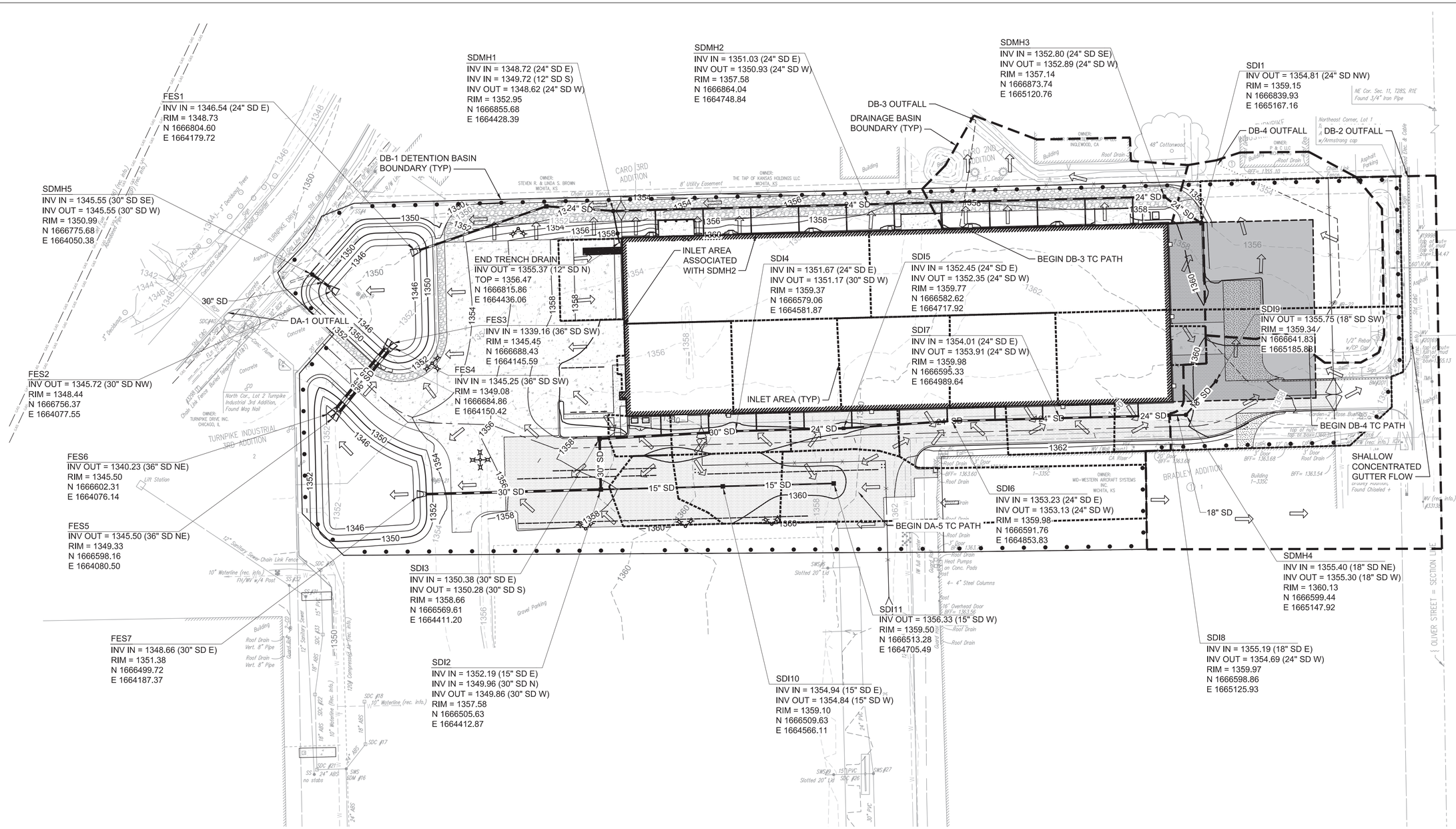
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

WAYNE A. HERBERT
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by J. JENKINS
02/20/18
Designed by C. KINGSLAND
02/20/18

Project No. 6936
Sheet Name: UTILITY PLAN
Sheet CU100 of XX
Drawing No. 108M-134-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC. THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL.



LEGEND

1360.0	EXISTING MAJOR CONTOUR
1359.5	EXISTING MINOR CONTOUR
1360.0	PROPOSED MAJOR CONTOUR
1359.5	PROPOSED MINOR CONTOUR
DB	DRAINAGE BASIN
CN	CURVE NUMBER
TC	TIME OF CONCENTRATION (MINUTES)
AC	ACRE
FES	FLARED END SECTION
SD	STORM DRAIN
SDI	STORM DRAIN INLET
	FLOW ARROWS

NOTES:

1. REFER TO THE DRAINAGE REPORT FOR SUPPORTING DATA AND CALCULATIONS.
2. TIME OF CONCENTRATION ASSUMED TO BE 5-MINUTES FOR ALL INLET CALCULATIONS. REFER TO DRAINAGE REPORT NARRATIVE FOR MORE INFORMATION. FLOW PATHS NOT SHOWN FOR CLARITY.
3. SDMH2 WAS MODELED AS AN INLET TO CORRECTLY SIZE THE 24" PIPE BETWEEN SDMH2 AND SDMH1 IN LIEU OF INCLUDING THE DOWNSPOUTS IN THE STORMWATER MODEL.
4. DETENTION BASIN (DB-1) WAS OVERSIZED FOR FUTURE DEVELOPMENT. FUTURE DRAINAGE PATTERNS AND LIMITS UNKNOWN AT THIS TIME. HOWEVER, DB-2, DB-3, AND DB-4 WERE ALSO MODELED TO COMPARE THE RUNOFF VALUES FOR THIS PROJECT, AS SHOWN IN THE PROVIDED TABLES.
5. SDI1 AND SDI8 WERE SIZED FOR FUTURE DEVELOPMENT. SDI8 AREA PROVIDED IN TABLE CONSISTS OF THE TOTAL SHOWN AREA MINUS THE SDI9 CONTRIBUTING AREA.
6. ALL CULVERTS WILL BE RCP WITH RCP FLARED END SECTIONS. ALL INLETS WILL BE PRECAST CONCRETE. ALL OTHER STORM PIPING SHALL BE HDPE.

DRAINAGE BOUNDARIES

0 60' 120'
SCALE IN FEET

NORTH

PROPOSED CONVEYANCES

Basin ID	Total Area (AC)	Impervious Area (AC)	C	TC (MIN)
SDI1	1.97	1.78	0.93	5.00
SDI2	0.17	0.17	0.93	5.00
SDI3	0.09	0.08	0.93	5.00
SDI4	0.54	0.54	0.93	5.00
SDI5	0.52	0.52	0.93	5.00
SDI6	0.67	0.60	0.93	5.00
SDI7	0.55	0.49	0.93	5.00
SDI8	1.54	1.39	0.93	5.00
SDI9	0.05	0.05	0.93	5.00
SDI10	0.24	0.24	0.93	5.00
SDI11	0.79	0.79	0.93	5.00
SDMH2	0.77	0.77	0.93	5.00
Trench Drain	0.19	0.19	0.93	5.00

PROPOSED CONDITIONS BASIN RUNOFF

Basin ID	Total Area (AC)	Impervious Area (AC)	CN	TC (MIN)
DB-1 (Overall Detention Basin)	13.36	12.03	97	5.00
DB-2	2.37	1.73	94	11.30
DB-3	0.75	0.31	90	9.70
DB-4	1.24	0.06	85	17.70

SUMMARY TABLE OF RUNOFF CALCULATIONS

Basin ID	2-YR PRE	2-YR POST	5-YR PRE	5-YR POST	10-YR PRE	10-YR POST	25-YR PRE	25-YR POST	100-YR PRE	100-YR POST
DB-1	19.90	12.10	26.67	21.31	32.58	27.73	40.92	34.31	55.14	42.28
DB-2	11.65	8.86	15.08	11.38	18.04	13.56	22.22	16.64	29.32	21.87
DB-3	3.44	2.73	4.77	3.61	5.94	4.37	7.61	5.44	10.48	7.27
DB-4	3.27	2.79	4.58	3.87	5.75	4.82	7.41	6.18	10.26	8.51

All values in CFS

BY	DESCRIPTION	DATE
CAK	PKG 1A, SITE WORK - IFC	A 03/09/2018
CAK	PKG 1A, SITE WORK - REV Z	Z 11/16/2018

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED PER IFC 2012
05/07/2018, 9:47:10 AM
☐ APPROVED
☐ NOT REQUIRED
DATE

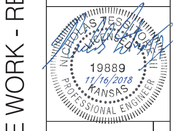
ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018
		03/06/2018
		03/06/2018

APPROVED
NT
NT

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



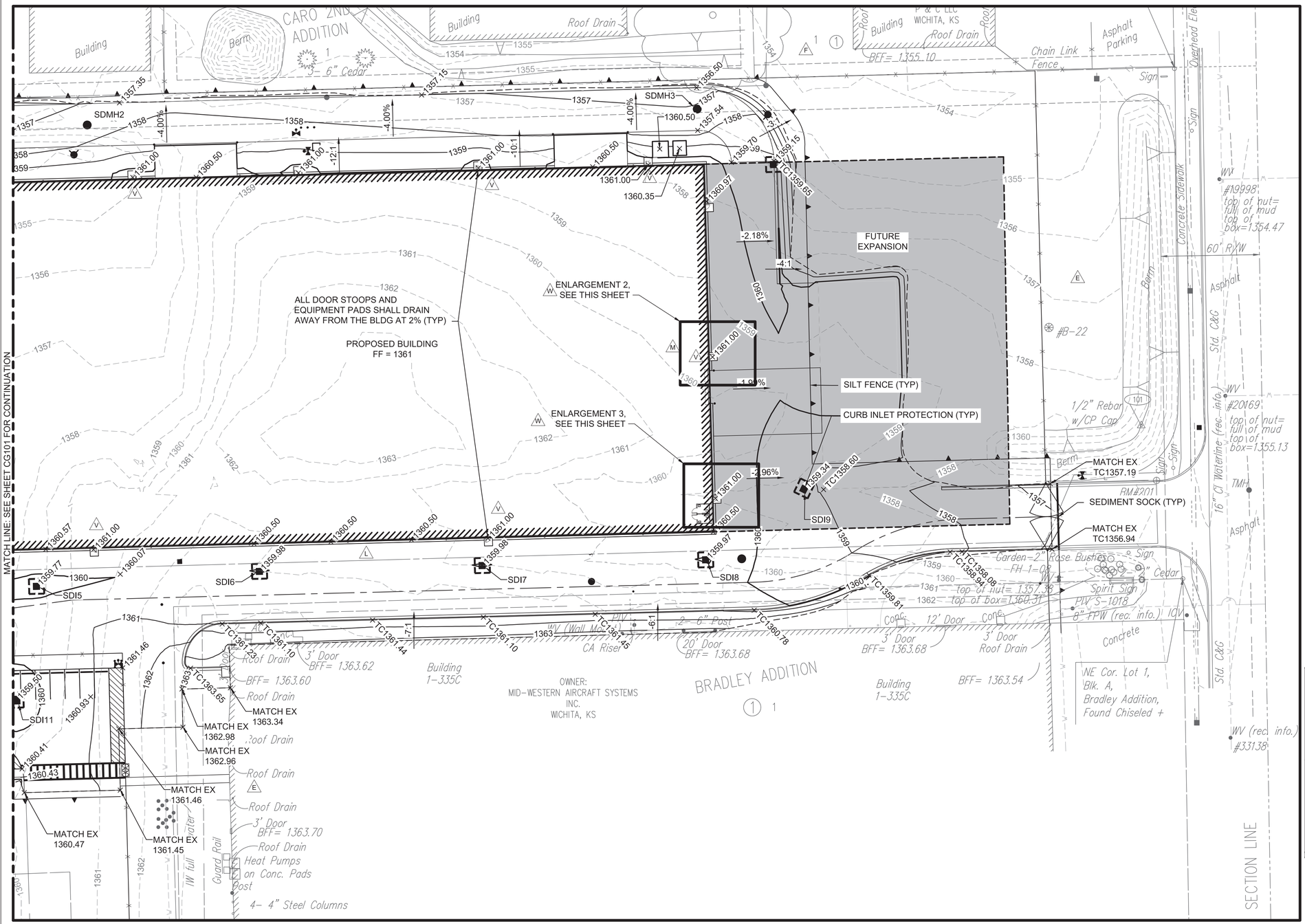
16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Designed by C. KINGSLAND 03/06/2018
Drawn by J. JENKINS 03/06/2018

Project No. 6936
Sheet Name: PROP. DRAIN AREA
Sheet CG111 of XX
Drawing No. 108M-126-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. IT'S ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CG101 FOR CONTINUATION

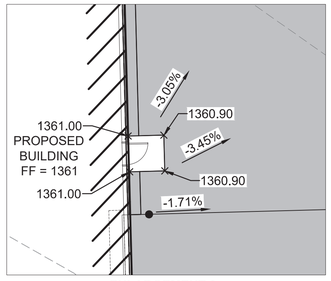


GRADING PLAN 2

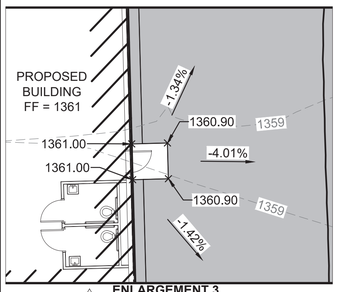
0 30' 60'

SCALE IN FEET

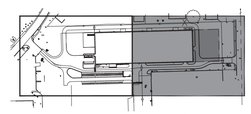
NORTH



ENLARGEMENT 2
1" = 10'



ENLARGEMENT 3
1" = 10'



KEY PLAN
NOT TO SCALE

NORTH

LEGEND

- AREA INLET PROTECTION — CG502, CG503
- CURB INLET PROTECTION — CG501
- SILT FENCE — CG502
- SEED/SOD (PERMANENT STABILIZATION POST CONSTRUCTION)
- SEDIMENT SOCK
- STABILIZED CONSTRUCTION ENTRANCE — CG501
- +1361.00 SPOT ELEVATION
- +TC1361.00 TOP CURB ELEVATION
- +BC1361.00 BOTTOM CURB ELEVATION

	DATE	DESCRIPTION	BY	APPROVED
M	06/13/2018	PKG 1A SITE WORK - REV M	CAK	NT
N	06/22/2018	PKG 1A- SITE WORK - REV N	CAK	NT
V	09/28/2018	PKG 1A- SITE WORK - REV V	CAK	NT
W	10/26/2018	PKG 1A- SITE WORK - REV W	CAK	NT
Z	11/16/2018	PKG 1A- SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
APPROVED ☐ NOT REQUIRED ☐
DATE ____

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE

SPIRIT AEROSYSTEMS

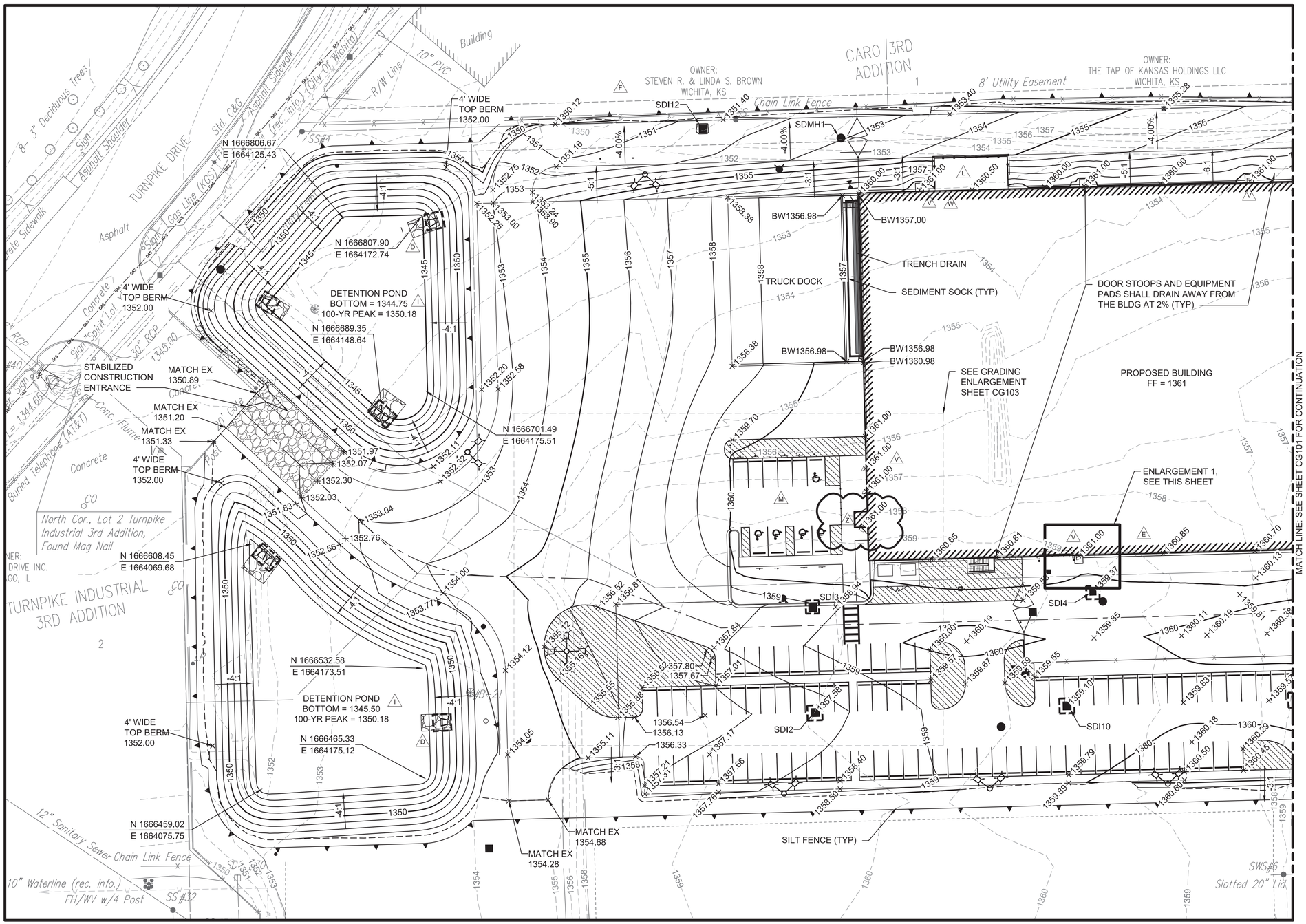
BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by J. JENKINS | 02/19/18
Designed by C. KINGSLAND | 02/19/18

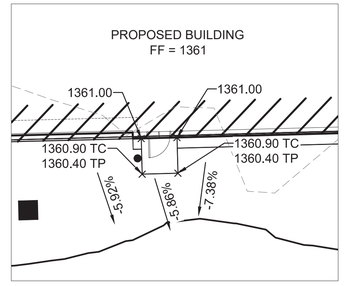
Project No. 6936
Sheet Name: GRADING PLAN
Sheet CG102 of XX
Drawing No. 108M-126-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



LEGEND

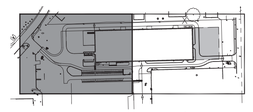
- AREA INLET PROTECTION — CG502
- CURB INLET PROTECTION — CG501
- SILT FENCE — CG502
- SEED/SOD (PERMANENT STABILIZATION POST CONSTRUCTION)
- SEDIMENT SOCK
- STABILIZED CONSTRUCTION ENTRANCE — CG501
- +1361.00 SPOT ELEVATION
- +TC1361.00 TOP CURB ELEVATION
- +BC1361.00 BOTTOM CURB ELEVATION



M ENLARGEMENT 1
1' = 10'

GRADING PLAN 1
0 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

BY	APPROVED
CAK	NT
CAK	NT
CAK	NT
CAK	NT
CAK	NT

	DATE	DESCRIPTION
M	06/13/2018	PKG 1A SITE WORK - REV M
N	06/22/2018	PKG 1A SITE WORK - REV N
V	09/28/2018	PKG 1A SITE WORK - REV V
W	10/26/2018	PKG 1A SITE WORK - REV W
Z	11/16/2018	PKG 1A SITE WORK - REV Z

FIRE PROTECTION REVIEW
☐ APPROVED
☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS
Drawn by: J. JENKINS | 02/19/18
Designed by: C. KINGSLAND | 02/19/18

Project No.
6936
Sheet Name:
GRADING PLAN
Sheet CG101 of XX
Drawing No.
108M-125-XXX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

MATCH LINE: SEE SHEET CS101 FOR CONTINUATION

REMOVE EXISTING TREE; GRUB TO SUBGRADE

REMOVE AND RELOCATE EXISTING SIGNS, POSTS, AND FOUNDATIONS

REMOVE CONCRETE FLUME AND RIP RAP

REMOVE EXISTING PIV VALVE AND PIPE △U
N 1666644.35
E 1664792.34

REMOVE CA SHUTOFF VALVE
N 1666642.22
E 1665076.92

REMOVE EXISTING TREE; GRUB TO SUBGRADE

N 1666667.72
E 1665135.31

REMOVE EXISTING CURB (TYP)

N 1666657.78
E 1664780.05

REMOVE EX. CONCRETE PAVEMENT

REMOVE 6" STEEL COMPRESSED AIR PIPING ⬡1

N 1666645.71
E 1665061.98

N 1666645.69
E 1665336.10

N 1666637.81
E 1664746.09

N 1666566.02
E 1664794.75

N 1666604.69
E 1665337.12

REMOVE EX. SIDEWALK △E

N 1666573.17
E 1664880.28

REMOVE EX 8" FIRE PROTECTION △U
N 1666581.08
E 1665207.94

N 1666571.32
E 1664747.61

⬡1 REMOVE 6" STEEL COMPRESSED AIR PIPING
N 1666579.76
E 1665079.53

N 1666567.83
E 1665137.74

N 1666518.52
E 1664749.44

N 1666535.94
E 1664795.26

REMOVE AND REPLACE EXISTING SIGNS, POSTS, AND FOUNDATIONS

REMOVE AND REPLACE EXISTING FIRE HYDRANT, VALVE, AND PIPE. CAP AT MAIN. △E

N 1666520.78
E 1664836.17

REMOVE AND REPLACE EXISTING PIV VALVE RESTORE WATER SERVICE TO EXISTING CONDITION

N 1666518.70
E 1664756.47

N 1666495.74
E 1664768.07

N 1666496.77
E 1664807.22

N 1666520.01
E 1664806.62

REMOVE EX 6" FIRE PROTECTION LINE (DO NOT DISTURB EX PIV)

N 1666457.88
E 1664751.09

REMOVE EXISTING FENCE

END 6" FP REMOVAL
N 1666562.07
E 1665082.34

N 1666467.93
E 1664835.53

N 1666465.96
E 1664768.85

N 1666462.94
E 1664835.68

N 1666457.25
E 1664711.10

N 1666460.90
E 1664768.98

N 1666458.35
E 1664769.05

REMOVE EXISTING FENCE

N 1666403.99
E 1664836.91

LEGEND

- FULL DEPTH CONCRETE PAVEMENT REMOVAL
- FULL DEPTH AGGREGATE REMOVAL
- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH SAWCUT
- MISCELLANEOUS REMOVAL
- MISCELLANEOUS REMOVAL
- TEMPORARY CONSTRUCTION FENCING

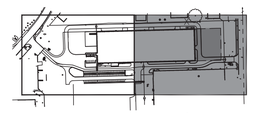
KEYED NOTE:

⬡1 SUBCONTRACTOR SHALL COORDINATE WITH CONTRACTOR FOR PLANNED COMPRESSED AIR SHUT-DOWN. SUBCONTRACTOR SHALL HAVE RELOCATED COMPRESSED AIR PIPING INSTALLED AND READY FOR TIE-IN PRIOR TO THE SHUT-DOWN TO MINIMIZE IMPACTS TO EXISTING OPERATIONS.

DEMOLITION PLAN 2

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

NORTH

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2339

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A SITE WORK - IFC	CAK	NT
E 03/26/2018 PKG 1A SITE WORK - IFC - ADD2	CAK	NT
U 06/13/2018 PKG 1A SITE WORK - REV U	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY THIS DESIGN AND/OR SPECIFICATION IS APPROVED
NAME | DEPT. | DATE

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

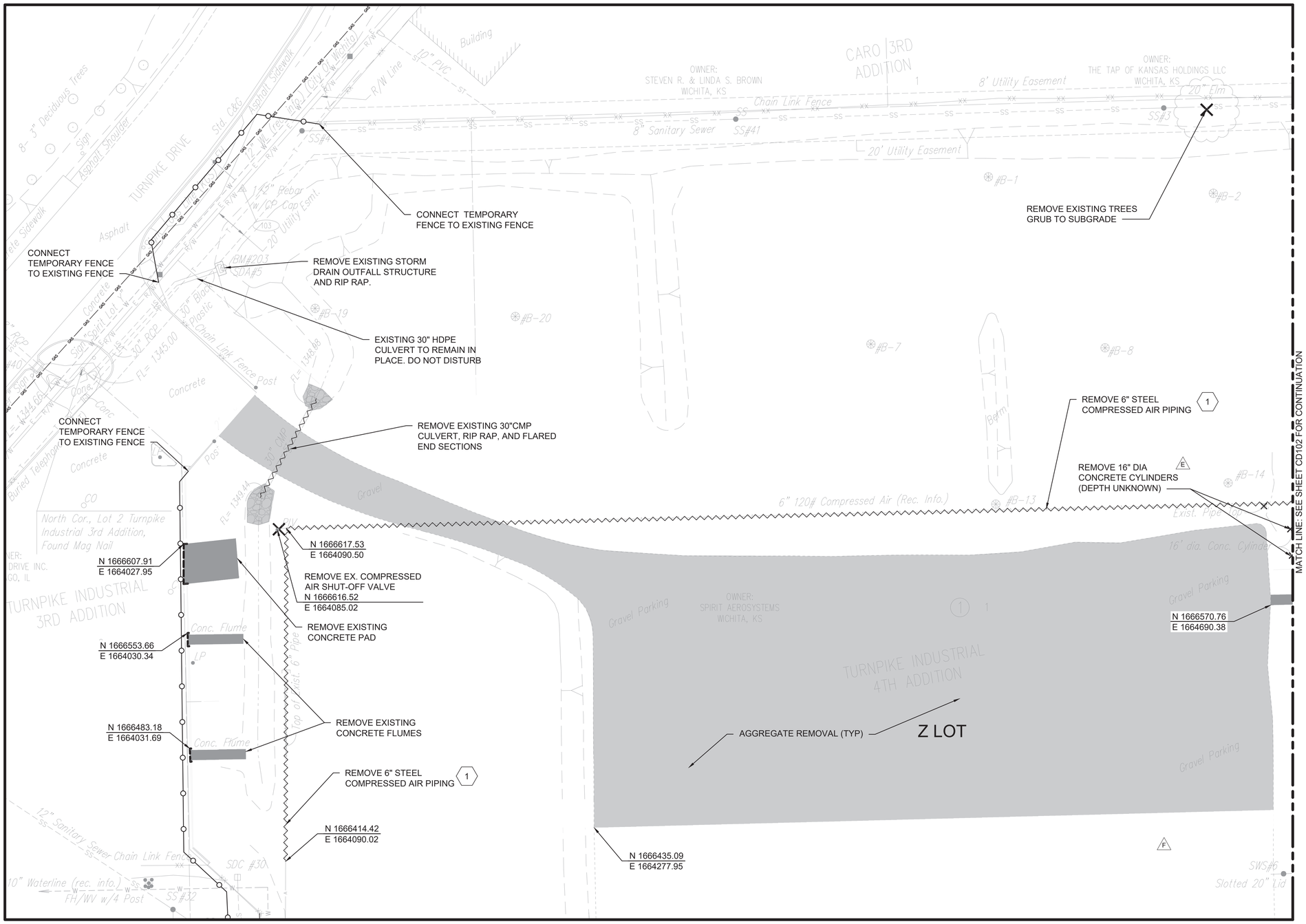
COMMONWEALTH OF KANSAS
CHRISTOPHER A. KINGSLAND
19889
11/16/2018
REGISTERED PROFESSIONAL ENGINEER

Facilities Engineering
AUTOMATED WAREHOUSE
BLDG-1-338G
WICHITA, KS

Designed by C. KINGSLAND 02/21/18
Drawn by J. JENKINS 02/21/18

Project No. 6936
Sheet Name: DEMO PLAN 2
Sheet CD102 of XX
Drawing No. 108M-XXX-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.



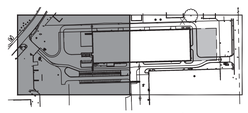
LEGEND

- CONCRETE PAVEMENT REMOVAL
- AGGREGATE REMOVAL
- ASPHALT PAVEMENT REMOVAL
- FULL DEPTH SAWCUT
- MISCELLANEOUS REMOVAL
- MISCELLANEOUS REMOVAL
- TEMPORARY CONSTRUCTION FENCING

DEMOLITION PLAN 1

0 15' 30' 60'
SCALE IN FEET

NORTH



KEY PLAN
NOT TO SCALE

GENERAL DEMOLITION NOTES:

1. ALL DEMOLITION, WASTE, DEBRIS, AND UNSATISFACTORY MATERIALS SHALL BE DISPOSED OF OFF SITE.
2. LOCATIONS NOTED FOR DEBRIS REMOVAL MAY CONTAIN ANY OF THE FOLLOWING MATERIALS: AGGREGATE, CONCRETE, ASPHALT, MASONRY, FOUNDATIONS, REBAR, FENCE MATERIAL, PIPING, AND MISCELLANEOUS STRUCTURES. LARGE PIECES OF MATERIAL MAY NEED TO BE CRUSHED AND/OR BROKEN UP FURTHER IN ORDER TO BE HAULED AWAY TO THE WASTE DISPOSAL SITE.
3. SUBCONTRACTOR SHALL COORDINATE LIMITS OF SAWCUT AND PAVEMENT REMOVAL WITH PROPOSED PAVEMENT LAYOUT AND JOINTING PLAN.
4. PAVEMENT DESIGNATED FOR SAWCUT SHALL BE SAWCUT FULL DEPTH.
5. EXISTING PAVEMENT EDGES SHALL BE SAWCUT IN LOCATIONS SHOWN TO PROVIDE CLEAN EDGE FOR CONSTRUCTION OF PROPOSED PAVEMENT.
6. PAVEMENT REMOVAL LIMITS SHALL BE TO THE NEAREST EXISTING PAVEMENT JOINT TO THE GREATEST EXTENT POSSIBLE TO PREVENT PARTIAL PANEL REMOVAL. PAVEMENT REMOVAL SHALL INCLUDE REMOVAL OF PAVEMENT AND ANY SUBBASE MATERIAL PRESENT.
7. ANY DAMAGE TO PAVEMENT AREAS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REMOVED AND REPLACED AT NO ADDITIONAL COST TO OWNER.
8. SUBCONTRACTOR SHALL PRESERVE EXISTING TREES AND VEGETATION WHENEVER PRACTICABLE. SUBCONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
9. EXISTING VEGETATION AND FACILITIES WHICH ARE NOT INDICATED TO BE REMOVED SHALL BE PROTECTED FROM DEMOLITION OR OTHER CONSTRUCTION ACTIVITIES.
10. SPECIAL HANDLING AND CONSIDERATION SHALL BE REQUIRED FOR EXCAVATED SOILS THOUGHT TO CONTAIN PETROLEUM-BASED /CONTAMINATED /HAZARDOUS SUBSTANCES. SUBCONTRACTOR SHALL PERIODICALLY MONITOR EXCAVATED SOILS. SOILS SHALL BE TREATED ON SITE OR DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS AND THE PROJECT SPECIFICATIONS. SUBCONTRACTOR SHALL COORDINATE REMOVAL OF PETROLEUM-BASED /CONTAMINATED /HAZARDOUS MATERIALS WITH CONTRACTOR.

UTILITY DEMOLITION NOTES:

1. SUBCONTRACTOR SHALL COORDINATE WITH THE CONTRACTOR PRIOR TO REMOVAL OF EXISTING UTILITIES IN SERVICE. RELOCATED UTILITIES SHALL BE CONSTRUCTED BEFORE REMOVAL OF EXISTING UTILITIES TO ENSURE UNINTERRUPTED SERVICE TO THE FACILITIES SERVED BY THE UTILITY. ALL RELOCATIONS SHALL BE COORDINATED WITH THE CONTRACTOR.
2. UTILITY CAPPING METHODS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC PIPE MATERIAL IN SERVICE. ALL CAPPING SHALL BE INSPECTED AND APPROVED BY THE CONTRACTOR.
3. ALL STRUCTURES, VALVES, ETC. TO REMAIN SHALL BE PROTECTED AND ADJUSTED TO FINISH GRADE.
4. IN AREAS OF UTILITY REMOVAL OF ABANDONED LINES, THE PORTION OF EXISTING ABANDONED LINES TO REMAIN SHALL BE CAPPED OR PLUGGED AT REMOVAL INTERFACE.

KEYED NOTES:

1 SUBCONTRACTOR SHALL COORDINATE WITH CONTRACTOR FOR PLANNED COMPRESSED AIR SHUT-DOWN. SUBCONTRACTOR SHALL HAVE RELOCATED COMPRESSED AIR PIPING INSTALLED AND READY FOR TIE-IN PRIOR TO THE SHUT-DOWN TO MINIMIZE IMPACTS TO EXISTING OPERATIONS.

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2359

	BY	APPROVED
DESCRIPTION		
A 03/09/2018 PKG 1A - SITE WORK - IFC	CAK	NT
E 03/26/2018 PKG 1A - SITE WORK - IFC - ADD2	CAK	NT
F 04/12/2018 PKG 1A SITE WORK - IFC - ADD3	CAK	NT
Z 11/16/2018 PKG 1A SITE WORK - REV Z	CAK	NT

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED PER WICHITA
05/07/2018 9:35:35 AM

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

☐ APPROVED
☐ NOT REQUIRED
DATE _____

SPIRIT AEROSYSTEMS

BURNS MCDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com



AUTOMATED WAREHOUSE
Facilities Engineering
WICHITA, KS
BLDG-1-338G

Designed by C. KINGSLAND 02/21/18
Drawn by J. JENKINS 02/21/18

Project No. 6936
Sheet Name: DEMO PLAN 1
Sheet CD101 of XX
Drawing No. 108M-XXX-XX

THIS DOCUMENT IS THE PROPERTY OF SPIRIT AEROSYSTEMS, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHALL BE TREATED AS CONFIDENTIAL MATERIAL, THAT IT SHALL BE RETURNED UPON REQUEST, AND THAT THE CONTENTS THEREOF SHALL NOT BE DISCLOSED, REPRODUCED, OR COPIED EXCEPT BY WRITTEN PERMISSION OF SPIRIT AEROSYSTEMS, INC.

TOPO LEGEND

- #B-1 — Bore Location
- △ — Monument/Horizontal Control Point
- BM — Benchmark
- E — Electric Box
- LP — Light Pole
- Power Pole
- SDA — Storm Water Drain Area Inlet
- SDM — Storm Drain Manhole
- CO — Clean Out
- SS — Sanitary Sewer Manhole
- SS(IW) — Sanitary Sewer Industrial Waste Manhole
- FH — Fire Hydrant
- WV — Water Valve
- ICV — Irrigation Control Valve
- PIV — Post Indicator Valve
- Post — Gate Post
- Post — Guard Post
- TMKR — Telephone Marker
- GWR — Groundwater Recovery Manhole
- GRD — Ground Shot Elevation
- GW — Groundwater Line
- ABN — Abandoned Line
- A — Compressed Air
- GAS — Gas Line
- T — Buried Telephone Line
- XX — Fence Types
- Guard Rail
- ST — Storm Sewer
- SS — Sanitary Sewer
- E — Overhead Electric
- FP — Fire Water
- Major Contour Interval
- Minor Contour Interval
- W — Water Line
- R/W — Right-of-Way
- Property Line

BENCH MARK LIST ⊕

BM #201 – SQUARE CUT ON THE WEST END OF THE CURB RETURN ON THE NORTHWEST CORNER OF S. OLIVER ST. AND E. COLFAX ST. \35' NORTH-NORTHWEST TO CONTROL POINT #101. \13' NORTHEAST TO THE BASE OF THE 'STOP' SIGN POST. \15' NORTH-NORTHWEST TO THE BASE OF THE 'NO OUTLET' SIGN POST.

ELEV.=1356.23 (NAVD88)

BM #202 – SQUARE CUT ON THE WEST END OF THE NORTH CURB LINE IN THE NORTHWEST CORNER OF THE PARKING LOT ON THE NORTH SIDE OF 1-355C BUILDING. \91' NORTHEAST TO CONTROL POINT #102. \46' EAST-NORTHEAST TO POST INDICATOR VALVE #1082.

ELEV.=1360.63 (NAVD88)

BM #203 – SQUARE CUT ON TOP OT THE EAST SIDE OF THE CONCRETE DRAINAGE STRUCTURE ON EAST SIDE OF TURNPIKE DR. \49' NORTH-NORTHEAST TO CONTROL POINT #103. \42' SOUTH TO THE NORTH EDGE OF THE DRIVE TO "Y" PARKING LOT (3300 S. TURNPIKE DR.) \40' SOUTHWEST TO BASE OF A POWER POLE.

ELEV.=1348.61 (NAVD88)

CONTROL POINTS 101

Pt. No. 101
1/2" REBAR WITH PEC CONTROL CAP SET FLUSH WITH GROUND, ON TOP OF BERM ON THE NORTH WEST CORNER OF S. OLIVER ST. AND E. COLFAX ST.
N: 1,666,680.73, E: 1,665,391.56
1. 34.8' SOUTH-SOUTHEAST TO BMK-201
2. 38.5' EAST TO THE WEST CURB LINE ALONG S. OLIVER ST.
3. 33.5' SOUTH TO THE NORTH CURB LINE ALONG ALONG E. COLFAX ST.

Pt. No. 102
1/2" REBAR WITH PEC CONTROL CAP SET FLUSH WITH GROUND NORTH OF THE PARKING LOT ON THE NORTH SIDE OF 1-355C BUILDING
N: 1,666,665.78, E: 1,664,833.37
1. 26.0' SOUTH TO THE NORTH EDGE OF ASPHALT OF THE PARKING LOT
2. 91.0' SOUTHWEST TO BMK-202
3. 46.4' EAST-NORTHEAST TO POST INDICATOR VALVE #1082

Pt. No. 103
1/2" REBAR WITH PEC CONTROL CAP SET FLUSH WITH GROUND ON THE EAST SIDE OF TURNPIKE DR.
N: 1,666,824.28, E: 1,664,063.76
1. 49.4' SOUTH-SOUTHWEST TO BMK-203
2. 23.8' WEST-NORTHWEST TO THE TOP BOLT OF A FIRE HYDRANT
3. 61.4' NORTHEAST TO THE CORNER FENCE POST OF A CHAIN-LINK FENCE

HORIZONTAL DATUM

KANSAS STATE PLANE (SOUTH ZONE)

STORM SEWER (NAVD88)

(Corrugated Black Plastic Pipe = ABS)

SDA#5 (Pt. 6001)
8'x5' Conc. Structure
2'x3' SDA Lids (two)
Top= 1348.65
FL=1345.55 30" Plastic Pipe (SW)*
FL=1346.35 5" Hole in Wall (NE)
FL=1347.35 12" W x 6" H hole (NE)
(Black plastic for 25'\ to a PI, then 30" RCP to RCE. 9 sections x 8ft.)

SDA#6 (Pt.1809)
Top= 1358.37
FL=1356.37 15" PVC (E-W)
Plugged 2' West

SDA#7 (Pt.1810)
Top= 1358.16
FL=1356.46 15" PVC (E-W)

SDA#8 (Pt.1811)
Top= 1358.32
FL=1356.32 15" PVC (E-W)

SDA#9 (Pt.1812)
Top= 1358.34
FL=1356.19 15" PVC (E-W)

SDA#10 (Pt.1815)
Top= 1358.07
FL=1355.97 15" PVC (E-W)

SDM#11 (Pt.6470) Conc. MH
Top= 1349.14
FL=1343.14 30" ABS (W)
FL=1343.14 30" ABS (S)
(near SW corner of big parking area)

SDM#12 (Pt.6472) Conc. MH
Top= 1349.19
FL=1342.99 30" ABS (N)
FL=1342.89 30" RCP (SSW)
FL=1342.99 12" ABS (E)
(partly under chain link fence)

SDA#13 (Pt.6474)
Top= 1349.03
FL=1343.63 12" ABS (W)

SDM#14 (Pt.6467) Conc. MH
Top= 1350.93
FL=1345.83 15" ABS (W)
FL=1343.33 30" ABS (E)
FL=1343.33 30" ABS (N)

SDM#15 (Pt.6460) Conc. MH
Top= 1350.64
FL=1343.34 24" ABS (N)
FL=1343.39 30" ABS (S)
FL=1344.94 12" ABS (W)
FL=1343.44 12" PVC (E)

SDM#16 (Pt.6457) Conc. MH
Top= 1350.84
FL=1345.04 24" ABS (W)
FL=1344.94 24" ABS (NE)
FL=1343.54 24" ABS (S)

SDA#17 (Pt.6456)
Top= 1349.70
FL=1345.30 18" ABS (N)
FL=1345.20 24" ABS (SW)

SDA#18 (Pt.6455)
Top= 1349.64
FL=1345.74 18" ABS (S)

SDA#19 (Pt.6541)
Top= 1348.89
FL=1345.89 15" ABS (E)

SDA#20 (Pt.6540)
Top= 1348.95
FL=1345.35 15" ABS (E)

SDA#21 (Pt.6538)
Top= 1349.06
FL=1344.96 24" ABS (E)
FL=1345.06 18" ABS (N)

SDA#22 (Pt.6537)
Top= 1348.97
FL=1344.97 18" ABS (S)
FL=1344.97 18" ABS (N)

SDA#23 (Pt.1770)
Top= 1359.93
FL=1356.13 15" PVC (W)
FL=1356.03 24" PVC (S)

SDA#24 (Pt.1771)
Top= 1360.06
FL=1356.16 15" PVC (W)
FL=1355.86 24" PVC (S)
FL=1355.86 24" PVC (N)

SDA#25 (Pt.1780)
Top= 1360.06
FL=1356.86 15" PVC (W)
FL=1355.76 24" PVC (N)
FL=1355.76 24" PVC (S)

SDM#26 (Pt.1782)
Conc. MH
Top= 1360.16
FL=1355.86 15" PVC (W)
FL=1355.76 18" PVC (E)

SDM#27 (Pt.1781) Conc. MH
Top= 1360.51
FL=1355.71 24" PVC (N)
FL=1355.61 30" PVC (S)
FL=1355.71 18" PVC (W)

SDA#28 (Pt.1808)
Top= 1360.16
FL=1355.56 15" PVC (W)
FL=1355.56 18" PVC (E)

SDM#29 (Pt.1807) Conc. MH
Top= 1360.68
FL=1355.48 30" PVC (N&S)
FL=1355.48 18" PVC (E)

SDA#30 (Pt.6451)
Top= 1348.59
FL=1345.59 15" PVC (N&S)
2 ft N to plug
(12" pipe at SDA-33)

SDA#33 (Pt.6517) 2x2 Grate
Top= 1349.20
FL=1345.19 12" PVC (N)
FL=1345.19 18" PVC (S)

SDC#40 (Pt.6139)
Top= 1348.69
FL=1344.26 40" RCP
FL=1340.29 48" RCP

SANITARY SEWER (NAVD88)

SSM#1 (Pt.1353) Conc. MH
Top= 1354.92
FL Out=1340.05 8" VCP (N)
FL In=1340.08 8" VCP (W)

SSM#2 (Pt.1382) Conc. MH
Top= 1357.34
FL Out=1340.65 8" VCP (E)
FL In=1340.75 8" VCP (W)

SSM#3 (Pt.1443) Conc. MH
Top= 1358.56
FL Out=1341.36 8" VCP (E)
FL In=1341.23 8" VCP (W)

SSM#4 (Pt.6266) Conc. MH
Top= 1349.45
FL Out=1342.73 8" VCP (E)
FL In=1342.73 8" VCP (SW)

SSM#31 (Pt.6515)
Conc. MH
Top= 1349.40
FL=1343.25 12" PVC (S)
FL=1343.27 6" PVC (NE)
FL=1343.05 15" VCP (NW)

SSM#341 (Pt.10012) Conc. MH
Top= 1351.54
FL=1341.71 8" VCP (E)
FL=1341.69 8" VCP (W)

SURVEY AND SUBSURFACE INVESTIGATION NOTES:

1. THE SURVEY WAS PERFORMED BY PEC IN FEBRUARY 2018. SURVEY CONTROL POINTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND SHALL BE RESET BY THE SUBCONTRACTOR IF DISTURBED DURING CONSTRUCTION.
2. SUBCONTRACTOR SHALL RETAIN A LICENSED SURVEYOR TO SURVEY PROJECT IMPROVEMENTS. IF BENCHMARKS SHOWN ARE IN AREAS THAT REQUIRE DEMOLITION, OTHER BENCHMARKS SHALL BE ESTABLISHED BEFORE DEMOLITION AND CONSTRUCTION WORK BEGINS. SUBCONTRACTOR SHALL SUPPLY CERTIFIED, CONTROL POINT DATA TO CONTRACTOR AFTER COMPLETION OF CONSTRUCTION.
3. THE GEOTECHNICAL INVESTIGATION WAS PERFORMED BY GSI ENGINEERING IN FEBRUARY 2018. THIS REPORT WAS PREPARED FOR SPIRIT AEROSYSTEMS AS REQUESTED BY BURNS & MCDONNELL. THE RESULTS OF THE INVESTIGATION ARE CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.

SUBSURFACE EXPLORATION NOTES:

1. THE BORING LOGS AND RELATED INFORMATION, INCLUDING WATER LEVELS, DEPICT CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND AT THE TIME DESIGNATED ON THE LOGS.
2. SOIL CONDITIONS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURING AT THESE SPECIFIC BORING LOCATIONS. ANY ATTEMPT TO INTERPOLATE THE STRATIGRAPHIC CONDITIONS BETWEEN BORINGS IS AT THE CONTRACTOR'S RISK.
3. FLUCTUATIONS OR CHANGES IN WATER LEVELS AND GROUNDWATER CONDITIONS CAN BE INFLUENCED BY SOURCES OUTSIDE THE AREAS OF THE SITE INVESTIGATED, BY SEASONAL RAINFALL, AND BY CHANGES IN DRAINAGE CONDITIONS IN AND AROUND THE SITE. FLUCTUATIONS CAN OCCUR AND SHOULD BE ANTICIPATED BETWEEN THE TIME OF INVESTIGATION AND THE TIME OF CONSTRUCTION.
4. LOCATIONS OF INDICATED STRATIGRAPHIC BOUNDARIES ARE APPROXIMATE AND THE TRANSITIONS BETWEEN SOIL TYPES MAY BE GRADUAL RATHER THAN CLEARLY DEFINED.
5. ADDITIONAL INFORMATION IS CONTAINED IN THE SUBSURFACE INFORMATION DOCUMENT, WHICH IS AVAILABLE AT THE OFFICE OF THE CONTRACTOR.
6. ADDITIONAL SUBSURFACE INFORMATION MAY EXIST AT THE SITE FROM EITHER PRIOR CONSTRUCTION ACTIVITIES OR FROM NEARBY FACILITIES. SUCH INFORMATION MAY BE AVAILABLE AT THE OFFICE OF THE CONTRACTOR.

16NOV2018 - PKG 1A - SITE WORK - REV Z
PE CONTACT: WAYNE HERBERT @ 316-523-2399

	BY	DESCRIPTION	DATE
A	CAK	PKG 1A, SITE WORK - IFC	03/09/2018
Z	CAK	PKG 1A, SITE WORK - REV Z	11/16/2018

FIRE PROTECTION REVIEW
FP REVIEW NOT REQUIRED FOR ARCHITECTURAL
06/07/2018 9:37:23 AM
☐ APPROVED ☐ NOT REQUIRED
DATE

ACCEPTABILITY
THIS DESIGN AND/OR SPECIFICATION IS APPROVED

NAME	DEPT.	DATE
SS	PE	5-10-2018

APPROVED NT

SPIRIT AEROSYSTEMS

BURNS McDONNELL
9400 Ward Parkway
Kansas City, MO 64114
www.burnsmcd.com

KANSAS REGISTERED ENGINEERING
19889
11/16/2018
KANSAS
PROFESSIONAL ENGINEER

WICHITA, KS

Designed by C. KINGSLAND 02/21/18

BLDG-1-338G

Drawn by J. JENKINS 02/21/18

AUTOMATED WAREHOUSE

Facilities Engineering

Project No. 6936
Sheet Name: SURVEY INFO
Sheet V-103 of XX
Drawing No. 108M-XXX-XX

WICHITA CONCRETE PIPE

LETTER OF CERTIFICATION

Project:	**Automated Warehouse – Spirit Aerosystems**
Project Number:	**18-0148**
Location:	**Wichita, Kansas**
Requesting Agency:	**City of Wichita, Kansas**
Contractor:	**Pearson Construction**
Date:	**November 7, 2018**

Wichita Concrete Pipe hereby certifies that all tongue and groove precast concrete pipe for the above stated project has been produced in accordance with and meets or exceeds all current requirements of: ASTM C76 Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.

PIPE QUANTITIES

496 L.F.	**Class III**	**30" RCP**
1/each	**30" RCP End Sections**	
220 L.F.	**Class III**	**36" RCP**
4/each	**36" RCP End Sections**	

Subscribed and sworn before me,

_____, Notary public,

this 7th day of November, 2018.

Respectfully submitted,

Wichita Concrete Pipe Co.

NOTARY PUBLIC STATE OF KANSAS
DAVID BRAY HOGLAND
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 08/10/2021

Phone: (316) 838-8651 · Fax (316) 838-0838 · 221 W. 37th St. North · Wichita, KS 67204

EJ
301 Spring Street
PO Box 439
East Jordan, MI 49727-0439

+1 231 536 2261
800 874 4100
ejco.com

Material Certification

November 7, 2018

Wichita Concrete Pipe
221 W 37th Street North
Wichita, KS 67204
Attn: Nick Wenger
Fax #:

RE: Job Name: Spirit Aerosystems - Automated Warehouse
Pearson Construction
Project #: 18-0148
Order Type.: Submittal

QUANTITY	DESCRIPTION
15	00539115 5391Z3 UND FRAME
30	00539132 5391M UND DNW GR
6	00193611 1936Z1 UND FRAME W/ MUD RG
6	00193627 1936A1GS UND WICHITA SS LO CV
5	00193611 1936Z1 UND FRAME W/ MUD RG
5	00193660 1936A2 UND PB2 STM SW CV

Dear Valued Partner:

We hereby certify that the iron used to make the construction castings manufactured by EJ for the above referenced project is in full compliance with ASTM A48, Class 35B and AASHTO M105 for gray iron castings and ASTM A536, Grade 70-50-05 for ductile iron castings. Thank you for specifying and using products manufactured by EJ.

The above listed castings are melted and manufactured 100% in the United States of America at our foundries in Ardmore, OK and East Jordan, MI. These castings comply with the applicable provisions of the Code of Federal Regulations 23 CFR 635.410 BUY AMERICA Requirements.

We also certify that the above listed products supplied to the subject project are in full compliance with the American Iron and Steel (AIS) requirement as mandated in EPA's State Revolving Fund Programs.

EJ USA, Inc.

Susannah Ohde

Susannah Ohde
Product Quality Manager