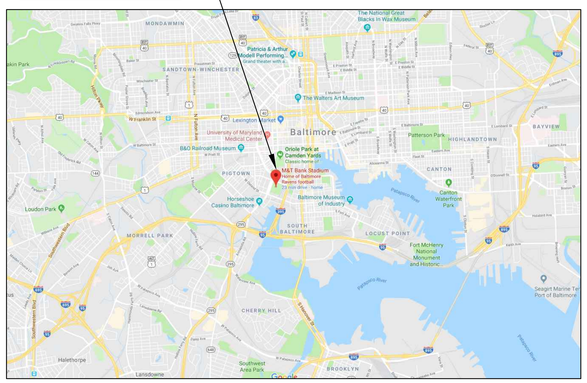
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS

1101 RUSSELL STREET
BALTIMORE, MARYLAND 21230

EBL FIRE ENGINEERING
DIVISION OF EBL ENGINEERS, LLC
8005 HARFORD ROAD
BALTIMORE, MARYLAND 21234-5701
410-668-8000 FAX 410-668-8001

PROJECT LOCATION



VICINITY MAP
NO SCALE

DRAWING LIST

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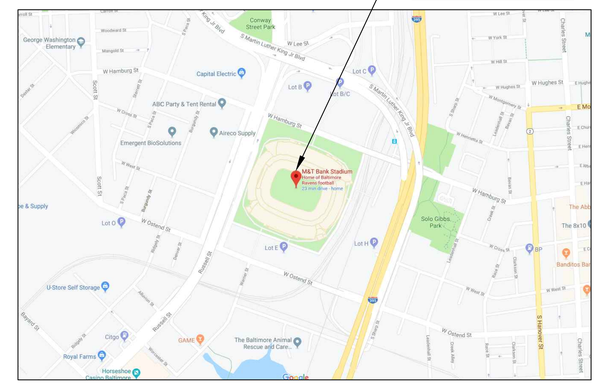
20 OF 20	FA-203	GENERATOR PLANT PLAN - FIRE ALARM
1 THRU 50	-	M&T BANK STADIUM SPRINKLER AS-BUILTS

PROJECT LOCATION



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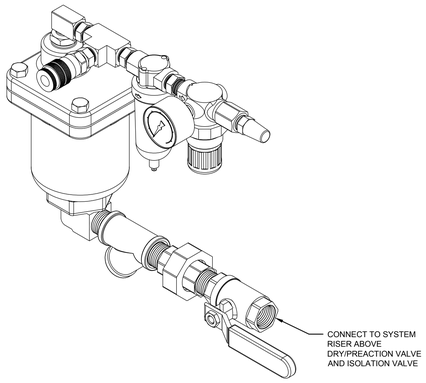
PROJECT NO: 17903.003
CAD FILE: 17903.003 G-001
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

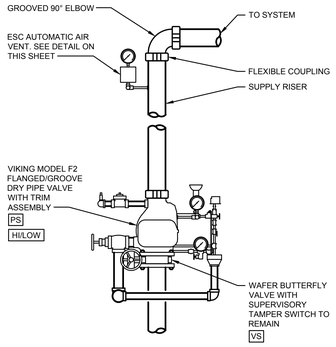
SHEET TITLE
COVER SHEET

G-001
SHEET 1 OF 20



ECS PROTECTOR AUTOMATIC AIR VENT (PAV-D) - DRY/PREACTION SYSTEM INSTALLATION DETAIL

NO SCALE

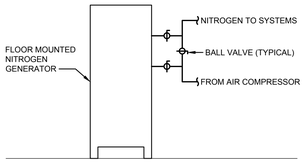


TYPICAL DRY-TYPE VALVE DETAIL

NO SCALE

NOTES:

1. REMOVE EXISTING PRESSURE SWITCHES AND PROVIDE NEW DEVICES. WIRING BY THE FIRE ALARM CONTRACTOR.
2. REMOVE EXISTING DRY PIPE VALVE TRIM AND PROVIDE NEW PIPING. CONNECT TO ALL EXISTING DRAINS, AIR SUPPLY LINES, AND NEW NITROGEN GENERATOR.
3. REFER TO FP-201, FP-202, AND FP-203 FOR ACTUAL SIZES.
4. SEE EBL REFERENCE DRAWING 1B FOR FIRE SPRINKLER ZONE SCHEDULE.

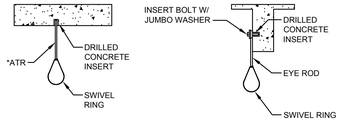


NITROGEN GENERATOR DETAIL

NO SCALE

NOTES:

1. REFER TO MANUFACTURERS SPECIFICATION SHEET FOR PIPING.
2. FOR GALLON CAPACITY, SEE DETAILS ON SHEETS FP-201, FP-202, AND FP-203.



HANGER DETAILS

NO SCALE

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	SPRINKLER MAIN
	SPRINKLER UNDERGROUND
	RISE IN PIPE
	DROP IN PIPE
	PIPE RISE/DROP
	PIPE CAP - FLUSHING CONNECTION
	SPRINKLER CONTROL VALVE RISER ASSEMBLY

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
ATR	ALL THREADED ROD
BPA	BACKFLOW PREVENTION ASSEMBLY
CFM	CUBIC FEET PER MINUTE
CL	CENTER LINE
CX	CONNECT TO EXISTING
DWG	DRAWING
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EX	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAGAP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL
FAPB	FIRE ALARM POWER BOOSTER PANEL
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FHV	FIRE HOSE VALVE
FL	FLOOR
FM	FACTORY MUTUAL
FSRP	FIRE SUPPRESSION RELEASING PANEL
GPM	GALLONS PER MINUTE
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
IDC	INITIATING DEVICE CIRCUIT
MAX	MAXIMUM
MIN	MINIMUM
N	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO.#	NUMBER
NRS	NON-RISING SYSTEM
OS&Y	OUTSIDE SCREW & YOKE
POD	POINT OF DISCONNECT
PSI	POUNDS-PER-SQUARE INCH
QR	LISTED QUICK-RESPONSE
RC	REDUCING COUPLING
RX	REMOVE EXISTING
SCH	SCHEDULE
SF	SQUARE FEET
SLC	SIGNALING LINE CIRCUIT
STD	STANDARD
TBD	TO BE DETERMINED
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
WP	WEATHERPROOF
W/	WITH

CODES AND STANDARDS REFERENCES:

ALL REFERENCES TO IBC SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO NFPA 13 SHALL MEAN THE 2013 EDITION.
ALL REFERENCES TO NFPA 24 SHALL MEAN THE 2013 EDITION
ALL REFERENCES TO NFPA 25 SHALL MEAN THE 2014 EDITION.
ALL REFERENCES TO NFPA 70 SHALL MEAN THE 2014 EDITION.
ALL REFERENCES TO NFPA 72 SHALL MEAN THE 2013 EDITION.
ALL REFERENCES TO NFPA 241 SHALL MEAN THE 2013 EDITION.
ALL REFERENCES TO NFPA 291 SHALL MEAN THE 2013 EDITION.

UNIT PRICES:

A. LIST OF UNIT PRICES: ALL UNIT PRICES SHALL INCLUDE LABOR (DEMOLITION OF EXISTING AND INSTALLATION), FABRICATION, FIELD SURVEY, AND CONTRACTOR MARKUPS.

1. BULK MAIN, SCHEDULE 10 BLACK STEEL PIPE (PIPE SIZES 2-1/2", 3", 4", 6", 8"). ONE (1) EACH FOR EACH PIPE SIZE TO INCLUDE:
   - 21'-0" PIPE, 2 PIPE HANGER ASSEMBLIES (FOR CONCRETE), 2 GROOVED COUPLINGS.
2. FEED AND CROSS MAIN, SCHEDULE 10 BLACK STEEL PIPE (PIPE SIZES 2-1/2", 3", 4", 6", 8"). ONE (1) EACH FOR EACH PIPE SIZE TO INCLUDE:
   - 10'-0" PIPE, 1 PIPE HANGER ASSEMBLY (FOR CONCRETE), 2 GROOVED COUPLINGS, TWO BRANCHLINE OUTLETS (SHOP WELDED) FITTINGS TO RECONNECT THE BRANCHLINE, 2" MAXIMUM.
3. BRANCHLINE PIPING, SCHEDULE 40 BLACK STEEL PIPE (PIPE SIZES 1, 1-1/4", 1-1/2", 2"). ONE (1) EACH FOR EACH PIPE SIZE TO INCLUDE:
   12'-0" PIPE, 1 PIPE HANGER ASSEMBLY (FOR CONCRETE), 1 BRANCHLINE FITTING, FITTINGS AND NIPPLES (1") TO RECONNECT THE DRY PENDENT SPRINKLER HEAD, ONE DRY PENDENT SPRINKLER HEAD (MATCH EXISTING) MAXIMUM 24" IN LENGTH.
4. TEMPORARY 2.5" FIRE HOSE VALVE CONNECTION TO BE EXTENDED FROM EXISTING WET PIPE SYSTEM. INCLUDE THE FOLLOWING:
   50'-0" PIPE, FOUR 90 DEGREE ELBOWS, GROOVED COUPLINGS AND ONE 2.5" BRASS FIRE HOSE VALVE.

FIRE PROTECTION (FIRE SPRINKLER) GENERAL NOTES:

1. PROVIDE A COMPLETE AND OPERATIONAL FIRE SPRINKLER SYSTEM. THE SYSTEM SHALL BE LAID OUT, FABRICATED, INSTALLED, COORDINATED, TESTED, AND PLACED INTO SERVICE IN ACCORDANCE WITH NFPA 13, NFPA 14, NFPA 24, NFPA 25, NFPA 70, NFPA 72, NFPA 101, NFPA 241, NFPA 291, IBC, LOCAL AUTHORITY REQUIREMENTS, AND THE CONTRACT DOCUMENTS.
2. THE GENERAL SCOPE OF THE AUTOMATIC FIRE PROTECTION SYSTEM SHALL CONSIST OF THE FOLLOWING FOR ALL AREAS OF THE PROJECT AS SHOWN:
   A. PERFORM AN INTERNAL PIPE ASSESSMENT IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 25, SECTION 14.3 AND PROVIDE DOCUMENTATION OF FINDINGS TO THE MARYLAND STADIUM AUTHORITY (MSA), FOR THE FOLLOWING DRY PIPE AND PREACTION SPRINKLER ZONES:
      a. SERVICE LEVEL - DIRT STORAGE DRY PIPE SYSTEM
      b. SERVICE LEVEL - LOADING DOCK DRY PIPE SYSTEM
      c. SERVICE LEVEL - TELEPHONE ROOM PREACTION SYSTEM
      d. SERVICE LEVEL - EAST DRY STANDPIPE SYSTEM
      e. SERVICE LEVEL - WEST DRY STANDPIPE SYSTEM
      f. MAIN CONCOURSE - QUAD A DRY PIPE SYSTEM
      g. MAIN CONCOURSE - QUAD B DRY PIPE SYSTEM
      h. MAIN CONCOURSE - QUAD C DRY PIPE SYSTEM
      i. MAIN CONCOURSE - QUAD D DRY PIPE SYSTEM
      j. PRESS LEVEL - DRY PIPE SYSTEMS SERVING QUAD A ELEVATORS
      k. PRESS LEVEL - DRY PIPE SYSTEMS SERVING QUAD B ELEVATORS
      l. PRESS LEVEL - CONTROL ROOM PREACTION SYSTEM
      m. CLUB LEVEL - WEST SCOREBOARD PREACTION SYSTEM
      n. CLUB LEVEL - EAST SCOREBOARD PREACTION SYSTEM
      o. CLUB LEVEL - KITCHEN DRY PIPE SYSTEM
      p. UPPER SUITE LEVEL - EAST DECK DRY PIPE SYSTEM
      q. UPPER SUITE LEVEL - WEST DECK DRY PIPE SYSTEM
      r. UPPER CONCOURSE - NORTH DECK DRY PIPE SYSTEM
      s. UPPER CONCOURSE - SOUTH DECK DRY PIPE SYSTEM
   B. BASED ON THE FINDINGS OF THE INTERNAL PIPE ASSESSMENT, MSA WILL PROVIDE DIRECTION ON THE EXTENT OF PIPING TO BE REPLACED FOR EACH SYSTEM. CONTRACTOR SHALL PROVIDE UNIT PRICING FOR ITEMS IDENTIFIED IN THE 'UNIT PRICES' SECTION ON THIS SHEET. CONTRACTOR SHALL ANTICIPATE THAT APPROXIMATELY 50% OF THE PIPING ON EACH SYSTEM WILL BE REPLACED, HOWEVER, THE EXACT PERCENTAGE MAY BE INCREASED OR DECREASED DEPENDING ON THE FINDINGS OF THE INTERNAL PIPE ASSESSMENT.
   C. PROVIDE NITROGEN GENERATORS AS INDICATED TO PROVIDE PRESSURE MAINTENANCE FOR EACH DRY PIPE AND PREACTION SPRINKLER SYSTEM.
   D. REPLACE EXISTING DRY PIPE AND PREACTION RISER VALVES AS INDICATED.
   E. PROVIDE AUTOMATIC AIR VENTS FOR EACH DRY AND PREACTION SPRINKLER SYSTEM AS INDICATED.
3. THE FIRE PROTECTION INSTALLER(S) SHALL SUBMIT COMPLETE LAYOUT SHOP DRAWINGS, CALCULATIONS, AND ANNOTATED MANUFACTURER'S DATA INFORMATION TO THE CONTRACTING REPRESENTATIVE AND ENGINEER OF RECORD FOR REVIEW AND APPROVAL. APPROVALS SHALL BE OBTAINED PRIOR TO THE PURCHASE OR INSTALLATION OF ANY PART OF THE FIRE PROTECTION SYSTEM.
4. THE FIRE PROTECTION INSTALLER(S) SHALL BE RESPONSIBLE FOR ALL APPLICABLE TRADE PERMITS, CURRENT HYDRANT WATERFLOW DATA AND ASSOCIATED FEES, AND REQUESTS/FEES FOR INSPECTION AND TESTING OF THE SYSTEM AS REQUIRED BY THE APPROVING AHJ.
5. THE FINAL DESIGN OF THE FIRE PROTECTION SYSTEM SHALL BE COORDINATED WITH FIELD CONDITIONS AND THE AVAILABLE WATER SUPPLY.
6. THE FIRE PROTECTION INSTALLER(S) SHALL COORDINATE ALL SYSTEM PIPING, DEVICES, CONDUIT, EQUIPMENT, AND RELATED APPURTENANCES WITH THE BUILDING STRUCTURAL, MECHANICAL AND ELECTRICAL ELEMENTS, INCLUDING BUT NOT LIMITED TO, STRUCTURAL MEMBERS AND SYSTEMS, AIR DUCTS AND OUTLETS, LIGHT FIXTURES, AND SIMILAR EQUIPMENT AND MATERIAL THAT MAY INTERFERE WITH THE PROPER INSTALLATION AND OPERATION OF THE SYSTEM. SUBMITTED LAYOUT SHOP DRAWINGS SHALL BE COORDINATED WITH ALL TRADES.
7. THE FIRE PROTECTION SYSTEM PIPING, DEVICES, HANGERS, CABINETS, EQUIPMENT AND RELATED APPURTENANCES SHALL BE INSTALLED NEAT AND IN A WORKMANLIKE MANNER. CONFORM TO THE LATEST TRADE PRACTICES. PIPING SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO BUILDING LINES AND PROPERLY MOUNTED/SECURED TO THE BUILDING STRUCTURE.
8. THE FIRE PROTECTION INSTALLER(S) SHALL REPAIR OR REPLACE ANY NEW OR EXISTING ITEM, WALL, FLOOR, CEILING, CEILING TILE, ETC. DAMAGED IN CONJUNCTION WITH ALL WORK. REPAIR OR REPLACEMENT SHALL BE AT THE INSTALLER'S COST.
9. THE FIRE PROTECTION INSTALLER(S) SHALL PROVIDE ALL CUTTING, PATCHING, AND CORE-DRILLING ASSOCIATED WITH THE INSTALLATION. THE INSTALLER(S) SHALL COORDINATE WORK WITH THE BUILDING STRUCTURAL SYSTEM. SLEEVES SHALL BE PROVIDED AT ALL FLOOR AND/OR WALL PENETRATIONS IN ACCORDANCE WITH NFPA 13, UNO.
10. THE FIRE PROTECTION INSTALLER(S) SHALL PROVIDE ALL NECESSARY PARTS AND ACCESSORIES EVEN THOUGH THE PARTS AND ACCESSORIES ARE NOT SPECIFICALLY MENTIONED OR SHOWN WITHIN THE CONTRACT DOCUMENTS.
11. ALL FIRE SPRINKLER SYSTEM PIPING AND EQUIPMENT SHOWN ARE FOR SUGGESTIVE PURPOSES ONLY AND SHALL NOT BE SCALED. THE FIRE PROTECTION INSTALLER(S) SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL CONDITIONS. ALL ITEMS OF EQUIPMENT SHALL BE INSTALLED BY ON-THE-JOB MEASUREMENTS AND COORDINATED WITH ALL OTHER TRADES. NOTIFY THE CONTRACTING REPRESENTATIVE IMMEDIATELY, IN WRITING, OF ANY DISCREPANCY BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS.
12. ALL FIRE SPRINKLER VALVES, WATERFLOW/PRESSURE SWITCHES, AND ELECTRIC SPRINKLER ALARM BELL SHALL BE SUPERVISED IN ACCORDANCE WITH NFPA 13 AND NFPA 72. ALL WIRING CONNECTIONS SHALL BE COORDINATED BY THE FIRE PROTECTION INSTALLER(S) AND MADE BY THE ELECTRICAL/FIRE ALARM INSTALLER(S). COORDINATE DEVICE LOCATIONS WITH THE FIRE ALARM DRAWINGS.
13. ALL INSPECTOR'S TEST CONNECTIONS AND AUXILIARY DRAIN VALVES SHALL BE LOCATED NOT MORE THAN 7 FEET ABOVE FINISHED FLOOR.
14. FIRE SPRINKLER PIPE HANGERS AND PIPE SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13. ALL HANGER MATERIALS SHALL BE UL LISTED. PIPE STANDS SHALL BE SECURELY MOUNTED TO BOTH THE FLOOR AND THE PIPE WHICH IT SUPPORTS.
15. WHERE THE MAXIMUM STATIC OR FLOWING PRESSURE EXCEEDS 100 PSI, HANGER ASSEMBLIES SUPPORTING PIPE SUPPLYING AN END SPRINKLER IN A PENDENT POSITION SHALL BE OF A TYPE THAT PREVENTS UPWARD MOVEMENT OF THE PIPE.
16. POST-INSTALLED ANCHORS (EXPANSION SHIELDS) PROVIDED IN CONCRETE IN THE VERTICAL POSITION USED TO SUPPORT 4-INCH OR LARGER PIPE SHALL NOT BE SPACED OVER 10 FEET APART PER NFPA 13.
17. ALL FIRE PROTECTION SYSTEM PIPING, DRY PIPE AND PREACTION VALVE (TRIP TESTING) SHALL BE SUBJECTED TO A HYDROSTATIC AND PNEUMATIC PRESSURE TEST IN ACCORDANCE WITH NFPA 13. MINIMUM 24 HOURS AT 40 PSI FOR DRY PIPE SYSTEMS.
18. THE TERM 'PROVIDE' MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
19. THE ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE DISCOVERY OR REMOVAL OF ASBESTOS AND LEAD PAINT IN THIS PROJECT. THE INSTALLER(S) SHALL NOTIFY THE CONTRACTING REPRESENTATIVE IF ASBESTOS OR LEAD PAINT IS SUSPECTED OR DISCOVERED. THE CONTRACTING REPRESENTATIVE SHALL RETAIN A COMPETENT CONSULTANT WITH KNOWLEDGE AND EXPERIENCE IN THE DETECTION OF ASBESTOS AND LEAD PAINT. THIS CONSULTANT SHALL VERIFY THE PRESENCE OF SUCH MATERIAL AND RECOMMEND THE PROPER METHOD FOR REMOVAL AND DISPOSAL.
20. THE FIRE PROTECTION SYSTEM SHALL BE A PHASED INSTALLATION AND SHALL BE INSTALLED IN AN OCCUPIED BUILDING.
21. ALL DUST GENERATION SHALL BE AVOIDED. IF DUST GENERATION CANNOT BE AVOIDED, THE DUST AND DEBRIS SHALL BE CLEANED UP IMMEDIATELY AND REMOVED FROM THE BUILDING AS WORK PROGRESSES. AT MINIMUM, THE FIRE PROTECTION INSTALLER(S) SHALL CLEAN AND VACUUM WORK AREAS AT THE END OF EACH WORK SHIFT.
22. CEILING GRIDS SHALL NOT BE REMOVED. THE FIRE PROTECTION INSTALLER(S) SHALL WORK THROUGH THE GRID OF SUSPENDED CEILINGS. THE FIRE PROTECTION INSTALLER(S) SHALL REMOVE CEILING TILES AS NEEDED FOR INSTALLATION AND INSPECTIONS. ALL TILES SHALL BE REINSTALLED AT THE END OF EACH WORK SHIFT.
23. PRIOR TO DISCONNECTING ANY EXISTING FIRE PROTECTION COMPONENT, THE FIRE PROTECTION INSTALLER(S) SHALL OBTAIN APPROVAL FROM THE CONTRACTING REPRESENTATIVE, IN WRITING, 14 DAYS IN ADVANCE. THE FIRE PROTECTION INSTALLER(S) SHALL HAVE ALL REQUIRED MATERIAL AND PERSONNEL READY FOR MINIMAL DISRUPTION OF SERVICES. THE LENGTH OF INTERRUPTION OF THE FIRE PROTECTION SYSTEM SHALL BE AS APPROVED BY THE CONTRACTING REPRESENTATIVE.
24. EXISTING DATA, PIPING, AND RELATED SYSTEM COMPONENTS INDICATED ARE DIAGRAMMATIC. THE FIRE PROTECTION INSTALLER(S) SHALL FIELD VERIFY CONDITIONS BY ON-THE-JOB MEASUREMENTS PRIOR TO FABRICATION OR INSTALLATION. NOTIFY THE CONTACTING REPRESENTATIVE IMMEDIATELY, IN WRITING, OF ANY DISCREPANCY BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS.
25. WHEN THE FIRE SPRINKLER SYSTEM IS OUT OF SERVICE FOR MORE THAN 4 HOURS IN A 24 HOUR PERIOD, THE FIRE PROTECTION INSTALLER(S) SHALL NOTIFY THE AHJ AND PROVIDE AN APPROVED FIRE WATCH FOR THE AFFECTED AREAS UNTIL THE FIRE SPRINKLER SYSTEM IS BACK IN SERVICE. THE FIRE WATCH SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
26. THE SUPERVISORY PRESSURE FOR ALL DRY PIPE AND PREACTION FIRE SPRINKLER SYSTEMS SHALL BE SUPPLIED FROM A NITROGEN GENERATOR. NITROGEN GENERATOR SHALL BE MANUFACTURED BY ECS, OR APPROVED EQUAL.
27. EACH PREACTION FIRE SPRINKLER SYSTEM SHALL BE PROVIDED WITH A DEDICATED AIR MAINTENANCE DEVICE WITH INTEGRAL ADJUSTABLE PRESSURE REGULATOR. PRESSURE REGULATOR SHALL BE VICTAULIC SERIES 757 AIR MAINTENANCE TRIM ASSEMBLY, OR APPROVED EQUAL.
28. EACH DRY PIPE AND PREACTION FIRE SPRINKLER SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF ONE ECS PROJECTOR DRY SMART VENT (PSV-D).

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DRAWN BY:	PJH/JCW
CHECKED BY:	STS/DAB

SHEET TITLE

FIRE PROTECTION GENERAL NOTES, LEGEND, AND DETAILS

FP-001

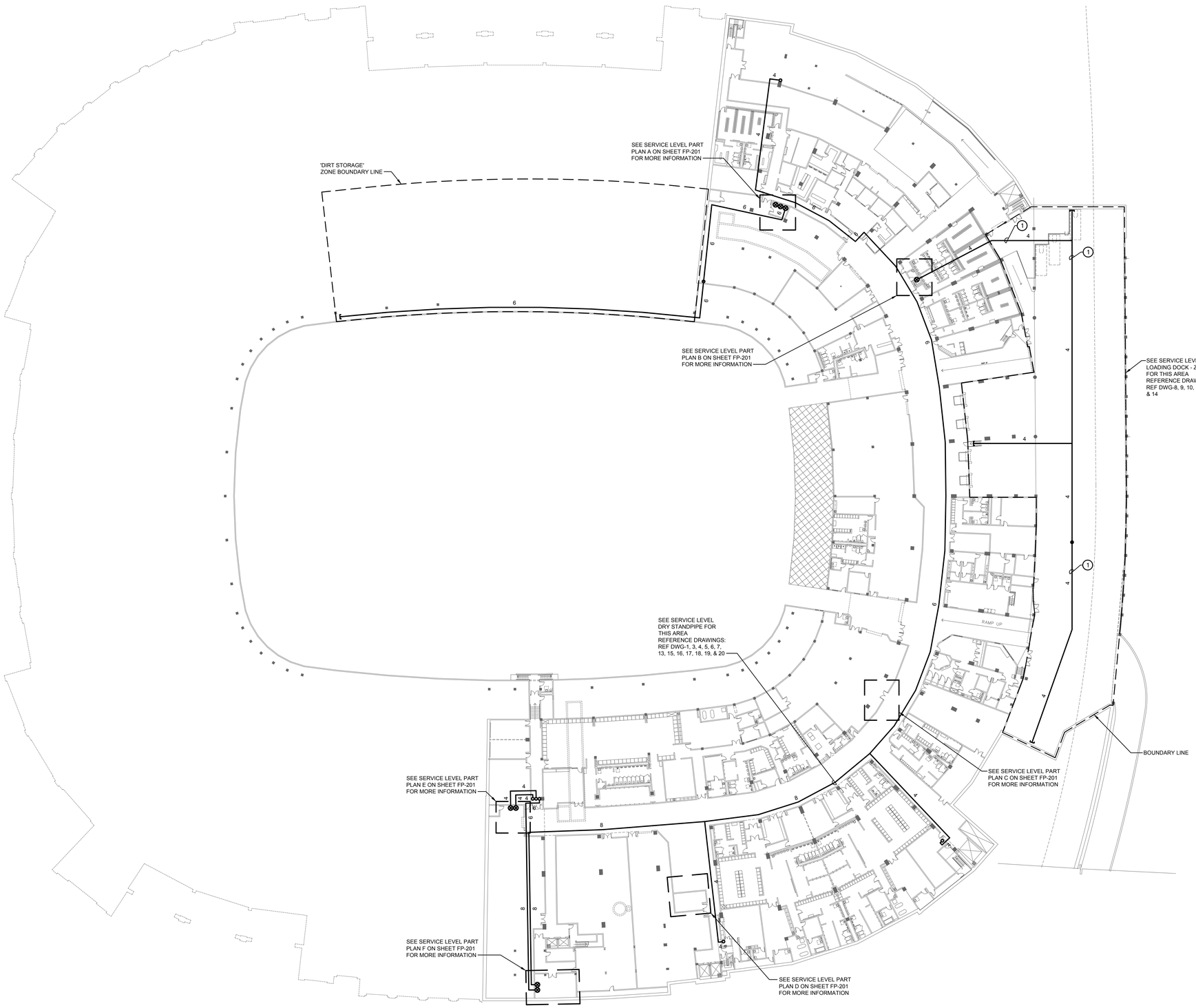
SHEET 2 OF 20

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.
2. ALL PIPING INDICATED IS APPROXIMATE LOCATIONS. THE FIRE SPRINKLER INSTALLER SHALL VERIFY THE EXACT LOCATIONS.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

(1) APPROXIMATE LOCATION OF PIPING.



SERVICE LEVEL - FIRE PROTECTION

NO SCALE

PIPE REPLACEMENT LEGEND

DIA	APPROXIMATE LENGTH EXISTING	ESTIMATED LENGTH TO BE REPLACED (50%)	SYSTEM TYPE/ZONE
2½"	NONE	NONE	-
3"	NONE	NONE	-
4"	660'-0"	330'-0"	DRY ZONE E2/ MAIN CONCOURSE
4"	346'-0"	172'-0"	STANDPIPE
6"	436'-0"	218'-0"	"DIRT STORAGE"
6"	483'-0"	243'-0"	STANDPIPE
8"	495'-0"	250'-0"	STANDPIPE

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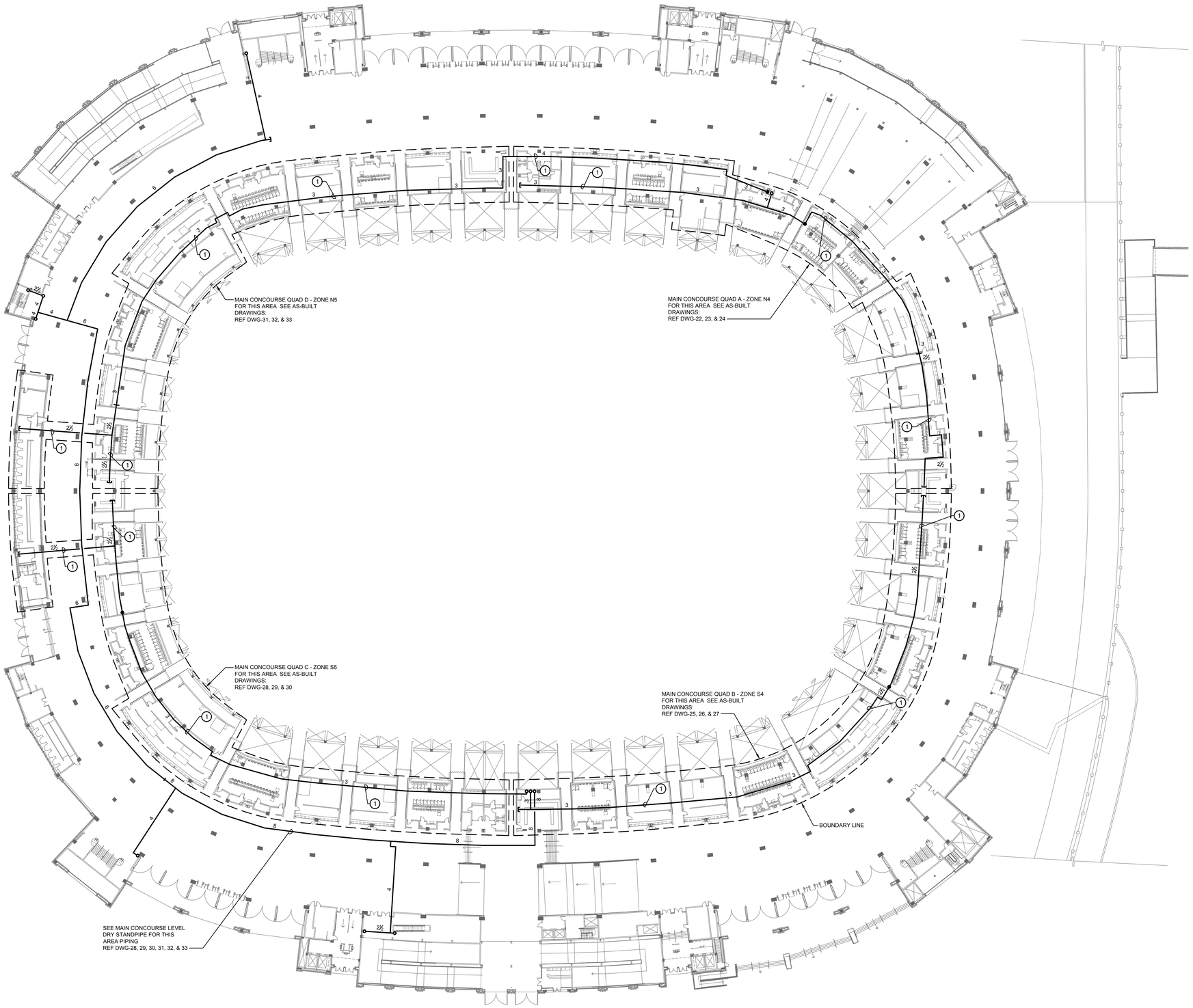
SHEET TITLE
SERVICE LEVEL - FIRE PROTECTION

FP-101

SHEET 3 OF 20



MAIN CONCOURSE LEVEL - FIRE PROTECTION

NO SCALE

GENERAL NOTES:

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DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

(1) APPROXIMATE LOCATION OF PIPING.

PIPE REPLACEMENT LEGEND

DIA	APPROXIMATE LENGTH EXISTING	ESTIMATED LENGTH TO BE REPLACED (50%)	SYSTEM TYPE/ZONE
2½"	117'-0"	60'-0"	DRY ZONE N4
2½"	165'-0"	84'-0"	DRY ZONE S4
2½"	110'-0"	55'-0"	DRY ZONE S5
2½"	131'-0"	65'-0"	DRY ZONE N5
2½"	65'-0"	32'-0"	STANDPIPE
3"	349'-0"	175'-0"	DRY ZONE N4
3"	355'-0"	178'-0"	DRY ZONE S4
3"	456'-0"	230'-0"	DRY ZONE S5
3"	425'-0"	212'-0"	DRY ZONE N5
4"	270'-0"	135'-0"	DRY ZONE N5
4"	285'-0"	145'-0"	STANDPIPE
6"	660'-0"	330'-0"	STANDPIPE
8"	350'-0"	175'-0"	STANDPIPE

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e-mail ebl@eblengineers.com

Fire Protection - Life Safety - Code Compliance

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

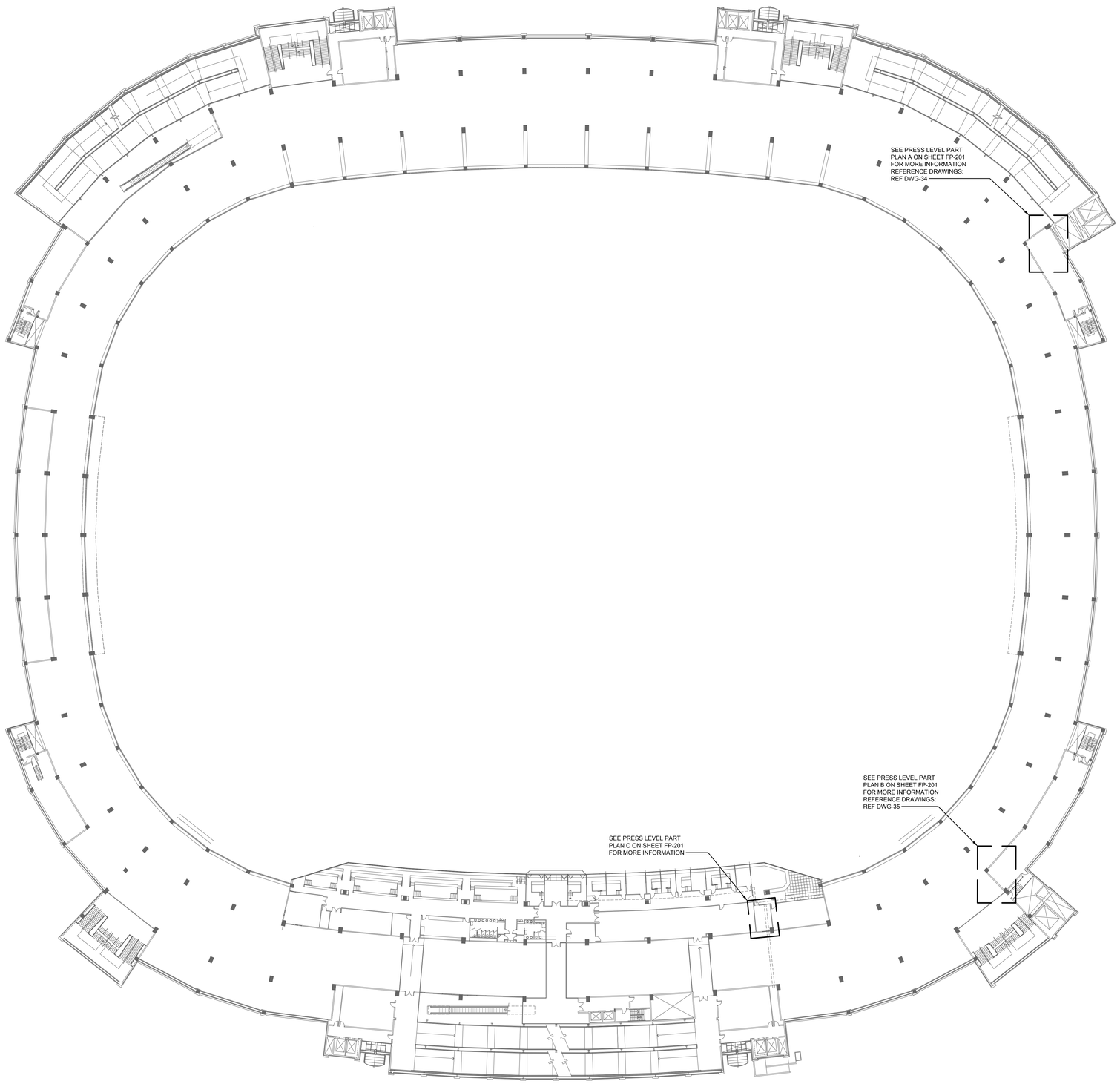
PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-102
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
MAIN CONCOURSE LEVEL - FIRE PROTECTION

FP-102



PRESS LEVEL - FIRE PROTECTION

NO SCALE

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.
2. ALL PIPING INDICATED IS APPROXIMATE LOCATIONS. THE FIRE SPRINKLER INSTALLER SHALL VERIFY THE EXACT LOCATIONS.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. APPROXIMATE LOCATION OF PIPING.

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e-mail ebl@eblengineers.com

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

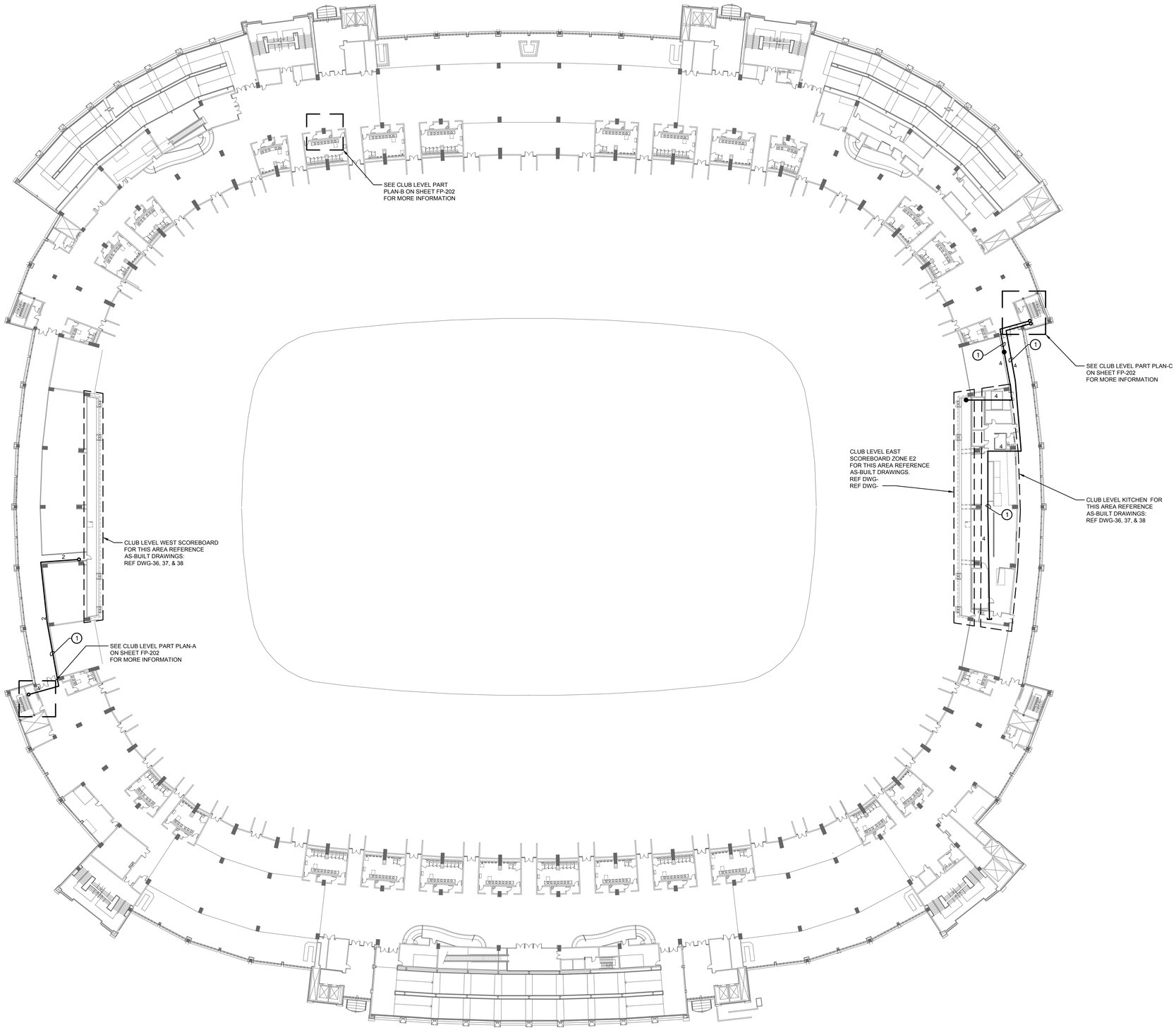
PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-103
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE

PRESS LEVEL - FIRE PROTECTION

FP-103

SHEET 5 OF 20



CLUB LEVEL - FIRE PROTECTION

NO SCALE

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.
2. ALL PIPING INDICATED IS APPROXIMATE LOCATIONS. THE FIRE SPRINKLER INSTALLER SHALL VERIFY THE EXACT LOCATIONS.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. APPROXIMATE LOCATION OF PIPING.

PIPE REPLACEMENT LEGEND

DIA	APPROXIMATE LENGTH EXISTING	ESTIMATED LENGTH TO BE REPLACED (50%)	SYSTEM TYPE/ZONE
2½"	NONE	NONE	-
3"	NONE	NONE	-
4"	154'-0"	77'-0"	PRE-ZONE E2
4"	131'-0"	65'-0"	DRY-KITCHEN
6"	NONE	NONE	-
8"	NONE	NONE	-

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

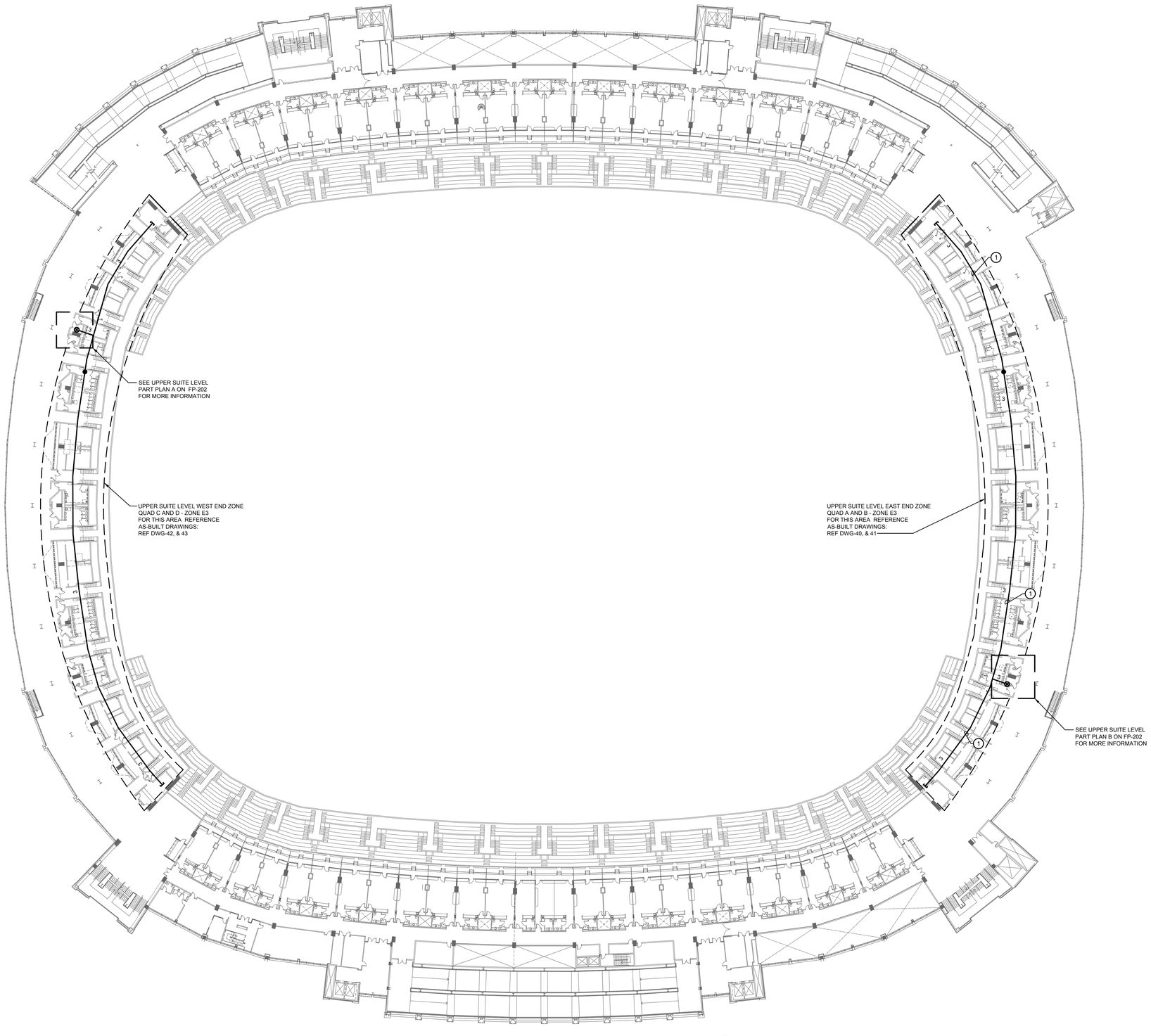
DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-104
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
CLUB LEVEL - FIRE PROTECTION

FP-104

SHEET 6 OF 20



UPPER SUITE LEVEL - FIRE PROTECTION

NO SCALE

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.
2. ALL PIPING INDICATED IS APPROXIMATE LOCATIONS. THE FIRE SPRINKLER INSTALLER SHALL VERIFY THE EXACT LOCATIONS.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. APPROXIMATE LOCATION OF PIPING.

PIPE REPLACEMENT LEGEND

DIA	APPROXIMATE LENGTH EXISTING	ESTIMATED LENGTH TO BE REPLACED (50%)	SYSTEM TYPE/ZONE
2½"	NONE	NONE	-
3"	403'-0"	202'-0"	DRY-ZONE E3
5"	403'-0"	202'-0"	DRY-ZONE W1

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

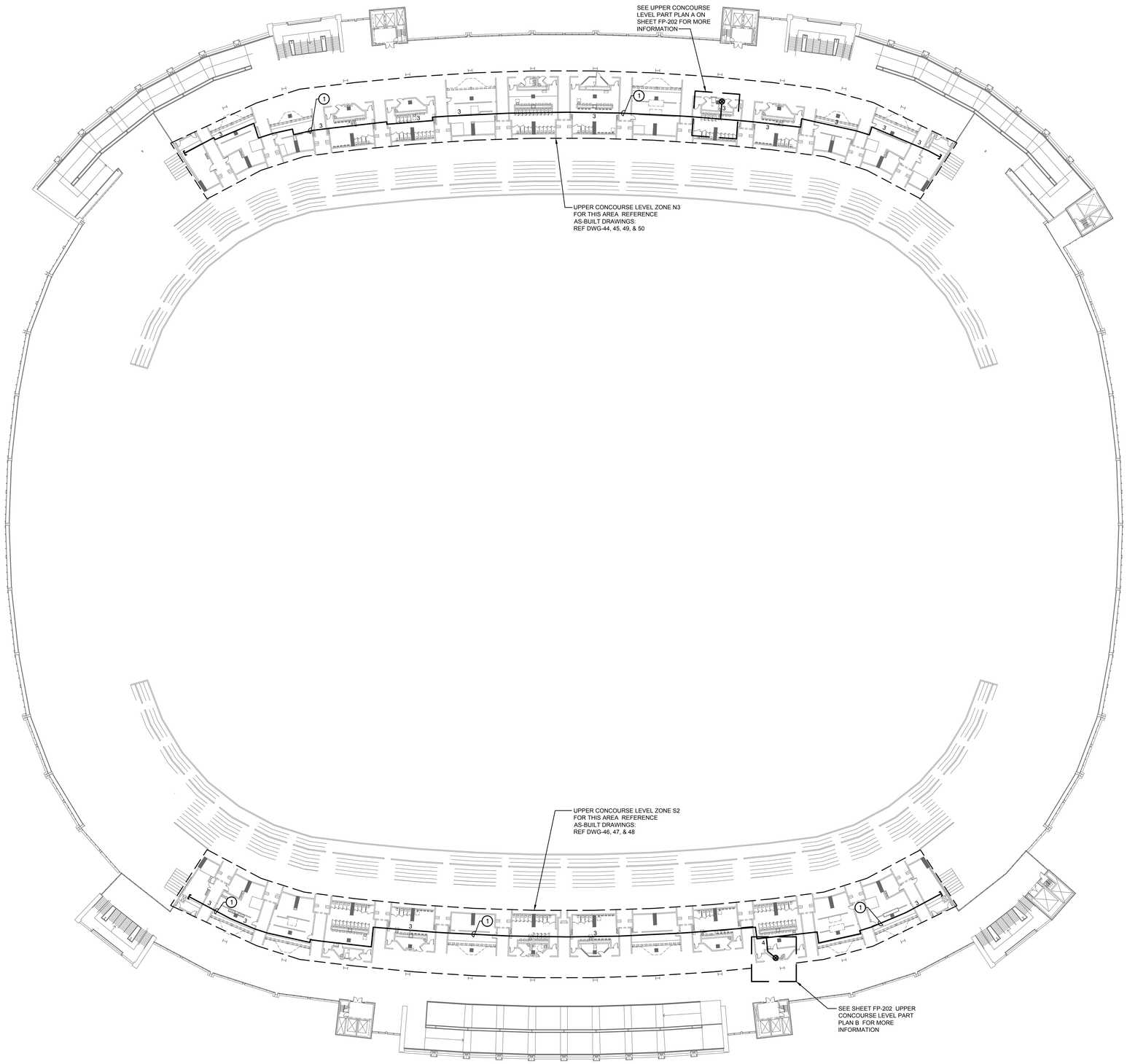
DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-105
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
UPPER SUITE LEVEL - FIRE PROTECTION

FP-105

SHEET 7 OF 20



UPPER CONCOURSE LEVEL - FIRE PROTECTION

NO SCALE

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.
2. ALL PIPING INDICATED IS APPROXIMATE LOCATIONS. THE FIRE SPRINKLER INSTALLER SHALL VERIFY THE EXACT LOCATIONS.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. APPROXIMATE LOCATION OF PIPING.

PIPE REPLACEMENT LEGEND

DIA	APPROXIMATE LENGTH EXISTING	ESTIMATED LENGTH TO BE REPLACED (50%)	SYSTEM TYPE/ZONE
2½"	NONE	NONE	-
3"	585'-0"	295'-0"	DRY-ZONE N3
3"	585'-0"	295'-0"	DRY-ZONE S2
4"	NONE	NONE	-
6"	NONE	NONE	-

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

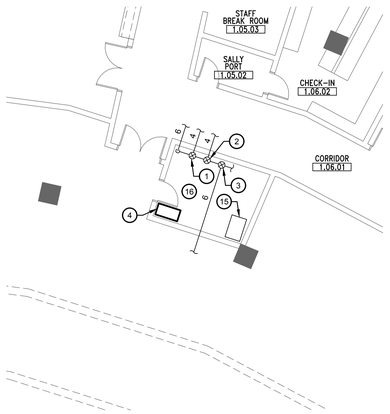
PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-106
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

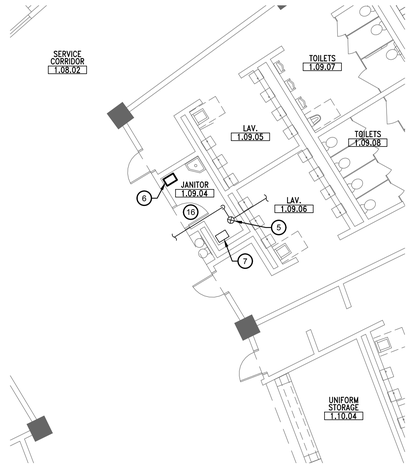
SHEET TITLE
UPPER CONCOURSE LEVEL - FIRE PROTECTION

FP-106



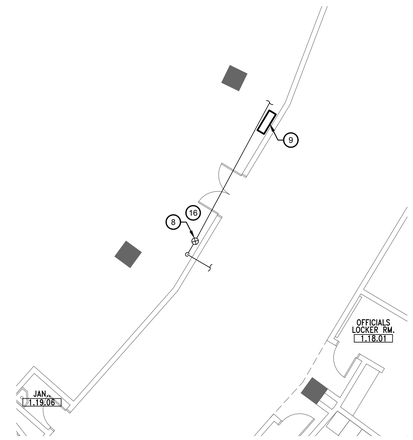
SERVICE LEVEL PART PLAN A - FIRE PROTECTION

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



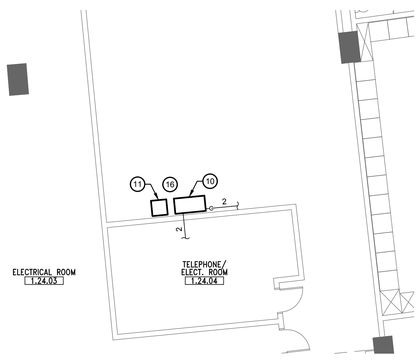
SERVICE LEVEL PART PLAN B - FIRE PROTECTION

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



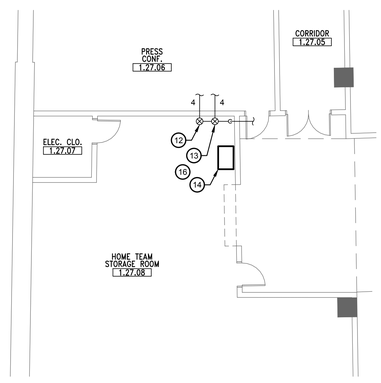
SERVICE LEVEL PART PLAN C - FIRE PROTECTION

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



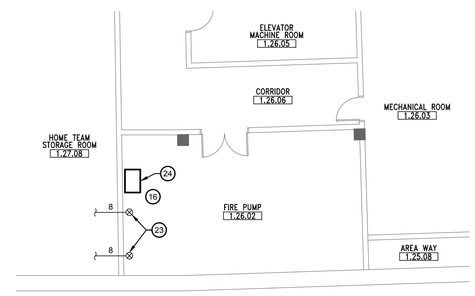
SERVICE LEVEL PART PLAN D - FIRE PROTECTION

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



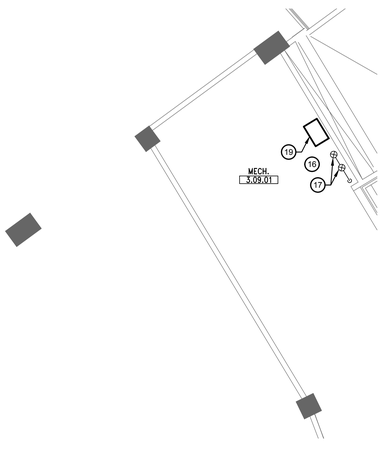
SERVICE LEVEL PART PLAN E - FIRE PROTECTION

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



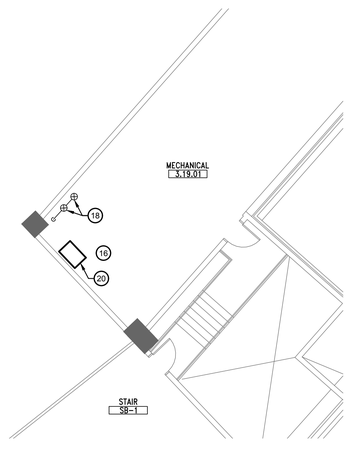
SERVICE LEVEL PART PLAN F - FIRE PROTECTION

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



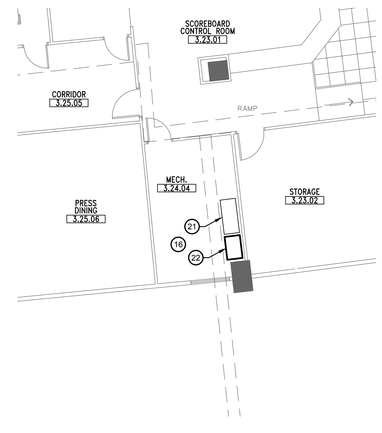
PRESS LEVEL PART PLAN A - FIRE PROTECTION

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



PRESS LEVEL PART PLAN B - FIRE PROTECTION

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



PRESS LEVEL PART PLAN C - FIRE PROTECTION

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

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. QUAD A MAIN CONCOURSE DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 1. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
2. QUAD D MAIN CONCOURSE DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 1. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
3. SERVICE LEVEL 'DIRT STORAGE' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 1. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
4. NITROGEN GENERATOR 1. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
5. SERVICE LEVEL 'LOADING DOCK' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 2. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
6. NITROGEN GENERATOR 2. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
7. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC.
8. SERVICE LEVEL 'ELEVATOR' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX PIPE-MOUNTED AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 3. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE ETR RASCO EX LOW PRESSURE DRY PIPE VALVE ASSEMBLY.
9. NITROGEN GENERATOR 3. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
10. SERVICE LEVEL 'TELEPHONE ROOM' PREACTION SPRINKLER SYSTEM RISER ASSEMBLY. RX 2" VIKING TOTAL PAC CABINET AND INSTALL NEW 2" TOTAL PAC3 CABINET, OR EQUAL. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 4. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE PREACTION SYSTEM CABINET.
11. NITROGEN GENERATOR 4. INSTALL ECS PGEN-3 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
12. QUAD C MAIN CONCOURSE DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 5. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
13. QUAD B MAIN CONCOURSE DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 5. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
14. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR (NITROGEN GENERATOR 5), OR EQUAL.
15. ETR AIR COMPRESSOR.
16. PROVIDE ONE ECS PROTECTOR HANDHELD GAS ANALYZER (PHGA-1), OR EQUAL FOR THIS SPACE.
17. PRESS LEVEL DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX EACH 2-1/2" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 2-1/2" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 7. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE EACH DRY VALVE ASSEMBLY.
18. PRESS LEVEL DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX EACH 2" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 2" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 8. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE EACH DRY VALVE ASSEMBLY.
19. NITROGEN GENERATOR 7. INSTALL ECS PGEN-3 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
20. NITROGEN GENERATOR 8. INSTALL ECS PGEN-3 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
21. ETR VIKING TOTAL PAC2. RX CABINET MOUNTED AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 9.
22. NITROGEN GENERATOR 9. INSTALL ECS PGEN-3 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
23. STANDPIPE SYSTEM RISER ASSEMBLY. RX EACH 6" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 6" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 6. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE EACH DRY VALVE ASSEMBLY.
24. NITROGEN GENERATOR 6. INSTALL ECS PGEN-50 NITROGEN GENERATOR, OR EQUAL.

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE
0 4' 8' 16' 24' 1/8"=1'-0"

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

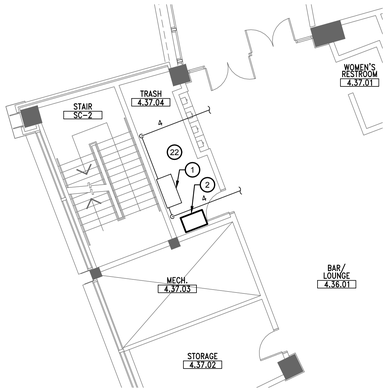
DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION
PROJECT NO:	17903.003
CAD FILE:	17903.003 FP-201
DRAWN BY:	PJH/JCW
CHECKED BY:	STS/DAB

SHEET TITLE

SERVICE AND PRESS LEVEL PART PLANS - FIRE PROTECTION

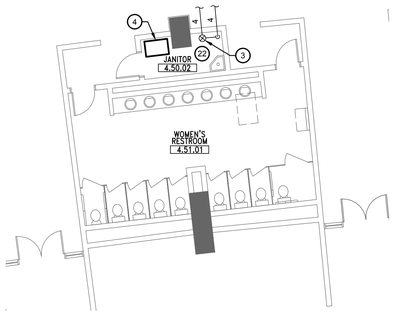
FP-201

SHEET 9 OF 20



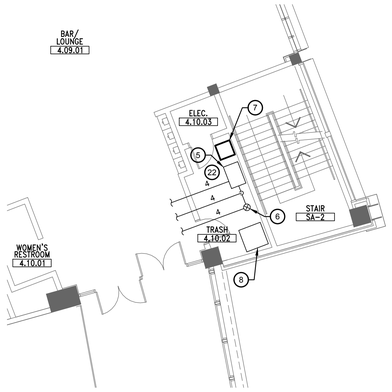
CLUB LEVEL PART PLAN A - FIRE PROTECTION

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



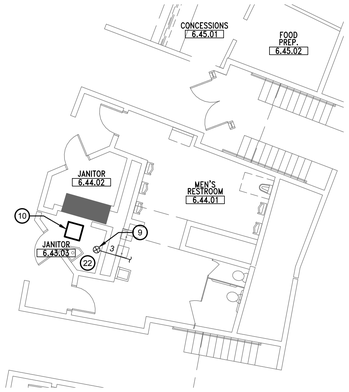
CLUB LEVEL PART PLAN B - FIRE PROTECTION

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



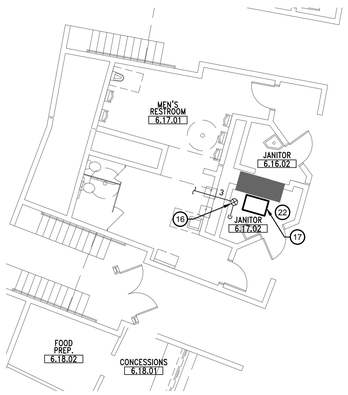
CLUB LEVEL PART PLAN C - FIRE PROTECTION

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



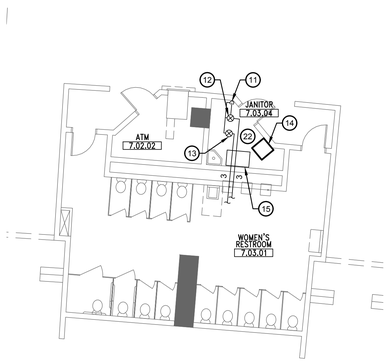
UPPER SUITE LEVEL PART PLAN A - FIRE PROTECTION

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



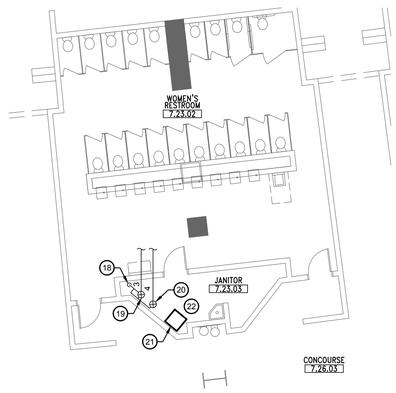
UPPER SUITE LEVEL PART PLAN B - FIRE PROTECTION

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



UPPER CONCOURSE LEVEL PART PLAN A - FIRE PROTECTION

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



UPPER CONCOURSE LEVEL PART PLAN B - FIRE PROTECTION

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

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. CLUB LEVEL 'WEST SCOREBOARD PREACTION SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING TOTAL PAC CABINET AND INSTALL NEW 4" TOTAL PAC3 CABINET, OR EQUAL. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 10. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE PREACTION SYSTEM CABINET.
2. NITROGEN GENERATOR 10. INSTALL ECS PGEN-3 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
3. CLUB LEVEL 'ELEVATOR/ESCALATOR' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX PIPE-MOUNTED AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 11. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE ETR 4" RASCO EX LOW PRESSURE DRY PIPE VALVE ASSEMBLY.
4. NITROGEN GENERATOR 11 INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR.
5. CLUB LEVEL 'EAST SCOREBOARD PREACTION SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING TOTAL PAC CABINET AND INSTALL NEW 4" TOTAL PAC3 CABINET, OR EQUAL. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 12. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE PREACTION SYSTEM CABINET.
6. CLUB LEVEL 'KITCHEN' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 12. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
7. NITROGEN GENERATOR 12 INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
8. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC.
9. UPPER CONCOURSE WEST DECK DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 13. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
10. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL (NITROGEN GENERATOR 13).
11. ETR 3" PIPE UP FROM LEVEL BELOW.
12. UPPER CONCOURSE NORTH DECK DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 15. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
13. UPPER CONCOURSE 'NORTHEAST SUITE' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX PIPE-MOUNTED AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 15. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE ETR 4" RASCO EX LOW PRESSURE DRY PIPE VALVE ASSEMBLY.
14. NITROGEN GENERATOR 15 INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
15. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC.
16. UPPER CONCOURSE EAST DECK DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 14. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
17. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL (NITROGEN GENERATOR 14).
18. ETR 3" PIPE UP FROM LEVEL BELOW.
19. UPPER CONCOURSE SOUTH DECK DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" VIKING MODEL F-1 DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX COMPRESSED AIR SUPPLY LINE FROM EXISTING AIR COMPRESSOR AND INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 16. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE ETR 4" RASCO EX LOW PRESSURE DRY PIPE VALVE ASSEMBLY.
20. UPPER CONCOURSE 'SOUTHWEST SUITE' DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX PIPE-MOUNTED AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 16. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE ETR 4" RASCO EX LOW PRESSURE DRY PIPE VALVE ASSEMBLY.
21. RX AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL ECS PGEN-10 WALL MOUNT NITROGEN GENERATOR, OR EQUAL (NITROGEN GENERATOR 16).
22. PROVIDE ONE ECS PROTECTOR HANDHELD GAS ANALYZER (PHGA-1), OR EQUAL FOR THIS SPACE.

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE
1/8"=1'-0"
0 4' 8' 16' 24'

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e-mail ebl@eblengineers.com

Fire Protection - Life Safety - Code Compliance

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

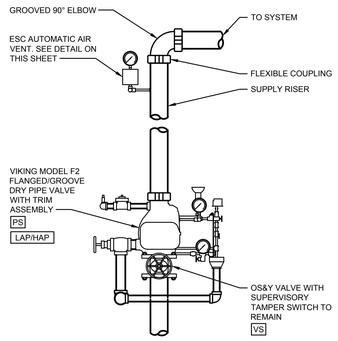
PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-202
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
CLUB, UPPER SUITE, AND UPPER CONCOURSE LEVEL PART PLANS - FIRE PROTECTION

FP-202

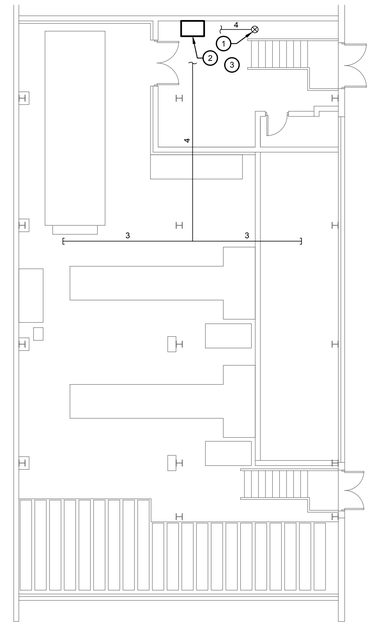


TYPICAL DRY-TYPE VALVE DETAIL

NO SCALE

NOTES:

1. REMOVE EXISTING PRESSURE SWITCHES AND PROVIDE NEW DEVICES. WIRING BY THE FIRE ALARM CONTRACTOR.
2. REMOVE EXISTING DRY PIPE VALVE TRIM AND PROVIDE NEW PIPING. CONNECT TO ALL EXISTING DRAINS, AIR SUPPLY LINES, AND NEW NITROGEN GENERATOR.
3. REFER TO FP-201, FP-202, AND FP-203 FOR ACTUAL SIZES.
4. SEE EBL REFERENCE DRAWING ___ FOR FIRE SPRINKLER ZONE SCHEDULE.



GENERATOR PLANT PLAN - FIRE PROTECTION

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

GENERAL NOTES:

1. FOR FIRE PROTECTION GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FP-001.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. GENERATOR PLANT DRY PIPE SPRINKLER SYSTEM RISER ASSEMBLY. RX 4" CSC DRY VALVE AND INSTALL NEW 4" VIKING MODEL F-2 DRY VALVE, OR EQUAL. RX PIPE-MOUNTED AIR COMPRESSOR AND ALL ASSOCIATED AIR SUPPLY PIPING, POWER SUPPLY WIRING, CONDUIT, ETC. INSTALL NEW NITROGEN SUPPLY PIPING TO NITROGEN GENERATOR 17. INSTALL ONE ECS PROTECTOR SMART VENT (PSV-D), OR EQUAL ON THE SYSTEM PIPING ABOVE THE DRY VALVE ASSEMBLY.
2. NITROGEN GENERATOR 17. INSTALL ECS PGEN-3 WALL MOUNT NITROGEN GENERATOR, OR EQUAL.
3. PROVIDE ONE ECS PROTECTOR HANDHELD GAS ANALYZER (PHGA-1), OR EQUAL FOR THIS SPACE.

PIPE REPLACEMENT LEGEND

DIA	APPROXIMATE LENGTH EXISTING	ESTIMATED LENGTH TO BE REPLACED (50%)	SYSTEM TYPE/ZONE
3"	32'-0"	32'-0"	GENERATOR PLANT
4"	32'-0"	32'-0"	GENERATOR PLANT

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE

1/8"=1'-0"

0 4' 8' 16' 24'

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DATE	DESCRIPTION
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12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FP-203
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE

GENERATOR PLANT PLAN - FIRE PROTECTION

FP-203

SHEET 11 OF 20

FIRE ALARM LEGEND

(EXISTING)

SYMBOL	DESCRIPTION
AIM	ETR ADDRESSABLE MONITOR MODULE
VS	VALVE TAMPER SUPERVISORY SWITCH WITH ADDRESSABLE MONITOR MODULE

(NEW WORK)

SYMBOL	DESCRIPTION
HI/LOW	HIGH AIR/LOW AIR PRESSURE SWITCH WITH ADDRESSABLE MONITOR MODULE
PS	PRESSURE SWITCH WITH ADDRESSABLE MONITOR MODULE
AIM	JUNCTION BOX WITH ADDRESSABLE MONITOR MODULE
#	DRAWING NOTE NUMBER

ABBREVIATIONS

A	AMPERE
AHJ	AUTHORITY HAVING JURISDICTION
AFAPB	ADDRESSABLE FIRE ALARM POWER BOOSTER PANEL
AHU	AIR HANDLING UNIT
ATC	AUTOMATIC TEMPERATURE CONTROL
C	CONDUIT
ETR	EXISTING TO REMAIN
EOR	ENGINEER OF RECORD
EX	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAGAP	FIRE ALARM GRAPHIC ANNUNCIATOR PANEL
FAPB	FIRE ALARM POWER BOOSTER PANEL
FASC	FIRE ALARM SYSTEM CONTRACTOR
FDC	FIRE DEPARTMENT CONNECTION
FPE	FIRE PROTECTION ENGINEER
GRD	GROUND
IBC	INTERNATIONAL BUILDING CODE
IMC	INTERNATIONAL MECHANICAL CODE
MAX	MAXIMUM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
Ø	PHASE
P	POLE (1P,2P,3P)
PA	PUBLIC ADDRESS SYSTEM
RTU	ROOF TOP UNIT
RX	REMOVE EXISTING
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
W	WIRE
W/	WITH

FIRE ALARM/ELECTRICAL GENERAL NOTES:

1. THE GENERAL SCOPE OF THIS FIRE ALARM PROJECT SHALL CONSIST OF MODIFICATIONS TO THE EXISTING ANALOG/ADDRESSABLE FIRE ALARM CONTROL PANEL (MANUFACTURER: SIEMENS, MODEL FIREFINDER XLS), AND THE INSTALLATION OF NEW ADDRESSABLE INTERFACE DEVICES FOR MONITORING OF MODIFIED PORTIONS OF THE EXISTING FIRE SPRINKLER SYSTEMS IN THE BUILDING. ALL WORK SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS AND APPENDIX OF NFPA 1, 70, 72, 101, 241, 720, 1221, IBC, IMC, LOCAL AUTHORITY AND THE SPECIFICATIONS.
2. WHEN THE EXISTING FIRE ALARM SYSTEM IS OUT OF SERVICE FOR MORE THAN 4 HOURS IN A 24-HOUR PERIOD, THE AUTHORITY HAVING JURISDICTION SHALL BE NOTIFIED AND THE BUILDING SHALL BE EVACUATED OR AN APPROVED FIRE WATCH SHALL BE PROVIDED BY THE FIRE ALARM/ELECTRICAL CONTRACTOR. THIS RULE SHALL APPLY UNTIL THE FIRE ALARM SYSTEM HAS BEEN RETURNED TO SERVICE, AND DETERMINED ACCEPTABLE BY THE AHJ.
3. THE EXISTING FIRE ALARM SYSTEM INITIATING DEVICES SHALL REMAIN IN SERVICE UNTIL THE NEW FIRE ALARM SYSTEM HAS BEEN INSTALLED, TESTED AND ACCEPTED. THEN REMOVE THE EXISTING FIRE ALARM SYSTEM AS INDICATED.
4. THE NEW FIRE ALARM SYSTEM SHALL BE INSTALLED IN AN OCCUPIED BUILDING.
5. THE FIRE ALARM/ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT, MATERIAL, DESIGN, HARDWARE, SOFTWARE, AND LABOR TO MODIFY THE EXISTING FIRE ALARM CONTROL PANEL (MANUFACTURER: SIEMENS, MODEL FIREFINDER XLS) TO INCORPORATE NEW ADDITIONAL ZONES, INITIATING DEVICES, AS REQUIRED BY THE CONTRACT DOCUMENTS. PROVIDES STANDBY BATTERY CALCULATIONS ON THE REVISED FIRE ALARM SYSTEM AND REPLACE EXISTING BATTERIES OF SUFFICIENT SIZES INDICATED BY THE STANDBY CALCULATIONS.
6. WHERE FIRE ALARM DEVICES ARE INSTALLED IN EXISTING GYPSUM WALL BOARD PARTITIONS, THE DEVICES SHALL BE RECESSED MOUNTED. THE CONDUIT SHALL BE INSTALLED CONCEALED IN WALLS AND ABOVE CEILINGS - UNLESS NOTED OTHERWISE.
7. WALL MOUNTED FIRE ALARM DEVICES SHALL BE SURFACE MOUNTED: THE SURFACE METAL RACEWAY SHALL BE INSTALLED ON WALLS AND CONDUIT CONCEALED ABOVE CEILINGS UNLESS NOTED OTHERWISE (WIREMOLD, SERIES 700 MINIMUM WITH 2-HOLE STRAPS OR AN APPROVED EQUAL).
8. WHERE WALL MOUNTED FIRE ALARM DEVICES IN THE ELECTRICAL ROOM, MECHANICAL ROOMS, AND CRAWL SPACES ARE INDICATED TO BE SURFACE MOUNTED: THE CONDUIT SHALL BE INSTALLED EXPOSED ON WALLS AND ON CEILINGS.
9. ALL FIRE ALARM SYSTEM WIRING SHALL BE INSTALLED IN 3/4-INCH CONDUIT MINIMUM. CONDUCTORS FOR THE FIRE ALARM SYSTEM DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70. THE CONDUCTORS SHALL NOT BE INSTALLED IN CONDUIT, JUNCTION BOXES, OR OUTLET BOXES WITH CONDUCTORS OF LIGHTING OR POWER SYSTEMS. THE SUM OF THE CROSS-AREAS OF INDIVIDUAL CONDUCTORS SHALL NOT EXCEED 40 PERCENT OF THE INTERIOR CROSS-SECTIONAL AREA OF THE CONDUIT. ALL FIRE ALARM NON-POWER LIMITED CIRCUITS (WIRING) SHALL BE:
   A. LOW-VOLTAGE CIRCUITS: NO. 14 AWG STRANDED (THWN), MINIMUM INITIATING AND SIGNALING LINE CIRCUITS.
   B. LOW-VOLTAGE CIRCUITS: NO. 14 AWG STRANDED (THWN), MINIMUM NOTIFICATION APPLIANCE CIRCUITS.
   C. LOW-VOLTAGE CIRCUITS NO. 16/2 AWG SHIELDED-STRANDED-COPPER, MINIMUM NOTIFICATION APPLIANCE (SPEAKER) CIRCUITS. WEST PENN. NO. 60990 BS OR AN APPROVED EQUAL.
   D. LINE-VOLTAGE CIRCUITS: NO. 12 AWG STRANDED (THWN), MINIMUM.
10. CONNECTIONS TO THE EXISTING SYSTEMS SHALL RUN THROUGH THE EXISTING BUILDING. ALL WORK TO CONNECT THE SYSTEM SHALL BE RUN IN CONDUIT CONCEALED IN THE EXISTING CEILING(S), WITH HANGERS, SLEEVES, ETC AS NECESSARY TO EFFECT A FULL, COMPLETE, AND CLEAN INSTALLATION. THE CONTRACTOR SHALL COORDINATE ALL WORK IN THE EXISTING BUILDING SO AS NOT TO DISRUPT THE BUILDING OCCUPANTS, INCLUDING OFF HOURS WORK AS REQUIRED. ANY CEILINGS, WALLS, ETC IN THE EXISTING BUILDING WHICH ARE AFFECTED OR MODIFIED DURING THE INSTALLATION OF THESE SYSTEMS CONNECTIONS SHALL BE RETURNED TO EXISTING OR BETTER CONDITION BY THE CONTRACTOR, SUBJECT TO REVIEW AND APPROVAL BY THE OWNER AND ENGINEER. THE CONTRACTOR SHALL VISIT THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS REQUIRED FOR SYSTEMS CONNECTIONS ROUTING PRIOR TO SUBMITTING A BID.
11. ALL CEILING, FLOOR, AND WALL PENETRATIONS REMAINING AFTER REMOVAL OF EXISTING AND INSTALLATION OF FIRE ALARM DEVICES AND EQUIPMENT SHALL BE FILLED AND SECURED WITH UL LISTED FIRE STOP MATERIAL IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
12. THE FIRE ALARM/ELECTRICAL CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING ITEM DAMAGED IN CONJUNCTION WITH ALL WORK. THE CONTRACTOR SHALL PROVIDE ALL CUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS, CEILINGS, OR FLOORS AS REQUIRED IN THE CONTRACT SPECIFICATIONS.
13. CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70. THE CONDUCTORS SHALL NOT BE INSTALLED WITH CONDUCTORS OF LIGHTING OR POWER SYSTEMS. THE SUM OF THE CROSS-AREA OF INDIVIDUAL CONDUCTORS SHALL NOT EXCEED 40 PERCENT OF THE INTERIOR CROSS-SECTION OF THE CONDUIT. ALL FIRE ALARM SYSTEM CONDUIT SHALL NOT BE LESS THAN 3/4 INCH.
14. ALL FIRE ALARM RELATED CONDUIT SHALL BE FACTORY PAINTED RED INCLUDING COUPLINGS AND CONNECTORS.
15. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.
16. FOR PROJECT PHASING, SEE SPECIFICATIONS.

FIRE ALARM/ELECTRICAL GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING THE WORK. VERIFY EXISTING CONSTRUCTION AND SUPPORT CONDITIONS OF ASSEMBLIES WITHIN SCOPE OF WORK. NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES AND RECEIVE CLARIFICATIONS BEFORE PROCEEDING WITH THE WORK.
2. ANY UNSAFE CONDITIONS EXPOSED BY DEMOLITION ARE TO BE CONVEYED TO THE OWNER AND ENGINEER. PROVIDE TEMPORARY PROTECTIVE BARRIERS TO MEET OSHA STANDARDS.
3. REMOVAL OF "PARTICULAR ITEMS" IS TO INCLUDE ALL RELATED ITEMS. IT IS ALSO TO INCLUDE PATCHING OF ANY DAMAGE TO THE EXISTING CONDITION AS A RESULT OF THE REMOVAL. CARE IS TO BE TAKEN NOT TO REMOVE ANY MORE THAN IS NECESSARY TO ACCOMMODATE NEW CONSTRUCTIONS AND THAT NO REMAINING ELEMENTS ARE DAMAGED DURING DEMOLITION AND CONSTRUCTION. ANY REMAINING SURFACES DISTURBED DURING DEMOLITION ARE TO BE RETURNED TO LIKE-NEW CONDITION WITH NEW MATERIALS TO MATCH SURROUNDING SURFACES.
4. REMOVE ALL DEMOLISHED MATERIAL THAT THE OWNER DOES NOT ELECT TO RETAIN FROM SITE AND DISPOSE OF IN ACCORDANCE WITH CITY, STATE AND FEDERAL REGULATIONS APPLICABLE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE OF ALL MATERIALS. THE MATERIALS SHALL BE STORED IN SUCH A MANNER AS TO PREVENT STAINING, DAMAGE AND DETERIORATION.
6. CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL WORK TO MINIMIZE DISRUPTIONS TO ONGOING OPERATIONS AND DOWN-TIME TO EXISTING LIFE-SAFETY AND SECURITY SYSTEMS. ALL MEANS OF EGRESS SHALL CONFORM TO STATE, LOCAL AND OSHA REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR REDIRECTING THE BUILDINGS PEDESTRIAN CIRCULATION TO THE EXISTING UNOBSTRUCTED EXISTS DURING CONSTRUCTION.
7. OWNER HAS FIRST RIGHT OF REFUSAL FOR ANY MATERIAL REMOVED.
8. REMOVE EXISTING FIRE ALARM DEVICES AND ALL ASSOCIATED WIRING BACK TO EXISTING FIRE ALARM CONTROL PANEL AS SHOWN ON THE DRAWINGS. REMOVE ALL EXPOSED CONDUIT. EXISTING CONDUIT CONCEALED IN WALLS SHALL BE ABANDONED.
9. WHERE EXISTING WALL AND CEILING MOUNTED FIRE ALARM DEVICES AND EXPOSED CONDUIT ARE REMOVED, THE FIRE ALARM/ELECTRICAL CONTRACTOR SHALL PATCH AND PAINT WALLS AND REPLACE CEILING TILES TO MATCH EXISTING.

CODE REFERENCES:

ALL REFERENCES TO IBC SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO IMC SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO NFPA 1 SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO NFPA 70 SHALL MEAN THE 2014 EDITION.
ALL REFERENCES TO NFPA 72 SHALL MEAN THE 2013 EDITION.
ALL REFERENCES TO NFPA 90A SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO NFPA 101 SHALL MEAN THE 2015 EDITION.
ALL REFERENCES TO NFPA 241 SHALL MEAN THE 2012 EDITION.
ALL REFERENCES TO NFPA 720 SHALL MEAN THE 2012 EDITION.
ALL REFERENCES TO NFPA 1221 SHALL MEAN THE 2013 EDITION.

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FIRE SPRINKLER SYSTEM MODIFICATIONS
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DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-001
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

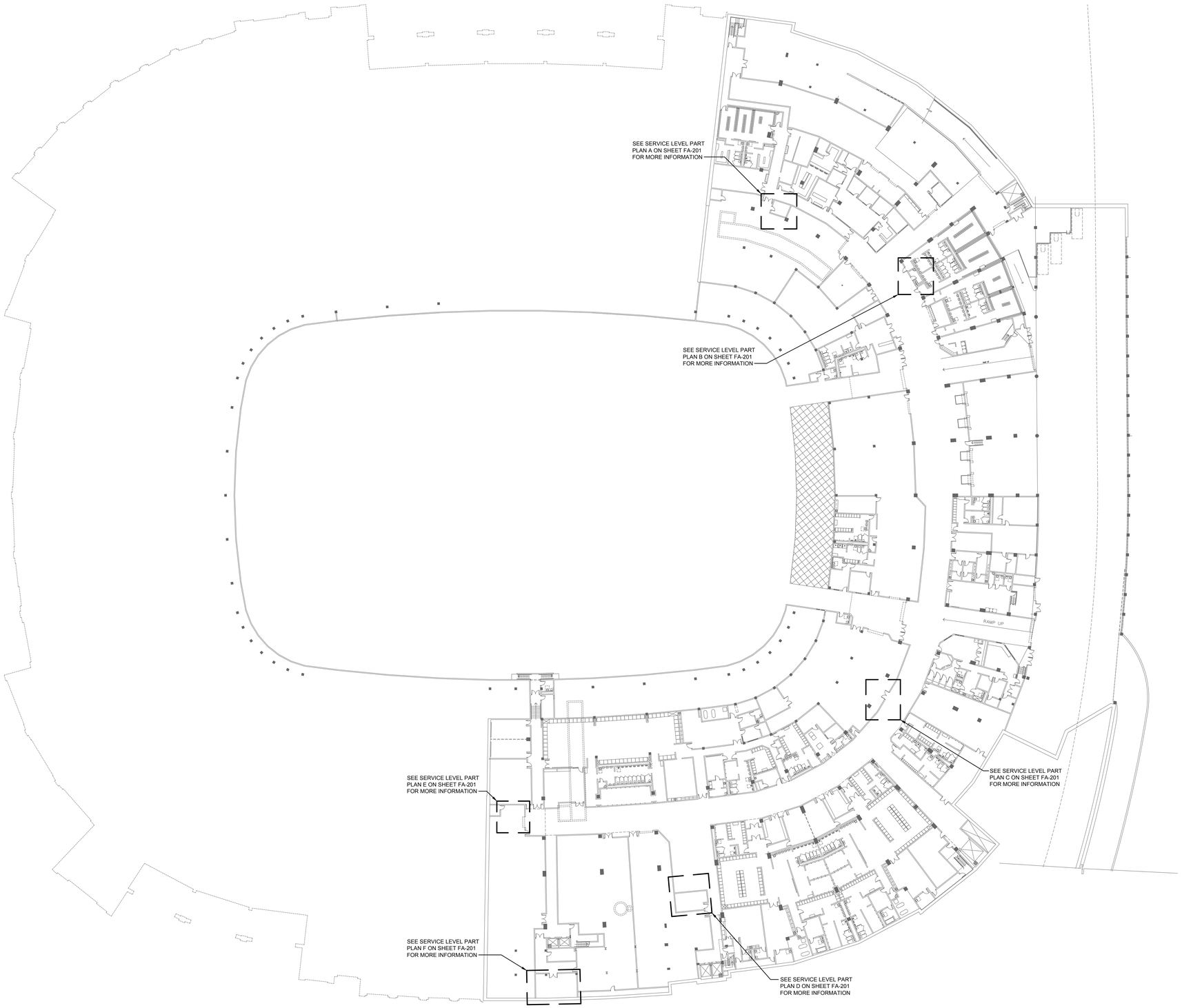
SHEET TITLE

FIRE ALARM GENERAL NOTES, LEGEND, AND DETAILS

FA-001

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.



SERVICE LEVEL - FIRE ALARM

NO SCALE

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LICENSE NO: 40447
EXPIRATION DATE: 03/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-101
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

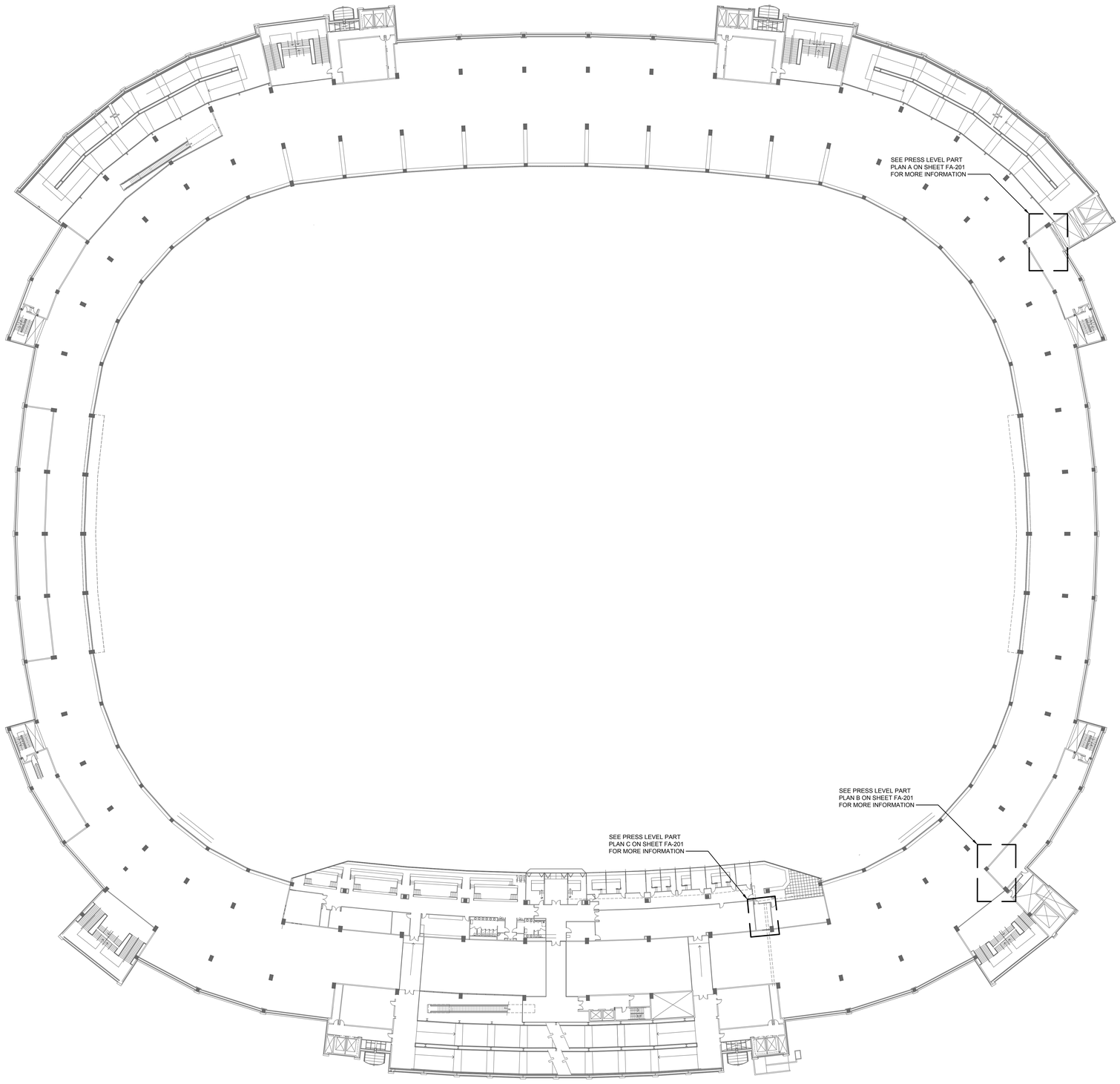
SHEET TITLE
SERVICE LEVEL - FIRE ALARM

FA-101

SHEET 13 OF 20

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.



PRESS LEVEL - FIRE ALARM

NO SCALE

EBL FIRE ENGINEERING
Division of EBL Engineers, LLC
The Professional Engineering Center
8000 Harford Road
Baltimore, Maryland 21234-5701
(410) 668-8000 FAX (410) 668-8001
e-mail ebl@eblengineers.com

Fire Protection - Life Safety - Code Compliance

PROFESSIONAL CERTIFICATION:
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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

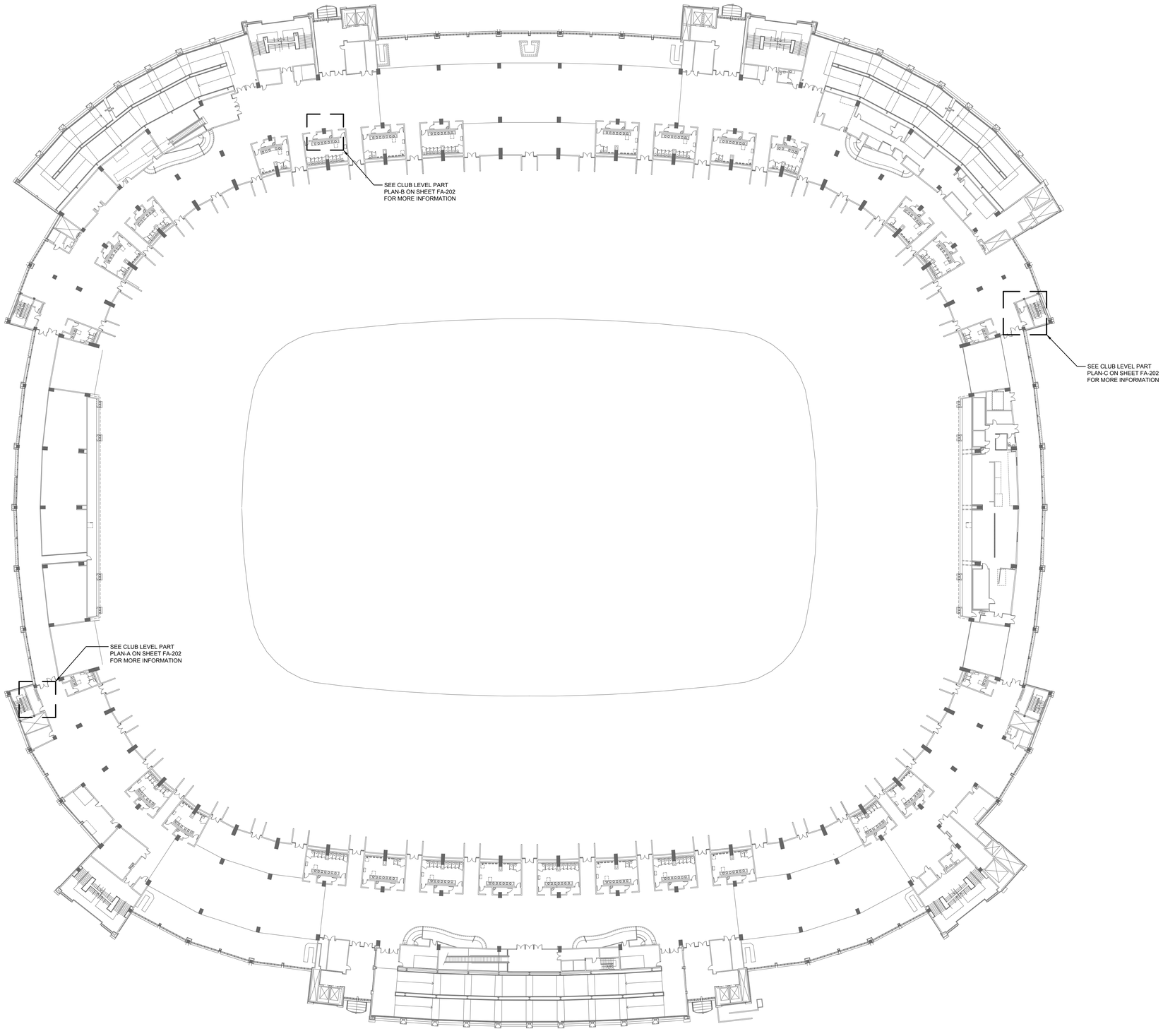
PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-102
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
PRESS LEVEL - FIRE ALARM

FA-102

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.



CLUB LEVEL - FIRE ALARM

NO SCALE

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Baltimore, Maryland 21234-5701
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Fire Protection - Life Safety - Code Compliance

PROFESSIONAL CERTIFICATION:
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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

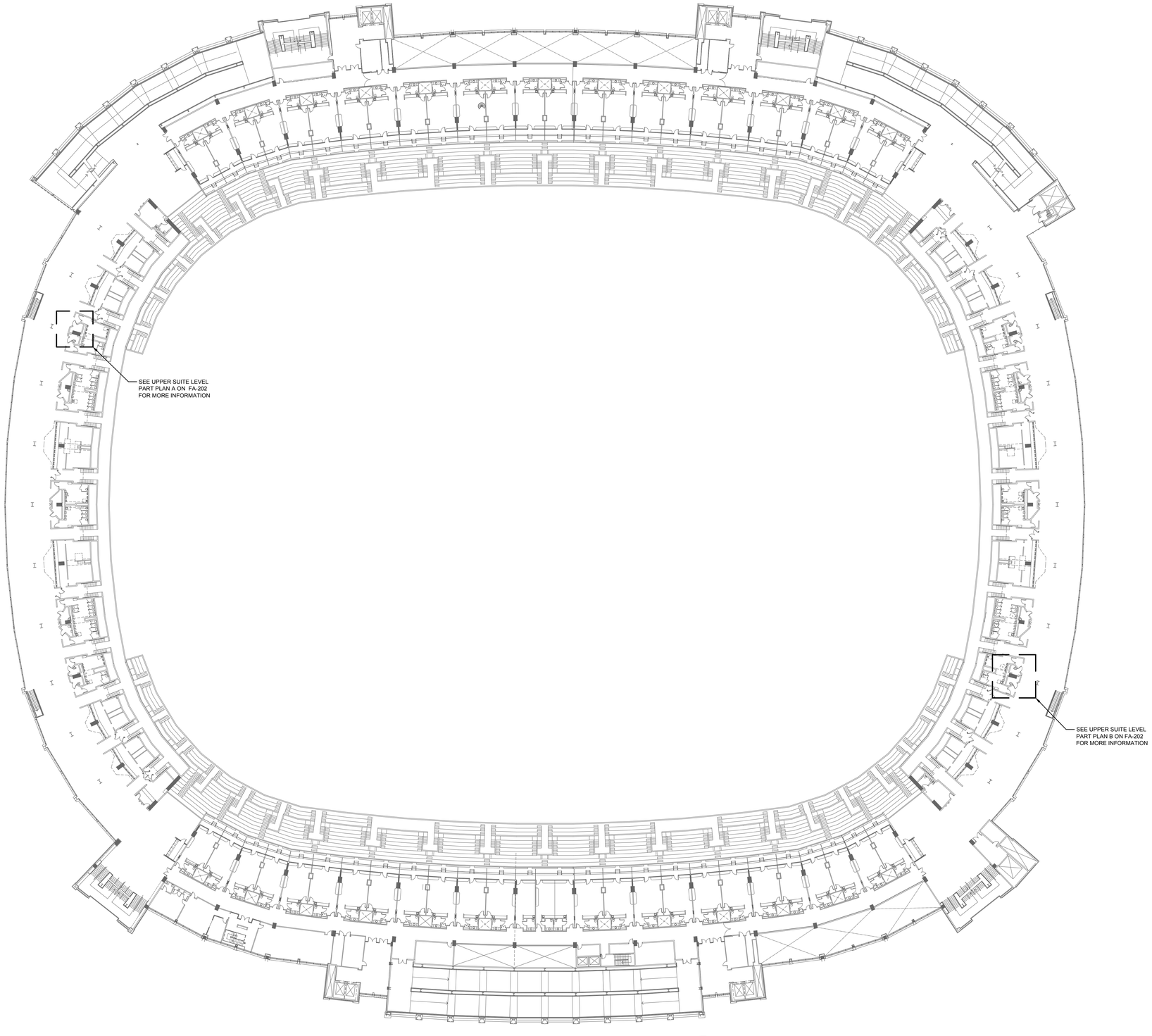
PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-103
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
CLUB LEVEL - FIRE ALARM

FA-103

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.



UPPER SUITE LEVEL - FIRE ALARM

NO SCALE

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Fire Protection - Life Safety - Code Compliance

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
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FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-104
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

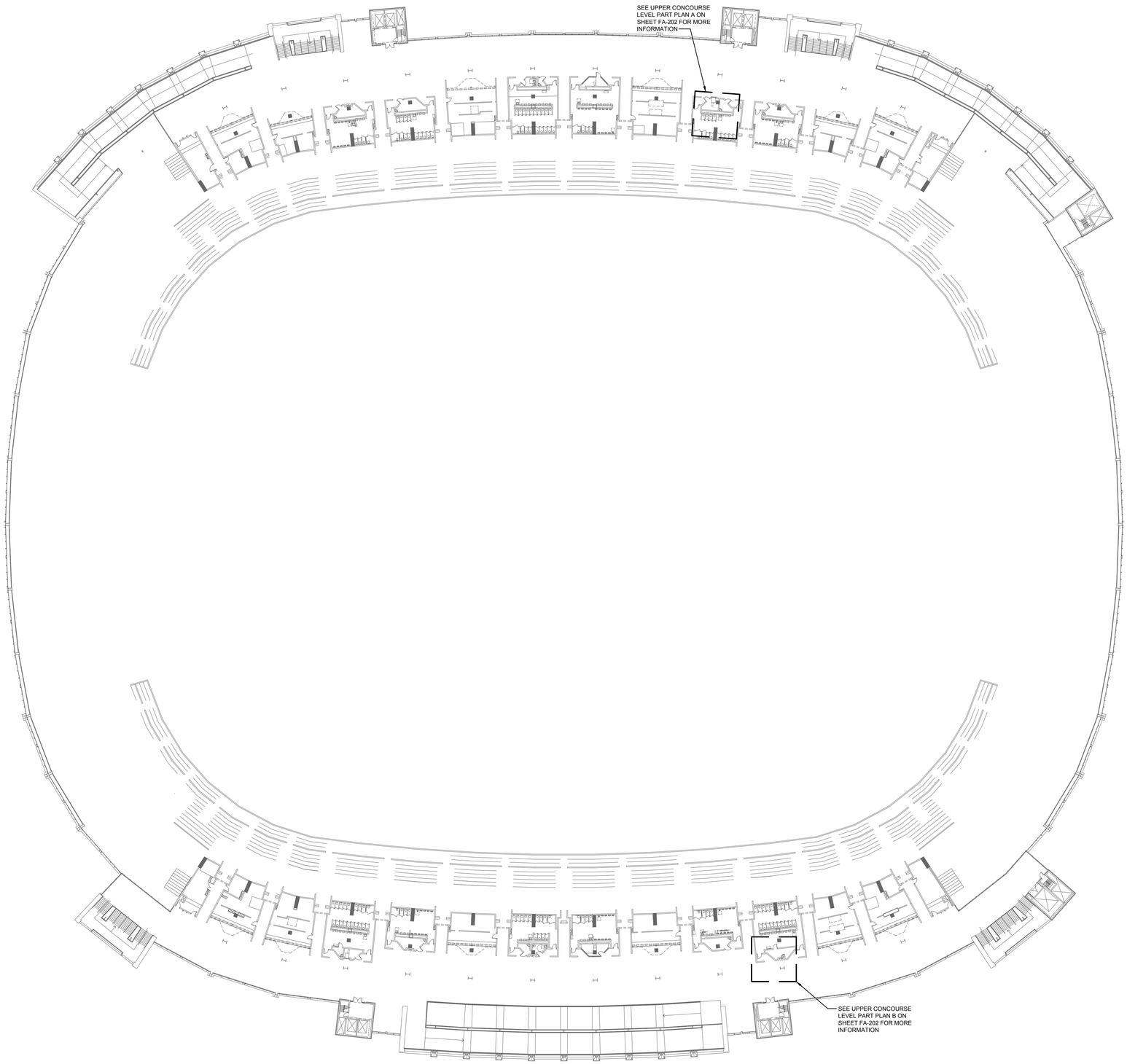
SHEET TITLE
UPPER SUITE LEVEL - FIRE ALARM

FA-104

SHEET 16 OF 20

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.



UPPER CONCOURSE LEVEL - FIRE ALARM

NO SCALE

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LICENSE NO: 40447
EXPIRATION DATE: 03/14/2020

PROJECT:
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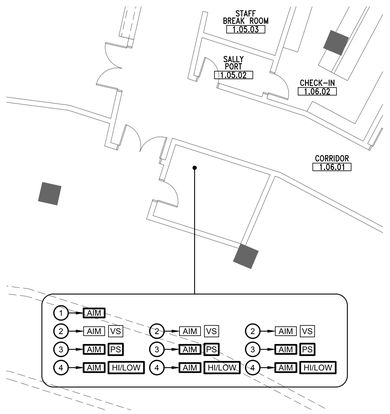
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-105
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

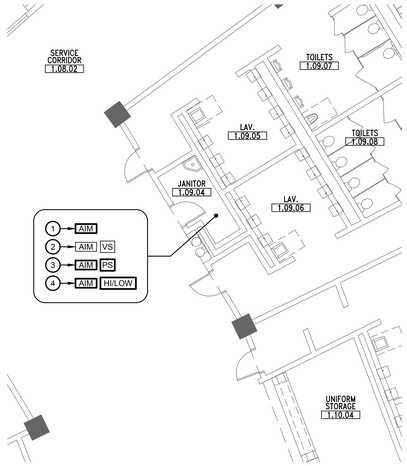
SHEET TITLE
UPPER CONCOURSE LEVEL - FIRE ALARM

FA-105



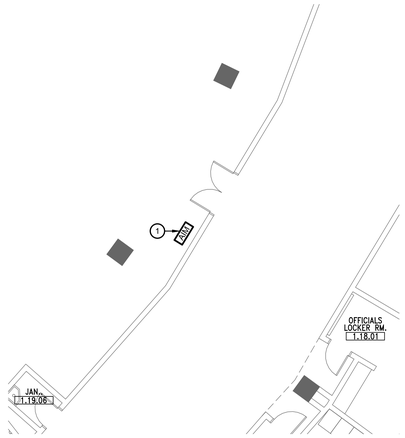
SERVICE LEVEL PART PLAN A - FIRE ALARM

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



SERVICE LEVEL PART PLAN B - FIRE ALARM

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



SERVICE LEVEL PART PLAN C - FIRE ALARM

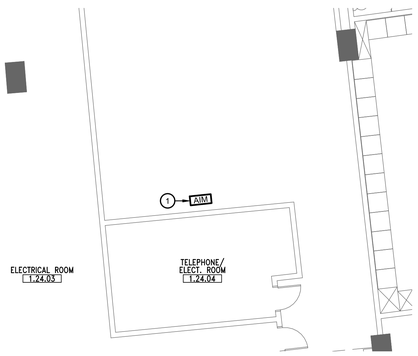
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.

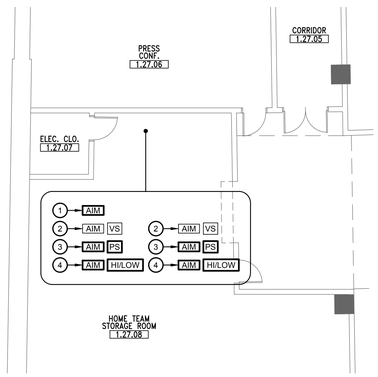
DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO NEW NITROGEN GENERATOR.
2. ETR VALVE TAMPER SUPERVISORY SWITCH WITH ADDRESSABLE MONITOR MODULE.
3. PROVIDE NEW PRESSURE SWITCH WITH ADDRESSABLE MONITOR MODULE FOR EACH DRY PIPE VALVE. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO PRESSURE SWITCH.
4. PROVIDE NEW HI/LOW AIR SWITCH WITH ADDRESSABLE MONITOR MODULE FOR EACH DRY PIPE VALVE. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO HI/LOW AIR SWITCH.



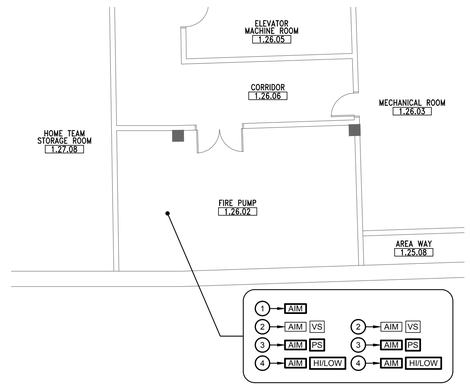
SERVICE LEVEL PART PLAN D - FIRE ALARM

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



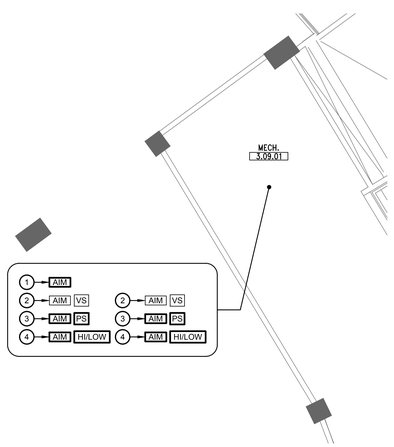
SERVICE LEVEL PART PLAN E - FIRE ALARM

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



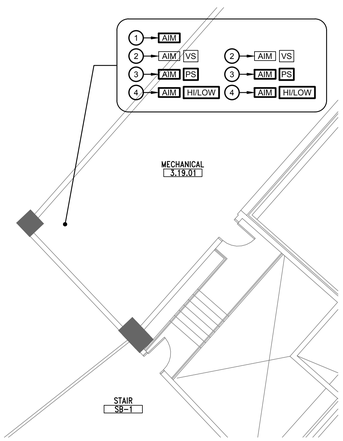
SERVICE LEVEL PART PLAN F - FIRE ALARM

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



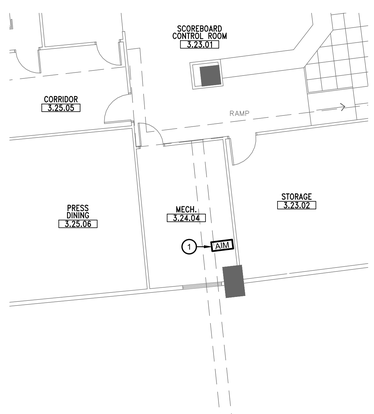
PRESS LEVEL PART PLAN A - FIRE ALARM

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



PRESS LEVEL PART PLAN B - FIRE ALARM

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



PRESS LEVEL PART PLAN C - FIRE ALARM

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

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE
1/8"=1'-0"
0 4' 8' 16' 24'

EBL FIRE ENGINEERING
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Fire Protection - Life Safety - Code Compliance

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-201
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
SERVICE AND PRESS LEVEL PART PLANS - FIRE ALARM

FA-201

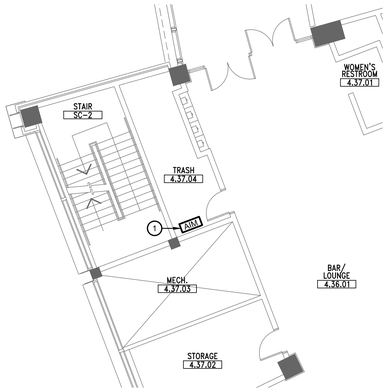
SHEET 18 OF 20

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.

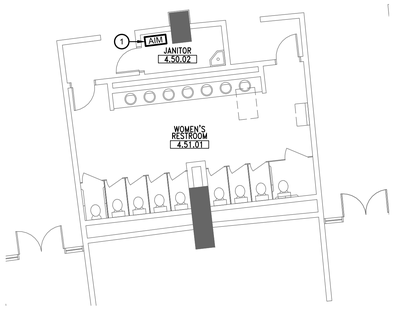
DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO NEW NITROGEN GENERATOR.
2. ETR VALVE TAMPER SUPERVISORY SWITCH WITH ADDRESSABLE MONITOR MODULE.
3. PROVIDE NEW PRESSURE SWITCH WITH ADDRESSABLE MONITOR MODULE FOR EACH DRY PIPE VALVE. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO PRESSURE SWITCH.
4. PROVIDE NEW HI/LOW AIR SWITCH WITH ADDRESSABLE MONITOR MODULE FOR EACH DRY PIPE VALVE. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO HI/LOW AIR SWITCH.



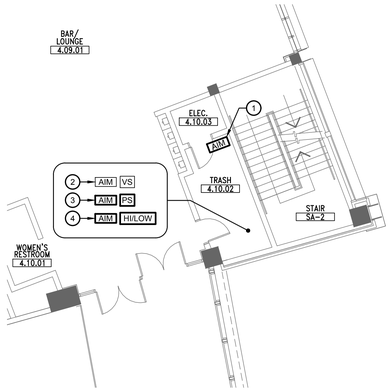
CLUB LEVEL PART PLAN A - FIRE ALARM

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



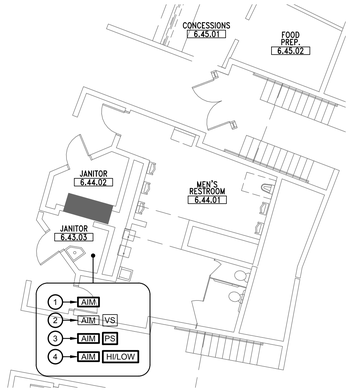
CLUB LEVEL PART PLAN B - FIRE ALARM

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



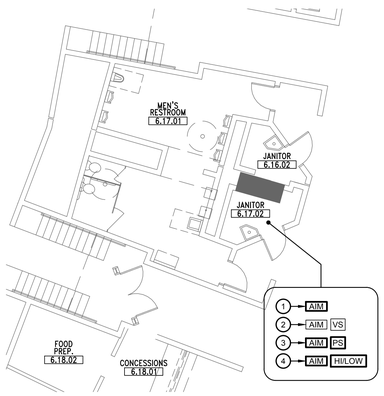
CLUB LEVEL PART PLAN C - FIRE ALARM

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



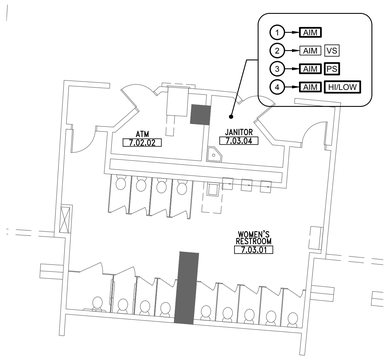
UPPER SUITE LEVEL PART PLAN A - FIRE ALARM

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



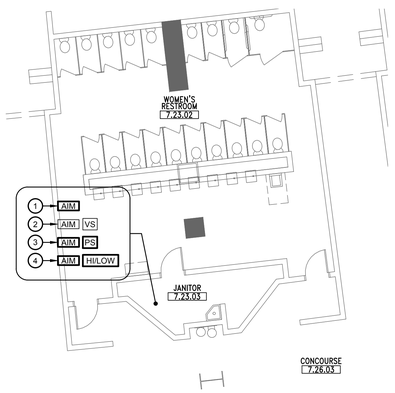
UPPER SUITE LEVEL PART PLAN B - FIRE ALARM

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



UPPER CONCOURSE LEVEL PART PLAN A - FIRE ALARM

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



UPPER CONCOURSE LEVEL PART PLAN B - FIRE ALARM

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

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE
1/8"=1'-0"
0 4' 8' 16' 24'

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LICENSE NO: 40447
EXPIRATION DATE: 02/14/2020

PROJECT:
M&T BANK STADIUM
FIRE SPRINKLER SYSTEM MODIFICATIONS
1101 RUSSELL STREET, BALTIMORE MD, 21230

DATE	DESCRIPTION
12/20/19	100% SUBMISSION
12/04/19	95% SUBMISSION
08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-202
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE
CLUB, UPPER SUITE, AND UPPER CONCOURSE LEVEL PART PLANS - FIRE ALARM

FA-202

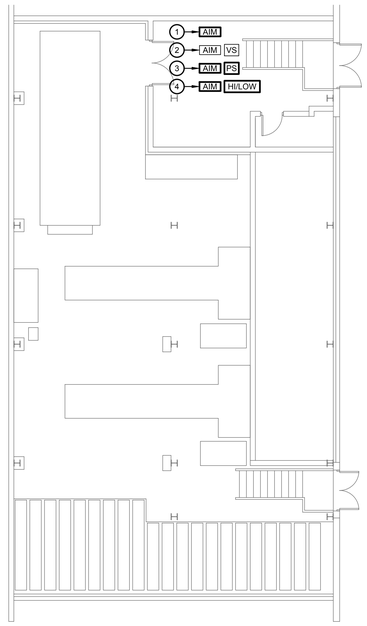
SHEET 19 OF 20

GENERAL NOTES:

1. FOR FIRE ALARM GENERAL NOTES, LEGEND AND DETAILS, SEE SHEET FA-001.

DRAWING NOTES: (APPLIES TO THIS SHEET ONLY)

1. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO NEW NITROGEN GENERATOR.
2. ETR VALVE TAMPER SUPERVISORY SWITCH WITH ADDRESSABLE MONITOR MODULE.
3. PROVIDE NEW PRESSURE SWITCH WITH ADDRESSABLE MONITOR MODULE FOR EACH DRY PIPE VALVE. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO PRESSURE SWITCH.
4. PROVIDE NEW HI/LOW AIR SWITCH WITH ADDRESSABLE MONITOR MODULE FOR EACH DRY PIPE VALVE. EXTEND 2#14 - 3/4"C FROM ADDRESSABLE MONITOR MODULE AND CONNECT TO HI/LOW AIR SWITCH.



GENERATOR PLANT PLAN - FIRE ALARM

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

CAUTION:
IF THIS PLAN IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

GRAPHIC SCALE

1/8"=1'-0"

0 4' 8' 16' 24'

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08/20/19	50% SUBMISSION

PROJECT NO: 17903.003
CAD FILE: 17903.003 FA-203
DRAWN BY: PJH/JCW
CHECKED BY: STS/DAB

SHEET TITLE

GENERATOR PLANT PLAN - FIRE ALARM

FA-203

SHEET 20 OF 20