FIRE ALARM SYSTEM GENERAL NOTES:

1. PROVIDE PARKING GARAGE WITH FIRE ALARM SYSTEM.

2. APPLICABLE CRITERIA:

NFPA 70	NATIONAL ELECTRICAL CODE (NEC), 2020
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE, 2019
UFC 3-600-01	FIRE PROTECTION ENGINEERING FOR FACILITIES (CHANGE 5), 24 SEPTEMBER 2020

3. INSTALLATION DRAWINGS, SHOP DRAWINGS OR WORKING PLANS, CALCULATIONS, OTHER REQUIRED PRE-CONSTRUCTION DOCUMENTATION AND AS-BUILT DRAWINGS MUST BE PREPARED BY, OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL FIRE PROTECTION ENGINEER OR A NICET ENGINEERING TECHNICIAN CERTIFIED IN THE FIELD OF FIRE PROTECTION ENGINEERING TECHNOLOGY WITH A MINIMUM LEVEL IV IN THE APPROPRIATE SUBFIELD.

4. NEW DEVICES MUST BE UL LISTED.

5. INITIATING DEVICE CIRCUITS, NOTIFICATION APPLIANCE CIRCUITS, AND SIGNALING LINE CIRCUITS MUST BE CLASS A.

6. ALL CONDUIT, JUNCTION/BACK BOXES, COVERS AND COUPLINGS, WHEN PROVIDED, MUST BE FACTORY PAINTED RED IN UNFINISHED AREAS (E.G. ABOVE CEILINGS, MECHANICAL ROOMS, ETC.). ALL CONDUIT, JUNCTION/BACK BOXES, COVERS AND COUPLINGS, WHEN PROVIDED, ARE PERMITTED TO BE PAINTED TO MATCH THE ROOM FINISHING IN FINISHED AREAS. THE INSIDE COVER OF THE JUNCTION BOX MUST BE IDENTIFIED AS "FIRE ALARM" AND THE CONDUIT MUST HAVE PAINTED RED BANDS 3/4-IN. WIDE AT 20 FT. INTERVALS AND ON BOTH SIDES OF ALL FLOOR, WALL, AND CEILING PENETRATIONS.

7. ALL SYSTEM POWER AND GROUND CIRCUITS MUST BE TYPE "THHN" SOLID OR STRANDED COPPER SIZED ACCORDING TO THE SPECIFICATIONS.

8. PROVIDE ALL WIRING IN RIGID METAL CONDUIT OR INTERMEDIATE METAL CONDUIT UNLESS SPECIFICALLY INDICATED OTHERWISE. MINIMUM CONDUIT SIZE MUCH BE 3/4-INCH IN DIAMETER; 1/2-INCH CONDUIT IS PERMITTED FOR DROPS TO SINGLE DEVICES.

9. ALL WIRING, CABLES, BOXES, TROUGHS AND OTHER RELATED EQUIPMENT MUST BE INSTALLED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).

10. PROVIDE SURGE PROTECTIVE DEVICES (SPD'S) TO PROTECT ALL POWER SUPPLY CIRCUITS TO THE FACP, INCLUDING ANY SUBPANELS SUCH AS NOTIFICATION APPLIANCE CIRCUIT (NAC) BOOSTER PANELS. PROVIDE SPD'S TO PROTECT ALL FIRE ALARM CIRCUITS LEAVING OR ENTERING THE BUILDING. DEVICES MOUNTED ON AN EXTERIOR WALL DO NOT REQUIRE SPD'S BECAUSE LIGHTNING PROTECTION WILL BE PROVIDED FOR THE BUILDING. PROVIDE SPD'S IN ACCORDANCE WITH UFC 3-520-01. MOUNT SPD'S IN A SEPARATE ENCLOSURE, UNLESS THE SPD IS LISTED AND INSTALLED IN THE CONTROL PANEL BY THE FACTORY. INSTALLING SPD'S NOT LISTED WITH THE PANEL IS PROHIBITED.

11. WALL-MOUNTED VISIBLE AND COMBINATION AUDIBLE/VISIBLE ALARM NOTIFICATION APPLIANCES MUST BE MOUNTED SUCH THAT THE ENTIRE LENS IS 80-IN ABOVE THE FINISHED FLOOR AND NOT GREATER THAN 96-IN ABOVE THE FINISHED FLOOR. WHERE LOW CEILINGS HEIGHTS DO NOT PERMIT DEVICES AT A MINIMUM OF 80-IN, DEVICES MUST BE MOUNTED WITHIN 6-IN OF THE CEILING.

12. VISIBLE DEVICES AND VISIBLE/AUDIBLE DEVICES MUST UTILIZE A CLEAR STROBE AND BE MARKED "FIRE" FOR FIRE ALARM USE.

13. SOUND PRESSURE LEVEL FROM AUDIBLE ALARM APPLIANCES MUST NOT EXCEED 110 DBA IN ANY OCCUPIED AREA.

14. SECONDARY POWER SUPPLY MUST BE VIA BATTERIES CAPABLE OF OPERATING THE FIRE ALARM SYSTEM ON STANDBY FOR 48 HOURS FOLLOWED BY 15 MINUTES IN ALARM. CHARGING AND METERING MUST BE PROVIDED IN ACCORDANCE WITH NFPA 72.

15. DEDICATED BATTERY CABINETS MUST BE MOUNTED NO MORE THAN 3-FT FROM THE FINISHED FLOOR.

16. PROVIDE SYSTEM RECORD DOCUMENT CABINET ADJACENT TO FIRE ALARM CONTROL PANEL.

17. PROVIDE LABELS FOR ALL ADDRESSABLE DEVICES AND NOTIFICATION APPLIANCES.

18. ALL DRAWINGS ARE CONCEPTUAL IN NATURE. THEY DO NOT SHOW THE EXACT LOCATIONS OF COMPONENTS NOR SHOW ALL SYSTEM COMPONENTS. CONTRACTOR MUST PROVIDE ADDITIONAL COMPONENTS FOR A PROPERLY INSTALLED AND FUNCTIONAL SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES.

19. EXTERIOR CONDUIT TO FIRE ALARM ANTENNAE MUST BE GALVANIZED RIGID STEEL (GRS). NO EXPOSED CABLE WILL BE PERMITTED.

FIRE ALARM LEGEND

FACP	FIRE ALARM MASS NOTIFICATION CONTROL PANEL
NAC	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
KF	KINGFISHER RADIO TRANSMITTER
RAP	REMOTE ANNUNCIATOR PANEL
CD	WALL MOUNTED COMBINATION HORN/CLEAR STROBE (SUPERSCRIPT INDICATES CANDELA RATING)
	WATER FLOW ALARM BELL
MM	MONITOR MODULE
CM	CONTROL MODULE
RM	RELAY MODULE
P	MANUAL PULL STATION
SS	SURGE SUPPRESSOR
	TAMPER SWITCH
	WATER FLOW SWITCH
	AREA SMOKE DETECTOR ("W" SUPERSCRIPT INDICATES WALL MOUNTED)
WP	WEATHERPROOF

GENERAL NOTE:

SHEET INSERTED FOR MOD 06/MOD 07.
NAVFAC NUMBER OUT OF ORDER.

NOTE:
IF THIS DRAWING IS LESS THAN 34" X 22"
IT IS A REDUCED SIZE DRAWING

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STM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER
SEAL

BAMFORTH
ENGINEERS & CONTRACTORS
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2023
ACTIVITY
Approved by J. Scott Roberts,
Asset Management Branch Head
& Supervisory Facility Planner,
PWD Beaufort, SC via email.
SATISFACTORY TO DATE 12/15/2022

DES ROP	DRW AHE	CHK APF	
PMDM			KTB / RLH
BRANCH MANAGER			DSN
CHIEF ENG/ARCH			EJA
FP ENGINEER			DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NORFOLK, VA
DC CORE:
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE - FIRE ALARM NOTES AND LEGEND

SCALE: 12" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12871515
SHEET 1149A OF 1412
PFA001
DRAWFORM REVISION: 25 AUGUST 2020

Autodesk Docs://2042 NAFAT 502 F35 Maintenance Hangar/2042 F35 Maint Hangar_Parking Facility - FP - R17.2025.rvt
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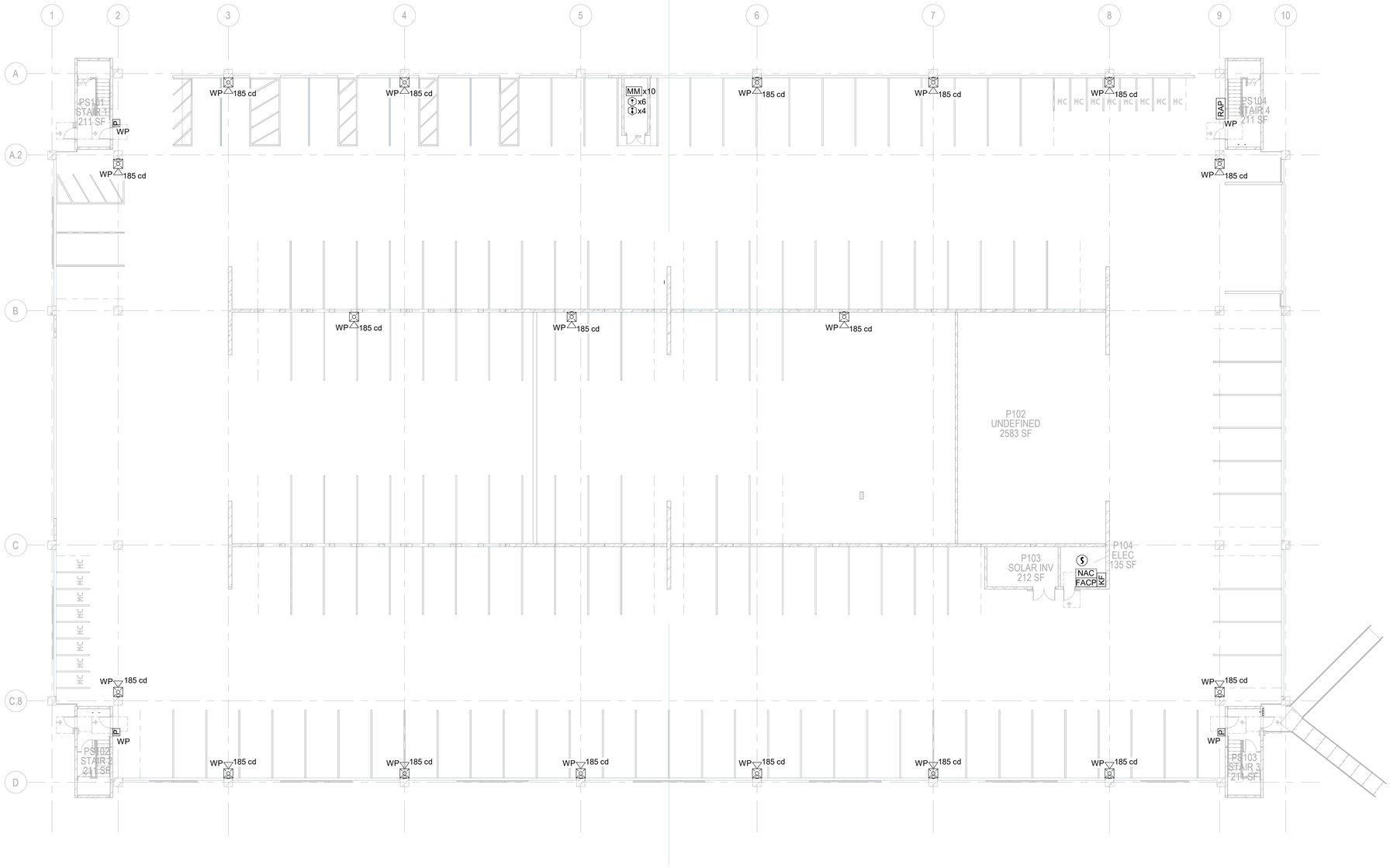

NOTES:

SHEET NOTES:

A. REFER TO SHEET PFA001 FOR GENERAL NOTES AND SYMBOLS.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

GENERAL NOTE:

SHEET INSERTED FOR MOD 06/MOD 07.
NAVFAC NUMBER OUT OF ORDER.

KEYPLAN

PLAN NORTH N

0 ½" 1" 2" 3" 4"
1'-0" = 1'-0" GRAPHIC SCALE

NOTE:
IF THIS DRAWING IS LESS THAN 34" X 22"
IT IS A REDUCED SIZE DRAWING

A1 PARKING GARAGE - FIRE ALARM PLAN - GROUND FLOOR - OVERALL
1/16" = 1'-0"

JENSEN HUGHES
Advancing the Science of Safety

SYM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER
SEAL

BAMFORTH
ENGINEERS CONTRACTORS
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2023

ACTIVITY:
Approved by J. Scott Roberts,
Asset Management Branch Head
& Supervisory Facility Planner,
PWD Beaufort, SC via email.

SATISFACTORY TO DATE 12/15/2022

DES	ROP	DRW	AHE	CHK	APF
PM/DM	KTB / RLH				
BRANCH MANAGER	DSN				
CHIEF ENG/ARCH	EJA				
FP ENGINEER	DSN				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
DC CORE:
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – MID-ATLANTIC
NORFOLK, VA
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE – FIRE ALARM PLAN – GROUND FLOOR

SCALE: 1/16" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12871516
SHEET 1149B OF 1412

PFA101

DRAWFORM REVISION: 25 AUGUST 2020

Autodesk Docs://2042 MFA1 502735 Maintenance Hangar/2042 F35 Maint Hangar_Parking Facility - FP - R/V72024.rvt
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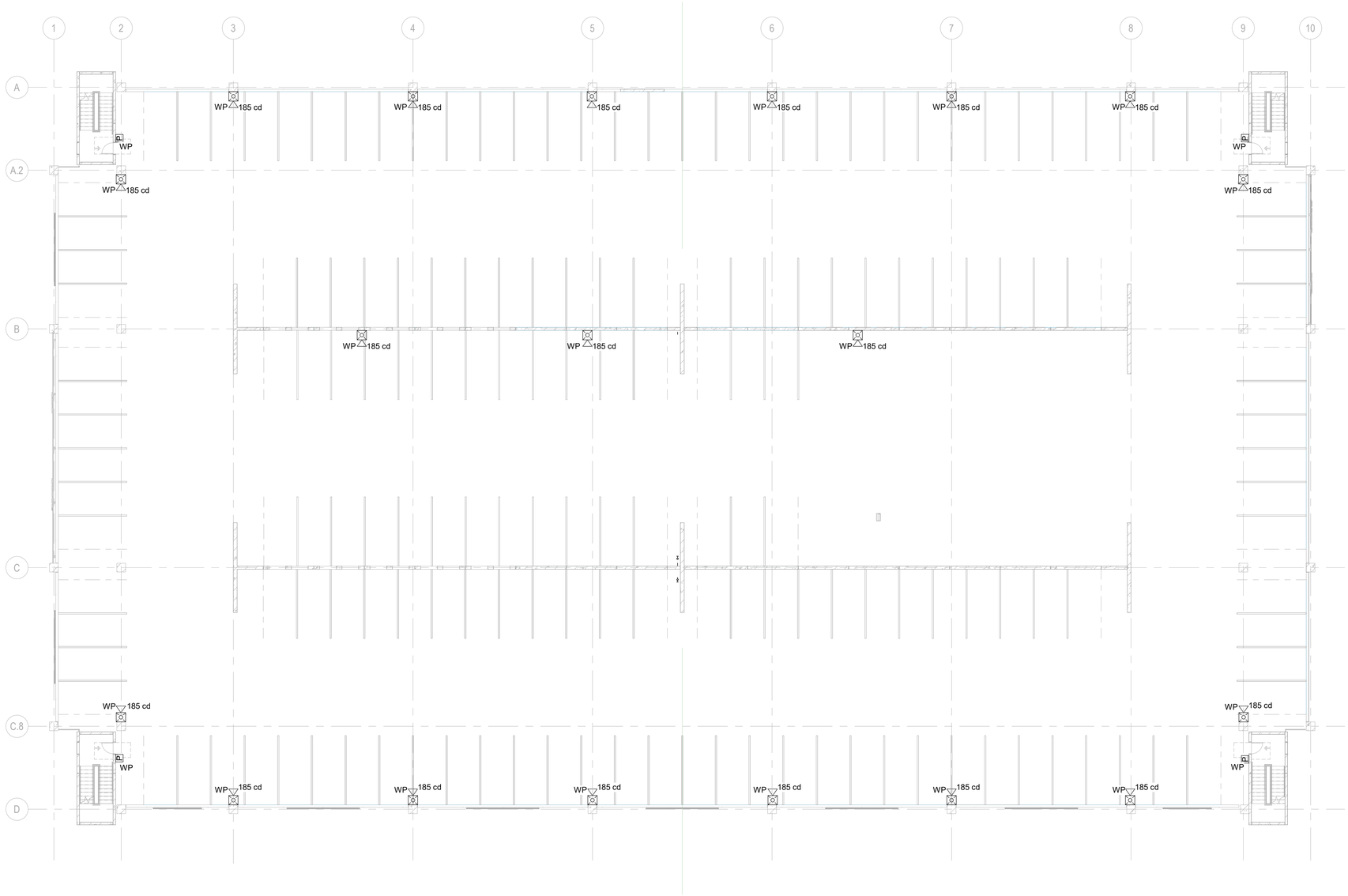

A1 PARKING GARAGE - FIRE ALARM PLAN - SECOND FLOOR - OVERALL

1/16" = 1'-0"

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NOTES:

SHEET NOTES:

A. REFER TO SHEET PFA001 FOR GENERAL NOTES AND SYMBOLS.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

GENERAL NOTE:

SHEET INSERTED FOR MOD 06/MOD 07.
NAVFAC NUMBER OUT OF ORDER.

KEYPLAN

PLAN NORTH N

0 10' 20' 40' 60'
1/16" = 1'-0" GRAPHIC SCALE

NOTE:
IF THIS DRAWING IS LESS THAN 34" X 22"
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STM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER
SEAL

BAMFORTH
ENGINEERS CONTRACTORS
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2023
ACTIVITY Approved by J. Scott Roberts, Asset Management Branch Head & Supervisory Facility Planner, PWD Beaufort, SC via email.
SATISFACTORY TO DATE 12/15/2022
DES ROP DRW AHE CHK APF
PM/DM KTB / RLH
BRANCH MANAGER DSN
CHIEF ENG/ARCH EJA
FP ENGINEER DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
DC CORE:
MCAS BEAUFORT
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – MID-ATLANTIC
NORFOLK, VA
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE – FIRE ALARM PLAN – SECOND FLOOR

SCALE: 1/16" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12871517
SHEET 1149C OF 1412
PFA111

DRAWFORM REVISION: 25 AUGUST 2020

Autodesk Docs://2024_MF-AT 3202 F35 Maintenance Hangar/2024_F35 Maint Hangar_Parking Facility - FP - R23T2024.rvt
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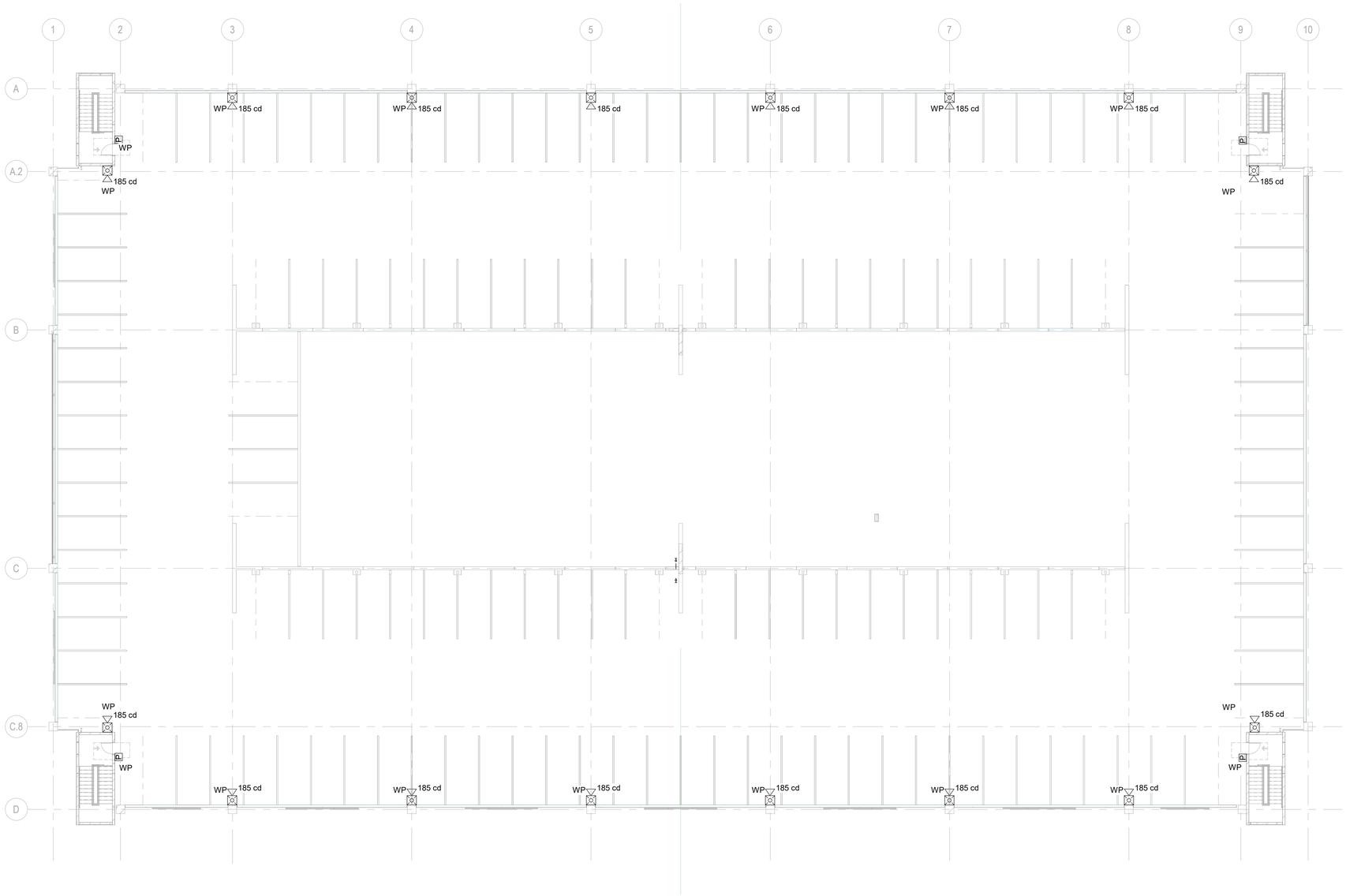

NOTES:

SHEET NOTES:

A. REFER TO SHEET PFA001 FOR GENERAL NOTES AND SYMBOLS.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

STM	DESCRIPTION	DATE	APPR
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PWD Beaufort, SC via email.

SATISFACTORY TO DATE 12/15/2022

DES ROP	DRW AHE	CHK APF	
PMDM	KTB / RLH		
BRANCH MANAGER	DSN		
CHIEF ENG/ARCH	EJA		
FP ENGINEER	DSN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NORFOLK, VA
DC CORE:
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE – FIRE ALARM PLAN – THIRD FLOOR

SCALE:	1/16" = 1'-0"
EPROJECT NO.:	1363603
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	12871518
SHEET	1149D OF 1412

PFA121

DRAWFORM REVISION: 25 AUGUST 2020

A1 PARKING GARAGE - FIRE ALARM PLAN - THIRD FLOOR - OVERALL
1/16" = 1'-0"

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Advancing the Science of Safety

GENERAL NOTE:

SHEET INSERTED FOR MOD 06/MOD 07.
NAVFAC NUMBER OUT OF ORDER.

KEYPLAN

PLAN NORTH N

0 10' 20' 40' 60'
1/16" = 1'-0" GRAPHIC SCALE

NOTE:
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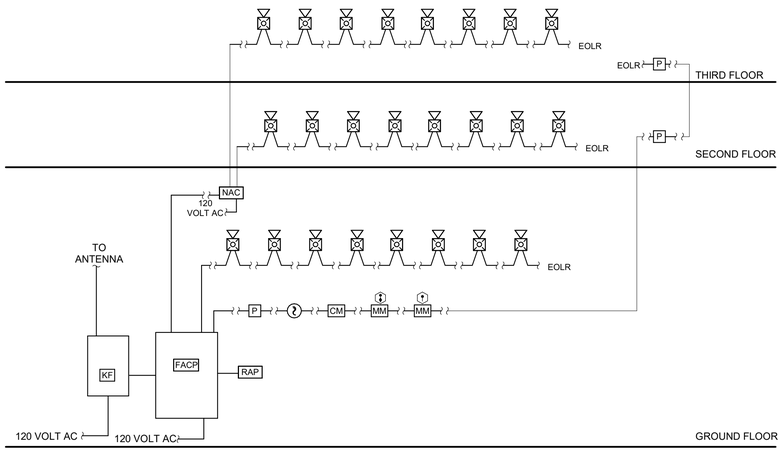

1. FINAL QUANTITY AND LOCATION(S) OF AUXILIARY ENCLOSURES ARE TO BE COORDINATED DURING CONSTRUCTION BY CONTRACTOR.

C1 FIRE ALARM SYSTEM RISER DIAGRAM

NOT TO SCALE

FIRE ALARM INPUT	ACTIVATE VISUAL STROBES	ACTIVATE AUDIBLE FIRE ALARM EVACUATION	ACTIVATE LOCAL EXTERIOR ELECTRIC SPRINKLER BELL	ALARM CONDITION AT FACP	SUPERVISORY CONDITION AT FACP	TROUBLE CONDITION AT FACP	TRANSMIT ALARM SIGNAL TO FIRE DEPT.	TRANSMIT SUPERVISORY SIGNAL TO FIRE DEPT.	TRANSMIT TROUBLE SIGNAL TO FIRE DEPT.
MANUAL PULL STATION	●	●		●			●		
AUTOMATIC SPRINKLER FLOW SWITCH	●	●	●	●			●		
AUTOMATIC SPRINKLER SYSTEM TAMPER SWITCH					●			●	
HIGH/LOW-NITROGEN PRESSURE SUPERVISORY SWITCH					●			●	
NITROGEN SYSTEM SUPERVISORY					●			●	
AREA SMOKE DETECTOR	●	●		●			●		
FMCP CIRCUIT FAULT (OPEN, GROUND, SHORT)						●			●
OTHER TROUBLE CONDITION						●			●

A3 FIRE ALARM SYSTEM SEQUENCE OF OPERATIONS

NOT TO SCALE

GENERAL NOTE:

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	MOD P00005	05/2023	

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COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER
SEAL

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ENGINEERS • CONTRACTORS
A/E INFO

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FOR COMMANDER NAVFAC 11/21/2023
ACTIVITY
Approved by J. Scott Roberts,
Asset Management Branch Head
& Supervisory Facility Planner,
PWD Beaufort, SC via email.
SATISFACTORY TO DATE 12/15/2022
DES ROP DRW AHE CHK APF
PMDM KTB / RLH
BRANCH MANAGER DSN
CHIEF ENG/ARCH EJA
FP ENGINEER DSN

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NORFOLK, VA
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
DC CORE:
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE - FIRE ALARM DETAILS

SCALE: 12" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12871519
SHEET 1149E OF 1412
PFA501
DRAWFORM REVISION: 25 AUGUST 2020

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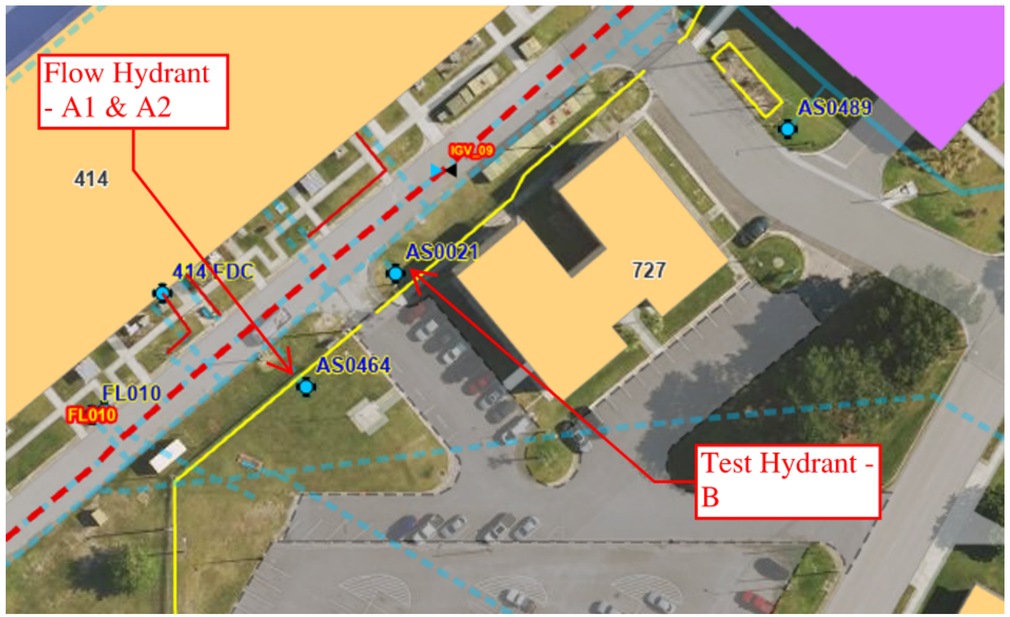
FIRE SPRINKLER GENERAL NOTES:

1. PROVIDE PARKING GARAGE WITH DRY-PIPE SPRINKLER SYSTEM.
2. APPLICABLE CRITERIA:
   NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS, 2019.
   UFC 3-600-01 FIRE PROTECTION ENGINEERING FOR FACILITIES (CHANGE 5), 24 SEPTEMBER 2020
3. CONTRACTOR MUST HAVE A DESIGNER WITH A NICET LEVEL III CERTIFICATION IN WATER-BASED FIRE PROTECTION SYSTEM LAYOUT OR A LICENSED PROFESSIONAL FIRE PROTECTION ENGINEER IN RESPONSIBLE CHARGE OF THE SYSTEM DESIGN.
4. SPRINKLER PIPE MUST BE U.L. LISTED BLACK STEEL, MINIMUM SCHEDULE 40 FOR PIPE DIAMETERS 2-IN AND LESS AND MINIMUM SCHEDULE 10 FOR PIPE DIAMETER LARGER THAN 2-IN.
5. PROVIDE QUICK-RESPONSE SPRINKLERS WITH ORDINARY TEMPERATURE RATING. PROVIDE WHITE SPRINKLERS AND ESCUTCHEON PLATES.
6. PROVIDE AT LEAST SIX SPARE SPRINKLERS WITH A MINIMUM OF TWO SPARE SPRINKLERS OF EACH TYPE AND TEMPERATURE CLASSIFICATION. PROVIDE SPARE SPRINKLER CABINET, WRENCHES, AND POSTED LIST OF ITEMS WITHIN THE CABINET. INSTALL IN LOCATION AS DIRECTED BY BUILDING MAINTENANCE PERSONNEL.
7. SPRINKLER SYSTEM MUST BE HYDRAULICALLY DESIGNED.
8. THESE DRAWINGS DEMONSTRATE THE CONFIGURATION OF MAJOR SYSTEM COMPONENTS. THEY ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW EXACT LOCATIONS. PIPE LENGTHS AND ELEVATIONS INDICATED ON THE DRAWINGS (IF SHOWN) ARE APPROXIMATE. COORDINATE FINAL INSTALLATION WITH ACTUAL FIELD CONDITIONS AND OTHER CONSTRUCTION TRADES. THE CONTRACTOR MUST DESIGN THE SPRINKLER SYSTEM TO PROVIDE COMPLETE PROTECTION THROUGHOUT IN ACCORDANCE WITH NFPA 13.
9. PROVIDE SEISMIC PROTECTION IN ACCORDANCE WITH NFPA 13.

P-475 PARKING GARAGE SITE - HYDRANT FLOW TEST LOCATION:



FIRE SPRINKLER LEGEND

- SPRINKLER PIPE
- OS&Y VALVE
- SUPERVISED CONTROL VALVE
- WATERFLOW SWITCH
- BACKFLOW PREVENTER
- NITROGEN GENERATOR
- NITROGEN TANK
- WALL MOUNT TEST HEADER
- WATERFLOW ALARM BELL
- FIRE DEPARTMENT CONNECTION
- SYSTEM RISER
- PIPE ELBOW UP OR DOWN
- PIPE TEE UP OR DOWN
- XX HAZARD CLASSIFICATION
- POINT OF CONNECTION TO EXISTING

SPRINKLER HAZARD LEGEND

ALL AREAS ARE ORDINARY HAZARD UNLESS NOTED OTHERWISE. ORDINARY HAZARD. A MINIMUM DENSITY OF 0.20-GPM/SF WITH A DESIGN AREA OF 3,500-SF AND A HOSE ALLOWANCE OF 250 GPM MUST BE USED. SPRINKLER LAYOUT MUST COMPLY WITH NFPA 13 ORDINARY HAZARD SPACING. SPRINKLERS MUST HAVE A MINIMUM K-FACTOR OF 8.0.

NOTE: NFPA 13 DESIGN AREA REDUCTION FOR QUICK RESPONSE SPRINKLERS IS NOT PERMITTED.

WATER SUPPLY

1. AVAILABLE WATER SUPPLY TEST DATA IS AS FOLLOWS:

DATE TEST PERFORMED:	MAY 14, 2025
STATIC PRESSURE (HYDRANT #AS0464):	58 PSI
RESIDUAL PRESSURE (HYDRANT #AS0464):	53 PSI
FLOW RATE (HYDRANT #AS0021):	1,500 GPM

NOTE:
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SYM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER

BAMFORTH ENGINEERS + SURVEYORS

APPROVED
FOR COMMANDER NAVFAC 11/21/2023
ACTIVITY Approved by J. Scott Roberts, Asset Management Branch Head & Supervisory Facility Planner, PWD Beaufort, SC via email.
SATISFACTORY TO DATE 12/15/2022
DES ROP DRW AHE CHK APF
PMDM KTB / RLH
BRANCH MANAGER DSN
CHIEF ENG/ARCH EJA
FP ENGINEER DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC NORFOLK, VA
DC CODE:
MCAS BEAUFORT BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE - FIRE PROTECTION NOTES AND LEGEND

SCALE: 1/4" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO: 12860370
SHEET 1149 OF 1412
PFX001
DRAWFORM REVISION: 25 AUGUST 2020

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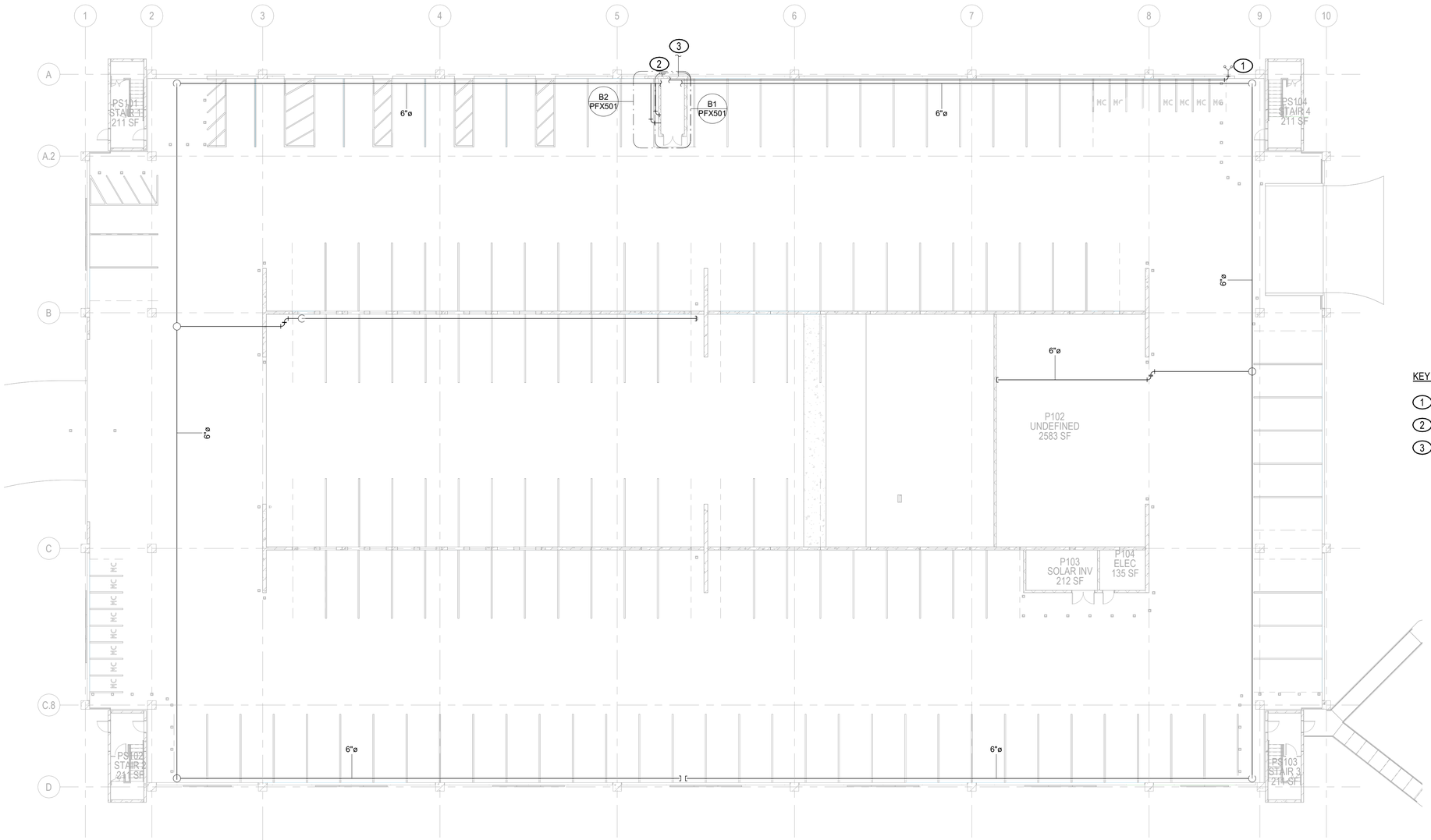

NOTES:

SHEET NOTES:

A. REFER TO SHEET PFX001 FOR GENERAL NOTES AND SYMBOLS.

B. DRAWING INDICATES MINIMUM PIPE SIZES.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

KEY NOTES (00)

(1) FIRE DEPARTMENT CONNECTION

(2) BACKFLOW PREVENTER TEST HEADER

(3) INCOMING 8" SERVICE LATERAL; REFER TO DRAWING CU105 FOR CONTINUATION.

A1 PARKING GARAGE - FIRE PROTECTION PLAN - GROUND FLOOR - OVERALL

1/16" = 1'-0"

KEYPLAN

0 ½" 1" 2" 3" 4"

1'-0" = 1'-0" GRAPHIC SCALE

NOTE:
IF THIS DRAWING IS LESS THAN 34" X 22"
IT IS A REDUCED SIZE DRAWING

JENSEN HUGHES
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SYM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER
SEAL

BAMFORTH
ENGINEERS CONTRACTORS

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 11/21/2022

ACTIVITY
Approved by J. Scott Roberts,
Asset Management Branch Head
& Supervisory Facility Planner,
PWD Beaufort, SC via email.

SATISFACTORY TO DATE 12/15/2022

DES ROP	DRW AHE	CHK APF	
PMDM	KTB / RLH		
BRANCH MANAGER	DSN		
CHIEF ENG/ARCH	EJA		
FP ENGINEER	DSN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NORFOLK, VA

DC CORE:
MCAS BEAUFORT

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

BEAUFORT, SC

P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)

PARKING GARAGE – FIRE PROTECTION PLAN – GROUND FLOOR

SCALE: 1/16" = 1'-0"

EPROJECT NO.: 13363603

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.
12860371

SHEET 1150 OF 1412

PFX101

DRAWFORM REVISION: 25 AUGUST 2020

Autodesk Docs://2042 NAFAI 502 FS3 Maintenance Hangar/2042 FS3 Maint Hangar_Parking Facility - FP - R17.2024.rvt
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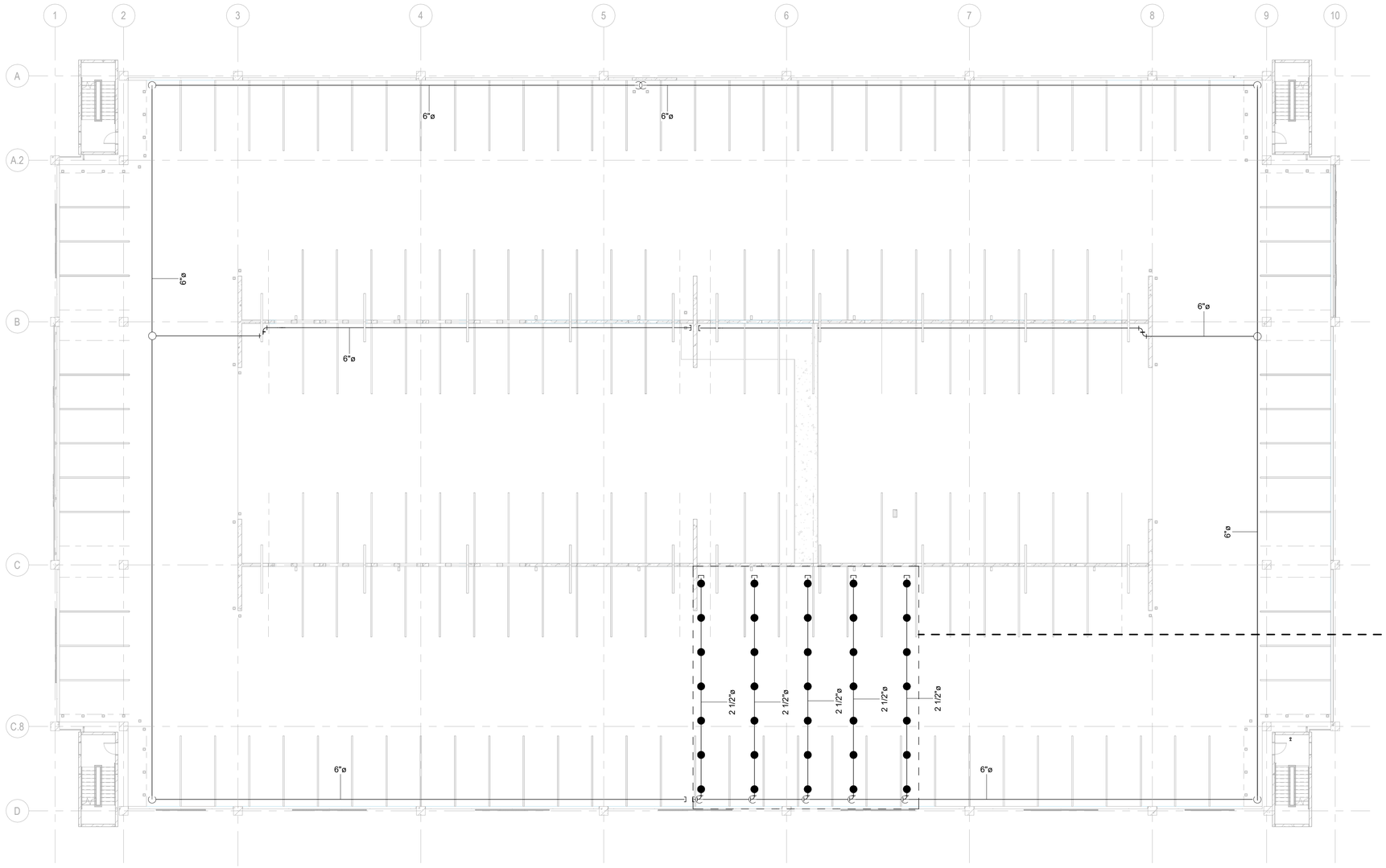

NOTES:

SHEET NOTES:

A. REFER TO SHEET PFX001 FOR GENERAL NOTES AND SYMBOLS.

B. DRAWING INDICATES MINIMUM PIPE SIZES.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

HYDRAULIC INFORMATION

HAZARD CLASSIFICATION	ORDINARY
SYSTEM TYPE	DRY
DENSITY (GPM/SQ.FT.)	0.20
REQUIRED AREA (SQ.FT.)	3,500
ACTUAL AREA (SQ.FT.)	3,716
SPRINKLERS FLOWING	35
SPRINKLER DEMAND (GPM)	909.7
SYSTEM PRESSURE (PSI)	51.4
HOSE ALLOWANCE (GPM)	250
TOTAL DEMAND (GPM)	1159.7
SAFETY MARGIN (PSI)	3.48

A1 PARKING GARAGE - FIRE PROTECTION PLAN - SECOND FLOOR - OVERALL

1/16" = 1'-0"

KEYPLAN

PLAN NORTH N

0 10' 20' 40' 60'

1/16" = 1'-0" GRAPHIC SCALE

NOTE:
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SATISFACTORY TO DATE 12/15/2022
DES ROP DRW AHE CHK APF
PM/DM KTB / RLH
BRANCH MANAGER DSN
CHIEF ENG/ARCH EJA
FP ENGINEER DSN

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC NORFOLK, VA
DEPARTMENT OF THE NAVY
DO CODE:
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE – FIRE PROTECTION PLAN – SECOND FLOOR

SCALE: 1/16" = 1'-0"
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12860372
SHEET 1151 OF 1412
PFX111

DRAWFORM REVISION: 25 AUGUST 2020

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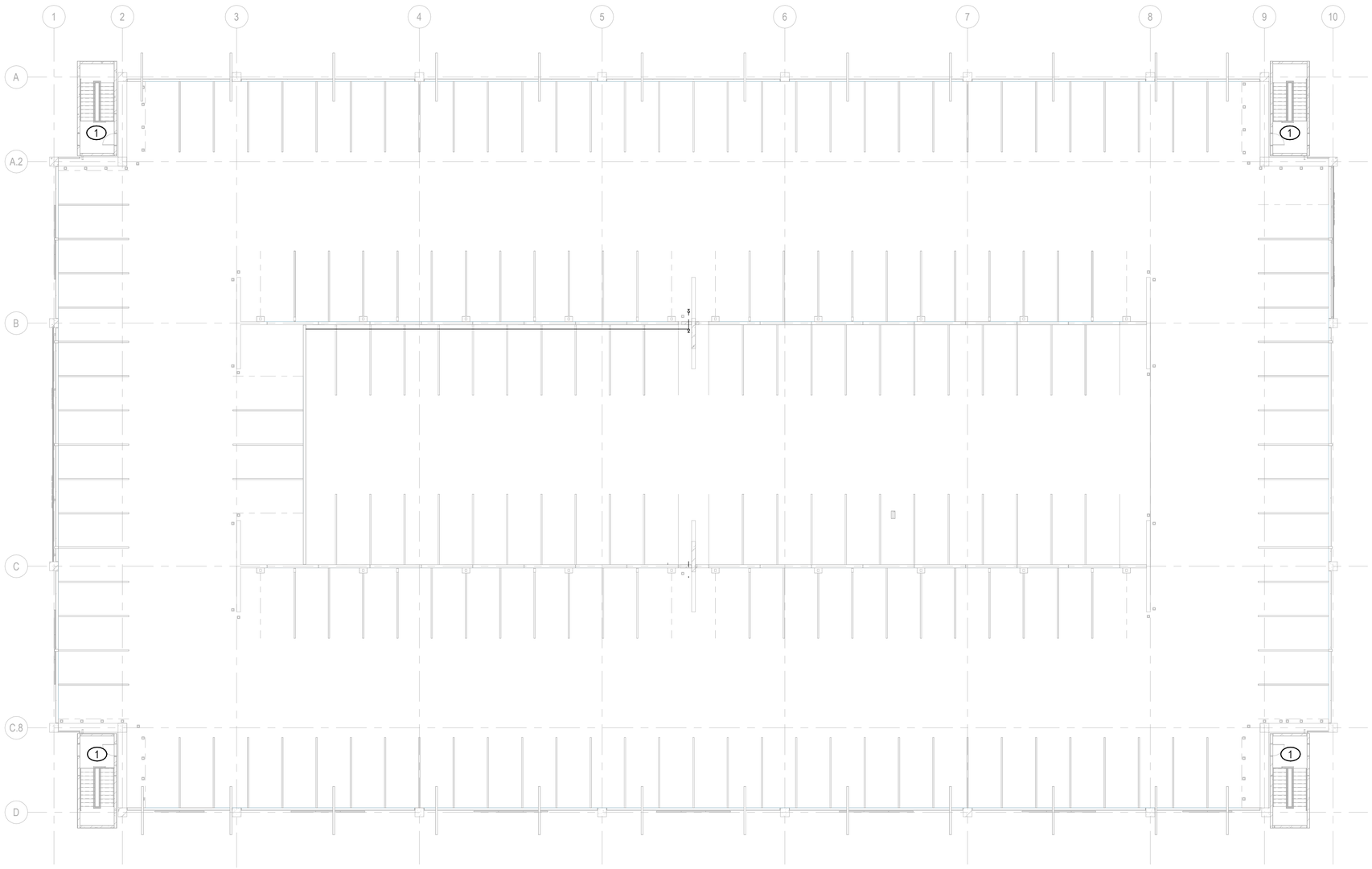

NOTES:

SHEET NOTES:

A. REFER TO SHEET PFX001 FOR GENERAL NOTES AND SYMBOLS.

B. DRAWING INDICATES MINIMUM PIPE SIZES.

C. PROVIDE EXTERIOR EXPOSURE CORROSION PROTECTION AND CONTROL IN ACCORDANCE WITH AN ENVIRONMENTAL SEVERITY CLASSIFICATION (ESC) OF C4 FOR BUILDING SYSTEMS AND COMPONENTS IN THE FOLLOWING ROOMS: STAIR 1, STAIR 2, STAIR 3, STAIR 4, P103 SOLAR INV, P104 ELEC, P105 SPKLR, AND PV CANOPY.

KEY NOTES (00)

(1) PROVIDE SPRINKLER PROTECTION AT TOP OF STAIR ENCLOSURE

KEYPLAN

PLAN NORTH N

0 10' 20' 40' 60'

1/16" = 1'-0" GRAPHIC SCALE

NOTE:
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A1 PARKING GARAGE - FIRE PROTECTION PLAN - THIRD FLOOR - OVERALL

1/16" = 1'-0"

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SYM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
PROFESSIONAL ENGINEER
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BAMFORTH ENGINEERS & CONTRACTORS
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2023

ACTIVITY
Approved by J. Scott Roberts,
Asset Management Branch Head
& Supervisory Facility Planner,
PWD Beaufort, SC via email.

SATISFACTORY TO DATE 12/15/2022

DES	ROP	DRW	AHE	CHK	APF

PMDM KTB / RLH
BRANCH MANAGER DSN
CHIEF ENG/ARCH EJA
FP ENGINEER DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC
NORFOLK, VA
DC CORE:
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
PARKING GARAGE – FIRE PROTECTION PLAN – THIRD FLOOR

SCALE: 1/16" = 1'-0"
EPROJECT NO.: 13663603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12860373
SHEET 1152 OF 1412

PFX121

DRAWFORM REVISION: 25 AUGUST 2020

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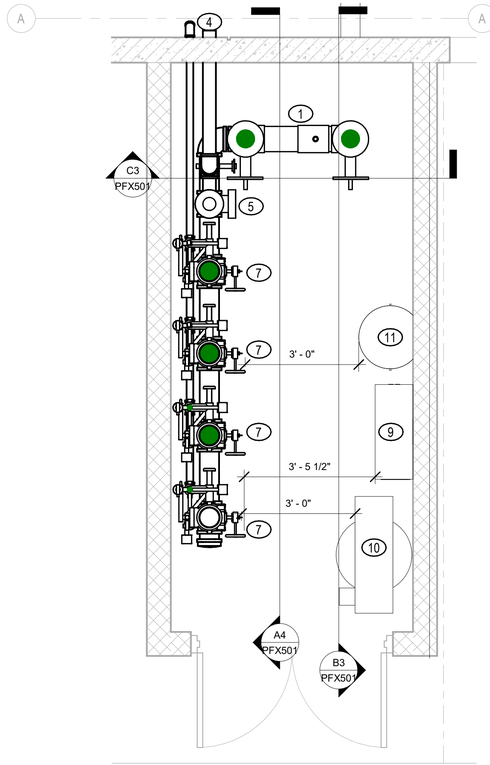
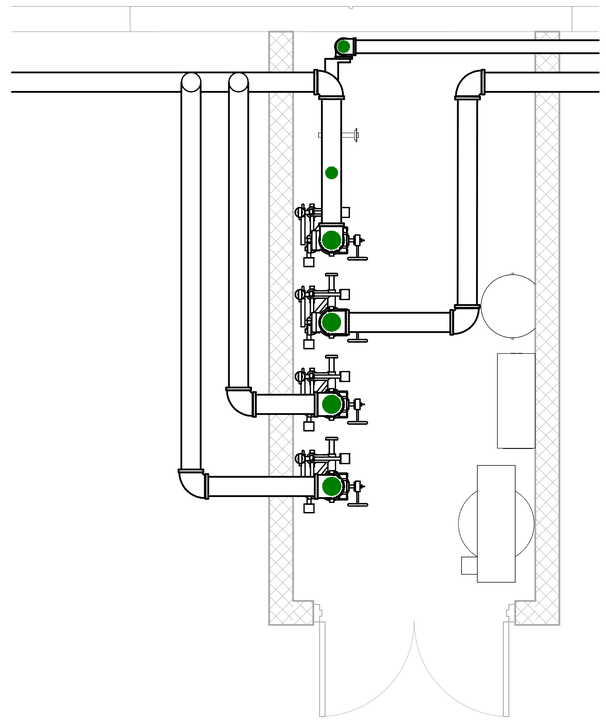
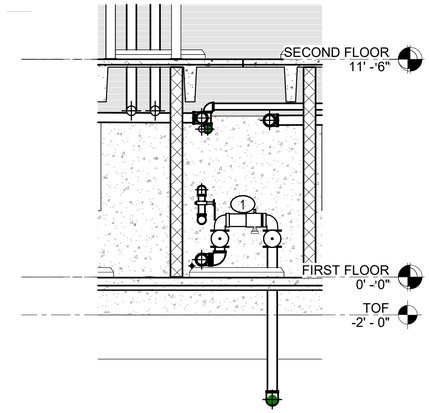


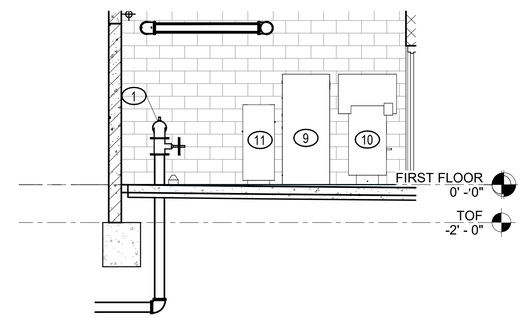
B1 FIRE RISER ROOM - ENLARGED PLAN
1/2" = 1'-0"



B2 FIRE RISER ROOM - ENLARGED PLAN - HIGH PIPING
1/2" = 1'-0"



C3 RISER ROOM NORTH WALL
1/4" = 1'-0"



B3 RISER ROOM EAST WALL
1/4" = 1'-0"

NOTES:

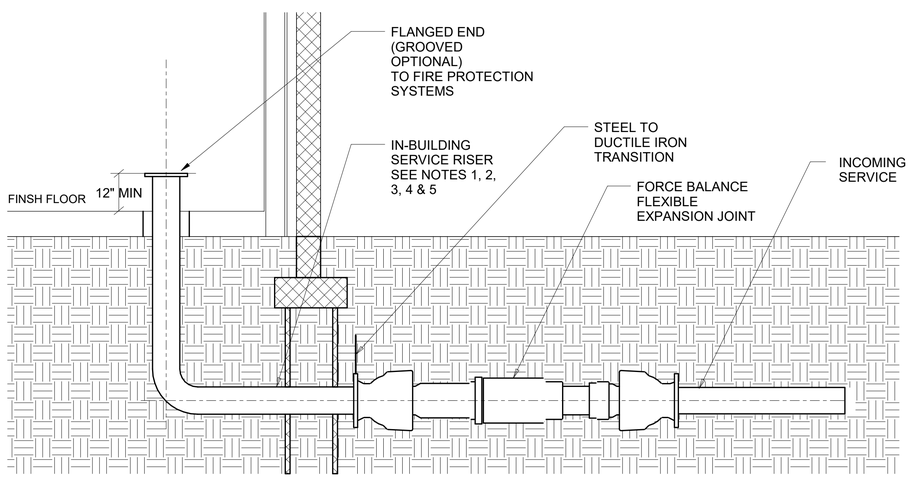
SHEET NOTES:

A. REFER TO SHEET PFX001 FOR GENERAL NOTES AND SYMBOLS.

B. DRAWING INDICATES MINIMUM PIPE SIZES.

KEY NOTES (00)

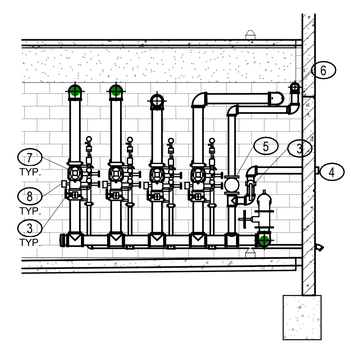
1. DOUBLE-CHECK BACKFLOW PREVENTER
2. BUTTERFLY OR OS&Y VALVE WITH TAMPER SWITCH
3. BUTTERFLY VALVE (LOCKED; NO TAMPER SWITCH)
4. BACKFLOW PREVENTER TEST HEADER
5. CHECK VALVE
6. TO FIRE DEPARTMENT CONNECTION
7. DRY PIPE SPRINKLER VALVE
8. PRESSURE SWITCH
9. NITROGEN GENERATOR CABINET
10. NITROGEN GENERATOR COMPRESSOR
11. NITROGEN STORAGE TANK



A1 IN-BUILDING RISER (SECTION VIEW)
NOT TO SCALE

GENERAL NOTES

1. IN-BUILDING RISER IS A CONTINUOUS SECTION OF WELDED STAINLESS STEEL FROM A POINT OUTSIDE THE BUILDING PERIMETER TO A FLANGED FITTING LOCATED AT LEAST 1 FT. ABOVE FINISHED FLOOR WITHIN THE BUILDING.
2. NON-WELDED FITTINGS ARE NOT PERMITTED WITHIN THIS SECTION OF PIPING (E.G. FLANGES, MECHANICAL COUPLINGS, PUSH-ON).
3. WELD AND HYDROSTATICALLY TEST THE STAINLESS STEEL PIPE AT THE FABRICATION SHOP OR MANUFACTURER.
4. PERFORM THE HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH NFPA 24.
5. WELDING IN THE FIELD IS NOT PERMITTED.
6. PROVIDE PENETRATIONS OF CONCRETE FLOORS WITH PIPE SLEEVES. PROVIDE SLEEVES WITH NOMINAL DIAMETER 2 IN. LARGER THAN PIPES BETWEEN 1 IN. AND 3-1/2 IN. PROVIDE SLEEVES 4 IN. LARGER THAN PIPES 4 IN. AND LARGER.



A4 RISER ROOM WEST WALL
1/4" = 1'-0"

0 1' 2' 4' 6' 8'
1/2" = 1'-0" GRAPHIC SCALE

NOTE:
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SYM	DESCRIPTION	DATE	APPR
	MOD P00006 AND MOD P00007	10/2025	
	MOD P00005	05/2023	

NAVFAC

COMMONWEALTH OF VIRGINIA
ALISON WAKELIN
Lic. No. 037705
11/18/2023
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SEAL

BAMFORTH ENGINEERS CONTRACTORS

AE INFO

APPROVED
FOR COMMANDER NAVFAC 11/21/2023

ACTIVITY: Approved by J. Scott Roberts, Asset Management Branch Head & Supervisory Facility Planner, PWD Beaufort, SC via email.

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DES ROP	DRW AHE	CHK	APF
PM/DM			KTB / RLH
BRANCH MANAGER			DSN
CHIEF ENG/ARCH			EJA
FP ENGINEER			DSN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
DC CORE
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC NORFOLK, VA
MCAS BEAUFORT
BEAUFORT, SC
P-475 AIRCRAFT MAINTENANCE HANGAR - VOLUME 4 (PARKING GARAGE OPTION)
FIRE PROTECTION DETAILS

SCALE: As indicated
EPROJECT NO.: 1363603
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12860374
SHEET 1153 OF 1412

PFX501

DRAWFORM REVISION: 25 AUGUST 2020

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