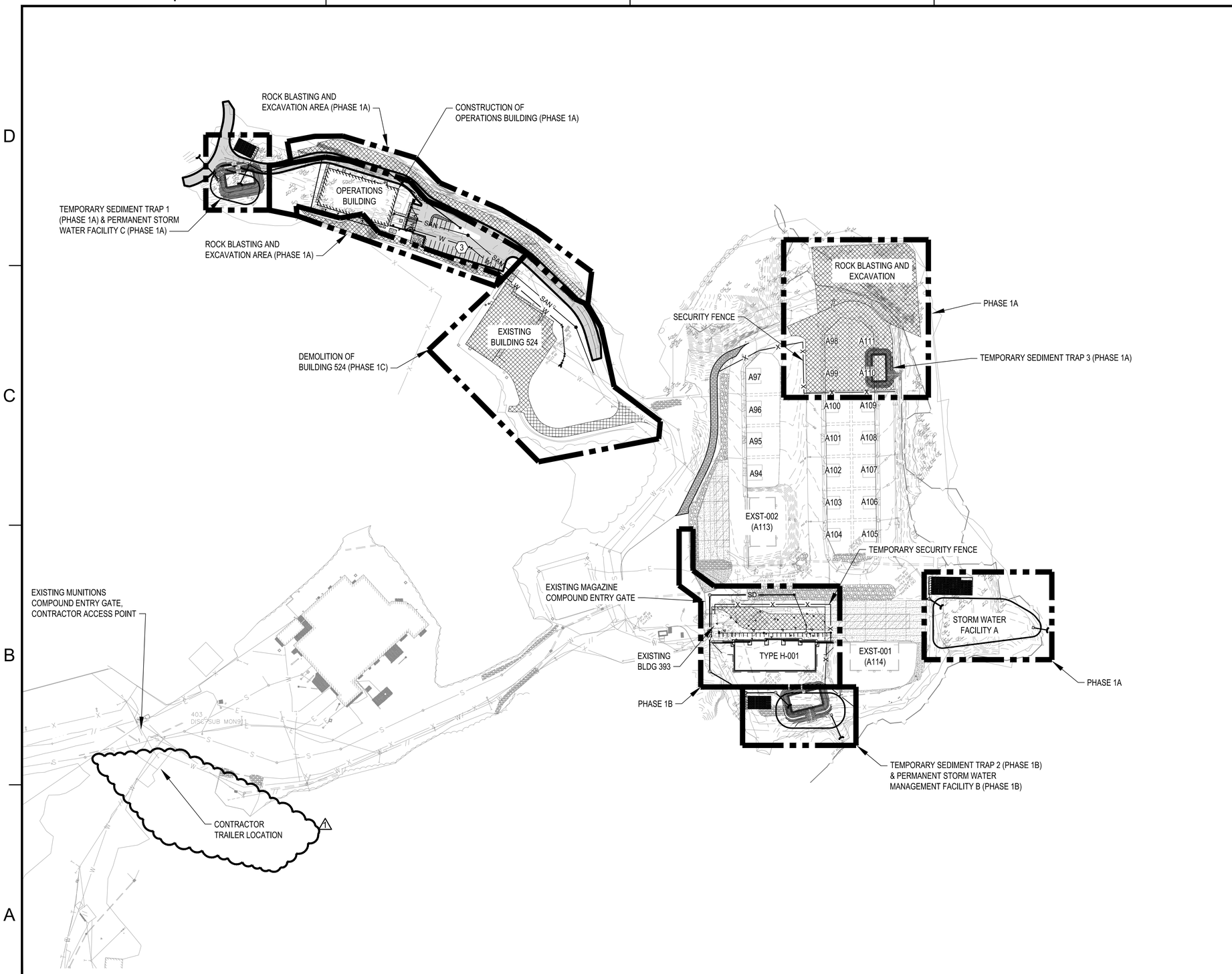


A1 CONSTRUCTION PHASING PLAN - PHASE 1

1" = 100'

GENERAL SHEET NOTES

1. REFER TO SHEETS C-001 TO C-004 FOR ADDITIONAL NOTES, EROSION CONTROL SEQUENCING, CONTRACTOR LAY DOWN AREA, AND SITE ACCESS.
2. REFER TO SHEETS CD100 TO CD103 FOR SITE DEMOLITION INFORMATION.
3. REFER TO SHEETS CS100 TO CS103 FOR SITE LAYOUT INFORMATION.
4. REFER TO SHEETS CG100 TO CG103 FOR SITE GRADING AND DRAINAGE INFORMATION.
5. REFER TO SHEETS CU100 TO CU103 FOR SITE UTILITY INFORMATION.
6. MAINTAIN ACCESS AND FUNCTIONALITY OF MAGAZINES TO REMAIN DURING PHASE 1 OPERATIONS INCLUDING POWER, SECURITY FEATURES, GROUNDING GRID, AND INTRUSION DETECTION SYSTEM.
7. TEMPORARY SECURITY FENCE MUST BE INSTALLED PRIOR TO DEMOLITION OF EXISTING PERIMETER FENCE AND BE FULLY GROUNDED AND BONDED.
8. CONTRACTOR MUST IMMEDIATELY CEASE BLASTING, EXCAVATION, DEMOLITION, CONSTRUCTION ACTIVITIES, AND VACATE THE SITE AT THE REQUEST OF SECURITY FORCES, MUNITIONS STAFF, OR CONTRACTING OFFICER TO FACILITATE NORMAL OPERATIONS AND SECURITY DRILLS ON SITE. CONSTRUCTION AND DEMOLITION ACTIVITIES, INCLUDING SITE ACCESS, WILL ONLY BE ALLOWED TO RESUME UPON VERBAL APPROVAL OF SECURITY FORCES, MUNITIONS STAFF, OR THE CONTRACTING OFFICER.
9. THE GOVERNMENT WILL MAINTAIN ACCESS CONTROL TO ACTIVE MAGAZINES (MAGAZINES NOT SCHEDULED FOR DEMOLITION DURING PHASE 1). DO NOT BLOCK THE ENTRANCE TO OR OTHERWISE IMPEDE GOVERNMENT ACCESS TO ACTIVE MAGAZINES. THE CONTRACTOR WILL NOT HAVE FREE ACCESS TO ACTIVE MAGAZINES FOR THE DURATION OF CONSTRUCTION.
10. CONTRACTOR EMPLOYEES, INCLUDING SUBCONTRACTORS, MUST COMPLETE EXPLOSIVE SAFETY TRAINING PRIOR TO SITE ACCESS.
11. EQUIPMENT FUELING WITHIN THE MUNITIONS COMPOUND IS STRICTLY PROHIBITED, FUELING MUST ONLY OCCUR WITHIN THE CONTRACTOR LAY DOWN AND STAGING AREA.
12. SUBMIT LIST OF SPARK PRODUCING EQUIPMENT, OR EQUIPMENT UTILIZING PROPANE GAS, TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO USE ON SITE.

PHASING NOTES

PHASE 1A

1. PROVIDE TEMPORARY CONSTRUCTION ACCESS AND SECURITY FENCING TO ENSURE A SECURE PERIMETER AROUND EXISTING MAGAZINES TO REMAIN IN PLACE DURING PHASE 1 OPERATIONS (MAGAZINES A94-A97, A-100-A104, A105-A109, A113, AND A114). REFER TO CIVIL DETAIL A1/CS504 FOR SECURITY FENCING INFORMATION.
2. DEMOLISH EXISTING MAGAZINES A98, A99, A110, AND A111 INCLUDING ASSOCIATED PAVEMENTS AND UTILITIES. INSTALL TEMPORARY SEDIMENT TRAPS 1 AND 3
3. ROCK BLASTING AND EXCAVATION FOR OPERATIONS BUILDING AND NEAR MAGAZINES A98, A99, A110, AND A111.
4. CONSTRUCT PERMANENT STORM WATER FACILITY A EAST OF EXST-001 (A114). MAINTAIN TREATMENT CHAMBERS OFFLINE UNTIL FINAL SITE STABILIZATION.
5. OPERATIONS BUILDING CONSTRUCTION INCLUDING SITE PREPARATION, DRAINAGE INFRASTRUCTURE, UTILITY INSTALLATION, ACCESS ROAD, AND PARKING LOT. CONVERT TEMPORARY SEDIMENT TRAP 1 TO PERMANENT STORM WATER FACILITY. MAINTAIN TREATMENT CHAMBERS OFFLINE UNTIL FINAL SITE STABILIZATION.
6. TRANSFER OF PERSONNEL TO OPERATIONS BUILDING.

PHASE 1B

1. INSTALL TEMPORARY SEDIMENT TRAP 2. REROUTE AND DEMOLISH EXISTING UTILITIES NECESSARY TO CONSTRUCT TYPE H MAGAZINE.
2. SITE PREPARATION, UTILITY INSTALLATION, AND CONSTRUCTION OF TYPE H MAGAZINE. CONVERT TEMPORARY SEDIMENT TRAP 2 TO PERMANENT STORM WATER FACILITY. MAINTAIN TREATMENT CHAMBERS OFFLINE UNTIL FINAL SITE STABILIZATION.

PHASE 1C

1. DEMOLITION OF EXISTING BUILDING 524, UTILITIES, AND PAVEMENTS.

GRAPHIC SCALE

1"=100' 0' 100' 200'

PLAN NORTH

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	5/19/2026	

NAVFAC

STATE OF CONNECTICUT · JOSHUA D. CORUM · 36276 · LICENSED PROFESSIONAL ENGINEER · 5/19/26

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/21/2026

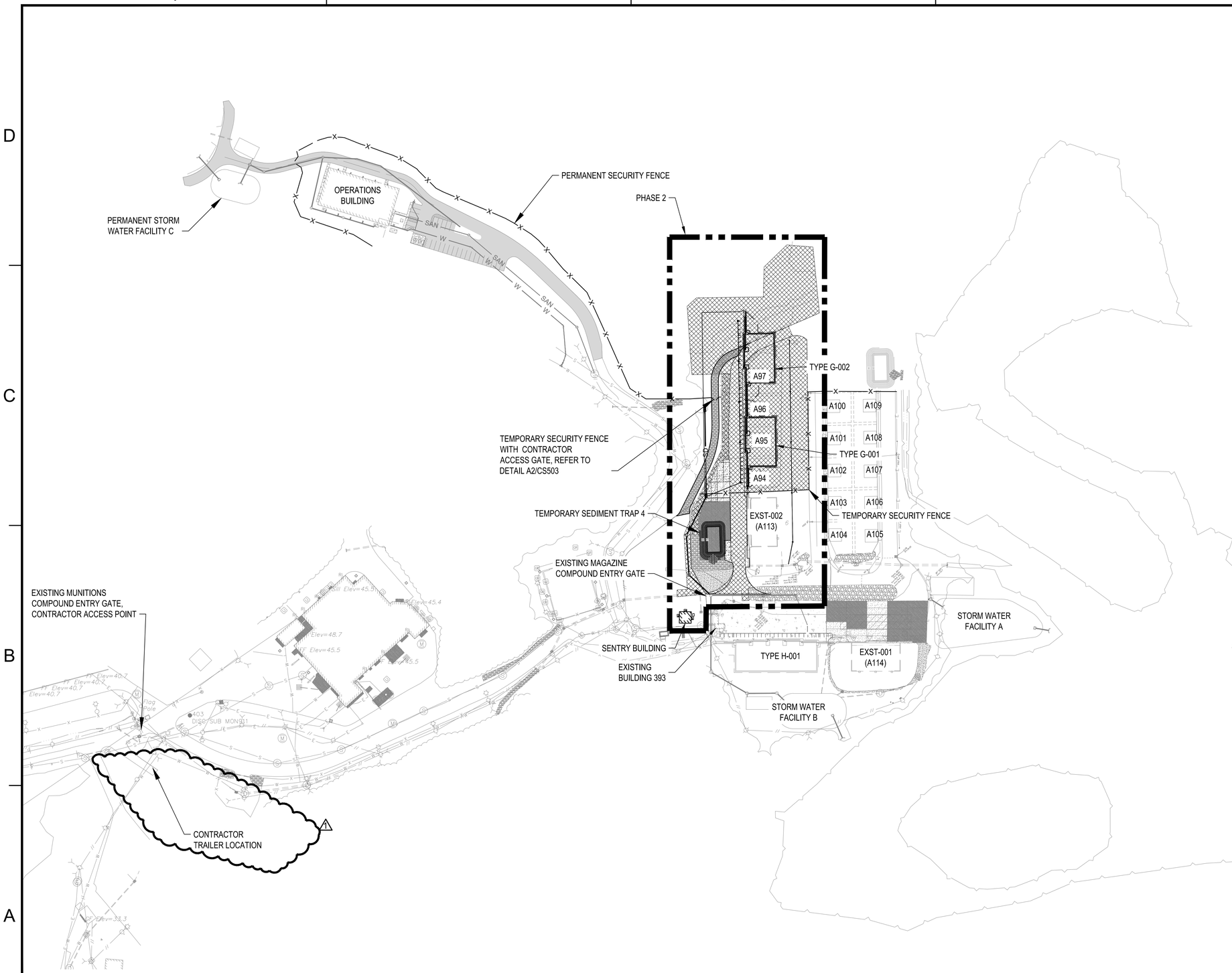
ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT
SATISFACTORY TO DATE 05/27/2025

DES	JC	DRW NM	CHK RC
PM/DM	SMS/CWJ		
BRANCH MANAGER	DLB		
CHIEF ENG/ARCH	JWJ		
FIRE PROTECTION	HPN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
SITE
CONSTRUCTION PHASING PLAN
PHASE 1

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12893809
SHEET 3 OF 152
GC101

FILE NAME: C:\pw_workdir\dms003\jv2mhill_jcorum\d1503110\P1102_GC101.dwg LAYOUT NAME: GC101 – CONSTRUCTION PHASING PLAN – PHASE 1 PLOTTED: Friday, May 15, 2026 – 6:59pm USER: jcorum



A1 CONSTRUCTION PHASING PLAN - PHASE 2

1" = 100'

GENERAL SHEET NOTES

1. REFER TO SHEETS C-001 TO C-004 FOR ADDITIONAL NOTES, EROSION CONTROL SEQUENCING, CONTRACTOR LAY DOWN AREA, AND SITE ACCESS.
2. REFER TO SHEETS CD100 TO CD103 FOR SITE DEMOLITION INFORMATION.
3. REFER TO SHEETS CS100 TO CS103 FOR SITE LAYOUT INFORMATION.
4. REFER TO SHEETS CG100 TO CG103 FOR SITE GRADING AND DRAINAGE INFORMATION.
5. REFER TO SHEETS CU100 TO CU103 FOR SITE UTILITY INFORMATION.
6. MAINTAIN ACCESS AND FUNCTIONALITY OF NEWLY CONSTRUCTED MAGAZINES AND MAGAZINES TO REMAIN DURING PHASE 2 OPERATIONS INCLUDING POWER, SECURITY FEATURES, GROUNDING GRID, AND INTRUSION DETECTION SYSTEM.
7. TEMPORARY SECURITY FENCE MUST BE INSTALLED PRIOR TO DEMOLITION OF EXISTING PERIMETER FENCE AND BE FULLY GROUNDED AND BONDED.
8. CONTRACTOR MUST IMMEDIATELY CEASE BLASTING, EXCAVATION, DEMOLITION, CONSTRUCTION ACTIVITIES, AND VACATE THE SITE AT THE REQUEST OF SECURITY FORCES, MUNITIONS STAFF, OR CONTRACTING OFFICER TO FACILITATE NORMAL OPERATIONS AND SECURITY DRILLS ON SITE. CONSTRUCTION AND DEMOLITION ACTIVITIES, INCLUDING SITE ACCESS, WILL ONLY BE ALLOWED TO RESUME UPON VERBAL APPROVAL OF SECURITY FORCES, MUNITIONS STAFF, OR THE CONTRACTING OFFICER.
9. THE GOVERNMENT WILL MAINTAIN ACCESS CONTROL TO ACTIVE MAGAZINES (MAGAZINES NOT SCHEDULED FOR DEMOLITION DURING PHASE 1). THE CONTRACTOR WILL NOT BLOCK THE ENTRANCE TO OR OTHERWISE IMPEDE GOVERNMENT ACCESS TO ACTIVE MAGAZINES. THE CONTRACTOR WILL NOT HAVE FREE ACCESS TO ACTIVE MAGAZINES FOR THE DURATION OF CONSTRUCTION.
10. CONTRACTOR EMPLOYEES, INCLUDING SUBCONTRACTORS, MUST COMPLETE EXPLOSIVE SAFETY TRAINING PRIOR TO SITE ACCESS.
11. EQUIPMENT FUELING WITHIN THE MUNITIONS COMPOUND IS STRICTLY PROHIBITED, FUELING MUST ONLY OCCUR WITHIN THE CONTRACTOR LAY DOWN AND STAGING AREA.
12. SUBMIT LIST OF SPARK PRODUCING EQUIPMENT, OR EQUIPMENT UTILIZING PROPANE GAS, TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO USE ON SITE.

PHASING NOTES

PHASE 2

1. MAINTAIN TEMPORARY CONSTRUCTION ACCESS AND PROVIDE TEMPORARY SECURITY FENCING TO ENSURE A SECURE PERIMETER AROUND EXISTING MAGAZINES TO REMAIN IN PLACE DURING PHASE 2 OPERATIONS (A100-A104, A105-A109, A113, A114, AND TYPE H-001). REFER TO CIVIL DETAIL A1/CS504 FOR SECURITY FENCING INFORMATION.
2. DEMOLISH PAVEMENT WEST OF EXST-002 (A113), INSTALL TEMPORARY SEDIMENT TRAP 4.
3. DEMOLISH EXISTING MAGAZINES A94, A95, A96, AND A97 INCLUDING ASSOCIATED PAVEMENTS AND UTILITIES.
4. ROCK BLASTING AND EXCAVATION FOR TYPE G MAGAZINES NEAR MAGAZINES A94, A95, A96, AND A97.
5. CONSTRUCT TYPE G MAGAZINES (TYPE G-001 AND TYPE G-002) ADJACENT TO EXST-002 (A113), INCLUDING ASSOCIATED PAVEMENTS AND UTILITIES. REPLACE EXST-002 GROUND RING DURING PAVEMENT DEMOLITION AND REPLACEMENT ASSOCIATED WITH TYPE G MAGAZINE CONSTRUCTION.
6. SITE PREPARATION, INCLUDING UTILITY INSTALLATION, AND CONSTRUCTION OF SENTRY BUILDING. INSTALLATION OF POWER AND TELECOMMUNICATIONS EQUIPMENT AND INTRUSION DETECTION SYSTEM IN SENTRY BUILDING.

GRAPHIC SCALE

1"=100' 0' 100' 200'

PLAN NORTH

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	5/19/2026	

NAVFAC

STATE OF CONNECTICUT JOSHUA D. CORUM 36276 5/19/26 LICENSED PROFESSIONAL ENGINEER

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

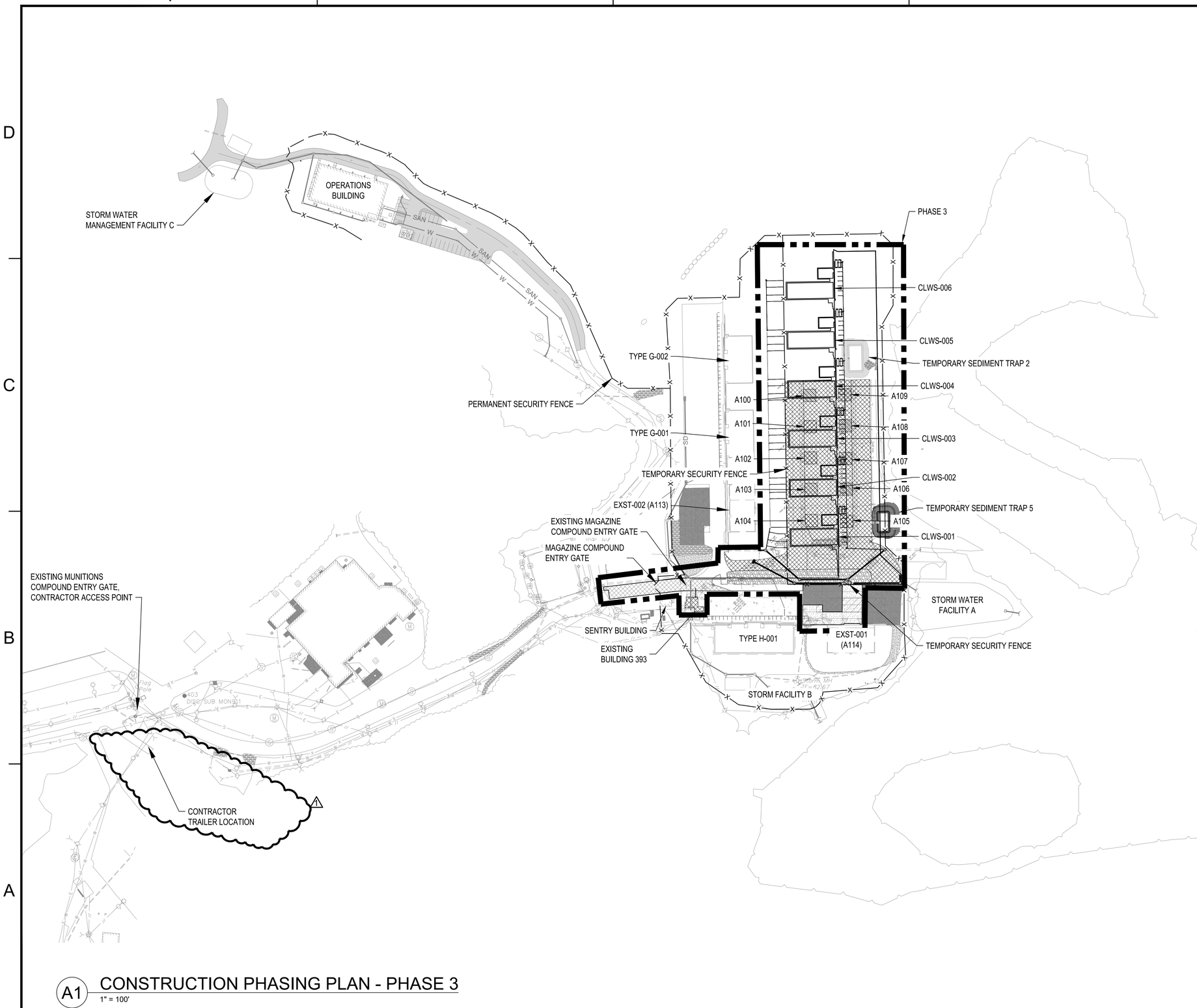
SATISFACTORY TO DATE 05/27/2025

DES	JC	DRW NM	CHK RC
PM/DM	SMS/CWJ		
BRANCH MANAGER	DLB		
CHIEF ENG/ARCH	JWJ		
FIRE PROTECTION	HPN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
SITE
CONSTRUCTION PHASING PLAN
PHASE 2

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12893810
SHEET 4 OF 152
GC102

FILE NAME: C:\pw_workdir\dms0033\ch2mhill_jconum\d1503110\P1102_GC102.dwg LAYOUT NAME: GC102 – CONSTRUCTION PHASING PLAN – PHASE 2 PLOTTED: Friday, May 15, 2026 – 7:03pm USER: jconum



A1 CONSTRUCTION PHASING PLAN - PHASE 3

1" = 100'

GENERAL SHEET NOTES

1. REFER TO SHEETS C-001 TO C-004 FOR ADDITIONAL NOTES, EROSION CONTROL SEQUENCING, CONTRACTOR LAY DOWN AREA, AND SITE ACCESS.
2. REFER TO SHEETS CD100 TO CD103 FOR SITE DEMOLITION INFORMATION.
3. REFER TO SHEETS CS100 TO CS103 FOR SITE LAYOUT INFORMATION.
4. REFER TO SHEETS CG100 TO CG103 FOR SITE GRADING AND DRAINAGE INFORMATION.
5. REFER TO SHEETS CU100 TO CU103 FOR SITE UTILITY INFORMATION.
6. MAINTAIN ACCESS AND FUNCTIONALITY OF MAGAZINES CONSTRUCTED DURING PHASE 1 AND 2 OPERATIONS INCLUDING POWER, SECURITY FEATURES, GROUNDING GRID, AND INTRUSION DETECTION SYSTEM.
7. TEMPORARY SECURITY FENCE MUST BE INSTALLED PRIOR TO DEMOLITION OF EXISTING PERIMETER FENCE AND BE FULLY GROUNDED AND BONDED.
8. CONTRACTOR MUST IMMEDIATELY CEASE BLASTING, EXCAVATION, DEMOLITION, CONSTRUCTION ACTIVITIES, AND VACATE THE SITE AT THE REQUEST OF SECURITY FORCES, MUNITIONS STAFF, OR CONTRACTING OFFICER TO FACILITATE NORMAL OPERATIONS AND SECURITY DRILLS ON SITE. CONSTRUCTION AND DEMOLITION ACTIVITIES, INCLUDING SITE ACCESS, WILL ONLY BE ALLOWED TO RESUME UPON VERBAL APPROVAL OF SECURITY FORCES, MUNITIONS STAFF, OR THE CONTRACTING OFFICER.
9. THE GOVERNMENT WILL MAINTAIN ACCESS CONTROL TO ACTIVE MAGAZINES (MAGAZINES CONSTRUCTED DURING PHASE 1 AND 2). THE CONTRACTOR WILL NOT BLOCK THE ENTRANCE TO OR OTHERWISE IMPEDE GOVERNMENT ACCESS TO ACTIVE MAGAZINES. THE CONTRACTOR WILL NOT HAVE FREE ACCESS TO ACTIVE MAGAZINE FOR THE DURATION OF CONSTRUCTION.
10. CONTRACTOR EMPLOYEES, INCLUDING SUBCONTRACTORS, MUST COMPLETE EXPLOSIVE SAFETY TRAINING PRIOR TO SITE ACCESS.
11. EQUIPMENT FUELING WITHIN THE MUNITIONS COMPOUND IS STRICTLY PROHIBITED, FUELING MUST ONLY OCCUR WITHIN THE CONTRACTOR LAY DOWN AND STAGING AREA.
12. SUBMIT LIST OF SPARK PRODUCING EQUIPMENT, OR EQUIPMENT UTILIZING PROPANE GAS, TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO USE ON SITE.

PHASING NOTES

PHASE 3

1. PROVIDE TEMPORARY CONSTRUCTION ACCESS AND SECURITY FENCING TO ENSURE A SECURE PERIMETER AROUND EXISTING MAGAZINES TO REMAIN IN PLACE DURING PHASE 3 OPERATIONS (A113, A114, TYPE H-001, TYPE G-001, AND TYPE G-002). REFER TO CIVIL DETAIL A1/CS504 FOR SECURITY FENCING INFORMATION.
2. DEMOLISH EXISTING PAVEMENT EAST OF MAGAZINE A105 AND INSTALL TEMPORARY SEDIMENT TRAP 5.
3. DEMOLISH EXISTING MAGAZINES A100 TO A104 AND A105 TO A109 INCLUDING ASSOCIATED PAVEMENTS AND UTILITIES.
4. CONSTRUCT SIX (6) CLWS MAGAZINES INCLUDING UTILITIES AND ASSOCIATED PAVEMENT. ENSURE TYPE H MAGAZINE IS COMPLETE AND OPERATIONAL AND EXST-001 IS EMPTY PRIOR TO DEMOLITION AND REPLACEMENT OF EXST-001 CONCRETE APRON. REPLACE EXST-001 GROUND RING DURING PAVEMENT DEMOLITION AND REPLACEMENT.
5. DEMOLISH EXISTING BUILDING 393 INCLUDING ASSOCIATED UTILITIES AND PAVEMENTS. ENSURE POWER EQUIPMENT AND INTRUSION DETECTION SYSTEM HAVE BEEN RELOCATED AND ARE OPERATIONAL PRIOR TO DEMOLITION OF BUILDING 393.

GRAPHIC SCALE

1"=100' 0' 100' 200'

PLAN NORTH

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	5/19/2026	

NAVFAC

STATE OF CONNECTICUT
JOSHUA D. CORUM
36276
5/19/26
LICENSED PROFESSIONAL ENGINEER

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	JC	DRW	NM	CHK	RC

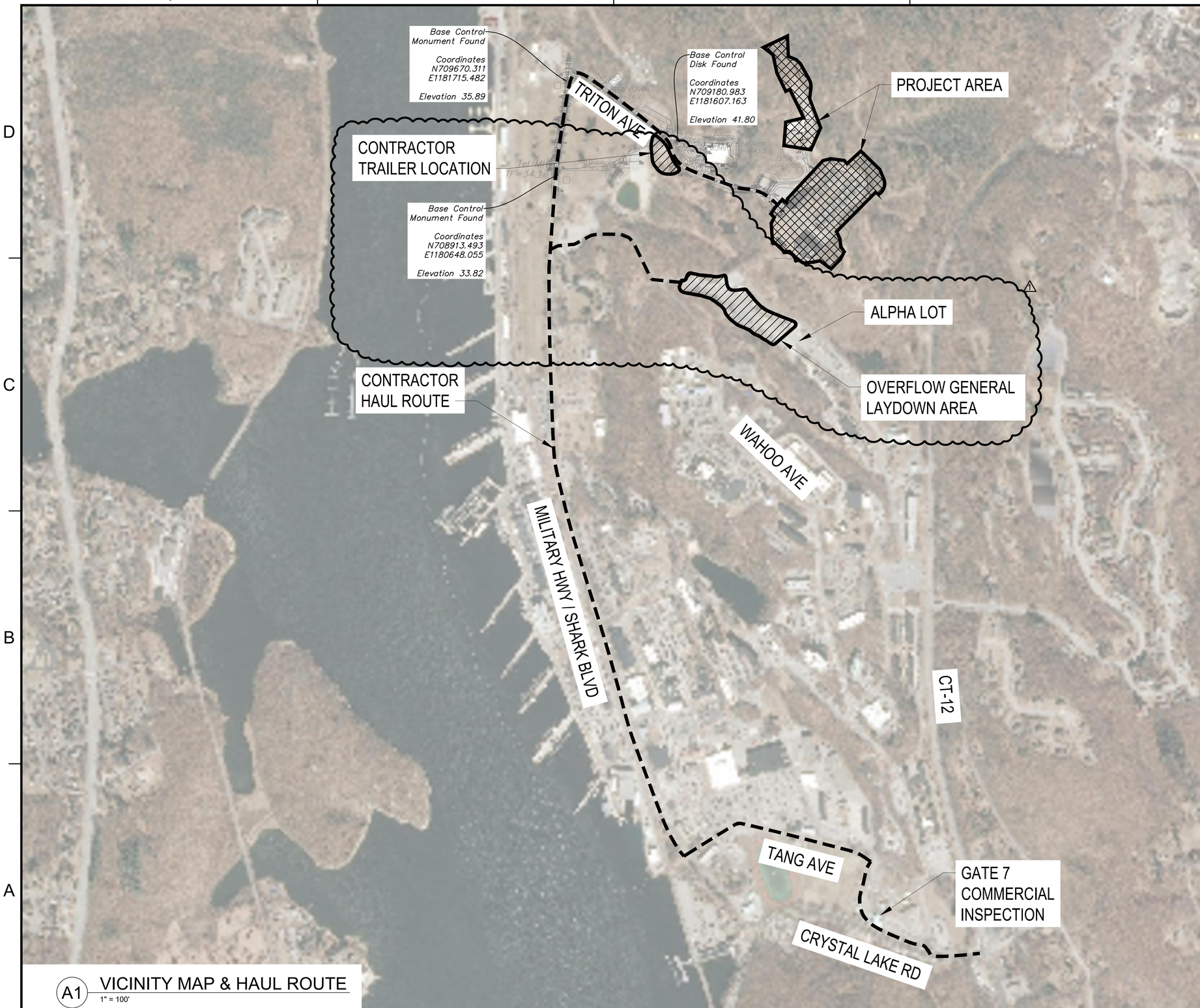
PM/DM	SMS/CWJ
BRANCH MANAGER	DLB
CHIEF ENG/ARCH	JWJ
FIRE PROTECTION	HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
SITE
CONSTRUCTION PHASING PLAN
PHASE 3 PLAN

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12893811
SHEET 5 OF 152

GC103

FILE NAME: C:\pw_work\dir003\pt2nbilj_jcorum\d1503110\P1102_GC103.dwg LAYOUT NAME: GC103 – CONSTRUCTION PHASING PLAN – PHASE 3 PLOTTED: Friday, May 15, 2026 – 7:06pm USER: jcorum



A1 VICINITY MAP & HAUL ROUTE
1" = 100'

GENERAL SHEET NOTES

1. AERIAL IMAGERY PROVIDED BY MICROSOFT CORPORATION.
2. EQUIPMENT AND MATERIAL STORAGE AREA IS DESIGNATED ON THIS SHEET. SECURE EQUIPMENT AND STORED MATERIALS. NO COVERED STORAGE IS AVAILABLE.
3. VERIFY CONSTRUCTION TRAILER SITE FOR SUITABILITY, SIZE AND FITMENT OF TRAILERS, FENCING, AND ELECTRICAL TIE IN FEASIBILITY.
4. LOCATE GENERAL CONSTRUCTION LAY DOWN AREA WITHIN THE WEAPONS COMPOUND AREA TO THE MAXIMUM EXTENT POSSIBLE WITHOUT IMPACT TO WEAPONS OPERATIONS.
5. OVERFLOW GENERAL LAY DOWN AREA MUST BE LOCATED IN ALPHA LOT. FULL USE OF ALPHA LOT WILL NOT BE PROVIDED. REVIEW AND IMPLEMENT LAND USE AND ENVIRONMENTAL CONTROLS PRIOR TO USE.
6. LOCATE ROCK CRUSHING OPERATIONS WITHIN THE WEAPONS COMPOUND AREA TO THE MAXIMUM EXTENT PRACTICAL. SHOULD ROCK CRUSHING OPERATIONS NOT FIT WITHIN THE ACTIVE CONSTRUCTION WORK ZONE, COORDINATE WITH THE CONTRACTING OFFICER TO SELECT AN ALTERNATE LOCATION.
7. LAY DOWN AREAS REQUIRE CONTRACTING OFFICER APPROVAL PRIOR TO USE.

PLAN NORTH

GRAPHIC SCALE
1"=400' 0' 400' 800'

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	5/19/2026	

NAVFAC

STATE OF CONNECTICUT
JOSHUA D. CORUM
36276
LICENSED PROFESSIONAL ENGINEER
5/19/26

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTON, CT
SATISFACTORY TO DATE 05/27/2025

DES	JC	DRW	NM	CHK	RC
PM/DM	SMS/CWJ				
BRANCH MANAGER	DLB				
CHIEF ENG/ARCH	JWJ				
FIRE PROTECTION	HPN				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
SITE
CIVIL
VICINITY MAP & HAUL ROUTE

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12893835
SHEET 29 OF 152
C-002

FILE NAME: C:\pw_workdir\dms003\jcb2mhill__jcorum\d0919842\P1102_C-002.dwg LAYOUT NAME: C-002 Vicinity Map & Haul Route PLOTTED: Friday, May 15, 2026 - 7:13pm USER: jcorum

FOUNDATIONS AND EARTHWORK

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY JACOBS, DATED 07 FEBRUARY 2025.
2. PLACE FOUNDATIONS ON UNDISTURBED, NATURAL SUBGRADE OR BACKFILL COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM SOIL DENSITY AS MEASURED BY ASTM D1557, MODIFIED PROCTOR TEST. THE MINIMUM ALLOWABLE SOIL BEARING CAPACITY UNDER FOUNDATIONS MUST BE 4,000 PSF.
3. FOR SPREAD FOOTING AND MAT FOUNDATIONS CONSTRUCTED OVER COMPACTED NATIVE SOILS, COMPACTED APPROVED GRAVEL BACKFILL MATERIALS, AND BEDROCK, PROVIDE A MINIMUM MODULUS OF SUBGRADE REACTION OF 150 POUNDS PER CUBIC INCH. DESIGN MUST MEET SPECIFIED BEARING AND SETTLEMENT CRITERIA. 1
4. PROVIDE MEASURES TO PREVENT WATER, FROST OR ICE FROM PENETRATING FOOTING OR SLAB SUBGRADE BEFORE PLACING CONCRETE. FOOTINGS, MUD SLABS, OR BUILDING SLABS MUST NOT BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
5. CONCRETE FOUNDATIONS OR A 3" THICK CONCRETE MUD MAT (LEAN CONCRETE) MUST BE PLACED THE SAME DAY THE SUBGRADE IS INSPECTED. IF THE GROUND SURFACE IS DISTURBED BEFORE CONCRETE IS PLACED, THE SUBGRADE MUST BE RE-INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AT NO ADDITIONAL COST.
6. DESIGN, PROVIDE AND MAINTAIN DEWATERING SYSTEMS, EARTH RETENTION SYSTEMS, AND BRACING. PROTECT EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION.
7. WHEN FILLING AGAINST OPPOSITE SIDES OF A WALL OR STRUCTURE, BACKFILL IN LIFTS THAT MAINTAIN LEVEL ELEVATIONS WITHIN 12" ON BOTH SIDES TO BALANCE THE LATERAL PRESSURE.
8. EARTHWORK, INCLUDING FOUNDATION SUBGRADE, FILL AND BACKFILL MUST BE INSPECTED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.
9. WHERE EXCAVATION WOULD BE BELOW A LINE EXTENDING UPWARD AT A 1.0 H TO 1.0 V SLOPE FROM THE BOTTOM OF A FOUNDATION OR UTILITY, PROVIDE SHEETING, SHORING, AND BRACING. DO NOT UNDERMINE EXISTING CONSTRUCTION.

CAST-IN-PLACE CONCRETE

1. PROVIDE CAST-IN-PLACE CONCRETE FOR EACH CLASS OF CONCRETE SHOWN IN TABLE 2 - CONCRETE MATERIAL SCHEDULE.
2. CONCRETE REINFORCING:
   a. TYPICAL DEFORMED BARS - ASTM A615, GRADE 60
   b. WELDED DEFORMED BAR ANCHORS - ASTM A706, GRADE 70
   c. PLAIN WELDED WIRE - ASTM A1064,GRADE 65, SUPPLIED IN FLAT SHEETS
3. CONCRETE COVER OVER STEEL REINFORCING, UON:
   a. REINFORCING IN CONCRETE CAST AGAINST & PERMANENTLY IN CONTACT WITH GROUND - 3"
   b. REINFORCING IN CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND AFTER CONCRETE PLACEMENT, INCLUDING ELEMENTS COVERED BY WATERPROOFING OR DAMPPROOFING
      - PRIMARY REINFORCING - 2"
      - STIRRUPS AND TIES - 1 1/2"
   c. REINFORCING IN CONCRETE SLABS AND WALLS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND - 3/4"
   d. REINFORCING IN CONCRETE BEAMS, GIRDERS, COLUMNS AND PEDESTALS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND, COVER TO - 1 1/2"
4. REFER TO TABLE 3 - CONCRETE REINFORCEMENT TENSION DEVELOPMENT LENGTHS FOR Ld.
5. SPLICE REINFORCING BARS PER ACI 318 WITH CLASS B TENSION LAP SPLICES (1.3 TIMES THE DEVELOPMENT LENGTH)
6. LAP SPLICE WWR SHEETS AT LEAST 8" AND TIE SECURELY.
7. DOWELS MUST MATCH SIZE AND SPACING AND BE CLASS B TENSION LAP SPLICED WITH THE MAIN REINFORCEMENT, UON.
8. FIELD BENDING OF REINFORCEMENT IS NOT PERMITTED UNLESS INDICATED ON THE DRAWINGS OR APPROVED IN WRITING BY THE COR. DO NOT HEAT REBAR WITH A TORCH IN THE FIELD.
9. EXCEPT FOR WELDED DEFORMED BAR ANCHORS, DO NOT WELD REINFORCING.
10. WIRE BRUSH, CLEAN, AND COAT CONSTRUCTION JOINTS WITH A BONDING AGENT OR MOISTEN WITH A CEMENT SLURRY SCRUBBED INTO THE JOINT IMMEDIATELY PRIOR TO PLACING FRESH CONCRETE.
11. CHAMFER EXPOSED CORNERS 3/4", UON.

POST-INSTALLED ANCHORS

1. ANCHORS AND INSERTS EXPOSED TO EARTH OR WEATHER MUST BE STAINLESS STEEL, UON. AT OTHER LOCATIONS PROVIDE GALVANIZED ANCHORS IN ACCORDANCE WITH ASTM A153. EMBEDDED DEFORMED REINFORCING BARS MUST BE UNCOATED STEEL.
2. PROVIDE TYPE & SIZE AS INDICATED & EMBED INTO THE EXISTING CONCRETE AS SHOWN IN TABLE 4 - POST-INSTALLED ANCHOR SCHEDULE. VERIFY MINIMUM EFFECTIVE EMBEDDMENT DEPTH WITH THE ANCHOR MANUFACTURER.
3. EXPANSION ANCHORS MUST BE WEDGE TYPE, TORQUE CONTROLLED.
4. ADHESIVE ANCHORS MUST CONSIST OF AN INSERT AND CARTRIDGE TYPE, TWO COMPONENT, EPOXY OR HYBRID ADHESIVE DISPENSED AND MIXED THROUGH A STATIC MIXING NOZZLE PROVIDED BY THE ADHESIVE MANUFACTURER.
5. ANCHORING TO CONCRETE:
   a. MECHANICAL ANCHORS USED IN CONCRETE MUST HAVE BEEN TESTED AND QUALIFIED FOR PERFORMANCE IN CRACKED AND UNCRACKED CONCRETE IN ACCORDANCE WITH ACI 355.2.
   b. ADHESIVE ANCHORS MUST HAVE BEEN TESTED AND QUALIFIED FOR PERFORMANCE IN CRACKED AND UNCRACKED CONCRETE, INCLUDING HORIZONTAL AND OVERHEAD INSTALLATIONS, AND LONG TERM CREEP IN ACCORDANCE WITH ACI 355.4.
6. IDENTIFY POSITION OF REINFORCING STEEL AND OTHER EMBEDDED ITEMS PRIOR TO DRILLING HOLES FOR ANCHORS. EXERCISE CARE IN DRILLING TO AVOID DAMAGING EXISTING REINFORCING OR EMBEDDED ITEMS. NOTIFY THE COR IF REINFORCING STEEL OR OTHER EMBEDDED ITEMS ARE ENCOUNTERED DURING DRILLING.
7. PROVIDE ANCHORS IN DRY HAMMER DRILLED HOLES IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.

OPEN WEB STEEL JOISTS

1. JOIST DESIGN, FABRICATION, AND ERECTION OF OPEN WEB STEEL JOISTS MUST BE PERFORMED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE, LATEST EDITION.
2. ALL BRIDGING, INCLUDING SIZING, SPACING CONNECTIONS, MUST BE DESIGNED BY JOIST DESIGNER IN ACCORDANCE WITH STEEL JOIST INSTITUTE REQUIREMENTS TO RESIST UPLIFT LOADING INDICATED ON DRAWINGS.
3. REFER TO S-102 FOR JOIST LAYOUT AND SHEET S-601 LOADING/DEPTH REQUIREMENTS TO BE USED IN DESIGN OF THE DELEGATED OPEN WEB STEEL JOISTS.
4. REFER TO S-505 FOR TYPICAL JOIST DETAILS INCLUDING END CONNECTION INFORMATION AND CHORD REINFORCEMENT REQUIREMENTS AT CONCENTRATED LOADING.
5. DO NOT CUT HOLES OR NOTCHES IN CHORD AND WEB MEMBERS, UNLESS APPROVED BY JOIST DESIGNER AND COR.
6. DO NOT APPLY TEMPORARY OR PERMANENT LOADS TO JOIST BRIDGING.
7. SHOP DRAWINGS FOR JOISTS AND JOIST ACCESSORIES TO BE PREPARED BY THE JOIST MANUFACTURER'S DETAILS.
8. SUBMIT DESIGN CALCULATIONS FOR REVIEW IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE DESIGN STANDARDS. SUBMIT DESIGN CALCUALTIONS SIGNED AND SEALED BY A PROFESSIONAL LICENSED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED.

STRUCTURAL & MISCELLANEOUS STEEL

1. STRUCTURAL STEEL MUST CONFORM TO THE FOLLOWING, UON:
   a. W & WT SHAPES — ASTM A992
   b. ANGLES & CHANNELS — ASTM S72, GR 50
   c. PLATES & BARS — ASTM 572, GR 50
   d. HSS — ASTM A500, GRADE C
   e. ANCHOR RODS — ASTM F1554, GRADE 36
   f. HIGH STRENGTH BOLTS — ASTM F3125, GRADE A325
   g. TENSION-CONTROL HS BOLTS TYPE 1 — ASTM F3125, GRADE F1852,
   h. DIRECT TENSION INDICATORS — ASTM F959, TYPE 325-1
   i. COMMON GRADE BOLTS — ASTM A307, GRADE A
   j. WELDING ELECTRODES — E70xx
2. GROUT UNDER STEEL BEARING PLATES MUST HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7,000 PSI.
3. FILLET WELDS MUST HAVE A MINIMUM SIZE OF 1/4", UON. INCREASE THE EFFECTIVE THROAT OF THE WELD TO MAINTAIN THE WELD SIZE WHEN PARTS JOINED BY FILLET WELDS ARE SEPARATED. THE ROOT OPENING MUST NOT EXCEED 3/16".
4. BOLTED CONNECTIONS MUST HAVE A MINIMUM OF (2) 3/4" DIAMETER HIGH STRENGTH BOLTS.
5. MEMBERS EXPOSED TO WEATHER MUST BE HOT DIPPED GALVANIZED.
6. PROVIDE ZINC COATED (GALVANIZED) BOLTS, NUTS, AND WASHERS TO CONNECT GALVANIZED STEEL MEMBERS.
7. HIGH STRENGTH BOLTED CONNECTIONS MUST BE PRETENSIONED. CONNECTIONS THAT USE OVERSIZE HOLES OR SLOTTED HOLES IN THE DIRECTION OF THE LOAD MUST BE SLIP CRITICAL.
8. PROVIDE STEEL TO STEEL CONNECTIONS IN ACCORDANCE WITH AISC 360-16. CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS MUST BE DESIGNED BASED ON A BEAM END REACTION OBTAINED FROM THE MAXIMUM UNIFORM LOAD TABLES IN PART 3 (DESIGN OF FLEXURAL MEMBERS). THE END REACTION IS EQUAL TO 1/2 THE TOTAL ALLOWABLE LOAD FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. DETAILED CONNECTIONS ON THE DRAWINGS SUPERCEDE THIS NOTE.
9. DO NOT FIELD CUT STRUCTURAL STEEL MEMBERS WITHOUT THE WRITTEN APPROVAL OF THE COR.
10. DO NOT SPLICE STEEL MEMBERS EXCEPT WHERE SPECIFICALLY DETAILED ON THE DRAWINGS.
11. PROVIDE TEMPORARY SHORING AND BRACING UNTIL THE STRUCTURE IS ALIGNED AND PERMANENT CONNECTIONS HAVE BEEN COMPLETED.

STEEL DECKING

1. ROOF DECK:
   a. CONFORM TO THE REQUIREMENTS OF ASTM A653, Fy = 50 KSI MIN, GALVANIZED G90.
   b. STEEL ROOF DECK MUST BE 1 1/2" HIGH, 20 GAUGE. DECK DESIGN IS BASED ON A THREE SPAN CONDITION. INCREASE DECK THICKNESS IF LESS THAN THREE SPAN CONDITION OR CONSTRUCTION LIVE LOAD EXCEEDS 20 PSF.
   c. THE DECK MUST HAVE THE FOLLOWING MINIMUM PROPERTIES PER FOOT WIDTH:
      $I_p = 0.201\ IN^4$ $I_n = 0.222$ $S_p = 0.234\ IN^3$ $S_n = 0.247\ IN^3$
2. DECK ENDS MUST BEAR AT LEAST 1 1/2" ON STRUCTURAL SUPPORTS. END JOINTS MUST BE BUTTED.
3. CONTINUOUS SHEET METAL CLOSURES ARE REQUIRED AT OPENINGS AND EDGES.
4. ROOF DECK FASTENING:
   a. FASTEN DECK TO EACH SUPPORT WITH 5/8" DIAMETER PUDDLE WELDS. WELD EDGE RIBS OF PANELS AND PROVIDE ADDITIONAL WELDS AT MAXIMUM 12" ON CENTER.
   b. FASTEN SIDE LAPS WITH #10 SELF DRILLING SCREWS AT THE LESSER OF 1/2 OF THE SPAN OR 36" ON CENTER, UON.
   c. FASTEN DECK EDGES TO PERIMETER SIDE SUPPORTS WITH #10 SELF DRILLING SCREWS AT THE LESSER OF 1/2 OF THE SPAN OR 24" ON CENTER, UON.
   d. SECURE DECK ACCESSORIES, SUCH AS CLOSURES AND RIDGE PLATES IN ACCORDANCE WITH SDI STANDARD PRACTICE. FASTENER SPACING MUST NOT EXCEED 12-INCHES.
5. LOADS HUNG FROM DECKING MUST NOT EXCEED 50 POUNDS. PIPES, DUCTS AND EQUIPMENT BENEATH ROOF DECKS MUST BE SUPPORTED BY THE STRUCTURAL STEEL, STEEL JOISTS OR SUPPLEMENTARY MEMBERS THAT ARE DIRECTLY SUPPORTED BY THE STEEL FRAMING. DESIGN AND PROVIDE SUPPLEMENTARY MEMBERS AT NO ADDITIONAL COST.

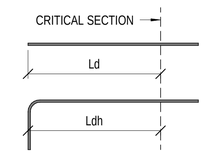
TABLE 2 - CONCRETE MATERIAL SCHEDULE (NORMAL WEIGHT)

ELEMENT	f'c	MAX W/CM RATIO	DRY UNIT WEIGHT	MAX AGGREGATE SIZE	ASTM C33 AGGREGATE CLASS	AIR CONTENT	SLUMP (NOTE 1)	MAXIMUM CHLORIDE CONTENT
FOUNDATIONS	4,500 PSI	0.45	145 PCF	3/4"	4S	5%	4"/8"	0.15%
LEAN CONCRETE FILL	1,000 PSI	--------	145 PCF	3/4"	4S	--------	--------	0.15%
INTERIOR SOG	4,000 PSI	0.55	145 PCF	1 1/2"	4S	3% MAX	4"/8"	0.15%
ARMS ROOM ROOF & WALLS	4,000 PSI	0.55	145 PCF	3/4"	4S	3% MAX	4"/8"	0.15%
OTHER WALLS	4,000 PSI	0.45	145 PCF	3/4"	4S	5%	4"/8"	0.15%

1. MAXIMUM SLUMP OF CONCRETE AT POINT OF PLACEMENT - WITHOUT / WITH HIGH-RANGE WATER-REDUCING ADMIXTURE
2. REFER TO CIVIL FOR CONCRETE SITE WALLS

TABLE 3 - CONCRETE REINF TENSION DEVELOPMENT LENGTHS (INCHES)

BAR SIZE	4,000 PSI					4,500 PSI				
	UNCOATED BARS					UNCOATED BARS				
	Ld				Ldh	Ld				Ldh
	TOP BARS		OTHER BARS		HOOKED BARS	TOP BARS		OTHER BARS		HOOKED BARS
	CASE 1	CASE 2	CASE 1	CASE 2		CASE 1	CASE 2	CASE 1	CASE 2	
#3	19	28	15	22	8	18	27	14	21	7
#4	25	37	19	29	10	24	35	18	27	9
#5	31	47	24	36	12	30	44	23	34	12
#6	37	56	29	43	15	35	53	27	41	14



1. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST BENEATH THE BAR.
2. Ld = THE STRAIGHT BAR DEVELOPMENT LENGTH
3. Ldh = THE HOOKED BAR DEVELOPMENT LENGTH
4. CASE 1: CLEAR SPACING OF BARS DEVELOPED OR SPLICED NOT LESS THAN db, CLEAR COVER NOT LESS THAN db, AND STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM **OR** CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2*db AND CLEAR COVER NOT LESS THAN db
5. CASE 2: REINFORCING BARS THAT DO NOT MEET THE REQUIREMENTS OF CASE 1
6. DEVELOPMENT LENGTHS ONLY APPLY TO THE OPPERATIONS AND SENTRY CONSTRUCTION.

TABLE 4 - POST-INSTALLED ANCHOR SCHEDULE

ANCHORING TO NORMAL WEIGHT CONCRETE

ANCHOR TYPE	ANCHOR DIAMETER/ REBAR SIZE	MINIMUM EFFECTIVE EMBEDMENT, UON	ULTIMATE DESIGN SHEAR CAPACITY (KIP)	ULTIMATE DESIGN TENSILE CAPACITY (KIP)
MECHANICAL	1/2"	3 1/4"	8.4	4.4
	5/8"	4"	13.1	6.6
	3/4"	4 3/4"	19	8.9
ADHESIVE	1/2"	2 3/4"	8.6	3.5
	3/4"	4"	20.4	8.3

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

LAURA ARICO PRESLEY REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106362 STATE OF TENNESSEE 05/19/26 SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026
ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLON FEAD DIRECTOR NEW LONDON, GROTON, CT
SATISFACTORY TO DATE 05/27/2025

DES JH	DRW JT	CHK LP	
PMDM			SMS/CWJ
BRANCH MANAGER			NEK
CHIEF ENG/ARCH			JWJ
FIRE PROTECTION			HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
OPERATIONS
MATERIAL NOTES

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12893958
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FOUNDATIONS AND EARTHWORK

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY JACOBS, DATED 07 FEBRUARY 2025.
2. PLACE FOUNDATIONS ON REINFORCED AND COMPACTED ENGINEERED FILL OVER CEMENTITIOUS RIGID INCLUSIONS (GROUND IMPROVEMENT SYSTEM), REFER TO CIVIL PLANS SHEET B-101, GROUND IMPROVEMENT PLANS FOR ADDITIONAL REQUIREMENTS. GROUND IMPROVEMENT SYSTEM MUST CREATE A FOUNDATION SUBGRADE WITH THE MINIMUM BEARING CAPACITY AS NOTED ON S-002 AND A MAXIMUM ALLOWABLE SETTLEMENT OF 3/4 INCH.
3. FOR SPREAD FOOTING AND MAT FOUNDATIONS CONSTRUCTED OVER COMPACTED NATIVE SOILS, COMPACTED APPROVED GRAVEL BACKFILL MATERIALS, AND BEDROCK, PROVIDE A MINIMUM MODULUS OF SUBGRADE REACTION OF 150 POUNDS PER CUBIC INCH. DESIGN MUST MEET SPECIFIED BEARING AND SETTLEMENT CRITERIA.
4. PROVIDE MEASURES TO PREVENT WATER, FROST OR ICE FROM PENETRATING FOOTING OR SLAB SUBGRADE BEFORE PLACING CONCRETE. FOOTINGS, MUD SLABS, OR BUILDING SLABS MUST NOT BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
5. CONCRETE FOUNDATIONS OR A 3" THICK CONCRETE MUD MAT (LEAN CONCRETE) MUST BE PLACED THE SAME DAY THE SUBGRADE IS INSPECTED. IF THE GROUND SURFACE IS DISTURBED BEFORE CONCRETE IS PLACED, THE SUBGRADE MUST BE RE-INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AT NO ADDITIONAL COST.
6. DESIGN, PROVIDE AND MAINTAIN DEWATERING SYSTEMS, EARTH RETENTION SYSTEMS, BRACING. PROTECT EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION.
7. WHEN FILLING AGAINST OPPOSITE SIDES OF A WALL OR STRUCTURE, BACKFILL IN LIFTS THAT MAINTAIN LEVEL ELEVATIONS WITHIN 12" ON BOTH SIDES TO BALANCE THE LATERAL PRESSURE.
8. EARTHWORK, INCLUDING FOUNDATION SUBGRADE, FILL AND BACKFILL MUST BE INSPECTED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.
9. WHERE EXCAVATION WOULD BE BELOW A LINE EXTENDING UPWARD AT A 1.0 H TO 1.0 V SLOPE FROM THE BOTTOM OF A FOUNDATION OR UTILITY, PROVIDE SHEETING, SHORING, AND BRACING. DO NOT UNDERMINE EXISTING CONSTRUCTION.

CAST-IN-PLACE CONCRETE

1. PROVIDE CAST-IN-PLACE CONCRETE FOR EACH CLASS OF CONCRETE SHOWN IN TABLE 2 - CONCRETE MATERIAL SCHEDULE.
2. CONCRETE REINFORCING:
   a. TYPICAL DEFORMED BARS - ASTM A615, GRADE 60
   b. WELDED DEFORMED BAR ANCHORS - ASTM A706, GRADE 70
   c. PLAIN WELDED WIRE - ASTM A1064, GRADE 65, SUPPLIED IN FLAT SHEETS
3. CONCRETE COVER OVER STEEL REINFORCING, UON:
   a. REINFORCING IN CONCRETE CAST AGAINST & PERMANENTLY IN CONTACT WITH GROUND - 3"
   b. REINFORCING IN CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND AFTER CONCRETE PLACEMENT, INCLUDING ELEMENTS COVERED BY WATERPROOFING OR DAMPPROOFING
      - PRIMARY REINFORCING - 2"
      - STIRRUPS AND TIES - 1 1/2"
   c. REINFORCING IN CONCRETE SLABS AND WALLS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND - 3/4"
   d. REINFORCING IN CONCRETE BEAMS, GIRDERS, COLUMNS AND PEDESTALS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND, COVER TO - 1 1/2"
4. REFER TO TABLE 3 - CONCRETE REINFORCEMENT TENSION DEVELOPMENT LENGTHS FOR Ld.
5. SPLICE REINFORCING BARS PER ACI 318 WITH CLASS B TENSION LAP SPLICES (1.3 TIMES THE DEVELOPMENT LENGTH)
6. LAP SPLICE WWR SHEETS AT LEAST 8" AND TIE SECURELY.
7. DOWELS MUST MATCH SIZE AND SPACING AND BE CLASS B TENSION LAP SPLICED WITH THE MAIN REINFORCEMENT, UON.
8. FIELD BENDING OF REINFORCEMENT IS NOT PERMITTED UNLESS INDICATED ON THE DRAWINGS OR APPROVED IN WRITING BY THE COR. DO NOT HEAT REBAR WITH A TORCH IN THE FIELD.
9. EXCEPT FOR WELDED DEFORMED BAR ANCHORS, DO NOT WELD REINFORCING.
10. WIRE BRUSH, CLEAN, AND COAT CONSTRUCTION JOINTS WITH A BONDING AGENT OR MOISTEN WITH A CEMENT SLURRY SCRUBBED INTO THE JOINT IMMEDIATELY PRIOR TO PLACING FRESH CONCRETE.
11. CHAMFER EXPOSED CORNERS 3/4", UON.

POST-INSTALLED ANCHORS

1. ANCHORS AND INSERTS EXPOSED TO EARTH OR WEATHER MUST BE STAINLESS STEEL, UON. AT OTHER LOCATIONS PROVIDE GALVANIZED ANCHORS IN ACCORDANCE WITH ASTM A153. EMBEDDED DEFORMED REINFORCING BARS MUST BE UNCOATED STEEL.
2. PROVIDE TYPE & SIZE AS INDICATED & EMBED INTO THE EXISTING CONCRETE AS SHOWN IN TABLE 4 - POST-INSTALLED ANCHOR SCHEDULE. VERIFY MINIMUM EFFECTIVE EMBEDDMENT DEPTH WITH THE ANCHOR MANUFACTURER.
3. EXPANSION ANCHORS MUST BE WEDGE TYPE, TORQUE CONTROLLED.
4. ADHESIVE ANCHORS MUST CONSIST OF AN INSERT AND CARTRIDGE TYPE, TWO COMPONENT, EPOXY OR HYBRID ADHESIVE DISPENSED AND MIXED THROUGH A STATIC MIXING NOZZLE PROVIDED BY THE ADHESIVE MANUFACTURER.
5. ANCHORING TO CONCRETE:
   a. MECHANICAL ANCHORS USED IN CONCRETE MUST HAVE BEEN TESTED AND QUALIFIED FOR PERFORMANCE IN CRACKED AND UNCRACKED CONCRETE IN ACCORDANCE WITH ACI 355.2.
   b. ADHESIVE ANCHORS MUST HAVE BEEN TESTED AND QUALIFIED FOR PERFORMANCE IN CRACKED AND UNCRACKED CONCRETE, INCLUDING HORIZONTAL AND OVERHEAD INSTALLATIONS, AND LONG TERM CREEP IN ACCORDANCE WITH ACI 355.4.
6. IDENTIFY POSITION OF REINFORCING STEEL AND OTHER EMBEDDED ITEMS PRIOR TO DRILLING HOLES FOR ANCHORS. EXERCISE CARE IN DRILLING TO AVOID DAMAGING EXISTING REINFORCING OR EMBEDDED ITEMS. NOTIFY THE COR IF REINFORCING STEEL OR OTHER EMBEDDED ITEMS ARE ENCOUNTERED DURING DRILLING.
7. PROVIDE ANCHORS IN DRY HAMMER DRILLED HOLES IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.

STEEL DECKING

1. COMPOSITE DECK:
   a. CONFORM TO THE REQUIREMENTS OF ASTM A653, Fy = 50 KSI MIN, GALVANIZED G90.
   b. STEEL ROOF DECK MUST BE 1 1/2" HIGH, 20 GAUGE. DECK IS DESIGNED BASED ON UNSHORED CONSTRUCTION FOR A TWO SPAN CONDITION. INCREASE DECK THICKNESS OR PROVIDE TEMPORARY SHORING IF LESS THAN TWO SPAN CONDITION OR CONSTRUCTION LIVE LOAD EXCEEDS 20 PSF.
   c. THE STEEL ROOF DECK MUST HAVE THE FOLLOWING MINIMUM PROPERTIES PER FOOT WIDTH:
      $I_p = 0.182\ IN^4$ $S_p = 0.218\ IN^3$ $S_n = 0.226\ IN^3$
2. DECK ENDS MUST BEAR AT LEAST 1 1/2" ON STRUCTURAL SUPPORTS. END JOINTS MUST BE BUTTED.
3. CONTINUOUS SHEET METAL CLOSURES ARE REQUIRED AT SLAB OPENINGS AND EDGES.
4. COMPOSITE DECK FASTENING:
   a. FASTEN DECK TO EACH SUPPORT WITH 5/8" DIAMETER PUDDLE WELDS. WELD EDGE RIBS OF PANELS AND PROVIDE ADDITIONAL WELDS AT MAXIMUM 12" ON CENTER.
   b. FASTEN SIDE LAPS WITH #10 SELF DRILLING SCREWS AT THE LESSER OF 1/2 OF THE SPAN OR 36" ON CENTER, UON.
   c. FASTEN PERIMETER EDGES TO SIDE SUPPORTS WITH #10 SELF DRILLING SCREWS AT THE LESSER OF 1/2 OF THE SPAN OR 24" ON CENTER, UON.
   d. SECURE POUR STOPS, BEAM FILLERS & DECK CLOSURES IN ACCORDANCE WITH SDI STANDARD PRACTICE REQUIREMENTS.
5. LOADS HUNG FROM CEILING DECKING MUST NOT EXCEED 50 POUNDS. DUCTS & PIPES LESS THAN 12 INCHES DIAMETER MAY BE HUNG DIRECTLY FROM ANCHORS CAST OR POST-INSTALLED IN THE CONCRETE SLAB OF COMPOSITE DECKS. PIPES, DUCTS AND EQUIPMENT BENEATH ROOF DECKS AND PIPES AND DUCTS LARGER THAN 12" BENEATH COMPOSITE CONCRETE AND STEEL DECK SLABS MUST BE SUPPORTED BY THE STRUCTURAL STEEL FRAME OR SUPPLEMENTARY MEMBERS THAT ARE DIRECTLY SUPPORTED BY THE STRUCTURAL STEEL FRAMING. DESIGN AND PROVIDE SUPPLEMENTARY MEMBERS AT NO ADDITIONAL COST.

STRUCTURAL & MISCELLANEOUS STEEL

1. STRUCTURAL STEEL MUST CONFORM TO THE FOLLOWING, UON:
   a. W & WT SHAPES — ASTM A992
   b. ANGLES & CHANNELS — ASTM 572, GR 50
   c. PLATES & BARS — ASTM 572. GR 50
   d. HSS — ASTM A500, GRADE C
   e. ANCHOR RODS — ASTM F1554, GRADE 36
   f. HIGH STRENGTH BOLTS — ASTM F3125, GRADE A325
   g. TENSION-CONTROL HS BOLTS — ASTM F3125, GRADE F1852, TYPE 1
   h. DIRECT TENSION INDICATORS — ASTM F959, TYPE 325-1
   i. COMMON GRADE BOLTS — ASTM A307, GRADE A
   j. WELDING ELECTRODES — E70xx
2. GROUT UNDER STEEL BEARING PLATES MUST HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7,000 PSI.
3. FILLET WELDS MUST HAVE A MINIMUM SIZE OF 1/4", UON. INCREASE THE EFFECTIVE THROAT OF THE WELD TO MAINTAIN THE WELD SIZE WHEN PARTS JOINED BY FILLET WELDS ARE SEPARATED. THE ROOT OPENING MUST NOT EXCEED 3/16".
4. BOLTED CONNECTIONS MUST HAVE A MINIMUM OF (2) 3/4" DIAMETER HIGH STRENGTH BOLTS.
5. MEMBERS EXPOSED TO WEATHER MUST BE HOT DIPPED GALVANIZED.
6. PROVIDE ZINC COATED (GALVANIZED) BOLTS, NUTS, AND WASHERS TO CONNECT GALVANIZED STEEL MEMBERS.
7. HIGH STRENGTH BOLTED CONNECTIONS MUST BE PRETENSIONED. CONNECTIONS THAT USE OVERSIZE HOLES OR SLOTTED HOLES IN THE DIRECTION OF THE LOAD MUST BE SLIP CRITICAL.
8. PROVIDE STEEL TO STEEL CONNECTIONS IN ACCORDANCE WITH AISC 360-16. CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS MUST BE DESIGNED BASED ON A BEAM END REACTION OBTAINED FROM THE MAXIMUM UNIFORM LOAD TABLES IN PART 3 (DESIGN OF FLEXURAL MEMBERS). THE END REACTION IS EQUAL TO 1/2 THE TOTAL ALLOWABLE LOAD FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED. DETAILED CONNECTIONS ON THE DRAWINGS SUPERCEDE THIS NOTE.
9. DO NOT FIELD CUT STRUCTURAL STEEL MEMBERS WITHOUT THE WRITTEN APPROVAL OF THE COR.
10. DO NOT SPLICE STEEL MEMBERS EXCEPT WHERE SPECIFICALLY DETAILED ON THE DRAWINGS.
11. PROVIDE TEMPORARY SHORING AND BRACING UNTIL THE STRUCTURE IS ALIGNED AND PERMANENT CONNECTIONS HAVE BEEN COMPLETED.

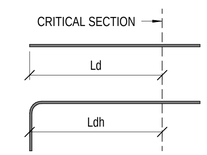
TABLE 2 - CONCRETE MATERIAL SCHEDULE (NORMAL WEIGHT)

ELEMENT	f'c	MAX W/CM RATIO	DRY UNIT WEIGHT	MAX AGGREGATE SIZE	ASTM C33 AGGREGATE CLASS	AIR CONTENT	SLUMP (NOTE 1)	MAXIMUM CHLORIDE CONTENT
FOUNDATIONS	4,500 PSI	0.45	145 PCF	3/4"	4S	5%	4"/8"	0.15%
LEAN CONCRETE FILL	1,000 PSI	--------	145 PCF	3/4"	4S	--------	--------	0.15%
INTERIOR SOG	4,000 PSI	0.55	145 PCF	1 1/2"	4S	3% MAX	4"/8"	0.15%
CONCRETE ON STEEL DECK	4,000 PSI	0.55	145 PCF	3/4"	4S	6%	4"/8"	0.15%
WALLS	4,000 PSI	0.45	145 PCF	3/4"	4S	5%	4"/8"	0.15%

1. MAXIMUM SLUMP OF CONCRETE AT POINT OF PLACEMENT - WITHOUT / WITH HIGH-RANGE WATER-REDUCING ADMIXTURE
2. REFER TO CIVIL FOR CONCRETE SITE WALLS

TABLE 3 - CONCRETE REINF TENSION DEVELOPMENT LENGTHS (INCHES)

BAR SIZE	4,000 PSI					4,500 PSI				
	UNCOATED BARS					UNCOATED BARS				
	Ld				Ldh	Ld				Ldh
	TOP BARS		OTHER BARS		HOOKED BARS	TOP BARS		OTHER BARS		HOOKED BARS
	CASE 1	CASE 2	CASE 1	CASE 2		CASE 1	CASE 2	CASE 1	CASE 2	
#3	19	28	15	22	8	18	27	14	21	7
#4	25	37	19	29	10	24	35	18	27	9
#5	31	47	24	36	12	30	44	23	34	12
#6	37	56	29	43	15	35	53	27	41	14



1. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST BENEATH THE BAR.
2. Ld = THE STRAIGHT BAR DEVELOPMENT LENGTH
3. Ldh = THE HOOKED BAR DEVELOPMENT LENGTH
4. CASE 1: CLEAR SPACING OF BARS DEVELOPED OR SPLICED NOT LESS THAN db, CLEAR COVER NOT LESS THAN db, AND STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM **OR** CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2*db AND CLEAR COVER NOT LESS THAN db
5. CASE 2: REINFORCING BARS THAT DO NOT MEET THE REQUIREMENTS OF CASE 1
6. DEVELOPMENT LENGTHS ONLY APPLY TO THE OPPERATIONS AND SENTRY CONSTRUCTION.

TABLE 4 - POST-INSTALLED ANCHOR SCHEDULE

ANCHORING TO NORMAL WEIGHT CONCRETE

ANCHOR TYPE	ANCHOR DIAMETER/ REBAR SIZE	MINIMUM EFFECTIVE EMBEDMENT, UON	ULTIMATE DESIGN SHEAR CAPACITY (KIP)	ULTIMATE DESIGN TENSILE CAPACITY (KIP)
MECHANICAL	1/2"	3 1/4"	8.4	4.4
	5/8"	4"	13.1	6.6
	3/4"	4 3/4"	19	8.9
ADHESIVE	1/2"	2 3/4"	8.6	3.5
	3/4"	4"	20.4	8.3

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

LAURA ARICO PRESLEY REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106362 STATE OF TENNESSEE 05/19/26 SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

AE INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLON FEAD DIRECTOR NEW LONDON, GROTON, CT

SATISFACTORY TO DATE 05/27/2025

DES	JH	DRW	JT	CHK	LP

PMDM	SMS/CWJ
BRANCH MANAGER	NEK
CHIEF ENG/ARCH	JWJ
FIRE PROTECTION	HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
SENTRY
MATERIAL NOTES

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12894093
SHEET 5 OF 65

S-003

5/18/2026 3:58:18 PM S-003
C:\Users\wwood\Documents\BLDG-1667770-S-BIM_v21_SENTRY_cwood5238.rvt

SITE SPECIFIC DATA*:

1. SITE SPECIFIC WIND DATA:
   - A. SITE SPECIFIC ULTIMATE WIND SPEED: 136 MPH
   - B. EXPOSURE: "C"
   - C. RISK CATEGORY: III

2. SITE SPECIFIC SIESMIC DATA:
   - A. RISK CATEGORY: III
   - B. IMPORTANCE FACTOR: 1.25
   - C. SIESMIC DESIGN CATEGORY: B
   - D. SITE SEISMICITY: SS = 0.19g, S1 = 0.052g
   - E. SITE CLASS: D

3. SNOW DESIGN DATA:
   - A. GROUND SNOW LOAD: 30 PSF
   - B. EXPOSURE FACTOR: 1.0
   - C. IMPORTANCE FACTOR" 1.10
   - D. THERMAL FACTOR: 1.2

4. ENVIRONMENTAL SEVERITY CLASSIFICATION.
   - A. ESC C4

* – SITE SPECIFIC DATA INCLUDED FOR INFORMATION ONLY. REFER TO S–001 FOR PARAMETERS USED IN THE DESIGN AND DEVELOPMENT OF THE STANDARIZED DRAWINGS

SITE SPECIFIC GEOTECHNICAL DATA:

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY JACOBS, DATED 07 FEBRUARY 2025

2. FOUNDATION SYSTEMS:

   FOR SPREAD FOOTINGS AND MAT FOUNDATIONS CONSTRUCTED OVER COMPACTED NATIVE SOILS, COMPACTED APPROVED GRAVEL BACKFILL MATERIALS, AND BEDROCK, PROVIDE A MINIMUM MODULUS OF SUBGRADE REACTION OF 150 POUNDS PER CUBIC INCH. DESIGN MUST MEET SPECIFIED BEARING AND SETTLEMENT CRITERIA. 1

   TYPE G–001

   PLACE FOUNDATIONS ON REINFORCED AND COMPACTED ENGINEERED FILL OVER CEMENTITIOUS RIGID INCLUSIONS (GROUND IMPROVEMENT SYSTEM), REFER TO CIVIL PLANS SHEET B–101, GROUND IMPROVEMENT PLANS FOR ADDITIONAL REQUIREMENTS. GROUND IMPROVEMENT SYSTEM MUST CREATE A FOUNDATION SUBGRADE WITH THE MINIMUM BEARING CAPACITY AS NOTED ON S–001 AND A MAXIMUM ALLOWABLE SETTLEMENT OF 3/4".

   TYPE G–002

   PLACE FOUNDATIONS PARTIALLY ON OVEREXCAVATED AREA USING CRUSHED AGGREGATE OVER BEDROCK AND PARTIALLY ON REINFORCED AND COMPACTED ENGINEERING FILL OVER CEMENTITIOUS REGID INCLUSIONS (GROUND IMPROVEMENT SYSTEM). REFER TO CIVIL PLANS SHEET B–101, GROUND IMPROVEMENT SYSTEM MUST CREATE A FOUNDATION SUBGRADE WITH THE MINIMUM BEARING CAPACITY AS NOTED ON S–001 AND A MAXIMUM ALLOWABLE SETTLEMENT OF 3/4".

3. PROVIDE MEASURES TO PREVENT WATER, FROST OR ICE FROM PENETRATING FOOTING OR SLAB SUBGRADE BEFORE PLACING CONCRETE. FOOTINGS, MUD SLABS, OR BUILDING SLABS MUST NOT BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.

4. CONCRETE FOUNDATIONS OR A 3" THICK CONCRETE MUD MAT (LEAN CONCRETE) MUST BE PLACED THE SAME DAY THE SUBGRADE IS INSPECTED. IF THE GROUND SURFACE IS DISTURBED BEFORE CONCRETE IS PLACED, THE SUBGRADE MUST BE RE–INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AT NO ADDITIONAL COST.

5. DESIGN, PROVIDE AND MAINTAIN DEWATERING SYSTEMS, EARTH RETENTION SYSTEMS, BRACING. PROTECT EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION.

6. WHEN FILLING AGAINST OPPOSITE SIDES OF A WALL OR STRUCTURE, BACKFILL IN LIFTS THAT MAINTAIN LEVEL ELEVATIONS WITHIN 12" ON BOTH SIDES TO BALANCE THE LATERAL PRESSURE.

7. EARTHWORK, INCLUDING FOUNDATION SUBGRADE, FILL AND BACKFILL MUST BE INSPECTED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.

8. WHERE EXCAVATION WOULD BE BELOW A LINE EXTENDING UPWARD AT A 1.0 H TO 1.0 V SLOPE FROM THE BOTTOM OF A FOUNDATION OR UTILITY, PROVIDE SHEETING, SHORING, AND BRACING. DO NOT UNDERMINE EXISTING CONSTRUCTION.

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

LAURA ARICO PRESLEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106363
STATE OF TENNESSEE
05/19/26
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	DRW	CHK
JH	JT	LP

PM/DM	SMS/CWJ
BRANCH MANAGER	NEK
CHIEF ENG/ARCH	JWJ
FIRE PROTECTION	HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
TYPE G MAGAZINE

GENERAL STRUCTURAL NOTES

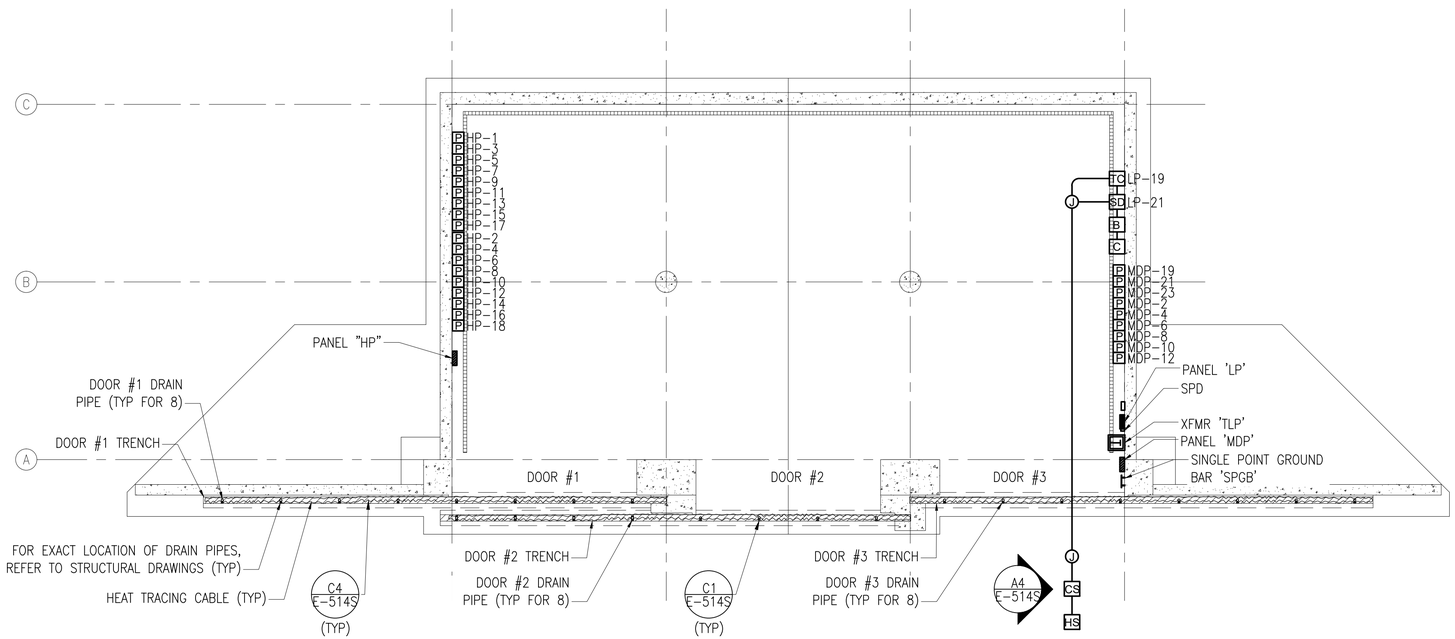
SCALE:
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12894158
SHEET 6 OF 91

S-004S

FILE NAME: C:\pw_workdir\dms003\jhg_hodidba\d1710459\S-0045.dwg LAYOUT NAME: S-0045 PLOTTED: Monday, May 18, 2026 - 3:13pm USER: BODIEBA

SHEET NOTES

1. COORDINATE WITH HEAT TRACE/SNOW MELT MANUFACTURER TO PROVIDE ALL MATERIALS, EQUIPMENT, POWER, AND CONTROLS WIRING FOR A FULLY FUNCTIONAL SYSTEM. SNOW MELT SYSTEM MUST BE CAPABLE OF SENSING TEMPERATURE AND DETECTING MOISTURE ON THE PAVEMENT.
2. HEAT TRACE LOADS FOR DRAIN PIPES ARE BASED ON 8W/LF. SNOWMELT LOAD FOR DOOR TRENCH IS BASED ON 50W/SF. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
3. SNOW MELT AND HEAT TRACE SYSTEMS MUST HAVE MINIMUM 2 YEAR WARRANTY. 1
4. COORDINATE FINAL LOCATION OF ALL HEAT TRACE DEVICES WITH GOVERNMENT PRIOR TO INSTALLATION. LOCATIONS SHOWN ARE DIAGRAMMATIC FOR CIRCUITING PURPOSES ONLY. COORDINATE FINAL ROUTING OF HEAT TRACE CABLES FROM HEAT TRACE POWER BOX TO EACH DOOR TRENCH AND DRAIN PIPES.



A1 ELECTRICAL HEAT TRACE PLAN

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

PLAN NORTH

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

COMMONWEALTH OF VIRGINIA
KELLEY BOURASSA
Lic. No. 0402061759
5/19/2026
PROFESSIONAL ENGINEER
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2025

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAO DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	JP	DRW JP	CHK KB
PM/DM	SMS/CWJ		
BRANCH MANAGER	WRB		
CHIEF ENG/ARCH	JWJ		
FIRE PROTECTION	HPN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
TYPE G MAGAZINE
ELECTRICAL HEAT TRACE PLAN

SCALE: AS SHOWN
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12894235
SHEET 83 OF 91
E-801S

FDZE1628

FILE NAME: C:\pw_workdir\dms0031\kelley.bourassa@jacobs.com\d1711378\E-801S.dwg LAYOUT NAME: E-801S – ELECTRICAL FLOOR PLAN PLOTTED: Monday, May 18, 2026 – 3:16pm USER: BOURASK
E-801S.dwg

THESE DRAWINGS HAVE BEEN ADAPTED FROM APPROVED NAVFAC MUNITIONS STORAGE CONSTRUCTION DOCUMENTS, NAVFAC DRAWING NUMBERS 14145735 TO 14145738, APPROVED BY DDESB ON 24 SEPTEMBER 2024. JACOBS DOR RESPONSIBILITY AND SEAL APPLICABILITY IS LIMITED TO THE SITE ADAPTATIONS AND MODIFICATIONS MADE TO THIS DRAWING.

LEGEND

DC	HIGH SECURITY DOOR SWITCH
K	KEYPAD
M	MOTION DETECTOR, CEILING MOUNTED
M	MOTION DETECTOR, WALL MOUNTED
J	RECESSED JUNCTION BOX
J	SURFACE JUNCTION BOX
IDS	IDS CONTROLLER
IT	IT CABINET
ILD	INTERNAL LOCKING DEVICE

SHEET NOTES

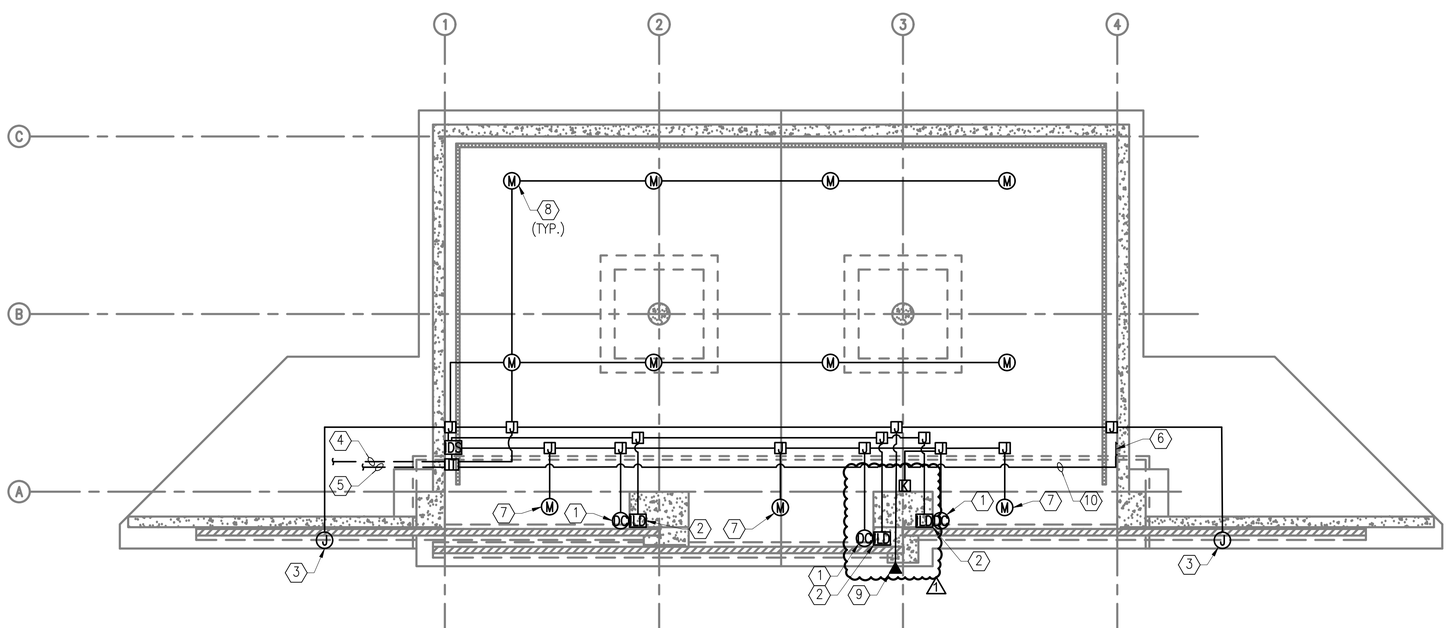
1. ALL CONDUIT MUST BE RIGID GALVANIZED STEEL CONDUIT UNLESS INDICATED OTHERWISE.
2. EXPOSED CONDUITS ON EXTERIOR WALLS MUST BE PROHIBITED.
3. PROPOSED IDS VENDOR TO PERFORM COVERAGE CALCULATIONS, INCLUDING OBSTRUCTIONS, TO VERIFY QUANTITY AND LOCATION OF MOTION DETECTORS. FINAL LOCATIONS AND QUANTITIES OF MOTION DETECTORS TO BE INSTALLED PER IDS VENDOR SHOP DRAWINGS.
4. ALL CONDUITS WILL BE MINIMUM 1"C UNLESS NOTED OTHERWISE. REFER TO T-601 FOR CONDUIT SIZES.
5. CONDUITS WILL BE EXPOSED INSIDE THE MAGAZINE UNLESS INDICATED OTHERWISE. LOCATE CONDUITS AS HIGH AS POSSIBLE AND COORDINATE ROUTING WITH OTHER TRADES. JUNCTION BOXES WILL BE SURFACE MOUNTED.

KEYED NOTES

1. DOOR CONTACT FOR ECM DOOR. COORDINATE WITH DOOR MANUFACTURER FOR EXACT LOCATION AND ROUGH-IN REQUIREMENTS. COORDINATE WITH THE CONTRACTING OFFICER FOR THE CONNECTION OF THE BMS ON THE DOOR.
2. IDS BOLTWORDS SLEEVE IN PILASTER. PROVIDE EMPTY 1" CONDUIT TO IDS PULLBOX FOR WIRING BY GOVERNMENT.
3. RECESSED ROUGH-IN FOR FUTURE CCTV CAMERA. HOMERUN TO IT CABINET. MOUNT 12" ABOVE TOP OF SLIDING MAGAZINE DOOR.
4. EXTEND TWO 1-1/2" CONDUITS TO SITE POLE, LOCATION TO BE DETERMINED THROUGH COORDINATION WITH BASE SSO AND COMM SQUADRON, FOR PoE IP CAMERA AND PoE WIRELESS ACCESS POINT. POLE LOCATION AND CONDUIT ROUTE WILL BE LIMITED BY MAXIMUM CABLE LENGTH OF 295' FROM PATCH PANEL TO DEVICE. REFER TO DETAIL A1/T-501 AND A1/T-601. TO BE PROVIDED WHEN REQUIRED BASED ON CLASSIFICATION OF STORED MATERIALS. COORDINATE WITH CONTRACTING OFFICER. CONDUITS WILL EXIT THE MAGAZINE THROUGH THE SIDE WALL, PENETRATION OF THE FOUNDATION IS NOT PERMITTED.
5. EXTEND TWO 4" CONDUITS TO NEAREST TELECOMM MANHOLE. CONDUITS WILL EXIT THE MAGAZINE THROUGH THE SIDE WALL, PENETRATION OF THE FOUNDATION IS NOT PERMITTED.
6. SINGLE POINT GROUND BAR. REFER TO E-101.
7. MOTION DETECTOR WILL BE INSTALLED 3' FROM THE INSIDE FACE OF THE MAGAZINE DOOR.
8. MOTION DETECTORS WILL BE EVENLY SPACED FOR COVERAGE OF THE ENTIRE INTERIOR SPACE.
9. EXTERIOR EMERGENCY PHONE. REFER TO A3/T-501.
10. TELECOMMUNICATIONS GROUNDING CONDUCTOR IN CONDUIT.

ABBREVIATIONS

BMS	BALANCED MAGNETIC SWITCH
CCTV	CLOSED-CIRCUIT TELEVISION
HSS	HIGH SECURITY SYSTEM
IDS	INTRUSION DETECTION SYSTEM
ILD	INTERNAL LOCKING DEVICE
IT	INFORMATION TECHNOLOGY
PIR	PASSIVE INFRARED SENSOR
POE	POWER OVER ETHERNET
RGC	RIGID GALVANIZED STEEL CONDUIT
WAP	WIRELESS ACCESS POINT



A1 TELECOMMUNICATION FLOOR PLAN
SCALE: 3/32" = 1'-0"

SYM	DESCRIPTION	DATE	APPR.
1	REVISIONS FOR AMENDMENT	5/19/2026	

NAVFAC

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Rene Rubio
BICSI ID #112613
EXPIRES 12-31-26
RCDD 5/19/2026

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	DS	DRW	GC	CHK	KD

PM/DM	SMS/CWJ
BRANCH MANAGER	WRB
CHIEF ENG/ARCH	JWJ
FIRE PROTECTION	HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
MID-ATLANTIC

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT

P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
TYPE G MAGAZINE

SECURITY FLOOR PLAN

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12894241
SHEET 89 OF 91
TY101S

FILE NAME: C:\pw_work\dms\dms0033\jwj_rubioxr\d1708576\TY101S.dwg LAYOUT NAME: TY101S PLOTTED: Monday, May 18, 2026 - 2:28pm USER: RubioXR

SITE SPECIFIC DATA*:

1. SITE SPECIFIC WIND DATA:
   - A. SITE SPECIFIC ULTIMATE WIND SPEED: 136 MPH
   - B. EXPOSURE: "C"
   - C. RISK CATEGORY: III
2. SITE SPECIFIC SEISMIC DATA:
   - A. RISK CATEGORY: III
   - B. IMPORTANCE FACTOR: 1.25
   - C. SEISMIC DESIGN CATEGORY: B
   - D. SITE SEISMICITY: SS = 0.19g, S1 = 0.052g
   - E. SITE CLASS: D
3. SNOW DESIGN DATA:
   - A. GROUND SNOW LOAD: 30 PSF
   - B. EXPOSURE FACTOR: 1.0
   - C. IMPORTANCE FACTOR: 1.10
   - D. THERMAL FACTOR: 1.2
4. ENVIRONMENTAL SEVERITY CLASSIFICATION.
   - A. ESC C4

* - SITE SPECIFIC DATA INCLUDED FOR INFORMATION ONLY. REFER TO S-001 FOR PARAMETERS USED IN THE DESIGN AND DEVELOPMENT OF THE STANDARDIZED DRAWINGS

SITE SPECIFIC GEOTECHNICAL DATA:

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY JACOBS, DATED 07 FEBRUARY 2025.
2. FOUNDATION SYSTEMS:

   FOR SPREAD FOOTINGS AND MAT FOUNDATIONS CONSTRUCTED OVER COMPACTED NATIVE SOILS, COMPACTED APPROVED GRAVEL BACKFILL MATERIALS, AND BEDROCK, PROVIDE A MINIMUM MODULUS OF SUBGRADE REACTION OF 150 POUNDS PER CUBIC INCH. DESIGN MUST MEET SPECIFIED BEARING AND SETTLEMENT CRITERIA. 1

   CLWS-001, CLWS-002, CLWS-003, CLWS-004, CLWS-005:
   PLACE FOUNDATIONS ON REINFORCED AND COMPACTED ENGINEERED FILL OVER CEMENTITIOUS RIGID INCLUSIONS (GROUND IMPROVEMENT SYSTEM), REFER TO CIVIL PLANS SHEET B-101, GROUND IMPROVEMENT PLANS FOR ADDITIONAL REQUIREMENTS. GROUND IMPROVEMENT SYSTEM MUST CREATE A FOUNDATION SUBGRADE WITH THE MINIMUM BEARING CAPACITY AS NOTED ON S-001 AND A MAXIMUM ALLOWABLE SETTLEMENT OF 3/4 INCH.

   CLWS-006
   PLACE FOUNDATIONS ON OVEREXCAVATED AREA USING CRUSHED AGGREGATE OVER BEDROCK. REFER TO CIVIL PLANS SHEET B-101 FOR ADDITIONAL INFORMATION.
3. PROVIDE MEASURES TO PREVENT WATER, FROST OR ICE FROM PENETRATING FOOTING OR SLAB SUBGRADE BEFORE PLACING CONCRETE. FOOTINGS, MUD SLABS, OR BUILDING SLABS MUST NOT BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE.
4. CONCRETE FOUNDATIONS OR A 3" THICK CONCRETE MUD MAT (LEAN CONCRETE) MUST BE PLACED THE SAME DAY THE SUBGRADE IS INSPECTED. IF THE GROUND SURFACE IS DISTURBED BEFORE CONCRETE IS PLACED, THE SUBGRADE MUST BE RE-INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AT NO ADDITIONAL COST.
5. DESIGN, PROVIDE AND MAINTAIN DEWATERING SYSTEMS, EARTH RETENTION SYSTEMS, BRACING. PROTECT EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION.
6. WHEN FILLING AGAINST OPPOSITE SIDES OF A WALL OR STRUCTURE, BACKFILL IN LIFTS THAT MAINTAIN LEVEL ELEVATIONS WITHIN 12" ON BOTH SIDES TO BALANCE THE LATERAL PRESSURE.
7. EARTHWORK, INCLUDING FOUNDATION SUBGRADE, FILL AND BACKFILL MUST BE INSPECTED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.
8. WHERE EXCAVATION WOULD BE BELOW A LINE EXTENDING UPWARD AT A 1.0H TO 1.0V SLOPE FROM THE BOTTOM OF A FOUNDATION OR UTILITY, PROVIDE SHEETING, SHORING, AND BRACING. DO NOT UNDERMINE EXISTING CONSTRUCTION.

CODES AND STANDARDS:

American Concrete Institute (ACI)
301 (2016) Specifications for Structural Concrete
318 (2014) Building Code Requirements for Structural Concrete

American Institute of Steel Construction (AISC)
360 (2016) Specification for Structural Steel Buildings

American Society for Testing and Materials (ASTM)
A29 (2020) Standard Specification for General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought
A500 (2020) Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
A572 (2018) Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
A615 (2020) Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
A992 (2020) Standard Specification for Structural Steel Shapes
A1064 (2018) Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
F1554 (2018) Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
F3125 (2020) Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength

American Society of Civil Engineers (ASCE)
7-16 (2016) Minimum Design Loads and Associated Criteria for Buildings and Other Structures

American Society Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
62.1 (2016) Ventilation for Acceptable Indoor Air Quality
F16 (2017) Fundamentals Chapter 16 – Ventilation and Infiltration

Department of Defense (DoD)
5100.76 (2012) Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives

International Code Council (ICC)
IBC (2018) International Building Code
IMC (2018) International Mechanical Code
IPC (2018) International Plumbing Code

National Fire Protection Association (NFPA)
70 National Electrical Code
780 Stand

SYM	DESCRIPTION	DATE	APPR.
1	REVISIONS FOR AMENDMENT	05/15/2026	

NAVFAC

LAURA ARICO PRESLEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106362
STATE OF TENNESSEE
05/19/26
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH CLOUCODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

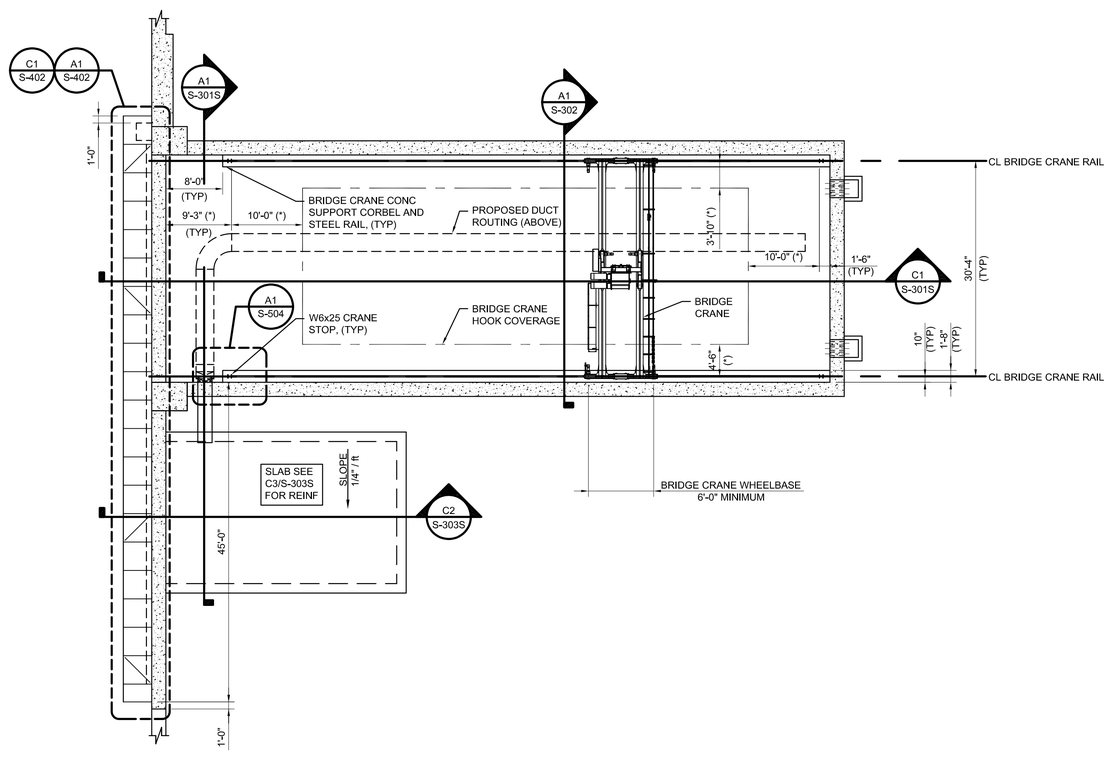
DES	SB	DRW	JC	CHK	LAP

PM/DM SMS/CWJ
BRANCH MANAGER NEK
CHIEF ENG/ARCH JWJ
FIRE PROTECTION HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
CLWS MAGAZINE
GENERAL NOTES - 3

SCALE: NONE
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12894249
SHEET 6 OF 77
S-004S

FILE NAME: C:\pw_workdir\dms003\jmg_bodidba\d1495963\S-0045.dwg LAYOUT NAME: S-0045 PLOTTED: Monday, May 18, 2026 – 2:20pm USER: BODIEBA



A2 BRIDGE CRANE AND CANOPY FRAMING PLAN
SCALE: 3/32" = 1'-0"

0 8' 16' 32'

SHEET NOTES

1. ALL ELEVATIONS ARE IN REFERENCE TO A DATUM ELEVATION OF 0'-0" FOR THE MAGAZINE FINISHED FLOOR ELEVATION. SEE CIVIL DRAWINGS FOR ACTUAL ELEVATIONS.

2. SEE SHEETS S-001, S-002, S-003, AND S-004S FOR GENERAL NOTES.

3. DIMENSIONS, ELEVATIONS, OR OTHER INFORMATION DESIGNATED WITH AN (*) MUST BE VERIFIED WITH SELECTED EQUIPMENT DIMENSION, REQUIRED CLEARANCES AND HOOK HEIGHTS.

4. BRIDGE CRANE MUST COMPLY WITH UFGS 41 22 13.14 AND MEET THE FOLLOWING REQUIREMENTS. 1
   - A. 25 TON CAPACITY
   - B. DOUBLE-GIRDER SYSTEM
   - C. MAXIMUM WHEEL LOAD = 37K
   - D. MINIMUM WHEELBASE = 6FT
   - E. MAXIMUM TOTAL WEIGHT = 40K
   - F. MAXIMUM HOIST AND TROLLEY WEIGHT = 10K
   - G. CMAA 70 CLASS D SERVICE
   - H. HOOK AND CRANE CLEARANCE REQUIREMENTS ON THIS SHEET AND ON A1/ S-302

5. BRIDGE CRANE RAIL MUST BE CONSTRUCTED TO RUNWAY TOLERANCES IN ACCORDANCE WITH CMAA SPECIFICATION #70. SEE DETAIL C4 ON SHEET S-303S. RAIL SPLICES AND SPLICE CONNECTIONS TO BE SELECTED AND LOCATED BY BRIDGE CRANE RAIL MANUFACTURER.

6. BRIDGE CRANE HOOK MUST BE SIZED TO APPROPRIATELY INTERFACE WITH CROSBY SHACKLE G213/S213, NOMINAL - SIZE 1 3/4", WORKING LOAD LIMIT 25 TON.

THESE DRAWINGS ARE AN EXACT REPLICA OF THE STANDARD MAGAZINE TYPE "CLWS" PROVIDED BY NAVFAC. THE DESIGN WILL BE SITE ADAPTED AND MODIFIED TO MEET THE SPECIFIC GEOTECHNICAL AND LOADING CONDITIONS SPECIFIC TO NAVAL SUBMARINE BASE NEW LONDON, GROTON, CONNECTICUT.

ORIGINAL STANDARD DRAWING IS NAVFAC DRAWING NUMBER 12877615 SHT 6 OF 51

SYM	DESCRIPTION	DATE	APPR.
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

LAURA ARICO PRESLEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106362
STATE OF TENNESSEE
05/19/26
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

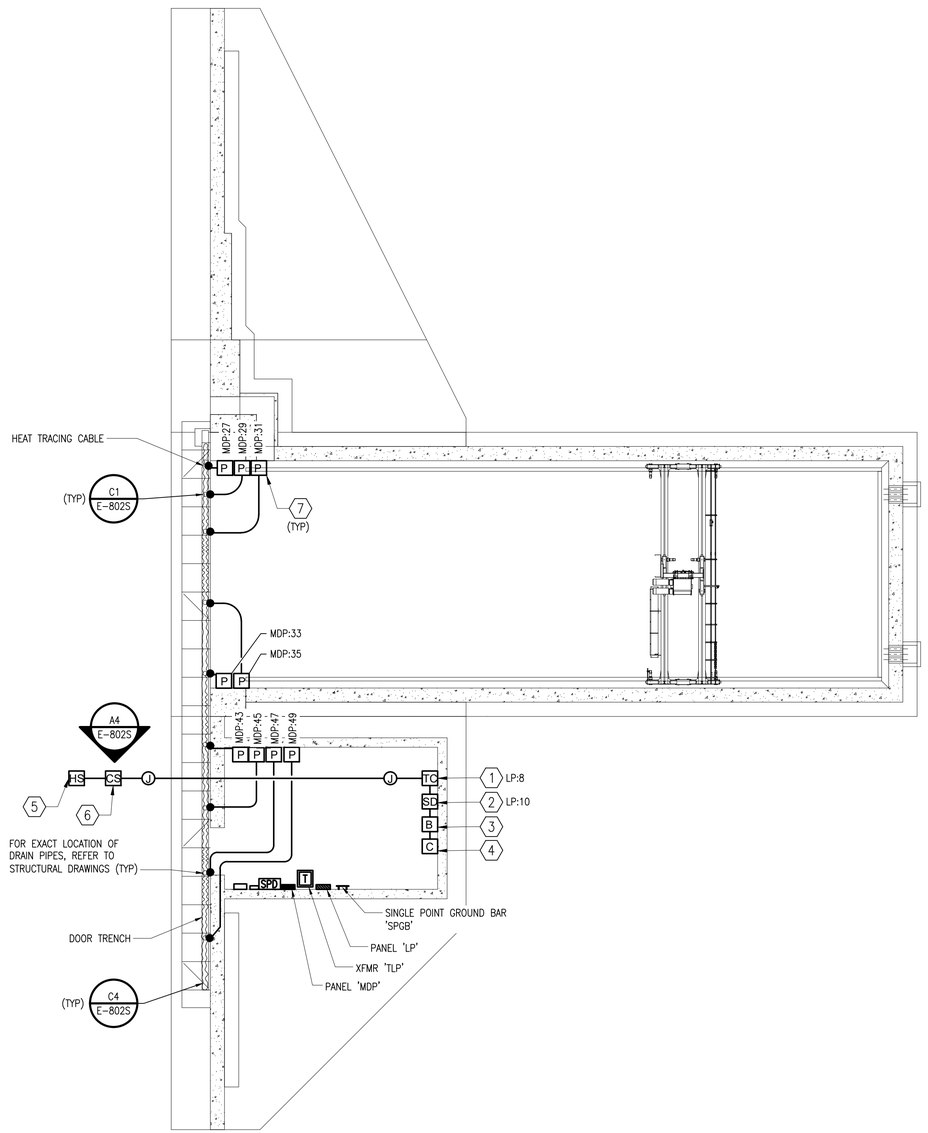
APPROVED:
FOR COMMANDER NAVFAC 5/27/2026
ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT
SATISFACTORY TO DATE 05/27/2025

DES JAF	DRW SFF	CHK TPH	
PM/DM	SMS/CWJ		
BRANCH MANAGER	NEK		
CHIEF ENG/ARCH	JWJ		
FIRE PROTECTION	HPN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
CLWS MAGAZINE
BRIDGE CRANE AND CANOPY FRAMING PLAN

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12894253
SHEET 10 OF 77
S-102

FILE NAME: C:\pw_workdir\dms0037\jaf_bodieba\d1495963\S-102.dwg LAYOUT NAME: S-102 PLOTTED: Monday, May 18, 2026 - 2:37pm USER: BODIEBA



A1 ELECTRICAL HEAT TRACE PLAN

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

PLAN NORTH

SHEET NOTES

1. COORDINATE WITH HEAT TRACE/SNOW MELT MANUFACTURER TO PROVIDE ALL MATERIALS, EQUIPMENT, POWER, AND CONTROLS WIRING FOR A FULLY FUNCTIONAL SYSTEM. SNOW MELT SYSTEM MUST BE CAPABLE OF SENSING TEMPERATURE AND DETECTING MOISTURE ON THE PAVEMENT.
2. HEAT TRACE LOADS FOR DRAIN PIPES ARE BASED ON 8W/LF. SNOWMELT LOAD FOR DOOR TRENCH IS BASED ON 50W/SF. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
3. SNOW MELT AND HEAT TRACE SYSTEMS MUST HAVE MINIMUM 2 YEAR WARRANTY. 1
4. COORDINATE FINAL LOCATION OF ALL HEAT TRACE DEVICES WITH GOVERNMENT PRIOR TO INSTALLATION. LOCATIONS SHOWN ARE DIAGRAMMATIC FOR CIRCUITING PURPOSES ONLY. COORDINATE FINAL ROUTING OF HEAT TRACE CABLES FROM HEAT TRACE POWER BOX TO DOOR TRENCH AND EACH DRAIN PIPE.

KEYED NOTES

1. TEMPERATURE CONTROL PANEL.
2. AUTOMATIC SNOW DETECTOR CONTROL PANEL.
3. BYPASS SWITCH.
4. CONTACTOR.
5. HEAT SENSOR EMBEDDED IN PAVEMENT.
6. COLD SENSOR EMBEDDED IN PAVEMENT.
7. HEAT TRACING POWER BOX.

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

COMMONWEALTH OF VIRGINIA
KELLEY BOURASSA
Lic. No. 0402061759
5/19/2026
PROFESSIONAL ENGINEER
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY:
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	JP	DRW	JP	CHK	KB
PM/DM					SMS/CWJ
BRANCH MANAGER					WRB
CHIEF ENG/ARCH					JWJ
FIRE PROTECTION					HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
CLWS MAGAZINE
ELECTRICAL HEAT TRACE PLAN

SCALE: AS SHOWN
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12894310
SHEET 67 OF 77
E-801S

FDZE1628

FILE NAME: C:\pw_work\dms003\kelley.bourassa@jacobs.com\d1771381\E-801S.dwg LAYOUT NAME: E101B – ELECTRICAL FLOOR PLAN PLOTTED: Monday, May 18, 2026 – 3:15pm USER: BOURASK

SITE SPECIFIC DATA*:

1. SITE SPECIFIC WIND DATA:
   - A. SITE SPECIFIC ULTIMATE WIND SPEED: 136 MPH
   - B. EXPOSURE: "C"
   - C. RISK CATEGORY: III

2. SITE SPECIFIC SIESMIC DATA:
   - A. RISK CATEGORY: III
   - B. IMPORTANCE FACTOR: 1.25
   - C. SIESMIC DESIGN CATEGORY: B
   - D. SITE SEISMICITY: SS = 0.19g
     S1 = 0.052g
   - E. SITE CLASS: D

3. SNOW DESIGN DATA:
   - A. GROUND SNOW LOAD: 30 PSF
   - B. EXPOSURE FACTOR: 1.0
   - C. IMPORTANCE FACTOR" 1.10
   - D. THERMAL FACTOR: 1.2

4. ENVIRONMENTAL SEVERITY CLASSIFICATION.
   - A. ESC C4

* – SITE SPECIFIC DATA INCLUDED FOR INFORMATION ONLY. REFER TO S-001 FOR PARAMETERS USED IN THE DESIGN AND DEVELOPMENT OF THE STANDARIZED DRAWINGS

SITE SPECIFIC GEOTECHNICAL DATA:

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY JACOBS, DATED 07 FEBRUARY 2025

2. FOUNDATION SYSTEMS:

   FOR SPREAD FOOTINGS AND MAT FOUNDATIONS CONSTRUCTED OVER COMPACTED NATIVE SOILS, COMPACTED APPROVED GRAVEL BACKFILL MATERIALS, AND BEDROCK, PROVIDE A MINIMUM MODULUS OF SUBGRADE REACTION OF 150 POUNDS PER CUBIC INCH. DESIGN MUST MEET SPECIFIED BEARING AND SETTLEMENT CRITERIA. 1

   TYPE H-001

   PLACE FOUNDATIONS PARTIALLY ON OVEREXCAVATED AREA USING CRUSHED AGGREGATE OVER BEDROCK. REFER TO CIVIL PLANS SHEET B-101, FOR ADDITIONAL INFORMATION.

3. PROVIDE MEASURES TO PREVENT WATER, FROST OR ICE FROM PENETRATING FOOTING OR SLAB SUBGRADE BEFORE PLACING CONCRETE. FOOTINGS, MUD SLABS, OR BUILDING SLABS MUST NOT BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.

4. CONCRETE FOUNDATIONS OR A 3" THICK CONCRETE MUD MAT (LEAN CONCRETE) MUST BE PLACED THE SAME DAY THE SUBGRADE IS INSPECTED. IF THE GROUND SURFACE IS DISTURBED BEFORE CONCRETE IS PLACED, THE SUBGRADE MUST BE RE-INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AT NO ADDITIONAL COST.

5. DESIGN, PROVIDE AND MAINTAIN DEWATERING SYSTEMS, EARTH RETENTION SYSTEMS, BRACING. PROTECT EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION.

6. WHEN FILLING AGAINST OPPOSITE SIDES OF A WALL OR STRUCTURE, BACKFILL IN LIFTS THAT MAINTAIN LEVEL ELEVATIONS WITHIN 12" ON BOTH SIDES TO BALANCE THE LATERAL PRESSURE.

7. EARTHWORK, INCLUDING FOUNDATION SUBGRADE, FILL AND BACKFILL MUST BE INSPECTED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.

8. WHERE EXCAVATION WOULD BE BELOW A LINE EXTENDING UPWARD AT A 1.0 H TO 1.0 V SLOPE FROM THE BOTTOM OF A FOUNDATION OR UTILITY, PROVIDE SHEETING, SHORING, AND BRACING. DO NOT UNDERMINE EXISTING CONSTRUCTION.

SYM	DESCRIPTION	DATE	APPR.
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

LAURA ARICO PRESLEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 106362
STATE OF TENNESSEE
05/19/26
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH CLOUGODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	DRW	CHK
JH	JT	LP

PM/DM	SMS/CWJ
BRANCH MANAGER	NEK
CHIEF ENG/ARCH	JWJ
FIRE PROTECTION	HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
TYPE H MAGAZINE

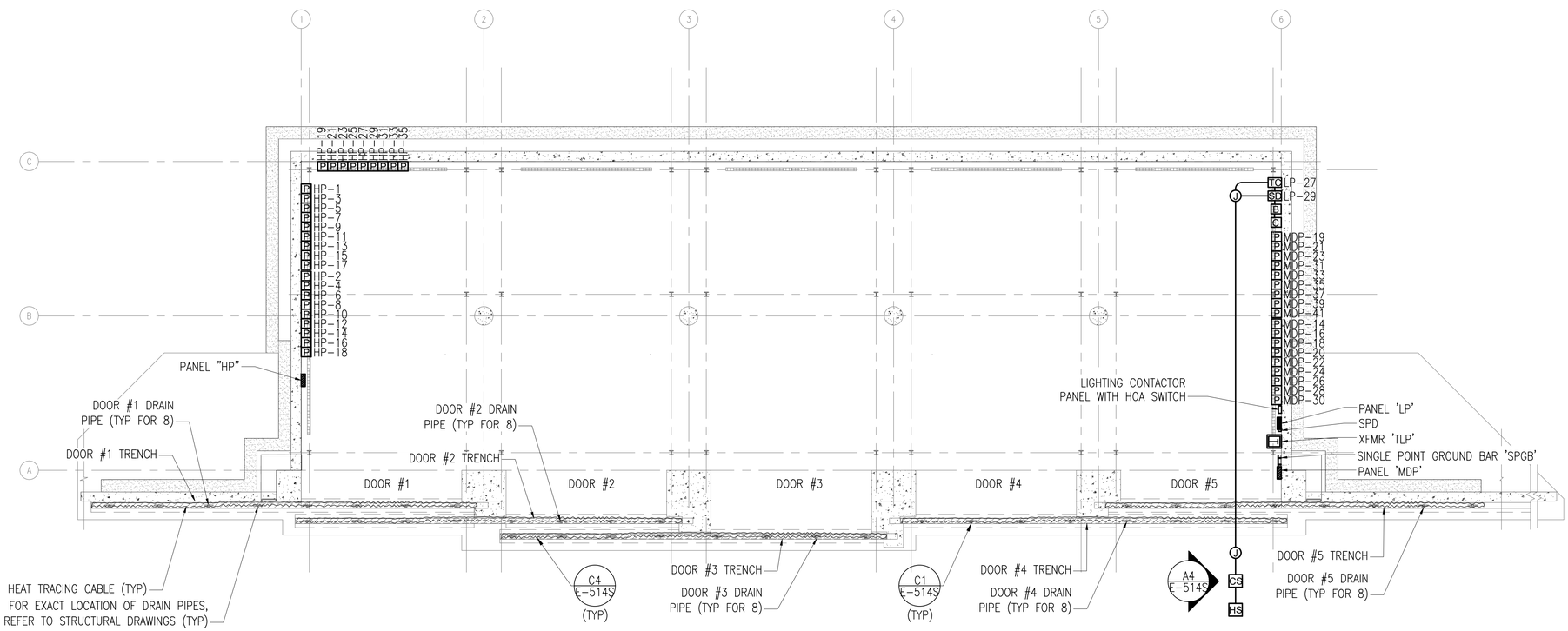
GENERAL NOTES

SCALE:
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12921239
SHEET 8 OF 85
S-006S

FILE NAME: C:\pw_workdir\dms003\jrg_bodieba\d1702377\S-006S.dwg LAYOUT NAME: S-006S PLOTTED: Monday, May 18, 2026 - 2:46pm USER: BODIEBA

SHEET NOTES

1. COORDINATE WITH HEAT TRACE/SNOW MELT MANUFACTURER TO PROVIDE ALL MATERIALS, EQUIPMENT, POWER, AND CONTROLS WIRING FOR A FULLY FUNCTIONAL SYSTEM. SNOW MELT SYSTEM MUST BE CAPABLE OF SENSING TEMPERATURE AND DETECTING MOISTURE ON THE PAVEMENT.
2. HEAT TRACE LOADS FOR DRAIN PIPES ARE BASED ON 8W/LF. SNOWMELT LOAD FOR DOOR TRENCH IS BASED ON 50W/SF. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
3. SNOW MELT AND HEAT TRACE SYSTEMS MUST HAVE MINIMUM 2 YEAR WARRANTY. (1)
4. COORDINATE FINAL LOCATION OF ALL HEAT TRACE DEVICES WITH GOVERNMENT PRIOR TO INSTALLATION. LOCATIONS SHOWN ARE DIAGRAMMATIC FOR CIRCUITING PURPOSES ONLY. COORDINATE FINAL ROUTING OF HEAT TRACE CABLES FROM HEAT TRACE POWER BOX TO EACH DOOR TRENCH AND DRAIN PIPES.



A1 ELECTRICAL HEAT TRACE PLAN

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

SYM	DESCRIPTION	DATE	APPR
1	REVISIONS FOR AMENDMENT	05/19/2026	

NAVFAC

COMMONWEALTH OF VIRGINIA
KELLEY BOURASSA
Lic. No. 0402061759
5/19/2026
PROFESSIONAL ENGINEER
SEAL

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600
A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	JP	DRW	JP	CHK	KB
PM/DM					SMS/CWJ
BRANCH MANAGER					WRB
CHIEF ENG/ARCH					JWJ
FIRE PROTECTION					HPN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
MID-ATLANTIC

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION - NORFOLK, VA
NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT
P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
TYPE H MAGAZINE

ELECTRICAL HEAT TRACE PLAN

SCALE: AS SHOWN
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12921308
SHEET 77 OF 85

E-801S

FDZE1628

FILE NAME: C:\pw_workdir\pw003\kelley.bourassa@jacobs.com\d171379\E-801S.dwg LAYOUT NAME: E-101 - ELECTRICAL FLOOR PLAN PLOTTED: Monday, May 18, 2026 - 3:17pm USER: BOURASK

THESE DRAWINGS HAVE BEEN ADAPTED FROM APPROVED NAVFAC MUNITIONS STORAGE CONSTRUCTION DOCUMENTS, NAVFAC DRAWING NUMBERS 14138857 TO 14138860, APPROVED BY DDESB ON 24 SEPTEMBER 2024. JACOBS DOR RESPONSIBILITY AND SEAL APPLICABILITY IS LIMITED TO THE SITE ADAPTATIONS AND MODIFICATIONS MADE TO THIS DRAWING.

LEGEND

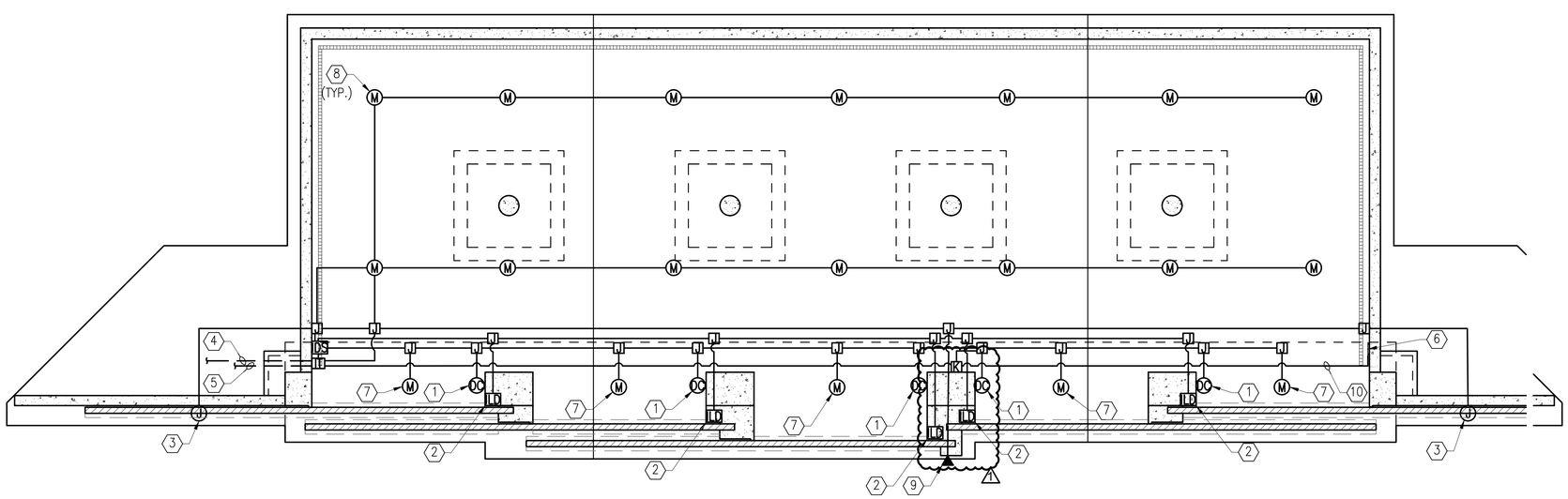
DC	HIGH SECURITY DOOR SWITCH
K	KEYPAD
M	MOTION DETECTOR, CEILING MOUNTED
M	MOTION DETECTOR, WALL MOUNTED
J	RECESSED JUNCTION BOX
J	SURFACE JUNCTION BOX
IDS	IDS CONTROLLER
IT	IT CABINET
ILD	INTERNAL LOCKING DEVICE

SHEET NOTES

1. ALL CONDUIT MUST BE RIGID GALVANIZED STEEL CONDUIT UNLESS INDICATED OTHERWISE.
2. EXPOSED CONDUITS ON EXTERIOR WALLS MUST BE PROHIBITED.
3. PROPOSED IDS VENDOR TO PERFORM COVERAGE CALCULATIONS, INCLUDING OBSTRUCTIONS, TO VERIFY QUANTITY AND LOCATION OF MOTION DETECTORS. FINAL LOCATIONS AND QUANTITIES OF MOTION DETECTORS TO BE INSTALLED PER IDS VENDOR SHOP DRAWINGS.
4. ALL CONDUITS WILL BE MINIMUM 1"C UNLESS NOTED OTHERWISE. REFER TO T-601 FOR CONDUIT SIZES.
5. CONDUITS WILL BE EXPOSED INSIDE THE MAGAZINE UNLESS INDICATED OTHERWISE. LOCATE CONDUITS AS HIGH AS POSSIBLE AND COORDINATE ROUTING WITH OTHER TRADES. JUNCTION BOXES WILL BE SURFACE MOUNTED.

KEYED NOTES

1. DOOR CONTACT FOR ECM DOOR. COORDINATE WITH DOOR MANUFACTURER FOR EXACT LOCATION AND ROUGH-IN REQUIREMENTS. COORDINATE WITH THE CONTRACTING OFFICER FOR THE CONNECTION OF THE BALANCED MAGNETIC SWITCH (BMS) ON THE DOOR.
2. ILD BOLTWORKS SLEEVE IN PILASTER. PROVIDE EMPTY 1" CONDUIT TO IDS PULLBOX FOR WIRING BY GOVERNMENT.
3. RECESSED ROUGH-IN FOR FUTURE CCTV CAMERA. HOMERUN TO IT CABINET. MOUNT 12" [31] ABOVE TOP OF SLIDING MAGAZINE DOOR.
4. EXTEND TWO 1-1/2" CONDUITS TO SITE POLE, LOCATION TO BE DETERMINED THROUGH COORDINATION WITH BASE SSO AND COMM SQUADRON, FOR PoE IP CAMERA AND PoE WIRELESS ACCESS POINT. POLE LOCATION AND CONDUIT ROUTE WILL BE LIMITED BY MAXIMUM CABLE LENGTH OF 295' [90M] FROM PATCH PANEL TO DEVICE. REFER TO DETAIL A1/T-501 AND A1/T601. CONDUIT WILL EXIT THE MAGAZINE THROUGH THE SIDE WALL, PENETRATION OF THE FOUNDATION IS NOT PERMITTED.
5. EXTEND TWO 4" CONDUITS TO NEAREST TELECOMM MANHOLE. CONDUITS WILL EXIT THE MAGAZINE THROUGH THE SIDE WALL, PENETRATION OF THE FOUNDATION IS NOT PERMITTED.
6. SINGLE POINT GROUND BAR. REFER TO E-101.
7. MOTION DETECTOR WILL BE INSTALLED 3' [92] FROM THE INSIDE FACE OF THE MAGAZINE DOOR.
8. MOTION DETECTORS WILL BE EVENLY SPACED FOR COVERAGE OF THE ENTIRE INTERIOR SPACE.
9. EXTERIOR EMERGENCY PHONE. REFER TO A3/T-501.
10. TELECOMMUNICATIONS BONDING BACKBONE CONDUCTOR IN CONDUIT.



A1 TELECOMMUNICATION FLOOR PLAN
SCALE: 3/32" = 1'-0"

0 8' 16' 32'

ABBREVIATIONS

BMS	BALANCED MAGNETIC SWITCH
CCTV	CLOSED-CIRCUIT TELEVISION
HSS	HIGH SECURITY SWITCH
IDS	INTRUSION DETECTION SYSTEM
ILD	INTERNAL LOCKING DEVICE
IT	INFORMATION TECHNOLOGY
PIR	PASSIVE INFRARED SENSOR
POE	POWER OVER ETHERNET
RGC	RIGID GALVANIZED STEEL CONDUIT
WAP	WIRELESS ACCESS POINT

SYM	DESCRIPTION	DATE	APPR.
1	REVISIONS FOR AMENDMENT	5/19/2026	

NAVFAC

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Rene Rubio
BICSI ID #112613
EXPIRES 12-31-26
RCDD 3/19/2026

Jacobs
1100 NORTH GLEBE ROAD
SUITE 500
ARLINGTON, VIRGINIA 22201
571.218.1000
FAX: 571.218.1600

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 5/27/2026

ACTIVITY
APPROVED BY LCDR ELIZABETH OLOKODE NAVFAC NLOD FEAD DIRECTOR NEW LONDON, GROTEN, CT

SATISFACTORY TO DATE 05/27/2025

DES	DS	DRW GC	CHK KD
PM/DM	SMS/CWJ		
BRANCH MANAGER	WRB		
CHIEF ENG/ARCH	JWJ		
FIRE PROTECTION	HPN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MID-ATLANTIC

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VA

NAVAL SUBMARINE BASE NEW LONDON
GROTON, CONNECTICUT

P-1102 WEAPONS MAGAZINE & ORDNANCE OPERATIONS FACILITY
TYPE H MAGAZINE

SECURITY FLOOR PLAN

SCALE: AS NOTED
EPROJECT NO.: 1667770
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12921314
SHEET 83 OF 85

TY101S

FILE NAME: C:\pw_work\dms\dms0033\jrg_rubioxr\d1708577\TY101S.dwg LAYOUT NAME: TY101S PLOTTED: Monday, May 18, 2026 - 2:29pm USER: RubioXR