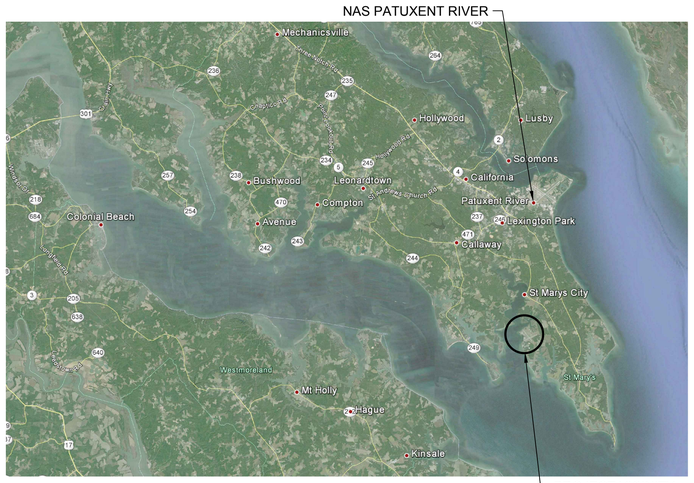
BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

WEBSTER FIELD, NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MARYLAND



PLAN NORTH

VICINITY MAP

NOT TO SCALE

PLAN NORTH

LOCATION MAP

NOT TO SCALE

ISSUE FOR CONSTRUCTION
MARCH 18, 2016

MDE PROJECT NO. 16-SF-0128

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES GLH	DRW NTG	CHK GLH

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

COVER SHEET

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078285
SHEET 1 OF 180

G-001

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:

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SHEET NO.	DRAWING NAME	NAVFAC NUMBER	SHEET NAME
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APPR	DATE	DESCRIPTION	SYM

NAVFAC

SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

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DES	GLH	DRW	NTG	CHK	GLH

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

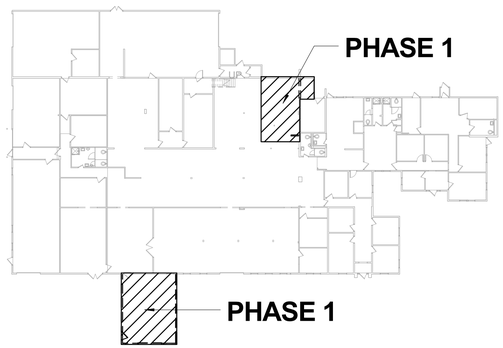
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
WEBSTER FIELD, NAS PATUXENT RIVER
NAVAL FACILITIES ENGINEERING COMMAND
ST. INIGOES, MD
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD
BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION
INDEX OF DRAWINGS

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078286
SHEET 2 OF 180

G-002

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:



PLAN NORTH

LEVEL 1 - PHASE 1 - DEMOLITION

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

PHASING NOTES - DEMOLITION - PHASE 1:

STRUCTURAL

1. DEMOLISH ROOF FRAMING, WALLS AND STRUCTURAL STEEL FRAMING FROM PRE-ENGINEERED METAL BUILDING ADDITION.
2. SAWCUT EXISTING MASONRY JOINT AND INSTALL NEW LOOSE STEEL ANGLE LINTELS ON BOTH FACES OF EXISTING CMU WALL. SAWCUT AND REMOVE PORTION OF EXISTING CMU WALL BELOW NEW LINTEL.

ARCHITECTURAL

1. DEMOLISH ROOF SYSTEM, EXTERIOR WALL SYSTEM AND INTERIOR STAIR AND RAILINGS FROM PRE-ENGINERED METAL BUILDING ADDITION.
2. DEMOLISH EXISTING WINDOWS AND DOORS FROM PRE-ENGINEERED METAL BUILDING ADDITION.
3. DEMOLISH EXISTING WALL BETWEEN MACHINING AREA AND SPRINKLER AND AIR COMPRESSOR ROOM.

INTERIORS / SPACE PLANNING

1. DEMOLISH INTERIOR FINISHES FROM PRE-ENGINEERED METAL BUILDING ADDITION.
2. DEMOLISH INTERIOR FINISHES ON WALL BETWEEN MACHINING AREA AND SPRINKLER AND AIR COMPRESSOR ROOM.
3. RELOCATE WOODWORKING AREA TO ADJACENT BUILDING 8108. ONCE WOODWORKING AREA IS VACATED, RELOCATE EQUIPMENT IN BENDING AREA TO THE FORMER WOODWORKING AREA.
4. RELOCATE MACHINING EQUIPMENT IN AREA OF NEW PHASE 1 ELECTRICAL ROOM TO THE FORMER WOODWORKING AREA.
5. CONTRACTOR TO RELOCATE ALL EQUIPMENT AND MACHINERY TO DESIGNATED TEMPORARY OR FINAL LOCATION.
6. ALL FREESTANDING FURNITURE, APPLIANCES, ANCILLARY OFFICE EQUIPMENT AND OTHER NON-PERMANENT COMPONENTS ASSOCIATED WITH THE OFFICE ADMINISTRATION AREA WILL BE REMOVED OR RELOCATED BY THE GOVERNMENT.
7. GOVERNMENT TO HANDLE PACKING AND MOVING OF ALL PERSONAL ITEMS.

FIRE ALARM

1. DEMOLISH EXISTING FIRE ALARM COMPONENTS WITHIN AREAS INDICATED.
2. AFTER NEW FIRE ALARM PANEL IS OPERATIONAL, DISCONNECT REMAINING EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES FROM EXISTING FIRE ALARM PANEL.

FIRE SUPPRESSION

1. DEMOLISH EXISTING DRY-PIPE SYSTEM PROTECTING PRE-ENGINEERED METAL BUILDING ADDITION AT SOUTH SIDE OF BUILDING (BENDING - SHEET METAL AREA). THIS SHALL INCLUDE ALL ASSOCIATED COMPONENTS BACK TO THE BASE OF THE SYSTEM RISER.
2. REMOVE ALL SYSTEM PIPING NOT BEING RE-USED WITHIN RENOVATED AREAS. MAINTAIN OPERABILITY OF EXISTING SYSTEM OUTSIDE OF THE CURRENT PHASE.

PLUMBING

1. DEMOLISH COMPRESSED AIR LINES AND DOMESTIC WATER LINES AS REQUIRED.

MECHANICAL

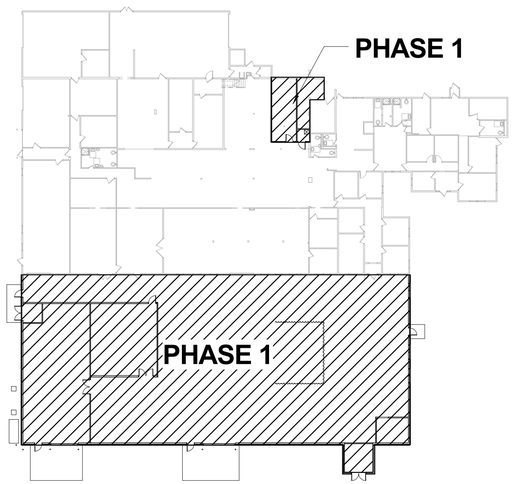
1. DEMOLISH EXISTING AHU-9 AND ASSOCIATED DUCTWORK.
2. DEMOLISH EXISTING ACCU-1.
3. DEMOLISH EXISTING HOT WATER UNIT HEATER AND CAP PIPING AT THE MAIN.
4. DEMOLISH SUPPLY DUCT RUNOUTS FROM AHU-4 IN PHASE 1 AREA AND CAP.
5. RELOCATE EXISTING 7.5 TON CONDENSING UNIT ACCU-2 FOR 7.5 TON INDOOR AIR HANDLING UNIT AHU-2 OUTSIDE OF PHASE 1 CONSTRUCTION AREA FOR CONTINUED OPERATION IN PHASE 1.
6. PROVIDE TEMPORARY HVAC FOR RELOCATED WOODWORKING AREA RELOCATED TO ADJACENT BUILDING 8108. PROVIDE A TOTAL OF 10 TONS COOLING CAPACITY AT 400 CFM PER TON FOR THE SPACE AND A TOTAL 550 CFM OF TOTAL OUTSIDE AIR. ALLOW FOR MINIMAL DUCTWORK DISTRIBUTION INCLUDING 50' OF 24" CENTRAL SPIRAL DUCT AND 10 SIDEWALL DIFFUSERS AT 400 CFM EACH.

ELECTRICAL

1. EXISTING PANELS FEEDING EXISTING EQUIPMENT SHALL REMAIN UNTIL LOADS HAVE BEEN TRANSFERRED TO NEW BUSDUCT / PANEL SYSTEM. DEMOLISH EQUIPMENT FEEDERS COMPLETE UPON TRANSFER OF LOAD; COORDINATE EXACT PIECES OF EQUIPMENT WITH OWNER.
2. DEMOLISH ALL EXISTING ELECTRICAL DEVICES AND RACEWAYS IN WALLS TO BE DEMOLISHED COMPLETE BACK TO PANEL.

TELECOMMUNICATIONS

1. DEMOLISH ALL EXISTING TELECOMMUNICATION DEVICES AND RACEWAYS IN WALLS TO BE DEMOLISHED COMPLETE BACK TO PANEL. SUBMIT REQUEST TO REMOVE POWER FROM THE COMMUNICATION LINES PRIOR TO EXISTING LINES BEING DEMOLISHED. COORDINATE THROUGH THE NAVAIR NATIONAL HELP DESK 301-342-3104.



PLAN NORTH

LEVEL 1 - PHASE 1 - NEW WORK

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

PHASING NOTES - NEW WORK - PHASE 1:

GENERAL

1. GENERAL CONTRACTOR IS REQUIRED TO PROVIDE A THREE (3) WEEK NOTIFICATION TO THE GOVERNMENT PRIOR TO THE MOVEMENT OF ANY EQUIPMENT. GOVERNMENT WILL COORDINATE ACTUAL RELOCATION AND SET-UP OF EQUIPMENT.

STRUCTURAL

1. INSTALL NEW MASONRY FOUNDATION WALLS SUPPORTED ON CAST-IN-PLACE CONCRETE STRIP FOOTINGS AROUND PERIMETER OF ADDITION.
2. INSTALL NEW MASONRY FOUNDATION WALLS SUPPORTED ON CAST-IN-PLACE CONCRETE STRIP FOOTINGS BELOW PROPOSED SHEAR WALLS WITHIN ADDITION.
3. INSTALL NEW STEEL BEAMS AND COLUMNS SUPPORTED ON SPREAD FOOTINGS WITHIN NEW ADDITION.
4. INSTALL NEW CAST-IN-PLACE CONCRETE SLAB ON GRADE OVER VAPOR BARRIER AND 6" COMPACTED GRAVEL.
5. INSTALL NEW THICKENED SLAB BELOW PROPOSED LOAD BEARING WALL WITHIN EXISTING BUILDING.
6. INSTALL LOAD-BEARING COLD FORMED STEEL WALLS.
7. INSTALL METAL DECKING AND COLD FORMED STEEL ROOF TRUSSES.
8. INSTALL EXTERIOR CAST-IN-PLACE CONCRETE STAIRS AND RAMPS AROUND NEW ADDITION.

ARCHITECTURAL

1. INSTALL EXTERIOR CLADDING SYSTEM OVER NEW COLD FORMED STEEL WALLS AT NEW ADDITION.
2. INSTALL MODIFIED BITUMINOUS ROOFING SYSTEM OVER NEW COLD FORMED STEEL ROOF TRUSSES AT NEW ADDITION.
3. INSTALL NEW WINDOWS AND DOORS (INTERIOR AND EXTERIOR).
4. INSTALL TEMPORARY WEATHER-TIGHT WALL AT ROOF GABLE END BETWEEN NEW ADDITION AND EXISTING BUILDING.
5. INSTALL INTERIOR PARTITION WALLS WITH THE EXCEPTION OF THE FOLLOWING: WALLS AROUND CHEMICAL TREATING ROOM, WALL BETWEEN CARPENTRY AND WOOD STORAGE / TOOL ROOMS, WALL BETWEEN WOOD STORAGE AND TOOL ROOMS, WALL BETWEEN METAL STORAGE AND WOOD STORAGE / TOOL ROOMS, UNISEX BATH / SHOWER WALLS, AND BRANCH HEAD OFFICE WALLS.
6. INSTALL NEW WALLS AND FINISHES AT THE FIRE PROTECTION ROOM, ELECTRICAL ROOM AND JANITOR'S CLOSET.

INTERIORS / SPACE PLANNING

1. INSTALL INTERIOR FINISHES AT NEW WALLS AND FLOORS.
2. AT COMPLETION OF PHASE 1 CONSTRUCTION, RELOCATE ADMINISTRATIVE OFFICE SPACE INTO NEW ADDITION (LOCATE IN FUTURE WOODWORKING, TOOLS, WOOD STORAGE, AND METAL STORAGE AREAS. SEE SHEET AJ101A TEMPORARY CONDITIONS PLAN PHASE 2.
3. CONFIRM, COORDINATE AND PROVIDE THE NECESSARY POWER/DATA IN THE TEMPORARY LOCATION FOR THE RELOCATION OF THE ADMINSTRATIVE OFFICE SPACES, EQUIPMENT, AND MACHINERY NEEDS.
4. CONTRACTOR TO RELOCATE ALL EQUIPMENT AND MACHINERY TO DESIGNATED TEMPORARY OR FINAL LOCATION.
5. ALL FREESTANDING FURNITURE, APPLIANCES, ANCILLARY OFFICE EQUIPMENT AND OTHER NON-PERMANENT COMPONENTS ASSOCIATED WITH THE OFFICE ADMINISTRATION AREA WILL BE REMOVED OR RELOCATED BY THE GOVERNMENT.
6. GOVERNMENT TO HANDLE PACKING AND MOVING OF ALL PERSONAL ITEMS.

FIRE ALARM

1. INSTALL FIRE ALARM CONTROL PANEL AND CONNECTION TO BASE REPORTING SYSTEM.
2. INSTALL NEW FIRE ALARM COMPONENTS IN NEW WORK AREAS.
3. CONNECT EXISTING FIRE ALARM COMPONENTS IN AREAS OUTSIDE THE LIMITS OF DEMOLITION TO NEW FIRE ALARM CONTROL PANEL. PROVIDE TEMPORARY ADDRESSIBLE INPUT MODULES TO MONITOR EXISTING CONVENTIONAL INITIATING DEVICES.

FIRE SUPPRESSION

1. INSTALL NEW SPRINKLER SYSTEMS IN RENOVATED AREAS.
2. PROVIDE RPZ BACKFLOW PREVENTER AND NEW WET AND DRY SYSTEM RISERS SIZED TO ACCOMODATE FINAL SYSTEM DESIGN AFTER ALL PHASES ARE COMPLETED. CONNECT NEW RISERS TO EXISTING UNDERGROUND FIRE MAIN.
3. CONNECT EXISTING SPRINKLER SYSTEM PIPING TO NEW SPRINKLER MAINS TO MAINTAIN OPERABILITY OF SYSTEMS IN EXISTING AREAS. OBSERVE EXISTING PIPE SCHEDULE OF EXISTING SYSTEM FOR NEW PIPING SERVING EXISTING MAINS AND BRANCH LINES.

PLUMBING

1. PROVIDE TEMPORARY CONNECTIONS FOR COMPRESSED AIR AND DOMESTIC WATER TO MAINTAIN SERVICE TO THE REMAINING BUILDING EQUIPMENT.
2. PROVIDE ROUGH-IN FOR JANITOR SINK TO BE COMPLETED IN PHASE 3 ALONG WITH ADJACENT MEN'S ROOM.
3. PROVIDE UNDERGROUND SANITARY TO SERVE RESTROOM SANITARY AND WATER JET FLOOR DRAINS. TIE INTO NEW SANITARY DURING PHASE 2.
4. RELOCATED WATER SERVICE INTO FIRE PROTECTION ROOM AND PROVIDE NEW BACKFLOW PREVENTER.

MECHANICAL

1. PROVIDE NEW ROOFTOP AIR HANDLING UNITS RTU-1, 2, AND 3 AND ASSOCIATED DUCTWORK AND CONTROLS.
2. PROVIDE DUCTLESS SPLIT SYSTEM FOR ELECTRICAL ROOM, DSS-1A/B.
3. PROVIDE TEMPORARY CONDITIONING FOR AREA SERVED BY ACCU-1/AHU-1.
4. PROVIDE DUCTLESS SPLIT SYSTEM FOR FIRE ROOM, SS-2A/B.
5. PROVIDE NEW ROOFTOP DEDICATED OUTSIDE AIR SYSTEM, DOAS-3 AND ASSOCIATED CONTROL AND DUCTWORK.
6. PROVIDE NEW ROOFTOP EXHAUST FAN, EF-4 FOR WOODWORKING AREA AND ASSOCIATED CONTROLS AND INTERLOCKS AND DUCTWORK.

ELECTRICAL

1. INSTALL NEW BUSDUCT BDH & BDL.
2. INSTALL NEW PANELS DP, LP, EM1, M, FP, L1 AND L2.
3. INSTALL NEW ATS.
4. INSTALL NEW TRANSFORMER T1.
5. INSTALL NEW SERVICE DISCONNECT, CT CABINET AND AMI METER AT THE EXTERIOR WALL ON THE NEW ELECTRICAL ROOM.
6. INSTALL NEW FEEDER CONDUITS AND CABLES. CONNECT TO NEW BUSDUCTS, TRANSFORMER AND DISCONNECTS.
7. INSTALL AND CONNECT NEW POWER AND LIGHTING DEVICES SHOWN IN PHASE 1 AREA.

TELECOMMUNICATIONS

1. INSTALL AND CONNECT NEW AUXILIARY DEVICES SHOWN IN PHASE 1 AREA.
2. CONTRACTOR SHALL COORDINATE, PROVIDE AND CONNECT TEMPORARY CABLE TO ALL EQUIPMENT AND WORKBENCHES.

APPR	DATE	DESCRIPTION	SYM

NAVFAC

COMMONWEALTH OF VIRGINIA
JOHN B. ANDERSON III
Lic. No. 015146
3/18/2016
ARCHITECT

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

A/E INFO

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ACTIVITY

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CHIEF ENG/ARCH

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NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

PHASING PLANS AND NOTES - PHASE 1

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078287
SHEET	3 OF 180

GC101

DRAWFORM REVISION: 10 MAY 2014

FILE NAME: C:\Revit_Projects\86314_A_Central_jbanderson@burnsmcd.com.rvt

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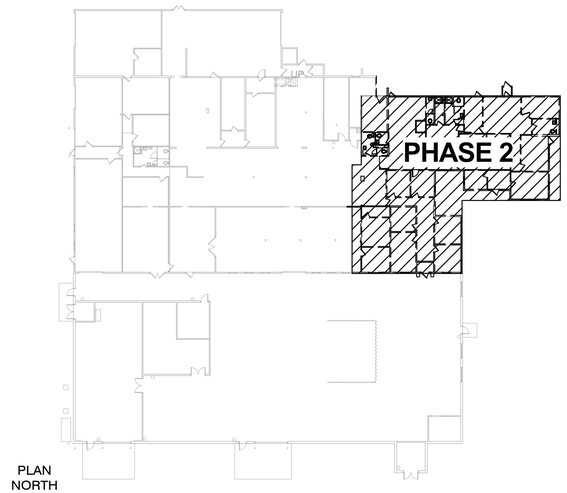


PLAN NORTH

LEVEL 1 - PHASE 2 - DEMOLITION

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

PHASING NOTES - DEMOLITION - PHASE 2:

STRUCTURAL

1. DEMOLISH ROOF FRAMING, WOOD STUD WALLS, AND POSTS DOWN TO FOUNDATION.
2. SAWCUT AND REMOVE PORTION OF EXISTING CONCRETE SLAB TO ALLOW INSTALLATION OF NEW INTERIOR STEEL COLUMN AND CONCRETE SPREAD FOOTING.
3. DEMOLISH TOP 8" OF MASONRY FOUNDATION WALL ALONG SECTION OF EXISTING FOUNDATION WALL WHERE BUILDING FOOTPRINT IS EXPANDED TO ALLOW NEW CONCRETE SLAB TO BE PLACED OVER TOP OF REMAINING PORTION OF EXISTING FOUNDATION WALL.

ARCHITECTURAL

1. DEMOLISH EXISTING EXTERIOR WALL BETWEEN EXISTING BUILDING AND NEW ADDITION COMPLETED IN PHASE 1.
2. DEMOLISH ROOF SYSTEM, EXTERIOR WALL SYSTEM, INTERIOR PARTIONS, CEILINGS AND PLUMBING FIXTURES.
3. DEMOLISH EXISTING WINDOWS AND DOORS.

INTERIORS / SPACE PLANNING

1. DEMOLISH INTERIOR FINISHES.
2. AT THE START OF PHASE 2 CONSTRUCTION, RELOCATE ADMINISTRATIVE OFFICE SPACE INTO NEW ADDITION (LOCATE IN FUTURE WOODWORKING, TOOLS, WOOD STORAGE, AND METAL STORAGE AREAS. SEE SHEET AJ101A TEMPORARY CONDITIONS PLAN PHASE 2
3. CONFIRM, COORDINATE AND PROVIDE THE NECESSARY POWER/DATA IN THE TEMPORARY LOCATION FOR THE RELOCATION OF THE ADMINSTRATIVE OFFICE SPACES, EQUIPMENT, AND MACHINERY NEEDS.
4. CONTRACTOR TO RELOCATE ALL EQUIPMENT AND MACHINERY TO DESIGNATED TEMPORARY OR FINAL LOCATION.
5. ALL FREESTANDING FURNITURE, APPLIANCES, ANCILLARY OFFICE EQUIPMENT AND OTHER NON-PERMANENT COMPONENTS ASSOCIATED WITH THE OFFICE ADMINISTRATION AREA WILL BE REMOVED OR RELOCATED BY THE GOVERNMENT.
6. GOVERNMENT TO HANDLE PACKING AND MOVING OF ALL PERSONAL ITEMS.

FIRE ALARM

1. DEMOLISH EXISTING FIRE ALARM COMPONENTS WITHIN AREAS INDICATED. MAINTAIN OPERABILITY OF EXISTING SYSTEM OUTSIDE OF THE CURRENT PHASE.
2. REMOVE EXISTING FIRE ALARM CONTROL PANEL.

FIRE SUPPRESSION

1. REMOVE ALL SYSTEM PIPING NOT BEING RE-USED WITHIN RENOVATED AREAS. MAINTAIN EXISTING SYSTEM OUTSIDE OF THE CURRENT PHASE.

PLUMBING

1. DEMOLISH EXISTING DOMESTIC WATER SERVICE.
2. DEMOLISH ALL EXISTING PLUMBING IN PHASE 2 AREAS.

MECHANICAL

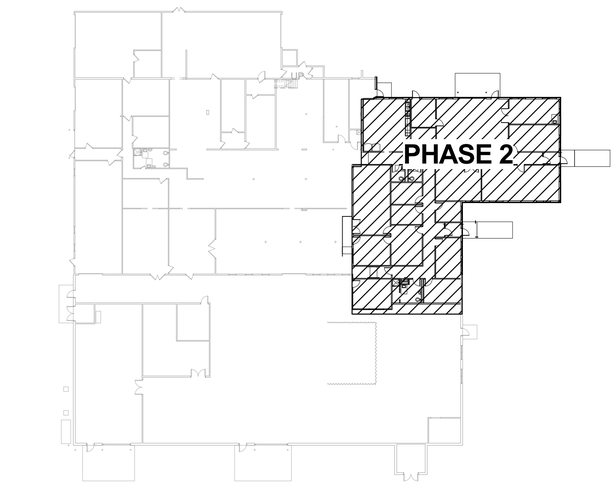
1. DEMOLISH EXISTING AHU-3 AND 10, RTU-2 AND 3, AND ASSOCIATED DUCTWORK.
2. DEMOLISH EXISTING BOILER AND ALL ASSOCIATED PIPING IN THE PHASE 1 AND 2 AREAS.
3. DEMOLISH EXISTING HOT WATER UNIT HEATERS AND BASEBOARD HEATERS.

ELECTRICAL

1. EXISTING PANELS FEEDING EXISTING EQUIPMENT SHALL REMAIN UNTIL LOADS HAVE BEEN TRANSFERRED TO NEW BUSDUCT / PANEL SYSTEM. DEMOLISH EQUIPMENT FEEDERS COMPLETE UPON TRANSFER OF LOAD; COORDINATE EXACT PIECES OF EQUIPMENT WITH OWNER.
2. DEMOLISH ALL EXISTING ELECTRICAL DEVICES AND RACEWAYS IN WALLS TO BE DEMOLISHED COMPLETE BACK TO PANEL.

TELECOMMUNICATIONS

1. DEMOLISH ALL EXISTING TELECOMMUNICATION DEVICES AND RACEWAYS IN WALLS TO BE DEMOLISHED COMPLETE BACK TO PANEL. SUBMIT REQUEST TO REMOVE POWER FROM THE COMMUNICATION LINES PRIOR TO EXISTING LINES BEING DEMOLISHED. COORDINATE THROUGH THE NAVAIR NATIONAL HELP DESK 301-342-3104.
2. CONTRACTOR SHALL PROTECT EXISTING INCOMING COPPER AND FIBER FEEDER CABLES UNTIL THE NEW POP ROOM IS READY AND THEY CAN BE RELOCATED AND TERMINATED.
3. EXISTING NMCI AND RDT&E CABINETS SHALL BE MOVED TO THE PHASE 3 SHOP AREA TEMPORARILY. PROVIDE TEMPORARY RDT&E CONNECTIONS TO THE SHOP EQUIPMENT AS REQUIRED. PROVIDE TEMPORARY 20A CIRCUIT FOR EACH SWITCH.
4. ALL COMMUNICATION OUTAGES SHALL BE DONE AS WEEKEND WORK TO MINIMIZE SHOP DOWNTIME.



PLAN NORTH

LEVEL 1 - PHASE 2 - NEW WORK

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

PHASING NOTES - NEW WORK - PHASE 2:

GENERAL

1. GENERAL CONTRACTOR IS REQUIRED TO PROVIDE A THREE (3) WEEK NOTIFICATION TO THE GOVERNMENT PRIOR TO THE MOVEMENT OF ANY EQUIPMENT. GOVERNMENT WILL COORDINATE ACTUAL RELOCATION AND SET-UP OF EQUIPMENT.

STRUCTURAL

1. INSTALL NEW MASONRY FOUNDATION WALLS SUPPORTED ON CAST-IN-PLACE CONCRETE STRIP FOOTINGS TIED INTO EXISTING FOOTINGS WHERE NEW CONSTRUCTION EXTENDS BEYOND EXISTING BUILDING FOOTPRINT.
2. INSTALL NEW STEEL BEAMS AND COLUMNS SUPPORTED ON SPREAD FOOTINGS.
3. INSTALL NEW CAST-IN-PLACE CONCRETE SLAB ON GRADE OVER VAPOR BARRIER AND 6" COMPACTED GRAVEL WITHIN AREAS WHERE NEW CONSTRUCTION EXTENDS BEYOND EXISTING BUILDING FOOTPRINT.
4. INSTALL LOAD BEARING COLD FORMED STEEL WALLS.
5. INSTALL METAL DECKING AND COLD FORMED STEEL ROOF TRUSSES.
6. INSTALL EXTERIOR CAST-IN-PLACE CONCRETE RAMPS.

ARCHITECTURAL

1. INSTALL EXTERIOR CLADDING SYSTEM OVER NEW COLD FORMED STEEL WALLS.
2. INSTALL MODIFIED BITUMINOUS ROOFING SYSTEM OVER NEW COLD FORMED STEEL ROOF TRUSSES.
3. INSTALL NEW WINDOWS AND DOORS (INTERIOR AND EXTERIOR).
4. INSTALL TEMPORARY WEATHER-TIGHT WALL AT ROOF GABLE END BETWEEN NEW ROOFAND EXISTING BUILDING.
5. INSTALL INTERIOR PARTITION WALLS, CEILINGS, AND PLUMBING FIXTURES (INCLUDING UNISEX BATH AND SHOWER AND BRANCH HEAD OFFICE, LOCATED IN THE PHASE 1 ADDITION AREA).

INTERIORS / SPACE PLANNING

1. INSTALL INTERIOR FINISHES AT NEW WALLS, FLOORS AND CEILINGS.
2. AT COMPLETION OF PHASE 2 CONSTRUCTION, RELOCATE ADMINISTRATIVE OFFICES IN COMPLETED AREAS OF PHASE 2 (PERMANANT LOCATION). RELOCATE MACHINING AREAS, CHEMICAL TREATING AREA, AND BREAK-DOWN AND ASSEMBLY AREAS INTO PHASE 1 ADDITION AREA. SEE SHEET AJ101B TEMPORARY CONDITIONS PLAN PHASE 3.
3. CONFIRM, COORDINATE AND PROVIDE THE NECESSARY POWER/DATA IN THE TEMPORARY LOCATION FOR THE RELOCATION OF THE ADMINSTRATIVE OFFICE SPACES, EQUIPMENT, AND MACHINERY NEEDS.
4. CONTRACTOR TO RELOCATE ALL EQUIPMENT AND MACHINERY TO DESIGNATED TEMPORARY OR FINAL LOCATION.
5. ALL FREESTANDING FURNITURE, APPLIANCES, ANCILLARY OFFICE EQUIPMENT AND OTHER NON-PERMANENT COMPONENTS ASSOCIATED WITH THE OFFICE ADMINISTRATION AREA WILL BE REMOVED OR RELOCATED BY THE GOVERNMENT.
6. GOVERNMENT TO HANDLE PACKING AND MOVING OF ALL PERSONAL ITEMS.

FIRE ALARM

1. PROVIDE TEMPORARY CONNECTIONS TO EXISTING FIRE ALARM DEVICES AND APPLIANCES TO MAINTAIN FUNCTIONALITY OF EXISTING FIRE ALARM.
2. INSTALL NEW FIRE ALARM COMPONENTS IN NEW WORK AREAS.

FIRE SUPPRESSION

1. INSTALL NEW SPRINKLER SYSTEMS IN RENOVATED AREAS.
2. CONNECT EXISTING SPRINKLER SYSTEM PIPING TO NEW SPRINKLER MAINS TO MAINTAIN OPERABILITY OF SYSTEMS IN EXISTING AREAS. OBSERVE EXISTING PIPE SCHEDULE OF EXISTING SYSTEM FOR NEW PIPING SERVING EXISTING MAINS AND BRANCH LINES.

PLUMBING

1. PROVIDE TEMPORARY CONNECTIONS FOR COMPRESSED AIR AND DOMESTIC WATER TO MAINTAIN SERVICE TO THE REMAINING BUILDING EQUIPMENT.
2. PROVIDE NEW UNDER-SLAB SANITARY PIPING TO SUPPORT THE PHASE 2 AREA TO THE EXISTING BUILDING SANITARY CONNECTION ON THE WEST CORNER OF THE BUILDING.
3. TIE IN THE PHASE 1 SANITARY PIPING.

MECHANICAL

1. PROVIDE NEW ROOFTOP DEDICATED OUTSIDE AIR SYSTEM, DOAS-1 FOR ADMIN AREAS.
2. PROVIDE NEW VARIABLE REFRIGERANT FLOW (VRF) SYSTEM FOR ADMIN AREAS.
3. PROVIDE NEW DUCTLESS SPLIT SYSTEM SS-3A/B FOR POP ROOM.
4. PROVIDE NEW DUCTLESS SPLIT SYSTEM SS-4A/B FOR ADDITIVE MANUFACTURING ROOM.

ELECTRICAL

1. INSTALL NEW PANELS TPP.
2. INSTALL AND CONNECT NEW POWER AND LIGHTING DEVICES SHOWN IN PHASE 2 AREA.

TELECOMMUNICATIONS

1. INSTALL NEW NMCI AND 19" OPEN RACK. COORDINATE WITH NMCI PROVIDER TO RELOCATE EXISTING FIBER AND COPPER TO NEW TERMINATION POINTS IN THE POP ROOM.
2. INSTALL CABLE TRAY AND PROVIDE CONNECTION TO SHOP EQUIPMENT. COORDINATE WITH OWNER ON FINAL PLACEMENT AND CONNECTION LOCATION OF SHOP EQUIPMENT.
3. INSTALL AND CONNECT NEW AUXILIARY DEVICES SHOWN IN PHASE 2 AREA.
4. ALL COMMUNICATION OUTAGES SHALL BE DONE AS WEEKEND WORK TO MINIMIZE SHOP DOWNTIME.

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BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

PHASING PLANS AND NOTES - PHASE 2

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078288
SHEET	4 OF 180

GC102

DRAWFORM REVISION: 10 MAY 2014

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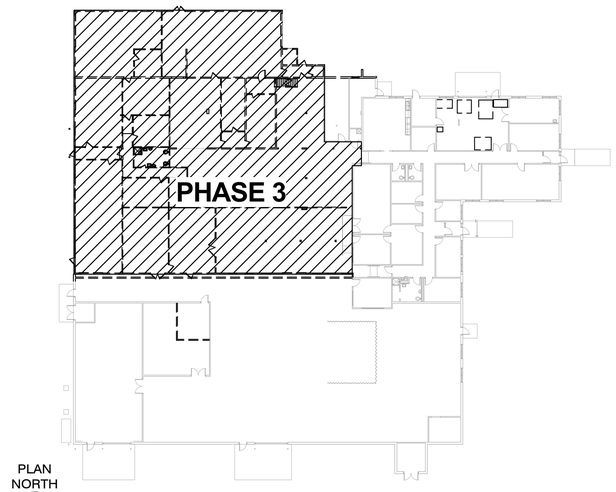


PLAN NORTH

LEVEL 1 - PHASE 3 - DEMOLITION

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

PHASING NOTES - DEMOLITION - PHASE 3:

STRUCTURAL

1. DEMOLISH ROOF FRAMING, PARTIAL SECOND FLOOR FRAMING, WOOD STUD WALLS, AND POSTS DOWN TO FOUNDATION.
2. SAWCUT AND REMOVE SECTION OF CONCRETE SLAB ON GRADE FROM WITHIN THE BREAK-DOWN AND ASSEMBLY, SAND-BLASTING, PAINT BOOTH AND DRYING, AND CHEMICAL TREATING ROOMS.
3. SAWCUT AND REMOVE PORTION OF CONCRETE SLAB ON GRADE AS NECESSARY TO INSTALL NEW INTERIOR LOAD BEARING WALL TO THE WEST OF THE FOREMAN AND QUALITY ASSURANCE ROOMS.

ARCHITECTURAL

1. DEMOLISH ROOF SYSTEM, EXTERIOR WALL SYSTEM, INTERIOR PARTITIONS, CEILINGS AND PLUMBING FIXTURES.
2. DEMOLISH INTERIOR RAMPS AT FLOOR LEVEL CHANGES.
3. DEMOLISH RAISED FLOOR AT CHEMICAL TREATING ROOM.
4. DEMOLISH EXISTING WINDOWS AND DOORS.

INTERIORS / SPACE PLANNING

1. DEMOLISH INTERIOR FINISHES.
2. AT THE START OF PHASE 3 RELOCATE MACHINING AREAS, CHEMICAL TREATING AREA, FIBERGLASS AREA, AND WELDING AREAS INTO PHASE 1 ADDITION AREA. SEE SHEET AJ101B TEMPORARY CONDITIONS PLAN PHASE 3
3. CONFIRM, COORDINATE AND PROVIDE THE NECESSARY POWER/DATA IN THE TEMPORARY LOCATION FOR THE RELOCATION OF THE EQUIPMENT, AND MACHINERY NEEDS.
4. CONTRACTOR TO RELOCATE ALL EQUIPMENT AND MACHINERY TO DESIGNATED TEMPORARY OR FINAL LOCATION.
5. ALL FREESTANDING FURNITURE, APPLIANCES, ANCILLARY OFFICE EQUIPMENT AND OTHER NON-PERMANENT COMPONENTS ASSOCIATED WITH THE OFFICE ADMINISTRATION AREA WILL BE REMOVED OR RELOCATED BY THE GOVERNMENT.
6. GOVERNMENT TO HANDLE PACKING AND MOVING OF ALL PERSONAL ITEMS.

FIRE ALARM

1. DEMOLISH EXISTING FIRE ALARM COMPONENTS WITHIN AREAS INDICATED. MAINTAIN OPERABILITY OF EXISTING SYSTEM OUTSIDE OF THE CURRENT PHASE.

FIRE SUPPRESSION

1. REMOVE ALL SYSTEM PIPING NOT BEING RE-USED WITHIN RENOVATED AREAS. MAINTAIN EXISTING SYSTEM OUTSIDE OF THE CURRENT PHASE.

PLUMBING

1. DEMOLISH EXISTING DOMESTIC WATER SERVICE.
2. DEMOLISH ALL EXISTING PLUMBING IN PHASE 3 AREAS.

MECHANICAL

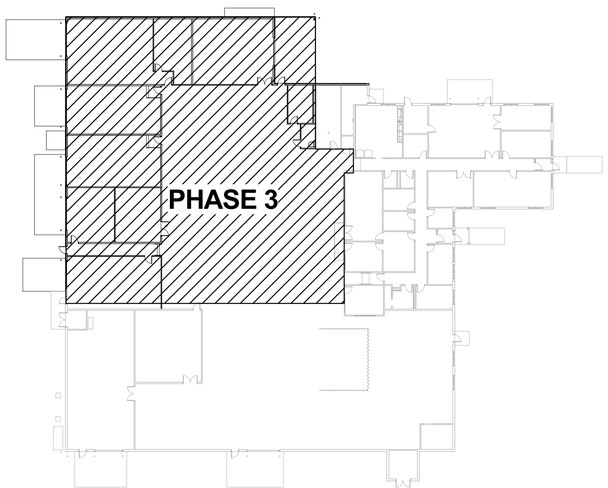
1. DEMOLISH EXISTING ACCU/AHU-1, 2, 4 AND 7, RTU-1, AND ASSOCIATED DUCTWORK.
2. DEMOLISH EXISTING HOT WATER PIPING IN THE PHASE 3 AREA.
3. DEMOLISH EXISTING HOT WATER UNIT HEATERS AND BASEBOARD HEATERS.

ELECTRICAL

1. EXISITING PANELS FEEDING EXISTING EQUIPMENT SHALL REMAIN UNTIL LOADS HAVE BEEN TRANSFERRED TO NEW BUSDUCT / PANEL SYSTEM. DEMOLISH EQUIPMENT FEEDERS COMPLETE UPON TRANFER OF LOAD; COORDINATE EXACT PIECES OF EQUIPMENT WITH OWNER.
2. SUPPORT NEW BUSDUCT FROM PHASE 2 CONSTRUCTION UNTIL PHASE 3 STEEL AND SLAB HAVE BEEN INSTALLED. REMOVE TEMPORARY SUPPORT STRUCTURES AND PATCH/REPAIR PHASE 2 CONSTRUCTION AFTER BUSDUCT HAS BEEN SUPPORTED FROM PHASE 3 CONSTRUCTION.
3. DEMOLISH ALL EXISTING ELECTRICAL DEVICES AND RACEWAYS IN WALLS TO BE DEMOLISHED COMPLETE BACK TO PANEL.

TELECOMMUNICATIONS

1. DEMOLISH ALL EXISTING TELECOMMUNICATION DEVICES AND RACEWAYS IN WALLS TO BE DEMOLISHED COMPLETE BACK TO PANEL. SUBMIT REQUEST TO REMOVE POWER FROM THE COMMUNICATION LINES PRIOR TO EXISTING LINES BEING DEMOLISHED. COORDINATE THROUGH THE NAVAIR NATIONAL HELP DESK 301-342-3104.
2. PROVIDE TEMPORARY RST&E CONNECTIONS TO THE SHOP EQUIPMENT AS REQUIRED.



PLAN NORTH

LEVEL 1 - PHASE 3 - NEW WORK

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

PHASING NOTES - NEW WORK - PHASE 3:

GENERAL

1. GENERAL CONTRACTOR IS REQUIRED TO PROVIDE A THREE (3) WEEK NOTIFICATION TO THE GOVERNMENT PRIOR TO THE MOVEMENT OF ANY EQUIPMENT. GOVERNMENT WILL COORDINATE ACTUAL RELOCATION AND SET-UP OF EQUIPMENT.

STRUCTURAL

1. INSTALL NEW STEEL BEAMS AND COLUMNS SUPPORTED ON SPREAD FOOTINGS.
2. INSTALL NEW CAST-IN PLACE CONCRETE SLAB ON GRADE OVER VAPOR BARRIER AND 6" COMPACTED GRAVEL WITHIN LOWERED SLAB AREAS.
3. INSTALL LOAD BEARING COLD FORMED STEEL WALLS.
4. EXTEND TOP OF EXISTING CMU WALL UP TO TRUSS BEARING HEIGHT.
5. INSTALL METAL DECKING AND COLD FORMED STEEL ROOF TRUSSES.
6. INSTALL EXTERIOR CAST-IN-PLACE CONCRETE STAIRS AND RAMPS.

ARCHITECTURAL

1. INSTALL EXTERIOR CLADDING SYSTEM OVER NEW COLD FORMED STEEL WALLS.
2. INSTALL MODIFIED BITUMINOUS ROOFING SYSTEM OVER NEW COLD FORMED STEEL ROOF TRUSSES. TIE ROOFING SYSTEM INTO ROOFING SYSTEM PREVIOUSLY INSTALLED IN PHASE 1.
3. INSTALL NEW INTERIOR RAMPS, STAIRS, AND RAILINGS.
4. INSTALL NEW WINDOWS AND DOORS (INTERIOR AND EXTERIOR).
5. INSTALL INTERIOR PARTITION WALLS, CEILINGS, AND PLUMBING FIXTURES.

INTERIORS / SPACE PLANNING

1. INSTALL INTERIOR FINISHES AT NEW WALLS, FLOORS AND CEILINGS.
2. AT COMPLETION OF PHASE 3 CONSTRUCTION, MOVE MACHINING EQUIPMENT AND FUNCTIONS AND ALL SHOP AREAS AND ASSOCIATED EQUIPMENT INTO THEIR FINAL LOCATIONS.
3. CONTRACTOR TO RELOCATE ALL EQUIPMENT AND MACHINERY TO DESIGNATED FINAL LOCATION.
4. ALL FREESTANDING FURNITURE, APPLIANCES, ANCILLARY OFFICE EQUIPMENT AND OTHER NON-PERMANENT COMPONENTS ASSOCIATED WITH THE OFFICE ADMINISTRATION AREA WILL BE REMOVED OR RELOCATED BY THE GOVERNMENT.
5. GOVERNMENT TO HANDLE PACKING AND MOVING OF ALL PERSONAL ITEMS.

FIRE ALARM

1. PROVIDE TEMPORARY CONNECTIONS TO EXISTING FIRE ALARM DEVICES AND APPLIANCES TO MAINTAIN FUNCTIONALITY OF EXISTING FIRE ALARM.
2. INSTALL NEW FIRE ALARM COMPONENTS IN NEW WORK AREAS.

FIRE SUPPRESSION

1. INSTALL NEW SPRINKLER SYSTEMS IN RENOVATED AREAS.
2. CONNECT EXISTING SPRINKLER SYSTEM PIPING TO NEW SPRINKLER MAINS TO MAINTAIN OPERABILITY OF SYSTEMS IN EXISTING AREAS. OBSERVE EXISTING PIPE SCHEDULE OF EXISTING SYSTEM FOR NEW PIPING SERVING EXISTING MAINS AND BRANCH LINES.

PLUMBING

1. RELOCATE AIR COMPRESSOR AND MAINTAIN SERVICE TO THE REMAINING BUILDING EQUIPMENT.
2. CONNECT LP GAS TO RELOCATED PAINT BOOTH MAKE-UP AIR UNIT.
3. RELOCATE EXISTING AIR COMPRESSOR FOR 3D PRINTING.

MECHANICAL

1. PROVIDE NEW ROOTOP AIR HANDLING UNITS RTU-4, 5, 6, 7, AND 8, AND ASSOCIATED DUCTWORK AND CONTROLS.
2. PROVIDE NEW DUCTLESS SPLIT SYSTEM SS-5A/B FOR CHEMICAL TREATMENT ROOM.
3. PROVIDE NEW EXHAUST FAN EF-2 FOR TOILET.
4. PROVIDE NEW EXHAUST FAN EF-1 FOR CHEMICAL TREATMENT ROOM. PROVIDE ROOFTOP GOOSENECK FOR CHEMICAL TREATMENT EVAPORATOR EXHAUST. RELOCATE EXISTING CHEMICAL TREATMENT UTILITY SET FAN TO NEW CHEMICAL TREATMENT ROOM LOCATION AND RECONNECT EXISTING RELOCATED TANKS USING PVC PIPING.
5. PROVIDE NEW EXHAUST FAN EF-3 FOR WELDING SHOP.
6. PROVIDE A ROOF CURB AND RELOCATE PAINT BOOTH EXHAUST STACK TO NEW LOCATION. RELOCATE EXISTING MAKE-UP AIR UNIT WITH PROPANE HEAT TO NEW PAINT BOOTH LOCATION AND RECONNECT DUCTWORK AND CONTROLS.
7. RELOCATE EXISTING SAND BLAST BOOTH AND EXISTING ANCILLARY EQUIPMENT, MEDIA RECLAIMER, DUCTWORK, BREATHING AIR PUMP, AND DUST COLLECTOR TO NEW LOCATION AND EXTEND DUCTWORK AND PIPING TO SUPPORT NEW LOCATION.

MECHANICAL (CONT)

8. RELOCATE EXISTING WELDING TABLES, HOODS, AND EXHAUST FANS TO NEW WELDING SHOP AND PROVIDE NEW DUCTWORK. PROVIDE ROOFTOP HOODED GRAVITY INTAKE FOR AIR COMPRESSOR
9. VENTILATION AND DUCT FROM COMPRESSOR DISCHARGE TO ROOFTOP GOOSENECKS.
10. PROVIDE NEW ROOTOP DEDICATED OUTSIDE AIR SYSTEM, DOAS-2 AND ASSOCIATED CONTROLS AND DUCTWORK.

ELECTRICAL

1. INSTALL AND CONNECT NEW POWER AND LIGHTING DEVICES SHOWN IN PHASE 3 AREA.

TELECOMMUNICATIONS

1. INSTALL AND CONNECT NEW AUXILIARY DEVICES SHOWN IN PHASE 3 AREA.
2. CONTRACTOR SHALL COORDINATE, PROVIDE AND CONNECT TEMPORARY CABLE TO ALL EQUIPMENT AND WORKBENCHES.

SYM	DESCRIPTION	DATE	APPR

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COMMONWEALTH OF VIRGINIA
JOHN B. ANDERSON III
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3/18/2016
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JOINT VENTURE

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ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

PHASING PLANS AND NOTES - PHASE 3

SCALE: AS NOTED

EPROJECT NO. 1183080

CONSTR. CONTR. NO. N40080-15-D-0452

NAVFAC DRAWING NO. 13078289

SHEET 5 OF 180

GC103

DRAWFORM REVISION: 10 MAY 2014

FILE NAME: C:\Revit_Projects\86314_A_Central_jbanderson@burnsmcd.com.rvt

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1. APPLICABLE CODES AND STANDARDS

ABBREVIATIONS	TITLE	EDITION
IBC	INTERNATIONAL BUILDING CODE	2012
IMC	INTERNATIONAL MECHANICAL CODE	2012
IPC	INTERNATIONAL PLUMBING CODE	2012
NFPA 10	STANDARD FOR PORTABLE FIRE EXTINGUISHERS	2013
NFPA 13	STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS	2013
NFPA 33	STANDARD FOR SPRAY APPLICATIONS USING FLAMMABLE OR COMBUSTIBLE MATERIALS	2016
NFPA 70	NATIONAL ELECTRICAL CODE	2014
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2013
NFPA 80	STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	2016
NFPA 90A	STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS	2015
NFPA 101	LIFE SAFETY CODE	2015
NFPA 400	HAZARDOUS MATERIALS CODE	2016
UFC 1-200-01	GENERAL BUILDING REQUIREMENTS	AUGUST 2015
UFC 3-580-10	NAVY AND MARINE CORPS INTRANET (NMCI) STANDARD CONSTRUCTION PRACTICES	APRIL 2005
UFC 3-600-01	FIRE PROTECTION ENGINEERING FOR FACILITIES	M ARCH 2013
UFC 3-600-10N	FIRE PROTECTION ENGINEERING, FINAL DRAFT	AUGUST 2007

2. TYPE OF CONSTRUCTION (IBC 602)

BUILDING ELEMENT	TYPE OF CONSTRUCTION	FIRE RESISTANCE RATING****
PRIMARY STRUCTURAL FRAME	IIB	0 HR ***
BEARING EXTERIOR WALL	IIB	0 HR **
BEARING INTERIOR WALL	IIB	0 HR *
NON-BEARING EXTERIOR WALL	IIB	0 HR **
NON-BEARING INTERIOR WALL	IIB	0 HR *
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	IIB	0 HR *
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	IIB	0 HR

* EXCEPT AS REQUIRED FOR OCCUPANCY SEPARATION, INCIDENTAL USE, AND OTHER PASSIVE FIRE PROTECTION.
** EXCEPT AS REQUIRED FOR BUILDING SEPARATION.
*** EXCEPT AS REQUIRED TO SUPPORT HORIZONTAL ASSEMBLY (IBC 712.4)
**** REPRESENTS BOTH REQUIRED AND PROVIDED RATINGS

3. CLASSIFICATION OF OCCUPANCY

AREAS	OCCUPANCY	IBC	NFPA 101
ENTIRE BUILDING	INDUSTRIAL		6.1.12, 6.1.14.1.3
OFFICES, CIRCULATION, RESTROOMS, BREAKROOM	BUSINESS, GROUP B	304.1	
CARPENTRY, FIBERGLASS, WELDING	INDUSTRIAL MODERATE-HAZARD, F-1	306.2	
METALWORKING	INDUSTRIAL LOW HAZARD, F-2	306.3	
PAINT BOOTH AND DRYING	HIGH-HAZARD, GROUP H-3	307.5	
CHEMICAL TREATING	HIGH-HAZARD, GROUP H-4	307.6	
WOOD STORAGE	STORAGE MODERATE-HAZARD, S-1	311.2	
METAL STORAGE, TOOL STORAGE	STORAGE LOW-HAZARD, S-2	311.3	

4. ACCESSORY OCCUPANCY 10% LIMITATION (508.2)

FLOOR	FLOOR AREA (SF)	ACCESSORY	ACCESSORY AREA (SF)	PERCENTAGE OF AREA (SUM < 10%)	IBC AREA LIMITATION (SF)	IBC OCCUPANCY
LEVEL 1	28635	H-3	869	3%	14000	B / F-1 / F-2 / S-1 / S-2
LEVEL 1	28635	H-4	813	3%	17500	B / F-1 / F-2 / S-1 / S-2

5. OCCUPANCY SEPARATION

FLOOR / OCCUPANCY	SEPARATION	FLOOR / OCCUPANCY	SEPARATION RATING	IBC
LEVEL 1 / B, F-1, F-2, S-1, S-2	NONSEPARATED	LEVEL 1 / B, F-1, F-2, S-1, S-2	0 HR BARRIER	508.3.3

6. UNLIMITED AREA BUILDING (IBC 507)

OCCUPANCY	FLOORS	FRONTAGE	FIRE SUPPRESSION	IBC
B / F-1 / F-2 / S-1 / S-2	1 LEVEL	> 60 FT ON ALL SIDES	FULLY SPRINKLERED	507.3

8. MODIFIED ALLOWABLE HEIGHT (IBC 504)**

OCCUPANCY	*RESTRICTING ALLOWABLE HEIGHT (FT / STORY)	SPRINKLER INCREASE (FT / STORY)	MODIFIED ALLOWABLE HEIGHT (FT / STORY)
B / F-1 / F-2 / S-1 / S-2*	55 / 2	20 / 1	75 / 3

* FOR NONSEPARATED OCCUPANCIES THE MOST RESTRICTIVE OCCUPANCY LIMITATION IS USED.
** ACTUAL BUILDING HEIGHT IS 24 FT / 1 STORY.

9. PROTECTION FROM HAZARDS AND OTHER PASSIVE FIRE PROTECTION

AREA	REQUIRED RATING	CODE
EXIT ACCESS CORRIDORS	0 HOUR BARRIER*	NFPA 101 SECTION 38.3.,6 40.3.6 & 42.3.6
PAINT SPRAY AREA (GROUP H-3)	1 HR FIRE BARRIER	IBC TABLE 508.4
CHEMICAL TREATMENT AREA (GROUP H-4)	1 HR FIRE BARRIER	IBC TABLE 508.4
ROOMS CONTAINING NMCI EQUIPMENT (POP ROOM)	1 HR FIRE BARRIER	UFC 3-580-10

10. BUILDING SEPARATION (IBC TABLE 602)

OCCUPANCY	ELEVATION	RESTRICTIVE FIRE SEPARATION DISTANCE (FT)*	FIRE RESISTIVE RATING OF EXTERIOR WALL
B / F-1 / F-2 / S-1 / S-2	NORTH/SOUTH/WEST/EAST	> 30	NO RATING

* IBC 702 - FIRE SEPARATION DISTANCE = DISTANCE FROM BUILDING'S FACE TO CLOSEST INTERIOR LOT LINE, CENTERLINE OF A STREET ALLEY OR PUBLIC WAY, OR IMAGINARY LINE BETWEEN TWO BUILDINGS.

11. OPENING PROTECTION FOR FIRE AND SMOKE RESISTIVE CONSTRUCTION

COMPONENT	FIRE DOOR / SHUTTER ASSEMBLIES	DUCT PENETRATIONS	OTHER PENETRATIONS	IBC
1 HR FIRE BARRIER	3/4 HR	1-1/2 HR FIRE DAMPER ONLY ON TRANSFER DUCTS IN H OCCUPANCIES	1 HR	716.5, 717.5.2

12. OCCUPANT LOAD LIFE SAFETY PLAN

NAME	USE	S.F. PER PERSON	OCCUPANCY S.F. TYPE	AREA	OCCUPANTS
CONFERENCE ROOM	ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)	15	NET	286 SF	19
BREAK ROOM	ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)	15	NET	404 SF	27
ADMIN AREAS	BUSINESS 100 SF/PERSON	100	GROSS	4814 SF	48
SHOPS	INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON	100	GROSS	23538 SF	235
					329

12A. OCCUPANT LOAD LIFE SAFETY PLAN PHASE 1

NAME	USE	S.F. PER PERSON	OCCUPANCY S.F. TYPE	AREA	OCCUPANTS
EXISTING CONFERENCE	ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)	15	NET	171 SF	11
EXISTING ADMIN	BUSINESS 100 SF/PERSON	100	GROSS	3292 SF	33
EXISTING SHOPS	INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON	100	GROSS	13111 SF	131
					175

12B. OCCUPANT LOAD LIFE SAFETY PLAN PHASE 2

NAME	USE	SF PER PERSON	OCCUPANCY SF TYPE	AREA	OCCUPANTS
TEMP ADMIN AREA	BUSINESS 100 SF/PERSON	100	GROSS	2565 SF	26
EXISTING SHOPS	INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON	100	GROSS	12442 SF	124
PHASE 1 SHOPS	INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON	100	GROSS	9175 SF	92
					242

12C. OCCUPANT LOAD LIFE SAFETY PLAN PHASE 3

NAME	USE	SF PER PERSON	OCCUPANCY SF TYPE	AREA	OCCUPANTS
BREAK ROOM	ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)	15	NET	404 SF	27
CONFERENCE ROOM	ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)	15	NET	286 SF	19
ADMIN AREA	BUSINESS 100 SF/PERSON	100	GROSS	4848 SF	48
SHOPS	INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON	100	GROSS	10914 SF	109
INDUSTRIAL	INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON	100	GROSS	490 SF	5
					208

13. OCCUPANT LOAD SUMMARY AND MINIMUM EXITS FROM FLOOR

FLOOR	GROSS AREA (SF)	OCCUPANTS	REQUIRED EXITS (NFPA 101)	REQUIRED EXIT SEPARATION (NFPA 101)
LEVEL 1	28635	299	2 (7.4.1.1)	1/3 DIAGONAL (7.5.1.3.3)

* ACTUAL NUMBER OF BUILDING EXITS PROVIDED = 10 (NOT COUNTING SMALL, SINGLE-EXIT ROOMS)

14. MINIMUM EXITS OR EXIT ACCESSES FROM A SPACE OR AREA (NFPA 101)

OCCUPANCY	CONDITION PERMITTING ONE EXIT	CONDITION REQUIRING TWO OR MORE EXITS	CODE SECTION
INDUSTRIAL	LESS THAN 100' COMMON PATH	100' OR GREATER COMMON PATH	40.2.4.1.2

15. COMMON PATH, DEAD-END, AND TRAVEL DISTANCE LIMITS (NFPA 101, TABLE A.7.6)

OCCUPANCY	COMMON PATH LIMIT (FT)	DEAD END LIMIT (FT)	TRAVEL DISTANCE LIMIT (FT)
INDUSTRIAL GENERAL	100	50	250

16. MINIMUM EGRESS WIDTHS

COMPONENT	REQUIREMENT	WIDTH (IN)	NFPA 101
DOORS IN HIGH HAZARD AREAS	PER PERSON	0.4	SECTION 7.11.3
DOORS IN EGRESS ACCESS	PER COMPONENT	32	SECTION 7.2.1.2.3.2
CORRIDORS	MINIMUM	36	SECTION 7.3.4.1
STAIRS IN EGRESS ACCESS	MINIMUM	44	SECTION 7.2.2.2.1.1
OTHER EGRESS COMPONENTS	PER PERSON	0.2	TABLE 7.3.3.1
STAIRS	PER PERSON	0.3	TABLE 7.3.3.1

18. MINIMUM INTERIOR FINISH RATINGS (NFPA 101, TABLE A.10.2.2)

OCCUPANCY	EXITS	EXIT ACCESS CORRIDORS	OTHER SPACES
INDUSTRIAL	NOT APPLICABLE	CLASS C	CLASS C

19. FIRE SUPPRESSION REQUIREMENTS (UFC 3-600-01 4-2.2, 4-9)

SPRINKLERS (UFC 3-600-01)	STANDPIPE (UFC 3-600-01)	FIRE EXTINGUISHERS (UFC 3-600-01)
SPRINKLERS PROVIDED THROUGHOUT	NOT REQUIRED	FIRE EXTINGUISHERS PROVIDED THROUGHOUT

20. FIRE ALARM REQUIREMENTS (UFC 3-600-01 5-1)

MANUAL INITIATION	AUTOMATIC INITIATION	OCCUPANT NOTIFICATION
MANUAL FIRE ALARM PULL STATIONS PROVIDED AT EXITS	FLOW AND TAMPER SWITCHES, SPOT SMOKE DETECTORS AT ALARM PANELS AND DUCT SMOKE DETECTORS PROVIDED	VOICE MESSAGING, WHITE ALERT NOTIFICATION STROBES; TEXT MESSAGE SIGNS

21. FIRE EXTINGUISHER DISTRIBUTION (NFPA 10)

OCCUPANCY	PRIMARY CLASSIFICATION OF FIRE AND HAZARD	MINIMUM RATING	MINIMUM FLOOR AREA PER A (SF)	MAX TRAVEL DISTANCE (FT)
ALL	CLASS A:B:C - ORDINARY	2-A	1,500	75

APPR | DATE | DESCRIPTION | SYM

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JOINT VENTURE

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CHIEF ENG/ARCH

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NAVFAC ENGINEERING COMMAND – WASHINGTON
NAVAL AIR STATION PATUXENT RIVER
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ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

LIFE SAFETY NARRATIVE AND BUILDING CODE ANALYSIS

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078290
SHEET 6 OF 180

GI001

DRAWFORM REVISION: 10 MAY 2014

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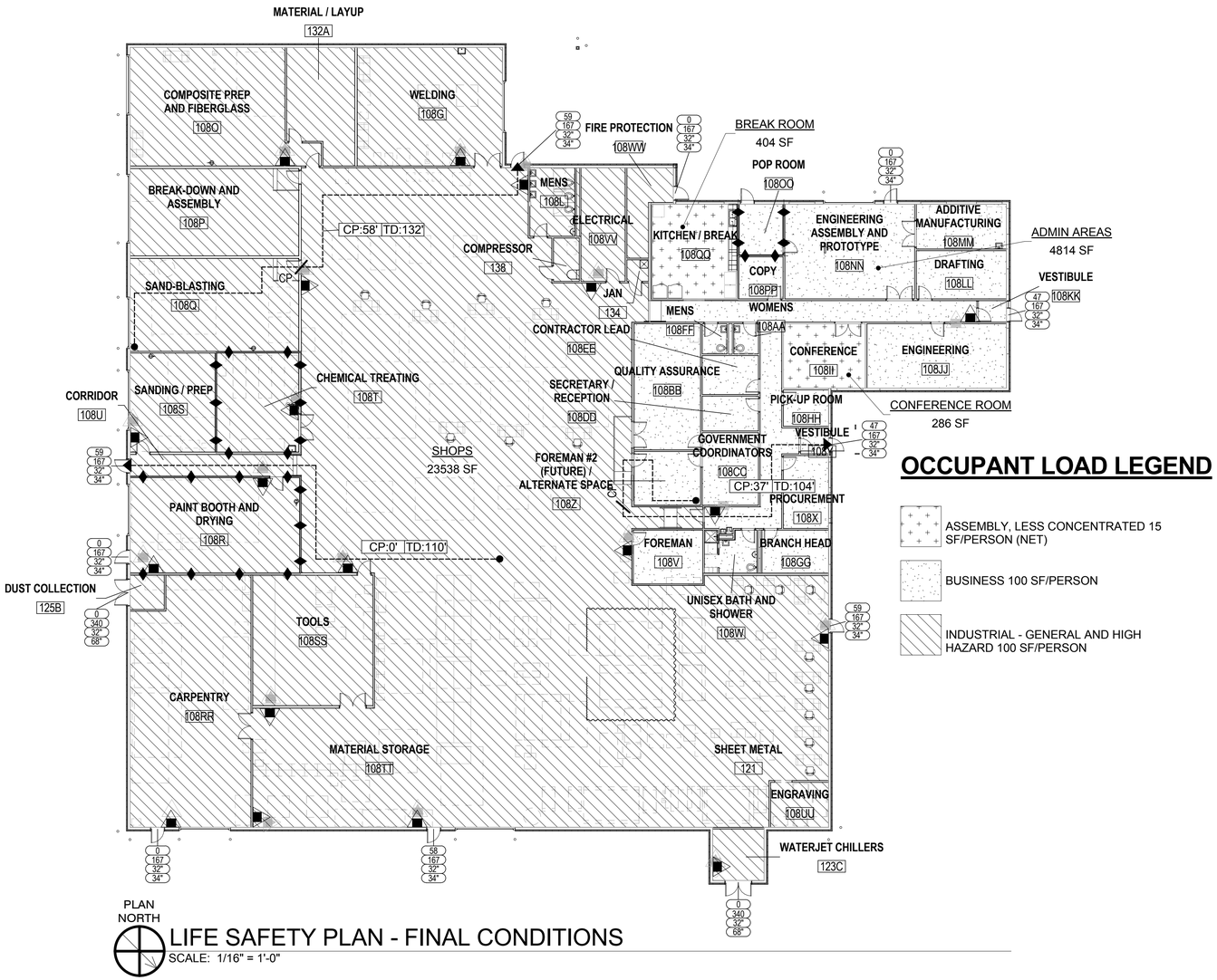

LIFE SAFETY PLAN - FINAL CONDITIONS
SCALE: 1/16" = 1'-0"

OCCUPANT LOAD LEGEND

- ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)
- BUSINESS 100 SF/PERSON
- INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON

GENERAL NOTES:

1. REFER TO ARCHITECTURAL LEGEND FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
2. REFER TO GI001 FOR LIFE SAFETY NARRATIVE AND BUILDING CODE ANALYSIS.
3. REFER TO THE ELECTRICAL LIGHTING PLANS FOR LOCATION OF EXIT SIGNS AND EMERGENCY LIGHTING.
4. REFER TO THE FIRE SUPPRESSION AND ALARM PLANS FOR LOCATION OF FIRE PROTECTION DEVICES.
5. FINAL LOCATIONS OF FIRE EXTINGUISHERS SHALL BE APPROVED BY THE AHJ PRIOR TO INSTALLATION.
6. REFER TO GI001 FOR OCCUPANT LOAD.

EGRESS PATH

CP:50' TD:100' — CP — EGRESS PATH

TRAVEL DISTANCE; COMMON PATH TERMINATION POINT; EXIT DOOR; COMMON PATH OF TRAVEL

DEAD END CORRIDOR

10' — TERMINATION OF DEAD END CORRIDOR

DEAD END DISTANCE

DOOR EGRESS TAG

78	OCCUPANTS SERVED
180	EXIT CAPACITY
32"	REQUIRED WIDTH
36"	PROVIDED WIDTH

FIRE RESISTIVE CONSTRUCTION

1 HR FIRE BARRIER

PORTABLE FIRE EXTINGUISHERS

A:B:C: TYPE DRY CHEMICAL 4A-20B:C

GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

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CHIEF ENG/ARCH

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ST. INIGOES, MD
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD
BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION
LIFE SAFETY PLAN FINAL CONDITIONS

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078291
SHEET 7 OF 180
GI101

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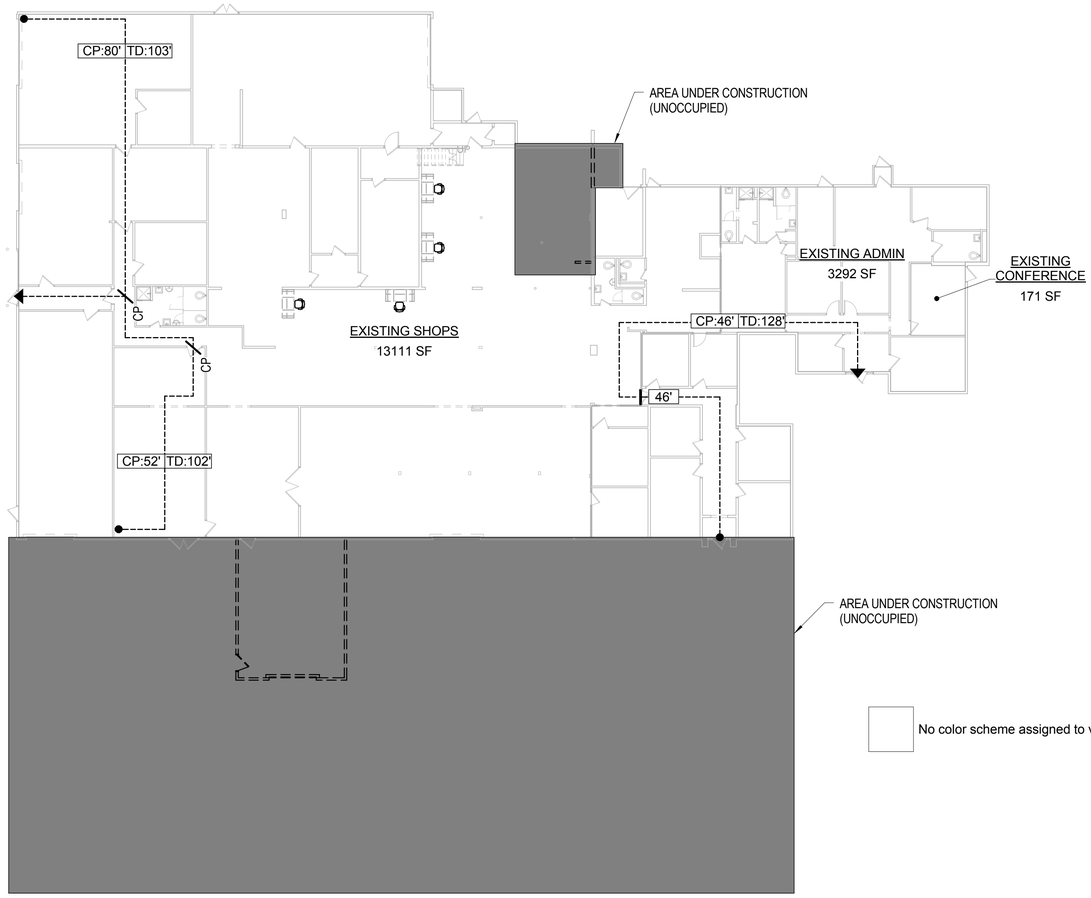

PLAN NORTH

LIFE SAFETY TEMPORARY CONDITIONS - PHASE 1

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

GENERAL NOTES:

1. REFER TO ARCHITECTURAL LEGEND FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
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3. REFER TO THE ELECTRICAL LIGHTING PLANS FOR LOCATION OF EXIT SIGNS AND EMERGENCY LIGHTING.
4. REFER TO THE FIRE SUPPRESSION AND ALARM PLANS FOR LOCATION OF FIRE PROTECTION DEVICES.
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6. REFER TO GI001 FOR OCCUPANT LOAD.

EGRESS PATH

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TRAVEL DISTANCE; COMMON PATH TERMINATION POINT; EXIT DOOR; COMMON PATH OF TRAVEL

DEAD END CORRIDOR

10' — TERMINATION OF DEAD END CORRIDOR

DEAD END DISTANCE

DOOR EGRESS TAG

78	OCCUPANTS SERVED
180	EXIT CAPACITY
32"	REQUIRED WIDTH
36"	PROVIDED WIDTH

FIRE RESISTIVE CONSTRUCTION

1 HR FIRE BARRIER

PORTABLE FIRE EXTINGUISHERS

A:B:C: TYPE DRY CHEMICAL
4A-20B:C

GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

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ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

LIFE SAFETY PLAN PHASE 1

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078292
SHEET	8 OF 180

GI102

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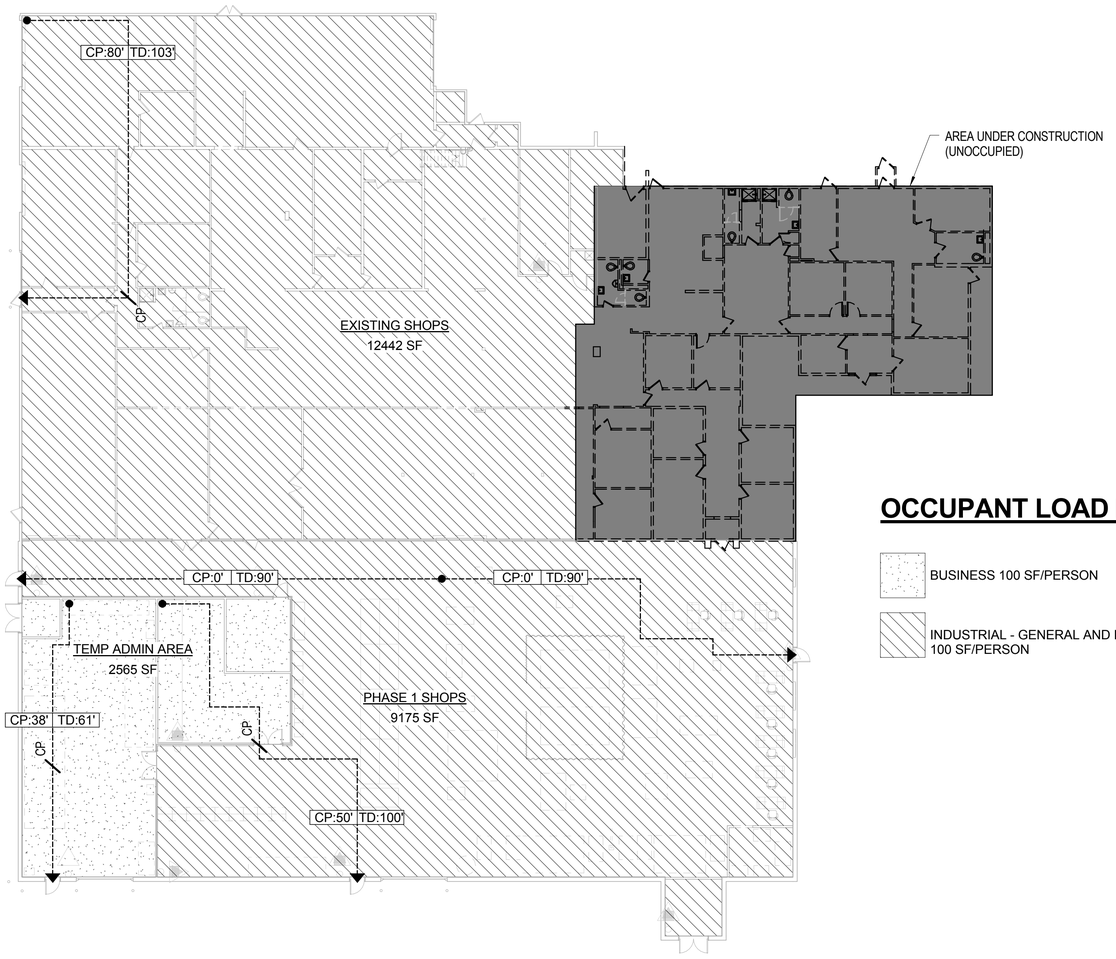

PLAN NORTH

LIFE SAFETY TEMPORARY CONDITIONS - PHASE 2

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

OCCUPANT LOAD LEGEND

BUSINESS 100 SF/PERSON

INDUSTRIAL - GENERAL AND HIGH HAZARD
100 SF/PERSON

GENERAL NOTES:

1. REFER TO ARCHITECTURAL LEGEND FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
2. REFER TO GI001 FOR LIFE SAFETY NARRATIVE AND BUILDING CODE ANALYSIS.
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DEAD END CORRIDOR

10' — TERMINATION OF DEAD END CORRIDOR

DEAD END DISTANCE

DOOR EGRESS TAG

78 OCCUPANTS SERVED
180 EXIT CAPACITY
32" REQUIRED WIDTH
36" PROVIDED WIDTH

FIRE RESISTIVE CONSTRUCTION

1 HR FIRE BARRIER

PORTABLE FIRE EXTINGUISHERS

A:B:C: TYPE DRY CHEMICAL
4A-20B:C

GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

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BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

LIFE SAFETY PLAN PHASE 2

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078293
SHEET	9 OF 180

GI103

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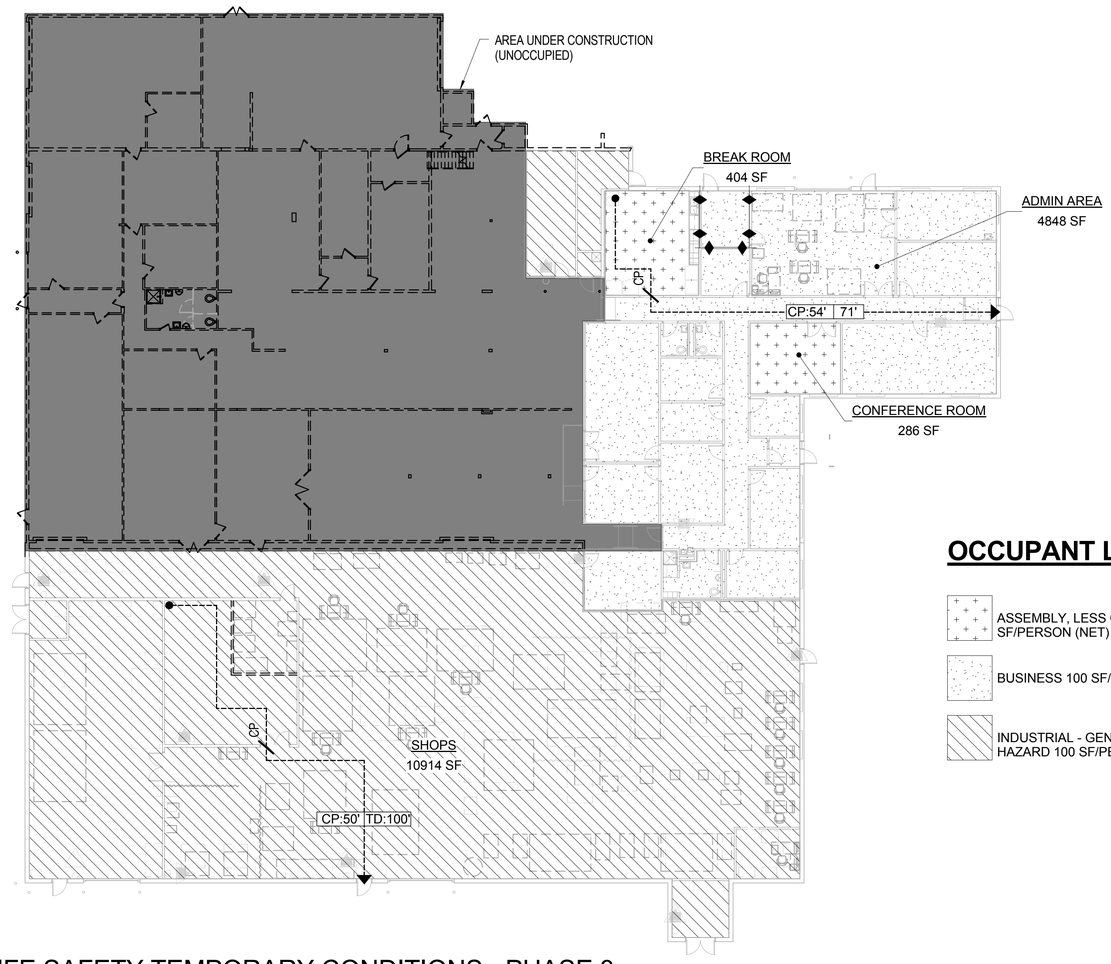

PLAN NORTH

LIFE SAFETY TEMPORARY CONDITIONS - PHASE 3

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

GENERAL NOTES:

1. REFER TO ARCHITECTURAL LEGEND FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
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10' — TERMINATION OF DEAD END CORRIDOR

DEAD END DISTANCE

DOOR EGRESS TAG

78	OCCUPANTS SERVED
180	EXIT CAPACITY
32"	REQUIRED WIDTH
36"	PROVIDED WIDTH

FIRE RESISTIVE CONSTRUCTION

1 HR FIRE BARRIER

OCCUPANT LOAD LEGEND

ASSEMBLY, LESS CONCENTRATED 15 SF/PERSON (NET)

BUSINESS 100 SF/PERSON

INDUSTRIAL - GENERAL AND HIGH HAZARD 100 SF/PERSON

PORTABLE FIRE EXTINGUISHERS

A:B:C: TYPE DRY CHEMICAL
4A-20B:C

GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

SYM	DESCRIPTION	DATE	APPR

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BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

LIFE SAFETY PLAN PHASE 3

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078294
SHEET 10 OF 180

GI104

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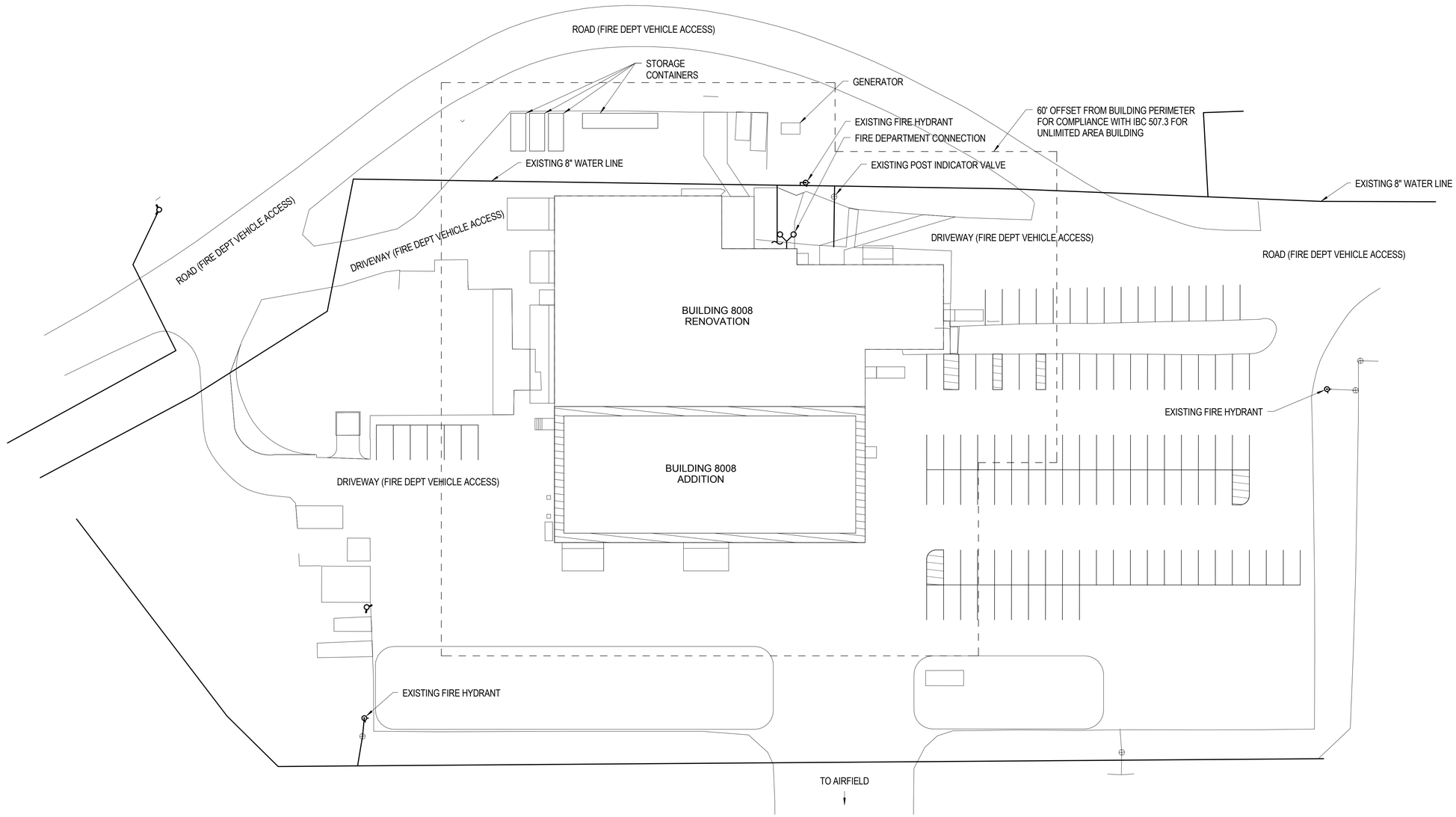

PLAN NORTH

OVERALL SITE BUILDING CODE PLAN

SCALE: 1" = 30'-0"

GRAPHIC SCALE:

1" = 30'-0" 0 30' 60'

SYM	DESCRIPTION	DATE	APPR

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BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

OVERALL SITE LIFE SAFETY PLAN

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078295
SHEET 11 OF 180

GI105

DRAWFORM REVISION: 10 MAY 2014

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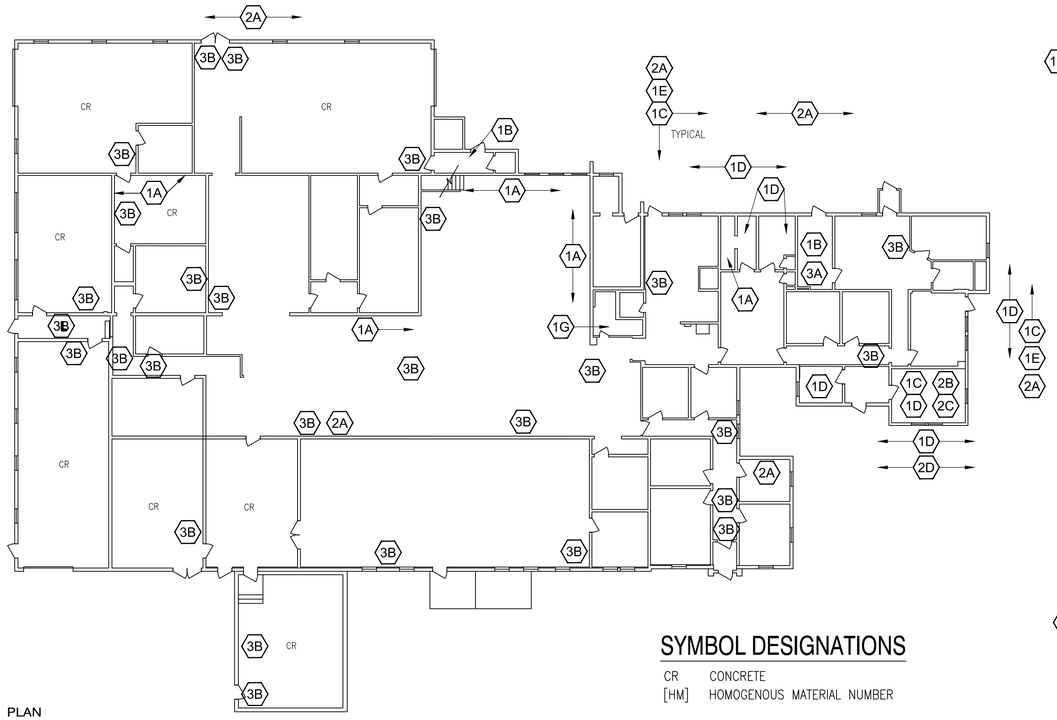

PLAN NORTH

HAZARDOUS MATERIALS ASSESSMENT -BLDG 8008 FIRST FLOOR

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

SYMBOL DESIGNATIONS

CR	CONCRETE
[HM]	HOMOGENOUS MATERIAL NUMBER

GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

HAZMAT DEMOLITION NOTES

REFER TO THE HAZARDOUS MATERIAL INSPECTION REPORT, AH ENVIRONMENTAL CONSULTANTS, INC., SEPTEMBER 2015, FOR DETAILS CONCERNING HAZARDOUS MATERIALS IDENTIFIED AT THIS SITE, INCLUDING ASBESTOS CONTAINING MATERIALS, LEAD PAINT AND DUST, MERCURY BULBS, PCB LIGHT BALLASTS, AND OTHER ITEMS ASSOCIATED WITH RENOVATION AND DEMOLITION OF THE STRUCTURE. ASBESTOS CONTAINING MATERIALS
ANY ACM IDENTIFIED THAT IS FRIABLE, OR CATEGORY I AND II NON-FRIABLE THAT MEETS THE QUALIFICATIONS TO BE CONSIDERED A REGULATED ASBESTOS-CONTAINING MATERIAL (RACM), MUST BE REMOVED PRIOR TO DEMOLITION OR DISTURBANCE THAT WOULD BREAK UP, DISLODGE, OR SIMILARLY DESTROY THE MATERIAL OR PRECLUDE ACCESS TO THE MATERIAL FOR SUBSEQUENT REMOVAL. THIS INCLUDES GASKET MATERIALS.

(1) ASBESTOS CONTAINING MATERIALS

ANY ACM IDENTIFIED THAT IS FRIABLE, OR CATEGORY I AND II NON-FRIABLE THAT MEETS THE QUALIFICATIONS TO BE CONSIDERED A REGULATED ASBESTOS-CONTAINING MATERIAL (RACM), MUST BE REMOVED PRIOR TO DEMOLITION OR DISTURBANCE THAT WOULD BREAK UP, DISLODGE, OR SIMILARLY DESTROY THE MATERIAL OR PRECLUDE ACCESS TO THE MATERIAL FOR SUBSEQUENT REMOVAL. THIS INCLUDES GASKET MATERIALS.

BLDG 8008 ACM

(1A) PIPE INSULATION AND FITTINGS: VARIOUS THERMAL SYSTEM INSULATION (TSI) MATERIALS ARE CONSIDERED FRIABLE, AND REGULATED ACM. NOTE: LIMITED DAMAGE AND DEBRIS IS PRESENT ABOVE DROP CEILING AREA OF THE SOUTHWEST CORNER OF THE SOUTHWEST BREAK ROOM.

(1B) FLOOR TILE: THESE VINYL COMPOSITE FLOOR TILES, IN MULTIPLE LOCATIONS, IS NON-FRIABLE CATEGORY I

(1C) FLOOR TILE MASTIC/ADHESIVE, BLACK: THE MATERIAL IS NOT CONSIDERED HAZARDOUS OR FRIABLE, REMOVAL IS REQUIRED TO ENSURE "NON-DISTURBANCE" DURING RENOVATIONS AND TO ENSURE PROPER UNDERLAYMENT FOR NEW FLOORING.

(1D) ASBESTOS CEMENT PANELS AND SIDING: IDENTIFIED AS EXTERIOR SIDING UNDER EXISTING METAL, CEILING AND WALL PANEL SHEETS, AND AS RESIDUAL PIECES WHERE CEILINGS OR WALLS HAVE BEEN INCOMPLETELY REMOVED. CLASSIFIED AS NON-FRIABLE CATEGORY II.

(1E) ASBESTOS JOINT COMPOUND (ASSOCIATED WITH DRYWALL): ACM JOINT COMPOUND IS PRESENT ON WALLS AND CEILINGS IN THE SOUTHWEST AND MAIN CENTRAL SECTIONS OF THE BUILDING. DURING RENOVATIONS, OSHA REGULATES THE MATERIALS AS SEPARATE AND THE ASBESTOS STANDARD APPLIES TO DISTURBANCE. DEMOLITION ACTIONS OCCURRING ON DESIGNATED WALLS AND CEILINGS MUST BE HANDLED AS ASBESTOS CLASS II WORK.

(1F) ROOF SEALANT, GRAY: THE MATERIAL IS NOT CONSIDERED HAZARDOUS OR FRIABLE AND REMOVAL IS NOT REQUIRED.

(1G) HM55- VINYL SHEET FLOORING: VINYL SHEET FLOORING IN THE CENTRAL RESTROOM AREA IS ACM. THE MATERIAL IS PRESENTLY CONSIDERED CATEGORY I NON-FRIABLE ACM, BUT REMOVAL OF THIS MATERIAL IS LIKELY TO DISTURB AND DAMAGE THE FELTS ENABLING FIBERS TO BECOME AIRBORNE AND THUS SHOULD BE TREATED AS A FRIABLE MATERIAL.

BLDG 8108 ACM

NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED DURING INSPECTION OF 8108.

BLDG 8136 ACM

NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED DURING INSPECTION OF 8136.

HAZMAT DEMOLITION NOTES CONT

BLDG 8143 ACM

(1H) ROOF SEALANT, SILVER: THE ACM IS NOT CONSIDERED HAZARDOUS OR FRIABLE AND REMOVAL IS NOT REQUIRED FOR DEMOLITION. HOWEVER, THE METAL PANELS HAVE ACM ATTACHED, RECYCLING CANNOT OCCUR. THE WASTE CAN BE DISPOSED OF AS STANDARD CONSTRUCTION/ DEMOLITION DEBRIS AT ANY LANDFILL ACCEPTING NON-FRIABLE ASBESTOS WASTES.

ALTHOUGH WORK MAY BE PERFORMED WITH THE ACM IN PLACE, REMOVAL OF THE IDENTIFIED ACM THAT MAY BE DISTURBED IS RECOMMENDED TO PROVIDE A WORKSITE FREE OF IDENTIFIED ACM AND THEREFORE STANDARD ACTIVITIES COULD PROCEED WITHOUT CONCERN (WITH REGARDS TO ACM). ACM WILL BE IMPACTED DURING RENOVATION, CONSTRUCTION, AND DEMOLITION ACTIVITIES IN ALL PHASES AS SHOWN IN THE FOLLOWING CHART.

BUILDING	PHASE	ACM IMPACTED
8008	I	FLOOR TILE
8008	II	ASBESTOS CEMENT PANELS; PIPE INSULATION; DRYWALL JOINT COMPOUND; FLOOR TILE AND MASTIC/ ADHESIVE; VINYL SHEET FLOORING
8008	III	DRYWALL JOINT COMPOUND; FLOOR TILE AND MASTIC/ ADHESIVE
8008	IV	PIPE INSULATION; ASBESTOS CEMENT PANELS
8008	V	ASBESTOS CEMENT PANELS
8008	VI	ASBESTOS CEMENT PANELS
8143	N/A	ROOFING SEALANT, SILVER

LEAD NOTES

(2) LBP OR PCL IDENTIFIED

DISTURBANCE OF PAINT CONTAINING LEAD REQUIRES SPECIAL TRAINING AND INITIAL EXPOSURE MONITORING AT A MINIMUM. ABOVE 0.5% BY WEIGHT (BULK PAINT) OR >0.75 MG/CM2 (XRF), PAINT IS CONSIDERED TO BE LEAD-BASED. HOWEVER, LOWER THRESHOLDS ARE UTILIZED IN CONSTRUCTION SINCE OSHA STANDARDS 29 CFR 1926.62 (LEAD IN CONSTRUCTION) ARE INVOKED IF ANY LEAD IS PRESENT; THERE IS NO MINIMUM CONCENTRATION LEVEL.

OSHA AND EPA REGULATIONS MUST BE FOLLOWED WHEN RENOVATION OR DEMOLITION WORK AFFECTS ANY LEAD BASED PAINT (LBP) OR PAINTS WITH DETECTABLE LEAD LEVELS REFERRED TO AS PAINT CONTAINING LEAD (PCL).

BLDG 8008 LEAD

(2A) COMPONENTS TESTED AND DETERMINED TO BE LEAD-BASED [L] OR >0.75 MG/CM2 LEAD INCLUDE:

- BEIGE VINYL BASE COVE [014]
- BEIGE ASBESTOS CEMENT CEILING [031]
- WHITE CERAMIC BATH FIXTURE [034, 092, 119]
- WHITE/ BEIGE DRYWALL CEILING [044, 068, 076]
- RED METAL FIRE PULL [063]
- BEIGE VINYL BLINDS [064, 072, 083]
- BEIGE METAL PIPING [069]
- LT. GREEN DRYWALL WALL [075, 162, 163]
- WHITE/ LT. BLUE BLOCK WALL [099, 100, 117, 197]
- YELLOW METAL CABINETS [111, 112]
- RED METAL FIRE CAN [154]
- WHITE METAL EXT. WALL [009, 010, 015, 017, 056, 058, 062]
- WHITE EXT. CEMENT/ BLOCK WALL [011, 012, 013, 060, 072]

(2B) COMPONENTS TESTED AT LEVELS DETERMINED TO CONTAIN ELEVATED LEAD [E] OR 0.75- 0.50 INCLUDE:

- LT. BROWN LAMINATE WALL [052]

(2C) COMPONENTS TESTED AND DETERMINED TO CONTAIN LEAD LEVELS OF CONCERN [C] OR 0.50 – 0.25 MG/CM2 INCLUDE:

- LT. BROWN LAMINATE WALL [049, 050, 051]
- WHITE CERAMIC BATH FIXTURE [093]
- YELLOW METAL BOLLARD [042]

(2D) COMPONENTS TESTED AND DETERMINED TO CONTAIN DETECTABLE LEAD LEVELS [D] OR 0.25 – 0.05 MG/CM2 LEAD INCLUDE:

- TAN METAL PARTITION WALL [036]
- WHITE DRYWALL CEILING [059, 164]
- BROWN VINYL BASE COVE [071]
- WHITE LAMINATE WALL [073]
- WHITE METAL BEAMS/ POLES [107, 108, 205, 209, 221]
- WHITE EXT. BLOCK WALL [059]
- WHITE METAL RAILING [066]

BLDG 8108 LEAD

NO LEAD PAINT CONCERNS IN BUILDING 8108.

BLDG 8136 LEAD

[2D]: COMPONENTS TESTED AND DETERMINED TO BE LEAD-BASED [L] OR >0.75 MG/CM2 LEAD INCLUDE:

- WHITE CONCRETE FLOOR [021]

COMPONENTS TESTED AND DETERMINED TO CONTAIN DETECTABLE LEAD LEVELS [D] OR 0.25 – 0.05 MG/CM2 LEAD INCLUDE:

- WHITE METAL POST/ BEAM [012, 013]
- WHITE/ LT. GREEN METAL CEILING/ WALL [016, 025, 029, 035]
- SILVER METAL BEAM [039]

BLDG 8143 LEAD

NO LEAD PAINT CONCERNS IN BUILDING 8143.

ADDITIONALLY, AREAS BEHIND WALL BUILDOUTS COULD NOT BE PROPERLY ASSESSED AND ARE TYPICALLY HIGH DUST AND LEAD PAINT CONTAMINATED SPACES.

(3) OTHER HAZARDS

OLDER BUILDING DEMOLITION CREATES ADDITIONAL ITEMS OF CONCERN; FLUORESCENT LIGHTING FIXTURES HAVE ELEMENTAL MERCURY IN THE FLUORESCENT BULBS AND MAY ALSO CONTAIN POLYCHLORINATED BIPHENYLS (PCB) BALLASTS. BUILDINGS MAY ALSO CONTAIN MERCURY SWITCHES INSIDE OF THERMOSTATS, LEAD OR OTHER CHEMICAL CONTAINING BATTERIES, AND OTHER MATERIALS OF SPECIAL CONCERN.

FLUORESCENT LAMPS

INSPECTION OF THE PROJECT BUILDINGS IDENTIFIED APPROXIMATELY 750 FLUORESCENT LAMP TUBES IN VARIOUS STYLES OF LIGHTING FIXTURES. THERE IS APPROXIMATELY 3,700 LINEAR FEET OF FLUORESCENT LAMP TOTAL. THEY ARE TYPICAL THROUGHOUT THE PROJECT BUILDINGS.

(3A) PCBS

TWO (2) LIGHTING FIXTURES WERE FOUND TO CONTAIN BALLASTS LIKELY TO BE PCB CONTAINING. THESE UNITS ARE LOCATED IN BUILDING 8008 IN THE OLD KITCHEN AREA. THE UNITS HAVE BEEN CHANGED OUT TO NEW ELECTRONIC STYLE BALLASTS, BUT THE ORIGINAL BALLASTS (UNIVERSAL) REMAIN.

(3B) LEAD BATTERIES

ITEMS OF NOTE FOR POTENTIAL REGULATORY CONCERN WERE NOTED DURING THE INSPECTION AS FOLLOWS:

- EXIT SIGNAGE MAY CONTAIN LEAD BATTERY BACKUP. REMOVAL IF REQUIRED SHOULD BE DONE WITH CAUTION. ALL BATTERIES (LEAD ACID, NIMH, OR NICD) SHOULD BE RECYCLED. THERE IS APPROXIMATELY FOUR (4) SUCH EMERGENCY EXIT SIGNS.
- EMERGENCY LIGHTING WILL CONTAIN BATTERY BACKUP. REMOVAL IF REQUIRED SHOULD BE DONE WITH CAUTION. ALL BATTERIES (LEAD ACID, NIMH, OR NICD) SHOULD BE RECYCLED. THERE ARE APPROXIMATELY TWENTY-SIX (26) SUCH LIGHTS.

MERCURY

NO OLD STYLE THERMOSTATS CONTAINING A MERCURY VIAL WERE IDENTIFIED DURING THE BUILDING INSPECTION. IF ANY ARE IDENTIFIED DURING THE COURSE OF RENOVATION OR DEMOLITION, THEY ARE LIKELY TO CONTAIN MERCURY SWITCHES. THE MERCURY IS IN A LIQUID STATE, WITHIN A SMALL GLASS VIAL.

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Wiley|Wilson | BURNS MCDONNELL JOINT VENTURE

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	DD	DRW	AD	CHK	JR

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

HAZARDOUS MATERIALS ASSESSMENT - FIRST FLOOR

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078296
SHEET 12 OF 180

HM101

DRAWFORM REVISION: 10 MAY 2014

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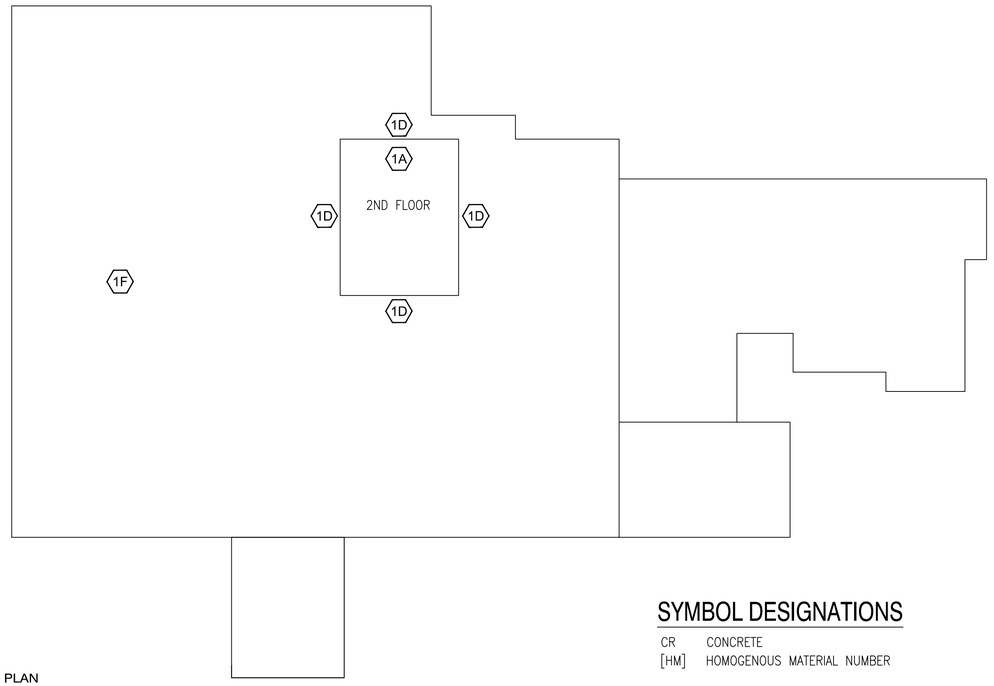

SYMBOL DESIGNATIONS

CR CONCRETE
[HM] HOMOGENOUS MATERIAL NUMBER

PLAN NORTH

HAZARDOUS MATERIALS ASSESSMENT -BLDG 8008 SECOND FLOOR/ROOF

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

GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

HAZMAT DEMOLITION NOTES

REFER TO THE HAZARDOUS MATERIAL INSPECTION REPORT, AH ENVIRONMENTAL CONSULTANTS, INC., SEPTEMBER 2015, FOR DETAILS CONCERNING HAZARDOUS MATERIALS IDENTIFIED AT THIS SITE, INCLUDING ASBESTOS CONTAINING MATERIALS, LEAD PAINT AND DUST, MERCURY BULBS, PCB LIGHT BALLASTS, AND OTHER ITEMS ASSOCIATED WITH RENOVATION AND DEMOLITION OF THE STRUCTURE. ASBESTOS CONTAINING MATERIALS
ANY ACM IDENTIFIED THAT IS FRIABLE, OR CATEGORY I AND II NON-FRIABLE THAT MEETS THE QUALIFICATIONS TO BE CONSIDERED A REGULATED ASBESTOS-CONTAINING MATERIAL (RACM), MUST BE REMOVED PRIOR TO DEMOLITION OR DISTURBANCE THAT WOULD BREAK UP, DISLODGE, OR SIMILARLY DESTROY THE MATERIAL OR PRECLUDE ACCESS TO THE MATERIAL FOR SUBSEQUENT REMOVAL. THIS INCLUDES GASKET MATERIALS.

(1) ASBESTOS CONTAINING MATERIALS

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BLDG 8008 ACM

(1A) PIPE INSULATION AND FITTINGS: VARIOUS THERMAL SYSTEM INSULATION (TSI) MATERIALS ARE CONSIDERED FRIABLE, AND REGULATED ACM. NOTE: LIMITED DAMAGE AND DEBRIS IS PRESENT ABOVE DROP CEILING AREA OF THE SOUTHWEST CORNER OF THE SOUTHWEST BREAK ROOM.

(1B) FLOOR TILE: THESE VINYL COMPOSITE FLOOR TILES, IN MULTIPLE LOCATIONS, IS NON-FRIABLE CATEGORY I

(1C) FLOOR TILE MASTIC/ADHESIVE, BLACK: THE MATERIAL IS NOT CONSIDERED HAZARDOUS OR FRIABLE, REMOVAL IS REQUIRED TO ENSURE "NON-DISTURBANCE" DURING RENOVATIONS AND TO ENSURE PROPER UNDERLAYMENT FOR NEW FLOORING.

(1D) ASBESTOS CEMENT PANELS AND SIDING: IDENTIFIED AS EXTERIOR SIDING UNDER EXISTING METAL, CEILING AND WALL PANEL SHEETS, AND AS RESIDUAL PIECES WHERE CEILINGS OR WALLS HAVE BEEN INCOMPLETELY REMOVED. CLASSIFIED AS NON-FRIABLE CATEGORY II.

(1E) ASBESTOS JOINT COMPOUND (ASSOCIATED WITH DRYWALL): ACM JOINT COMPOUND IS PRESENT ON WALLS AND CEILINGS IN THE SOUTHWEST AND MAIN CENTRAL SECTIONS OF THE BUILDING. DURING RENOVATIONS, OSHA REGULATES THE MATERIALS AS SEPARATE AND THE ASBESTOS STANDARD APPLIES TO DISTURBANCE. DEMOLITION ACTIONS OCCURRING ON DESIGNATED WALLS AND CEILINGS MUST BE HANDLED AS ASBESTOS CLASS II WORK.

(1F) ROOF SEALANT, GRAY: THE MATERIAL IS NOT CONSIDERED HAZARDOUS OR FRIABLE AND REMOVAL IS NOT REQUIRED.

(1G) HM55- VINYL SHEET FLOORING: VINYL SHEET FLOORING IN THE CENTRAL RESTROOM AREA IS ACM. THE MATERIAL IS PRESENTLY CONSIDERED CATEGORY I NON-FRIABLE ACM, BUT REMOVAL OF THIS MATERIAL IS LIKELY TO DISTURB AND DAMAGE THE FELTS ENABLING FIBERS TO BECOME AIRBORNE AND THUS SHOULD BE TREATED AS A FRIABLE MATERIAL.

BLDG 8108 ACM

NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED DURING INSPECTION OF 8108.

BLDG 8136 ACM

NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED DURING INSPECTION OF 8136.

HAZMAT DEMOLITION NOTES CONT

BLDG 8143 ACM

(1H) ROOF SEALANT, SILVER: THE ACM IS NOT CONSIDERED HAZARDOUS OR FRIABLE AND REMOVAL IS NOT REQUIRED FOR DEMOLITION. HOWEVER, THE METAL PANELS HAVE ACM ATTACHED, RECYCLING CANNOT OCCUR. THE WASTE CAN BE DISPOSED OF AS STANDARD CONSTRUCTION/ DEMOLITION DEBRIS AT ANY LANDFILL ACCEPTING NON-FRIABLE ASBESTOS WASTES.

ALTHOUGH WORK MAY BE PERFORMED WITH THE ACM IN PLACE, REMOVAL OF THE IDENTIFIED ACM THAT MAY BE DISTURBED IS RECOMMENDED TO PROVIDE A WORKSITE FREE OF IDENTIFIED ACM AND THEREFORE STANDARD ACTIVITIES COULD PROCEED WITHOUT CONCERN (WITH REGARDS TO ACM). ACM WILL BE IMPACTED DURING RENOVATION, CONSTRUCTION, AND DEMOLITION ACTIVITIES IN ALL PHASES AS SHOWN IN THE FOLLOWING CHART.

BUILDING	PHASE	ACM IMPACTED
8008	I	FLOOR TILE
8008	II	ASBESTOS CEMENT PANELS; PIPE INSULATION; DRYWALL JOINT COMPOUND; FLOOR TILE AND MASTIC/ ADHESIVE; VINYL SHEET FLOORING
8008	III	DRYWALL JOINT COMPOUND; FLOOR TILE AND MASTIC/ ADHESIVE
8008	IV	PIPE INSULATION; ASBESTOS CEMENT PANELS
8008	V	ASBESTOS CEMENT PANELS
8008	VI	ASBESTOS CEMENT PANELS
8143	N/A	ROOFING SEALANT, SILVER

LEAD NOTES

(2) LBP OR PCL IDENTIFIED

DISTURBANCE OF PAINT CONTAINING LEAD REQUIRES SPECIAL TRAINING AND INITIAL EXPOSURE MONITORING AT A MINIMUM. ABOVE 0.5% BY WEIGHT (BULK PAINT) OR >0.75 MG/CM2 (XRF), PAINT IS CONSIDERED TO BE LEAD-BASED. HOWEVER, LOWER THRESHOLDS ARE UTILIZED IN CONSTRUCTION SINCE OSHA STANDARDS 29 CFR 1926.62 (LEAD IN CONSTRUCTION) ARE INVOKED IF ANY LEAD IS PRESENT; THERE IS NO MINIMUM CONCENTRATION LEVEL.

OSHA AND EPA REGULATIONS MUST BE FOLLOWED WHEN RENOVATION OR DEMOLITION WORK AFFECTS ANY LEAD BASED PAINT (LBP) OR PAINTS WITH DETECTABLE LEAD LEVELS REFERRED TO AS PAINT CONTAINING LEAD (PCL).

BLDG 8008 LEAD

(2A) COMPONENTS TESTED AND DETERMINED TO BE LEAD-BASED [L] OR >0.75 MG/CM2 LEAD INCLUDE:

- BEIGE VINYL BASE COVE [014]
- BEIGE ASBESTOS CEMENT CEILING [031]
- WHITE CERAMIC BATH FIXTURE [034, 092, 119]
- WHITE/ BEIGE DRYWALL CEILING [044, 068, 076]
- RED METAL FIRE PULL [063]
- BEIGE VINYL BLINDS [064, 072, 083]
- BEIGE METAL PIPING [069]
- LT. GREEN DRYWALL WALL [075, 162, 163]
- WHITE/ LT. BLUE BLOCK WALL [099, 100, 117, 197]
- YELLOW METAL CABINETS [111, 112]
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(2B) COMPONENTS TESTED AT LEVELS DETERMINED TO CONTAIN ELEVATED LEAD [E] OR 0.75- 0.50 INCLUDE:

- LT. BROWN LAMINATE WALL [052]

(2C) COMPONENTS TESTED AND DETERMINED TO CONTAIN LEAD LEVELS OF CONCERN [C] OR 0.50 – 0.25 MG/CM2 INCLUDE:

- LT. BROWN LAMINATE WALL [049, 050, 051]
- WHITE CERAMIC BATH FIXTURE [093]
- YELLOW METAL BOLLARD [042]

(2D) COMPONENTS TESTED AND DETERMINED TO CONTAIN DETECTABLE LEAD LEVELS [D] OR 0.25 – 0.05 MG/CM2 LEAD INCLUDE:

- TAN METAL PARTITION WALL [036]
- WHITE DRYWALL CEILING [059, 164]
- BROWN VINYL BASE COVE [071]
- WHITE LAMINATE WALL [073]
- WHITE METAL BEAMS/ POLES [107, 108, 205, 209, 221]
- WHITE EXT. BLOCK WALL [059]
- WHITE METAL RAILING [066]

BLDG 8108 LEAD

NO LEAD PAINT CONCERNS IN BUILDING 8108.

BLDG 8136 LEAD

[2D]: COMPONENTS TESTED AND DETERMINED TO BE LEAD-BASED [L] OR >0.75 MG/CM2 LEAD INCLUDE:

- WHITE CONCRETE FLOOR [021]

COMPONENTS TESTED AND DETERMINED TO CONTAIN DETECTABLE LEAD LEVELS [D] OR 0.25 – 0.05 MG/CM2 LEAD INCLUDE:

- WHITE METAL POST/ BEAM [012, 013]
- WHITE/ LT. GREEN METAL CEILING/ WALL [016, 025, 029, 035]
- SILVER METAL BEAM [039]

BLDG 8143 LEAD

NO LEAD PAINT CONCERNS IN BUILDING 8143.

ADDITIONALLY, AREAS BEHIND WALL BUILDOUTS COULD NOT BE PROPERLY ASSESSED AND ARE TYPICALLY HIGH DUST AND LEAD PAINT CONTAMINATED SPACES.

(3) OTHER HAZARDS

OLDER BUILDING DEMOLITION CREATES ADDITIONAL ITEMS OF CONCERN; FLUORESCENT LIGHTING FIXTURES HAVE ELEMENTAL MERCURY IN THE FLUORESCENT BULBS AND MAY ALSO CONTAIN POLYCHLORINATED BIPHENYLS (PCB) BALLASTS. BUILDINGS MAY ALSO CONTAIN MERCURY SWITCHES INSIDE OF THERMOSTATS, LEAD OR OTHER CHEMICAL CONTAINING BATTERIES, AND OTHER MATERIALS OF SPECIAL CONCERN.

FLUORESCENT LAMPS

INSPECTION OF THE PROJECT BUILDINGS IDENTIFIED APPROXIMATELY 750 FLUORESCENT LAMP TUBES IN VARIOUS STYLES OF LIGHTING FIXTURES. THERE IS APPROXIMATELY 3,700 LINEAR FEET OF FLUORESCENT LAMP TOTAL. THEY ARE TYPICAL THROUGHOUT THE PROJECT BUILDINGS.

(3A) PCBS

TWO (2) LIGHTING FIXTURES WERE FOUND TO CONTAIN BALLASTS LIKELY TO BE PCB CONTAINING. THESE UNITS ARE LOCATED IN BUILDING 8008 IN THE OLD KITCHEN AREA. THE UNITS HAVE BEEN CHANGED OUT TO NEW ELECTRONIC STYLE BALLASTS, BUT THE ORIGINAL BALLASTS (UNIVERSAL) REMAIN.

(3B) LEAD BATTERIES

ITEMS OF NOTE FOR POTENTIAL REGULATORY CONCERN WERE NOTED DURING THE INSPECTION AS FOLLOWS:

- EXIT SIGNAGE MAY CONTAIN LEAD BATTERY BACKUP. REMOVAL IF REQUIRED SHOULD BE DONE WITH CAUTION. ALL BATTERIES (LEAD ACID, NIMH, OR NICD) SHOULD BE RECYCLED. THERE IS APPROXIMATELY FOUR (4) SUCH EMERGENCY EXIT SIGNS.
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MERCURY

NO OLD STYLE THERMOSTATS CONTAINING A MERCURY VIAL WERE IDENTIFIED DURING THE BUILDING INSPECTION. IF ANY ARE IDENTIFIED DURING THE COURSE OF RENOVATION OR DEMOLITION, THEY ARE LIKELY TO CONTAIN MERCURY SWITCHES. THE MERCURY IS IN A LIQUID STATE, WITHIN A SMALL GLASS VIAL.

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Wiley|Wilson | BURNS MCDONNELL JOINT VENTURE

A/E INFO.

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	DD	DRW	AD	CHK	JR

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

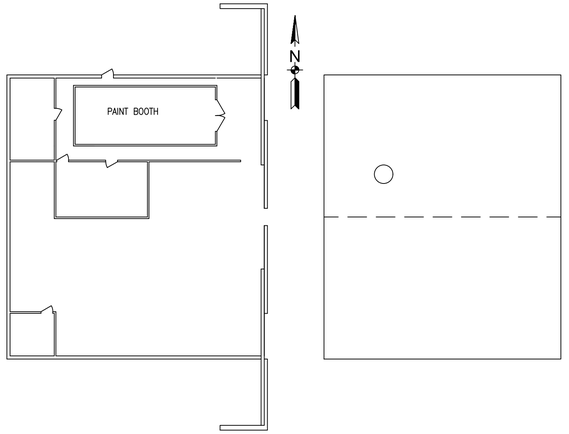
HAZARDOUS MATERIALS ASSESSMENT - SECOND FLOOR/ROOF

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078297
SHEET	13 OF 180

HM102

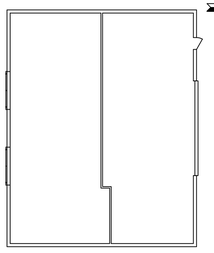
DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:

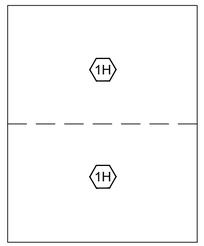


BUILDING 8108 FIRST FLOOR

BUILDING 8108 ROOF



BUILDING 8136 FIRST FLOOR

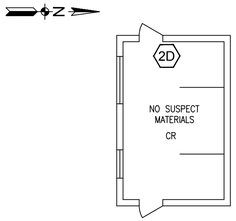


BUILDING 8136 ROOF

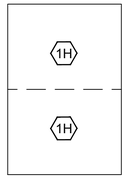
GRAPHIC SCALE:

1/16" =1'-0" 0' 8' 16' 32'

PLAN NORTH



BUILDING 8143 FIRST FLOOR



BUILDING 8143 ROOF

GRAPHIC SCALE:

1/8" =1'-0" 0' 4' 8' 16'

SYMBOL DESIGNATIONS

CR CONCRETE

HAZMAT DEMOLITION NOTES

REFER TO THE HAZARDOUS MATERIAL INSPECTION REPORT, AH ENVIRONMENTAL CONSULTANTS, INC., SEPTEMBER 2015, FOR DETAILS CONCERNING HAZARDOUS MATERIALS IDENTIFIED AT THIS SITE, INCLUDING ASBESTOS CONTAINING MATERIALS, LEAD PAINT AND DUST, MERCURY BULBS, PCB LIGHT BALLASTS, AND OTHER ITEMS ASSOCIATED WITH RENOVATION AND DEMOLITION OF THE STRUCTURE. ASBESTOS CONTAINING MATERIALS
ANY ACM IDENTIFIED THAT IS FRIABLE, OR CATEGORY I AND II NON-FRIABLE THAT MEETS THE QUALIFICATIONS TO BE CONSIDERED A REGULATED
ASBESTOS-CONTAINING MATERIAL (RACM), MUST BE REMOVED PRIOR TO DEMOLITION OR DISTURBANCE THAT WOULD BREAK UP, DISLODGE, OR SIMILARLY DESTROY THE MATERIAL OR PRECLUDE ACCESS TO THE MATERIAL FOR SUBSEQUENT REMOVAL. THIS INCLUDES GASKET MATERIALS.

(1) ASBESTOS CONTAINING MATERIALS

ANY ACM IDENTIFIED THAT IS FRIABLE, OR CATEGORY I AND II NON-FRIABLE THAT MEETS THE QUALIFICATIONS TO BE CONSIDERED A REGULATED
ASBESTOS-CONTAINING MATERIAL (RACM), MUST BE REMOVED PRIOR TO DEMOLITION OR DISTURBANCE THAT WOULD BREAK UP, DISLODGE, OR SIMILARLY DESTROY THE MATERIAL OR PRECLUDE ACCESS TO THE MATERIAL FOR SUBSEQUENT REMOVAL. THIS INCLUDES GASKET MATERIALS.

BLDG 8008 ACM

(1A) PIPE INSULATION AND FITTINGS: VARIOUS THERMAL SYSTEM INSULATION (TSI) MATERIALS ARE CONSIDERED FRIABLE, AND REGULATED ACM. NOTE: LIMITED DAMAGE AND DEBRIS IS PRESENT ABOVE DROP CEILING AREA OF THE SOUTHWEST CORNER OF THE SOUTHWEST BREAK ROOM.

(1B) FLOOR TILE: THESE VINYL COMPOSITE FLOOR TILES, IN MULTIPLE LOCATIONS, IS NON-FRIABLE CATEGORY I

(1C) FLOOR TILE MASTIC/ADHESIVE, BLACK: THE MATERIAL IS NOT CONSIDERED HAZARDOUS OR FRIABLE, REMOVAL IS REQUIRED TO ENSURE "NON-DISTURBANCE" DURING RENOVATIONS AND TO ENSURE PROPER UNDERLAYMENT FOR NEW FLOORING.

(1D) ASBESTOS CEMENT PANELS AND SIDING: IDENTIFIED AS EXTERIOR SIDING UNDER EXISTING METAL, CEILING AND WALL PANEL SHEETS, AND AS RESIDUAL PIECES WHERE CEILINGS OR WALLS HAVE BEEN INCOMPLETELY REMOVED. CLASSIFIED AS NON-FRIABLE CATEGORY II.

(1E) ASBESTOS JOINT COMPOUND (ASSOCIATED WITH DRYWALL): ACM JOINT COMPOUND IS PRESENT ON WALLS AND CEILINGS IN THE SOUTHWEST AND MAIN CENTRAL SECTIONS OF THE BUILDING. DURING RENOVATIONS, OSHA REGULATES THE MATERIALS AS SEPARATE AND THE ASBESTOS STANDARD APPLIES TO DISTURBANCE. DEMOLITION ACTIONS OCCURRING ON DESIGNATED WALLS AND CEILINGS MUST BE HANDLED AS ASBESTOS CLASS II WORK.

(1F) ROOF SEALANT, GRAY: THE MATERIAL IS NOT CONSIDERED HAZARDOUS OR FRIABLE AND REMOVAL IS NOT REQUIRED.

(1G) HM55- VINYL SHEET FLOORING: VINYL SHEET FLOORING IN THE CENTRAL RESTROOM AREA IS ACM. THE MATERIAL IS PRESENTLY CONSIDERED CATEGORY I NON-FRIABLE ACM, BUT REMOVAL OF THIS MATERIAL IS LIKELY TO DISTURB AND DAMAGE THE FELTS ENABLING FIBERS TO BECOME AIRBORNE AND THUS SHOULD BE TREATED AS A FRIABLE MATERIAL.

BLDG 8108 ACM

NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED DURING INSPECTION OF 8108.

BLDG 8136 ACM

NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED DURING INSPECTION OF 8136.

HAZMAT DEMOLITION NOTES CONT

BLDG 8143 ACM

(1H) ROOF SEALANT, SILVER: THE ACM IS NOT CONSIDERED HAZARDOUS OR FRIABLE AND REMOVAL IS NOT REQUIRED FOR DEMOLITION. HOWEVER, THE METAL PANELS HAVE ACM ATTACHED, RECYCLING CANNOT OCCUR. THE WASTE CAN BE DISPOSED OF AS STANDARD CONSTRUCTION/ DEMOLITION DEBRIS AT ANY LANDFILL ACCEPTING NON-FRIABLE ASBESTOS WASTES.

ALTHOUGH WORK MAY BE PERFORMED WITH THE ACM IN PLACE, REMOVAL OF THE IDENTIFIED ACM THAT MAY BE DISTURBED IS RECOMMENDED TO PROVIDE A WORKSITE FREE OF IDENTIFIED ACM AND THEREFORE STANDARD ACTIVITIES COULD PROCEED WITHOUT CONCERN (WITH REGARDS TO ACM). ACM WILL BE IMPACTED DURING RENOVATION, CONSTRUCTION, AND DEMOLITION ACTIVITIES IN ALL PHASES AS SHOWN IN THE FOLLOWING CHART.

BUILDING	PHASE	ACM IMPACTED
8008	I	FLOOR TILE
8008	II	ASBESTOS CEMENT PANELS; PIPE INSULATION; DRYWALL JOINT COMPOUND; FLOOR TILE AND MASTIC/ ADHESIVE; VINYL SHEET FLOORING
8008	III	DRYWALL JOINT COMPOUND; FLOOR TILE AND MASTIC/ ADHESIVE
8008	IV	PIPE INSULATION; ASBESTOS CEMENT PANELS
8008	V	ASBESTOS CEMENT PANELS
8008	VI	ASBESTOS CEMENT PANELS
8143	N/A	ROOFING SEALANT, SILVER

LEAD NOTES

(2) LBP OR PCL IDENTIFIED

DISTURBANCE OF PAINT CONTAINING LEAD REQUIRES SPECIAL TRAINING AND INITIAL EXPOSURE MONITORING AT A MINIMUM. ABOVE 0.5% BY WEIGHT (BULK PAINT) OR >0.75 MG/CM2 (XRF), PAINT IS CONSIDERED TO BE LEAD-BASED. HOWEVER, LOWER THRESHOLDS ARE UTILIZED IN CONSTRUCTION SINCE OSHA STANDARDS 29 CFR 1926.62 (LEAD IN CONSTRUCTION) ARE INVOKED IF ANY LEAD IS PRESENT; THERE IS NO MINIMUM CONCENTRATION LEVEL.

OSHA AND EPA REGULATIONS MUST BE FOLLOWED WHEN RENOVATION OR DEMOLITION WORK AFFECTS ANY LEAD BASED PAINT (LBP) OR PAINTS WITH DETECTABLE LEAD LEVELS REFERRED TO AS PAINT CONTAINING LEAD (PCL).

BLDG 8008 LEAD

(2A) COMPONENTS TESTED AND DETERMINED TO BE LEAD-BASED [L] OR >0.75 MG/CM2 LEAD INCLUDE:

- BEIGE VINYL BASE COVE [014]
- BEIGE ASBESTOS CEMENT CEILING [031]
- WHITE CERAMIC BATH FIXTURE [034, 092, 119]
- WHITE/ BEIGE DRYWALL CEILING [044, 068, 076]
- RED METAL FIRE PULL [063]
- BEIGE VINYL BLINDS [064, 072, 083]
- BEIGE METAL PIPING [069]
- LT. GREEN DRYWALL WALL [075, 162, 163]
- WHITE/ LT. BLUE BLOCK WALL [099, 100, 117, 197]
- YELLOW METAL CABINETS [111, 112]
- RED METAL FIRE CAN [154]
- WHITE METAL EXT. WALL [009, 010, 015, 017, 056, 058, 062]
- WHITE EXT. CEMENT/ BLOCK WALL [011, 012, 013, 060, 072]

(2B) COMPONENTS TESTED AT LEVELS DETERMINED TO CONTAIN ELEVATED LEAD [E] OR 0.75- 0.50 INCLUDE:

- LT. BROWN LAMINATE WALL [052]

(2C) COMPONENTS TESTED AND DETERMINED TO CONTAIN LEAD LEVELS OF CONCERN [C] OR 0.50 – 0.25 MG/CM2 INCLUDE:

- LT. BROWN LAMINATE WALL [049, 050, 051]
- WHITE CERAMIC BATH FIXTURE [093]
- YELLOW METAL BOLLARD [042]

(2D) COMPONENTS TESTED AND DETERMINED TO CONTAIN DETECTABLE LEAD LEVELS [D] OR 0.25 – 0.05 MG/CM2 LEAD INCLUDE:

- TAN METAL PARTITION WALL [036]
- WHITE DRYWALL CEILING [059, 164]
- BROWN VINYL BASE COVE [071]
- WHITE LAMINATE WALL [073]
- WHITE METAL BEAMS/ POLES [107, 108, 205, 209, 221]
- WHITE EXT. BLOCK WALL [059]
- WHITE METAL RAILING [066]

BLDG 8108 LEAD

NO LEAD PAINT CONCERNS IN BUILDING 8108.

BLDG 8136 LEAD

[2D]: COMPONENTS TESTED AND DETERMINED TO BE LEAD-BASED [L] OR >0.75 MG/CM2 LEAD INCLUDE:

- WHITE CONCRETE FLOOR [021]

COMPONENTS TESTED AND DETERMINED TO CONTAIN DETECTABLE LEAD LEVELS [D] OR 0.25 – 0.05 MG/CM2 LEAD INCLUDE:

- WHITE METAL POST/ BEAM [012, 013]
- WHITE/ LT. GREEN METAL CEILING/ WALL [016, 025, 029, 035]
- SILVER METAL BEAM [039]

BLDG 8143 LEAD

NO LEAD PAINT CONCERNS IN BUILDING 8143.

ADDITIONALLY, AREAS BEHIND WALL BUILDOUTS COULD NOT BE PROPERLY ASSESSED AND ARE TYPICALLY HIGH DUST AND LEAD PAINT CONTAMINATED SPACES.

(3) OTHER HAZARDS

OLDER BUILDING DEMOLITION CREATES ADDITIONAL ITEMS OF CONCERN; FLUORESCENT LIGHTING FIXTURES HAVE ELEMENTAL MERCURY IN THE FLUORESCENT BULBS AND MAY ALSO CONTAIN POLYCHLORINATED BIPHENYLS (PCB) BALLASTS. BUILDINGS MAY ALSO CONTAIN MERCURY SWITCHES INSIDE OF THERMOSTATS, LEAD OR OTHER CHEMICAL CONTAINING BATTERIES, AND OTHER MATERIALS OF SPECIAL CONCERN.

FLUORESCENT LAMPS

INSPECTION OF THE PROJECT BUILDINGS IDENTIFIED APPROXIMATELY 750 FLUORESCENT LAMP TUBES IN VARIOUS STYLES OF LIGHTING FIXTURES. THERE IS APPROXIMATELY 3,700 LINEAR FEET OF FLUORESCENT LAMP TOTAL. THEY ARE TYPICAL THROUGHOUT THE PROJECT BUILDINGS.

(3A) PCBS

TWO (2) LIGHTING FIXTURES WERE FOUND TO CONTAIN BALLASTS LIKELY TO BE PCB CONTAINING. THESE UNITS ARE LOCATED IN BUILDING 8008 IN THE OLD KITCHEN AREA. THE UNITS HAVE BEEN CHANGED OUT TO NEW ELECTRONIC STYLE BALLASTS, BUT THE ORIGINAL BALLASTS (UNIVERSAL) REMAIN.

(3B) LEAD BATTERIES

ITEMS OF NOTE FOR POTENTIAL REGULATORY CONCERN WERE NOTED DURING THE INSPECTION AS FOLLOWS:

- EXIT SIGNAGE MAY CONTAIN LEAD BATTERY BACKUP. REMOVAL IF REQUIRED SHOULD BE DONE WITH CAUTION. ALL BATTERIES (LEAD ACID, NIMH, OR NICD) SHOULD BE RECYCLED. THERE IS APPROXIMATELY FOUR (4) SUCH EMERGENCY EXIT SIGNS.
- EMERGENCY LIGHTING WILL CONTAIN BATTERY BACKUP. REMOVAL IF REQUIRED SHOULD BE DONE WITH CAUTION. ALL BATTERIES (LEAD ACID, NIMH, OR NICD) SHOULD BE RECYCLED. THERE ARE APPROXIMATELY TWENTY-SIX (26) SUCH LIGHTS.

MERCURY

NO OLD STYLE THERMOSTATS CONTAINING A MERCURY VIAL WERE IDENTIFIED DURING THE BUILDING INSPECTION. IF ANY ARE IDENTIFIED DURING THE COURSE OF RENOVATION OR DEMOLITION, THEY ARE LIKELY TO CONTAIN MERCURY SWITCHES. THE MERCURY IS IN A LIQUID STATE, WITHIN A SMALL GLASS VIAL.

HAZARDOUS MATERIALS ASSESSMENT

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

APPR | DATE | SYM | DESCRIPTION

NAVFAC

SEAL

Wiley|Wilson | BURNS MCDONNELL JOINT VENTURE

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	DD	DRW	AD	CHK	JR

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

HAZARDOUS MATERIALS ASSESSMENT - BLDG 8108/8136/8143

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078298
SHEET	14 OF 180

HM103

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:

REVDATE:

SURVEY LEGEND:

- CONTROL POINT
- CONTROL POINT - NAIL SET
- DOWNSPOUT
- DROP INLET
- SANITARY MANHOLE
- SANITARY CLEANOUT
- ELECTRIC MANHOLE
- PP# ELECTRIC PANEL
- JUNCTION BOX
- ELECTRIC METER
- WMH WATER MANHOLE
- FHYD FIRE HYDRANT
- WV WATER VALVE
- YHYD YARD HYDRANT
- CPED CABLE TV PEDESTAL
- SIGN
- BOLLARD
- EDGE OF WATER
- HANDRAIL
- EDGE OF PAVEMENT
- FENCELINE
- TREELINE
- 10 MAJOR CONTOURS
- 9 MINOR CONTOURS
- UGT UNDERGROUND TELEPHONE
- NG NATURAL GAS
- UGE UNDERGROUND ELECTRIC
- SD STORM LINE
- W WATER LINE
- F FUEL LINE
- DITCH

NEW WORK LEGEND:

- BUILDING
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- BOLLARD
- SIGN
- # OF PARKING SPACES
- 8.50 SPOT ELEVATION
- SLOPE/FLOW ARROW
- BIORETENTION BASIN
- SS SANITARY SEWER LINE
- W DOMESTIC WATER LINE
- UD UNDERDRAIN LINE
- WATER VALVE
- CLEANOUT
- SITE DEMOLITION
- PAVEMENT DEMOLITION
- BUILDING DEMOLITION
- UTILITY DEMOLITION

SURVEY NOTES:

1. THE TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, JAMES J. LEWIS, JR. FROM AN ACTUAL GROUND SURVEY MADE UNDER HIS SUPERVISION.THE PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. SURVEY CONDUCTED BY WILEY|WILSON IN JULY 2015.
3. HORIZONTAL DATUM IS NORTH AMERICAN DATUM OF 1983 (NAD 83), MARYLAND STATE PLANE COORDINATE SYSTEM IN U.S. SURVEY FEET.
4. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
5. ALL EXISTING UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND MAY NOT REPRESENT ALL UNDERGROUND UTILITIES OR SERVICE LINES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATION, DEPTH, SIZE, AND TYPE OF UTILITIES SHOWN AND NOTIFYING THE CONTRACTING OFFICER OF DISCREPANCIES. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT THE PERTINENT UTILITY COMPANIES AND/OR UTILITY LOCATING SERVICES TO HAVE ALL UNDERGROUND UTILITIES LOCATED AND MARKED. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE TO PROPERTY, UTILITIES, OR PHYSICAL IMPROVEMENTS.
6. CONTACT "MARYLAND MISS UTILITY" AT 1-800-257-7777 TO DETERMINE THE LOCATIONS OF UNDERGROUND UTILITIES.
7. THE SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND MAY NOT SHOW ALL EASEMENTS THAT MAY AFFECT THE PROPERTY.
8. SEE SHEET C-101 FOR BENCHMARK AND CONTROL POINT LOCATIONS.

MARYLAND SURVEY NOTE:

PROFESSIONAL LAND SURVEYOR IDENTIFIED HEREIN WAS IN RESPONSIBLE CHARGE OVER THE PREPARATION OF THIS TOPOGRAPHIC SURVEY AND THE SURVEYING WORK REFLECTED IN IT, ALL IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN REGULATION 09.13.06.04.

LAND SURVEYOR LICENSE EXPIRATION DATE: 08/02/2017.

GENERAL CIVIL NOTES:

1. ALL WORK SHALL BE SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF GOVERNMENT REGULATORY AGENCIES AND THE CONTRACTING OFFICER.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND LICENSES REQUIRED BY THE STATE OF MARYLAND OR OTHER GOVERNMENT REGULATORY AGENCIES INVOLVED UNDER THIS CONTRACT.
3. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND GOVERNMENT CODES, ORDINANCES, AND REGULATIONS. IN CASE OF CONTRADICTION OR DISCREPANCY BETWEEN REQUIREMENTS, CONTRACTOR SHALL INCORPORATE WHICHEVER IS MOST STRINGENT. WHERE A QUESTION REMAINS ON WHICH REQUIREMENT IS MOST STRINGENT, CONTRACTOR SHALL SUBMIT ISSUE TO THE OWNERS REPRESENTATIVE IN WRITING. THE DECISION OF THE OWNERS REPRESENTATIVE SHALL BE CONSIDERED FINAL.
4. SITE WORK (GRADING, EXCAVATING, AND CONSTRUCTION) ON THE PROJECT SHALL NOT COMMENCE UNTIL THE APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AS SPECIFIED ON THE PLAN.
5. THE CONTRACTOR SHALL ENSURE THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE PROJECT HAVE A CERTIFICATE OF TRAINING AT AN MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION/SEDIMENT PRIOR TO BEGINNING THE PROJECT.
6. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESEEDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND RESTORED TO PRE-DEVELOPMENT CONDITIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL BUILDING UTILITY CONNECTIONS WITH THE INFORMATION PROVIDED ON THE MECHANICAL AND ELECTRICAL DRAWINGS.
8. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THE UTILITY CONSTRUCTION AND CONNECTIONS.
9. CONNECTION TO EXISTING WATER AND SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL REQUIREMENTS OF ASSOCIATED UTILITY COMPANIES AND AGENCIES.
10. A MINIMUM COVER OF 42 INCHES IS REQUIRED OVER PROPOSED WATER LINES.
11. IMMEDIATELY REPAIR ALL ACTIVE UTILITIES DAMAGED DURING CONSTRUCTION AND NOTIFY THE CONTRACTING OFFICER AND AFFECTED UTILITY COMPANIES OF THE DAMAGE.
12. THE CONTRACTOR SHALL COMPLY WITH THE MOST CURRENT EDITION OF OSHA REGULATIONS CONCERNING EXCAVATION AND TRENCHES.
13. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET, UNLESS OTHERWISE INDICATED.
14. CALLOUTS, COORDINATES, AND DIMENSIONS ARE POINTED TO OR MEASURED TO STRUCTURE CENTER, EDGE OF PAVEMENT, BACK OF CURB, OR OUTSIDE FACE OF FOUNDATION WALL, UNLESS INDICATED OTHERWISE.
15. PAVEMENT DESIGNATED FOR SAWCUT SHALL BE SAWCUT FULL DEPTH.
16. ANY DAMAGE TO PAVEMENT AREAS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.

ACCESS AND STAGING NOTES:

1. THE CONTRACTOR ACCESS AND HAUL ROUTE FOR ALL CONTRACTOR PERSONNEL, VEHICLES, EQUIPMENT, AND DELIVERIES IS SHOWN ON SHEET G-001.
2. EMPLOYEE ACCESS TO BUILDING 8008 MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE ACTIVITIES AND MAINTAIN ALL ACCESS AND HAUL ROUTES IN A MANNER THAT ALLOWS UNOBSTRUCTED EMERGENCY ACCESS TO ALL PROJECT AREAS, AND EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAY TO EMERGENCY AND SECURITY VEHICLE RESPONSE TIME. CONTRACTOR SHALL MAINTAIN ACCESS AND HAUL ROUTES TO BE FREE FROM DEBRIS CAUSED FROM CONSTRUCTION ACTIVITIES ON A DAILY BASIS.
4. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A STAGING/LAYDOWN AREA FOR MATERIALS AND EQUIPMENT. LOCATION OF CONTRACTOR'S STAGING/LAYDOWN AREA SHALL BE AS ILLUSTRATED ON SHEET C-101.
5. CONTRACTOR SHALL PROVIDE AND INSTALL AT THE PROJECT SITE A PROFESSIONALLY PAINTED SIGN, MEETING CONTRACTING OFFICER APPROVAL, TO DIRECT MATERIAL SUPPLIERS, EMPLOYEES, AND DELIVERIES TO THE CONSTRUCTION SITE. THE SIGN SHALL READ “CONSTRUCTION VEHICLES ONLY - NO VENDORS ALLOWED.”
6. ALL CONTRACTOR VEHICLES AND PERSONNEL ARE SUBJECT TO SEARCH BY SECURITY WHEN ENTERING THE BASE. ALL PERSONNEL MUST HAVE A CURRENT AND VALID PHOTO IDENTIFICATION PER BASE SECURITY REQUIREMENTS, AND ALL VEHICLES MUST HAVE CURRENT AND VALID REGISTRATION AND INSURANCE. ALL CONTRACTOR PERSONNEL SHALL BE RESPONSIBLE FOR COORDINATING WITH THE BASE SECURITY OFFICE IN OBTAINING PROPER SECURITY CLEARANCE AND BADGING PRIOR TO ENTERING SECURE AREAS.
7. ACCESS POINTS, HAUL ROUTES, STAGING/LAYDOWN AREA, AND ANY OTHER AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE CONTRACTING OFFICER.

SITE PHASING NOTES:

SITE DEMOLITION AND NEW WORK SHALL CONFORM TO THE FOLLOWING PHASING PLAN. SEE SHEETS GC101-GC103 FOR OVERALL PROJECT PHASING NOTES.

PRIOR TO PHASE 1:

1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
2. SAW CUT AND REMOVE EXISTING PAVEMENTS AND OTHER SITE FEATURES ASSOCIATED WITH BUILDING 8008 REPAIRS AND ADDITION.
3. RELOCATE STORAGE CONTAINERS.
4. RELOCATE RAM POLE FIXTURE AND EQUIPMENT.

PHASE 1:

1. INSTALL CONCRETE RAMPS AT CARPENTRY (RM 125), MATERIALS STORAGE (RM123) AND JANITOR (RM 136) ROOMS.
2. INSTALL CONCRETE PAD AT SHEET METAL ROOM (RM 121) AND CORRIDOR (RM 126.
3. INSTALL CONCRETE PAD FOR MAKE-UP AIR UNIT.
4. INSTALL MICRO-BIORETENTION BASIN.
5. PERFORM MINOR GRADING AROUND PERIMETER OF BUILDING.

PHASE 2:

1. INSTALL CONCRETE RAMPS AT ENGINEERING ASSEMBLY AND PROTOTYPE ROOM (RM 112).
2. INSTALL CONCRETE PAD AT VESTIBULE (RM 108A) AND CORRIDOR (RM 108).
3. REMOVE ABOVE GROUND FUEL OIL STORAGE TANK AND UNDERGROUND FUEL PIPING TO EXISTING BOILER.
4. REPLACE EXISTING SANITARY SEWER LINE. REMOVE EXISTING CONNECTION TO BUILDING AND PROVIDE NEW CONNECTIONS.
5. INSTALL DOMESTIC WATER SERVICE TO BUILDING.

PHASE 3:

1. INSTALL CONCRETE RAMPS AT PAINT BOOTH (RM 129) AND BREAK-DOWN AND ASSEMBLY (RM 131).
2. INSTALL CONCRETE PAD FOR SANDBLASTER DUST COLLECTION UNIT OUTSIDE SAND-BLASTING ROOM (RM 130).
3. INSTALL FENCED ENCLOSURE AND COVERED WORK AREA OUTSIDE WELDING ROOM (RM 133).

FOLLOWING PHASE 3:

1. DEMOLISH BUILDINGS 8108, 8136 AND 8143, AS WELL AS ADDITIONAL SITE FEATURES AS INDICATED.
2. INSTALL CONCRETE DUMPSTER PAD AND ENCLOSURE.
3. INSTALL CONCRETE PAD FOR FUEL STATION.
4. PERFORM GRADING AND PROVIDE TOPSOIL, SEEDING AND MULCHING IN VICINITY OF DEMOLISHED BUILDINGS.
5. REMOVE EXISTING PAVEMENT STRIPING.
6. INSTALL NEW ASPHALT PAVEMENT AS INDICATED.
7. INSTALL NEW PAVEMENT STRIPING, SIGNAGE AND WHEEL STOPS.
8. REMOVE EROSION AND SEDIMENT CONTROL MEASURES ONCE CONSTRUCTION IS COMPLETE AND SITE HAS BEEN STABILIZED.

CIVIL ABBREVIATIONS:

A/C	AIR CONDITIONING UNIT	R	RADIUS
APPROX	APPROXIMATE	RM	ROOM
AST	ABOVEGROUND STORAGE TANK	STA	STATION
BLDG	BUILDING	SD	STORM DRAIN
CMP	CORRUGATED METAL PIPE	SMH	SEWER MANHOLE
CONC	CONCRETE	STDI	STORM DROP INLET
CP	CONTROL POINT	TC	TERRA COTTA
DI	DUCTILE IRON	TYP	TYPICAL
E	EASTING	UGE	UNDERGROUND ELECTRIC
EL	ELEVATION	W	WATER
FF	FINISH FLOOR	WM	WATER METER
FHYD	FIRE HYDRANT	WMH	WATER MANHOLE
GOVT	GOVERNMENT	WV	WATER VALVE
INV	INVERT	XFMR	TRANSFORMER
N	NORTHING	YHYD	YARD HYDRANT
PVC	POLYVINYL CHLORIDE		

MDE PROJECT NO. 16-SF-0128

APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND · JOSEPH T. GUTHRIE · 48844 · REGISTERED PROFESSIONAL ENGINEER · 3/18/16

SEAL

Wiley|Wilson | BURNS MCDONNELL

JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

CIVIL NOTES, LEGENDS AND ABBREVIATIONS

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078299
SHEET	15 OF 180

C-001

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:

REVDATE:

EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE ADMINISTRATION (WMA) AT (410) 537-3510 SEVEN (7)DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE ADMINISTRATION, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF WMA.

2. THE CONTRACTOR MUST NOTIFY WMA IN WRITING AND BY TELEPHONE AT THE FOLLOWING POINTS:
   A. THE REQUIRED PRE-CONSTRUCTION MEETING.
   B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
   C. DURING THE INSTALLATION OF SEDIMENT BASINS (TO BE CONVERTED INTO PERMANENT STORMWATER MANAGEMENT STRUCTURES) AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION OF EACH STEP IS MANDATORY.
   D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
   E. PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES.
   F. PRIOR TO FINAL ACCEPTANCE.

3. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED AND APPROVED BY THE AGENCY INSPECTOR OR WMA INSPECTOR PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE WMA INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM WMA INSPECTOR AND AGENCY INSPECTOR. THE CONTRACTOR MUST OBTAIN PRIOR AGENCY AND WMA APPROVAL FOR CHANGES TO THE SEDIMENT CONTROL PLAN AND / OR SEQUENCE OF CONSTRUCTION.

4. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.

5. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM WMA INSPECTOR AND AGENCY INSPECTOR.

6. ALL SEDIMENT BASINS, TRAP EMBANKMENTS AND SLOPES, PERIMETER DIKES, SWALES AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SOD OR SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES, AS SOON AS POSSIBLE BUT NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. (REQUIREMENT FOR STABILIZATION MAY BE REDUCED TO THREE (3) DAYS FOR SENSITIVE AREAS.)

7. THE CONTRACTOR SHALL APPLY SOD OR SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS AND STOCKPILES WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED IN THE AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. (REQUIREMENT MAY BE REDUCED TO SEVEN (7) DAYS FOR SENSITIVE AREAS.)

8. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE AND HAVE ESTABLISHED PERMANENT STABILIZATION FOR ALL CONTRIBUTORY DISTURBED AREAS USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHERE THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE, BUT NOT LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED AND ANCHORED STRAW MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.

9. THE SITE'S APPROVAL LETTER, APPROVED EROSION AND SEDIMENT CONTROL PLANS, DAILY LOG BOOKS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF WMA AND THE AGENCY RESPONSIBLE FOR PROJECT.

10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WATER DOWNSLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF A CUT OR FILL SLOPE UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE METHODS MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.

11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING, RIP-RAP, OR BY OTHER WMA APPROVED STABILIZATION MEASURES.

12. TEMPORARY SEDIMENT CONTROL DEVICES MAY BE REMOVED, WITH PERMISSION OF WMA INSPECTOR AND AGENCY INSPECTORS, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.

13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NONMAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.

14. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS TO PREVENT WATER FROM PONDING FOR MORE THAN TWENTY FOUR (24) HOURS AFTER THE END OF A RAINFALL EVENT. DRAINAGE COURSES AND SWALE FLOW AREAS MAY TAKE AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL EVENT TO DRAIN. AREAS DESIGNED TO HAVE STANDING WATER SHALL NOT BE REQUIRED TO MEET THIS REQUIREMENT.

15. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A FOUNDATION THAT EXISTS OR IS UNDER CONSTRUCTION. NO STRUCTURE MAY BE CONSTRUCTED WITHIN 20 FEET OF AN ACTIVE SEDIMENT TRAP OR BASIN.

16. THE WMA INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY.

17. ALL TRAP DEPTH DIMENSIONS ARE RELATIVE TO THE OUTLET ELEVATION. ALL TRAPS MUST HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.

18. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING, AND GROUND COVERS.

19. SEDIMENT SHALL BE REMOVED AND THE TRAP OR BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE QUARTER OF THE TOTAL DEPTH OF THE TRAP OR BASIN. TOTAL DEPTH SHALL BE MEASURED FROM THE TRAP OR BASIN BOTTOM TO THE CREST OF THE OUTLET.

20. SEDIMENT REMOVED FROM TRAPS (AND BASINS) SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE MUST BE DIRECTED TO A SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.

21. ALL WATER REMOVED FROM EXCAVATED AREAS SHALL BE PASSED THROUGH A WMA APPROVED DEWATERING PRACTICE OR PUMPED TO A SEDIMENT TRAP OR BASIN PRIOR TO DISCHARGE TO A FUNCTIONAL STORM DRAIN SYSTEM OR TO STABLE GROUND SURFACE.

22. SEDIMENT CONTROL FOR UTILITY CONSTRUCTION FOR AREAS OUTSIDE OF DESIGNED CONTROLS OR AS DIRECTED BY ENGINEER OR WMA INSPECTOR:
   A. CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK.
   B. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
   C. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED, AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE COMPLETED THE SAME DAY, UNLESS;
   D. TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED FOR MORE THAN ONE DAY.

23. WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR, SEDIMENT BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE MUST BE MADE OF WELDED WIRE AND AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.

24. OFF-SITE SPOIL OR BORROW AREAS ON STATE OR FEDERAL PROPERTY MUST HAVE PRIOR APPROVAL BY WMA AND OTHER APPLICABLE STATE, FEDERAL, AND LOCAL AGENCIES; OTHERWISE APPROVAL MUST BE GRANTED BY THE LOCAL AUTHORITIES. ALL WASTE AND BORROW AREAS OFF-SITE MUST BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED.

25. SITES WHERE INFILTRATION DEVICES ARE USED FOR THE CONTROL OF STORMWATER, EXTREME CARE MUST BE TAKEN TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE STRUCTURE DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES PLACED IN INFILTRATION AREAS MUST HAVE BOTTOM ELEVATIONS AT LEAST TWO (2) FEET HIGHER THAN THE FINISH GRADE BOTTOM ELEVATION OF THE INFILTRATION PRACTICE. WHEN CONVERTING A SEDIMENT TRAP TO AN INFILTRATION DEVICE, ALL ACCUMULATED SEDIMENT MUST BE REMOVED AND DISPOSED OF PRIOR TO FINAL GRADING OF INFILTRATION DEVICE.

26. WHEN A STORM DRAIN SYSTEM OUTFALL IS DIRECTED TO A SEDIMENT TRAP OR SEDIMENT BASIN AND THE SYSTEM IS TO BE USED FOR TEMPORARILY CONVEYING SEDIMENT LADEN WATER, ALL STORM DRAIN INLETS IN NON-SUMP AREAS SHALL HAVE TEMPORARY ASPHALT BERMS CONSTRUCTED AT THE TIME OF BASE PAVING TO DIRECT GUTTER FLOW INTO THE INLETS TO AVOID SURCHARGING AND OVERFLOW OF INLETS IN SUMP AREAS.

27. TOTAL DISTURBED AREA: 2.55 AC
    STORMWATER STUDY AREA: 0.65 AC
    AREA TO BE ROOFED AND/OR PAVED: 0.40 AC
    TOTAL VOLUME OF SPOIL MATERIAL: 0 CY
    TOTAL VOLUME OF BORROW MATERIAL: 0 CY

EROSION AND SEDIMENT CONTROL NARRATIVE:

PROJECT DESCRIPTION

THE PROJECT SITE IS LOCATED AT THE WEBSTER FIELD ANNEX OF NAVAL AIR STATION PATUXENT RIVER, MARYLAND. THE PROJECT INCLUDES REPAIRS AND ADDITIONS TO BUILDING 8008, WHICH OPERATES AS A MACHINE SHOP FACILITY. SITE WORK ASSOCIATED WITH THIS PROJECT INCLUDES CONCRETE RAMP CONSTRUCTION, PARKING LOT MODIFICATIONS, STORMWATER MANAGEMENT DESIGN, AND DEMOLITION OF EXISTING BUILDINGS AND PAVEMENT TO ACCOMMODATE THE BUILDING EXPANSION. MINOR GRADING WILL TAKE PLACE IN THE AREAS WHERE EXISTING BUILDINGS AND PAVEMENT ARE BEING DEMOLISHED, AND AROUND BUILDING 8008 TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.

EXISTING SOILS INFORMATION

EXISTING SOILS AT THE PROJECT SITE CONSIST OF MATTAPEX SILT LOAM AND OTHELLO SILT LOAM. SOILS ARE CLASSIFIED AS ML AND ML-CL PER UNIFIED SOIL CLASSIFICATION.

SEQUENCE OF CONSTRUCTION

1. CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AT (410) 537-3510 AT LEAST SEVEN (7) DAYS PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITY.
2. INSTALL PERIMETER SILT FENCE AT DOWNSTREAM END OF PROJECT SITE.
3. INSTALL REMAINING SILT FENCE AND INLET PROTECTION.
4. SAW CUT AND REMOVE EXISTING PAVEMENT AND OTHER SITE FEATURES ASSOCIATED WITH PROJECT.
5. PERFORM PHASE 1 SITE WORK AS DESCRIBED IN SITE PHASING NOTES ON SHEET C-001. PHASE 1 SITE WORK INCLUDES INSTALLATION OF THE MICRO-BIORETENTION BASIN AND MINOR GRADING AROUND THE PERIMETER OF THE BUILDING.
6. PERFORM PHASE 2 SITE WORK AS DESCRIBED IN SITE PHASING NOTES ON SHEET C-001.
7. PERFORM PHASE 3 SITE WORK AS DESCRIBED IN SITE PHASING NOTES ON SHEET C-001.
8. DEMOLISH BUILDINGS 8108, 8136 AND 8143, AS WELL AS ADDITIONAL SITE FEATURES AS INDICATED.
9. PERFORM GRADING AND PROVIDE TOPSOIL IN THE VICINITY OF THE DEMOLISHED BUILDINGS.
10. PROVIDE PERMANENT SEEDING AND MULCHING IMMEDIATELY FOLLOWING GRADING OPERATIONS.
11. ENSURE A GOOD STAND OF VEGETATIVE COVER (>95% COVER) HAS BEEN ESTABLISHED IN ALL AREAS THAT HAVE BEEN SEEDED.
12. ONCE CONSTRUCTION IS COMPLETE, CONTACT THE MDE INSPECTOR TO PERFORM A FINAL SITE INSPECTION TO ENSURE SITE HAS BEEN STABILIZED.
13. UPON APPROVAL BY MDE INSPECTOR, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

MAINTENANCE

IN GENERAL, ALL EROSION AND SEDIMENT CONTROLS SHALL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:

1. SILT FENCE SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALFWAY TO THE TOP OF THE FENCE AND DISPOSED OF PER STANDARD EROSION AND SEDIMENT CONTROL NOTE #20 (SEE THIS SHEET).
2. SEEDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.
3. SEDIMENT REMOVED DURING MAINTENANCE SHALL BE SPREAD AND IMMEDIATELY STABILIZED OR SHALL BE REMOVED FROM THE SITE.

SOIL STABILIZATION

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

MDE PROJECT NO. 16-SF-0128

APPR	DATE	DESCRIPTION	SYM

NAVFAC

STATE OF MARYLAND · TIMOTHY GUTHRIE · 48844 · REGISTERED PROFESSIONAL ENGINEER · 3/18/16

SEAL

Wiley|Wilson | BURNS MCDONNELL

JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

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BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

EROSION AND SEDIMENT CONTROL NOTES

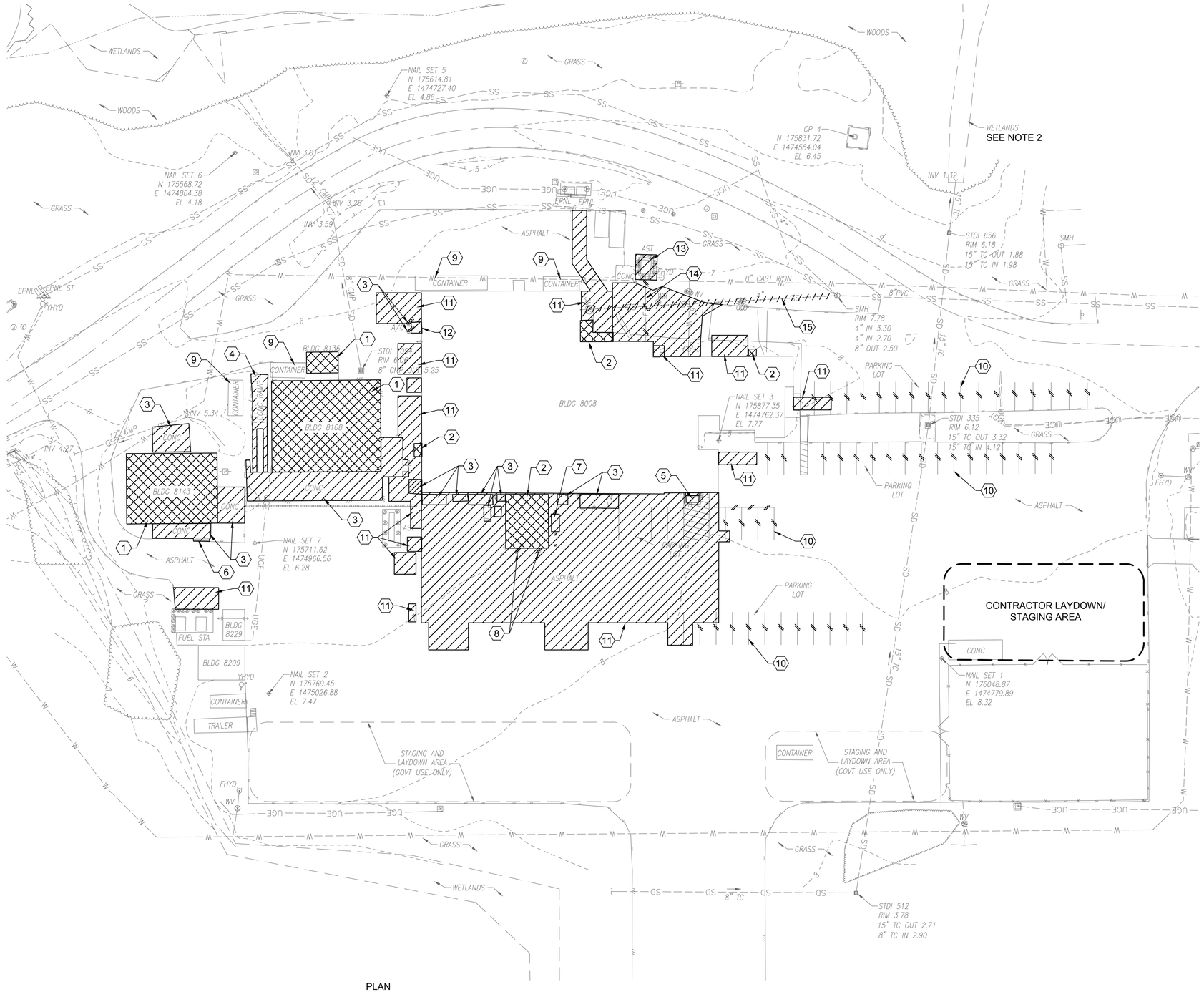
SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078300
SHEET	16 OF 180

C-002

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:

REV/DATE:



PLAN NORTH

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 30'

GENERAL NOTES:

1. SEE SHEET C-001 FOR SITE NOTES AND LEGEND.
2. WETLANDS LIMITS SHOWN ARE APPROXIMATE AND ARE BASED OFF EXISTING BASE MAPPING PROVIDED BY NAVFAC. THE CONTRACTOR SHALL ENSURE WETLANDS ARE NOT IMPACTED DURING CONSTRUCION.

DEMOLITION KEY NOTES:

1. DEMOLISH BUILDING, FOUNDATION AND EXTERIOR HVAC EQUIPMENT.
2. DEMOLISH PORTION OF BUILDING 8008. SEE ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.
3. REMOVE CONCRETE PAVEMENT.
4. REMOVE CONCRETE RAMP.
5. REMOVE CONCRETE STAIRS.
6. REMOVE TRENCH DRAIN AND CAP STORM DRAIN PIPE.
7. RELOCATE RAM POLE FIXTURE AND EQUIPMENT. SEE SHEET C-102 FOR NEW LOCATION. RELOCATION SHALL INCLUDE FILLING OF EXISTING RAM POLE PIT (APPROX 20' DEEP, 1' DIAMETER), REMOVAL OF CONCRETE PAD, RELOCATION OF CRADLE, AND RELOCATION OF COMPRESSED AIR/POWER EQUIPMENT. THE CONTRACTOR SHALL INSPECT EQUIPMENT PRIOR TO RELOCATION AND SHALL ENSURE EQUIPMENT IS PROPERLY INSTALLED AND MEETS FUNCTIONAL REQUIREMENTS AFTER RELOCATION.
8. REMOVE BOLLARDS.
9. RELOCATE STORAGE CONTAINER. SEE SHEET C-102 FOR NEW LOCATION.
10. REMOVE PAVEMENT STRIPING (TYP).
11. REMOVE ASPHALT PAVEMENT AS REQUIRED FOR BUILDING ADDITION AND NEW CONCRETE PADS AND RAMPS. COORDINATE WITH NEW WORK SHOWN ON SHEET C-201.
12. REMOVE A/C UNIT AND CONCRETE PAD.
13. REMOVE 1,000 GALLON ABOVE GROUND FUEL OIL STORAGE TANK, BOLLARDS, AND UNDERGROUND FUEL PIPING TO EXISTING BOILER IN ACCORDANCE WITH NFPA 31, CHAPTERS 7.12 AND 7.13. TANK SHALL BE RELOCATED AND STORED IN THE FENCED AREA LOCATED NORTH OF BUILDING 8008. TANK SHALL NOT BE DISPOSED OF.
14. REMOVE UNDERGROUND FUEL PIPING. VERIFY ROUTING OF FUEL PIPING PRIOR TO PAVEMENT REMOVAL.
15. REMOVE SEWER CLEANOUTS AND 4" SANITARY SEWER CONNECTION TO BUILDING.

GRAPHIC SCALE:

1" = 30'

0' 15' 30' 60'

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48844
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BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

EXISTING CONDITIONS AND DEMOLITION PLAN

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C-101

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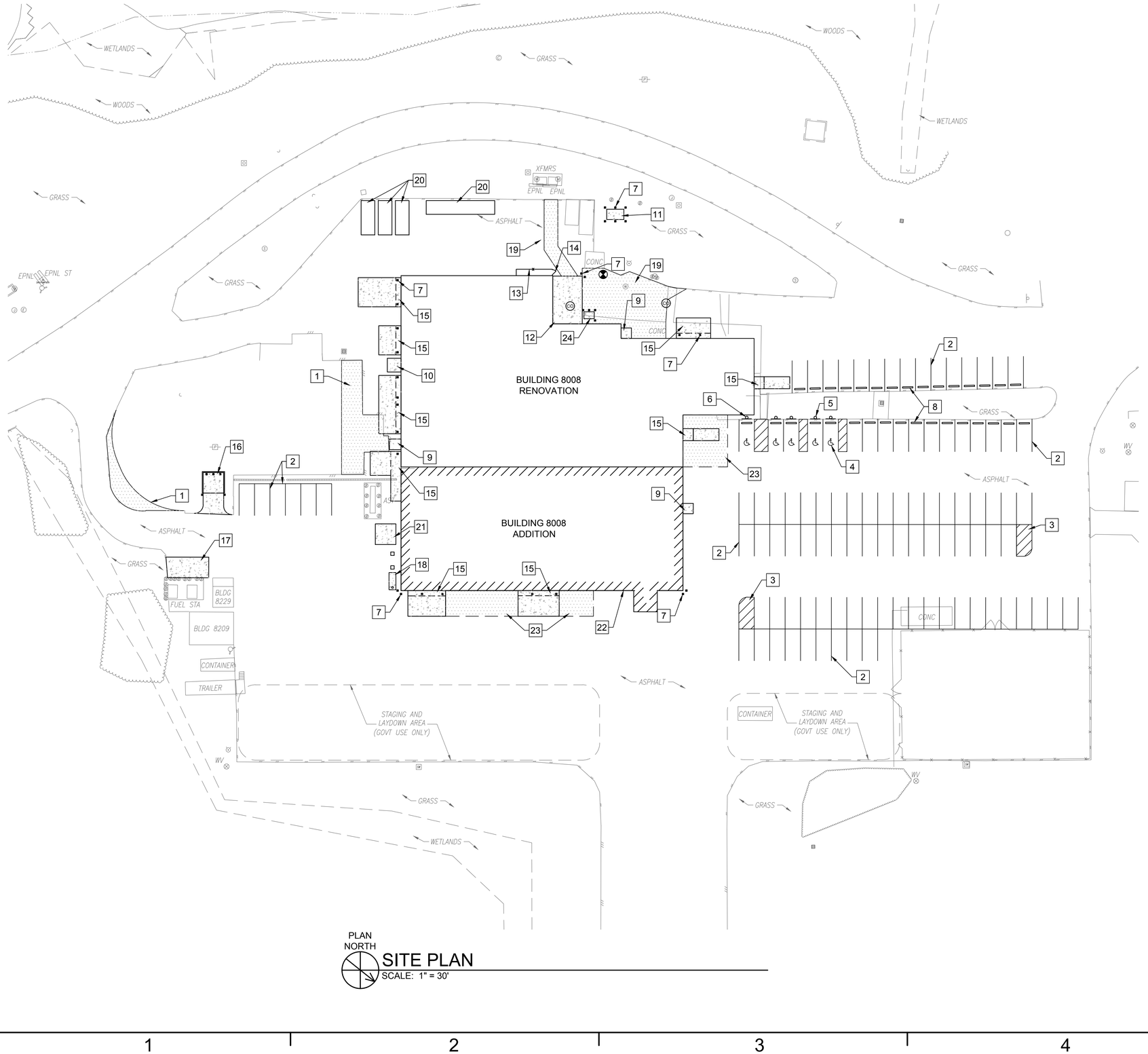

PLAN NORTH

SITE PLAN
SCALE: 1" = 30'

GENERAL NOTES:

1. SEE SHEET C-001 FOR SITE NOTES AND LEGEND.

☐ NEW WORK KEY NOTES:

1. ASPHALT PAVEMENT. (D1 / C-501)
2. PARKING SPACE MARKINGS (TYP). (C3 / C-501)
3. "NO PARKING AREA" STRIPING. (C3 / C-501)
4. ACCESSIBLE SYMBOL (TYP OF 5). (B5 / C-501)
5. ACCESSIBLE PARKING SIGNAGE - STANDARD SIGN (TYP OF 4). (C4 / C-501)
6. ACCESSIBLE PARKING SIGNAGE - VAN ACCESSIBLE SIGN. (C4 / C-501)
7. BOLLARD (TYP OF 36). (B4 / C-501)
8. CONCRETE WHEEL STOP (TYP OF 32). (A1 / C-501)
9. 6' x 6' CONCRETE PAD AT BUILDING ENTRANCE. SEE STRUCTURAL DRAWINGS FOR DETAIL.
10. 8' x 8' CONCRETE PAD FOR SANDBLASTER DUST COLLECTION UNIT. SEE STRUCTURAL DRAWINGS FOR DETAIL.
11. 10' x 6' CONCRETE PAD FOR DIESEL GENERATOR. SEE STRUCTURAL DRAWINGS FOR DETAIL.
12. COVERED CONCRETE PAD. SEE ARCH DRAWINGS FOR ADDITIONAL INFORMATION.
13. 6' CHAIN LINK FENCE. (C1 / C-502)
14. CHAIN LINK PERSONNEL GATE. (C2 / C-502)
15. CONCRETE RAMP AT OVERHEAD DOOR. SEE STRUCTURAL DRAWINGS FOR DETAIL.
16. CONCRETE DUMPSTER PAD AND ENCLOSURE. (A3 / C-501)
17. 12' x 24' CONCRETE PAD FOR FUELING STATION. (B1 / C-501)
18. RELOCATE RAM POLE FIXTURE AND EQUIPMENT TO THIS LOCATION. RELOCATION SHALL INCLUDE DRILLING OF NEW RAM POLE PIT (20' DEEP, 1' DIAMETER), NEW CONCRETE PAD, INSTALLATION OF CRADLE, AND INSTALLATION OF COMPRESSED AIR/POWER EQUIPMENT. ENSURE EQUIPMENT IS PROPERLY INSTALLED AND MEETS FUNCTIONAL REQUIREMENTS AFTER RELOCATION.
19. REPLACE ASPHALT PAVEMENT UPON COMPLETION OF UTILITY REMOVAL AND INSTALLATION. MATCH EXISTING PAVEMENT SECTION AND GRADE. (C1 / C-501)
20. RELOCATE STORAGE CONTAINERS TO LOCATIONS SHOWN.
21. 12' x 12' CONCRETE PAD FOR MAKE-UP AIR UNIT. SEE STRUCTURAL DRAWINGS FOR DETAIL. PROVIDE PROPANE LINE FROM ADJACENT TANK TO UNIT.
22. PATCH ASPHALT PAVEMENT AS REQUIRED FOLLOWING INSTALLATION OF FOOTINGS FOR BUILDING ADDITION.
23. ASPHALT OVERLAY. SEE SHEET C-401 FOR ADDITIONAL INFORMATION. (A4 / C-501)
24. CONCRETE PAD FOR TRANSFORMER. SEE STRUCTURAL DRAWINGS FOR DETAIL.

GRAPHIC SCALE:

1" = 30' — 0' 15' 30' 60'

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

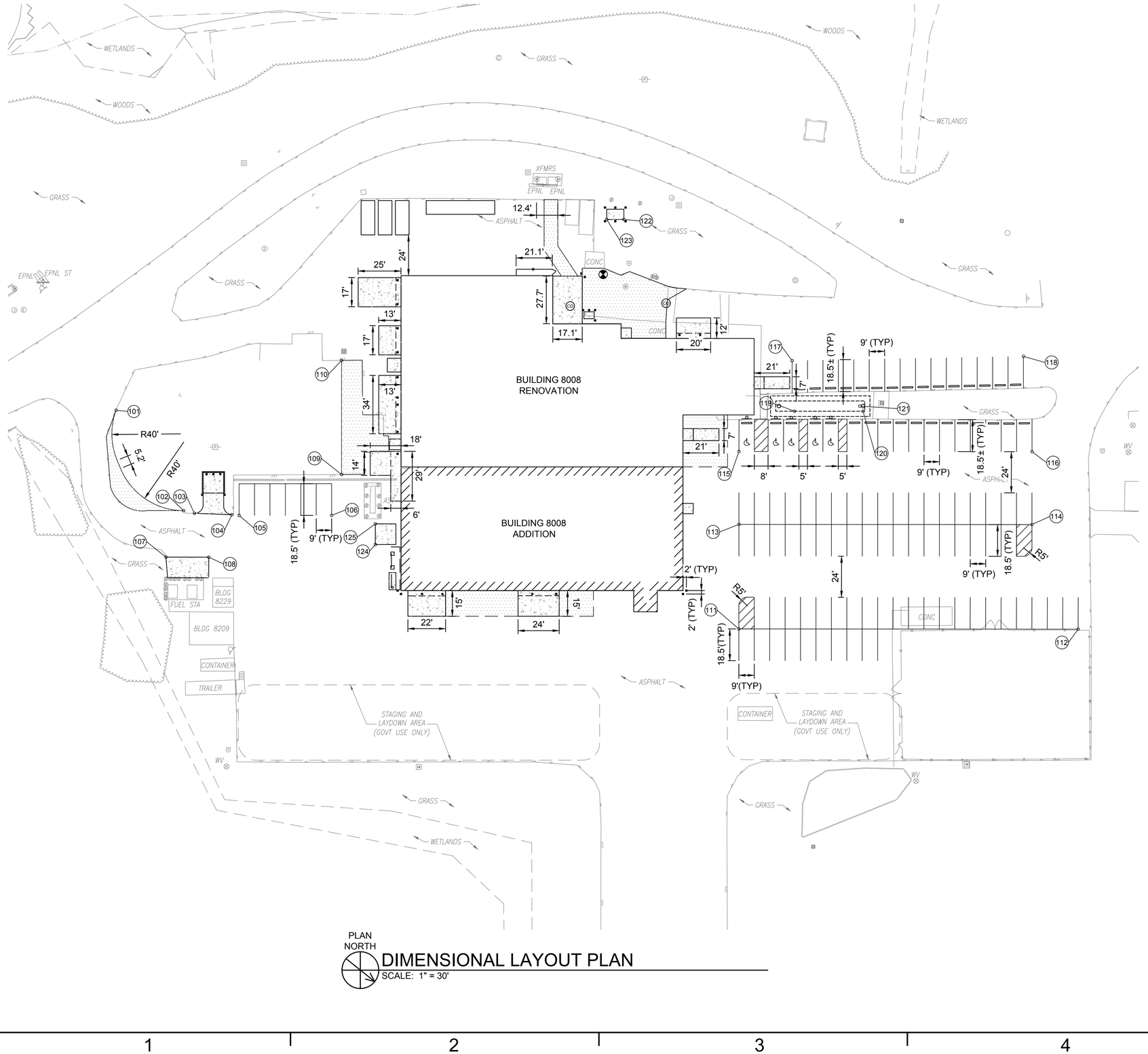
SITE PLAN

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078302
SHEET	18 OF 180

C-201

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:



PLAN NORTH

DIMENSIONAL LAYOUT PLAN

SCALE: 1" = 30'

GENERAL NOTES:

1. SEE SHEET C-001 FOR SITE NOTES AND LEGEND.
2. SEE ARCHITECTURAL SHEETS FOR DIMENSIONAL LAYOUT OF CONCRETE RAMPS, STAIRS AND PADS.

PARKING SPACE SUMMARY

STANDARD PARKING SPACES	100
ACCESSIBLE PARKING SPACES	5
TOTAL PARKING SPACES	105

SITE COORDINATE POINTS

POINT #	DESCRIPTION	NORTHING	EASTING
101	EDGE OF PVMT	175615.57	1474964.81
102	EDGE OF PVMT	175682.88	1474986.16
103	CONC PAD CORNER	175688.80	1474983.48
104	CONC PAD CORNER	175706.43	1474970.44
105	PARKING STRIPING	175710.00	1474968.20
106	PARKING STRIPING	175752.24	1474934.56
107	CONC PAD CORNER	175691.70	1475013.78
108	CONC PAD CORNER	175711.28	1474998.29
109	EDGE OF PVMT	175741.91	1474912.29
110	EDGE OF PVMT	175700.50	1474860.19
111	PARKING STRIPING	175979.47	1474838.55
112	PARKING STRIPING	176134.54	1474715.44
113	PARKING STRIPING	175941.54	1474790.78
114	PARKING STRIPING	176075.47	1474684.45
115	PARKING STRIPING	175915.12	1474757.49
116	PARKING STRIPING	176049.04	1474651.17
117	PARKING STRIPING	175906.45	1474696.72
118	PARKING STRIPING	176010.55	1474610.72
119	BIORETENTION BASIN	175925.89	1474718.91
120	BIORETENTION BASIN	175957.20	1474694.02
121	DRAIN BASIN	175953.81	1474692.88
122	CONC PAD CORNER	175778.34	1474693.36
123	CONC PAD CORNER	175770.52	1474699.58
124	CONC PAD CORNER	175782.74	1474932.00
125	CONC PAD CORNER	175775.27	1474922.60

GRAPHIC SCALE:

1" = 30'

0' 15' 30' 60'

APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND
ROBERT T. GUTHRIE
No. 48844
REGISTERED
PROFESSIONAL ENGINEER
3/18/16
SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18
A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

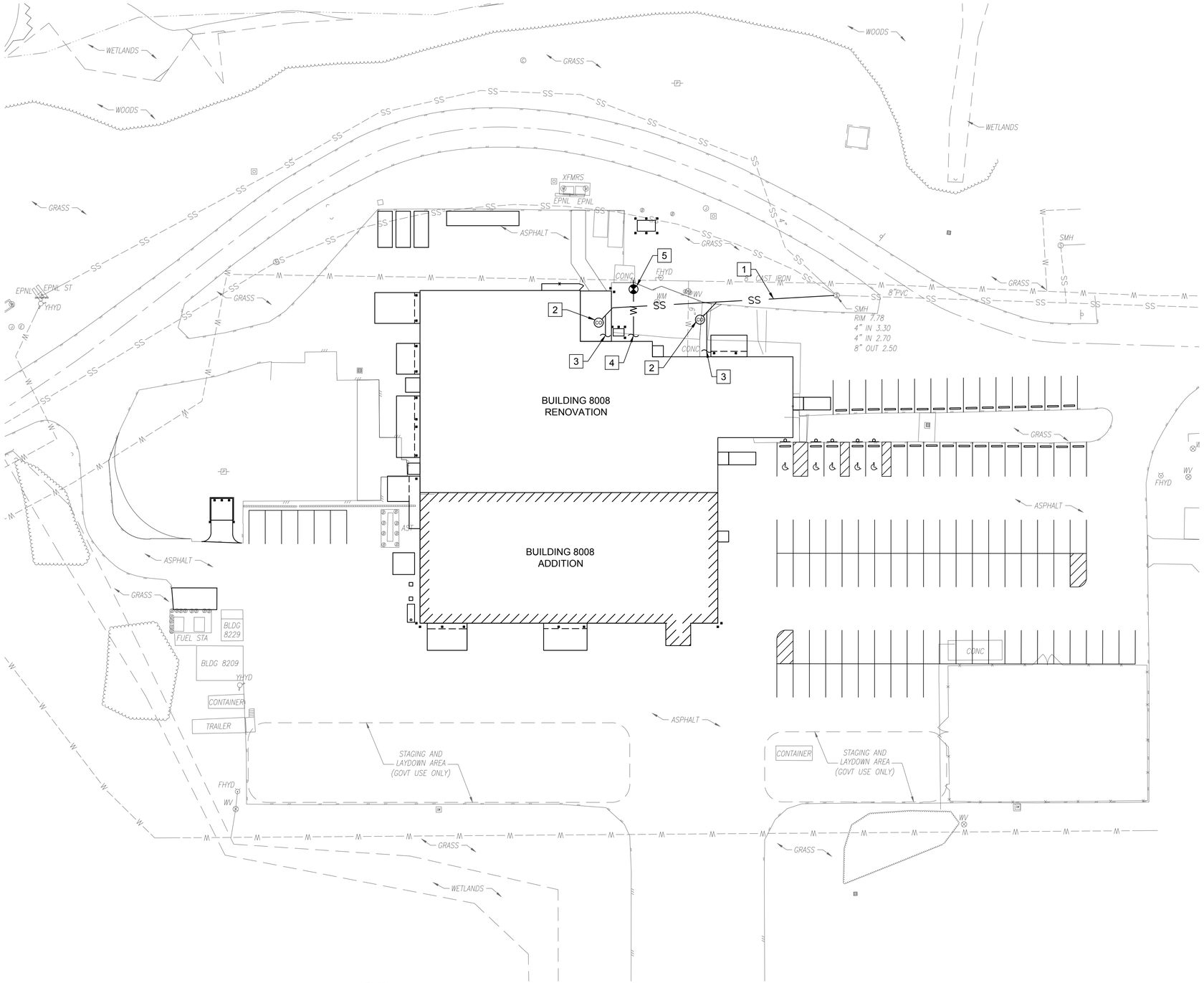
DIMENSIONAL LAYOUT PLAN

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078303
SHEET	19 OF 180

C-211

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:



PLAN NORTH

UTILITY PLAN
SCALE: 1" = 30'

GENERAL NOTES:

1. SEE SHEET C-001 FOR SITE NOTES AND LEGEND.
2. SEE DETAIL A3, SHEET C-502 FOR UTILITY TRENCH CROSS SECTION.

☐ NEW WORK KEY NOTES:

1. 4" PVC SANITARY SEWER. CONNECT TO EXST SEWER MANHOLE. SEE PLUMBING SHEETS FOR CONT.
2. 4" SANITARY SEWER CLEANOUT. (B4 / C-502)
3. 4" PVC SANITARY SEWER CONNECTION TO BLDG. SEE PLUMBING SHEETS FOR CONT.
4. 3" DI DOMESTIC WATER. CONNECT TO EXST 8" WATER MAIN WITH TAPPING SLEEVE AND VALVE. SEE PLUMBING SHEETS FOR CONT. (A2 / C-502)
5. 3" WATER VALVE IN VALVE BOX. (A1 / C-502)

GRAPHIC SCALE:
1" = 30'
0' 15' 30' 60'

APPR	DATE	DESCRIPTION	SYM

NAVFAC

STATE OF MARYLAND · JOSEPH F. GUTHRIE · 48844 · PROFESSIONAL ENGINEER · 3/18/16
SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

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A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY
SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
WEBSTER FIELD, NAS PATUXENT RIVER
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

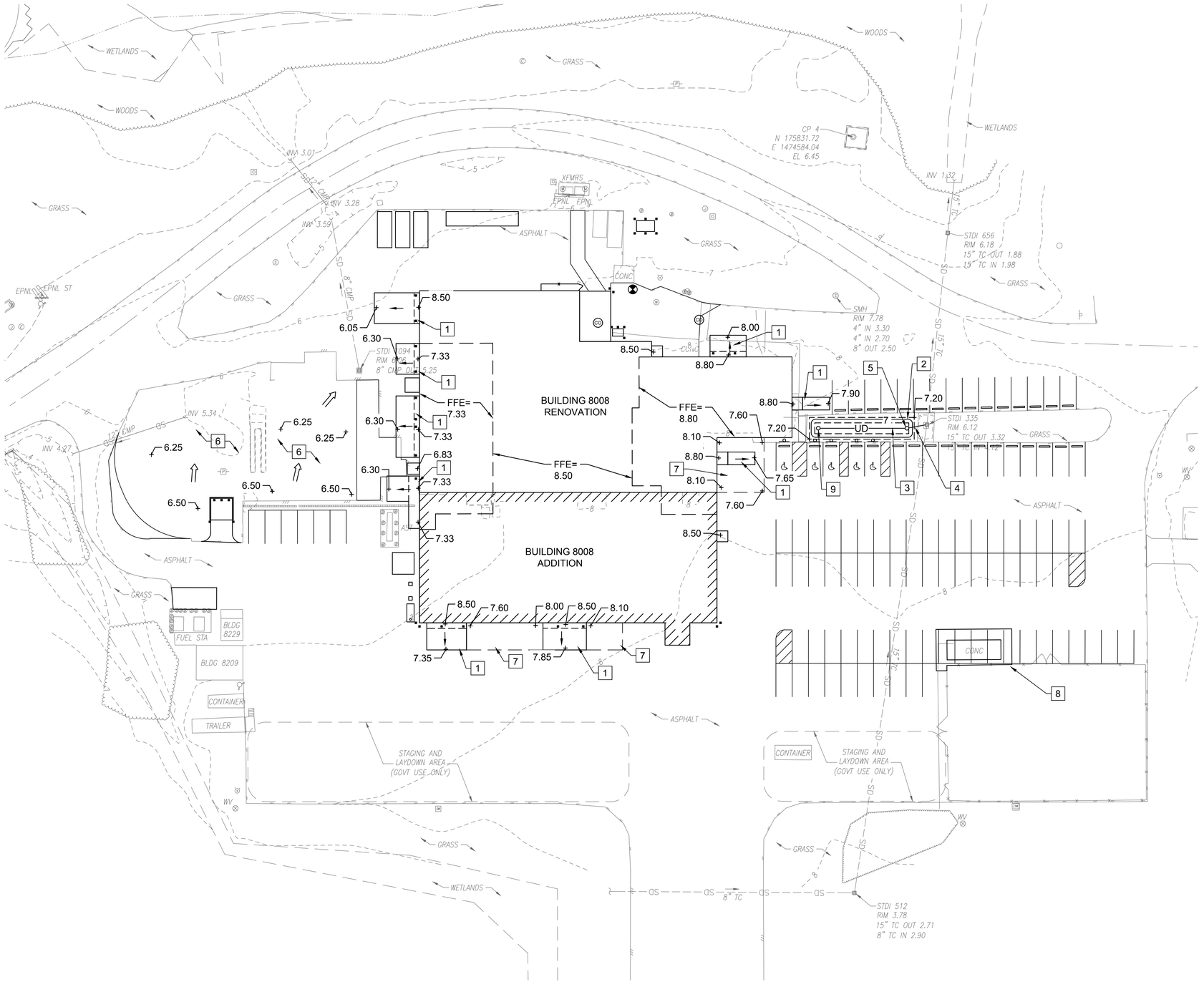
UTILITY PLAN

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078304
SHEET	20 OF 180

C-301

FILE NAME:
REV/DATE:

DRAWFORM REVISION: 10 MAY 2014



GENERAL NOTES:

1. SEE SHEET C-001 FOR SITE NOTES AND LEGEND.

☐ NEW WORK KEY NOTES:

1. PROVIDE UNIFORM SLOPE ALONG CONCRETE RAMP FROM BUILDING SLAB ELEVATION TO EXISTING GRADE.
2. MICRO-BIORETENTION BASIN (BMP-1). (C2 / C-503)
3. 6" PERFORATED PVC UNDERDRAIN.
4. 12" PVC STORM DRAIN, CONNECT TO EXISTING DROP INLET.
5. 24" PVC DRAIN BASIN WITH TRASH RACK.
6. REGRADE AREAS WITHIN BUILDING DEMOLITION LIMITS TO PROVIDE POSITVE DRAINAGE TO EXISTING STORM DRAIN SYSTEM.
7. PLACE ASPHALT SURFACE COURSE AT SPOT ELEVATIONS SHOWN TO ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING. PROVIDE UNIFORM SLOPE TO EXISTING GRADE. MILL TOP 1" OF EXISTING ASPHALT SURFACE COURSE PRIOR TO PLACEMENT OF NEW ASPHALT. (A4 / C-501)
8. PLACE ASPHALT SURFACE COURSE AROUND EXISTING CONCRETE PAD TO PROVIDE UNIFORM SLOPE TO EXISTING GRADE. EXISTING CONCRETE PAD IS RAISED APPROXIMATELY 4" ABOVE SURROUNDING GRADE.
9. 6" PVC CLEANOUT.

GRADING AND DRAINAGE PLAN

SCALE: 1" = 30'

GRAPHIC SCALE:

1" = 30' 0' 15' 30' 60'

MDE PROJECT NO. 16-SF-0128

APPR	DATE	SYM	DESCRIPTION

NAVFAC

STATE OF MARYLAND — JOSEPH T. GUTHRIE — 48844 — REGISTERED PROFESSIONAL ENGINEER — 3/18/16

SEAL

Wiley|Wilson | BURNS MCDONNELL

JOINT VENTURE

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

GRADING AND DRAINAGE PLAN

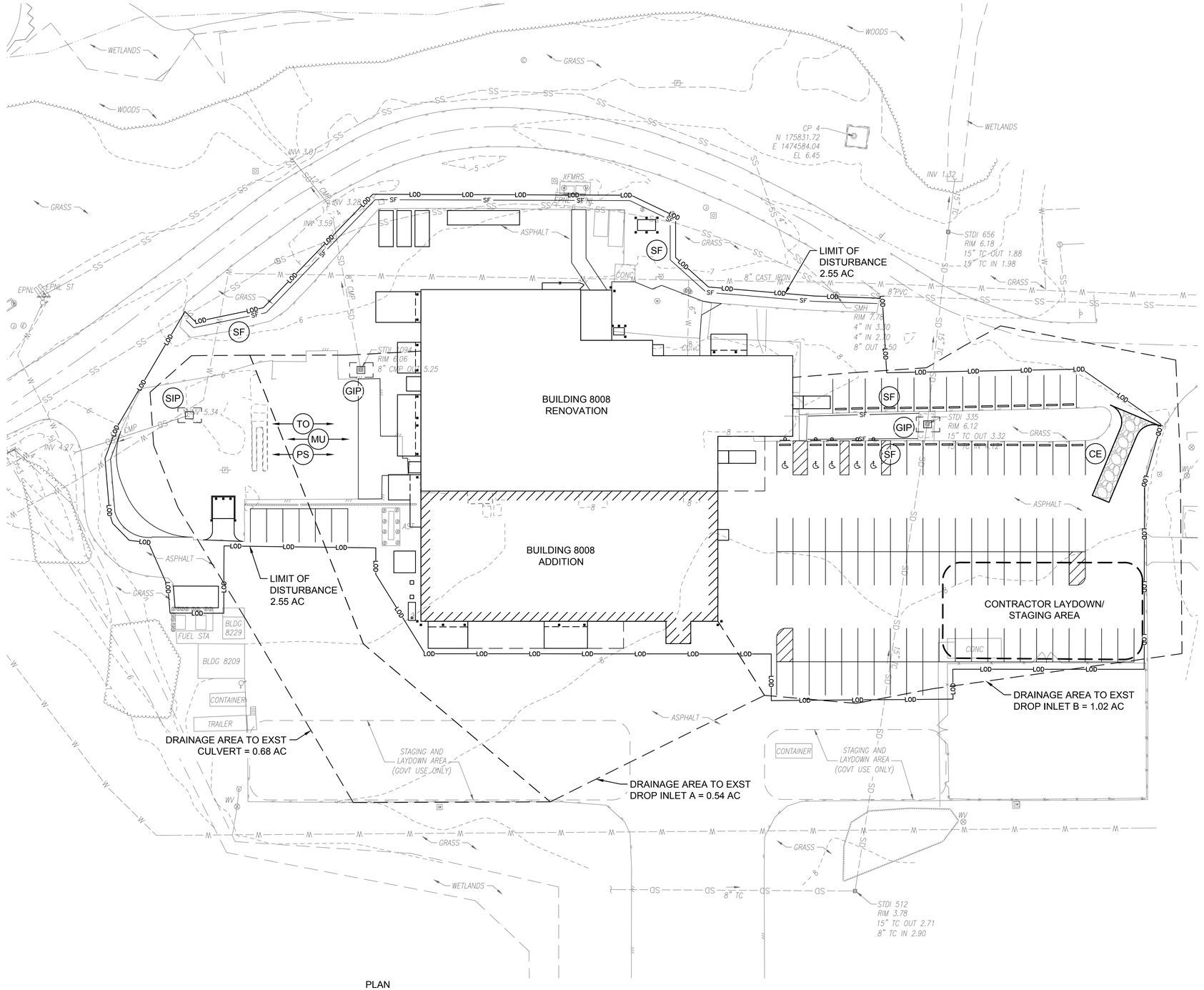
SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078305
SHEET	21 OF 180

C-401

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:

REVDATE:



PLAN NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 30'

GENERAL NOTES:

1. SEE SHEET C-001 FOR SITE NOTES AND LEGEND.
2. SEE SHEET C-002 FOR EROSION AND SEDIMENT CONTROL NOTES. SEE SHEETS C-504 - C-506 FOR EROSION AND SEDIMENT CONTROL DETAILS.

EROSION AND SEDIMENT CONTROL LEGEND:

LOD	LIMIT OF DISTURBANCE
CE	CONSTRUCTION ENTRANCE
SF	SILT FENCE
GIP	GABION INLET PROTECTION
SIP	STANDARD INLET PROTECTION (TYPE B)
TO	TOPSOIL
MU	TEMPORARY MULCHING
PS	PERMANENT SEEDING

INLET PROTECTION TABLE

INLET TYPE/ID	INLET PROTECTION TYPE	DRAINAGE AREA (MAX)	DRAINAGE AREA (DESIGN)
CULVERT	STANDARD (TYPE B)	1.00 AC	0.68 AC
DROP INLET A	GABION	1.50 AC	0.54 AC
DROP INLET B	GABION	1.50 AC	1.02 AC

OWNER/DEVELOPER CERTIFICATION:

I / WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I/WE HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY APPROPRIATE INSPECTION AND ENFORCEMENT AUTHORITY OR THE STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT.

DATE _____ OWNER/DEVELOPER SIGNATURE _____

MDE TRAINING CARD NO. _____ PRINTED NAME AND TITLE _____

DESIGN CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II INCLUDING SUPPLEMENTS, THE ENVIRONMENT ARTICLE SECTIONS 4-101 THROUGH 116 AND SECTIONS 4-201 AND 215, AND THE CODE OF MARYLAND REGULATIONS (COMAR) 26.17.01 AND COMAR 26.17.02 FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT, RESPECTIVELY.

3/18/16 DESIGNER SIGNATURE _____
DATE

48844 NOAH GUTHRIE
MD REGISTRATION NO. PRINTED NAME

GRAPHIC SCALE:

1" = 30' 0' 15' 30' 60'

MDE PROJECT NO. 16-SF-0128

APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND
NOAH T. GUTHRIE
48844
PROFESSIONAL ENGINEER
3/18/16
SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18
A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY
SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

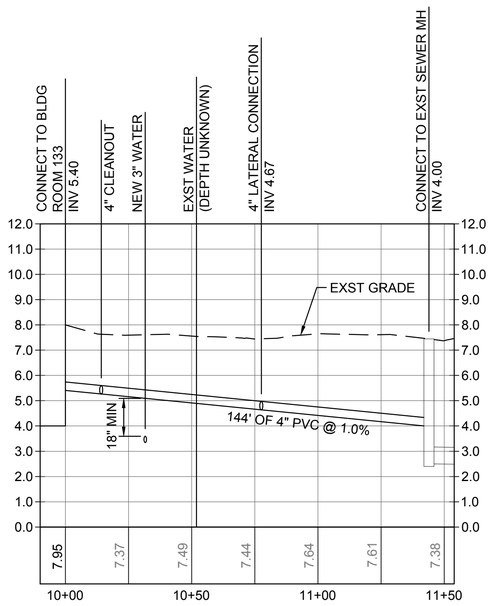
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER
NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD
BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION
EROSION AND SEDIMENT CONTROL PLAN

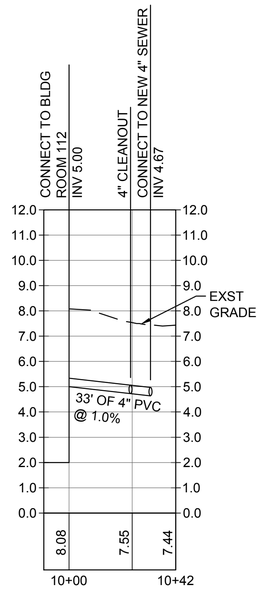
SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078306
SHEET 22 OF 180

C-411

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:





SANITARY SEWER PROFILES

SCALE: 1" = 30' (HORIZONTAL)
1" = 3' (VERTICAL)

GRAPHIC SCALES:

1" = 30' 0' 15' 30' 60'

1" = 3' 0' 1.5' 3' 6'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

STATE OF MARYLAND
ANTHONY T. GUTHRIE
48844
PROFESSIONAL ENGINEER
3/18/16
SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

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A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY
SATISFACTORY TO DATE

DES NTG	DRW NTG	CHK PCB

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVFAC FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

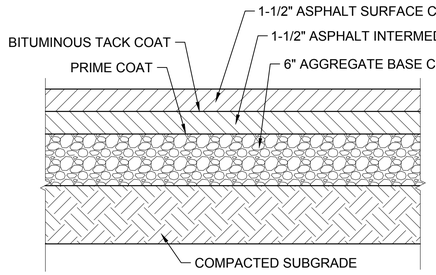
SANITARY SEWER PROFILES

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078307
SHEET	23 OF 180

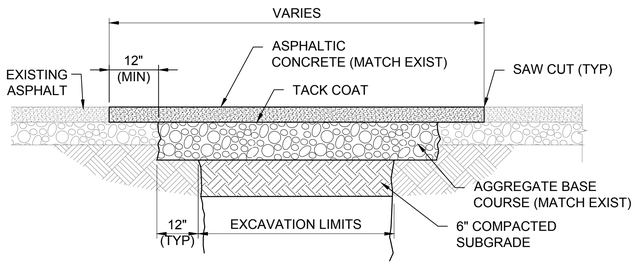
C-451

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:



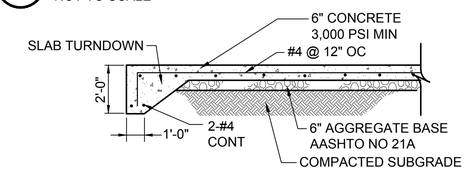
D1 ASPHALT PAVEMENT SECTION
NOT TO SCALE



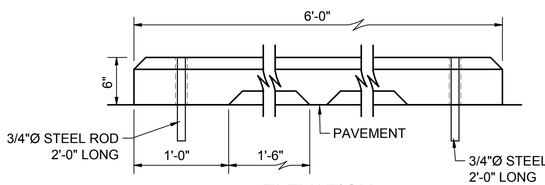
NOTES:

1. THICKNESS OF ALL REPLACEMENT COURSES SHALL BE EQUAL TO EXISTING.
2. BASE COURSE SHALL BE PORTLAND CEMENT TO MATCH EXISTING CONCRETE BASE, AND SHALL BE ASPHALTIC CONCRETE BASE TO REPLACE ALL OTHER BASE MATERIALS.
3. SAWCUTS THAT EXTEND OUTSIDE THE AREA OF REMOVAL AND REPLACEMENT SHALL BE FILLED WITH AN EPOXY-BASED GROUT APPROVED BY THE ENGINEER.

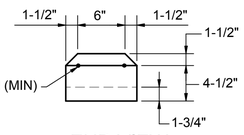
C1 ASPHALT PAVEMENT REMOVAL AND REPLACEMENT
NOT TO SCALE



B1 FUELING STATION CONCRETE PAD
NOT TO SCALE



ELEVATION

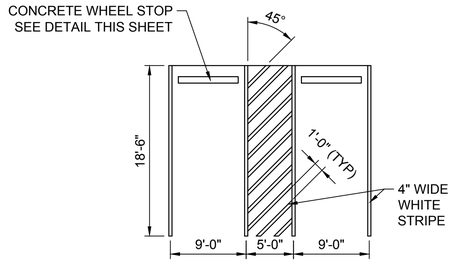


END VIEW

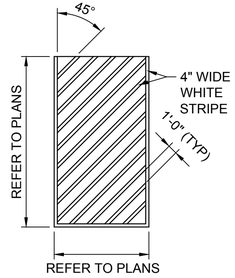
NOTES:

1. WHEEL STOP SHALL BE PRECAST CLASS A CONCRETE.
2. WHEEL STOP SHALL BE CENTERED IN THE PARKING SPACE AND LOCATED 2'-6" FROM EDGE OF PAVEMENT OR SIDEWALK.

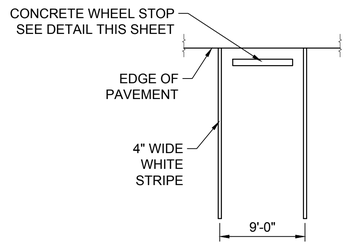
A1 CONCRETE WHEEL STOP
NOT TO SCALE



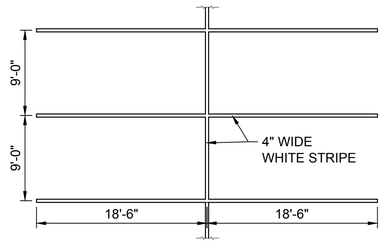
ACCESSIBLE PARKING STALL STRIPING



"NO PARKING AREA" STRIPING

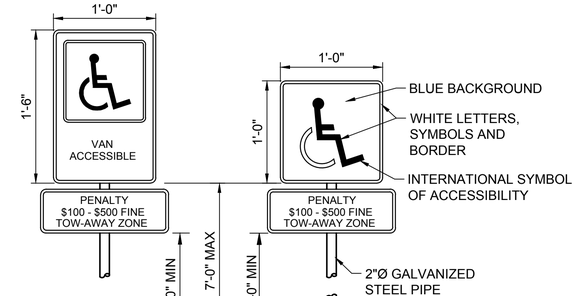


SINGLE PARKING STALL STRIPING



DOUBLE PARKING STALL STRIPING

C3 PARKING SPACE MARKINGS
NOT TO SCALE

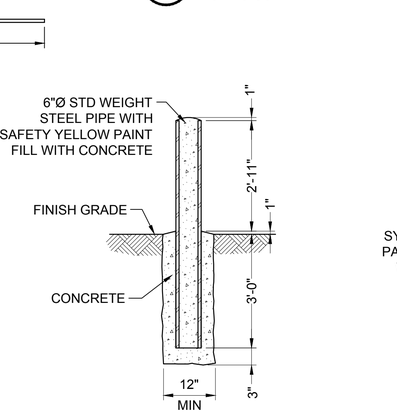


USE VAN ACCESSIBLE SIGN WHERE INDICATED ON PLANS. ALL OTHER ACCESSIBLE PARKING SIGNS ARE STANDARD.

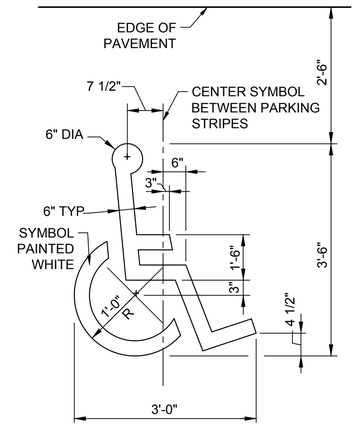
VAN ACCESSIBLE SIGN

STANDARD SIGN

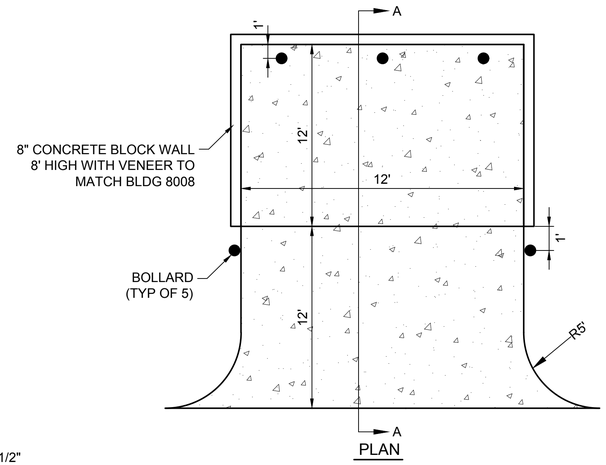
C4 ACCESSIBLE PARKING SIGNAGE
NOT TO SCALE



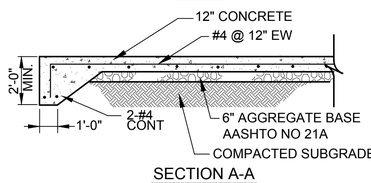
B4 BOLLARD
NOT TO SCALE



B5 ACCESSIBLE SYMBOL
NOT TO SCALE

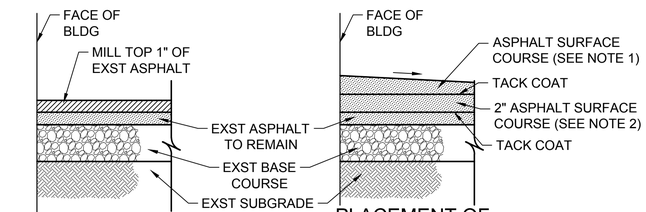


PLAN



SECTION A-A

A3 DUMPSTER PAD AND ENCLOSURE
NOT TO SCALE



ASPHALT MILLING

PLACEMENT OF NEW ASPHALT

NOTES:

1. GRADE TOP LIFT OF ASPHALT AWAY FROM BUILDING AT A MINIMUM 2% SLOPE. PROVIDE UNIFORM SLOPE TO EXISTING ASPHALT SURFACE.
2. NUMBER OF 2" ASPHALT SURFACE COURSE LIFTS VARY BASED ON GRADING REQUIREMENTS.
3. SEE SHEET C-401 FOR SPOT ELEVATIONS.

A4 ASPHALT MILLING/PLACEMENT
NOT TO SCALE

GLH APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND — JOSEPH T. GUTHRIE — 44844 — PROFESSIONAL ENGINEER — 3/18/16 — SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVFAC FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

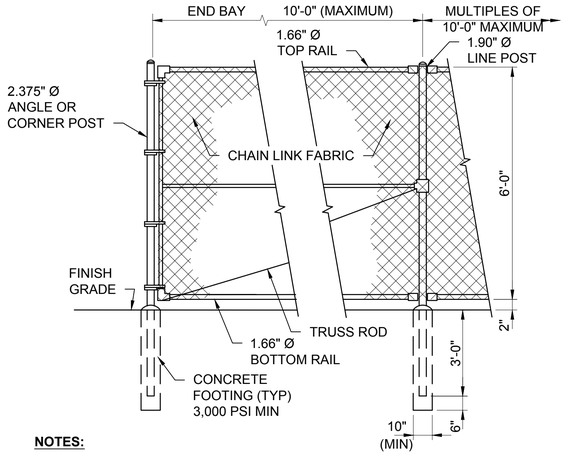
CIVIL DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1183080
CONSTR. CONTR. NO.: N40080-15-D-0452
NAVFAC DRAWING NO.: 13078308
SHEET 24 OF 180

C-501

DRAWFORM REVISION: 10 MAY 2014

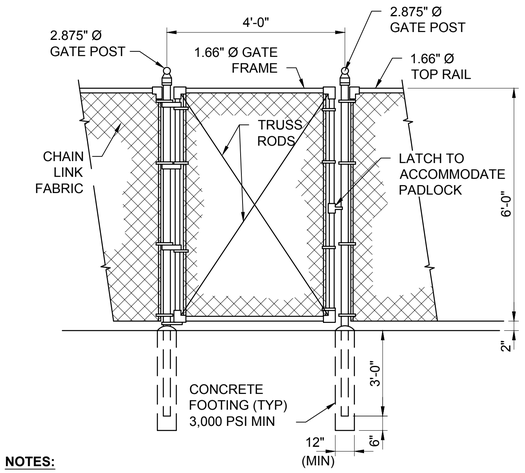
FILE NAME:
REVDATE:



NOTES:

1. ALL FENCE FABRIC TO BE CLASS 2B POLYVINYL CHLORIDE COATED STEEL FABRIC, COLOR BLACK. FABRIC WILL BE 9 GAUGE WIRE WOVEN IN 2" MESH.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE OPPOSITE SIDE OF THE SECURE AREA.
3. ONLY 9-GAGE GALVANIZED STEEL TIE WIRES SHALL BE USED FOR FASTENING FENCE FABRIC TO FENCE POSTS AND RAILS. 16-GAGE, STAINLESS STEEL TIE WIRES SHALL BE USED FOR FASTENING FENCE FABRIC TO TENSION WIRES.
4. DETAILS ARE TO CLARIFY REQUIREMENTS, BUT ARE NOT INTENDED TO LIMIT OTHER FENCE SECTIONS AND METHODS OF INSTALLATIONS SPECIFIED.

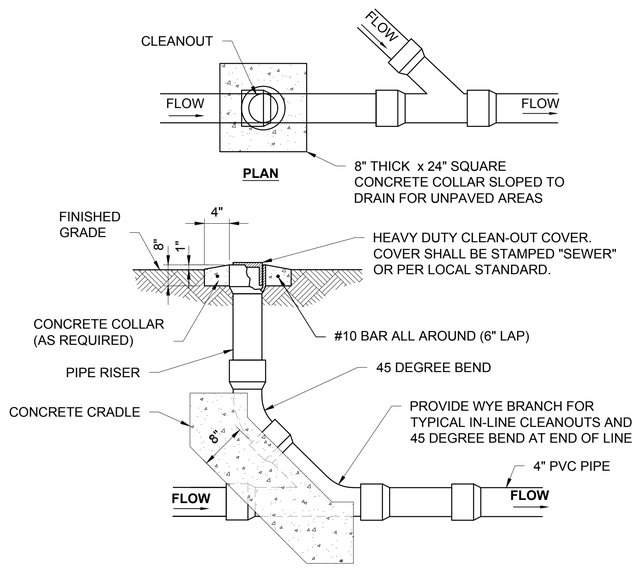
C1 6' CHAIN LINK FENCE
NOT TO SCALE



NOTES:

1. ALL FENCE FABRIC TO BE CLASS 2B POLYVINYL CHLORIDE COATED STEEL FABRIC, COLOR BLACK. FABRIC WILL BE 9 GAUGE WIRE WOVEN IN 2" MESH.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE OPPOSITE SIDE OF THE SECURE AREA.
3. FINAL GATE LAYOUT, DIMENSIONS, PARTS, AND ASSEMBLY SHALL BE ACCORDING TO MANUFACTURER SPECIFICATIONS.
4. DETAILS ARE TO CLARIFY REQUIREMENTS, BUT ARE NOT INTENDED TO LIMIT OTHER FENCE SECTIONS AND METHODS OF INSTALLATIONS SPECIFIED.

C2 CHAIN LINK PERSONNEL GATE
NOT TO SCALE

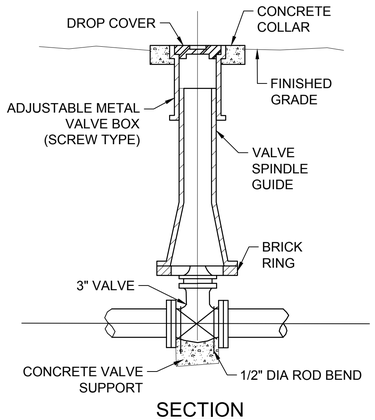


ELEVATION

NOTES:

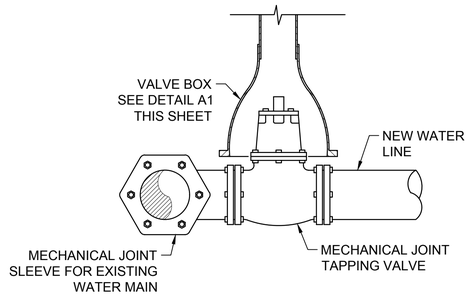
1. CLEANOUTS LOCATED IN VEHICULAR AREAS SHALL BE H-20 TRAFFIC RATED.
2. CLEANOUTS LOCATED IN PAVED AREAS SHALL BE INSTALLED FLUSH WITH FINAL GRADING.
3. CONCRETE COLLAR MAY BE LOWERED ON RISER ASSEMBLY TO ACCOMMODATE SPECIAL FINISH GRADE.

B4 4" SANITARY SEWER CLEANOUT
NOT TO SCALE

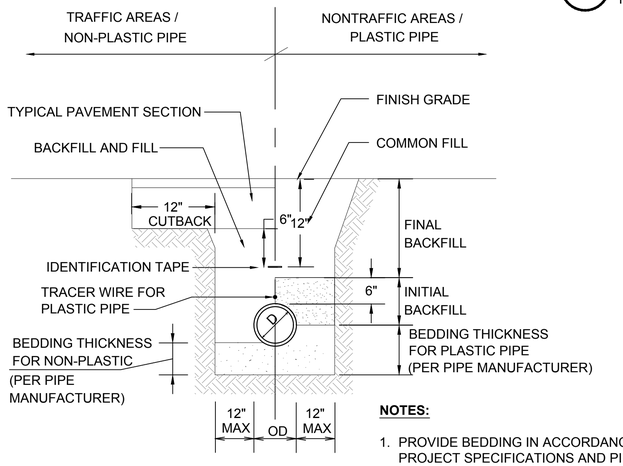


SECTION

A1 VALVE BOX
NOT TO SCALE



A2 TAPPING SLEEVE
NOT TO SCALE



NOTES:

1. PROVIDE BEDDING IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND PIPE MANUFACTURER.
2. PROVIDE MINIMUM COVER OVER PIPES IN ACCORDANCE WITH UTILITY NOTES ON SHEET C-001.

A3 TRENCH CROSS SECTION
NOT TO SCALE

		GLH	APPR
		DATE	
		DESCRIPTION	
		SYM	

NAVFAC

STATE OF MARYLAND · ROBERT J. GUTHRIE · 48844 · PROFESSIONAL ENGINEER · 3/18/16 · SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18
A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY
SATISFACTORY TO DATE

DES	DRW	CHK
NTG	NTG	PCB

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER
NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

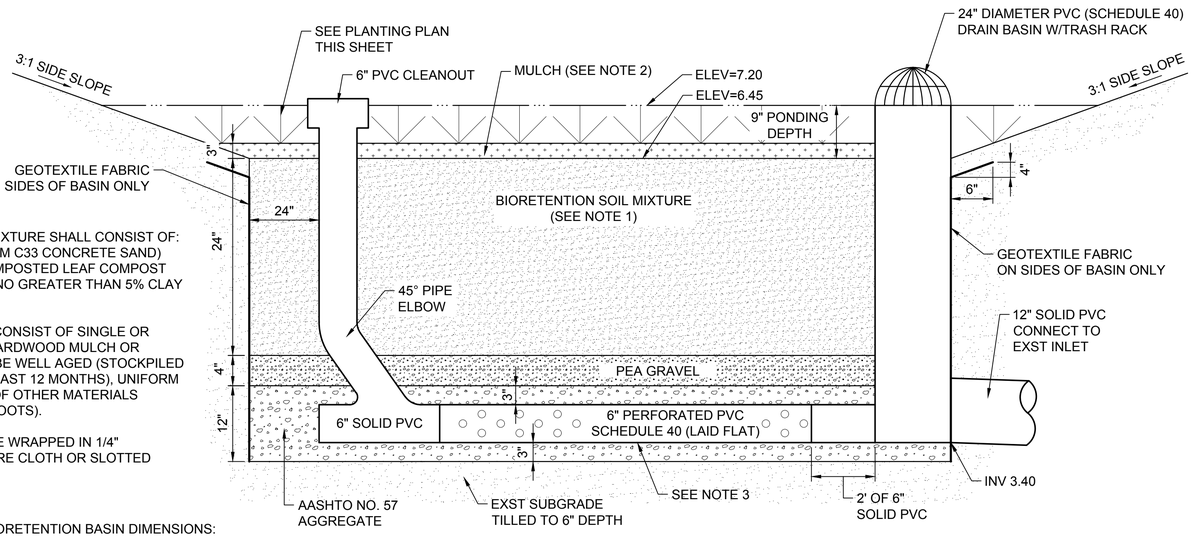
CIVIL DETAILS

SCALE:	AS NOTED
EPROJECT NO.	1183080
CONSTR. CONTR. NO.	N40080-15-D-0452
NAVFAC DRAWING NO.	13078309
SHEET	25 OF 180

C-502

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:



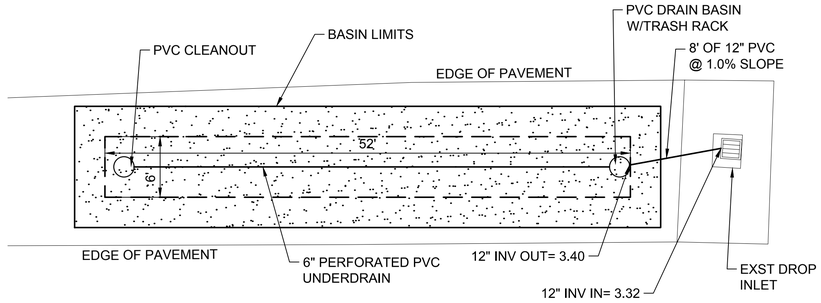
SECTION

NOTES:

1. BIORETENTION SOIL MIXTURE SHALL CONSIST OF:
   - 50% SAND (ASTM C33 CONCRETE SAND)
   - 30% FULLY COMPOSTED LEAF COMPOST
   - 20% TOPSOIL (NO GREATER THAN 5% CLAY CONTENT)
2. MULCH LAYER SHALL CONSIST OF SINGLE OR DOUBLE SHREDDED HARDWOOD MULCH OR CHIPS. MULCH SHALL BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS (WEED SEEDS, SOIL, ROOTS).
3. UNDERDRAIN SHALL BE WRAPPED IN 1/4" GALVANIZED HARDWARE CLOTH OR SLOTTED UNDERDRAIN PIPE.

MICRO-BIORETENTION BASIN DIMENSIONS:

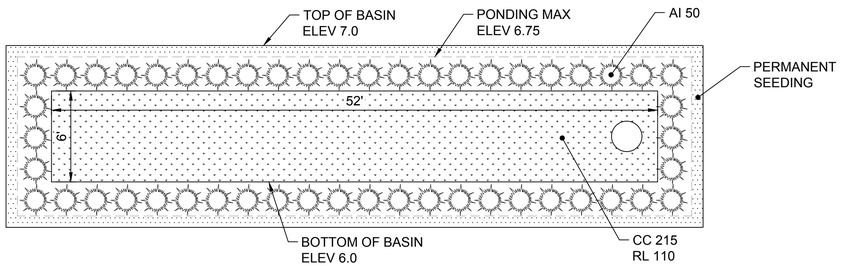
- BOTTOM LENGTH: 52'
- BOTTOM WIDTH: 6'



PLAN VIEW

C2 MICRO-BIORETENTION BASIN (BMP-1)

NOT TO SCALE



MICRO-BIORETENTION BASIN PLANTING PLAN

NOT TO SCALE

MICRO-BIORETENTION BASIN PLANTING LIST

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPACING
260	CC	CAREX CRINITA	FRINGED SEDGE	3" POT	24"	10" O.C.
130	RL	RUDBECKIA LACINIATA	CUT-LEAF CONEFLOWER	4" POT	24"	18" O.C.
60	AI	ASCLEPIAS INCARNATA	SWAMP MILKWEED	3" POT	24"	24" O.C.

MONTHLY INSPECTION		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and/or debris clogging all openings.	Dispose of trash and debris in an acceptable manner.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Weed out invasive species. Remove and replace plants in accordance with approved landscaping plan.
Vegetative Cover	Check for channelizing and bare spots. Check for vegetation blocking inlet and outlet.	Re-seed or re-plant in accordance with approved landscaping plans. Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when necessary, but do not mow filter bed.
Mulch Layer	Check mulch for adequate cover, sediment accumulation, or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
SEASONAL INSPECTION AND AFTER A MAJOR STORM		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. Follow up inspections must confirm adequate dewatering. If the facility does not function as intended after the above action, the entire system including the underdrain may need refurbishing.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runoff channelization.	Re-grading may be required when concentrated flow causes rills or gullying through the facility. Grade, vegetate, and/or armor to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment on filter bed and clogging openings.	When sediment accumulates to 1 inch depth, remove and dispose of in an acceptable location.
Underdrain and Overflow Structures	Check for misalignments, broken pipes, and blockages. Check observation well for water levels.	Repair any broken or faulty piping. Clear out any blockages.
ANNUAL INSPECTION		
Inspection Item	Inspection Requirements	Remedial Action
Maintenance Access	Check for accessibility to facility.	Prevent excessive vegetative growth, erosion, and obstructions on access way.
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as rip rap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that any flow splitters are functioning as designed and that bypass is operating as designed.	Repair to good condition according to specifications on the approved plans.

MAINTENANCE SCHEDULE

AS-BUILT CERTIFICATION:

I HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT FACILITIES (BOTH BMPS AND ESD PRACTICES) SHOWN ON THE PLANS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, EXCEPT AS NOTED IN RED ON THE "AS-BUILT" DRAWINGS.

NAME _____ SIGNATURE _____

MARYLAND REGISTRATION NO. _____ DATE _____

MDE NO. _____

FACILITIES BEING CERTIFIED:

FACILITY ID	FACILITY TYPE
BMP-1	MICRO-BIORETENTION BASIN

DESIGN / AS-BUILT DATA : MCRO-BIORETENTION		
Project Name: Building 8008 Repairs, Alterations and Addition	MDE No. : 16-SF-0128	BMP ID: BMP-1
FEATURE	**DESIGN**	**AS-BUILT**
FILTER BED DIMENSIONS (L x W)	52 FT x 6 FT	
FILTER BED SURFACE AREA	312 SF	
FILTER BED SURFACE ELEVATION	6.00	
PONDING HEIGHT	0.75 FT	
SURFACE STORAGE VOLUME	337 SF	
SIDE SLOPES	3:1	
TOP OF EMBANKMENT ELEVATION	7.00	
UNDERDRAIN PIPE SIZE & INVERT	6 IN 3.40	
UNDERDRAIN PIPE MATERIAL	PVC	
NUMBER OF CLEANOUTS / SIZE	1 6 IN	
MULCH THICKNESS	3 IN	
FILTER MEDIA THICKNESS	24 IN	
PEA GRAVEL THICKNESS	4 IN	
UNDERDRAIN GRAVEL THICKNESS	12 IN	
BOTTOM ELEVATION	3.15	
PLACEMENT OF GEOTEXTILE	Y	
VEGETATION ESTABLISHED	Y	
UPSTREAM DRAINAGE AREA CONVEYED TO FACILITY AS DESIGNED	0.41 AC	YES NO (circle one)
DATE AS-BUILT ACCEPTED BY MDE:		

DESIGN / AS-BUILT DATA

MDE PROJECT NO. 16-SF-0128

APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND · NOAH T. GUTHRIE · 48844 · PROFESSIONAL ENGINEER · 3/18/16

SEAL

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PROJECT MANAGER

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NAVAL FACILITIES ENGINEERING COMMAND
ST. INIGOES, MD
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD
BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION
STORMWATER MANAGEMENT DETAILS

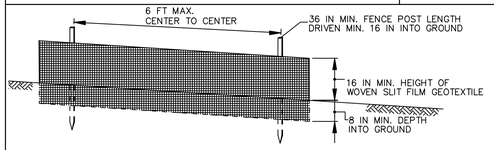
SCALE: AS NOTED
EPROJECT NO.: 1183080
CONSTR. CONTR. NO.: N40080-15-D-0452
NAVFAC DRAWING NO.: 13078310
SHEET 26 OF 180
C-503

DRAWFORM REVISION: 10 MAY 2014

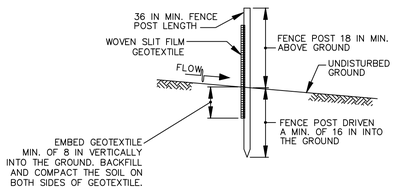
FILE NAME:
REVDATE:

DETAIL E-1 SILT FENCE

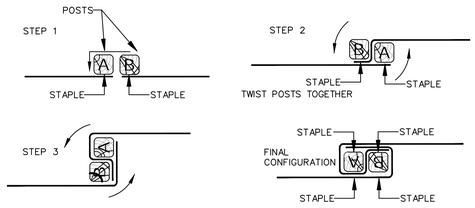
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅜ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

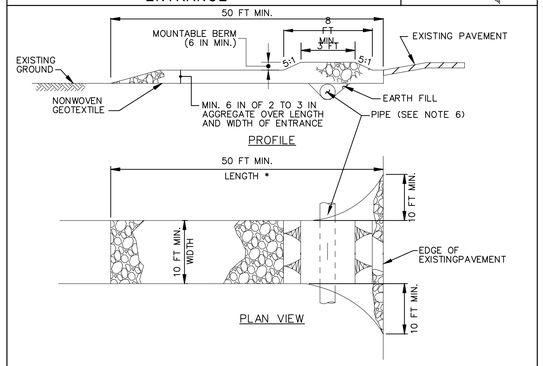
2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (+30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

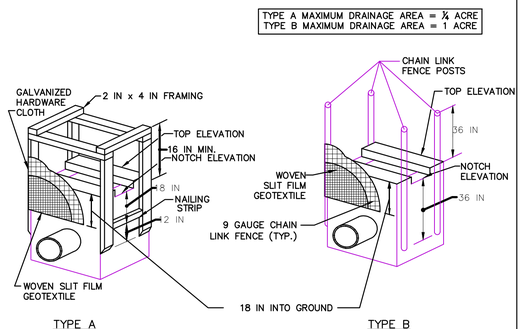
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

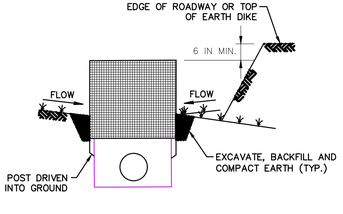
STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



TYPE A TYPE B

ISOMETRIC VIEW



SECTION FOR TYPE A AND B

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

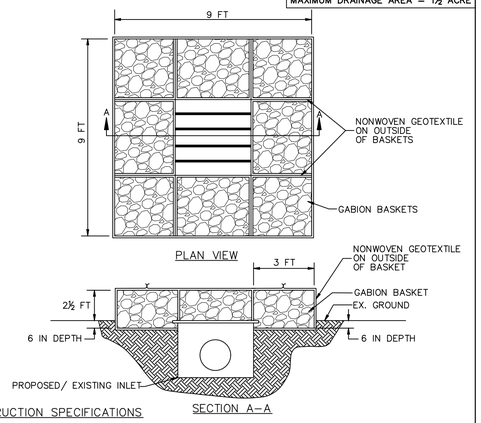
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-7 GABION INLET PROTECTION

STANDARD SYMBOL: GIP

MAXIMUM DRAINAGE AREA = 1½ ACRE



CONSTRUCTION SPECIFICATIONS

1. USE BASKETS MADE OF 11 GAUGE WIRE OR HEAVIER.
2. WRAP 3 FEET x 3 FEET GABION BASKETS (LENGTH VARIABLE) WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVERLAPPING AT THE TOP AND FASTEN THE GEOTEXTILE AT THE TOP OF THE BASKET WITH WIRE FASTENERS (HOG RINGS) AT A MAXIMUM OF 1 FOOT INTERVALS ALONG THE SEAM.
3. AVOID TEARING OR DAMAGING GEOTEXTILE.
4. ENTRENCH GABION BASKETS TO A DEPTH OF 6 INCHES.
5. PLACE AND INTERLOCK GABION BASKETS WITH NO GAPS.
6. FILL GABION BASKETS WITH CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR MESH.
7. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MDE PROJECT NO. 16-SF-0128

APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND · ROBERT T. GUTHRIE · 48844 · PROFESSIONAL ENGINEER · 3/18/16 · SEAL

Wiley|Wilson | BURNS MCDONNELL
JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES NTG	DRW NTG	CHK PCB

PROJECT MANAGER
IPT TECH. BRANCH HEAD
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER
NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD
ST. INIGOES, MD
BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION
EROSION AND SEDIMENT CONTROL DETAILS

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13078311
SHEET 27 OF 180
C-504

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REVDATE:

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
   a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
   b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
   c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
   d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

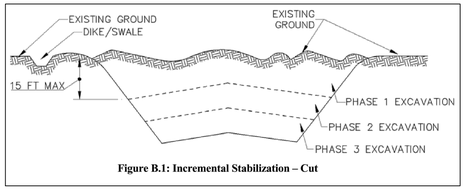


Figure B.1: Incremental Stabilization – Cut

B. Incremental Stabilization - Fill Slopes

1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
   a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
   b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
   c. Place Phase 1 fill, prepare seedbed, and stabilize.
   d. Place Phase 2 fill, prepare seedbed, and stabilize.
   e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

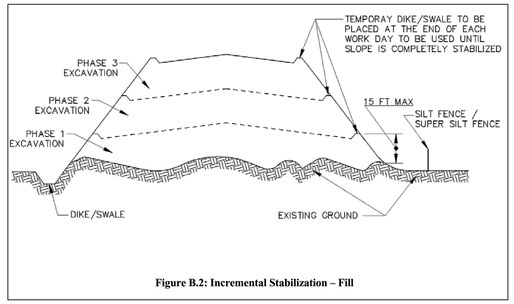


Figure B.2: Incremental Stabilization – Fill

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding

1. Specifications
   a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re_testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. **Note: Use only sterile straw mulch in areas where one species of grass is desired.**
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA_70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. **Use of asphalt binders is strictly prohibited**.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

MDE PROJECT NO. 16-SF-0128

APPR	DATE	DESCRIPTION	SYM

NAVFAC

STATE OF MARYLAND — ROBERT T. GUTHRIE — 48844 — PROFESSIONAL ENGINEER — 3/18/16

SEAL

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FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	NTG	DRW	NTG	CHK	PCB

PROJECT MANAGER

IPT TECH. BRANCH HEAD

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DEPARTMENT OF THE NAVY
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EPROJECT NO.	1183080
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NAVFAC DRAWING NO.	13079644
SHEET	27A OF 180

C-505

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:

REVDATE:

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 7a **Seed Mixture** (from Table B.1):					**Fertilizer Rate (10-20-20)**	**Lime Rate**
No.	**Species**	**Application Rate (lb/ac)**	**Seeding Dates**	**Seeding Depths**		
	Annual Ryegrass	40 lb/ac	Feb 15 - Apr 30 Aug 15 - Nov 30	1.0 in	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	Foxtail Millet	30 lb/ac	May 1 - Aug 14	0.5 in		

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use
   a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
   b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA_NRCS Technical Field Office Guide, Section 342 _ Critical Area Planting.
   c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
   d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .
2. Turfgrass Mixtures
   a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
   b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
      i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
      iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

      Notes:

      Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

      Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

   c. Ideal Times of Seeding for Turf Grass Mixtures

      Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

      Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)

      Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15
      (Hardiness Zones: 7a, 7b)

   d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
   e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 7a **Seed Mixture** (from Table B.3): 8					**Fertilizer Rate (10-20-20)**			**Lime Rate**
No.	**Species**	**Application Rate (lb/ac)**	**Seeding Dates**	**Seeding Depths**	**N**	**P_2O_5**	**K_20**	
	Tall Fescue	100	Mar 1 - May 15 Aug 15 - Oct 15	¼- ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
				¼- ½ in				
				¼- ½ in				

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications
   a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
   b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
2. Sod Installation
   a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
   b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
   c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
   d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than ⅓ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

MDE PROJECT NO. 16-SF-0128

APPR | DATE | DESCRIPTION | SYM

NAVFAC

STATE OF MARYLAND · JOSEPH T. GUTHRIE · 48844 · PROFESSIONAL ENGINEER · 3/18/16

SEAL

Wiley|Wilson | BURNS MCDONNELL

JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 48844 EXPIRATION DATE: 3/15/18

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES NTG | DRW NTG | CHK PCB

PROJECT MANAGER

IPT TECH. BRANCH HEAD

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WEBSTER FIELD, NAS PATUXENT RIVER

NAVAL FACILITIES ENGINEERING COMMAND ~ WASHINGTON
ST. INIGOES, MD

NAVAL AIR STATION PATUXENT RIVER
ST. INIGOES, MD

BUILDING 8008 REPAIRS, ALTERATIONS AND ADDITION

EROSION AND SEDIMENT CONTROL DETAILS

SCALE: AS NOTED
EPROJECT NO. 1183080
CONSTR. CONTR. NO. N40080-15-D-0452
NAVFAC DRAWING NO. 13079645
SHEET 27B OF 180

C-506

DRAWFORM REVISION: 10 MAY 2014

FILE NAME:
REV/DATE: