NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND

REPLACE 15KV SECTIONALIZING SWITCHES

PHASE III

AT

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

WON 1470840

PREPARED BY

PM&E NEWPORT, RI

REQUEST FOR PROPOSAL PREPARED BY:

Roberta Regan Date: May 5, 2016

NAVFAC DESIGN MANAGER

Roberta Regan
NAVFAC PWD NEWPORT Date: May 5, 2016

Replace 15KV Sectionalizing Switches Phase III WON 1470840
Naval Station Newport, Newport, RI

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Preface

This Request for Proposal (RFP) consists of six parts.

Part 1 contains typical contractual forms, procedures, bidding instructions, bond information, clauses and wage decisions.

Part 2 contains general contract administrative and execution requirements including, but not limited to safety, design criteria & process, quality control, security, schedule, invoicing, temporary facilities, and design and construction oversight processes.

Part 2, Attachment A, contains project-specific general requirements that may either modify and/or supplement the corresponding standard paragraphs in the Part 2 “General Requirements” section.

Part 3 lists the project requirements, specific scope items, and expected quality level above and beyond those outlined in Part 4.

Part 4 Performance Specifications and minimum quality requirements.

Part 5, Technical Specifications – unless included by attachment in Part 6

Part 6 contains background project information, references, and other project-specific requirements. Refer to Attachment A through Attachment H.

Small Project Part 2
General Requirements

02/10

1. **DEFINITIONS:** As used throughout the contract, the following terms shall have the meaning set forth below:

Contracting Officer (KO): The individual designated to administer the contract. Throughout this contract this individual will be responsible and possess the authority to act on behalf of the Government with respect to the specific contract.

Contracting Officer Representative (COR): The individual designated by the Contracting Officer as the authorized representative of the Contracting Officer. The COR is responsible for monitoring performance and technical management of the effort required and should be contacted regarding questions or problems of a technical nature.

Contractor: The term Contractor refers to both the prime Contractor and subcontractors, including the Designer of Record.

Designer of Record (DOR): Licensed architect/engineer working as subcontractor to or partner with prime Contractor who provides design for this contract.

Quality Control (QC): Contractor's system to control the quality of design, material, equipment and construction.

Quality Assurance (QA) Program: Government's program to evaluate the effectiveness of the Contractor's quality control. The Government's QA Program is not a substitute for the Contractor's QC Program.

Federal Holidays: New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day; Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

Contract: Contract or task order.

2. **ORDER OF PRECEDENCE:** NFAS Clause 5252.236-9312. In the event of conflict or inconsistency between any of the below described portions of the confirmed contract, precedence shall be given in the following order:

a. Any portions of the proposal or final design that exceed the requirements of the solicitation.
    1) Any portion of the proposal that exceeds the final design.
    2) Any portion of the final design that exceeds the proposal.
    3) Where portions within either the proposal or the final design conflict, the portion that most exceeds the requirements of the solicitation has precedence.

b. The requirements of the solicitation, in descending order of precedence:
    1) Standard Form 1442, Price Schedule, and Davis Bacon wage rates.

2) Part 1 – Contract Clauses.
3) Part 2 – General Requirements.
4) Part 3 – Statement of Work/Project Program Requirements.
5) Part 6 – Attachments (excluding Concept Drawings).
6) Part 5 – Prescriptive Specifications, exclusive of performance specifications.
7) Part 4 – Minimum Materials, Engineering and Construction Requirements, exclusive of prescriptive specifications.
8) Part 6 – Attachments (including Concept Drawings).

3. **POST AWARD KICKOFF MEETING (PAK):** Prior to commencement of design, and within 15 calendar days of award, meet with representatives of the Contracting Officer, installation and client to present the concept design for discussion and acceptance. The project team will develop a mutual understanding relative to the approved proposal, safety program, environmental permits and requirements, quality control procedures, and design and construction schedule. During the meeting, Contractor shall propose and gain acceptance for any critical path work activities requiring advance submittal and approval. If the contract includes work on any fire protection system, including fire alarm and mass notification systems, the Contractor and the appropriate DOR shall meet with the NAVFAC Fire Protection Engineer (FPE) to establish clear expectations of fire protection requirements of the project.

The Contractor's key personnel shall attend at the expense of the Contractor. Key personnel are defined as the Project Manager, Superintendent, CQC representative(s), DOR, major subcontractors and specialized supplementary personnel.

The PAK includes partnering, held during normal work hours with the non-labor –related costs shared by both parties. Partnering is a structured process, as well as philosophy of doing business with Contractors and clients that recognizes common goals through communication and teamwork. It helps create an environment where trust and teamwork prevent disputes, foster good working relationships to everyone's benefit, and facilitate the completion of a successful contract. If included in Attachment A, a Performance Assessment Plan that provides monthly performance feedback to the Contractor, will be discussed during the partnering session.

Key personnel will meet to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start the turnover process at the PAK Meeting utilizing the NAVFAC Red Zone (NRZ) Checklist and convene the Facility Turnover Meetings once the project has reached approximately 75% completion or 3 to 6 months prior to Beneficial Occupancy Date (BOD), whichever comes first. The Contracting Officer's Representative will lead the meetings and guide the discussions based on an agenda provided by the Government. The Facility Turnover effort shall fill in the NRZ Checklist including Contractor, Client, and NAVFAC Checklist Items and assign a person to be responsible for each item and a due date. The Contracting Officer's Representative will facilitate the assignment of responsibilities and fill out the NRZ Checklist. The Contracting Officer's Representative shall develop a Plan of Action and Milestones (POAM) for the completion of all Contractor, Client, and NAVFAC Checklist items.

4. **DESIGN**: Design is the work necessary to ensure functionality, quality, and safety for critical facets of the project. Special coordination requirements, such as for phone, LAN and cable, are included in Attachment A.

a. Provide work in compliance with the following design standards and codes, as a minimum. Government standards listed in this RFP take precedence over industry standards.

This RFP references published standards, the titles of which can be found in the Unified Master Reference List (UMRL) on the Whole Building Design Guide at the Unified Facilities Guide Specification (UFGS) Website. The publications referenced form a part of this specification to the extent referenced.

The advisory provisions of all codes, requirements, and standards shall be mandatory; substitute words such as “shall”, “must”, or “required” for words such as “should”, “may”, or “recommended,” wherever they appear. The results of these wording substitutions incorporate these code and standard statements as requirements. Reference to the “authority having jurisdiction” shall be interpreted to mean “Contracting Officer”. Comply with the required and advisory portions of the current edition of the standard at the time of contract solicitation.

The following list of codes and standards is not comprehensive and is augmented by other codes and standards referenced and cross-referenced in the RFP. Refer to Parts 3 and 4 for specific requirements within other UFC’s.

a) UFC 1-200-01, *General Building Requirements*
b) UFC 1-300-08, *Criteria for Transfer and Acceptance of Military Real Property*
c) UFC 1-300-09N, *Design Procedures*
d) UFC 3-560-01, *Electrical Safety, O&M*
e) UFC 3-600-01, *Fire Protection Engineering for Facilities*
f) UFC 3-600-10N, *Fire Protection Engineering*
g) UFC 3-800-10N, *Environmental Engineering for Facility Construction*
h) UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*
i) UFC 4-020-01, *Security Engineering: Facilities Planning Manual*

b. Provide professional registration and design signing and stamping requirements per requirements of UFC 1-300-09N, *Design Procedures*.

c. See Attachment A for project-specific submittal requirements.

5. **FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS**: Work shall comply with applicable criteria identified herein and Attachment A. Any project including work on means of egress, fire rated elements, Fire Suppression, Mass Notification, or Fire Alarm Systems shall require the services of a Registered Fire Protection Engineer per Attachment A.

a. Final Life Safety/Fire Protection Certification Documentation: Unless otherwise specified in Attachment A, provide certification that all life safety and fire protection

features and systems have been installed in accordance with applicable criteria, the contract documents, approved submittals, and manufacturer's requirements. This certification shall summarize all life safety and fire protection features.

6. **QUALITY CONTROL**: Maintain quality control for and inspect all work under the contract. The DOR, as a member of the Contractor QC organization, shall remain directly involved during the construction process. For certain projects, the Quality Control Manager, Superintendent, and Site Safety and Health Officer may be combined – see paragraphs 6 and 34 in Attachment A. Further QC requirements are identified in Attachment A.

a. Submit a QC Plan for Government review and acceptance. The QC plan shall include the following:

1) NAMES, QUALIFICATIONS and RESPONSIBILITIES: For each person in the QC organization (design and construction).

2) OUTSIDE ORGANIZATIONS: Outside organizations, including architectural and consulting engineering firms and a description of the services these firms will provide.

3) INITIAL SUBMITTAL REGISTER (DESIGN & CONSTRUCTION): Include submittal reviewer, estimated date of delivery, and identify which design submittals require Government approval prior to construction, and which construction submittals require DOR or Government approval prior to construction.

4) TESTING LABORATORIES: Accredited laboratories as applicable.

5) TESTING PLAN AND LOG: Tests required, referenced by specification paragraph number requiring the test, frequency, and person responsible for each test.

6) LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task, which is separate and distinct from other tasks, and has the same control requirements and work crews.

7) COMMUNICATION PLAN: Provide a plan for key decisions and possible problems the Contractor and Government may encounter during the design phase of the project. Communication Plan shall indicate the frequency of design meetings and what information is covered in those meetings, key design decision points tied to the Network Analysis Schedule and how the DOR plans to include the Government in those decisions, peer review procedures, interdisciplinary coordination, design review procedures, and comment resolution.

b. QC Manager Responsibilities:

1) Participate in the Post Award Kick-off, Partnering, Design Development and Coordination Meetings and Production Meetings.

2) Ensure that no construction begins before the DOR has signed and stamped the design for that segment of work, and design and construction submittals are approved as required in Attachment A and the QC Plan.

3) Immediately stop any work that does not comply with contract plans and specifications, and direct the removal and replacement of any defective work.

4) Prepare QC Reports.

5) Hold biweekly QC meetings with DOR, Superintendent and Government technical team; participation shall be suitable for the phase of work.

6) Ensure that safety inspections are performed. Attend weekly Toolbox meetings.

7) Maintain submittal log.

8) Maintain updated as-built drawings on site.

9) Maintain testing plan and log. Ensure that all testing is performed per contract.

10) Maintain deficiency log on site, noting dates deficiency identified, and date corrected.

11) Certify and sign statement on each invoice that all work to be paid under the invoice has been completed in accordance with contract requirements.

12) Perform Punch-out and Pre-final inspections, and participate in Final Inspections. Establish list of deficiencies; correct prior to the Final inspection.

13) Ensure that all required keys, operation and maintenance manuals, warranty certificates, and the As-built drawings are submitted to the Contracting Officer.

c. Use the Three Phases of Control process for construction QC.

1) Preparatory Phase: Review all applicable documents for compliance with all applicable laws, codes, regulations, and the requirements of the contract, including contract drawings and specifications. Determine requirements for testing and certification. Review submittal approvals for materials, equipment, shop drawings, and applicable methods of construction and installation. Include all Preparatory Phase items in the QC Report.

2) Initial Phase: Observe and inspect the initial portion of the work performed under a DFOW to establish the quality of the workmanship, resolve conflicts in construction, ensure that testing is done and certified as required, and to check all work procedures to ascertain the work is in conformance with required safety requirements. Record and report nonconforming work and work not of acceptable quality and requiring correction or rework. Include all Initial Phase items, along with initial phase checklist and, in the QC Report.

3) Follow-Up Phase: Occurs at the completion of each DFOW. Ensure the work is in compliance with contract requirements, quality of workmanship for all work is maintained, and all work performed meets safety requirements. Include all Follow-Up Phase items, including date, in the QC Report.

d. The QC Manager must posses a current certificate showing successful completion of the NAVFAC Contractor Quality Management (CQM) Training.

7. **SUBMITTAL PROCESS**: Provide to the Government submittals as listed. See Paragraph 4, DESIGN, and Attachment A for specific design and construction submittal format and approval and surveillance requirements. Design drawings may be prepared more like shop

drawings to minimize construction submittals after final designs are approved. Therefore, the Contractor is encouraged to prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings.

a. QC Plan, prior to Design/Construction (may be phased).

b. Design and construction submittals, prior to construction, approved IAW QC Plan, The DOR or QC Specialist is the approving authority for submittals unless otherwise indicated in Attachment A.

c. DOR-approved design and construction submittals identified in Attachment A for Government surveillance (typically Fire Protection system and Life Safety submittals). Stamp the submittals "FOR SURVEILLANCE ONLY." Submit Surveillance submittals to the Government prior to starting work for that item. Submittals required for surveillance will be returned only if corrective actions are required.

d. Material Safety Data Sheets (MSDS) as applicable.

e. Schedule: Provide detailed design schedule and preliminary construction schedule, due prior to PAK.

f. Environmental Protection Plan, prior to start of the work.

g. Contractor Safety Self-Evaluation Checklist.

h. Accident Reports – submit if incidence occurs.

i. Safety Submittals: Per Paragraph 34 and Attachment A, prior to construction.

j. Schedule of Prices, initial due 15 calendar days after award and a detailed due prior to construction.

k. Budget Management Summary: Per Attachment A.

l. Record Drawings, due at Beneficial Occupancy

m. Operation and Maintenance Information: Per Paragraph 23, Part 2 Attachment A, and Part 4. Due prior to testing as applicable, no later than 30 calendar days before Beneficial Occupancy.

n. Licenses and Permits: Per Attachment A and Part 4.

o. DD Form 1354: For all new construction, demolition, and any construction on an existing facility that adds new parts, items, or systems that are not maintenance or repair; e.g. replacement of windows, replacement of roofs, replacement of an exterior utility, adding an AC system, adding exterior lighting, the DOR shall prepare DD Form 1354 TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY, in accordance with UFC 1-300-08, available at http://65.204.17.188/report/doc_ufc.html. Submit form for Government approval a minimum of 30 calendar days prior to final acceptance of work.

8. **SUPERVISION:** The Contractor shall have a supervisor fluent in English on the job site during working hours. Additional requirements per Attachment A.

9. **SCHEDULE**: Provide Design and Construction Schedule adequate for Contractor to efficiently manage project and for Government to efficiently manage QA and scheduling interfaces. Include construction phasing and any work restrictions (such as occupied spaces,

special hours, potential work disruptions). Schedule shall contain DFOWs and dates for completion of each task including material procurement, and construction activities. Update the schedule at least monthly; use 3-week look-ahead for each QC meeting.

10. **BUDGET MANAGEMENT:** The Contractor shall be responsible for budget management throughout the entire project. It is the intent of the Government to partner with the Contractor to maximize project value while strictly controlling contract modifications and maintaining overall fiscal control. When required in Attachment A, develop a Budget Management System for each phase of the design.

11. **PRECONSTRUCTION CONFERENCE**: Prior to construction or demolition start, meet with representatives of the Contracting Officer to discuss and develop mutual understanding relative to administration of the safety programs, environmental issues, safety of building occupants and surrounding area, hazardous materials, waste disposal, construction QC procedures, construction schedule, labor provisions and other construction phase contract procedures. The Preconstruction Conference shall reinforce partnering philosophy initially established during the PAK.

12. **ACCESSIBILITY**: Barrier-free design should be in accordance with the requirements of the Federal Accessibility Standards (UFAS) as required by 42 U.S.C. 4151-4157, Architectural Barriers Act (ABA) of 1968, and consistent with 29 U.S.C. 794, *Rehabilitation Act of 1973*, but also meet the requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Use the criteria that provide the greatest barrier-free design requirements. The soon to be released DOD Accessibility Standards will implement the US Access Board's update of the ABA and ADA guidelines and supersede the requirements noted above.

13. **CONTRACTOR'S PRODUCTION REPORTS**: Submit Contractor Production Reports on forms furnished for this purpose. Complete the reports weekly unless otherwise requested by the Contracting Officer. Reports shall include:

a. Worker hours by classification, move-on and move-off of construction equipment furnished by the prime, subcontractor or the Government, and materials and equipment delivered to the site.

b. Safety meetings, checks and inspections.

c. Disposition of Construction Waste Material: Per Environmental Protection Plan.

d. Design and Construction Services: Including, but not necessarily limited to:

1) Check all Contract Documents for correctness and correlation. If the Contractor notes any discrepancy or ambiguity, immediately notify the COR.

2) Examine the work site as to conditions affecting the work. Field verify the site and scope of work, including but not limited to the measurement and location of all significant items required to perform the work. Failure by the Contractor to familiarize oneself with available information regarding these conditions shall not relieve the Contractor from the responsibility of successfully completing the work.

14. **SCHEDULE OF PRICES:** Submit on forms furnished by the Government. The initial schedule of prices may be preliminary for construction activities until the design is developed. Include a detailed breakdown of the contract price, with quantities for each kind of work. Include General Conditions, profit, and overhead in the unit prices. Break down into design and each construction category if stated in Attachment A. The Contractor may invoice for bonds once the Government has approved the bonds, however, no other requests for payment will be processed without an approved Schedule of Prices.

15. **CONTRACTOR INVOICES**: Contractor requests for payment shall conform and will be processed in accordance with the requirements of FAR 52.232-5 and FAR 52.232-27.

a. Content of Invoice: Requests for payment in accordance with the terms of the contract shall consist of the following: (If NFAS Clause 5252.232-9301 is present in the contract, documents shall be provided as attachments in Wide Area Workflow (WAWF). The maximum size limit per attachment is less than 2 megabytes, but you may have an unlimited number of attachments. If a document cannot be attached to WAWF due to system or size restrictions it shall be provided as instructed by the contracting officer). If NFAS Clause 5252.232.9301 is not present in the contract, follow the invoicing instructions provided in the contract.

1) Contractor's Invoice on NAVFAC Form 7300/30, which shall show, in summary form, the basis for arriving at the amount of the invoice.

2) Contractor's Monthly Estimate for Voucher (LANTNAVFACENGCOM Form 4-4330/110 (New 7/84)), with subcontractor and supplier payment certification.

3) Affidavit to accompany invoice (LANTDIV NORVA Form 4-4235/4 (Rev. 5/81)).

4) Updated copy of submittal register.

5) Updated copy of progress schedule. Furnish as specified in "FAR 52.236-15, Schedules for Construction Contracts."

6) Network mathematical analysis.

7) Contractor Safety Self Evaluation Checklist (original)

8) Final release (for final payment only)

b. Payment:

1) Payment will be made on Contractor's submission of itemized requests and will be subject to reduction for overpayments or increased for underpayments from previous payments. The Government may withhold payment or reduce payments for the following:

a) Defects in material or workmanship.

b) Claims the Government may have against the Contractor under or in connection with this contract.

c) Contractor's failure to submit an updated schedule.

d) Payroll violations.

e) Unless otherwise adjusted, repayment to the Government upon demand for overpayments made to the Contractor.

2) Payments may be made for materials, stored off construction sites, under the following conditions:

a) Conditions described in Attachment A.

b) Materials adequately insured and protected from theft and exposure.

c) Materials not susceptible to deterioration or physical damage in storage or in transit to the job site are acceptable for progress payments. Items such as steel, machinery, pipe and fittings and electrical cable are acceptable, but items such as gypsum board; glass, insulation and wall covering are not.

d) Materials in transit to the job or storage site are not acceptable for payment.

e) Conditions specified in FAR 52.232-5(b) Payments Under Fixed Price Construction Contracts.

16. **PROTECTION OF GOVERNMENT PROPERTY**: Take special care to protect Government property. Return areas damaged as a result of construction under this contract to their original condition. In addition to FAR 52.236-9, *Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements*, perform the following:

a. Remove or alter existing work or facilities in such a manner as to prevent injury or damage to any portion of the existing work or facilities that remain.

b. Repair or replace portions of existing work altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

c. Preserve the natural resources in accordance with the approved environmental protection plan.

17. **EXISTING UNDERGROUND UTILITIES**: Verify on-site utilities and have them marked out by a utility locator service prior to the start of construction. Where existing piping, utilities, oil and gas lines, and underground obstructions of any type that are to remain are indicated in locations to be traversed by new piping, ducts, and other work provided herein, and such are not indicated or specified to be removed, the elevations of the existing utilities and obstructions shall be determined before the new work is laid closer than the nearest manhole or other structure at which an adjustment in grade could be made. Obtain required dig permits and notify the Contracting Officer 21 calendar days prior to any excavation. Refer to Attachment A for specific station requirements.

18. **LICENSES/PERMITS**: Obtain all appointments, licenses, and permits required to perform work under this contract at no additional expense to the Government. See "Permits Record of Decision" (PROD) form for list of permits. Comply with all applicable federal, state, and local laws, and base regulations and procedures. Provide evidence of such permits and licenses to the Contracting Officer before work commences and at other times as requested by the Contracting Officer (see FAR 52.236-7, *Permits and Responsibilities*). Coordinate permit applications with Navy or local environmental office.

The contractor shall submit a complete PROD form with the first design submittal package. A blank PROD form can be obtained at the Download Tab of Part 6 of the NAVFAC Design-Build website at the following link http://www.wbdg.org/ndbm/Download/Download.html?Tab=Download. Contractor shall determine correct permit fees and pay said fees. Copies of all permits, permit applications, and the completed PROD form shall be forwarded to the Government's Civil Reviewer and Environmental Reviewer.

Contractor is exclusively responsible for his full compliance with patent laws and shall affirm that the company is licensed to use equipment and processes the company shall employ in this project.

19. **CONTRACTOR WORK SITE**: Limit use of the premises for work and for storage of material and equipment associated with the contract. Unless otherwise specified or separately agreed to, Government owned material handling equipment, transportation equipment or general tools will not be available for Contractor's use. Clean work area daily and after completion of the work, removing all loose debris and disposing of all non-permanent materials IAW the contractor's Waste Management Plan.

a. **Temporary Facilities**: The Contractor may provide his own office facilities; coordinate and obtain advance approval from the Contracting Officer. Provide and maintain suitable sanitary facilities within the construction limits of the contract. Dispose of sanitary waste in accordance with the applicable laws, and local regulation.

b. **Contractor-Furnished Equipment**: Equipment is subject to the inspection and approval of the Contracting Officer, prior to and during the life of the contract. All equipment and vehicles shall display readily visible Contractor identification markings. Relocate stored Contractor equipment which may interfere with operations of the Government or with others on-site.

c. **Contractor-furnished Material**: Protect and secure products stored at this site.

1) All replacement units, parts, components, and materials to be used in the maintenance, repair and alteration of facilities and equipment shall be new and compatible with the existing equipment on which it is to be used, and shall comply with applicable Government, commercial, or industrial standards such as Underwriter's Laboratories, Inc., and National Electrical Manufacturers Association.

2) In addition, submit a current certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations.

20. **TEMPORARY UTILITIES**:

a. The Government will provide water and power in reasonable quantities at the prevailing rates unless otherwise noted in Part 2A.

b. All labor, material, and equipment necessary to affect temporary utility tie-ins, including transformers if necessary, shall be at the expense of the Contractor and under the surveillance of the Contracting Officer.

c. The Contractor shall be responsible for any damages to Government, private or public facilities and property that may result from the installation and removal of these temporary utility tie-ins. Corrections and repairs shall be made at the Contractor's expense.

d. The actual location and installation of the temporary tie-in, together with any interruptions of utilities systems, shall be identified and approved by the Contracting Officer prior to execution. Notify the COR and Station Utilities 15 calendar days prior to any tie-ins.

e. Permanent utility systems, when indicated, will be available for tie-in.

f. Telephone and Data Service: Make arrangements with local telephone company, NMCI and other pertinent base communication departments.

g. Maintain utility services to existing facilities surrounding the site at all times during construction.

h. Contractor shall install and certify back flow preventers on all connections to the potable water supply system.

21. **ENVIRONMENTAL CONTROLS AND PROTECTION**

Unforeseen Hazardous Conditions: Do not disturb hazardous materials and report condition immediately to the Contracting Officer potentially hazardous conditions that are uncovered or the Contractor becomes aware of that have not been identified in the RFP. This includes hazardous components and materials and contamination (see UFC 3-800-10 for more information). This includes conditions that are not only hazardous to humans but wildlife, marine life and the environment. Stop work in the area of the questionable material or condition until identification and direction is provided.

22. **WASTE MANAGEMENT**: Develop a Waste Management Plan that identifies all recyclable material and disposal methods for all material. Contractor shall reduce, recycle or salvage as much waste material as possible with a goal of diverting at least 50% of construction waste from landfill. Address waste reduction, recycling and salvage as part of the waste management plan. Report volume or weight of disposed and recycled materials. The Contractor is responsible for removing and disposing of all waste materials generated. Consider all material recyclable or reusable, unless clearly demonstrated the material requiring disposal is waste material.

23. **RECORD DRAWINGS AND OPERATION & MAINTENANCE (O&M) DATA**: Furnish hard copy and electronic format for all as-built and O&M information. Record drawings shall incorporate all changes to the approved final design. Provide O&M data for as-built products, materials, and equipment, including data sheets, test reports, warranties, certificates, list of spare parts suppliers for all pieces of equipment, and approved construction submittals. Refer to Attachment A.

24. **WARRANTY**: Warrant all materials and work for not less than one year after final acceptance of the work, except as otherwise indicated in this RFP. If required to provide

remedial repair of previously installed work due to latent defect or unacceptable work performance, warrant the repaired work for one year after the completion and acceptance of the repair. For warranted items, furnish the manufacturers' original written warranty accompanied by a copy of the supplier's receipt showing place of purchase, telephone number of supplier, address, delivery order number if applicable, and ticket number.

25. **PERFORMANCE EVALUATIONS:** The evaluation will take into account all aspects of the Contractor's performance, including evaluations from Performance Assessment Plans when included in Attachment A. Performance evaluations may be completed any time during the contract. The Government will provide a copy of the performance evaluation and an opportunity to discuss the evaluation. The performance evaluations will have an impact on the award of future contracts.

26. **WORK HOURS, ACCESS AND PASSES**: All Contractor employees, including subcontractors, and subcontractors' employees, suppliers, and suppliers' employees shall be required to comply with the Installation Security Requirements regarding personnel, vehicle, and equipment security passes and access the jobsite. Nothing in the contract shall be construed in any way to limit the authority of the Commanding Officer to prescribe new, or to enforce existing security regulations governing the admission or exclusion of persons and the conduct of persons while aboard the station, including but not limited to, the rights of search of all persons or vehicles aboard the station.

Coordinate with the Contracting Officer for specific security and access requirements.

a. Access to Buildings/ Occupied Buildings: The Contractor may work in or around existing occupied buildings. The Contractor is responsible, via the Contracting Officer, to obtain access to building and facilities and arrange for them to be opened and closed. Do not enter the building(s) without prior approval of the Contracting Officer. Keep the existing buildings and their contents secure at all times. Provide temporary closures as required to maintain security. Contract personnel will not be permitted in security-regulated buildings or areas unless cleared by the Security Officer.

b. Passes and Badges: Contractor employees and representatives performing work under this contract are required to be either United States citizens or documented legal residents (status verified by prime contractor). All Contractor employees shall obtain the required employee and vehicle passes. Each employee shall wear the Government issued badge over the front of the outer clothing. Failure to obtain security and base access passes shall not be a cause for contract performance time extension. The Contractor shall immediately turn in all terminated employee's badges to the issuing office.

    1) Personnel will be issued appropriate identification badges when the Contractor submits, in writing on company letterhead, a list indicating that all individuals are bona fide employees. Employees shall complete questionnaires and other forms as required for security. Allow 14 calendar days for background checks and processing. The list shall contain the following information:

        f) Name of employee

g) Social Security Number

h) Date of Birth

i) Place of Birth

j) Citizenship, Statement of (U.S.) or proof of documented legal residency

k) Employment Eligibility Verification Form (DHS FORM I-9). This form is available at http://uscis.gov/graphics/formsfee/forms/files/I-9.pdf

c. Contractor Vehicles: All vehicles shall display a valid state license plate and safety inspection sticker, if applicable, and shall be maintained in good repair. The company name shall be displayed in a clearly visible manner and size on each Contractor vehicle used in the course of work. Registration, proof of insurance and driver's licenses are required to obtain a station vehicle pass.

d. Work Hours: Unless otherwise indicated, work will be located on a Government compound, military installation, or station. Contractor work hours shall be between 0630 and 1700 Monday through Friday, or as indicated in Attachment A. Obtain advance approval from the Contracting Officer for Contractor personnel to remain on site beyond normal working hours. Notify the Contracting Officer at least 48 hours in advance to obtain approval for access to the jobsite or work outside of normal working hours or on Saturday, Sunday, and Federal Holidays.

e. Contractor Personnel**:** Provide the Contracting Officer the name(s) of the supervisory person(s) authorized to act for the Contractor. Provide, and update as required, a list of the key personnel for the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency.

f. Contractor employees shall conduct themselves in a proper, efficient, courteous and businesslike manner. Remove from the site any individual whose continued employment is deemed by the Contracting Officer to be contrary to the public interest or inconsistent with the best interests of National Security.

27. **SECURITY REQUIREMENTS**: All security requirements apply to all subcontractors and suppliers associated with this contract. Special or extraordinary security requirements are identified in Attachment A. In addition to special or extraordinary security requirements, comply with the following:

a. Do not publicly disclose any information concerning any aspect of the materials or services relating to this contract, without prior written approval of the Contracting Officer.

b. Do not disclose or cause to be disseminated any information concerning the operations of the activity's security or interrupt the continuity of its operations.

c. Do not disclose any information to any person not entitled to receive it. Failure to safeguard any classified information that may come to the Contractor or any person under his control, may subject the Contractor, his agents or employees to criminal liability under 18 U.S.C., Sections 793 and 798.

d. Direct to the Contracting Officer and or Installation Security Officer for resolution all inquiries, comments or complaints arising from any matter observed, experienced, or

learned as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information.

e. Coordinate photography requirements with the Contracting Office. Some areas restrict or prohibit photographing Government property.

Deviations from or violations of any of the provisions of this paragraph, will, in addition to all other criminal and civil remedies provided by law, subject the Contractor to immediate termination for default and withdrawal of the Government's acceptance and approval of employment of the individuals involved.

28. **REQUIRED INSURANCE**: Within 15 calendar days after award, furnish the Contracting Officer a Certificate of Insurance as evidence of the following insurance coverage amounts not less than the amount specified below in accordance with FAR Clause 52.228-5, *Insurance Work On A Government Installation*:

a. Comprehensive General Liability: $500,000 per occurrence.
b. Automobile Liability: $200,000 per person, $500,000 per occurrence for bodily injury; $20,000 per occurrence for property damage.
c. Worker's Compensation: As required by Federal and State Worker's compensation and occupational disease and other laws.
d. Employer's Liability Coverage: $100,000, except in states where worker's compensation may not be written by private carriers.
e. Others as required by state law.
f. Above insurance coverages are to extend to Contractor personnel operating Government owned equipment and vehicles.
g. The Certificate of Insurance shall provide for 30 calendar days written notice to the Contracting Officer by the insurance company prior to cancellation or material change in policy coverage. Other requirements and information are contained in Attachment A.

For projects which require removal of asbestos containing materials the Asbestos Contractor or Subcontractor, as the case may be shall provide occurrence-based liability insurance with asbestos coverages in an amount not less than $1,000,000 and shall name the Government and PQP as additional insureds.

29. **PROPRIETARY RIGHTS**: All field notes, design drawings, specifications, and other documents collected and produced as part of this contract shall be considered property of the Government. These data shall not be used, in whole or part, published or unpublished, as a part of any technical or non-technical presentation without written pre-approval of the Contracting Officer.

30. **GOVERNMENT FURNISHED MATERIAL AND EQUIPMENT**: If applicable, the Government will furnish the materials and equipment for installation by the Contractor pursuant to contract clause FAR 52.245-2, *Government Property (Fixed Price Contracts)*. Notify the Contracting Officer in writing at least 15 calendar days before the materials and equipment are required. Pick up materials and equipment no later than 30 calendar days after such date. When materials and equipment are not picked up by the 30th day, the Contractor will be charged for

storage at the prevailing rate. The Contracting Officer will specify the location of materials and equipment and the delivery location.

31. **ORAL MODIFICATION**: No oral statement by any person other than the Contracting Officer, as provided in the contract clause entitled, "CHANGES AND CHANGED CONDITIONS," will in any manner or degree modify or otherwise affect the terms of this contract.

32. **NO WAIVER BY THE GOVERNMENT**: The failure of the Government in any one or more instances to insist upon strict performance to any of the terms of this contract or to exercise any option herein conferred shall not be construed as a wavier or relinquishment to any extent of the right to assert or rely upon such terms or options on any future occasion.

33. **EQUITABLE ADJUSTMENTS – WAIVER AND RELEASE OF CLAIMS:**

a. Whenever the Contractor submits a claim for equitable adjustment under a clause which provides for equitable adjustment of the contract, such claim shall include all types of adjustments in the total amounts to which the clause entitles the Contractor, including, but not limited to, adjustment arising out of delays or disruptions.

b. Except as the parties may otherwise expressly agree, the Contractor shall be deemed to have waived: (1) any adjustments to which he otherwise might be entitled under the clause where such claim fails to request such adjustments; and (2) any increase in the amount of equitable adjustments additional to those requested in its claim.

c. The Contractor agrees that, if required by the Contracting Officer, it shall execute a release, in form and substance satisfactory to the Contracting Officer, as part of the supplemental agreement setting forth the aforesaid equitable adjustment. The Contractor further agrees that such release shall discharge the Government, including its officers, agents, and employees, from any further claims, including, but not limited to, further claims arising out of delays or disruptions caused by the aforesaid change.

34. **SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS:**

a. References: The publications listed below form a part of this specification to the extent referenced. Use current version of referenced requirements at the time of contract solicitation. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z359.1, *Safety Requirements for Personal Fall Arrest System, Subsystems and Components*

ANSI A10.32, *Fall Protection systems for Construction and Demolition Operations*

ANSI A10.6, *Demolition Operations*

ANSI Z9.2, *Fundamentals Governing the Design and Operation of Local Exhaust Systems*
ANSI Z88.2, *Respiratory Protection*
ANSI Z358.1, *Emergency Eyewash and Shower Equipment*

ASME INTERNATIONAL (ASME)
ASME B30.22, *Articulating Boom Cranes*
ASME B30.3, *Construction Tower Cranes*
ASME B30.5, *Mobile and Locomotive Cranes*
ASME B30.8, *Floating Cranes and Floating Derricks*

AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM)
ASTM Standards on Lead-Based Paint Abatement in Buildings
ASTM E 1368, *Visual Inspection of Asbestos Abatement Projects*

DEPARTMENT OF DEFENSE (DoD)
MIL-STD-1472F, Military Standard, *Human Engineering Design Criteria for Military Systems, Equipment and Facilities*
DoD-HDBK 743A, *Anthropometry of US Military Personnel*

DEFENSE LOGISTICS AGENCY (DLA)
DLA 4145.25, *Storage and Handling of Compressed Gases and Liquids in Cylinders*

EPA Standards and Documents – General
15 U.S.C. 2601 – *Toxic Substances Control Act*
EPA Title X – *The Residential Lead Based Paint Hazard Reduction Act*
EPA & HUD – *Lead Safe Work Practices*
HUD Guidelines, *Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing*

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
NFPA 241,*Safeguarding Construction, Alteration, and Demolition Operations*
NFPA 51B, *Fire Prevention During Welding, Cutting, and Other Hot Work*
NFPA 70, *National Electrical Code*
NFPA 70E, *Electrical Safety in the Workplace*

U.S. ARMY CORPS OF ENGINEERS (USACE)
EM 385-1-1 Safety -- *Safety and Health Requirements*

UNITED FACILITIES CRITERIA (UFC)
UFC 3-560-01, *Electrical Safety, O&M*

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
29 CFR 1910 *Occupational Safety and Health Standards*
29 CFR 1910.146 *Permit-required Confined Spaces*
29 CFR 1915 *Occupational Safety and Health Standards for Shipyard Employment*
29 CFR 1926 *Safety and Health Regulations for Construction*

b. Submittals: A "G" following a submittal indicates that Government approval action is required.
   1) Contractor Accident Prevention Plan (APP), comply with EM 385-1-1, Appendix A; G
   2) Contractor Safety Self-Evaluation Checklist; G
   3) Monthly Work-Hour Reports
   4) Crane Critical Lift Plan; G
   5) Accident Reports – submit if incidence occurs.
   6) Activity Hazard Analyses, as applicable.

c. Weight Handling Equipment (WHE) Accident: A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over).

d. Contractor Safety Self-Evaluation Checklist: Contracting Officer will provide a "Contractor Safety Self-Evaluation checklist" to the Contractor. Complete the checklist monthly and submit with each request for payment. A score of 90 or greater is required. Failure to submit the completed safety self-evaluation checklist or achieve a score of at least 90, will result in a retention of up to 10 percent of the voucher.

e. Regulatory Requirements: In addition to the detailed requirements included in this contract, work performed shall comply with USACE EM 385-1-1, and the laws, ordinances, criteria, rules and regulations included in Attachment A. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply. UFC 3-560-01 takes precedence over all other guidance for electrical safety.

f. Site Safety and Health Officer (SSHO) Qualifications & Duties: SSHO shall perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The assignment of the SSHO does not relieve the Contractor from the regulatory requirements governing safety responsibility. The SSHO on this project can be the site superintendent unless otherwise indicated in Attachment A. The SSHO shall meet the following requirements:

   1) A minimum of 5 years safety work on similar projects.
   2) 30-hour OSHA construction safety class or equivalent within the last 5 years.
   3) An average of at least 24 hours of formal safety training each year for the past 5 years.
   4) Competent person training as needed.

5) Successfully completed the Environmental Compliance Awareness Training (ECATT) Program.
6) In addition to duties required in EM 385-1-1, perform the following:
    a) Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the daily production report.
    b) Attend pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic progress meetings.

Failure to actively apply an acceptable safety program will result in dismissal and a project work stoppage that will remain in effect pending approval of a suitable replacement.

g. Accident Notification and Reports

1) For recordable injuries and illnesses, and property damage accidents resulting in at least $2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the Navy Contractor Significant Incident Report (CSIR) form and provide the report to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms.
2) For any weight handling equipment accident (including rigging gear accidents), the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.
3) Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $2,000, or any weight handling equipment accident. Include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (e.g., type of construction equipment used, PPE used). Preserve the conditions and evidence on accident site until the Government investigation team arrives and Government investigation is conducted.
4) Monthly Work-Hour Reports: Monthly work-hour reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

h. Hot Work: Prior to performing "Hot Work" (e.g., welding, cutting) or operating other flame-producing/ spark-producing devices, request a written permit from the Fire

Division. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. It is mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site as required after completion of the task or as specified on the hot work permit.

i. Hazardous Material Use: Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocynates, or lead-based paint are prohibited. The Contracting Officer, upon written request may consider exceptions to the use of any of the above excluded materials.

The Request for Proposal should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to FAR 52.243-4, *Changes*, and FAR 52.236-2, *Differing Site Conditions*.

j. Pre-outage Coordination Meeting: Apply for utility outages at least 15 days in advance. As a minimum, include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the Contracting Officer to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

k. Fall Hazard Protection and Prevention Program: Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Include company policy; identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

1) Fall Protection for Roofing Work: Implement all protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.
    a) A safety monitoring system is not adequate fall protection for low sloped roofs and is not authorized.

b) Work on steep-sloped roofs, including residential or housing type construction, requires a personal fall arrest system, guardrails with toe-boards, or safety nets.

2) Fall Prevention and Design: During design, consider and eliminate fall hazards encountered at the facility during maintenance evolutions whenever possible. If it is not feasible to eliminate or prevent the need to work at heights with its subsequent exposure to fall hazards, include control measures in the design to protect personnel conducting maintenance work after completion of the project. In addition to the detailed requirements included in the provisions of this contract, incorporate the requirements of 29 CFR 1910 Standards in the design (29 CFR 1915 applies for work in Shipyards).

l. Weight Handling Equipment:

1) Crane Critical Lift Plan: Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit the plan 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. as well as the following:

a) For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.550(g).
b) For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.

2) Provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. The Certificate of Compliance shall state that the crane operator(s) is qualified and trained in the operation of the crane to be used. Also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). Post these certifications on the crane.

3) Notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.

4) Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.

5) Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.

6) Under no circumstance make a lift at or above 90% of the crane's rated capacity in any configuration.

7) When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

8) Use cribbing when performing lifts on outriggers.

9) Position the crane hook/block directly over the load. Side loading of the crane is prohibited.

10) Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall be available for review by Contracting Officer personnel.

11) Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

12) Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

13) Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations, set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. Include this maximum wind speed determination in the activity hazard analysis plan for that operation.

m. Utility Locations and Verification Prior to Excavation: Obtain appropriate digging permit from Base personnel through Contracting Officer prior to digging. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Maintain all markings during utility investigation throughout the contract. Locate utilities in accordance with Paragraph 17 and Attachment A.

Physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come

within three feet of the underground system. Use hand digging within 0.61 m (2 feet) of a known utility. If construction is parallel to an existing utility, expose the utility by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

n. Utilities Within Concrete Slabs: Utilities located within concrete slabs are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with station utility departments in addition to a private locating service. Outages to isolate utility systems shall be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

o. Conduct of Electrical Work: Follow electrical safety criteria specified in UFC 3-560-01, USACE EM 385-1-1, and NFPA 70E during the conduct of all work.

p. Work in Confined Spaces: In addition to the requirements of Section 06.I of USACE EM 385-1-1, OSHA 29 CFR 1910.146 and OSHA 29 CFR 1926.21(b)(6), comply with the following paragraphs. Any potential for a hazard in the confined space requires a permit system to be used.

1) Confined Space Signage: Provide permanent signs integral to or securely attached to access covers for permit-required confined spaces provided by this contract. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of 25 mm (one inch) in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m (5 feet).

2) Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and all potential hazards are controlled or eliminated and documented. (See Section 06.I.06 of USACE EM 385-1-1 for entry procedures.) Review all hazards pertaining to the space with each employee during AHA process.

3) Forced air ventilation is required for all confined space entry operations. Maintain minimum air exchange requirements to ensure exposure to any hazardous atmosphere is kept below its' action level.

4) Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

q. Ergonomics Considerations During Design: Design facilities, processes, job tasks, tools and materials to reduce or eliminate work-related musculoskeletal (WMSD) injuries and risk factors in the workplace. Design maintenance access to reduce WMSD risk factors to the lowest level possible. In addition to requirements included in this contract, design shall incorporate the requirements of MIL-STD-1472F.

-- End of Section --

Small Project Part 2, Attachment A
Project-Specific General Requirements

05/11

The following requirements are project specific and may either supplement and/or modify those requirements contained in the body of Part 2, General Requirements, for Small Projects. Paragraph numbers in Part 2 correspond to paragraph numbers used in Part 2, Attachment A.

Paragraph 3 POST AWARD KICKOFF MEETING (PAK)

Record and provide meeting minutes within 5 days of PAK meeting.

Due to limited scope and duration, this project Partnering will be part of every meeting rather than as a separate meeting.

Paragraph 4 DESIGN

Submit design drawings or sketches, calculations and manufacturer's data to demonstrate compliance with contract requirements. The Contractor is encouraged to prepare design drawings more like shop drawings to minimize construction submittals.

Provide both hard and electronic copies of design submittal package to the following reviewers 1 week prior to the in-progress review meeting. Electronic copies shall include a .pdf version as well as the Autocad .dwg and SpecsIntact .sec files. :

	Deliverable	FEAD/ ROICC	IPT	PWO	User
	Design Development 30%, 75%, Pre-Final				
	Half-size Drawings or Sketches	5			
	Specifications and Manufacturer's Cut Sheets	5			
	Design/Construction Schedule	5			
	Budget Management Status	1			
	Calculations	2			
	PROD Form (Permits)	N/A			
	Finish Documentation Color Boards	N/A			
Final Design					
	Half-size Drawings or Sketches	5			
	Full-size Drawings on Mylar	1			
	Specifications and Manufacturer's Cut Sheets	5			
	Design/Construction Schedule	5			

	Budget Management Summary	1			
	Calculations	2			
	Finish Documentation Color Boards	N/A			

1. The final design submittal must be professionally signed and sealed by the DOR and forwarded to the Contracting Officer prior to the start of construction. The DOR shall be a Registered Professional Engineer. The following design submittals must be approved by the Contracting Officer prior to the start of construction:

   a. Final Design
   b. Specifications/Manufacturer's Cut Sheets
   c. Construction Schedule

Design Submissions shall be sent to:
Attn: Roberta Regan
Public Works Department
Facilities Engineering & Acquisition Division
Naval Station Newport
1 Simonpietri Drive
Newport, RI 02841

2. All construction submittals are to be Contractor-approved. Submittals listed below shall also be reviewed and approved by the DOR and Government:
   1) Fire Protection related submittals (if applicable).
   2) Earthwork and Geotechnical submittals.
   3) Concrete, foundation, paving submittals.
   4) All structural components.
   5) All components of the roof, exterior walls, and trim.
   6) Doors and hardware.
   7) **All lighting and electrical components**.
   8) Qualifications/Certifications for electrical and telecomm splicers
   9) Exterior paint/facade materials and colors.

3. Submit one copy of all construction submittals for surveillance by the Government. Submit five copies of submittals requiring Government review.

Paragraph 5 FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

When fire protection and life safety requirements are all or part of the contract scope, the Contractor shall retain the services of a Registered Fire Protection Engineer (FPE). This FPE shall be an integral part of the Prime Contractor's Design and Quality Control Organization, and shall have no business relationships (owner, partner, operating officer, distributor, salesman, or technical representative) with any fire protection equipment device manufacturers, suppliers or installers for any such equipment provided as part of this project. Unless otherwise specified, all work performed on means of egress, fire rated elements, Fire Suppression, Mass Notification, and Fire Alarm Systems shall be designed, reviewed, inspected and approved by the FPE.

1. Qualifications/Experience:

a. Qualifications of the Designer: The FPE DOR shall have obtained professional registration by successfully completing the Fire Protection Engineering discipline examination.

b. Qualifications of the Installer: Prior to installation, submit data showing the Contractor has successfully installed systems of the same type and design as specified herein, or that Contractor has a contractual agreement with a subcontractor having such experience. Include names and locations of at least two installations where the Contractor, or subcontractor, has installed such systems. Indicate type and design of each system and certify that each has performed satisfactorily as intended for not less than 18 months.

c. Qualifications of the System Technician: Installation drawings, shop drawing and as-built drawings shall be prepared, by or under the supervision of, an individual who is experienced with the types of works specified herein, and is currently certified by the National Institute for Certification in Engineering Technologies (NICET) as an engineering technician with minimum Level-III certification in the fire protection certification program applicable to the work being performed. Submit data for approval showing the name and certification of all involved individuals with such qualifications at or prior to submittal of drawings.

2. Area of Responsibility: The FPE is responsible for assuring the proper design, construction and installation of life safety, fire protection, and mass notification features across all disciplines and trades. Services include preparing the Design Analysis, preparing or reviewing and approving the design documents (drawings), preparing or reviewing all fire protection related specification sections (including fireproofing, firestopping, fire suppression systems, and mass notification and fire alarm systems), certifying in writing that the completed design incorporates all required features, and certifying in writing that the facility was constructed in accordance with the approved design documents and applicable criteria. The FPE shall be responsible for assuring that the construction and installation are in accordance with the approved design documents by reviewing and approving all fire protection construction submittals, providing construction surveillance and preliminary and final inspections and testing services. Examples include, but are not limited to, water distribution systems including fire pumps and fire hydrants, fire resistive assemblies such as spray-applied fire proofing of structural components and fire rated walls/partitions, mass notification, fire alarm and detection systems, fire suppression and standpipe systems, means of egress components, and emergency and exit lighting fixtures. A copy of each approved submittal, with a copy of the Contractor’s FPE review comments, shall be forwarded to the Government FPE prior to starting work for that item.

3. Construction Surveillance: The FPE shall visit the construction site as necessary to ensure life safety and fire protection systems are being constructed, applied, and installed in accordance with the approved design documents, approved construction submittals, and manufacturer's requirements. Frequency and duration of the field visits are dependent upon particular system components, system complexity, and phase of construction. At a minimum, field visits shall occur just prior to installation of suspended ceiling system to inspect the integrity of passive fire protection features and fire suppression system piping, preliminary inspections of mass notification, fire alarm/detection and suppression systems, and final acceptance testing of mass notification, fire alarm/detection and suppression systems.

a. Preliminary and Final Inspections and Acceptance Testing: FPE shall personally witness all preliminary inspections and testing of mass notification, fire alarm/detection and suppression systems. Once preliminary inspections and testing

have been successfully completed, the FPE shall submit a signed certificate to the QC Manager that systems are fully compliant and ready for final inspection and acceptance testing. The QC Manager shall provide 14 days advance notice to the Contracting Officer to schedule the final inspection and acceptance testing with the activity Fire Inspection Office and the NAVFAC Fire Protection Engineer.

b. Final Life Safety/Fire Protection Certification Documentation: The FPE shall provide certification that all life safety and fire protection features and systems have been installed in accordance with applicable criteria, the contract documents, approved submittals, and manufacturer's requirements. This certification shall summarize all life safety and fire protection features, and shall bear the professional seal of the fire protection engineer.

Paragraph 6 QUALITY CONTROL

The Superintendent may not also serve as the Quality Control Manager on this project. Exceptions based on limited project size and complexity may be granted with approval of the Contracting Officer. A credit to the government may be required for any/all exceptions granted during the post-award period of performance.

Special inspection, testing, approvals, certifications, observations and quality assurance plans as prescribed in Chapter 17 of the IBC are required.

Paragraph 7 SUBMITTAL PROCESSING

	SUBMITTAL/BENCHMARK	DURATION	BENCHMARK	RECEIVED	STATUS
1	Quality Control Plan				
2	Material Safety Data Sheets				
3	Design/Construction Schedule				
4	Waste Management Plan				
5	Safety and Health Plan				
6	Schedule of Prices				
7	Budget Management Summary				
8	Record Drawings				
9	Operation and Maintenance Information				
10	Licenses and Permits				
11	Badge Requests				
12	Statement of Acknowledgement SF 1413				
13	Demolition and Work Plan				
14	Design Development Docs				
15	Final Design Docs				
16	Submittal Register				
17	Performance/Payment Bonds				
18	Environmental Protection Plan				

19	Certificates of Insurance				
20	DD Form 1354				

Paragraph 8 SUPERVISION

No additional requirements.

Paragraph 9 SCHEDULE

A Network Analysis Schedule (NAS) is required, unless an exception is granted by the Contracting Officer.

The Contractor shall provide a construction schedule in sufficient detail to show all salient features of work. As a minimum, the schedule shall include all submittals and administrative items required by the contract, outages, delivery of materials, quality control activities (i.e. preparatory and initial phase meetings), detailed work activities, inspections, punch list, etc. No work may commence until the baseline Network Analysis Schedule (NAS) is approved.

Include design and permit activities with the necessary conferences and follow-up actions and design package submission dates. Include the design schedule in the project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. This shall be at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. The schedule shall include review and correction periods associated with each item. As a minimum, schedule updates shall be provided biweekly and with all invoice submissions.

Paragraph 10 BUDGET MANAGEMENT

No additional requirements.

Paragraph 11 PRECONSTRUCTION CONFERENCE

No additional requirements

Paragraph 12 ACCESSIBILITY

No additional requirements

Paragraph 13 CONTRACTOR'S PRODUCTION REPORTS

The Contractor shall submit daily Production and Quality Control Reports on forms provided by the Government. Each report shall be filled out in its entirety. Separate reports shall be provided for each day any work was done on site. Completed reports shall be provided to the Government Officer in Charge by 10:00 am on the day following the day covered by the report.

Paragraph 14 SCHEDULE OF PRICES

Include cost breakdown of all Design phase activities.

Paragraph 15 INVOICES

The Contractor is required to use Wide Area Work Flow for invoicing.

Paragraph 16 PROTECTION OF GOVERNMENT PROPERTY

No additional requirements.

Paragraph 17 EXISTING UNDERGROUND UTILITIES

Dig Safe requirements at Naval Station Newport are as follows:

1. Contact National Dig Safe at 1-888-344-7233 and obtain a national Dig Safe permit number.

2. Retain a private utility locator. All undersurface utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Any markings made during the utility investigation must be maintained throughout the contract. Scan the construction site with electromagnetic or sonic equipment, and clearly mark the surface where existing utilities are discovered. Verify the elevations of existing piping, ducts, and other work to be conducted or installed. Verify elevations before installing new work.

3. Submit a NAVSTA Newport Dig Safe request form (Form “B”) to FEAD a minimum of 21 days prior to planned excavation work. Attach sketches and/or drawings to indicate area of excavation. Approved Dig Safes shall be updated every 30 days by re-submitting the Government Dig Safe form.

4. The Contractor’s utility locating company shall meet with a government representative from NSN’s Public Works Utility Branch prior to performing the Dig Safe.

5. No excavation or penetration of the ground may commence without having an approved Dig Safe from the Navy.

Paragraph 18 LICENSES/PERMITS

All outside permit inquiries and applications are to be made by the NSN Environmental Office. The Environmental Office is the exclusive POC with outside regulatory agencies for any and all design and construction permits at NSN.

Paragraph 19 CONTRACTOR WORK SITE

Lay down area and contractor field office location shall be as directed by the Contracting Officer. Contractor’s lay down area shall be demarcated by a 6 ft high temporary chain link fence enclosure with any necessary gates. This fence enclosure shall be secured by the Contractor during off hours.

Construction warning signs, movable fence, cones, etc. may be required to denote a construction area and to create separation from the general public during construction. The Contractor is required to provide grass maintenance (mowing) within the fenced lay down enclosure. The grass shall be maintained at all times not to exceed 4 inches in height.

Paragraph 20 TEMPORARY UTILITIES

At the Contractor’s expense and in a manner satisfactory to the Contracting Officer, provide and maintain necessary temporary connections, distribution lines, and meter bases (Government will provide the meters) required for temporary services. The Contractor will be

charged for use of all utilities for the duration of the contract at prevailing (2014) rates. NAVFAC Mid-Atlantic requires a security deposit equivalent to three months average billing for all long-term recurring services. For non-recurring services a full advance payment is required for the estimated amount. Deposits will be refunded after services have been terminated and accounts are paid in full.

1. The Contractor shall provide a backflow preventer, required for connection to all domestic water lines. The Contractor shall submit a utilities request 15 days in advance, including the proposed location for temporary water. NSN Public Works Utilities will test, approve, and install the Contractor's backflow preventer. The Contractor shall also submit a utilities request 15 days in advance for removal of the backflow preventer.

2. The Contractor will be required to provide temporary power (panel and meter socket) in accordance with NSN specifications and in compliance with the National Electric Code. Submit a utilities request a minimum of 15 days in advance of the required service. The Government will provide a meter and make the final hot connection after inspection and approval of the Contractor's temporary installation. Notify the Government 15 days in advance for final meter reading and disconnection of service. Completely remove temporary wiring and installation prior to acceptance of the work by the Government.

Paragraph 21 ENVIRONMENTAL CONTROLS AND PROTECTION

The Contractor is required to complete and submit evidence of completion of the Environmental Compliance Assessment Training and Tracking (ECATTS) program. For more detailed information on ECATTS see UFGS 01 57 19.00 20.

The DOR is required to edit and submit UFGS 01 57 19.00 20, *Temporary Environmental Controls,* and UFGS 01 57 19.01 20, *Supplementary Temporary Environmental Controls.* The DOR must ensure state and local regulations are met within the edited UFGS section.

Paragraph 22 WASTE MANAGEMENT

Environmental Requirement for Waste Management: The Contractor shall keep record of all waste material generated on the project and shall record the information in the "Waste Management Periodic Report", to be submitted monthly to the Naval Station Newport Environmental Department.

Paragraph 23 RECORD DRAWINGS AND OPERATION & MAINTENANCE (O&M) DATA

Provide the Contracting Officer with one copy of full-size as-built drawings, two copies of half size as-built drawings, two CDs containing drawings (in both PDF and AutoCAD formats), and all construction submittals.

Paragraph 24 WARRANTY

No additional requirements.

Paragraph 25 PERFORMANCE EVALUATIONS

No additional requirements.

Paragraph 26 WORK HOURS, ACCESS AND PASSES

Access to Naval Station Newport will be as directed, and may require advance notice. Access will require participating in the Navy Commercial Access Control System (NCACS), or obtaining passes each day from the Base Pass and Identification Office. Costs for

obtaining passes through NCACS are the responsibility of the Contractor. One-day passes, issued through the Base Pass and Identification Office, will be furnished without charge. (Note: Naval Station Newport shall not be held responsible for time impacts related to the processing of badges.)

Identification Badges and Installation Access Policy:

Application for and use of badges will be as directed. Obtain access to the installation by participating in the Navy Commercial Access Control System (NCACS), or by obtaining passes each day from the Base Pass and Identification Office. Costs for obtaining passes through the NCACS are the responsibility of the Contractor. One-day passes, issued through the Base Pass and Identification Office, will be furnished without charge. Furnish a completed EMPLOYEE ELIGIBILITY VERIFICATION (DHS FORM I-9) form for all personnel requesting badges. This form is available at http://www.uscis.gov/portal/site/uscis by searching or selecting Employment Verification (Form I-9). Immediately report instances of lost or stolen badges to the Contracting Officer.

a. NCACS Program: NCACS is a voluntary program in which Contractor personnel who enroll, and are approved, are subsequently granted access to the installation for a period up to one year, or the length of the contract, whichever is less, and are not required to obtain a new pass from the Base Pass and Identification Office for each visit. The Government performs background screening and credentialing. Throughout the year the Contractor employee must continue to meet background screening standards. Periodic background screenings are conducted to verify continued NCACS participation and installation access privileges. Under the NCACS program, no commercial vehicle inspection is required, other than for Random Anti-Terrorism Measures (RAM) or in the case of an elevation of Force Protection Conditions (FPCON). Information on costs and requirements to participate and enroll in NCACS is available at http://www.rapidgate.com or by calling 1-877-727-4342. Contractors should be aware that the costs incurred to obtain NCACS credentials, or costs related to any means of access to a Navy Installation, are not reimbursable. Any time invested, or price(s) paid, for obtaining NCACS credentials will not be compensated in any way or approved as a direct cost of any contract with the Department of the Navy.

   Delivery companies submitting NCACS applications must only be granted access if the prime Contractor has included the company on a participant's spreadsheet provided in advance to the Contracting Officer. This form must be provided to the Government upon request.

b. One-Day Passes: Participation in the NCACS is not mandatory, and if the Contractor chooses to not participate, the Contractor's personnel will have to obtain daily passes, be subject to daily, mandatory vehicle inspection, and will have limited access to the installation. The Government will not be responsible for any cost or lost time associated with obtaining daily passes or added vehicle inspections incurred by non-participants in the NCACS.

c. Facility Access Determinations (FAD): The NCACS program above allows contractors to work on the NUWC grounds outside of buildings. In order to perform work within existing buildings, a FAD must be submitted. The FAD is

a process whereby commanding officers, in their responsibilities under the Internal Security Act of 1950 to protect persons and property under their command against the actions of untrustworthy persons, may request personnel scrutiny investigations and review the results to determine whether to allow the identified person(s) access to facilities under their control. The FAD program also complies with the requirements of Homeland Security Presidential Directive 12 (HSPD-12) to have a background investigation on all individuals who access federal facilities. FADs are required when:

i. Unescorted access to the installation is required for a non-classified contract
ii. A request for a photo ID is submitted. Photo ID's are only given when the contractor will be on site for a minimum of 3 days per week for a period not less than 90 days.
iii. When there is no other background investigation that meets the requirement of HSPD-12 such as a prior NAC, NACI, or TWIC.

The FAD Process consists of the following:

1. Company submits a complete visit request for the individual. Visit request forms are available from the Security Department or NUWC Website.
2. The NUWC POC submits a badge card for the individual after verifying that the individual needs access for a minimum of three days per week for a period of at least 90 days.
3. During the badge card review process, the individual does not have a background investigation that meets the requirements of HSPD-12.
4. The individual, and the individual's company, are provided the SF-85 form through the electronic Questionnaire for Investigation Processing (eQip)
5. The eQip is reviewed and the individual is fingerprinted to verify citizenship through a valid birth certificate or US Passport.
6. OPM conducts the NAC or NACI. Only a determination of Favorable will result in the individual's unescorted access to NUWCDIVNPT.
7. If derogatory information occurs after the badge is issued, the contractor will be advised that the issuance of a NUWC badge is the sole prerogative of the commanding officer. If the commanding officer determines, upon review of the facts, that allowing a person to perform certain duties or to access certain areas, would pose an unacceptable risk, that decision is final. No due process procedures are required.

The base access process is subject to change without notice. The contractor shall work with security to obtain base access.

Paragraph 27 SECURITY REQUIREMENTS

No additional requirements.

Paragraph 28 REQUIRED INSURANCE

No additional requirements.

Paragraph 29 PROPRIETARY RIGHTS

No additional requirements.

Paragraph 30 GOVERNMENT FURNISHED MATERIAL AND EQUIPMENT

No additional requirements.

Paragraph 31 ORAL MODIFICATION

No additional requirements.

Paragraph 32 NO WAIVER BY THE GOVERNMENT

No additional requirements.

Paragraph 33 EQUITABLE ADJUSTMENTS – WAIVER AND RELEASE OF CLAIMS

No additional requirements.

Paragraph 34 SAFETY AND OCCUPATIONAL HEALTH

The DOR is required to edit and submit UFGS 01 35 29, *Safety and Occupational Health Requirements*.

Sub-Paragraph a., References
The publication listed below forms a part of this specification to the extent referenced. Use current version of referenced requirements at the time of contract solicitation. The publication is referred to within the text by the basic designation only.

NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

NAVFAC P-307, *Management of Weight Handling Equipment*

(NAVFAC P-307 can be downloaded from http://portal.navfac.navy.mil/ncc.)

Sub-Paragraph b., Safety and Health Officer (SSHO)

The Superintendent may not also serve as the SSHO on this project. Exceptions based on limited project size and complexity may be granted with approval of the Contracting Officer. When requesting a waiver during the post-award period of performance, the contractor shall also submit a credit proposal to the government.

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. Minimum qualifications shall meet the qualifications listed in USACE EM385-1-1.

Sub-Paragraph c., Hot Work
For any work that requires an open flame or creates sparks (this includes welding, cutting, grinding, etc.) the Contractor must obtain a hot work permit from the Naval Station Fire Inspector prior to performing hot work.

Sub-Paragraph d., Pre-Outage Coordination Meeting
Outage requests must be submitted a minimum of 15 days prior to the planned utility outage. If necessary, a pre-outage coordination meeting shall be held within this time frame with NSN Public Works Utility Department.

Road Closures are not permitted at Naval Station Newport without consent of NSN Installation Command. Outage requests shall be submitted 21 days in advance of planned closure. Requests for Road Closure shall include plans for minimizing negative impacts on traffic flow.

Sub-Paragraph e., Weight Handling Equipment
The Contractor is required to comply with policies and procedures governing the use of Weight Handling Equipment (WHE) at Naval Station Newport, including program requirements as outlined in NAVFAC P-307.

Weight Handling Equipment and Crane inspections must be witnessed by NAVFAC PWD Crane Inspectors prior to each set-up. Inspection requests must be submitted a minimum of 15 days before planned crane activity. If necessary, a crane lift coordination meeting shall be held within this time frame with NSN Public Works BSVE Department.

Submission requirements include a Certificate of Compliance (P-1) and Contractor Crane Entry Package Checklist for each crane entering NSN. Government furnished forms shall be provided at the Pre-Construction Conference.

End of PART 2 Attachment A

Small Project Part 3

Statement of Work / Project Program

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1. PROJECT DESCRIPTION

The project includes the replacement of nine existing 15KV sectionalizing switches. The existing equipment shall be removed and replaced with new, 6-way 15KV, sectionalizing switches as described herein. Provide fault indicating devices at all locations.

2. PROJECT OBJECTIVES

REPLACE 15KV SECTIONALIZING SWITCHES

Switches are located in various locations throughout the Naval Station Complex. (Refer to Part 6 for photos, geographical maps and utility drawings of each site.) The existing switches are a combination of oil-insulated and SF6 gas-insulated G&W switches of various sizes. As shown in the photos, the switches are in varied states of condition. It is the intent of this contract to replace the existing switches with pad-mounted, 6-way switches equipped with fault current indication compatible with the existing Radio Ranger system. The goal is to enhance the sectionalizing capability on the system, facilitate fault location during outages, and replace outdated/failing equipment to improve system reliability. In addition, there is an option to this contract to provide motor control capability/provisions at each switch.

The designer shall work with the Navy's Utility Engineer to select the appropriate replacement switches and new switch locations. A performance specification for the switches has been provided in Part 6 of this RFP. The specification has been provided to facilitate the procurement of the equipment and to expedite the delivery and completion of contract work. In general, the switches shall be pad-mounted, dead front, with corrosion resistant, stainless-steel construction. Provide low-profile switches wherever possible. All switches shall include fault indication and capability to ground the cables. (Typical Manufacturers: S&C, Powell, etc.). Switches shall be 600-A, load-interrupter switches and shall include; microprocessor-controlled resettable vacuum-fault interrupters where indicated (VFI applies to switches as described below and shall be provided where indicated. Typical designation shall be on distribution feeders rather than load.); three-phase voltage sensing for each source; and self-power via voltage transformers; all enclosed in a welded-stainless steel tank. The designer shall coordinate with the Navy's Utility Engineer to determine the optimum site locations for the new switches. The existing switches are located on concrete pads within site of the manholes from which they are fed. Generally, the Navy prefers to locate new switches adjacent to the existing manholes and route new conduits to the switches. This facilitates the cutover of the new switches from the old with the least possible impact to the customers. This method shall be applied in all locations unless specifically indicated otherwise. The contractor shall schedule all work to minimize impact to the customers served by this equipment. Multiple outages may be required to implement the cutover of each switch. The contractor shall be prepared to provide temporary 15KV cabling as needed to minimize the impact of cutovers to customers. Where possible, position equipment pads adjacent to manholes to facilitate cabling. Provide a new pad for all new equipment. Provide 8-way, 5" concrete encased ductbank (one conduit per switch way and

two spares) to each switch from existing manholes. Provide the complete demolition of the existing switchgear, pad and all associated equipment. Provide bollards as needed to protect new equipment. Provide visible fault indicating devices for all equipment. Fault indication shall be self-reset, test point, fault current indicators (FCIs) on each of the 600AMP cable terminations. Fault indicating equipment shall also be compatible with and connected to the existing base wide Radio Ranger system. Provide transceivers as needed at each switch. Provide a minimum of two remote monitoring devices to allow system operators to read the status of the fault indication without opening the switch enclosures. Typical 15KV Feeder cable size is 350KCMIL copper (EPR 133%) between switches with #2AWG copper (EPR 133%) to transformers. The designer shall field verify cable sizes prior to ordering materials as exceptions do exist. The contractor shall provide watertight taped splices for all medium voltage splice work. Qualification of the cable splicer/terminator shall meet or exceed the requirements shown in G4010 below.

BASE CONTRACT WORK

The base bid shall include the replacement of three switches that are presently in an advanced state of disrepair. These switches are S-384, S-411, and S-524.

S-384 is a five-way, oil-filled, G&W switch (Cat# RAC-55-376M-32M). Provide a new, six-way switch to replace the existing. Provide vacuum fault interruption on two of the six ways. During design, the utility energy manager shall designate which two feeds shall be protected by the VFIs. The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

S-411 is a six-way, oil-filled, G&W switch (Cat#RAC-66-376-40). Provide a new, six-way switch to replace the existing. Provide vacuum fault interruption on two of the six ways. During design, the utility energy manager shall designate which two feeds shall be protected by the VFIs. The existing switch is located between primary fuse protection cabinets for two existing transformers. The new switch location may be determined during design but consideration should be given to solutions involving VFI protection of the existing transformer(s). Consideration may also be given to solutions that place the new equipment on the existing pad (if possible). Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

S-524 is a five-way, SF6 gas-filled, G&W switch. Provide a new, FIVE-way switch to replace the existing. Provide vacuum fault interruption on each of the five ways. The new switch location may be determined during design but it should be noted that the existing switch is located within the main substation and shares a pad with another switch. During design, consideration shall be given to solutions that place the new switch in the same location as the existing in order to minimize impact on the footprint of the substation. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site. Since this switch is to be located in the main substation, provide analysis of the existing feeders to determine whether the proposed switch specification is suitable for use in the substation. Contractor shall provide a switch that is rated to withstand any additional electrical transients/anomalies that may occur at this location. S-524 shall be sized and rated for use in the substation environment.

OPTION 1 – REPLACE S-414

S-414 is a six-way, oil filled, G&W switch (Cat#RAC-66-376-40). Provide a new, six-way switch to replace the existing. The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

OPTION 2 – REPLACE S-456

S-456 is a six-way, oil-filled, G&W switch (Cat#RAC-66-376-40). Provide a new, six-way switch to replace the existing. There are two distribution feeders serving this switch, both of which are t-spliced (refer to the oneline). The work to refeed this switch should include the reconfiguration and provision of distribution feeders as needed to remove the existing t-splices. Replace the t-splice between S-399-1 (way #2) and Sub#5 with a strait splice. Splice cabling from switch way S-399-1 to the existing feeder serving S-456 (way #5). Splice cabling from S-411 (way #5) to S-456 (way #3). The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

OPTION 3 – REPLACE S-458

S-458 is a six-way, oil-filled, G&W switch (Cat#RAC-55-376-40). Provide a new, six-way switch to replace the existing. Provide vacuum fault interruption on two of the six ways. During design, the utility energy manager shall designate which two feeds shall be protected by the VFIs. The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

OPTION 4 – REPLACE S-459

S-459 is a five-way, oil-filled, G&W switch (Cat#RAC-55-376-40). Provide a new, six-way switch to replace the existing. Provide new 15KV feed to T-866 to eliminate the existing T-splice serving Bldgs 399 and 1250. Provide cabling and splicing as needed to restore the circuits. The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

OPTION 5 – REPLACE S-464

S-464 is a six-way, oil-filled, G&W switch (Cat#RAC-66-376-40). Provide a new, six-way switch to replace the existing. The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

OPTION 6 – REPLACE S-468

S-468 is a five-way, oil-filled, G&W switch (Cat#RAC-55-376-40). Provide a new, six-way switch to replace the existing. Provide vacuum fault interruption on two of the six ways. During design, the utility energy manager shall designate which two feeds shall be protected by the VFIs. The new switch location may be determined during design. Existing site photos and utility reference drawings have been provided to assist with the selection of the new site.

OPTION 7 – PROVIDE MOTOR ACTUATED PROVISIONS

Provide motor actuated provisions for all switches that are part of this contract work.

2.1 APPLICABLE CODES AND STANDARDS:

In addition to the codes and standards listed in Part 4, the design and construction shall be in accordance with the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date.

National Electrical Code,

National Electric Safety Code

2.2 SUSTAINABLE DESIGN

In accordance with Executive Order 13423, NAVFAC Engineering & Construction Bulletin (ECB) 2008-01 and other pertinent directives, integrate sustainable principles into the design, development and construction of the project. Reduce the total cost of ownership of the facility using a whole building, life-cycle approach.

Provide integrated sustainable design strategies and features to minimize the energy consumption of the facilities; conserve resources; minimize adverse effects to the environment; and improve occupant productivity, health, and comfort.

3. SITE ANALYSIS

3.1 EXISTING SITE CONDITIONS

The sites are located in accessible areas. For the most part, the areas are open and accessible (refer to the appendices for site plans and photos). Existing utilities include water lines, sanitary gravity sewer mains, storm sewers, steam, gas, buried chilled water, underground electric and underground telephone.

Geotechnical Data:

Any Government provided geotechnical data is included for the Contractor's information only, and while it is considered to represent subsurface conditions existing on the project site anticipated at this time, it is not guaranteed to fully represent all subsurface conditions. The Contractor shall be responsible for providing the services of a geotechnical engineer to conduct any subsurface exploration, investigation, testing, and analysis that the Designer of Record deems necessary for the design and construction of the proposed facility and site improvements. The geotechnical engineer shall be registered as a Professional Engineer (Geotechnical Engineer where required by law) and experienced with soil conditions in the region where the project site is located. The geotechnical engineer shall prepare a report

addressing any elements of the work requiring his services. The report shall be submitted to the Contracting Officer accompanied by a letter from the Designer of Record certifying that the Geotechnical Engineer has reviewed the construction documents and that the design reflects the recommendations of the geotechnical report.

3.2 SITE DEVELOPMENT

Vehicular Access and Circulation

4. BUILDING REQUIREMENTS

This project does not require a building. Provide stainless steel enclosures for all equipment.

5. ROOM REQUIREMENTS

Not used.

6. ENGINEERING SYSTEMS REQUIREMENTS (ESR)

A10 Foundations
D50 Electrical Power and Lighting
F20 Selective Building Demo
G10 Site Preparations
G20 Site Improvements
G40 Site Electrical Utilities

A10 FOUNDATION

Frost penetration: Frost penetration depth: 48 in.

B20 EXTERIOR ENCLOSURE

D50 ELECTRICAL

The electrical design shall comply with the design criteria specified in UFC 3-500-10N, *Electrical Engineering*, and its referenced documents.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide an insulated equipment grounding conductor in all raceways for systems operating at greater than 50 volts.

D5020 LIGHTING & BRANCH WIRING

All conductors shall be copper.

Provide lighting and general purpose receptacles as required to serve equipment being installed as part of this project.

D5030 COMMUNICATIONS & SECURITY

Telecommunications Systems

F10 SPECIAL CONSTRUCTION

F1010 SPECIAL STRUCTURES: PRE-ENGINEERED METAL BUILDINGS

F20 SELECTIVE BUILDING DEMOLITION

F2020 HAZARDOUS COMPONENT ABATEMENT

A report for the following: asbestos, lead based paint, paint: lead, cadmium, chromium, mercury and low level radioactive components, PCBs, ozone depleting substances, animal droppings, molds and spores is not provided to support this project.

Prior to the start of the work the ECATTS trained contractor is required to inspect the work area with the designer of record, and government representative to address existing potentially hazardous components as part of the work. The contractor is required to provide a list of hazardous components, locations and quantities that must be addressed as part of the work. Should hazardous components be encountered, the contractor shall immediately notify the government in both oral and written form. Within 15 days, the contractor shall submit to the government a detailed RFI and plan for the removal of such components.

Private Qualified Person (PQP)

The Contractor is required to hire a PQP to ensure compliance with the approved work plans and perform independent inspections, testing and verification of the hazardous components work including: asbestos, lead containing paint, cadmium containing paint, chromium containing paint, mercury & LLR components, PCBs ODS, animal droppings and molds and spores.

G10 SITE PREPARATION

Perform a topographic survey of the project site and include it in the design drawings. Physically verify the location of all existing utilities.

Jurisdictional tidal and non-tidal wetlands have not been identified on the project site. However, the contractor shall closely coordinate all work with the contracting office and base environmental departments to ensure strict compliance with all regulations involving coastal work.

G1010 SITE CLEARING

Minimize removal and disposal of all trees required for project construction.

Burning will not be allowed.

All grubbing and clearing residue, demolished material, rubbish and debris generated by this project shall be hauled off-site and off station by the Contractor.

G1020 SITE DEMOLITION & RELOCATIONS

Preserve the following underground site elements: existing utilities to remain.

G1030 SITE EARTHWORK

Provide grading so the site will drain. Blasting for rock excavation will not be permitted.

Provide materials required in excess of those resulting from excavations from off Government property."

All unsuitable material and surplus excavation shall become the property of the Contractor and shall be disposed of off Government property. Contractor should refer to the soil management plan additional information regarding the removal and disposal of unsuitable and/or surplus material.

G20 SITE IMPROVEMENTS

G2050 LANDSCAPING

Seeding and Sodding

Restore site to match or improve pre-construction conditions. Restore turf areas where disturbed. Turf shall be seeded.

G30 SITE CIVIL/MECHANICAL UTILITIES

G3010 WATER SUPPLY

Disruption of the water supply is not anticipated as part of this work. Refer to 'restoration of utilities'.

G3020 SANITARY SEWER

Disruption of the sanitary sewer system is not anticipated as part of this work. Refer to 'restoration of utilities'.

G3030 STORM SEWER

Disruption of the storm sewer system is not anticipated as part of this work. Refer to 'restoration of utilities'.

G40 SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

The electrical design shall comply with the design criteria specified in UFC 3-500-10N, *Electrical Engineering*.

All primary distribution systems must be designed as four wire, multi-grounded systems that are wye connected at the source transformer. A system grounded neutral conductor must be provided throughout the system. Equipment intended to interrupt current at fault levels must have interrupting ratings sufficient for the nominal circuit voltage and the current that is available at the line terminals of the equipment.

Use stainless steel enclosures and hardware for all exterior electrical equipment.

Provide SF6 insulated, vacuum break, dead-front switches.

Equipment foundation pads must be 200 mm (8 in) thick; pre-cast concrete pads are not permitted. Ensure a minimum of 3 m (10 ft) clear workspace in front of pad-mounted equipment for hot stick work. Provide bollards in areas where equipment is subject to vehicular damage.

Underground Electric Conductors

All conductors shall be copper.

Underground primary electrical distribution shall comply with Section 2.2-10 of UFC 3-500-10N, *Electrical Engineering*.

Certification of the qualification of the cable splicer/terminator shall be submitted, for approval, 30 days before splices or terminations are to be made in medium voltage (5 kV to 35 kV) cables. The certification shall include the training, and experience of the individual on the specific type and classification of cable to be provided under this contract. The certification shall indicate that the individual has had three or more years of recent experience splicing and terminating medium voltage cables. The certification shall also list a minimum of three splices/terminations that have been in operation for more than one year. In addition, the individual may be required to perform a dummy or practice splice/termination in the presence of the Contracting Officer, before being approved as a qualified cable splicer. If that additional requirement is imposed, the Contractor shall provide short sections of the approved types of cables along with the approved type of splice/termination kit, and detailed manufacturer's instructions for the cable to be spliced. The Contracting Officer reserves the right to require additional proof of competency or to reject the individual and call for certification of an alternate cable splicer/terminator. In addition, the cable splicer/terminator must have a certification from the National Cable Splicing Certification Board (NCSCB) in the field of splicing and terminating shielded medium voltage (5 kV to 35 kV) power cable using pre-manufactured kits (pre-molded, heat-shrink, cold shrink). Submit

"Proof of Certification" for approval, for the individuals that will be performing cable splicer and termination work, 30 days before splices or terminations are to be made.

G4030 SITE COMMUNICATION & SECURITY

Not used.

-- End of Section --

Small Project Part 4
Minimum Materials, Engineering and Construction Requirements

02/10

1. GENERAL REQUIREMENTS: The requirements indicated here are minimum performance requirements. More specific project functional and performance requirements, scope items and expected quality levels over and above the standards in Part 4 are identified in Part 3 of the Request for Proposal or Basic Ordering Agreement. The Contractor is encouraged to exceed the minimum requirements. The Contractor's performance evaluation will be based in part on enhancements to materials, engineering, design and construction provided for the contract that exceed minimum requirements.

Part 4 is a general section. Not all items in Part 4 will be required for this project. See Part 3 for project-specific requirements. See "Order of Precedence" paragraph in Part 2 for relationships between all parts of the RFP.

In general, unless otherwise indicated, Contractor shall provide all labor, equipment and materials necessary to complete the work required for the contract. All work shall be in conformance with all applicable referenced criteria, construction standards, laws and regulations, including applicable building and fire, life safety codes.

Recycled Materials Considerations:
An Affirmative Procurement Program has been established within the Federal government to promote the purchase of products containing recovered materials. This program promotes the purchase of products containing materials recovered from the solid waste stream. The intent is to conserve resources and reduce solid waste by developing markets for recycled products and encouraging manufacturers to produce quality recycled content products. The contractors shall use products that meet or exceed the EPA guideline standards for recovered content as required by the Federal Acquisition Regulations (FAR). Availability lists of manufacturers and EPA research on product usage are on the Construction Criteria Base (CCB) at http://www.ccb.org under Documents Library, NAVFAC Criteria. A partial list of products containing recycled materials for possible use is as follows:

- Rock Wool Insulation
- Fiberglass Insulation
- Cellulose Insulation
- Structural Fiberboard and Laminated Paperboard
- Cement and Concrete - Coal Fly Ash
- Carpet including backings and cushions
- Floor Tiles
- Reprocessed and Consolidated Latex Paint.

1.1 MATERIALS AND METHODS OF CONSTRUCTION. Only new materials and equipment shall be installed in the work. All materials, equipment and appliances shall be of the current manufacturers' products. No obsolete or discontinued materials, equipment and appliances shall be used, except that construction materials containing recycled content as described in

Paragraph 1 of this Part that completely comply with all materials specifications found elsewhere in this Part may be used.

1.2 APPLICABLE CODES AND STANDARDS:

The design and construction shall be in accordance with established construction practices, and the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date. References are available at www.wbdg.org/ndbm/. The advisory provisions of all codes and standards shall be mandatory, as though the word “shall” had been substituted for “should” wherever it appears. Reference to the “authority having jurisdiction” shall be construed to mean “Contracting Officer”. Comply with the required and advisory portions of the current edition of the standard at the time of contract award. UFC 1-200-01, *General Building Requirements* is the building code guide and contains references to other UFCs and Codes that are to be used for all sections in this contract. UFC 1-300-09N, *Design Procedures*, provides design guidance and contains references to other UFCs and Codes that are to be used for all sections in this contract.

1. Unified Facilities Criteria (UFC) 1-200-01, *General Building Requirements*
2. UFC 1-300-09N, *Design Procedures*
3. American Gas Association (AGA).
4. Associated Air Balance Council (AABC)
5. National Environmental Balancing Bureau (NEEB)
6. International Mechanical Code (IMC).
7. American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Standards
8. Sheet Metal and Air Conditioning Contractors National Association (SMACNA) guidelines.
9. International Plumbing Code (IPC).
10. Illuminating Engineering Society North America (IESNA) Handbook
11. National Electrical Manufacturers Association (NEMA).
12. Electronic Industries Alliance (EIA)
13. Telecommunications Industry Association (TIA)
14. American Woodwork Institute
15. Architectural Woodwork Institute
16. APA – The Engineered Wood Association.
17. Steel Door Institute (SDI).
18. American Aluminum Manufacturers Association (AAMA)
19. National Wood Window and Door Association (NWWDA).
20. NRCA, *Roofing and Waterproofing Manual* found at http://www.nrca.net/rp/technical/manual/manual.aspx
21. American Hardware Association (AHA).
22. Building Hardware Manufacturers Association (BHMA).
23. Federal, State, County, and local environmental regulations.
24. ASHRAE Std. 90.1, *Energy Standards for Buildings Except Low Rise Residential Buildings*
25. American Society of Testing and Materials (ASTM)
26. American Water Works Association (AWWA)
27. National Fire Protection Association (NFPA) Codes and Standards
28. IEEE C2, *National Electrical Safety Code*

1.3 LOCATION-SPECIFIC CODES AND STANDARDS: See Part 3

1.4 DISCREPANCIES: When discrepancies in the referenced standards and the contract requirements occur, the more stringent requirements shall govern. The word "should" in all NFPA publications shall be interpreted as a requirement. The Authority Having Jurisdiction in the interpretation of the codes and standards, and approving the exceptions allowed in the referenced standards, shall be the Contracting Officer, and the parties designated by the Contracting Officer.

2. PERFORMANCE TECHNICAL SPECIFICATIONS

Note: The paragraph numbers used correspond with the numbers used in UNIFORMAT II/Work Breakdown Structures (WBS) as listed in the Whole Building Design Guide, Navy Design Build Master, accessible at this website: www.wbdg.org/ndbm.

SECTION A. SUBSTRUCTURE

A10 FOUNDATION

Foundations shall be reinforced concrete slabs-on-grade with continuous strip footings or isolated spread footings. Concrete slabs shall not be less than 4 inches in thickness and footings shall not be less than 18 inches below the lowest adjacent grade. Foundations shall be designed and constructed of reinforced concrete. All design and construction shall comply with IBC and with applicable requirements in Section B Shell. For the purposes of interpreting IBC Chapter 18, the "Owner" and "Building Official" shall mean the "Government", and the "Applicant" shall mean the "Contractor/Designer of Record".

1. **Contractor-Foundation Design:** The Designer of Record shall evaluate the RFP data, and obtain and evaluate all additional data as required to support the design and construction.

2. **Geotechnical Site Data required in Design Drawings:** The Contractor's final design drawings shall include:

   a. Notes identifying the soil allowable bearing capacity used in design.
   b. Subsurface soil information, be it Government provided or Contractor obtained, that represents subsurface conditions existing on the project site (such as boring logs, test pits, laboratory test results and groundwater observations). The locations of all borings shall be indicated on the drawings.

3. **Performance Verification and Acceptance Testing:** Verification of satisfactory construction and system performance shall be via Performance Verification Testing, as detailed in this part of the RFP.

   a. **Earthwork:** Perform quality assurance for earthwork in accordance with IBC Chapter 17. See Section G1030.

SECTION B. SHELL

Building shell may be of any materials and design allowed by applicable codes and standards, subject to specific requirements that may be applicable to a particular Activity, such as the Base Exterior Architecture Plan (BEAP) and UFC 4-010-01.

B10 SUPERSTRUCTURES

Superstructure work includes structural frames, bearing walls, floors, roofs, roof canopies, and balcony construction. Unless otherwise specified in Part 3, superstructures may be designed and constructed using any materials or combination of different materials allowed by applicable codes and standards. All design and construction shall comply with IBC. Special inspection, testing, approvals, certifications, observations and quality assurance plans as prescribed in Chapter 17 of the IBC are required.

1. **Concrete:** All concrete shall be constructed in accordance with ACI 301. Concrete shall have a 28-day minimum compressive strength of 3,000 psi. Slump shall be between 2 and 4 inches in accordance with ASTM C143. Provide joints as required to minimize cracking. All concrete shall be reinforced. Provide joints as required by applicable ACI standards. Unless otherwise specified in Part 3 or as indicated by the contracting officer, provide steel trowel finish for all exposed floor surfaces.

2. **Masonry:**

   a. All concrete masonry shall be constructed in accordance with ACI 530.1. Concrete masonry shall have a minimum 28-day compressive strength of 1500 psi. Concrete masonry units shall conform to ASTM C90, grade A1. Broken blocks are not allowed. Use only standard size and shape blocks. Block may be cut when necessary. Mortar shall be Type S.

   b. When used, brick shall conform to ASTM C216. In exposed construction, broken brick shall not be allowed. Standard size brick may be cut to fit job condition. Use Type S mortar.

   c. Provide metal anchors for masonry and brick, including veneer construction as required by IBC.

3. **Structural Steel:** Structural steel exposed to weathering shall be adequately protected to prevent corrosion.

4. **Steel deck:** Steel form deck shall have a G90 galvanized finish, and must have a minimum 26-gage thickness. All other steel deck shall have a G90 galvanized finish, and must have a minimum 20-gage thickness.

5. **Cold-formed metal framing:** Cold-formed steel studs, joists and track shall be galvanized with a minimum thickness of 20-gage.

6. **Wood framing:** Wood framing members shall be new lumber, unless otherwise allowed by Part 3. Timber can be Douglas Fir, Douglas Fir-Larch, Hem-Fir, Southern Pine or other structurally competent species allowed by applicable codes and standards. Wood framing shall meet the following minimum grading requirements:

a. Studs - #3
b. Joists and rafters- #2
c. Beams, 4x and larger - #1
d. Posts, 4x and larger - #1
e. Blocking - #3
f. Fascia, trim - #1
g. Wood Structural Panel Sheathing (Exterior Glue)
h. Roof - APA rated with span index of 24/0 – minimum thickness ½ inch
i. Walls - APA rated with span index of 32/16 – minimum thickness ½ inch
j. Flooring- APA rated with span index of 48/24 – minimum thickness 3/4 inch

B20 EXTERIOR ENCLOSURE

B2010 EXTERIOR WALLS

1. **Exterior Wall Performance:**

   a. **Vapor Transmission Analysis:** Perform a job specific vapor transmission analysis in accordance with ASHRAE 90.1 or WUFI. The conclusion of the analysis shall indicate the appropriate locations of needed vapor retarders, air barriers, and anticipated dew-point locations in the exterior enclosure during different critical times of the year.

   b. **Maximum Air Infiltration:** The maximum allowable air leakage for any material used as part of the air barrier system for the opaque enclosure shall be 0.02 L/s/M² @ 75 Pa (liters/second per square meter at 75 Pa pressure) [0.004 cfm / sf at 1.57 psf], as tested according to ASTM E 2178 test protocol.

   c. **Wind Loads:** Provide wind load calculations for exterior cladding in accordance with ASCE-7 with comparative analysis of the cladding system to be provided.

   d. **Water Penetration:** No water penetration shall occur at a pressure of 39 Kg/m^2 (8 psf) of fixed area when tested in accordance with ASTM E 331.

   e. **Insulating Value:** The complete wall system shall have a minimum insulating value as required by the building code and as required to meet ASHRAE Standard 90.1 as modified by the Energy Policy Act of 2005.

2. **Masonry Veneer Exterior Wall Closure Components:** Masonry veneer shall include load bearing and non-load bearing exterior walls of the structure, and shall include colored mortar, special shapes such as sills, headers, trim units and copings of brick masonry, precast concrete, concrete masonry units, or other approved material. Utilize BIA Technical Notes to design, detail, and construct brick masonry walls. Substitute directive language in the place of BIA suggestive language. The results of these wording substitutions change this document to required procedures. The veneer shall be tied to the backup wall system with a system that allows the veneer to move independently of the backup wall system, while being structurally supported. The masonry veneer shall allow for expansion and contraction of the veneer without cracking the exterior material.

a. **Masonry Veneer Installation:** Conform to ACI 530.1 for masonry veneer installation, including cold weather construction. Antifreeze admixtures are not to be used.

b. **Mortar:** Provide factory-tinted colored mortar conforming to ASTM C270, unless DOR directs otherwise.

c. **Expansion/Control Joints:** Locate expansion/control joints and seal with proper backing material and ASTM C 920 polyurethane sealant, or preformed foam or rubberized expansion joint closure. Conform to UFC 3-100-10 and BIA Technotes 18, 18A.

d. **Brick:** shall be ASTM C216, Grade SW, type FBS, or type FBX for detail work. ASTM C67 test rating shall be "Not effloresced". Use FBA brick only for special architectural effects requiring a non-uniform size.

e. **Split Faced or Ground Faced Masonry:** ASTM C 90

f. **Cast Stone Trim Units:** Cast Stone shall meet or exceed the requirements of ASTM C 1364.

g. **Wall Cavity:** shall Comply with the and BIA Technical Notes 21A, 21B, 21C, 28B

h. **Through-Wall Flashing Components:** Through-wall flashing with weep holes shall be incorporated in cavity wall construction. Flashing shall be 7 ounce copper flashing with a 3 ounce bituminous coating on each side or a fiberglass fabric bonded on each side of the copper sheet; 16-ounce uncoated copper, 28 gauge Type 302 or 304 stainless steel is also acceptable. `Flexible membrane flashing, plastic or PVC-based membrane flashing is prohibited.

i. **Reinforcing in Veneer Layer:** Reinforcing in the veneer layer shall be galvanized in accordance with ASTM A 123/A123M, ASTM A153/A153M, or ASTM A653/A653M, Z275 (G90) coating, and be of sufficient size to eliminate damage to the veneer layer from wind and other live and dead loads imposed on the veneer layer.

j. **Masonry Cleaning:** Clean the masonry in accordance with manufacturer's instructions and BIA Technote 20.

3. Metal Wall Panel Exterior Closure

Panels shall have factory applied, baked coating to the exterior and interior of metal wall panels and metal accessories. Exterior finish topcoat shall be of 70 percent polyvinylidene fluoride (PVDF) resin with not less than 0.8 mil dry film thickness (DFT). Exterior primer shall be standard with panel manufacturer with not less than 0.8 mil dry film thickness (DFT).

Wall system and attachments shall resist wind loads as determined by ASCE 7, with a factor of safety appropriate for the material holding the anchor. Maximum deflection due to wind on aluminum wall panels shall be 1/60. Maximum deflection due to wind on steel wall panels and girts behind aluminum or steel wall panels shall be limited to 1/120 of

their respective spans, except that when interior finishes are used the maximum allowable deflection shall be limited to 1/180 of their respective spans.

Conformations - Non-insulated steel or aluminum wall panels shall have configurations for overlapping adjacent sheets or interlocking ribs for securing adjacent sheets and shall be fastened to framework using concealed fasteners, or choose the option for exposed fasteners when exposed fasteners are acceptable at the installation. Length of sheets shall be sufficient to cover the entire height of any unbroken wall surface.

a. **Steel Wall Panels**:

1) Material and Coating: Form sheets from steel conforming to ASTM A 653/A 653M, Structural Grade 40, galvanized coating conforming to ASTM A 924/A 924M, Class G-90; aluminum-coated steel conforming to SAE AMS 5036; or steel-coated with aluminum-zinc alloy conforming to ASTM A 792/A 792M, except that coating chemical composition shall be approximately 55 percent aluminum, 1.6 percent silicon, and 43.4 percent zinc with minimum coating weight of 0.5 ounce per square foot.

2) Gage: Minimum 22 U.S. Standard Gage for wall panels, but in no case lighter than required to meet maximum deflection requirements specified.

b. **Aluminum Wall Panels**:

1) Material and Coating - Form sheets of Alloy 3004 or Alclad 3004 conforming to ASTM B 209 having proper temper to suit respective forming operations.

2) Thickness - Minimum 0.81 mm (0.032 inch) nominal, but in no case thinner than that required to meet maximum deflection requirements specified.

c. **Insulated Aluminum or Steel Wall Panels:** Insulated wall panels shall be steel or aluminum factory-fabricated units with insulating core between metal face sheets securely fastened together and uniformly separated with rigid spacers. Panels shall have a factory color finish. Wall panels shall have edge configurations with interlocking ribs for securing adjacent panels. System shall utilize factory fabricated corners and trim pieces at intersections with other materials. Insulated wall panels shall be fastened to framework using concealed fasteners.

1) Insulated Steel Panels - Zinc-coated steel conforming to ASTM A 653/A 653M; or Aluminum-zinc alloy coated steel conforming to ASTM A 792/A 792M, AZ 55 coating. Uncoated wall panels shall be 0.61 mm (0.024 inch) thick minimum.

2) Insulated Aluminum Panels - Alloy conforming to ASTM B209, temper as required for the forming operation, minimum 0.81 mm (0.032 inch) thick.

4. Stucco Exterior Wall Closure

a. **Portland Cement Plaster:** ASTM C150, gray Portland cement Type II with 13 mm (1/2 inch) maximum chopped alkali resistant fiberglass strands, minimum 1.5 percent by weight to cement; .68 kg (1 1/2 pounds) per sack of cement. Lime shall conform to ASTM C206, Type S. System shall utilize stainless steel or zinc corner beads, J-

beads and other accessories. Unless specifically deleted, the system shall utilize an acrylic admixture or coating to give additional moisture suppression to control fungus growth.

b. **Exterior Insulation and Finish System (EIFS):** EIMA TM 101 and 01 EIMA TM 101.86. EIFS shall be used as the non-primary or the primary exterior finish material only for projects where it is necessary to match existing EIFS.

5. Precast Concrete Wall Panels: ACI 211.1 and ACI 301. PCI MNL-116 or PCI MNL-117. Concrete shall have a minimum 28-day compressive strength of 281 Kg/cm^2 (4000 psi). Joints shall include properly sized and placed backing material and fully loaded and tooled sealant joint of no less than 1/4 inch sealant material thickness.

6. Other Wall Finish Systems

a. **Horizontal Wood Siding:** Horizontal Wood Siding: DOC PS 20, exterior, lap type, 6 inches wide, maximum practicable lengths, 11 mm (7/16 inch) thick, smooth face. All surfaces of wood siding and trim shall be shop coated with an alkyd primer.

Species and Grades 1. Grade 1 Common spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA. 2. Grade Prime or D finish, pressure-preservative-treated hem-fir; NLGA, WCLIB, or WWPA. 3. Grade D Select (Quality) eastern white pine, eastern hemlock-balsam fir-tamarack, eastern spruce, or white woods; NELMA, NLGA, WCLIB, or WWPA. 4. Grade D Select northern white cedar; NELMA or NLGA. 5. Grade B & B, pressure-preservative-treated southern pine; SPIB.

b. **Vinyl Siding System:** Integrally colored, vinyl siding complying with ASTM D 3679.

c. **Manufactured Faced Panels Systems Exterior Wall Siding:** Glass Fiber Reinforced Cementitious Panels System: Siding made from fiber-cement board that does not contain asbestos fibers; complies with ASTM C 1186, Type A, Grade II; horizontal or vertical pattern in plain or beaded-edge style. Texture: Rough sawn or smooth, factory primed.

7. Exterior Wall Backup Construction

a. **Concrete Unit Masonry:** Provide concrete unit masonry to comply with ACI 530.1. Load-bearing units: ASTM C90, Non-load bearing- units: ASTM C129, Type I or II. Provide ground face units, split-faced units, ground-faced units, or split-ribbed units for exposed exterior walls. Provide water repellent admixture to masonry units where the exterior face of the units will not receive a waterproof coating such as paint

b. **Dampproofing:** Dampproof the cavity-facing wythe of the backup masonry using asphaltic primer according to ASTM D 41, if dampproofing is not provided by a sprayed on foam or other DOR-approved membrane insulation system.

8. Load-Bearing Metal Framing System

If permitted, provide load-bearing metal framing including top and bottom tracks, bracing, fastenings, and other accessories necessary for complete installation. Framing members shall have the structural properties indicated. Where physical structural

properties are not indicated, they shall be as necessary to withstand all imposed loads. Design framing in accordance with AISI SG-673. Installation shall be in accordance with DOR-approved shop drawings and manufacturer's installation instructions.

9. Exterior Studs:

Max. Deflection Criteria	Exterior Finish
L/360	Cement Plaster, Wood Veneer, Synthetic Plaster, Metal Panels
L/600	Brick Veneer, Stone Panels

Wall deflections shall be computed on the basis that studs withstand all lateral forces independent of any composite action from sheathing materials. Studs abutting windows or louvers shall also be designed not to exceed 1/4-inch maximum deflection and as required in UFC 4-010-01.

1) Studs - ASTM A 1003/ASTM A 1003M, Structural Grade 50, Type H minimum; provide Z180 (G60) galvanized coating in accordance with ASTM A 653/ASTM A 653M. Do not expose studs to direct moisture contact

2) Bracing - Provide horizontal bracing in accordance with design calculations and AISI SG-673, consisting of, as a minimum, runner channel cut to fit between and welded to the studs.

3) Sheathing - Provide sheathing to withstand structural loads imposed on the wall structure. Cover sheathing with either a 15 pound asphalt-impregnated building paper, or air barrier as required by the wall moisture analysis. Sheathing shall be one of the following:

   a) Plywood: C-D Grade, Exposure 1;
   b) Structural-Use and OSB Panels;
   c) Gypsum: ASTM C 79/C 79M and ASTM C 1177/C 1177M, 13 mm (1/2 inch) thick fire retardant (Type X) 15 mm (5/8 inch) thick; 1.2 meters (4 feet) wide with square edge for supports 400 mm (16 inches) o.c. with or without corner bracing of framing. Gypsum sheathing shall be faced with materials capable of resisting six months of weathering exposure without degradation of the covering or the gypsum. Seal all joints as recommended by the manufacturer.

10. Wood Framing System: All materials shall be kiln-dried lumber complying with DOC PS 20. Installation shall be in accordance with AF&PA T11. System shall use preservative pressure treated lumber at sill plates and other members in contact with concrete and masonry surfaces.

a. **Species and Grades:** Provide species and grades listed: 1) Grade 2 Common spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA: 2) Grade 2 Common, hem-fir; Douglas-fir; NLGA, WCLIB, or WWPA; 3) Grade 2 Common, southern pine; SPIB.

b. **Sheathing:** Sheathing shall withstand structural loads imposed on the wall structure. Cover sheathing with either a 15 pound asphalt-impregnated building paper, or air barrier as required by the wall moisture analysis. Sheathing shall be as for Metal Studs.

11. **Cast-in-place Concrete System:** Concrete construction must be in accordance with ACI 301.

12. **Insulation and Vapor Retarder:** Insulation, Vapor Retarders, and Air Barrier Systems in or on Exterior Enclosure shall include: insulation, liquid, sheet or continuous film materials installed separately in or on wall assemblies to provide resistance to heat loss/gain, and vapor penetration.

    a. **Vapor retarder:** Comply with ASTM C755. Incorporate in the exterior wall system where required by vapor transmission calculations or dew point analysis indicates the need or in conditions of high moisture exposure.

    b. **Bituminous Dampproofing:** Bituminous Dampproofing shall be ASTM D449, Type I or Type II bituminous dampproofing on the exterior surface of the interior wythe of masonry in a cavity wall (back-up wall for masonry veneer).

    c. **Building Paper:** FS UU-B-790, Type I, Grade D, Style 1.

    d. **Air Barrier:** Building wrap consisting of air barrier sheeting complying with ASTM E 1677, Type 1, not less than 3 mils thick with a permeance of not less than 575 ng/Pa x s x sq.m. (10 perms). Building wrap shall have a flame spread index of less than 25 in accordance with ASTM E 84. Provide building wrap over sheathing of wood or metal framed construction to reduce air penetration and airborne vapor penetration. Provide building wrap tape as recommended by the manufacturer for sealing all joints in the building wrap. Installation shall be in accordance with manufacturer's instructions. Air barrier installation at windows shall be in accordance with ASTM E 2112.

    e. **Insulation Systems:** Vertical and horizontal polystyrene insulation conforming to ASTM C578 or rigid polyisocyanurate board wall insulating products conforming to ASTM C591 or mineral-fiber blanket insulation conforming to ASTM C 665 shall be provided.

13. **Parapets:** Avoid parapets when possible, but when necessary, provide parapets with the same materials as the exterior wall construction. Provide scuppers and wall edge according to SMACNA.

14. **Exterior Louvers and Screens:** If required, provide louvers for Screened Equipment Enclosure or as louvers for exterior doors.

    Storm shutters shall comply with ASTM E 1996-03.

15. **Balcony Walls and Handrails:** Balcony walls to match exterior construction. Handrails to comply with the IBC and OSHA.

16. **Exterior Soffits:** Exterior soffit system.

17. **Exterior Painting and Special Finishes;** All painting and coating materials shall be low VOC. Painting practices shall comply with applicable federal, state and local laws enacted to insure compliance with Federal Clean Air Standards. Apply coating materials in accordance with SSPC PA 1. SSPC PA 1 methods are applicable to all substrates.

    All paint shall be in accordance with the Master Painters Institute (MPI) standards for the exterior architectural surface being finished. The current MPI, "Approved Product List" which lists paint by brand, label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. Provide paint systems tested to “Detailed Performance Level” standard as defined by MPI.

18. **Exterior Joint Sealant:** Sealant joint design, priming, tooling, masking, cleaning and application shall be in accordance with the general requirements of Sealants: A Professionals’ Guide from the Sealant, Waterproofing & Restoration Institute (SWRI). All sealant shall conform to ASTM C 920.

19. **Sun Control Devices:** Sun control devices shall be manufactured devices to provide sun control on exterior windows and storefronts. Sun control devices shall be designed and installed to withstand the wind loads prevailing at the project site.

B2020 EXTERIOR WINDOWS

All windows and doors in new or existing buildings, which are subject to Anti-terrorism Standards, must be blast-resistant as prescribed in UFC 4-010-01.

Unless otherwise allowed by Part 3, windows for new facilities shall be aluminum. In building additions or renovations windows shall match existing window materials. Exterior windows design, dimension, and construction shall meet or exceed the requirements for Anti Terrorism Force Protection requirements. In addition, exterior windows shall meet or exceed Energy Star requirements. The design and placement of exterior windows shall take into considerations view, natural light, privacy, and protection for the occupants of the facilities. Provide operable hardware and insect screen for exterior windows. Windows shall be fabricated by manufacturers normally involved in the manufacturing of windows and shall be of the current make and model. No obsolete or discontinued windows shall be used. Provide weather stripping, STC and IIC rating, commensurate with the intended use of the facility. Submit catalog information and manufacturer’s specifications for approval by Contracting Officer prior to purchase of windows.

Windows shall consist of fixed and operable sash used singly and in multiples. Provide operable sash in spaces occupied by people as a minimum. Include operating hardware, non-corroding framed metal screens for operable sash, integrated blinds set between glass panels and security grilles. Provide jamb support for larger windows where recommended by manufacturer.

1. **Metal Windows:** All windows shall conform to ANSI/AAMA/WDMA 101. Metal windows with insulating glass shall have thermally broken frames and sash. Factory finish aluminum windows and provide with aluminum frame screens with aluminum mesh at

operable sash, hardware and locks, and tinted glazing. Aluminum screens shall comply with ANSI/SMA 1004.

2. **Wood Windows:** Clad wood and wood windows shall consist of complete units including sash, glass, frame, weatherstripping, insect screen, and hardware. Window units shall meet the requirements of AAMA 101, except maximum air infiltration shall not exceed 0.30 CFM per linear foot of sash crack when tested under uniform static air pressure difference of 7.66 Kg/m^2 (1.57 psf).

3. **Storefronts:** Provide one-story storefront system fabricated from formed and extruded aluminum and glass components for exterior use. Utilize the specific section of the Standard Design-Build Performance Technical Specifications Section B202002 for the storefront to be provided. Storefront framing shall meet or exceed the structural requirements, as measured in accordance with ANSI/ASTM E330: Design system to withstand this as a minimum and comply with design pressure established within the required ASCE 7-05 Wind Speed Calculations determined by the overall average opening within the project.

4. **Glazing: All exterior glazing shall be insulating glass.**

   a) Clear Glass - Type I, Class 1 (clear), Quality q4 (A);
   b) Heat-Absorbing Glass - ASTM 1036, Type I, Class 2 Quality q3 (select) ray frames;
   c) Wire Glass - Type II, Class 1, Form 1, Quality q8 Mesh m1 or Form 2, Quality q7;
   d) Laminated Glass - ASTM 1172, total thickness shall be nominally 6 mm (1/4 inch);
   e) Insulating Glass Units - Typically ASTM C 1036, Type I, Class 1, Quality q4, minimum 6 mm;
   f) Tempered Glass - ASTM C 1048, Kind FT (fully tempered);
   g) Patterned Glass - ASTM 1036, Type II, Class 1 (translucent), Form 3 (patterned), Quality q7 (decorative), Finish f1 (patterned one side), Pattern p2 (geometric) 5.55 mm (7/32 inch) thick.

B2030 EXTERIOR DOORS

Exterior doors shall be heavy duty insulated steel doors and frames for service access. Door frames shall have welded corners. Use heavy-duty overhead holder and closer to protect doors from wind damage. Steel shall have G60 galvanized coating in accordance with ASTM A 924/A 924M and ASTM A 653/A 653M when the job site is located within 300 feet from a body of salt water. Provide commercial quality, coating Class A zinc coating in accordance with ASTM A591 for other steel or steel skin hollow metal doors at other locations. Provide kickplates on the inside face of all exterior doors. Weather-protect all exterior doors and related construction with low infiltration weatherstripping and sealants. Provide threshold with offset to stop water penetration while maintaining accessibility compliance. Conform to the design criteria of ASCE 7. See the hardware schedule for door hardware requirements.

1. **Steel Doors:** Exterior doors shall comply with ANSI A250.8-1998 (SDI-100). Hardware preparation shall be in accordance with ANSI A250.6. Doors shall be hung in accordance with ANSI A115.16.

   a. Doors Required:

      1) Standard Duty Doors - Level 1, MSG # 20 (IP 0.032", 0.8 mm), physical performance Level C, Model 1 or 2.

      2) Heavy Duty Doors – MSG # 18 (IP 0,042", 1 mm), physical performance Level B, Model 1 or 2.

      3) Extra Heavy Duty Doors – Level 3, MSG #16, (0.053", 1.3 mm) physical performance Level A, Model 1, 2, or 3.

      4) Maximum Duty Doors – Level 4 (IP 0.067", 1.6 mm), physical performance Level A, Model 1 or 2.

   b. Insulated steel doors and frames are required for entrances to dwelling units, and may also be specified as a Contractor's option to Level 1 standard hollow metal doors. Do not use wood doors for exterior doors, unless they are fully protected from the elements, an exterior grade species, and specially finished. If wood doors are used, provide in accordance with Standard Design-Build Performance Technical Specification Paragraph B203001 2.

2. **Standard Steel Frames;** ANSI A 250.8. Form frames with welded corners for installation in exterior walls. Form stops and beads of 20 gage steel. Frames shall be set in accordance with ASTM A250.11. Anchor all frames with a minimum of three jamb anchors and base steel anchors per frame, zinc-coated or painted with rust-inhibitive paint, not lighter than 18 gage. Mortar infill frames in masonry walls, and infill with gypsum board compound at each jamb anchor in metal frame walls. Only use surface exposed bolted anchors in concrete walls.

3. **Door and Frame Finishes:** a) Exterior Doors, Factory-Primed and Field Painted Finish - Doors and frames shall be factory primed with a rust inhibitive coating as specified in ANSI A250.8. Factory prime doors on six sides of the door; b) Exterior Doors Galvanized Finish -- Shall be Commercial Quality, Coating Class A, zinc coating in accordance with ASTM A 591 when facility is located further than 91 meters (300 feet) from the ocean. When facility is located within 91 meters (300 feet) of the ocean, provide G60 galvanized coating in accordance with ASTM A 924/A 924M and ASTM A 653/A 653M.

4. **Upward Acting Doors:** Upward acting doors shall be capable of withstanding the design wind loading of ASCE 7. Provide galvanized steel tracks not lighter than 14 gage for 50 mm (2 inch) tracks and not lighter than 12 gage for 75 mm (3 inch) track. Provide a positive locking device and cylinder lock with two keys on manually operated doors.

5. **Overhead and Roll-up Doors:** Large exterior overhead and roll-up doors system shall consist of manual or automatic exterior doors and door assemblies.

6. **Rolling Service Doors and Grilles:** Coiling overhead doors shall have minimum 22 gage thermal insulated slats. Electric operators shall have three-button switches conforming to NEMA MG 1, NEMA ICS 1, and NEMA ICS 2, and auxiliary hand chain operation, weather-stripping and wind-locks. Doors shall be capable of withstanding the design wind loading of ASCE 7 and still operate normally. Finish of the door shall be hot-dipped galvanized with a painted finish.

7. **Sectional Overhead Doors:** Sectional overhead doors shall conform to NAGDM 102, Residential or Commercial or Industrial door standards. If doors are electrically operated, pushbuttons shall be full-guarded to prevent accidental operation, and include limit switches to automatically stop doors at the fully open and closed positions. Limit switch positions shall be readily adjustable.

8. **Hardware:** Provide the services of a Certified Door Hardware Consultant to prepare the door hardware schedule.

   Provide all new hardware with satin chrome finish throughout. Hardware shall be commercial grade, suitable for the operational requirements and in compliance with life safety code and handicapped accessibility requirements, similar in quality to the hardware shown in C1020 Interior Doors and Hardware below.

   Coordination: Provide a master keying system compatible with the existing base system. Provide an emergency access key box for exterior door fireman key access. Coordinate with the local authority and the Contracting Officer to determine the local requirements for hardware, keying and master keying.

B30 ROOFING

For repair of existing roofing, the cutting of the existing roof shall be kept to a minimum and, where necessary, shall be made in a clean and orderly manner to prevent the appearance of a patch.

Repair all damage to existing and new roofing caused by the work of this Contract at no additional cost to the Government. The work shall be executed in such a manner as to maintain the integrity of the existing roofing manufacturer's warranty.

1. **Pre-Roofing Conference:** Prior to beginning roofing work, the Contractor shall hold a Pre-Roofing Conference with the personnel directly responsible for the roofing systems work, as well as the roofing manufacturer’s technical representative.

2. **Roof Design Assurance:** If the roofing project is significant (Significant Roof – A single or group of buildings greater than 1,400 m^2 (15,000 sf)), or where extenuating circumstances of the roof project such as building use, content, safety, or visibility require a roofing consultant, the Contractor shall utilize the services of a Registered Roof Consultant (RRC) certified by the Roof Consultant Institute, or a Registered Professional architect or Engineer who specializes in roofing, to approve the roof design. The roof consultant must be engaged in roofing design and roofing construction as his primary endeavor. The roof consultant shall verify in writing that the design for the project is in accordance with the current edition of *NRCA Roofing and Waterproofing Manual*, UFC’s, and RFP, and standard industry practices and building codes.

If a Roof Design Assurance Consultant is needed, consider using a Registered Roof Observer as a QC specialist.

B3010 ROOF COVERINGS

Roof coverings and procedures shall comply with the requirements of UFC 3-110-03, *Roofing*, and NRCA, *Roofing and Waterproofing Manual* found at http://www.nrca.net/rp/technical/manual/manual.aspx as the primary NAVFAC roofing criteria. Roof selection shall comply with UFC 3-330-02A, *Design: Commentary on Roof Systems*. Determine wind uplift using wind speed in accordance with ASCE-7.

1. **STEEP SLOPE ROOF SYSTEMS:** Steep slope systems shall be roofs with a pitch greater than 3 in 12. Steep Slope Systems are slate roofing, Asphalt Shingles, Roof Tiles, Foam Set Tiles, Metal Roof Panels (Architectural Standing Seam Metal Roofs on supported substrate), and Structural Standing Seam Metal Roof (SSSMR). Asphalt shingles can only be used for residential construction and light commercial construction.

2. **LOW SLOPE ROOF SYSTEMS:** Low slope systems shall be roofs with a pitch 3 in 12 or less. Low slope roofing systems shall be built-up asphalt roofing (aggregate surfaced, with modified bituminous components), modified bituminous membrane roofing of a minimum of 3 plies with aggregate surface or granular surface modified bitumen cap sheet, or structural standing seam metal roofing. Use epdm systems only to match existing construction.

3. **ROOF COMPONENTS:**

   a. **Insulation:** For existing structures, provide insulation in accordance with ASHRAE 90.1. For new construction, provide R-30 insulation in the ceilings, attic spaces and soffit areas for interior spaces. Injected polyurethane and Urea Formaldehyde Foam field applied shall not be used. Provide acoustical insulation above walls separating bathroom/restrooms and corridor and adjacent occupied spaces, and between offices and corridors. Insulation shall have a minimum sound attenuation rating of STC-55.

   Insulation shall be Polyisocyanurate Rigid Board Insulation , Mineral Fiber Blanket Insulation to conform to ASTM C 991, with Glass Mat Gypsum Roof Board for use above the deck or insulation conforming to ASTM C 1177/C 1177M, where necessary.

   Only on portions of the roof where the sloping of structure does not allow the minimum slopes, provide a factory tapered roof insulation system to provide positive drainage of roof system, and to include drainage around curbs, penetrations, and projections through the roof plane.

   Provide Glass Mat Protection Board meeting ASTM C 1177 for use as a thermal barrier (underlayment) or protection board for hot-mopped applications.

   b. **Vapor Retarder:**–Determine the need and location in the roof assembly for a vapor retarder. Where the mean January temperature is 40 degrees Fahrenheit or less,

and the expected interior relative humidity is 45% or greater, use a vapor retarder. Otherwise, use ASHRAE 90.1 for the determination.

1) Vapor Retarders as Integral Facing - Alloy conforming to ASTM B 209, or Vapor Retarders Separate from Insulation - Vapor retarder material shall be 10 mil polyethylene sheeting conforming to ASTM D 4397.

2) A slip sheet is required to separate the roofing panels from the insulation facing where the facing would be in direct contact with the roofing panels. If a slip sheet is necessary for use with a vapor retarder, use a 5 lb. per 100 square feet rosin-sized, unsaturated building paper.

c. **EPDM Rubber Boots:** Flashing devices around pipe penetrations shall be flexible, one-piece devices molded from weather-resistant EPDM rubber.

d. **Prefabricated Curbs and Equipment Support:** Provide Prefabricated curbs and equipment supports shall be of structural quality, hot-dipped galvanized or galvanized sheet steel, factory primed and prepared for painting with mitered and welded joints. Integral base plates and water diverter crickets shall be provided. Minimum height of curb shall be 8 inches above finish roof.

e. **Fasteners:** Shall meet all requirements of the NRCA and Factory Mutual

f. **Wood Nailers:** Wood nailers shall be pressure-preservative-treated in accordance with AWPA M2 Standards, permanently marked or branded, and installed flush with the top of the adjacent insulation board.

g. **Flashing and Sheet Metal:** Provide flashing and sheet metal work including scuppers, splash pans, and sheet metal roofing. Flashing and sheet metal shall be provided in accordance with roof manufacturer's printed installation instructions and in compliance with NRCA and SMACNA recommendations. Fabricate Flashing and sheet metal components from Copper, Lead-Coated Copper sheet, Steel Sheet, Zinc-Coated (Galvanized) - ASTM A 653/ A 653M, Stainless Steel - ASTM A 167, Type 302 or 304, 2D finish, or Pre-Finished Aluminum.

h. **Gutters and Downspouts:** Provide gutters and downspouts compatible with roofing material and finish. Concealed (interior) gutters and downspouts are prohibited. Provide splash guards at points of discharge.

i. **Roof Openings and Supports:** Provide flashings for roof openings and supports as recommended by the NRCA. Assure all penetration flashings extend minimum 200 mm (8 inches) above the finished roof surface.

j. **Roof Hatches:** Provide roof hatch where required by OSHA, and as access to roof when roof mounted equipment is used or other routine roof maintenance is required.

k. **Glazed Roof Openings:** Skylights and other glazed roof openings shall be used only to supplement interior lighting levels (generally in steep slope or vertical applications), and otherwise, are discouraged from use.

l. **Guards:** Provide rails or guards as required by the OSHA, the International Building Code or other applicable safety standards.

m. **Traffic Pads:** Provide on roof system to protect roof from foot traffic. Provide traffic pads around roof mounted mechanical equipment and underneath removable mechanical equipment access panels. Traffic pads shall be of compatible material to roof.

4. OTHER ROOFING

a. **Lightning Protection:** Lightning protection component penetrations and attachments shall be sealed and flashed and anchored in a permanent manner and in a manner to avoid the degradation of the watertight integrity of the roof system.

b. **Roof Drains (Existing):** Where existing roof drains are to be reused in roof replacement construction, the contractor shall provide new, compatible flashing materials, a new drain clamping ring and new bolts for anchorage. Reuse of existing clamping ring and bolts is unacceptable.

SECTION C. INTERIORS

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

1. **Fixed Partitions:** wood frame; light gage steel frame; concrete masonry complying with ACI 530.1/ASCE 6/TMS 602 and associated ASTM Standards; or cast-in-place concrete complying with UFC 1-200-01, ACI 117 and ACI 301/301M. In addition, interior partitions shall comply with tables for sound isolation and noise reduction in Chapter 1, “Architectural Graphic Standards”. Include a statement of adherence to the applicable criteria.

   Gypsum board/stud partitions may be standard gypsum board, moisture resistant, or impact resistant. Use cement board in showers and other wet areas. Reinforce points where doorknobs can strike a wall and anchorage points for wall mounted equipment.

2. **Demountable or Removable Partitions:** shall be of materials allowed by code and shall be anchored firmly to the structure to carry their own weight as well as impact forces and seismic lateral forces. Sound Transmission Class (STC) rating and Impact Isolation Class (IIC) rating shall be in accordance with ASTM E 90 or ASTM E 413 for frequency data,, and shall meet the requirements of the intended use in Part 3.

3. **Glazed Partitions and Interior Windows:** shall be of the materials allowed by code IBC, and shall comply with fire and smoke separation requirements. Provide safety glazing and fire resistant rating where they are required.

C1020 INTERIOR DOORS

1. **Wood Doors:** Stile and rail wood doors shall be WDMA I.S.6A-01, premium or custom grade, heavy duty or extra heavy duty. Flush wood doors shall be WDMA I.S.1A-04,

premium or custom grade, heavy duty or extra heavy duty; or WDMA I.S.-97 (PC-5 5-ply particleboard core or SCLC-5 5-ply structural composite lumber core). Doors adjacent to paneling or millwork shall comply with corresponding AWI millwork grade. Provide interior fire doors.

2. **Steel doors:** shall be ANSI A 250.8, Level 1, (occasional use, low abuse types such as closet doors without locks); Level 2, (low use, moderate abuse types such as office/storeroom doors); Level 3, (moderate use, high abuse types such as BEQ sleeping room doors); Level 4, (high use, high abuse types such as corridors, stairways, assembly spaces, and main entry doors), with a physical performance level of 'A'. Maximum door undercut shall not exceed 19 mm (3/4 inch).

3. **Sound Insulated Doors and Frames:** Utilize Sound Insulated Doors and Frames with sound control weatherstripping in rooms requiring wall assemblies to be sound insulated with a Sound Transmission Class (STC) rating as required. The STC rating for the door and frame assembly shall be not less than the wall assembly STC rating.

4. **Aluminum Doors and Frames:** Provide swing-type aluminum doors and frames complete with framing members, transoms, side-lites, and accessories. Fabricate of ASTM B 221, Alloy 6063-TS for extrusions.

5. **Steel Door Frames:** ANSI A 250.8. Form frames with welded corners for installation in masonry partitions and knock-down field assembled corners for installation in metal stud and GWB partitions. Frames shall be set in accordance with SDI 105. Form stops and beads with 20 gauge steel.

   Provide a minimum of three jamb anchors and base steel anchors per frame, zinc-coated or painted with rust-inhibitive paint, not lighter the 18 gauge. Secure frames to previously installed concrete or masonry with expansion bolts in accordance with SDI 11-F. Provide mortar infill of frames in masonry walls, and gypsum board compound infill at each jamb anchor in metal frame walls.

6. **Fire doors:** Provide in conformance with NFPA 80 an NFPA 105. Fire doors and frames shall bear the label of UL, FM or WHI attesting to the rating required. Door and frame assemblies shall be tested for conformance per NFPA 252 or UL 10B (for neutral pressure) or UL 10C (for positive pressure). Wood fire doors shall also comply with ASTM E 152.

   Provide stainless steel astragals complying with NFPA 80 for fire-rated assemblies and NFPA 105 for smoke control assemblies.

7. **Interior Door Hardware:** Provide the services of a certified door hardware consultant to prepare the door hardware schedule. Unless otherwise noted, interior doors shall include latch, hinges, door stops and door silencers. Provide closers and kick plates for fire-rated, corridor, stairway and high-use non-residential doors.

   a. **Hinges** - BHMA A156.1, Grade 1, 108 x 108 mm (4 1/2 x 4 1/2 inches) with non-removable pin or anti-friction bearing hinges.

   b. **Locks and Latches** - For non-residential buildings use Series 1000, Operational Grade 1, Security Grade 2 for stairways, building entrances, corridors, assembly

spaces, and other high use interior doors. Use Series 4000, Grade 1 for non-residential locations not using Series 1000 hardware. For residential buildings use Series 4000, Grade 2 for interior doors. a) Mortise Locks and Latches - BHMA A 156.13, Series 1000, Operation Grade 1, Security Grade 2. b) Bored Locks and Latches - BHMA A 156.2, Series 4000, Grade 1, or Grade 2.

c. **Exit Devices** - BHMA A 156.3, Grade 1. Touch bars shall be provided in lieu of conventional crossbars and arms. Use manufacturer's integral touch bars in aluminum storefront doors.

d. **Card Key Access -** Provide card key type access units for specialized entries. Provide lithium battery powered, magnetic stripe keycard locksets that are ANSI/BHMA A156.13, Series 1000, Grade 1, mortise or ANSI/BHMA A156.2, Series 4000, Grade 1, cylindrical locks, tamper resistant, UL listed with 25 mm (1 inch) throw deadbolt, 19 mm (3/4-inch) throw latch bolt, auxiliary dead-locking latch, and 68.75 mm (2-3/4 inch) backset.

   Provide hardware keying compatible with the existing base-wide keying system. Replacement interchangeable cores shall be compatible with the Best Lock system.

e. **Key Cabinet:** Provide a Key Cabinet with 30% over capacity.

C1030 SPECIALTIES

1. **Compartments, Cubicles, & Toilet Partitions:** FS A-A-60003. Provide toilet compartments at multi-fixture toilet rooms of Type I, Style B-Ceiling Hung, C-Overhead Braced, or F-Overhead braced-alcove. Reinforce panels to receive partition-mounted accessories. Urinal screens shall be FS A-A-60003. Type III, Style A, floor supported and wall hung or Style D, wall hung. Wall hung urinal screens shall be secured with continuous flanges to urinal screen and wall. Steel and Plastic toilet partitions shall have a recovered materials content of 20 to 30 percent. Chrome-plated or stainless steel door latches and coat hooks. Provide one coat hook per compartment door. Latches and hinges for handicapped compartments shall comply with UFAS & ADAAG.

2. **Toilet and Bath Accessories:** Provide toilet and bath accessories and install per ADAAG and manufacturers' requirements.

3. **Marker Boards and Tack Boards:** Provide porcelain enamel marker boards fused to a nominal 28 gauge steel sheet and tack boards of cork, with a tensile strength of at least 40 psi when tested according to ASTM F 152, with woven or vinyl covering.

4. **Identifying Devices:** All interior doors shall have an identifying device. All handicap accessible facilities shall utilize signage which meets current ADAAG requirements with regard to Braille, raised characters, finishes (contrast), size and mounting height. If room names are subject to frequent change, provide an interchangeable strip to be utilized to facilitate removal and replacement.

5. **Lockers:** Provide lockers to meet FS AA-L-00486 (Rev J), enameled steel with special bases.

6. **Shelving:** Provide steel shelving.

7. **Counters:** Provide solid plastic or plastic laminate counter tops and back splashes, AWI Custom grade.

8. **Cabinets:** Provide cabinetry and millwork items with associated accessories and hardware. Cabinetry shall be AWI premium or custom grade and have concealed hinges with adjustable standards for shelves.

9. **Casework:** Provide all built-in premanufactured metal cabinetry for specialized functions such as laboratories, libraries, medical and dental facilities. Casework shall comply with Mil Std 1691.

10. **Closets:** Provide premanufactured or millwork closets or prefabricated coat closets

11. **Fire Extinguisher Cabinets:** Provide fire extinguisher cabinets. Size and locate fire extinguisher cabinets to encase extinguisher as required by NFPA 10 & 101. Fire extinguishers will be provided by the Customer.

12. **Firestopping Penetrations:** Provide all sleeves, caulking, and flashing for firestopping penetrations.

13. **Entrance Floor Grilles and Mats:** Provide recessed pan or surface floor mats at main only or all building entrances.

14. **Ornamental Metal Work:** Provide ornamental metalwork

15. **Other Interior Specialties:** Motorized projection screen shall be wall or ceiling or above-ceiling mounting. Pull-down projection screens shall be provided in lieu of motorized projection screens as approved by the Activity.

C20 STAIR CONSTRUCTION

Provide interior and exterior stair construction. Stair design, materials and construction shall comply with IBC, and applicable codes and standards, including NFPA 101. Provide refuge area at top of stair in accordance with applicable Americans with Disability Act Design Guide requirements.

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Unless otherwise noted in the RFP, primary wall finishes shall be painted gypsum wall board. Provide fire resistive construction and finishes for fire separation between areas of the building in accordance with the latest adopted version of the IBC, and NFPA 101. Provide water resistant cementitious board at floors and walls of tubs and showers.

1. **Ceramic Tile:** Provide ceramic tile wall systems as defined in the Tile Council of America (TCA) handbook for ceramic tile installation and materials for the service requirements listed. Provide installation and materials in accordance with ANSI A108/A118 series standards, except do not use organic adhesives. Provide

manufacturer's full range of colors and styles. Tile shall be a minimum of one grade above base grade. Coordinate with ceramic bath accessories for modularity. Include all trim pieces, caps, stops, and returns to complete installation.

2. **Wallcovering:** Vinyl wallcovering shall conform to ASTM F793, Category V Type II, 371 g to 624 g (13.1 to 22 ounces) total weight per square yard and width of 1370 mm (54 inches). Provide ASTM F793, Category VI, Type III, 624 g (22 ounces) and above to cover rough textured walls such as masonry. High performance fabric wallcovering shall be woven or non-woven Class A, fire resistive material, a minimum of 1219 mm (48 inches) wide, with a soil repellent finish and a minimum of 340 g (12 ounces) per square yard exclusive of backing. "Tackable" wall covering shall be "self-healing" from tack penetration through the covering into the substrate. Acoustical wallcovering shall be textured, woven or non-woven, Class A fire resistive material with an acrylic backing, a minimum of 1219 mm (48 inches) wide and a minimum of 454 g (16 ounces) per square yard. The material shall have an NRC rating of .15 on gypsum board in accordance with ASTM C423.

C3020 FLOOR FINISHES

Provide new flooring materials as required. All flooring materials, adhesives, finish coats, sealers and mortar materials shall meet or exceed EPA requirements for toxic substance content restrictions and air quality requirements; and shall meet or exceed fire protection requirements, such as smoke and flame spread requirements. When laying broadloom carpets and resilient flooring, use the widest sheet materials available to avoid or minimize the number and extent of seams. When seams are required, locate seams at infrequent traffic areas. Contractor is required to submit seam layout to Contracting Officer for approval prior to installation.

1. **Ceramic Tile:** Provide ceramic tile floor systems as defined in the Tile Council of America (TCA) handbook for ceramic tile installation and materials for the service requirements listed. Provide installation and materials in accordance with ANSI A108/A118 series standards, except do not use organic adhesives. Provide manufacturer's full range of colors and styles. Tile shall be a minimum of one grade above base grade.

   Provide ceramic or porcelain tile with a minimum breaking strength of 202kg (300 pounds), ASTM C648, and a maximum absorption rate of 0.5%, ASTM C373. Tile shall have a minimum coefficient of friction (wet and dry) of 0.6, ASTM C1028.

2. **Resilient Flooring:** Shall meet or exceed applicable ADA horizontal requirements, and shall be installed per manufacturer's recommended methods and adhesives. Provide manufacturers full line of color and pattern selections, including multi-color patterns.

   Linoleum Sheet or Tile Flooring shall be 2.5 mm (0.10 inch) gage; minimum 250 psi static load limit, ASTM F970; and with multi-color pattern and color extending throughout thickness, ASTM F2034, Type I. Resilient homogeneous vinyl sheet flooring shall be commercial quality, 2.0 mm (0.080 inch) overall gage, with minimum 1.6 mm (.066 inch) thick wear layer, protective urethane finish, ASTM F1303, Type II, Grade 1, Class A. Resilient vinyl composition tile shall be commercial grade, 3 mm (.125 inch) gage, FS SS-T-312B (1), Type IV, Comp. 1, Class 2, through pattern.

3. **Carpet:** Carpet manufacturer and installer shall be experienced, established and in good standing with the industry. Carpet, broadloom or tile, shall be installed per the Carpet & Rug Institute's recommendations. Carpet shall be tufted, textured loop, cut/loop or tip sheared, a minimum of 26 oz. face weight, minimum density of 6600, 100% premium branded yarn- or solution-dyed, Type 6 or 6.6 continuous hollow filament nylon. Carpet shall be multi-color and patterned for soil and wear hiding properties. Carpet shall have high performance backing warranted against zippering, edge raveling and delamination, be anti-static and anti-microbial. Carpet shall meet Flammability ratings; generate less than a 450 rating, ASTM E662; meet the Critical Radiant Flux Classification of not less than 0.45 W/sq. cm., ASTM E648. Where indicated in the room requirements, provide attached polyurethane cushion or separate polyurethane cushion for double stick pad installations, ASTM 1667 and ASTM 3676.

4. **Wall Base:** Provide porcelain or ceramic tile base for porcelain or ceramic tile floor. Provide solid, through color preformed rubber or vinyl base for carpeted/resilient flooring areas. Provide a sealant between base and floor finish in all wet areas.

C3030 CEILING FINISHES

Unless otherwise noted in the room requirements, acoustical ceiling panels shall be 24 inch by 24 inch, with a minimum light reflectance of .75, Class A, flame spread 25 or less and smoke development of 50 or less, ASTM E84. Acoustical ceiling panels shall have minimum 60% recycled content and conform to ASTM E1264. Panels shall have a factory-applied standard washable painted finish or Type IV with factory-applied plastic membrane-faced vinyl, Form: 1, 2 or 3. Provide square edge except as noted.

Unless otherwise noted in the room requirements for entrance lobby, restrooms and showers, provide a painted, suspended gypsum board ceiling. Exposed structural systems shall be painted.

C3040 PAINTING

All painting and coating materials shall be low VOC, comply with local air quality control laws and, regulations; and conform to the Master's Painters Institute's (MPI) *Architectural, Interior Systems Manual* and the MPI's *Maintenance and Repainting Manual* recommendations for paint systems, surface preparation and applications.

Provide minimum of one prime coat and two finish coats. The prime coat shall not be combined with texture or other coatings. Seal and prime all surfaces to cover underlying stains or discoloration that may affect finish paint. Finish coats shall provide full coverage of undercoats and substrates. All walls and ceilings in wet area shall have semi-gloss paint. All wood or metal cased openings, door trims and casings, window trims and casing, and other finish trim shall have semi-gloss paint. All interior walls and ceilings shall have satin or eggshell finish. For previously painted surfaces, prime all surfaces to ensure compatibility of finish coats. Do not paint prefinished surfaces except as noted.

Provide Institutional Low Odor/Low VOC Latex paint or High Performance Architectural Latex systems as defined and approved by the MPI Systems Manual for the various substrates required to be painted.

Paint/Color Selection: Provide paint systems tested to "Detailed Performance Level" standard as defined by MPI. Paints shall be readily available for purchase in standard colors.

SECTION D. SERVICES

D10 CONVEYING Elevators and Escalators - Not used

D20 PLUMBING

Provide plumbing fixtures, appliances, and equipment complete and usable as required by Part 3. All plumbing fixtures, appliances and equipment, piping, valves, accessories, and appurtenances shall comply with International Plumbing Code (IPC) and all other applicable codes and standards, including energy, water conservation, and local activity regulations and standards.

1. **Domestic Water:** Provide ASTM B 88 Type K or L copper tubing and fittings for pipe sizes 4 inches or smaller. Provide Type L tubing above ground with solder fittings. For buried piping, use Type K tubing with solder fittings, or Chlorinated polyvinyl chloride (CPVC) Plastic pipe, fittings, and solvent cement per ASTM D 2846/D 2846M for sizes 4 inches and smaller.

   Provide mineral fiber insulation with vapor barrier on domestic water (hot and cold) supply and recirculation piping. Provide re-circulating pumps or instantaneous water heaters for hot water systems with fixtures greater than 100 ft from hot water source. Provide water hammer arrestors per PDI STD WH-210 as required for rapid water shut off scenarios. All water valves except for fixture shut off valves shall be ANSI B16.18 brass, full port ball type. All plumbing fixtures shall have separate shut off valves. All piping shall be concealed in walls, attic spaces, or in crawl spaces under floors. Provide access panels for valves behind walls. No under slab water piping is allowed. Fittings for annealed copper tubing shall conform to ANSI Bl6.22. Solder and flux shall be lead free. Exposed exterior piping is prohibited unless otherwise not practical. Provide identification for piping and equipment.

2. **Wall Penetrations:** Piping which penetrates fire rated walls shall be completely sealed to maintain fire resistance integrity as required by Code. Penetrations through walls that are not fire rated shall be adequately supported and sealed. Pipe penetrations through exterior walls shall be sleeved, caulked with weatherproof sealant and provided with finish trim.

D2010 PLUMBING FIXTURES

Fixtures shall be provided complete with fittings, and chromium-plated, or nickel-plated brass (polished bright or satin surface) trim. All fixtures, fittings, and trim, shall be from

the same manufacturer and shall have the same finish. Access panels shall be provided for all bathtubs and showers, except at exterior and party walls and where tub or showers are back to back. Provide cleanouts in accordance with the plumbing code. Rotate or extend cleanouts required to facilitate maintenance and clearing of blockage in waste piping.

1. **Faucets:** All faucets shall be brass construction, washerless type, with seals and seats combined in one replaceable ceramic disk valve cartridge designed to be interchangeable with all lavatories, bathtubs and kitchen sinks, or having replaceable seals and seats removable either as a seat insert or as a part of a replaceable valve unit. Faucets provided shall be of the same type and manufacturer throughout the facility, unless otherwise noted.

2. **Water Closets:** Water closets shall be in accordance with ANSI A112.19.2, with trim conforming to A112.19.5. Water closets shall be vitreous china and have an elongated bowl with trip lever, unlined tank, close coupled siphon jet, floor outlet with wax gasket, flange and an anti-siphon float valve. Provide white closed front seat and cover for private toilets and open front seat cover for public facilities. Water consumption shall be no greater than 1.6 gallon maximum per complete flushing cycle. Provide self-closing metering type flush valve on flush valve type water closets, unless electronic control is specified in Part 3.

3. **Urinals:** ASME A112.19.2M, vitreous china, wall-mounted, wall outlet, siphon jet, integral trap, extended side shields. Provide large diaphragm (not less than 66 mm (2.625 inches) upper chamber inside diameter at the point where the diaphragm is sealed between the upper and lower chambers) flush valve of chrome plated cast brass conforming to ASTM B 584, including vacuum breaker and angle (control-stop) valve. Provide self-closing metering type flush valve on urinals, unless electronic control is specified in Part 3.

4. **Lavatories:** Unless otherwise specified by Part 3, lavatories shall be integral to the vanity countertops. Each lavatory shall be provided with hot and cold water tempered by means of a mixing valve or combination faucet.

5. **Sinks:** ASME/ANSI A112.19.3M sink, 20 gage stainless steel with integral mounting rim, minimum dimensions of 840 mm (33 inches) wide for two compartment or 560 mm (21 inches) wide for one compartment by 560 mm (21 inches) front to rear, with ledge back and undersides coated with sound dampening material.

6. **Water Coolers:** ARI 1010, wall-mounted, bubbler style, air-cooled condensing unit, 4.20 mL per second (4.0 gph) minimum capacity, stainless steel splash receptor, double wall heat exchanger, and all stainless steel cabinet. Install in accordance with the manufacturers instructions.

7. **Showers:** ASME A112.18.1M, ball joint, self-cleaning, adjustable spray pattern shower heads, connected to concealed pipe connected to copper alloy single control type mixing valve with front access integral screwdriver stops. Anchor the mixing valves and the pipe to each showerhead in wall to prevent movement. Unless otherwise specified by Part 3, showers shall be supplied with water at a temperature no more than 110°F by means of a pressure balance, tempering or mixing valve.

8. **Service sinks:** ASME A112.19.1M, white enameled cast-iron or ASME A112.19.2M white vitreous china, wall mounted and floor supported by wall outlet cast-iron P-trap, minimum dimensions of 560 mm (22 inches) wide by 457 mm (18 inches) front to rear with 230 mm (9 inch) splashback, and stainless steel rim guard. Provide ASME A112.18.1M copper alloy back-mounted combination faucets with vacuum breaker and 20 mm (0.75 inch) external hose threads

9. **Mop Sinks:** Pre-cast terrazzo or ASME A112.19.2M white vitreous china floor-mounted mop sink, 914 mm x 914 mm x 305 mm (36 inches x 36 inches x 12 inches). Terrazzo shall be made of marble chips cast in white Portland cement to a compressive strength of not less than 25 mPa (3625 PSI) 7 days after casting. Provide brass body drains with nickel bronze strainers cast integral with mop sink. Provide stainless steel rim guard for mop sink. Provide chrome-plated exposed hot and cold water faucets ASME A112.15.M wall-mounted copper alloy faucets swing spout with 20 mm (3/4 inch) hose connection, vacuum breaker, and pail hook. Provide mop hanger on wall above sink suitable for four mops.

10. **Laundry Sinks:** ANSI Z124.1, plastic, two compartment, minimum dimensions of 1016 mm wide by 533 mm (40 inches wide by 21 inches) front to rear, with floor-supported steel mounting frame secured to wall. Provide ASME A112.18.1M copper alloy centerset faucets, swing spout with aerator, and stainless steel drain outlets with cup strainers, and 40 mm (1.5 inch) adjustable P-trap with drain piping to vertical vent stack.

11. **Emergency Eyewash:** ANSI Z358.1, wall-mounted self-cleaning, non-clogging eye and face wash with quick opening, full-flow valves, stainless steel eye and face wash receptor. Provide copper alloy control valves. Pressure-compensated tempering valve is required for emergency fixtures, with leaving water temperature setpoint adjustable throughout the range 15.5 and 35 degrees C (60 to 95 degrees F) unless cold water supply meets temperature criteria.

D2020 DOMESTIC WATER DISTRIBUTION

1. **Natural Gas or Propane Fired Storage Water Heaters:** Provide high efficiency storage type natural gas or propane fired water heaters per ANSI Z21.10.1 or ANSI Z21.10.3 meeting AGA requirements. Unit efficiency shall meet or exceed that listed in the Title-24 Standards. Water heaters shall be equipped with glass-lined steel tanks, minimum R-15 polyurethane foam insulation, replaceable anodes, and adjustable range thermostat to allow hot water settings between 43 and 71 degrees C (110 and 160 degrees F). Water heater warranty shall be a minimum of 10 years. Provide vent in accordance with NFPA 54. Provide low NOx burners that meet SCAQMD requirements. Install in accordance with manufacturer's instructions and the code. Where earthquake loads are applicable, water heater supports shall be designed and installed for seismic forces in accordance with the International Building Code.

2. **Electric Water Heaters:** Provide electric water heaters with double heating element per UL 174. Unit efficiency shall meet or exceed that listed for FEMP or ENERGYSTAR, or as listed in ASHRAE 90.1, whichever is greatest. Water heaters shall be equipped with glass-lined steel tanks, high efficiency type, insulated with polyurethane foam insulation,

replaceable anodes, and adjustable range thermostat to allow hot water settings between 43 and 71 degrees C

3. **Domestic Water Boilers:** Boilers shall be designed, tested, and installed per ASME CSD-1 (Controls and Safety Devices) and ASME BPVC (Boiler and Pressure Vessel Code). The boiler shall meet the requirements of the UL 795, NFPA 85, ANSI Z83.3, and ASME CSD. Boilers must be certified by Naval Personnel or a contractor approved by the Contracting Officer.

D2030 SANITARY WASTE & VENT

All new sewers below concrete slab shall be solid core, minimum schedule 40 (DWV Type), ABS in accordance with ASTM 2661. New waste and vent piping above floor shall be Schedule 40 PVC (DWV Type) ASTM 2665 or ABS ASTM 2661. Use of ABS plastic pipe shall conform to the IBC and IPC. Provide pipe sizing, configurations, and cleanouts as required by the IPC. Cellular core plastic pipe is not allowed. SOVENT systems are not allowed.

D2040 RAINWATER DRAINAGE

Below concrete slab shall be solid core, minimum schedule 40 (DWV Type), ABS in accordance with ASTM 2661. Above floor shall be cast iron hubless, or hub and spigot, or Schedule 40 PVC (DWV Type) ASTM 2665 or ABS ASTM 2661 as indicated in Part 3. Pipe materials shall conform to the IBC and IPC. Provide pipe sizing, configurations, and cleanouts as required by applicable codes and standards.

D2090 OTHER PLUMBING SYSTEMS

Natural Gas Piping Systems: Exterior above grade natural gas piping shall be schedule 40 galvanized steel pipe with threaded fittings and joints. Underground exterior gas piping shall be polyethylene pipe that satisfies the requirements of NFPA 54, ASTM D2513-01, and ASME B31-8. Provide warning tape at 12 inches below grade directly above buried gas pipes. Below grade metal gas piping is prohibited. Interior gas piping shall be ASTM A 53, schedule 40 black steel with ASME B16.3 threaded fittings and joints. The use of semi-rigid tubing and flexible connectors for gas equipment and appliances is prohibited except for final connections to the equipment and appliances where they shall be provided. Provide flexible gas connections in accordance with ANSI Z21.45 and not more than 40 inches long. Provide accessible gas service with shutoff valve for all equipment. Gas piping shall conform to NFPA 54 and shall be pressure tested in accordance therewith. . Gas piping is considered a fragile utility in the content of UFC 4-010-01, *DOD Minimum Antiterrorism Standards for Buildings*.

D30 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS:

The HVAC systems shall comply with the latest edition of the International Mechanical Code, International Plumbing Code, ASHRAE Standards, National Electrical Code, National Fire Protection Association Publications, International Building Code, and California Title 24 or ASHRAE 90.1 energy efficiency standards (the more stringent of

the two) unless otherwise specified in Part 3. All equipment, appliances, ductwork and accessories shall comply with applicable codes and standards. For projects located in California, also comply with California Energy Commission (CEC) efficiency rating requirements as stated in Ca. AB 970 Title 24. The Contractor shall certify that the installation is in conformance with the applicable codes and standards at the completion of the contract, prior to final invoice being processed and final acceptance.

1. **Equipment Clearance:** Provide working space around all equipment. Provide all required fittings, connections and accessories required for a complete and usable system. All equipment shall be installed per the manufacturer's recommendations. Where the word "should" is used in manufacturer's instructions, substitute the word "shall".

2. **Material and Equipment Qualifications:** All materials and equipment shall have been in satisfactory commercial or industrial use for 2 years prior to the bid opening. The 2-year use shall include applications of equipment and materials under similar circumstances and of similar size. The product shall have been for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures during the 2-year period.

3. **Motors:** Single-phase fractional-horsepower alternating-current motors shall be high efficiency types corresponding to the applications listed in NEMA MG 11. Select polyphase motors based on high efficiency characteristics relative to the applications as listed in NEMA MG 10. Additionally, all polyphase squirrel-cage medium induction motors with continuous ratings shall meet or exceed energy efficient ratings per Table 12-10 of NEMA MG 1. Provide controllers for 3-phase motors rated 0.75 kW (1 hp) and above with phase voltage monitors designed to protect motors from phase loss and over/under-voltage. Provide means to prevent automatic restart by a time adjustable restart relay. For packaged equipment, the manufacturer shall provide controllers including the required monitors and timed restart. Provide reduced voltage starters for all motors 25 hp and larger.

4. **Equipment Support:** Provide housekeeping pads and vibration isolators under all floor-mounted equipment.

5. **Coatings:** When required in Part 3, provide chiller and air handler coils with copper tube/copper fin coil construction or immersion applied, baked phenolic or other approved coating. Field applied coatings are not acceptable. Mechanical equipment casings shall have painted finishes that pass a salt-spray test conducted per ASTM B117 for duration of at least 500 hours.

6. **Equipment Insulation:** Provide insulation on all chilled water equipment. Insulate hot and chilled water pumps and equipment as suitable for the temperature and service in rigid block, semi-rigid board, or flexible unicellular insulation to fit as closely as possible to equipment. Provide vapor retarder for chilled water applications.

7. **Acoustical considerations:** Noise levels in all areas served (supply, return, and exhaust) by a mechanical system shall comply with ASHRAE Design Guidelines for HVAC related background sound in rooms as indicated in the lasted ASHRAE Fundamentals Handbook. The RC-rating method shall be utilized.

D3020 HEAT GENERATING SYSTEMS

1. **Boilers:** Boilers shall be designed, tested, and installed per ASME CSD-1 (Controls and Safety Devices) and ASME BPVC (Boiler and Pressure Vessel Code). The boiler shall meet the requirements of the UL 795, NFPA 85, ANSI Z83.3, and ASME CSD. Do not provide watertube boiler(s) for hydronic heating when size permits otherwise. Provide insulated boiler stack in accordance with manufacturer's recommendations and conform to NFPA 211 or provide pre-manufactured, multi-wall stacks complying with NFPA 54 or NFPA 58 and UL-listed. Low pressure boilers shall be equipped with one or more pressure relieving devices, adjusted and sealed to discharge at a pressure not to exceed the maximum allowable working pressure of the boiler. The combined capacity of these devices shall be such that with the fuel burning equipment installed and operating at maximum capacity, the pressure cannot rise more than 5 psi for steam boilers or 10% for water boilers above the maximum allowable working pressure of the boiler. Pressure relieving devices shall be installed as required by the referenced code, be ASME stamped and rated, and shall be installed with the valve spindle in the vertical position. Provide with manual lifting device for periodic testing. Boilers shall comply with the local air quality regulations. Boilers shall be equipped with pressure and temperature gauges as required for proper maintenance and operation. Thermometers shall also be provided at the inlet and exit of the boiler, and shall be visible to the operator from the operating area.

2. **Furnaces:** UL-listed, factory assembled, self contained, forced circulation, furnace. Provide electronic ignition system. Unit shall be design certified by AGA, GAMA efficiency rating certified, for gas furnaces and NFPA 31 for oil furnaces. Provide with cooling coil as necessary. Furnaces shall comply with the local air quality regulations.

D3030 COOLING GENERATING SYSTEMS

1. **Chillers:** Air-cooled chillers shall be type indicated in Part 3 and meet the requirements of ARI 550/590-98. Provide control panel with the manufacturers' standard controls and protection circuits. If DDC system is required in project, provide a control interface for remote monitoring of the chiller's operating parameters, functions and alarms from the DDC control system central workstation. Provide complete start-up and operational testing of chiller equipment.

2. **Direct expansion systems:** Provide units factory assembled, designed, tested, with ducted air distribution and rated in accordance with ARI 210/240 or ARI 340/360. Refrigerant piping size shall be per the manufacturer's recommendations. Insulate refrigerant piping suction lines and condensate drain.

3. **Refrigerants:** The use of Ozone Depleting Substances (ODS) as well as the qualifications and credentials of personnel servicing equipment that contains ODS is restricted. Refrigerants shall have an Ozone Depletion Factor (ODF) of 0.055 or less. The ODF shall be in accordance with the "Montreal Protocol on Substances That Deplete the Ozone Layer", September 1987, sponsored by the United Nations Environment Program.

D3040 DISTRIBUTION SYSTEMS

1. **Ductwork:** All ductwork shall be provided in accordance with the latest SMACNA guidelines. Flexible duct lengths shall not exceed 6 feet. Provide galvanized sheet metal ducts except for special exhaust systems and the following:

   a. For fume hood exhaust, kitchen hood exhaust, and dishwasher exhaust, provide stainless steel ductwork.

   b. For shower area exhausts, provide aluminum or stainless steel ductwork and sloped to drain provisions. After the shower exhaust is mixed with a volume of general exhaust air equal to 200% of the shower exhaust rate, standard galvanized construction may be used.

   c. Internal insulation-lined ductwork is prohibited in all areas. For ductwork located exterior to the building, provide externally insulated systems with sheet metal cladding. Provide external thermal insulation for all ductwork. Insulate ductwork in concealed spaces with blanket flexible mineral fiber. Insulate ductwork in Mechanical Rooms and exposed locations with rigid mineral fiber insulation. Provide insulation with factory applied all-purpose jacket with integral vapor retarder. In exposed locations, provide a jacket with white surface suitable for painting. Flame spread/smoke developed rating for all insulation shall not exceed 25/50. Minimum insulation thickness shall be the minimum thickness required by ASHRAE 90.1. Insulate the backs of all supply air diffusers with blanket flexible mineral fiber insulation.

   d. The ductwork shall be sealed with an approved duct sealer and in accordance with SMACNA standards. If leakage testing is indicated in part 3, the duct leakage shall not exceed 2%.

   e. Provide manual volume dampers in each branch take-off from the main duct to control air quantity. Dampers shall conform to SMACNA DCS. Dampers shall be installed in accessible locations.

2. **Fire Dampers:** Fire dampers shall be rated per UL 555. Fire dampers shall be dynamic type rated for closure against a moving airstream. Provide fire dampers that do not intrude into the air stream when in the open position.

3. **Piping:**

   a. Provide insulated, steel piping for sizes 4 inches and larger and insulated copper piping for sizes less than 4 inches for water supply and return piping to serve the HVAC equipment throughout the facility.

   b. Provide system flushing and start-up for water systems.

c. Oil piping: ANSI/ASTM A53 or A106 piping with associated ASME fittings or ASTM B88, type L or M copper tubing with ASME B16.26 flared fittings or compression type fittings.

4. Exhaust Fans And Ducts:

a. **General:** Exhaust fans shall be sized to move the volume of air required to comply with International Mechanical Code for the areas requiring exhaust.

b. **Bathroom, restrooms and Utility Room Exhaust Fans:** Exhaust fans shall be sized to give not less than 10 air changes per hour in the space to be ventilated. Fans shall have a maximum sound level of 3 sones and be separately switched from light.

c. **Flues:** When required, provide new Type B, U.L. listed, double wall flues. Flue installation shall be in accordance with the International Mechanical Code.

5. Air handling units: Modular construction, double wall air handling units with minimum of 25 mm (1 inch) casing insulation. Provide ARI 430 certified fans and ARI certified coils. Provide stainless steel, positive draining condensate drain pan. For 100% outside air units provide capability for cooling, heating, dehumidification and reheat.

D3050 TERMINAL AND PACKAGE UNITS

1. Unit ventilators: Unit shall be factory assembled unit ventilator capable of up to 100% outdoor air ventilation and UL-listed.

2. Unit heaters: ANSI Z83.8 and AGA label. Equip each heater with individually adjustable package discharge louver. Provide with thermostat.

3. Fan coil units: UL-Listed, factory assembled and tested fan coils, ARI 440 and ARI certified.

4. Packaged units:

Factory packaged rooftop units in accordance with ARI 430 and suitable for outdoor installation. Provide with manufacturer's roof curb.

Packaged through wall units shall be factory assembled air conditioner or heat pump and rated in accordance with ARI 310 or ARI 380 and ARI certified. Unit shall include heat and operate under the standard unit controls. Units shall be designed to allow ease of maintenance by use of a wall sleeve. Units shall have internal condensate removal (condensate shall not be externally drained).

D3060 CONTROLS AND INSTRUMENTATION

1. General: Provide stand-alone or distributed direct digital controls, as required in Part 3.

2. **Distributed Direct Digital Controls (DDC):** DDC hardware shall be UL-916 rated. Use controllers in a distributed control manner. Controllers shall be stand alone with an internal clock and modem. The total number of I/O hardware points shall not exceed 48 in any controller. Provide sufficient memory for each controller to support required control, communication, trends, alarms, and messages. Provide communications ports for controller to controller, on-site interface, remote workstation interface, and telecommunications interface. When providing a partial DDC system or connecting to an existing DDC system, provide a laptop computer with all necessary software for user interface.

D3070 SYSTEMS TESTING AND BALANCING

All HVAC water and air systems, both new and retrofit, shall be TABed in accordance with NEBB or AABC standards. As part of any TAB air balancing effort, acceptable air quantity variations shall be 0 to –10% for exhaust systems and 0 to +10% for supply air systems.

D40 FIRE PROTECTION

Provide new or extend existing Automatic Fire Sprinkler systems, Smoke and Heat detection systems, Fire Alarm and Mass Notification systems as required. The work for fire sprinklers, fire alarm, smoke detection, and heat detection shall be provided by contractors licensed to perform such work.

Project Requirements: Prior to the start of design, the Designer of Record shall meet with the Government's Fire Protection Engineer to determine the extent and types of fire protection required**.**

D4010 FIRE ALARM AND DETECTION

Fire alarm system shall include manual stations, system smoke detectors, duct smoke detectors, heat detectors, audio/visual alarms, connection to basewide fire alarm monitoring, electrical supervision of fire pump controllers, and electrical supervision of all sprinkler system alarm and supervisory devices as required.

D4020 FIRE SUPPRESSION WATER SUPPLY AND EQUIPMENT

The water supply information is provided for bidding purposes. The design point of connection to existing water supply shall require the approval of the Contracting Officer. The FPE DOR shall conduct additional flow tests after contract award prior to any design submissions. Tests shall be coordinated through the Contracting Officer.

D4040 SPRINKLERS

Areas subject to freezing shall be provided with a dry pipe system.

D50 ELECTRICAL

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide interior electrical wiring, fixtures, switches, outlets, and apparatus in accordance with applicable codes and standards. The electrical system shall conform to NFPA 70. Power and lighting circuits shall be separate.

1. **Wiring:** All wiring shall be in electrical metal conduits and shall be concealed except in the industrial spaces and at locations indicated in Part 3. No conductors shall be smaller than No. 12 AWG, copper wires. Wiring below slab or underground shall be in Schedule 40 PVC with ground wire. Exposed conduits on the exterior of the building are prohibited. Provide a ground conductor for each circuit; conduits shall not be used for grounding. Use of cable assemblies Types AC, MC, or MI and flat conductors are prohibited. Circuit breakers shall be bolt-on type. Series rated circuit breakers and fusible panelboards shall not be used.

2. **Outlet Circuits:** Lighting and convenience outlets shall be on separate circuits. Install GFI protected receptacles at all wet or damp areas. Location of outlets shall be as required by applicable codes and standards. Provide extra outlets for maintenance and service staffs in spaces such as corridors, hallways and other public spaces as identified below. All exterior outlets shall be on separate circuits, shall be GFI protected, and equipped with a cover to prevent accidental water infiltration into the devices.

   In addition to the location requirements specified by NFPA 70, locate general purpose and dedicated outlets in accordance with the following:

   a. Mechanical equipment: Provide receptacle within 7.6 m (25 ft) of mechanical equipment on the interior and exterior of buildings.

   b. Office, staff support spaces, and other workstation locations: One receptacle for each workstation with a minimum of one for every 3050 mm (10 ft) of wall space. When less than 3500 mm (10 ft) of wall at the floor line, provide a minimum of two receptacles spaced appropriately to anticipate furniture relocations. Limit loads to a maximum of four workstations per 20 amp circuit. See Appendix C, Table C1 for workstation load data.

   c. Conference rooms and training rooms: One for every 3.6 m (12 ft) of wall space at the floor line. Ensure one receptacle is located next to each voice/data outlet. Provide one receptacle above the ceiling to support video projection device. Extend circuit to wall location for connection to motorized screen. When it is expected that a conference room table will be specifically dedicated to floor space in a conference room, locate a floor-mounted receptacle under the table. This receptacle may be part of combination power/communications outlet.

   d. Provide power outlets throughout the building to serve all proposed equipment, including government furnished equipment, and allow for future reconfiguration of equipment layout. Provide power connections to all ancillary office equipment such as printers, faxes, plotters, and shredders. Provide dedicated circuits where warranted.

e. In each telecommunications room provide a dedicated 20 amp circuit with a receptacle adjacent to each rack or backboard for each of the following:

   1) CCTV for training systems

   2) CCSTV for security systems

   3) CATV

   4) Voice systems

   5) Data systems.

f. Provide dedicated receptacles as required throughout the facility for television monitors. These outlets will typically be located at the ceiling level for wall mounted television monitors.

g. Provide dedicated receptacles as required throughout the facility for tape players and disc players.

h. Corridors: One every 15 m (50 ft) with a minimum of one per corridor.

i. Janitor's closet and toilet rooms: One GFI receptacle per closet. Provide GFI receptacles at counter height for each counter in toilets such that there is a minimum of one outlet for each two sinks.

j. Space with counter tops: One for every 1.200 m (4 ft) of countertop, with a minimum of one outlet. Provide GFI protection of outlets when located within 1.8 m (6 ft) of plumbing fixtures.

k. Building exterior: One for each wall, GFI protected and weatherproof.

l. Kitchen non-residential: One for each 3.05 m (10 ft) of wall space at the floor line. Provide GFI protection when located within 1.8 m (6 ft) of plumbing fixture.

m. Child occupied spaces (including toilets): One for every 3.6 m (12 ft) of wall space. Use child safety type such as those that require rotating an integral surface cover plate to access current. Removable caps and plugs are not acceptable.

n. All other rooms: One for every 7.6 m (25 ft) of wall space at the floor line. When 7.6 m (25 ft) or less of wall at the floor line exists in a room, provide a minimum of two receptacles spaced appropriately to anticipate furniture relocations.

o. Special purpose receptacles: Designer of Record must coordinate with the user to provide any special purpose outlets required. Provide outlets to allow connection of equipment in special use rooms.

3. Service Entrance Equipment: When a switchboard or switchgear is required, the Designer of Record shall utilize UFGS Section 26 23 00, *Switchboards and Switchgear*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

D5020 LIGHTING & BRANCH WIRING

1. **Lighting Fixtures:** All lighting fixtures shall be energy conservation compact fluorescent except where indicated by Part 3.

   a. **Fluorescent Fixtures for Administrative and Commercial Spaces**: For offices, commercial and administrative spaces and facilities provide high efficiency ballast, and instant or rapid start recessed fluorescent fixtures.

   b. Three-Way and Four-Way Switches: Provide three-way or four-way switching of light fixtures as necessary to facilitate movement between adjacent spaces to allow efficient energy management.

2. **Exterior Lighting Fixtures for Large Open Areas:** Exterior lighting fixtures for large open areas such as parking lots, streets and playgrounds shall be energy efficient High-Intensity Discharge (HID) or compact fluorescent fixtures and shall comply with local regulations regarding low lighting levels to avoid light pollution.

   a. Photocell Overriding Switch: Provide photocell-overriding switch for all outdoor light fixtures.

D5030 COMMUNICATIONS & SECURITY

1. **Telecommunications Systems:** Provide a horizontal distribution system including, but not necessarily limited to, all wiring, pathway systems, connector blocks, protectors for all copper service entrance pairs, terminators for all fiber optic cables, outlet boxes, telephone jacks, and data jacks cover plates in accordance with EIA/TIA standards. Provide Category 6 UTP telephone premise wiring where telephones are required.

2. **Public Address Systems:** Provide a Public Address system with speakers in all locations identified in Part 3.

3. **Intercommunications Systems:** Provide an Intercommunication System to allow two-way communications between all locations identified in Part 3.

4. **Television Systems:** Provide television systems to the extent specified in Part 3. Coordinate with the local Cable Company, Local users and Local Authority at the Activity for other specific requirements. The interior cable outlets and wiring shall be complete and ready for use. Wiring shall not be run exposed on any surface of the building.

5. **Security Systems:** Provide an Intrusion Detection System (IDS) to sense all perimeter doors and windows and the interior volume in at least two locations. System shall have 90-minute battery back-up and annunciate both locally and at the Base Security Office via a telephone dialer. System shall have entry/exit timer. Provide wall mounted keypad control at two locations.

D5090 OTHER ELECTRICAL SERVICES

1. **Transient Voltage Surge Suppression (TVSS):** Provide TVSS in accordance with UFC 3-500-10N.

2. **Emergency Generators:** When an emergency generator is required, the Designer of Record shall utilize UFGS Section 26 32 13.00 20 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

3. **Automatic Transfer and Bypass/Isolation Switches:** When an Automatic Transfer Switch is required, the Designer of Record shall utilize UFGS Section 26 36 23.00 20 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

4. **Uninterruptible Power Supply (UPS) System:** When a UPS system is required, the Designer of Record shall utilize UFGS Section 26 32 33.00 20 and shall submit the edited specification section as a part of the design submittal for the project.

5. **400 Hertz Systems:** The Designer of Record shall utilize UFGS Section 26 32 26 or 26 35 43 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

SECTION E. EQUIPMENT AND FURNISHINGS

E10 EQUIPMENT

Equipment and Appliances: Provide appliances and equipment to fulfill the work for Part 3. Whenever possible, all appliances and equipment provided for the facilities in the contract shall be by the same manufacturer and shall be the current model available at the time of proposals. Discontinued makes and models are prohibited. All appliances and equipment shall comply with applicable Energy Star efficiency rating requirements and shall be rated as high efficiency models. Appliances and equipment on California projects shall comply with California Title 24 and be rated as high efficiency. All appliances shall be of the same manufacturer and shall be the same, or similar in color. Submit catalog information for approval by the Contracting Officer prior to purchasing, delivery and installation of the appliances at the job site. Equipment and appliances such as dishwashers, ice machines with drains, garbage disposers, and ovens/ranges are not considered FF&E.

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Window Treatments: Unless otherwise specified in Part 3 window treatments shall be as follows: Horizontal blinds shall be aluminum, washable, cleanable, installed in all windows except for bathroom, kitchen, and utility windows. Horizontal blinds shall be installed at all sliding glass doors. All blinds shall be screwed or securely anchored to wood backing and shall be inside mounted except at sliding glass door. Submit catalog information for approval by the Contracting Officer. Blinds shall have 1-inch aluminum slats, mounted within window opening. Blinds shall have separate tilt and height controls, metal truck, head channels, wand, and valance. Solar shades shall be woven

polyester/resin coated fiberglass or polyester fabric with fade resistance and dimensional stability; with clutch or motorized roller operation. Roller shades shall be screwed or securely anchored to wood backing and shall be inside mounted except at sliding glass door. Submit catalog information for approval by the Contracting Officer. Blinds shall have prefinished steel or aluminum roller housing and valance. Window treatments are not considered FF&E.

E2020 MOVABLE FURNISHINGS

1. **Furnishings, Fixtures and Equipment (FF&E):** FF&E shall include furniture, shop equipment, audiovisual equipment (excluding motorized screens), and specialty equipment. Weapon racks, drying cages, motorized projection screens and lockers are not considered FF&E. FF&E shall be fully integrated with the building system.

   Design and provide FF&E for all areas as developed during client programming. Design an FF&E package and prepare supporting plans and procurement data in accordance with the General Interior Design Requirements UFC 3-120-10.

   The contractor shall have an NCIDQ certified Interior designer not affiliated with any furniture dealership prepare both the SID and FF&E package and participate in design charettes to develop the building floorplan. The designer must have previous experience in project types similar to this contract. As required, the contractor shall obtain services of equipment specialists to specify the audiovisual, shop, or specialty equipment. Equipment specialists shall not have any affiliation with the product specified.

   The contractor's Interior Designer shall be responsible for specifying product and installation for all FF&E for the designated facilities built under this contract, using NAVSUP Blanket Purchase Agreements, GSA federal supply schedules or other government supply sources and complying with priorities found in FAR Part 8.404.

   All fixed and movable furnishings selections shall be coordinated with Sections C10, "Interior Construction" and C30, "Interior Finishes." The FF&E shall be fully integrated with the building systems as well as the design and construction schedule.

   As an option to the contract/task order, the contractor shall be authorized to procure all FF&E with separate funding.

   a. **FF&E Package:** Provide the FF&E loose furnishings package from Government supply sources schedules according to Federal Acquisition Regulations, to include but not limited to, systems and modular furniture, training and conference furniture, seating, tables, artwork, window covering, specialty furniture and equipment, and accessories. NAVSUP Blanket Purchase Agreements (BPA) must be used whenever possible.

      The Government will provide separate funding for procurement of the FF&E package. Upon receipt of required funding, the Contractor shall be authorized by the Contracting Officer as an option to contract/task order to procure all FF&E using predominately negotiated price schedules from GSA or other Federal contracts. The amount of the modification will be the actual cost of these items from the Federal

price schedules or NAVSUP BPAs, including any freight and installation charges from the furniture supplier as well as the contractor's FF&E Handling and Administration Rate (HAR). The HAR includes all of the prime contractor's effort related to storage, coordination, handling, administration of subcontractors, and all other associated costs and profit for the procurement of FF&E. The prime contractor will propose in the contract/task order solicitation the FF&E HAR. The contractor's proposed HAR may not exceed 5% of the total FF&E costs, as noted on the bid schedule. No other charges, expenses, fees, or other markups will be authorized.

When the FF&E package is complete and accepted by the Government, the procurement option will be awarded based on the specific line items in the final package. The Government's Interior Designer will approve the final FF&E submittal. The FF&E package will be presented to the Project Manager and they will expect the Contractor to procure the FF&E exactly as specified and approved by the government Interior Designer.

Two copies of all ordering documentation shall be provided to the Contracting Officer including purchase orders and warranty information. The Contractor shall take maximum advantage of all exemptions from State and Local taxation authorities whether available to it directly or available to the contractor based on an exemption afforded the Government. The responsibility for paying applicable taxes rests with the contractor. Any state and local taxes applicable to the FF&E option will be included with the FF&E Dealer quote, if applicable.. Under regulation 1521, Construction Contractors performing work for the US Government are not required to charge the Government sales tax for the purchase of furniture. Any items purchased as building materials such as carpet are taxable. FF&E items are subject to the Buy American Act. The contractor shall not be required to secure any additional bond for the award of the FF&E option item. Any performance and payments bonds required for the FF&E option will be included in the prim contractor's FF&E HAR.

b. **Procurement and Installation:** Upon completion and Government acceptance of the design, using the Best Value Determination (BVD) method in association with the Government's Interior Design Representative, the Government will award the FF&E procurement option for the Contractor to purchase the FF&E package. The Government's Interior Designer shall provide a certification to the Contracting Officer that the process was completed. The Design-Build Contractor will receive a letter of authorization from the Contracting Officer citing the name of the furniture dealer and other information to use when accessing the Government supply sources. The FF&E package includes the installation of all furniture and furnishings as specified in the FF&E package. The installation dealer specified in the FF&E package will receive, store, if required, transport to the project site, off load, inside deliver, unpack, assemble, place/install, clean, if required, and dispose of all the trash for all furniture and furnishings. The Contractor's Interior Designer will be responsible for specifying installation services and warehousing, as required, for all collateral equipment. It is the Contractor's responsibility to coordinate the building completion, occupancy, and furniture installation dates with the installation dealer specified in the FF&E package. Any costs associated with storing or delaying furniture shipments is the responsibility of the Construction Contractor. Davis Bacon wages do not apply to the FF&E installer accessed through Government supply sources. The Contractor should

anticipate providing a deposit of between 30% and 50% of the furniture costs when placing their order.

All movable furnishings shall be installed in accordance with the manufacturer's instructions and warranty requirements. All movable furnishings shall be level and aligned and all doors, drawers and accessories shall be level and aligned to open, close and otherwise operate smoothly and securely. All systems furniture shall be installed by the systems furniture manufacturer's dealer of record and not by the General Contractor.

c. **Furnishings for Special Functions:** Contractor shall coordinate shop equipment, audiovisual equipment, and specialty equipment, with the building systems.

SECTION F. SPECIAL CONSTRUCTION AND DEMOLITION

F1010 SPECIAL STRUCTURES

1. PRE-ENGINEERED BUILDINGS

Provide the design and installation in accordance with the UFC 3-100-10, *Architecture* and UFC 3-300-10N, *Structural Engineering.*

a. **Design Requirements -** The metal building manufacturer shall have AISC FCD, category MB certification. The Metal Building System design shall be in accordance with the Metal Building Manufacturers Association (MBMA) *Metal Building Systems Manual*. All structural design shall comply with the provisions of Section B10, "Superstructures", above.

b. **Additional Roof Design Requirements -** Roof Decking – In addition to any other load requirements, roof decking shall be designed to support a 91 kg (200-pound) concentrated load at mid-span on a 300 mm (12-inch) wide section of deck.

c. **Deflection –** the maximum deflection for –

1) Structural Members - main framing members shall be L/240.

2) Purlins and Roof Panels: The deflection due to live, snow, or wind shall not exceed L/180.

3) For buildings with masonry infill, limit frame sway to L/600th of building eave height.

4) Wall Panels - Maximum deflection of wall panels due to wind loads shall be L/120th of their respective spans except that when interior finishes are used the maximum allowable deflection shall be limited to L/180th of their respective spans.

d. **Wall and Roof materials –**

1) Alum/Zinc-Coated Steel Sheet: ASTM A792/ A792M, AZ 55.

2) Aluminum Sheet: Alloy 3004 Alclad conforming to ASTM B209.

3) Framing and Structural Members – Steel - ASTM A992 / A992M, ASTM A529/ A529M, ASTM A572/ A572M, or ASTM A588/ A588M.

4) Framing and Structural Members, Aluminum: ASTM B221 or ASTM C308

e. **Structural Tube:** ASTM A500 or ASTM B221.

f. **Fasteners** - Shall be compatible with the materials they are fastening to, be gasketed when exposed to weather to prevent leaks, and shall provide both shear and tensile strengths not less than 3,336 N (750 pounds) per fastener. The main fastening system shall use concealed fasteners, however, when exposed fasteners are needed, color fasteners shall be color coated to match wall/roof panels.

g. **Light Transmitting Roof Panels (Non-Insulated):** ASTM D3841, Type II, Grade 1.

h. **Insulatio**n: Blanket-type fiberglass insulation with a factory applied facing on one side and having a permeance rating of 0.05 or less in accordance with ASTM E96. Flame Spread Rating 75 or less, and a Smoke Developed Rating of 150 or less when tested in accordance with ASTM E84.

i. **Panel Finish -** Factory Color Finish - Provide factory applied baked coatings to the exterior and interior of metal wall panels and metal accessories. Provide exterior primer standard with panel manufacturer but not less than 0.8 mil dry film thickness (DFT). Provide PVDF exterior finish top coat of 70 percent inorganic pigments with 0.8 mil DFT. Provide factory-applied clear finish over the color topcoat and edge coating for projects within 91 meters of a water shoreline or industrial environments. Field apply 70 percent PVDF clear coat to unfinished panel edges or field cut panels. Interior finish exposed to sun or rain shall be the same coating and DFT as the exterior coating. Interior finish protected from sun or rain exposure shall receive 1.0 mil DFT coating of siliconized polyester (SMP) resin coating with organic or blended pigments and manufacturer's standard primer.

F20 SELECTIVE BUILDING DEMOLITION

In general terms, demolition work shall include the removal and effective management and disposition of existing construction and or structures. Contractor shall take care to prevent damage to existing utilities and construction that are not scheduled for demolition. If damage occurs, the Contractor shall make repairs to the satisfaction of the Contracting Officer and at no cost to the Government. Comply with local Activity and Installation local requirements regarding demolition and removal. Unless otherwise specified in Part 3, all demolished materials and equipment must be removed from government property in accordance with applicable laws and regulations, including local Activity or Installation regulations. Selling of demolished or salvaged materials and equipment on government properties is prohibited.

Demolition Plan and Environmental Protection Plan: No demolition work shall take place until a Demolition Plan, Environmental Protection Plan, Safety Plan (including

Activity Hazard Analysis), Asbestos Abatement Plan, and a Lead Abatement Plan have been submitted to, and approved by, the Contracting Officer. The Plans shall take into consideration, and indicate method of removal, disposition, and abatement of environmentally hazardous materials. Demolition, disposition, and abatement of hazardous materials must comply with all applicable Local, State, and Federal regulations and laws. If destructive investigation is to occur, the Contracting Officer shall approve a Destructive Investigation Plan.

When hazardous materials such as asbestos, lead paint, PCB and other hazardous materials are involved in the performance of the work, the contractor shall abate, remove and manage the hazardous materials in construction and finish materials such as insulation, flooring, wall materials, ceiling materials, roofing materials, heating, plumbing, ventilation, air conditioning equipment and installations in accordance with National as well as local Environmental Protection Laws and Regulations.

F2020 HAZARDOUS COMPONENT ABATEMENT

1. **Asbestos in DoD Schools:** For projects that require removal or disturbance of asbestos containing materials within DoD schools, perform work in accordance with the edited UFGS 02 82 14.00 10, *Asbestos Hazard Control Activities*.

2. **Asbestos Materials:** Asbestos shall be removed, transported and managed in accordance with the following regulations: 29 CFR 1926.1101, and 40 CFR 61-Subpart M.

   Category I & II Nonfriable: Demolition of Category I & II nonfriable asbestos containing materials (approved to be left in place during building demolition) shall be performed in accordance with 40 CFR 61 – Subpart M.

3. **Lead Based Paint in Child Occupied Facilities:** For projects that require removal or disturbance of painted surfaces within a child occupied facility, perform work in accordance with the edited UFGS 02 83 19.00 10, *Lead Based Paint Hazard Abatement, Target Housing and Child Occupied Facilities.*

4. **Paint Containing Lead, Cadmium and Chromium:** Work which requires the disturbance of paint that have been determined to contain all or any of the following: lead, cadmium and chromium must be performed in accordance with: 29 CFR 1926.62, 29 CFR 1926.1126 and 29 CFR 1926.1127.

5. **Mercury & LLR Components:** Work which requires removal of mercury and LLR components shall be performed in accordance with: 29 CFR 1910.1000, 10 CFR 20, and 40 CFR 273.

6. **PCBs:** Work which requires removal of PCB containing components or materials shall be performed in accordance with 29 CFR 1910.1000, 40 CFR 761, and 40 CFR 273.

7. **Hazardous Materials Reporting:**

   a. **Daily Report**: Notify the Contracting Officer of work involving hazardous materials abatement and removal, including the quantities involved, on daily reports.

b. **Hazardous Material Inventory Report*:*** The Contractor shall provide a list of all hazardous materials used on the site.

SECTION G. BUILDING SITEWORK

G10 SITE PREPARATIONS

1. **General Requirements:** Building site work includes site preparation, site improvements, site civil/mechanical utilities, site electrical utilities, exterior furnishings, landscaping, and irrigation. Provide site work in accordance with UFC 3-200-10N, *Civil Engineering*, which accommodates regional requirements (see paragraph 1-6).

2. **Project Limitations:** Prior to the start of design, the contractor shall determine the exact limit-of-work line for the project periphery, considering items such as, but not limited to, utility work, landscape re-vegetation of disturbed areas, and lay down areas. The Civil Engineer and Landscape Architect of Record shall determine limit-of-work lines. Minimize the impact of construction activity on operations and neighboring facilities.

3. **Geotechnical Data:** A geotechnical engineer shall conduct the subsurface exploration, investigation/evaluation, testing, and analysis that the Designer of Record deems necessary for the design and construction of the proposed facilities, including building pad, structure, pavement sections, repairs, overlays, stormwater management facilities, utility structure foundations, septic systems, and other features requiring soil support.

G1010 SITE CLEARING

1. **Existing Utilities:** When the Contractor is to work at a site that has existing utilities, the contractor is responsible for coordination with Contracting Officer and utility companies for staking out, capping, connection and relocation of any existing utility systems or traffic interruption. Notify utility locator service for area where Project is located before site clearing.

2. **Interruption:** All interruption to the existing utilities and traffic shall be coordinated with and approved by the Contracting Officer not less than 14 calendar days in advance of such interruption.

G1020 SITE DEMOLITION & RELOCATIONS

Abandon utility systems in-place conforming to applicable codes and regulations, removing their presence from the ground surface and clearly indicating that they have been abandoned. Remove utilities underneath or within 3.0 m (10 feet) of any new facilities. Fill abandoned gravity systems with flowable fill. Fill abandoned utility system piping under pavements subject to potential vehicle loading with flowable fill.

Remove existing utility structures to 900 mm (3 feet) below existing or new adjacent grade, whichever is greater. Break up bases to permit drainage. Fill with clean sand.

Comply with the requirements of the utility provider concerning utility relocation.

G1030 SITE EARTHWORK

The DOR shall utilize UFGS Section 31 23 00.00 20 for the project specification and shall submit the edited section as a part of the design submittal. Perform quality assurance for earthwork in accordance with UFGS Section 31 23 00.00 20. If sheeting/shoring or dewatering is required, the Contractor shall provide a registered Professional Engineer to provide excavation, sheeting, shoring, and dewatering plans and inspection of excavations and soil/groundwater conditions throughout construction. The Engineer shall be responsible for performing pre-construction and periodic site visits throughout construction to assess site conditions. The Engineer, with the concurrence of the contractor and the Contracting Officer, shall update the excavation, sheeting, shoring, and dewatering plans as construction progresses to reflect actual site conditions and shall submit the updated plan and a written report (with professional seal) at least monthly informing the Contractor and the Contracting Officer of the status of the plan and an accounting of Contractor adherence to the plan; specifically addressing any present or potential problems. The Engineer shall be available to meet with the Contracting Officer at any time throughout the contract duration.

G20 SITE IMPROVEMENTS

Provide site improvements as required to make a useable facility that meets functional and operational requirements, incorporates all applicable anti-terrorism, force protection and physical security requirements and blends into the existing environment.

Provide site improvements in conformance with applicable requirements of the Uniform Federal Accessibility Standards.

1. **Pavements:** For work in and adjacent to existing pavements, the Contractor is required to match the existing adjacent finish elevation, materials, paving section and texture, unless otherwise indicated in Part 3 or directed by the Contracting Officer.

   Provide pavement design and pavement section materials in accordance with UFC 3-200-10N, *Civil Engineering*.

2. **Traffic Control:** If the site work involves interference with normal vehicular and or pedestrian traffic, the Contractor shall coordinate with the authority having jurisdiction, propose and obtain approval for traffic control measures that may be required in performance of the work required by the contract.

3. **Performance Verification And Acceptance Testing:**

   a. **Subgrade Preparation:** If required by the Designer of Record, perform proof rolling. Proof rolling shall be performed in the presence of the Contracting Officer. Rutting or pumping of material shall be undercut as directed by the Contracting Officer and replaced with satisfactory soil materials as defined by the Geotechnical Engineer.

   b. **Base Course Performance Verification:** At a minimum, Contractor must perform visual performance verification. Surface shall be smooth with no ruts, sloped or crowned to not pond water.

c. **Bituminous Concrete Pavement Performance Verification:** At a minimum, Contractor must perform visual performance verification. Finished surface shall be uniform in texture and appearance, free of defects such as cracks and creases, and be sloped or crowned so as to not pond water.

d. **Portland Cement Concrete Pavement Performance Verification**: At a minimum, Contractor must perform visual performance verification. Finished surface shall be uniform in texture and appearance, free of defects such as cracks and spalls, and be sloped or crowned so as to not pond water.

e. **Concrete Joint Performance Verification:** Joint sealer that fails to cure properly, or fails to bond to joint walls, or reverts to uncured state or fails in cohesion, or shows excessive air voids, blisters, or has surface defects, swells, or other deficiencies, or is not recessed within indicated tolerances shall be rejected. Remove rejected sealer, re-clean and reseal joints.

G2040 EXTERIOR FURNISHINGS

All site furnishings shall be permanently attached to concrete pads. Site furnishings shall conform to the Base Exterior Architecture Plan (BEAP) or Installation Appearance Plan (IAP) for each Activity. If no product guidance is given, coordinate material, finish and color with architecture (fiberglass and aluminum are not acceptable) and provide to the greatest extent possible, materials with industrial recycled content, preferably from regionally local manufacturers. At a minimum, provide a trash and ash receptacle at each entry and gathering/smoking area.

G2050 LANDSCAPING

1. **Landscaping Design:** The design of landscaped areas shall be in accordance with Presidential Executive Order 13148 of April 2000 with a goal to reduce fertilizers, pesticides, and water use. All non-paved site areas inside the project limits disturbed by construction operations, after meeting plant quantity requirements, shall be covered with plant material or mulch. All projects with planting (except for seeding, sprigging and or sodding) and or irrigation areas shall utilize the design services of a Landscape Architect licensed or certified in the State of the project.

2. **Existing Plant Material to Remain:** Fence at plant or tree drip lines, and maintain all plant material to remain to keep plants healthy and thriving during construction operations. Should any plants die or are damaged during this period or during the Landscape Establishment Period, the Contractor, at the direction of the Contracting Officer, shall remove the existing tree and stump and replace with trees of the same genus and species equal to the total caliper of the existing tree. Minimum caliper of replacement trees shall be 100 mm (4 inch). Replace shrubs with 18.9 liter (5 gallon) size container, ground cover with flat containers planted at 200 mm (8 inches) on center, and turf with sod, all of the same genus and species.

3. **Seeding, Sprigging, and Sodding:** Select a permanent seed mix. Apply seed at a time best suited for germination of the selected species. Seeded areas shall achieve a 95-percent coverage of the selected species and be weed free at the end of the Establishment Period. Sodded areas shall achieve 100% coverage and be weed free.

4. **Utilities:** Trees shall not be placed within 10 feet of any above or below-grade utility line or structure.

5. **Green Waste Recycling:** Contact the Public Works Department for potential green waste collection, management, and recycling by the Government.

6. **Plant Quality:** All plants shall be in a healthy, disease and pest-free condition. All seed mixes, sod and sprigs shall be State Certified. Contractor shall provide native species appropriate for the locality.

7. **Plant Quantities:** Within project limits, provide for building periphery, parking lot and perimeter site planting, not covered by buildings or paving, with a minimum of one tree and a minimum of 8 shrubs per 83.6 square meter (900 square feet) of landscape area. Provide a minimum tree size of 200 mm (24 inch) box/50mm (2 inch) caliper, or if within an anti-terrorism zone provide a minimum size of 910 mm (36 inch) box/76 mm (3 inch) caliper. For shrubs provide a minimum size of 19-liter (5 gallon), for ground cover provide a minimum size of 3.85-liter (1 gallon) containers. For trees and shrubs within concrete or other non-permeable paved area, allow a minimum non-paved area of 1.2 m by 2.4 m (4 feet by 8 feet per tree).

8. **Edging & Mulching Materials:** Provide 3/16-inch thick by 4-inch deep galvanized metal or 6-inch by 6-inch Concrete edging dividing all turf and shrub areas and dividing all planted and non-planted inorganic mulch areas. Plastic edging is not allowed. Mulch all plant areas with a minimum 3-inch layer of mulch to match local area material.

9. **Weed Control Fabric:** Provide an ultra-violet-resistant weed barrier fabric of polypropylene or polyester fabric specifically designed for weed control purposes beneath all mulched non-planted areas with a minimum weight of 0.11 kg per square meter (5 ounces per square yard) with a minimum thickness of 0.50mm (20 mils) with a 20-year minimum guarantee.

10. **Irrigation:** If specified in Part 3, all planting areas shall be automatically irrigated with a permanent, below-grade system.

    a. **Irrigation Design and Testing:** Provide 100 percent sprinkler head coverage. Provide pop-up heads in turf and when adjacent to turf, walks, roads, parking lots, and in sparsely planted landscape areas where pedestrians may circulate. Provide pop-up heads project-wide on high-traffic sites such as, but not limited to, dining, housing, entertainment, daycare, education and recreation facilities. Verify adequate water pressure for irrigation purposes and provide booster pumps and or pressure regulation as required. Provide minimum 12-inch cover over PVC irrigation pipe. 13 mm (1/2 inch) pipe is not allowed. The Landscape Contractor shall test the entire system in the presence of the Contracting Officer (and for projects greater than 5,000 square feet, the Landscape Architect of Record shall attend,) to ensure proper performance. All irrigation components shall be commercial or institutional quality. Provide rain shut-off device and watertight splices. Sprinkler heads, bodies and nozzles shall be of the same manufacturer.

    b. **Irrigation Operation and Control:** Assure systems will automatically operate on an “irrigation window” between 2130-0530. Provide compatible and fully functional

control if a central control system exists on base. Otherwise, provide evaporo-transpiration measuring control with flow meter and master valve with controller capable of indicating visible or auditory notification, such as a blinking light or beeping sound, of system shut-off.

c. **Irrigation Controller Charts:** Provide one chart for each new controller or existing re-sequenced controller. The chart shall be an actual plan reduced to fit inside maximum dimensions of the controller housing. Use black line print for chart and a different color to indicate each station area of coverage. After chart is completed and approved for final acceptance, seal chart between two 0.5 mm (20 mil) pieces of clear plastic. The chart shall be affixed to the inside of the controller cabinet door using approved mastic or fastening system.

d. **Irrigation Zoning:** Provide separate control valves for differing solar exposures, for areas with differing irrigation head types or differing precipitation rates, and top and bottom of slopes. Provide a separate irrigation backflow prevention device and water meter. Turf and shrubs/groundcover are not allowed on the same valve. Provide separate concrete valve box with cast iron lid and valve ID for each valve and wire splice. Provide quick coupling valves at 30m (100 feet) on center. Provide in-head check valves for sloped areas with 150 mm (0.5 feet) or more in elevation change.

e. **Temporary Irrigation:** Provide ultra-violet resistant pipe and fittings for above-grade, temporary irrigation. Only non-pressure pipe is allowed above grade. Irrigation systems intended to remain in place longer than one year shall be installed below grade.

f. **Non-Potable Irrigation:** Provide lavender-colored pipe, sprinkler head and quick coupler caps, valve tags, signage, and associated filtration equipment.

11. Landscape and Irrigation Establishment Period and Guarantee: Provide the following landscape and irrigation establishment period for landscaped areas within the limits of work and areas disturbed by construction:

365 days: Trees, Shrubs, Ground Cover, Vines, and Ornamental Grasses.
120 days: Turf Areas (Active growing season).

The Landscape Architect-of-Record shall, along with the Contracting Officer, attend, approve and document the start of the Establishment Period and document quarterly and final inspections. During this period, the Contractor shall perform tasks which shall include, but not be limited to, watering, weeding, eradicating pests, adjust irrigation and replenish mulch to assure all plant material is in a healthy and thriving condition or the Contractor shall replace plant material at his own expense. All trees, shrubs, and ground covers that die or have 20 percent or more of their crowns that die during planting operations or the guarantee period shall be replaced with healthy plants of the same species or variety. Broadcast seeded or hydro-seeded areas that do not achieve the 95-percent coverage of the selected species by the end of the Establishment Period shall be reseeded by the same method and be maintained an additional 120 days to assure coverage. Sodded turf areas should be 100% at the end of the guarantee period. Turf shall be maintained in a manner that promotes proper health, growth, rich natural

green color, and a neat, uniform, manicured appearance. Mow weekly during the growing season and remove excess clippings.

G30 SITE CIVIL/MECHANICAL UTILITIES

Develop the site to provide water, fire protection, sanitary sewer, storm drainage, heating, cooling and fuel distribution services that meet the requirements of each utility provider and each applicable regulatory agency that governs and issues permits for the construction and operation of these systems.

Coordinate with the local utility providers and pay any fees or charges required to connect to their utility.

Provide all required fittings, connections and accessories required for a complete and usable system. All equipment shall be installed per the criteria indicated in this RFP and the manufacturer's recommendations. Where the word "should" is used in the manufacturer's recommendations, substitute the word "shall".

G3010 WATER SUPPLY

1. **Water System Design and Construction:** Provide the new water system and connections to the existing water system in accordance with UFC 3-200-10N, *Civil Engineering (paragraph 2-3)*; the utility provider's requirements; or the state waterworks' regulations; whichever is more stringent.

2. **Notifications:** Notify the utility provider of the additional demand generated by the proposed facility. Provide a copy of all correspondence with the utility provider to the Government's Civil/Mechanical Reviewer.

3. **Performance Verification And Acceptance Testing:** Provide testing on water mains and service lines in accordance with the state waterworks' regulations and the following:

   a. Ductile iron and other materials: AWWA C600.
   b. PVC: AWWA C605.

   whichever is more stringent. Do not begin testing on any section of a pipeline where concrete thrust blocks have been provided until at least 5 days after placing of the concrete.

G3020 SANITARY SEWER

1. **Sanitary System Design and Construction:** Provide the new sanitary sewer system and connections to the existing sanitary sewer collection system in accordance with UFC 3-200-10N, *Civil Engineering (paragraphs 2-4 and 2-5)*; the utility provider's requirements; or the state sewerage regulations; whichever is more stringent.

2. **Notifications:** Notify the utility provider of the additional wastewater flow generated by the proposed facility. Provide a copy of all correspondence with the utility provider to the Government Civil Reviewer.

3. **Wastewater Pump Station:** Where required, provide a duplex, grinder pump station in accordance with the utility provider's requirements. Provide pump station wet well of fiberglass construction. Provide adjacent valve vault of precast concrete construction.

   Provide automatic control to start and stop the pump system. Provide automatic level control by floats in accordance with the preferences of the system owner to fill and prevent overflow of the wet well. Provide an emergency pump connection.

   Provide a telephone dialer in the control panel capable of accepting up to 8 telephone numbers. At the control panel provide an alarm horn and light with battery backup. Alarms shall include high liquid wet well level; loss of main power; no flow as sensed by current sensor; and pump failure via overload or motor heat sensor trip. Provide seal failure indicator lights and elapsed time meters.

   Provide electrical connections for a portable emergency generator hook-up sized to start up and maintain the total rated running capacity of the station, including the pumps, controls, lighting, and other auxiliary equipment.

4. **Performance Verification And Acceptance Testing:**

   a. Sanitary Sewer Distribution System Performance Verification: Provide testing on sewer mains and laterals in accordance with the state sewerage regulations. At a minimum, perform the following:

      1) Visual Test: Check each straight run of pipeline for gross deficiencies by holding a light in a manhole; it shall show a full circle of light through the pipeline when viewed from the adjoining end of line.

      2) Leakage Tests: Test lines for leakage by either infiltration tests or exfiltration tests, or by low-pressure air tests in accordance with the following:

         d) Exfiltration Tests: ASTM C 969M (ASTM C 969) and perform calculations in accordance with its Appendix.
         e) Low-pressure Air Tests: Pipelines: ASTM C 924M (ASTM C 924) and perform calculations in accordance with its Appendix. PVC plastic pipelines: UBPPA UNI-B-6 and perform calculations in accordance with its Appendix.

      3) Cross Connection Tests: Cross connection tests shall be observed by the Contracting Officer and the utility provider's inspector.

         a) Perform a tracer study from the project sewer connection to the first manhole downstream on the active sewer system. Use a nontoxic, non-staining sewer tracing dye. Testing shall continue until the dye visually confirms the design connection is appropriate. During the test, the contractor shall monitor the storm drainage system (structures and outfalls) downstream from the project for any sign of cross connection.
         b) Perform a smoke test on the project sewer to verify that project storm drainage inlets or drains have not been connected to the sanitary sewer.

b. Sanitary Sewer Manholes Verification Testing: Provide testing on sanitary sewer manholes in accordance with the state sewerage regulations. At minimum, perform hydraulic testing in accordance with ASTM C 969M (ASTM C 969).

c. Wastewater Pump Station Verification Testing: Test the wastewater pump station in accordance with the state sewerage regulations. Conduct testing on discharge piping and force main in accordance with tests for water distribution mains; see G30, paragraph 1.3.2. Test pumps, controls, and alarms, in operation, under design conditions to ensure proper operation of all equipment.

G3030 STORM SEWER

1. **Storm System Design and Construction:** Provide the new storm sewer system and connections to the existing storm sewer system in accordance with UFC 3-200-10N, *Civil Engineering (paragraph 2-2)*; the utility provider's requirements; or the state stormwater management laws and regulations; whichever is more stringent.

   The Contractor shall make necessary adjustments to the drainage design in order to avoid disruption to existing utilities and to protect existing trees to remain.

   Confirm that the existing receiving system has adequate capacity to receive the additional stormwater flow generated by the project.

2. **Storm Sewer System Performance Verification:** At a minimum, Contractor shall perform visual testing. Check each straight run of pipeline for deficiencies by holding a light in a manhole; it shall show a full circle of light through the pipeline when viewed from the adjoining end of line.

G3060 FUEL DISTRIBUTION

Gas Distribution System: Refer to Section D20 for requirements.

G40 SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

1. **Electrical Utilities Design and Construction:** Site electrical utilities include all exterior electrical work, including the connection to the primary distribution system. This also includes telephone and cable television supplies.

   Provide electrical overhead and underground, distribution systems in accordance with IEEE C2 (National Electrical Safety Code), NFPA 70, local utilities company requirements, and local Activity guidelines.

2. **Coordination With Local Utilities Company and Local Activity:** Service meters for electrical services shall be provided and installed in conformance with the local utilities company requirements and local activity guidelines.

3. **Substations:** When secondary unit substations are required, the Designer of Record shall utilize UFGS Section 26 11 13, *Secondary Unit Substation*, and UFGS Section 26

23 00, *Switchboards and Switchgear*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

4. **Transformers:** When transformers are required, the Designer of Record shall utilize UFGS Section 26 12 19.10, *Three-Phase Pad Mounted Transformers*, UFGS Section 26 12 19.20, *Single-Phase Pad Mounted Transformers*, or UFGS Section 33 71 01.00 20, *Overhead Transmission and Distribution*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

5. **Switches, Controls and Devices:** When switches or control devices are required, the Designer of Record shall utilize UFGS Section 26 13 00.00 20, SF6 *Insulated Pad Mounted Switchgear*, or UFGS Section 33 71 01.00 20, *Overhead Transmission and Distribution*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

G4030 SITE COMMUNICATION & SECURITY

1. **Telephone Distribution System:** Provide all telephone distribution systems in accordance with EIA/TIA Standards, NFPA 70, and the cognizant telephone company requirements.

2. **Cable Television System:** Provide all cable television systems in accordance with NFPA 70, and the cognizant cable television company requirements and BICSI recommendations.

** End of Part 4 **

Small Project Part 6A
Attachments

Attachment A **Project Specific Record Drawings and Utility Plans**

15KV_Switches_PhaseII_General Site Plans.pdf

15KV_Switches_PhaseII_GRXMaps.pdf

15KV_Switches_PhaseII_Elec Site Plans.pdf

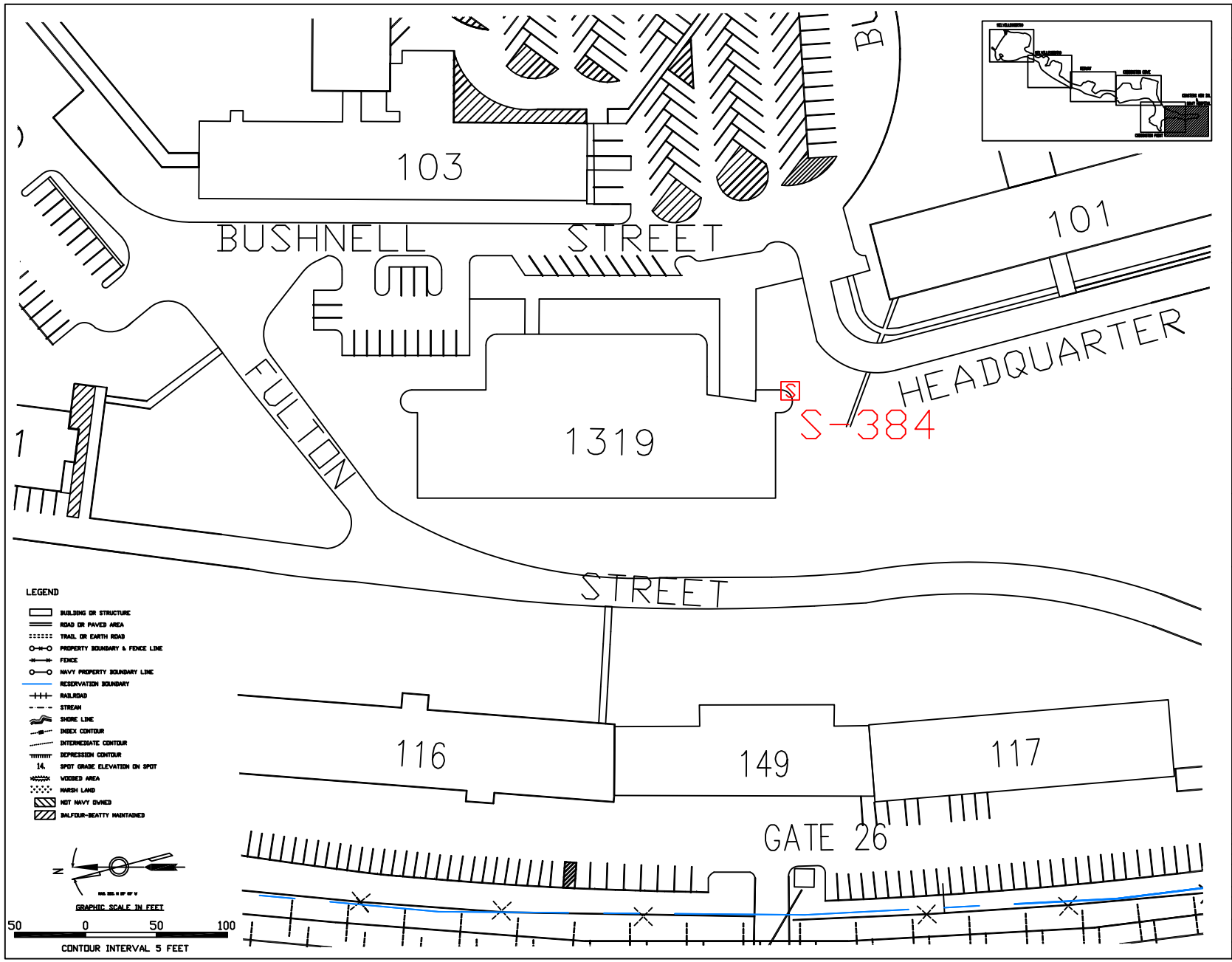
15KV_Switches_PhaseII_Elec Onelines.pdf

15KV_Switches_PhaseII_Sewer Plans.pdf

15KV_Switches_PhaseII_Steam Plans.pdf

15KV_Switches_PhaseII_Storm Plans.pdf

15KV_Switches_PhaseII_Water Plans.pdf



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

EXISTING CONDITION MAP

S-384 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

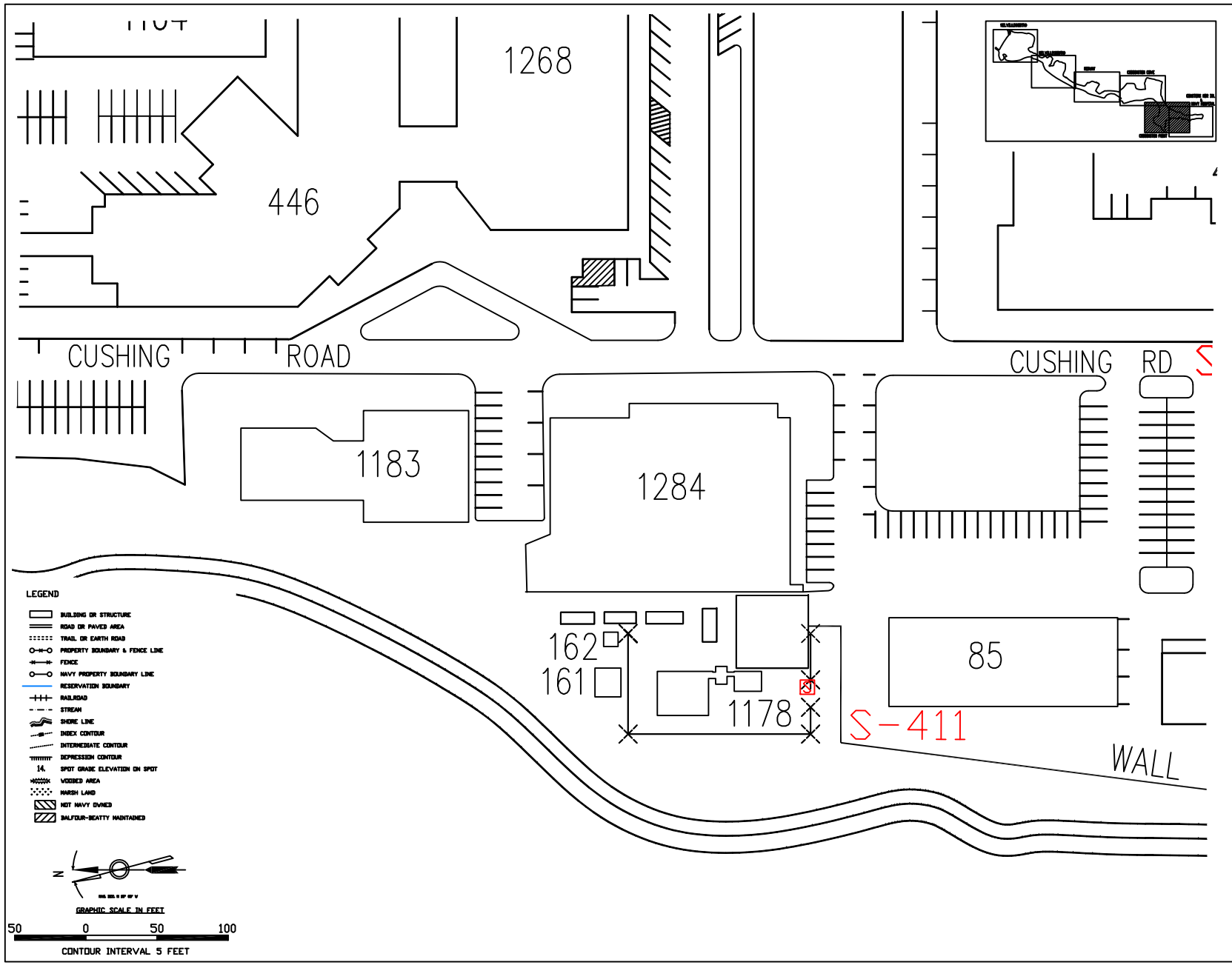
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. ___-___-___

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUPV. ____ CHK. ____
BR. HD. ____
DIV. HD. ____

SATISFACTORY TO ____ DATE ____

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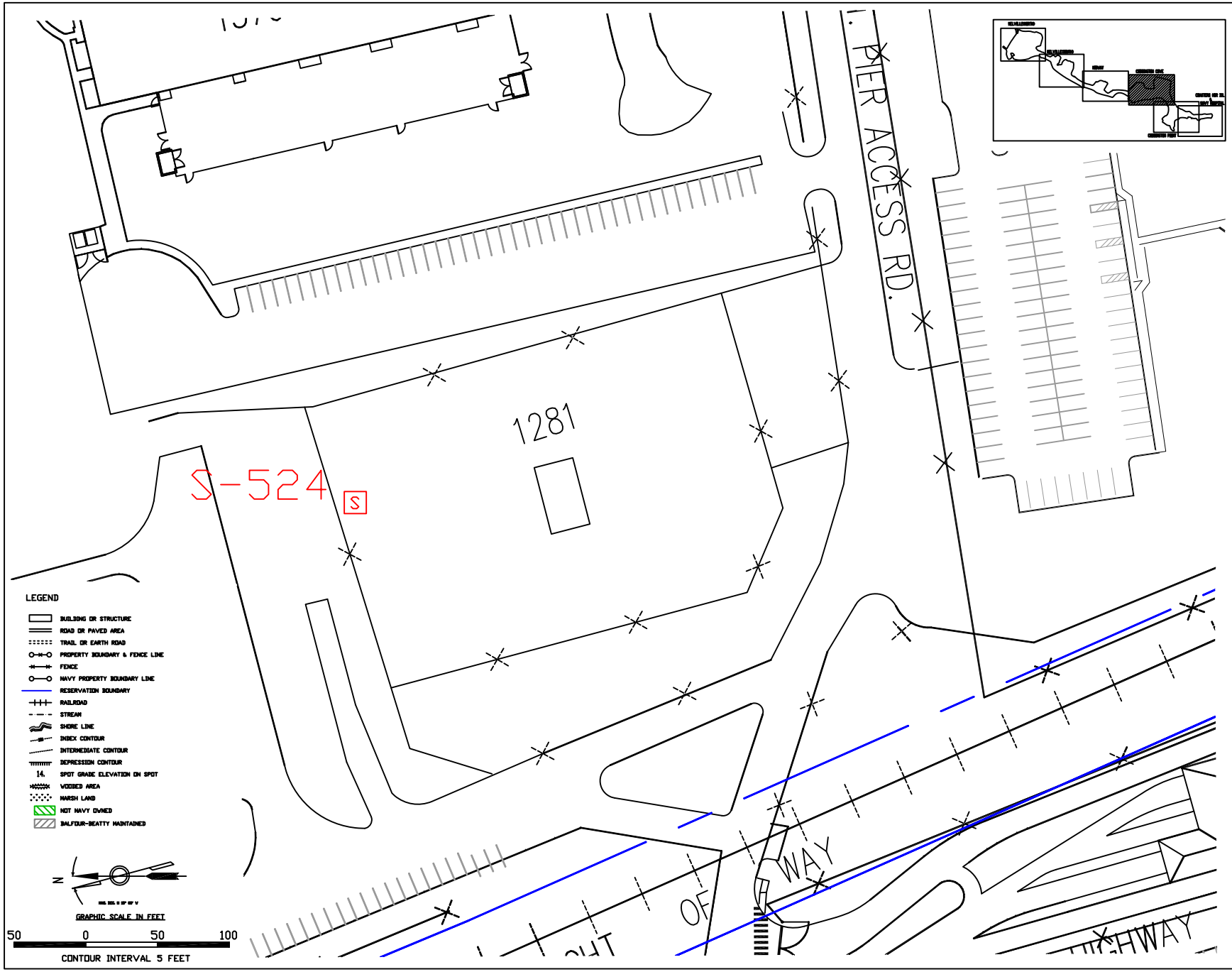
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING CONDITION MAP

S-411 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-__
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — DATE
SUPV. — CHK.
DR. HD.
DIV. HD.

SATISFACTORY TO — DATE

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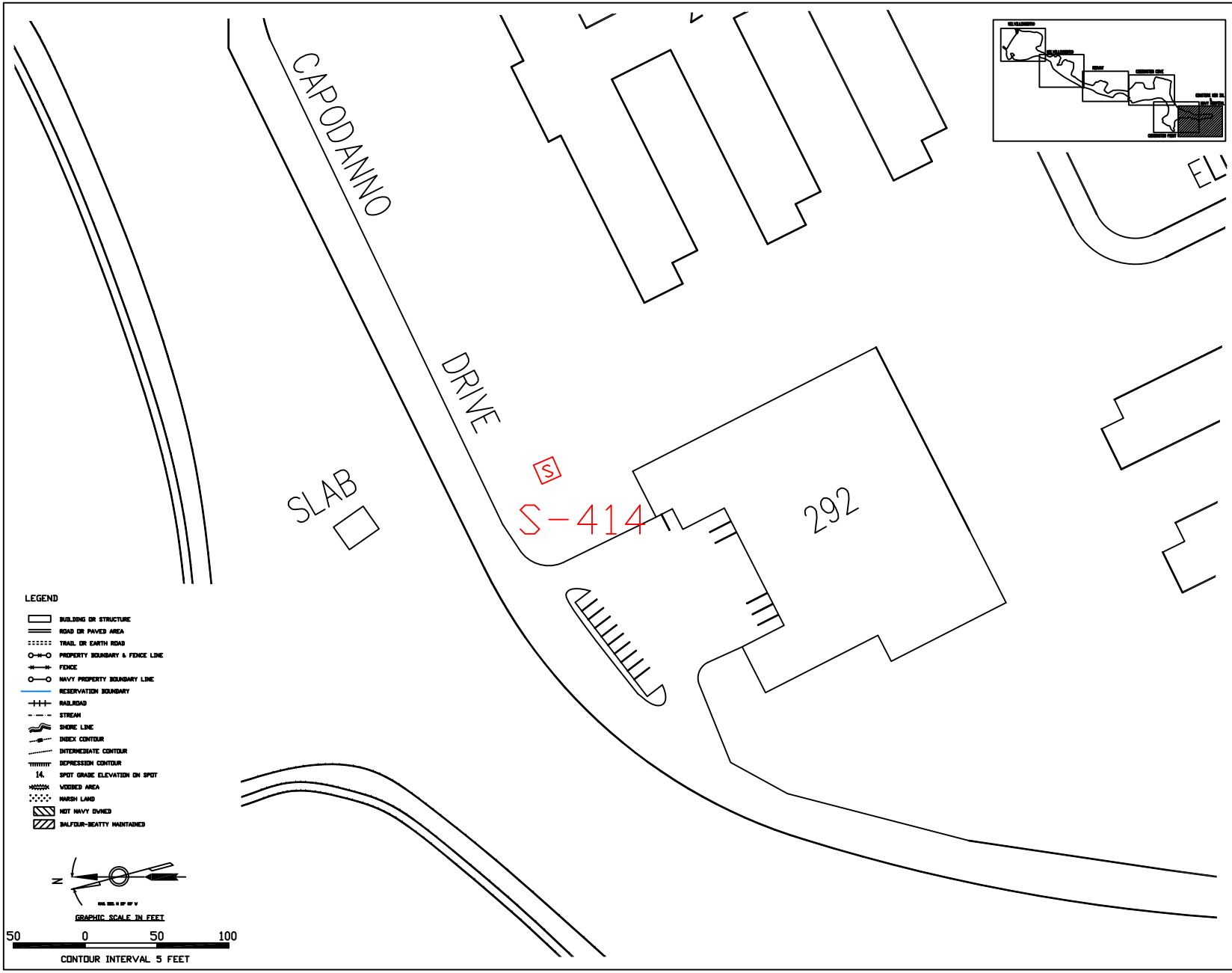
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING CONDITION MAP

S-524 CODDINGTON COVE

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD.
DIV. HD.

SATISFACTORY TO DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

EXISTING CONDITION MAP

S-414 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

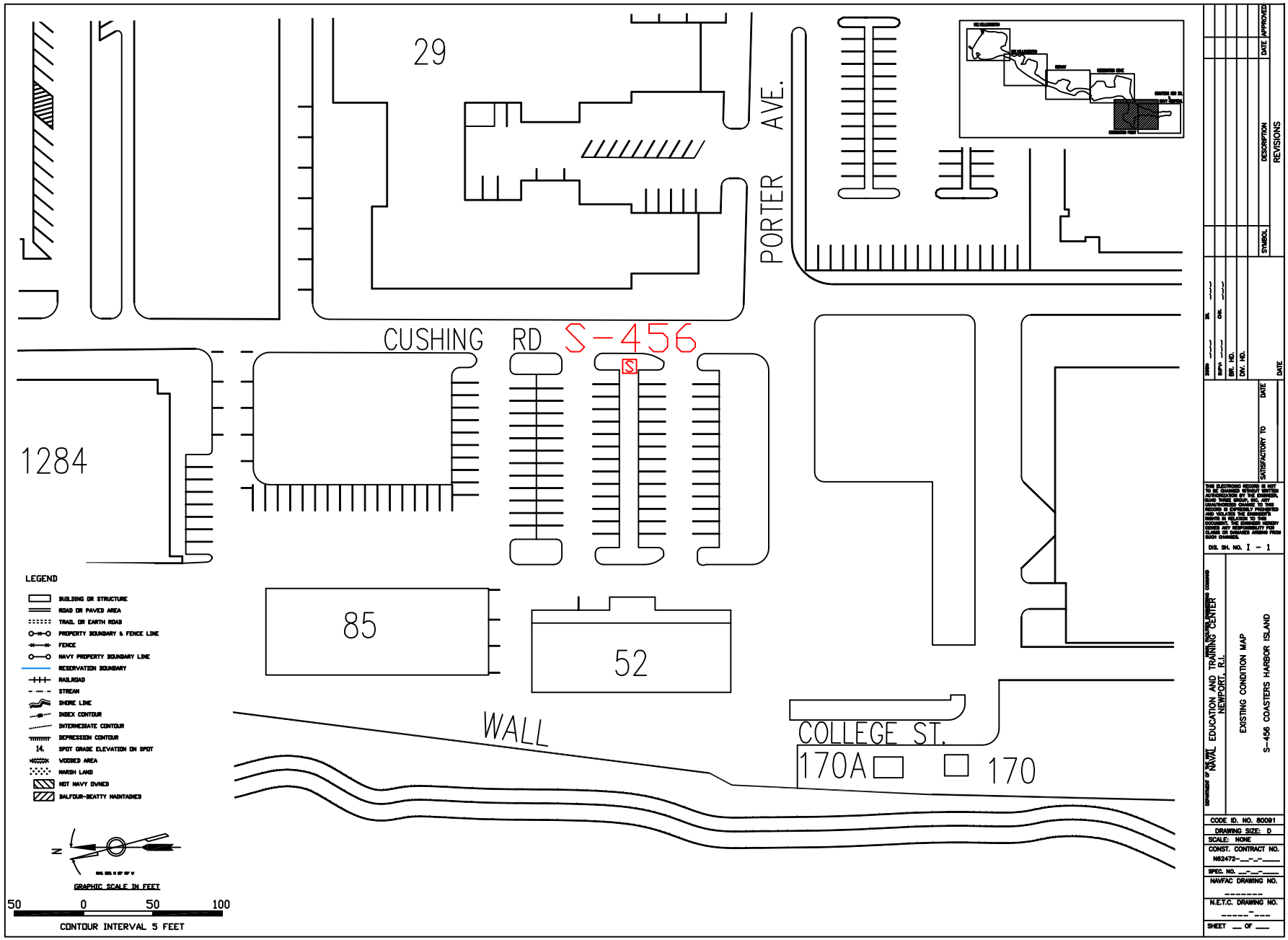
CONST. CONTRACT NO. N62472-__-__-____

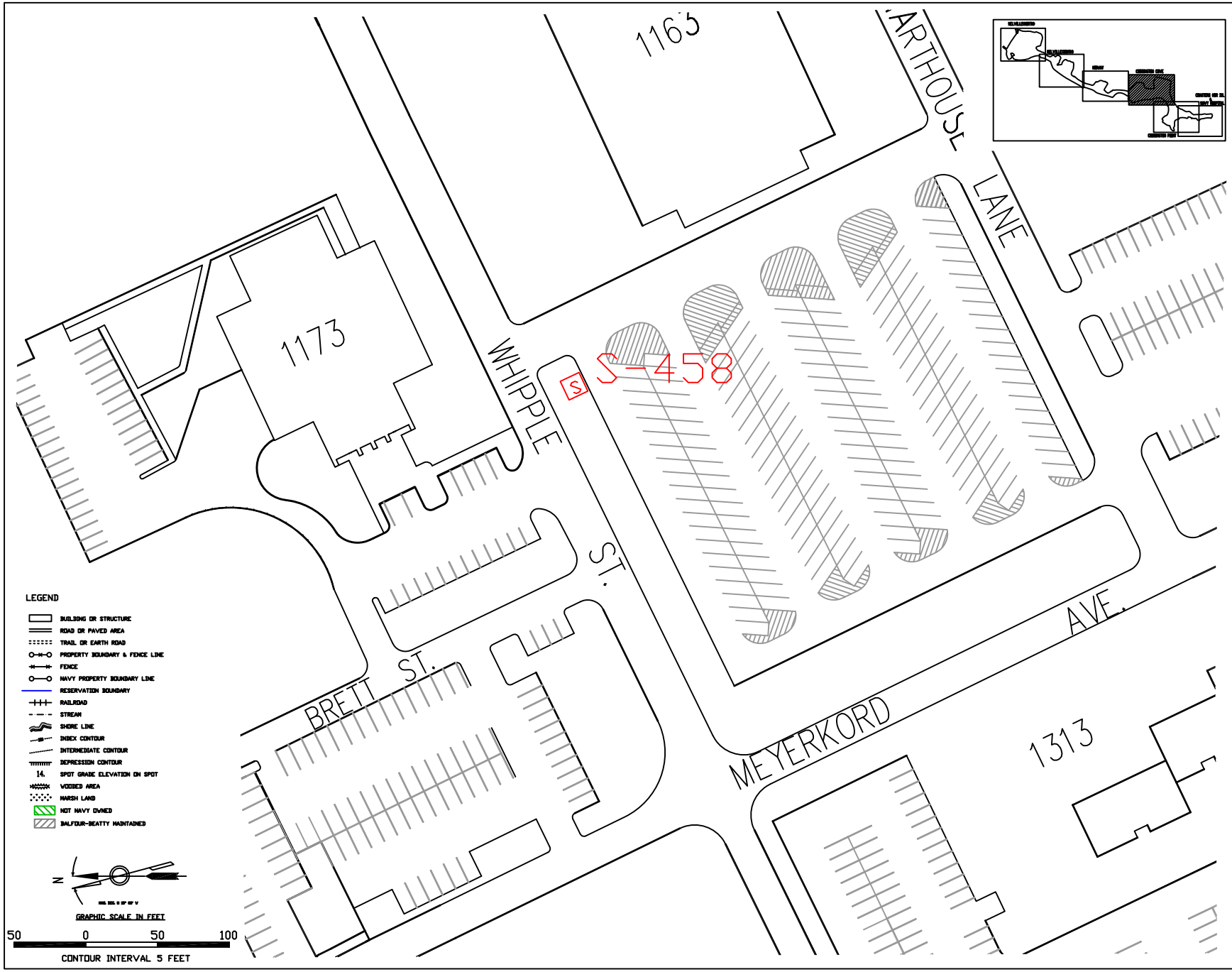
SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF ___


29
PORTER AVE.
CUSHING RD
S-456
1284
85
52
WALL
COLLEGE ST.
170A
170
LEGEND
BUILDING OR STRUCTURE
ROAD OR PAVED AREA
TRAIL OR EARTH ROAD
PROPERTY BOUNDARY & FENCE LINE
FENCE
NAVY PROPERTY BOUNDARY LINE
RESERVATION BOUNDARY
RAILROAD
STREAM
SHORE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
DEPRESSION CONTOUR
14. SPOT GRADE ELEVATION ON SPOT
WOODED AREA
MARSH LAND
NOT NAVY OWNED
BALFOUR-BEATTY MAINTAINED
N
GRAPHIC SCALE IN FEET
50 0 50 100
CONTOUR INTERVAL 5 FEET
SYMBOL
DESCRIPTION
DATE
APPROVED
REVISIONS
DRAWN
SUPV.
DIR. HD.
DIV. HD.
CHK.
DATE
SATISFACTORY TO
DATE
THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DISCLAIMS ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.
DIS. SH. NO. I - 1
DEPARTMENT OF THE NAVY
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.
EXISTING CONDITION MAP
S-456 COASTERS HARBOR ISLAND
CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-__
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV'S ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

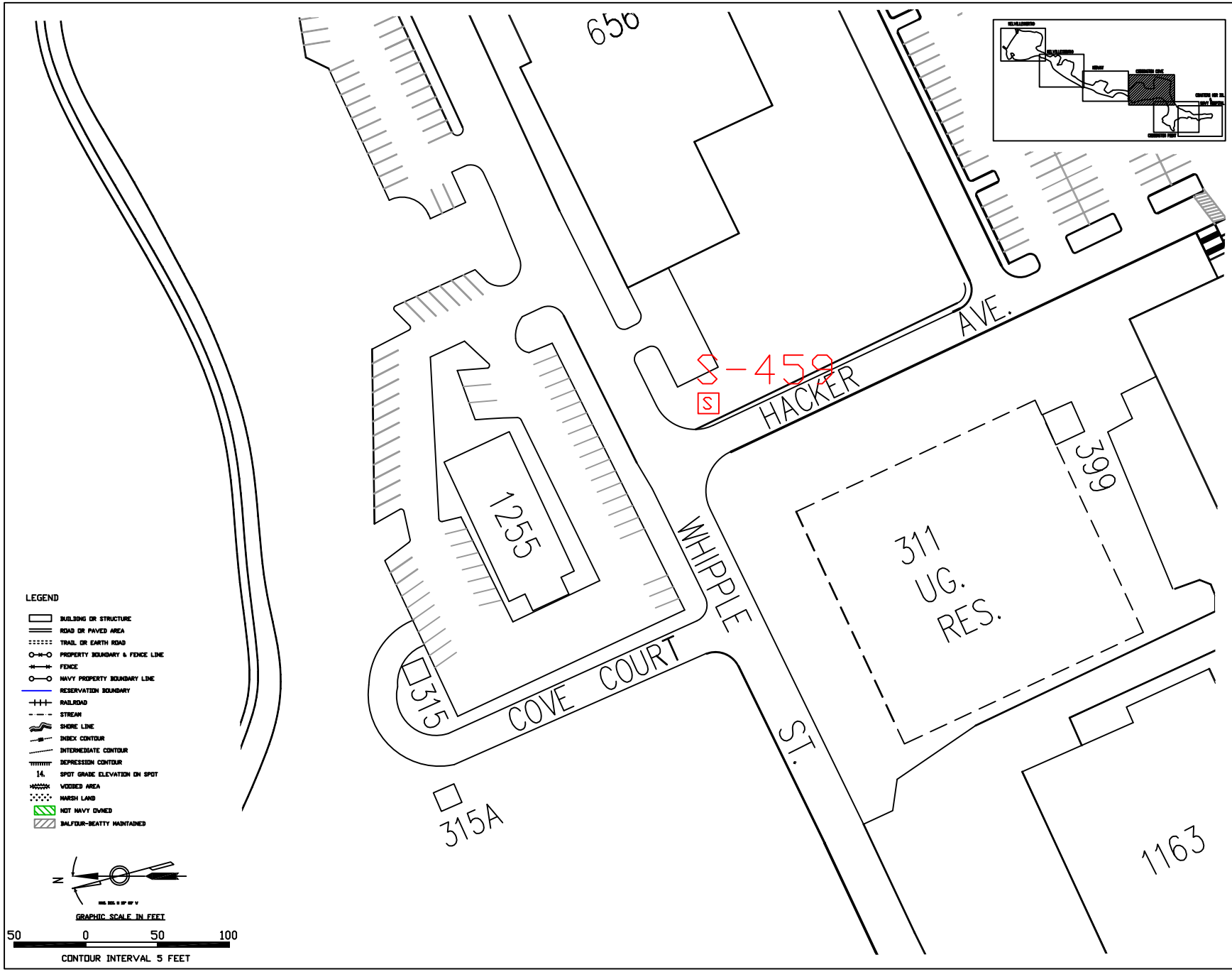
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING CONDITION MAP

S458 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____ - ___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUPV. ____ CHK. ____
DR. HD.
DIV. HD.

SATISFACTORY TO ____ DATE ____

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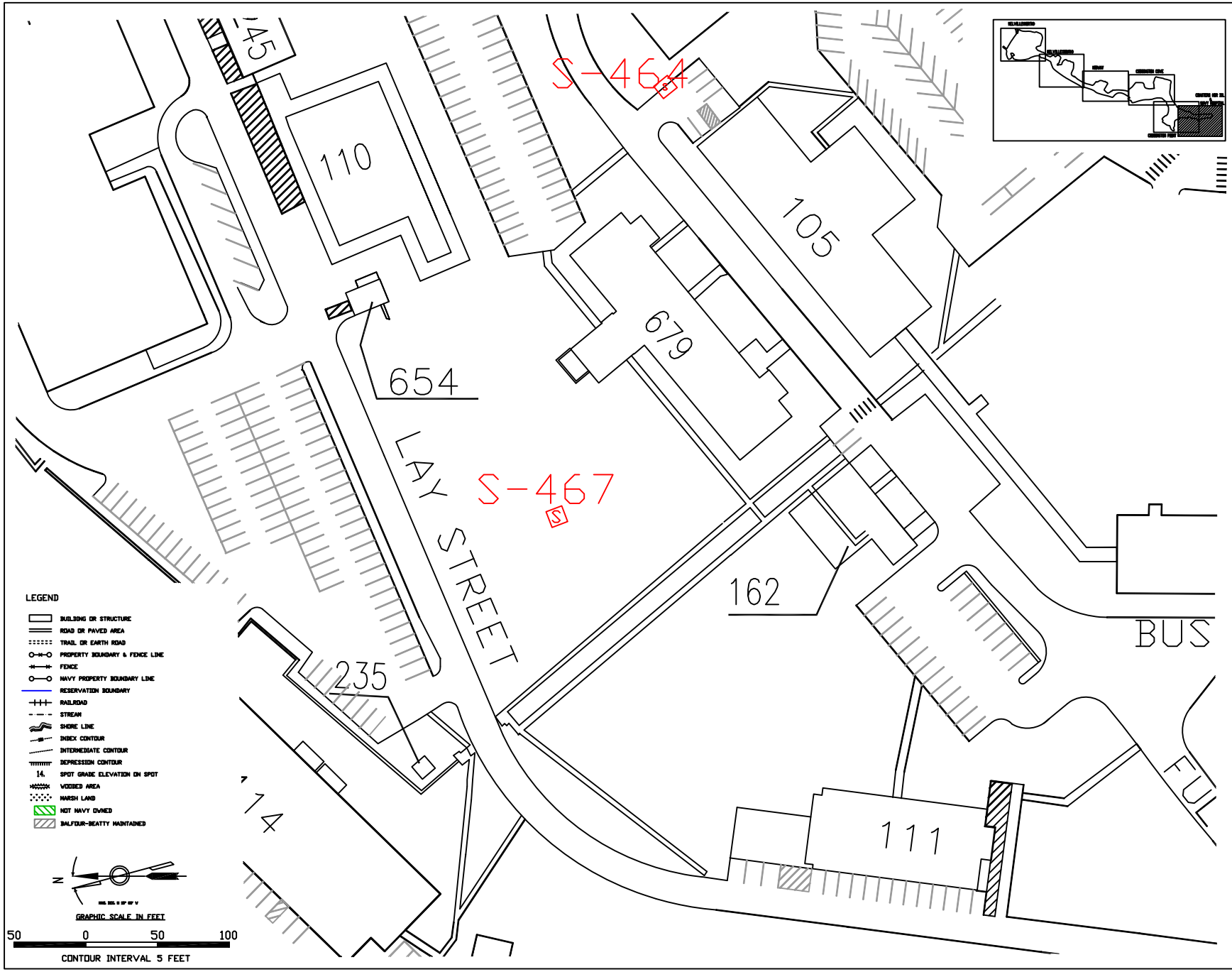
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING CONDITION MAP

S459 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN DR. DATE
SUP'V. CHK.
DIR. HD.
DIV. HD.

SATISFACTORY TO DATE

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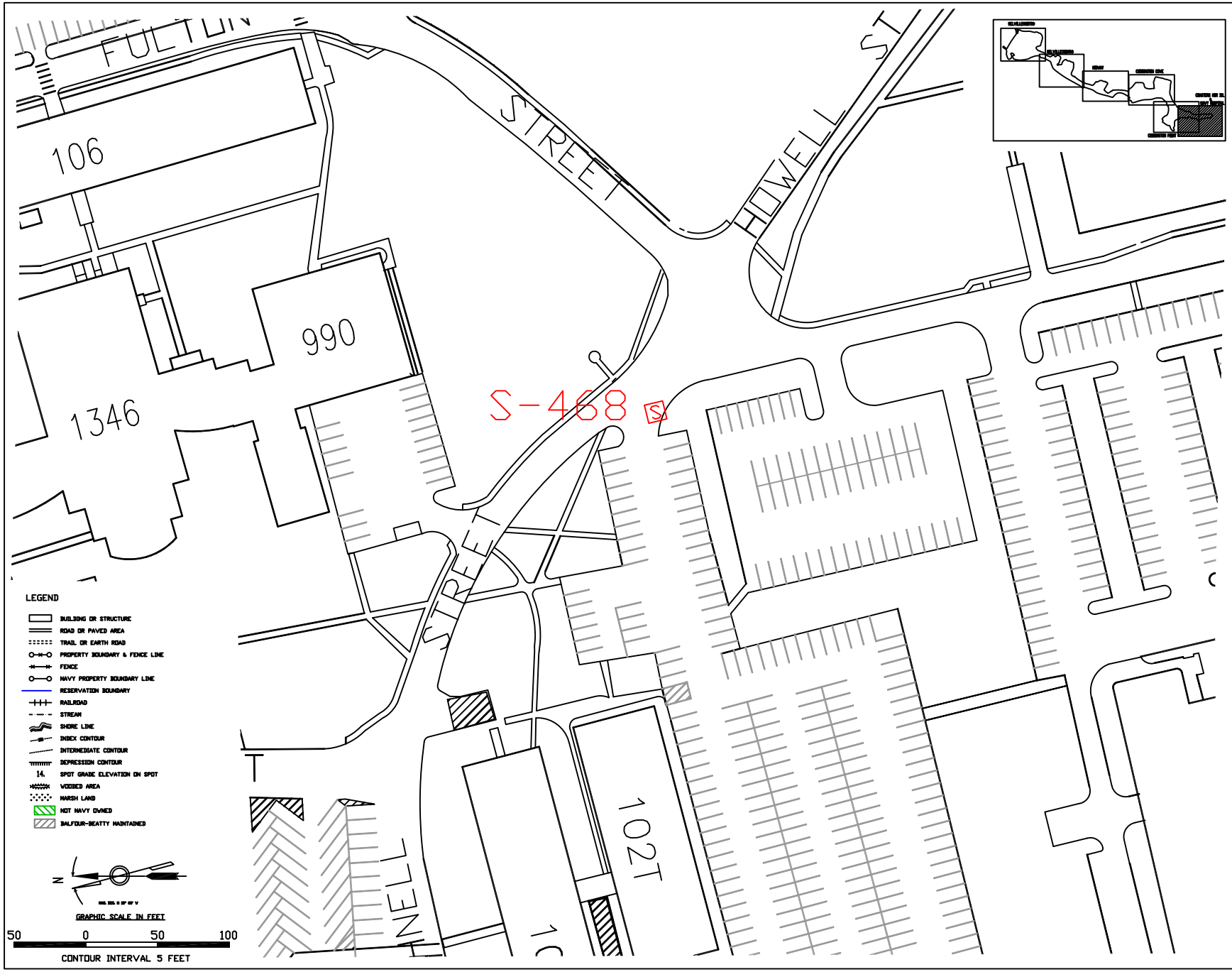
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING CONDITION MAP

S-467 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DIR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING CONDITION MAP

S-468 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

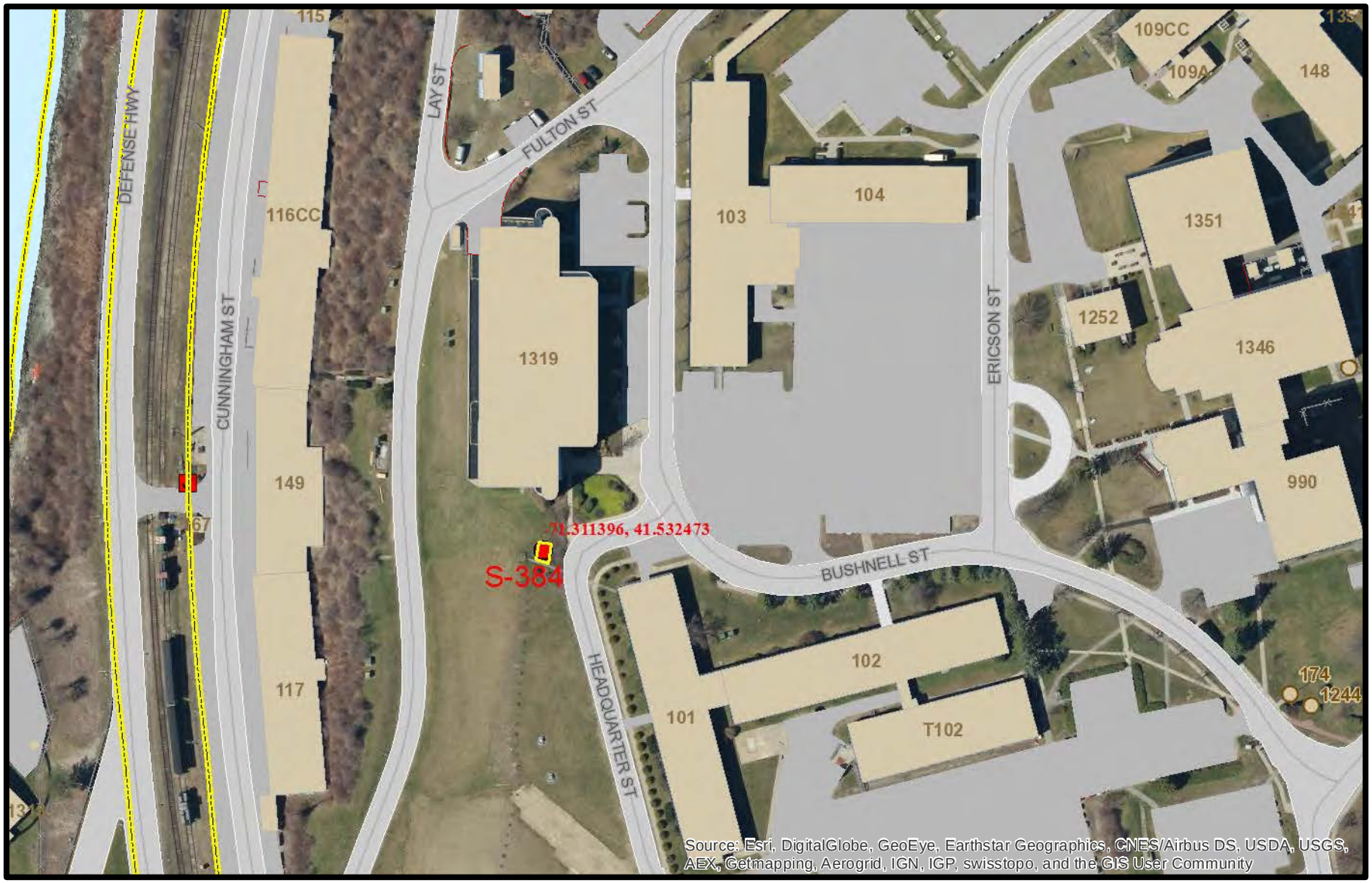
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF ___



Prepared For:

jody.chase@navy.mil
05/11/2016

Map of:

SITE PLAN S-384

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N

Prepared For:

jody.chase@navy.mil

05/12/2016

Map of:

SITE PLAN - S411

FOR OFFICIAL USE ONLY

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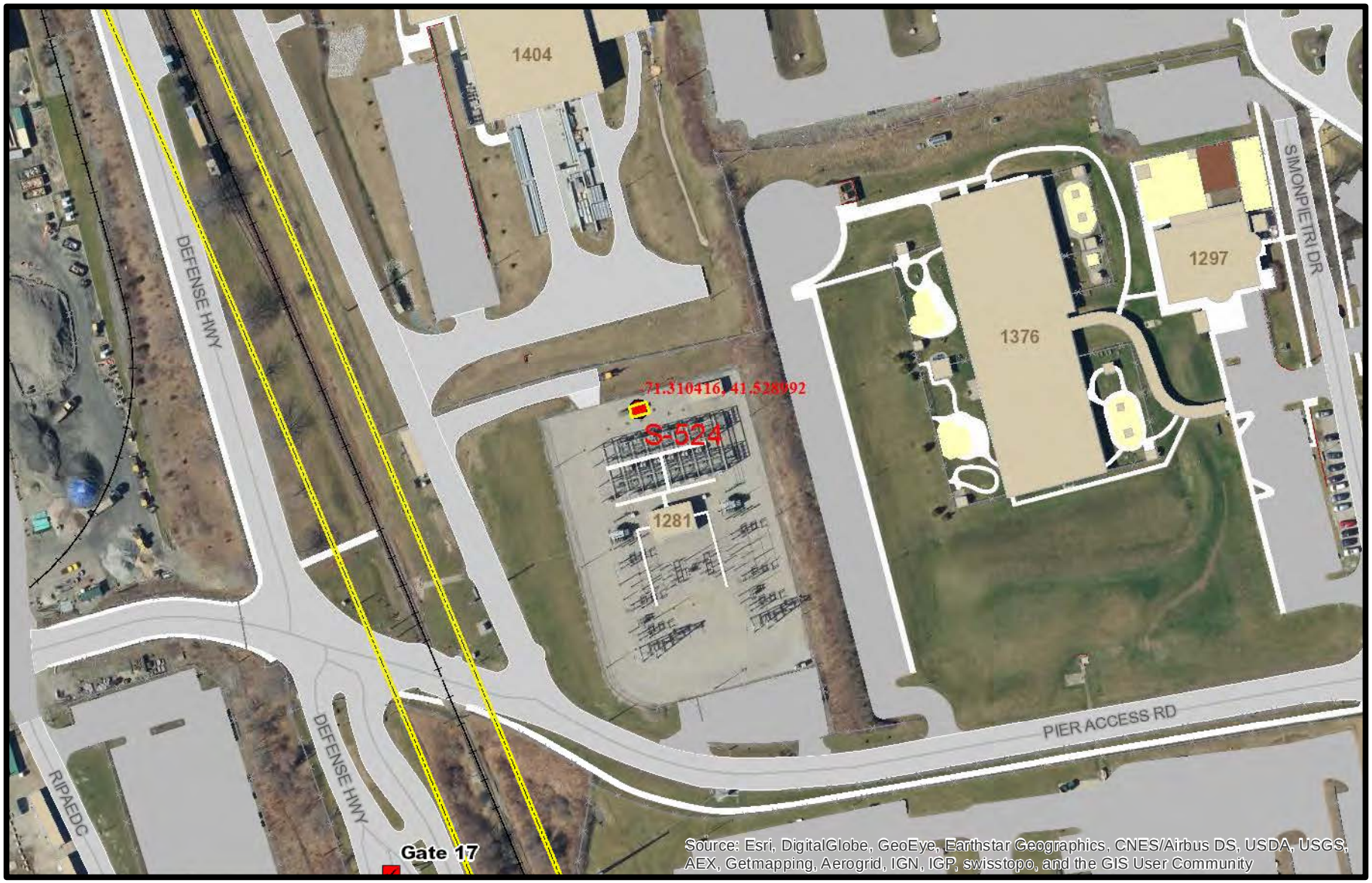
Document Generated from RSIMS Internet Mapping Application

N



Prepared For:

jody.chase@navy.mil
05/17/2016

Map of:

SITE PLAN S-524

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Prepared For:

jody.chase@navy.mil
05/12/2016

Map of:

SITE PLAN - S414

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Document Generated from RSIMS Internet Mapping Application

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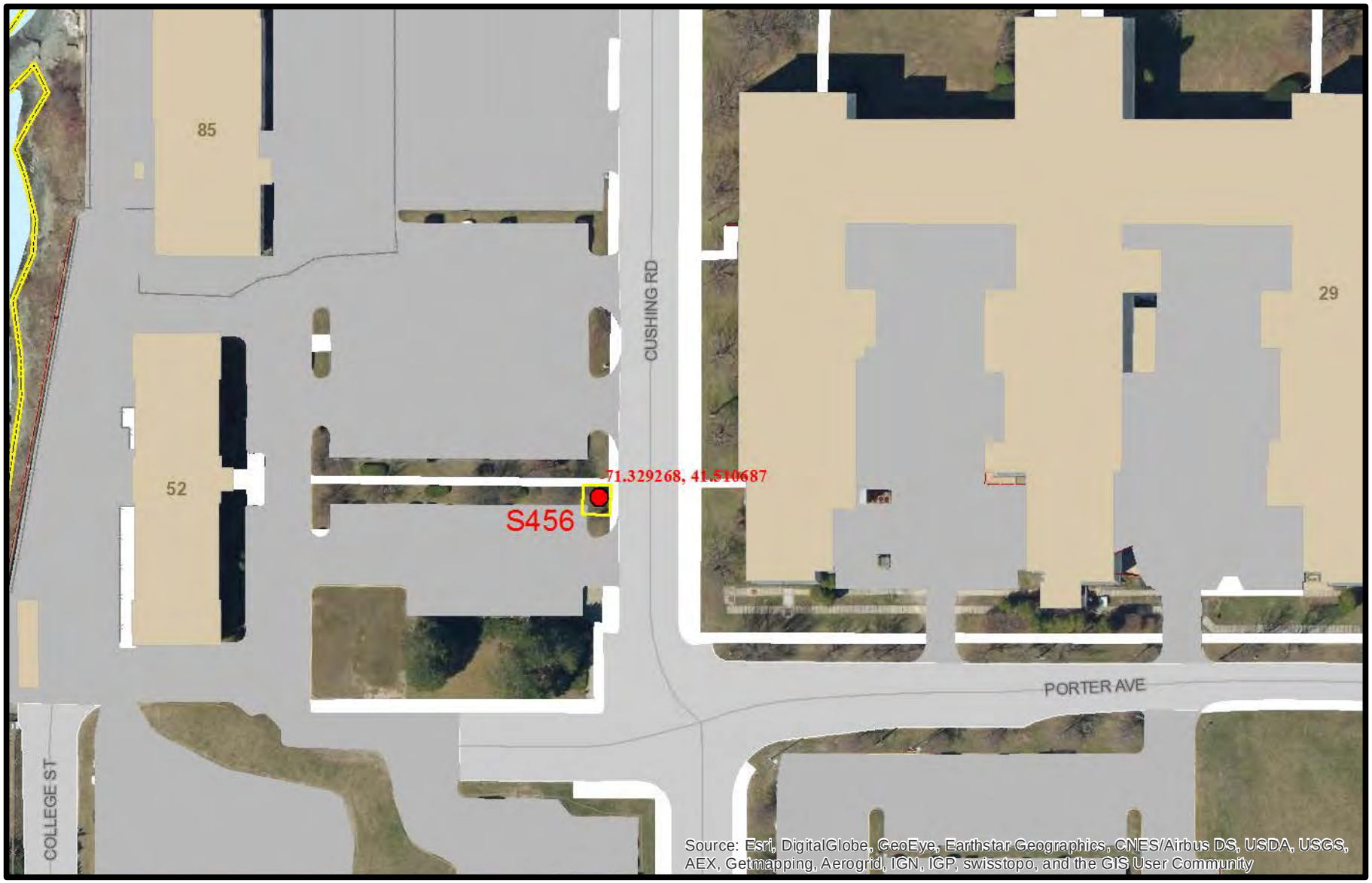


Prepared For:

jody.chase@navy.mil
05/12/2016

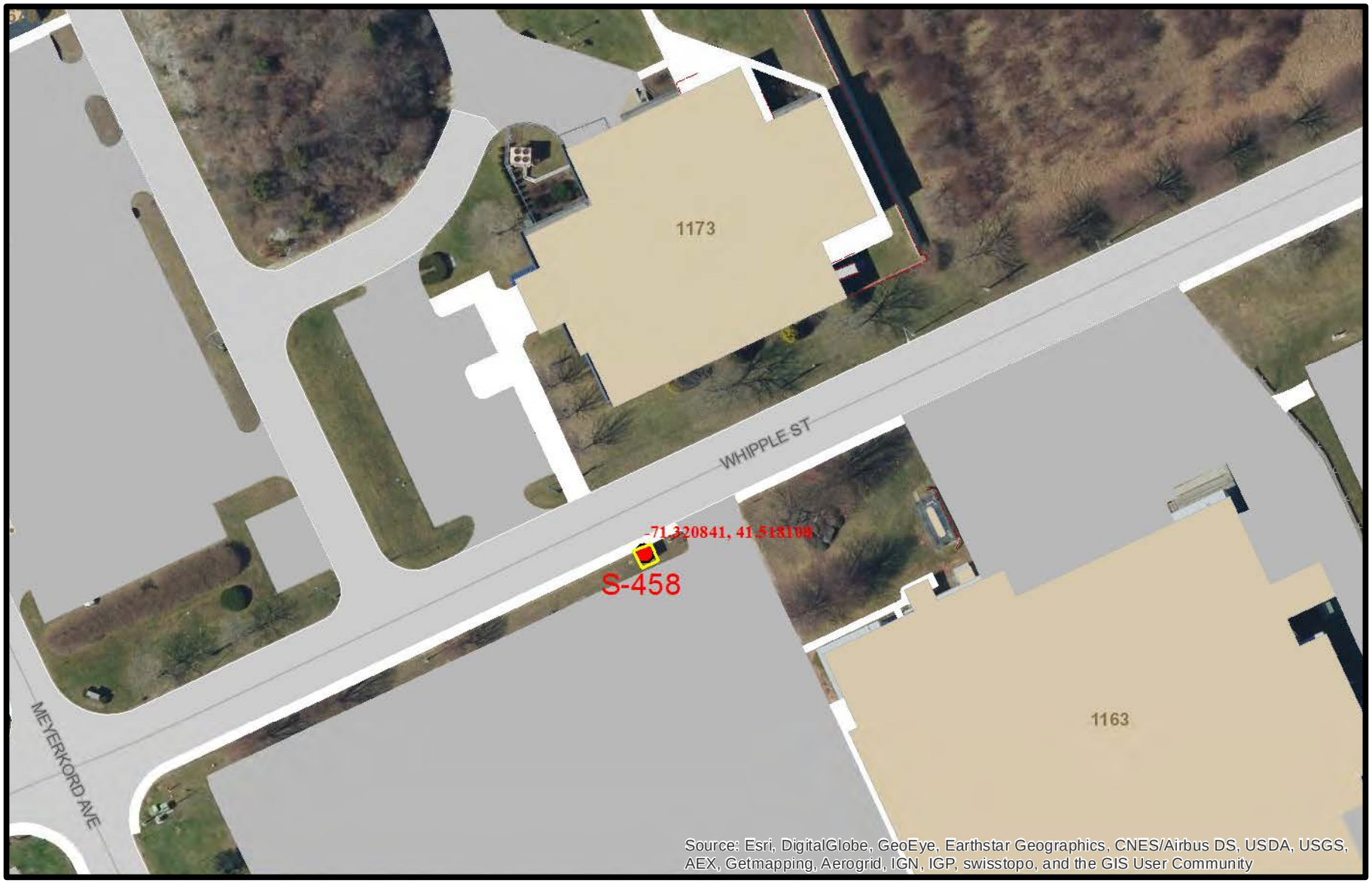
Map of:

SITE PLAN - S456

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N



Prepared For:

jody.chase@navy.mil
05/17/2016

Map of:

SITE PLAN S-458

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Document Generated from RSIMS Internet Mapping Application

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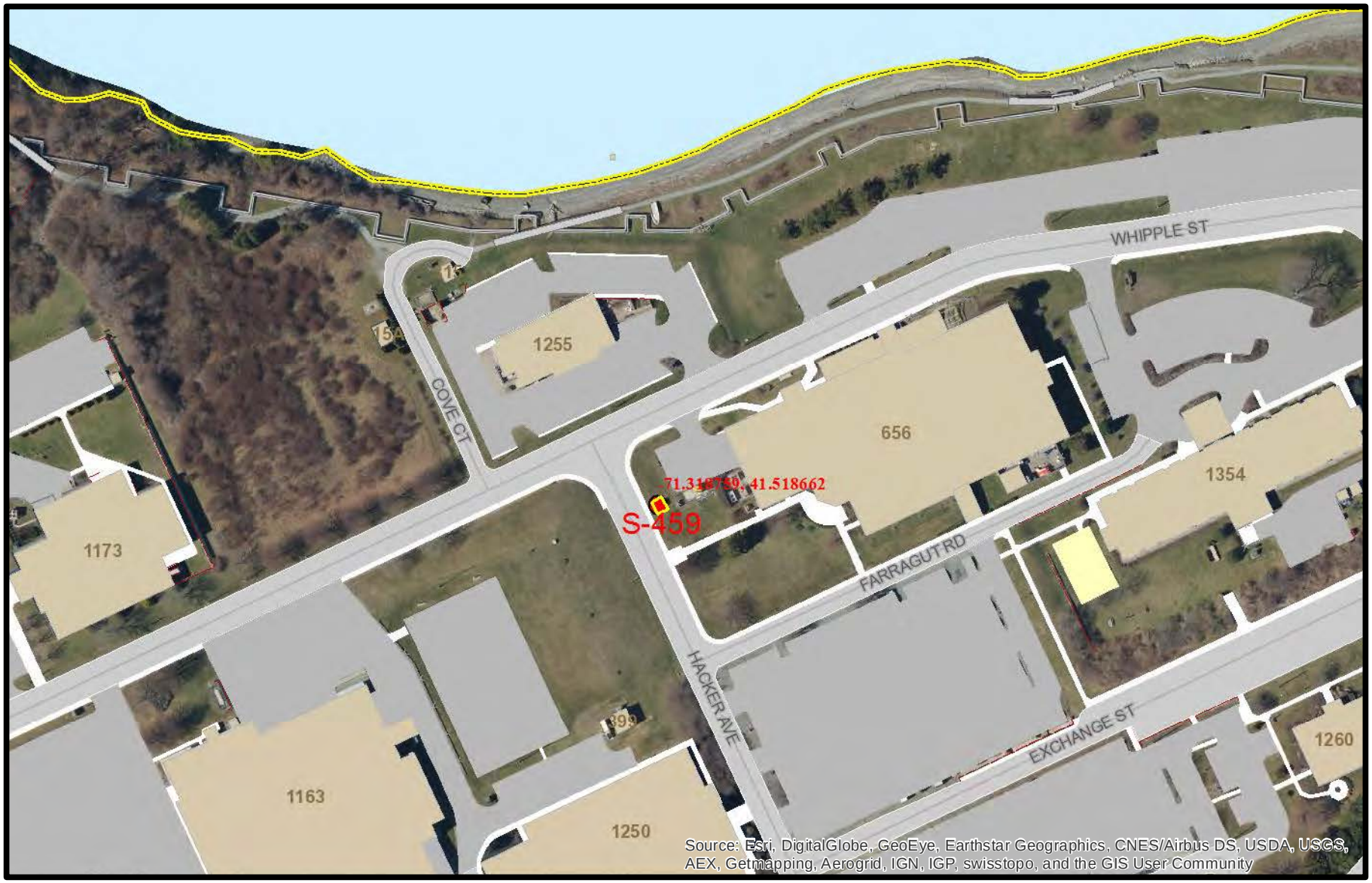

Prepared For:

jody.chase@navy.mil
05/17/2016

Map of:

SITE PLAN S-459

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N

Prepared For:

jody.chase@navy.mil
05/17/2016

Map of:

SITE PLAN S-464

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Document Generated from RSIMS Internet Mapping Application

N

Prepared For:

jody.chase@navy.mil
05/17/2016

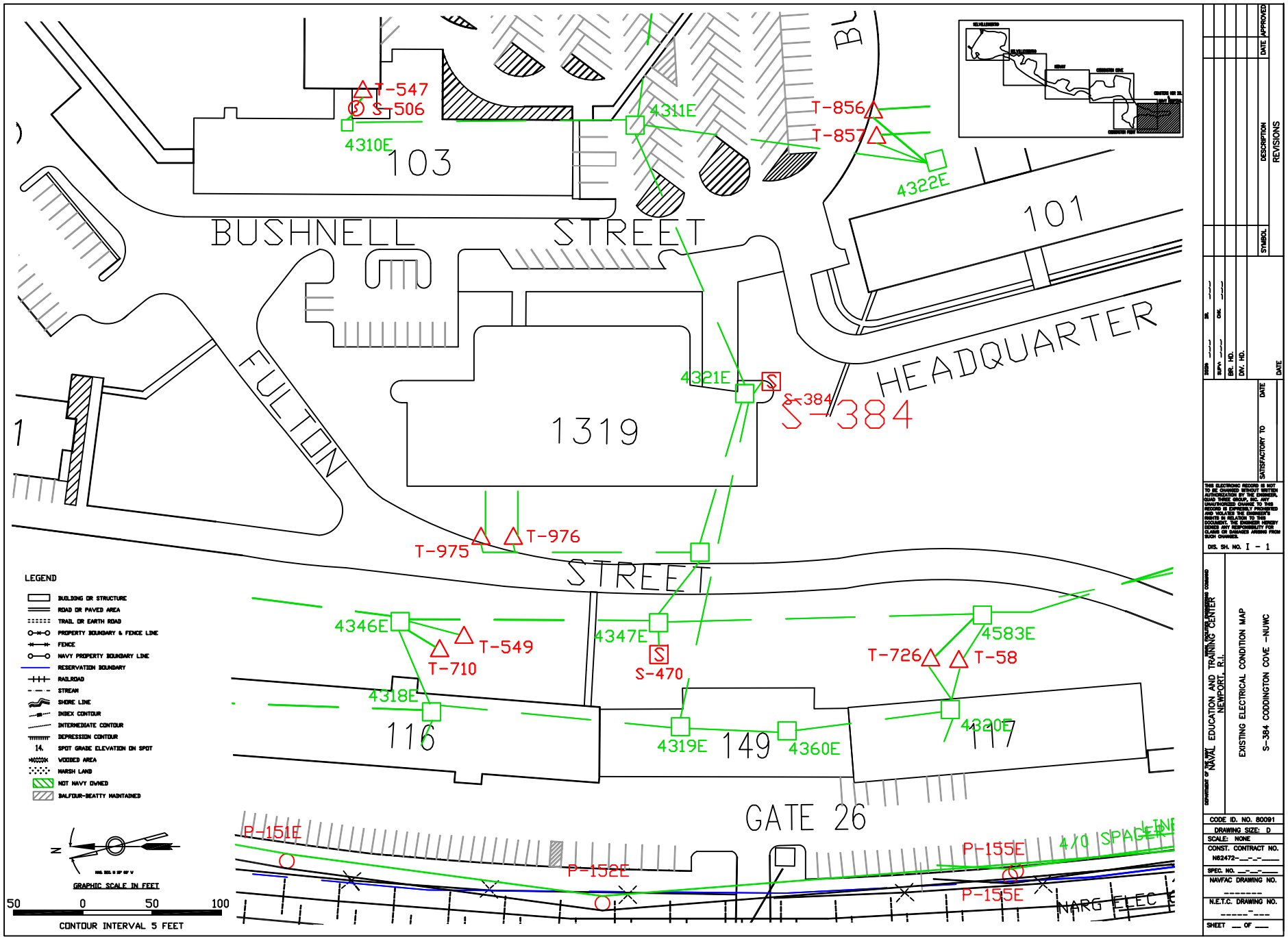
Map of:

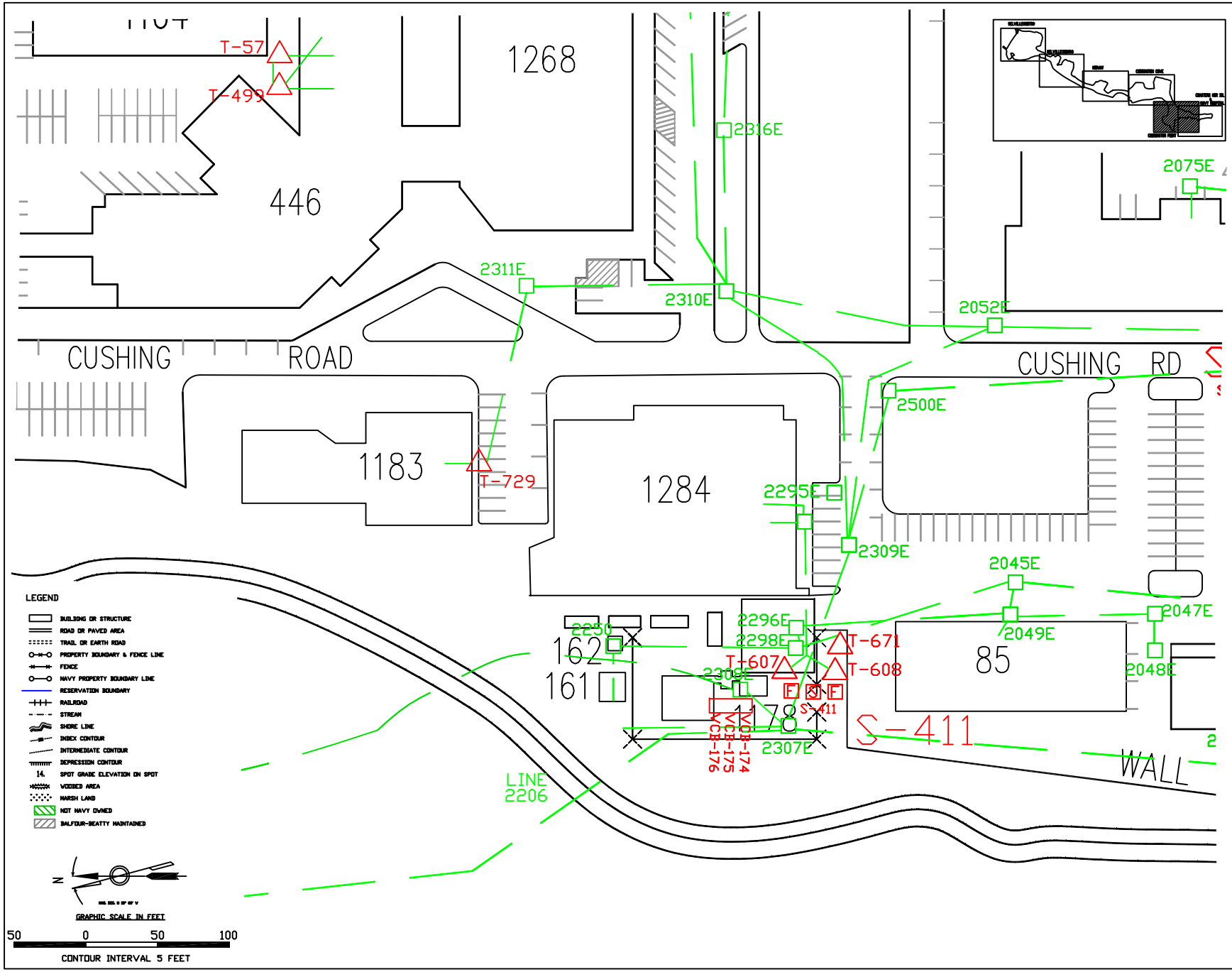
SITE PLAN S-468

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N


BUSHNELL STREET
FULTON STREET
HEADQUARTER
103
101
1319
116
149
117
GATE 26
T-547
S-506
4310E
4311E
T-856
T-857
4322E
4321E
S-384
T-975
T-976
4346E
T-549
T-710
4347E
S-470
4583E
T-726
T-58
4318E
4319E
4360E
4320E
P-151E
P-152E
P-155E
P-155E
4/0 SPACER
NARG ELEC
LEGEND
BUILDING OR STRUCTURE
ROAD OR PAVED AREA
TRAIL OR EARTH ROAD
PROPERTY BOUNDARY & FENCE LINE
FENCE
NAVY PROPERTY BOUNDARY LINE
RESERVATION BOUNDARY
RAILROAD
STREAM
SHORE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
DEPRESSION CONTOUR
14. SPOT GRADE ELEVATION ON SPOT
WOODED AREA
MARSH LAND
NOT NAVY OWNED
BALFOUR-BEATTY MAINTAINED
N
GRAPHIC SCALE IN FEET
50 0 50 100
CONTOUR INTERVAL 5 FEET
SYMBOL
DESCRIPTION
DATE
APPROVED
REVISIONS
DR.
CHK.
DR. HD.
DIV. HD.
DATE
SATISFACTORY TO
DATE
THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.
DIS. SH. NO. I - 1
DEPARTMENT OF THE NAVY
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.
EXISTING ELECTRICAL CONDITION MAP
S-384 CODDINGTON COVE -NUWC
CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-__
SPEC. NO. __-__-__
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

S-411 COASTERS HARBOR ISLAND

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

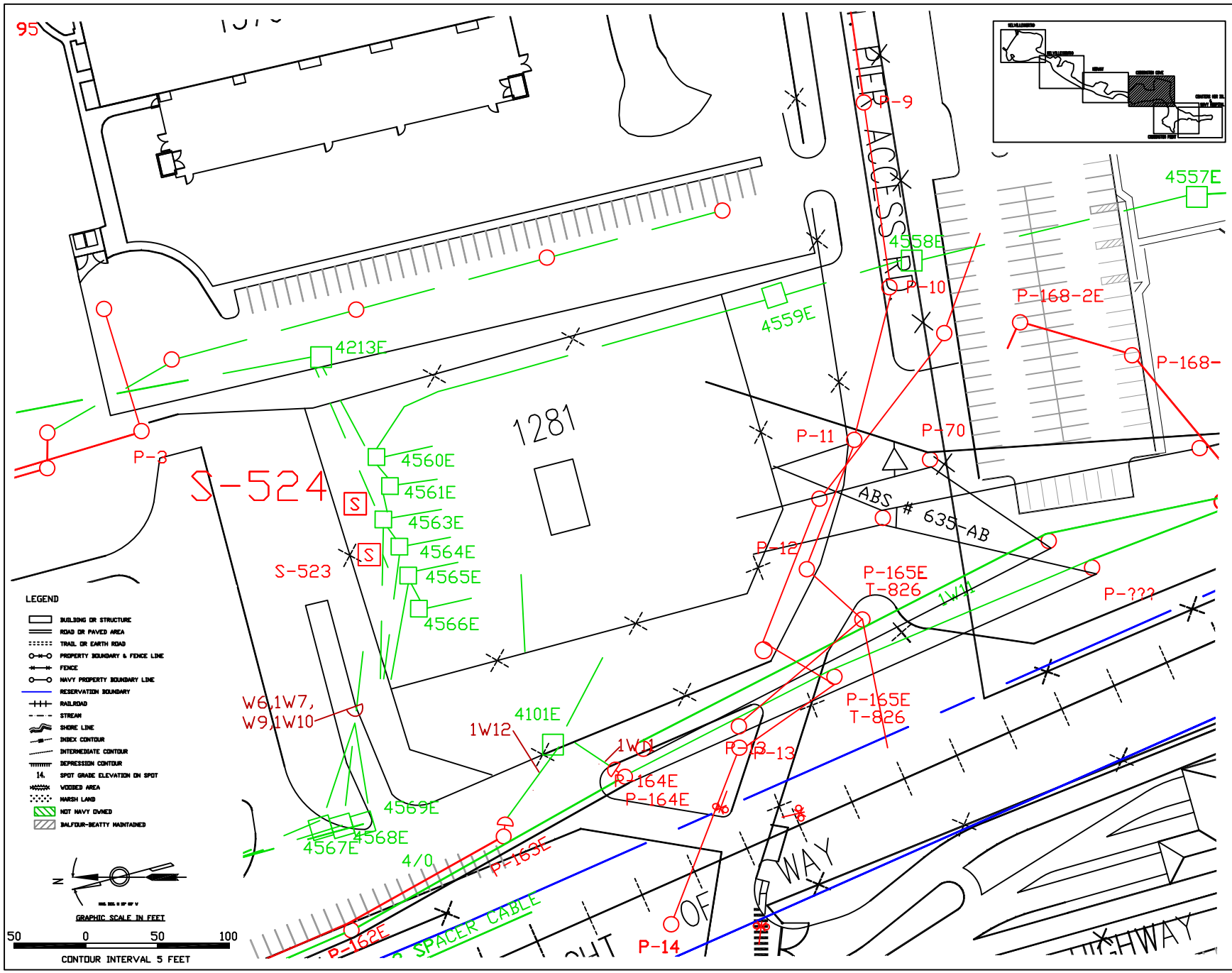
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV'S ___ CHK. ___
DIR. HD.
DIV. HD.
DATE

SATISFACTORY TO DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

DIS. SH. NO. I - 1

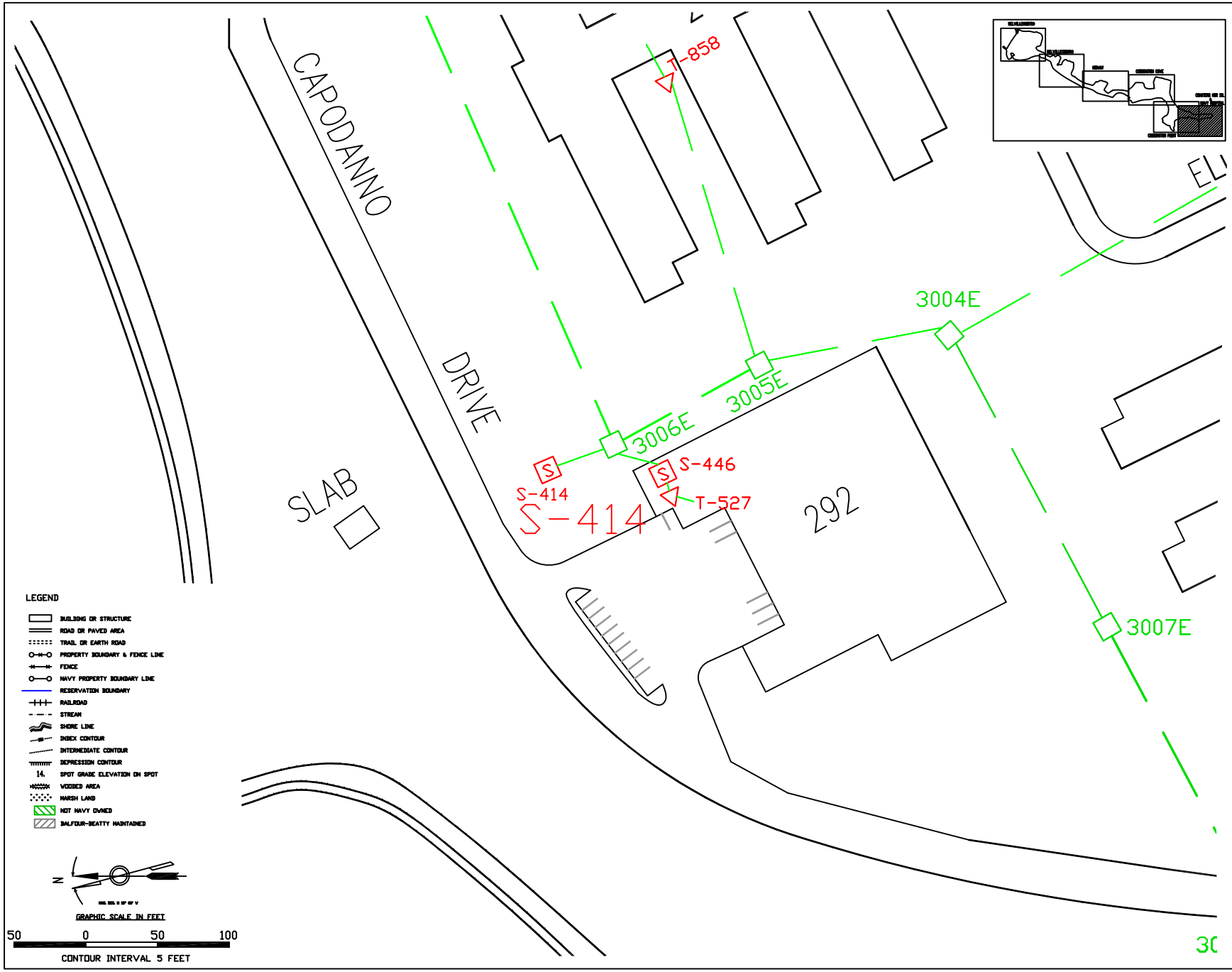
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING ELECTRICAL CONDITION MAP

S-524 CODDINGTON COVE

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUPV. ____ CHK. ____
DR. HD. ____
DIV. HD. ____
DATE

SATISFACTORY TO ____ DATE

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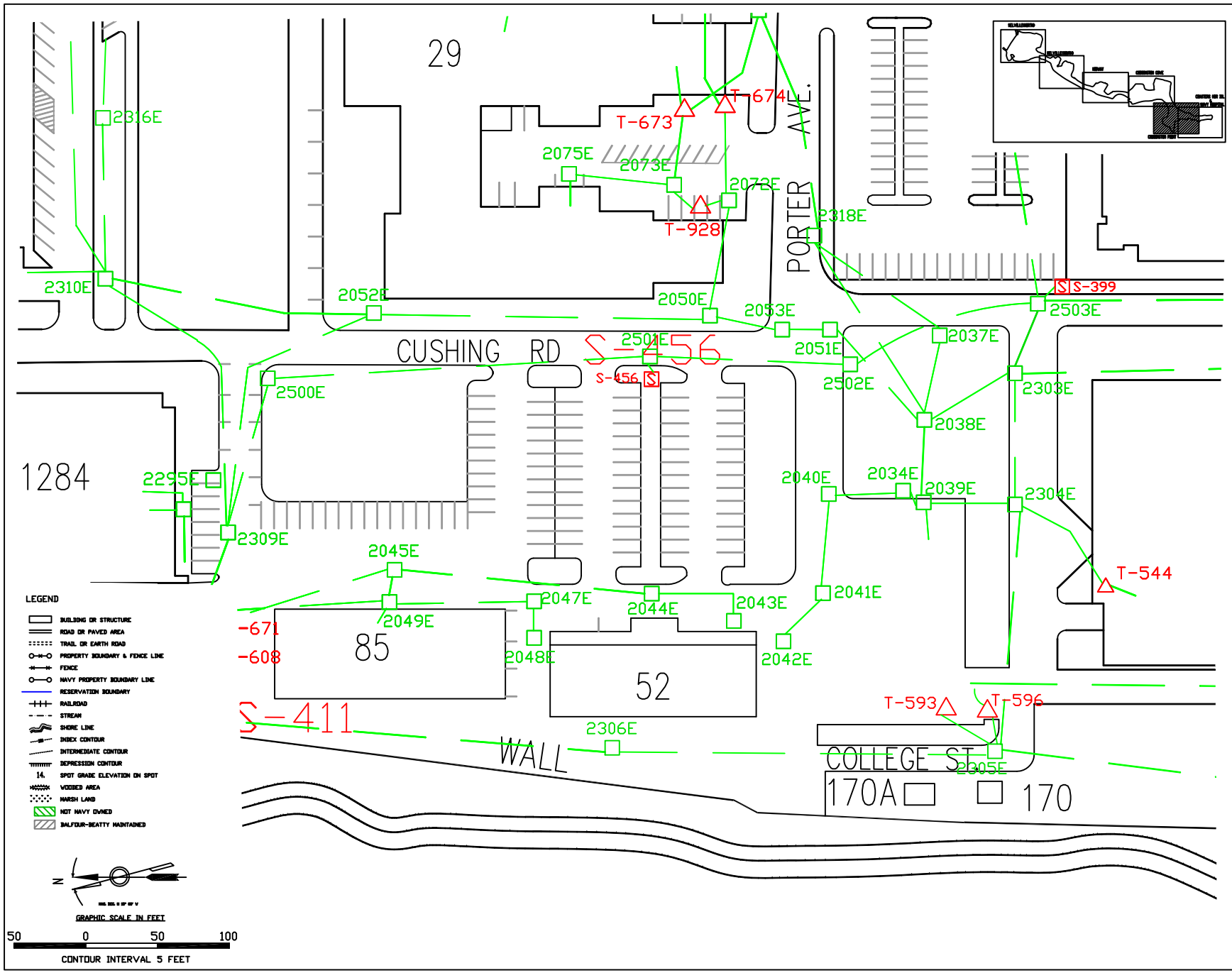
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL CONDITION MAP

S-414 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ____
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

SIGN. ___ DR. ___ SUP'V. ___ CHK. ___ DR. HD. ___ DIV. HD. ___ DATE

SATISFACTORY TO ___ DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING ELECTRICAL CONDITION MAP

S-456 COASTERS HARBOR ISLAND

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

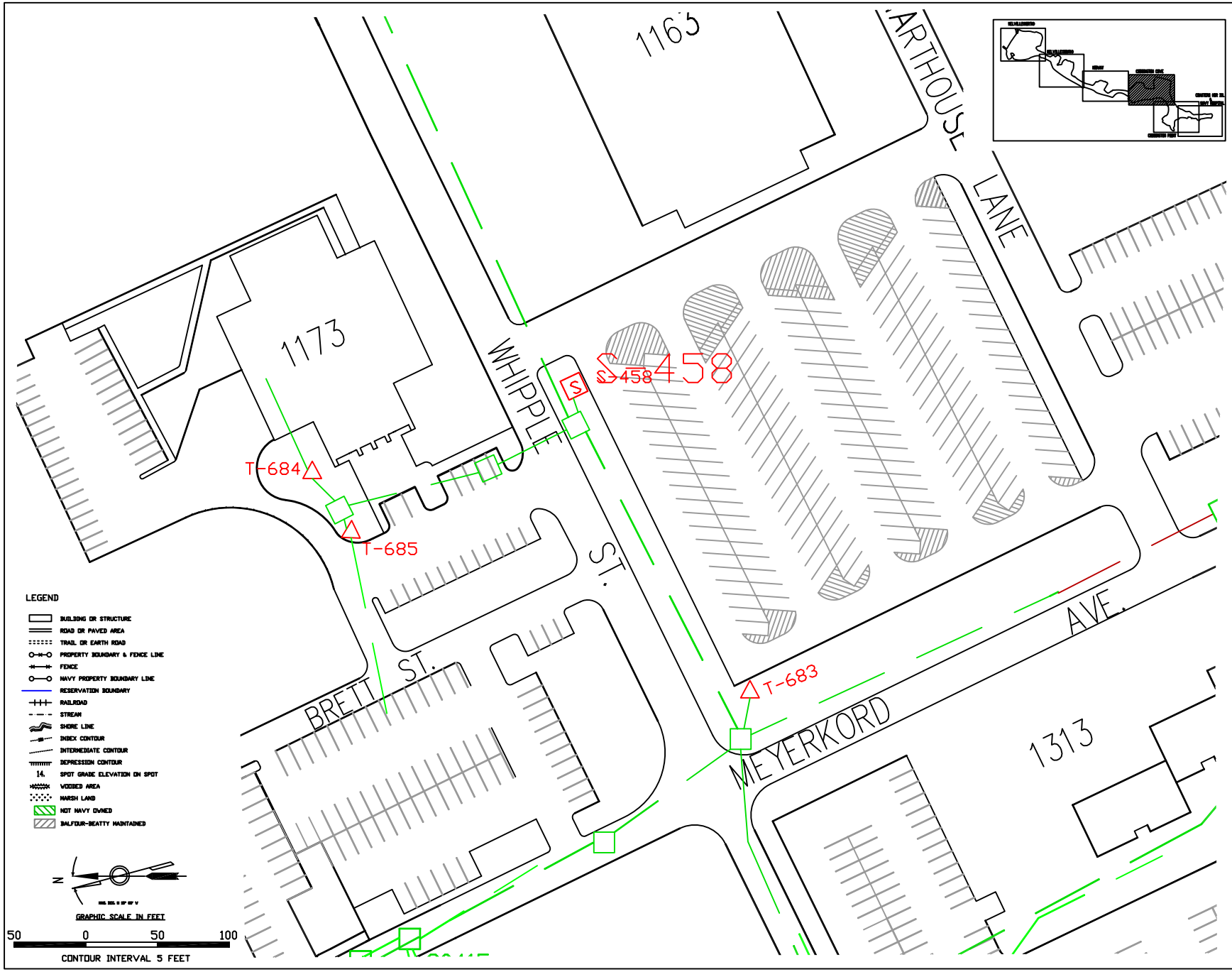
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____ - ___

SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV'S ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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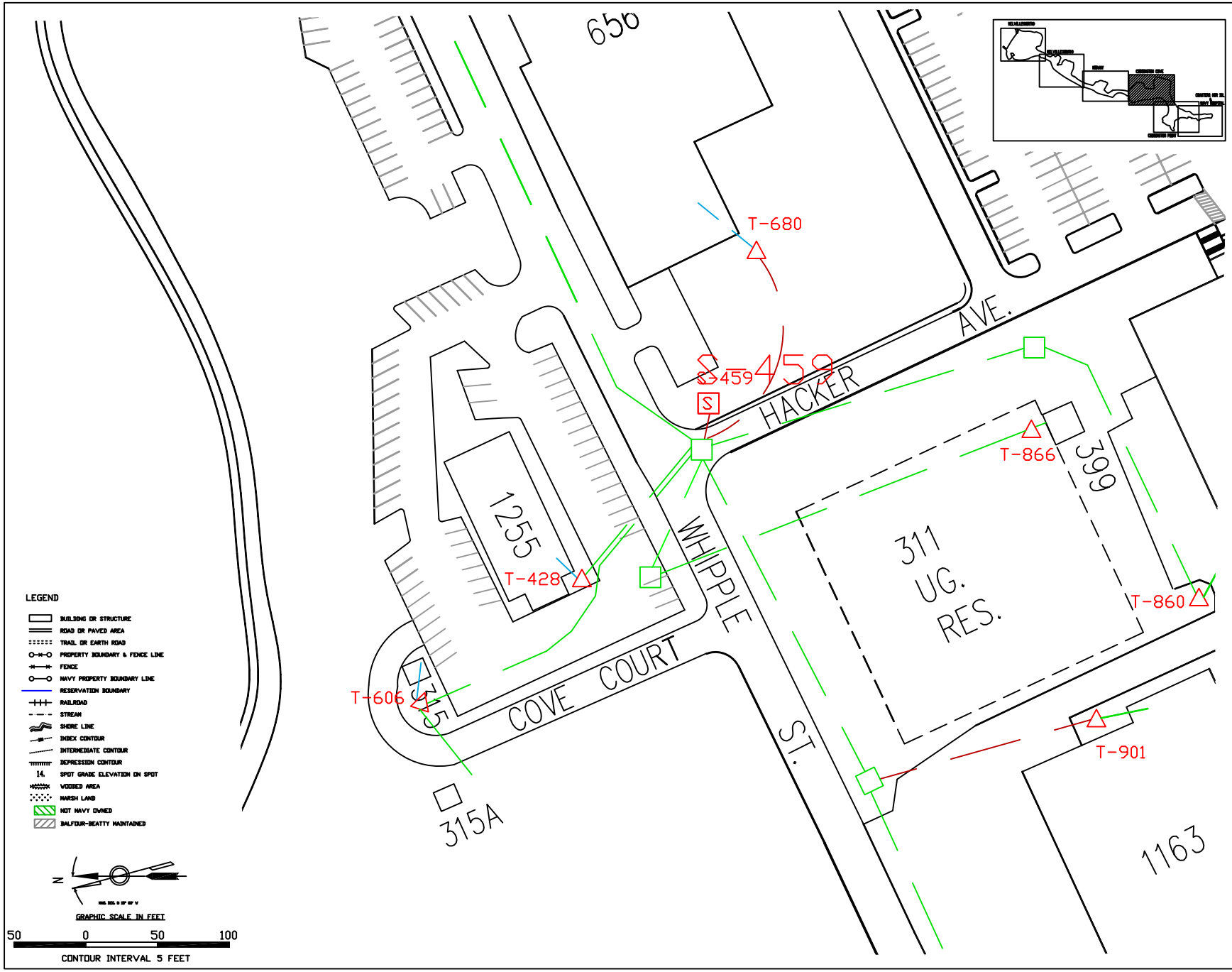
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING ELECTRICAL CONDITION MAP

S458 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUP'V. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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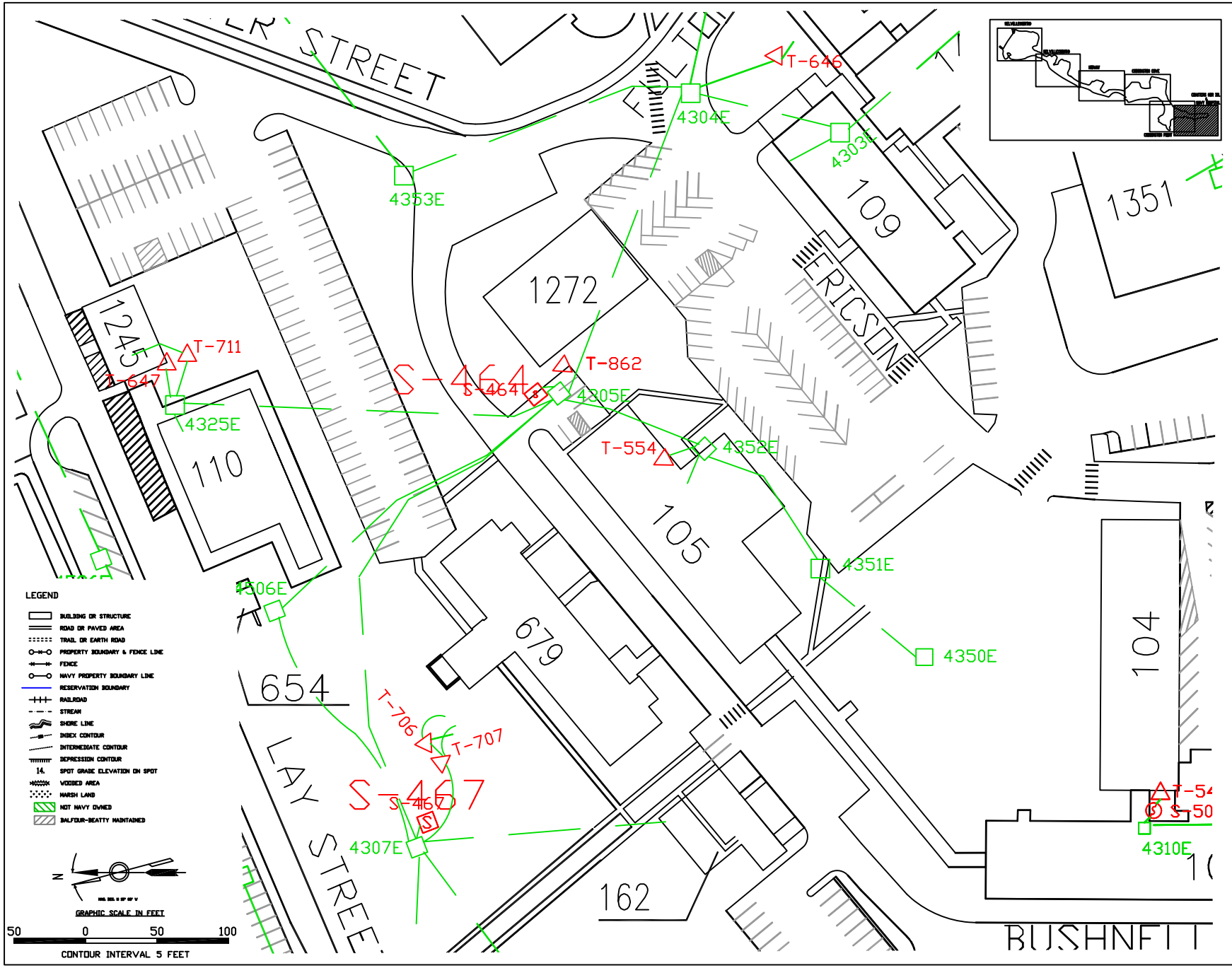
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING ELECTRICAL CONDITION MAP

S459 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DIR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING ELECTRICAL CONDITION MAP

S-464 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

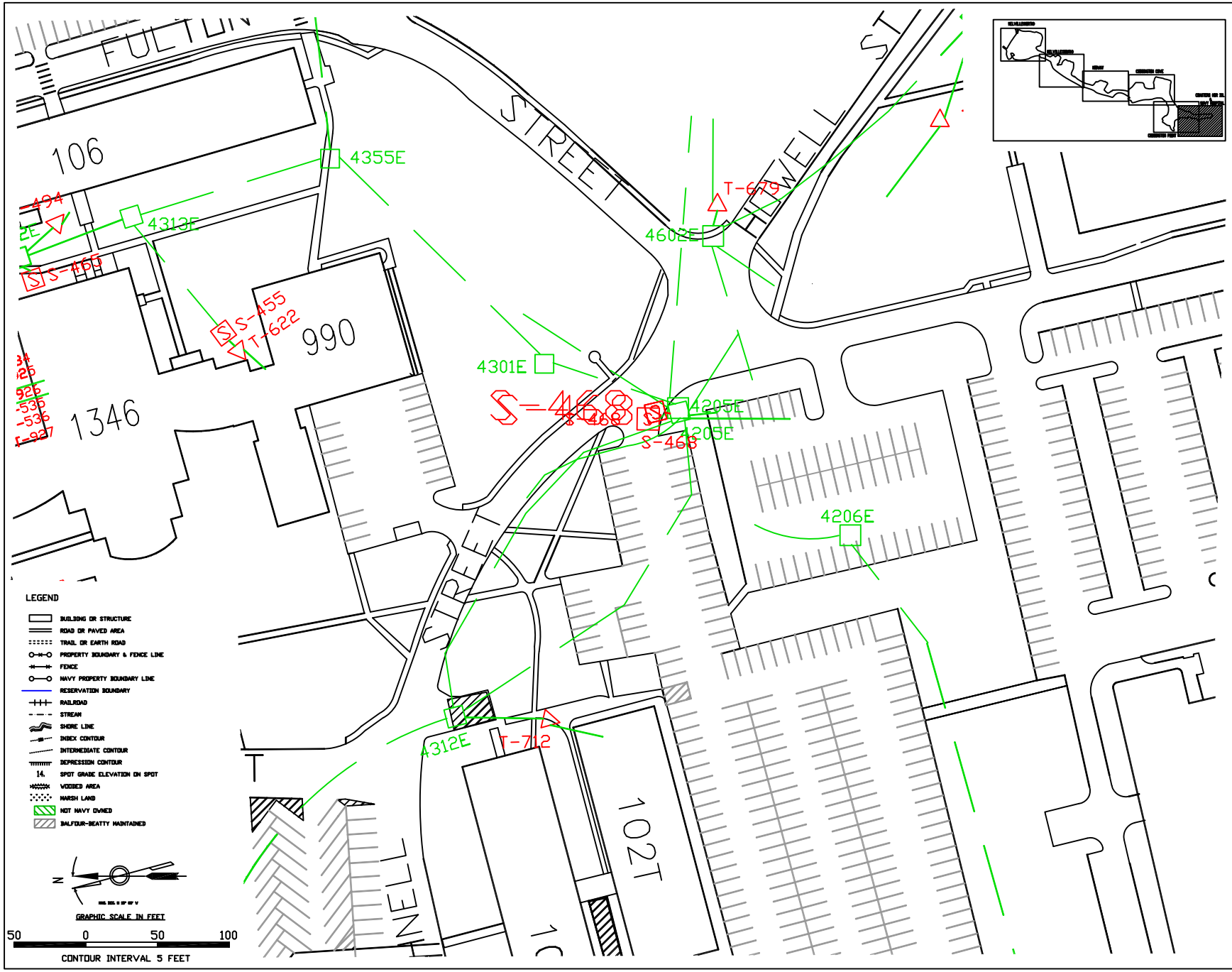
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DIR. HD.
DIV. HD.

SATISFACTORY TO ___ DATE ___

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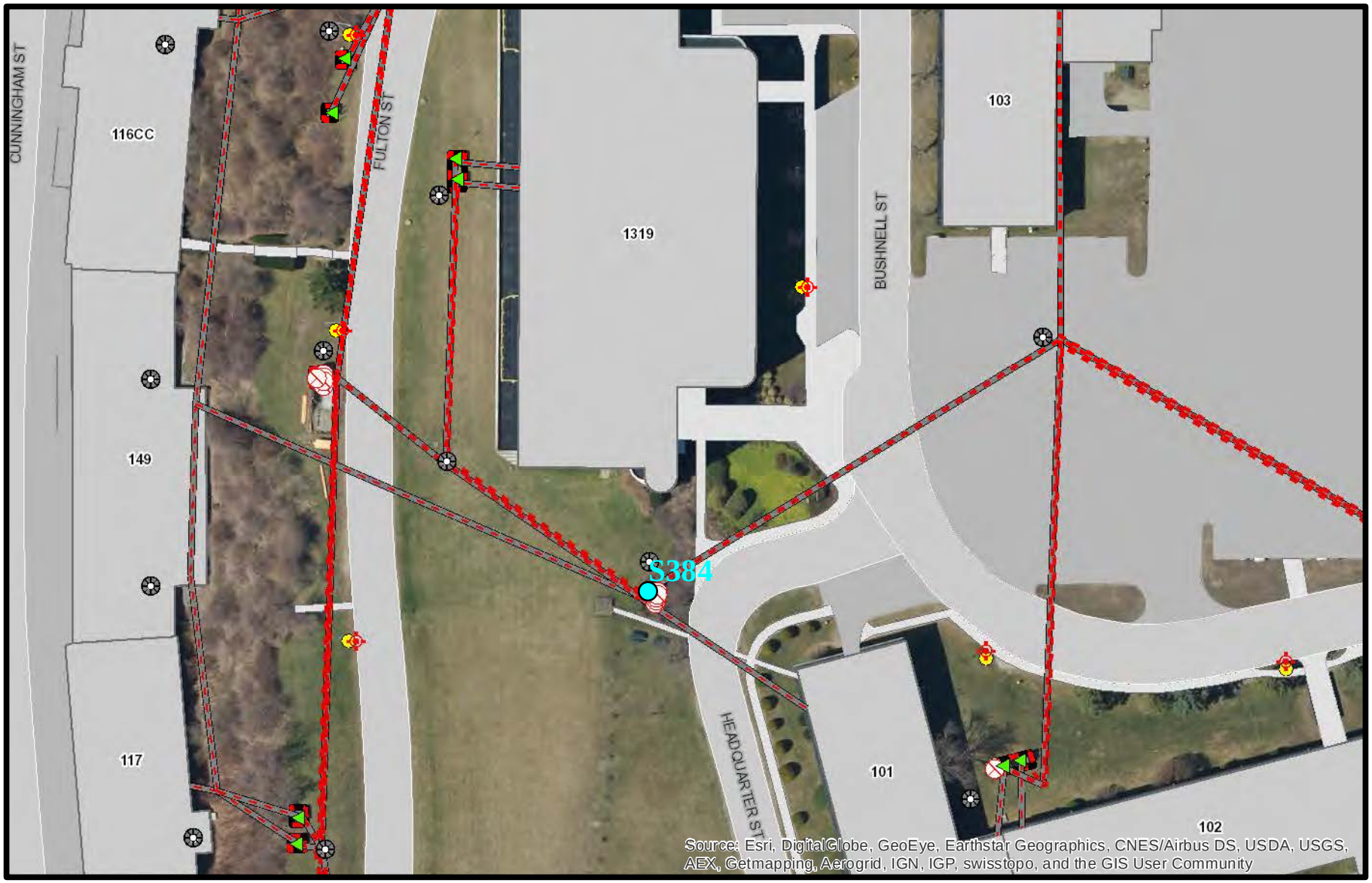
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING ELECTRICAL CONDITION MAP

S-468 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____ ___
SHEET __ OF ___



Prepared For:

jody.chase@navy.mil
05/12/2016

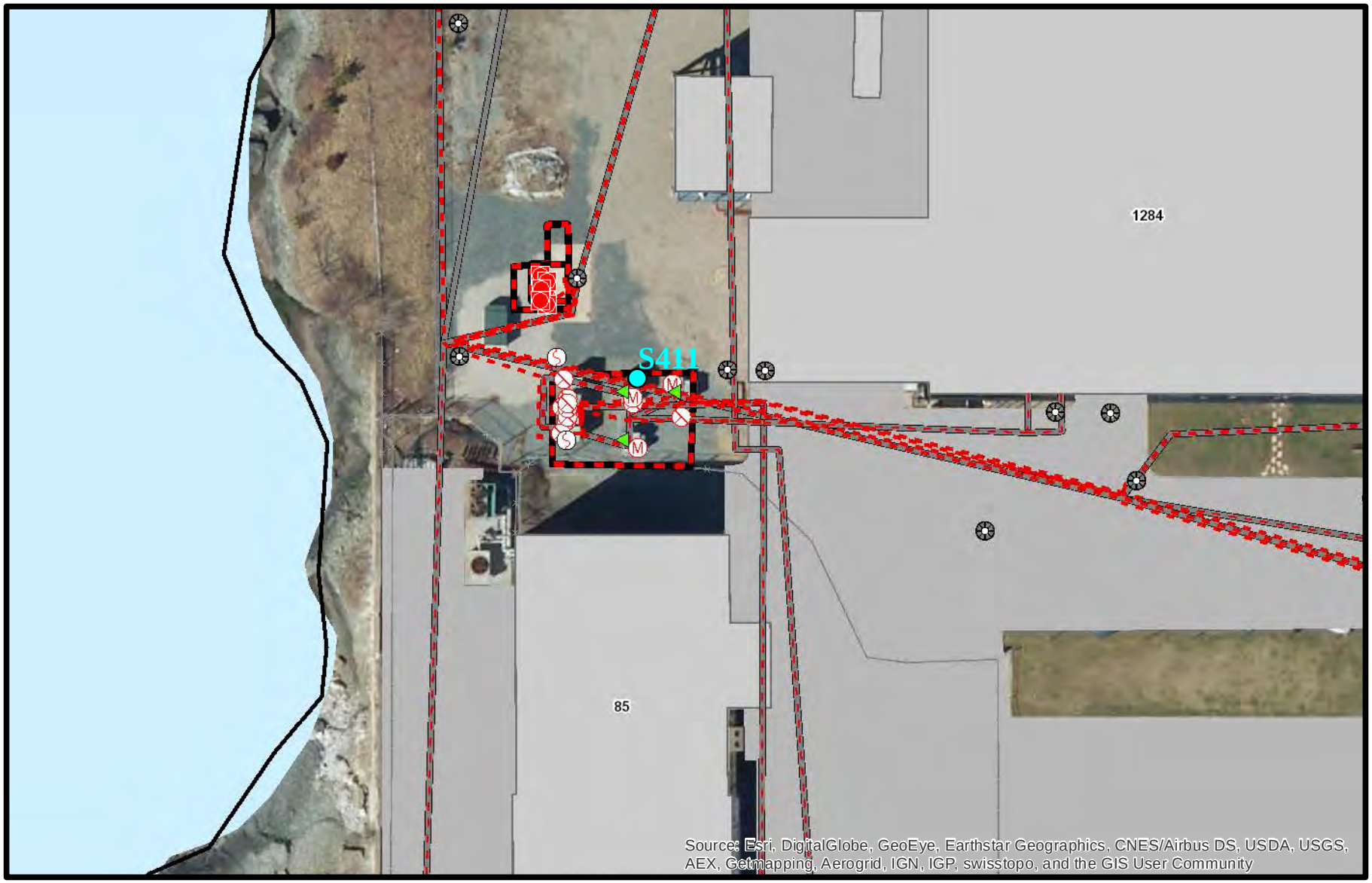
Map of:

ELEC SITE PLAN S384

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N



Prepared For:

jody.chase@navy.mil
05/12/2016

Map of:

ELEC SITE PLAN S411

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Document Generated from RSIMS Internet Mapping Application

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Prepared For:

jody.chase@navy.mil
05/19/2016

Map of:

ELEC SITE PLAN S-524

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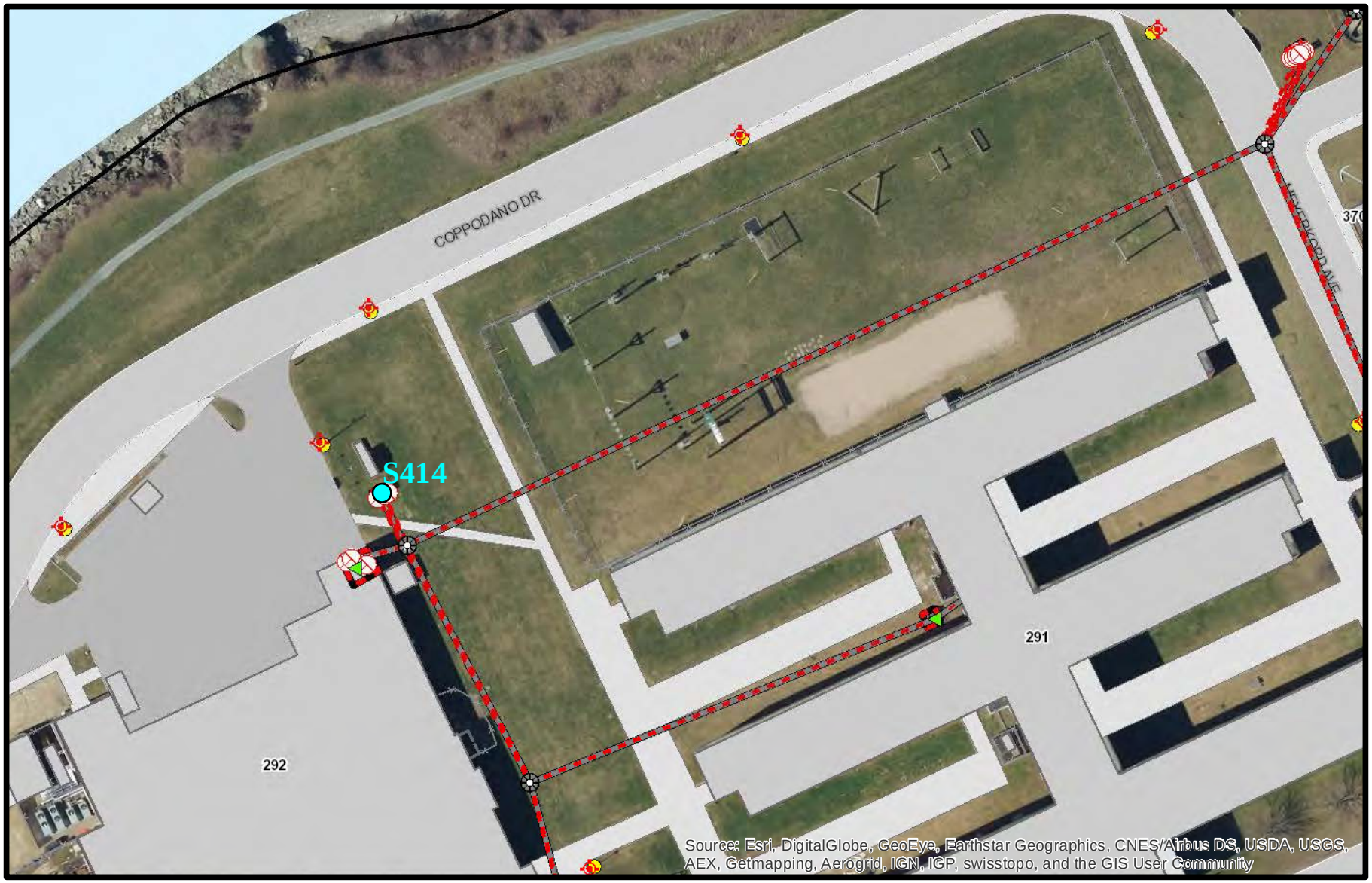
N



Prepared For:

jody.chase@navy.mil
05/12/2016

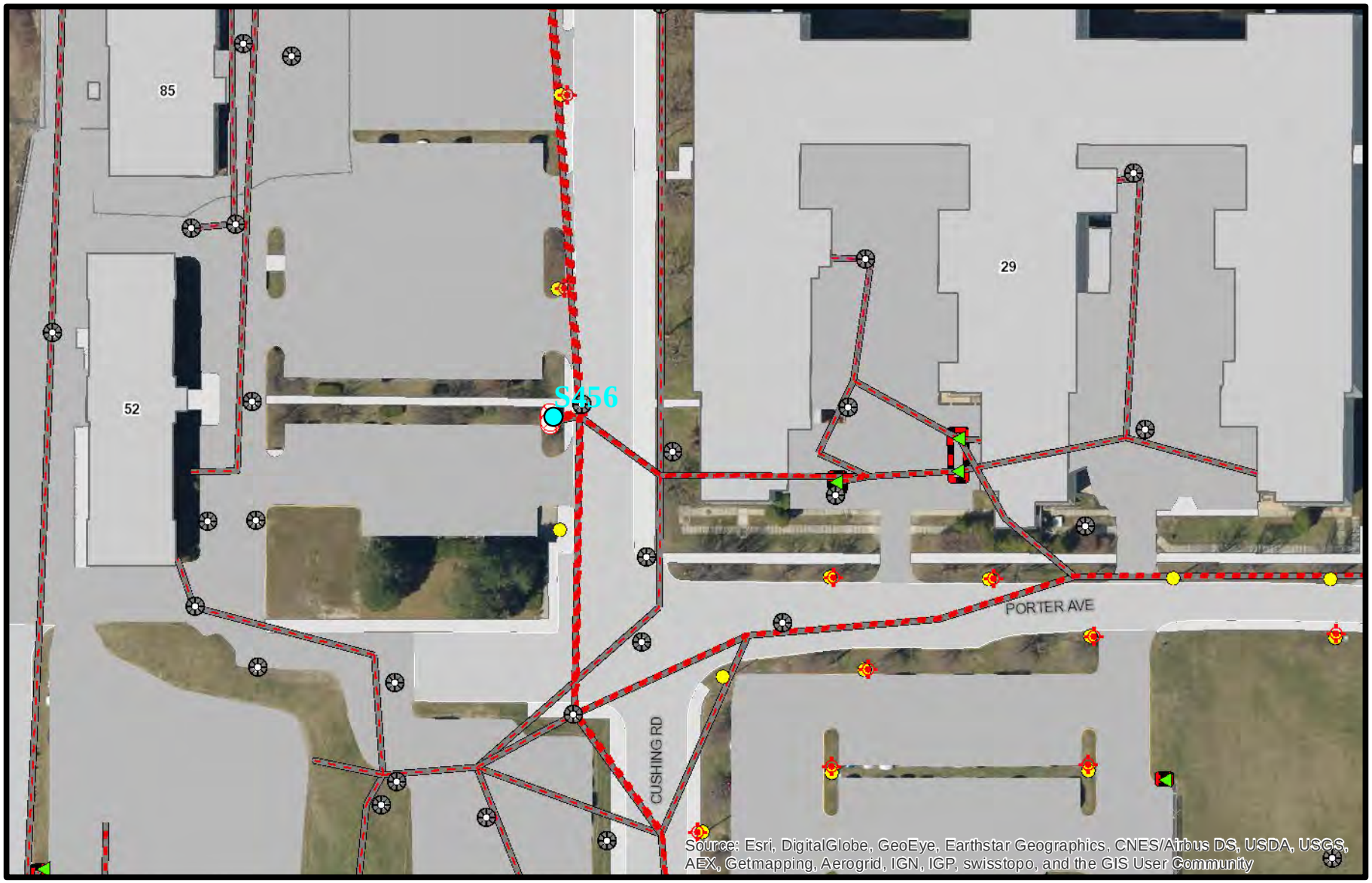
Map of:

ELEC SITE PLAN S414

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N



Prepared For:

jody.chase@navy.mil
05/12/2016

Map of:

ELEC SITE PLAN S456

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N

Prepared For:

jody.chase@navy.mil
05/19/2016

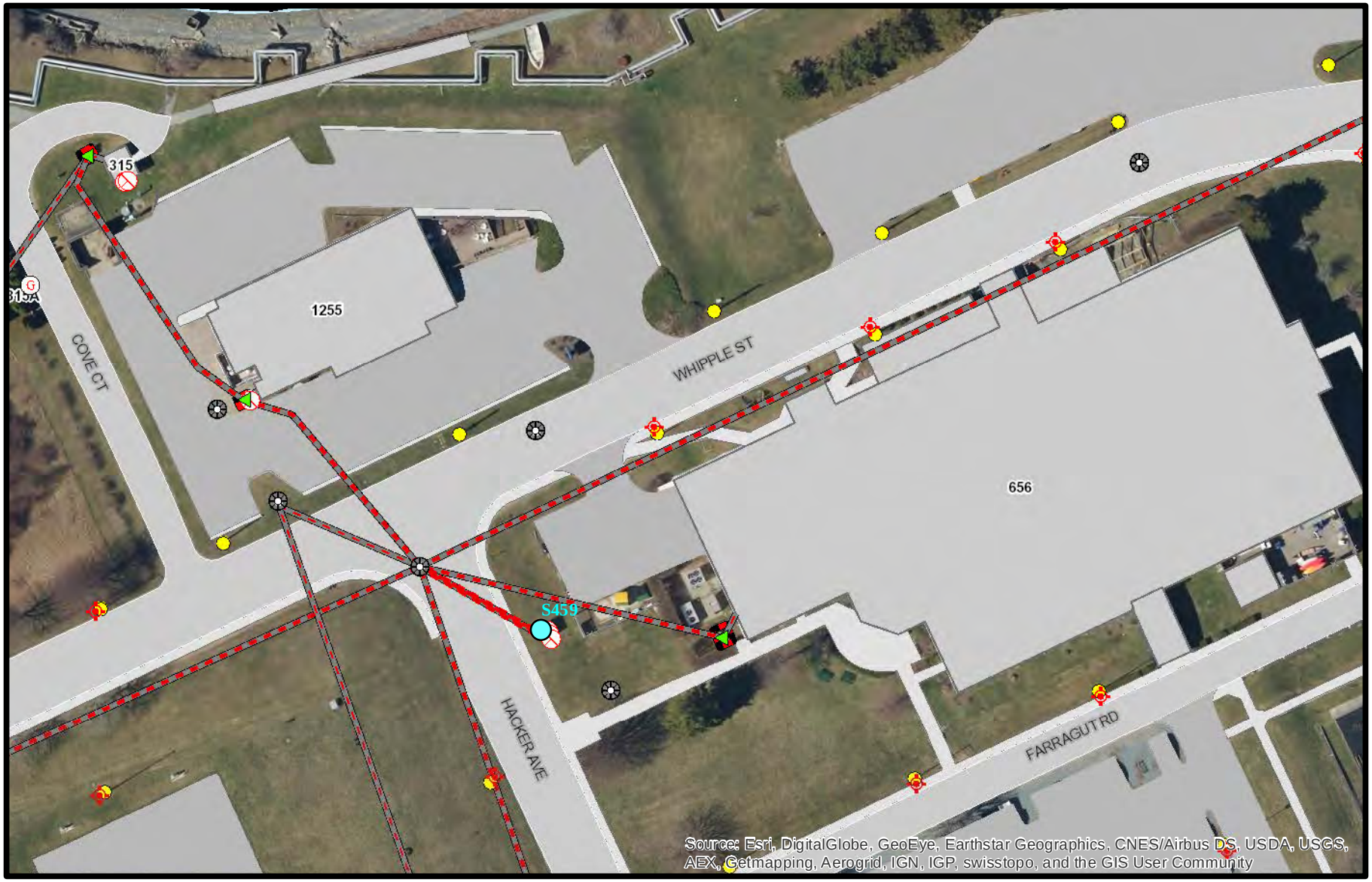
Map of:

ELEC SITE PLAN S-458

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N



Prepared For:

jody.chase@navy.mil

05/19/2016

Map of:

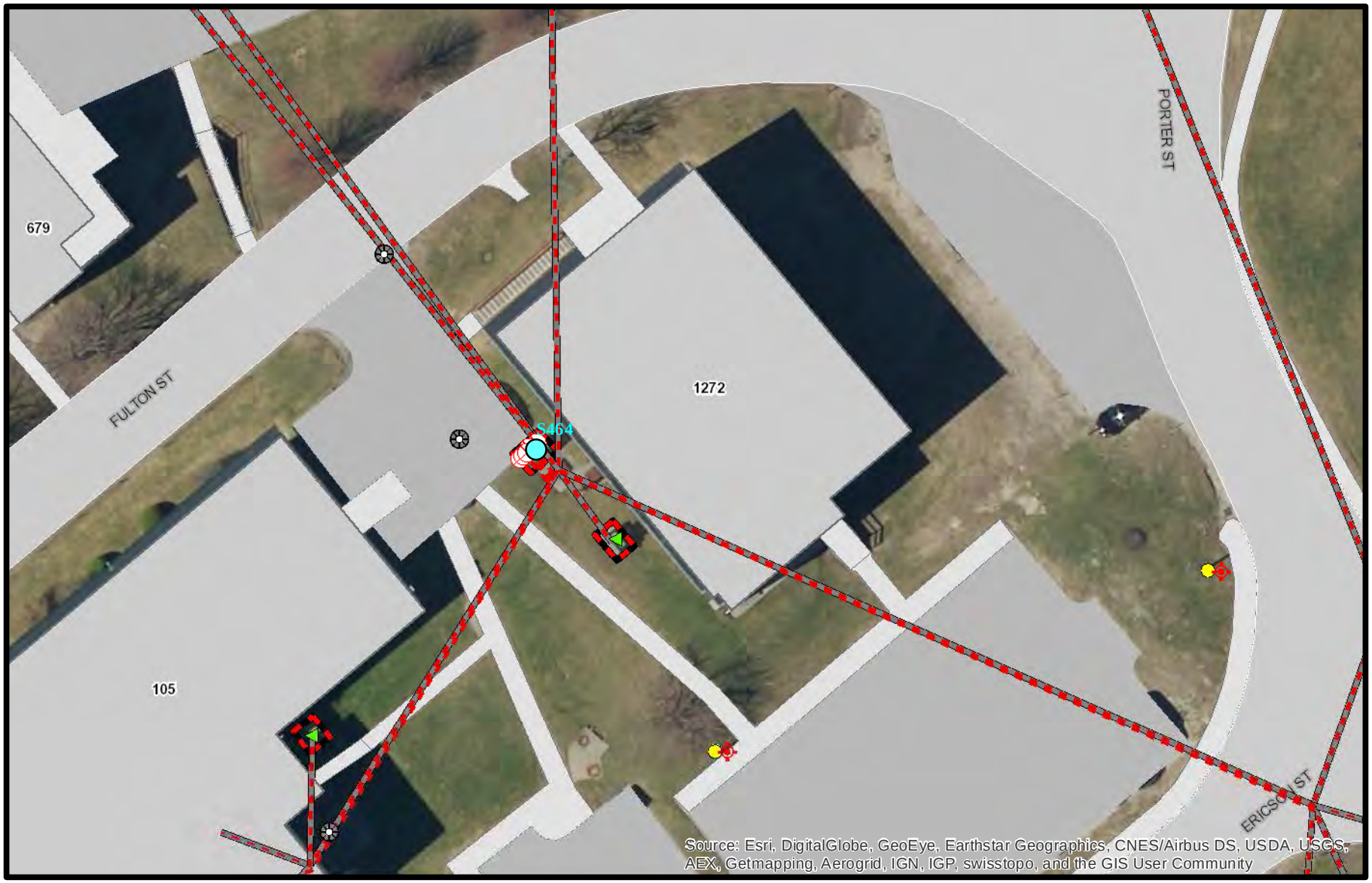
ELEC SITE PLAN S-459

FOR OFFICIAL USE ONLY

Not to Scale

Document Generated from RSIMS Internet Mapping Application

N



Prepared For:

jody.chase@navy.mil
05/19/2016

Map of:

ELEC SITE PLAN S-464

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N

Prepared For:

jody.chase@navy.mil
05/19/2016

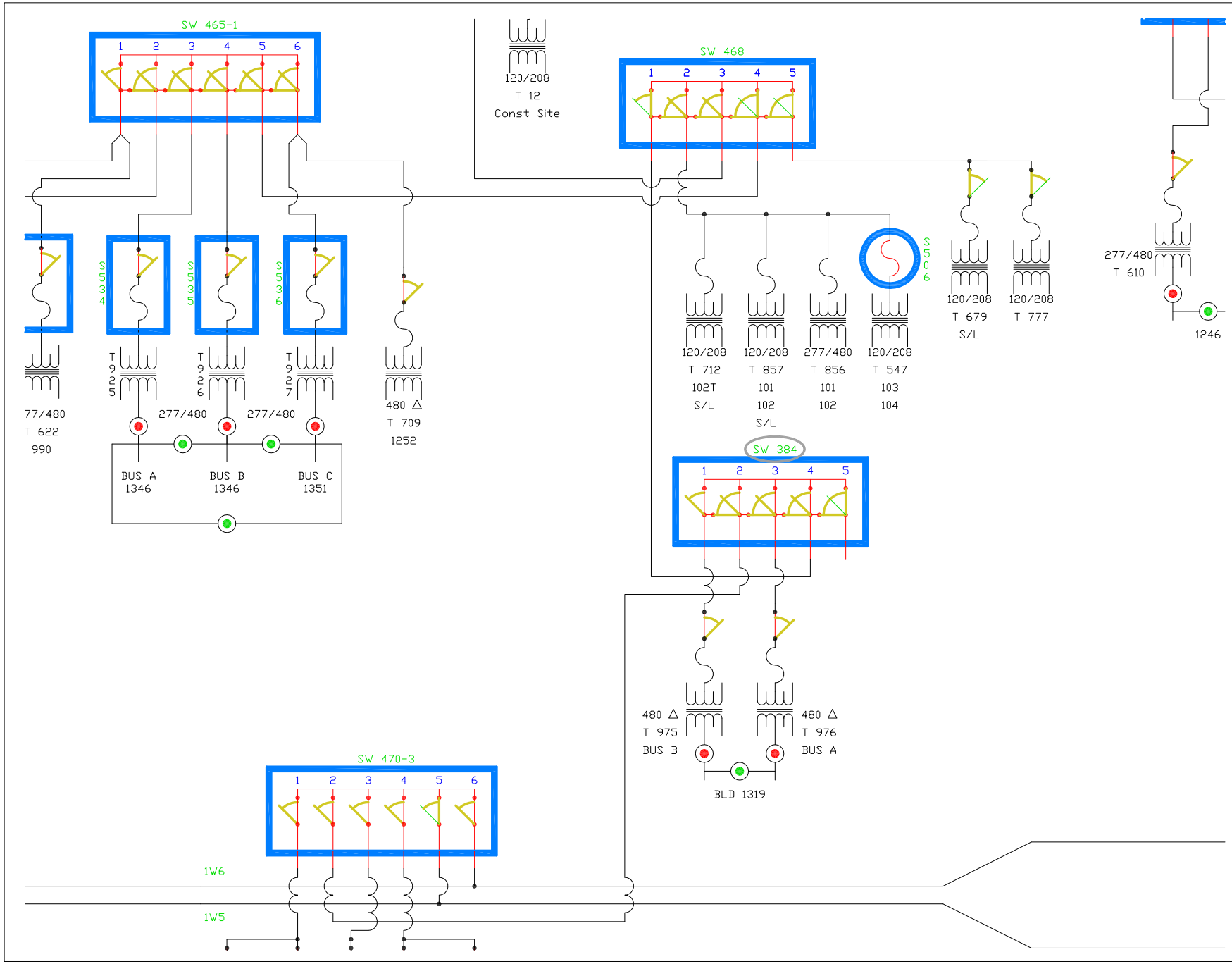
Map of:

ELEC SITE PLAN S-468

FOR OFFICIAL USE ONLY

Not to Scale
Document Generated from RSIMS Internet Mapping Application

N



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER. QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

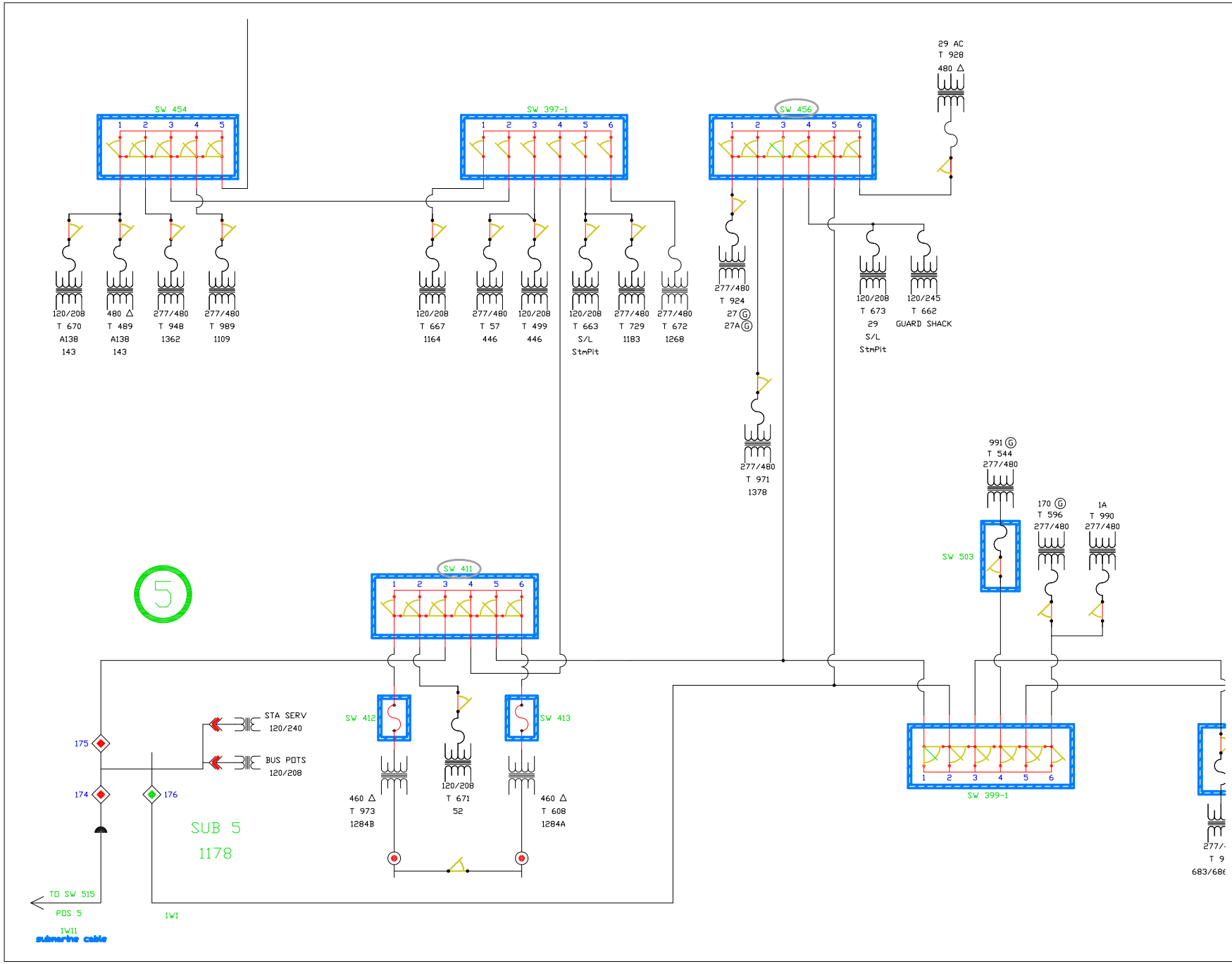
DIS. SH. NO. I – 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-384 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-_-____
SPEC. NO. __-__-___
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___ DATE
SUPV. ___ CHK. ___
BR. HD.
DIV. HD.

SATISFACTORY TO DATE

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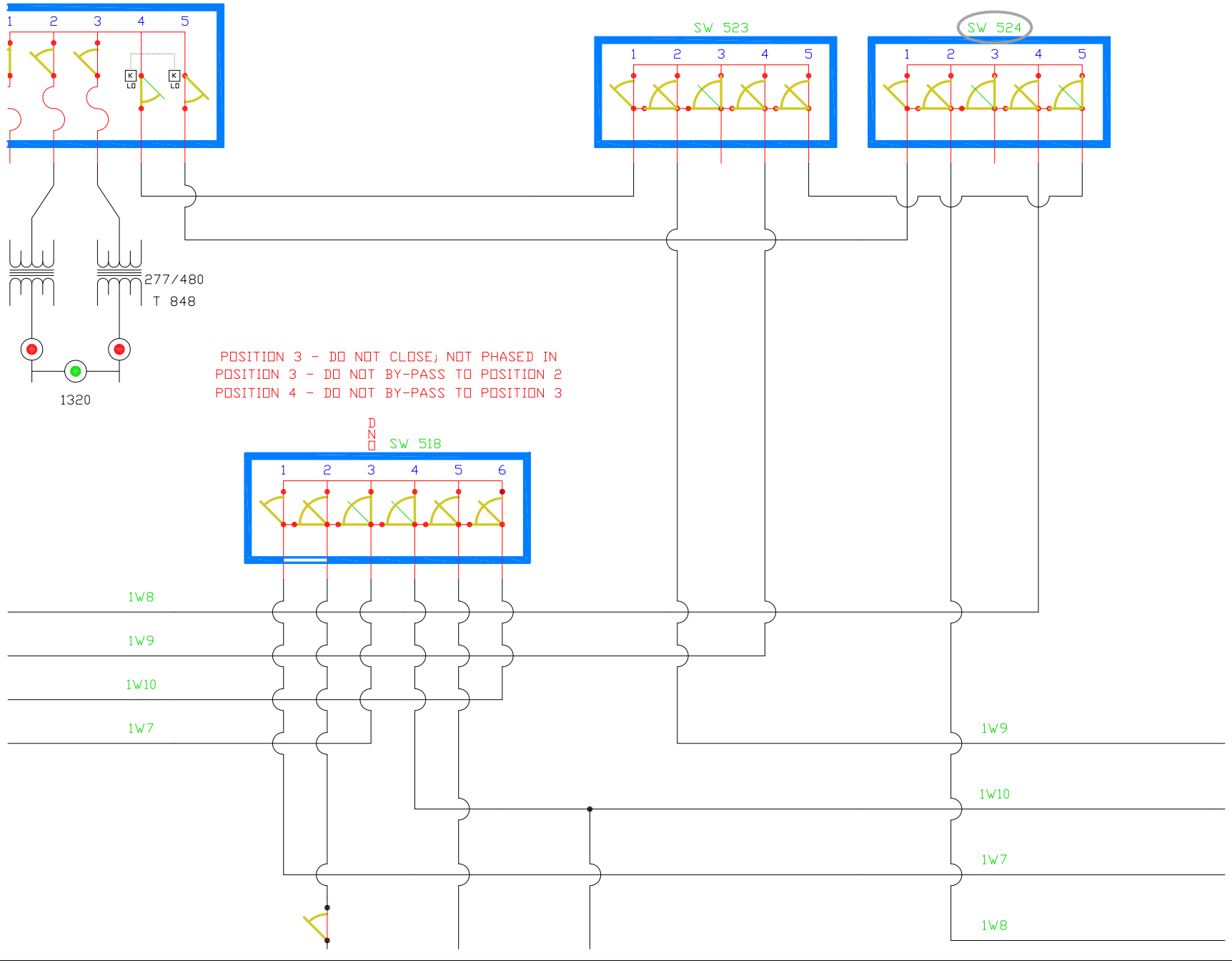
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-411 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE ___

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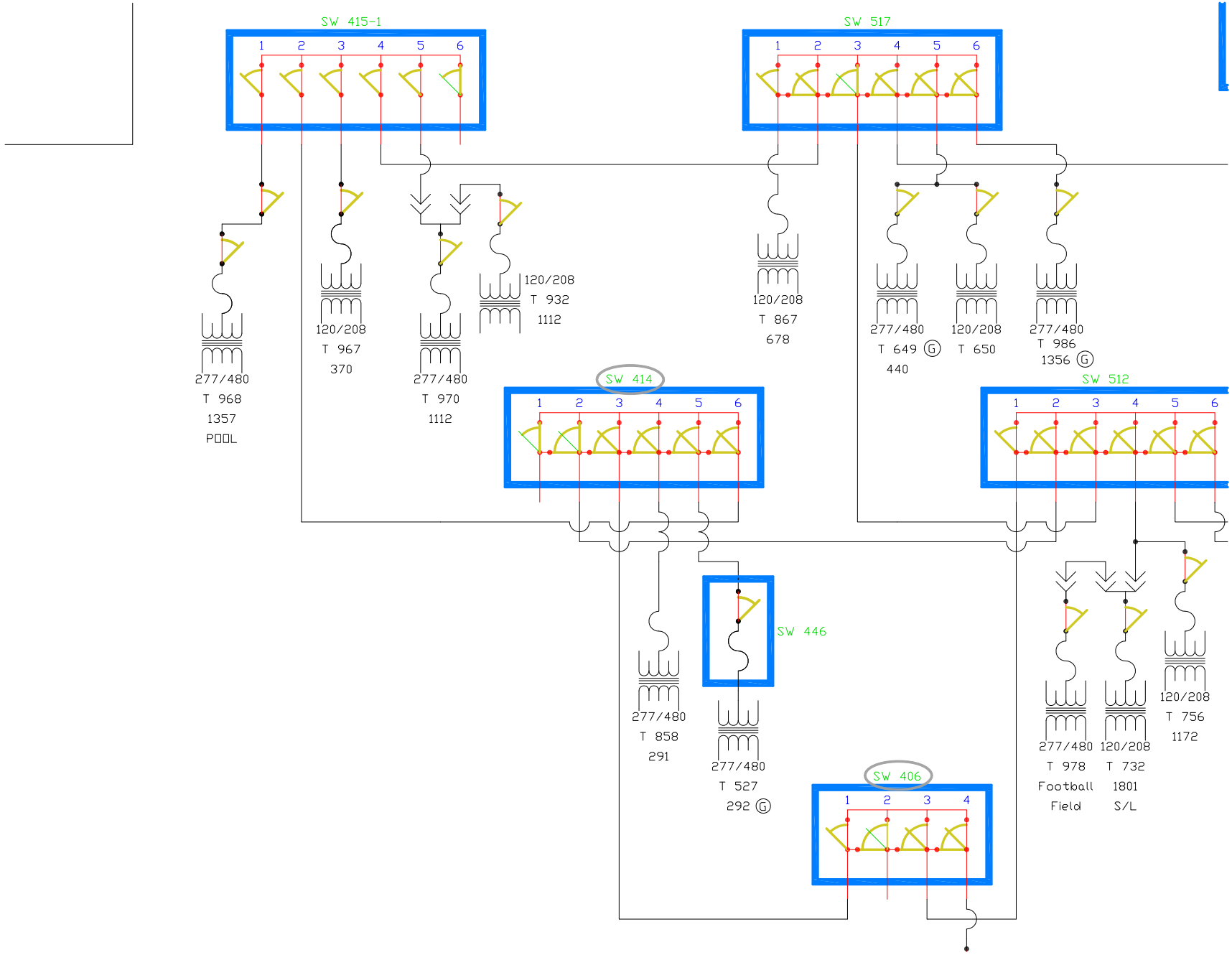
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-524 CODDINGTON COVE

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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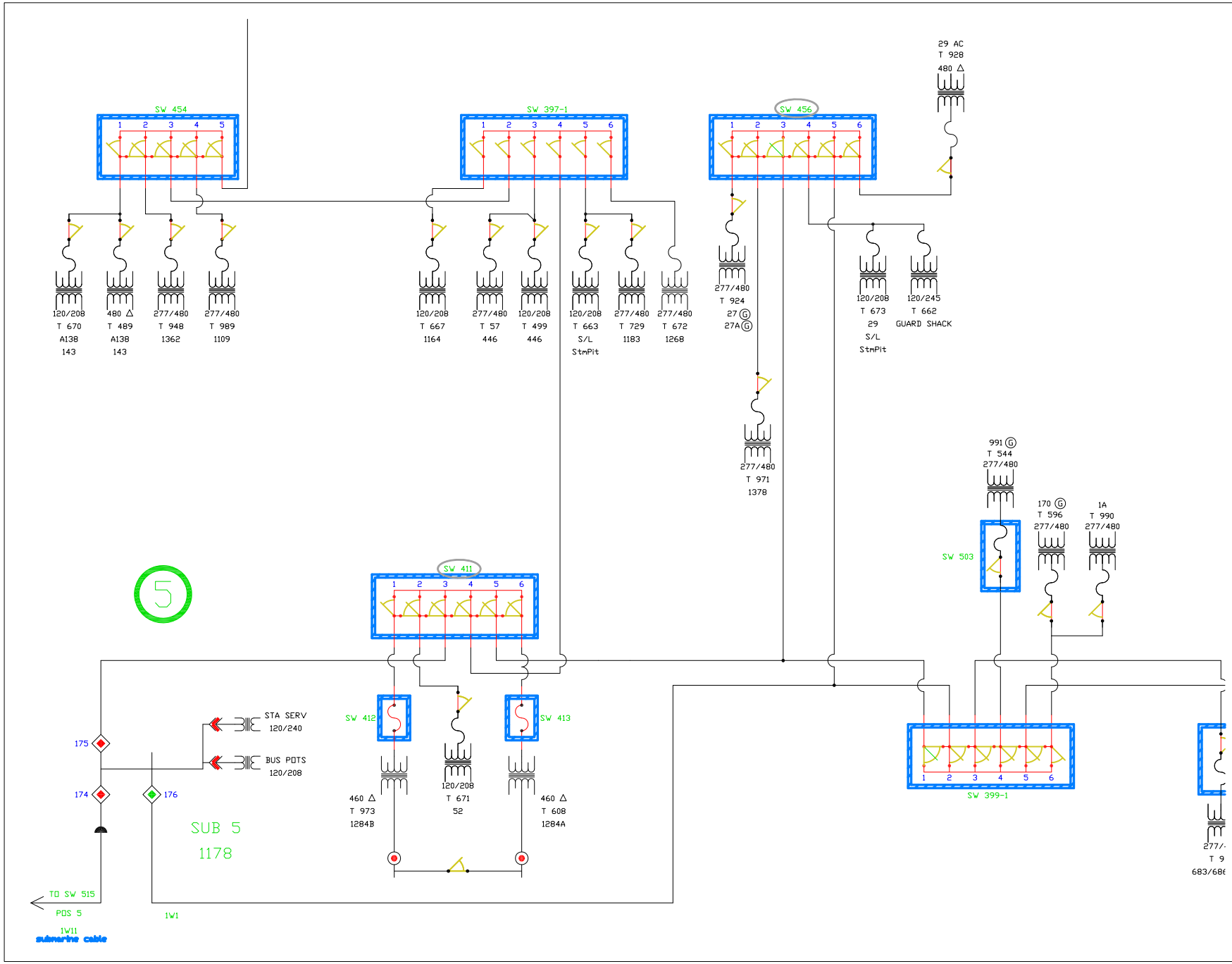
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-414 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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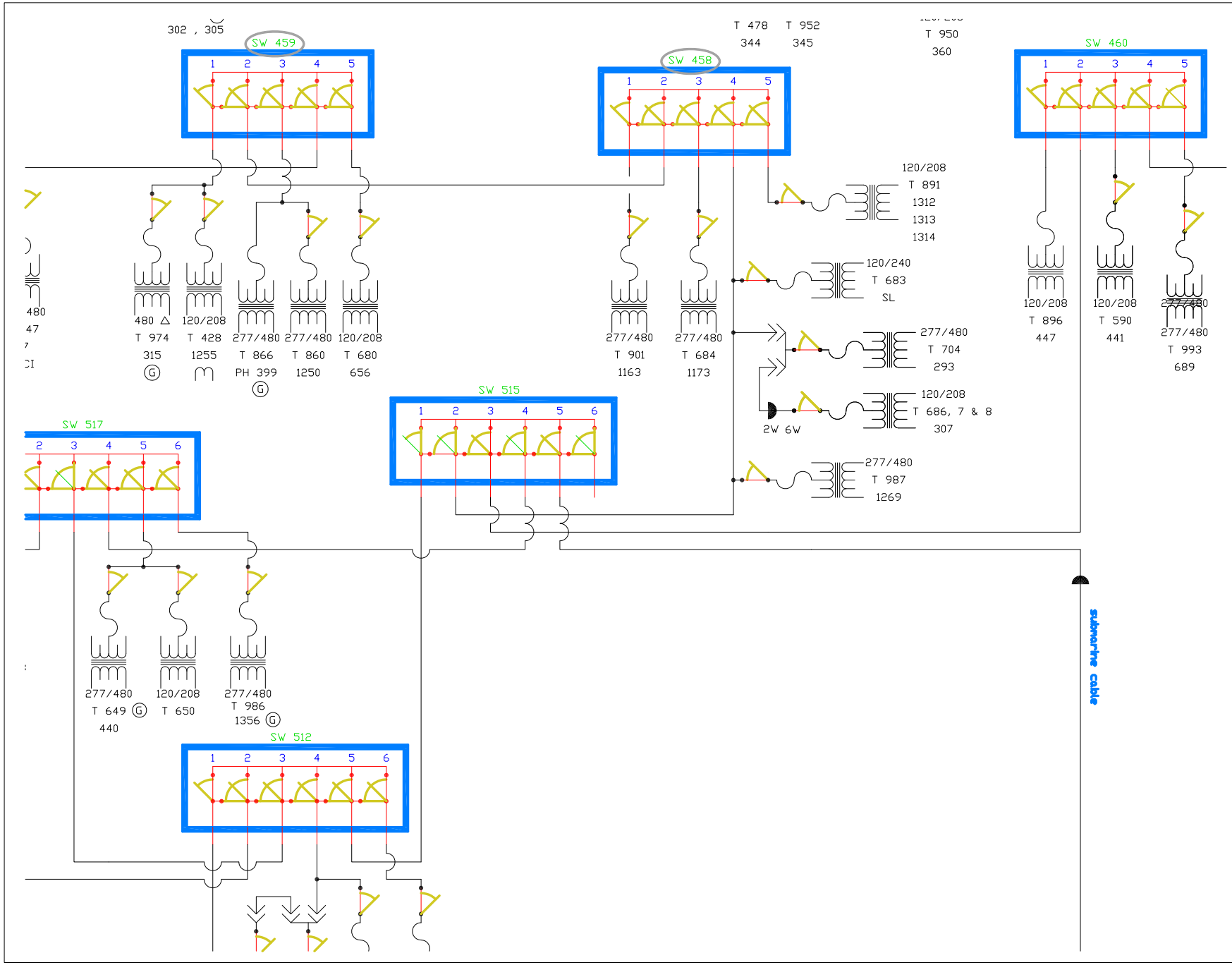
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-456 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-_ ___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___ DATE
SUPV. ___ CHK. ___
BR. HD.
DIV. HD.

SATISFACTORY TO DATE

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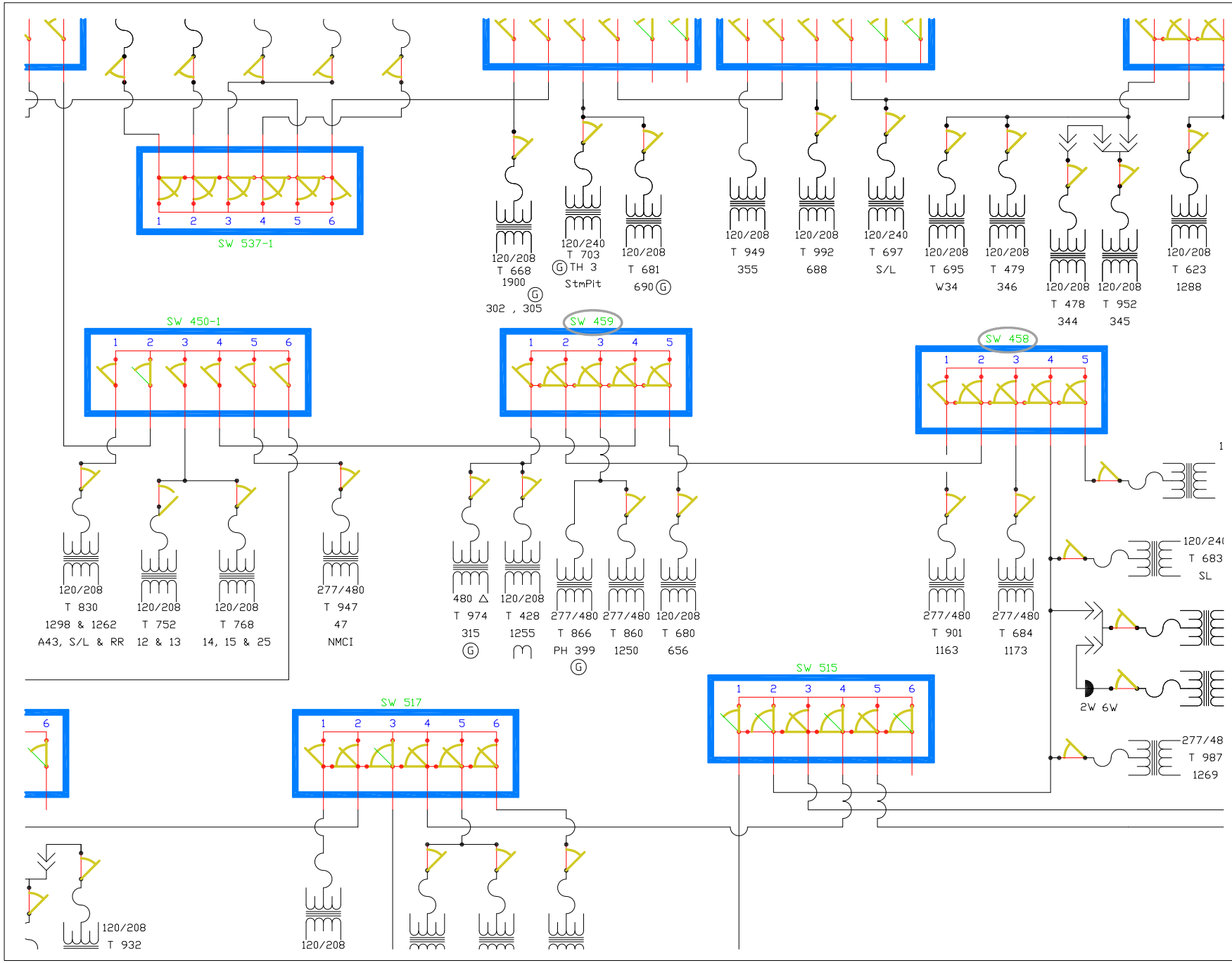
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-458 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-_-____
SPEC. NO. __-__-___
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD.
DIV. HD.
DATE

SATISFACTORY TO DATE

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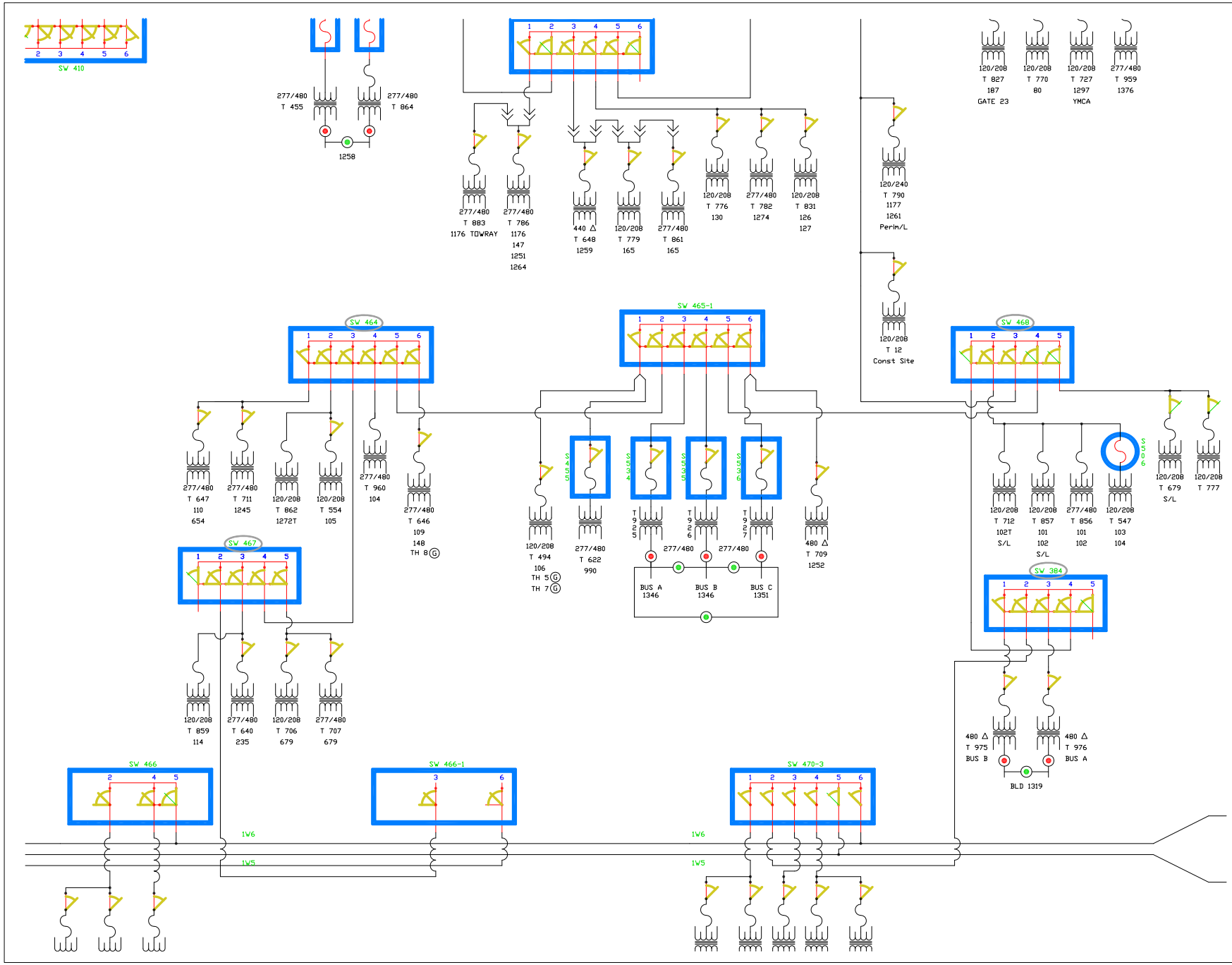
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-459 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-_-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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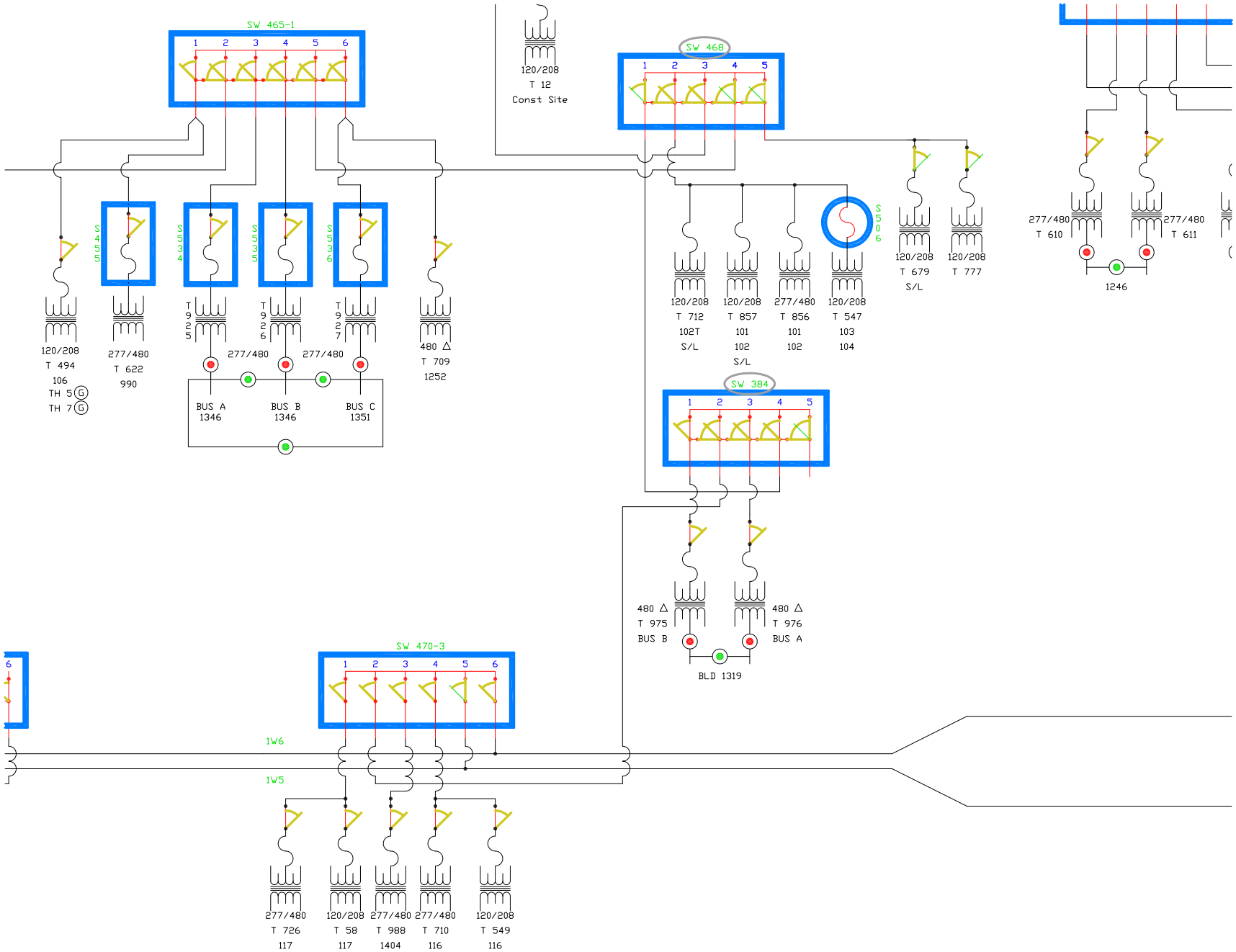
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-464 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-___
SHEET __ OF ___



REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVED

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
BR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER. QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

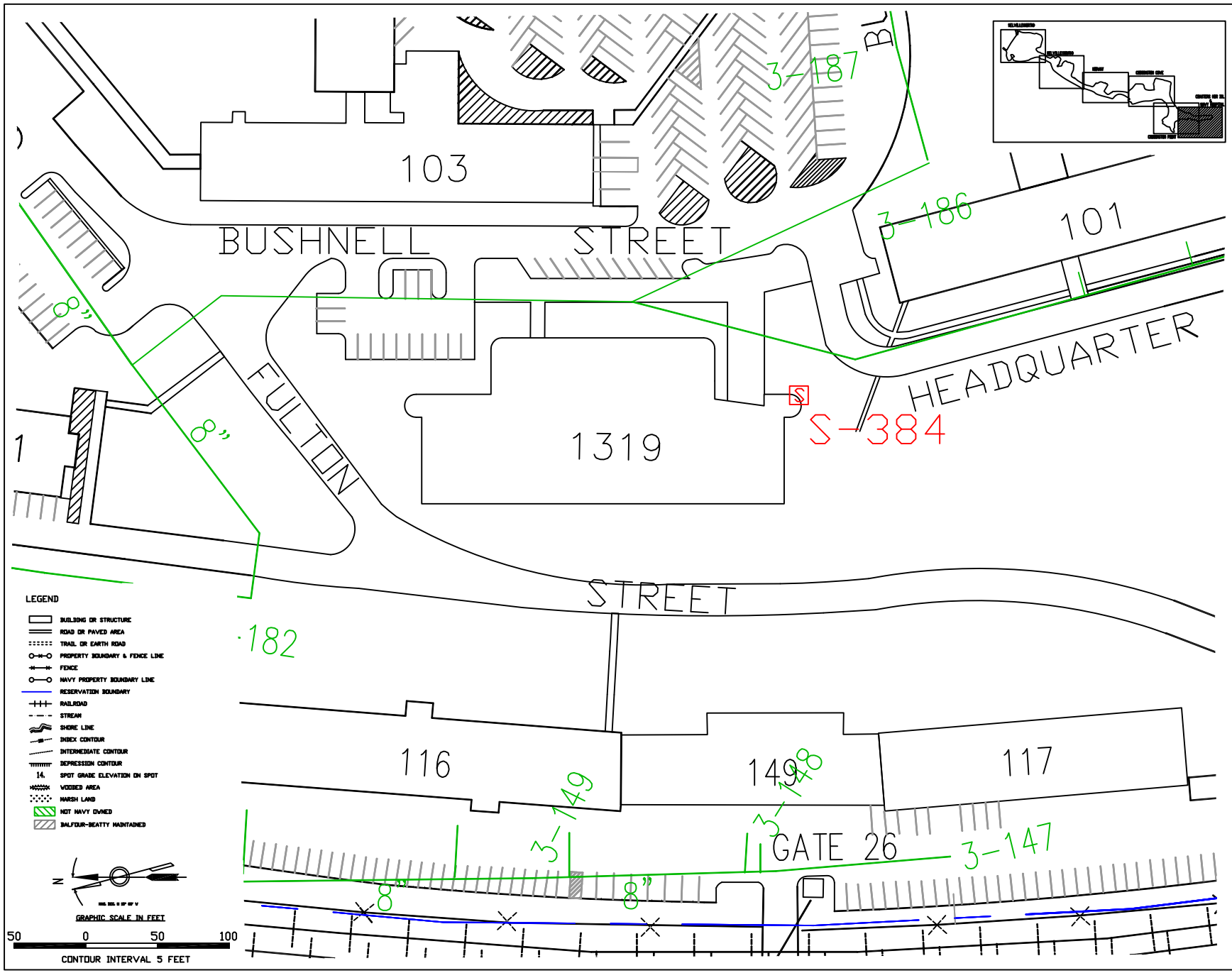
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING ELECTRICAL ONE-LINE DIAGRAM

S-468 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-_-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUP'V. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

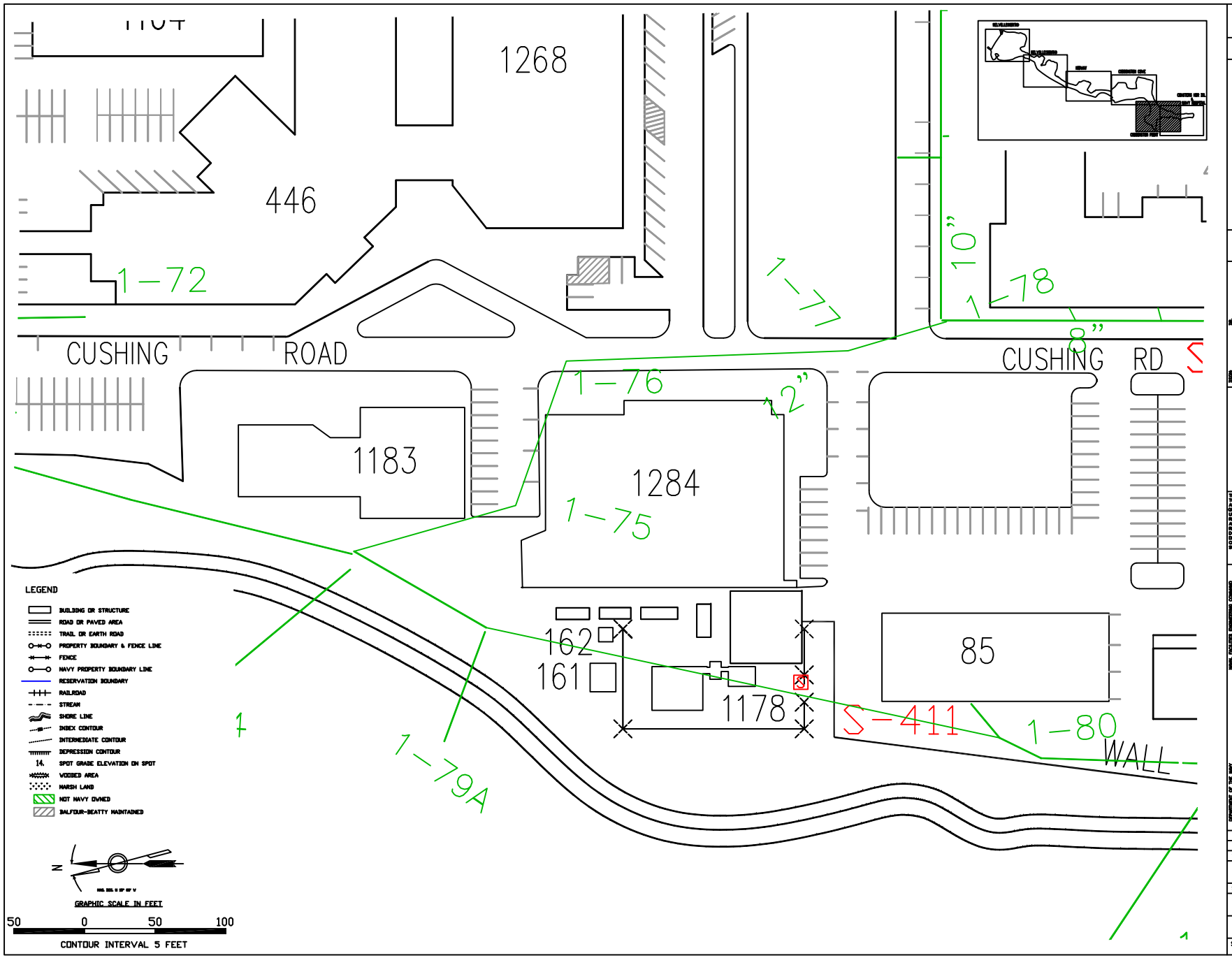
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING SANITARY SEWER CONDITION MAP

S-384 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-_____
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

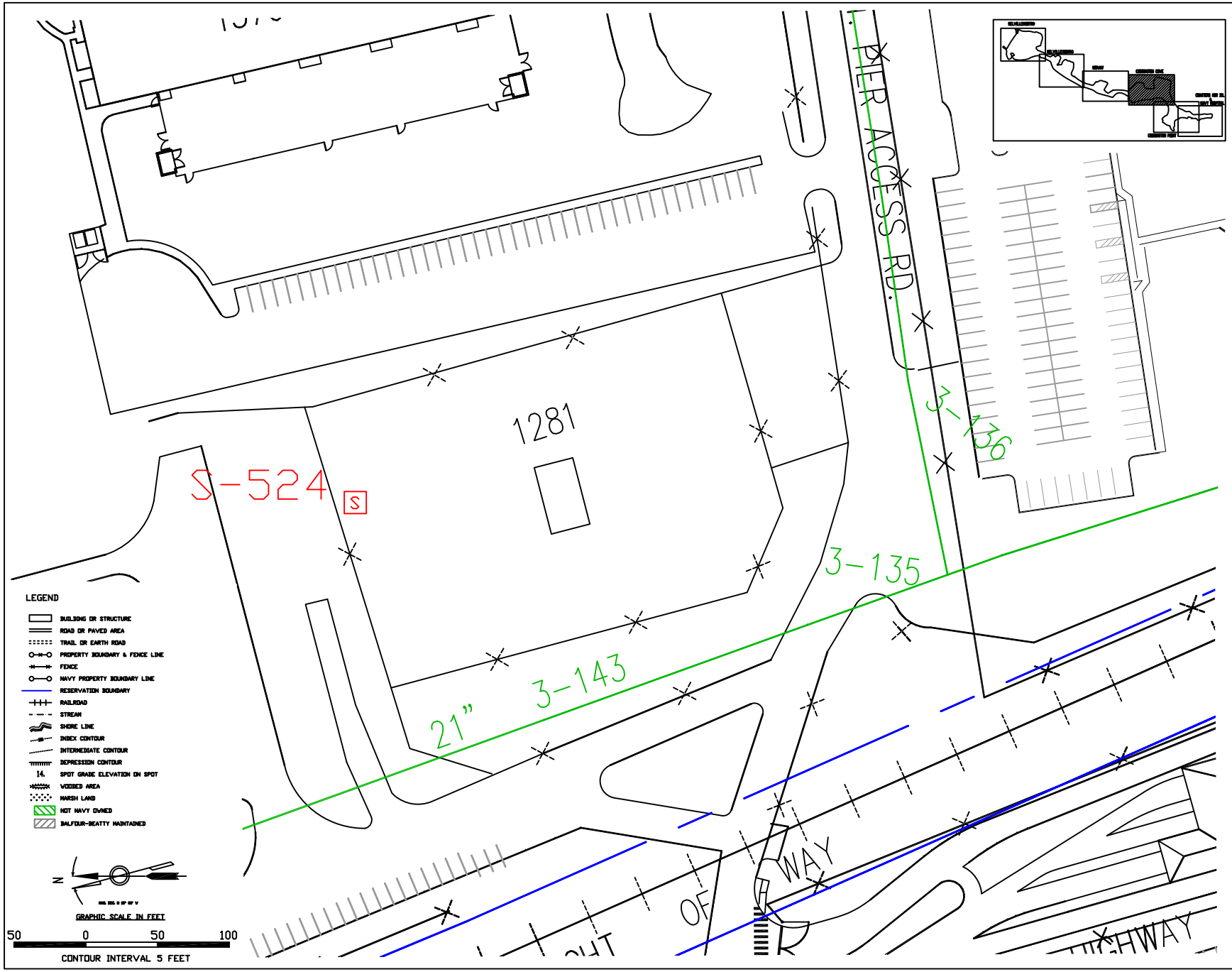
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING SANITARY SEWER CONDITION MAP

S-411 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING SANITARY SEWER CONDITION MAP

S-524 CODDINGTON COVE

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

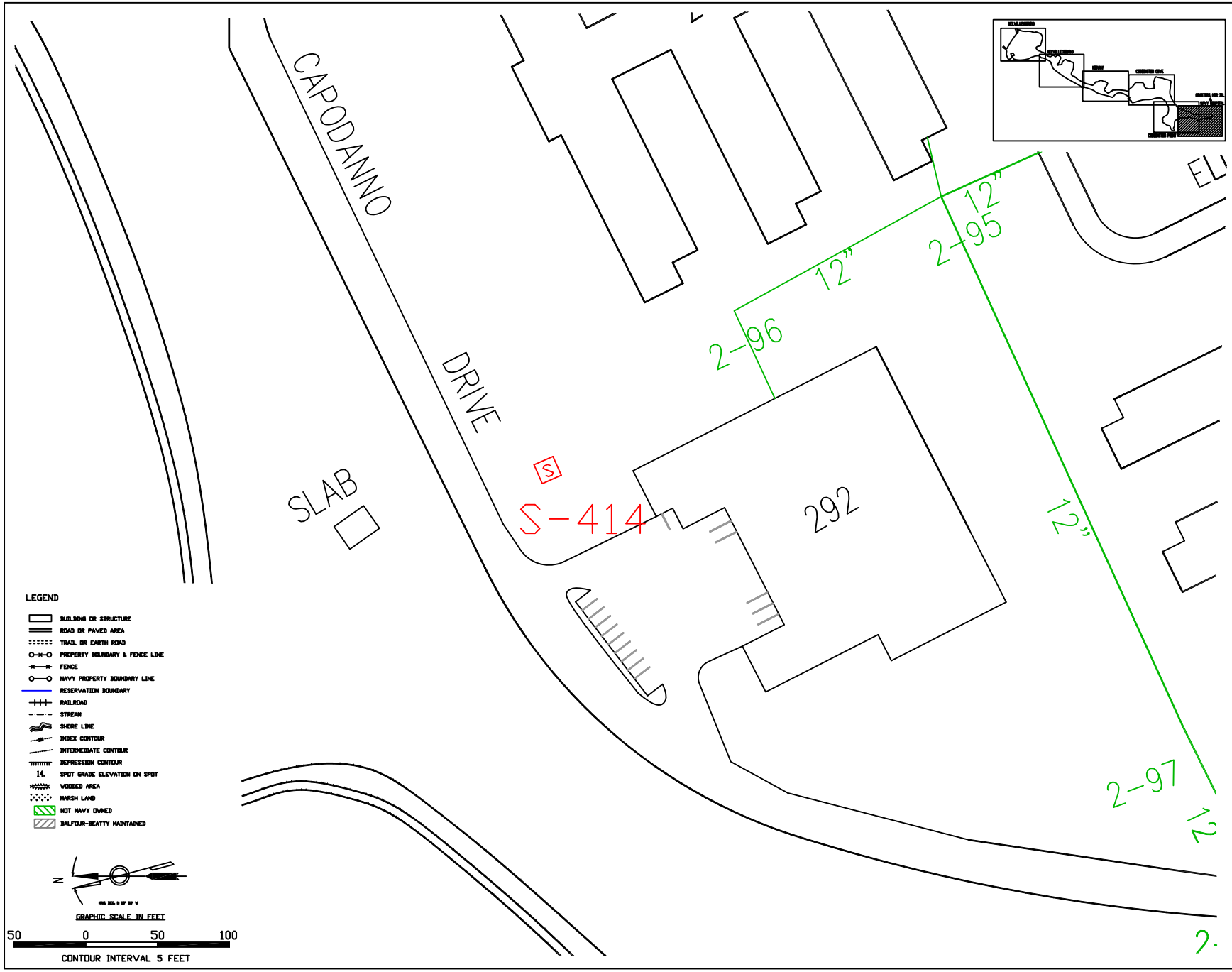
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUP'V. ____ CHK. ____
DR. HD. ____
DIV. HD. ____
DATE

SATISFACTORY TO ____ DATE

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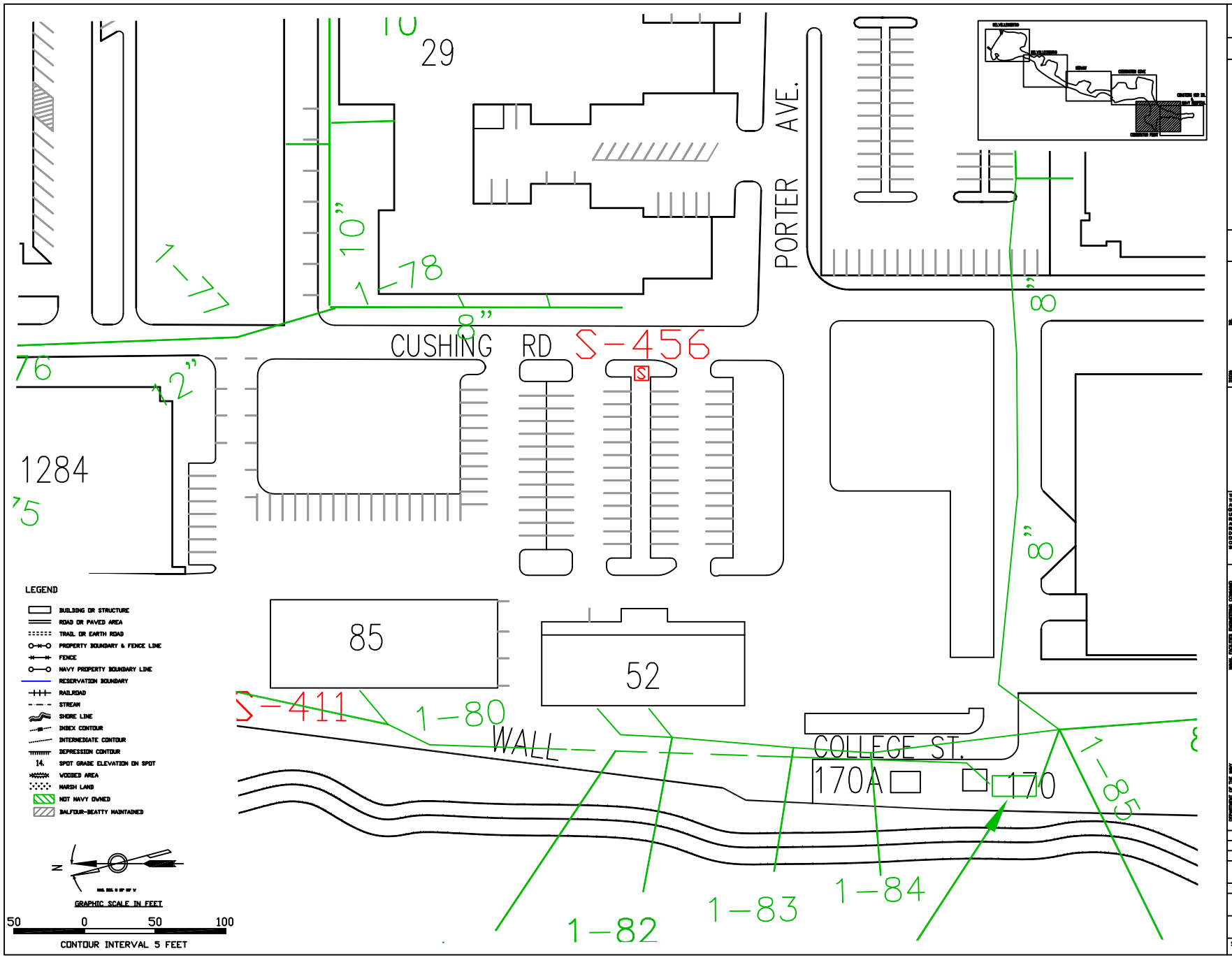
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING SANITARY SEWER CONDITION MAP

S-414 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ____
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUP'V. — DIR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING SANITARY SEWER CONDITION MAP

S-456 COASTERS HARBOR ISLAND

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

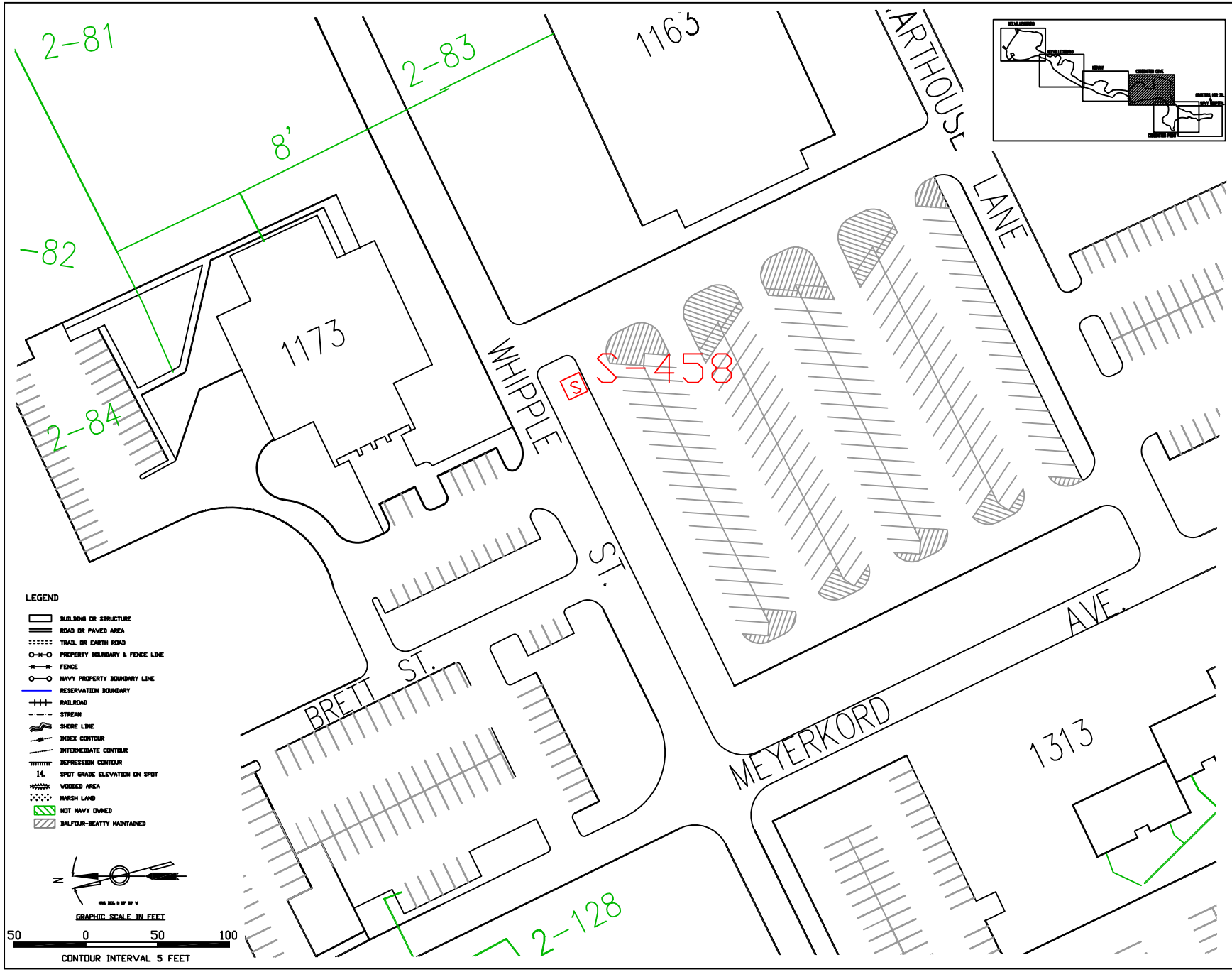
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUP'V. ___ CHK. ___
DR. HD.
DIV. HD.
DATE

SATISFACTORY TO DATE

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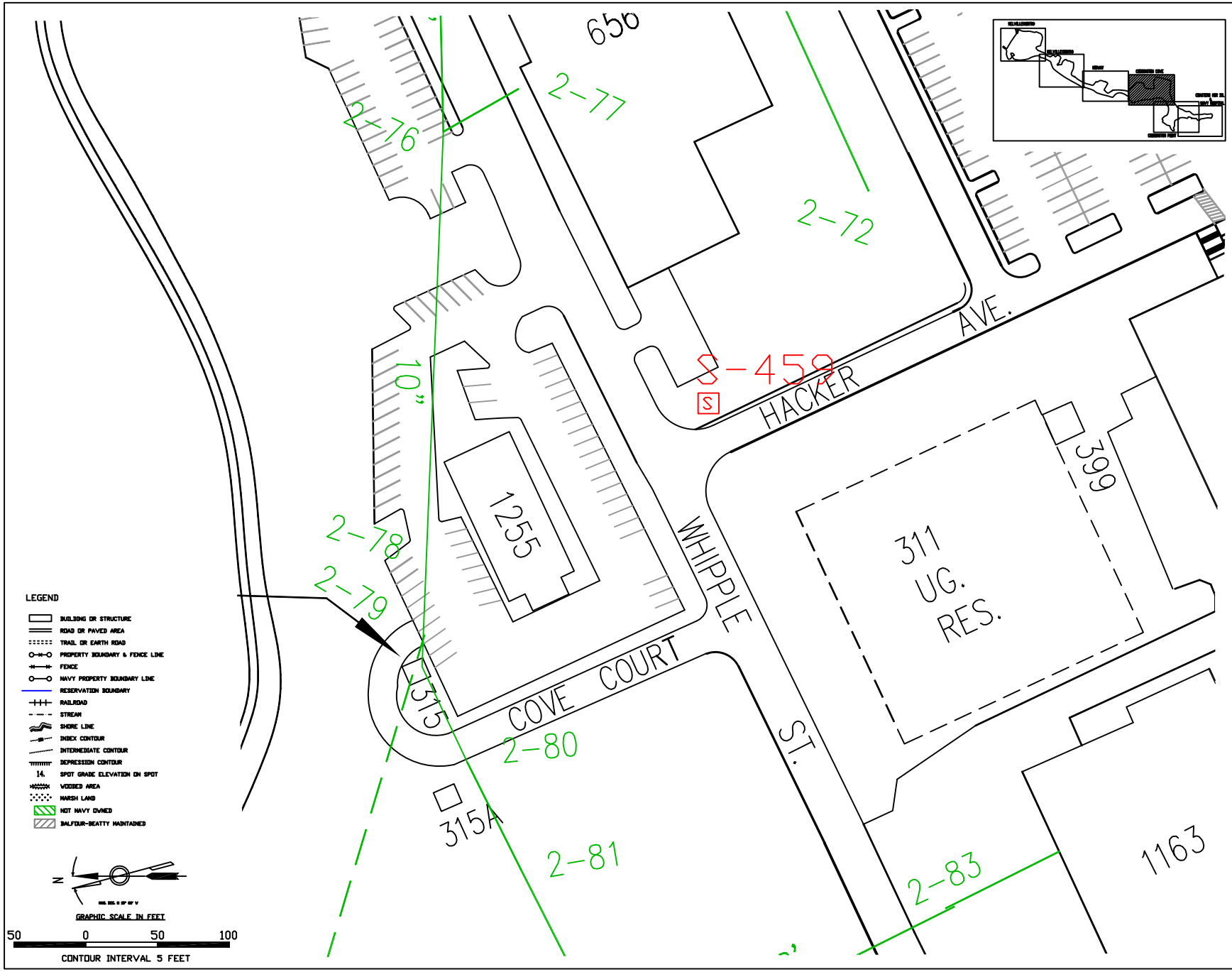
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING SANITARY SEWER CONDITION MAP

S458 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

SIGN. DR. DATE
SUPV. CHK.
DR. HD.
DIV. HD.

SATISFACTORY TO DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING SANITARY SEWER CONDITION MAP

S459 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

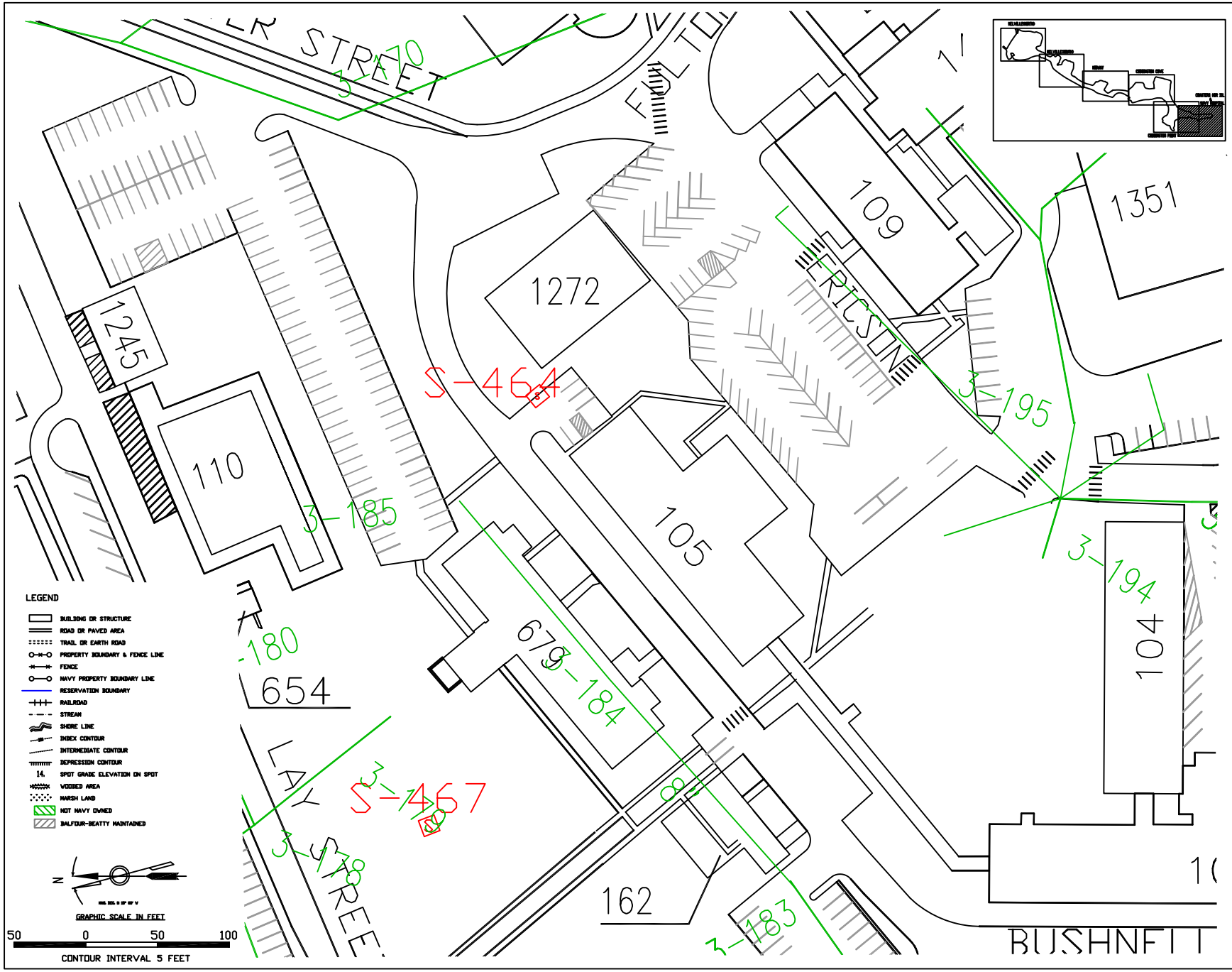
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUP'V. — DIR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING SANITARY SEWER CONDITION MAP

S-464 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

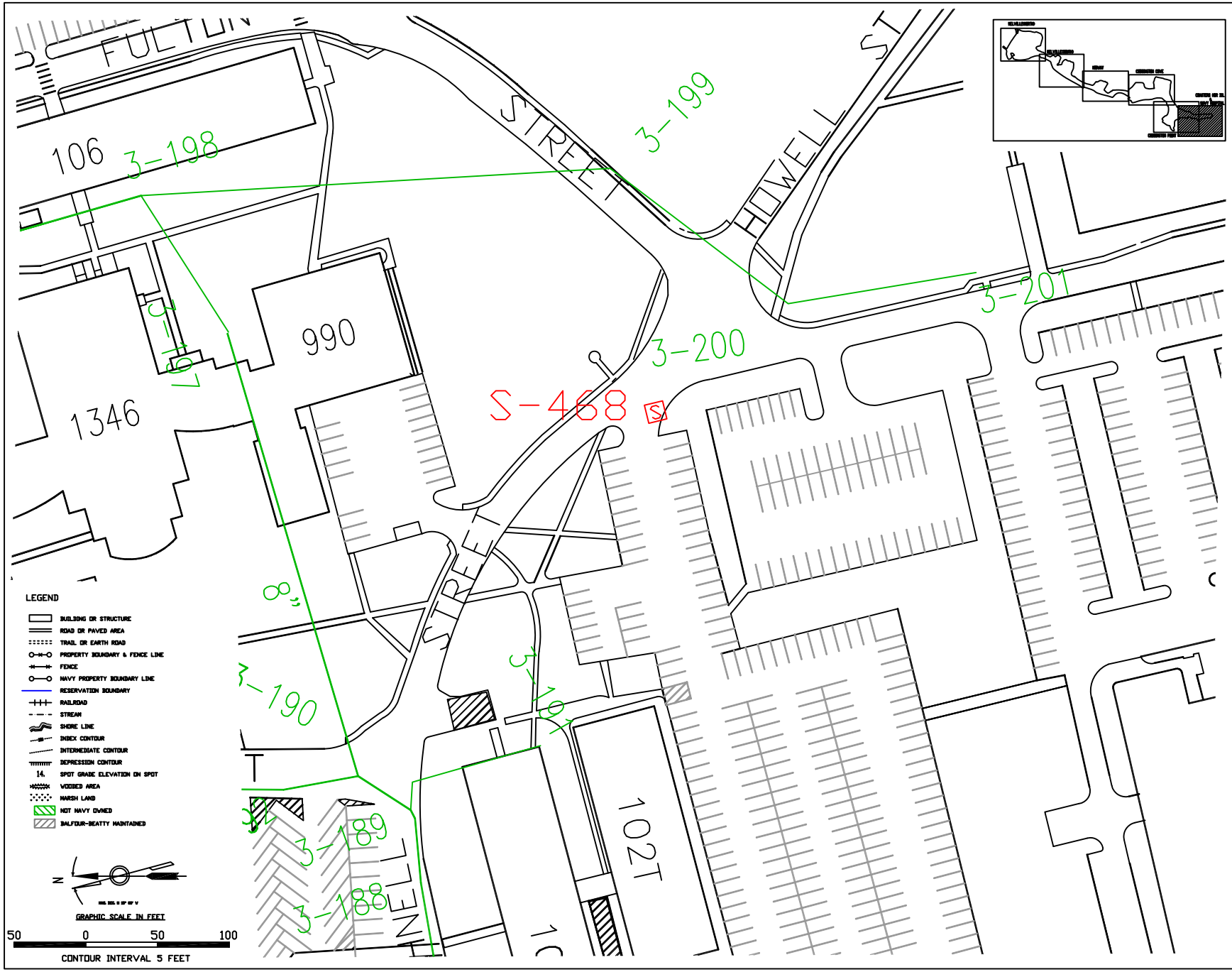
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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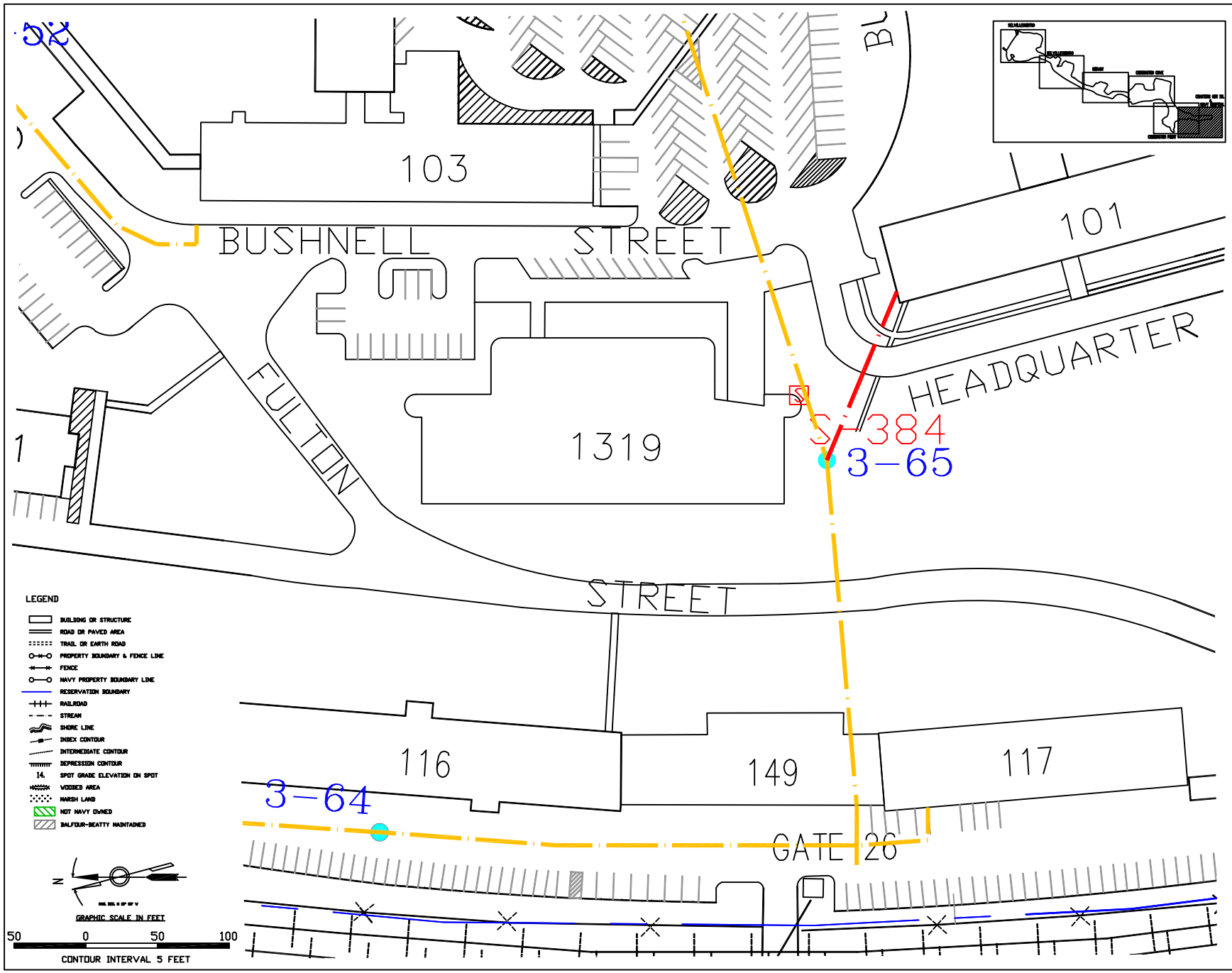
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING SANITARY SEWER CONDITION MAP

S-468 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____ - ____
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

SIGN. DR. ___ CHK. ___ SUP'V. ___ DR. HD. ___ DIV. HD. ___ DATE

SATISFACTORY TO ___ DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STEAM/CONDENSATE CONDITION MAP

S-384 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

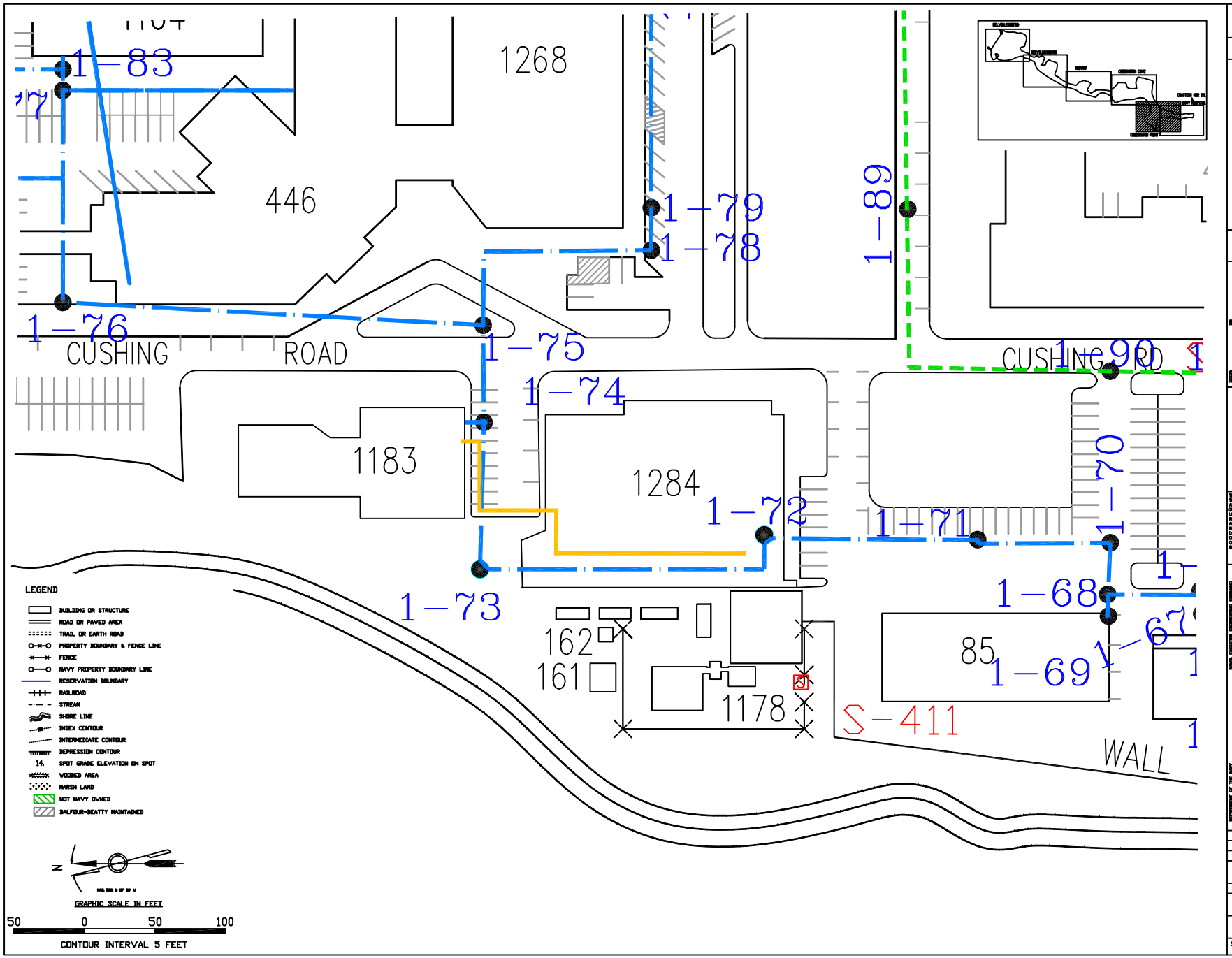
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-_-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUP'V. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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DIS. SH. NO. I - 1

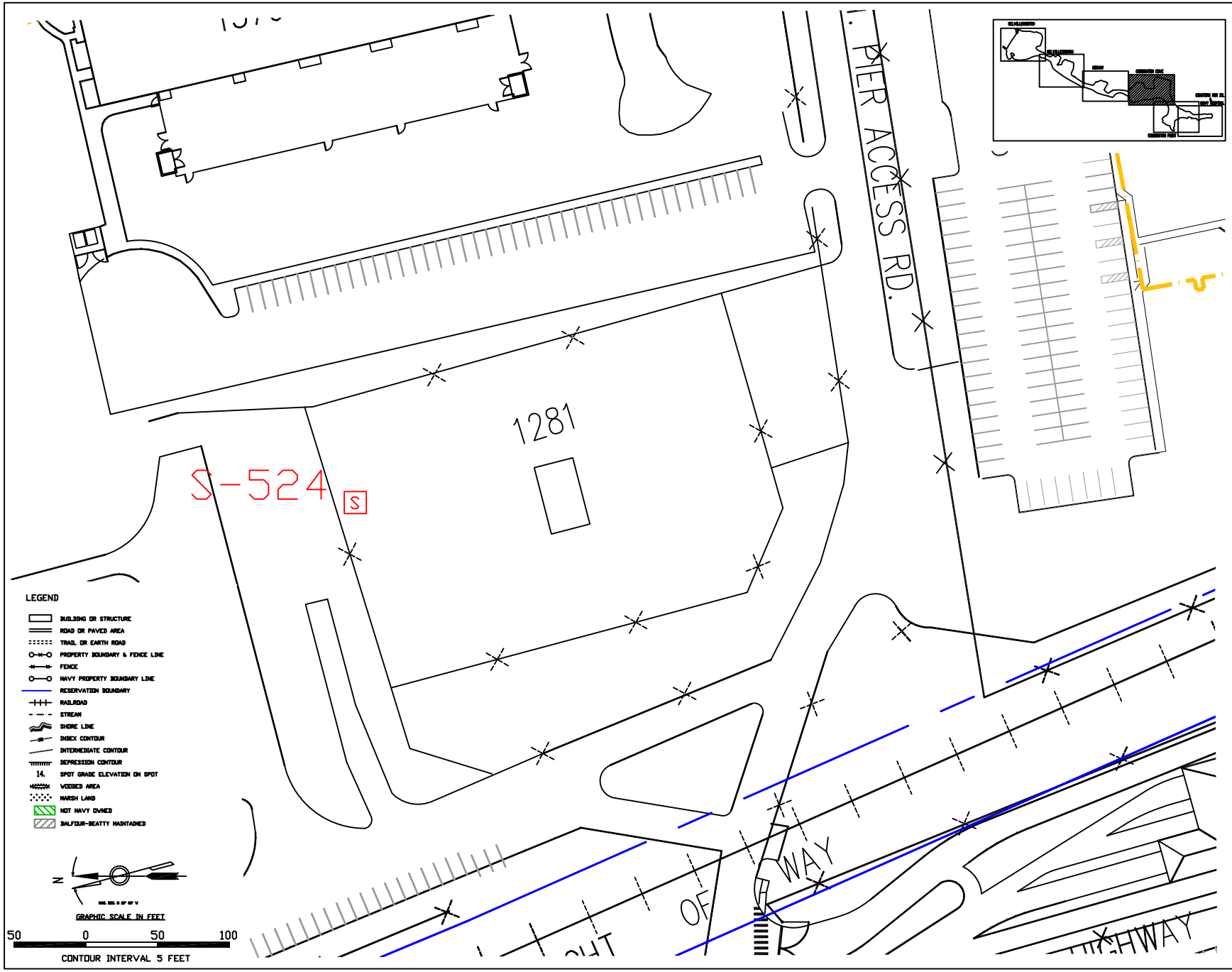
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STEAM/CONDENSATE CONDITION MAP

S-411 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STEAM/CONDENSATE CONDITION MAP

S-524 CODDINGTON COVE

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

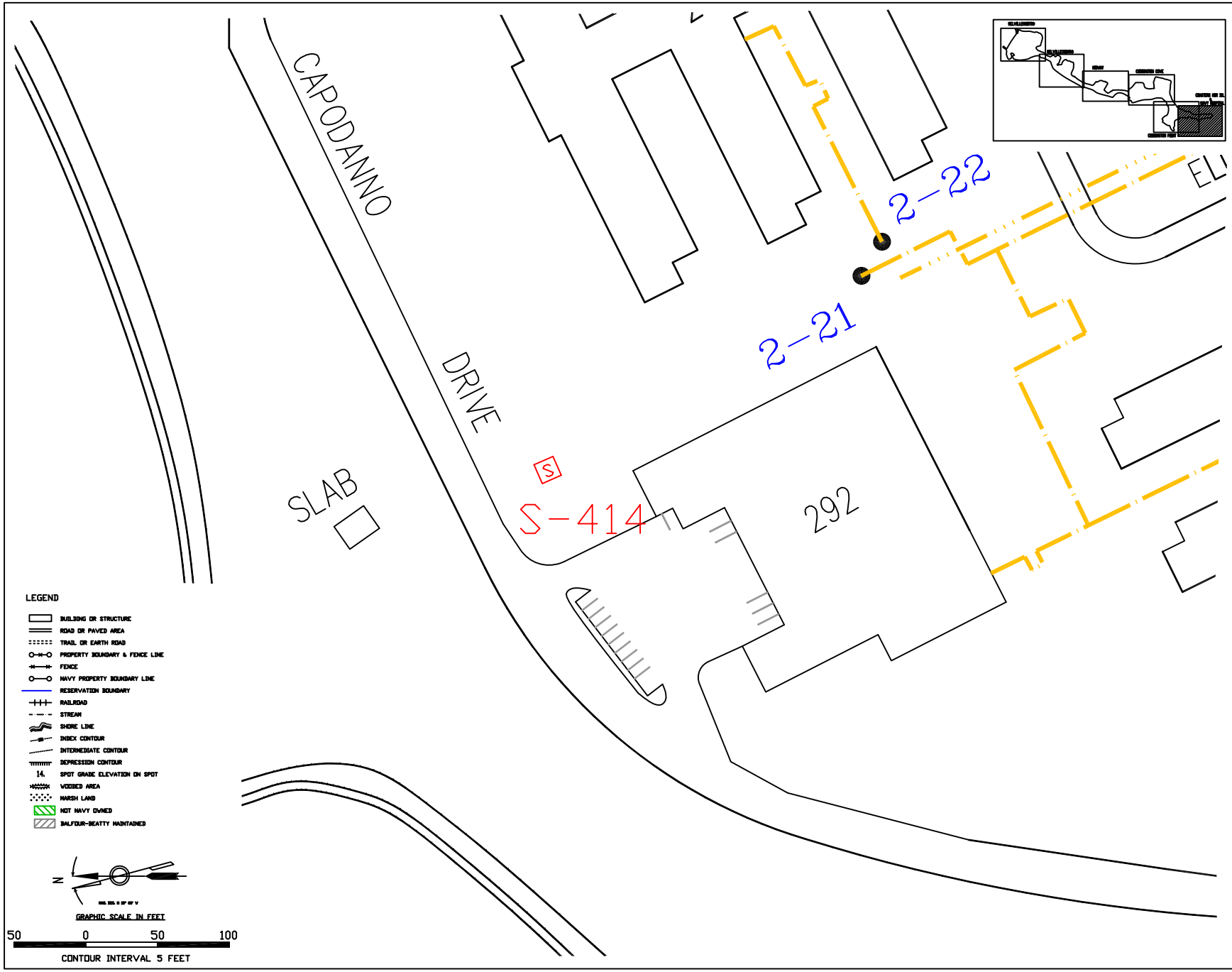
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUPV. ____ CHK. ____
DR. HD.
DIV. HD.

SATISFACTORY TO ____ DATE ____

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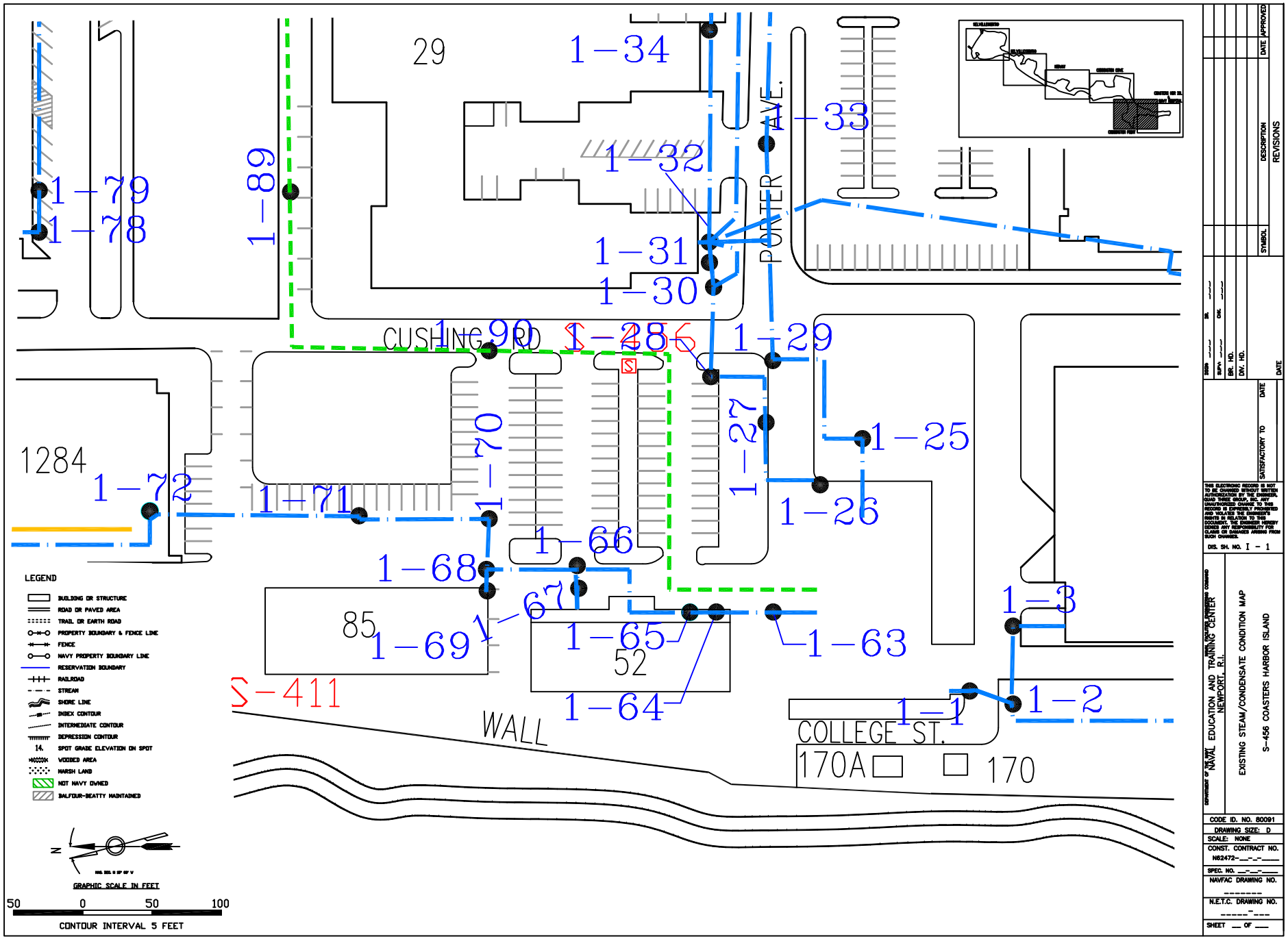
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STEAM/CONDENSATE CONDITION MAP

S-414 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ____
SHEET __ OF ___


29
1-34
1-33
1-32
1-31
1-30
PORTER AVE.
1-79
1-78
1-89
CUSHING RD
1-90
S-286
1-29
1-27
1-25
1-26
1284
1-72
1-71
1-70
1-66
1-68
1-67
1-69
85
1-65
52
1-63
1-3
1-2
1-1
S-411
1-64
WALL
COLLEGE ST.
170A
170
LEGEND
BUILDING OR STRUCTURE
ROAD OR PAVED AREA
TRAIL OR EARTH ROAD
PROPERTY BOUNDARY & FENCE LINE
FENCE
NAVY PROPERTY BOUNDARY LINE
RESERVATION BOUNDARY
RAILROAD
STREAM
SHORE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
DEPRESSION CONTOUR
14. SPOT GRADE ELEVATION ON SPOT
WOODED AREA
MARSH LAND
NOT NAVY OWNED
BALFOUR-BEATTY MAINTAINED
N
GRAPHIC SCALE IN FEET
50 0 50 100
CONTOUR INTERVAL 5 FEET
SYMBOL
DESCRIPTION
REVISIONS
DATE
APPROVED
DESIGN
DR.
SUPV.
CHK.
DR. HD.
DIV. HD.
DATE
SATISFACTORY TO
DATE
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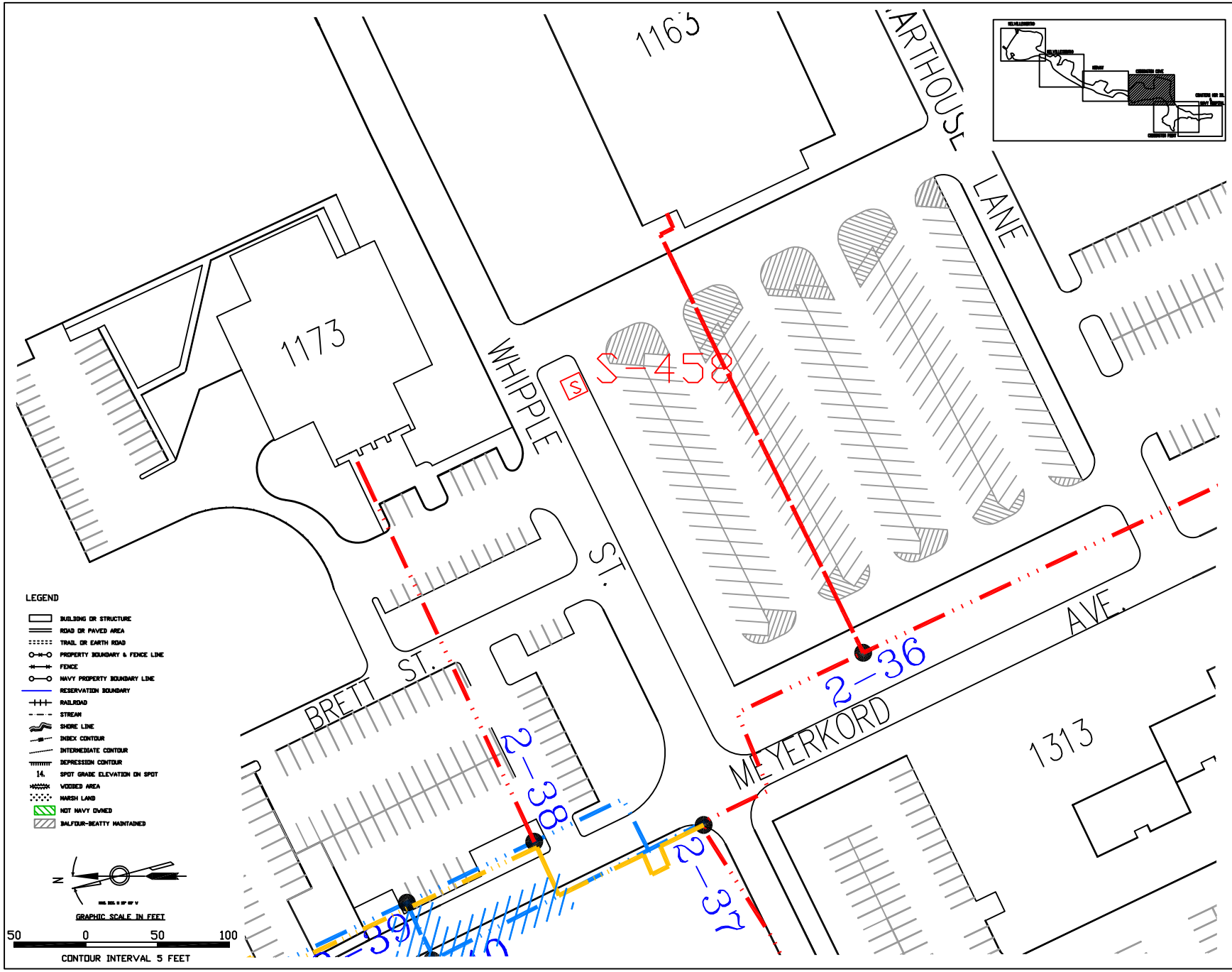
DIS. SH. NO. I - 1
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND
EXISTING STEAM/CONDENSATE CONDITION MAP
S-456 COASTERS HARBOR ISLAND
CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — SUPV. — CHK. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STEAM/CONDENSATE CONDITION MAP

S458 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

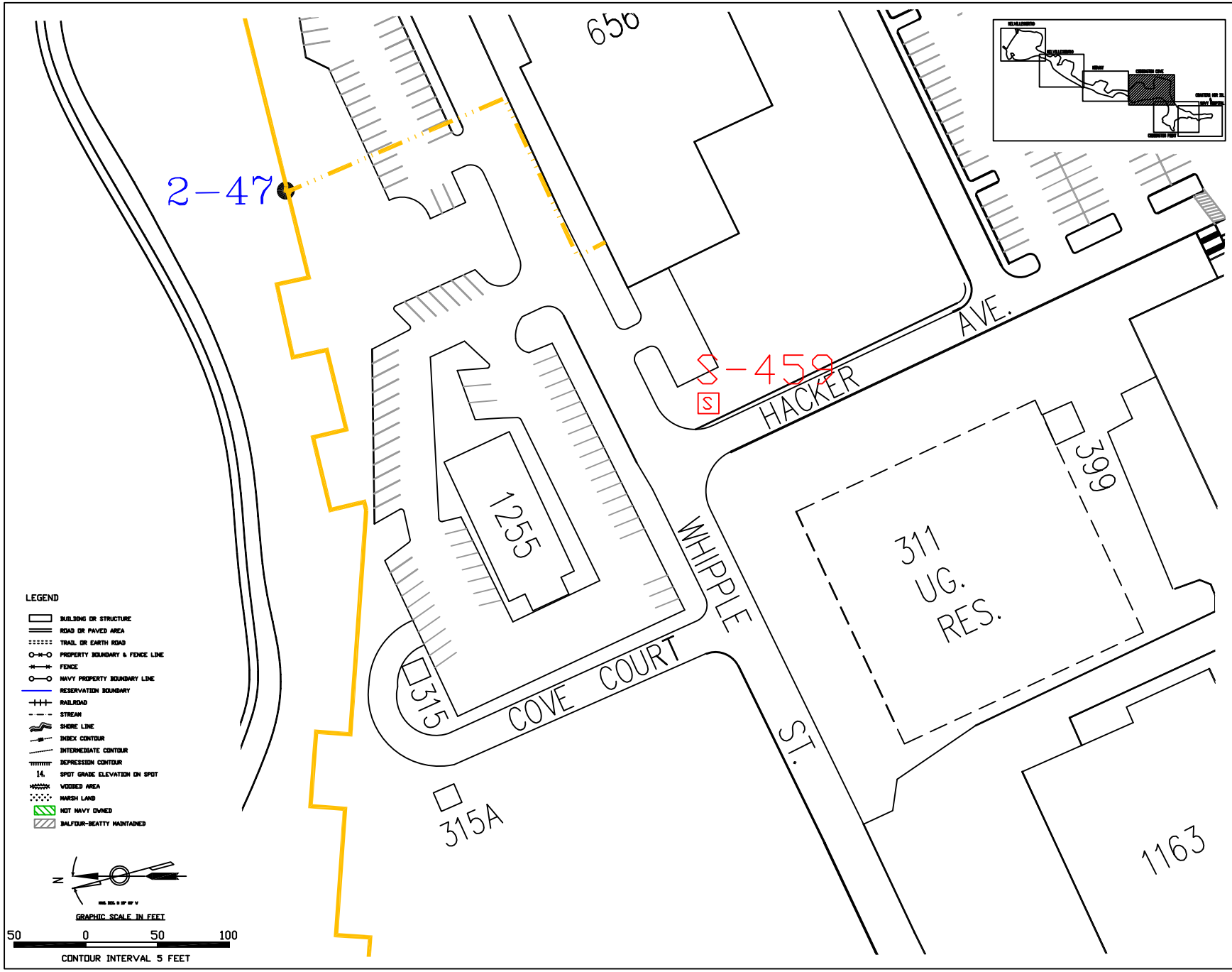
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DR. HD.
DIV. HD.
DATE

SATISFACTORY TO DATE

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DIS. SH. NO. I - 1

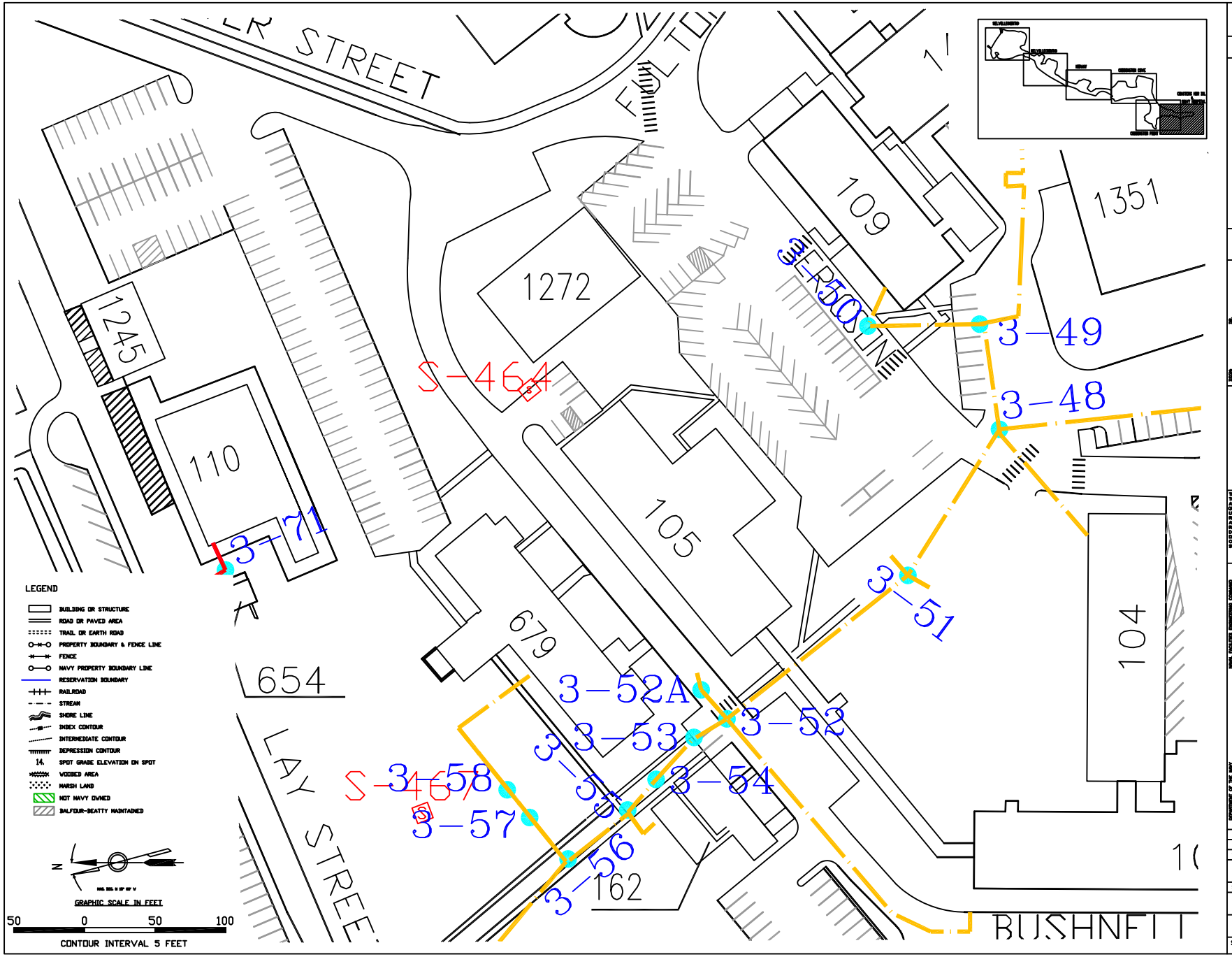
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STEAM/CONDENSATE CONDITION MAP

S459 CODDINGTON POINT

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-___
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUP'V. ___ CHK. ___
DIR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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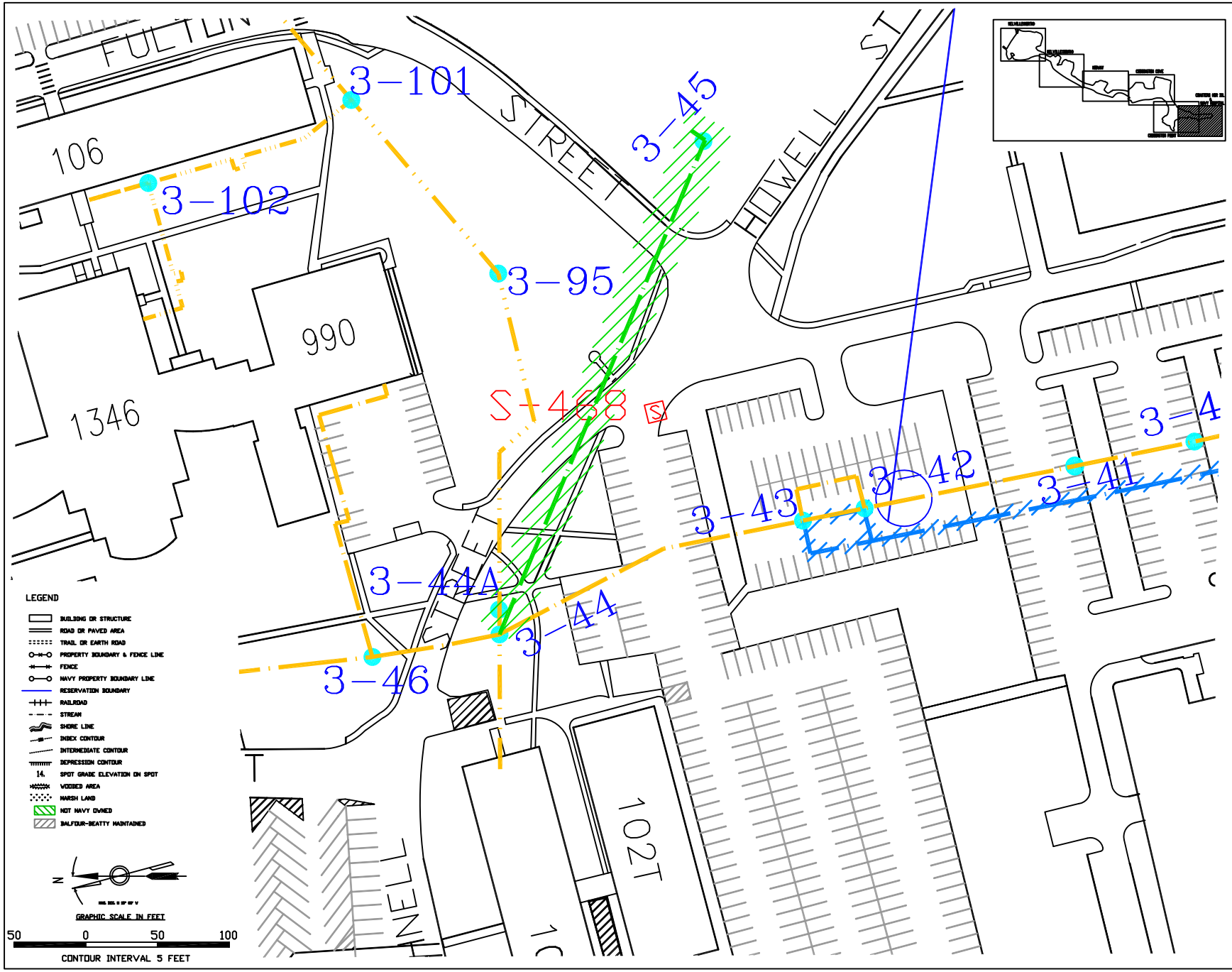
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

EXISTING STEAM/CONDENSATE CONDITION MAP

S-464 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

SIGN. DR. CHK. SUP'V. DIR. HD. DIV. HD. DATE

SATISFACTORY TO DATE

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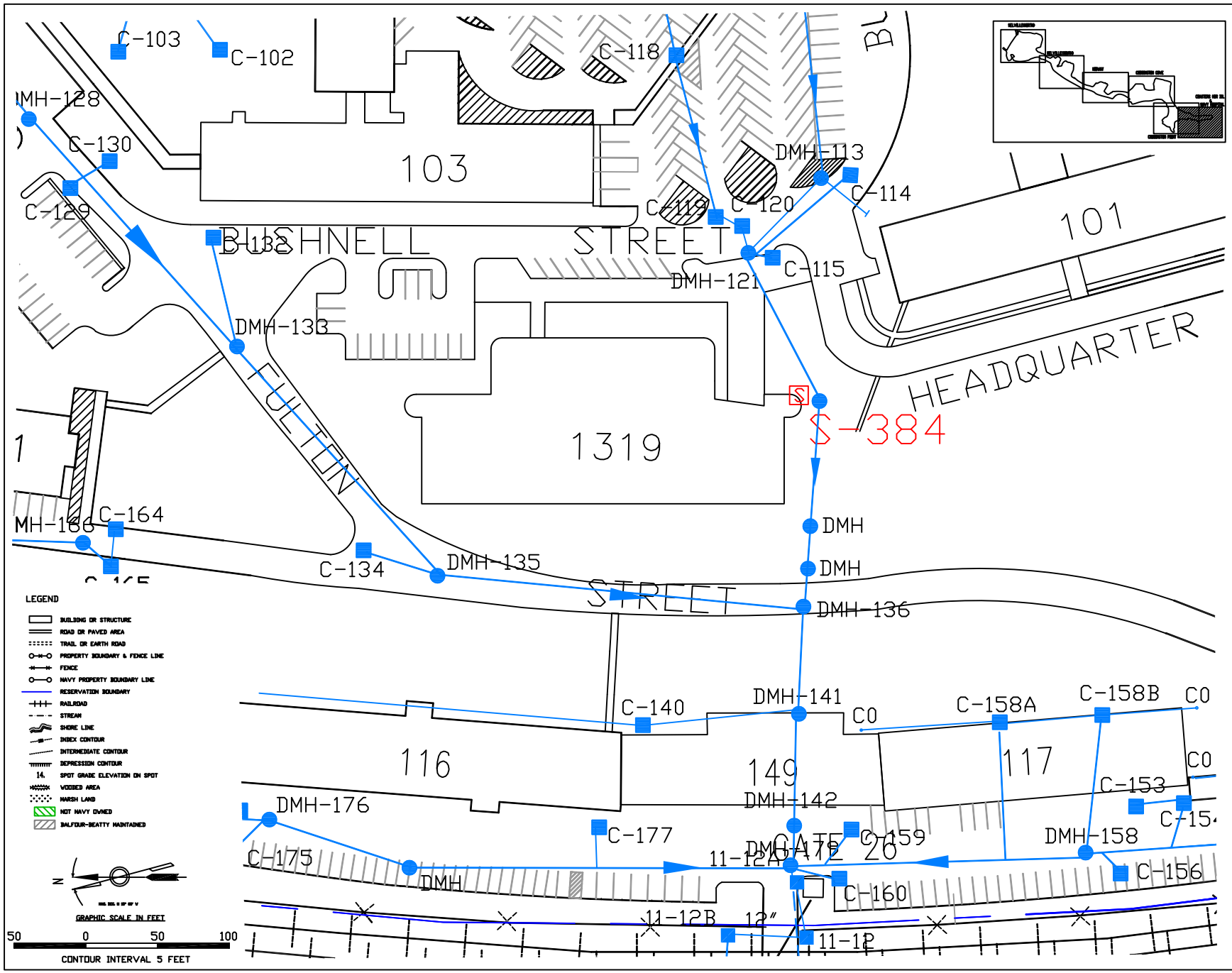
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING STEAM/CONDENSATE CONDITION MAP

S-468 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____ ___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

THIS ELECTRONIC RECORD IS NOT TO BE CHANGED WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER, QUAD THREE GROUP, INC. ANY UNAUTHORIZED CHANGE TO THIS RECORD IS EXPRESSLY PROHIBITED AND VIOLATES THE ENGINEER'S RIGHTS IN RELATION TO THIS DOCUMENT. THE ENGINEER HEREBY DENIES ANY RESPONSIBILITY FOR CLAIMS OR DAMAGES ARISING FROM SUCH CHANGES.

DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STORM DRAINAGE CONDITION MAP

S-384 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

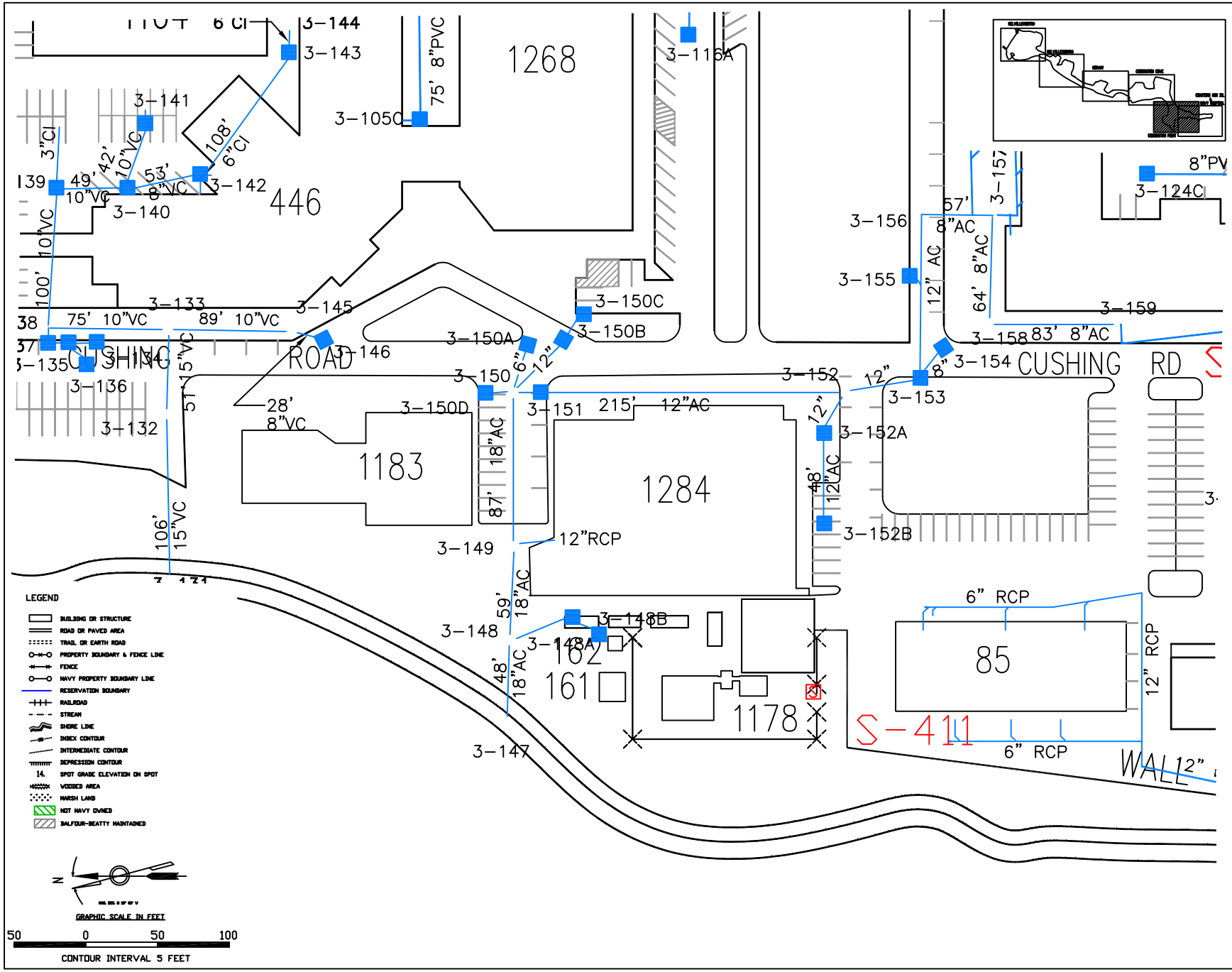
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE

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DIS. SH. NO. I - 1

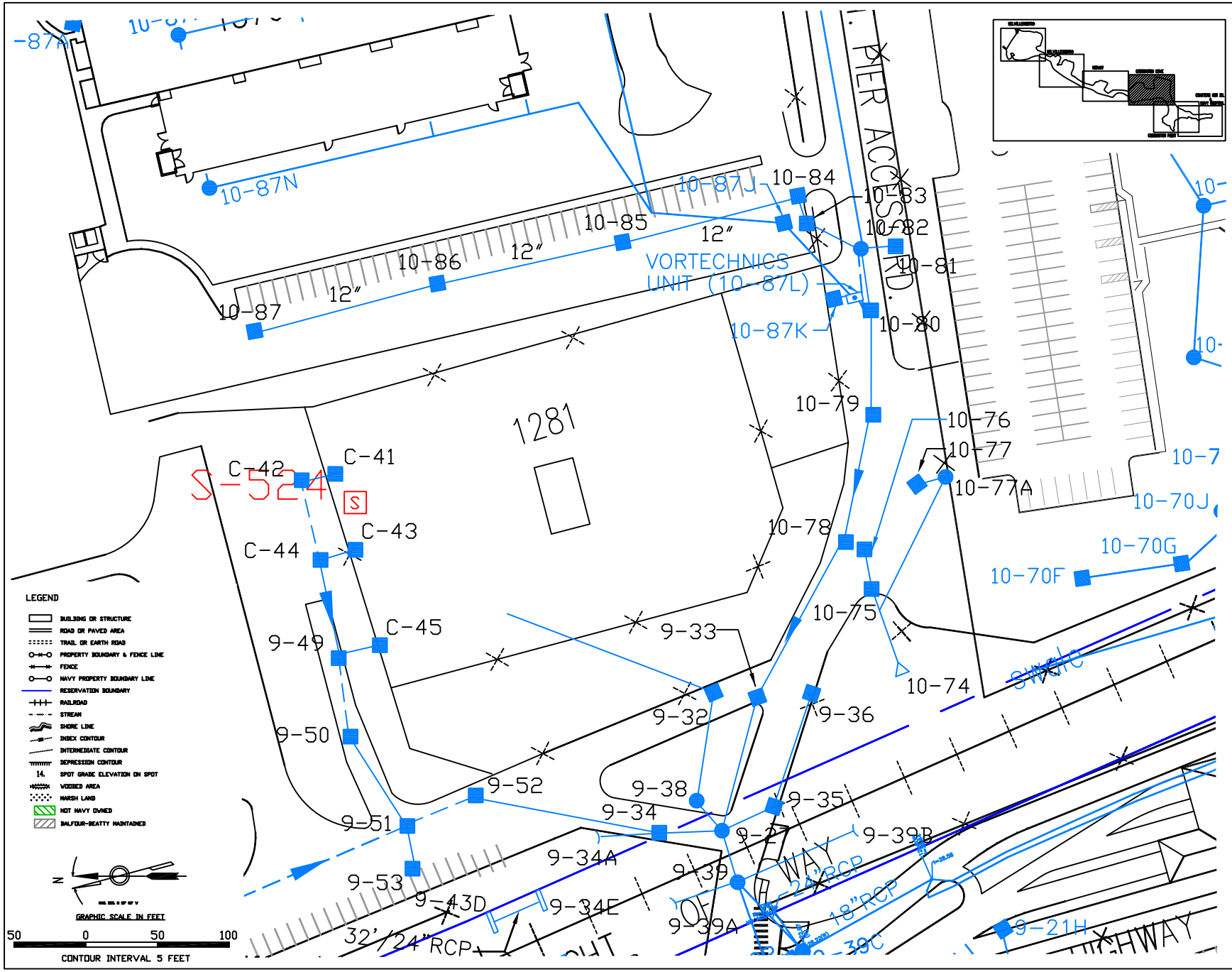
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STORM DRAINAGE CONDITION MAP

S-411 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUP'V. ____ CHK. ____
DIR. HD.
DIV. HD.

SATISFACTORY TO ____ DATE ____

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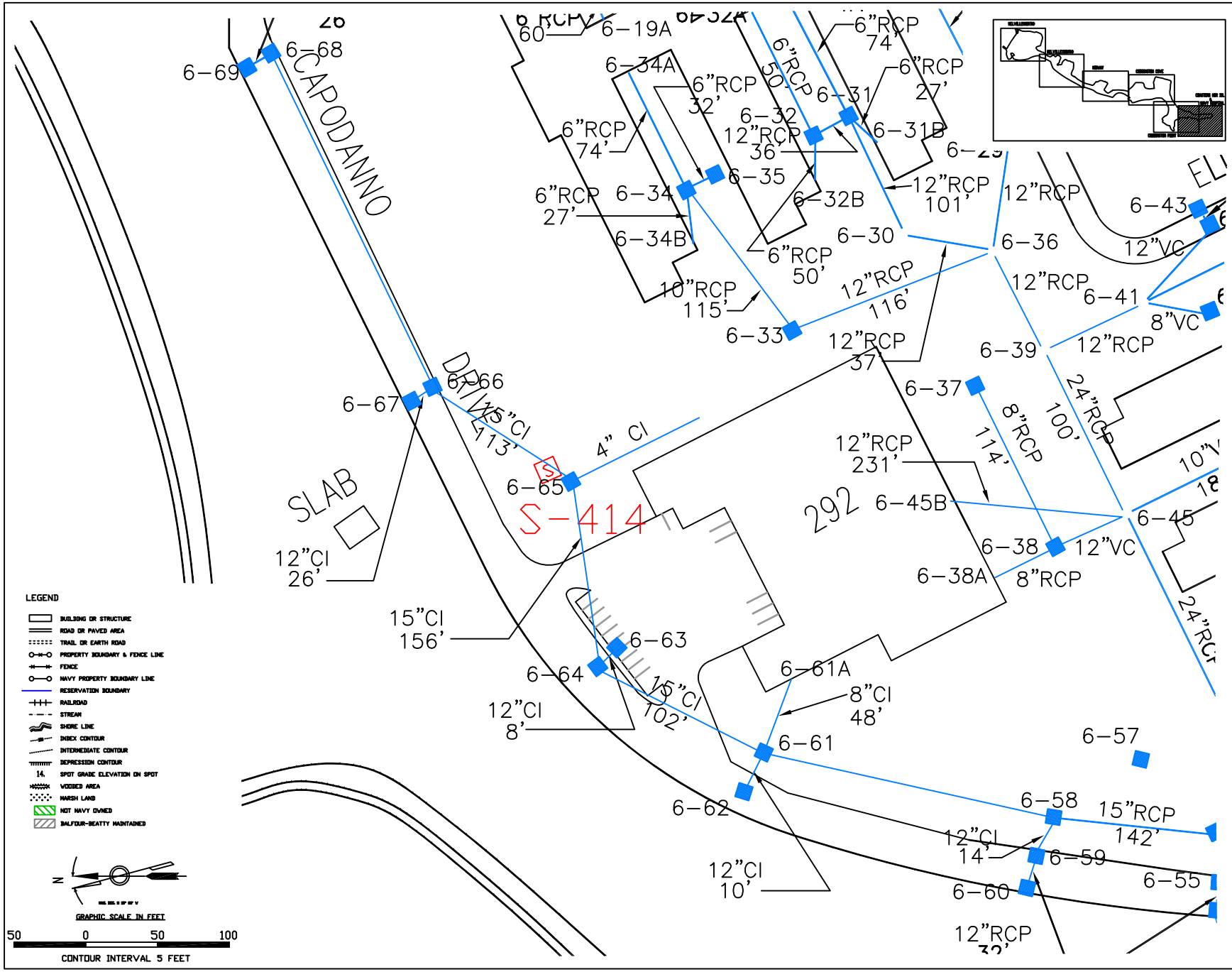
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING STORM DRAINAGE CONDITION MAP

S-524 CODDINGTON COVE

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STORM DRAINAGE CONDITION MAP

S-414 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

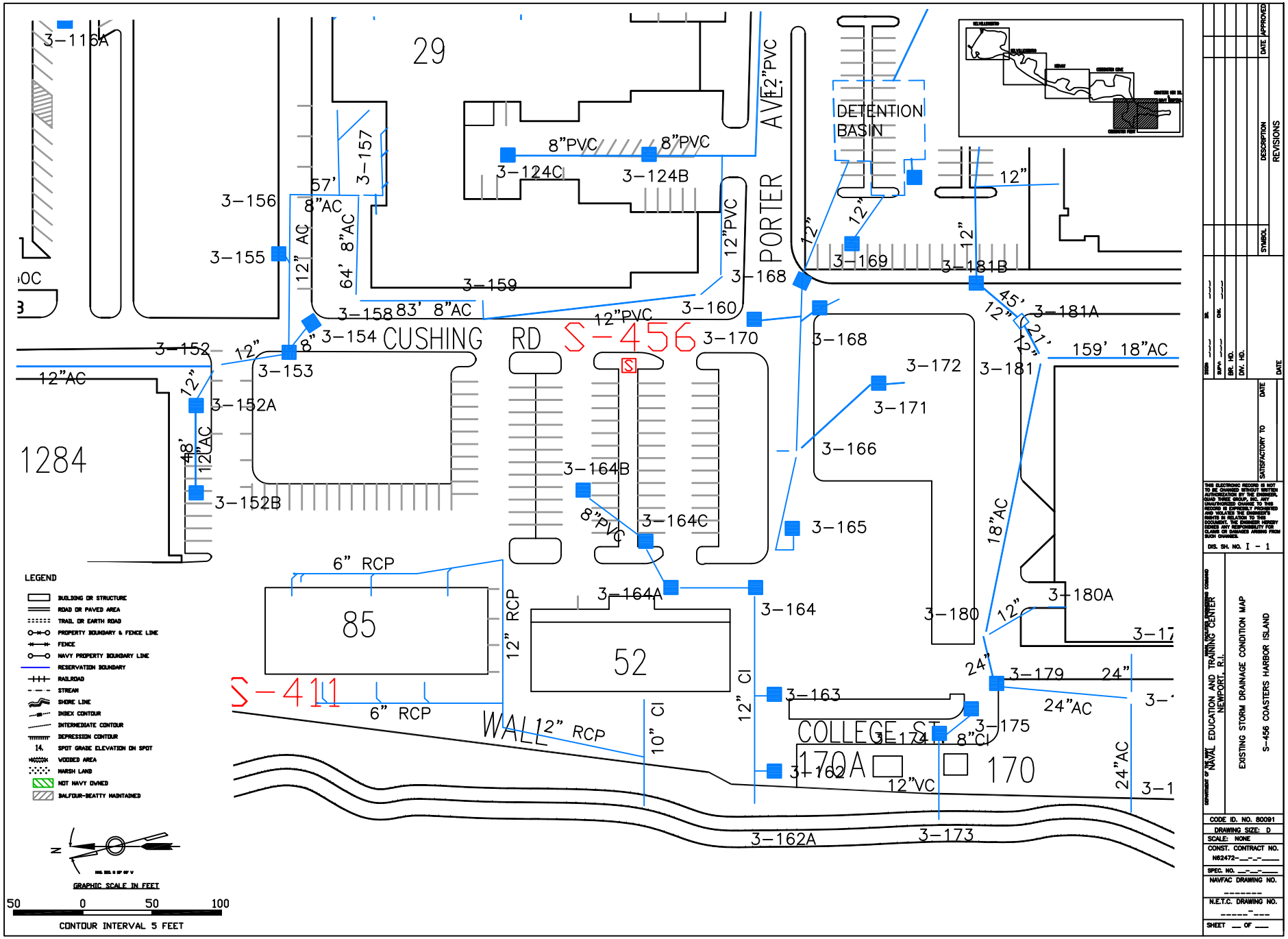
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUP'V. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO DATE

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DIS. SH. NO. I - 1

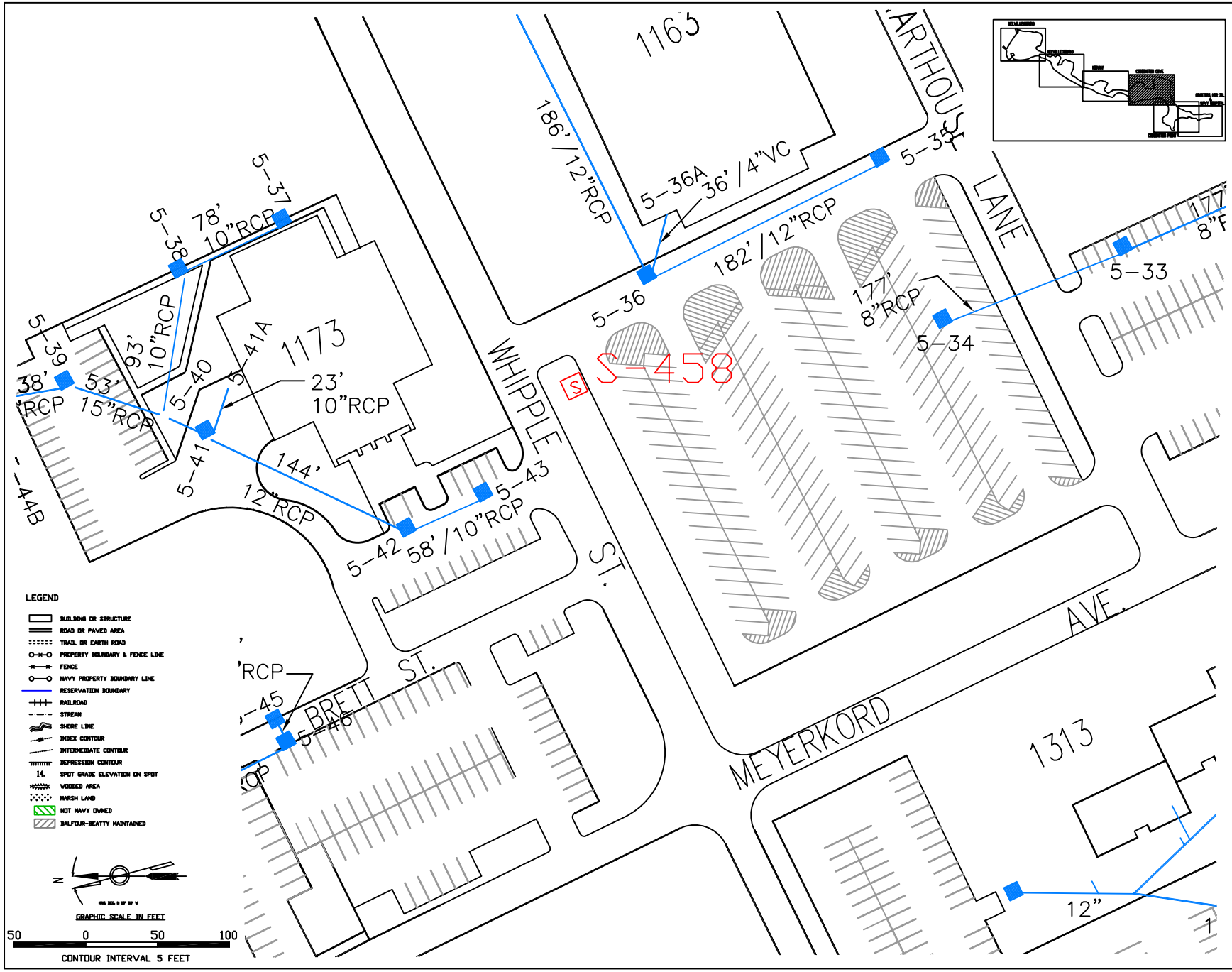
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STORM DRAINAGE CONDITION MAP

S-456 COASTERS HARBOR ISLAND

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO. N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO. _____
N.E.T.C. DRAWING NO. _____-___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — SUP'V. — CHK. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STORM DRAINAGE CONDITION MAP

S458 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

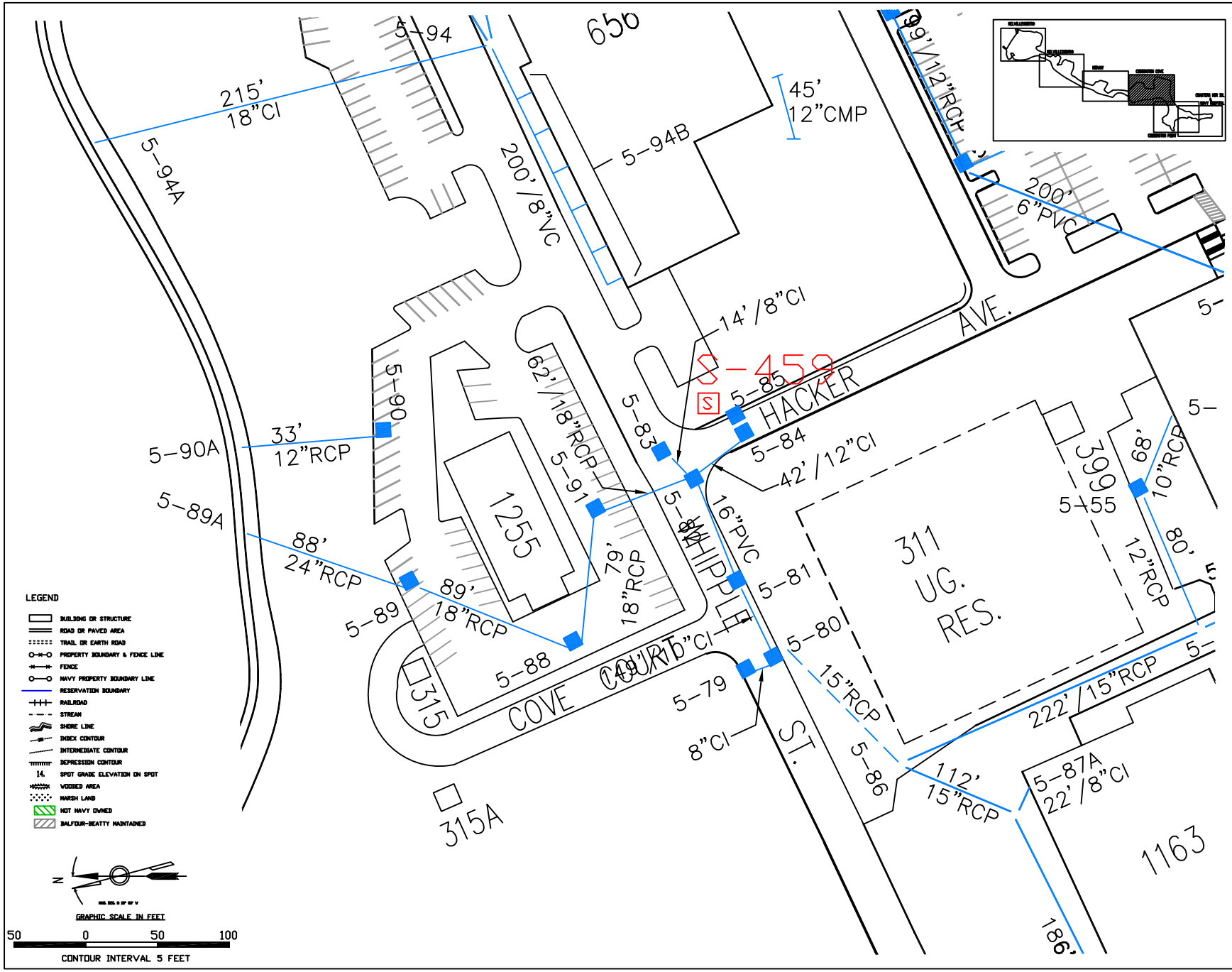
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — SUPV. — CHK. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING STORM DRAINAGE CONDITION MAP

S459 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

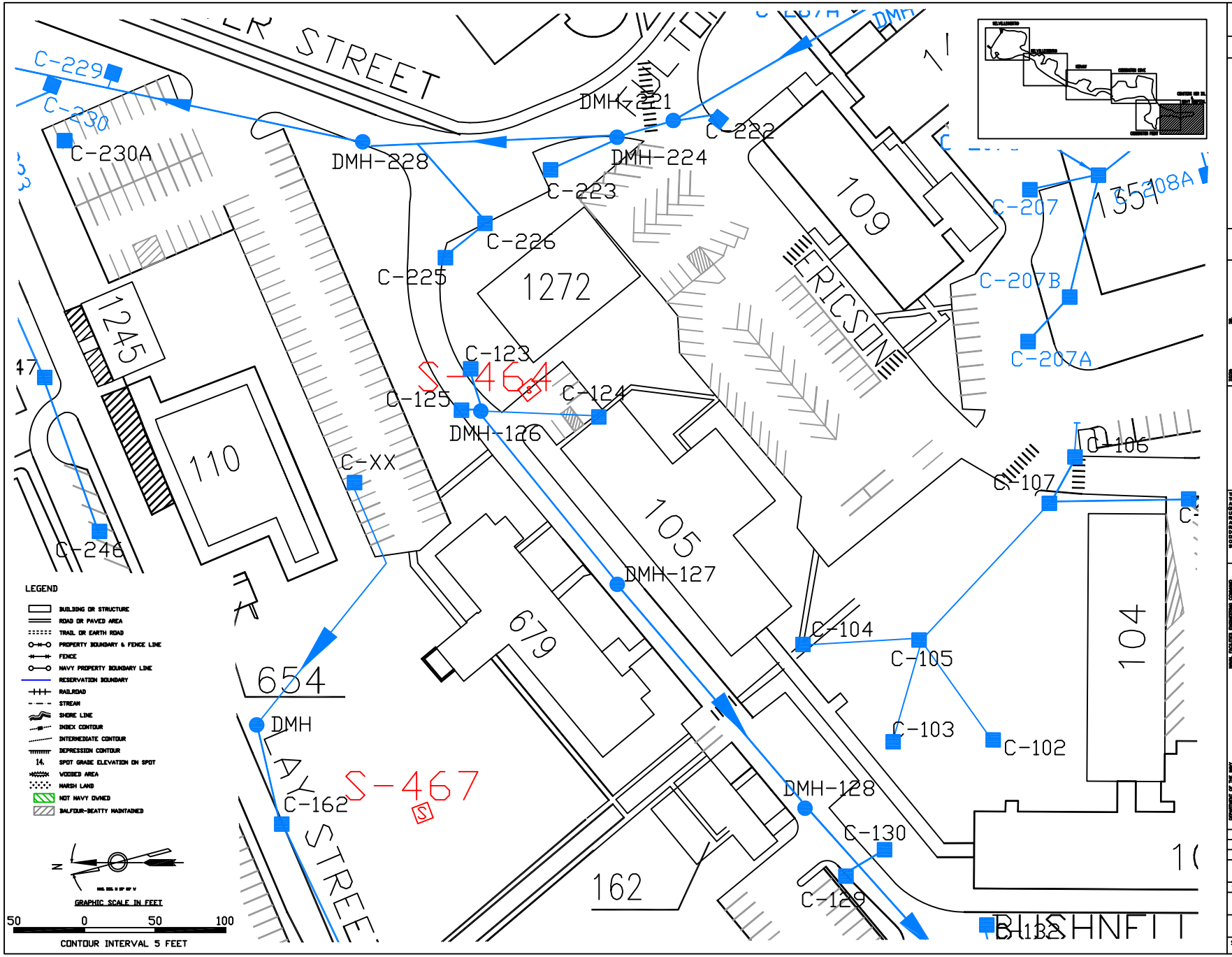
CONST. CONTRACT NO. N62472-__-__-____

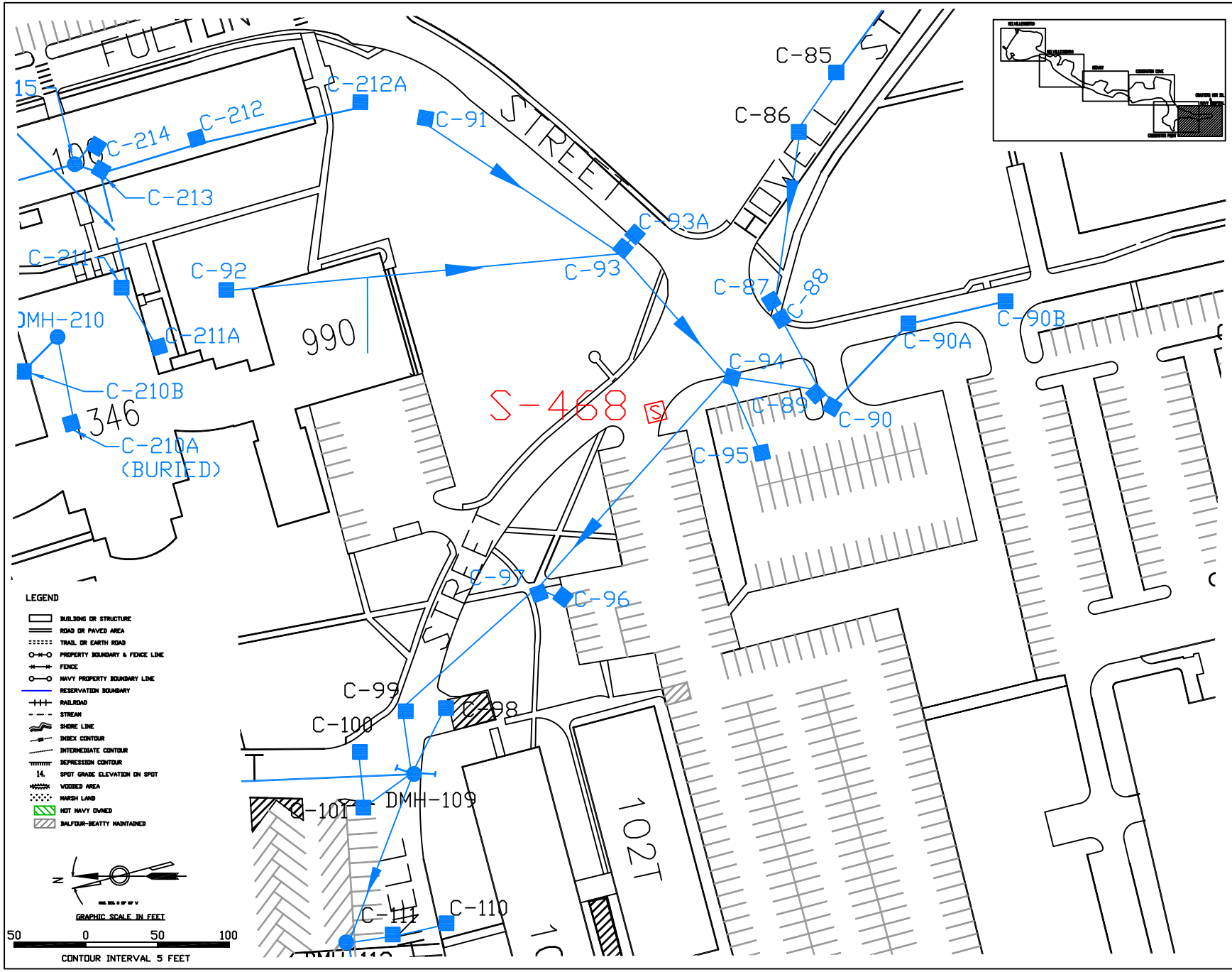
SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____ - ___

SHEET __ OF ___


STREET
C-229
C-230
C-230A
DMH-228
DMH-221
DMH-224
C-222
C-223
C-226
C-225
1272
109
ERICSON
C-207
C-207B
C-207A
1351
C-208A
1245
110
C-123
S-464
C-125
C-124
DMH-126
C-XX
105
DMH-127
C-106
C-107
C-104
C-105
C-103
C-102
104
679
654
DMH
C-162
S-467
DMH-128
C-130
C-129
162
C-246
47
LEGEND
BUILDING OR STRUCTURE
ROAD OR PAVED AREA
TRAIL OR EARTH ROAD
PROPERTY BOUNDARY & FENCE LINE
FENCE
NAVY PROPERTY BOUNDARY LINE
RESERVATION BOUNDARY
RAILROAD
STREAM
SHORE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
DEPRESSION CONTOUR
14. SPOT GRADE ELEVATION ON SPOT
WOODED AREA
MARSH LAND
NOT NAVY OWNED
BALFOUR-BEATTY MAINTAINED
GRAPHIC SCALE IN FEET
50 0 50 100
CONTOUR INTERVAL 5 FEET
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
EXISTING STORM DRAINAGE CONDITION MAP
S-464 CODDINGTON COVE -NUWC
CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF __
DIS. SH. NO. I - 1
SYMBOL
DESCRIPTION
DATE
APPROVED
REVISIONS
SATISFACTORY TO
DATE
DR.
CHK.
DIR. HD.
DIV. HD.
SUPV.
DESIGN



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE ___

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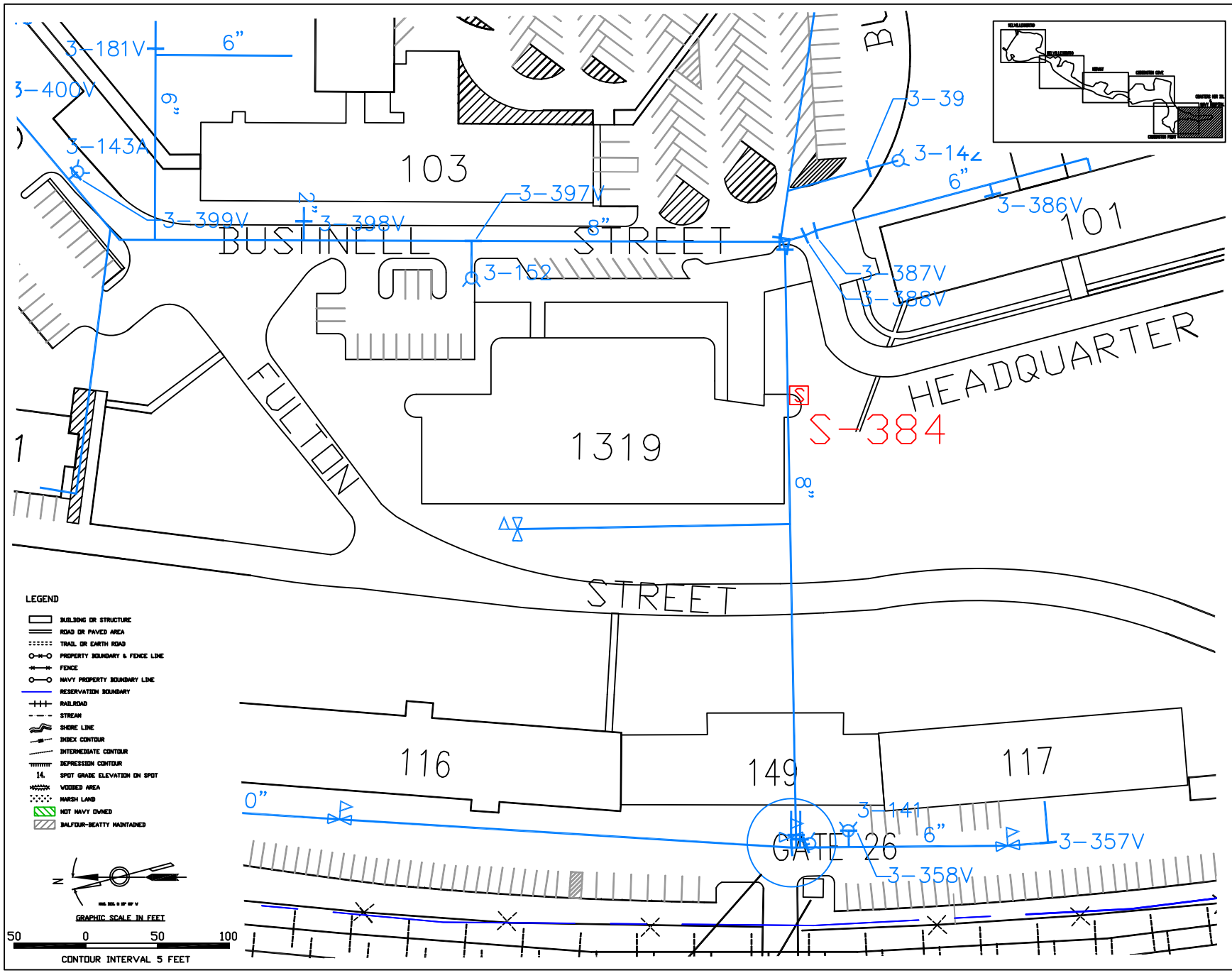
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING STORM DRAINAGE CONDITION MAP

S-468 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ - ____
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

SIGN. DR. DATE
SUP'V. CHK.
DR. HD.
DIV. HD.

SATISFACTORY TO DATE

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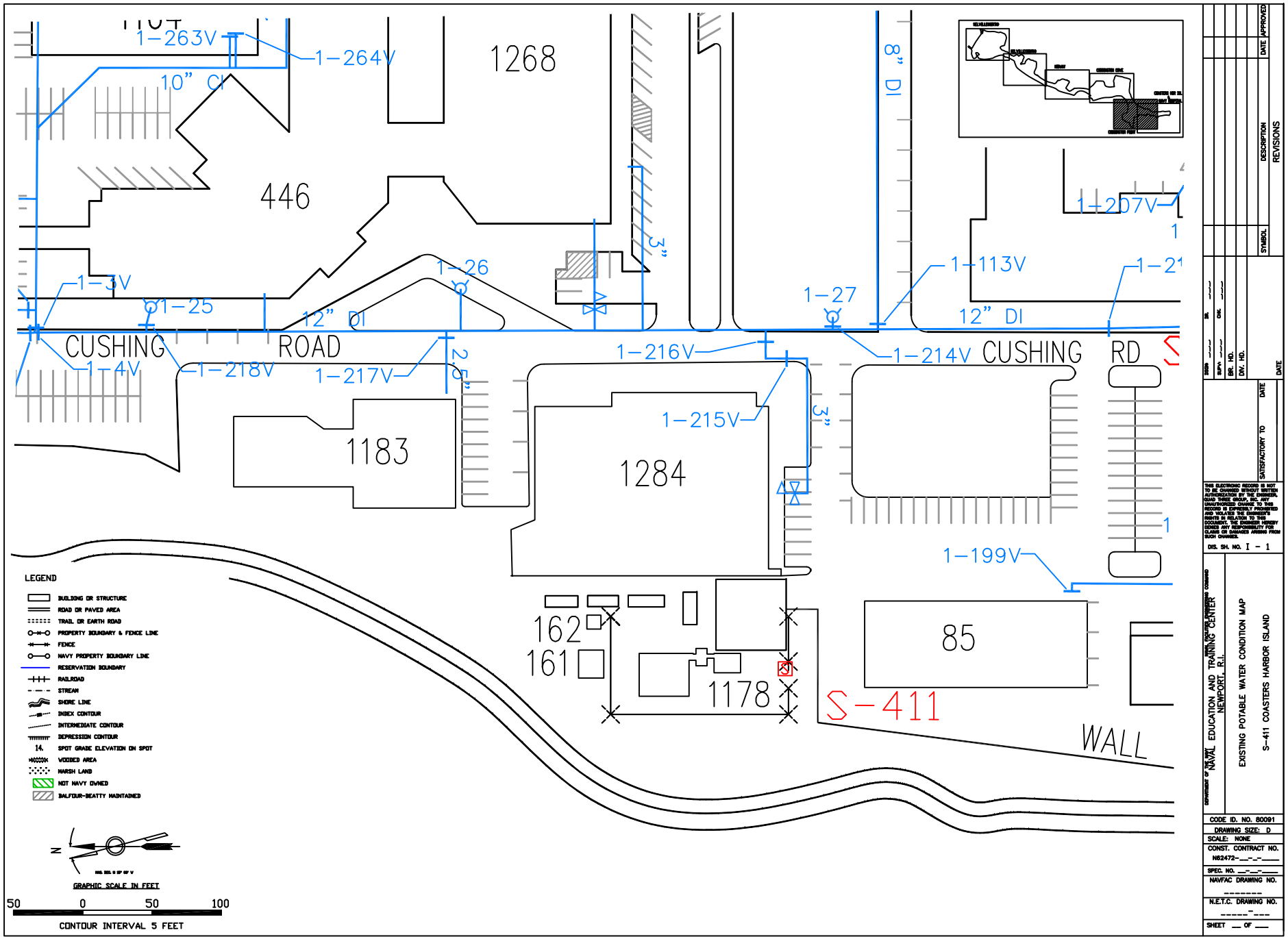
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING POTABLE WATER CONDITION MAP

S-384 CODDINGTON COVE -NUWC

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____-___
SHEET __ OF __


1-263V
1-264V
10" CI
1268
446
8" DI
1-207V
1-113V
1-26
1-25
12" DI
1-27
12" DI
CUSHING ROAD
1-4V
1-218V
1-217V
1-216V
1-214V
CUSHING RD
1-215V
1183
1284
1-199V
162
161
1178
85
S-411
WALL
LEGEND
BUILDING OR STRUCTURE
ROAD OR PAVED AREA
TRAIL OR EARTH ROAD
PROPERTY BOUNDARY & FENCE LINE
FENCE
NAVY PROPERTY BOUNDARY LINE
RESERVATION BOUNDARY
RAILROAD
STREAM
SHORE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
DEPRESSION CONTOUR
14. SPOT GRADE ELEVATION ON SPOT
WOODED AREA
MARSH LAND
NOT NAVY OWNED
BALFOUR-BEATTY MAINTAINED
N
GRAPHIC SCALE IN FEET
50 0 50 100
CONTOUR INTERVAL 5 FEET
SYMBOL
DESCRIPTION
DATE
APPROVED
REVISIONS
DR.
CHK.
SUPV.
DIR. HD.
DIV. HD.
DATE
SATISFACTORY TO
DATE
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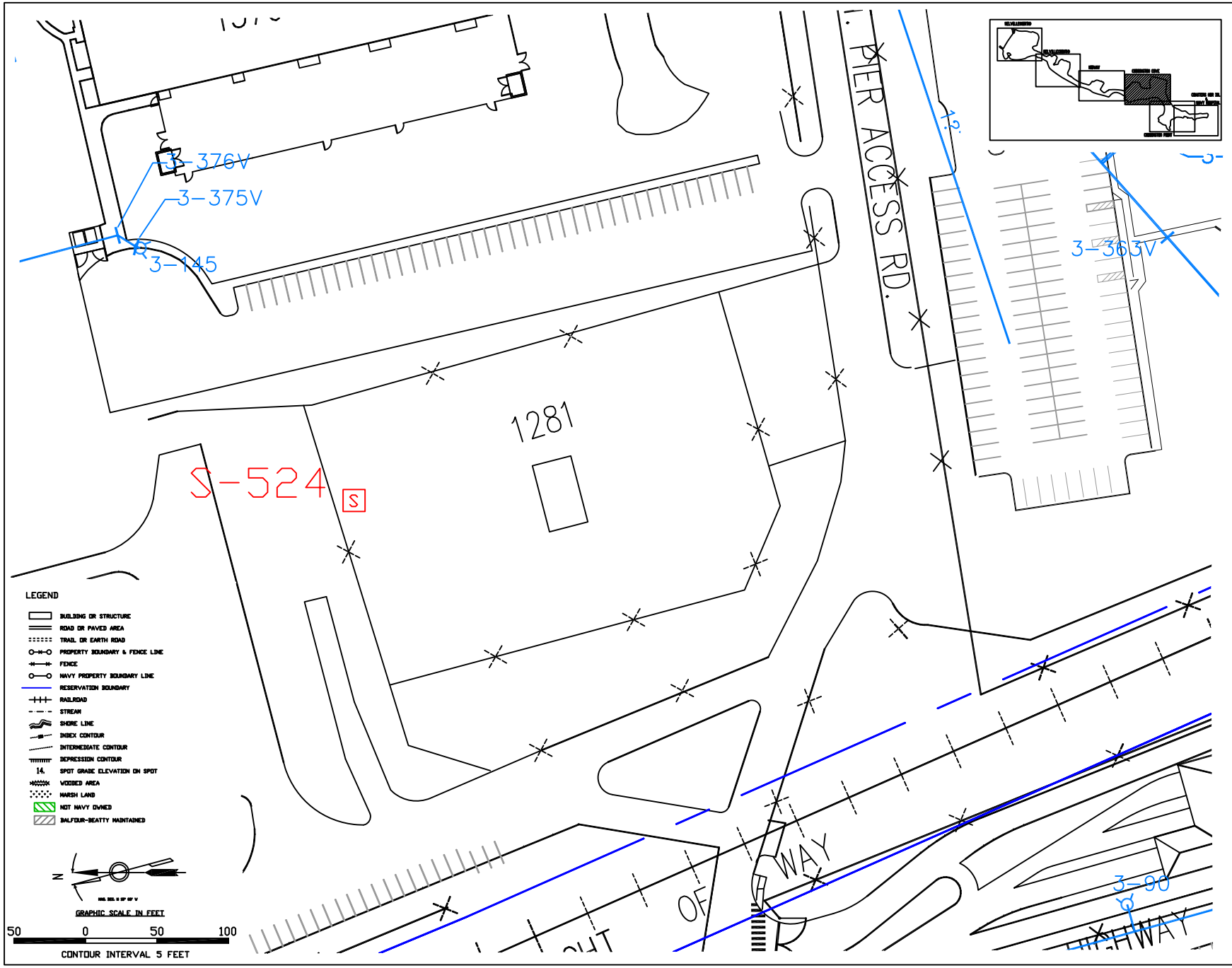
DIS. SH. NO. I - 1
DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.
NAVAL FACILITIES ENGINEERING COMMAND
EXISTING POTABLE WATER CONDITION MAP
S-411 COASTERS HARBOR ISLAND
CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
N.E.T.C. DRAWING NO.
SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ____ DR. ____
SUPV. ____ CHK. ____
DR. HD.
DIV. HD.
DATE

SATISFACTORY TO DATE

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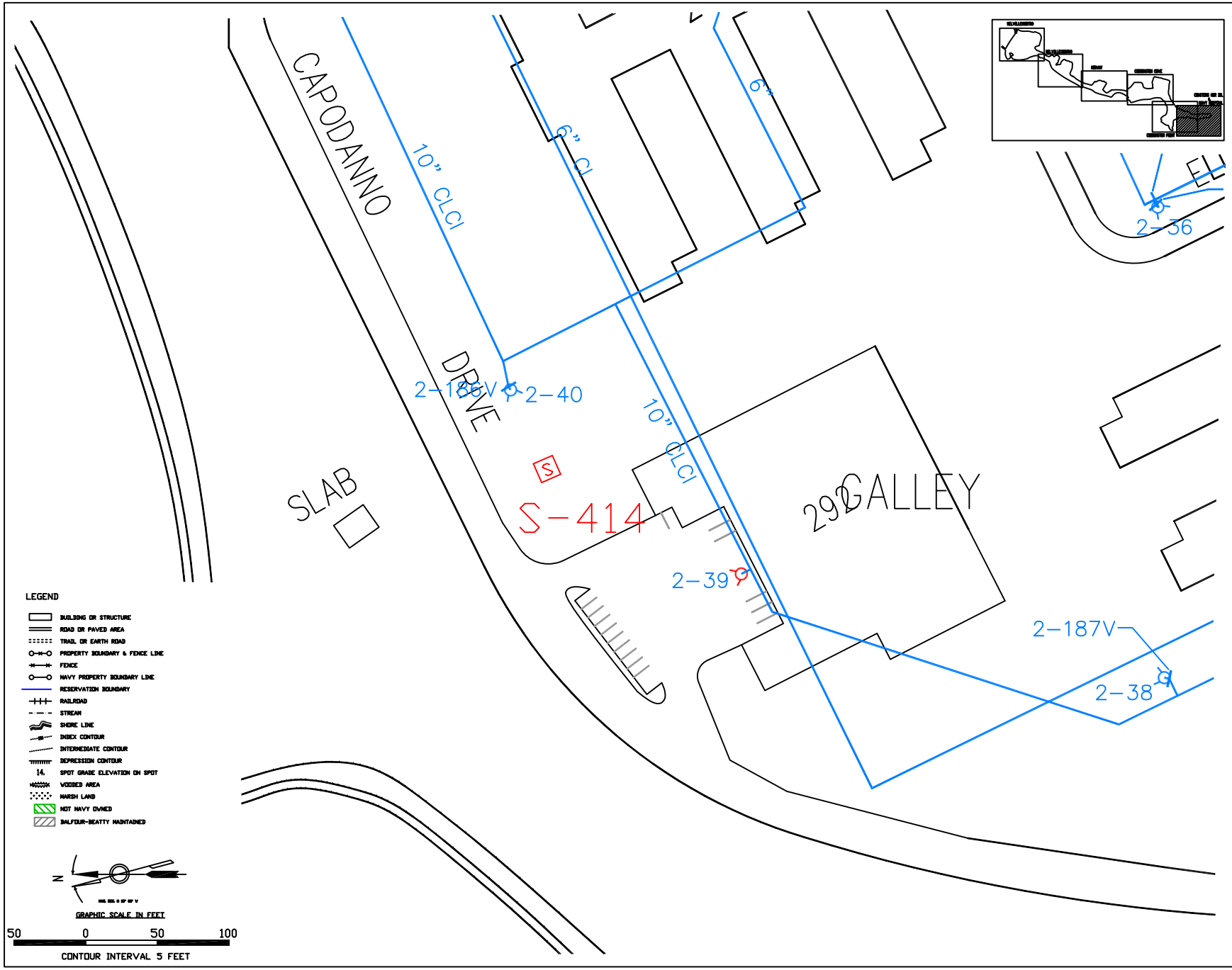
DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, R.I.

EXISTING POTABLE WATER CONDITION MAP

S-524 CODDINGTON COVE

CODE ID. NO. 80091
DRAWING SIZE: D
SCALE: NONE
CONST. CONTRACT NO.
N62472-__-__-____
SPEC. NO. __-__-____
NAVFAC DRAWING NO.
_____
N.E.T.C. DRAWING NO.
_____ ___
SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DR. HD. ___
DIV. HD. ___
DATE

SATISFACTORY TO ___ DATE ___

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING POTABLE WATER CONDITION MAP

S-414 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

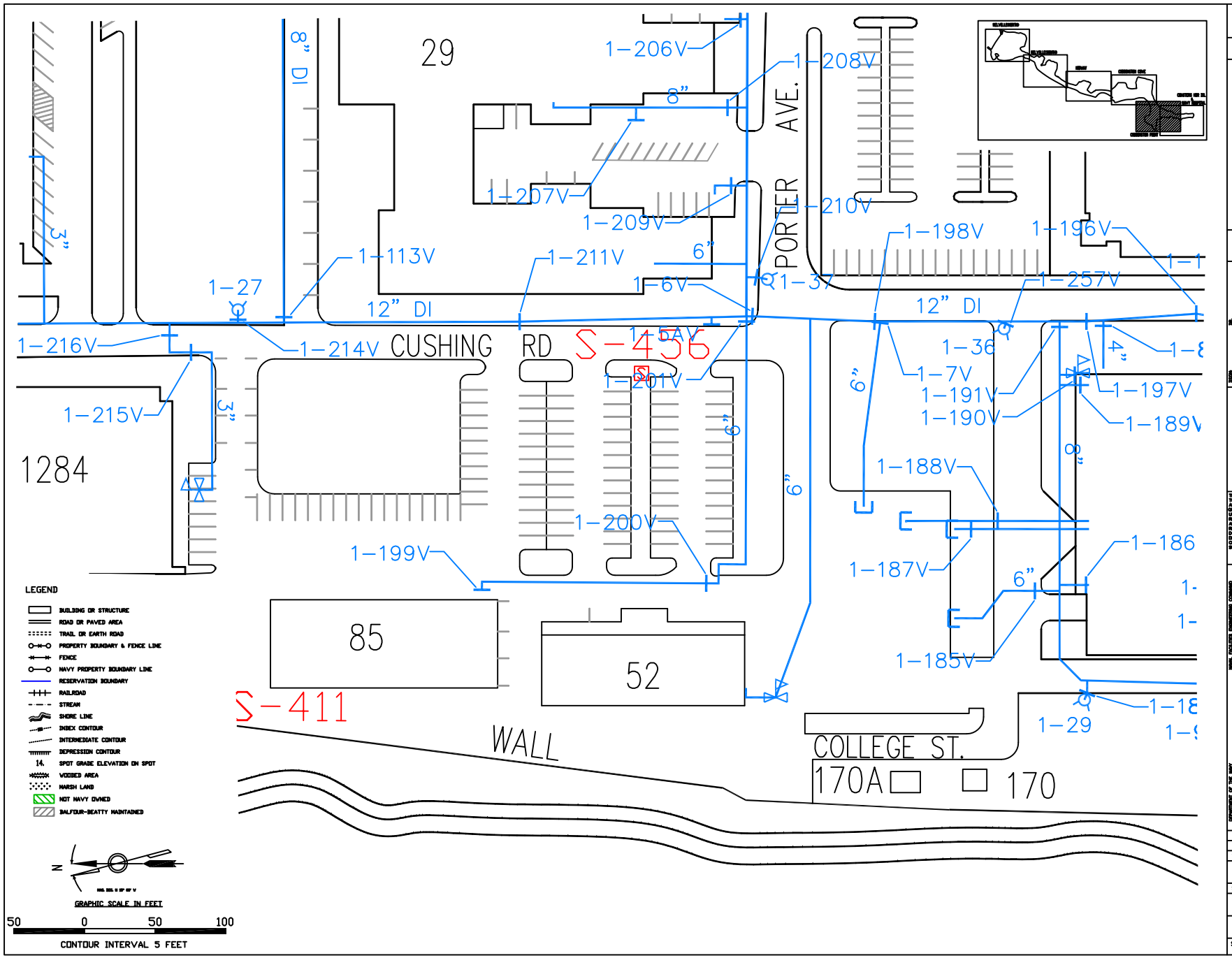
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____ - ___

SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUP'V. — DIR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING POTABLE WATER CONDITION MAP

S-456 COASTERS HARBOR ISLAND

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

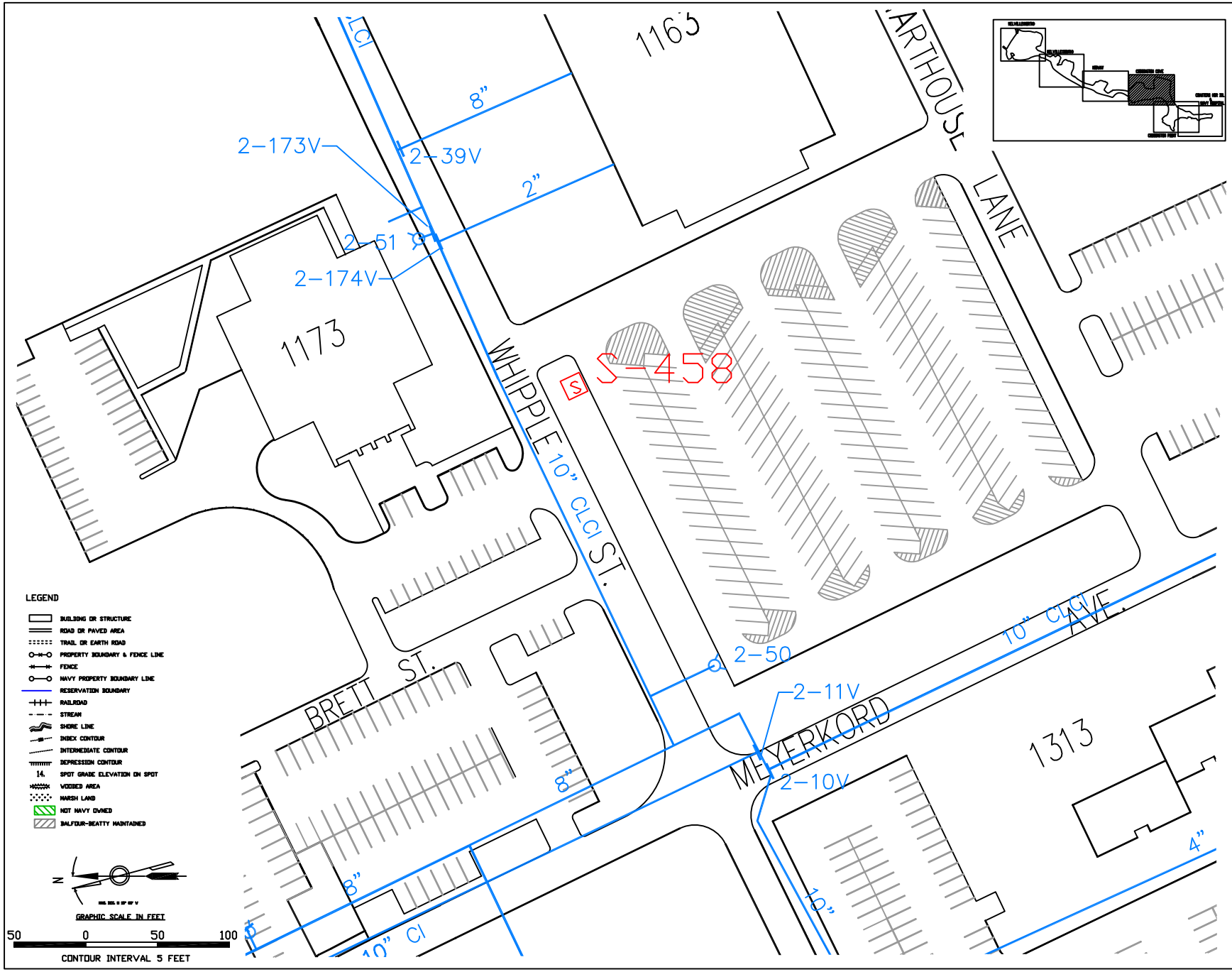
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUP'V. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING POTABLE WATER CONDITION MAP

S458 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

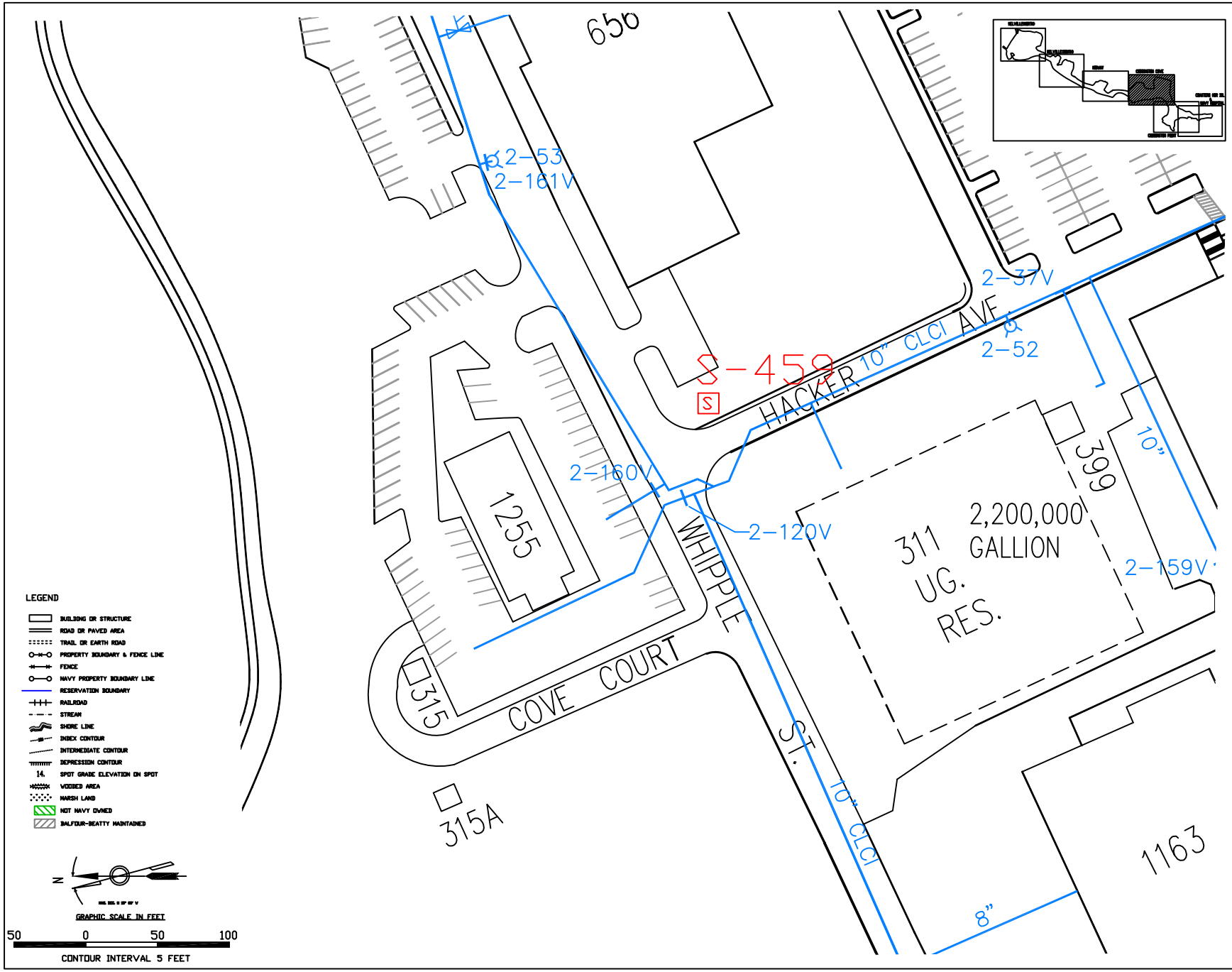
CONST. CONTRACT NO. N62472-__-__-__

SPEC. NO. __-__-__

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN ___ DR. ___
SUPV. ___ CHK. ___
DR. HD.
DIV. HD.
DATE

SATISFACTORY TO DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY NAVAL EDUCATION AND TRAINING CENTER NEWPORT, R.I.

NAVAL FACILITIES ENGINEERING COMMAND

EXISTING POTABLE WATER CONDITION MAP

S459 CODDINGTON POINT

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

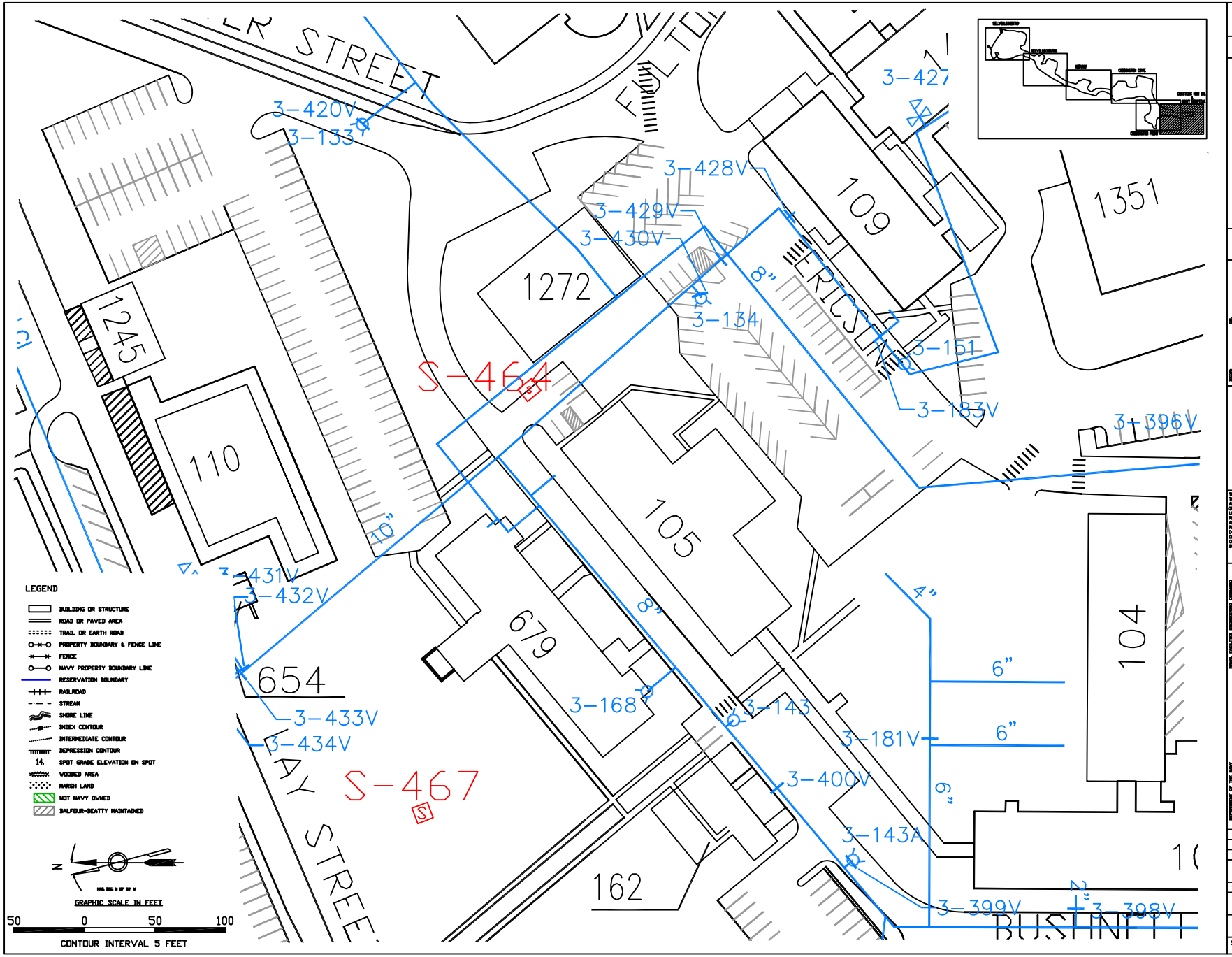
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF ___



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — SUPV. — CHK. — DR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING POTABLE WATER CONDITION MAP

S-464 CODDINGTON COVE -NUWC

CODE ID. NO. 80091

DRAWING SIZE: D

SCALE: NONE

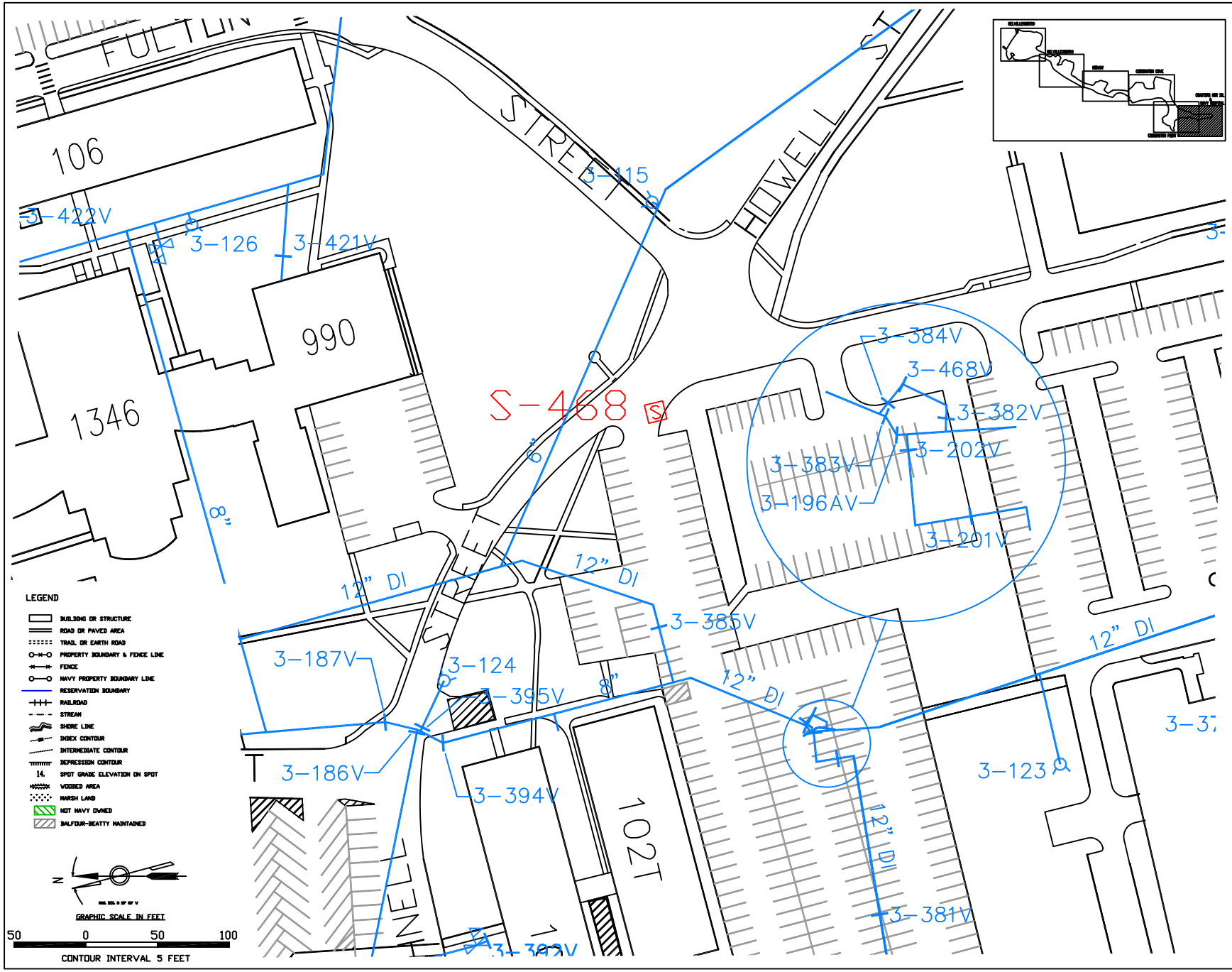
CONST. CONTRACT NO. N62472-__-__-____

SPEC. NO. __-__-____

NAVFAC DRAWING NO. _____

N.E.T.C. DRAWING NO. _____-___

SHEET __ OF __



SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGN — DR. — CHK. — SUPV. — DRR. HD. — DIV. HD. — DATE

SATISFACTORY TO — DATE

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DIS. SH. NO. I - 1

DEPARTMENT OF THE NAVY — NAVAL EDUCATION AND TRAINING CENTER, NEWPORT, R.I. — NAVAL FACILITIES ENGINEERING COMMAND

EXISTING POTABLE WATER CONDITION MAP

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SHEET __ OF __

Small Project Part 6B
Attachments

Attachment B **Performance Specification – 15KV Sectionalizing Switches**

SECTION 26 13 00

SF6/HIGH-FIREPOINT FLUIDS INSULATED PAD-MOUNTED SWITCHGEAR

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM A167	(1999; R 2009) Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
ASTM D1535	(2013) Specifying Color by the Munsell System
ASTM D2472	(2000; R 2006) Standard Specification for Sulphur Hexafluoride
ASTM D6871	(2003; R 2008) Standard Specification for Natural (Vegetable Oil) Ester Fluids Used in Electrical Apparatus

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 386	(2006; INT 1 2011) Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600V
IEEE C2	(2012; Errata 2012; INT 1-4 2012; INT 5-7 2013) National Electrical Safety Code
IEEE C37.60	(2012) Standard Requirements for Overhead, Pad Mounted, Dry Vault and Submersible Automatic Circuit Reclosers and Fault Interrupters for Alternating Current Systems Up to 38 kV
IEEE C37.74	(2003; Int 1 2004) Standard Requirements for Subsurface, Vault, and Pad-Mounted Load-Interrupter Switchgear and Fused Load-Interrupter Switchgear for Alternating Current Systems Up to 38 kV
IEEE C57.12.29	(2014) Standard for Pad-Mounted Equipment - Enclosure Integrity for Coastal Environments

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)

NETA ATS	(2013) Standard for Acceptance Testing

	Specifications for Electrical Power Equipment and Systems

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

IEC 61099	(2010; ED 2.0) Insulating Liquids - Specifications for Unused Synthetic Organic Esters for Electrical Purposes
IEC 62271-111	(2012; ED 2.0) High Voltage Switchgear And Control gear - Part 111: Automatic Circuit Reclosers and Fault Interrupters for Alternating Current Systems up to 38 kV

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2014; AMD 1 2013; Errata 1 2013; AMD 2 2013; Errata 2 2013; AMD 3 2014; Errata 3 2014) National Electrical Code
NFPA 70B	(2013) Recommended Practice for Electrical Equipment Maintenance

UNDERWRITERS LABORATORIES (UL)

UL 467	(2007) Grounding and Bonding Equipment

1.2 RELATED REQUIREMENTS

Section 26 00 00.00 20 BASIC ELECTRICAL MATERIALS AND METHODS and Section 26 08 00 APPARATUS INSPECTION AND TESTING, applies to this section, with the additions and modifications specified herein.

1.3 DEFINITIONS

1.3.1 Switched Way

A switched way is considered a three-phase circuit entrance to the bus through a switch.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Switchgear Drawings; G

SD-03 Product Data

Electronic Overcurrent Control Curves; G

SF6/High-Firepoint Fluid Insulated Pad-mounted Switchgear; G

Insulated High-Voltage Connectors; G

Surge Arresters: G

Laptop Computer; G

Fault Indicators; G

SD-06 Test Reports

Acceptance Checks and Tests; G

SD-07 Certificates

Paint Coating System; G

SD-09 Manufacturer's Field Reports

Switchgear design and production tests; G

SD-10 Operation and Maintenance Data

SF6/High-Firepoint Fluid Insulated Pad-mounted Switchgear, Data Package 5; G

Submit in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

1.5 QUALITY ASSURANCE

1.5.1 Switchgear Drawings

Furnish drawings that include, but are not limited to, the following:

a. Overall dimensions, weights, plan view, and front view

b. Ratings

c. Single-line diagram.

1.5.2 Paint Coating System

Submit IEEE C57.12.29 paint coating system performance requirement tests.

1.5.3 Electronic Overcurrent Control Curves

Provide time-current characteristic curves in PDF format and in electronic format suitable for import or updating into the SKM PowerTools for Windows computer program.

1.6 MAINTENANCE

1.6.1 SF6/High-Firepoint Fluid Insulated Pad-mounted Switchgear Operation and Maintenance

Submit Operation and Maintenance Manuals in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

PART 2 PRODUCTS

2.1 SF6/HIGH-FIREPOINT FLUID INSULATED PAD-MOUNTED SWITCHGEAR

IEEE C37.74

2.1.1 Ratings and Test Requirements

The voltage rating of the switchgear must be 15.5 kV. Provide the corresponding ratings associated with the required switchgear voltage rating as follows:

Rated Maximum Voltage, kV	15.5
Rated Withstand Impulse Voltage, kV BIL	95
Continuous and Load Interrupting Current, A	600
Short-Time Current, kA rms Sym	20
Short-Circuit interrupting Current,kA rms Sym	20

2.1.2 Switchgear Construction

Provide switchgear with switch contacts and cable entrance terminations contained in a sealed, dielectric-filled stainless steel tank. Switchgear must be shipped factory filled with appropriate levels of SF6 gas conforming to ASTM D2472 or less-flammable, high-firepoint biodegradable fluid conforming to ASTM D6871 and IEC 61099. Configure switchgear with load interrupting and fault interrupting switched ways as indicated. Provide switchgear with front accessible terminations suitable for cables entering from below with manual operating provisions either mounted on the rear or capable of hookstick operation per IEEE C37.74. Switch contact positions for switched ways must be visible through viewing windows in the switchgear tank located adjacent to the manual operating provisions. Provide internal gas pressure gage or fluid level gage in viewable location from switch operating handle. Provide each switched way with three position switch; Open, Closed, Ground.

2.1.2.1 Pad-mounting Provisions

Provide enclosed switchgear suitable for installation on a concrete pad. Fabricate switchgear support frame, enclosure base and enclosure with ASTM A167 type 304 or 304L stainless steel. Enclosure base must include any part of the switchgear enclosure that is within 3 inches of concrete pad. Paint switchgear enclosure including base ASTM D1535 Munsell 7GY3.29/1.5 green. Comply with IEEE C57.12.29 for the paint coating system regardless of equipment material.

2.1.3 Load Interrupting Switched Ways

2.1.3.1 Three-Pole Group Operated Switched Ways

Provide three-pole group operated load interrupting switched ways as indicated.

2.1.3.2 Fault Interrupting Switched Ways

IEEE C37.60, IEC 62271-111. Provide non-fused, non-reclosing, manual reset,

vacuum interrupters consisting of vacuum interrupter and a spring assisted operating mechanism. Each fault interrupting switched way must utilize internally mounted current transformers and an electronic overcurrent control to provide three-pole ganged tripping as indicated for single-phase and three-phase faults. Provide electronic overcurrent control with provisions for a minimum of ten field changeable overcurrent trip settings. Provide remote tripping via an external dry contact device for fault interrupting switched ways. Provide 120 Vac remote trip control power.
The electronic overcurrent control shall have an EIA-RS-485 communications port that supports Modbus and DNP3.0 Level 2 protocals.

2.1.4 Automatic Switch Controls

Provide motor actuated provisions.

2.1.4.1 Manual Operation

Provide the motor operator controllers with “Close” and “Open” pushbuttons for manual operation

2.1.5 Low Voltage Test Pins

Provide load interrupting switch ways with internal load side voltage sensors and external test pins that allow for low voltage checks to confirm energized and in-phase conditions using a standard high-impedance voltmeter.

2.1.6 Dead-Front High-Voltage Bushings

IEEE 386. 15 kV, 95 kV BIL. Provide 600 ampere one-piece deadbreak apparatus bushings for each switched way.

a. Parking stands: Provide a parking stand near each dead-front bushing. Provide insulated standoff bushings for parking of energized load-break connectors on each parking stands.

2.2 Insulated High-Voltage Connectors

IEEE 386. Provide corresponding connector for each switched way. Provide a grounding eye and test point on each connector.

a. 600 Ampere deadbreak connector ratings: Voltage: 15 kV, 95 kV BIL. Short time rating: 25,000 rms symmetrical amperes. Provide connectors with 200 ampere bushing interface.

2.2.1 Live End Caps

Provide live end caps for all unused switched ways. Caps shall be rated 15KV and shall be furnished with test points.

2.2.2 Standoff Bushings

Provide a quantity of 30 - 15KV standoff bushings.

2.3 Surge Arresters

IEEE C62.11, rated 12kV, fully shielded, dead-front, metal-oxide-varistor, elbow type with resistance graded gap, suitable for plugging into inserts. Provide arresters on switched ways that are normally open.

2.4 SF6 Refill Cylinders

Provide two SF6 refill cylinders, minimum size of 6 pounds of SF6; include regulator, valves, and hose for connection to the fill valve of the switch.

2.5 SOURCE QUALITY CONTROL

2.5.1 Switchgear Design and Production Tests

Furnish reports which include results of design and production tests performed according to IEEE C37.74. Perform manufacturer production test on each switchgear assembly to ensure that design performance is maintained in production.

2.5 FAULT INDICATORS WITH REMOTE DISPLAY

Provide underground cable fault indicators on each 600 amp switch way. Fault indicators shall be suitable for operation on a 15KV system Indicators shall be self-reset type having time reset with current restoration override optional times of 0, 2, 4, 8 and 12 hours. Each indicator shall have a trip range of 50 to 1,200 amperes. Provide high capacity lithium battery having an approximate life of 20 years. Battery shall be integral to the fault indicator. Battery shall be suitable to power a remote display. Both fault indicator and battery shall be cable of operating between -40 degree F to +185 degree F.

2.5.1 Remote Display

Provide each fault indicator with remote interface and transceivers compatible with the existing base wide radio ranger system. Remote display shall consist of a LED display on a transceiver that can be read remotely utilizing unlicensed radio technology. Provide a minimum of two remote readers that communicate with the transceivers provided at each switch. The remote readers shall display the status of the fault indication in the switches without having to open the switch enclosures. Fiber-optic cable length shall be long enough so that the cable can be trained away from other indicators without interfering with the operation or maintenance of the switch. The entire remote display shall be detachable from the fault indicator.

2.6 LAPTOP COMPUTER

Provide laptop computer with the following:

1. Processor: Intel Quad Core i7
2. Operating System: Windows 8.1 Pro
3. Display: 15.6 inch LED Tough Display
4. Memory: 16GB Min.
5. Hard Drive: 1TB
6. High Definition Audio
7. Dual Band Wireless and Bluetooth 4.0
8. Integrated 6-Cell Battery
9. AC Adaptor

10. Software: Pre-loaded VFI switch software and Microsoft Office Professional

11. Hardware: Communication cables and ports for connecting laptop to switch

12. Provide Serial and USB Ports

13. Alternately provide an USB to Serial Converter

PART 3 EXECUTION

3.1 INSTALLATION

Conform to IEEE C2, NFPA 70, and to the requirements specified herein.

3.2 GROUNDING

NFPA 70 and IEEE C2, except provide grounds and grounding systems with a resistance to solid earth ground not exceeding 5 ohms. When work, in addition to that indicated or specified, is directed to obtain the specified ground resistance, the provision of the contract covering "Changes" applies.

3.2.1 Grounding Electrodes

Provide driven ground rods as specified in Section 33 71 02 UNDERGROUND ELECTRICAL DISTRIBUTION at each corner of switchgear pad as indicated. Ground rod dimensions shall be a minimum ¾ x 12’. Greater depth of rods may be required to obtain the required resistance.

3.2.2 Switchgear Grounding

Connect #4/0 bare copper conductor ground ring, not less than 24 inches below grade, to the upper end of the ground rods by exothermic welds or compression connectors. Provide #4/0 bare copper conductors connecting the switchgear grounding provisions to two different ground rods.

3.2.3 Connections

Make joints in grounding conductors and ground ring by exothermic weld. Install exothermic welds as specified during design in Section 33 71 02 UNDERGROUND ELECTRICAL DISTRIBUTION.

3.2.4 Grounding and Bonding Equipment

UL 467, except as indicated or specified otherwise.

3.3 FOUNDATION FOR EQUIPMENT AND ASSEMBLIES

Mount switch on concrete slab as indicated. Equipment pad shall have a dimension that extends 8” beyond the maximum projected dimension of the equipment.
Coordinate dimensions of cable wells with switch cable training areas.
Provide concrete work as specified during design in Section 03 30 00 CAST-IN-PLACE CONCRETE.

3.4 FIELD QUALITY CONTROL

3.4.1 Performance of Acceptance Checks and Tests

Perform in accordance with the manufacturer's recommendations, NFPA 70B, NETA ATS and referenced ANSI standards.

Include the following visual and mechanical inspections and electrical tests, performed in accordance with NETA ATS.

3.4.1.1 Switchgear

a. Visual and Mechanical Inspection

1. Compare equipment nameplate information with specifications and approved shop drawings.

2. Inspect physical and mechanical condition.

3. Check for proper anchorage, alignment, required area clearances, and grounding.

4. Perform mechanical operator tests in accordance with manufacturer's instructions.

5. Verify that insulating SF6 gas pressure or dielectric fluid level is correct.

6. Inspect all indicating devices for proper operation.

7. Test interlock systems for proper operation and sequencing.

b. Electrical Tests

1. Perform contact-resistance tests.

2. Trip fault interrupters by operation of overcurrent control

3. Perform insulation-resistance tests.

4. Perform an over-potential test on each switched way pole with the switched way in the open position in accordance with the manufacturer's instructions.

5. Set fault interrupter overcurrent control in accordance with government provided settings. Request settings from government, in writing, a minimum of 30 days prior to scheduling electrical tests.

3.4.1.2 Grounding System

a. Visual and Mechanical Inspection

Inspect ground system for compliance with contract plans and specifications.

b. Electrical Tests

1. Perform ground-impedance measurements utilizing the fall-of-potential method. On systems consisting of interconnected ground rods, perform tests after interconnections are complete. On systems consisting of a single ground rod perform tests before any wire is connected. Take measurements in normally dry weather, not less than 48 hours after rainfall. Use a portable ground resistance tester in accordance with manufacturer's instructions to test each ground or group of grounds.Use an instrument equipped

with a meter reading directly in ohms or fractions thereof to indicate the ground value of the ground rod or grounding systems under test.

2. Submit the measured ground resistance of each ground rod and grounding system, indicating the location of the rod and grounding system. Include the test method and test setup (i.e., pin location) used to determine ground resistance and soil conditions at the time the measurements were made.

3.4.2 Follow-Up Verification

Upon completion of acceptance checks and tests, show by demonstration in service that devices are in good operating condition and properly performing the intended function. Perform each test function not less than three times. As an exception to requirements stated elsewhere in the contract, notify the Contracting Officer five working days in advance of the dates and times for checks and tests.

3.5 SWITCH SET UP TRAINING

Provide switch set-up training using the provided laptop. Allow for 8 hours of on-site training of switch set-up and operation to Government Personnel.

3.6 FAULT INDICATOR REMOTE DISPLAY

Mount fault indication transmitter on street side of switch enclosure or where switch orientation is not parallel to a road, mount remote transmitter so that communication with a handheld remote can be achieved from the road. Mounting shall be per manufacturer requirements.

-- End of Section --

Small Project Part 6C
Attachments

Attachment C **Project Specific Site Photographs**

S-384

S-411

S-524

S-414

S-456

S-458

DANGER
HIGH
VOLTAGE
ELECTRIC
S250
PRO

S 458
G&W
G&W ELECTRIC CO.
BLUE ISLAND, ILL.
POS 1
POS 2
POS 3
POS 4
POS 5
BLD 1163
T-901
S-459 POS 2
BLD 1173
T-684
S-515
POS-2
BLD 293
T-704
BLD 1269
T-631
BL.
T-683
T-891
BLD 1312
57

S-459

S-464

S-468

Small Project Part 6D
Attachments

Attachment D **Project Specific Crane Requirements**

DEPARTMENT OF THE NAVY
COMMANDER
NAVY REGION MID-ATLANTIC
1510 GILBERT ST.
NORFOLK, VA 23511-2737

IN REPLY REFER TO:
COMNAVREGMIDLANTINST 11262.1A
REG ENG/PW7
6 FEB 2013

COMNAVREG MIDLANT INSTRUCTION 11262.1A

From: Commander, Navy Region Mid-Atlantic

Subj: CONTRACTOR CRANE/WEIGHT HANDLING EQUIPMENT OVERSIGHT

Ref: (a) NAVFAC P-307
(b) Occupational Safety and Health Administration (OSHA) 29 CFR, Parts 1910, 1915, 1917, 1918, 1919, and 1926
(c) ASME B30.3, B30.5, B30.8, B30.9, B30.20, B30.22, B30.26, and ANSI/ITSDF B56.6
(d) USACE EM 385-1-1
(e) Federal Acquisition Regulation Part 52.236-13, Accident Prevention
(f) Unified Facilities Guide Specification 01 35 26
(g) SECNAVINST M-5210.1

Encl: (1) Certificate of Compliance
(2) Contractor Crane/WHE Entry Package Checklist
(3) Contractor Crane/WHE Pre-Entry Checklist
(4) Contractor Crane/WHE Operating Permit
(5) Contractor Crane/WHE Non-Operation Permit
(6) Contractor Crane Or Rigging Operation Checklist
(7) Contractor Crane/WHE Oversight Discrepancy Form
(8) Contractor Crane/WHE Discrepancy Response Form
(9) Crane and Rigging Gear Accident Report
(10) Crane and Rigging Near Miss Report

1. Purpose. To establish a Regional Contractor Crane Oversight Plan per reference (a) and to prevent the potential for damage to government property and injury to government personnel by contractors performing weight handling operations on Commander, Navy Region Mid-Atlantic (COMNAVREG MIDLANT) property. The intent of this Contractor Crane Oversight Plan is to improve safety of personnel and protection of property. It does not relieve the contractor of any responsibility for safe and proper contract performance.

2. Cancellation. COMNAVREGMIDLANTINST 11262.1.

3. Background. Non-Navy owned cranes and multi-purpose machines operated by contractor personnel on Navy property, often from a variety of sources, are incidental to construction contracts, ship repair contracts, demolition contracts, maintenance, and other service contracts, and deliveries of supplies and equipment. Numerous organizations, including tenant activities, ships, and supply departments, have contracting authority that often involves the use of non-Navy-owned and operated cranes.

4. Scope. This oversight plan relates directly to the use of non-Navy-owned Category I and IV Cranes, Multi-Purpose Machines (MPM), Material Handling Equipment (MHE), and Construction Equipment (CE) when used as a crane to lift suspended loads with rigging gear (RG), and equipment in weight handling operations used or operated by contractor personnel conducting business on COMNAVREG MIDLANT property.

Note: Hereinafter, the term weight handling equipment (WHE) will refer to MPM, MHE, and CE as applicable.

5. General Requirements. Contractor cranes/WHE used to lift suspended load by RG on COMNAVREG MIDLANT property shall operate per references (a) through (f) and in accordance with this instruction, as applicable. Nothing in this instruction is to deviate from the operation and safety requirements of these referenced instructions and guidance. Crane Surveillance Teams (CST) and contracting officers will review contractor crane submittals for compliance with references (a) through (f), as applicable, before contractor cranes/WHE are allowed to operate on COMNAVREG MIDLANT property. CSTs will additionally perform random job site surveillances of contractor crane/WHE operations for the purpose of verifying contractors are operating per references (a) through (f). Surveillance by the CST's does not in any way relieve respective contracting officers from their responsibility for contract oversight or to ensure contractors compliance with applicable safety requirements.

6. Responsibilities

a. COMNAVREG MIDLANT Installation Commanding Officers (COs)

(1) Issue implementing instructions detailing site-specific requirements for their installation.

(2) Designate Crane Program Managers (PM), via local instruction, responsible for administering this oversight plan.

b. Department of Defense (DoD) contracting officers for Crane/WHE Services

(1) For contractor rental cranes/WHE, ensure that the minimum requirements of references (a) through (f), and this instruction for crane/WHE safety and surveillance are either specifically included in the contract documents or incorporated by reference. This includes all existing and future contracts for contractor cranes/WHE operating on COMNAVREG MIDLANT property.

(2) Ensure crane/WHE contractors submit to the contracting officer or his/her designated representative, a Certificate of Compliance; (enclosure (1)), a Contractor Crane/WHE Entry Package Checklist (enclosure (2)), and any additional applicable documentation identified within this instruction.

(3) After the package has been reviewed for compliance by the CST, require the contractor to notify the contracting officer a minimum of 24 hours in advance of any cranes/WHE that are entering a naval installation.

(4) Require the crane/WHE contractor to designate qualified personnel to perform rigger-in-charge duties as identified within reference (a), section 10. Non-DoD personnel designated to perform rigger-in-charge duties shall be qualified as defined per references (a), (b), and 29 CFR 1926.32.

(5) Provide oversight of contractor crane and applicable WHE entry and operations per reference (a).

(6) Report all contractor crane/WHE accidents to their applicable Safety Office and applicable CST for accident investigation and reporting oversight. The contracting officer shall notify the host activity of any crane/WHE accident upon notification by the contractor per reference (a).

(7) Require the contractor to comply with the following requirements pertaining to crane/WHE safety and operation listed below:

(a) Do not block fire lanes for any reason without approval from the contracting officer and Base Fire Marshall.

(b) Do not block railroad and crane rails for any reason without prior approval from the contracting officer and activity PM. Contractor shall obtain written authorization via the contracting officer, with concurrence from the PM before any equipment, material, or vehicles are setup on crane or railroad tracks.

(c) Ground loading limitations must be adhered to at all times. This includes the travel path taken by the crane to the work site.

(d) Use proper cribbing as required by the local cognizant engineering organization and reference (f). In areas of operation that have not been identified by the local cognizant engineering organization, the crane contractor is responsible for determining ground loading/cribbing requirements and provide such information to the CST for compliance.

(e) The contractor shall complete enclosure (6) each time the crane is re-configured or set-up in a new location.

(f) The contractor is required to notify ship's quarterdeck or designated site representative of planned lifts prior to commencement of lifts and convey any hazardous conditions associated with the lifts.

c. Base Security. Where the capability exists, Security personnel shall not allow access onto CNRMA property by any Contractor Cranes or WHE used as a crane to lift suspended loads with RG without a valid permit (enclosure (4)), or non-operational permit (enclosure (5)) posted in the front windshield or vehicle cab. Security shall notify the installation Contracting Officer or designated representative of the arrival of any crane and detain it until validation of the entry checklist or non-operational permit can be conducted.

d. Crane Surveillance Teams (CSTs)

(1) Manage the entry inspection process of all contractor cranes/WHE onto all COMNAVREG MIDLANT property.

(2) Serve as the Installation CO's agent in matters pertaining to contractor crane/WHE requirements per reference (a).

(3) Provide coordination between crane contractors and the local cognizant engineering organization in matters of ground loading permits.

(4) Provide random oversight surveillance of contractor crane/WHE operations on behalf of Installation CO's and provide monthly reports of contractor crane activity to the Commanding Officer.

(5) Per with reference (a) and herein, provide oversight of accident reporting and investigation as required.

e. Crane/WHE Program Managers (PM). The identified Crane/WHE PMs (Northeast, Pennsylvania, New Jersey, Hampton Roads, Portsmouth and Norfolk Naval Shipyards) are responsible for oversight of all Contractor Cranes/WHE on COMNAVREG MIDLANT property. Crane PMs shall have the authority to restrict or prohibit contractor lifting and handling operations within their area of responsibility when the contractor fails to meet the provisions outlined in this instruction and reference (e) as applicable. Crane PMs will report non-compliance of all requirements herein to the appropriate DoD contracting officers and Installation CO's.

7. Procedure

a. When lifting a suspended load by rigging equipment on a Navy facility, contractors shall submit all required documents to the contracting officer for review and approval. Contracting officers or their designated representative will review and concur with the contractor submitted documentation prior to forwarding the package to the CST for review. The CST must be provided a minimum of three business days for review of the entry package. Failure to submit the required documentation in the specified time may result in installation access delays. In

emergent situations where it is not possible to submit the required documentation within the specified time, as determined by the contracting officer, contractors shall notify the contracting officer's representative, coordinate arrival time with the CST, and present the documentation listed below to the CST at the applicable entry point. The CST will review documentation at the entry point prior to crane/WHE entry. For remote installations with no on-site CST, the designated WHE PM shall review the submitted documentation. This review will include the following documentation:

(1) Certificate of Compliance (enclosure (1));

(2) Contractor Crane/WHE Entry Package Checklist, (enclosure (2));

(3) Crane's annual and quadrennial inspection;

(4) Per reference (b), copies of operator medical certificate and qualifications by a source that qualifies Crane/WHE Operators (union, Governmental agency, or an organization that tests and qualifies Crane/WHE Operators for the equipment being operated).

(5) Personnel designated and qualified by the Crane Contractor conducting weight-handling operations to perform rigger-in-charge duties as identified in reference (a), section 10. For further guidance, refer to paragraph 6b(4) of this instruction.

(6) Copy of the load chart(s) for each intended lift configuration for the specific crane or applicable WHE (i.e., jib installed, etc.)

(7) Crane/WHE data sheet.

(8) Job site ground loading conditions with restrictions as applicable.

(9) Contractor Crane/WHE Operational Permit (enclosure (4)).

(10) Cribbing plan, if applicable.

(11) Routine and/or critical lift plan (e.g., weights, crane radius, net crane capacity, type of rigging gear, rigging gear net capacity). For further guidance, refer to reference (a), section 1. The lift plan(s) must cover all complex/critical lifts and additional routine lifts that are over 50 percent of the crane capacity, based on the crane configuration, for the period of operation on Navy property. Under no circumstance shall a contractor make a lift at or above 90 percent of the crane's rated capacity in any configuration per reference (f).

(12) Per with reference (c), a listing of rigging gear with Original Equipment Manufacturers (OEM) specifications.

(13) Other documentation specified by the contracting officer.

Note: The submission of this information is not intended to, nor does it create any right or benefit or trust responsibility, substantive or procedural, enforceable against the U.S., its agencies or instrumentalities, or its officers or employees.

b. Contracting officers will coordinate the date and time of arrival of the contractor crane with the CST, and the CST personnel will perform a quality assurance review of the Contractor Crane/WHE and associated rigging gear for compliance with applicable OSHA regulations and applicable ASME or ANSI standards per references (a) and (d) prior to entry. Use enclosures (2) and (3) as a guides to ensure compliance with applicable requirements. If the crane/WHE is determined to be in compliance, and all required documentation has been verified, the CST conducting the review will issue a Crane/WHE Operating Permit (enclosure (4)). Enclosure (4) will be valid for the duration determined by the local CST or until the crane/WHE exits the installation. For remote installations with no on-site CST, the designated WHE PM shall review submitted documentation and determine, based on risk of the job being performed, the need for onsite quality assurance review and job site surveillance.

c. A Critical Lift Plan shall be reviewed and approved by the appropriate CST before any critical lift is performed.

(1) Critical lift plans shall include, as a minimum, the following:

(a) Size and weight of the load to be lifted, including crane and rigging components.

(b) Lift geometry, including the crane/WHE position, boom length and angle, height of lift, and radius for the entire range of the lift for both single and multiple crane/WHE lifts.

(c) Rigging plan showing the lifting points, rigging gear, and rigging procedures.

(d) Environmental conditions under which lift operations are to be suspended (e.g., wind, electrical storm).

(e) For barge-mounted mobile cranes, stability calculations identifying crane placement/footprint; barge list and trim based on anticipated loading, load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.

(2) Critical Lift Plans are required for each of the following:

(a) Lifts over 75 percent of the rated capacity of the crane at any radius;

(b) Lifts over 50 percent of the rated capacity for barge mounted mobile cranes at any radius;

(c) Lifts involving more than one crane or hoist;

(d) Lifts of personnel;

(e) Lifts that require the load to be lifted, swung, or placed out of the operator's view; and,

(f) Lifts involving non-routine rigging or operation, hazardous materials, explosives, highly volatile substances, or unusual safety risks.

d. Commercial service vehicles and other commercial vendors often enter COMNAVREG MIDLANT property with Category IV Cranes

or WHE that they do not intend to operate. For those instances, and in lieu of a compliance review, the contractor may request a Contractor Crane Non-Operation Permit (enclosure (5)), certifying that the crane/WHE will not be operated on COMNAVREG MIDLANT property. The contractor must submit in writing that the vehicle will not be used as a crane. The permit must be posted in a conspicuous location on the crane/WHE or in the cab, and will be obtained from the CST. A new permit may be valid for only one entry or an extended period not to exceed one (1) year. The CST, on a case-by-case basis, will determine the length of the permit.

e. Contractor floating cranes granted access to COMNAVREG MIDLANT property by the respective Port Operations (PortOps) Officer/Authority, coordinated with Base Security, shall be located pier side and accessible to the applicable CST prior to conducting weight handling operations.

f. Contractor mobile crane/WHE access to gated COMNAVREG MIDLANT property shall be restricted to the gates designated by the installation CO.

g. Installation COs will detail the procedure for emergency access to COMNAVREG MIDLANT property after normal working hours via implementing instruction.

h. COMNAVREG MIDLANT funds local CST's to provide a surveillance program and monitor contractor cranes/WHE and operators working on COMNAVREG MIDLANT property for safe practices. The CSTs role does not supplant the need for contracting officers to maintain their own surveillance programs; rather, they are an additional level of safety provided to help prevent damage to government property and injury to personnel.

i. CST personnel will randomly monitor contractor crane/WHE operations using the Contractor Crane or Rigging Operation Checklist (enclosure (6)), as a guide. To ensure contractor compliance, CST personnel will check for valid crane/WHE operating permits, certificates of compliance, and crane/WHE operator qualifications. In addition to verifying proper documentation, CST personnel will randomly observe crane/WHE operations for safe operation, proper set-up, adequate pier support, and proper rigging practices. The contractor shall

immediately correct any deficiency discovered prior to performing crane/WHE operations. Deficiencies that may affect safe operations, which are not immediately corrected, shall be technically evaluated for resolution and documented on the Contractor crane/WHE Oversight Discrepancy Form (enclosure (7)). Promptly forward (enclosure (7)) to the responsible contracting officer for resolution. Contracting officers will submit a written response to all discrepancies within 10 working days to the respective CST. Use the Contractor Crane/WHE Discrepancy Response Form (enclosure (8)), to identify the root cause(s) and any corrective/preventive actions taken to prevent recurrence.

8. Contractor Crane/WHE Accidents

a. Any crane/WHE accident, as defined in reference (a), Section 12, must be investigated and reported. In the event of an accident, contractors shall secure the accident site, protect evidence, and immediately (within four hours) notify the contracting officer or the designated representative.

b. The DoD contracting officer or local representative will notify the local Crane PM upon notification by the contractor. Additionally, the contracting officer/representative must notify the Navy Crane Center (NAVCRANECEN), (757) 967-3803 or by e-mail: m_nfsh_ncc_accident@navy.mil of an accident involving a fatality, inpatient hospitalization, overturned crane/WHE, collapsed boom, or any other major damage to the crane/WHE or adjacent property within 24 hours of notification by the contractor.

c. The contractor, assisted by the CST, the contracting officer, and the applicable Safety Office will conduct an accident investigation to establish the root cause(s). Crane/WHE operations shall not proceed until cause and corrective actions are determined. Corrective actions, including recovery plans, require approval by the contracting officer and the WHE Coordinator/PM, as designated by the host activity.

d. Within 30 days, the contractor must provide the contracting officer a WHE Crane and Rigging Gear Accident Report using enclosure (9) to include summary of circumstances, an explanation of cause(s), photographs (if available), and corrective actions taken. The contracting officer must forward

this report to the NAVCRANECEN and WHE Coordinator/PM upon receipt.

e. These notifications and reporting requirements are in addition to those promulgated by OPNAVINST 5100.23 and related claimant instructions.

9. Near Misses and Other Unplanned Occurrences. A near miss is a situation where an accident was avoided by mere chance or where intervention prevented an ongoing sequence of events that would have resulted in an accident. Contractors with the concurrence of their contracting officers involved in a near miss or other unplanned occurrence with lessons to be learned, shall report the near miss using enclosure (10) and E-mailed to: m_nfsh_ncc_accident@navy.mil within 30 days of the occurrence.

10. Implementation. Implementation of the requirements in this instruction shall be effective immediately.

11. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed per reference (g).

M. M. JACKSON
Captain, U. S. Navy
Chief of Staff

Distribution: Electronic only, via CNIC G2 Portal/Organization/ Mid-Atlantic Web site: https://g2.cnic.navy.mil/CNRMA/

CERTIFICATE OF COMPLIANCE	
This certificate shall be signed by an official of the company that provides cranes (or multi-purpose machines, material handling equipment, or construction equipment used to lift loads suspended by rigging gear) or rigging gear for any application under this contract. Post a completed certificate on each crane or alternate machine (or in the contractor's on-site office for rigging operations) brought onto Navy property.	
CONTRACTING OFFICER'S POINT OF CONTACT (Government Representative)	PHONE
PRIME CONTRACTOR/PHONE	CONTRACT NUMBER
CRANE OR ALTERNATE MACHINE SUPPLIER/PHONE (if different from prime contractor)	CRANE OR ALTERNATE MACHINE NUMBER (i.e., ID #)
CRANE OR ALTERNATE MACHINE MANUFACTURER/TYPE/CAPACITY	
CRANE OR ALTERNATE MACHINE OPERATOR'S NAME(S)	
I certify that 1. The above noted crane or alternate machine and all rigging gear conform to applicable OSHA regulations (host country regulations for naval activities in foreign countries) and applicable ASME B30 standards. The following OSHA regulations and ASME standards apply:_____ 2. The operators noted above have been trained and are qualified for the operation of the above noted crane(s) or alternate machine(s). 3. The operators noted above have been trained not to bypass safety devices during lifting operations. 4. The operators, riggers and company officials are aware of the actions required in the event of an accident as specified in the contract.	
COMPANY OFFICIAL SIGNATURE	DATE
COMPANY OFFICIAL NAME/TITLE	
POST ON CRANE (OR ALTERNATE MACHINE) (IN CAB OR VEHICLE) (or in the contractor's on-site office for rigging operations)	

CONTRACTOR CRANE/WHE ENTRY PACKAGE CHECKLIST

1	Company / Equipment Information	Company Name			
		Equipment Manufacture / Equipment Model / Equipment Number			
2	Date of Annual Inspection Expiration		CONTRACT NUMBER		
3	Date of Quadrennial Inspection Expiration				
4	Name & phone number of Contracting Official (or designated local representative)	Contracting Official			
		Phone Number			
5	Does the package include a routine or critical lift plan?			YES	NO
6	Has the contract been verified to contain all the requirements of NAVFAC P-307 Paragraphs 1.7.2 a.-j. as applicable?			YES	NO
7	Location of lift site				
8	Duration equipment will be continuously on the job site (hrs, days, weeks…)				
9	Does plan include certification from contractor that the equipment complies with applicable ASME standards IAW Ref. (c)?			YES	NO
10	Does plan include a certificate of compliance per COMNAVREGMIDLANTINST 11262.1A [enclosure (1)]?			YES	NO
11	Which OSHA regulations does the certificate of compliance indicate? (For cranes used in cargo transfer, 29 CFR 1917 applies; for cranes used in construction, demolition, or maintenance, 29 CFR 1926 applies; for cranes used in shipbuilding, ship repair, or ship breaking, 29 CFR 1915 applies).				
12	Does plan include valid medical certificate and proof of operator qualification from a source that qualifies crane/equipment operators (union, governmental agency, or an organization that tests and qualifies crane/equipment operators)? Verify qualification for each back-up operator (if provided) on the certificate of compliance.		YES	NO	N/A
13	Does the plan designate a qualified Rigger-in-Charge?			YES	NO
14	What is the weight of the heaviest load to be lifted?				lbs.
15	What is the weight of the rigging gear?				lbs.
16	What are the crane components (and their weights) that add to the weight of the load (hook, jib, etc.)?	Main Block			lbs.
		Aux. Block			lbs.
		Jib (Stowed)			lbs.
		Jib (Erected)			lbs.
		Other			lbs.
17	What is the maximum total crane lift (sum of 13, 14 & 15 above)?	TOTAL			lbs.
18	What is the capacity of the equipment as configured?				lbs.
19	What percentage of the equipment capacity does this lift represent?				%
20	What is the main boom length? If a jib will be utilized, indicate the length and offset.		Main	Jib	Offset
21	What are the minimum and maximum load radii?	Min		Max	
22	Does the plan include the manufacturer's load chart for entire range of lift(s)?			YES	NO
23	Does plan include ground loading and outrigger reaction data to determine cribbing requirements, or a Waterfront Operational Permit?		YES	NO	N/A

CONTRACTOR CRANE/WHE ENTRY PACKAGE CHECKLIST (CONT)

24	For crawler crane, does the plan indicate area restrictions for operation?	YES	NO	N/A
25	For floating crane, does plan include maximum allowable list?	YES	NO	N/A
26	For mobile crane mounted on barge, is crane equipped with load indicating device? Wind indicating device? Marine type list and trim indicator (readable in one-half degree increments)?	YES	NO	N/A
27	For mobile crane mounted on barge, does plan include revised load chart?	YES	NO	N/A
28	What are the environmental conditions under which crane/WHE operations are to be stopped?			
29	Will the crane perform critical lifts per COMNAVREGMIDLANTINST 11262.1A? (If no, skip items **29**-49.)		YES	NO
30	What circumstances require this lift to be classified as a critical lift? (Blind lift, 75% of load chart non-routine rigging, etc.)			
31	What are the exact dimensions of the load? (L x W x H)			
32	Does the plan indicate the crane position? (Overhead view)		YES	NO
33	What is the maximum lift height of the lift?			
34	What is the minimum boom angle?			
35	What is the maximum boom angle?			
36	What is the name of the operator?			
37	Indicate name(s) of backup operator (if required).			
38	Does the plan show lift points?		YES	NO
39	Does the plan describe the rigging procedures?		YES	NO
40	Does the plan indicate rigging hardware requirements?		YES	NO
41	For personnel lifts, does the plan demonstrate compliance with 29 CFR 1926.1431?	YES	NO	N/A
42	Does EM 385-1-1 govern this lift?	YES	NO	N/A
43	What are the coordination and communication requirements for the lift (e.g., radio and hand signals)?			
44	For tandem or tailing crane lifts, does the plan indicate the make and model of the crane, the line, boom, and swing speeds, and the requirement for an equalizer beam?	YES	NO	N/A
45	For floating cranes, refer to questions 20-22?			
46	What is the name of the lift supervisor?			
47	Does the plan indicate the qualifications of the lift supervisor?		YES	NO
48	What are the names of the riggers?			
49	Does the plan indicate the qualifications of the riggers?		YES	NO
50	Did all involved personnel (Operator, Riggers, Lift Supervisor, etc.) sign the critical lift plan?		YES	NO

Signature below verifies crane package complies with CNRMA INST 11262.1A and NAVFAC P -307

Contracting Official:	**Organization:**	**Signature:**	**Date:**	**Phone:**
Reviewed By:				

CONTRACTOR CRANE/WHE PRE-ENTRY CHECKLIST

Contracting Office:	Contractor's Package Rec'd:	Proposed Date(s) of Entry:	Prime Contractor:	Prime Contractor POC:	Date:
			Contracting Officer:	Phone:	Contract Number:

Crane Supplier / Phone (If different from prime contractor):		Serial number	Approved/Qualified Operator(s) and Rigger-in-Charge: 1.
Equipment Manufacturer	Equipment Model	Equipment Number	2.
Manufacturers Maximum Rated Capacity:	Heaviest Lift		3.

Cert. Type Exp. Date Quadrennial: _____ Annual: _____	Equipment Setup Site:	Lift Type: ☐ Critical ☐ Routine

Equipment Type at Check in Point

☐ Mobile RT ☐ Floater ☐ Other (Specify): _____

☐ Mobile Truck ☐ Mobile on barge

☐ Crawler ☐ Boom truck

If Boom Truck, will boom be used for lift? Y / N
If yes, does Boom Truck have required papers? Y / N

Boom Type

Telescopic manufactured after 02/28/92? Y / N / NA

Lattice manufactured after 02/28/92? Y / N / NA

Equipped with Anti Two-Blocking device? Y / N / NA

Boom free of obvious defects? Y / N / NA

Equipment at Check in Point

Same as identified in submitted crane/WHE package? Y / N
Configured same as identified in submitted crane/WHE package? Y / N
All Hoist Block Hooks equipped with positive latching device? Y / N
Hoist wire rope free of obvious defects? Y / N / NA
List / trim angle indicator visible to operator while at controls? Y / N / NA
Calibrated Load Moment / Load Indicator present in operator's cab? Y / N / NA
Crane equipped with appropriately rated fire extinguisher? Y / N / NA
Crane equipped with spill containment kit? Y / N / NA

Hoist wire rope dead ended with:

Poured Socket? Y / N
Wedge Socket? Y / N
If wedge type socket, is pig tail clamped correctly? Y / N

Operator at Check in Point in Possession of:

Completed Certificate of Compliance? Y / N
Copy of Required Crane/WHE Certifications? Y / N / NA
Current Crane/WHE Operator Qualifications? Y / N / NA
Copy of Approved Lift Plan? Y / N / NA
Copy of approved Ground Loading restrictions for all set up/work locations? Y / N / NA
Approved cribbing plan and cribbing at pass office prior to entry? Y / N / NA
Load Rating Charts visible to operator while at controls? Y / N / NA
Boom angle indicator visible to operator while at controls? Y / N / NA
Rigging gear free of obvious defects? Y / N

General Notes:

Reviewing Surveillance Team Member	Phone	Expiration of Permit	Date of Entry	Time of Entry

CONTRACTOR CRANE/WHE OPERATING PERMIT

NAVFAC MIDLANT CONTRACTOR CRANE/WHE OPERATING PERMIT

_____

DATE ISSUED

_____

EXPIRATION DATE

CONTRACTING AGENT NAME & PHONE# _____

_____

CONTRACT #

_____

AUTHORIZED LOCATION

_____

EQUIPMENT CONTRACTOR

_____

EQUIPMANT NUMBER

_____

CONTRACTOR CRANE/WHE NON-OPERATION PERMIT

POST THIS PERMIT IN A CONSPICUOUS LOCATION ON THE EQUIPMENT	
Company:	Point of Contact (Name/Phone)
Equipment Type/Manufacture:	Vehicle ID / Serial Number:
Contracting Official:	Phone:
Work Location:	

I certify that this equipment will be used for the transportation of personnel and materials only.
At no time will the equipment be operated while on Navy property.

Company Official / Title: (print) _____

Signature:_____ Date:_____

CONTRACTOR CRANE OR RIGGING OPERATIONS CHECKLIST				
		YES	NO	N/A
1	Is the Certificate of Compliance, P-1, in the operator's cab (or in the contractor's on-site office for rigging operations) with the current operator's name listed?			
2	Is the crane/machine transited to and from the job site correctly? Are the OEM instructions for travel being followed?			
3	Does the operator know the weight of the load to be lifted?			
4	Is the load to be lifted within the crane/machine manufacturer's rated capacity in its present configuration?			
5	Are outriggers or stabilizers required?			
6	If outriggers are required, are outriggers fully extended and down, and the crane load off the wheels?			
7	Is the crane/machine level and on firm ground, if the ground is not firm is the crane/machine blocked?			
8	If blocking is required, is the entire surface of the outrigger pad supported and is the blocking material of sufficient strength to safely support the loaded outrigger pad?			
9	If outriggers are not used, is the crane/machine rated for on-rubber lifts by the manufacturer's load chart? If stabilizers are used and not outriggers and the wheels are not off the ground is this the correct setup in accordance with the OEM?			
10	Is the swing radius of the crane counterweight clear of people and obstructions and accessible areas within the swing area barricaded to prevent injury or damage?			
11	Has the hook been centered over the load in such a manner to minimize swing?			
12	Is the load well secured and balanced in the sling or lifting device before it is lifted more than a few inches?			
13	Is the lift and swing path clear of obstructions?			
14	If rotation of the load being lifted is hazardous, is a tag or restraint line being used?			
15	Are personnel prevented from standing or passing under a suspended load?			
16	Is the operator's attention diverted?			
17	Are proper signals being used at all times? Is the operator responding properly to the signals? Are radios used for blind lifts?			
18	Is the load lifted a few inches to ensure it is secure and balanced?			
19	Are empty hooks lashed or otherwise secured during travel to prevent swinging?			
20	Does the operator remain at the controls while the load is suspended?			
21	Do the operations ensure that side loading is prohibited?			
22	Are personnel prevented from riding on a load?			
23	Are start and stop motions in a smooth fluid motion (no sudden acceleration or deceleration)?			
	CONTRACTOR CRANE OR RIGGING OPERATIONS			

	CHECKLIST (CONT).			
24	If operating near electric power lines, are the rules and guidelines understood and adhered to?			
25	Is the lift a critical lift?			
26	If so, are all regulations understood and check-off sheets initialed and signed off?			
27	Are any overhead power lines in the vicinity?			
28	If so, are complex lift rules and 1926.1407-1411 being followed?			
29	If pick and carry operations are allowed and performed, are OEM directions followed (e.g. rotation lock engaged, boom centered over front or rear, etc.)?			
30	When the crane/machine is left unattended, is it in a safe condition?			
31	Is rigging gear undamaged and acceptable for the application?			
32	Does rigging gear meet applicable ASME or host country standards (e.g. ASME B30.9 for slings, B30.10 for hooks, B30.26 for hardware such as shackles, safety hoist rings, eyebolts, etc, B30.20 for below the hook lifting devices, etc.)?			
33	Is the rigging gear inspected prior to use?			
34	Is chafing gear used to protect slings (especially synthetic slings) and equipment from damage due to sharp corners and edges?			
35	Is the rigging gear used in accordance with its working load limit? Is the load limit visible?			
36	Are positive latching devices used on crane and rigging hooks, or are the hooks "moused"?			

Contractor:	Subcontractor:
Location:	Date:
Notes:	
Signature of Contracting Officer's Representative:	

CONTRACTOR CRANE/WHE OVERSIGHT DISCREPANCY FORM

Date:	Equipment: _____ Rigging: _____ Operations: _____	Package ID Control #
Contractor:	Subcontractor:	
Equipment Owner:	Equipment Mfg.:	Model / Ser #
Location Of Operations:		
Contracting Official:	Phone:	Contract #

Note:

Contracting Officials shall submit a written response to all discrepancies within 10 working days to the NAVFAC MIDLANT CST. Identify the root cause(s) and any corrective / preventive actions taken to prevent recurrence.

Item#	Discrepancy
Oversight Personnel's Signature:	Date:

CONTRACTOR CRANE/WHE DISCREPANCY RESPONSE FORM

Date:	Package ID Control #	Contractor:
Sub Contractor:		Equipment Owner:
Location Of Operations:		
Contracting Officer:	Phone:	Contract #
Root Cause		
Corrective / Preventive Action (s) Taken To Prevent Recurrence		
Contracting Representative Signature:		Date:

Note:Contracting Officials shall submit a written response to all discrepancies within ten (10) working days to the NAVFACMIDLANT C S T . Identify the root cause(s) and any corrective / preventive actions taken to prevent recurrence.

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CRANE AND RIGGING GEAR ACCIDENT REPORT

Accident Category: ☐ Crane Accident ☐ Rigging Gear Accident

From:
UIC:

To: Navy Crane Center
Bldg. 491 NNSY
Portsmouth, VA 23709
Fax: 757-967-3808

Activity:

Report No:

Crane No:

Category:

Accident Date:

Time: hrs:

Category of Service: ☐ SPS ☐ GPS

Crane Type:

Crane Manufacturer:

Was Crane/Rigging Gear Being Used in SPS: ☐ Yes ☐ No

Was Crane/Rigging Gear Being Used in a Complex Lift/Critical Non-Crane Rigging Operation: ☐ Yes ☐ No

Location:

Weather:

Crane Capacity:

Hook Capacity:

Weight of Load on hook:

Fatality or Permanent Disability? ☐ Yes ☐ No

Reported to NAVSAFECEN? ☐ Yes ☐ No

Material/Property Cost Estimate:

Accident Type:

☐ Personal Injury ☐ Overload ☐ Derail ☐ Damaged Rigging Gear

☐ Load Collision ☐ Two Blocked ☐ Dropped Load ☐ Damaged Crane

☐ Crane Collision ☐ Damaged Load ☐ Other: Specify _____

Cause of Accident:

☐ Improper Operation ☐ Equipment Failure ☐ Inadequate Visibility

☐ Improper Rigging ☐ Switch Alignment ☐ inadequate Communication

☐ Track Condition ☐ Procedural Failure ☐ Other: Specify _____

Chargeable to:

☐ Crane Walker ☐ Rigger ☐ Operator

☐ Maintenance ☐ Management/Supervision ☐ Other: Specify _____

Crane Function:

☐ Travel ☐ Hoist ☐ Rotate ☐ Luffing ☐ Telescoping ☐ Other ☐ N/A

Is this accident indicative of a recurring problem? ☐ Yes ☐ No

If yes, list Accident Report Nos.: _____

ATTACH COMPLETE AND CONCISE SITUATION DESCRIPTION AND CORRECTIVE/PREVENTIVE ACTIONS TAKEN AS ENCLOSURE (1). Include probable cause and contributing factors. Assess damages and define responsibility. For equipment malfunction or failure, include specific description of the component and the resulting effect or problem caused by the malfunction or failure. List immediate and long term corrective/preventive actions assigned and respective codes.

Preparer:	Phone:	E-mail:	Code:	Date:

Concurrences: (Include Code, Signature and Date)

	Code:	Date:
	Code:	Date:
Certifying Official (Crane Accident Only):	Code:	Date:

CRANE AND RIGGING GEAR ACCIDENT REPORT (CONT)

Brief Description:

Background and Detailed Description:

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CRANE AND RIGGING GEAR NEAR MISS REPORT

Near Miss Category:	☐ **Crane Near Miss**	☐ **Rigging Gear Near Miss**	
From: **UIC:**	**To:** Navy Crane Center Bldg. 491 NNSY Portsmouth, VA 23709 Fax (757) 967-3808 nfsh_ncc_accident@navy.mil		
Activity:		**Report No.**	
Crane/Equipment No.:	**Category:**	**Near Miss Date:**	**Time:** **Hrs.**
Category of Service: ☐ **SPS** ☐ **GPS**	**Crane Equipment type:**	**Crane Equipment manufacturer:**	
Location:		**Weather:**	
Crane/Equipment Capacity:	**Hook capacity:**	**Weight of Load on Hook:**	

Is this near miss indicative of a recurring problem? ☐ **Yes** ☐ **No**
If yes, list report numbers: _____

In the space below, include a brief description of the event and corrective actions taken to prevent recurrence:

Preparer:	**Phone:**	**Email:**	**Date:**
Certifying Official:		**Code:**	**Date:**

Small Project Part 6E
Attachments

Attachment E Soil Management Plan

Soil Management Plan
Naval Station Newport, Newport, RI

This Soil Management Plan (SMP) has been prepared to establish procedures that will be followed should future construction, demolition or maintenance activities at the Naval Station Newport (NAVSTA) require the need to manage disturbed or excavated soil. The plan cannot be used to manage soils on Navy Installation Restoration (IR) sites, soils with known contamination, such as PCBs, asbestos, or mercury, soils regulated by the State of RI with contamination other than arsenic, and on property leased to private entities (e.g. privatized Housing).

Background

The property, located in Newport, RI, was established in 1869 with the construction of a torpedo station. The Navy War College was added in 1884 and the site was used for sailor training and housing and fueling facilities during World War II. Post WWII the property footprint and training activities were reduced while research and development efforts were increased. The soils on the property were found to contain arsenic that exceeds regulatory levels during a property-wide site investigation that included the collection and analysis of more than 1000 soil samples These soils must be removed and disposed of, or covered with Department (i.e. State of Rhode Island Department of Environmental Management) approved engineered controls, consisting of building foundations, asphalt pavement, and landscaping and environmental land use controls (ELUR) in order to prevent direct exposure to regulated soils.

Applicable Area

This SMP, and affiliated ELUR (when applicable), restricts the property to industrial or commercial usage, and pertains to the entire property. See attached site figure.

Soil Management

The direct exposure pathway is the primary concern at the site. Individuals engaged in activities at the site may be exposed through incidental ingestion, dermal contact, or inhalation of entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

During site work, the appropriate precautions will be taken to restrict unauthorized access to the property.

During all site/earth work, dust suppression (i.e. watering) techniques must be employed at all times. In the event that an unexpected observation or situation arises during site work, such activities will immediately stop (such as olfactory or visual evidence of waste material or contamination, PCB contamination or asbestos debris disposal). Workers will not attempt to handle the situation themselves but will contact the appropriate authority for further direction.

If excess soil is generated /excavated from the property, the soil is to remain on-site for analytical testing, to be performed by an environmental professional, in order to determine the appropriate disposal and/or management options. The soil must be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against storm-water and/or wind erosion (i.e. hay bales, silt fencing, rocks, etc).

Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (i.e. away from public roadways/walkways). No soil will be stockpiled on-site for greater than 60 days without prior Department approval.

Soils excavated from the site may not be re-used as fill on residential property. Excavated fill material shall not be re-used as fill on commercial or industrial properties unless it meets the Department's Method 1 Residential Direct Exposure Criteria for all constituents listed in Table 1 of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations).

Excavated soil to be reused on non-Navy commercial or industrial properties must be sampled and analyzed, by a qualified environmental professional, at a frequency of one sample per 500 tons for all constituents in Table 1. Copies of the laboratory analysis results shall be maintained by the site owner and included in the annual inspection report for the site, or the closure report if applicable. In the event that the soil does not meet any of these criteria, the material must be properly managed and disposed of off site at a licensed facility.

Site soils, which are to be disposed of off-site (and not reused off-site), must be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the material shipping records associated with the disposal of the material shall be maintained by the site owner and included in the annual inspection report for the site.

Best soil management practices should be employed at all times and regulated soils should be segregated into separate piles (or cells or containers) as appropriate based upon the results of analytical testing, when multiple reuse options are planned (i.e. reuse on-site, reuse at a Department approved industrial/commercial property, or disposal at a Department approved licensed facility).

All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the site. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the site.

At the completion of site work, all exposed soils that remain on the site (i.e. have not been removed to licensed disposal facility) are required to be recapped with Department approved engineered controls (i.e. 2 feet of clean fill or equivalent; building foundations; 4 inches of pavement/concrete underlain with 6 inches of clean fill; and/or 1 foot of clean

fill underlain with a geotextile liner) consistent or better than the site surface conditions prior to the work that took place. These measures must also be consistent with the Department approved ELUR recorded on the property. Any clean fill material brought on site is required to meet the Department's Method 1 Residential Direct Exposure Criteria or be designated by an Environmental Professional as Non-Jurisdictional under the Remediation Regulations. The Annual Inspection Report for the site, or Closure Report if applicable, should include either analytical sampling results from the fill demonstrating compliance or alternatively include written certification by an Environmental Professional that the fill is not jurisdictional.

Worker Health and Safety

To ensure the health and safety of on-site workers, persons involved in the excavation and handling of the material on site are required to wear a minimum of Level D personal protection equipment, including gloves, work boots and eye protection. Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site.

Department Approval

In accordance with the Departments' requirements, no soil at the property is to be disturbed after an engineering control has been implemented in any manner without prior written permission of the Department's Office of Waste Management, except for minor inspections, maintenance, and landscaping activities that do not disturb the contaminated soil that is left in place.

As part of the notification process, the Navy shall publish a notice, annually in the *Newport Daily News* that indicates that soil contain arsenic above the Department's Method 1 Direct Exposure Criteria, that soil work is planned on the property, and that individuals will be notified if work is to be done adjacent to privately-owned property.

In addition, the Navy will prepare an annual report to be submitted to the Department that summarizes construction work done on the property were soil was removed and inspections of sites on the property were soils with arsenic have been left in place and land use restrictions have been applied.

For soil that is removed, the report will identify the location, quantity, and ultimate destination. For sites with land use restrictions the inspections will include the location of the site and certification that the engineering controls remain in place.

David Dorocz, PE	Leo Hellsted, PE 6-3-10
Environmental Division Director	Chief of Office of Waste Management
Naval Station Newport	Department of Environmental Management

NAVSTA Newport

Commander Navy Region
Mid-Atlantic GeoReadiness
Center

Legend

- Gates
- Base Boundary
- Existing Structures
- Ammunition Storage Area
- Fence Line
- Runway
- Taxiway
- Helipad
- Apron
- Shoulder Overrun
- Aircraft Parking Area
- Railroad
- Golf Course
- Playground
- Swimming Pool
- Athletic Court
- Athletic Field
- Existing Piers
- Drydock

Print Date: 15 Oct, 2021

N
W E
S

0 1,000 2,000 4,000 Feet

0 0.4 0.8 Miles

Coordinate System: WGS 84 UTM Zone 17 N

GeoReadiness Center

AM-GIS Mid-Atlantic
Norfolk, Va 23511
(757) 444-3013

This map is generated from data contained in the CNRMA GeoReadiness Center (GRC). The information contained in CNRMA GRC is not to be construed or used as a "legal description" nor is it survey grade. Plans and maps from this database are believed to be accurate but accuracy is not guaranteed and the burden for determining accuracy, completeness, and appropriateness for use rests solely on the user exercising this information. The user acknowledges and accepts all inherent limitations of the maps and data, including the fact that they are dynamic and in a constant state of maintenance, correction and revision. Data owners should be consulted if field verification or additional information is needed.

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Small Project Part 6F
Attachments

Attachment F **Project Specific Drawing Format Requirements**

2 April 2009

NAVFAC Design Information

This document contains design information which may change periodically.

AutoCAD
NAVFAC is standardized on the AutoCAD 2006 file format. A/E/C's may submit a current set of DWG files (AutoCAD 2007 or greater) and a converted set of AutoCAD 2006 DWGs when submitting the final drawings. However, PDFs may not be made using AutoDesk's "DWG to PDF.PC3" plot driver.

Signature Software
The software used to digitally sign and seal Adobe Acrobat drawing sets and specifications can be purchased from CIC, Inc. (http://www.cic.com/signit/). The POC for Sign-it is:

Kassy Loving
T: 650.802.7766
F: 650.820.7777
E-mail: kloving@cic.com

NAVFAC is standardized on Sign-it v 7.01. See UFC 1-300-09N, "Design Procedures" and the Sign-it instructions located on the WBDG site for more information.

Design Resource Files
To aid in the design of NAVFAC projects, the following files are available for use:

NAVFAC_STND_A1_Metric.dwt
NAVFAC standard AutoCAD 2006 model space metric border template. This is an ISO A1 paper size template for use on all NAVFAC projects. All the text attributes are editable through double-clicking in AutoCAD or use of the DDATTE command. This drawform will scale to halfsize on ISO A3 paper.

NAVFAC_STND_D_Imperial.dwt
NAVFAC standard AutoCAD 2006 model space imperial border template. This is an ANSI D (34x22) sheet border to use for all NAVFAC projects. All the text attributes are editable through double-clicking in AutoCAD or use of the DDATTE command.

NavFacStnd.ctb
Color dependent pen table for use with the NAVFAC border.

NavFacStnd-Sketch.ctb
Color dependent pen table for use with the NAVFAC sketch sheets.

Small Project Part 6G
Attachments

Attachment G **Project Specific Environmental Memos**

ENVIRONMENTAL CHECKLIST – NAVAL STATION NEWPORT
Update 04/19/2011

1. General. Designers need to ensure that the project design and contemplated methods of construction comply with all applicable federal laws including: Clean Air Act (CAA), Clean Water Act (CWA), Coastal Zone Management Act (CZMA), Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Emergency Planning and Community Right to Know Act (EPCRA), Endangered Species Act (ESA), Fish and Wildlife Coordination Act (FWCA), Marine Protection, Research, and Sanctuaries Act (MPRSA), National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), National Pollutant Discharge Elimination System (NPDES), Oil Pollution Act (OPA), Research and Sanctuaries Act, Native American Graves Protection and Repatriation Act (NAGPRA), Resource Conservation and Recovery Act (RCRA), Rivers and Harbors Act of 1899 (R&H), Safe Drinking Water Act (SDWA), Toxic Substance Control Act (TSCA), Wild & Scenic Rivers Act (WSRA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and Subsequent Executive Orders. In addition, compliance with the General Laws of the State of Rhode Island is also required particularly those laws described in Chapters 23, 42, and 46.

2. Project requires a federal coastal zone consistency determination and/or coastal wetland permit. Projects that are reasonably likely to affect any land or water use or natural resources of the coastal zone are subject to the federal coastal zone consistency determination requirement. This includes new construction, alteration, or demolition of commercial, industrial, and recreational structures, treatment of sewage and stormwater, construction of roadways, parking lots, and the like, and maintenance activities. Plans and specifications must be submitted. Use of the Rhode Island Erosion and Sediment Control Handbook (http://www.dot.ri.gov/documents/enviro/stormwater/Soil_Erosion_Sediment_Control_Handbook.pdf) and the Storm Water Installation Manual (link on left side at http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm) is required. In addition, the checklist, found in Appendix A of the Storm Water Design Manual, must be completed and submitted to the Navy with the plans and specifications. All projects must meet the set back requirements (50 feet from a coastal feature such as cliffs and bluffs, rocky shores, coastal beaches, coastal wetlands, and existing manmade shorelines). Contact 401-841-7651 for assistance.

The regulations can be obtained from the following:
http://www.rules.state.ri.us/dar/regdocs/released/pdf/CRMC/CRMC_1059_.pdf
http://www.rules.state.ri.us/dar/regdocs/released/pdf/CRMC/CRMC_1058_.pdf

A/E or Contractor Action: Prepare documents, pollution prevention plans, basis of design, calculations, plans and specifications and submit to the Navy
Navy Action: Prepare Consistency Determination and submit to the State of Rhode Island Coastal Resources Management Council

3. Project may require a Water Quality Certification (also known as 401 Certification). Activities that require a water quality certification include the following:

- Dredging and Dredged Material Disposal

- Filling of Waters of the State
- Residential development of six (6) or more units
- Any commercial, industrial, state or municipal land development that results in the creation of 10,000 square feet or more of additional impervious area
- Five (5) or more acres of land disturbance
- Marinas - construction of new facilities or expansion of existing facilities
- Flow Alterations
- Harbor Management Plans for those elements which will likely affect water quality
- A point source discharge of pollutants
- Redevelopment projects (construction, demolition, alteration, and improvement but not renovation) that disturbs 10,000 square feet or more of existing impervious area

Contact 401-841-7561 for assistance. An application and a $200 or $400 fee (for the General Treasurer, State of Rhode Island) will be required. In addition, use of the Storm Water Installation Manual (link on left side at http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm) is required. The checklist, found in Appendix A of the Storm Water Design Manual, must be completed and submitted to the Navy.

The regulations can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/REGS/WATER/h2oq10.pdf

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, pollution prevention plans, the Water Quality Certificate application form, and fee (check made out to the Treasurer, State of Rhode Island), and submit to the Navy
Navy Action: Submit information to the State of Rhode Island for Water Quality Certificate

4. Project funds may need to be allocated to do an EA (Environmental Assessment) if the project involves land acquisition, disposal, or any real estate transaction or if the project adversely affects a historic or prehistoric building or site. Contact 401-841-6377 for assistance.

The regulations can be obtained from the following:
http://www.access.gpo.gov/nara/cfr/waisidx_03/32cfr775_03.html

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, pollution prevention plans, and submit to the Navy
Navy Action: Review project and determine if EA is required

5. Project requires calculations for emissions under the Clean Air Act General Conformity Rule PRIOR to any work being done. Activities and sources that generate air emissions during construction and the first year of operation must be identified. These include the following: surface disturbance; construction equipment (bulldozers, backhoes, etc, at site); construction of facilities (paints, coatings, solvents, adhesives); and delivery trucks (on-base emissions only). Contact 401-841-6377 for assistance.

The regulations can be obtained from the following:

https://www.denix.osd.mil/denix/Public/Library/Air/Conform/app_f_change3_final_1.html

A/E or Contractor Action: Identify activities and sources that generate air emissions if a Clean Air Act General Conformity is required; submit information to the Navy
Navy Action: Perform analysis for General Conformity

6. Project must be approved by NAVSTA Cultural Resource Specialist. Project may require consultation with the State Historic Preservation Office (SHPO) if project is located within a historic district or area of concern or if the building or site is listed or eligible for listing on the National Register of Historic Places. Contact 401-841-6377 for assistance.

The regulations can be obtained from the following:
http://www.access.gpo.gov/nara/cfr/waisidx_03/32cfr767_03.html
http://www.achp.gov/navy.html

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications and submit to the Navy if consultation is required
Navy Action: Prepare project documents and submit to the State of RI Historic Preservation Officer

7. Project funds need to be allocated for tribal consultation if the project involves work in areas of tribal significance OR the project is considered to be an issue of tribal concern. Contact 401-841-6377 for assistance.

The regulations can be obtained from the following:
http://neds.daps.dla.mil/Directives/11010_14.pdf

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications and submit to the Navy if consultation is required
Navy Action: Prepare project documents and submit to the tribes

8. Project requires a storm water pollution prevention plan. Projects that disturb more than one acre must prepare a Notice of Intent and a storm water pollution prevention plan. Use of the Rhode Island Erosion and Sediment Control Handbook (http://www.dot.ri.gov/documents/enviro/stormwater/Soil_Erosion_Sediment_Control_Handbook.pdf) and the Storm Water Installation Manual (link on left side at http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm) is required. In addition, the checklist, found in Appendix A of the Storm Water Design Manual, must be completed and submitted to the Navy with the plans and specifications. Contact 401-841-1790 for assistance.

The regulations and requirements can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/REGS/WATER/ripdesca.pdf

A/E or Contractor Action: Prepare documents, Notice of Intent, basis of design, calculations, plans and specifications, and storm water pollution prevention plan and submit to the Navy

Navy Action: Submit documents, Notice of Intent, basis of design, calculations, plans and specifications, and storm water pollution prevention plan to the State of RI Department of Environmental Management

9. Project may require a pre-construction air permit. A determination of whether the project needs a pre-construction air permit must be done in consult with the Environmental Office. Note that emergency generators over 50 hp must meet regulatory standards and will need a permit. Contact 401-841-6378 for assistance.

The regulations and requirements can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/REGS/AIR/AIR09-98.PDF

A/E or Contractor Action: Prepare documents for emergency generators and submit to the Navy
Navy Action: Review information, prepare permit if necessary, and submit to the State of Rhode Island

10. Project may require a change to Naval Station's Title V Air Permit. Generally, any source (e.g., chillers, boilers, emergency generators) that burns fuel must be added to the Title V permit prior to operation. All storage tanks are also considered air sources. Any storage tank needs to be evaluated to determine if it needs to be added to the Title V operating permit. Contact 401-841-6378 for assistance.

The regulations and requirements can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/REGS/AIR/AIR29-00.PDF

A/E or Contractor Action: Provide information such as plans, specs, cut sheets, manufacturers specifications to the Navy
Navy Action: Review information and change Air Permit if necessary

11. Projects that include the installation or removal of an underground storage tank require a permit. Contact 401-841-3919 for assistance.

The regulations and requirements can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/regs/waste/ust1002.pdf

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, the application form, and fee (check made out to the Treasurer, State of Rhode Island), and submit to the Navy
Navy Action: Submit information to the State of Rhode Island

12. Projects that include the installation of an aboveground storage tank (AST) require a permit and must be compliant with federal SPCC (Spill Prevention, Control and Countermeasures) regulations and state AST or oil pollution control regulations. Contact the 401-841-3919 for assistance with the permit and 401-841-1791 for assistance with SPCC regulations.

The regulations and requirements can be obtained from the following:

http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_40/40cfr112_00.html
http://www.state.ri.us/dem/pubs/regs/regs/compinsp/oilpollu.pdf

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, and the application form
Navy Action: Submit information to the State of Rhode Island

13. Special soil provisions. Soils on Aquidneck Island contain naturally-occurring arsenic at concentrations that exceed the state residential and industrial/commercial direct exposure criteria under the remediation regulations. Soil must be covered with building foundations, pavement, concrete, or two feet of clean soil. Excess soil must be disposed of at solid waste landfill. Contact 401-841-7671 for assistance.

The regulations can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/REGS/WASTE/remreg96.PDF

A/E or Contractor Action: Prepare documents, basis of design, calculations, and plans and specifications, based on the Soil Management Plan for Naval Station Newport
Navy Action: Review project for compliance with the Soil Management Plan

14. Radon. Radon is regulated under TSCA (Toxic Substances Control Act). Based on historical data and geological conditions, radon reduction techniques shall be incorporated into the design and construction phases of new structures and significantly modified structures. Contact 401-841-7672 for assistance.

Information is available at:
http://www.epa.gov/radon/

A/E or Contractor Action: Design all new construction with passive or active systems to avoid radon buildup.
Navy: Review project for consistency with radon requirements.

15. CERCLA/Superfund. Naval Station is on the NPL (National Priorities List) and it is a Superfund site with more than 10 areas of concern. As such, designers and construction contractors must consider site conditions that include potential contamination and existence of hazardous substance releases as well as the existence of land use controls. Additionally, Naval Station must manage hazardous substances to avoid spills and releases, report hazardous substance releases to the National Response Center, and establish contracts to conduct cleanup activities. Contact 401-841-7561 for assistance.

The regulations can be obtained from the following:
http://www.epa.gov/superfund/action/law/cercla.htm
http://assembler.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_103.html or
http://www.access.gpo.gov/uscode/title42/chapter103_.html

A/E or Contractor Action: If project is located on Superfund site where soil or groundwater contamination exists, or where environmental land use restrictions are in place, unique design and

construction issues will need to be addressed in plans, specifications, and other project-related documents; ensure Navy is informed when hazardous substances are released on the construction site.
Navy: Review project to determine if work will be completed on or near a Navy Superfund site.

16. Freshwater Wetland Permit. A wetland permit is required for projects that affect freshwater wetlands. In addition, use of the Storm Water Installation Manual (link on left side at http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm) is required. The checklist, found in Appendix A of the Storm Water Design Manual, must be completed and submitted to the Navy, along with the wetland permit application. Contact 401-841-7561 for assistance.

The regulations can be obtained from the following:
http://www.dem.ri.gov/programs/benviron/water/permits/fresh/index.htm

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, wetland delineation report pollution prevention plans, the Wetland application form, and fee (check made out to the Treasurer, State of Rhode Island), and submit to the Navy
Navy Action: Submit information to the State of Rhode Island

17. Army Corps Permit. Activities that require an Army Corps permit include (but are not limited to) the following:

- dredging and dredged material disposal;
- filling of waters of the state;
- marinas - construction of new facilities or expansion of existing facilities;
- harbor management plans for those elements which will likely affect water quality;
- bridge construction; and
- construction activities within the limits of a coastal feature.

Contact 401-841-7561 for assistance.

The regulations can be obtained from the following:
http://www.usace.army.mil/inet/functions/cw/cecwo/reg/sadmin3.htm

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, and pollution prevention plans and submit to the Navy
Navy Action: Submit information to the Army Corps of Engineers

18. Industrial Waste Water Pretreatment Permit: An industrial pretreatment permit is required if the project will introduce industrial wastewater (e.g. boiler cooling water, laboratory wastewater, super heated water, condensate water, discharges from industrial cleaners, and pretreatment systems that can include silver recovery, amalgam recovery, wash racks and grease traps) or any other discharge beyond domestic wastewater into the sanitary/wastewater collection system. Contact 401-841-6376 for assistance.

The regulations can be obtained from the following:

http://ordlink.com/codes/newportr/index.htm - (Chapter 13.10)

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, and submit to the Navy
Navy Action: Submit information to the City of Newport

19. Lead-Based Paint Abatement, Renovation, or Re-Painting: Projects with painted surfaces may require lead abatement. Painted surfaces must be tested for the presence of lead in paint and the appropriate regulations must be applied to the project. Contact 401-841-7628 for assistance.

The regulations can be obtained from the following:
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10641
http://www.state.ri.us/dem/pubs/regs/regs/air/air24-93.pdf

A/E or Contractor Action: Prepare documents, basis of design, calculations, plans and specifications, lead plans, and submit to the Navy
Navy Action: Review project documents to determine compliance with lead regulations

20. Solid Waste/Recycling: EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance, dated 5 October 2009 includes specific pollution prevention reduction and diversion targets that the Navy must meet. These specific targets include (EO 13514, para 2(e)): diversion of at least 50 percent of non-hazardous solid waste, excluding construction and demolition debris; and diversion of at least 50 percent of construction and demolition materials and debris.

Projects that generate demolition debris, renovation debris or scrap building materials require recycling. Common construction items that must be recycled include metal (all types), wood, concrete, asphalt, cement, oil-contaminated soils, glass (all colors), and paper/cardboard (all types). In addition, all scrap metal generated during renovation or demolition must be submitted to the Navy's scrap metal yard. Contact Scott Mello at 401-841-2464 for assistance with extra dumpsters or 401-841-7561 for additional information.

The regulations can be obtained at the following:
http://www.dem.ri.gov/pubs/regs/regs/stratpol/commrecy.pdf

A/E or Contractor Action: Prepare documents, plans and specifications, a recycling and solid waste plan, and submit to the Navy
Navy Action: Review project to determine compliance with solid waste and recycling regulations

21. Oil-Contaminated Soil: Any oil-contaminated soil encountered while excavating soil must be managed in accordance with the regulations. Rhode Island has one licensed Petroleum Contaminated Soil Processing Facility (D'Ambra Construction Company located at 800 Jefferson Blvd, Warwick, RI, 401-737-1300). Contact 401-841-7561 or 401-841-1791 for assistance.

The regulations can be obtained from the following:
http://www.dem.ri.gov/pubs/regs/regs/waste/swrg05_1.pdf
http://www.dem.ri.gov/pubs/regs/regs/compinsp/oilpollu.pdf

A/E or Contractor Action: Provide information to the Navy related to how compliance with the regulation is; assist the Navy with notifications must be made to the regulators of the State of Rhode Island; prepare waste related documentation and submit to the Navy
Navy Action: Review plans and documents and submit information to the State of Rhode Island as required by the regulations

22. Discovery of Abandoned Tanks: Abandoned tanks must be removed in accordance with the regulations. Contact 401-841-3919 for assistance.

The regulations and requirements can be obtained from the following:
http://www.state.ri.us/dem/pubs/regs/regs/waste/ust1002.pdf

A/E or Contractor Action: Provide information to the Navy related to how compliance with the regulation; assist the Navy with notifications must be made to the regulators of the State of Rhode Island; prepare waste related documentation and submit to the Navy
Navy Action: Review plans and documents and submit information to the State of Rhode Island as required by the regulations

23. Drinking Water Requirements: No new water treatment works, water storage facilities, or water pumping facilities can be constructed or altered until design plans and specifications, that have been prepared by a professional engineer registered in accordance with Chapter 5-8 of the General Laws of Rhode Island, and a plan for operation and maintenance have been approved by the State of Rhode Island. Contact 401-841-6376 for assistance.

The regulations and requirements can be obtained from the following:
http://www.health.ri.gov/environment/dwq/drinkwaterfund-final-april06.pdf

A/E or Contractor Action: Provide plans, specifications and operation and maintenance plans to the Navy
Navy Action: Submit information to the State of Rhode Island

24. Asbestos: If demolition is involved, a destructive hazardous material survey will need to be performed. Projects that involve asbestos removal require special procedures that will add costs and additional time. Contact 401-841-7628 for assistance.

The regulations and requirements can be obtained from the following:

29 CFR 1910.1001
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9995
29 CFR 1926.1101
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10862
40 CFR 61
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=a6f579391bf4dc2e563f856b6b826d72&rgn=div5&view=text&node=40:8.0.1.1.1&idno=40#40:8.0.1.1.1.13
40 CFR 763

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=4a1a26fae2caf693d2fd22bb5649536b&tpl=/ecfrbrowse/Title40/40cfr763_main_02.tpl
http://www.rilin.state.ri.us/Statutes/TITLE23/23-24.5/INDEX.HTM

A/E or Contractor Action: Provide plans, specifications, 10-day notification form, and asbestos plan to the Navy
Navy Action: Review documents and asbestos plan, submit 10 day notification to the US EPA Region 1

25. Demolition: Hazardous material surveys for demolition projects may need to include identification of abandoned subsurface structures as well as sampling for soil contamination.

Demolition debris such as aerosol cans, fluorescent light bulbs, batteries, oil rags, ionized smoke detectors, tritium exit signs, used oil filters, drums, compressed gas cylinders, mercury-containing switches/thermometers and other materials, asbestos, light ballasts (PCB and other), empty drums, cathode ray tubes and glass, lead paint and lead paint chips, caulking, and solvents have unique handling and disposal requirements. Contact 401-841-1791 for assistance.

The regulations and requirements can be obtained from the following:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=401d1fa5a85e820674e669b8a3edf23b&c=ecfr&tpl=/ecfrbrowse/Title40/40cfrv25_02.tpl
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=401d1fa5a85e820674e669b8a3edf23b&c=ecfr&tpl=/ecfrbrowse/Title40/40cfrv26_02.tpl

A/E or Contractor Action: Identify hazardous demolition debris and provide plan for removal to the Navy
Navy Action: Review plans and documents

26. Environmental Condition of Property (former Environmental Baseline Survey (EBS)): Any real estate transaction, including but not limited to leases, ingrants, outgrants, transfers easements, require that an ECP be completed. Contact 401-841-7561 for assistance.

The requirements can be obtained from the following:
https://portal.navfac.navy.mil/pls/portal/docs/PAGE/NAVFAC/NAVFAC_WW_PP/NAVFAC_NFESC_PP/ENVIRONMENTAL/ERB/GPR/DON_POLICY_MEMO_06-06.PDF

A/E or Contractor Action: None unless requested by Navy
Navy Action: Complete ECP

27. Pollution Prevention/Sustainability: The project shall comply with sustainable procurement and practices and all applicable Federal, state and local laws and regulation, including Executive Order 13423, Installation Water Conservation Programs and energy reduction requirements.
In Jan.07, Executive Order (EO) 13423 “Strengthening Federal Environmental, Energy, and Transportation Management” consolidated the existing preference purchasing programs, energy-efficient and water-conserving programs, and sustainable design requirements into one program.

Executive Order 13514 - Federal Leadership in Environmental, Energy and Economic Performance (PDF), of Oct 2009 requires federal agencies to advance sustainable acquisition by acquiring products that are energy-efficient, water-efficient, bio-based, environmentally preferable, non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives. EO 13514 further mandates that 95 percent of new contract actions, including task and delivery orders, for products and services with the exception of acquisition of weapon systems, meet the requirement for use of sustainable environmental practices. Contact 401-841-7561 for assistance.

The requirements can be obtained from the following:
40 CFR 247
FAR Part 23

A/E or Contractor Action: Incorporate requirements into design and submittals
Navy Action: Review and design and submittals

DEPARTMENT OF THE NAVY

Memorandum

DATE: May 24, 2011

SUBJ: COMPREHENSIVE PROCUREMENT GUIDELINE PRODUCTS

The Government has an affirmative procurement program to promote the purchase of products containing recovered or recycled materials. The intent is to reduce the solid waste stream and conserve natural resources by establishing markets for recycled content products and encouraging manufacturers to produce quality products containing recovered materials.

Participate in this program by using, for Environmental Protection Agency (EPA) designated items, recovered materials to the maximum extent practicable without jeopardizing the intended end use of the item. The percentage of recovered materials content levels for use in the performance of this contract will be, at a minimum, the amount recommended in the EPA Comprehensive Procurement Guideline (CPG) Product Index (website www.epa.gov/cpg/products). Use of EPA designated products is not required for products that are either not available within a reasonable period of time, are not available at a reasonable price, are not available from a sufficient number of sources to maintain a satisfactory level of competition, or fail to meet performance standards based on technical verification. EPA designation of products is an on going process. Listings of EPA designated products containing recovered materials are found in 40 CFR 247. Make recommendation and submit Recovered Material Certification, to the Contracting Officer, when a product containing recovered materials is equal to or better than the original and could be used for this contract. All changes of products shall be accepted by the Contracting Officer before it is used.

Contractors are responsible to purchase new items made with various amounts of recycled material as described in the CPG with the most commonly used requirements listed below:

1. Printing and writing paper – 30% - 100% recycled material;
2. Bathroom/facial tissue, napkins, paper towels – 30% -100 %;
3. Construction products – 25% - 100% (these include cement, concrete, steel, plastic, fly ash, carpet backing and carpet cushings);
4. Landscape equipment – 60% - 70% (these include park and recreational furniture, playground equipment, garden hoses, and pallets);
5. Park and Recreation products – 60% - 100% (these include plastic fencing, playground surfaces, and running tracks); and
6. Transportation products – 25% - 100% (these include channelizers, delineators, flexible delineators, parking stops, traffic barricades and cones).

Contractors shall ensure that each item purchased will have the designated recycled content within the material. This can be done through certification from the manufacturer. Naval Station's point of contact for this program is Ms. Cornelia Mueller. Ms. Mueller can be reached at 401.841.7561.

ASBESTOS ABATEMENT – CHECK LIST

Start Date: _____ Ending Date: _____
Contractor Name: _____
Contract No: _____
Contract Name: _____
Location: _____

Type of Asbestos:	TSI		Surfacing		Floor Tile		Transite	
	Roof		Spray-On		Mastic		Other	
Description of ACM:								
Quantities:	Sq Ft:		Ln Ft:		Other			
Containment Type:	Full Containment		Mini Enclosure		Glovebag			
	Other:							

PRE-ABATEMENT CHECKLIST			
✓	CHECKLIST ITEM DESCRIPTION	REFERENCE	NOTES
	1. Has the contractor obtained state licenses and permits, where necessary?	Section 13281 Para. 1.3.4	
	2. Has the contractor notified the EPA, or the appropriate state or local regulatory agency, 10 days prior to the commencement of work?	Section 13281 Para. 1.3.4 40 CFR 61.145 (b)	
	3. Has the contractor provided proof that all asbestos workers and supervisors are trained in the proper removal procedures of asbestos?	Section 13281 Para. 1.3.3 29 CFR 1926.1101 (k)(9), (o)(3)(i) 40 CFR 763.121 (k)(3)	
	4. Has the contractor provided the name of the "competent" or "qualified" person?	Section 13281 Para. 1.3.7 29 CFR 1926.1101 (o)(4)	
	5. Has the contractor provided proof that the supervisor, remaining on-site during all abatement operations, is trained in the requirements of NESHAP?	Section 13281 Para. 1.3.7 40 CFR 61.145 (c)(8)	
	6. Has the contractor provided proof that all of the employees have received medical examinations and that medical records are kept?	Section 13281 Para. 1.3.12 29 CFR 1926.1101 (m), (n)(3)(i) 40 CFR 763.121 (n)(3)(i)	
	7. Has the contractor provided proof that all of the employees are respirator trained and fit tested?	Section 13281 Para. 1.3.3 29 CFR 1910.134 (e)(5)(I) 29 CFR 1926.1101 (h)(4)	
	8. Has the contractor provided proof that all vacuum and ventilation equipment has the manufacturer's certification that it is capable of handling airborne asbestos fibers in conformance with ANSI Standard Z9.2?	40 CFR 61.152	
	9. Has the contractor provided a detailed asbestos hazard abatement plan that complies with EPA/OSHA Safety and Health requirements? (See Asbestos Hazard Abatement Plan Checklist for details)	40 CFR 61.145 (b)(4)(x)-(xi)	
	10. Has the contractor provided the name, address, and phone number of the Private Qualified Person responsible for the exposure monitoring program and air sampling?	Section 13281 Para. 1.5.1	
	11. Has documented evidence the PQP has completed training in and is accredited and where required is certified as a Building Inspector, Contractor/Supervisor Abatement Worker and Asbestos Project Designer and successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating airborne Asbestos Dust" or equivalent?	Section 13281 Para. 1.5.1	
	12. Has the contractor provided the name, address, and phone number and state license of the testing laboratory for all asbestos sampling analysis?	Section 13281 Para. 1.3.10	

ASBESTOS ABATEMENT – CHECK LIST

	13. Has the laboratory shown proof of participation in a Proficiency Analytical Testing (PAT) program, accredited by the American Industrial Hygiene Association (AIHA) and judged proficient by the current inclusion on the AIHA Asbestos Analysis Registry (ARR)?	Section 13281 Para. 1.3.10 29 CFR 1926.1101 App. A	
	14. Has the contractor provided a Quality Assurance plan to ensure that laboratory analysis is accurate?	29 CFR 1926.1101 App. A	
	15. Has the contractor provided the name and the location of certified waste disposal site?	Section 13281 Para. 1.3.11 40 CFR 61.145 (b)(4)(xii)	
	16. Has the contractor submitted a written program manual or operating procedure including methods of compliance regulatory statues?	Section 13281 Para. 1.	
	17. Has the contractor provide a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site?	Section 13281 Para. 1.	
	18. Has the contractor provided product data?	Section 13281 Para. 1. (SD-03)	

ASBESTOS HAZARD ABATEMENT PLAN CHECKLIST	
✓	**CHECKLIST ITEM DESCRIPTION** (Section 13281 Para. 1.3.9)
	1. Is the plan prepared, signed, and sealed by the Private Qualified Person, including certification number and certification date?
	2. Does the plan include a drawing showing the location, size, and details of asbestos regulated areas, including the following: - location of the clean and dirty areas - buffer zones - showers - storage areas - change rooms - local exhaust equipment
	3. Does the plan include a planned air monitoring strategies?
	4. Does the plan include the precise personal protective equipment to be used?
	5. Does the plan include step-by-step details for the sequencing of asbestos-related work?
	6. Does the plan include a disposal plan?
	7. Does the plan specify the type of wetting agent to be used?
	8. Does the plan include both Fire and Medical Emergency response plans?
	9. Does the plan include a detailed description of the environmental pollution control method?

POST-ABATEMENT CHECKLIST		
✓	**CHECKLIST ITEM DESCRIPTION**	**REFERENCE**
	1. Have copies of all appropriate environmental monitoring documents been supplied to the OICC/ROICC or the Navy Consultant?	29 CFR 1910.1001(m)(1)(i) 29 CFR 1926.1101(n)(2)(i) & (iii), (n)(3)(i) OPNAVINST 5100.23 ch.17
	2. Has the Asbestos Program Manager been informed the removal has been completed?	
	3. Has the contractor provided written proof of the total amount of asbestos received and buried by the landfill?	40 CFR 61.150(d)(3)
	4. Has the original Waste Shipment Record been forwarded to the Environmental Department?	

ASBESTOS ABATEMENT – CHECK LIST

Start Date: _____ Ending Date: _____
Contractor Name: _____
Contract No: _____
Contract Name: _____
Location: _____

Type of Asbestos:	TSI		Surfacing		Floor Tile		Transite	
	Roof		Spray-On		Mastic		Other	
Description of ACM:								
Quantities:	Sq Ft:		Ln Ft:		Other			
Containment Type:	Full Containment		Mini Enclosure		Glovebag			
	Other:							

PRE-ABATEMENT CHECKLIST			
✓	CHECKLIST ITEM DESCRIPTION	REFERENCE	NOTES
	1. Has the contractor obtained state licenses and permits, where necessary?	Section 13281 Para. 1.3.4	
	2. Has the contractor notified the EPA, or the appropriate state or local regulatory agency, 10 days prior to the commencement of work?	Section 13281 Para. 1.3.4 40 CFR 61.145 (b)	
	3. Has the contractor provided proof that all asbestos workers and supervisors are trained in the proper removal procedures of asbestos?	Section 13281 Para. 1.3.3 29 CFR 1926.1101 (k)(9), (o)(3)(i) 40 CFR 763.121 (k)(3)	
	4. Has the contractor provided the name of the "competent" or "qualified" person?	Section 13281 Para. 1.3.7 29 CFR 1926.1101 (o)(4)	
	5. Has the contractor provided proof that the supervisor, remaining on-site during all abatement operations, is trained in the requirements of NESHAP?	Section 13281 Para. 1.3.7 40 CFR 61.145 (c)(8)	
	6. Has the contractor provided proof that all of the employees have received medical examinations and that medical records are kept?	Section 13281 Para. 1.3.12 29 CFR 1926.1101 (m), (n)(3)(i) 40 CFR 763.121 (n)(3)(i)	
	7. Has the contractor provided proof that all of the employees are respirator trained and fit tested?	Section 13281 Para. 1.3.3 29 CFR 1910.134 (e)(5)(I) 29 CFR 1926.1101 (h)(4)	
	8. Has the contractor provided proof that all vacuum and ventilation equipment has the manufacturer's certification that it is capable of handling airborne asbestos fibers in conformance with ANSI Standard Z9.2?	40 CFR 61.152	
	9. Has the contractor provided a detailed asbestos hazard abatement plan that complies with EPA/OSHA Safety and Health requirements? (See Asbestos Hazard Abatement Plan Checklist for details)	40 CFR 61.145 (b)(4)(x)-(xi)	
	10. Has the contractor provided the name, address, and phone number of the Private Qualified Person responsible for the exposure monitoring program and air sampling?	Section 13281 Para. 1.5.1	
	11. Has documented evidence the PQP has completed training in and is accredited and where required is certified as a Building Inspector, Contractor/Supervisor Abatement Worker and Asbestos Project Designer and successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating airborne Asbestos Dust" or equivalent?	Section 13281 Para. 1.5.1	
	12. Has the contractor provided the name, address, and phone number and state license of the testing laboratory for all asbestos sampling analysis?	Section 13281 Para. 1.3.10	

ASBESTOS ABATEMENT – CHECK LIST

	13. Has the laboratory shown proof of participation in a Proficiency Analytical Testing (PAT) program, accredited by the American Industrial Hygiene Association (AIHA) and judged proficient by the current inclusion on the AIHA Asbestos Analysis Registry (ARR)?	Section 13281 Para. 1.3.10 29 CFR 1926.1101 App. A	
	14. Has the contractor provided a Quality Assurance plan to ensure that laboratory analysis is accurate?	29 CFR 1926.1101 App. A	
	15. Has the contractor provided the name and the location of certified waste disposal site?	Section 13281 Para. 1.3.11 40 CFR 61.145 (b)(4)(xii)	
	16. Has the contractor submitted a written program manual or operating procedure including methods of compliance regulatory statues?	Section 13281 Para. 1.	
	17. Has the contractor provide a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site?	Section 13281 Para. 1.	
	18. Has the contractor provided product data?	Section 13281 Para. 1. (SD-03)	

ASBESTOS HAZARD ABATEMENT PLAN CHECKLIST	
✓	**CHECKLIST ITEM DESCRIPTION** (Section 13281 Para. 1.3.9)
	1. Is the plan prepared, signed, and sealed by the Private Qualified Person, including certification number and certification date?
	2. Does the plan include a drawing showing the location, size, and details of asbestos regulated areas, including the following: - location of the clean and dirty areas - buffer zones - showers - storage areas - change rooms - local exhaust equipment
	3. Does the plan include a planned air monitoring strategies?
	4. Does the plan include the precise personal protective equipment to be used?
	5. Does the plan include step-by-step details for the sequencing of asbestos-related work?
	6. Does the plan include a disposal plan?
	7. Does the plan specify the type of wetting agent to be used?
	8. Does the plan include both Fire and Medical Emergency response plans?
	9. Does the plan include a detailed description of the environmental pollution control method?

POST-ABATEMENT CHECKLIST		
✓	**CHECKLIST ITEM DESCRIPTION**	**REFERENCE**
	1. Have copies of all appropriate environmental monitoring documents been supplied to the OICC/ROICC or the Navy Consultant?	29 CFR 1910.1001(m)(1)(i) 29 CFR 1926.1101(n)(2)(i) & (iii), (n)(3)(i) OPNAVINST 5100.23 ch.17
	2. Has the Asbestos Program Manager been informed the removal has been completed?	
	3. Has the contractor provided written proof of the total amount of asbestos received and buried by the landfill?	40 CFR 61.150(d)(3)
	4. Has the original Waste Shipment Record been forwarded to the Environmental Department?	

DEPARTMENT OF THE NAVY

Memorandum

Co

DATE: 25 March 2010

SUBJ: DEMOLITION/RENOVATION

A separate asbestos plan may be needed; the asbestos plan must be approved before work can begin.

ASBESTOS COMPLIANCE

The government is responsible to identify all asbestos which will be removed or is likely to be disturbed. Contractors are responsible to ensure their employees and cognizant work areas are in compliance with the applicable regulations when working on an Asbestos Project. An Asbestos Project is any activity involving the abatement, renovation, demolition, removal, salvage, clean up, or disposal of asbestos-containing material (ACM), or any other action that disturbs, or is likely to disturb, any ACM (both friable and non friable).

Quick Tip: Contractor employees performing work on an Asbestos Project must be trained and certified before beginning any asbestos work.

NOTIFICATION (NOTE THAT NOTIFICATION IS REQUIRED EVEN IF ASBESTOS IS NOT PRESENT)

Fill in a Notification for Renovation/Demolition (the notification form is available at http://www.epa.gov/region1/enforcement/asbestos/forms.html). Submit the completed form to the contracting office.

Quick Tip 2: Submit the form to your contracting officer at least twenty (working) days before the job begins.

ASBESTOS WASTE

Asbestos waste must be transported by a hauler, who is licensed to do so, and disposed at a landfill permitted to receive asbestos waste. The facility must be approved by the Contracting Officer. It is very likely that some type of waste disposal application may be required by the receiving site. An Asbestos Waste Shipment Record is required for the transport and disposal of asbestos.

Naval Station’s point of contact is Mr. Tom Smith. He can be reached at 401.841.7628.

DEPARTMENT OF THE NAVY

Memorandum

DATE: 1 April 2009

SUBJ: ECATTS

Go to http://navfac.ecatts.com

Password for ECATTS is lower case “navfac”

Provide verification of training to the Navy.

Naval Station’s point of contact is Ms. Michelle Imbriglio. She can be reached at 401.841.7714.

DEPARTMENT OF THE NAVY

Memorandum

DATE: 25 August 2003

SUBJ: LEAD ABATEMENT PROCEDURES

Contracts requiring the disturbance of any painted surface must include a determination of lead content in the paint. Determination is usually performed paint chip testing. If lead based paint is determined to be present, the contract will require implementation of one of the following groups of regulations:

1. Housing areas - OSHA 29 CFR 1926.62 (worker protection), RIDOH lead poison prevention laws (interior work), and RIDEM Air Pollution Regulation #24 (exterior work) will be applicable.
2. Industrial or office type buildings - OSHA 29 CFR 1926.6262 (worker protection), and RIDEM Air Pollution Regulation #24 (exterior work) will be applicable.

If contractor is working in housing, the following general items will apply:

1. Prepare and submit a lead abatement plan to the ROICC. The plan should include all applicable items listed on the lead containing material removal plan approval checklist.
2. Submit lead training records, lead and respirator physical exam records, blood lead level testing, and respirator fit testing for workers.
3. Once plan is approved, notifications can be delivered at least 5 days in advance of start of work.
4. Ensure personnel and area air sampling for lead is scheduled with an industrial hygienist.
5. Ensure wipe testing for lead in the affected area is scheduled to be performed by the industrial hygienist. Must meet federal standards of 40 $\mu g/ft^2$ on floor, 250 $\mu g/ft^2$ on window sills, and 400 $\mu g/ft^2$ in wells.

If contractors are working in an industrial or office building, the following general items will apply:

1. Prepare and submit a lead abatement plan to the ROICC. The plan should include all applicable items listed on the lead containing material removal plan approval checklist.
2. Submit lead training records, lead and respirator physical exam records, blood lead level testing, and respirator fit testing for workers.
3. Once plan is approved, notifications can be delivered at least 5 days in advance of start of work.
4. If exterior job, notify RIDEM 5 days prior to start of project.
5. If interior, OSHA 29 CFR 1926.62 and Navy clearance levels of 100 $\mu g/ft^2$ apply.

Personnel air samples may be submitted to the ROICC after the first days work to obtain approval to drop some controls on job provided workers are not exposed to lead above the PEL. Controls dropped will include the use of respirators, and use of personal protective equipment only.

The POC is Mr. Tom Smith. He can be reached at 401-841-7628.

LEAD ABATEMENT PLAN APPROVAL CHECK LIST

CONTRACT NUMBER: _____

CONTRACT NAME: _____

LEAD ABATEMENT PLAN	INCLUDED		
LEAD CONTAINING MATERIAL REMOVAL PLAN	**YES**	**NO**	**COMMENTS**
Description of Removal procedures			
Drawing of affected area			
Isolation of Areas / protection of occupants belongings			
Notification Provisions			
Personal Protection Clothing			
Provisions for posting lead abatement signs			
Provisions for showers / wash areas			
Personal and area air sampling			
Clearance sampling /method			
Clean up provisions			
Hazardous waste storage/disposal procedures			
MEDICAL SURVEILLANCE PROGRAM 29 CFR 1926.62(d)(2)(v)			
Respirator / Lead physicals			
Respirator fit test			
Annual training certificate			
Blood lead levels			
HAZARD COMMUNICATION PLAN			
MSDS sheets (if applicable)			
Spill prevention plan			
Safety and health section			
Information on equipment to be used			
OTHER			
	APPROVED		Deb Moore
	DISAPPROVED		
	SIGN / DATE		

23.000 Scope.

This part prescribes acquisition policies and procedures supporting the Government's program for ensuring a drug-free workplace, for protecting and improving the quality of the environment, and to foster markets for sustainable technologies, materials, products, and services, and encouraging the safe operation of vehicles by—

(a) Reducing or preventing pollution;

(b) Managing efficiently and reducing energy and water use in Government facilities;

(c) Using renewable energy and renewable energy technologies;

(d) Acquiring energy-efficient and water-efficient products and services, environmentally preferable (including EPEAT-registered, and non-toxic and less toxic) products, products containing recovered materials, non-ozone depleting products, and biobased products;

(e) Requiring contractors to identify hazardous materials;

(f) Encouraging contractors to adopt and enforce policies that ban text messaging while driving; and

(g) Requiring contractors to comply with agency environmental management systems.

23.001 Definitions.

As used in this part—

"Environmental" means environmental aspects of internal agency operations and activities, including those aspects related to energy and transportation functions.

"Greenhouse gases" means carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

"Toxic chemical" means a chemical or chemical category listed in 40 CFR 372.65.

"United States," except as used in subpart 23.10, means—

(1) The fifty States;

(2) The District of Columbia;

(3) The commonwealths of Puerto Rico and the Northern Mariana Islands;

(4) The territories of Guam, American Samoa, and the United States Virgin Islands; and

(5) Associated territorial waters and airspace.

23.002 Policy.

Executive Order 13423 sections 3(e) and (f) require that contracts for contractor operation of a Government-owned or -leased facility and contracts for support services at a Government-owned or -operated facility include provisions that obligate the contractor to comply with the requirements of the order to the same extent as the agency would be required to comply if the agency operated or supported the facility. Compliance includes developing programs to promote and implement cost-effective waste reduction.

Subpart 23.1—Sustainable Acquisition Policy

23.101 Definition.

As used in this subpart—

"Contract action" means any oral or written action that results in the purchase, rent, or lease of supplies or equipment, services, or construction using appropriated dollars, including purchases below the micro-purchase threshold. Contract action does not include grants, cooperative agreements, other transactions, real property leases, requisitions from Federal stock, training authorizations, or other non-FAR based transactions.

23.102 Authorities.

(a) Executive Order 13423 of January 24, 2007, Strengthening Federal Environmental, Energy, and Transportation Management.

(b) Executive Order 13514 of October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance.

(c) All of the authorities specified in subparts 23.2, 23.4, 23.7, 23.8, 23.9, and 23.10.

23.103 Sustainable acquisitions.

(a) Federal agencies shall advance sustainable acquisition by ensuring that 95 percent of new contract actions for the supply of products and for the acquisition of services (including construction) require that the products are—

(1) Energy-efficient (ENERGY STAR® or Federal Energy Management Program (FEMP)-designated);

(2) Water-efficient;

(3) Biobased;

(4) Environmentally preferable (*e.g.*, EPEAT-registered, or non-toxic or less toxic alternatives);

(5) Non-ozone depleting; or

(6) Made with recovered materials.

(b) The required products in the contract actions for services include products that are—

(1) Delivered to the Government during performance;

(2) Acquired by the contractor for use in performing services at a Federally-controlled facility; or

(3) Furnished by the contractor for use by the Government.

(c) The required products in the contract actions must meet agency performance requirements.

(d) For purposes of meeting the 95 percent sustainable acquisition requirement, the term "contract actions" includes new contracts (and task and delivery orders placed against them) and new task and delivery orders on existing contracts.

23.104 Exceptions.

This subpart does not apply to the following acquisitions:

(a) Contracts performed outside of the United States, unless the agency head determines that such application is in the interest of the United States.

(b) Weapon systems.

23.105 Exemption authority.

(a) The head of an agency may exempt—

(1) Intelligence activities of the United States, and related personnel, resources, and facilities, to the extent the Director of National Intelligence or agency head determines it necessary to protect intelligence sources and methods from unauthorized disclosure;

(2) Law enforcement activities of that agency and related personnel, resources, and facilities, to the extent the head of an agency determines it necessary to protect undercover operations from unauthorized disclosure;

(3) Law enforcement, protective, emergency response, or military tactical vehicle fleets of that agency; and

(4) Agency activities and facilities in the interest of national security.

(b) If the head of the agency issues an exemption under paragraph (a) of this section, the agency must notify the Chair of the Council on Environmental Quality in writing within 30 days of the issuance of the exemption.

(c) The agency head may submit through the Chair of the Council on Environmental Quality a request for exemption of an agency activity other than those activities listed in paragraph (a) of this section and related personnel, resources, and facilities.

Subpart 23.2—Energy and Water Efficiency and Renewable Energy

23.200 Scope.

(a) This subpart prescribes policies and procedures for—

(1) Acquiring energy- and water-efficient products and services, and products that use renewable energy technology; and

(2) Using an energy-savings performance contract to obtain energy-efficient technologies at Government facilities without Government capital expense.

(b) This subpart applies to acquisitions in the United States and its outlying areas. Agencies conducting acquisitions outside of theses areas must use their best efforts to comply with this subpart.

23.201 Authorities.

(a) Energy Policy and Conservation Act (42 U.S.C. 6361(a)(1)) and Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901, *et seq.*).

(b) National Energy Conservation Policy Act (42 U.S.C. 8253, 8259b, 8262g, and 8287).

(c) Section 706 of Division D, Title VII of the Omnibus Appropriations Act, 2009 (Pub. L. 111-8).

(d) Title VI of the Clean Air Act, as amended (42 U.S.C. 7671, *et seq.*).

(e) Executive Order 11912 of April 13, 1976, Delegations of Authority under the Energy Policy and Conservation Act.

(f) Executive Order 13221 of July 31, 2001, Energy-Efficient Standby Power Devices.

(g) Executive Order 13423 of January 24, 2007, Strengthening Federal Environmental, Energy, and Transportation Management.

(h) Executive Order 13514 of October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance.

23.202 Policy.

(a) *Introduction.* The Government's policy is to acquire supplies and services that promote a clean energy economy that increases our Nation's energy security, safeguards the health of our environment, and reduces greenhouse gas emissions from direct and indirect Federal activities. To implement this policy, Federal acquisitions will foster markets for sustainable technologies, products, and services. This policy extends to all acquisitions, including those below the simplified acquisition threshold and those at or below the micro-purchase threshold (including those made with a Government purchase card).

(b) *Water-efficient.* In accordance with Executive Order 13514, dated October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance, it is the policy and objective of the Government to use and manage water through water-efficient means by—

(1) Reducing potable water consumption intensity to include low-flow fixtures and efficient cooling towers;

(2) Reducing agency, industry, landscaping, and agricultural water consumption; and

(3) Storm water management in accordance with section 438 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17094) as implemented in http://www.epa.gov/nps/lid/section438.

23.203 Energy-efficient products.

(a) Unless exempt as provided at 23.204—

(1) When acquiring energy-consuming products listed in the ENERGY STAR® Program or Federal Energy Management Program (FEMP)—

(i) Agencies shall purchase ENERGY STAR® or FEMP-designated products; and

(ii) For products that consume power in a standby mode and are listed on FEMP's Low Standby Power Devices product listing, agencies shall—

(A) Purchase items which meet FEMP's standby power wattage recommendation or document the reason for not purchasing such items; or

(B) If FEMP has listed a product without a corresponding wattage recommendation, purchase items which use no more than one watt in their standby power consuming mode. When it is impracticable to meet the one watt requirement, agencies shall purchase items with the lowest standby wattage practicable; and

(2) When contracting for services or construction that will include the provision of energy-consuming products, agencies shall specify products that comply with the applicable requirements in paragraph (a)(1) of this section.

(b) Information is available via the Internet about—

(1) ENERGY STAR® at *http://www.energystar.gov/products*; and

(2) FEMP at *http://www1.eere.energy.gov/femp/procurement/eep_requirements.html*.

23.204 Procurement exemptions.

An agency is not required to procure an ENERGY STAR® or FEMP-designated product if the head of the agency determines in writing that—

(a) No ENERGY STAR® or FEMP-designated product is reasonably available that meets the functional requirements of the agency; or

(b) No ENERGY STAR® or FEMP-designated product is cost effective over the life of the product taking energy cost savings into account.

23.205 Energy-savings performance contracts.

(a) Agencies should make maximum use of the authority provided in the National Energy Conservation Policy Act (42 U.S.C. 8287) to use an energy-savings performance contract (ESPC), when life-cycle cost-effective, to reduce energy use and cost in the agency's facilities and operations.

(b)(1) Under an ESPC, an agency can contract with an energy service company for a period not to exceed 25 years to improve energy efficiency in one or more agency facilities at no direct capital cost to the United States Treasury. The energy service company finances the capital costs of implementing energy conservation measures and receives, in return, a contractually determined share of the cost savings that result.

(2) Except as provided in 10 CFR 436.34, ESPC's are subject to Subpart 17.1.

(c) To solicit and award an ESPC, the contracting officer—

(1) Must use the procedures, selection method, and terms and conditions provided in 10 CFR Part 436, Subpart B; at *http://www.eren.doe.gov/femp/resources/legislation.html*; and

(2) May use the "Qualified List" of energy service companies established by the Department of Energy and other agencies.

23.206 Contract clause.

Unless exempt pursuant to 23.204, insert the clause at 52.223-15, Energy Efficiency in Energy-Consuming Products, in solicitations and contracts when energy-consuming products listed in the ENERGY STAR® Program or FEMP will be—

(a) Delivered;

(b) Acquired by the contractor for use in performing services at a Federally-controlled facility;

(c) Furnished by the contractor for use by the Government; or

(d) Specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.

Subpart 23.4—Use of Recovered Materials and Biobased Products

23.400 Scope of subpart.

(a) The procedures in this subpart apply to all agency acquisitions of an Environmental Protection Agency (EPA) or United States Department of Agriculture (USDA)-designated item, if—

(1) The price of the designated item exceeds $10,000; or

(2) The aggregate amount paid for designated items, or for functionally equivalent designated items, in the preceding fiscal year was $10,000 or more.

(b) While micro-purchases are included in determining the aggregate amount paid under paragraph (a)(2) of this section, it is not recommended that an agency track micro-purchases when—

(1) The agency anticipates the aggregate amount paid will exceed $10,000; or

(2) The agency intends to establish or continue an affirmative procurement program in the following fiscal year.

23.401 Definitions.

As used in this subpart—

(a) "EPA-designated item" means a product that is or can be made with recovered material—

(1) That is listed by EPA in a procurement guideline (40 CFR part 247); and

(2) For which EPA has provided purchasing recommendations in a related Recovered Materials Advisory Notice (RMAN) (available at *http://www.epa.gov/epaoswer/non-hw/procure/backgrnd.htm*).

(b) "USDA-designated item" means a generic grouping of products that are or can be made with biobased materials—

(1) That is listed by USDA in a procurement guideline (7 CFR part 2902, subpart B); and

(2) For which USDA has provided purchasing recommendations.

23.402 Authorities.

(a) The Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. 6962.

(b) The Farm Security and Rural Investment Act of 2002 (FSRIA), 7 U.S.C. 8102.

(c) Executive Order 13423 of January 24, 2007, Strengthening Federal Environmental, Energy, and Transportation Management.

(d) The Energy Policy Act of 2005, Pub. L. 109-58.

(e) Executive Order 13514 of October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance.

23.403 Policy.

Government policy on the use of products containing recovered materials and biobased products considers cost, availability of competition, and performance. Agencies shall purchase these products or require in the acquisition of services, the delivery, use, or furnishing (see 23.103(b)) of such products. Agency contracts should specify that these products are composed of the highest percent of recovered material or biobased content practicable, or at least meet, but may exceed, the minimum recovered materials or biobased content of an EPA- or USDA- designated product. Agencies shall purchase these products to the maximum extent practicable without jeopardizing the intended use of the product while maintaining a satisfactory level of competition at a reasonable price. Such products shall meet the reasonable performance standards of the agency and be acquired competitively, in a cost-effective manner. Except as provided at 23.404(b), virgin material shall not be required by the solicitation (see 11.302).

23.404 Agency affirmative procurement programs.

(a) An agency must establish an affirmative procurement program for EPA and USDA-designated items if the agency's purchases of designated items exceed the threshold set forth in 23.400.

(1) Agencies have a period of 1 year to revise their procurement program(s) after the designation of any new item by EPA or USDA.

(2) Technical or requirements personnel and procurement personnel are responsible for the preparation, implementation, and monitoring of affirmative procurement programs.

(3) Agency affirmative procurement programs must include—

(i) A recovered materials and biobased products preference program;

(ii) An agency promotion program;

(iii) For EPA-designated items only, a program for requiring reasonable estimates, certification, and verification of recovered material used in the performance of contracts. Both the recovered material content and biobased programs require preaward certification that the products meet EPA or USDA recommendations. A second certification is required at contract completion for recovered material content; and

(iv) Annual review and monitoring of the effectiveness of the program.

(b) *"Exemptions"*. (1) Agency affirmative procurement programs must require that 100 percent of purchases of EPA or USDA-designated items contain recovered material or biobased content, respectively, unless the item cannot be acquired—

(i) Competitively within a reasonable time frame;

(ii) Meeting reasonable performance standards; or

(iii) At a reasonable price.

(2) EPA and USDA may provide categorical exemptions for items that they designate, when procured for a specific purpose. For example, some USDA-designated items such as mobile equipment hydraulic fluids, diesel fuel additives, and penetrating lubricants (see 7 CFR 2902.10 *et seq.*) are excluded from the preferred procurement requirement for the application of the USDA-designated item to one or both of the following:

(i) Spacecraft system and launch support equipment.

(ii) Military equipment, *i.e.*, a product or system designed or procured for combat or combat-related missions.

(c) Agency affirmative procurement programs must provide guidance for purchases of EPA-designated items at or below the micro-purchase threshold.

(d) Agencies may use their own specifications or commercial product descriptions when procuring products containing recovered materials or biobased products. When using either, the contract should specify—

(1) For products containing recovered materials, that the product is composed of the—

(i) Highest percent of recovered materials practicable; or

(ii) Minimum content standards in accordance with EPA's Recovered Materials Advisory Notices; and

(2) For biobased products, that the product is composed of—

(i) The highest percentage of biobased material practicable; or

(ii) USDA's recommended minimum contents standards.

(e) Agencies shall treat as eligible for the preference for biobased products, products from "designated countries," as defined in 25.003, provided that those products—

(1) Meet the criteria for the definition of biobased product, except that the products need not meet the requirement that renewable agricultural materials (including plant, animal, and marine materials) or forestry materials in such product must be domestic; and

(2) Otherwise meet all requirements for participation in the preference program.

23.405 Procedures.

(a) *Designated items and procurement guidelines.* (1) *Recovered Materials.* Contracting officers should refer to EPA's list of EPA-designated items (available via the Internet at *http://www.epa.gov/cpg/products.htm*) and to their agencies' affirmative procurement program when purchasing products that contain recovered material, or services that could include the use of products that contain recovered material.

(2) *Biobased products.* Contracting officers should refer to USDA's list of USDA-designated items (available through the Internet at *http://www.usda.gov/biopreferred*) and to their agencies affirmative procurement program when purchasing supplies that contain biobased material or when purchasing services that could include supplies that contain biobased material.

(b) *Procurement exemptions.* (1) Once an item has been designated by either EPA or USDA, agencies shall purchase conforming products unless an exemption applies (see 23.404(b)).

(2) When an exemption is used for an EPA-designated item or the procurement of a product containing recovered material does not meet or exceed the EPA recovered material content guidelines, the contracting officer shall place a written justification in the contract file.

(c) *Program priorities.* When both the USDA-designated item and the EPA-designated item will be used for the same purposes, and both meet the agency's needs, the agency shall purchase the EPA-designated item.

23.406 Solicitation provisions and contract clauses.

(a) Insert the provision at 52.223-1, Biobased Product Certification, in solicitations that—

(1) Require the delivery or specify the use of USDA-designated items; or

(2) Include the clause at 52.223-2.

(b) Insert the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts, in service or construction solicitations and contracts unless the contract will not involve the use of USDA-designated items at *http://www.usda.gov/biopreferred* or 7 CFR Part 2902.

(c) Except for the acquisition of commercially available off-the-shelf items, insert the provision at 52.223-4, Recovered Material Certification, in solicitations that—

(1) Require the delivery or specify the use of EPA-designated items; or

(2) Include the clause at 52.223-17, Affirmative Procurement of EPA-designated Items in Service and Construction Contracts.

(d) Except for the acquisition of commercially available off-the-shelf items, insert the clause at 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-designated Items, in solicitations and contracts exceeding $150,000 that are for, or specify the use of, EPA-designated items containing recovered materials. If technical personnel advise that estimates can be verified, use the clause with its Alternate I.

(e) Insert the clause at 52.223-17, Affirmative Procurement of EPA-designated Items in Service and Construction Contracts, in service or construction solicitations and contracts unless the contract will not involve the use of EPA-designated items.

Subpart 23.7—Contracting for Environmentally Preferable Products and Services

23.700 Scope.

This subpart prescribes policies for acquiring environmentally preferable products and services.

23.701 Definitions.

As used in this subpart—

"Computer monitor" means a video display unit used with a computer.

"Desktop computer" means a computer designed for use on a desk or table.

"Notebook computer" means a portable-style or laptop-style computer system.

"Personal computer product" means a notebook computer, a desktop computer, or a computer monitor, and any peripheral equipment that is integral to the operation of such items. For example, the desktop computer together with the keyboard, the mouse, and the power cord would be a personal computer product. Printers, copiers, and fax machines are not included in peripheral equipment, as used in this definition.

23.702 Authorities.

(a) Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901, *et seq.*).

(b) National Energy Conservation Policy Act (42 U.S.C. 8262g).

(c) Pollution Prevention Act of 1990 (42 U.S.C. 13101, *et seq.*).

(d) Farm Security and Rural Investment Act of 2002 (FSRIA) (7 U.S.C. 8102).

(e) Executive Order 13221 of July 31, 2001, Energy Efficient Standby Power Devices.

(f) Executive Order 13423 of January 24, 2007, Strengthening Federal Environmental, Energy, and Transportation Management.

(g) Executive Order 13514 of October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance.

23.703 Policy.

Agencies must—

(a) Implement cost-effective contracting preference programs promoting energy-efficiency, water conservation, and the acquisition of environmentally preferable products and services; and

(b) Employ acquisition strategies that affirmatively implement the following environmental objectives:

(1) Maximize the utilization of environmentally preferable products and services (based on EPA-issued guidance).

(2) Promote energy-efficiency and water conservation.

(3) Eliminate or reduce the generation of hazardous waste and the need for special material processing (including special handling, storage, treatment, and disposal).

(4) Promote the use of nonhazardous and recovered materials.

(5) Realize life-cycle cost savings.

(6) Promote cost-effective waste reduction when creating plans, drawings, specifications, standards, and other product descriptions authorizing material substitutions, extensions of shelf-life, and process improvements.

(7) Promote the use of biobased products.

(8) Purchase only plastic ring carriers that are degradable (7 USC 8102(c)(1), 40 CFR part 238).

23.704 Electronic products environmental assessment tool.

(a) *General.* As required by E.O. 13423, agencies must ensure that they meet at least 95 percent of their annual acquisition requirement for electronic products with Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic products, unless there is no EPEAT standard for such products. This policy applies to contracts performed in the United States, unless otherwise provided by agency procedures.

(b) *Personal computer products.* Personal computer products is a category of EPEAT-registered electronic products.

(1) The IEEE 1680 standard for personal computer products—

(i) Was issued by the Institute of Electrical and Electronics Engineers on April 28, 2006;

(ii) Is a voluntary consensus standard consistent with Section 12(d) of Pub. L. 104-113, the "National Technology Transfer and Advancement Act of 1995", (see 11.102(c));

(iii) Meets EPA-issued guidance on environmentally preferable products and services; and

(iv) Is described in more detail at *www.epeat.net*.

(2) A list of EPEAT-registered products that meet the IEEE 1680 standard can be found at *www.epeat.net*.

(3) The IEEE 1680 standard sets forth required and optional criteria. EPEAT "Bronze" registered products must meet all required criteria. EPEAT "Silver" registered products meet all required criteria and 50 percent of the optional criteria. EPEAT "Gold" registered products meet all required criteria and 75 percent of the optional criteria. These are the levels discussed in clause 1.4 of the IEEE 1680 Standard. The clause at 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products, makes EPEAT Bronze registration the standard that contractors must meet. In accordance with guidance from the Office of the Federal Environmental Executive encouraging agencies to procure EPEAT Silver registered products, Alternate I of the clause makes EPEAT Silver registration the standard that con-

tractors must meet. Agencies also may use EPEAT Silver or Gold registration in the evaluation of proposals.

(c) The agency shall establish procedures for granting exceptions to the requirement in paragraph (a) of this section, with the goal that the dollar value of exceptions granted will not exceed 5 percent of the total dollar value of electronic products acquired by the agency, for which EPEAT-registered products are available. For example, agencies may grant an exception if the agency determines that no EPEAT-registered product meets agency requirements, or that the EPEAT-registered product will not be cost effective over the life of the product.

23.705 Contract clauses.

(a) Insert the clause at 52.223-10, Waste Reduction Program, in all solicitations and contracts for contractor operation of Government-owned or -leased facilities and all solicitations and contracts for support services at Government-owned or -operated facilities.

(b)(1) Unless an exception has been approved in accordance with 23.704(c), insert the clause at 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products, in all solicitations and contracts for—

(i) Personal computer products;

(ii) Services that require furnishing of personal computer products for use by the Government; or

(iii) Contractor operation of Government-owned facilities.

(2) Agencies may use the clause with its Alternate I when there are sufficient EPEAT Silver registered products available to meet agency needs.

Subpart 23.8—Ozone-Depleting Substances

23.800 Scope of subpart.

This subpart sets forth policies and procedures for the acquisition of items which contain, use, or are manufactured with ozone-depleting substances.

23.801 Authorities.

(a) Title VI of the Clean Air Act (42 U.S.C. 7671, *et seq.*).

(b) Section 706 of Division D, Title VII of the Omnibus Appropriations Act, 2009 (Pub. L. 111-8).Executive Order 13423 of January 24, 2007, Strengthening Federal Environmental, Energy, and Transportation Management.

(c) Executive Order 13514 of October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance.

(d) Environmental Protection Agency (EPA) regulations, Protection of Stratospheric Ozone (40 CFR part 82).

23.802 [Reserved]

23.803 Policy.

(a) It is the policy of the Federal Government that Federal agencies—

(1) Implement cost-effective programs to minimize the procurement of materials and substances that contribute to the depletion of stratospheric ozone; and

(2) Give preference to the procurement of alternative chemicals, products, and manufacturing processes that reduce overall risks to human health and the environment by lessening the depletion of ozone in the upper atmosphere.

(b) In preparing specifications and purchase descriptions, and in the acquisition of supplies and services, agencies shall—

(1) Comply with the requirements of Title VI of the Clean Air Act, Section 706 of Division D, Title VII of Pub. L. 111-8, Executive Order 13423, Executive Order 13514, and 40 CFR 82.84(a)(2), (3), (4), and (5); and

(2) Substitute safe alternatives to ozone-depleting substances, as identified under 42 U.S.C. 7671k, to the maximum extent practicable, as provided in 40 CFR 82.84(a)(1), except in the case of Class I substances being used for specified essential uses, as identified under 40 CFR 82.4(r). EPA's Significant New Alternatives Policy (SNAP) program (available at http://www.epa.gov/ozone/snap) has a list of safe alternatives to ozone-depleting substances.

23.804 Contract clauses.

Except for contracts that will be performed outside the United States and its outlying areas, insert the clause at:

(a) 52.223-11, Ozone-Depleting Substances, in solicitations and contracts for ozone-depleting substances or for supplies that may contain or be manufactured with ozone-depleting substances.

(b) 52.223-12, Refrigeration Equipment and Air Conditioners, in solicitations and contracts for services when the contract includes the maintenance, repair, or disposal of any equipment or appliance using ozone-depleting substances as a refrigerant, such as air conditioners, including motor vehicles, refrigerators, chillers, or freezers.

DEPARTMENT OF THE NAVY

Memorandum

DATE: 24 May 2011

SUBJ: GREEN PROCUREMENT

The contractor shall use sustainable procurement and practices and will comply with all applicable Federal, state and local laws and regulation, including Executive Order 13423, Installation Water Conservation Programs and energy reduction requirements.

In Aug 04 DoD issued a new Green Procurement Program (GPP) policy, strategy, and metrics. The DoD GPP policy defines “Green Procurement” (GP) as the “purchase of environmentally preferable products and services in accordance with federally mandated ‘green’ procurement preference programs.” These programs are the result of laws, regulations, and executive orders.

In Jan.07, Executive Order (EO) 13423 “Strengthening Federal Environmental, Energy, and Transportation Management” consolidated the existing preference purchasing programs, energy-efficient and water-conserving programs, and sustainable design requirements into one program.
Executive Order 13514 - Federal Leadership in Environmental, Energy and Economic Performance (PDF), of Oct 2009 requires federal agencies to advance sustainable acquisition by acquiring products that are energy-efficient, water-efficient, bio-based, environmentally preferable, non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives. EO 13514 further mandates that 95 percent of new contract actions, including task and delivery orders, for products and services with the exception of acquisition of weapon systems, meet the requirement for use of sustainable environmental practices.

Both EO 13514 and 13423 require that agencies acquire paper of at least 30 percent post-consumer fiber content. EO 13514 further stipulates that uncoated printing and writing paper be used. EO 13514 also specifically requires that there be procurement preference for EPEAT-registered electronic products and that, for electronic equipment, Energy Star and FEMP designated electronic equipment be procured. Jointly the EOs mandate there is a reduction or elimination of acquisition and use of toxic chemical and an increase of the use of acceptable alternative chemicals and processes in keeping with the agency's procurement policies.

In Feb. 09, DON finalized its Green Procurement Program Implementation Guide, available at http://www.p2sustainabilitylibrary.mil/p2_documents/don_gpp_implementationguide020509.pdf
The Green Procurement Program includes:

Recovered Material- aka Comprehensive Procurement Guideline (CPG) program- part of EPA's continuing effort to promote the use of materials recovered from solid waste. (Go to: http://www.epa.gov/epawaste/conserve/tools/cpg/index.htm). EPA has designated products in eight categories; EPA has already designated or is proposing to designate products grouped into the following eight categories: Construction Products; Landscaping Products; Non-paper Office Products; Paper and Paper Products; Park and Recreation Products; Transportation Products; Vehicular Products; and Miscellaneous Products.

Energy Efficient : (FEMP, ENERGY STAR®, EPEAT) Federal agencies are required to procure energy efficient products qualified in the Energy Star® program or designated by Federal Energy Management Program (FEMP). This includes items such as computers, monitors, printers, scanners, fax machines, and

copiers; building construction, renovation and maintenance projects; and purchases of appliances. Water-efficiency requirements apply to building construction and renovation projects.

Alternative fuels/alternative fueled vehicles Federal agencies must acquire alternative fueled vehicles (AFVs), alternative fuels (i.e. E85, E100, biodiesel) for those vehicles, and fuel-efficient petroleum powered passenger cars and light trucks.

Biobased Products: Biobased items include, but are not limited to, clothing, bedding, linens; office products; printing products; transportation fleet maintenance products; construction products; and janitorial and landscaping products. USDA maintains the BioPreferred Program website (http://www.biopreferred.gov).

Non ozone depleting substances are required for: refrigeration and air conditioning; foam insulation; cleaning solvents; fire suppressants; aerosol solvents and propellants; sterilants; and adhesives, coatings and inks

Environmentally preferable products; EPPs are any products and services that are more environmentally friendly than what the activity/installation routinely purchases, but are not already covered by one of the other programs already described

Green Procurement applies to all DoD and operations, except military tactical vehicles and equipment. Military tactical vehicles and equipment include weapon systems used on the battle ground, portable equipment that supports logistical and combat aircraft, vehicles to transport combat and support personnel during military operations, and other military equipment weapon systems.

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Websites for finding Green products

The Defense Logistics Information Service (DLIS) identifies Environmentally Preferable or 'green' products in the Federal Catalog System (FCS). The most up to date listing of Environmental Attributes being used and applied to products in the Federal Catalog System can be found at: http://www.dlis.dla.mil/green/xls/environ_fcs.xls

EPA's Pollution Prevention Tools website: http://www.epa.gov/p2/tools/p2tools.htm

USDA's BioPreferred Website: http://www.biopreferred.gov/Default.aspx?SMSESSION=NO

DLA's Green Product Website:
http://www.dscr.dla.mil/ExternalWeb/UserWeb/aviationengineering/BUY_GREEN/

EPA's Design for the Environment (DfE) Safer Product Labeling Program (announced in April 2011)
http://epa.gov/dfe/pubs/projects/formulat/formpart.htm
Products that carry the DfE label include all-purpose cleaners, laundry and dishwasher detergents, drain line maintainers, car and boat care and other products. More information on the DfE Safer Product Labeling Program and Standard for 2500 Safer Products: http://epa.gov/dfe

EPA's Green Cleaning Website (scroll to bottom of page for several green cleaning links);
http://www.fedcenter.gov/janitor/

GSA green products: http://www.gsa.gov/portal/category/27116
GSA's chart of environmental symbols for Green Products:
https://www.gsaadvantage.gov/advantage/information/page.do?keyName=NEWS#news1

Cleaner solutions database from the Toxics Use Reduction Institute
http://www.turi.org/green_cleaning_lab/cleanersolutions_database

Green Training:
ECATTS Green Procurement Training: https://navfac.ecatts.com

OFEE Green Purchasing Training Presentation is available at:
http://www.fedcenter.gov/Documents/index.cfm?id=14261&pge_prg_id=26960

Navy CECOS course: Buying Green a Multifunctional Approach to Pollution Prevention
https://www.netc.navy.mil/centers/csfe/cecos/CourseDetail.aspx?CID=70. (No classes were scheduled in HR region in 2011, expect to be scheduled in 2012)

Naval Station's point of contact is Ms. Cornelia Mueller. Ms. Mueller can be reached at 401.841.7561.

DEPARTMENT OF THE NAVY

Memorandum

DATE: 3 March 2011

SUBJ: SOLID WASTE/RECYCLING PROCEDURES

Contractors are responsible for removal of all solid waste generated from each project. Various materials are required to be recycled. Specifics are listed below:

1. All metals (including copper, aluminum, brass, iron, gold, lead, nickel, silver) are to be turned into the Naval Station Newport scrap metal yard located at building 47CC unless the contract specifically states otherwise;
2. Plant, bush, grass, tree and brush trimmings are to be recycled at a compost facility;
3. Cement, asphalt and concrete are to be recycled at either a batching plant or facility that recycles the items;
4. Wood may either be brought to a recycling facility or an incinerator to be used as fuel;
5. Wood with lead paint may be brought to a facility that can separate the lead from the wood (incinerator with emission equipment that will capture the lead), or the local landfill if such a facility cannot be found;
6. All types of paper including office, colored, newspaper, magazines, and thin cardboard; and
7. All colors of glass, tin and aluminum cans, cardboard, toner cartridges, tires, wood, cement, plastic and other items as designated by the State.

Weight slips for all solid waste and recycled items are to be submitted to the government on a monthly basis. Contractors may utilize the weight scale located at building 1166CC to weigh the metal brought to the scrap metal yard.

Material purchased for construction purposed on Naval Property shall contain recycled materials in accordance with 40 CFR 247. Specifically, cement and concrete shall contain fly ash. All copy paper shall contain 30% post consumer product by weight. All newsprint, printing and writing paper, corrugated and fiberboard boxes, folding boxboard and cartons, stationary, office paper, envelopes, computer paper, toilet tissue, paper towels, facial tissues, paper napkins and brown an coarse paper, used by the contractor to perform the government job shall contain at least 30 % recycled content. Construction material used for outdoor playgrounds or benches, furniture, etc., shall be made of recycled content material.

Naval Station's point of contact for solid waste and recycling is Ms. Cornelia Mueller. Ms. Mueller can be reached at 401.841.7561.

DEPARTMENT OF THE NAVY

Memorandum

DATE: 19 September 2011

SUBJ: SOLID WASTE/RECYCLING PROCEDURES

Contractors are responsible for removal of all solid waste generated from each project. Various materials are required to be recycled. Fifty percent of non-hazardous solid waste and sixty percent of construction and demolition debris must be diverted from the solid waste stream. Specifics for recycled items are listed below:

1. All metals (including copper, aluminum, brass, iron, gold, lead, nickel, silver) are to be turned into the Naval Station Newport scrap metal yard located at building 47CC unless the contract specifically states otherwise;
2. Plant, bush, grass, tree and brush trimmings are to be recycled at a compost facility;
3. Cement, asphalt and concrete are to be recycled at either a batching plant or facility that recycles the items;
4. Wood may either be brought to a recycling facility or an incinerator to be used as fuel;
5. Wood with lead paint may be brought to a facility that can separate the lead from the wood (incinerator with emission equipment that will capture the lead), or the local landfill if such a facility cannot be found;
6. All types of paper including office, colored, newspaper, magazines, and thin cardboard; and
7. All colors of glass, tin and aluminum cans, cardboard, toner cartridges, tires, wood, cement, plastic and other items as designated by the State.

Weight slips for all solid waste and recycled items are to be submitted to the government on a monthly basis with the WASTE MANAGEMENT PERIODIC REPORT provided. For each waste, including soil, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste. The Contractor will include copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, the Contractor may submit a statement indicating the disposal location for the solid waste which is signed by an officer of the Contractor firm authorized to legally obligate or bind the firm. The sales documentation or Contractor certification will include the receiver's tax identification number and business, EPA or State registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained by the Contractor for his own use, the Contractor will submit on the solid waste disposal report the information previously described in this paragraph. Prices paid or received will not be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

Naval Station's point of contact for solid waste and recycling is Ms. Cornelia Mueller. Ms. Mueller can be reached at 401.841.7561.

DEPARTMENT OF THE NAVY

Memorandum

Code N8N:

DATE: 26 June 2009

SUBJ: DEMOLITON PROJECTS

Demolition debris that requires special management includes the following:

Aerosol cans
Fluorescent light bulbs
Batteries
Oil rags
Ionized smoke detectors
Tritium exit signs
Used oil filters
Drums
Compressed gas cylinders
Mercury-containing switches/thermometers and other materials
Asbestos
Light ballasts (PCB and other)
Empty drums
Cathode ray tubes and glass
Lead paint and lead paint chips
Caulking
Solvents

ALL demolition projects require completion of the demolition notification form, whether asbestos is present or not. The form must be completed and submitted to Naval Station Newport.
Naval Station's point of contact for demolition waste is Mr. Mark Rielly. He can be reached at 401.841.1791.

Waste Management Periodic Report

Submit monthly; provide copies of weight slips for all materials listed below.

If NO materials were disposed, salvaged, reused or recycled during the period, check here ( ) .

Contract Number:
Contract Title:
Date of Report:
Reporting Period:

A. Water Material Disposed of in Landfill or Incinerator

Weight (in tons):
Type of Waste:
Tip fee per ton ($):
Total cost of disposal (with transportation, containers, etc.):

B. Materials Salvaged for Sale, Reuse, or Recycling

Material	Weight (tons)	Destination	Means of Transportation	Cost of Transportation & Handling	Tipping Fee Savings	Revenue Generated	Estimated Cost Savings
Metal							
Wood							
Concrete							
Asphalt							
Soil							
Other:							

DEPARTMENT OF THE NAVY

Memorandum

DATE: 3 March 2011

SUBJ: WASTE MANAGEMENT

State and Navy laws require recycling.

Recycling must be coordinated with the Contracting Officer and the Recycling Program Manager in the Environmental Office.

The WASTE MANAGEMENT PERIODIC REPORT must be submitted monthly.

For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste. The Contractor will include copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, the Contractor may submit a statement indicating the disposal location for the solid waste which is signed by an officer of the Contractor firm authorized to legally obligate or bind the firm. The sales documentation or Contractor certification will include the receiver's tax identification number and business, EPA or State registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained by the Contractor for his own use, the Contractor will submit on the solid waste disposal report the information previously described in this paragraph. Prices paid or received will not be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

Naval Station’s point of contact for solid waste and recycling is Ms. Cornelia Mueller. She can be reached at 401.841.7561.

Small Project Part 6H
Attachments

Attachment H **Asbestos Spec and Checklist**

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USACE / NAVFAC / AFCESA / NASA	**UFGS-02 82 16.00 20 (August 2011)**

Preparing Activity: NAVFAC	**Superseding**
	UFGS-02 82 16.00 20 (February 2010)
	UFGS-02 82 16.00 20 (April 2006)
	UFGS-13281N (August 2003)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2011

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USACE / NAVFAC / AFCESA / NASA	**UFGS-02 82 16.00 20 (August 2011)**

Preparing Activity: NAVFAC	**Superseding**
	UFGS-02 82 16.00 20 (February 2010)
	UFGS-02 82 16.00 20 (April 2006)
	UFGS-13281N (August 2003)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2011
****

SECTION 02 82 16.00 20

ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS
08/11

****
NOTE: This guide specification covers the requirements for safety procedures and requirements for the demolition, removal, encapsulation, and disposal of asbestos containing materials (ACM).

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).
****

****
NOTE: Federal regulations require EPA model accreditation plan training to edit this document. Furthermore, asbestos abatement designers must be accredited and licensed to design asbestos work in the location of the construction.

Nonfriable asbestos containing materials do not always require special handling. However, during demolition and removal of this material dust and airborne asbestos fibers will sometimes be released. If the project contains nonfriable asbestos which may release fibers when demolished and removed, the nonfriable asbestos shall be removed in the same way as friable asbestos.

OSHA regulations address worker protection, NESHAPS (EPA) regulations address disposal requirements, and they have different definitions as to what constitutes ACM in wallboard/joint compound systems. Therefore, where wallboard/joint compound are suspected to contain ACM, analyze both discrete samples (separate samples from wallboard and joint compound) to address worker protection and composite samples (wallboard system as a whole) to address disposal requirements. It is not unusual for the wallboard itself and the wallboard system (taken as a whole) to contain less than 1 percent asbestos, but the discrete joint compound samples to contain greater than 1 per cent asbestos. Problems can arise if these materials are not properly categorized in the design. Also, if the material is applied as an "add on" or "skim coat", NESHAPS considers the layers separate and composite sampling is not appropriate.

Asbestos operations do not always indicate negative pressure enclosure type asbestos control with all of its attendant requirements. The location of the area, type of material, and initial as well as other exposure assessments for abatement workers and the environment must be reviewed and a judgment made by the designer as to the precise asbestos control techniques described herein that may be safely and legally used.

It is the policy of the Navy to eliminate the use of materials containing asbestos wherever possible. Therefore, the designer shall not use asbestos containing materials wherever a substitute, suitable to the Navy, exists.

The limits and conditions of asbestos hazard abatement efforts must be indicated on the drawings or in the specification in sufficient detail for the Contractor to submit an accurate bid. Portions of the building where asbestos work will take place must be unoccupied during the removal operation. It is highly recommended that the entire building be unoccupied during asbestos hazard abatement operations. If portions of the building where asbestos hazard abatement is not taking place must remain occupied, additional requirements must be added for providing temporary heating/cooling and other utilities to the occupied portions of the building. The building heating/cooling system for example cannot be operated in the asbestos control area and due to wet removal procedures, electrical service to the asbestos control area may need to be shut off and resupplied through a ground fault circuit interrupter. In addition, the rooms with openings into the room undergoing asbestos abatement must be empty with critical barriers installed to provide a buffer zone.

****

****

NOTE: The following information shall be shown on the project drawings:

1. The project drawings shall clearly show location, extent, condition and form of asbestos materials to be controlled or in contact with other non-ACM removals or new work.

****

PART 1 GENERAL

1.1 REFERENCES

****

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

****

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)

AIHA Z88.6	(2006) Respiratory Protection - Respirator Use-Physical Qualifications for Personnel
AIHA Z9.2	(2006) Fundamentals Governing the Design and Operation of Local Exhaust Ventilation Systems

ASTM INTERNATIONAL (ASTM)

ASTM C732	(2006) Aging Effects of Artificial Weathering on Latex Sealants
ASTM D 2794	(1993; R 2010) Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
ASTM D 522	(1993a; R 2008) Mandrel Bend Test of

	Attached Organic Coatings
ASTM E 119	(2011) Standard Test Methods for Fire Tests of Building Construction and Materials
ASTM E 1368	(2005e1) Visual Inspection of Asbestos Abatement Projects
ASTM E 1494	(1992; R 2010) Encapsulants for Spray- or Trowel-Applied Friable Asbestos-Containing Building Materials
ASTM E 736	(2000; R 2011) Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
ASTM E 84	(2011a) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM E 96/E 96M	(2010) Standard Test Methods for Water Vapor Transmission of Materials

STATE OF VIRGINIA ADMINISTRATIVE CODE (VAC)

16 VAC 25-20-30	Title 16, Agency 25, Chapter 20, Section 30: Notification and Permit Fee

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 560/5-85-024	(1985) Guidance for Controlling Asbestos-Containing Materials in Buildings (Purple Book)

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1926.103	Respiratory Protection
29 CFR 1926.1101	Asbestos
29 CFR 1926.200	Accident Prevention Signs and Tags
29 CFR 1926.51	Sanitation
29 CFR 1926.59	Hazard Communication
40 CFR 61-SUBPART A	General Provisions
40 CFR 61-SUBPART M	National Emission Standard for Asbestos
40 CFR 763	Asbestos

U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

ND OPNAVINST 5100.23	(2005; Rev G) Navy Occupational Safety and Health (NAVOSH) Program Manual

UNDERWRITERS LABORATORIES (UL)

UL 586	(2009) Standard for High-Efficiency Particulate, Air Filter Units

1.2 DEFINITIONS

1.2.1 ACM

Asbestos Containing Materials.

1.2.2 Amended Water

Water containing a wetting agent or surfactant with a maximum surface tension of 2.9 Pa 0.00042 psi.

1.2.3 Area Sampling

Sampling of asbestos fiber concentrations which approximates the concentrations of asbestos in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.

1.2.4 Asbestos

The term asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, and actinolite asbestos and any of these minerals that has been chemically treated or altered. Materials are considered to contain asbestos if the asbestos content of the material is determined to be at least one percent.

1.2.5 Asbestos Control Area

That area where asbestos removal operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris.

1.2.6 Asbestos Fibers

Those fibers having an aspect ratio of at least 3:1 and longer than 5 micrometers as determined by National Institute for Occupational Safety and Health (NIOSH) Method 7400.

1.2.7 Asbestos Permissible Exposure Limit

0.1 fibers per cubic centimeter of air as an 8-hour time weighted average measured in the breathing zone as defined by 29 CFR 1926.1101 or other Federal legislation having legal jurisdiction for the protection of workers health.

1.2.8 Background

The ambient airborne asbestos concentration in an uncontaminated area as measured prior to any asbestos hazard abatement efforts. Background concentrations for other (contaminated) areas are measured in similar but asbestos free locations.

1.2.9 Contractor

The Contractor is that individual, or entity under contract to the Navy to

perform the herein listed work.

1.2.10 Competent Person

****
NOTE: Check state requirements for licensing and edit appropriately. For Virginia and North Carolina, a state asbestos abatement license is required.
****

A person meeting the requirements for competent person as specified in 29 CFR 1926.1101 including a person capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, and is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763) for project designer or supervisor, or its equivalent. [The competent person shall have a current [State of _____] [Commonwealth of Virginia] asbestos contractors or supervisors license.]

1.2.11 Encapsulation

The abatement of an asbestos hazard through the appropriate use of chemical encapsulants.

1.2.12 Encapsulants

Specific materials in various forms used to chemically or physically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulants as follows which must comply with performance requirements as specified herein.

a. Removal Encapsulant (can be used as a wetting agent)

b. Bridging Encapsulant (used to provide a tough, durable surface coating to asbestos containing material)

c. Penetrating Encapsulant (used to penetrate the asbestos containing material encapsulating all asbestos fibers and preventing fiber release due to routine mechanical damage)

d. Lock-Down Encapsulant (used to seal off or "lock-down" minute asbestos fibers left on surfaces from which asbestos containing material has been removed).

1.2.13 Friable Asbestos Material

One percent asbestos containing material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

1.2.14 Glovebag Technique

Those asbestos removal and control techniques put forth in 29 CFR 1926.1101 Appendix G.

1.2.15 HEPA Filter Equipment

High efficiency particulate air (HEPA) filtered vacuum and/or exhaust

ventilation equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall retain 99.97 percent of particles 0.3 microns or larger as indicated in UL 586.

1.2.16 Navy Consultant (NC)

That qualified person employed directly by the Government to monitor, sample, inspect the work or in some other way advise the Contracting Officer. The NC is normally a private consultant, but can be an employee of the Government.

1.2.17 Negative Pressure Enclosure (NPE)

That engineering control technique described as a negative pressure enclosure in 29 CFR 1926.1101.

1.2.18 Nonfriable Asbestos Material

Material that contains asbestos in which the fibers have been immobilized by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not normally release asbestos fibers during any appropriate use, handling, storage or transportation. It is understood that asbestos fibers may be released under other conditions such as demolition, removal, or mishap.

1.2.19 Personal Sampling

Air sampling which is performed to determine asbestos fiber concentrations within the breathing zone of a specific employee, as performed in accordance with 29 CFR 1926.1101.

1.2.20 Private Qualified Person (PQP)

That qualified person hired by the Contractor to perform the herein listed tasks.

1.2.21 Qualified Person (QP)

A Registered Architect, Professional Engineer, Certified Industrial Hygienist, consultant or other qualified person who has successfully completed training and is therefore accredited under a legitimate State Model Accreditation Plan as described in 40 CFR 763 as a Building Inspector, Contractor/Supervisor Abatement Worker, and Asbestos Project Designer; and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. The QP must be qualified to perform visual inspections as indicated in ASTM E 1368. [The QP shall be appropriately licensed in the State of [_____].]

1.2.22 TEM

Refers to Transmission Electron Microscopy.

1.2.23 Time Weighted Average (TWA)

The TWA is an 8-hour time weighted average airborne concentration of asbestos fibers.

1.2.24 Wetting Agent

A chemical added to water to reduce the water's surface tension thereby increasing the water's ability to soak into the material to which it is applied. An equivalent wetting agent must have a surface tension of at most 2.9 Pa 0.00042 psi.

1.3 REQUIREMENTS

1.3.1 Description of Work

****
NOTE: Specify the form, condition and approximate quantity square meters or linear meters square feet or linear feet of asbestos material to be controlled in the first blank and the location of the material in the second blank. Example: "The asbestos work includes the demolition and removal of 90 m of 200 mm 300 feet of 8 inch diameter asbestos insulation located on existing steam piping indicated to be removed in the boiler room." or "The asbestos work includes the encapsulation of 270 square meters 3,000 square feet of sprayed on asbestos containing fire proofing materials located above the ceiling throughout the structure."

The use of this section in the contract specification means that known asbestos material is involved. Estimate the quantity and specify as unit price items in Section 00 21 13, INSTRUCTIONS TO BIDDERS or Section 01 20 00.00 20 Price and Payment Procedures per standard practice of the activity preparing the contract.
****

****
NOTE: Include reference to 40 CFR 763 when asbestos work occurs in a public or private school Grades K thru 12.
****

****
NOTE: Nonfriable ACM may not require special handling. However, during demolition and removal of this material dust and airborne asbestos fibers will sometimes be released. If the project contains nonfriable asbestos which may release fibers when demolished and removed, the nonfriable asbestos shall be removed in the same way as friable asbestos. Include "Under normal.... specified herein.", if material traditionally defined as non-friable asbestos materials are to be removed.
****

****
NOTE: The appropriate engineering control technique must comply with the requirements outlined in 29 CFR 1926.1101 which is selected based on existing conditions, but must be that technique that provides

the best control during abatement at most reasonable cost.
****

The work covered by this section includes the handling and control of asbestos containing materials and describes some of the resultant procedures and equipment required to protect workers, the environment and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of any asbestos containing materials generated by the work. More specific operational procedures shall be outlined in the Asbestos Hazard Abatement Plan called for elsewhere in this specification. The asbestos work includes the [demolition and removal] [encapsulation] of [_____] located [_____] [which is governed by 40 CFR 763]. [Under normal conditions non-friable or chemically bound materials containing asbestos would not be considered hazardous; however, this material may release airborne asbestos fibers during demolition and removal and therefore must be handled in accordance with the removal and disposal procedures as specified herein.] Provide [negative pressure enclosure] [_____] techniques as outlined in this specification. The Navy will evacuate the [building] [work area] during the asbestos abatement work. All asbestos removal work shall be supervised by a competent person as specified herein.

1.3.1.1 Wallboard/Joint Compound

****
NOTE: When both composite and discrete sampling and testing is done on wallboard/joint compound , include and edit the following to address the site specific situation:
****

[Both composite samples of the wallboard and discrete samples of the components (wallboard and joint compound) have been tested and results are attached.]

[Composite samples of the wallboard system were tested and found to contain [less than one percent asbestos] [_____]. Discrete samples of the wallboard were tested and found to contain [less than one percent asbestos.] [_____]. Discrete samples of the joint compound were tested and found to contain [greater than one percent asbestos.] [_____].]

1.3.2 Medical Requirements

Provide medical requirements including but not limited to medical surveillance and medical record keeping as listed in 29 CFR 1926.1101.

1.3.2.1 Medical Examinations

Before exposure to airborne asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101 or other pertinent State or local directives. This requirement must have been satisfied within the 12 months prior to the start of work on this contract. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. Specifically identify x-ray films of asbestos workers to the consulting radiologist and mark medical record jackets with the word "ASBESTOS."

1.3.2.2 Medical Records

****

NOTE: Medical records shall be retained at least 50 years. Some States require longer retention periods. Check with the State in which the project is located for the required retention time.

****

Maintain complete and accurate records of employees' medical examinations, medical records, and exposure data for a period of [50 years] [indefinite time] after termination of employment and make records of the required medical examinations and exposure data available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health (OSHA), or authorized representatives of them, and an employee's physician upon the request of the employee or former employee.

1.3.3 Employee Training

****

NOTE: Include bracketed sentence where required by law, regulation or statute.

****

Submit certificates, prior to the start of work but after the main abatement submittal, signed by each employee indicating that the employee has received training in the proper handling of materials and wastes that contain asbestos in accordance with 40 CFR 763; understands the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of the respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis. Certificates shall be organized by individual worker, not grouped by type of certification. [Post appropriate evidence of compliance with the training requirements of 40 CFR 763.] Train all personnel involved in the asbestos control work in accordance with United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) training criteria or State training criteria whichever is more stringent. The Contractor shall document the training by providing: dates of training, training entity, course outline, names of instructors, and qualifications of instructors upon request by the Contracting Officer. Furnish each employee with respirator training and fit testing administered by the PQP as required by 29 CFR 1926.1101. Fully cover engineering and other hazard control techniques and procedures. [All asbestos workers shall have a current [State of _____][Commonwealth of Virginia] asbestos worker's license.]

1.3.4 Permits [, Licenses,] and Notifications

****

NOTE: The USEPA has delegated the responsibility of notification requirements to most States. Verify with the State and local authorities where the project is located whether the city, county, State, and/or USEPA has jurisdiction and whether a license is required.

For Virginia, use "Asbestos Control Clerk, Virginia Department of Labor" for the second sentence.
****

Obtain necessary permits [and licenses] in conjunction with asbestos removal, encapsulation, hauling, and disposition, and furnish notification of such actions required by Federal, State, regional, and local authorities prior to the start of work. Notify the [Regional Office of the United States Environmental Protection Agency (USEPA)] [State's environmental protection agency] [local air pollution control district/agency] and the Contracting Officer in writing 20 working days prior to commencement of work in accordance with 40 CFR 61-SUBPART M[and 16 VAC 25-20-30]. Notify the Contracting Officer and other appropriate Government agencies in writing 20 working days prior to the start of asbestos work as indicated in applicable laws, ordinances, criteria, rules, and regulations. Submit copies of all Notifications to the Contracting Officer. [Notify the local fire department 3 days prior to removing fire-proofing material from the building including notice that the material contains asbestos.]

1.3.5 Environment, Safety and Health Compliance

****
NOTE: The designer shall research the State, regional and local laws, regulations, statutes, etc., and list by authority and document number in the blank spaces provided those which apply to the asbestos work to be performed by the Contractor.
****

In addition to detailed requirements of this specification, comply with those applicable laws, ordinances, criteria, rules, and regulations of Federal, State, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1926.1101, 40 CFR 61-SUBPART A, 40 CFR 61-SUBPART M, and ND OPNAVINST 5100.23. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification, applicable laws, rules, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirement as defined by the Government shall apply. The following laws, ordinances, criteria, rules and regulations regarding removal, handling, storing, transporting and disposing of asbestos materials apply:

a. [_____]

b. [_____]

c. [_____].

1.3.6 Respiratory Protection Program

Establish and implement a respirator program as required by AIHA Z88.6, 29 CFR 1926.1101, and 29 CFR 1926.103. Submit a written description of the program to the Contracting Officer. Submit a written program manual or operating procedure including methods of compliance with regulatory statutes.

1.3.6.1 Respirator Program Records

Submit records of the respirator program as required by AIHA Z88.6, 29 CFR 1926.103, and 29 CFR 1926.1101.

1.3.7 Asbestos Hazard Control Supervisor

The Contractor shall be represented on site by a supervisor, trained using the model Contractor accreditation plan as indicated in the Federal statutes for all portions of the herein listed work.

1.3.8 Hazard Communication

Adhere to all parts of 29 CFR 1926.59 and provide the Contracting Officer with a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site.

1.3.9 Asbestos Hazard Abatement Plan

Submit a detailed plan of the safety precautions such as lockout, tagout, tryout, fall protection, and confined space entry procedures and equipment and work procedures to be used in the [encapsulation] [removal] [and demolition] of materials containing asbestos. The plan, not to be combined with other hazard abatement plans, shall be prepared, signed, and sealed by the PQP. Provide a Table of Contents for each abatement submittal, which shall follow the sequence of requirements in the contract. Such plan shall include but not be limited to the precise personal protective equipment to be used including, but not limited to, respiratory protection, type of whole-body protection [and if reusable coveralls are to be employed decontamination methods (operations and quality control plan)], the location of asbestos control areas including clean and dirty areas, buffer zones, showers, storage areas, change rooms, [removal] [encapsulation] method, interface of trades involved in the construction, sequencing of asbestos related work, disposal plan, type of wetting agent and asbestos sealer to be used, locations of local exhaust equipment, planned air monitoring strategies, and a detailed description of the method to be employed in order to control environmental pollution. The plan shall also include (both fire and medical emergency) response plans. The Asbestos Hazard Abatement Plan must be approved in writing prior to starting any asbestos work. The Contractor, Asbestos Hazard Control Supervisor, and PQP shall meet with the Contracting Officer prior to beginning work, to discuss in detail the Asbestos Hazard Abatement Plan, including work procedures and safety precautions. Once approved by the Contracting Officer, the plan will be enforced as if an addition to the specification. Any changes required in the specification as a result of the plan shall be identified specifically in the plan to allow for free discussion and approval by the Contracting Officer prior to starting work.

1.3.10 Testing Laboratory

Submit the name, address, and telephone number of each testing laboratory selected for the [sampling,] analysis, and reporting of airborne concentrations of asbestos fibers along with [evidence that each laboratory selected holds the appropriate State license and/or permits and] certification that each laboratory is American Industrial Hygiene Association (AIHA) accredited and that persons counting the samples have been judged proficient by current inclusion on the AIHA Asbestos Analysis Registry (AAR) and successful participation of the laboratory in the Proficiency Analytical Testing (PAT) Program. Where analysis to determine

asbestos content in bulk materials or transmission electron microscopy is required, submit evidence that the laboratory is accredited by the National Institute of Science and Technology (NIST) under National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos analysis. The testing laboratory firm shall be independent of the asbestos contractor and shall have no employee or employer relationship which could constitute a conflict of interest.

1.3.11 Landfill Approval

****

NOTE: The USEPA has delegated the responsibility of approving landfills for the disposal of asbestos to most States. Verify with the State in which the project is located whether the State or USEPA has jurisdiction and what laws apply.

****

Submit written evidence that the landfill is for asbestos disposal by the U.S. Environmental Protection Agency, Region 3, Air Enforcement Section (38W12), and local regulatory agencies. Within 3 working days after delivery, submit detailed delivery tickets, prepared, signed, and dated by an agent of the landfill, certifying the amount of asbestos materials delivered to the landfill. Submit a copy of the waste shipment records within 1 day of the shipment leaving the project site.

1.3.12 Medical Certification

Provide a written certification for each worker and supervisor, signed by a licensed physician indicating that the worker and supervisor has met or exceeded all of the medical prerequisites listed herein and in 29 CFR 1926.1101 and 29 CFR 1926.103 as prescribed by law. Submit certificates prior to the start of work but after the main abatement submittal.

1.4 SUBMITTALS

****

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project. Submittals should be kept to the minimum required for adequate quality control.

A “G” following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a “G”. Only delete an existing “G” if the submittal item is not complex and can be reviewed through the Contractor’s Quality Control system. Only add a “G” if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for

Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

****

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

****

NOTE: The submittals required for each project are very dependent upon the removal method to be used. Edit the submittals paragraph accordingly.

****

SD-03 Product Data

Local exhaust equipment; G

Vacuums; G

Respirators; G

Pressure differential automatic recording instrument; G

Amended water; G

[Glovebags; G]

Material Safety Data Sheets (MSDS) for all materials proposed for transport to the project site; G

Encapsulants; G

SD-06 Test Reports

Air sampling results; G

Pressure differential recordings for local exhaust system; G

Asbestos disposal quantity report; G

Encapsulation test patches; G

Clearance sampling; G

SD-07 Certificates

****
NOTE: Include contractor's and worker's licenses for Virginia projects.
****

Asbestos hazard abatement plan; G

Testing laboratory; G

Private qualified person documentation; G

[Contractor's license; G]

Competent person documentation; G

[Worker's license; G]

Landfill approval; G

Employee training; G

Medical certification requirements; G

Waste shipment records and if applicable exemption report; G

Respiratory Protection Program; G

Delivery tickets; G

Vacuums; G

Water filtration equipment; G

Ventilation systems; G

Other equipment used to contain airborne asbestos fibers; G

Chemical encapsulants sealers; G

Notifications

Show compliance with AIHA Z9.2 by providing manufacturers' certifications.

SD-11 Closeout Submittals

Notifications; G

Rental equipment; G

Respirator program records; G

Permits [and licenses]; G

[Protective clothing decontamination quality control records; G]

[Protective clothing decontamination facility notification; G]

1.5 QUALITY ASSURANCE

1.5.1 Private Qualified Person Documentation

****
NOTE: Edit requirement for private qualified person to have licensing.
****

Submit the name, address, and telephone number of the Private Qualified Person (PQP) selected to prepare the Asbestos Hazard Abatement Plan, direct monitoring and training, and documented evidence that the PQP has successfully completed training in and is accredited and where required is certified as, a Building Inspector, Contractor/Supervisor Abatement Worker, and Asbestos Project Designer as described by 40 CFR 763 and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. [The PQP shall be appropriately licensed in the [State of _____][Commonwealth of Virginia as a Project Monitor]]. The PQP and the asbestos contractor shall not have an employee/employer relationship or financial relationship which could constitute a conflict of interest. The PQP shall be a first tier subcontractor.

1.5.2 Competent Person Documentation

****
NOTE: Edit requirement for licensing.
****

Submit training certification and a current [State of _____][Commonwealth of Virginia] Asbestos Contractor's and Supervisor's License.

1.5.3 Worker's License

****
NOTE: Edit requirement for licensing.
****

Submit documentation that requires all workers have a current [State of _____][Commonwealth of Virginia] Asbestos Workers License.

1.5.4 Contractor's License

****
NOTE: Edit requirement for licensing.
****

Contractor shall have current [Virginia][_____] asbestos contractor's license. Submit a copy of the asbestos contractor's license issued by the [State of _____][Commonwealth of Virginia].

1.5.5 Air Sampling Results

****
NOTE: Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be

required to perform the function involved. However, the Contractor shall always hire a PQP.
****

Complete fiber counting and provide results to the [PQP] [and] [NC] for review within 16 hours of the "time off" of the sample pump. Notify the Contracting Officer immediately of any airborne levels of asbestos fibers in excess of the acceptable limits. Submit sampling results to the Contracting Officer and the affected Contractor employees where required by law within 3 working days, signed by the testing laboratory employee performing air sampling, the employee that analyzed the sample, and the [PQP] [and] [NC]. Notify the Contractor and the Contracting Officer immediately of any variance in the pressure differential which could cause adjacent unsealed areas to have asbestos fiber concentrations in excess of 0.01 fibers per cubic centimeter or background whichever is higher. In no circumstance shall levels exceed 0.1 fibers per cubic centimeter.

1.5.6 Pressure Differential Recordings for Local Exhaust System

****
NOTE: When an negative pressure enclosure is not required, delete the requirements for the local exhaust system and pressure differential recording.
****

****
NOTE: Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be required to perform the function involved. However, the Contractor shall always hire a PQP.
****

Provide a local exhaust system that creates a negative pressure of at least 0.51 mm 0.02 inches of water relative to the pressure external to the enclosure and operate it continuously, 24 hours a day, until the temporary enclosure of the asbestos control area is removed. Submit pressure differential recordings for each work day to the [PQP] [and] [NC] for review and to the Contracting Officer within 24 hours from the end of each work day.

[1.5.7 Protective Clothing Decontamination Quality Control Records

Provide all records that document quality control for the decontamination of reusable outer protective clothing.

][1.5.8 Protective Clothing Decontamination Facility Notification

Submit written evidence that persons who decontaminate, store, or transport asbestos contaminated clothing used in the performance of this contract were duly notified in accordance with 29 CFR 1926.1101.

]1.6 EQUIPMENT

1.6.1 Rental Equipment

Provide a copy of the written notification to the rental company concerning

the intended use of the equipment and the possibility of asbestos contamination of the equipment.

PART 2 PRODUCTS

2.1 ENCAPSULANTS

Shall conform to current USEPA requirements, shall contain no toxic or hazardous substances as defined in 29 CFR 1926.59, and shall conform to the following performance requirements.

2.1.1 Removal Encapsulants

Requirement	Test Standard
Flame Spread - 25, Smoke Emission - 50	ASTM E 84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E 96/E 96M

2.1.2 Bridging Encapsulant

Requirement	Test Standard
Flame Spread - 25, Smoke Emission - 50	ASTM E 84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E 96/E 96M
Fire Resistance - Negligible affect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E 119
Impact Resistance - Minimum 245.5 mm/N 43 in/lb	ASTM D 2794 Gardner Impact Test
Flexibility - no rupture or cracking	ASTM D 522 Mandrel Bend Test

2.1.3 Penetrating Encapsulant

Requirement	Test Standard
Flame Spread - 25, Smoke Emission - 50	ASTM E 84
Life Expectancy - 20 years	ASTM C732 Accelerated Aging Test
Permeability - Minimum 0.4 perms	ASTM E 96/E 96M
Cohesion/Adhesion Test - 729.5 N of force/meter 50 pounds of force/foot	ASTM E 736
Fire Resistance - Negligible affect on	ASTM E 119

Requirement	Test Standard
fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	
Impact Resistance - Minimum 245.5 mm/N 43 in/lb	ASTM D 2794 Gardner Impact Test
Flexibility - no rupture or cracking	ASTM D 522 Mandrel Bend Test

2.1.4 Lock-down Encapsulant

Requirement	Test Standard
Flame Spread: 25, Smoke Emission - 50	ASTM E 84
Life Expectancy: 20 years	ASTM C732 Accelerated Aging Test
Permeability: Minimum 0.4 perms	ASTM E 96/E 96M
Fire Resistance: Negligible affect on fire resistance rating over 3 hour test (Tested with fireproofing over encapsulant applied directly to steel member)	ASTM E 119

Bond Strength: 1459 N of force/meter 100 pounds of force/foot ASTM E 736
(Tests compatibility with cementitious and fibrous fireproofing)

PART 3 EXECUTION

3.1 EQUIPMENT

****
NOTE: Modify the number of sets of protective equipment as required, depending on the size of the asbestos removal project. Larger projects may require more than two persons on an inspection team.
****

At all times, provide the Contracting Officer or the Contracting Officer's Representative, with at least [two] [_____] complete sets of personal protective equipment [including decontaminating reusable coveralls] as required for entry to and inspection of the asbestos control area. Provide equivalent training to the Contracting Officer or a designated representative as provided to Contractor employees in the use of the required personal protective equipment. Provide manufacturer's certificate of compliance for all equipment used to contain airborne asbestos fibers.

3.1.1 Respirators

Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

3.1.1.1 Respirators for Handling Asbestos

Provide personnel engaged in pre-cleaning, cleanup, handling, [encapsulation] [removal] [and] [or] [demolition] of asbestos materials with respiratory protection as indicated in 29 CFR 1926.1101 and 29 CFR 1926.103.

3.1.2 Exterior Whole Body Protection

3.1.2.1 Outer Protective Clothing

Provide personnel exposed to asbestos with disposable "non-breathable," [or reusable "non-breathable"] whole body outer protective clothing, head coverings, gloves, and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by the use of tape. [Reusable whole body outer protective clothing shall be either disposed of as asbestos contaminated waste upon exiting from the asbestos regulated work area or be properly decontaminated.]

3.1.2.2 Work Clothing

Provide cloth work clothes for wear under the outer protective clothing and foot coverings and either dispose of or properly decontaminate them as recommended by the [NC] [PQP] after each use.

3.1.2.3 Personal Decontamination Unit

Provide a temporary, negative pressure unit with a separate decontamination locker room and clean locker room with a shower that complies with 29 CFR 1926.51(f)(4)(ii) through (V) in between for personnel required to wear whole body protective clothing. Provide two separate lockers for each asbestos worker, one in each locker room. Keep street clothing and street shoes in the clean locker. HEPA vacuum and remove asbestos contaminated disposable protective clothing while still wearing respirators at the boundary of the asbestos work area and seal in impermeable bags or containers for disposal. [HEPA vacuum and remove asbestos contaminated reusable protective clothing while still wearing respirators at the boundary of the asbestos work area, seal in two impermeable bags, label outer bag as asbestos contaminated waste, and transport for decontamination.] Do not wear work clothing between home and work. Locate showers between the decontamination locker room and the clean locker room and require that all employees shower before changing into street clothes. Collect used shower water and filter with approved water filtration equipment to remove asbestos contamination. Dispose of filters and residue as asbestos waste. Discharge clean water to the sanitary system. Dispose of asbestos contaminated work clothing as asbestos contaminated waste [or properly decontaminate as specified in the Contractor's Asbestos Hazard Abatement Plan]. Decontamination units shall be physically attached to the asbestos control area. Build both a personnel decontamination unit and an equipment decontamination unit onto and integral with each asbestos control area.

3.1.2.4 [Decontamination of Reusable Outer Protective Clothing

When reusable outer protective clothing is used, transport the double bagged clothing to a previously notified commercial/industrial

decontamination facility for decontamination. Perform non-destructive testing to determine the effectiveness of asbestos decontamination. If representative sampling is used, ensure the statistical validity of the sampling results. If representative sampling is used, reject any entire batch in which any of the pieces exceed 40 fibers per square millimeter. Inspect reusable protective clothing prior to use to ensure that it will provide adequate protection and is not or is not about to become ripped, torn, deteriorated, or damaged, and that it is not visibly contaminated. Notify, in writing, all personnel involved in the decontamination of reusable outer protective clothing as indicated in 29 CFR 1926.1101.]

3.1.2.5 Eye Protection

Provide goggles to personnel engaged in asbestos abatement operations when the use of a full face respirator is not required.

3.1.3 Warning Signs and Labels

Provide [bilingual] warning signs [printed in English and [_____]] at all approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos materials, scrap, waste, debris, and other products contaminated with asbestos.

3.1.3.1 Warning Sign

Provide vertical format conforming to 29 CFR 1926.200, and 29 CFR 1926.1101 minimum 500 by 355 mm 20 by 14 inches displaying the following legend in the lower panel:

Legend	Notation
Danger	25 mm one inch Sans Serif Gothic or Block
Asbestos	25 mm one inch Sans Serif Gothic or Block
Cancer and Lung Disease Hazard	6 mm 1/4 inch Sans Serif Gothic or Block
Authorized Personnel Only	6 mm 1/4 inch Gothic
Respirators and Protective Clothing are Required in this Area	6 mm 1/4 inch Gothic

Spacing between lines shall be at least equal to the height of the upper of any two lines.

3.1.3.2 Warning Labels

Provide labels conforming to 29 CFR 1926.1101 of sufficient size to be clearly legible, displaying the following legend:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

3.1.4 Local Exhaust System

****
NOTE: When a negative pressure enclosure is not required, delete the requirements for the local exhaust system and pressure differential recording.
****

Provide a local exhaust system in the asbestos control area in accordance with AIHA Z9.2 and 29 CFR 1926.1101 that will provide at least four air changes per hour inside of the negative pressure enclosure. Local exhaust equipment shall be operated 24 hours per day, until the asbestos control area is removed and shall be leak proof to the filter and equipped with HEPA filters. Maintain a minimum pressure differential in the control area of minus 0.51 mm 0.02 inch of water column relative to adjacent, unsealed areas. Provide continuous 24-hour per day monitoring of the pressure differential with a pressure differential automatic recording instrument. In no case shall the building ventilation system be used as the local exhaust system for the asbestos control area. Filters on exhaust equipment shall conform to AIHA Z9.2 and UL 586. The local exhaust system shall terminate out of doors and remote from any public access or ventilation system intakes.

3.1.5 Tools

Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to AIHA Z9.2 and UL 586. Do not use power tools to remove asbestos containing materials unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation systems. Remove all residual asbestos from reusable tools prior to storage or reuse.

3.1.6 Rental Equipment

If rental equipment is to be used, furnish written notification to the rental agency concerning the intended use of the equipment and the possibility of asbestos contamination of the equipment.

[3.1.7 Glovebags

****
NOTE: Include this paragraph if glovebag technique is permitted to be used in the project.
****

Submit written manufacturers proof that glovebags will not break down under expected temperatures and conditions.

]3.2 WORK PROCEDURE

****

NOTE: Use wet removal procedures in almost all cases. Wet removal is the preferred method and the least hazardous. Dry removal as an option can be used to allow the Contractor to use dry removal where wet removal may damage equipment or present an extreme hazard. Dry removal as the only method of removal should only be specified if freezing is likely to occur, safety hazards preclude the use of water, or severe water damage to equipment, etc., would occur during wet removal. If dry removal alone is allowed, carefully edit the specification to remove all reference to amended water and wetting down procedures and to include a requirement for a written variance submitted by the Contractor along with the written approval of any regulatory authority having jurisdiction.

****

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NOTE: Negative pressure enclosure and glovebag techniques pertain to the two most general but yet essentially different asbestos control techniques used for asbestos removal. Encapsulation work practice techniques are listed here, also. The use of unlisted removal work practice techniques will be acceptable if they are proven at least as safe as the listed practices. The appropriate technique depends on existing conditions, but must be that technique that provides the best control during abatement at most reasonable cost.

****

Perform asbestos related work in accordance with 29 CFR 1926.1101, 40 CFR 61-SUBPART M, and as specified herein. Use [[wet] [or] [if given prior EPA approval, dry] removal procedures] [appropriate encapsulation procedures as listed in the asbestos hazard abatement plan] and [negative pressure enclosure] [_____] techniques. Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, chewing gum, tobacco, or applying cosmetics shall not be permitted in the asbestos work or control areas. Personnel of other trades not engaged in the [encapsulation] [removal and demolition] of asbestos containing material shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection and training provisions of this specification are complied with by the trade personnel. [Seal all roof top penetrations, except plumbing vents, prior to asbestos roofing work.] Shut down the building heating, ventilating, and air conditioning system, cap the openings to the system, [and provide temporary [heating,] [and] [ventilation,] [and] [air conditioning]] prior to the commencement of asbestos work. [Disconnect electrical service when [encapsulation] [wet removal] is performed and provide temporary electrical service with verifiable ground fault circuit interrupter (GFCI) protection prior to the use of any [water] [encapsulant].] If an asbestos fiber release or spill occurs [outside of the asbestos control area], stop work immediately, correct the condition to the satisfaction of the Contracting Officer including clearance sampling, prior to resumption of work.

3.2.1 Protection of Existing Work to Remain

****

NOTE: Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be required to perform the function involved. However, the Contractor shall always hire a PQP.
****

Perform work without damage or contamination of adjacent work. Where such work is damaged or contaminated as verified by the Contracting Officer using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Government as deemed appropriate by the Contracting Officer. This includes inadvertent spill of dirt, dust, or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, stop work immediately. Then clean up the spill. When satisfactory visual inspection and air sampling results are obtained from the [PQP] [NC] work may proceed at the discretion of the Contracting Officer.

3.2.2 Furnishings

****
NOTE: Choose one of the following options. In most projects, the Government will remove furniture and equipment before the Contractor begins work. In this case the first paragraph should be used. The third paragraph should only be used when existing furnishings have been contaminated with asbestos fibers and the Contractor will be required to clean these items. When the third paragraph is used, identify the furnishings and indicate the quantity of each.
****

****
NOTE: The designer must decide if porous, non-solid surfaced items can be cleaned or must be disposed of as contaminated waste. If cleaning is chosen, specify methods.
****

[Furniture [,(_____)] and equipment will be removed from the area of work by the Government before asbestos work begins.]

[Furniture [,(_____)] and equipment will remain in the building. Cover and seal furnishings with 0.15 mm 6-mil plastic sheet or remove from the work area and store in a location on site approved by the Contracting Officer.]

[Furnishings listed below and located in the work area are considered to be contaminated with asbestos fibers. Transfer these items to an area on site approved by the Contracting Officer, decontaminate (wet methods where possible), and then store until the room from which they came is declared clean and safe for entry. [Carpets, draperies, and other items with porous, non-solid surfaces can not be suitably cleaned and shall be properly disposed of as contaminated waste.] At the conclusion of the asbestos removal work and cleanup operations, transfer all objects so removed and cleaned back to the area from which they came and re-install them. Base bids on decontaminating:

a. [_____] Desks

b. [_____] Filing cabinets

c. [_____] Linear meters feet of shelving

d. [_____] Cubic meters feet of books, papers, files, etc.

e. [_____]].

3.2.3 Precleaning

Wet wipe and HEPA vacuum all surfaces potentially contaminated with asbestos prior to establishment of an enclosure.

3.2.4 Asbestos Control Area Requirements

****
NOTE: When negative pressure enclosure is infeasible, use paragraph entitled "Glovebag" and delete paragraph entitled "Negative Pressure Enclosure." If the project has both areas which can be enclosed and areas which cannot be enclosed, retain the appropriate paragraphs and identify the areas which must be enclosed and the areas which cannot be enclosed.
****

3.2.4.1 Negative Pressure Enclosure

Block and seal openings in areas where the release of airborne asbestos fibers can be expected. Establish an asbestos negative pressure enclosure with the use of curtains, portable partitions, or other enclosures in order to prevent the escape of asbestos fibers from the contaminated asbestos work area. Negative pressure enclosure development shall include protective covering of uncontaminated walls, and ceilings with a continuous membrane of two layers of minimum 0.15 mm 6-mil plastic sheet sealed with tape to prevent water or other damage. Provide two layers of 0.15 mm 6-mil plastic sheet over floors and extend a minimum of 300 mm 12 inches up walls. Seal all joints with tape. Provide local exhaust system in the asbestos control area. Openings will be allowed in enclosures of asbestos control areas for personnel and equipment entry and exit, the supply and exhaust of air for the local exhaust system and the removal of properly containerized asbestos containing materials. Replace local exhaust system filters as required to maintain the efficiency of the system.

[3.2.4.2 Glovebag

****
NOTE: Specify the asbestos material to be removed in the first blank and identify the location of the area which cannot be enclosed in the second blank.
****

The construction of a negative pressure enclosure is infeasible for the [removal] [encapsulation] of [_____] located [_____]. Use alternate techniques as indicated in 29 CFR 1926.1101. Establish designated limits for the asbestos regulated area with the use of rope or other continuous

barriers, and maintain all other requirements for asbestos control areas. The PQP shall conduct personal samples of each worker engaged in asbestos handling (removal, disposal, transport and other associated work) throughout the duration of the project. If the quantity of airborne asbestos fibers monitored at the breathing zone of the workers at any time exceeds background or 0.01 fibers per cubic centimeter whichever is greater, stop work, evacuate personnel in adjacent areas or provide personnel with approved protective equipment at the discretion of the Contracting Officer. This sampling may be duplicated by the Government at the discretion of the Contracting Officer. If the air sampling results obtained by the Government differ from those obtained by the Contractor, the Government will determine which results predominate. If adjacent areas are contaminated as determined by the Contracting Officer, clean the contaminated areas, monitor, and visually inspect the area as specified herein.

][3.2.5 Removal Procedures

****
NOTE: Choose "Removal Procedures" or "Encapsulation Procedures" as appropriate for the project.
****

Wet asbestos material with a fine spray of [amended water] [a specific wetting agent such as light oil] during removal, cutting, or other handling so as to reduce the emission of airborne fibers. Remove material and immediately place in 0.15 mm 6 mil plastic disposal bags. Remove asbestos containing material in a gradual manner, with continuous application of the amended water or wetting agent in such a manner that no asbestos material is disturbed prior to being adequately wetted. Where unusual circumstances prohibit the use of 0.15 mm 6 mil plastic bags, submit an alternate proposal for containment of asbestos fibers to the Contracting Officer for approval. For example, in the case where both piping and insulation are to be removed, the Contractor may elect to wet the insulation, wrap the pipes and insulation in plastic and remove the pipe by sections. Asbestos containing material shall be containerized while wet. At no time shall asbestos material be allowed to accumulate or become dry. Lower and otherwise handle asbestos containing material as indicated in 40 CFR 61-SUBPART M.

3.2.5.1 Sealing Contaminated Items Designated for Disposal

****
NOTE: Use this paragraph only when asbestos contaminated items are also designated for removal and disposal.
****

Remove contaminated architectural, mechanical, and electrical appurtenances such as venetian blinds, full-height partitions, carpeting, duct work, pipes and fittings, radiators, light fixtures, conduit, panels, and other contaminated items designated for removal by completely coating the items with an asbestos lock-down encapsulant at the demolition site before removing the items from the asbestos control area. These items need not be vacuumed. The asbestos lock-down encapsulant shall be tinted a contrasting color. It shall be spray-applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces. Lock-down encapsulants shall comply with the performance requirements specified herein.

3.2.5.2 Exposed Pipe Insulation Edges

Contain edges of asbestos insulation to remain that are exposed by a removal operation. Wet and cut the rough ends true and square with sharp tools and then encapsulate the edges with a 6 mm 1/4 inch thick layer of non-asbestos containing insulating cement troweled to a smooth hard finish. When cement is dry, lag the end with a layer of non-asbestos lagging cloth, overlapping the existing ends by at least 100 mm 4 inches. When insulating cement and cloth is an impractical method of sealing a raw edge of asbestos, take appropriate steps to seal the raw edges as approved by the Contracting Officer.

][3.2.6 Encapsulation Procedures

****
NOTE: Choose "Removal Procedures" or "Encapsulation Procedures" as appropriate for the project.
****

3.2.6.1 Preparation of Test Patches

****
NOTE: Prior to preparing plans and specifications for an encapsulation project, the designer will have to ascertain that encapsulation is feasible at all. The foremost design criteria is the soundness of the existing asbestos containing matrix, i.e. the bond of the matrix to the substrate and the shear strength of the matrix itself. The designer should test the existing matrix in accordance with the ASTM E 1494, using the Field Testing Provisions for the Adhesion Test.
****

****
NOTE: Exercise discretion on the number and location of Contractor applied test patches. However, a minimum of three test patches should always be specified. Test locations, in areas of the matrix, that have a different appearance or raise doubts about their homogeneity. Specify number of test patches in first bracket and location in second bracket. Also show location on drawings.
****

Install [three] [_____] test patches of encapsulant in [_____], as indicated. Use airless spray at the lowest pressure and as recommended by the encapsulant manufacturer. Follow exactly the manufacturer's instructions for thinning recommendations, application procedures and rates. Curing time shall be not less than five days or that recommended by the manufacturer, whichever is more. A test patch shall be 0.8 square meter 9 square feet in size.

3.2.6.2 Field Testing

Field test the encapsulation test patches in accordance with ASTM E 1494, paragraph "Required Field Test," in the presence of the Contracting Officer. Keep a written record of the testing procedures and test results. Upon

successful testing of the encapsulant, submit a signed statement to the Contracting Officer certifying that the encapsulant is suitable for installation on the particular asbestos containing material.

3.2.6.3 Large-Scale Application

Apply encapsulant using the same equipment and procedures as employed for the test patches. Keep the encapsulant material stirred to prevent settling. Keep a clean work area. Change pre-filters in the ventilation equipment as soon as they appear clogged by encapsulant aerosol or pressure differential drops below 0.02 Hg.

]3.2.7 Air Sampling

****
NOTE: Air sampling regimen is very dependent on removal method and applicable laws, edit accordingly.
****

****
NOTE: Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be required to perform the function involved. However, the Contractor shall always hire a PQP.
****

Sampling of airborne concentrations of asbestos fibers shall be performed in accordance with 29 CFR 1926.1101 and as specified herein. Sampling performed in accordance with 29 CFR 1926.1101 shall be performed by the PQP. [Sampling performed for environmental and quality control reasons shall be performed by the [PQP] [NC].] Unless otherwise specified, use NIOSH Method 7400 for sampling and analysis. Monitoring may be duplicated by the Government at the discretion of the Contracting Officer. If the air sampling results obtained by the Government differ from those results obtained by the Contractor, the Government will determine which results predominate.

3.2.7.1 Sampling Prior to Asbestos Work

Provide area air sampling and establish the baseline one day prior to the masking and sealing operations for each [demolition] [removal] [encapsulation] site. Establish the background by performing area sampling in similar but uncontaminated sites in the building.

3.2.7.2 Sampling During Asbestos Work

****
NOTE: Choose one of the following options. Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be required to perform the function involved. However, the Contractor shall always hire a PQP.
****

****

NOTE: When an "enclosed" asbestos control area is not required, retain the appropriate portion in brackets.

****

[The PQP shall provide personal and area sampling as indicated in 29 CFR 1926.1101 and governing environmental regulations. In addition, provided the same type of work is being performed, provide area sampling at least once every work shift close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. If sampling outside the enclosure shows airborne levels have exceeded background or 0.01 fibers per cubic centimeter, whichever is greater, stop all work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately. [Where alternate methods are used, perform personal and area air sampling at locations and frequencies that will accurately characterize the evolving airborne asbestos levels.]]

[The PQP shall provide personal sampling as indicated in 29 CFR 1926.1101. At the same time the NC will provide area sampling close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. In addition, provided the same type of work is being performed, the NC will provide area sampling once every work shift close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. If sampling outside the enclosure shows airborne levels have exceeded background or 0.01 fibers per cubic centimeter, whichever is greater, stop all work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately. [Where alternate methods are used, perform personal and area air sampling at locations and frequencies that will accurately characterize the evolving airborne asbestos levels.]]

3.2.7.3 Sampling After Final Clean-Up (Clearance Sampling)

****

NOTE: The designer shall research the State, regional and local laws, regulations, statutes, etc., to determine whether "aggressive" air sampling is required. However, always use aggressive air sampling techniques after encapsulation type abatement efforts.

****

****

NOTE: Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be required to perform the function involved. However, the Contractor shall always hire a PQP.

****

****

NOTE: The designer shall research the State, regional and local laws, regulations, statutes,

etc., to determine whether TEM analysis is required and the number of samples required.
****

Provide area sampling of asbestos fibers [using aggressive air sampling techniques as defined in the EPA 560/5-85-024] and establish an airborne asbestos concentration of less than 0.01 fibers per cubic centimeter after final clean-up but before removal of the enclosure or the asbestos work control area. After final cleanup and the asbestos control area is dry but prior to clearance sampling, the [PQP] [and] [NC] shall perform a visual inspection in accordance with ASTM E 1368 to ensure that the asbestos control and work area is free of any accumulations of dirt, dust, or debris. [Prepare a written report signed and dated by the PQP documenting that the asbestos control area is free of dust, dirt, and debris and all waste has been removed.] [Perform at least [_____] samples.] [Use transmission electron microscopy (TEM) to analyze clearance samples and report the results in accordance with current NIOSH criteria.] The asbestos fiber counts from these samples shall be less than 0.01 fibers per cubic centimeter or be not greater than the background, whichever is greater. Should any of the final samples indicate a higher value, the Contractor shall take appropriate actions to re-clean the area and shall repeat the sampling and [TEM] analysis at the Contractor's expense.

3.2.8 Lock-Down

Prior to removal of plastic barriers and after pre-clearance clean up of gross contamination, the [PQP] [NC] shall conduct a visual inspection of all areas affected by the [removal] [encapsulation] in accordance with ASTM E 1368. Inspect for any visible fibers [, and to ensure that encapsulants were applied evenly and appropriately]. [A post removal (lock-down) encapsulant shall then be spray applied to ceiling, walls, floors and other areas exposed in the removal area. The exposed area shall include but not be limited to plastic barriers, furnishings and articles to be discarded as well as dirty change room, air locks for bag removal and decontamination chambers.]

3.2.9 Site Inspection

While performing asbestos engineering control work, the Contractor shall be subject to on-site inspection by the Contracting Officer who may be assisted by or represented by safety or industrial hygiene personnel. If the work is found to be in violation of this specification, the Contracting Officer or his representative will issue a stop work order to be in effect immediately and until the violation is resolved. All related costs including standby time required to resolve the violation shall be at the Contractor's expense.

3.3 CLEAN-UP AND DISPOSAL

3.3.1 Housekeeping

Essential parts of asbestos dust control are housekeeping and clean-up procedures. Maintain surfaces of the asbestos control area free of accumulations of asbestos fibers. Give meticulous attention to restricting the spread of dust and debris; keep waste from being distributed over the general area. Use HEPA filtered vacuum cleaners. DO NOT BLOW DOWN THE SPACE WITH COMPRESSED AIR. When asbestos removal is complete, all asbestos waste is removed from the work-site, and final clean-up is completed, the Contracting Officer will attest that the area is safe before the signs can

be removed. After final clean-up and acceptable airborne concentrations are attained but before the HEPA unit is turned off and the enclosure removed, remove all pre-filters on the building HVAC system and provide new pre-filters. Dispose of filters as asbestos contaminated materials. Reestablish HVAC mechanical, and electrical systems in proper working order. The Contracting Officer will visually inspect all surfaces within the enclosure for residual material or accumulated dust or debris. The Contractor shall re-clean all areas showing dust or residual materials. If re-cleaning is required, air sample and establish an acceptable asbestos airborne concentration after re-cleaning. The Contracting Officer must agree that the area is safe in writing before unrestricted entry will be permitted. The Government shall have the option to perform monitoring to determine if the areas are safe before entry is permitted.

3.3.2 Title to Materials

All waste materials, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified in applicable local, State, and Federal regulations and herein.

3.3.3 Disposal of Asbestos

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NOTE: Disposal procedures and sites for asbestos materials vary considerably with each location. Contact local station Public Works and the NAVFAC Engineering Field Division Hazardous Waste Manager or Industrial Hygienist for local procedures.

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3.3.3.1 Procedure for Disposal

Collect asbestos waste, asbestos contaminated water, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing which may produce airborne concentrations of asbestos fibers and place in sealed fiber-proof, waterproof, non-returnable containers (e.g. double plastic bags 0.15 mm 6 mils thick, cartons, drums or cans). Wastes within the containers must be adequately wet in accordance with 40 CFR 61-SUBPART M. Affix a warning and Department of Transportation (DOT) label to each container including the bags or use at least 0.15 mm 6 mils thick bags with the approved warnings and DOT labeling preprinted on the bag. The name of the waste generator and the location at which the waste was generated shall be clearly indicated on the outside of each container. Prevent contamination of the transport vehicle (especially if the transport vehicle is a rented truck likely to be used in the future for non-asbestos purposes). These precautions include lining the vehicle cargo area with plastic sheeting (similar to work area enclosure) and thorough cleaning of the cargo area after transport and unloading of asbestos debris is complete. Dispose of waste asbestos material at an Environmental Protection Agency (EPA) or State-approved asbestos landfill off Government property. For temporary storage, store sealed impermeable bags in asbestos waste drums or skids. An area for interim storage of asbestos waste-containing drums or skids will be assigned by the Contracting Officer or his authorized representative. Procedure for hauling and disposal shall comply with 40 CFR 61-SUBPART M, State, regional, and local standards. Sealed plastic bags may be dumped from drums into the burial site unless the bags have been broken or damaged. Damaged bags shall remain in the drum and the entire contaminated drum shall be buried. Uncontaminated drums may be recycled. Workers unloading the sealed drums shall wear appropriate

respirators and personal protective equipment when handling asbestos materials at the disposal site.

3.3.3.2 Asbestos Disposal Quantity Report

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NOTE: Normal practice is to have the Contractor hire one independent Private Qualified Person (the PQP) to perform all required functions. However, some applicable laws forbid this approach and will dictate when the PQP, the NC or both will be required to perform the function involved. However, the Contractor shall always hire a PQP.
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[Direct the PQP to record and report, to the Contracting Officer, the amount of asbestos containing material removed and released for disposal. Deliver the report for the previous day at the beginning of each day shift with amounts of material removed during the previous day reported in linear meters or square meters linear feet or square feet as described initially in this specification and in cubic meters feet for the amount of asbestos containing material released for disposal.]

[Allow the NC to inspect, record and report the amount of asbestos containing material removed and released for disposal on a daily basis.]

-- End of Section --

ASBESTOS ABATEMENT – CHECK LIST

Start Date: _____ Ending Date: _____
Contractor Name: _____
Contract No: _____
Contract Name: _____
Location: _____

Type of Asbestos:	TSI		Surfacing		Floor Tile/Covering		Transite	
	Roof		Spray-On		Mastic		Other	
Description of ACM:								
Quantities:	Sq Ft:		Ln Ft:		Other			
Containment Type:	Full Containment		Mini Enclosure		Glovebag			
	Other:							

PRE-ABATEMENT CHECKLIST			
✓	CHECKLIST ITEM DESCRIPTION	REFERENCE	NOTES
	1. Has the contractor obtained state licenses and permits, where necessary?	Section 16.00 20 Para. 1.3.4	
	2. Has the contractor notified the EPA, or the appropriate state or local regulatory agency, 10 days prior to the commencement of work?	Section 16.00 20 Para. 1.3.4 40 CFR 61.145 (b)	
	3. Has the contractor provided proof that all asbestos workers and supervisors are trained in the proper removal procedures of asbestos?	Section 16.00 20 Para. 1.3.3 29 CFR 1926.1101 (k)(9), (o)(3)(i) 40 CFR 763.121 (k)(3)	
	4. Has the contractor provided the name of the "competent" or "qualified" person?	Section 16.00 20 Para. 1.3.7 29 CFR 1926.1101 (o)(4)	
	5. Has the contractor provided proof that the supervisor, remaining on-site during all abatement operations, is trained in the requirements of NESHAP?	Section 16.00 20 Para. 1.3.7 40 CFR 61.145 (c)(8)	
	6. Has the contractor provided proof that all of the employees have received medical examinations and that medical records are kept?	Section 16.00 20 Para 1.3.12 29 CFR 1926.1101 (m), (n)(3)(i) 40 CFR 763.121 (n)(3)(i)	
	7. Has the contractor provided proof that all of the employees are respirator trained and fit tested?	Section 16.00 20 Para. 1.3.3 29 CFR 1910.134 (e)(5)(I) 29 CFR 1926.1101 (h)(4)	
	8. Has the contractor provided the name, address, and phone number of the Private Qualified Person responsible for the exposure monitoring program and air sampling?	Section 16.00 20 Para. 1.5.1	
	9. Has documented evidence the PQP has completed training in and is accredited and where required is certified as a Building Inspector, Contractor/Supervisor Abatement Worker and Asbestos Project Designer and successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating airborne Asbestos Dust" or equivalent?	Section 16.00 20 Para. 1.5.1	
	10. Has the contractor provided the name, address, and phone number and state license of the testing laboratory for all asbestos sampling analysis?	Section 16.00 20 Para. 1.3.10	
	11. Has the laboratory shown proof of participation in a Proficiency Analytical Testing (PAT) program, accredited by the American Industrial Hygiene Association (AIHA) and judged proficient by the current inclusion on the AIHA Asbestos Analysis Registry (ARR)?	Section 16.00 20 Para. 1.3.10 29 CFR 1926.1101 App. A	
	12. Has the contractor provided the name and the location of certified waste disposal site?	Section 16.00 20 Para 1.3.11 40 CFR 61.145 (b)(4)(xii)	

ASBESTOS ABATEMENT – CHECK LIST

	13. Has the contractor submitted a written program manual or operating procedure including methods of compliance regulatory statues?	Section16.00 20 Para. 1.2.6	
	14. Has the contractor provide a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site?	Section 16.00 20 Para. 1.2.6	
	15. Has the contractor provided product data?	Section 16.00 20 Para. 1.4 (SD-03)	

ASBESTOS HAZARD ABATEMENT PLAN CHECKLIST	
✓	**CHECKLIST ITEM DESCRIPTION** (Section 13281 Para. 1.3.9)
	1. Is the plan prepared, signed, and sealed by the Private Qualified Person, including certification number and certification date?
	2. Does the plan include a drawing showing the location, size, and details of asbestos regulated areas, including the following: - location of the clean and dirty areas - buffer zones - showers - storage areas - change rooms - local exhaust equipment
	3. Does the plan include a planned air monitoring strategies?
	4. Does the plan include the precise personal protective equipment to be used?
	5. Does the plan include step-by-step details for the sequencing of asbestos-related work?
	6. Does the plan include a disposal plan?
	7. Does the plan specify the type of wetting agent to be used?
	8. Does the plan include both Fire and Medical Emergency response plans?
	9. Does the plan include a detailed description of the environmental pollution control method?

POST-ABATEMENT CHECKLIST	
✓	**CHECKLIST ITEM DESCRIPTION**
	1. Have copies of all appropriate environmental monitoring documents been supplied to the OICC/ROICC or the Navy Consultant?
	2. Has the Asbestos Program Manager been informed the removal has been completed?
	3. Has the contractor provided written proof of the total amount of asbestos received and buried by the landfill?
	4. Has the original Waste Shipment Record been forwarded to the Environmental Department?

NOTES:

MSDS:
Surfactants
Spray Adhesives
Mastic Remover
Encapsulant:

Product/Equipment Info:
Vacuum
Negative Air Machine
Shower
Water Pump/Filter
Pressure Differential Recorder