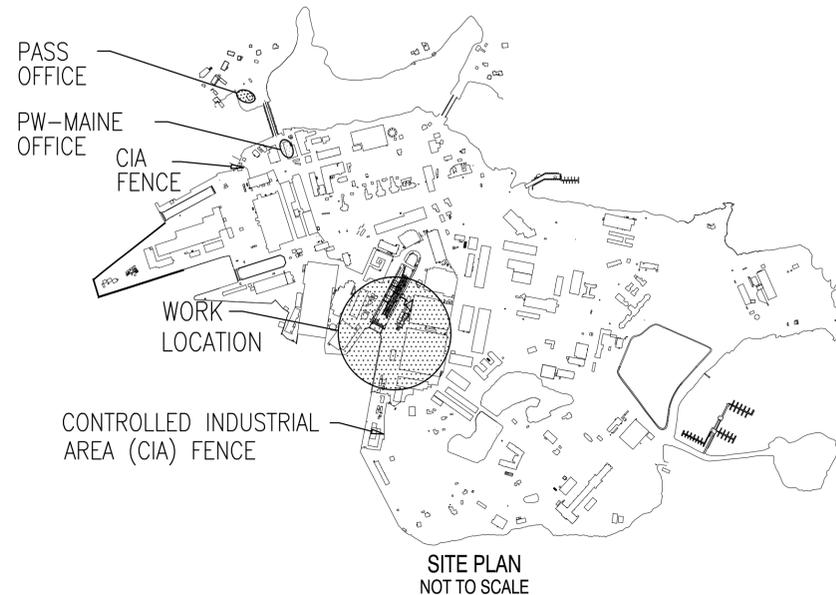
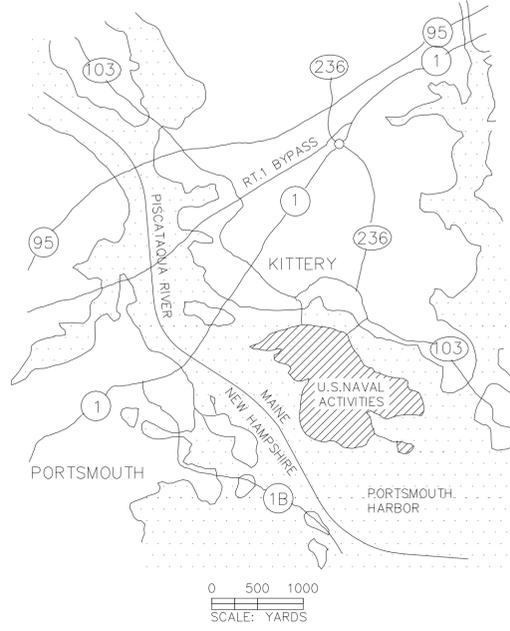


# PORTSMOUTH NAVAL SHIPYARD KITTERY, ME

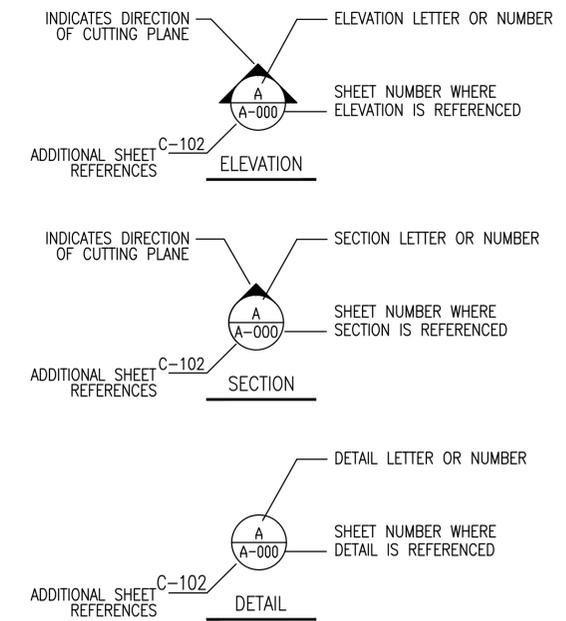
## STEAM AND CONDENSATE REPAIR FROM B180 TO B300 CONTRACT NO. N40085-##-##-####

### LIST OF DRAWINGS

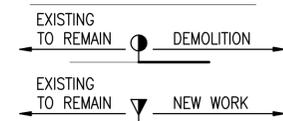
SHEET	SHEET NO.	PWD-ME NO.	NAVFAC DWG. NO.	DRAWING TITLE
1 OF 29	G-001	MS-15-XXXX	12706357	TITLE SHEET
2 OF 29	G-002	MS-15-XXXX	12706358	NOTES
3 OF 29	G-003	MS-15-XXXX	12706359	PHASING, STAGING/STOCKPILE, & TRAFFIC PLAN
4 OF 29	C-001	MS-15-XXXX		CIVIL NOTES
5 OF 29	C-101	MS-15-XXXX	12706360	TRENCH AND TRENCH COVER DETAILS
6 OF 29	C-102	MS-15-XXXX	12706361	TRENCH AND TRENCH COVER DETAILS
7 OF 29	C-401	MS-15-XXXX	12706362	DETAILS
8 OF 29	C-402	MS-15-XXXX	12706363	DETAILS
9 OF 29	C-500	MS-15-XXXX		EROSION CONTROL NOTES AND DETAILS
10 OF 29	M-001	MS-15-XXXX	12706366	MECHANICAL LEGEND
11 OF 29	MD101	MS-15-XXXX	12706367	DEMOLITION PLAN
12 OF 29	MD102	MS-15-XXXX	12706368	DEMOLITION PLAN
13 OF 29	MD401	MS-15-XXXX	12706370	STEAM MANHOLES PIPING-DEMOLITION
14 OF 29	MD402	MS-15-XXXX	12706371	STEAM MANHOLES PIPING-DEMOLITION
15 OF 29	MD403	MS-15-XXXX	12706372	STEAM MANHOLES PIPING-DEMOLITION
16 OF 29	M-101	MS-15-XXXX	12706374	PIPING PLAN
17 OF 29	M-102	MS-15-XXXX	12706375	PIPING PLAN
18 OF 29	M-103	MS-15-XXXX	12706376	PIPING PLAN
19 OF 29	M-201	MS-15-XXXX	12706377	PROFILES
20 OF 29	M-401	MS-15-XXXX	12706378	STEAM MANHOLES PIPING
21 OF 29	M-402	MS-15-XXXX	12706379	STEAM MANHOLES PIPING
22 OF 29	M-403	MS-15-XXXX	12706380	STEAM MANHOLES PIPING
23 OF 29	M-501	MS-15-XXXX	12706382	DETAILS
24 OF 29	M-502	MS-15-XXXX	12706383	DETAILS
25 OF 29	M-503	MS-15-XXXX	12706384	DETAILS
26 OF 29	M-504	MS-15-XXXX	12706385	DETAILS
27 OF 29	M-601	MS-15-XXXX	12706386	PIPING SCHEMATICS
28 OF 29	M-602	MS-15-XXXX	12706387	PIPING SCHEMATICS
29 OF 29	M-603	MS-15-XXXX	12706388	PIPING SCHEMATICS



### ELEVATION, SECTION OR DETAIL SYMBOLS



### GENERAL LEGEND



ISSUE OF BID DOCUMENT	DATE	APPR
0	01/14/2016	



APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES A/E | DRW FP | CHK A/E

PM/DM ROGER ROY

BRANCH MANAGER NATHAN MAHER

LEAD/PM/ME AMIN BAHROUR, PM&E

FIRE PROTECTION X

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC

PUBLIC WORKS DEPARTMENT - MAINE

PORTSMOUTH NAVAL SHIPYARD - PORTSMOUTH, ME

RME REPAIR STEAM AND CONDENSATE

PN5Y BLDG 180 TO BLDG 300, RM14-0205

TITLE SHEET

PROJECT NO.: 1370673

CONSTR. CONTR. NO. N40085-##-##-####

NAVFAC DRAWING NO. 12706357

SHEET 1 OF 29

G-001 MS-15-XXXX

FILE NAME: Z:\Clients\NAVFAC\USShipyard\Main\65866L\_PNS5Y180\Design\Mech\Sheet\2 - RM 14-0205 - Repair Steam and Condensate PWS\B180 to B300\G001.dwg PLOTTED: Thursday, January 14, 2016 - 6:13pm USER: jcastiglione

GENERAL NOTES

- 1. PLANS HAVE BEEN COMPILED FROM EXISTING RECORD PLANS, ON-SITE FIELD SURVEY AND OBSERVATION.
2. EXISTING CONDITION CONTOURS SHOWN DEVELOPED BY AERIAL MAPPING PERFORMED BY AERIAL SURVEY & PHOTO, NORRIDGEWOCK, MAINE, JULY 27, 2001. SEE "TOPOGRAPHIC PLAN OF THE PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE FOR TETRA TECH NUS" DATED 11-22-02.
3. VERTICAL DATUM: PORTSMOUTH NAVAL SHIPYARD 2002
4. EXISTING CONDITIONS OF RAMP WERE FIELD VERIFIED BY SURVEY PERFORMED BY NAVFAC, PWD-ME JULY 2012.
5. HORIZONTAL DATUM: MAINE STATE COORDINATES. WEST ZONE NAD 83.
6. PORTSMOUTH NAVAL SHIPYARD GROUND CONTROL ESTABLISHED BY CIVIL CONSULTANTS, SOUTH BERWICK MAINE FEBRUARY 2002.
7. COASTAL WETLANDS CHARACTERIZATION AND DELINEATION OF EXISTING BOAT RAMP EXTENTS COMPLETED BY IAN TREFY CWS, CESSWI, NATURAL RESOURCE MANAGER NAVFAC PWD-ME.
8. PROVIDE DRAWINGS FOR CONSTRUCTION LAYOUT OF THE PROPOSED IMPROVEMENTS. ALL FINISHED GRADES WILL PROVIDE POSITIVE DRAINAGE FOR ALL RECONSTRUCTED AREAS.
9. UNLESS OTHERWISE NOTED, ALL EXISTING FEATURES DESIGNATED ON THE PLANS TO REMAIN INCLUDING, BUT NOT LIMITED TO, TREES, SIGNS, SIGN POSTS, CURBS, SIDEWALKS AND BACK OF SIDEWALK FEATURES WILL BE VERIFIED, LOCATED, AND PROTECTED DURING ALL PHASES OF CONSTRUCTION.
10. NEW WHEELCHAIR RAMPS AND ACCESSIBLE FEATURES WILL BE PROVIDED WHERE REQUIRED AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE UNIFORM FEDERAL ACCESSIBILITY STANDARDS AND ALL ADDENDA ISSUED THERETO.
11. SURVEY CONTROL BOUNDS AND STREET LINE MONUMENTATION SHALL NOT BE DISTURBED DURING THE COURSE OF WORK AND SHALL BE PROTECTED. SHOULD ANY BOUND BE DISTURBED, THE CONTRACTOR WILL BE REQUIRED TO HIRE, AT HIS OWN EXPENSE, A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MAINE TO REPLACE AND / OR RESET THE BOUND TO ITS ORIGINAL POSITION.
12. SALVAGED ITEMS ARE TO BECOME THE PROPERTY OF THE GOVERNMENT.
13. FEATURES MAY BE SHOWN WITHIN THE LIMIT OF WORK THAT ARE NOT EXPLICITLY CALLED OUT FOR REMOVAL OR DEMOLITION. DEMOLISH ALL FEATURES WITHIN THE LIMIT OF WORK REQUIRED TO COMPLETE THE WORK OF THE PROJECT.
14. PREVENT ANY DISTURBANCE OR DAMAGE TO ADJACENT PROPERTIES.
15. YELLOW PLASTIC: CONTRACTORS SHALL NOT USE YELLOW OR ORANGE-YELLOW COLORED MATERIALS FOR THE FOLLOWING PURPOSES: PROTECTIVE CLOTHING, HOODS, SHEETING, TARPS, POLYETHYLENE BOTTLES OR OTHER CONTAINERS, TAPES, BAGS, BANDING, IDENTIFICATION MARKS ON TOOLS, BOUNDARY MARKERS, RIBBONS, VENT DUCTS, ETC. CONTRACTOR GENERATED YELLOW COLORED WASTE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF-YARD. SHIPYARD REFUSE CONTAINERS SHALL NOT BE USED FOR THE DISPOSAL OF YELLOW COLORED WASTE MATERIALS. YELLOW COLORED ITEMS SUCH AS DESCRIBED ABOVE ARE OF SPECIAL SIGNIFICANCE WITHIN THE SHIPYARD AND ARE SUBJECT TO STRICT CONTROLS. YELLOW COLORED CONTRACT GENERATED DEBRIS SHALL BE BAGGED IN NON-TRANSLUCENT CONTAINERS, AND PROMPTLY REMOVED FROM PORTSMOUTH NAVAL SHIPYARD.
16. CONTRACTOR SHALL REPORT ALL SPILLS AND LEAKS OF OIL OR OTHER HAZARDOUS SUBSTANCES. (IE OIL, ANTIFREEZE, CHEMICALS, ETC.) OCCURRING DURING THE PERFORMANCE OF THIS CONTRACT IMMEDIATELY UPON DISCOVERY, REGARDLESS OF THE QUANTITY. CALL THE FIRE DEPARTMENT AT EXTENSION 2333 TO REPORT THE SPILL. THE GOVERNMENT RESERVES THE RIGHT TO CLEAN UP, PACKAGE AND DISPOSE OF CONTRACTOR SPILLS OCCURRING ON THE SHIPYARD, AND BILL SUCH COSTS TO THE CONTRACTOR.
17. SHOP DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR CONTRACTING OFFICER'S APPROVAL.
18. THE PROJECT SITE IS AN OPERATING NAVAL FACILITY. THE CONTRACTOR SHALL COORDINATE WORK TO PERMIT NAVY OPERATIONS TO BE PERFORMED DURING THE COURSE OF WORK. DELAY CLAIMS DUE TO PERIODIC WORK STOPPAGES OR CHANGES IN WORK SEQUENCE BASED ON IMPACTS FROM SHIPYARD OPERATIONS WILL NOT BE ALLOWED. THE CONTRACTOR MAY NEED TO WORK WEEKENDS TO ENSURE SHIPYARD OPERATIONS ARE NOT IMPACTED.
19. THE CONTRACTOR SHALL ENSURE ALL WORK MEETS THE REQUIREMENTS SPECIFIED IN EM 385-1-1 (CURRENT EDITION, INCLUDING LATEST ERRATA AND CHANGES).
20. IN THE EVENT THAT ARCHAEOLOGICAL RESOURCES ARE IDENTIFIED DURING CONSTRUCTION, WORK SHALL STOP IMMEDIATELY AND CONTRACTING OFFICER SHALL BE CONTACTED FOR FURTHER DIRECTION. WORK SHALL NOT RESUME UNTIL DIRECTED BY THE CONTRACTING OFFICER TO PROCEED.

- 21. UNFORESEEN HAZARDOUS MATERIAL
THE DESIGN HAS BUDGETED ALLOWANCES FOR IDENTIFIED MATERIALS SUCH AS FRIABLE AND NON-FRIABLE ASBESTOS. IF ADDITIONAL 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. CONTRACTOR SHALL REFERENCE SEPARATE "ASBESTOS HAZARDOUS MATERIALS ASSESSMENT" DATE 08/20/15 BY TERRACON CONSULTANTS, INC.

UTILITY NOTES:

- 1. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY INFORMATION AND TIE IN LOCATIONS NEEDED TO COMPLETE THE DESIGN OF NEW UTILITY SYSTEMS AND SITE IMPROVEMENTS. VERIFICATION METHODS SHALL INCLUDE BUT NOT BE LIMITED TO TESTS PITS AND CCTV TO VERIFY LOCATION, ELEVATION, SIZE, MATERIAL, AND ANY OTHER INFORMATION REQUIRED TO COMPLETE THE DESIGN.
2. UTILITIES NOT SHOWN ON THESE PLANS MAY EXIST. THE LOCATION, ELEVATION, SIZE AND MATERIAL OF ALL UTILITIES WILL BE VERIFIED BEFORE PROCEEDING WITH CONSTRUCTION. ALL UTILITY LINES AND ASSOCIATE STRUCTURES, NOT AFFECTED BY THIS PROJECT WILL BE PROTECTED THROUGHOUT ALL PHASES OF WORK.
3. THE LOCATION OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE EXCAVATION OR GROUND PENETRATING WORK WILL BE LOCATED PRIOR TO COMMENCING ANY EXCAVATION OR GROUND PENETRATING WORK. "DIG SAFE" (1-888-344-7233) WILL BE NOTIFIED WITHIN 15 CALENDAR DAYS PRIOR TO THE COMMENCEMENT OF THE EXCAVATION OR GROUND PENETRATING ACTIVITY. THE STATE OF MAINE "DIG SAFE" LAW (TITLE 23, MRSA 3360-A) WILL BE FULLY COMPILED WITH.
4. THE EXCAVATOR SHALL PREPARE A "PWD ME DIG SAFE UTILITY LOCATE REQUEST FORM" AT LEAST 15 CALENDAR DAYS PRIOR TO THE COMMENCEMENT OF THE EXCAVATION OR GROUND PENETRATING ACTIVITY AND SUBMIT THE FORM TO THE CONTRACTING OFFICER (PLEASE SEE QC MANAGER FOR FORM).
5. THE GOVERNMENT WILL LOCATE AND MARK THE UNDERGROUND UTILITIES WITHIN 15 CALENDAR DAYS OF RECEIVING THE DIG SAFE NOTIFICATION.
6. EXCAVATION OR GROUND PENETRATION ACTIVITIES CAN NOT COMMENCE UNTIL THE UTILITIES HAVE BEEN MARKED IN THE FIELD AND THE PWD ME DIG SAFE UTILITY LOCATE REQUEST FORM HAS BEEN RETURNED INDICATING THE PWD ME DIG SAFE REVIEW PROCESS HAS BEEN COMPLETED AND EXCAVATION HAS BEEN APPROVED BY THE CONTRACTING OFFICER.
7. IF THE EXCAVATION OR GROUND PENETRATING ACTIVITIES DO NOT COMMENCE WITHIN 15 DAYS OF DIG SAFE NOTIFICATION OR THE EXCAVATION WORK IS EXPANDED OUTSIDE THE LOCATION ORIGINALLY SPECIFIED IN THE NOTIFICATION, THE EXCAVATOR SHALL RE-NOTIFY DIG SAFE, THE CONTRACTING OFFICER AND THE PWD ME DIG SAFE COORDINATOR.
8. THE CONTRACTOR SHALL MAINTAIN THE UTILITY MARKINGS THROUGHOUT THE CONTRACT PERIOD. IF ADDITIONAL MARKINGS ARE REQUIRED, THE EXCAVATOR SHALL RE-NOTIFY DIG SAFE, THE CONTRACTING OFFICER, AND THE PWD ME DIG SAFE COORDINATOR AT 207-438-1082.
9. ALL SEWER AND DRAIN FRAMES AND GRATES OR COVERS WILL BE ADJUSTED TO MATCH PROPOSED FINISHED GRADE. EXISTING FRAMES AND GRATES OR COVERS WILL BE REMOVED AND NEW FRAMES AND GRATES OR COVERS WILL BE PROVIDED IF EXISTING ITEMS ARE DAMAGED DURING THE COURSE OF WORK.
10. ALL ELECTRIC POWER MANHOLE FRAMES AND COVERS WILL BE ADJUSTED TO MATCH FINISH GRADE. REMOVE EXISTING FRAMES AND COVERS AND PROVIDE NEW FRAMES AND COVERS WHEN DAMAGED DURING THE COURSE OF WORK.
11. SHORING SYSTEMS: MECHANICAL MEANS OF EXCAVATION SHALL NOT BE USED WHEN EXCAVATING WITHIN 61mm (2 INCHES) OF ANY MARKED UNDERGROUND UTILITY UNTIL THE UNDERGROUND UTILITY HAS BEEN EXPOSED. MECHANICAL MEANS MAY BE USED, AS NECESSARY, FOR INITIAL PENETRATION AND REMOVAL OF PAVEMENT, ROCK, OR OTHER MATERIALS REQUIRING USE OF MECHANICAL MEANS OF EXCAVATION. ONCE THE UNDERGROUND UTILITIES HAVE BEEN EXPOSED, FURTHER EXCAVATION SHALL BE PERFORMED EMPLOYING REASONABLE PRECAUTIONS TO AVOID DAMAGE TO THE UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO ANY SUBSTANTIAL WEAKENING OF STRUCTURAL OR LATERAL SUPPORT OF THE UTILITY OR PENETRATION OR DESTRUCTION OF THE UTILITY OR THEIR PROTECTIVE COATINGS.
12. ADJUST ALL GATE VALVE BOXES AND CURB STOP BOXES TO FINISH GRADE. REMOVE EXISTING GATE VALVE BOXES AND CURB STOP BOXES AND PROVIDE NEW GATE VALVE BOXES AND CURB STOP BOXES WHEN DAMAGED DURING THE COURSE OF WORK.
13. THE COST FOR THE ADJUSTMENT OR RELOCATION OF PRIVATE UTILITY PIPES, STRUCTURES AND CASTINGS, INCLUDING BUT NOT LIMITED TO GAS, CABLE TV, AND TELEPHONE, SHALL BE PAID BY THE CONTRACTOR. COMPLETION OF SUCH WORK MAY OR MAY NOT BE COMPLETED BY THE PRIVATE UTILITY OWNER. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE PRIVATE UTILITY COMPANIES. CONTACT: NORTHERN UTILITIES, AT&T/BROADBAND, VERIZON AND ANY OTHER PRIVATE UTILITY OWNERS.

- 14. PREVENT DEBRIS FROM ENTERING INLETS AND BASINS. PROVIDE AND MAINTAIN INLET PROTECTION FOR THE DURATION OF THE WORK. INSPECT INLETS WEEKLY AND AFTER EACH STORM EVENT, AND REMOVE ACCUMULATED DEBRIS. CLEAN ALL STRUCTURES AT THE COMPLETION OF THE WORK.
15. WHERE ITEMS SUCH AS UTILITY STRUCTURES AND EARTHWORK MATERIALS ARE INDICATED BY TYPE, SEE THE MEDOT STANDARD SPECIFICATIONS, HIGHWAY AND BRIDGES, NOVEMBER 2014 EDITION.

CONSTRUCTION NOTES:

- 1. WHEELED OR TRACKED VEHICLES SHALL NOT OPERATE IN THE WATER. EQUIPMENT MAY OPERATE ON SHORE AND REACH INTO THE WATER WITH A BUCKET OR SIMILAR EXTENSION.
2. ALL WORK REQUIRED BELOW THE HIGH WATER LINE SHALL BE COMPLETED AT LOW TIDE.
3. REPAIR AND REPLACEMENT WORK SHALL BE LIMITED TO THE EXISTING FOOTPRINT OF THE BOAT RAMP. NO FILL MATERIAL SHALL BE PLACED OUTSIDE THE LIMITS OF THE BOAT RAMP.
4. THE CONTRACTOR SHALL COORDINATE MATERIAL STORAGE AND LAYDOWN AREAS WITH CONTRACTING OFFICER.
5. ALL CONSTRUCTION MATERIALS SHALL BE TRANSPORTED TO AND FROM THE SITE IN COVERED VEHICLES. THE CONTRACTOR SHALL VACUUM ASSISTED STREET SWEEPER AVAILABLE AT THE SITE ON A DAILY BASIS TO KEEP TRAFFIC AREAS CLEAN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH PORTSMOUTH SHIPYARD OPERATIONS DURING THE PROCESS OF THE WORK.
7. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SEQUENCING PLAN FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOR MAINTAINING SECURITY AT ALL TIMES DURING CONSTRUCTION.
9. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE O.S.H.A. REGULATIONS AND SAFETY REQUIREMENTS.
10. ALL CONSTRUCTION SIGNS SHALL BE DESIGNED TO WITHSTAND 50MPH WINDS VELOCITY WINDS AND ARE PREPARED BY A PROFESSIONAL SIGN COMPANY WITH A MINIMUM OF THREE (3) YEARS EXPERIENCE.
11. WORKING HOURS SHALL COMPLY WITH PNSY.
12. WHERE CONTRACTOR REMOVES EXISTING SITE FEATURES THAT ARE TO REMAIN, TO FACILITATE INSTALLATION OF NEW WORK FOR THIS PROJECT, CONTRACTOR SHALL REPLACE THE EXISTING SITE FEATURES AT CONTRACTORS EXPENSE.
13. THE CONSTRUCTION LIMIT LINE SHOWN ON DRAWING IS AN APPROXIMATION OF THE CONSTRUCTION LIMITS. THE CONTRACTOR IN COORDINATION WITH THE OWNER. OWNER MAY MODIFY THIS LINE TO ACCOMMODATE THE EFFICIENCY OF CONSTRUCTION PROJECT.
14. ALL CONSTRUCTION DETAILS AND SPECIFICATION ARE PROVIDED TO MEET NAVFAC MID ATLANTIC PUBLIC WORKS DEPARTMENT MAINE FOR PORTSMOUTH NAVAL SHIPYARD.

RAIL TRACKS

- 1. CONTRACTOR SHALL COORDINATE WITH PWD-ME CONSTRUCTION OFFICER FOR RECERTIFICATION OF ALL AFFECTED RAIL TRACKS DUE TO WORK AFTER THEIR REINSTALLATION.

DEMOLITION:

- 1. THE CONTRACTOR SHALL PROVIDE CONTROL MEASURES AS REQUIRED BY ENVIRONMENTAL REGULATIONS AND AS REQUIRED TO PREVENT DEBRIS CONTAMINANTS (SOLID, LIQUID OR DISSOLVED) FROM ENTERING THE RIVER.
2. ALL MATERIALS DEMOLISHED AND NOT REUSED OR SALVAGED TO THE GOVERNMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED DAILY FROM THE GOVERNMENT'S PROPERTY. REMOVED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL DEBRIS RESULTING FROM DEMOLITION.

AS BUILT NOTES:

- 1. PLANS HAVE BEEN COMPILED FROM EXISTING RECORD PLAT CONTRACTOR SHALL REVISE 2 SETS OF PAPER DRAWINGS BY RED-LINE PROCESS TO SHOW THE AS-BUILT CONDITIONS DURING THE PROSECUTION OF THE PROJECT. THE CONTRACTOR SHALL KEEP THE AS-BUILT DRAWINGS CURRENT ON A WEEKLY BASIS AND AT LEAST ONE SET AVAILABLE ON THE JOB SITE AT ALL TIMES. THE PLANS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN SECTION 01 78 00.00 22 CLOSEOUT SUBMITTALS.

AS BUILT NOTES:

- 1. CHANGES FROM THE CONTRACT PLANS WHICH ARE MADE IN THE WORK OR ADDITIONAL INFORMATION WHICH MIGHT BE UNCOVERED IN THE COURSE OF CONSTRUCTION MUST BE ACCURATELY AND NEATLY RECORDED AS THEY OCCUR BY MEANS OF DETAILS AND NOTES. THE CONTRACTOR SHALL PREPARE AND PROVIDE TO THE CONTRACTING OFFICER WORKING RECORD (AS-BUILT) DRAWINGS AFTER THE COMPLETION OF EACH DEFINABLE FEATURE OF WORK AS LISTED IN THE CONTRACTOR QUALITY CONTROL PLAN (FOUNDATIONS, UNDERGROUND UTILITIES, STRUCTURAL STEEL, ETC., AS APPROPRIATE FOR THE PROJECT). IF THE CONTRACTOR FAILS TO MAINTAIN THE WORKING AND FINAL RECORD DRAWINGS AS SPECIFIED HEREIN, THE CONTRACTING OFFICER WILL DEDUCT FROM THE MONTHLY PROGRESS PAYMENT AN AMOUNT REPRESENTING THE ESTIMATED COST OF MAINTAINING THE RECORD DRAWINGS. THIS MONTHLY DEDUCTION WILL CONTINUE UNTIL AN AGREEMENT CAN BE REACHED BETWEEN THE CONTRACTING OFFICER AND THE CONTRACTOR REGARDING THE ACCURACY AND COMPLETENESS OF UPDATED DRAWINGS. THE CONTRACTOR SHALL SHOW ON THE WORKING AND FINAL RECORD DRAWINGS, BUT NOT LIMITED TO, THE FOLLOWING INFORMATION:
A. THE ACTUAL LOCATION (ELEVATION AND HORIZONTAL COORDINATES), MATERIALS AND SIZES OF ALL SUB-SURFACE UTILITY LINES. IN ORDER THAT THE LOCATION OF THESE LINES AND APPURTENANCES MAY BE DETERMINED IN THE EVENT THE SURFACE OPENINGS OR INDICATORS BECOME COVERED OVER OR OBTSCURED, SHOW BY OFFSET DIMENSIONS TO TWO PERMANENTLY FIXED SURFACE FEATURES THE END OF EACH RUN INCLUDING EACH CHANGE IN DIRECTION ON THE RECORD DRAWINGS OR HORIZONTAL COORDINATES BASED ON THE SHIPYARD DATUM. LOCATE VALVES, FITTINGS, SPLICE BOXES AND SIMILAR APPURTENANCES BY DIMENSIONING ALONG THE UTILITY RUN FROM A REFERENCE POINT. ALSO, RECORD THE DEPTH BELOW THE SURFACE OF EACH RUN OF PIPE, FITTINGS, VALVES, ETC.
B. THE LOCATION AND DIMENSIONS OF ANY CHANGES WITHIN THE BUILDING STRUCTURE.
C. CORRECT GRADE, ELEVATIONS, CROSS SECTION, OR ALIGNMENT OF ROADS, EARTHWORK, STRUCTURES OR EXISTING AND NEW UTILITIES IF ANY CHANGES WERE MADE FROM CONTRACT PLANS.
D. CHANGES IN DETAILS OF DESIGN OR ADDITIONAL INFORMATION OBTAINED FROM WORKING DRAWINGS SPECIFIED TO BE PREPARED AND/OR FURNISHED BY THE CONTRACTOR; INCLUDING BUT NOT LIMITED TO FABRICATION, ERECTION, INSTALLATION PLANS AND PLACING DETAILS, PIPE SIZES, INSULATION MATERIAL, DIMENSIONS OF EQUIPMENT FOUNDATIONS, ETC.
E. THE TOPOGRAPHY, INVERT ELEVATIONS AND GRADES OF DRAINAGE INSTALLED OR AFFECTED AS PART OF THE PROJECT CONSTRUCTION.
F. CHANGES OR MODIFICATIONS WHICH RESULT FROM THE FINAL INSPECTION.
G. WHERE CONTRACT DRAWINGS OR SPECIFICATIONS PRESENT OPTIONS, SHOW ONLY THE OPTION SELECTED FOR CONSTRUCTION ON THE FINAL AS-BUILT PRINTS.
H. SYSTEMS DESIGNED OR ENHANCED BY THE CONTRACTOR, SUCH AS HVAC CONTROLS, FIRE ALARM, FIRE SPRINKLER, AND IRRIGATION SYSTEMS.
I. MODIFICATIONS (INCLUDE WITHIN MODIFICATION PRICING THE COST TO CHANGE WORKING AND FINAL RECORD DRAWINGS TO REFLECT MODIFICATIONS) AND COMPLIANCE WITH THE PROCEDURES SPECIFIED IN SECTION 01 78 00.00 22 CLOSEOUT SUBMITTALS.
J. WHERE UTILITY LOCATIONS DIFFER FROM THOSE IDENTIFIED ON THE PLANS.

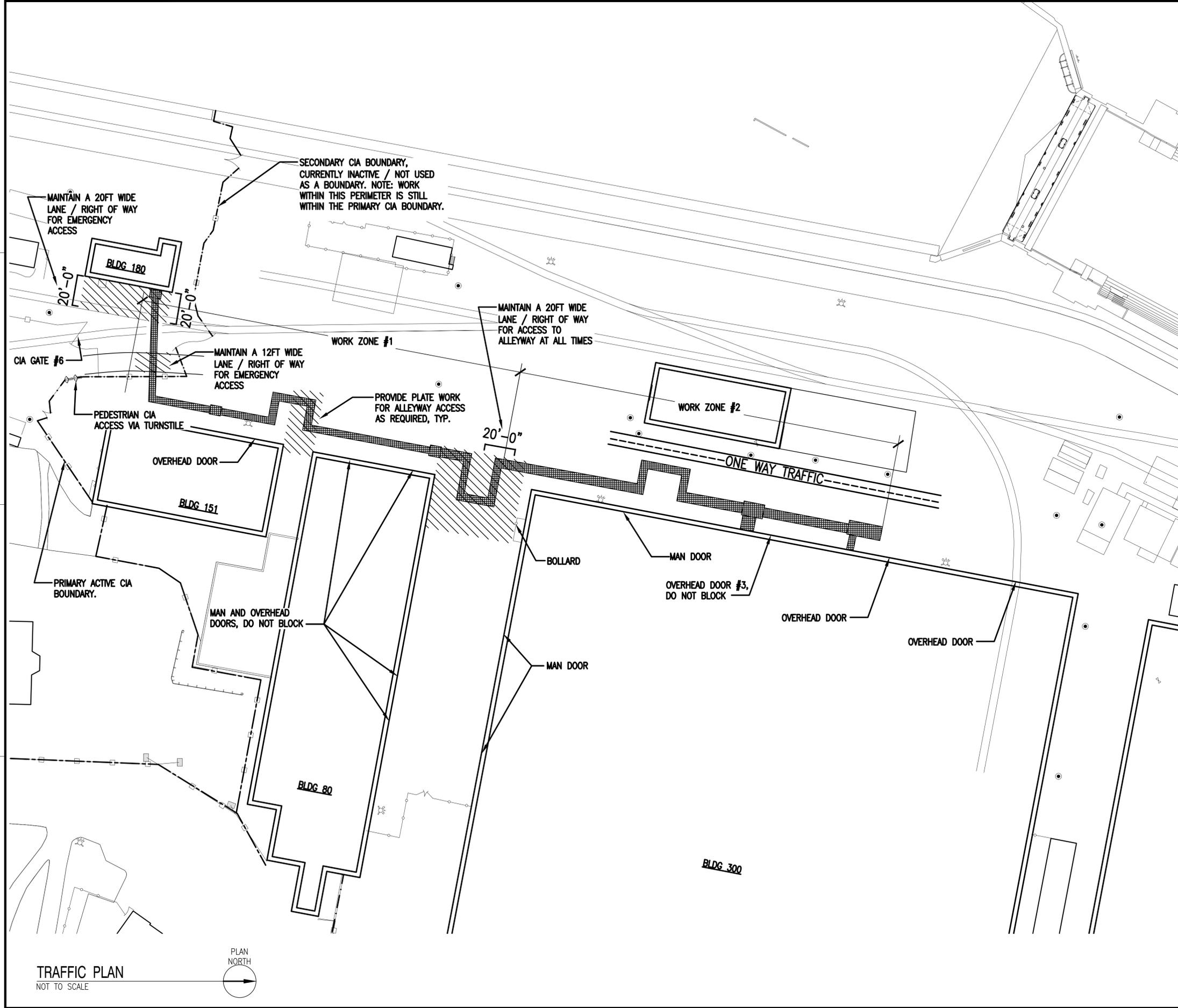
TRAFFIC NOTES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING THE CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING THE PROGRESS OF THE WORK. A DETAILED TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE TRAFFIC CONTROL PLAN SHALL CONSIDER ALL AFFECTED PORTSMOUTH SHIPYARD OPERATIONS. THE CONTRACTOR SHALL UPDATE THE TRAFFIC CONTROL PLAN AS REQUIRED DURING THE PROJECT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING TRAFFIC CONTROL SIGNAGE AND INFORMATIONAL SIGNS DURING THE PROCESS OF WORK.
4. TRAFFIC CONTROL DEVICES SHALL BE PROVIDED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL PROVIDE POST MOUNTED AND WALL MOUNTED TRAFFIC CONTROL AND INFORMATION SIGNS IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AS PUBLISHED BY THE DEPARTMENT OF COMMERCE.

Project information block containing logos for NAVFAC, Casco Bay Engineering, and JV, along with project details: PROJECT NO.: 1370673, CONSTR. CONTR. NO.: N40085-###-###-###, NAVFAC DRAWING NO.: 12706358, SHEET 2 OF 29, G-002 MS-15-XXXX, and a vertical title block: NOTES, RME REPAIR STEAM AND CONDENSATE, PWSY BLDG 180 TO BLDG 300, RM14-0205, PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE, NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC, NAVAL SHIPYARD - PORTSMOUTH, MAINE, PUBLIC WORKS DEPARTMENT - MAINE, DEPARTMENT OF THE NAVY.

FILE NAME: \\medch\dca\clients\NAVFAC\Shipyard\Bldg180\Bldg180\_PWSY\1370673\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PWSY B180 to G002.dwg LAYOUT NAME: G002 PLOTTED: Thursday, January 14, 2016 8:22am USER: jrd@igaz

FILE NAME: P:\Data\PROJECTS\2015 Proj\15-068 NAVFAC TD-1\Draw\DWG\2016 Project Update Drawings\Bldg 180-300\G-003 1-7-16.dwg LAYOUT NAME: G-003 PLOTTED: Friday, January 15, 2016 - 11:24am USER: Tony



**TRAFFIC PLAN**  
NOT TO SCALE

**GENERAL SHEET NOTES**

1. SEE SHEET G002 FOR LEGEND AND GENERAL NOTES.
2. ONE WAY TRAFFIC DURING CONSTRUCTION SHALL BE MAINTAINED BY PROJECT FLAGGING PERSONNEL.
3. VEHICLE ACCESS NORMALLY RESTRICTED AT CIA GATE 6. CIA ACCESS IS PROVIDED AT CIA GATE 2, NEAR BLDG 14.
4. STORAGE AREA AVAILABILITY, SIZE, AND QUANTITY ARE LIMITED AND NOT GUARANTEED. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM CONTRACTING OFFICER FOR ALL STAGING AREAS, SUCH APPROVAL IS REQUIRED PRIOR TO USE. PLAN ON MINIMUM OF 21 DAYS AFTER AN OFFICIAL REQUEST HAS BEEN SUBMITTED WITH THE CONTRACTING OFFICER.
5. WRITTEN REQUEST FOR ACCESS AT CIA GATES OTHER THAN CIA GATE 2 WILL BE CONSIDERED BUT SUCH ACCESS CAN NOT BE GUARANTEED. ACCESS AT CIA GATE 6 IS NORMALLY RESTRICTED.
6. DOORS: CONTRACTOR SHALL PROVIDE TEMPORARY PLATING OR PHASE WORK IN MANNER THAT MAINTAINS ACCESS TO ALL DOORWAYS. THESE DRAWINGS IDENTIFY KEY DOORWAYS. CONTRACTOR SHALL PLAN ON A TOTAL OF 8 MAN DOORS AND 4 OVERHEAD DOORS.
7. PEDESTRIAN ACCESS: CONTRACTOR SHALL PROVIDE FOR SAFE PEDESTRIAN CROSSING THROUGH THE CONSTRUCTION ACTIVITY. THE MAIN ROUTE OF EXISTING PEDESTRIAN TRAFFIC IS FROM THE EXISTING IDENTIFIED TURNSTILE OF CIA GATE 6 AND RUNNING NORTHERLY APPROXIMATELY PARALLEL TO AND ADJACENT TO THE EXISTING TURNSTILE.
8. MINIMUM PHASING REQUIREMENTS: WORK SHALL BE COMPLETED IN A PHASED MANNER WITHIN THE IDENTIFIED WORK ZONES. INTENT IS THAT ALL WORK IN EACH ZONE IS COMPLETED TO INCLUDE TESTING AND TRENCH AND SITE RESTORATION WITHIN EACH ZONE PRIOR TO PROCEEDING TO THE NEXT ZONE. COORDINATE SEQUENCING OF WORK ZONES WITH GOVERNMENT.

**LEGEND**

- — — — — CIA FENCE LINE (PRIMARY BOUNDARY)
- - - - - CIA FENCE LINE (SECONDARY BOUNDARY)

	ED APPR
	DATE 1/14/2016
	DESCRIPTION ISSUE OF BID DOCUMENT
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SEAL	
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FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO DATE	
DES: A/E	CHK: A/E
FM/DM	XXX
BRANCH MANAGER	
FEAD/PM/AAE	
FIRE PROTECTION	
X	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE FORTSMOUTH NAVAL SHIPYARD - PROFESSIONAL IN CHARGE KITTERY, MAINE	
<b>STEAM AND CONDENSATE REPAIR FROM B180 TO B300</b>	
<b>PHASING STAGING/STOCKPILE &amp; TRAFFIC PLAN</b>	
PROJECT NO.: 1370673	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO. #####	
SHEET 3 OF ##	
G-003 MS-15-NUM	
DRAWING REVISION: 10 OCTOBER 2014	

GENERAL CIVIL NOTES:

1. STRUCTURAL DESIGN COMPLIES WITH THE REQUIREMENTS OF:

A. 2012 INTERNATIONAL BUILDING CODE.

B. UFC 1-200-01, GENERAL BUILDING REQUIREMENTS, 1 JULY 2013, WITH CHANGE 1, 1 SEPTEMBER 2013.

C. UFC 3-301-01, STRUCTURAL ENGINEERING, 1 JUNE 2013, WITH CHANGE 1, 15 MAY 2014.

2. ALL DIMENSIONS, ELEVATIONS AND CONDITIONS SHALL BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.

3. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CONTRACTING OFFICER. NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 15 DAYS IN ADVANCE OF ANY OUTAGES.

4. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND ERECTION UNLESS OTHERWISE DIRECTED. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE DOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECTS.

5. METHODS OF DEMOLITION, CONSTRUCTION, AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.

6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT NOT BE LIMITED TO TURBIDITY, PH AND DUST. PROPER EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED THROUGH SITE STABILIZATION. CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH MAINE'S BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL.

7. ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS AND PERMITS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT, US ARMY CORPS OF ENGINEERS, AND STATE/LOCAL WETLAND CONTROL.

ABBREVIATION:

AB	ANCHOR BOLT	L	ANGLE
ADDL	ADDITIONAL	LL	DOUBLE ANGLE
ARCH &	ARCHITECT AND	LB	POUND
		LF	LINEAR FOOT
		LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
BLDG	BUILDING	MAX	MAXIMUM
BM	BEAM	MECH	MECHANICAL
BOT	BOTTOM	MFR	MANUFACTURER
BRG	BEARING	MIN	MINIMUM
BTWN	BETWEEN	MISC	MISCELLANEOUS
CIP	CAST-IN-PLACE CONCRETE		
CJ	CONTROL JOINT	NF	NEAR FACE
CL	CENTERLINE	NO	NUMBER
CLR	CLEAR	NS	NEAR SIDE
CNJ	CONSTRUCTION JOINT	NTS	NOT TO SCALE
COL	COLUMN	OC	ON CENTER
CONC	CONCRETE	OF	OUTSIDE FACE
CONN	CONNECTION	OPNG	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
CONTR	CONTRACTOR		
CY	CUBIC YARD	P	PIER DESIGNATION
		PL	PLATE
DIA	DIAMETER	PL	PREFABRICATED
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DISCONT	DISCONTINUOUS	PSI	POUNDS PER SQUARE INCH
DWG	DRAWING		
		REQ, REQD	REQUIRED
(E), EX, EXIST	EXISTING		
EA	EACH	SECT	SECTION
EF	EACH FACE	SIM	SIMILAR
EL, ELEV	ELEVATION	SPAC	SPACING
EQ	EQUAL	SPECS	SPECIFICATIONS
EQUIP	EQUIPMENT	STD	STANDARD
ES	EACH SIDE	STL	STEEL
EW	EACH WAY	STR	STRAIGHT
EXP	EXPANSION	STRUCT	STRUCTURAL
EXT	EXTERIOR		
		T	TOP
		T&B	TOP AND BOTTOM
FLG	FLANGE	TOC, T/CONC	TOP OF CONCRETE
		T/FTG, TOF	TOP OF FOOTING
FV	FIELD VERIFY	TEMP	TEMPERATURE
		TYP	TYPICAL
HOR, HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HSS	HOLLOW STRUCTURAL SHAPE		
		VER, VERT	VERTICAL
HT	HEIGHT	VIF	VERIFY IN FIELD
IF	INSIDE FACE	w/	WITH
IN	INCH	w/O	WITHOUT
INFO	INFORMATION	WT	WEIGHT
JT	JOINT		
K	KIP (1 KIP = 1,000 LBS)		
KSI	KIPS PER SQUARE INCH		

**GENERAL SHEET NOTES**

1. SEE SHEET G001 FOR LEGEND AND G002 FOR GENERAL NOTES.

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FM/DM: XXX

BRANCH MANAGER

LEAD/PM/AC

FIRE PROTECTION: X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD - PROFESSIONAL ENGINEER  
 KATELYN MARVE  
 RME REPAIR STEAM AND CONDENSATE PNSY  
 BLDG 180 TO BLDG 300, RM14-0205  
 CIVIL NOTES

PROJECT NO.: 1370673

CONSTR. CONTR. NO. N40085-##-##-####

NAVFAC DRAWING NO.

SHEET 4 OF ##

C-001 MS-15-NUM

DRAWING REVISION: 10 OCTOBER 2014

FILE NAME: P:\Data\PROJECTS\2015 Proj\15-058 NAVFAC TD-1\Draw\Civil\2016 Project Update Drawings\Bldg 180-300\C100a 180-300 1-01-16.dwg LAYOUT NAME: C001 PLOTTED: Friday, January 15, 2016 11:28am USER: Tony

MATCH LINE - SHEET C102



**SITE PLAN**  
SCALE: 1" = 40'

**GENERAL SHEET NOTES**

- SEE SHEET G001 FOR LEGEND AND G002 FOR GENERAL NOTES.
- ALL PAVEMENT RESTORATION SHALL CONFORM TO DETAIL 1/C-401

**LEGEND**

- REINSTALL EXIST. MH COVER
- REINSTALL EXIST. TRENCH COVER
- CIA FENCE

**DEMOLITION KEYNOTES**

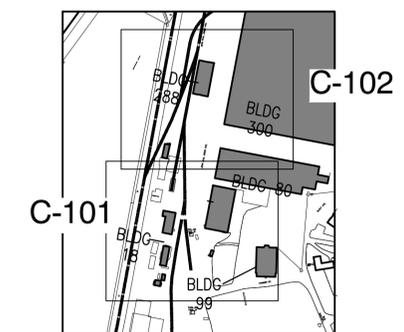
- REMOVE EXISTING MANHOLE FRAME AND COVER
- REMOVE EXISTING TRENCH COVER. SAWCUT ASPHALT AND REMOVE SOIL AS REQUIRED.

**NEW WORK KEYNOTES**

- REINSTALL EXISTING MH FRAME AND COVER. PROVIDE NEW ASPHALT AS REQUIRED (SEE DETAILS 1&4/C401 AND 1&2/C-402)
  - RESEAL JOINTS AND INSTALL EXISTING TRENCH COVERS. PROVIDE NEW ASPHALT AS REQUIRED (SEE DETAILS 1&4/C-401 AND 1&2/C-402)
- \* RESEAL JOINTS AND REINSTALL EXISTING TRENCH COVERS (SEE DETAIL 2/C-402 AND 3/C-402)

**EROSION CONTROL**

- ADD TEMPORARY SILT SACKS AT ADJACENT STORMWATER CATCH BASINS DURING CONSTRUCTION. TYP.



**KEYPLAN**  
SCALE: N.T.S.

**GRAPHIC SCALE**



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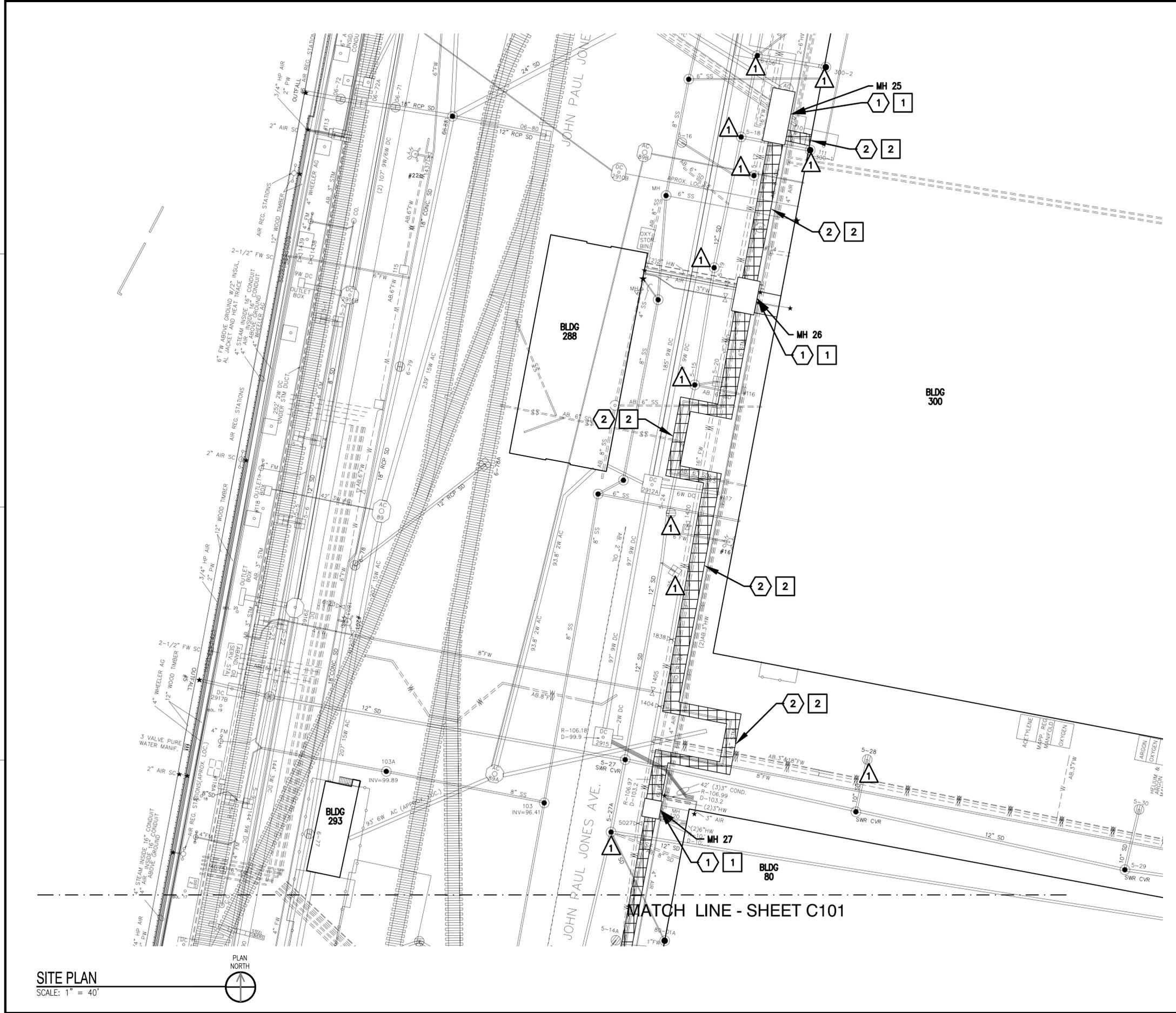
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO DATE		
DES: A/E	DRW: FP	CHK: A/E
FM/MD	XXX	
BRANCH MANAGER		
LEAD/PM/AC		
FIRE PROTECTION	X	

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT - MAINE  
PORTSMOUTH NAVAL SHIPYARD  
NAVAL SHIPYARD - PORTSMOUTH, NH  
KITEER, WALTER  
RME REPAIR STEAM AND CONDENSATE PNSY  
BLDG 180 TO BLDG 300, RM14-0205  
TRENCH AND TRENCH COVER PLAN

PROJECT NO.:	1370673
CONSTR. CONTR. NO.:	N40085-##-##-####
NAVFAC DRAWING NO.:	12706360
SHEET	5 OF ##

FILE NAME: P:\Data\PROJECTS\2015 Proj\15-056 MAWFC TO-1\Drawings\2016 Project Update Drawings\Bldg 180-300\C100s 180-300 1-01-16.dwg LAYOUT NAME: C101 PLOTTED: Friday, January 15, 2016 - 11:27am USER: Tony

FILE NAME: P:\Data\PROJECTS\2015 Proj\15-056 NAVFAC TD-1\Draw\Civil\2016 Project Update Drawings\Bldg 180-300\180-300 1-01-16.dwg LAYOUT NAME: C102 PLOTTED: Friday, January 15, 2016 - 11:27am USER: Tony



**SITE PLAN**  
SCALE: 1" = 40'



**GENERAL SHEET NOTES**

- SEE SHEET G001 FOR LEGEND AND G002 FOR GENERAL NOTES.
- ALL PAVEMENT RESTORATION SHALL CONFORM TO DETAIL 1/C-401

**LEGEND**

- REINSTALL EXIST. MH COVER
- REINSTALL EXIST. TRENCH COVER

**DEMOLITION KEYNOTES**

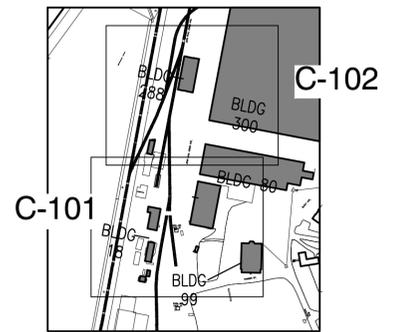
- REMOVE EXISTING MANHOLE FRAME AND COVER
- REMOVE EXISTING TRENCH COVER. SAWCUT ASPHALT AND REMOVE SOIL AS REQUIRED.

**NEW WORK KEYNOTES**

- REINSTALL EXISTING MH FRAME AND COVER. PROVIDE NEW ASPHALT AS REQUIRED (SEE DETAILS 1&4/C401 AND 1&2/C-402)
  - RESEAL JOINTS AND INSTALL EXISTING TRENCH COVERS. PROVIDE NEW ASPHALT AS REQUIRED (SEE DETAILS 1&4/C-401 AND 1&2/C-402)
- \* RESEAL JOINTS AND REINSTALL EXISTING TRENCH COVERS (SEE DETAIL 2/C-402 AND 3/C-402)

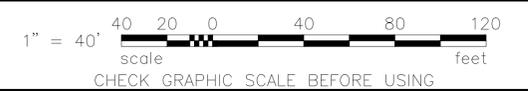
**EROSION CONTROL**

- ADD TEMPORARY SILT SACKS AT ADJACENT STORMWATER CATCH BASINS DURING CONSTRUCTION. TYP.



**KEYPLAN**  
SCALE: N.T.S.

**GRAPHIC SCALE**



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	DESCRIPTION SYN
	ISSUE OF BID DOCUMENT
	APPR
<small>APPROVED FOR COMMANDER NAVFAC</small> <small>ACTIVITY</small> <small>SATISFACTORY TO DATE</small> <small>DES: A/E</small> <small>DRW: FP</small> <small>CHK: A/E</small> <small>FM/DM: XXX</small> <small>BRANCH MANAGER</small> <small>LEAD/PM/AC</small> <small>FIRE PROTECTION: X</small>	
<b>EROSION CONTROL</b> 1. ADD TEMPORARY SILT SACKS AT ADJACENT STORMWATER CATCH BASINS DURING CONSTRUCTION. TYP.	
<b>KEYPLAN</b> SCALE: N.T.S.	
<b>GRAPHIC SCALE</b> 1" = 40' scale feet CHECK GRAPHIC SCALE BEFORE USING	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE MAINE SHIPYARD - PORTSMOUTH <b>Rme REPAIR STEAM AND CONDENSATE PNSY</b> <b>BLDG 180 TO BLDG 300, RM14-0205</b> <b>TRENCH AND TRENCH COVER PLAN</b>	
<small>PROJECT NO.: 1370673</small> <small>CONSTR. CONTR. NO. N40085-##-##-####</small> <small>NAVFAC DRAWING NO. 12706361</small> <small>SHEET 6 OF ##</small> <b>C-102 MS-15-NUM</b> <small>DRAWING REVISION: 10 OCTOBER 2014</small>	

FILE NAME: P:\Data\PROJECTS\2015 Proj\15-058 NAVFAC TO-1\Draw\2016 Project Update Drawings\Bldg 180-300 1-05-16.dwg LAYOUT NAME: C401 PLOTTED: Friday, January 15, 2016 - 11:28am USER: Tony

**GENERAL SHEET NOTES**

1. SEE SHEET G001 FOR LEGEND AND G002 FOR GENERAL NOTES.
2. REFER TO CIVIL NOTES ON SHEET C-001 FOR ADDITIONAL INFORMATION.

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DES | DRAW | CHK

PM/DM

BRANCH MANAGER

LEAD/FRAME

FIRE PROTECTION X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 NAVAL SHIPYARD - PORTSMOUTH, NH  
 KITTERY, MAINE  
 RME REPAIR STEAM AND CONDENSATE PNSY  
 BLDG 180 TO BLDG 300, RM14-0205

PROJECT NO.: 1370673

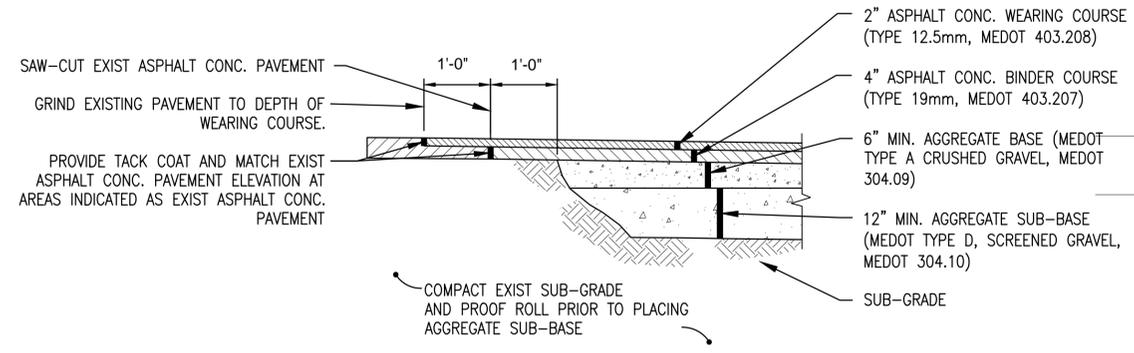
CONSTR. CONTR. NO.  
 N40085-##-##-###

NAVFAC DRAWING NO.  
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SHEET 7 OF ##

C-401 MS-15-NUM

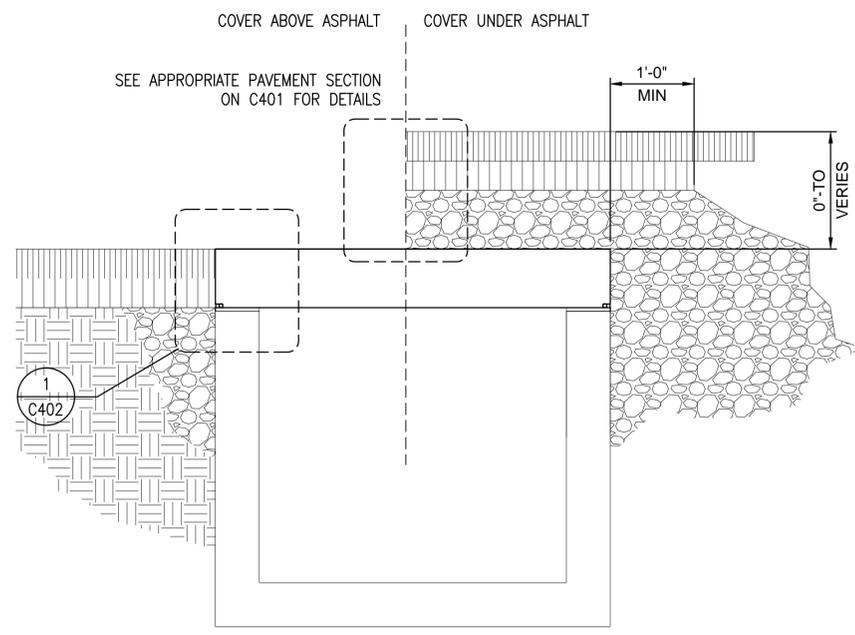
DRAWFORM REVISION: 10 OCTOBER 2014



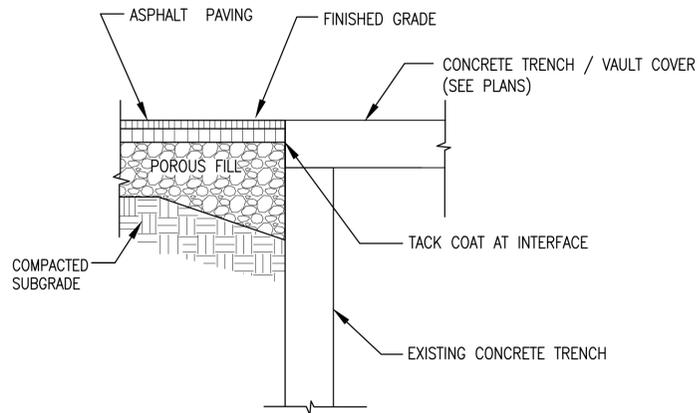
**TYPICAL ASPHALT CONCRETE PAVEMENT NOTES:**

1. PROVIDE AND CONSTRUCT HOT MIX ASPHALT IN ACCORDANCE WITH MEDOT STANDARD SPECIFICATIONS, DIVISION 400 - PAVEMENTS.
2. PROVIDE AND CONSTRUCT SUB-BASE AND BASE MATERIALS IN ACCORDANCE WITH MEDOT STANDARD SPECIFICATIONS, DIVISION 300 - BASES.
3. MATERIALS SHALL COMPLY WITH APPLICABLE SECTIONS OF MEDOT SPECIFICATIONS DIVISION 700 - MATERIALS.

**1 TYPICAL ASPHALT CONCRETE PAVEMENT DETAIL-CIA**  
 NTS

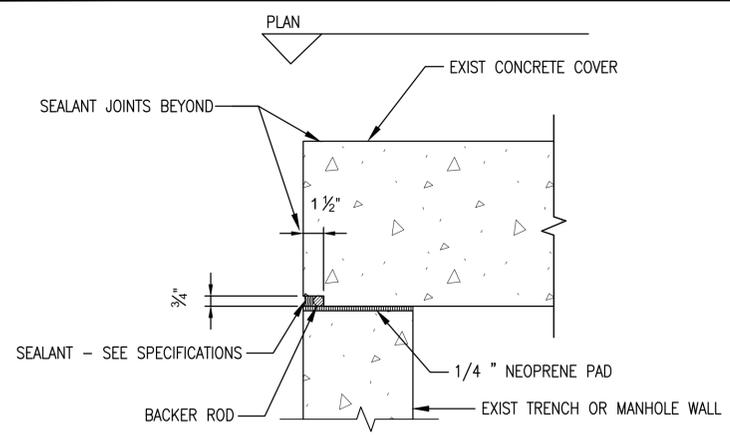


**3 TYPICAL TRENCH COVER REINSTALLATION DETAIL**  
 NTS

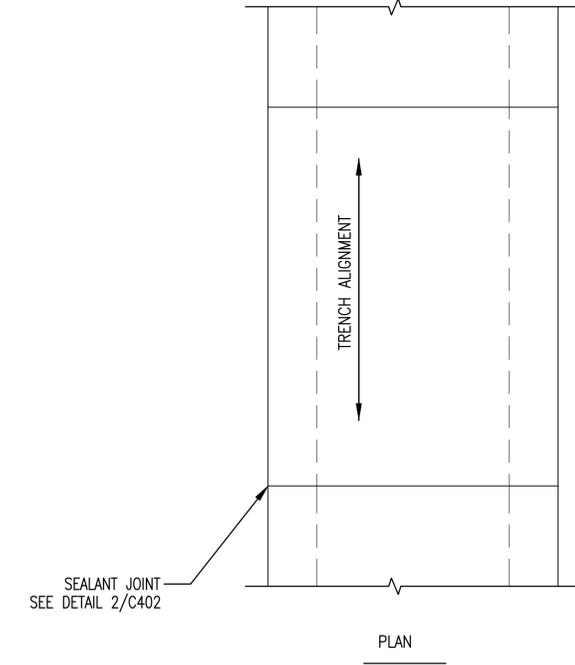


**4 NEW ASPHALT AND PAVING SECTION @ EXIST VAULT AND TRENCH COVERS**  
 NTS

FILE NAME: P:\Data\PROJECTS\2015 Proj\15-058 NAVFAC TO-1\Draw\2016 Project Update Drawings\Blg 180-300\C400s 180-300 1-05-16.dwg LAYOUT NAME: C402 PLOTTED: Friday, January 15, 2016 - 11:29am USER: Tony



NOTE: PROVIDE 4 LIFTING INSERTS PER 12" THICK COVER. PROVIDE 2 LIFTING INSERTS PER 8" THICK COVER. SEE DETAIL 4/C402



2 TYPICAL JOINT BETWEEN COVERS NTS

1 SEALANT JOINT DETAIL NTS

GENERAL SHEET NOTES

1. SEE SHEET G001 FOR LEGEND AND G002 FOR GENERAL NOTES.
2. REFER TO CIVIL NOTES ON SHEET C-001 FOR ADDITIONAL INFORMATION.

SYN	DESCRIPTION	DATE	APPR
0	ISSUE OF BID DOCUMENT	01/14/2016	ED



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PER COMMANDER NAFAC	
ACTIVITY	
SATISFACTORY TO	DATE
DES	DRW
CHK	
PM/DM	
BRANCH MANAGER	
TEAD/P/ME	
FIRE PROTECTION	X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 NAVAL SHIPYARD - PORTSMOUTH, MAINE  
 RME REPAIR STEAM AND CONDENSATE PNSY  
 BLDG 180 TO BLDG 300, RM14-0205

PROJECT NO:	1370673
CONSTR. CONTR. NO:	N40085-##-##-###
NAVFAC DRAWING NO:	#####
SHEET	8 OF ##

**EROSION CONTROL NOTES**

**A. GENERAL NOTES**

DURING CONSTRUCTION, AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ONE TIME DURING CONSTRUCTION. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHALL BE KEPT AT A MAXIMUM OF 30 DAYS.

EROSION AND SEDIMENT CONTROL PRACTICES INCLUDE THE USE OF THE FOLLOWING: SILT FENCE BARRIERS, TURF REINFORCEMENT MATTING, TEMPORARY CHECK DAMS, INLET PROTECTION, TEMPORARY CONSTRUCTION EXITS, TEMPORARY DIVERSION DIKES, SEDIMENT BASINS, AND PUMPED DISCHARGE SEDIMENT CONTROL DEVICES.

CONTRACTOR SHALL DESIGNATE AN ENVIRONMENTAL MANAGER WHO SHALL BE RESPONSIBLE FOR INSPECTING ALL INSTALLED EROSION CONTROL MEASURES, MONITORING THEIR EFFECTIVENESS, AND TO ASSESS RE-VEGETATION PROGRESS.

SUBMIT EROSION AND SEDIMENT CONTROL INSPECTION REPORTS TO THE CONTRACTING OFFICER ONCE EVERY 7 CALENDAR DAYS AND BEFORE AND AFTER (24 HOURS) A STORM EVENT PRIOR TO PERMANENT STABILIZATION. EROSION AND SEDIMENT CONTROL MEASURES REQUIRING MODIFICATION OR REPAIRS, OR IF ADDITIONAL MEASURES ARE DEEMED NECESSARY MUST BE COMPLETED WITHIN 7 DAYS AND PRIOR TO THE NEXT STORM EVENT.

THE PLACEMENT OF SEDIMENT BARRIERS SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED BY MEDEP STANDARDS AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS HEREIN. EROSION CONTROL MEASURES SHALL CONFORM TO THE LATEST REVISION MAINE EROSION AND SEDIMENT CONTROL BMPs, PUBLISHED BY BUREAU OF LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

CONTRACTOR SHALL PREPARE DETAILED SCHEDULE AND MARKED UP SITE PLAN INDICATING AREAS OF WORK AND DATES OF DISTURBANCE. EROSION CONTROL MEASURES SHALL REMAIN INSTALLED AND MAINTAINED UNTIL ALL EXPOSED SLOPES HAVE A MINIMUM 85% VIGOROUS PERENNIAL VEGETATIVE COVER. EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT VEGETATIVE STABILIZATION BEING ATTAINED.

CONTRACTOR SHALL INSTALL ADDITIONAL MEASURES TO CONTROL EROSION AS IS NECESSARY GIVEN SITE AND WEATHER CONDITIONS. SITE ENTRANCES AND ADJACENT ROADWAYS SHALL BE PERIODICALLY SWEEPED TO MINIMIZE TRACKING OF SEDIMENT AND DEBRIS. ALL CATCH BASINS AND DRAINAGE INLETS SUBJECT TO RUNOFF FROM PROJECT SITE SHALL BE CLEANED AFTER THE SITE HAS BEEN FULLY STABILIZED.

KEEP DUST DOWN AT ALL TIMES, INCLUDING DURING NONWORKING PERIODS. SPRINKLE OR TREAT, WITH DUST SUPPRESSANTS, THE SOIL AT THE SITE, HAUL ROADS, AND OTHER AREAS DISTURBED BY OPERATIONS. DRY POWER BROOMING WILL NOT BE PERMITTED. INSTEAD, USE VACUUMING, WET MOPPING, WET SWEEPING, OR WET POWER BROOMING.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON DISTURBED AREAS NOT RECEIVING FINAL GRADING WITHIN 30 DAYS TO 1 YEAR. HAY BALES ARE NOT AN APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICE FOR PNSY. AS SUCH, THEIR USE WILL NOT BE PERMITTED.

SOIL STOCKPILES SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS. PER 1000 S.F. OR WITH A 4" LAYER OF EROSION CONTROL MIX WITHIN 7 DAYS OF STOCKING. SMALL STOCKPILES SHALL BE COVERED WITH A TARP.

**B. VEGETATIVE MEASURES**

1. TOPSOIL STOCKPILING. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR LATER USE ON CRITICAL AREAS AND ALL OTHER AREAS TO BE SEEDED. THE STOCKPILE SHALL NOT BE COMPACTED AND SHALL BE STABILIZED AGAINST EROSION WITH TEMPORARY SEEDING.
2. TEMPORARY SEEDING
  - (A) BEDDING - REMOVE STONES AND TRASH THAT WILL INTERFERE WITH SEEDING THE AREA. WHERE FEASIBLE, TILL THE SOIL TO DEPTH OF ABOUT 3" TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.
  - (B) FERTILIZER - FERTILIZER SHALL BE UNIFORMLY SPREAD OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. A 10-10-10 MIX OF FERTILIZER SHALL BE APPLIED AT A RATE OF 300 POUNDS PER ACRE (OR 7 POUNDS PER 1,000 SF)
  - (C) SEED MIXTURE - USE ANY OF THE FOLLOWING IN UPLAND AREAS:

SEEDING RATE: SPECIES	PER ACRE	PER 1,000 S.F.	DATES	DEPTH
WINTER RYE	112 LBS.	2.6 LBS.	8/15-10/1	1-1 1/2 IN
OATS	80 LBS.	1.8 LBS.	4/1-7/1	1-1 1/2 IN
ANNUAL GRASS	40 LBS.	0.9 LBS.	4/1-7/1	1/4 IN
SUDAN GRASS	40 LBS.	0.9 LBS.	5/15-8/15	1/2-1 IN
PERENNIAL	40 LBS.	0.9 LBS.	8/15-9/15	1/4 IN

- (A) MULCHING - WHERE IT IS IMPRACTICAL TO INCORPORATE FERTILIZER AND SEED INTO MOIST SOIL, THE SEEDED AREA SHALL BE MULCHED TO FACILITATE GERMINATION. MULCH IN THE FORM OF HAY OR STRAW SHALL BE APPLIED AT A RATE OF 70 TO 90 LBS PER 1,000 SF
- (B) INSPECTION - CONTRACTOR SHALL INSPECT THE SITE TWICE PER MONTH UNTIL A MINIMUM OF 85% OF THE AREA IS VEGETATED WITH VIGOROUS GROWTH.

**C. STRUCTURAL MEASURES**

SILT SCREEN FENCES: SILT SCREEN FENCES SHALL BE INSTALLED IN THE AREAS SHOWN ON THE DRAWINGS. THEY ARE INTENDED PRIMARILY TO INTERCEPT AND FILTER SMALL VOLUMES OF "SHEET FLOWING" RUNOFF, OR AS SEDIMENT TRAPS IN SMALL SWALES. SILT SCREEN FENCES WILL FUNCTION 6 MONTHS OR LONGER IF KEPT FREE OF SEDIMENT ACCUMULATIONS (SEE DETAILS FOR ADDITIONAL INFORMATION).

SWALES: TEMPORARY AND/OR PERMANENT SWALES SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS. SWALES ARE USED TO CONVERT SHEET FLOW TO CHANNEL FLOW AND CONVEY THE RUNOFF TO A PERMANENT CHANNEL, STORM DRAIN, OR DETENTION/SEDIMENT STRUCTURE. SWALES ARE INTENDED TO INTERCEPT RUNOFF AND DIVERT IT FROM EXPOSED OR NEWLY SEEDED AREAS TOWARD AN ACCEPTABLE OUTLET (GRASS SWALES, SEDIMENTATION POND, ETC.) OR TO REDUCE THE VELOCITY OF RUNOFF FLOWING DOWN FROM A DRAINAGE AREA.

**D. MAINTENANCE**

DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED:

1. SEEDED AREAS SHALL BE FERTILIZED, MULCHED, AND SHALL BE SEEDED TO INSURE NEGATIVE ESTABLISHMENT.
2. ALL DIVERSION CHANNELS AND SWALES SHALL BE CHECKED WEEKLY AND REPAIRED UNTIL ADEQUATE VEGETATION IS ESTABLISHED
3. ALL SILT SCREEN FENCES SHALL BE CHECKED WEEKLY. REPAIRS SHALL BE MADE TO CORRECT UNDERMINING OR DETERIORATION OF THE BARRIERS.

**E. WINTER CONSTRUCTION**

"WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR IF NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.

WINTER EROSION CONTROL MEASURES SHALL CONFORM TO MAINE EROSION AND SEDIMENT CONTROL BMPs SECTION A-3.

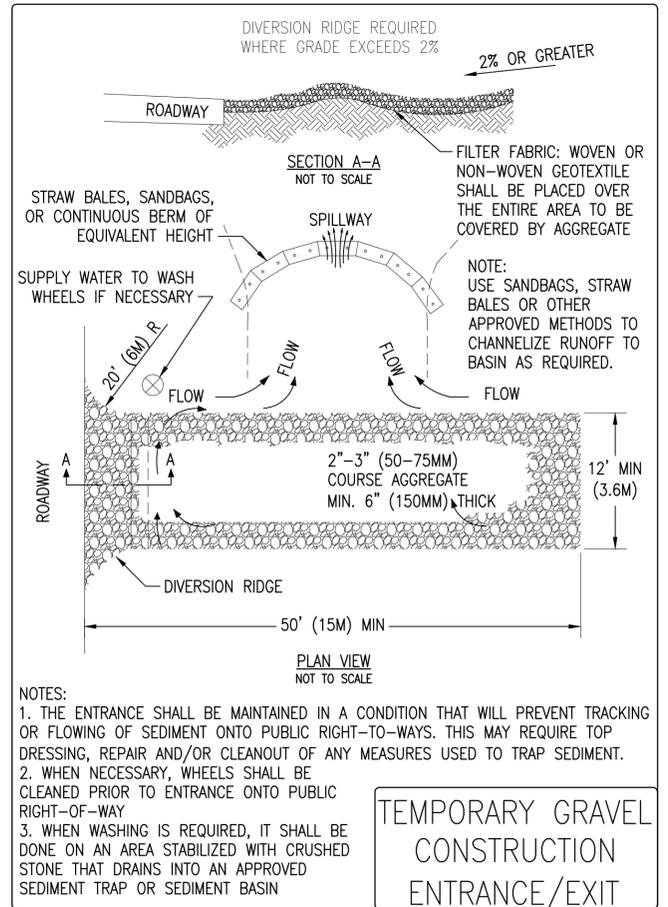
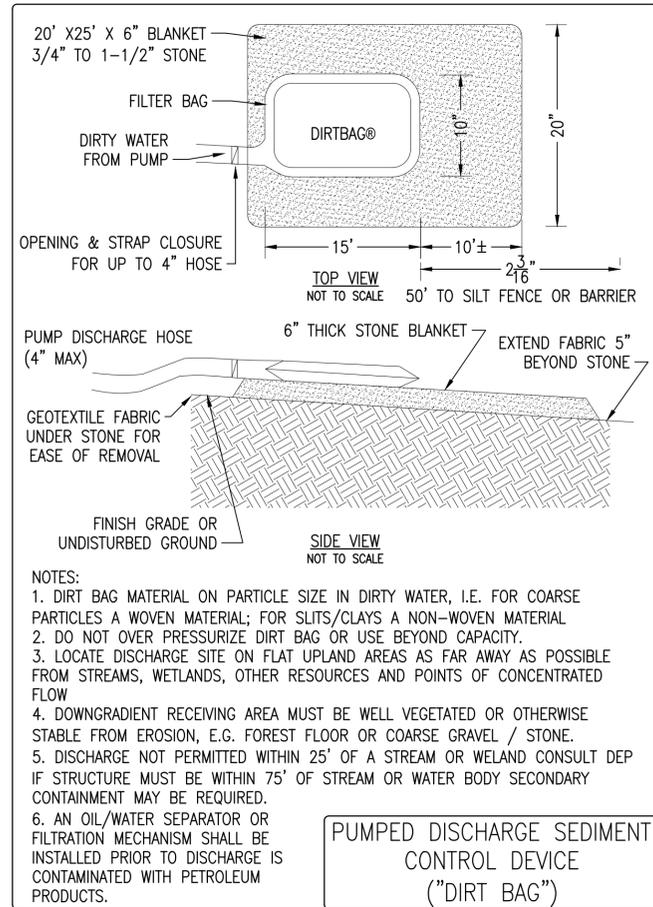
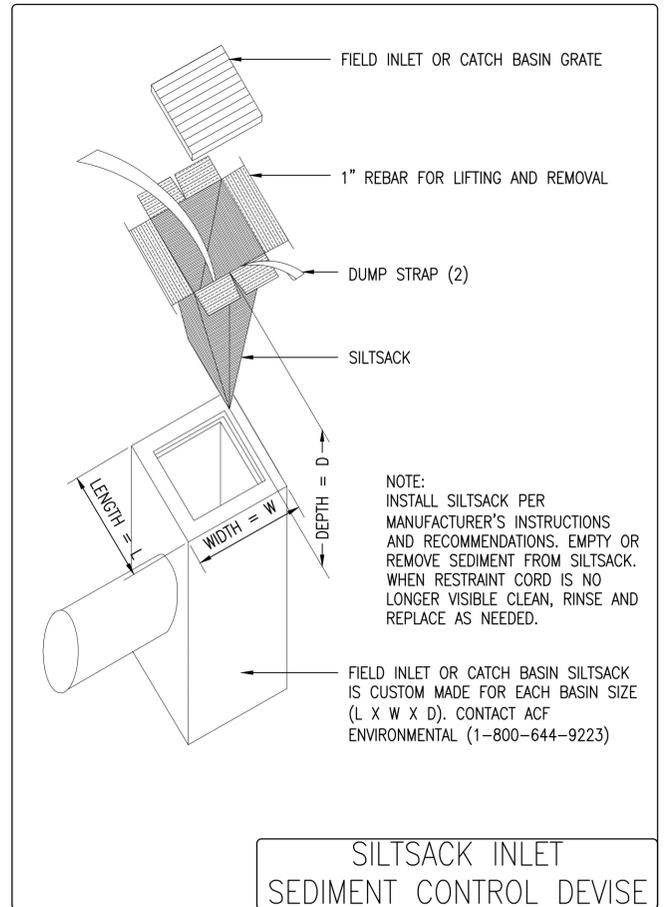
WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.

DISTURBED SOILS - BY SEPTEMBER 15 THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED SOILS ON THE SITE. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THE CONTRACTOR SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

1. STABILIZE THE SOIL WITH TEMPORARY VEGETATION - BY OCTOBER 1 THE CONTRACTOR SHALL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET. LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE CONTRACTOR SHALL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE CONTRACTOR SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN THE "STABILIZE THE SOIL WITH MULCH" SECTION BELOW

**E. WINTER CONSTRUCTION CONT:**

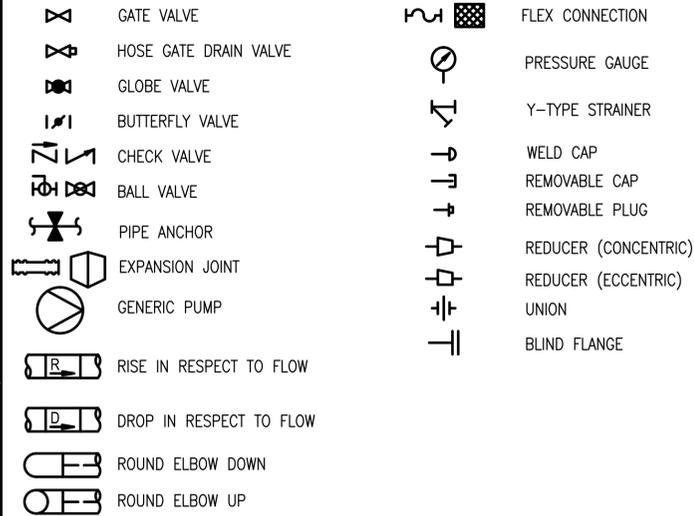
2. STABILIZE THE SOIL WITH SOD - THE CONTRACTOR SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO HE DISTURBED SOIL.
3. STABILIZE THE SOIL WITH MULCH - BY NOVEMBER 15 THE CONTRACTOR SHALL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH, IMMEDIATELY AFTER APPLYING THE MULCH. THE CONTRACTOR SHALL ANCHOR THE MULCH WITH NETTING OR OTHER METHOD TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.



FILE NAME: P:\Data\PROJECTS\2015 Proj\15-058 NAVFAC To-10\Drawings\2016 Project Update Drawings\Blg 180-300\5005 180-300 1-06-16.dwg LAYOUT NAME: C500 PLOTTED: Friday, January 15, 2016 - 11:31am USER: Tony

ED	APPR			
1/14/2016	DATE			
0	ISSUE OF BID DOCUMENTS			
0	DESCRIPTION			
APPROVED:				
FOR COMMANDER NAVFAC:				
ACTIVITY:				
SATISFACTORY TO DATE:				
DES	CDW	CD	CHK	ED
PA/DM	XXX			
BRANCH MANAGER				
FEAD/FRAME				
FIRE PROTECTION				
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE RME REPAIR STEAM AND CONDENSATE PNSY BLDG 180 TO BLDG 300, RM14-0205				
PROJECT NO.: 1370673 CONSTR. CONTR. NO.: N40085-##-##-### NAVFAC DRAWING NO.: ##### SHEET 10 OF ##				
C-500 MS-15-NUM				
DRAWFORM REVISION: 10 MARCH 2009				

**PIPE SYMBOLS**



**MECHANICAL GENERAL NOTES:**

- LEGEND IS GENERAL IN NATURE AND MAY INDICATE MORE INFORMATION THAN IS APPLICABLE TO PROJECT. SEE PLANS FOR SPECIFIC SYMBOLS AND ABBREVIATIONS.
- PROVIDE ALL MATERIALS, VALVES, HANGERS, ETC. AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
- COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
- LOCATE ALL MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
- VERIFY DIMENSIONS AND CONNECTION SIZE WITH FURNISHED EQUIPMENT.
- COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED AND FINAL CONNECTIONS TO EQUIPMENT FURNISHED.
- PIPING IS INDICATED DIAGRAMMATICALLY AND ALL REQUIRED FITTINGS ARE NOT INDICATED. PROVIDE ALL FITTINGS REQUIRED TO PROVIDE A COMPLETE PIPING SYSTEM.
- THE DRAWINGS SHOW VARIOUS PIPING SYSTEMS SCHEMATICALLY AND DO NOT ATTEMPT TO SHOW EXACT DETAILS OF ALL PIPING OR ALL OFFSETS THAT MAY BE REQUIRED. VERIFY ALL DIMENSIONS, ELEVATIONS AND CONNECTIONS THAT ARE DETERMINED BY EQUIPMENT SELECTION AND ADJUST SYSTEMS TO ENSURE THAT EQUIPMENT, PIPE, ETC., CAN BE INSTALLED IN THE ALLOTTED SPACE. NO ADDED COMPENSATION SHALL BE PERMITTED FOR VARIATION DUE TO EQUIPMENT SELECTION.
- NOT ALL REQUIRED PIPE SUPPORTS ARE INDICATED. PROVIDE SUPPORTS IN ACCORDANCE WITH ASME B31.1 (POWER PIPING), LATEST EDITION. MAXIMUM PIPE SUPPORT SPACING SHALL BE IN ACCORDANCE WITH TABLE 121.5 (SUGGESTED PIPE SUPPORT SPACING).
- ALL PIPING BENDS SHALL BE LONG RADIUS UNLESS NOTED OTHERWISE.
- PROVIDE FLUID TIGHT PLUGS, CAPS, OR CLASS 150 BLIND FLANGES AT ALL PIPE TERMINATIONS.
- ALL STEAM AND CONDENSATE PIPING, INCLUDING VALVES, STEAM TRAPS, STRAINERS, FLANGES, ETC., SHALL BE RATED FOR A DESIGN PRESSURE AND TEMPERATURE OF 150 PSIG AT 450 DEGREES FAHRENHEIT. ALL STEAM AND CONDENSATE ISOLATION VALVES SHALL BE RATED FOR A DIFFERENTIAL PRESSURE ACROSS THE VALVE SEATS OF 150 PSID AT 450 DEGREES FAHRENHEIT WHEN THE VALVES ARE IN THE IN THE FULLY CLOSED POSITION AND SEAT LEAKAGE CLASSIFICATION OF CLASS IV IN ACCORDANCE WITH ANSI/FCI 70-2 (CONTROL VALVE SEAT LEAKAGE).

STEAM TRAP SCHEDULE (T)	
TAG NO.	T-1
PIPING DESCRIPTION	STEAM MAIN
TYPE OF TRAP	IBT
CONDENSATE DEMAND (LBS/HR)	100
FLOW DIRECTION	HORIZONTAL
SIZING DIFFERENTIAL PRESSURE (PSIG)	100
APPROX. RATED TRAP CAPACITY @ OPERATING DIFFERENTIAL PRESSURE (LBS/HR)	118
MAXIMUM OPERATING DIFFERENTIAL PRESSURE (PSIG)	200
STEAM TRAP MIN. DESIGN PRESSURE AND TEMPERATURE (PSIG/°F)	400/800
END CONNECTION SIZE (CONNECTION TYPE)	3/4" (NPT)
NOTES:	1, 2, 3, AND 4

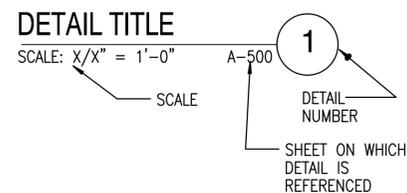
**NOTES:**

- STEAM TRAPS SHALL BE UNINSULATED.
- IBT = INVERTED BUCKET TRAP.
- SIZING DIFFERENTIAL PRESSURE SHALL BE DEFINED AS THE TRAP INLET PRESSURE MINUS THE TRAP OUTLET PRESSURE OR THE BACK PRESSURE IN CONDENSATE LINE DOWNSTREAM OF TRAP.
- TRAP VALVE STATION (TVS) SHALL INCLUDE INTEGRAL STRAINER, BLOWDOWN VALVE, TRAP INLET AND OUTLET ISOLATION VALVES, AND TEST VALVE. CHECK VALVE SHALL BE PROVIDED DOWNSTREAM OF TVS.

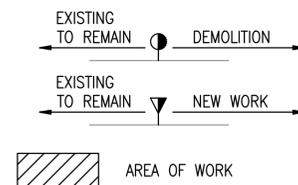
**PIPE LINE ABBREVIATIONS**

CA	COMPRESSED AIR
COND, CR	CONDENSATE RETURN
EXIST	EXISTING
HS	HOT WATER SUPPLY
HR	HOT WATER RETURN
ST, STM	STEAM

**DETAIL/SECTION TITLE**



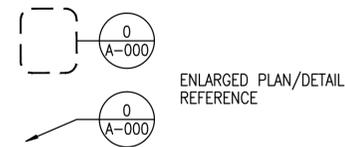
**CONSTRUCTION INTERFACE**



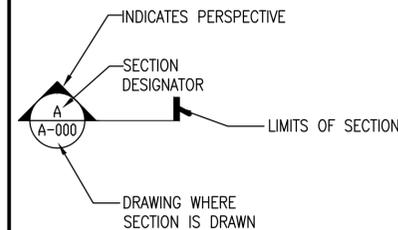
**MECHANICAL ABBREVIATIONS**

BOP	BOTTOM OF PIPE
BLDG	BUILDING
CIA	CONTROLLED INDUSTRIAL AREA
CL	CENTER LINE OF PIPE ELEVATION
CONC	CONCENTRIC
DN	DOWN
ED	ELECTRICAL DUCTBANK
EL	ELEVATION
ELL	ELBOW
EXIST/EXST	EXISTING
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
HP	HIGH PRESSURE (125 PSIG OPERATING)
IBT	INVERTED BUCKET TRAP
MH	MANHOLE
NTS	NOT TO SCALE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
PSIG	POUNDS PER SQUARE INCH GAUGE
RED	REDUCER-REDUCING
SCH	SCHEDULE
SD	STORM DRAIN
S	SANITARY

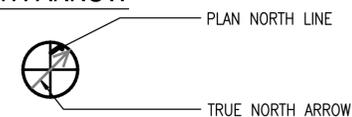
**DETAIL/SECTION CALLOUT SYMBOL**



**SECTION CUT SYMBOL**



**NORTH ARROW**



SUMP PUMP SCHEDULE	
TAG NO.	SUMP PUMP
SERVICE	VALVE MANHOLE
TYPE	HIGH TEMPERATURE, CORROSION RESISTANT SUBMERSIBLE
FLOW (GPM)	50
HEAD (FT WG)	32
MAX SOLID SIZE (IN)	2
DISCHARGE SIZE (IN)	2
MAXIMUM OPERATING TEMPERATURE (°F)	200
MAX HP	1
VOLTAGE / PHASE / FREQUENCY	208/1/60
NOTES:	1, 2

**NOTES:**

- PROVIDE WITH POWER WHIP TO SEALED JUNCTION BOX.
- CONNECT JUNCTION BOX TO SITE POWER AS DIRECTED BY NAVFAC.

DATE	01/14/2016	JPC
DESCRIPTION	ISSUE OF BID DOCUMENT	APPR
APPROVED		
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO	DATE	
DES	JPC	
DRW	KC	
CHK	CB	
PM/DM	ROGER ROY	
BRANCH MANAGER	NATHAN MAHER	
HEAD/PAVE	AMIN BAHRLOUR PM&E	
FIRE PROTECTION	X	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE RME REPAIR STEAM AND CONDENSATE PNSY BLDG 180 TO BLDG 300, RM14-0205 MECHANICAL LEGEND		
EPROJCT NO.:	1370673	
CONSTR. CONTR. NO.:	N40085-###-###-###	
NAVFAC DRAWING NO.:	12706366	
SHEET	10	OF 29
M-001	MS-15-XXXX	
DRAWING REVISION: 10 OCTOBER 2014		

FILE NAME: \\mcd\dfs\clients\yaf\USShip\Main\85860\_PNSY\180to300\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY B180 to M001.dwg LAYOUT NAME: M001 PLOTTED: Thursday, January 14, 2016 - 8:42am USER: jrodriquez

MATCH LINE - SHEET MD102



**DEMOLITION PLAN**  
SCALE: 1" = 20'



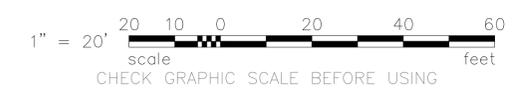
**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATION AND GENERAL NOTES.
- REMOVE AND RETAIN EXISTING TRENCH COVERS FOR REUSE EXCEPT AS NOTED ON THE CIVIL DRAWINGS.
- DEMOLISH EXISTING STEAM AND CONDENSATE PIPE SUPPORTS FOR THE DEMOLISHED STEAM AND CONDENSATE PIPING.
- SEE M-600 SERIES FOR DEMARCATION OF NEW AND EXISTING STEAM PIPING AND POINTS OF CONNECTION FOR STEAM AND CONDENSATE.

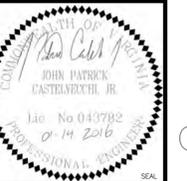
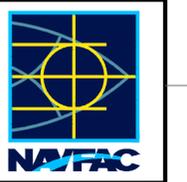
**DEMOLITION KEYNOTES**

- DEMOLISH EXISTING 3" CONDENSATE IN EXISTING TRENCH.
- DEMOLISH EXISTING STEAM AND CONDENSATE CONNECTIONS TO BLDG 151 IN MH 28.
- DEMOLISH EXISTING CONDENSATE EXPANSION LOOP IN EXISTING TRENCH.
- DEMOLISH EXISTING 1-1/4" CONDENSATE IN EXISTING TRENCH.
- DEMOLISH EXISTING 6" STEAM IN EXISTING TRENCH.
- NOT USED.
- NOT USED.
- EXISTING STEAM EXPANSION LOOP IN EXISTING TRENCH TO REMAIN.
- DEMOLISH EXISTING 6" STEAM PIPING IN EXISTING TRENCH WITHIN 10' OF EXISTING MH 27 AND 28. ALL OTHER STEAM PIPING BETWEEN MH 27 AND 28 TO REMAIN.

**GRAPHIC SCALE**



DATE	DESCRIPTION	APPR	JPC
01/14/2016	ISSUE OF BID DOCUMENT		



APPROVED

FIR COMMANDER NAVFAC

ACTIVITY

DESIGNED BY: JPC  
DRAWN BY: KC  
CHECKED BY: CB  
DATE: ROGER ROY

BRANCH MANAGER: NATHAN MAHER  
TEAM LEADER: AMIN BAHRLOUR, PM&E

FIRE PROTECTION

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
PUBLIC WORKS DEPARTMENT - MAINE

PORTSMOUTH NAVAL SHIPYARD  
KITERY, MAINE

RME REPAIR STEAM AND CONDENSATE  
PNSY BLDG 180 TO BLDG 300, RM14-0205

DEMOLITION PLAN

PROJECT NO.: 1370673  
CONSTR. CONTR. NO.: N40085-#-#-#-#-#

NAVFAC DRAWING NO.: 12706367

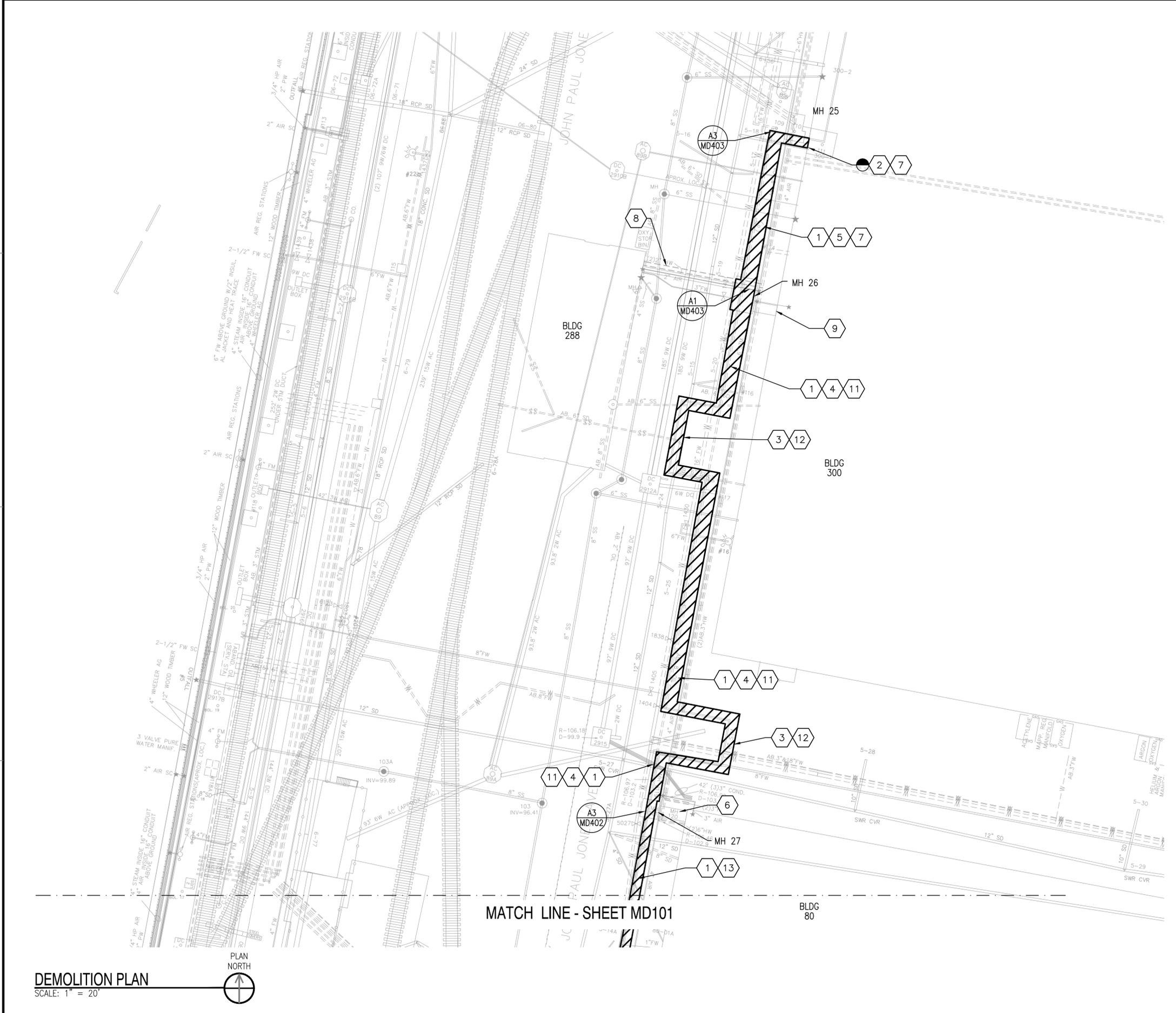
SHEET 11 OF 29

MD101 MS-15-XXXX

DRAWING REVISION: 10 OCTOBER 2014

FILE NAME: \\mcd\dfs\clients\WAF\Shipyard\Main\85860\_PNSY\151\Bldg\Design\Mech\Sheet3.dwg LAYOUT NAME: MD101 PLOTTED: Thursday, January 14, 2016 - 8:46am USER: jpc@navfac

FILE NAME: \\mcd\dfs\clients\USNav\85860\_PNSY\1810 to MD102.dwg LAYOUT NAME: MD102 - PLOTTED: Thursday, January 14, 2016 - 8:47am USER: jodriguez



**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATION AND GENERAL NOTES.
- REMOVE AND RETAIN EXISTING TRENCH COVERS FOR REUSE EXCEPT AS NOTED ON THE CIVIL DRAWINGS.
- DEMOLISH EXISTING STEAM, CONDENSATE, HS & HR PIPE SUPPORTS FOR THE DEMOLISHED STEAM, CONDENSATE, HS & HR PIPING.
- SEE M-600 SERIES FOR DEMARCATION OF NEW AND EXISTING STEAM PIPING AND POINTS OF CONNECTION FOR STEAM AND CONDENSATE.

**DEMOLITION KEYNOTES**

- DEMOLISH EXISTING 3" CONDENSATE IN EXISTING TRENCH.
- DEMOLISH EXISTING STEAM AND CONDENSATE CONNECTIONS AND BUILDING 300 ISOLATION VALVES. SEE DETAIL A3/M103 FOR EXISTING CONDITIONS INSIDE BUILDING 300.
- DEMOLISH EXISTING CONDENSATE, HS & HR EXPANSION LOOPS IN EXISTING TRENCH.
- DEMOLISH EXISTING 6" HS AND HR IN EXISTING TRENCH.
- DEMOLISH EXISTING 6" STEAM PIPING IN EXISTING TRENCH WITHIN 10' OF EXISTING MH 25 AND 26. ALL OTHER STEAM PIPING IN EXISTING TRENCH BETWEEN MH 25 AND 26 TO REMAIN.
- EXISTING STEAM AND CONDENSATE BRANCH CONNECTIONS IN EXISTING TRENCH TO BUILDING 80 TO REMAIN.
- EXISTING 6" HS AND HR IN EXISTING TRENCH TO REMAIN.
- EXISTING 2" HS AND HR IN EXISTING TRENCH TO BUILDING 288 TO REMAIN.
- EXISTING 4" HS AND HR IN EXISTING TRENCH TO BUILDING 300 TO REMAIN.
- NOT USED.
- DEMOLISH EXISTING 6" STEAM PIPING IN EXISTING TRENCH WITHIN 10' OF EXISTING MH 26 AND 27. ALL OTHER STEAM PIPING IN EXISTING TRENCH BETWEEN MH 26 AND 27 TO REMAIN.
- EXISTING STEAM EXPANSION LOOP TO REMAIN.
- DEMOLISH EXISTING 6" STEAM PIPING IN EXISTING TRENCH WITHIN 10' OF EXISTING MH 27 AND 28. ALL OTHER STEAM PIPING IN EXISTING TRENCH BETWEEN MH 27 AND 28 TO REMAIN.

**GRAPHIC SCALE**



**DEMOLITION PLAN**  
SCALE: 1" = 20'



DATE	01/14/2016	JPC
DESCRIPTION	ISSUE OF BID DOCUMENT	0
SW		

APPROVED

FOR COMMANDER NAFAC

ACTIVITY

SATISFACTORY TO DATE

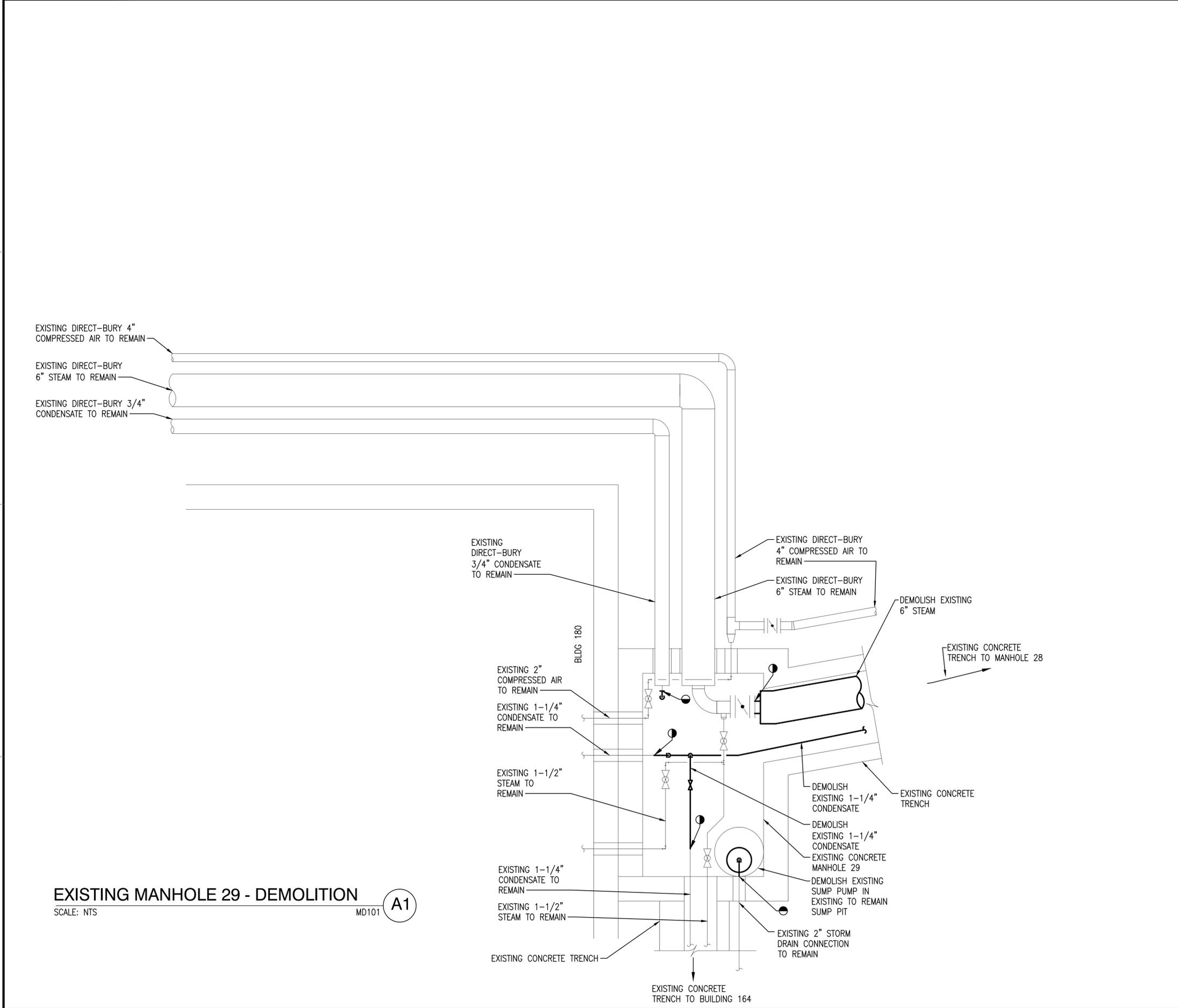
DES	JPC	DRW	KC	CHK	CB
FW/DW	ROGER ROY				
BRANCH MANAGER	NATHAN MAHER				
TEAM/PM/EA	AMIN BAHROUR, PM&E				

FIRE PROTECTION X

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
NAVAL SHIPYARD - PORTSMOUTH, MA  
PORTSMOUTH NAVAL SHIPYARD - MAINE  
RME REPAIR STEAM AND CONDENSATE  
PNSY BLDG 180 TO BLDG 300, RM14-0205  
DEMOLITION PLAN

EPROJECT NO.: 1370673  
CONSTR. CONTR. NO.: N40085-###-###-###  
NAVFAC DRAWING NO.: 12706368  
SHEET 12 OF 29  
MD102 MS-15-XXXX  
DRAWFORM REVISION: 10 OCTOBER 2014

FILE NAME: \\med\dfs\Clients\NAVFAC\Shipyard\NAVFAC\PSNY\151515\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PWSY B180 to MD401.dwg LAYOUT NAME: MD401 PLOTTED: Thursday, January 14, 2016 8:49am USER: jrodiguez



**GENERAL SHEET NOTES**

1. SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

ISSUE OF BID DOCUMENT	DATE	JPC	APPR
0	01/14/2016		

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

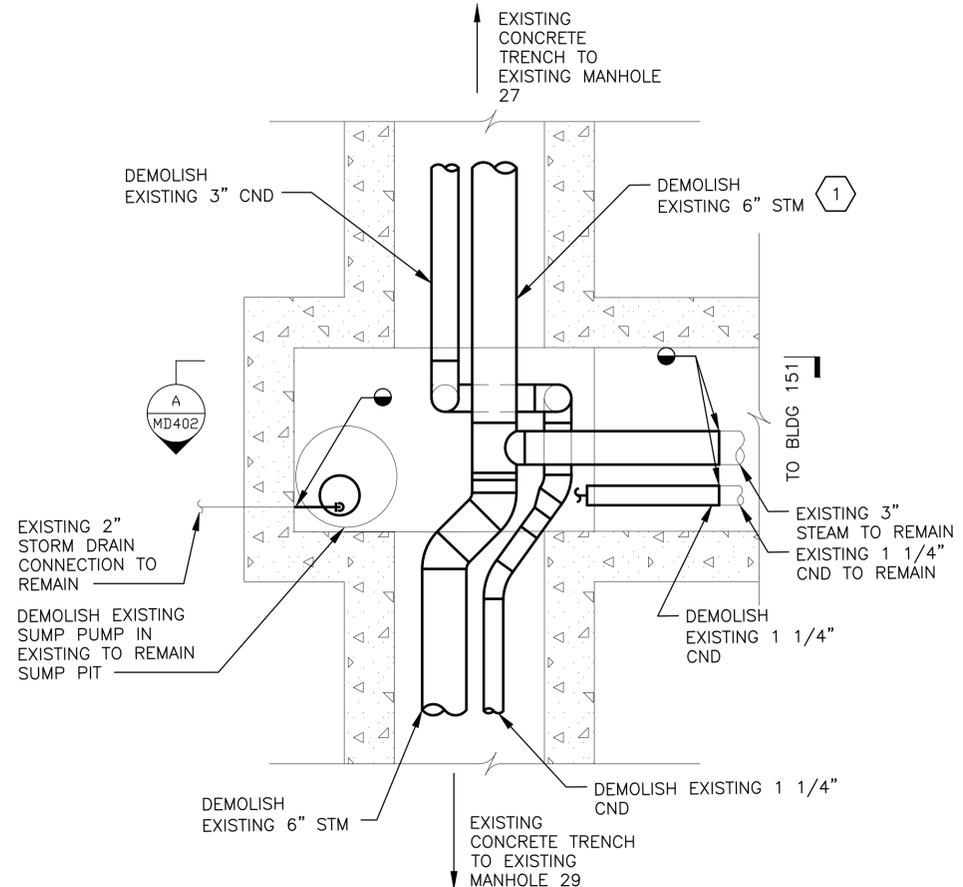
DES	JPC	DRW	KC	CHK	CB
PM/DM	ROGER ROY				
BRANCH MANAGER	NATHAN MAHER				
TEAM/PAK	AMIN BAHRLOUR PM&E				

FIRE PROTECTION

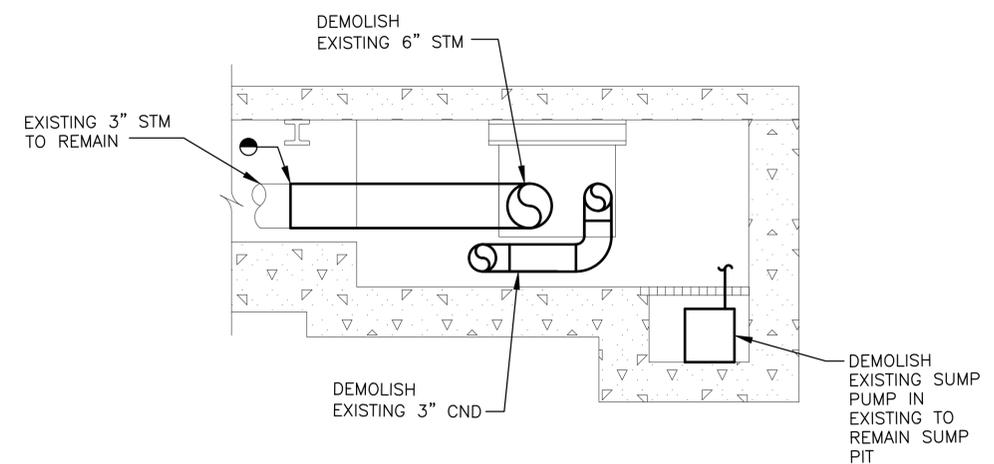
DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 RME REPAIR STEAM AND CONDENSATE  
 PWSY BLDG 180 TO BLDG 300, RM14-0205  
 KITTERY, MAINE  
 STEAM MANHOLES PIPING-DEMOLITION

PROJECT NO.: 1370673  
 CONSTR. CONTR. NO. N40085-###-###-###  
 NAVFAC DRAWING NO. 12706370  
 SHEET 13 OF 29  
 MD401 MS-15-XXXX  
DRAWING REVISION: 10 OCTOBER 2014

FILE NAME: \\mod\dfs\clients\NAVFAC\USNAVY\USNAVY\55866\_PNSY1101EM\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY B180 to MD402.dwg LAYOUT NAME: MD402 PLOTTED: Thursday, January 14, 2016 - 8:50am USER: jodriguez

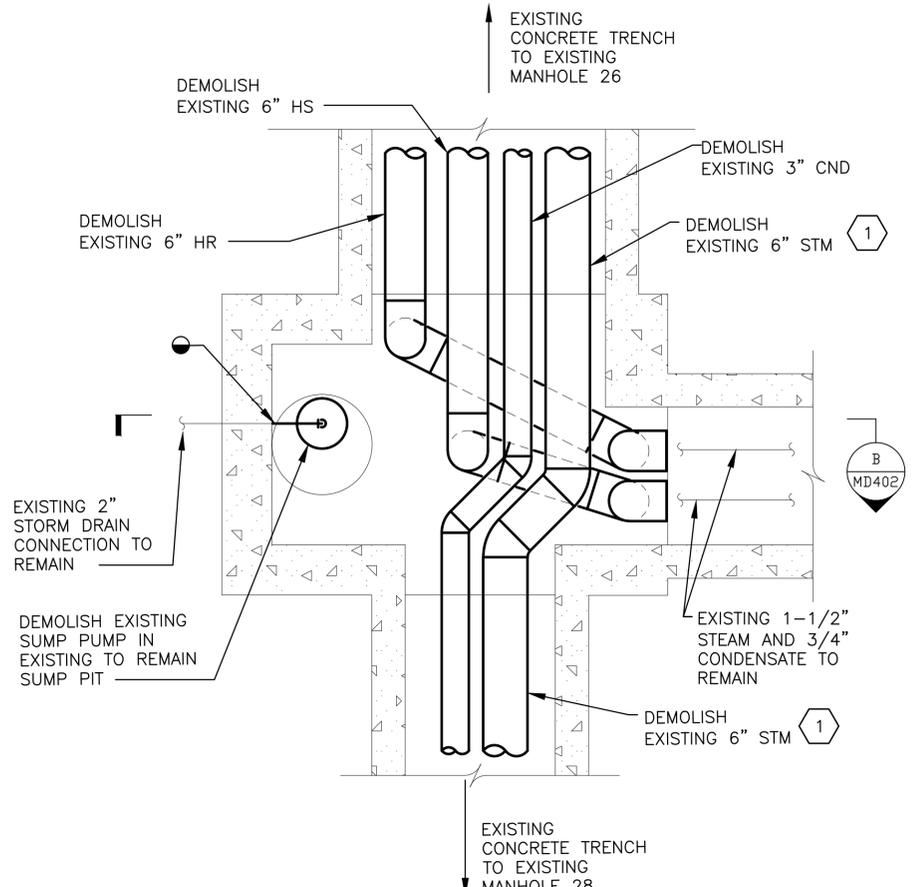


**PLAN**  
SCALE: NTS

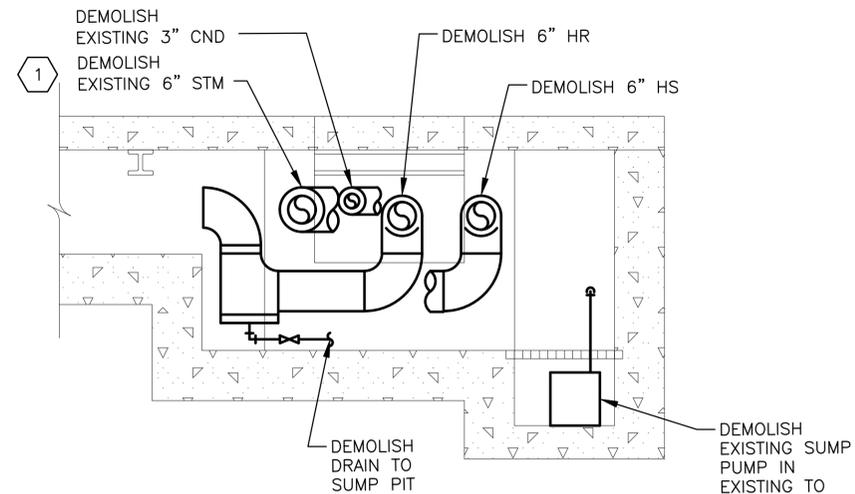


**SECTION A**  
SCALE: NTS  
MD402

**EXISTING MANHOLE 28 - DEMOLITION**  
SCALE: NTS  
MD101



**PLAN**  
SCALE: NTS



**SECTION B**  
SCALE: NTS  
MD402

**EXISTING MANHOLE 27 - DEMOLITION**  
SCALE: NTS  
MD102

**GENERAL SHEET NOTES**

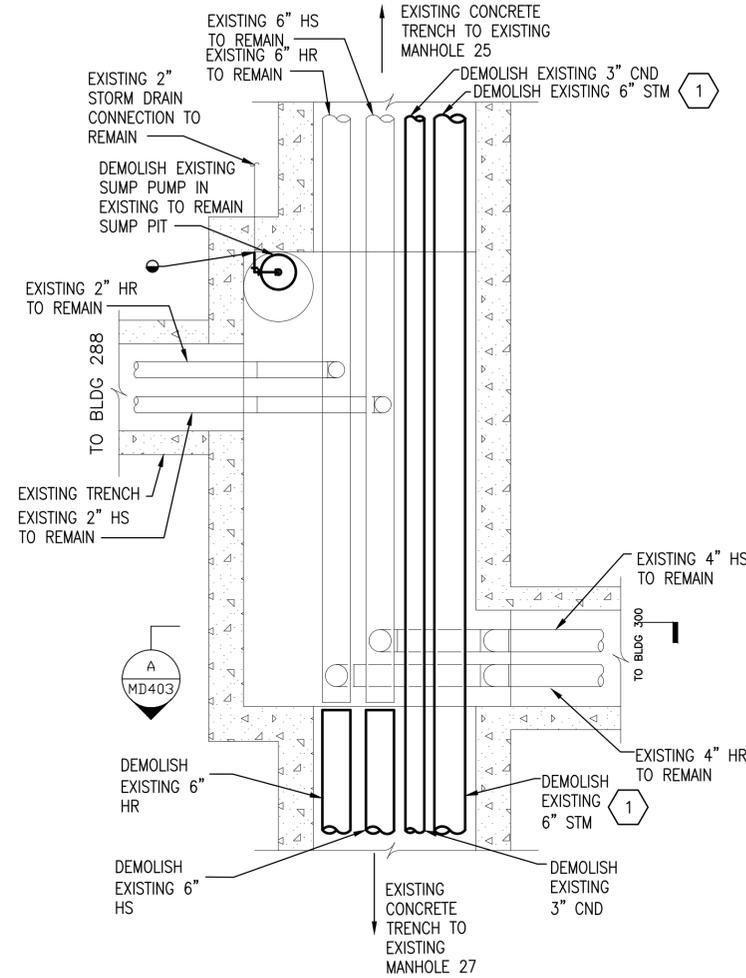
- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**DEMOLITION KEYNOTES**

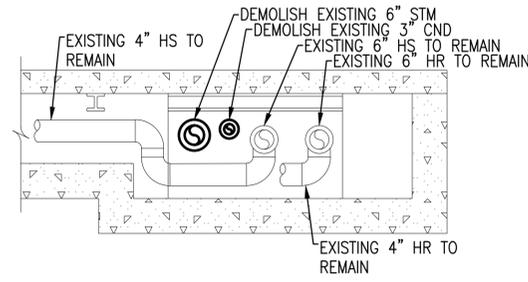
- DEMOLISH FIRST 10' OF STEAM PIPING ADJACENT TO MANHOLE AND ALL STEAM PIPING IN THE MANHOLE.

DATE	01/14/2016	JPC	APPR
DESCRIPTION	ISSUE OF BID DOCUMENT		
SYMBOL	0		
  			
APPROVED			
FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO	DATE		
DES JPC	DRW KC	CHK CB	
PM/DM	ROGER ROY		
BRANCH MANAGER	NATHAN MAHER		
HEAD/PLANE	AMIN BAHROUR PM&E		
FIRE PROTECTION	X		
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND		
NAVAL FACILITIES ENGINEERING COMMAND	~ MID-ATLANTIC		
PUBLIC WORKS DEPARTMENT - MAINE	NAVAL SHIPYARD - PORTSMOUTH, MAINE		
PORTSMOUTH NAVAL SHIPYARD	KITERY, MAINE		
<b>RME REPAIR STEAM AND CONDENSATE</b> <b>PNSY BLDG 180 TO BLDG 300, RM14-0205</b> <b>STEAM MANHOLES PIPING-DEMOLITION</b>			
PROJECT NO.	1370673		
CONSTR. CONTR. NO.	N40085-###-###-###		
NAVFAC DRAWING NO.	12706371		
SHEET	14	OF	29
MD402	MS-15-XXXX		
DRAWING REVISION: 10 OCTOBER 2014			

FILE NAME: \\med\dfs\clients\WAF\USShip\Main\85860\_PNSY71BUEM\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY 8180 to MD403.dwg LAYOUT NAME: MD403 PLOTTED: Thursday, January 14, 2016 8:52am USER: jodriguez

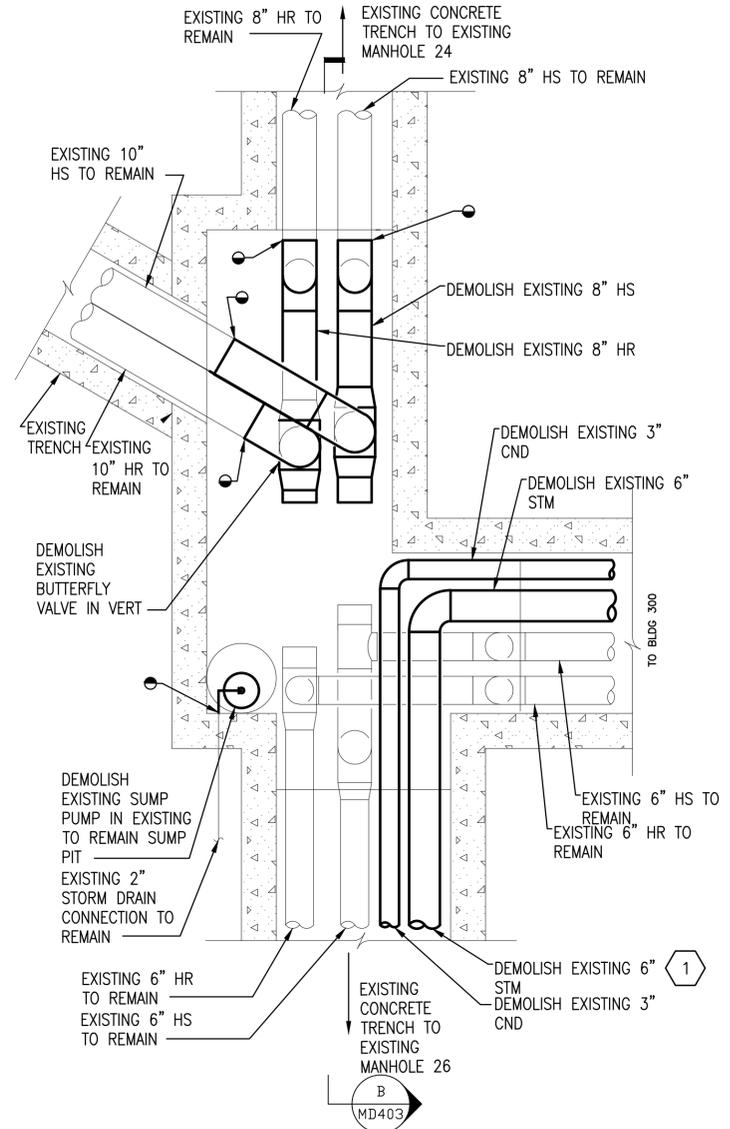


**PLAN**  
SCALE: NTS

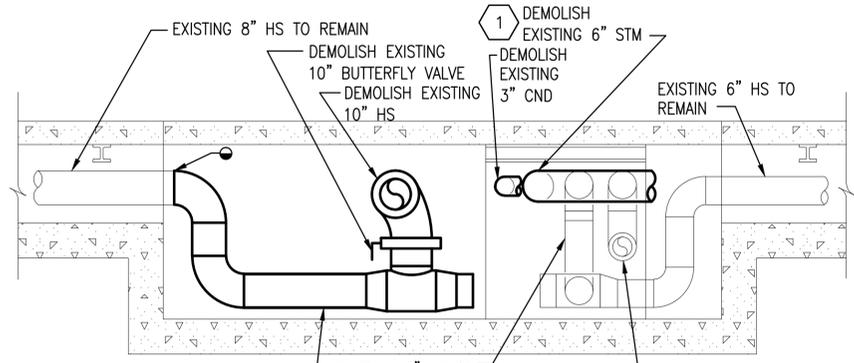


**SECTION A**  
SCALE: NTS

**EXISTING MANHOLE 26 - DEMOLITION**  
SCALE: NTS MD102 **A1**



**PLAN**  
SCALE: NTS



**SECTION B**  
SCALE: NTS

**EXISTING MANHOLE 25 - DEMOLITION**  
SCALE: NTS MD102 **A3**

**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- CAP OR FLANGE TERMINATIONS ON PIPING TO BE ABANDONED.

**DEMOLITION KEYNOTES**

- DEMOLISH FIRST 10' OF STEAM PIPING ADJACENT TO MANHOLE AND ALL STEAM PIPING IN THE MANHOLE.

DATE	DESCRIPTION	ISSUE OF BID DOCUMENT	JPC	APPR
01/14/2016				



APPROVED FOR COMMANDER NAFAC

DESIGNED BY: JPC  
 DRAWN BY: KC  
 CHECKED BY: CB  
 PROJECT MANAGER: ROGER ROY  
 BRANCH MANAGER: NATHAN MAHER  
 LEAD/PM/EA: AMIN BAHRLOUR, PM&E

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 RME REPAIR STEAM AND CONDENSATE  
 PNSY BLDG 180 TO BLDG 300, RM14-0205  
 STEAM MANHOLES PIPING-DEMOLITION

PROJECT NO.: 1370673  
 CONSTR. CONTR. NO.: N40085-###-###-###  
 NAFAC DRAWING NO.: 12706372  
 SHEET 15 OF 29  
 MD403 MS-15-XXXX

MATCH LINE - SHEET M102



**SITE PLAN**  
SCALE: 1" = 20'

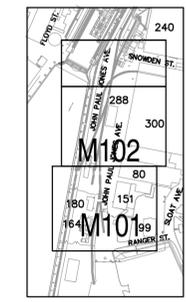


**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATION AND GENERAL NOTES.
- PIPE ANCHOR LOCATIONS ARE INDICATED DIAGRAMMATICALLY. PRE-ENGINEERED PIPING MANUFACTURER SHALL SELECT FINAL ANCHOR LOCATIONS AND SHALL DESIGN ANCHORS FOR CALCULATED LOADS.
- REPLACE RETAINED EXISTING TRENCH COVERS AFTER SUCCESSFUL TESTING, INSPECTIONS AND EXAMINATIONS OF THE STEAM AND CONDENSATE PIPING IS COMPLETE AND ACCEPTED BY THE CONTRACTING OFFICER. STEAM AND CONDENSATE SHALL NOT BE CONCEALED UNTIL AFTER ACCEPTANCE.
- SEE M-600 SERIES FOR DEMARCATION OF NEW AND EXISTING STEAM PIPING AND POINTS OF CONNECTION FOR STEAM AND CONDENSATE.
- SEE M-500 SERIES FOR TYPICAL DETAILS.
- SEE M-400 SERIES FOR SUMP PUMP REPLACEMENT LOCATIONS.

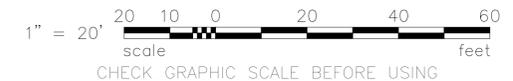
**NEW WORK KEYNOTES**

- PROVIDE PRE-ENGINEERED 3" CONDENSATE IN EXISTING TRENCH.
- CONNECT TO EXISTING STEAM AND CONDENSATE CONNECTION FOR BLDG 151 IN MH 28.
- PROVIDE PRE-ENGINEERED CONDENSATE EXPANSION LOOP IN EXISTING TRENCH.
- NOT USED.
- PROVIDE PRE-ENGINEERED 6" STEAM IN EXISTING TRENCH.
- NOT USED.
- NOT USED.
- EXISTING STEAM EXPANSION LOOP IN EXISTING TRENCH TO REMAIN.
- PROVIDE FIELD INSULATED 6" STEAM PIPING IN EXISTING TRENCH WITHIN 10' OF EXISTING MH 27 AND 28. ALL OTHER STEAM PIPING IN EXISTING TRENCH BETWEEN MH 27 AND 28 TO REMAIN. SEE DETAIL.
- NOT USED.
- NOT USED.
- NOT USED.
- MAIN ANCHOR



**KEYPLAN**  
SCALE: N.T.S.

**GRAPHIC SCALE**



DATE	DESCRIPTION	BY	CHKD	APPR
01/14/2016	ISSUE OF BID DOCUMENT			



APPROVED: \_\_\_\_\_  
FOR COMMANDER NAVFAC

DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

BRANCH MANAGER: NATHAN MAHER  
TEAM LEAD: AMIN BAHRLOUR, PM&E

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
NAVAL SHIPYARD - PORTSMOUTH, MAINE  
RME REPAIR STEAM AND CONDENSATE  
PNSS BLDG 180 TO BLDG 300, RM14-0205  
PIPING PLAN

PROJECT NO.: 1370673  
CONSTR. CONTR. NO.: N40085-###-###-###  
NAVFAC DRAWING NO.: 12706374  
SHEET 16 OF 29

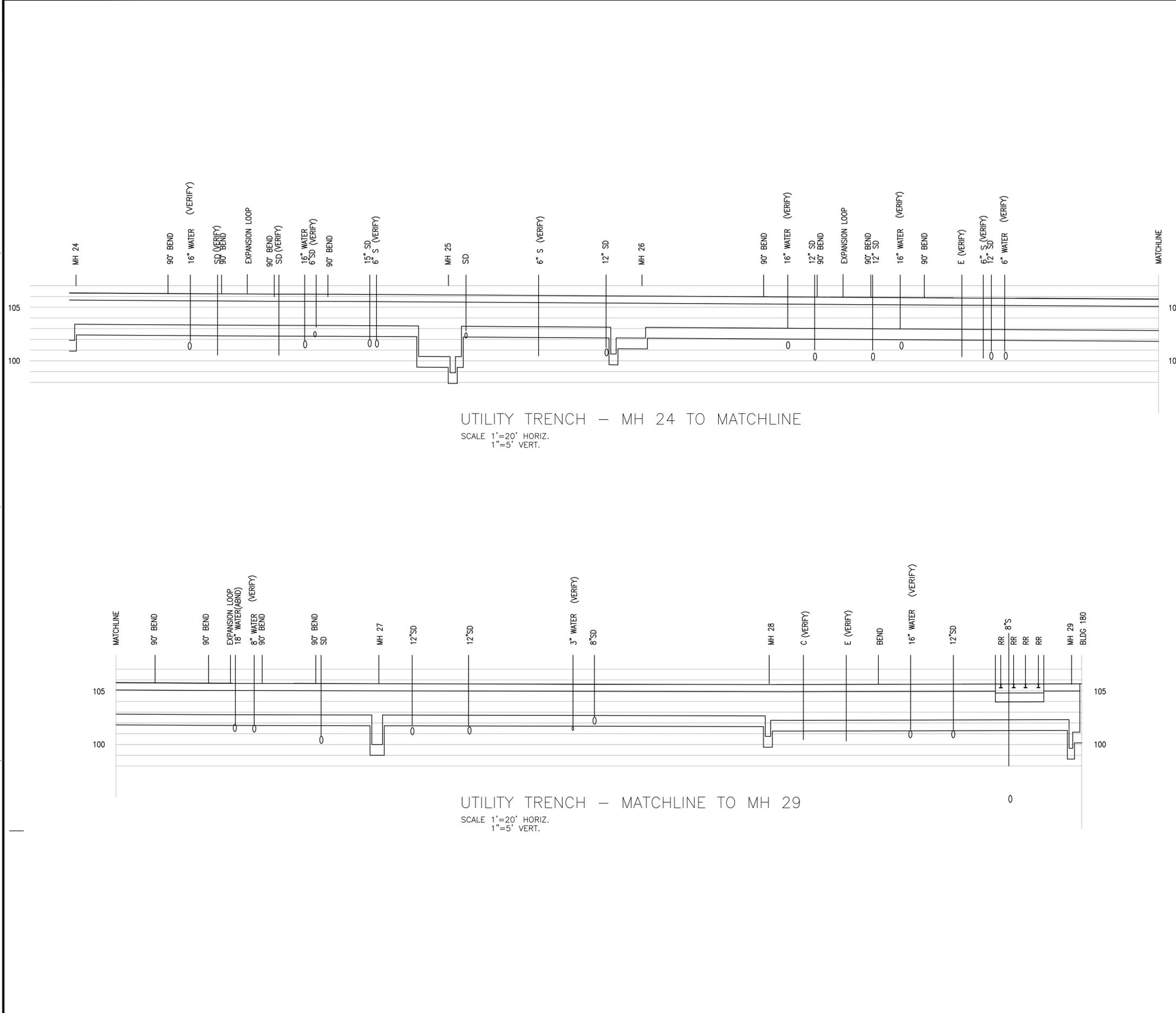
M-101 MS-15-XXXX  
DRAWING REVISION: 10 OCTOBER 2014

FILE NAME: \\mcd\dfs\clients\USShip\Main\85860\_PNSSTY181818\Design\Mech\Sheet32 - RM 14-0205 - Repair Steam and Condensate PNSS B180 to M101.dwg LAYOUT NAME: M101 PLOTTED: Thursday, January 14, 2016 - 8:54am USER: jrodiguez





FILE NAME: \\mcd\dfs\clients\VF\USShip\Main\85860\_PNSY71B\EM\Design\Mech\Sheet2.dwg - RM 14-0205 - Repair Steam and Condensate PWSY B180 to M201.dwg LAYOUT NAME: M201 PLOTTED: Thursday, January 14, 2016 - 9:11am USER: jrodriguez



**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- PROFILES AND ELEVATIONS ARE BASED ON EXISTING RECORD PLANS. VERIFY ALL ACTUAL PROFILES AND ELEVATIONS IN FIELD.

ISSUE OF BID DOCUMENT	DATE	JPC	APPR
0	01/14/2016		



APPROVED  
 FOR COMMANDER NAVFAC

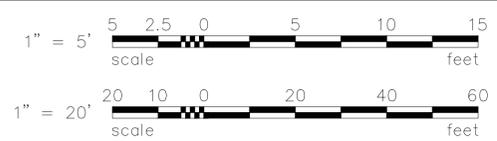
ACTIVITY

SATISFACTORY TO DATE  
 DES JPC | DRW KC | CHK CB  
 PM/DM ROGER ROY  
 BRANCH MANAGER NATHAN MAHER  
 LEAD/PM/ME AMIN BAHRROUR PM&E

FIRE PROTECTION X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 RME REPAIR STEAM AND CONDENSATE  
 PWSY BLDG 180 TO BLDG 300, RM14-0205  
 KITTERY, MAINE  
 PROFILES

**GRAPHIC SCALE**



CHECK GRAPHIC SCALE BEFORE USING

PROJECT NO.:	1370673
CONSTR. CONTR. NO.:	N40085-###-####
NAVFAC DRAWING NO.:	12706377
SHEET	19 OF 29

M-201 MS-15-XXXX  
 DRAWING REVISION: 10 OCTOBER 2014

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### GENERAL SHEET NOTES

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SEE M600 SERIES FOR DEMARCATION BETWEEN PRE-ENGINEERED STEAM/CONDENSATE PIPING AND FIELD INSULATED STEAM/CONDENSATE PIPING.

DATE	DESCRIPTION	JPC	APPR
01/14/2016	ISSUE OF BID DOCUMENT		



APPROVED

FOR COMMANDER NAVFAC

SATISFACTORY TO DATE

DES JPC | DRW KC | CHK CB

PM/DM ROGER ROY

BRANCH MANAGER NATHAN MAHER

TEAM/PM&E AMIN BAHRLOUR PM&E

FIRE PROTECTION X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 PUBLIC WORKS DEPARTMENT - MAINE  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 NAVAL SHIPYARD - PORTSMOUTH, MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 KITTERY, MAINE  
 RME REPAIR STEAM AND CONDENSATE  
 PNSY BLDG 180 TO BLDG 300, RM14-0205  
 STEAM MANHOLES PIPING

PROJECT NO.: 1370673

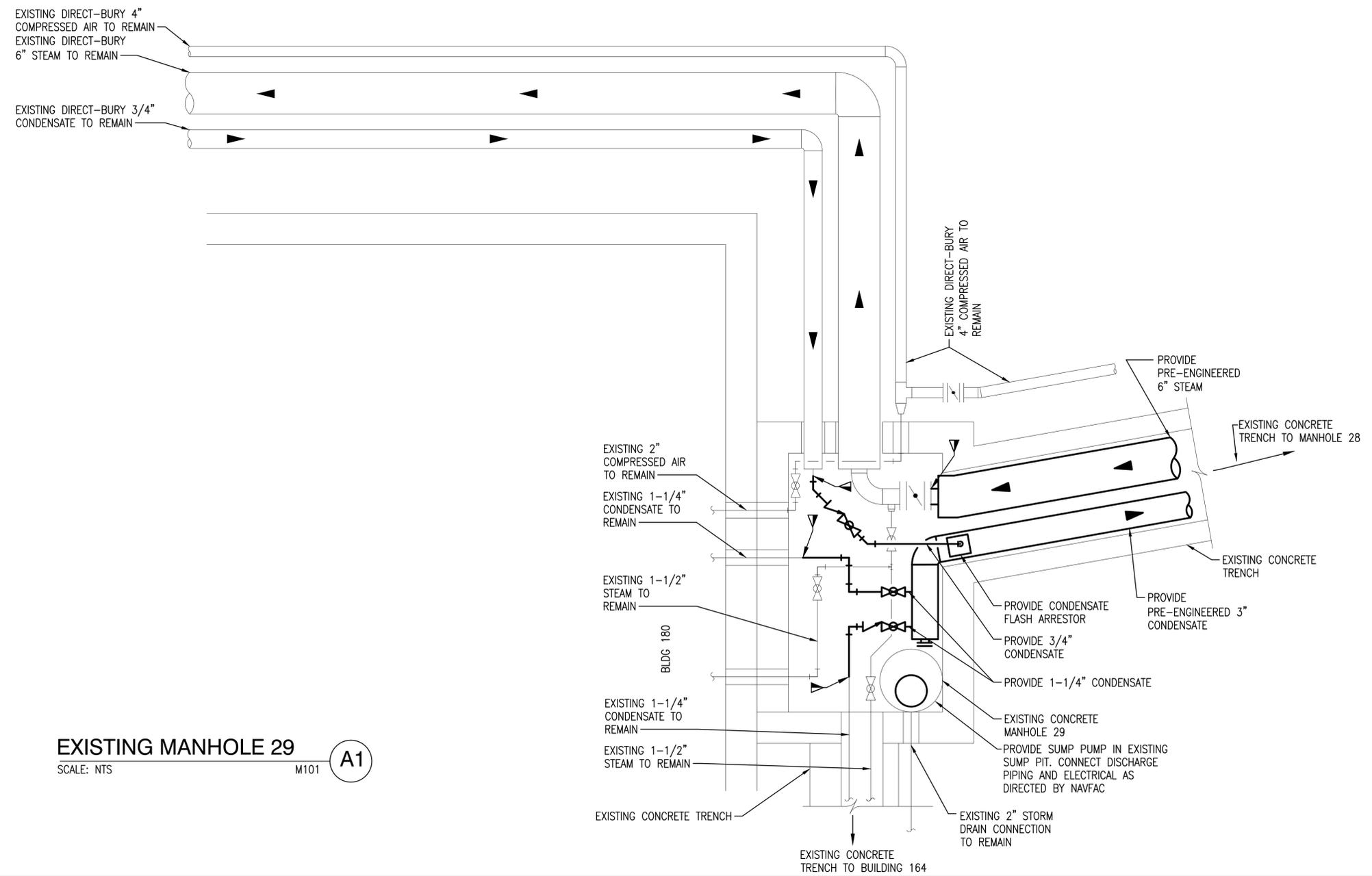
CONSTR. CONTR. NO. N40085-###-###-###

NAVFAC DRAWING NO. 12706378

SHEET 20 OF 29

M-401 MS-15-XXXX

DRAWING REVISION: 10 OCTOBER 2014



**EXISTING MANHOLE 29**  
 SCALE: NTS  
 M101 A1

FILE NAME: \\mcc\dfs\clients\waf\us\shop\main\85860\_PNSY11\BUEM\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY BLDG 180 to M401.dwg LAYOUT NAME: M401 PLOTTED: Thursday, January 14, 2016 - 9:16am USER: jrodriquez

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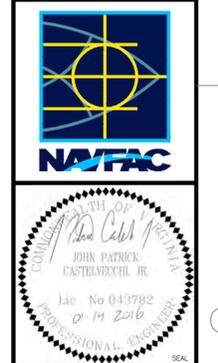
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FILE NAME: \\mch\dfs\clients\NAV\USNav\85860L\_PNSY71B1EM\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY 8180 to M402.dwg LAYOUT NAME: M402 PLOTTED: Thursday, January 14, 2016 - 9:15am USER: jrodriquez

**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SEE M600 SERIES FOR DEMARCATION BETWEEN PRE-ENGINEERED STEAM/CONDENSATE PIPING AND FIELD INSULATED STEAM/CONDENSATE PIPING.

NO.	DESCRIPTION	DATE	APPR.
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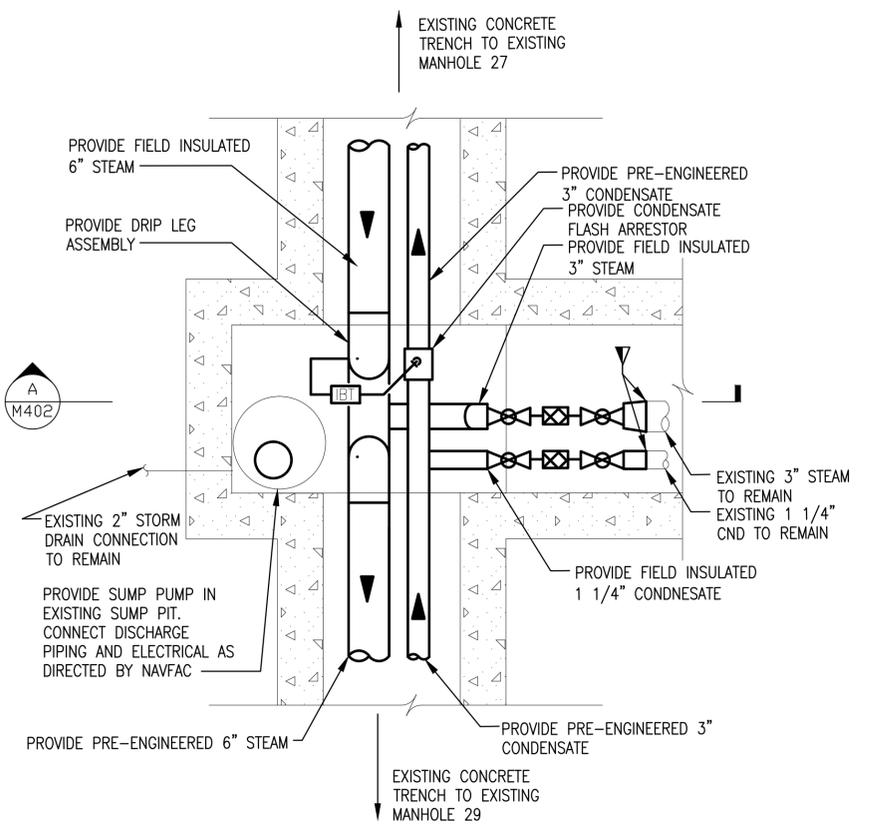


APPROVED
FOR COMMANDER NAVAC
ACTIVITY
SATISFACTORY TO DATE
DES JPC   DRW KC   CHK CB
PA/DM ROGER ROY
BRANCH MANAGER NATHAN MAHER
TEAM/PM/EA AMIN BAHROUR, PM&E
FIRE PROTECTION X

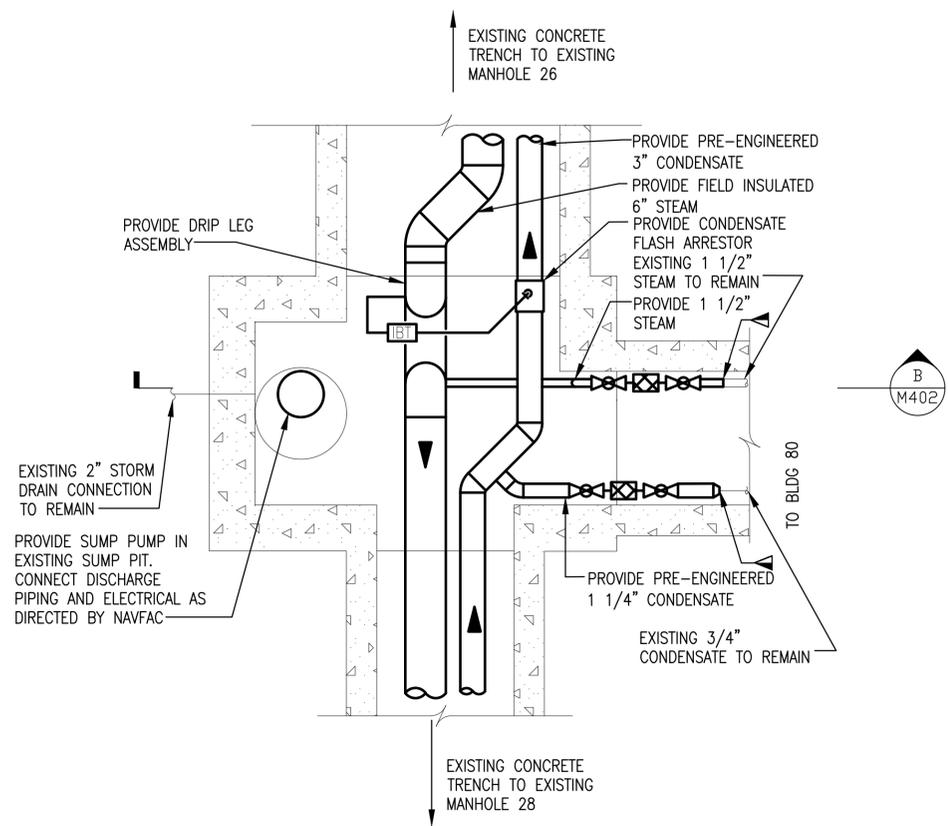
DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 RME REPAIR STEAM AND CONDENSATE  
 PNSY BLDG 180 TO BLDG 300, RM14-0205  
 STEAM MANHOLES PIPING

PROJECT NO. 1370673
CONSTR. CONTR. NO. N40085-##-##-##-##
NAVAC DRAWING NO. 12706379
SHEET 21 OF 29
M-402 MS-15-XXXX

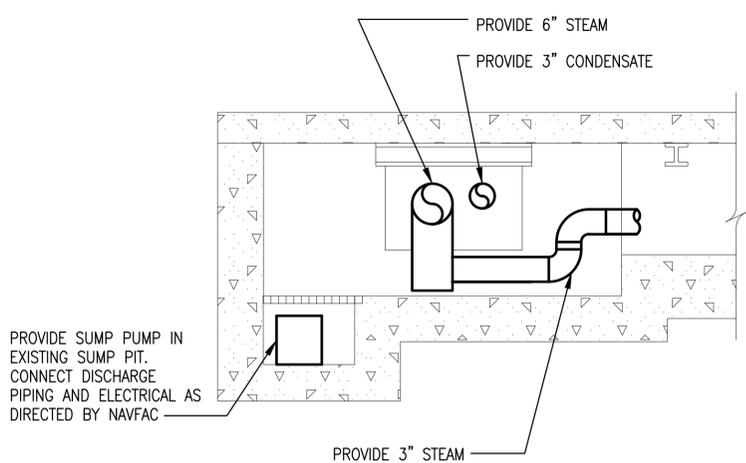
DRAWING REVISION: 10 OCTOBER 2014



**PLAN**  
SCALE: N.T.S.



**PLAN**  
SCALE: N.T.S.

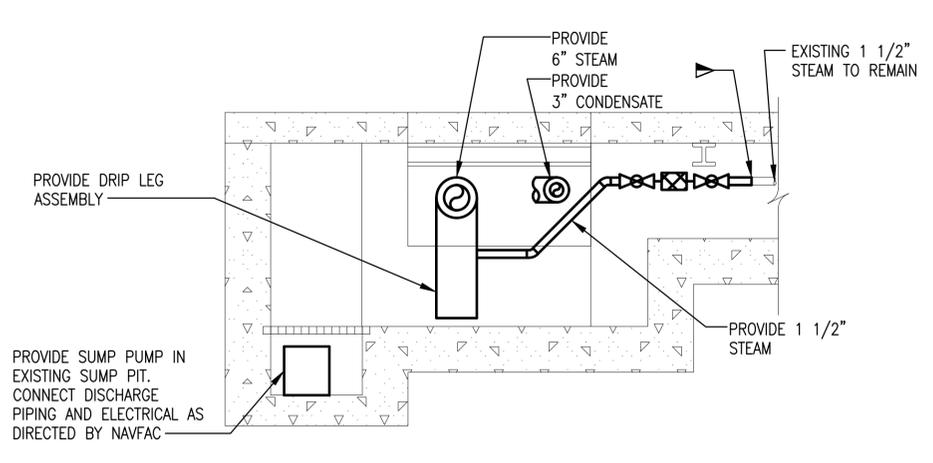


**SECTION A**

SCALE: NTS M402

**EXISTING MANHOLE 28**

SCALE: NTS M101



**SECTION B**

SCALE: NTS M402

**EXISTING MANHOLE 27**

SCALE: NTS M102

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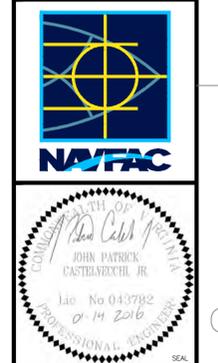
4

5

### GENERAL SHEET NOTES

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SEE M600 SERIES FOR DEMARCATION BETWEEN PRE-ENGINEERED STEAM/CONDENSATE PIPING AND FIELD INSULATED STEAM/CONDENSATE PIPING.

DATE	01/14/2016	JPC	APPR
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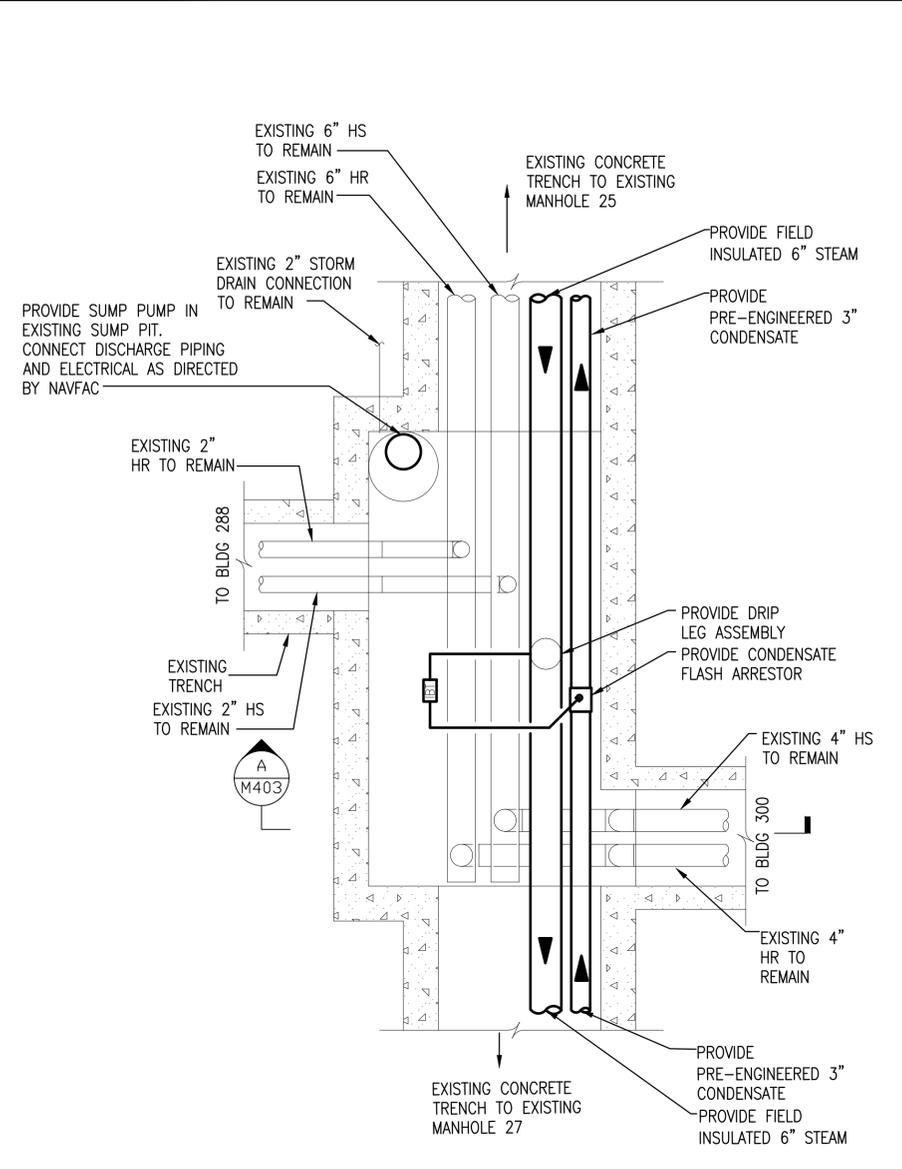


APPROVED		
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO	DATE	
DES JPC	DRW KC	CHK CB
PM/DM	ROGER ROY	
BRANCH MANAGER	NATHAN MAHER	
TEAM/PAKE	AMIN BAHRLOUR PM&E	
FIRE PROTECTION	X	

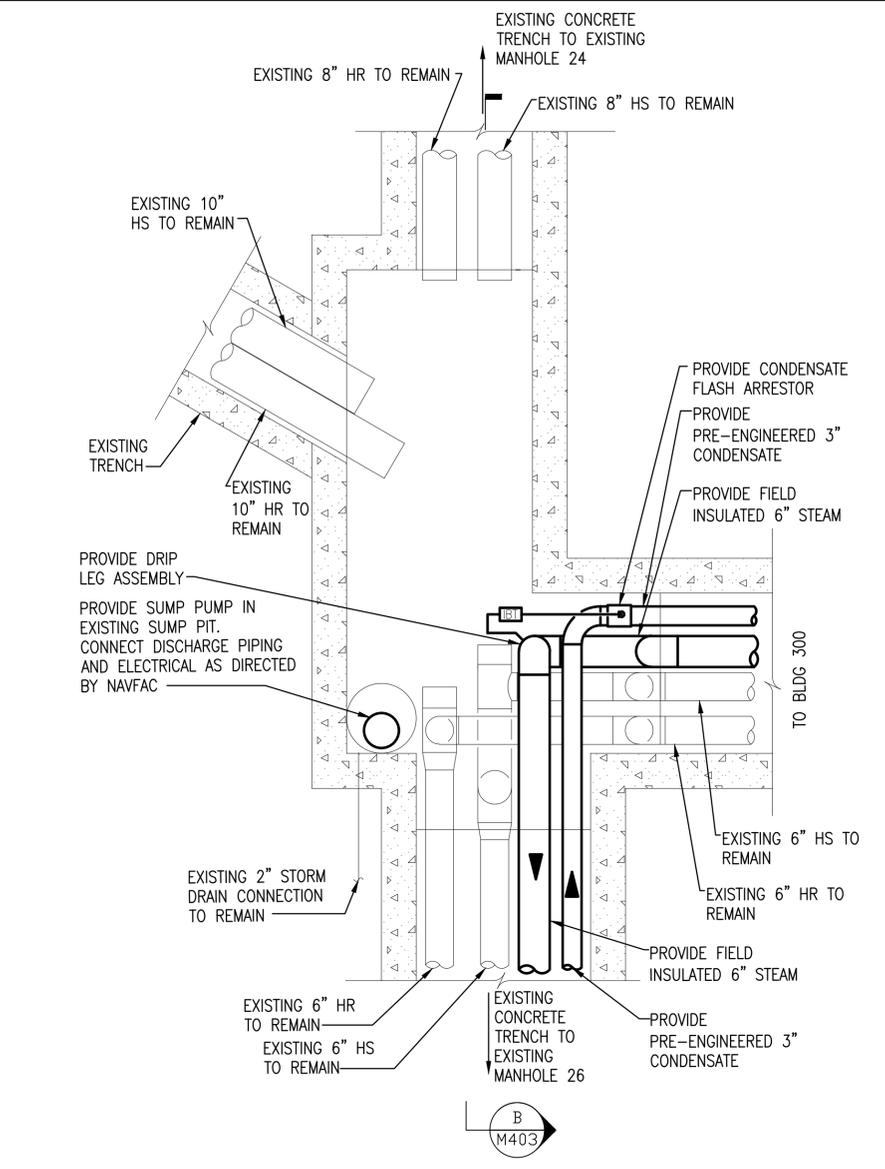
DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 KITTERY, MAINE  
 RME REPAIR STEAM AND CONDENSATE  
 PNSY BLDG 180 TO BLDG 300, RM14-0205  
 STEAM MANHOLES PIPING

EPROJECT NO.:	1370673
CONSTR. CONTR. NO.:	N40085-###-###-###
NAVFAC DRAWING NO.:	12706380
SHEET	22 OF 29

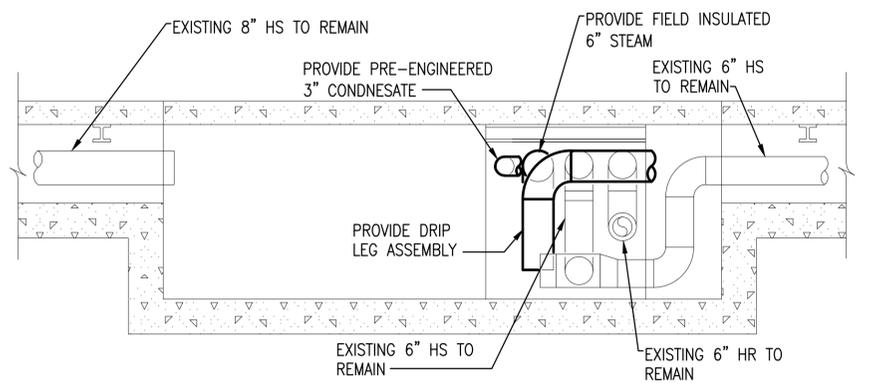
M-403 MS-15-XXXX  
DRAWING REVISION: 10 OCTOBER 2014



**PLAN**  
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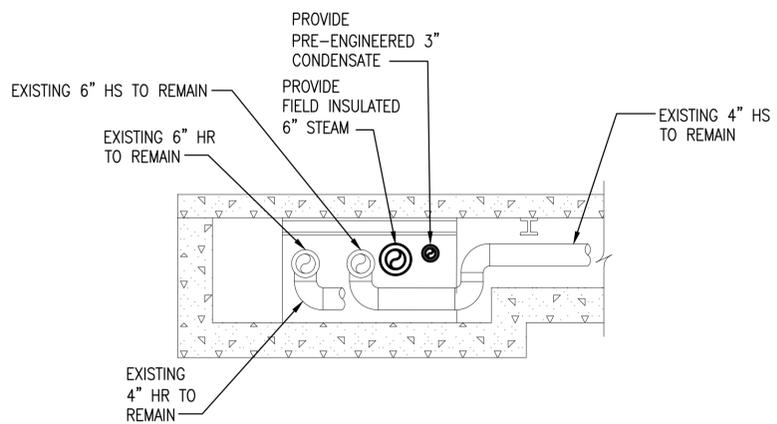


**PLAN**  
SCALE: NTS



**SECTION**  
SCALE: NTS

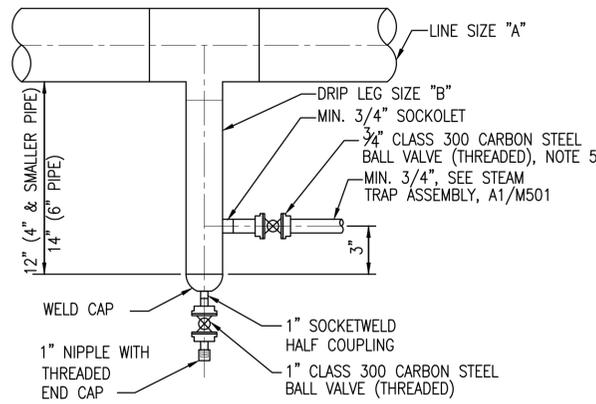
**EXISTING MANHOLE 25**  
SCALE: NTS



**SECTION**  
SCALE: NTS

**EXISTING MANHOLE 26**  
SCALE: NTS

FILE NAME: \\mcd\dfs\clients\WVF\USShip\Main\85860\_PNSY1818A\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY BLDG 180 to M403.dwg LAYOUT NAME: M403\_PLOTTED: Thursday, January 14, 2016 - 9:16am USER: jrodriquez



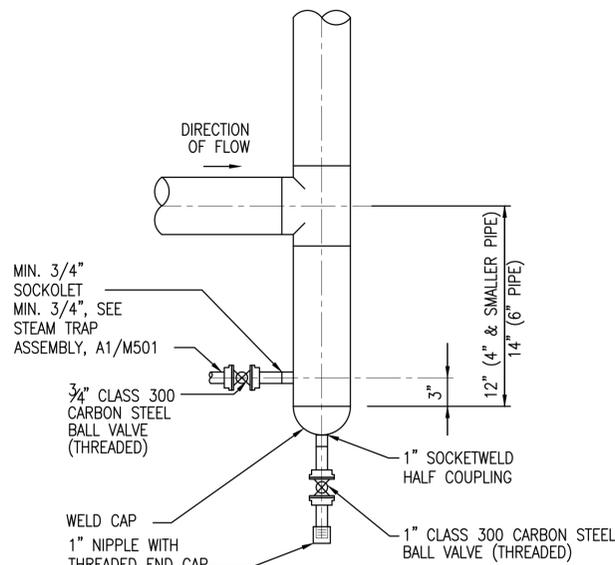
SIZE SCHEDULE	
LINE "A"	POCKET "B"
UP TO 4"	LINE SIZE
4" & 6"	4"

**NOTES:**

1. PROVIDE DRIP LEG FOR ALL STEAM RISERS, END OF MAINS, AND RUN OF MAINS WHERE INDICATED OR REQUIRED.
2. STATIC HEAD: CONDENSATE PIPING SHALL POSITIVELY DRAIN AND SLOPE DOWNWARD TO STEAM TRAP. STEAM TRAP SHALL BE INSTALLED BELOW STEAM HEADER.
3. LOCATE AT 100 TO 300 FEET INTERVAL (MAXIMUM) ON ALL STEAM SERVICE LINES UNLESS NOTED OTHERWISE.
4. TEE DRIP LEG ASSEMBLIES SHALL BE PROVIDED WHERE STEAM LINES OFFSET VERTICALLY UP IN THE DIRECTION OF FLOW.
5. LOCATE ISOLATION VALVE WITHIN 6 INCHES OF DRIP LEG CONNECTION WHILE PROVIDING ENOUGH SPACE FOR REQUIRED INSULATION.

**TYPICAL DRIP LEG DETAIL**

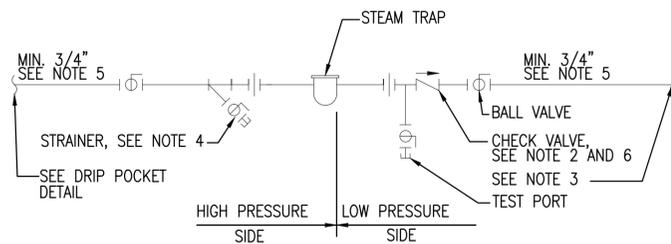
SCALE: NTS M501 **B1**



NOTE: LOCATE ISOLATION VALVE WITHIN 6 INCHES OF DRIP LEG CONNECTION WHILE PROVIDING ENOUGH SPACE FOR REQUIRED INSULATION.

**TYPICAL TEE DRIP LEG ASSEMBLY DETAIL**

SCALE: NTS M501 **C2**

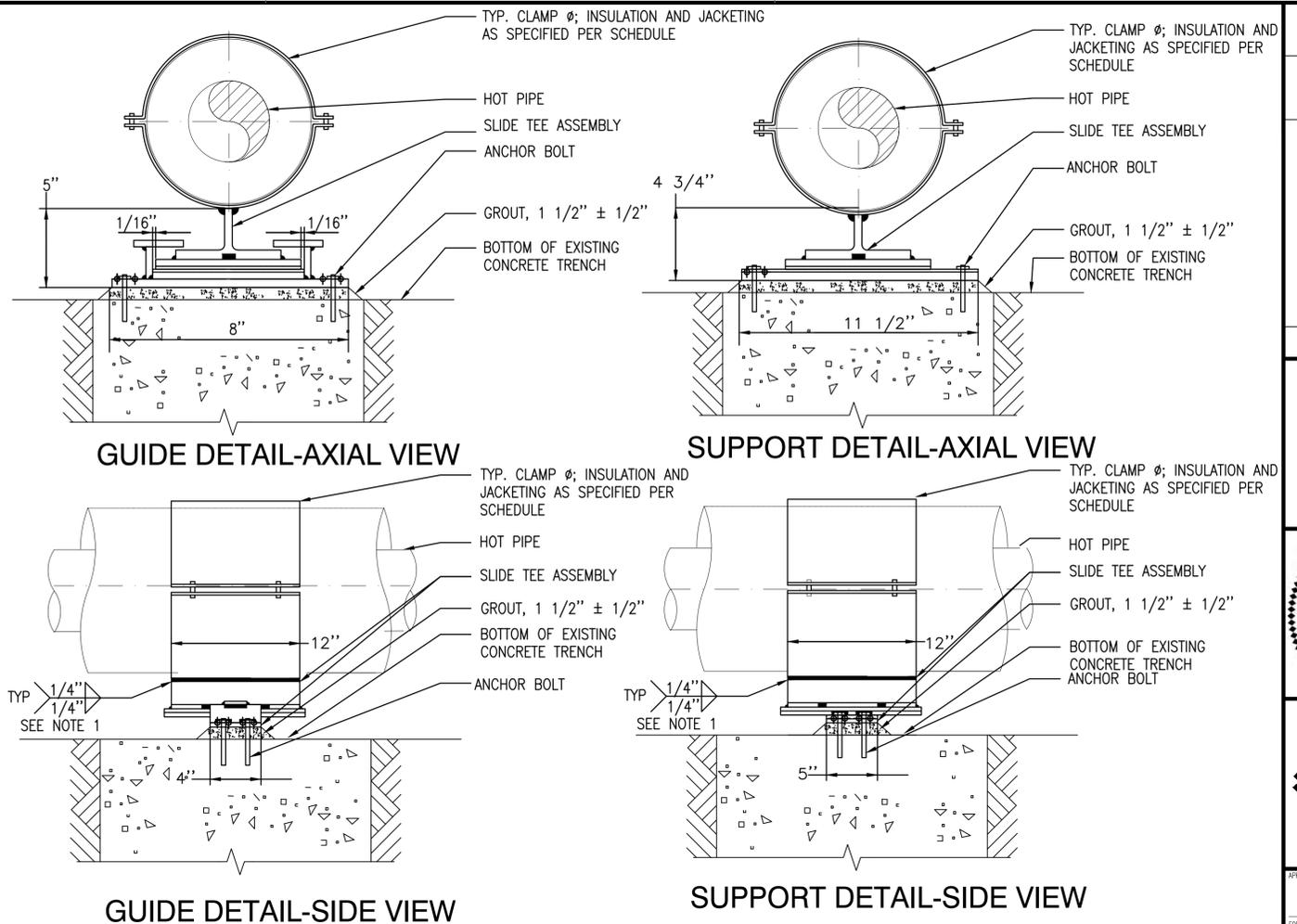


**NOTES:**

1. PIPING, VALVES AND FITTINGS SHALL BE AS SPECIFIED FOR EACH SYSTEM.
2. PROVIDE CHECK VALVE ONLY WHERE CONDENSATE RETURN MAIN OR HEADER IS ABOVE TRAP DISCHARGE.
3. PIPE TRAP DISCHARGE TO CONDENSATE RETURN MAIN OR TRAP DISCHARGE HEADER OR AS INDICATED.
4. SEPARATE STRAINER (WITH BLOWDOWN VALVE, NIPPLE & CAP) NOT REQUIRED IF STRAINER IS INTEGRAL WITH TRAP.
5. FOR TRAP CONNECTION SIZES, PIPE SIZES, AND ADDITIONAL REQUIREMENTS SEE DRAWINGS AND STEAM TRAP SCHEDULE.
6. WHERE TRAP VALVE STATIONS (TVS) ARE SCHEDULED AND INDICATED, LOCATE CHECK VALVE DOWNSTREAM OF TVS WITH BALL VALVE AFTER AND UNION BEFORE CHECK VALVE.

**TYPICAL STEAM TRAP DETAIL**

SCALE: NTS M501 **A1**



**NOTES:**

1. FACTORY WELDS
2. ENTIRE PIPE SUPPORT ASSEMBLY SHALL BE PROVIDED BY CONTRACTOR.
3. FINISH SHALL BE HOT-DIP GALVANIZED (WELDED AFTER GALVANIZING AND COLD SPRAY TOUCHED-UP).

PRE-ENGINEERED PIPING, GUIDE, AND SPACING SCHEDULE									
	1" COND.	1.5" COND.	2" COND.	2" STEAM	2.5" STEAM	3" STEAM	3" COND.	4" COND.	6" STEAM
CARRIER DIAM. (IN.) (CARBON STEEL)	1.00	1.50	2.00	2.00	2.50	3.00	3.00	4.00	6.00
CARRIER INSULATION (AEROGEL)	0.20	0.20	0.20	1.60	1.80	1.80	0.40	0.40	2.40
AIR GAP THICKNESS (IN.)	1.30	2.00	1.80	1.40	1.00	1.70	1.5	1.50	1.20
CONDUIT DIAM. (IN.) (BLACK STEEL)	4.50	6.63	6.63	8.63	8.63	10.75	7.63	8.63	14.00
POLYURETHANE THICKNESS (IN.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
TOTAL PIPE OD (IN.) (APPROX. HDPE JACKET)	7.00	9.00	9.00	11.00	11.00	13.20	10.00	11.00	16.50
EXPANSION JOINT FIRST GUIDE SPACINGS (FT.)	2.00	2.00	2.00	2.00	2.50	3.00	3.00	4.00	6.00
EXPANSION JOINT INTERMEDIATE GUIDE SPACINGS (FT.)	5.50	8.00	10.50	10.50	13.50	16.00	16.00	20.00	29.00
SUPPORT SPACING (FT.)	7.00	9.00	10.00	13.00	14.00	15.00	15.00	14.00	21.00

GUIDES & SUPPORTS: MSS SP-58 TYPE 42 (CLAMP) AND TYPE 35. GUIDES MUST BE INSTALLED AT THE GIVEN SPACINGS FROM BOTH FACES OF EACH EXPANSION JOINT.

**TYPICAL PIPE GUIDE AND SUPPORT DETAILS**

SCALE: NTS M501 **A4**

**GENERAL SHEET NOTES**

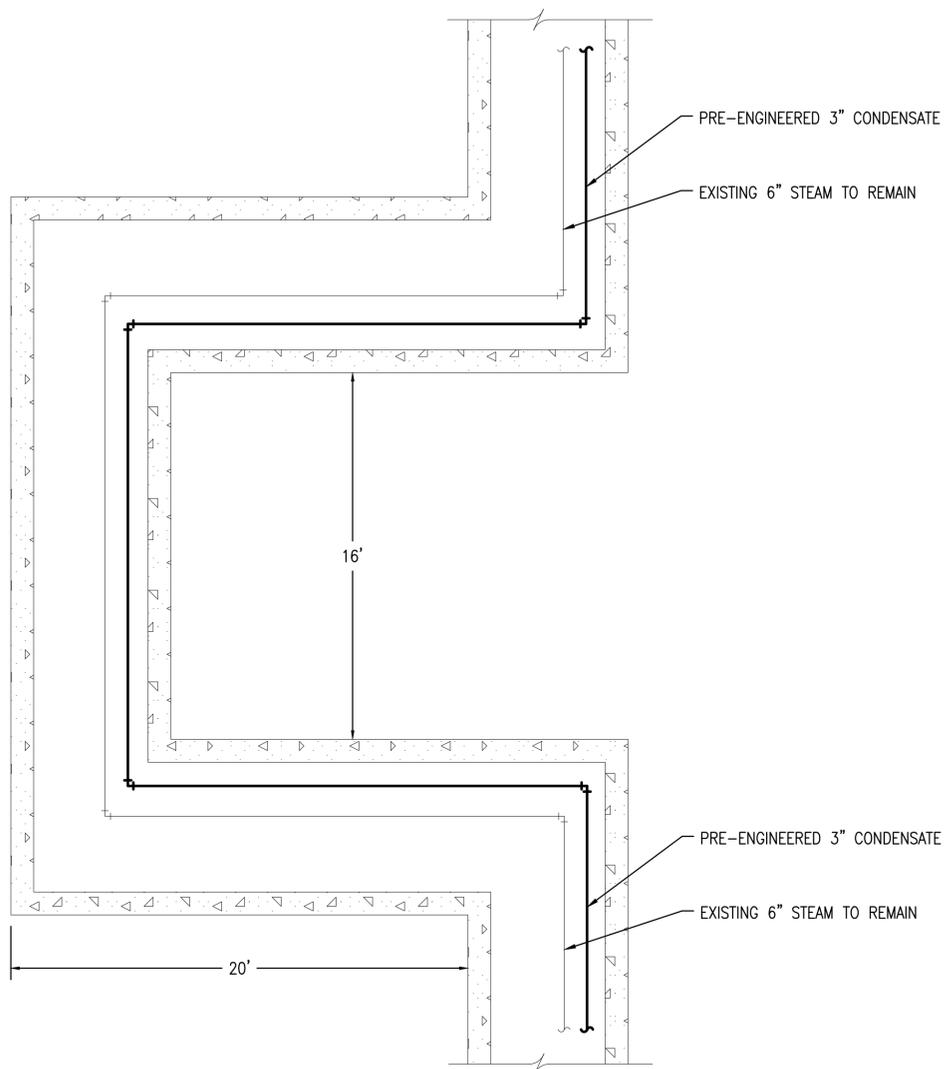
1. SEE SHEET G-002 AND M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

DATE	01/14/2016	UFC	APPR
ISSUE OF BID DOCUMENT	0	DESCRIPTION	
APPROVED		A/E INFO	
FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO	DATE		
DES. JPC	DRW. KC	CHK. CB	
PM/DM	ROGER ROY		
BRANCH MANAGER	NATHAN MAHER		
TEAM/PM/EA	AMIN BAHROUR, PM&E		
FIRE PROTECTION	X		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD - KITTERY, MAINE <b>RmE REPAIR STEAM AND CONDENSATE</b> <b>PNSY BLDG 180 TO BLDG 300, RM14-0205</b> <b>DETAILS</b>			
PROJECT NO.:	1370673		
CONSTR. CONTR. NO.:	N40085-###-###-###		
NAVFAC DRAWING NO.:	12706382		
SHEET	23	OF	29
M-501	MS-15-XXXX		
DRAWING REVISION: 10 OCTOBER 2014			

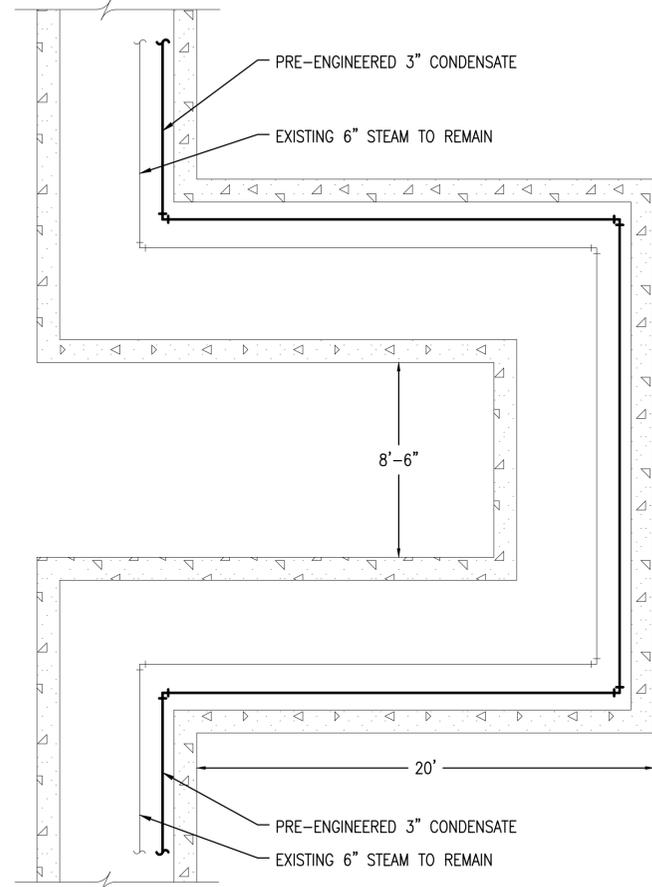
FILE NAME: \\mcc\dfs\clients\WAF\USShip\Main\85860\_PNSY1818M\Design\Mech\Sheet2.dwg - RM 14-0205 - Repair Steam and Condensate PWSY B180 to M501.dwg LAYOUT NAME: M501 PLOTTED: Thursday, January 14, 2016 - 9:40am USER: jrodiguet



FILE NAME: \\mcc\dfs\clients\NAVY\USNavy\Main\85860\_PNSY7181EM\Design\Mech\Sheet2.dwg - RM 14-0205 - Repair Steam and Condensate PWSY B180 to M503.dwg LAYOUT NAME: M503\_PLOTTED: Thursday, January 14, 2016 - 9:34am USER: jrodriquez



**DETAIL - EXPANSION LOOP 1**  
SCALE: NTS  
M102 A1 M503



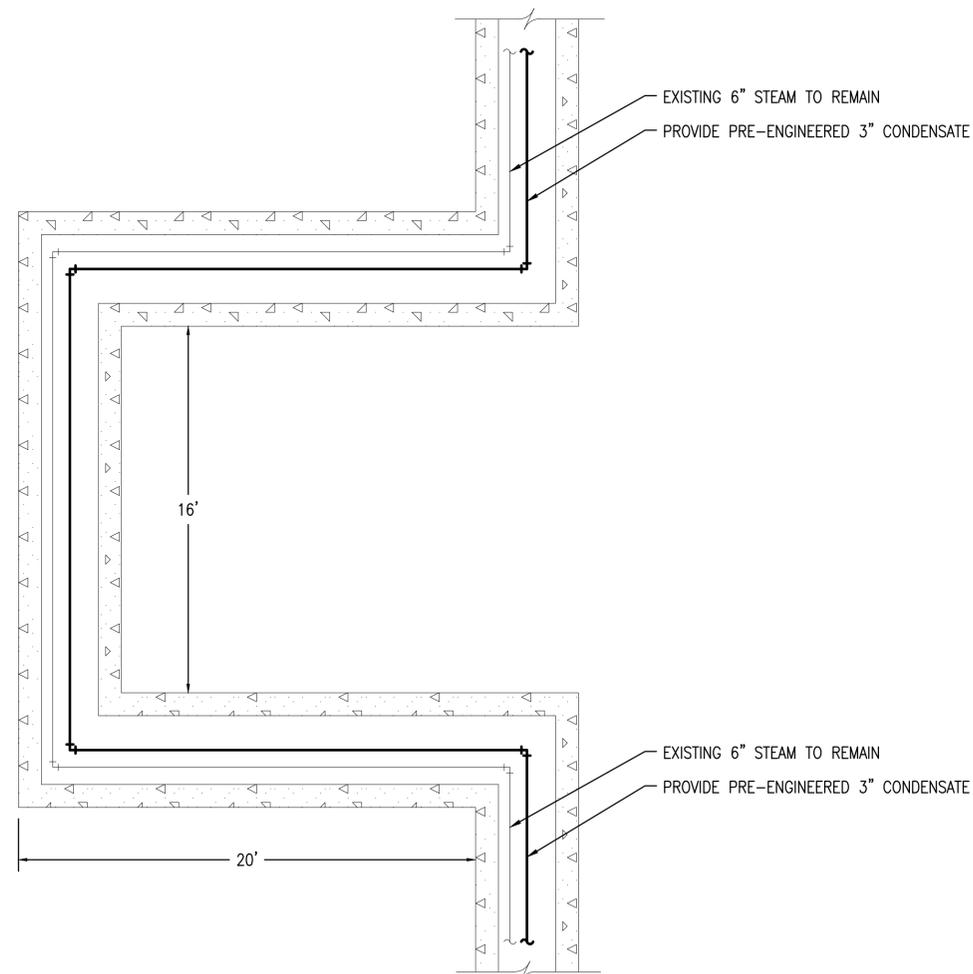
**DETAIL - EXPANSION LOOP 2**  
SCALE: NTS  
M102 A4 M503

**GENERAL SHEET NOTES**

- SEE SHEET G-002 AND M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- VERIFY IN FIELD EXISTING EXPANSION LOOP TRENCH DIMENSIONS.

ISSUE OF BID DOCUMENT	0	DATE	01/14/2016	JPC	
DESCRIPTION				APPR	
					
					
					
APPROVED					
FOR COMMANDER NAVFAC					
ACTIVITY					
SATISFACTORY TO DATE					
DES	JPC	DRW	KC	CHK	CB
PM/DM	ROGER ROY				
BRANCH MANAGER	NATHAN MAHER				
TEAM/PM/ME	AMIN BAHRLOUR PM&E				
FIRE PROTECTION					
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD RME REPAIR STEAM AND CONDENSATE PWSY BLDG 180 TO BLDG 300, RM14-0205 KITTERY, MAINE DETAILS					
PROJECT NO.: 1370673					
CONSTR. CONTR. NO.: N40085-###-###-###					
NAVFAC DRAWING NO.: 12706384					
SHEET	25	OF	29		
M-503	MS-15-XXXX				
DRAWFORM REVISION: 10 OCTOBER 2014					

FILE NAME: \\mcc\dfs\clients\NAVY\USShip\Main\85860\_PNSY71B1EM\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PWSY B180 to M504.dwg LAYOUT NAME: M504 PLOTTED: Thursday, January 14, 2016 - 9:23am USER: jrodriguez

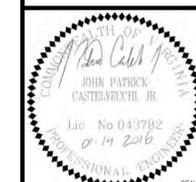


**DETAIL - EXPANSION LOOP 3**  
 SCALE: NTS  
 M101 A1 M504

**GENERAL SHEET NOTES**

1. SEE SHEET G-002 AND M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

REV	DESCRIPTION	DATE	APPR
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 PER COMMANDER NAVFAC

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 DES JPC | DRW KC | CHK CB  
 PM/DM ROGER ROY  
 BRANCH MANAGER NATHAN MAHER  
 LEAD/PM/ME AMIN BAHROUR PM&E

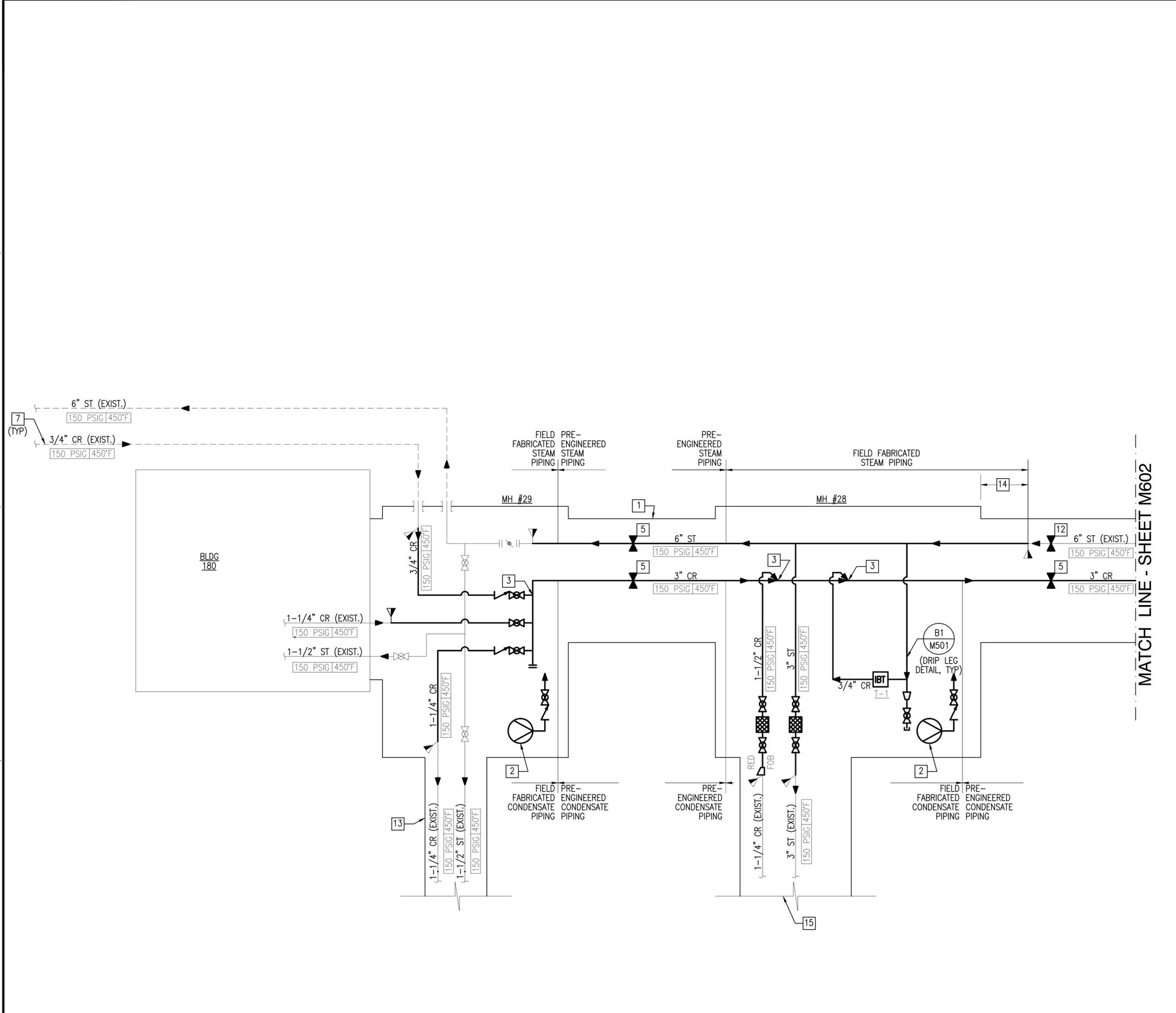
FIRE PROTECTION X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 KITTERY, MAINE  
 RME REPAIR STEAM AND CONDENSATE  
 PWSY BLDG 180 TO BLDG 300, RM14-0205  
 DETAILS

PROJECT NO.:	1370673
CONSTR. CONTR. NO.:	N40085-##-##-####
NAVFAC DRAWING NO.:	12706385
SHEET	26 OF 29
M-504	MS-15-XXXX

DRAWFORM REVISION: 10 OCTOBER 2014

FILE NAME: \\mcc\dfs\clients\us\shopy\m\h\4\85860\_PNSY71BUEM\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY B180 to M601.dwg LAYOUT NAME: M601 PLOTTED: Thursday, January 14, 2016 - 9:21am USER: jrodriquez



**GENERAL SHEET NOTES**

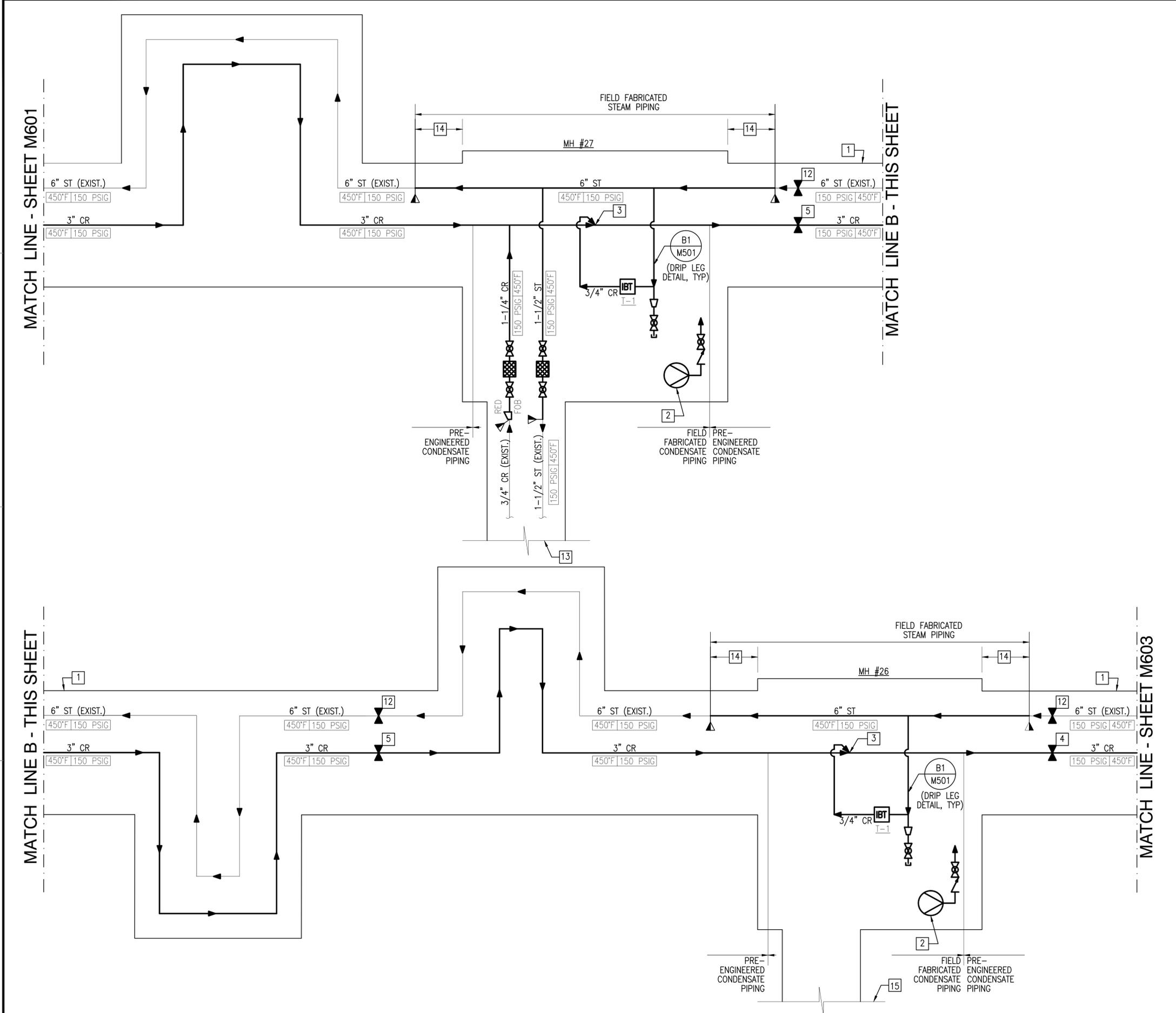
- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**NEW WORK KEYNOTES**

- EXISTING CONCRETE PIPE TRENCH.
- PROVIDE MANHOLE SUMP PUMP (CONNECT TO EXISTING DISCHARGE PIPING AND ELECTRICAL OR AS DIRECTED BY NAVFAC).
- PROVIDE CONDENSATE FLASH ARRESTOR.
- NOT USED.
- MAIN ANCHOR.
- NOT USED.
- DIRECT BURY PIPING.
- NOT USED.
- EXISTING CONCRETE PIPE TRENCH TO BUILDING 164.
- PROVIDE FIELD INSULATED STEAM PIPING FOR THE FIRST 10' OF PIPING OUTSIDE OF EXISTING MANHOLE.
- EXISTING CONCRETE PIPE TRENCH TO BUILDING 151.

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ACTIVITY			
SATISFACTORY TO	DATE		
DES JPC	DRW KC	CHKR CB	
PA/DM	ROGER ROY		
BRANCH MANAGER	NATHAN MAHER		
TEAM/PM/ME	AMIN BAHRLOUR, PM&E		
FIRE PROTECTION	X		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD RME REPAIR STEAM AND CONDENSATE PNSY BLDG 180 TO BLDG 300, RM14-0205 PIPING SCHEMATICS			
PROJECT NO.:	1370673		
CONSTR. CONTR. NO.:	N40085-###-###-###		
NAVFAC DRAWING NO.:	12706386		
SHEET	27	OF	29
M-601	MS-15-XXXX		
DRAWING REVISION: 10 OCTOBER 2014			

FILE NAME: \\mch\dfs\clients\VF\USShip\Main\85860\_PNSY71B1EIA\Design\Mech\Sheets\2 - RM 14-0205 - Repair Steam and Condensate PNSY B180 to M602.dwg LAYOUT NAME: M601 PLOTTED: Thursday, January 14, 2016 - 9:20am USER: jrodriquez



### GENERAL SHEET NOTES

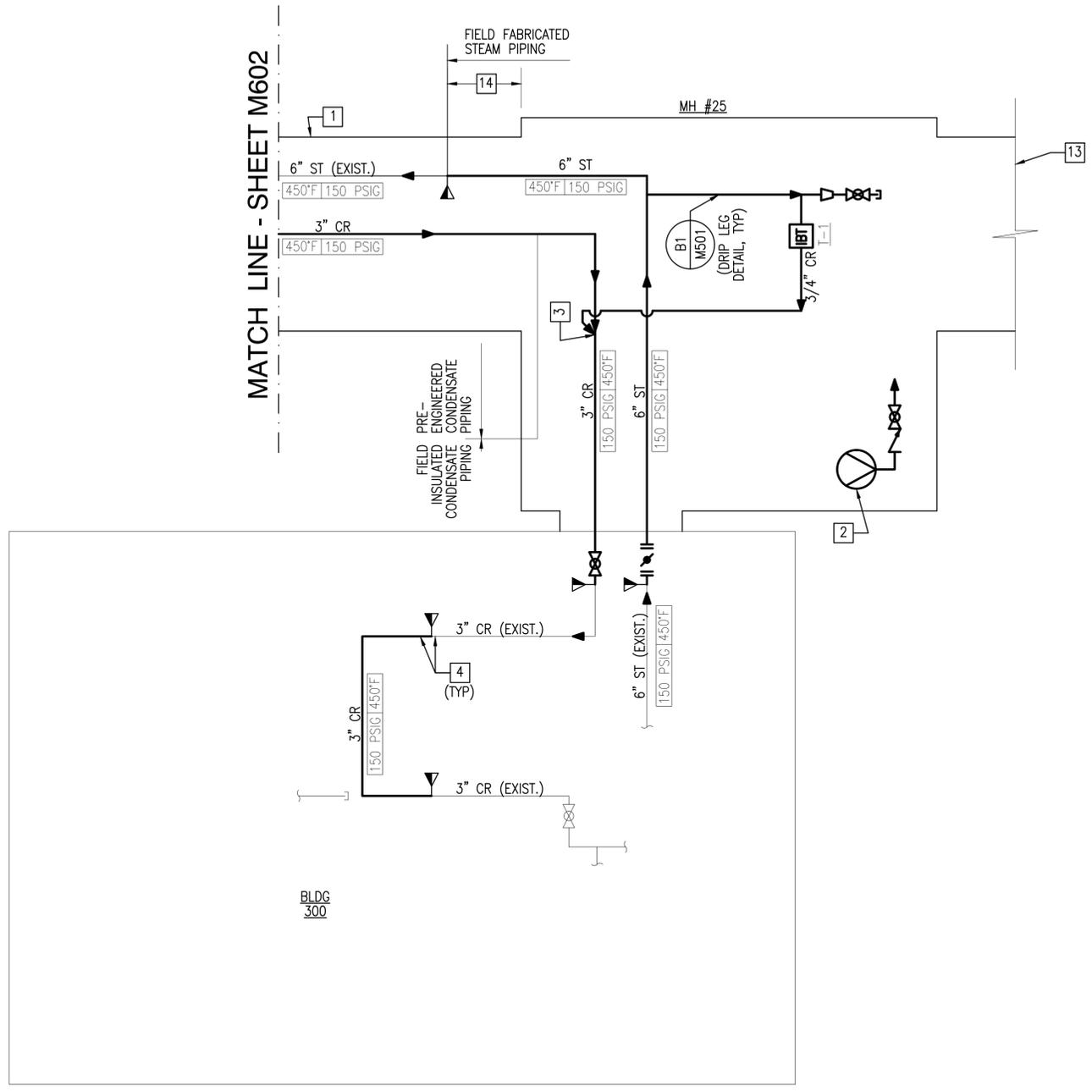
- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

### NEW WORK KEYNOTES

- EXISTING CONCRETE PIPE TRENCH.
- PROVIDE MANHOLE SUMP PUMP (CONNECT TO EXISTING DISCHARGE PIPING AND ELECTRICAL OR AS DIRECTED BY NAVFAC).
- PROVIDE CONDENSATE FLASH ARRESTOR.
- INTERMEDIATE ANCHOR.
- MAIN ANCHOR.
- NOT USED.
- EXISTING ANCHOR.
- EXISTING CONCRETE PIPE TRENCH TO BUILDING 80.
- PROVIDE FIELD INSULATED STEAM PIPING FOR THE FIRST 10' OF PIPING OUTSIDE OF EXISTING MANHOLE.
- EXISTING CONCRETE PIPE TRENCH TO BUILDING 300.

ISSUE OF BID DOCUMENT	DATE	JPC	APPR
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FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO DATE			
DES	JPC	DRW	KC
CHK	CB	APP	
PM/DM	ROGER ROY		
BRANCH MANAGER	NATHAN MAHER		
TEAD/PM&E	AMIN BAHRLOUR, PM&E		
FIRE PROTECTION			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC PUBLIC WORKS DEPARTMENT - MAINE PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE RME REPAIR STEAM AND CONDENSATE PNSY BLDG 180 TO BLDG 300, RM14-0205 PIPING SCHEMATICS			
PROJECT NO.: 1370673			
CONSTR. CONTR. NO. N40085-##-##-##			
NAVFAC DRAWING NO. 12706387			
SHEET 28 OF 29			
M-602 MS-15-XXXX			
DRAWING REVISION: 10 OCTOBER 2014			

FILE NAME: \\nrcd\dfs\clients\usnavy\mha\85860\pnsy718\em\design\mech\sheet3.dwg - RM 14-0205 - Repair Steam and Condensate PNSY B180 to M603.dwg LAYOUT NAME: M601 PLOTTED: Thursday, January 14, 2016 - 9:20am USER: jrodriquez



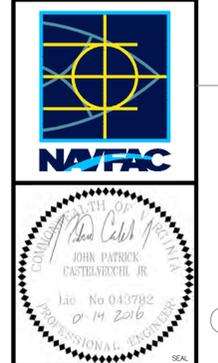
**GENERAL SHEET NOTES**

- SEE SHEET G002 AND M001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**NEW WORK KEYNOTES**

- EXISTING CONCRETE PIPE TRENCH.
- PROVIDE MANHOLE SUMP PUMP (CONNECT TO EXISTING DISCHARGE PIPING AND ELECTRICAL OR AS DIRECTED BY NAVFAC).
- PROVIDE CONDENSATE FLASH ARRESTOR.
- SEE SHEET M103 FOR ADDITIONAL NOTES ON CONDENSATE PIPING WORK INSIDE BUILDING 300.
- NOT USED.
- EXISTING CONCRETE PIPE TRENCH TO MH 24.
- PROVIDE FIELD INSULATED STEAM PIPING FOR THE FIRST 10' OF PIPING OUTSIDE OF EXISTING MANHOLE.

DATE	DESCRIPTION	ISSUE OF BID DOCUMENT	JPC	APPR
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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES JPC   DRW KC   CHK CB
PM/DM ROGER ROY
BRANCH MANAGER NATHAN MAHER
TEAM/PM/ME AMIN BAHROUR PM&E
FIRE PROTECTION X

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
 PUBLIC WORKS DEPARTMENT - MAINE  
 PORTSMOUTH NAVAL SHIPYARD  
 RME REPAIR STEAM AND CONDENSATE  
 PNSY BLDG 180 TO BLDG 300, RM14-0205  
 PIPING SCHEMATICS

EPROJCT NO.:	1370673
CONSTR. CONTR. NO.	N40085-##-##-####
NAVFAC DRAWING NO.	12706388
SHEET	29 OF 29
M-603	MS-15-XXXX