REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
A	REVISED "AS BUILT"	OCT.77	RJS

BERTHING PIERS (1ST INCREMENT) PIER 25

NAVAL STATION, NORFOLK, VIRGINIA

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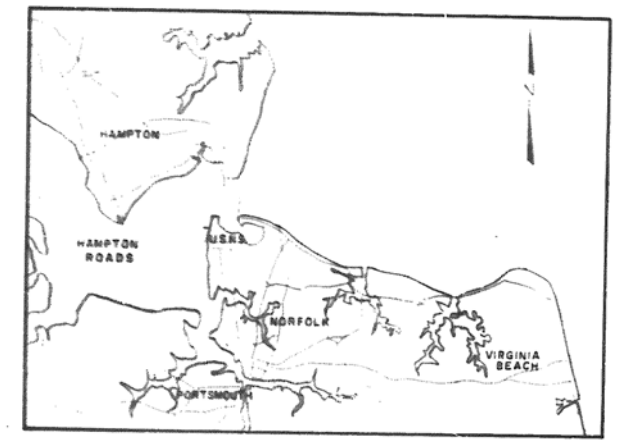
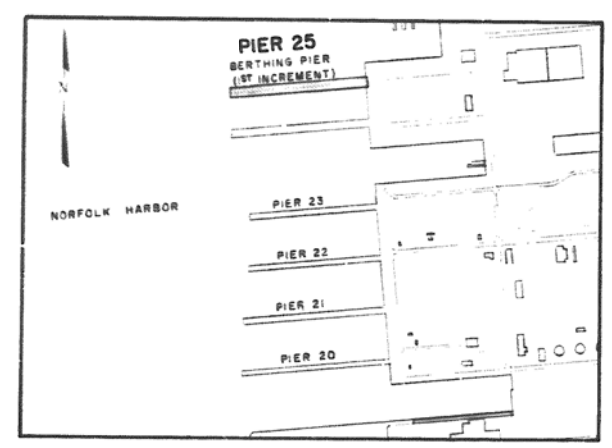


VICINITY MAP
SCALE: 1" = 3 MILES



LOCATION MAP
SCALE: 1" = 800'

SECTION/DETAIL IDENTIFICATION

LAST TWO DIGITS OF NAVFAC DWG. NO. ON WHICH SECTION/DETAIL IS TAKEN

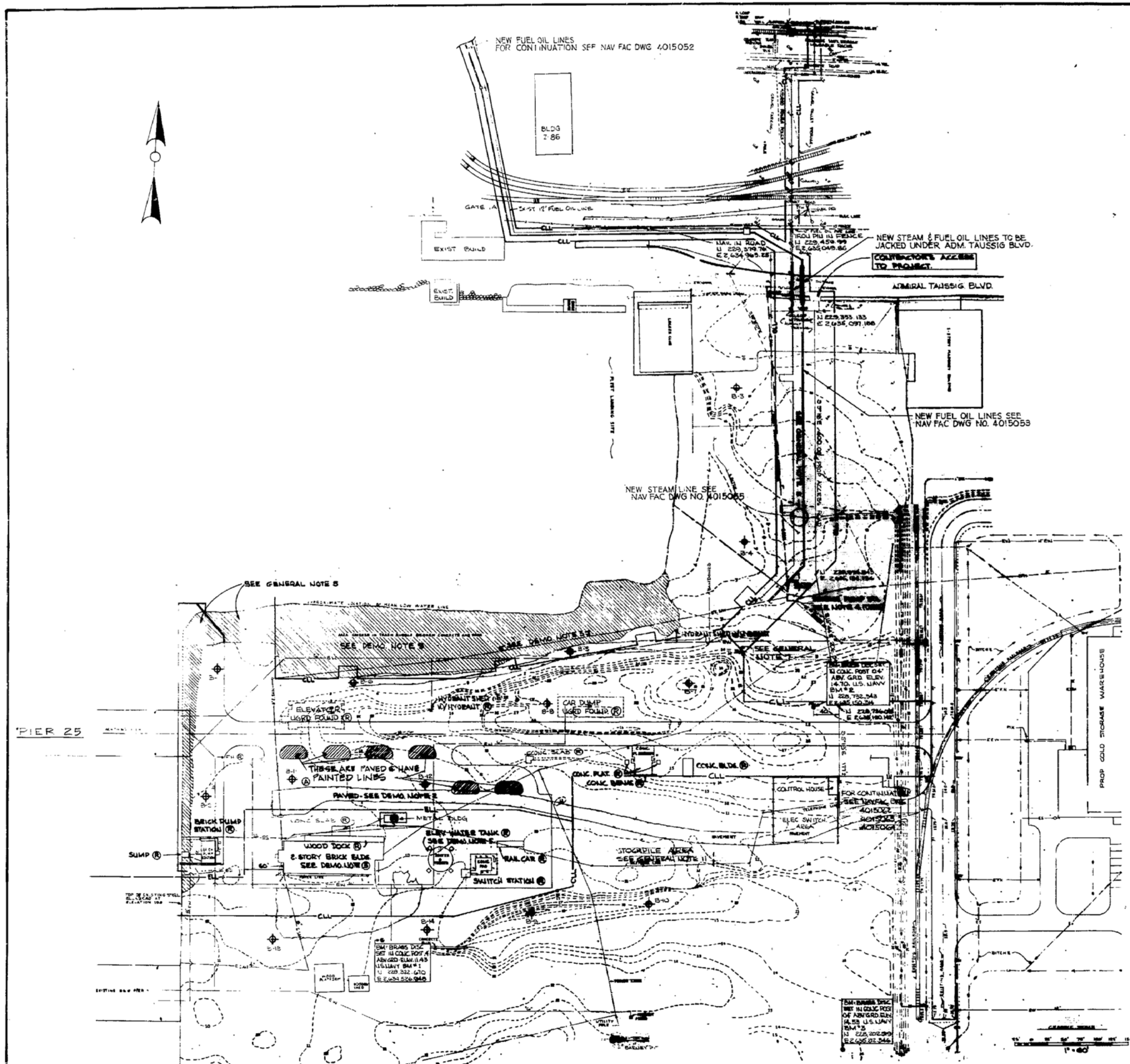
LAST TWO DIGITS OF NAVFAC DWG. NO. ON WHICH SECTION/DETAIL IS SHOWN

SECTION/DETAIL SYMBOL

RECORD DRAWING
LETTER DATED

EFD DWG. NO. 115019	DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
WORK REQ. NO. 54502518	ATLANTIC DIVISION
DES.	NAVAL STATION — NORFOLK, VA.
DRWN. JF - BW - JL	NAVAL STATION — NORFOLK, VA.
TR.	BERTHING PIERS (1ST INCREMENT)
CHK.	PIER 25
SR. MGR.	TITLE SHEET
DES. DIR.	
SATISFACTORY TO — DATE	
APPROVED — DATE	
FOR EFD FOR COMMANDER NAVFAC	SIZE F — CODE IDENT. NO. 80091 — DWG. NO. 4015019 — CONTR. IDENT. NO. N62470-73-B-1221
	SCALE NOTED — SPEC. 05-73-1221 — SHEET 1 OF 66

REVISIONS		
DESCRIPTION	DATE	APPROVED
REVISED AS BUILT		



LEGEND

EXISTING		NEW
	EXIST. LEASE LIMIT	ELL
	CONTRACT LIMIT LINE	CLL
	CONNECTION TO EXIST	
B-11	SOIL BORING	
14	CONTOUR	(14)
	GROUND SLOPE	SLOPE
10.4	SPOT ELEV.	(10.4)
	PAVEMENT	
	TELEPHONE/POWER	
	FENCE	
	RAILROAD	
S.S.	STORM	S
E.W.	WATER	W
E.SAN.	SAN. SEWER	SAN
E.F.M.	SAN. FORCEMAIN	F.M.
	MAN HOLE	
	STORM INLET	
	VALVE	
	FIRE HYDRANT	
	TRASH & RUBBLE	
	TELEPHONE/POWER MANHOLE	

GENERAL NOTES

(A) 1. ELEVATIONS SHOWN HEREON REFER TO U.S.C&GS DATUM 0.00 = MEAN LOW WATER.
2. BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON LAMBERT CONFORMAL CONIC PROJECTION (VIRGINIA-SOUTH ZONE).
3. SOIL BORINGS - FOR BORING LOGS SEE NAVFAC DRAWING NO. 4018081.
4. ALL NON-PAVED AREAS WITHIN CONTRACT LIMIT LINE (CLL) SHALL BE VEGETATED. SEE ALSO NOTE 7.
5. EXISTING RIPRAP SHALL BE REMOVED AND STOCKPILED FOR REUSE AT NEW BULKHEAD.
6. FOR ADDITIONAL ELECTRICAL CONSTRUCTION SEE NAV FAC DWG NO. 4015054
7. GRUBBING AND VEGETATION IS NOT REQUIRED NORTH & EAST OF THIS LINE.
8. CONSTRUCTION OF OIL AND STEAM LINES SHALL NOT INTERFERE WITH DRAINAGE WAY.
9. GROUND SURFACE OUTSIDE OF CLL SHALL BE RETURNED TO EXISTING GRADE. TRANSITION SLOPE SHALL NOT EXCEED 3 TO 1. GROUND CONTOURS SHOWN OUTSIDE OF CLL ARE NOT IN THIS CONTRACT.
10. ELECTRICAL SWITCH STATION NOT IN THIS CONTRACT.
11. APPROVED EXCAVATED MATERIAL NOT USED AS FILL SHALL BE STOCKPILED IN THE GENERAL AREA INDICATED AS DIRECTED BY THE OICC.

DEMOLITION NOTES

1. NO CONSTRUCTION AND/OR DEMOLITION WILL BE PERMITTED WITHIN THE LIMITS OUTLINED BY THE EXISTING LEASE LINE (ELL) AND CONTRACT LIMIT LINE (CLL) UNTIL AFTER 30 JUNE 1976.
2. THE EXISTING PAVED ROAD SHALL BEING EXISTING LEASE HOLDER UNTIL 30 JUNE 1975, AND THEN BE REMOVED.
3. EXISTING BUILDING SHALL NOT BE DEMOLISHED NOR EXISTING UTILITIES THEREFOR DISRUPTED OR REMOVED PRIOR TO 30 JUNE 1975.
4. EXISTING SEWAGE PUMP STATION AND ELECTRICAL SERVICE THEREFOR SHALL REMAIN IN OPERATION.
5. EXISTING 100,000 GALLON ELEVATED WATER TANK SHALL BE DEMOLITIED. CONCRETE FOUNDATIONS SHALL BE REMOVED TO A DEPTH OF THREE (3) FEET BELOW EXISTING GROUND.
6. CONTRACTOR MAY ABANDON ALL UNDERGROUND PIPING EXCEPT WHERE REMOVAL IS NECESSARY FOR NEW CONSTRUCTION. PIPING BROKEN AND/OR REMOVED IN CONSTRUCTION SHALL HAVE OPEN ENDS PLUGGED WITH CONCRETE.
7. ALL EXISTING ITEMS NOTED (R) SHALL BE DEMOLISHED AND/OR REMOVED.
8. ALL MATERIALS RESULTING FROM DEMOLITION, REMOVAL, ETC. SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE REMOVED FROM GOVERNMENT PROPERTY.
9. THIS AREA IS CURRENTLY A TRASH AND RUBBLE DISPOSAL AREA. NO ADDITIONAL MATERIALS WILL BE PERMITTED.
10. EXISTING TRASH AND RUBBLE SHALL BE REMOVED WITHIN CLL AND DISPOSED OFF GOVERNMENT PROPERTY.

RECORD DRAWING
LETTER DATED

EFD DWG. NO.	113080
WORK REQ. NO.	34502318
DES.	FRIER
DRWN.	GIBBINES
TR.	
CHK.	
DR. MGR.	
PCD. DIR.	
SATISFACTORY TO	DATE
APPROVED	DATE 8 APR 1974

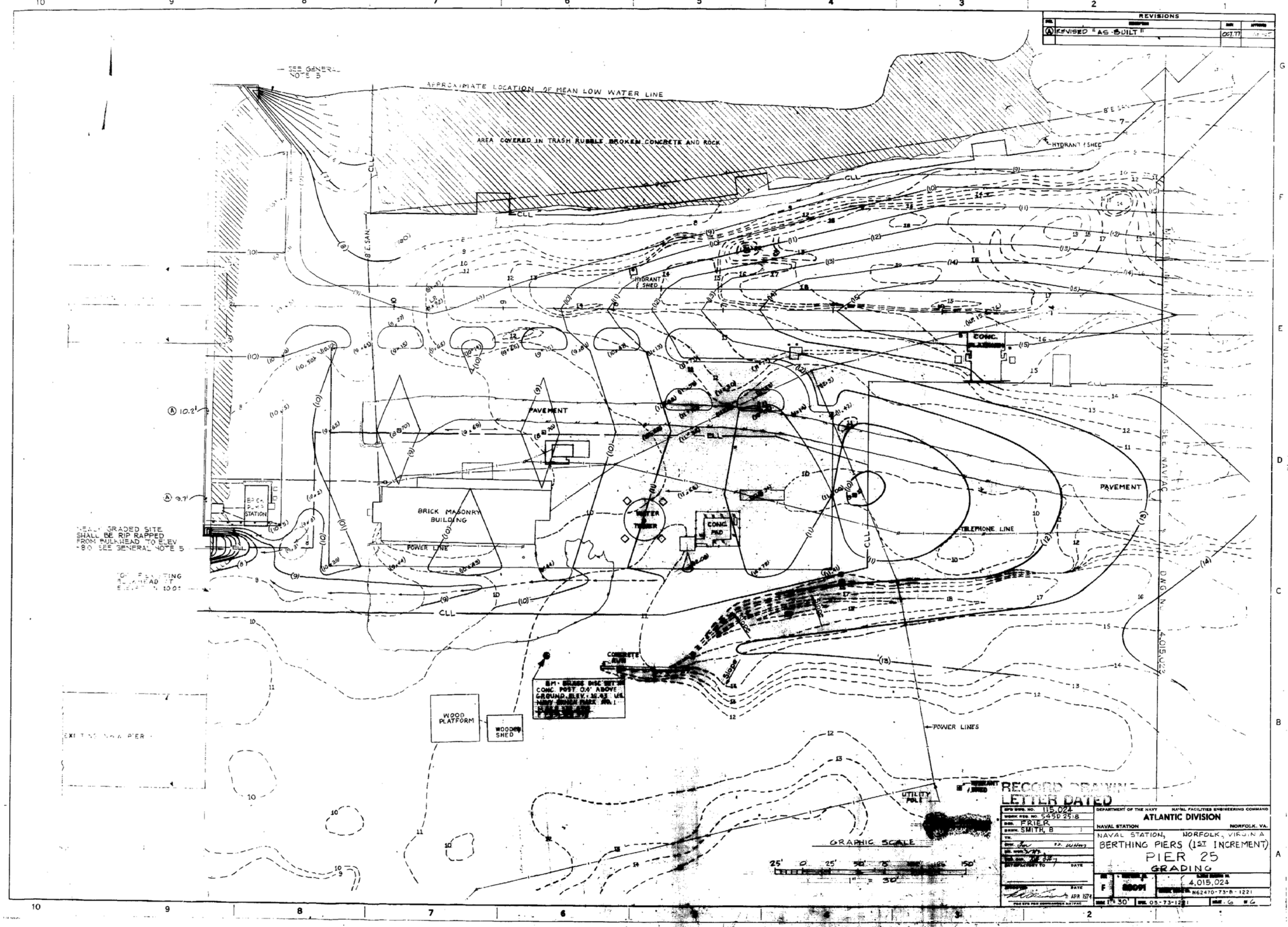
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION — NORFOLK, VA.

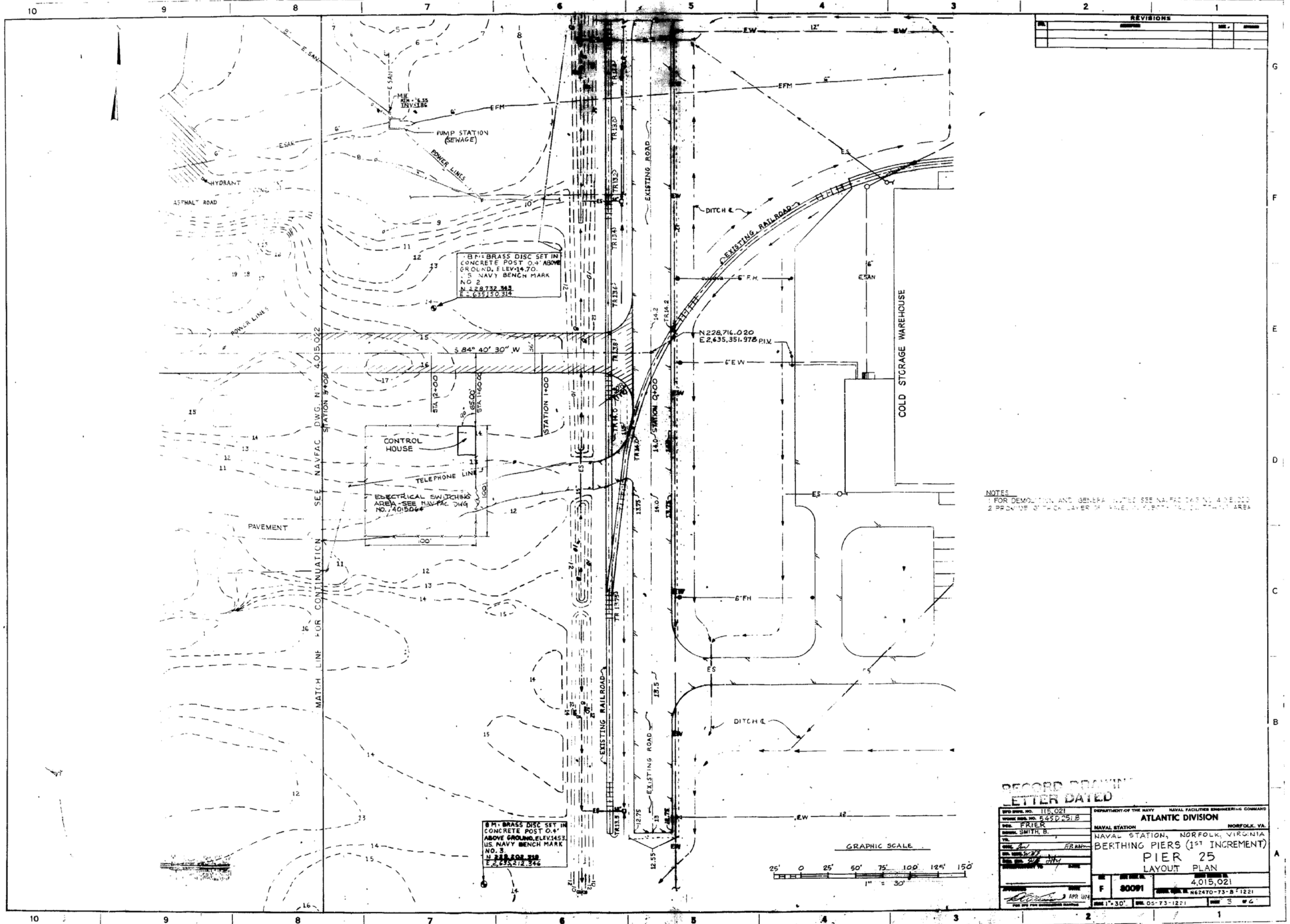
NAVAL STATION, NORFOLK, VIRGINIA
BERTHING PIERS (1ST INCREMENT)
PIER 25
GENERAL SITE PLAN

SIZE	CODE IDENT NO.	NAVFAC DRAWING NO.
F	80091	4015020

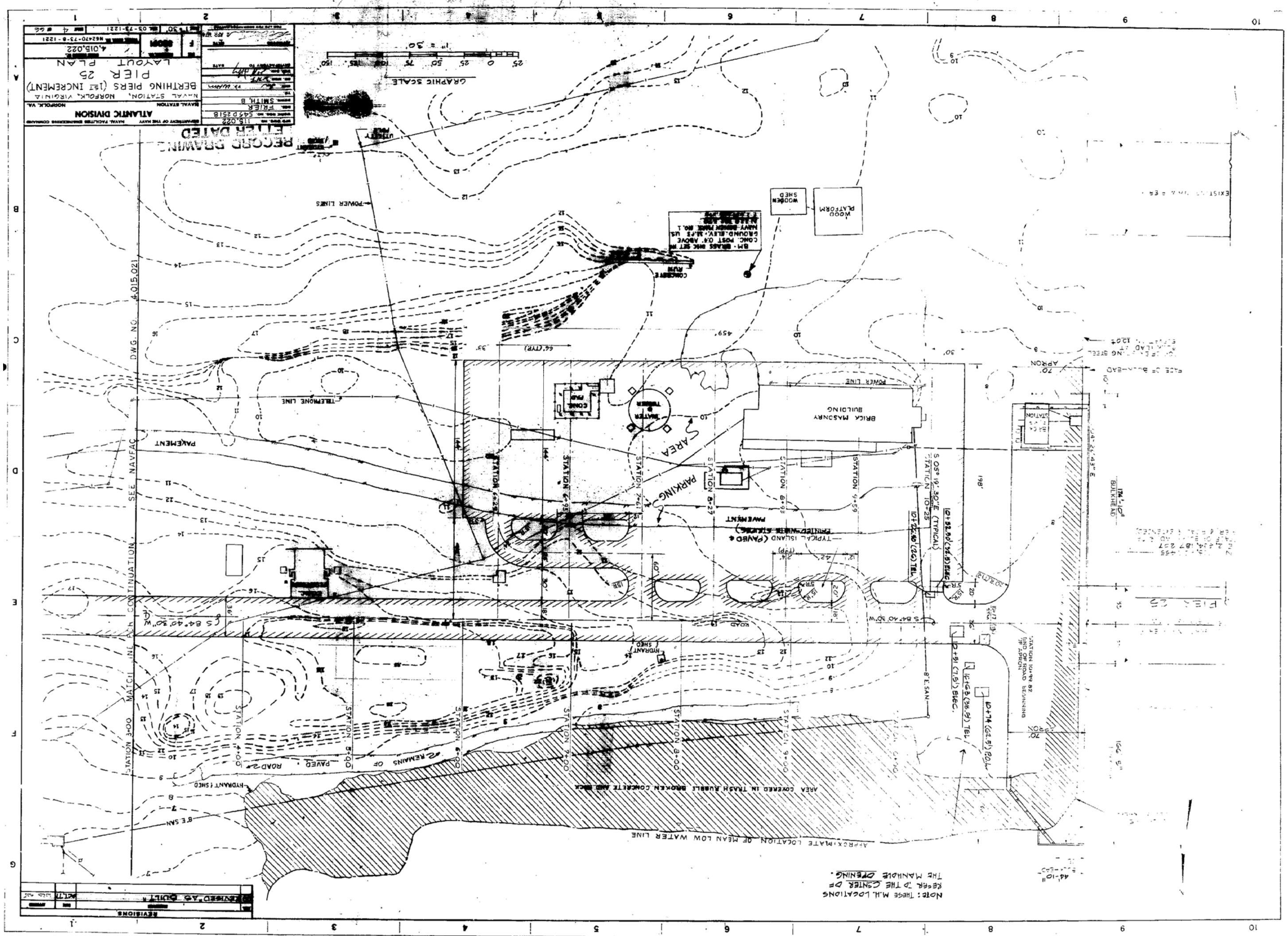
DRAWING NO. 162470-73-B-122

SCALE 1" = 60' DATE 08-73-1981 SHEET 2 OF 66


REVISIONS
REVISED "AS-BUILT"
SEE GENERAL NOTE 5
APPROXIMATE LOCATION OF MEAN LOW WATER LINE
AREA COVERED IN TRASH RUBBLE BROKEN CONCRETE AND ROCK
HYDRANT & SHED
CLL
8" E. SAN.
PAVEMENT
BRICK MASONRY BUILDING
POWER LINE
WATER TOWER
CONC. PAD
TELEPHONE LINE
CONC. PLATFORM
CONCRETE RUN
WOOD PLATFORM
WOODEN SHED
POWER LINES
UTILITY POLE
NEARLY GRADED SITE SHALL BE RIP RAPPED FROM BULKHEAD TO ELEV -8.0 SEE GENERAL NOTE 5
EXISTING NAVY PIER
SEE NAVFAC DWG NO. 4,015,023
GRAPHIC SCALE
25' 0 25' 50' 75' 100' 125' 150'
1" = 30'
RECORD DRAWING LETTER DATED
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION
NORFOLK, VA.
NAVAL STATION, NORFOLK, VIRGINIA
BERTHING PIERS (1ST INCREMENT)
PIER 25
GRADING
115,024
S45D 2518
FRIER
SMITH, B
APR 1974
4,015,024
N62470-73-B-1221
1" = 30'
05-73-1221
6 #6



REVISIONS
PUMP STATION (SEWAGE)
POWER LINES
HYDRANT
ASPHALT ROAD
EXISTING ROAD
EXISTING RAILROAD
DITCH ℄
COLD STORAGE WAREHOUSE
N 228,716.020
E 2,635,351.978 P.I.V.
S 84° 40' 30" W
STATION 3+00
STATION 1+00
STATION 0+00
CONTROL HOUSE
TELEPHONE LINE
ELECTRICAL SWITCHING AREA - SEE NAVFAC DWG NO. 4015064
PAVEMENT
MATCH LINE FOR CONTINUATION SEE NAVFAC DWG. NO. 4,015,022
BM: BRASS DISC SET IN CONCRETE POST 0.4' ABOVE GROUND, ELEV. 14.70. U.S. NAVY BENCH MARK NO. 2
BM: BRASS DISC SET IN CONCRETE POST 0.4' ABOVE GROUND, ELEV. 14.53. U.S. NAVY BENCH MARK NO. 3.
GRAPHIC SCALE
1" = 30'
NOTES
1. FOR DEMOLITION AND GENERAL NOTES SEE NAVFAC DWG NO. 4015020
2. PROVIDE 6" THICK LAYER OF GRAVEL IN ELECTRICAL SWITCHING AREA
RECORD DRAWING LETTER DATED
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION
NORFOLK, VA.
NAVAL STATION, NORFOLK, VIRGINIA
BERTHING PIERS (1ST INCREMENT)
PIER 25
LAYOUT PLAN
115,021
FRIER
SMITH, B.
APR 1974
F
80091
4,015,021
N62470-73-B-1221
1"=30'
05-73-1221
3 of 6



RECORD DRAWING
ETTER DATED
ATLANTIC DIVISION
NAVAL STATION, NORFOLK, VIRGINIA
BERTHING PIERS (1ST INCREMENT)
PIER 25
LAYOUT PLAN
4,015,022
GRAPHIC SCALE
1" = 30'
POWER LINES
TELEPHONE LINE
PAVEMENT
BRICK MASONRY BUILDING
WOOD PLATFORM
WOODEN SHED
CONCRETE RUN
AREA
PARKING
TYPICAL ISLAND (PAVED & PAINTED WHITE STRIPES)
REMAINS OF PAVED ROAD
AREA COVERED IN TRASH RUBBLE BROKEN CONCRETE AND BRICK
APPROXIMATE LOCATION OF MEAN LOW WATER LINE
STATION 3+00 MATCH LINE FOR CONTINUATION SEE NAVFAC DWG. NO. 4,015,021
NOTE: THESE M.H. LOCATIONS REFER TO THE CENTER OF THE MANHOLE OPENING.
REVISED "AS BUILT"
REVISIONS

REVISIONS			

BORING B-1
ELEV 7.2'

DESCRIPTION	BLOWS
SAND, fine to med, some clay, tan and gray, damp medium dense	16, 20
SAND fine to medium trace silt gray to ▽ trace of organics material damp medium dense to loose	5, 7
no organics, some shell at 25'	2
shell at 35' alternating lenses of silt throughout	WOH
S__ gray, little to some sand fine to med, thin lenses of sand throughout, medium compact	7
change to very soft	WOH
SAND fine to medium little silt trace organic material medium dense	15
SILT gray to brown, trace organic material soft	3
soft	3
stiff	9
SAND fine to medium, little silt, little organic material, gray medium dense,	11
change to little shell no organic material	13
SAND and silt, fine, little shell, gray-green, medium dense	20
change to dense	31
	22
	34
	31
change to medium dense	26
	22
change to dense, no shell	22
	32
SILT some fine sand, gray, hard	35
change to very stiff	21
little fine sand	20

BOTTOM OF BORING @ 111'-0"
WATER DATA
5.0' @ 24 HRS

BORING B-2
ELEV - 8.0'

DESCRIPTION	BLOWS
* 1 SEE BELOW	
SAND, some clay, fine to medium trace of small gravel, wet, medium dense	8, 7
* 2	8
* 3	
* 4	2
SAND, fine to medium, trace of shell, trace of silt, gray, loose	2, 2
alternating lenses of silt	2
little wood 18' to 19' loose	2
	3
SILT, little fine sand, organic odor, dark gray, very soft	WOH
change to some fine sand, gray-green, medium compact	2
SAND & SILT, fine, trace of shell, gray-green, medium dense	11
	15
	16
change to dense	35
	42
	37
little shell	54
	37
trace of shell	33
change to medium dense	21
change to dense.	36
	33
	38
SILT, some sand, fine to medium, gray-green, hard	20
change to very stiff	24

BOTTOM OF BORING @ 111'-0"
WATER DATA
4.0' @ 24 HRS.

DESCRIPTION	BLOWS
SAND, fine to medium, gray streaks of black, and silt, wet and very loose.	2
SAND fine, gray, some silt, trace of shell, medium compact and moist	22, 30
change to compact	33
change to medium compact	30
change to compact	26, 37
	41
	48
	42
	42
	48

BOTTOM OF BORING @ 90'-0"

* NOTES FROM BORING B-2
* 1 SAND & SILT, dark gray, fine to medium wet medium dense.
* 2 SAND, fine to medium, little silt organic gray to dark gray loose
* 3 SILT very organic, black, medium compact
* 4 SAND, little sand, fine to medium trace silt, gray loose.

BORING B-3
ELEV. - 9.3'

DEPTH 0.0	DESCRIPTION	BLOWS
	SAND, fine to medium, gray small bits of concrete, brick, etc., damp, loose	8
	change to medium dense	30
	little silt, black and gray, trace of shell, coal, dense	
5.0	change to tan, no silt or trash, wet and medium dense.	20
	change to loose	14
	lenses of silt, medium dense	
	fine to coarse, no silt, very dense	43
	trace of small gravel, medium dense	20
10.0		
	reddish brown, fine to medium	17
	SILT gray medium	
15.0		
20.0		4

BOTTOM OF BORING 21'-0"
WATER DATA
CAVED @ 5.0'

BORING B-4
ELEV. - 7.2'

DESCRIPTION	BLOWS
SAND fine to medium, gray roots in top 1', wet, loose	3
	4
trash, coal, concrete etc., wet fine to coarse medium dense	13
trace of small gravel, very dense	41
change to medium	7
loose	
change to medium dense reddish brown, trace of clay.	16
change to dense	34
SILT, gray, medium	6

BOTTOM OF BORING 21'-0"
WATER DATA
CAVED @ 0.0'

BORING B-5
ELEV. - 8.5'

DESCRIPTION	BLOWS
SAND fine to medium, little clay, tan, roots top 1', damp, loose.	8
trace of clay, damp medium dense.	12
▽ gray, no clay fine, trace of shell, trace silt, loose	12
SILT, gray, very soft.	2
	WOH
	4
SAND, fine to medium, gray, trace of silt, loose	6
SAND & CLAY, brown, fine to coarse, trace small gravel.	
SAND, fine to medium, tan, trace of clay, medium dense	8
SILT, gray	

BOTTOM OF BORING @ 21'-0"
WATER DATA
4.5' @ 24 HRS

BORING B-6
ELEV. - 7.5'

DESCRIPTION	BLOWS
SAND, fine to medium, black, trash, gravel, coal, shell, etc., dry, dense medium dense	7
loose	10
SAND, fine to medium, tan, damp, medium dense	
SHELL, little sand, gray, wet, medium dense	14
SAND, fine to medium, gray	16
▽ loose	7
trace of organics, medium dense	19
* washed up fine sand, trace shell and silt, no organics	30
little silt	12

BOTTOM OF BORING @ 21'-0"
WATER DATA
8.0' @ 24 HRS.

BORING B-7
ELEV. - 19.5'

DESCRIPTION	BLOWS
COAL DUST	
SAND, fine to medium, trace to little clay, reddish brown, loose	
SAND, fine to medium, gray, trace organics, loose	

BOTTOM OF BORING @ 10'-0"
WATER DATA
NOT REACHED

BORING B-8
ELEV. - 19.2'

DESCRIPTION	BLOWS	DEPTH 0.0
COAL CINDERS		
SAND, fine to medium, trace clay, reddish brown, loose		5.0
SAND, fine to med, dark gray, trace organics		10.0

BOTTOM OF BORING @ 10'-0"
WATER DATA
NOT REACHED

BORING B-9
ELEV. - 20.0'

DEPTH 0.0	DESCRIPTION	BLOWS
	SAND, fine to medium, trace of clay, little clay, trash and coal top one foot, medium dense.	
5.0		
	SILT & SHELL, medium.	
10.0	SAND, fine to medium, tan	
15.0		
20.0		

BOTTOM OF BORING @ 10'-0"
WATER DATA
NOT REACHED

BORING B-10
ELEV. - 17.8'

DESCRIPTION	BLOWS
SAND fine to coarse, gray	
SAND, fine to medium, trace to little clay, little shell, medium dense.	
SILT & SAND	
SAND, fine to medium, tan, trace of shell medium dense	

BOTTOM OF BORING @ 10'-0"
WATER DATA
NOT REACHED

BORING B-11
ELEV. - 8.4'

DESCRIPTION	BLOWS
SAND, fine to medium shell, coal, gravel, etc. in top 1.5', damp medium dense.	15
loose	10
medium dense trace of shell, damp	7

BOTTOM OF BORING @ 5'-0"
WATER DATA
NOT REACHED

BORING B-12
ELEV. - 10.2'

DESCRIPTION	BLOWS
SAND, fine to medium, tan, trace of clay, top foot mixed with coal, medium dense. damp	10
no clay	15
	8

BOTTOM OF BORING @ 5'-0"
WATER DATA
NOT REACHED

BORING B-13
ELEV. - 9.5'

DESCRIPTION	BLOWS
SAND-SILT-GRAVEL mixture	
COAL DUST	22
SAND fine to coarse, trace of small gravel, tan, med. dense	10
SAND, fine to medium, gray-green, lenses of silt, loose no silt, damp, medium dense	14

BOTTOM OF BORING @ 5'-0"
WATER DATA
NOT REACHED

BORING B-14
ELEV. - 11.5'

DESCRIPTION	BLOWS	DEPTH 0.0
SAND, some shell, little silt, fine to medium, gray & tan, damp, medium dense		
SAND, fine to medium, trace of clay, tan.		5.0

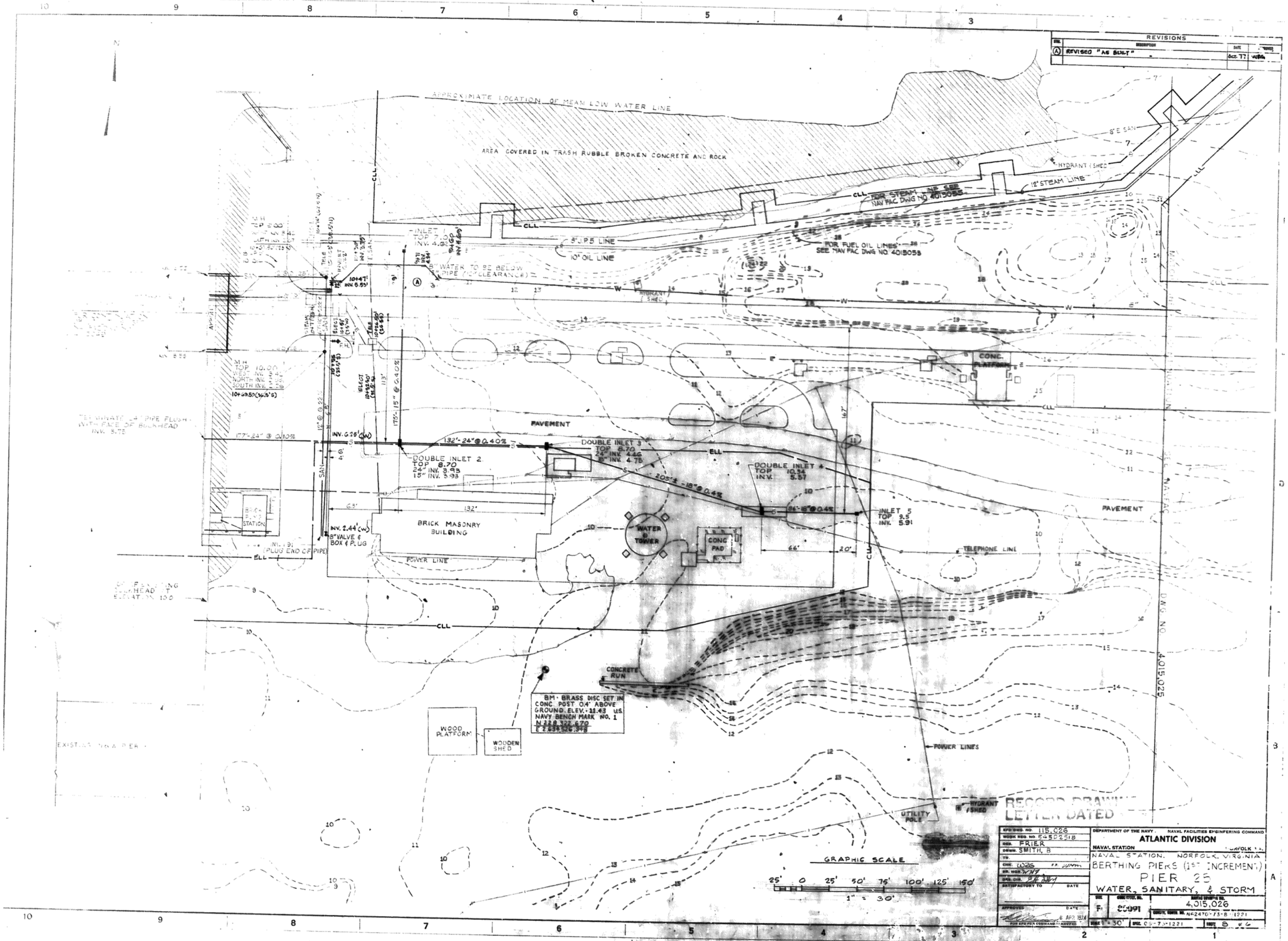
BOTTOM OF BORING @ 5'-0"
WATER DATA
NOT REACHED

BORING LOGS
SCALE: 1" = 5'-0"
VERTICAL

BORING LOGS B-3 THRU B-14
SCALE: 1" = 2'-6"
VERTICAL

RECORD DRAWING
LETTER DATED 9 JUL 1975

EFD DWG. NO. 115031	DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
WORK REQ. NO. 54502518	ATLANTIC DIVISION
DES.	NAVAL STATION — NORFOLK, VA.
DRWN. JCJ	NAVAL STATION NORFOLK, VIRGINIA
TR.	BERTHING PIERS (1ST INCREMENT)
CHK. KAN / R.P. WHITE	PIER 25
SUPERVISOR	BORING LOGS III
APPROVED / DATE	F 80091 — 4015031
APR 1974	N62470-73-B-1221
FOR EFD FOR ENGINEERING SERVICE	SCALE AS SHOWN — 05-73-1221 — SHEET 13 OF 66


REVISIONS
REVISED "AS BUILT"
APPROXIMATE LOCATION OF MEAN LOW WATER LINE
AREA COVERED IN TRASH RUBBLE BROKEN CONCRETE AND ROCK
FOR STEAM LINE SEE NAV FAC DWG NO 4015055
12" STEAM LINE
HYDRANT & SHED
8" J.P.S LINE
10" OIL LINE
FOR FUEL OIL LINES SEE NAV FAC DWG NO 4015053
8" WATER TO BE BELOW 8" PIPE (10" CLEARANCE)
CONC. PLATFORM
PAVEMENT
DOUBLE INLET 2 TOP 8.70 24" INV. 3.93 15" INV. 3.93
DOUBLE INLET 3 TOP 8.70 24" INV. 4.46 18" INV. 4.75
DOUBLE INLET 4 TOP 10.34 INV. 5.57
INLET 5 TOP 9.5 INV. 5.91
132'-24" @ 0.40%
205'± -18" @ 0.4%
86'-18" @ 0.4%
177'-24" @ 0.10%
175'-15" @ 0.40%
BRICK MASONRY BUILDING
WATER TOWER
CONC PAD
POWER LINE
TELEPHONE LINE
8" VALVE & BOX & PLUG
CONCRETE RUN
BM - BRASS DISC SET IN CONC. POST 0.4' ABOVE GROUND. ELEV. - 11.43 U.S. NAVY BENCH MARK NO. 1
WOOD PLATFORM
WOODEN SHED
POWER LINES
UTILITY POLE
HYDRANT & SHED
GRAPHIC SCALE
25' 0 25' 50' 75' 100' 125' 150'
1" = 30'
RECORD DRAWING LETTER DATED
DEPARTMENT OF THE NAVY - NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION NORFOLK, VA.
NAVAL STATION, NORFOLK, VIRGINIA
BERTHING PIERS (1ST INCREMENT)
PIER 25
WATER, SANITARY, & STORM
EFD DWG. NO. 115,026
WORK REQ. NO. 545D2518
DES. FRIER
DRWN. SMITH, B
CHK. WRG
SATISFACTORY TO
DATE
APPROVED
6 APR 1974
FOR EFD FOR COMMAND AT NAVFAC
SIZE F
CODE IDENT. NO. 86091
NAVFAC DRAWING NO. 4,015,026
CONTR. CONTR. NO. N62470-73-B-1221
SCALE 1" = 30'
SPEC. 05-73-1221
SHEET 8 of 6
DWG NO. 4,015,025

REVISIONS			

BORING A-8
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, black, little sand and organics, trace of clay, wet and very soft	ML	WOH
SAND, fine gray some silt, little clay, moist and medium compact, little silt, trace of clay and shell	ML / SM	3 / 29
SAND, fine gray little silt, trace of clay and shell, moist, and medium compact.	SM	25
change to very compact	SM	72
	SM	34
	SM	22
change to compact	SM	22
no shell very compact	SM	40
BOTTOM OF BORING @ 76'-6"		

BORING A-9
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, black, little sand and organics, trace of clay, wet and very soft	ML	WOH
SAND, fine to med., gray little silt, trace of clay, shell and coal, moist and loose	SM	8
change to fine, no coal, moist and medium compact	SM	26
SAND, fine, little silt, gray, trace of clay and shell, moist and medium compact	SM	19
	SM	23
	SM	30
	SM	35
change to compact	SM	32
	SM	31
	SM	31
BOTTOM OF BORING @ 76'-6"		

BORING A-10
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, gray little fine sand, wet and very soft	ML	WOH
SAND, fine to medium, gray, some silt, trace of clay, wet and loose	SM	7
change to fine, some silt, trace of clay and shell, moist, medium compact	SM	20
SAND, fine, gray, little silt, trace of clay and shell, moist, medium compact	SM	24
change to compact	SM	37
change to very compact.	SM	52
trace of pea gravel, compact	SM	44
no pea gravel	SM	50
SAND, fine, gray, little silt and clay, trace of shell, moist, compact	SM	39
	SM	70
BOTTOM OF BORING @ 76'-6"		

BORING A-11
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, gray little sand, wet and very soft	ML	WOH
SAND, fine to medium, gray, some silt, wet and loose.	SM	7
fine, little silt, trace of clay, moist, medium compact.	SM	12
	SM	12
little silt, trace of clay and shell.	SM	29
SAND, fine, gray, little silt, trace of clay and shell, moist and compact.	SM	31
fine to medium, some silt, trace of clay and shell, moist and medium compact	SM	22
	SM	28
little silt, trace of clay and shell, moist and compact.	SM	32
medium compact	SM	25
some shell, little silt, trace of clay, moist and compact.	SM	39
little silt, trace of shell and clay.	SM	44
little silt and shell, trace of clay, moist and very compact	SM	65
BOTTOM OF BORING @ 91'-6"		

BORING C-1
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SAND, fine to medium, gray, trace of silt, very loose and saturated		2
		4
SAND, fine to coarse, black, little silt, traces of shell and pea gravel, loose and saturated.		3
		7
ORGANIC CLAY, brown, traces of wood and silt, very stiff and damp.		19
SAND, fine to medium, gray, some silt, loose and moist.		9
SAND, fine, gray, some silt, trace of shell, medium compact and moist		24
		24
		44
		33
change to compact		33
		31
change to medium compact.		30
change to compact.		32
		31
SAND, fine, gray and clay, some shell, little silt, compact and moist.		40
		44
BOTTOM OF BORING @ 90'-0"		

BORING C-2
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, black, trace of coal, very soft and wet.		2
		2
		2
		2
		2
SAND, fine, gray, some silt, little coal, medium compact and moist.		2
SAND, fine, gray, some silt, trace of shell, compact and moist		34
		44
		33
		42
		44
		45
		31
		54
little silt and shell, very compact.		53
		57
BOTTOM OF BORING @ 90'-0"		

BORING C-3
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, black, trace of coal, very soft and wet.		2
		2
		2
		3
some wood		4
WOOD		
SAND, fine, gray, some silt, trace of shell, medium compact and moist.		22
		29
		32
		40
		42
		43
		47
		34
CLAY, gray, layers of sand, fine, some silt, trace of shell, hard and moist.		41
SAND, fine, gray, some silt, little shell, compact and moist.		40
and shell, wet		47
BOTTOM OF BORING @ 90'-0"		

BORING C-4
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, black, trace of coal, very soft and wet.		2
		2
		2
		2
		2
SAND, fine, gray, some silt, trace of shell, medium compact and moist.		25
change to compact		44
		49
		41
		35
		48
		43
		41
SAND, fine to medium, gray, some clay and silt, little shell, compact and moist		62
		79
BOTTOM OF BORING @ 90'-0"		

BORING C-5
ELEV. - MLW

DESCRIPTION		BLOWS
WATER		
SILT, black, trace of coal, very soft and wet.		2
		2
		2
		2
		3
SAND, fine, gray, some silt, trace of shell, medium compact and moist.		18
		19
		36
		40
change to compact		41
		48
		60
change to very compact		62
		64
SAND, fine, gray and clay, little silt and shell, very compact and moist.		65
		101
BOTTOM OF BORING @ 90'-0"		

BORING C-6
ELEV. - MLW

DESCRIPTION		BLOWS	DEPTH
WATER			0.0
			5.0
			10.0
			15.0
			20.0
SILT, black, very soft and wet.		2	
		2	25.0
		2	
trace of coal		2	30.0
no coal		2	35.0
trace of coal		3	40.0
		34	45.0
SAND, fine, gray, some silt, trace of shell, compact and moist.		38	50.0
		34	55.0
		40	60.0
change to very compact		54	65.0
change to compact		42	70.0
		47	75.0
		44	80.0
		81	85.0
SAND, fine, gray, some silt, little shell, very compact and moist		76	90.0
BOTTOM OF BORING @ 90'-0"			95.0
			100.0

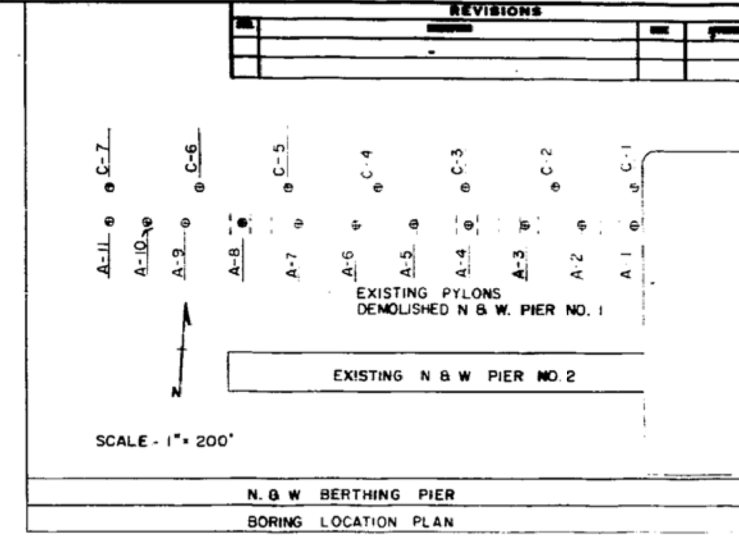
BORING LOGS
SCALE: 1" = 5'0"
VERTICAL

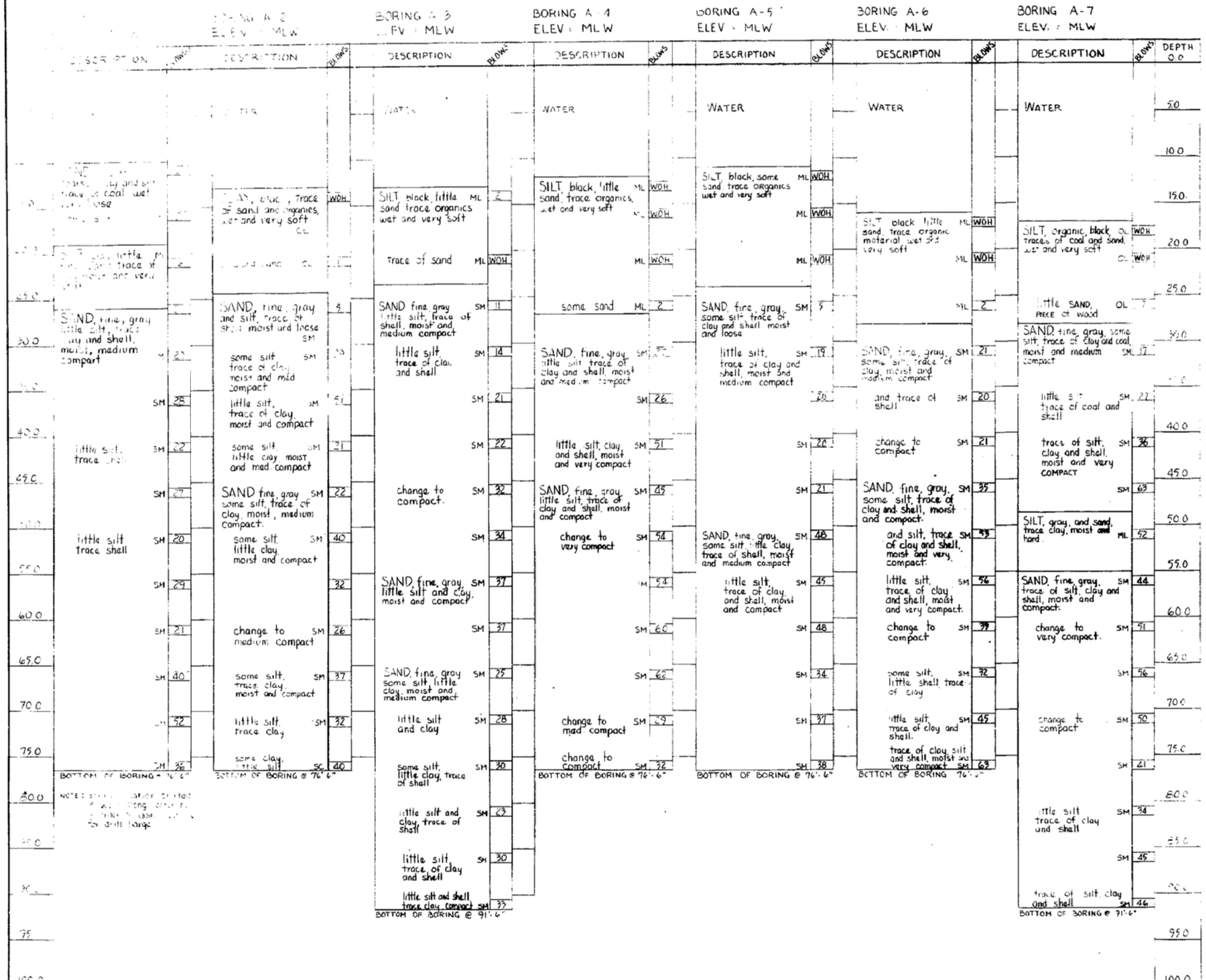
RECORD DRAWING
LETTER DATED 9 JUL 1975

DFD DWG. NO.	115030
WORK ORD. NO.	545D2518
DRN.	JEJ
DSGN.	KAN F.P. WH
CHK.	
APPROVED	2 APR 1974

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION — NORFOLK, VA.
NAVAL STATION NORFOLK, VIRGINIA
BERTING PIERS (1ST INCREMENT)
PIER 25
BORING LOGS II

F	80091	4015030
		N62470-73-B-1221
SCALE 1"=5'	05-73-1221	SHEET 12 OF 66

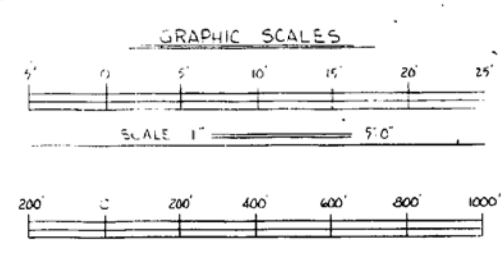




BORING LOGS

SCALE : 1" = 5.0'

VERTICAL



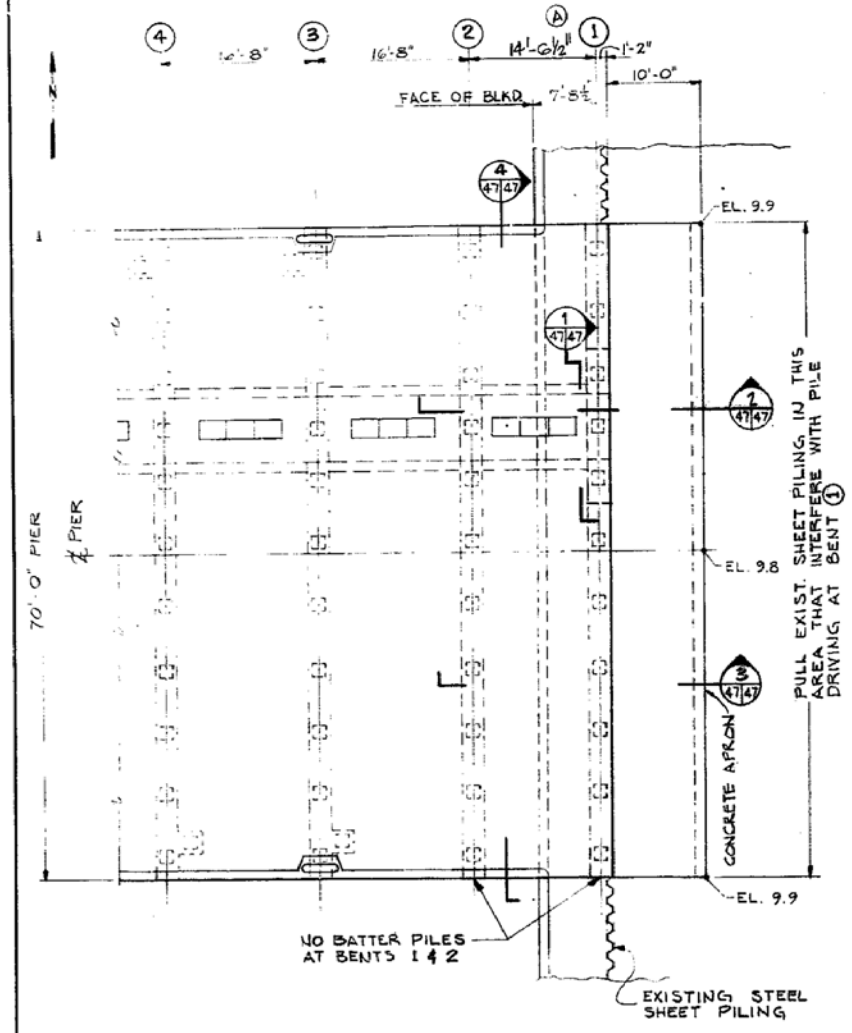
GENERAL NOTES

1. BORINGS ADVANCED BY WASHING.
2. BLOWS COLUMN INDICATES DEPTH OF SAMPLE [illegible] NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER ONE FOOT INTO UNDISTURBED SOIL WITH A 140 LB HAMMER FALLING 30" AS PER ASTM TEST D1586-64T.
3. ALL DEPTHS AND LOCATIONS ARE APPROXIMATE.
4. BORING DRILLED BY: A-BORINGS CARPENTER CONSTRUCTION CO. IN SEPTEMBER [illegible] B BORINGS LANTDIV CODE 4[illegible] IN AUGUST [illegible] C BORINGS CARPENTER CONSTRUCTION [illegible] JULY 1969
5. WATER TABLE INDICATED THUS: ▽
6. ABBREVIATIONS: ELEV - ELEVATION, MED - MEDIUM, MLW - MEAN LOW WATER, WOH - WEIGHT OF HAMMER
7. SM SC ML OL, ETC FROM UNIFIED SOIL CLASSIFICATION SYSTEM, DESCRIPTION OF SOIL IN ACCORDANCE WITH BURMISTERS CLASSIFICATION ON BASIS OF VISUAL ESTIMATE BY DRILLER
8. SAMPLES ARE STORED AT LANTDIV [illegible] AND ARE AVAILABLE FOR INSPECTION
9. UNABLE TO RECOVER SAMPLE INDICATED [illegible]
SEE NAVFAC DWG [illegible] FOR LOCATIONS OF [illegible]

RECORD DRAWING
LETTER DATED

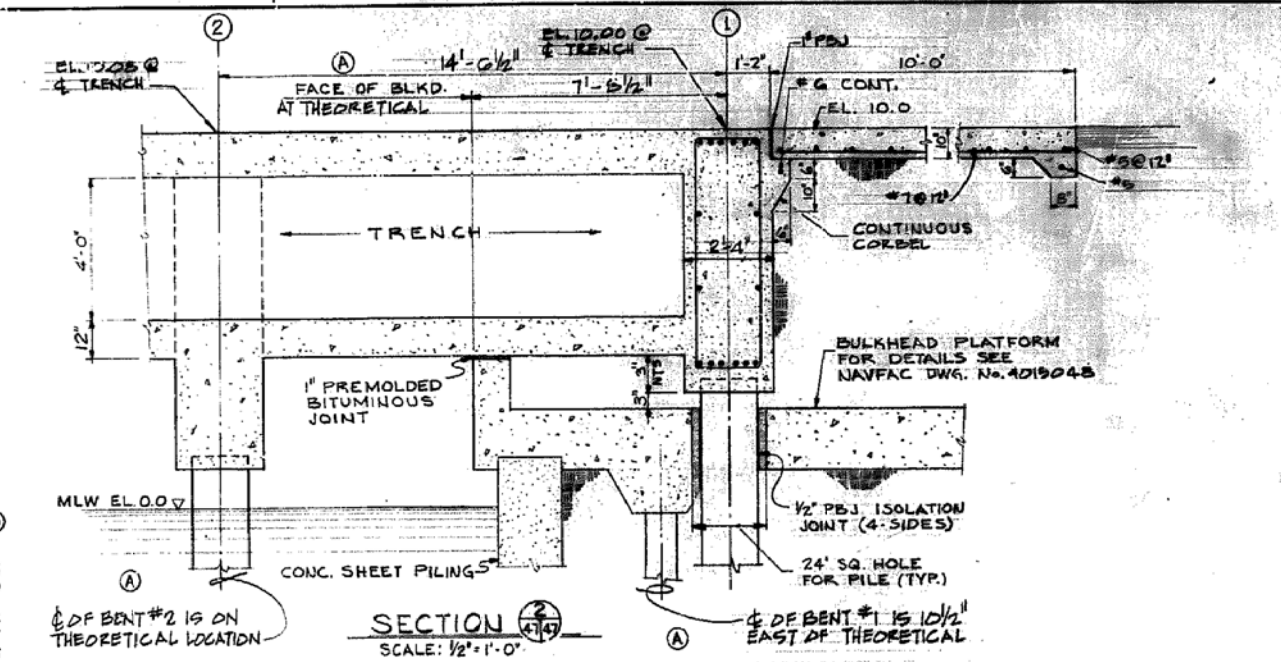
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND	
ATLANTIC DIVISION	NORFOLK, VA.
NAVAL STATION	NORFOLK, VIRGINIA
BERTHING PIERS (1ST INCREMENT)	
PIER 25	
BORING LOGS I	
F	80091
4015029	N62470-73-B-1221
SPEC. 05-73-1221	SHEET 11 OF 66
EFD DWG. NO. 115029	
WORK REQ. NO. 545D2514	
DRN. JEJ	
CHK. KAN	
APPROVED — APR 1974	

REVISIONS			
A	REVISED "AS BUILT"		VRS



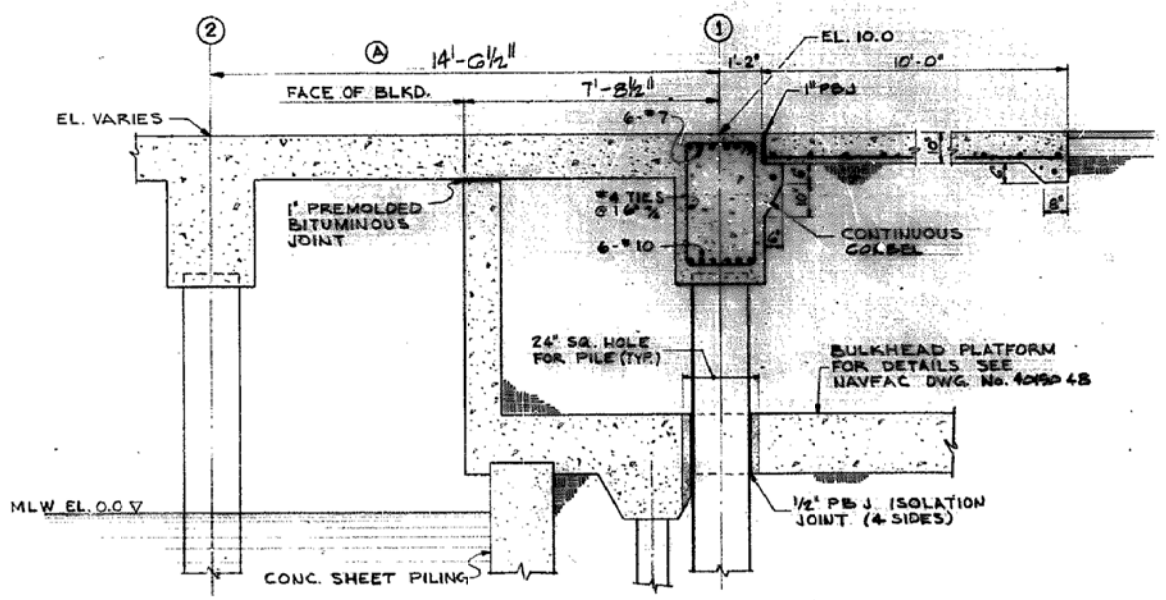
PLAN - INBOARD END OF PIER

SCALE: 1/8" = 1'-0"



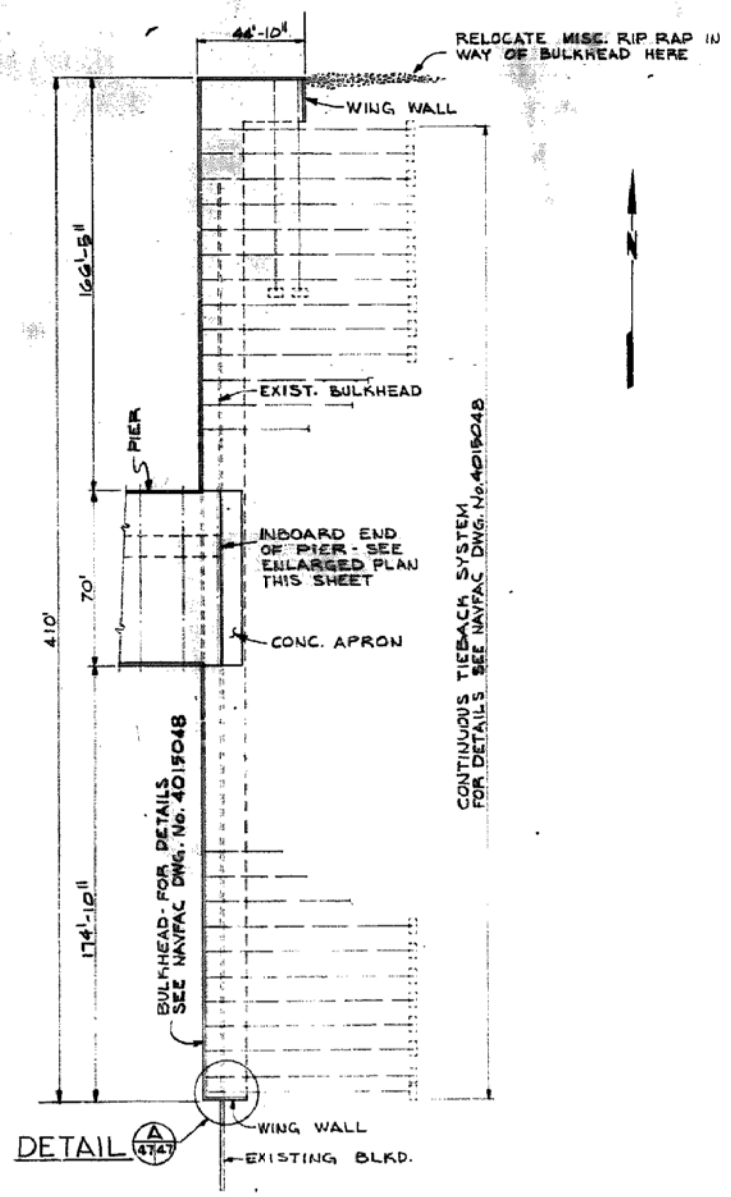
SECTION 2/47

SCALE: ½" = 1'-0"



SECTION 3/47

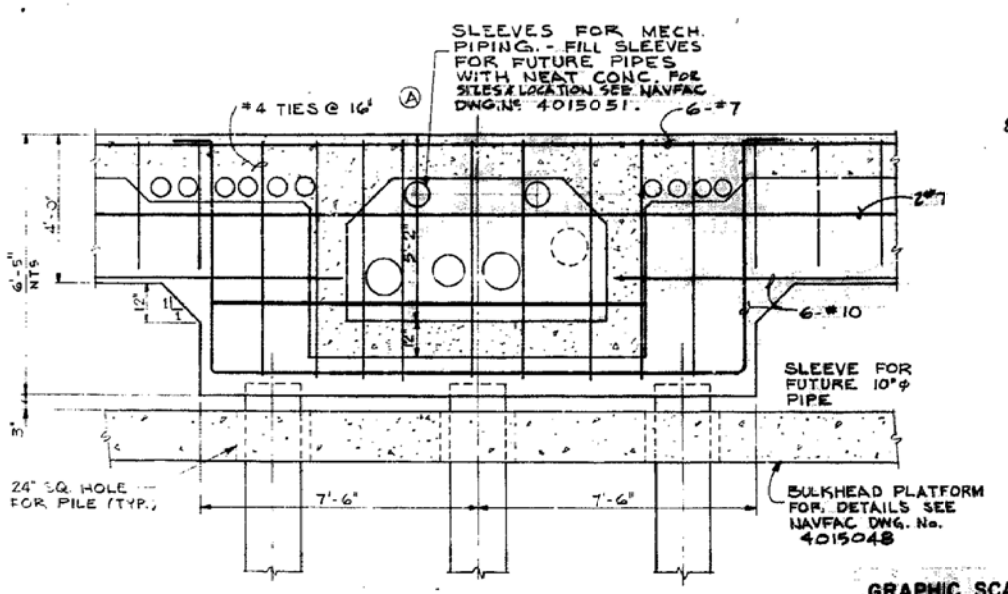
SCALE: ½" = 1'-0"



DETAIL A/47

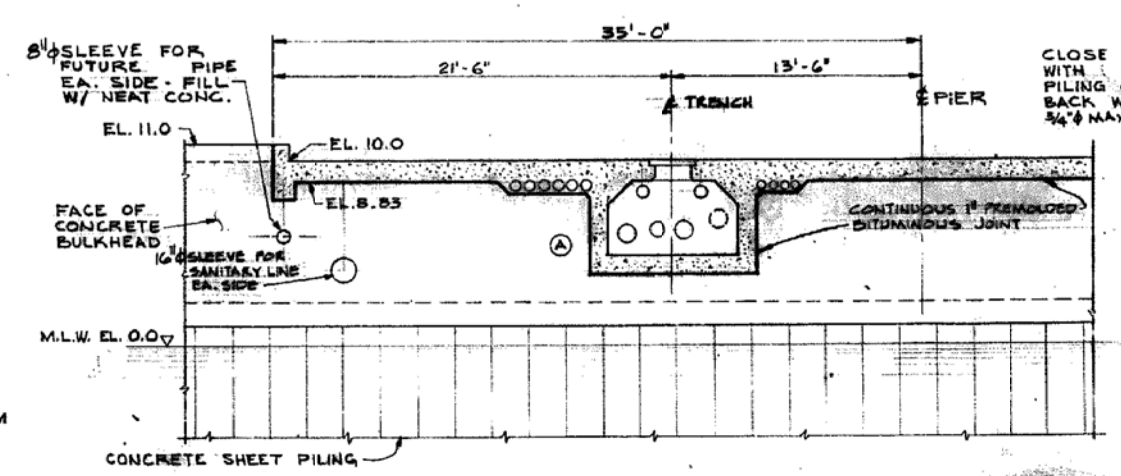
PLAN OF BULKHEAD

SCALE: 1" = 30'-0"



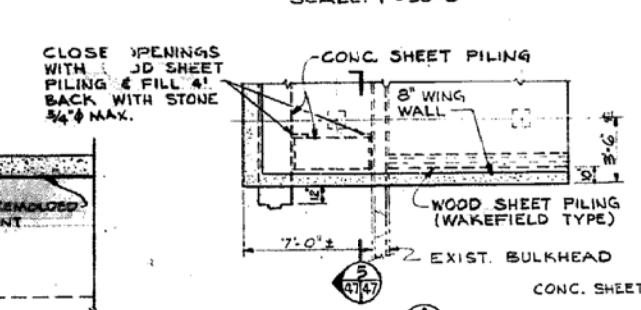
SECTION 1/47

SCALE: ½" = 1'-0"



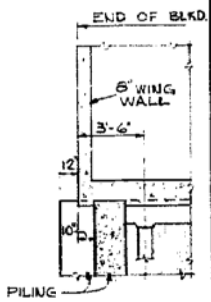
SECTION 4/47

SCALE: ¼" = 1'-0"



DETAIL A/47

SCALE: ¼" = 1'-0"



SECTION 5/47

SCALE: ¼" = 1'-0"

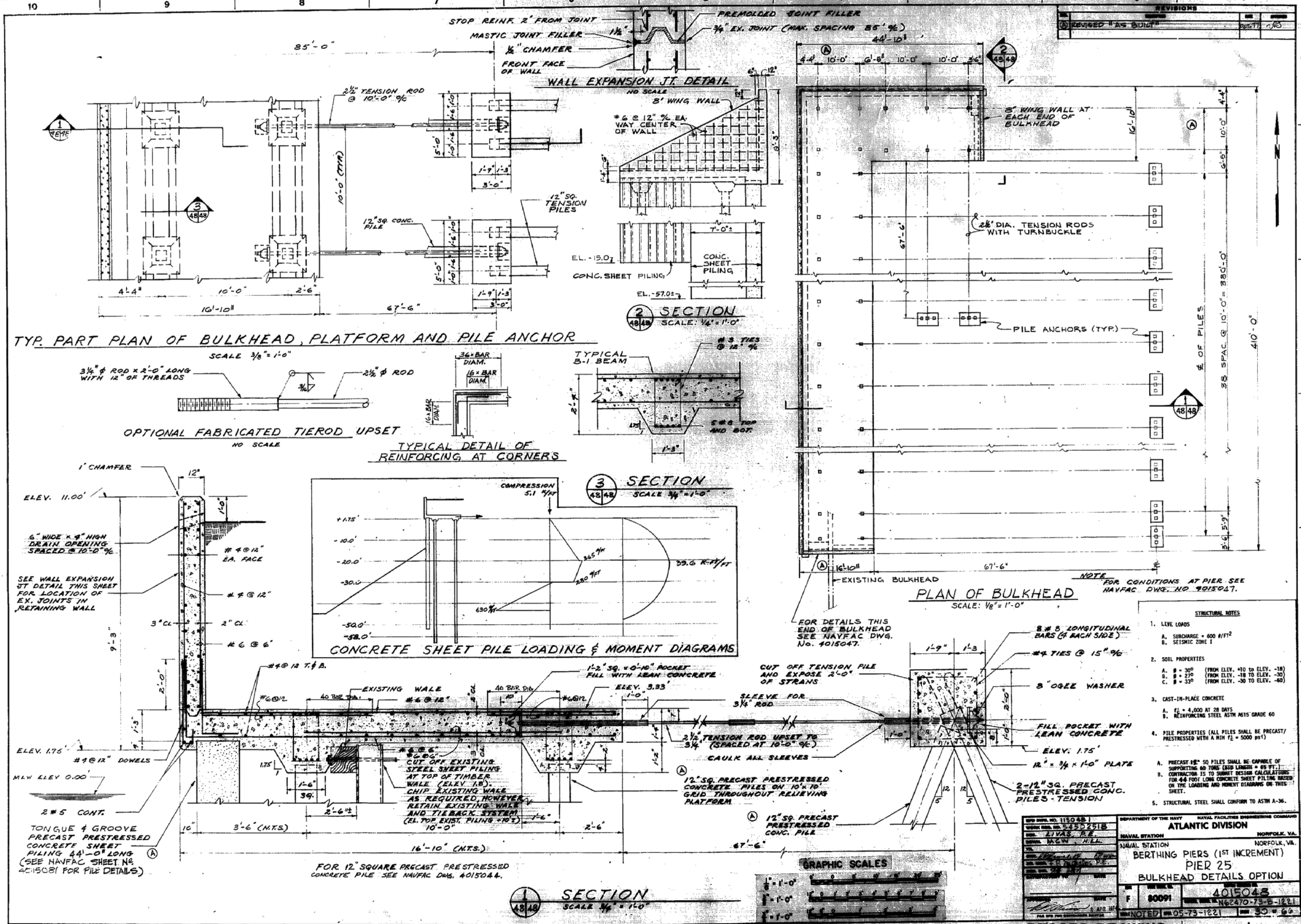
GRAPHIC SCALES

½" = 1'-0" ¼" = 1'-0" ⅛" = 1'-0" 1" = 30'-0"

RECORD DRAWING LETTER DATED 8 JUL. 1976

SPD DWG. NO. 115047	DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	
SPEC. DWG. NO. E450258	ATLANTIC DIVISION		
DES. V.R. JACKSON, P.E.	NAVAL STATION	NORFOLK, VA.	
DRN. MCW	NAVAL STATION	NORFOLK, VA.	
CHK.	BERTHING PIERS (1ST INCREMENT)		
	PIER 25		
	INBOARD END OPTION		
APPROVED	DATE	F	80091
APR 1974		4015047	
		NG2410-73-B-1221	
		NOTED 05-73-1221	25 of 66

REVISIONS			
A	REVISED "AS BUILT"	26 JUL 77	RB



STRUCTURAL NOTES

1. LIVE LOADS
   A. SURCHARGE = 600 #/FT²
   B. SEISMIC ZONE I
2. SOIL PROPERTIES
   A. ϕ = 30° (FROM ELEV. +10 to ELEV. -18)
   B. ϕ = 27° (FROM ELEV. -18 TO ELEV. -30)
   C. ϕ = 33° (FROM ELEV. -30 TO ELEV. -60)
3. CAST-IN-PLACE CONCRETE
   A. f'c = 4,000 AT 28 DAYS
   B. REINFORCING STEEL ASTM A615 GRADE 60
4. PILE PROPERTIES (ALL PILES SHALL BE PRECAST/PRESTRESSED WITH A MIN f'c = 5000 psi)
   A. PRECAST 12" SQ PILES SHALL BE CAPABLE OF SUPPORTING 60 TONS (BID LENGTH = 65 FT.)
   B. CONTRACTOR IS TO SUBMIT DESIGN CALCULATIONS FOR 44 FOOT LONG CONCRETE SHEET PILING BASED ON THE LOADING AND MOMENT DIAGRAMS ON THIS SHEET.
5. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36.

SPD DWG. NO.	115048
WORK REQ. NO.	545D2518
DES.	L.IVAS, P.E.
DRWN.	M.C.W. H.L.L.
APPROVED	
DATE	6 APR 197

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC DIVISION
NAVAL STATION — NORFOLK, VA.
NAVAL STATION — NORFOLK, VA.
BERTHING PIERS (1ST INCREMENT)
PIER 25
BULKHEAD DETAILS OPTION

SIZE F	80091	4015048
		N62470-73-B-1221
NOTED	05-73-1221	30 of 60

RECORD DRAWING
LETTER DATED 8 JUL 1974