GENERAL CIVIL NOTES (ALL CIVIL SHEETS)

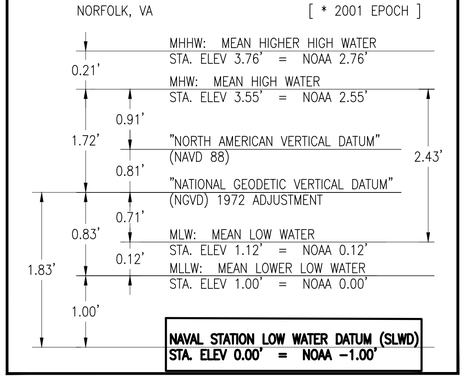
1. THE TOPOGRAPHIC SURVEY WAS PERFORMED BY NAVFAC MIDLANT CODE PRW212 IN OCTOBER 2015 AND AMENDED WITH HISTORICAL DATA WHICH HAS NOT BEEN FIELD VERIFIED. ALL EXISTING CONDITIONS INCLUDING UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND NOTIFY THE CONTRACTING OFFICER OF ANY DEVIATIONS WHICH WILL IMPACT THE PROPOSED WORK.
2. UTILITY INFORMATION ON THESE DRAWINGS IS FROM BEST AVAILABLE RECORDS AND SURFACE OBSERVATIONS AND DOES NOT GUARANTEE THE EXISTENCE/NON-EXISTENCE, SIZE, TYPE OR LOCATION OF UNDERGROUND UTILITIES. LOCATION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXCAVATED/EXPOSED UTILITIES IN EXCAVATIONS.
4. PRIOR TO ANY EXCAVATION, CONTACT MISS UTILITY OF VIRGINIA (TELEPHONE#: 811) TO HAVE THE EXISTING UNDERGROUND LINES MARKED ON THE GROUND SURFACE IN THE AREAS OF CONSTRUCTION.
5. COMPLY WITH THE PROVISIONS OF THE "VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT" (SECTION 56-265.14 ET. SEQ., CODE OF VIRGINIA, 1950, AMENDED).
6. ITEMS NOTED TO BE DEMOLISHED OR REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVE DEMOLITION DEBRIS FROM GOVERNMENT PROPERTY AND PROPERLY DISPOSE, UNLESS OTHERWISE SPECIFIED. ADHERE TO APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
7. ALL GRADE TRANSITIONS SHALL BE SMOOTH AND GRADUAL WITH NO SHARP OR ABRUPT CHANGES UNLESS OTHERWISE NOTED. SUBBASE DRAINAGE SHALL NOT BE RESTRICTED OR IMPEDED.
8. ALL DISTURBED AND FINAL PAVED AREAS SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE.
9. ALL LAYDOWN AREAS SHALL BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO DELIVERY OF ANY MATERIALS. LAYDOWN AREA PLAN SHALL BE PROVIDED. CONTRACTOR SHALL COORDINATE THE LOCATION(S) OF LAYDOWN AREAS WITH CONTRACTING OFFICER.
10. STRIP AND STOCKPILE TOPSOIL WITHIN THE LIMITS OF NEW PAVEMENT AREAS. ASSUME 8" TOPSOIL THICKNESS. DISPOSE OF UNACCEPTABLE EXCAVATED MATERIALS OFF OF GOVERNMENT PROPERTY IN ACCORDANCE WITH TEMPORARY ENVIRONMENTAL SUPPLEMENTARY CONTROLS SPECIFICATION.
11. SAWCUT PAVEMENT/SIDEWALKS FULL DEPTH ALONG STRAIGHT LINES PRIOR TO REMOVAL.
12. RESTORE SURFACES DISTURBED DURING THE COURSE OF WORK TO MATCH EXISTING CONDITIONS.
13. REFERENCE BENCHMARK DETAILS FOR HORIZONTAL AND VERTICAL DATUMS.
14. FOR BIDDING PURPOSES, ASSUME THE FOLLOWING EXISTING PAVEMENT SECTIONS UNLESS OTHERWISE NOTED:
    -BITUMINOUS ASPHALT: 6.5" BITUMINOUS ASPHALT OVER 8" STONE BASE
    -CONCRETE: 12" CONCRETE OVER 8" STONE BASE
15. FOR BIDDING PURPOSES, ASSUME EXISTING CONCRETE FENCE POST FOUNDATIONS TO BE DEMOLISHED HAVE THE SAME FOUNDATION DIMENSIONS AS SHOWN IN THE FENCE POST DETAIL PROVIDED ON CS501.
16. BEGIN EARTHWORK ACTIVITIES ONLY AFTER SOIL EROSION DEVICES ARE IN-PLACE. REFER TO EROSION AND SEDIMENT CONTROL PLANS FOR REQUIRED MINIMUM E&S MEASURES SOIL EROSION ENSURE THAT NO OFFSITE SEDIMENT LOSS OCCURS.
17. WHERE EXISTING STRUCTURES TO REMAIN ARE DAMAGED DUE TO CONSTRUCTION OR DEMOLITION REQUIRED BY THESE DOCUMENTS, REPAIR THE DAMAGED ITEM(S) WITH NEW MATERIALS TO MATCH THE ADJACENT MATERIAL, TEXTURE, AND COLOR AT NO ADDITIONAL COST TO THE GOVERNMENT.
18. OBSERVE AND MAINTAIN SECURITY REQUIREMENTS AS DIRECTED BY THE CONTRACTING OFFICER.
19. SUBMIT A SEQUENCE OF CONSTRUCTION AND PHASING PLAN AND WEEKEND WORK REQUESTS TO THE CONTRACTING OFFICER FOR APPROVAL.
20. PROVIDE TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL TRAFFIC CONTROL PLANS SHALL BE APPROVED BY THE CONTRACTING OFFICER.
21. PROPERLY STOCKPILE SOIL THAT IS EXCAVATED AND REUSED TO PREVENT OFFSITE SEDIMENT LOSS.
22. IF EXCAVATED SOIL IS TO BE SHIPPED OFFSITE IT SHALL HAVE A VALID INSPECTION CERTIFICATE ISSUED BY AN OFFICER OF THE PLANT PROTECTION AND QUARANTINE PROGRAM OF THE U.S. DEPARTMENT OF AGRICULTURE. CONTACT THE PEST MANAGEMENT COORDINATOR AT 757-341-0402, VIA THE CONTRACTING OFFICER, FOR ENVIRONMENTAL COMPLIANCE.
23. MAINTAIN LIMITS OF DISTURBANCE SHOWN HEREIN OR, IF DEVIATING FROM LIMITS AS SHOWN, COORDINATE WITH THE CONTRACTING OFFICER PRIOR TO EARTHWORK ACTIVITIES.
24. PRIOR TO THE START OF CONSTRUCTION, PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES (VAR10) AND SUBMIT A REGISTRATION STATEMENT AND OBTAIN A GENERAL CONSTRUCTION PERMIT.
25. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS, ELEVATIONS, AND OTHER REQUIREMENTS NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW WORK TO THE EXISTING STRUCTURES TO REMAIN. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR FABRICATION AND ERECTION REPAIRS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER PRIOR TO ORDERING OR FABRICATION OF MATERIAL OR BEGINNING WORK.

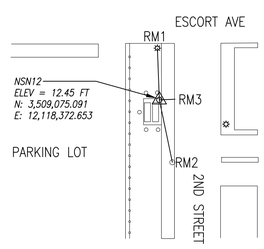
CIVIL ABBREVIATIONS:

ABDN	ABANDON	MAX	MAXIMUM
AC	ACRE	MG	MATCH GRADE (GRADE)
AFFF	AQUEOUS FILM FORMING FOAM	MH	MANHOLE
AG	AGGREGATE (GRADE)	MIN	MINIMUM
APPROX	APPROXIMATE	MON	MONITORING WELL
ASPH	ASPHALT	N.F.	NOT FOUND
AVE	AVENUE	NTS	NOT TO SCALE
A/C	ASBESTOS CEMENT	OHE	OVERHEAD ELECTRIC
AST	ABOVEGROUND STORAGE TANK	ORN	ORNAMENTAL
BC	BOTTOM OF CURB	OWO	OILY-WASTE WASTE-OIL
BOC	BACK OF CURB	P	PAVEMENT (GRADE)
BIT	BITUMINOUS	PC	POINT OF CONNECTION
CI	CURB INLET OR	PED.	PEDESTRIAN
	CAST IRON	PT	POINT OF TANGENCY
CF	CUBIC FEET	PVMT	PAVEMENT
CL	CENTER LINE	RAD	RADIUS
CLF	CHAIN LINK FENCE	RD	ROOF DRAIN
CONC	CONCRETE	REQ'D	REQUIRED
COMB.	COMBINATION	SS	SANITARY SEWER
COMM	COMMUNICATION	SSCO	SANITARY SEWER CLEANOUT
CO	CLEAN OUT	SD	STORM DRAIN
DI	DROP INLET	SF	SILT FENCE
DIA	DIAMETER	SWM	STORM WATER MANAGEMENT
DS	DOWN SPOUT (STORMWATER)	S/W	SIDEWALK
ELEC	ELECTRICAL	TBM	TEMPORARY BENCH MARK
ELEV	ELEVATION	TC	TOP OF CURB (GRADE)
EOP	EDGE OF PAVEMENT	TP	TREE PROTECTION
EX	EXISTING	TW	TOP OF WALL (GRADE)
FA	FIRE ALARM	TYP	TYPICAL
FOC	FACE OF CURB	UG	UNDERGROUND
FDC	FIRE DEPARTMENT CONNECTION	UON	UNLESS OTHERWISE NOTED
FF	FINISHED FLOOR	UST	UNDERGROUND STORAGE TANK
FG	FINISHED GRADE	W	WATER
		WV	WATER VALVE

DIAGRAM OF DATUM PLANE *

NAVAL BASE NORFOLK, VA — VERTICAL CONTROL [* 2001 EPOCH]





REFERENCE DATA:
VIRGINIA SOUTH STATE PLANE COORD. (ZONE 4502)
NAD 1983 1993 (UNITS = U.S. FEET)
STATION LOW WATER DATUM (SLWD) ELEVATION

TYPE OF MARK: ALUMINUM DISC IN CONCRETE VAULT

REFERENCE TIES
1. PK NAIL IN UTILITY POLE = 36.2 FT
2. CENTER OF STORM MANHOLE = 24.5 FT
3. "X" CUT IN TOP OF CONCRETE CURB = 5.8 FT

PLAN NORTH

BENCH MARK - NSN12

NOT TO SCALE

LEGEND

EXISTING		NEW
	BUILDING	
	BITUMINOUS PAVEMENT	DEMO AND FULL DEPTH REPAIR
	BITUMINOUS MILL AND OVERLAY	BITUMINOUS MILL AND OVERLAY
	DEMO PAVEMENT	
	CONCRETE	
	GRAVEL	
	BITUMINOUS BUILD UP	
TBM XX	TEMPORARY BENCH MARK	
	DROP INLET	
OR	STORM OUTFALL	
	CURB DROP INLET	
XFR	TRANSFORMER	
S	SANITARY/OILY WATER MANHOLE	
D OR SD	STORM MANHOLE	D OR SD
	VALVE	
	POST INDICATOR VALVE	
	UTILITY POLE	
	LIGHT POLE	
	FIRE HYDRANT	
M	METER	
T	TELEPHONE PEDESTAL	
+12.56	SPOT ELEVATION	12.56
	GUY WIRE	
E SW	ELECTRIC MANHOLE/SWITCH	E
CO	SEWER CLEANOUT	CO
T	TELEPHONE MANHOLE	T
	MISCALLENOUS SITE FEATURE / BOLLARD	
	TREE / VEGETATION	
	SIGN	
XX-X	GEOTECH AUGER BORING	
FA	ALARM BOX	
OW_X	OILY WASTE	
UF_X	UNDERGROUND FUEL	
SD_X	STORM SEWER	SD
SS_X	SANITARY SEWER	SAN
W_X	WATER	W
FM_X	SEWER FORCEMAIN	FM
NG_X	NATURAL GAS	
UGC_X	UNDERGROUND COMMUNICATION	UGC
CE_X OR UE_X	UNDERGROUND ELECTRICAL	UE
OHE_X	OVERHEAD ELECTRICAL	E
UT_X	UNDERGROUND TELEPHONE	UT
$STEAM_X$	UNDERGROUND STEAMLINE	
	TREE PROTECTION	TP
	SILT FENCE	SF
	TURBIDITY CURTAIN	TC
	CURB	
	CURB AND GUTTER	
x	CHAIN LINK FENCE	X

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

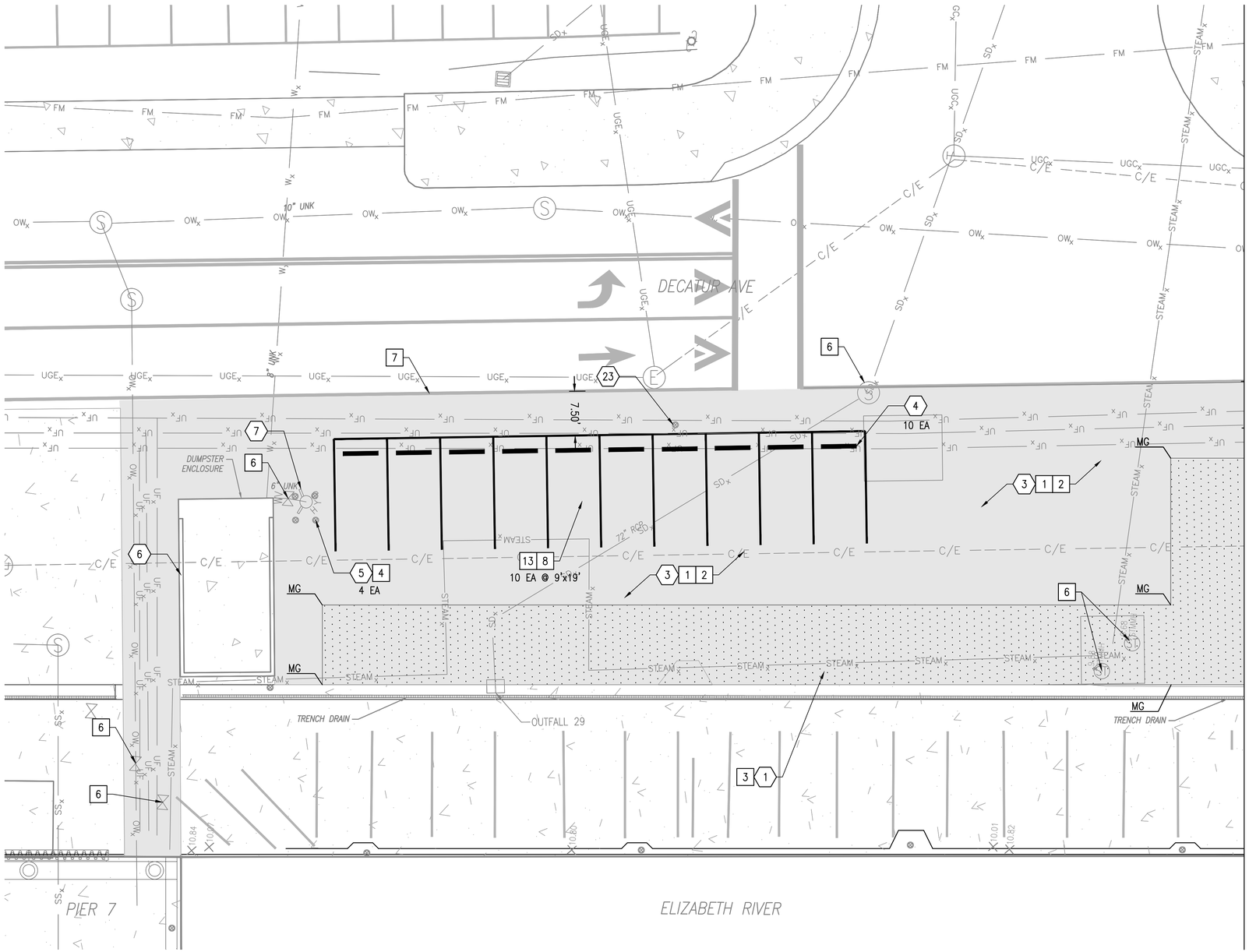
ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
HAMPTON ROADS IPT - PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA
CEP-175 AND Z-308 BULKHEAD REPAIR
CIVIL LEGEND, NOTES AND ABBREVIATIONS

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,660
SHEET 5 OF 158
C-001

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-C-LEGEND NOTES ABBREV.dwg LAYOUT NAME: C-001 LEGEND NOTES AND ABBREVIATIONS PLOTTED: Friday, July 08, 2016 - 3:20pm USER: franklin.ruiledge



CIVIL SITE PLAN

SCALE: 1" = 10'

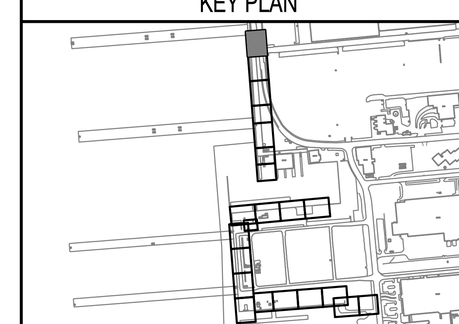
DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
–	–	–	–

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (1 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

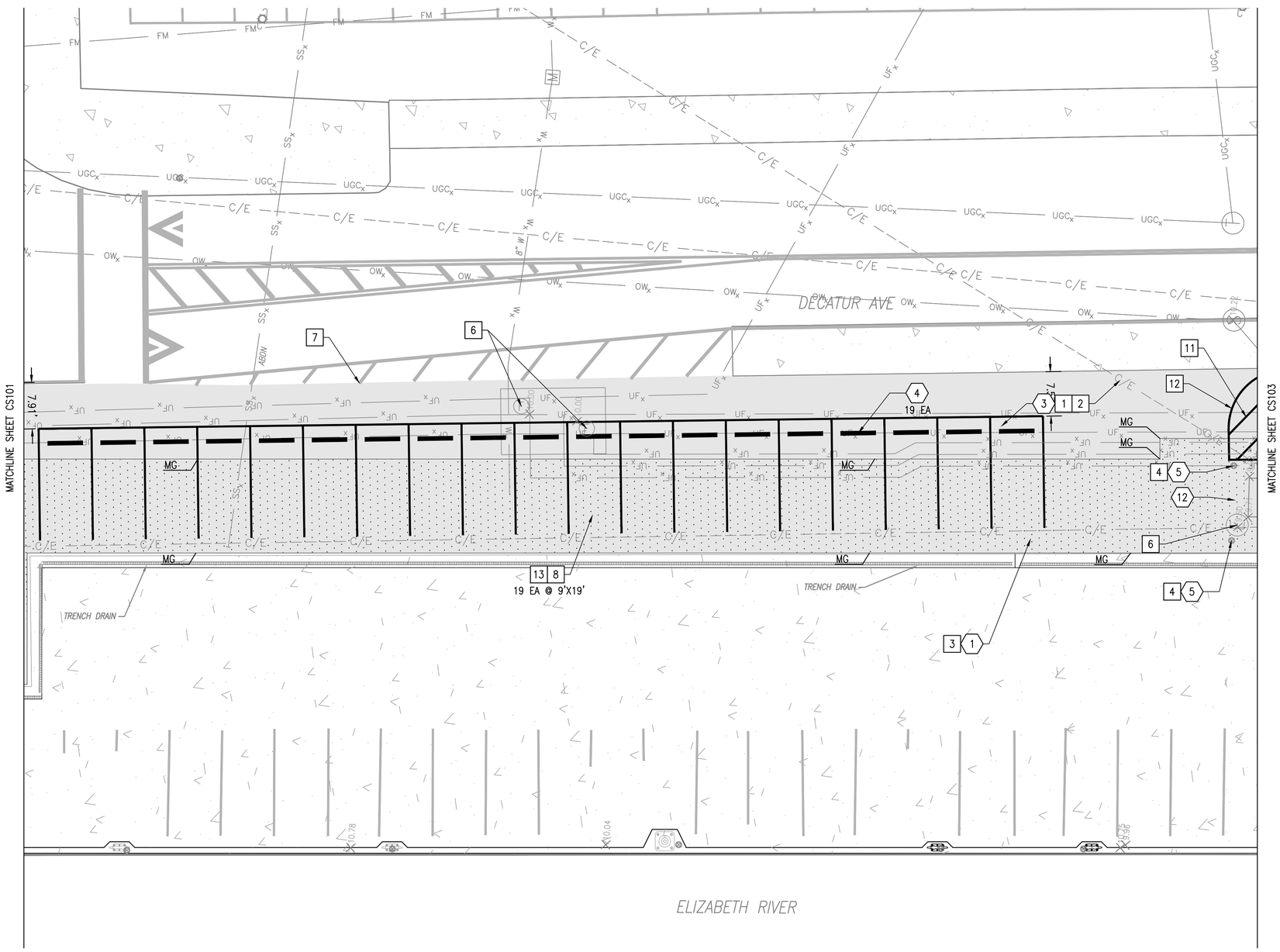
NAVFAC DRAWING NO. 12,729,661

SHEET 6 OF 158

CS101

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS101 PLOTTED: Friday, July 08, 2016 - 3:20pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

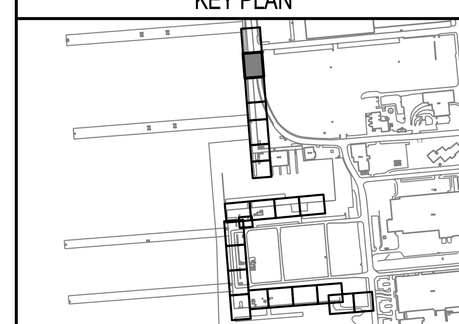
DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½-INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (2 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

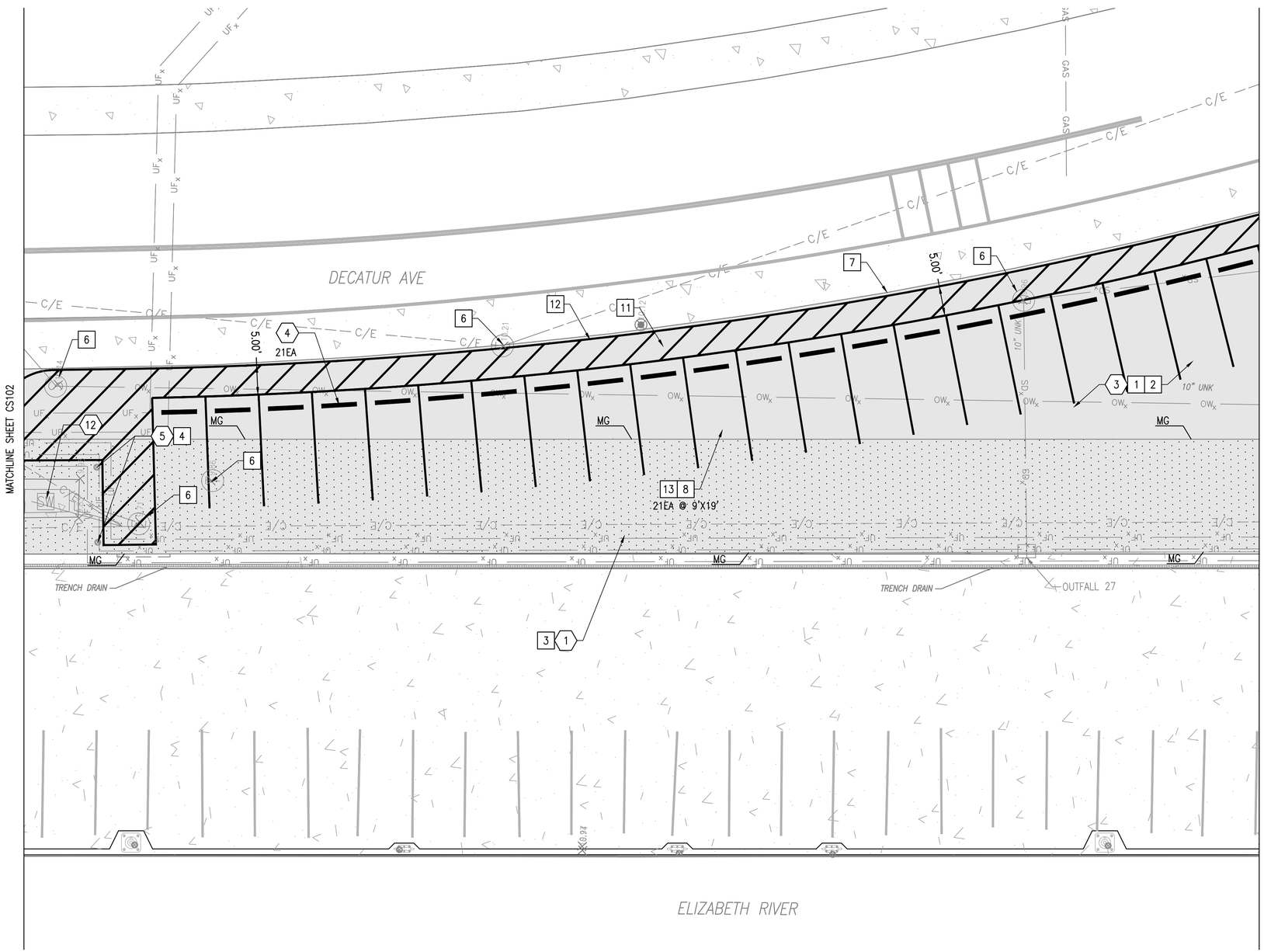
NAVFAC DRAWING NO. 12,729,662

SHEET 7 OF 158

CS102

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS102 PLOTTED: Friday, July 08, 2016 - 3:21pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
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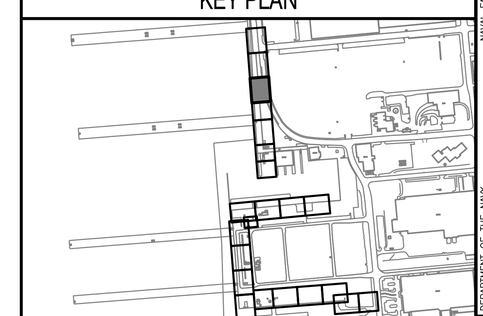
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

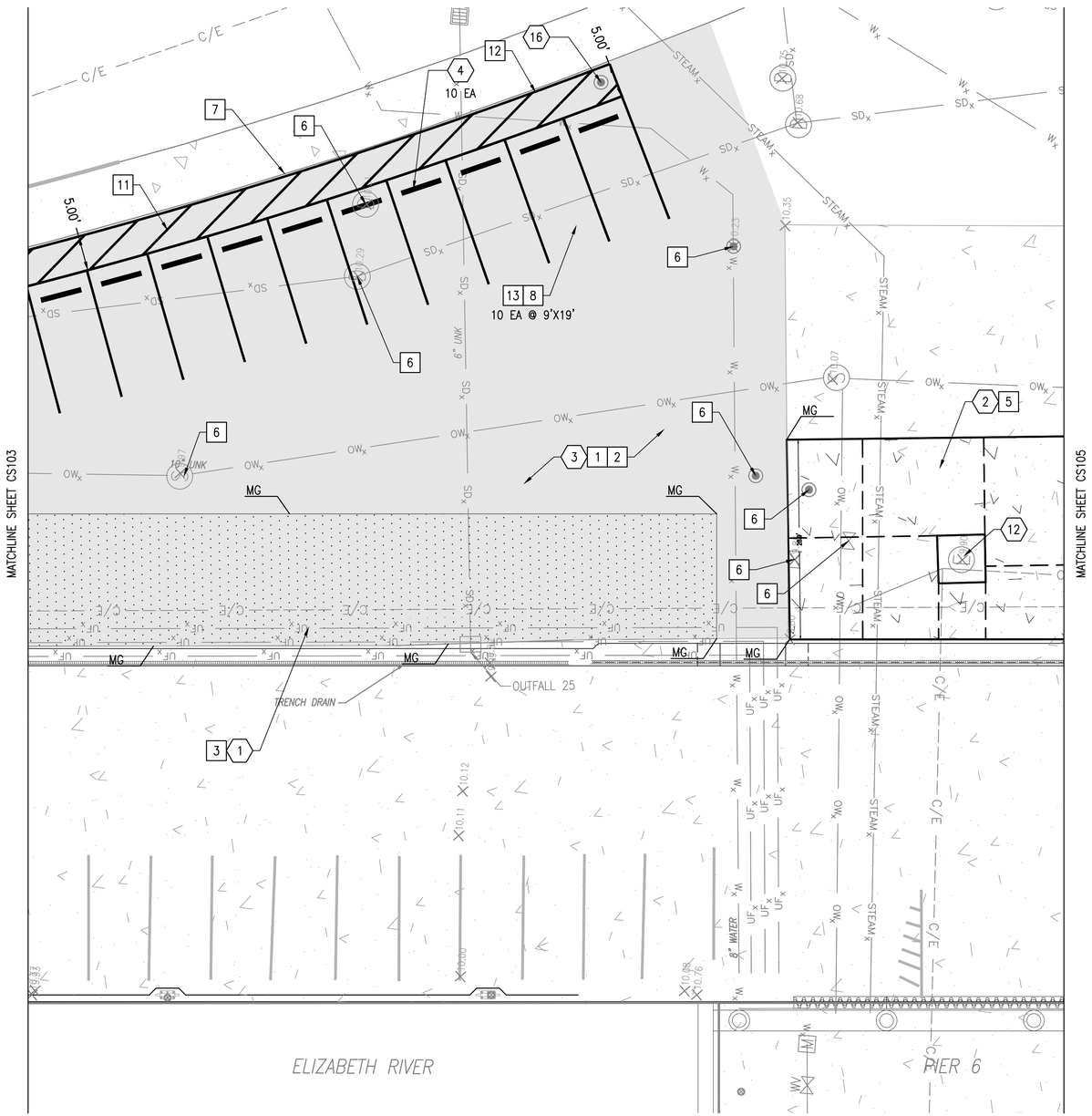
CIVIL SITE PLAN (3 OF 21)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,663
SHEET 8 OF 158

CS103

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS103 PLOTTED: Friday, July 08, 2016 - 3:21pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

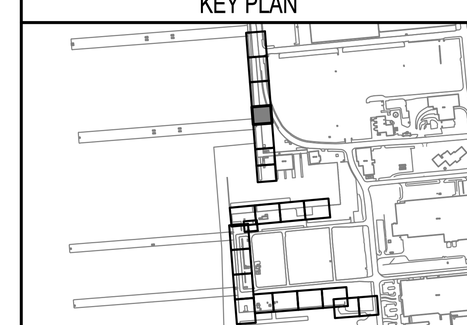
DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
–	–	–	–

SEAL

A/E INFO

APPROVED FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (4 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO.: N/A

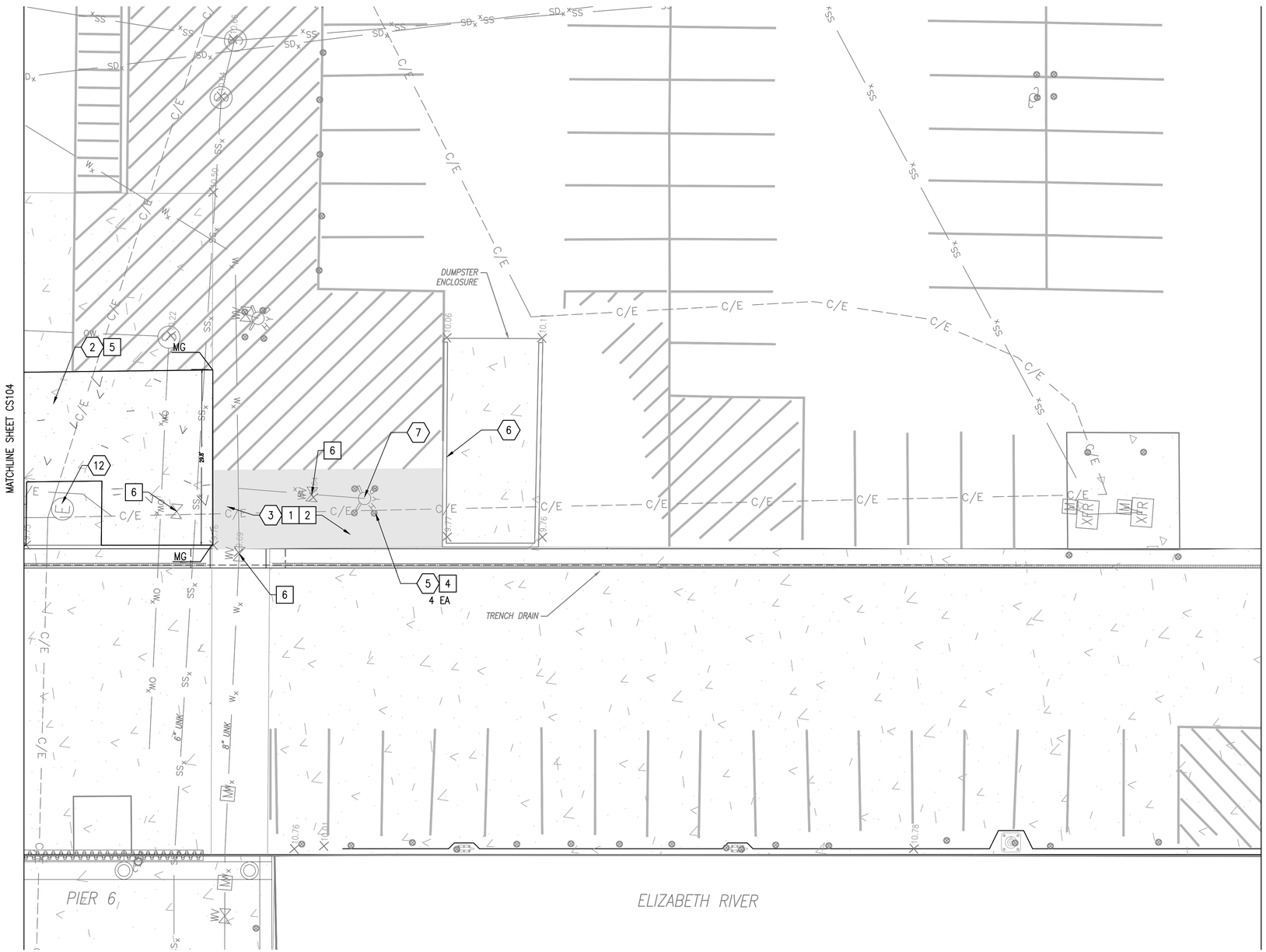
NAVFAC DRAWING NO.: 12,729,664

SHEET 9 OF 158

CS104

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS104 PLOTTED: Friday, July 08, 2016 - 3:21pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

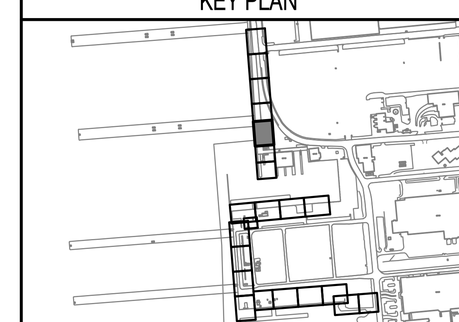
DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (5 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO.: N/A

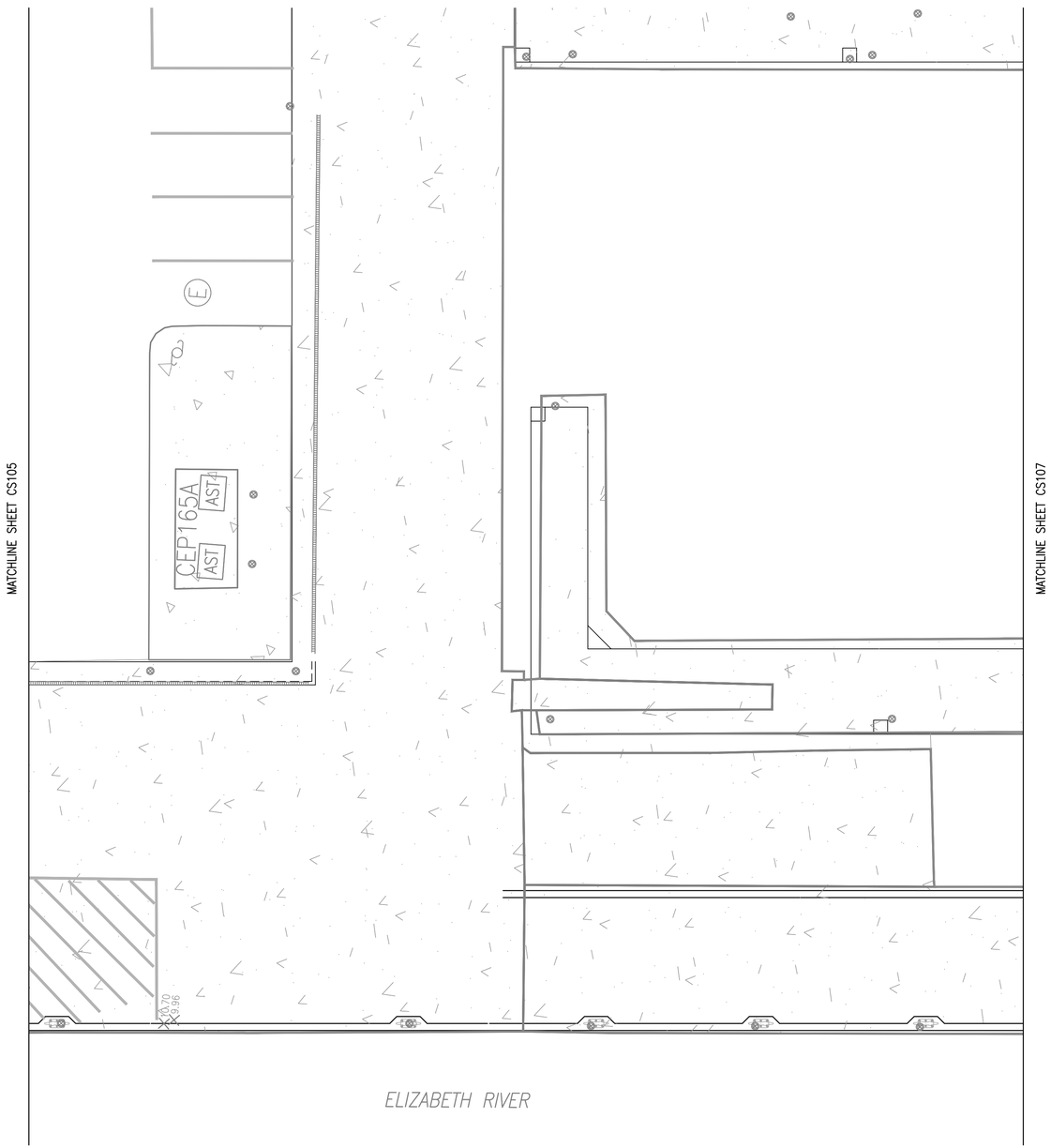
NAVFAC DRAWING NO.: 12,729,665

SHEET 10 OF 158

CS105

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS105 PLOTTED: Friday, July 08, 2016 - 3:21pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

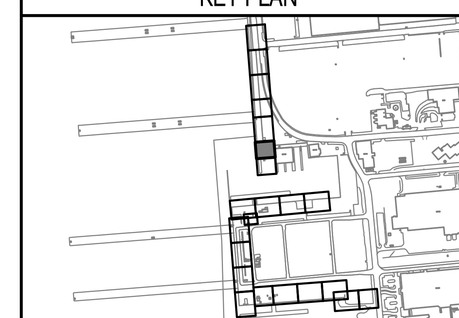
DEMOLITION KEYNOTES

1. NO CIVIL WORK THIS SHEET.

NEW WORK KEYNOTES

1. NO CIVIL WORK THIS SHEET.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (6 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

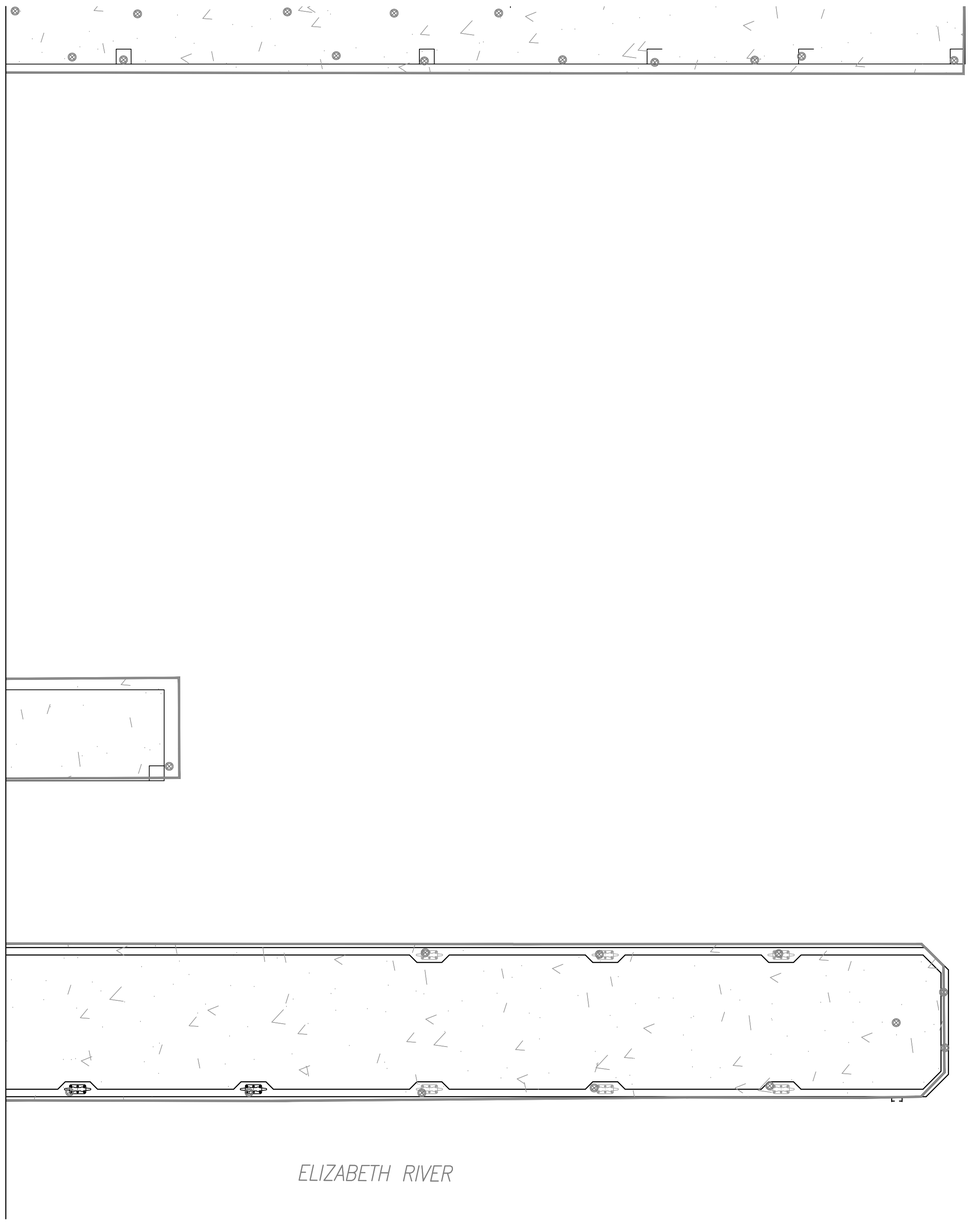
NAVFAC DRAWING NO. 12,729,666

SHEET 11 OF 158

CS106

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS106 PLOTTED: Friday, July 08, 2016 - 3:22pm USER: franklin.rulledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

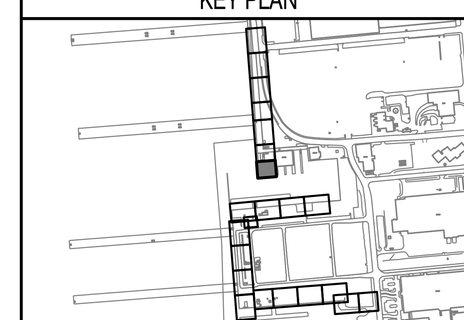
DEMOLITION KEYNOTES

1. NO CIVIL WORK THIS SHEET.

NEW WORK KEYNOTES

1. NO CIVIL WORK THIS SHEET.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (7 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

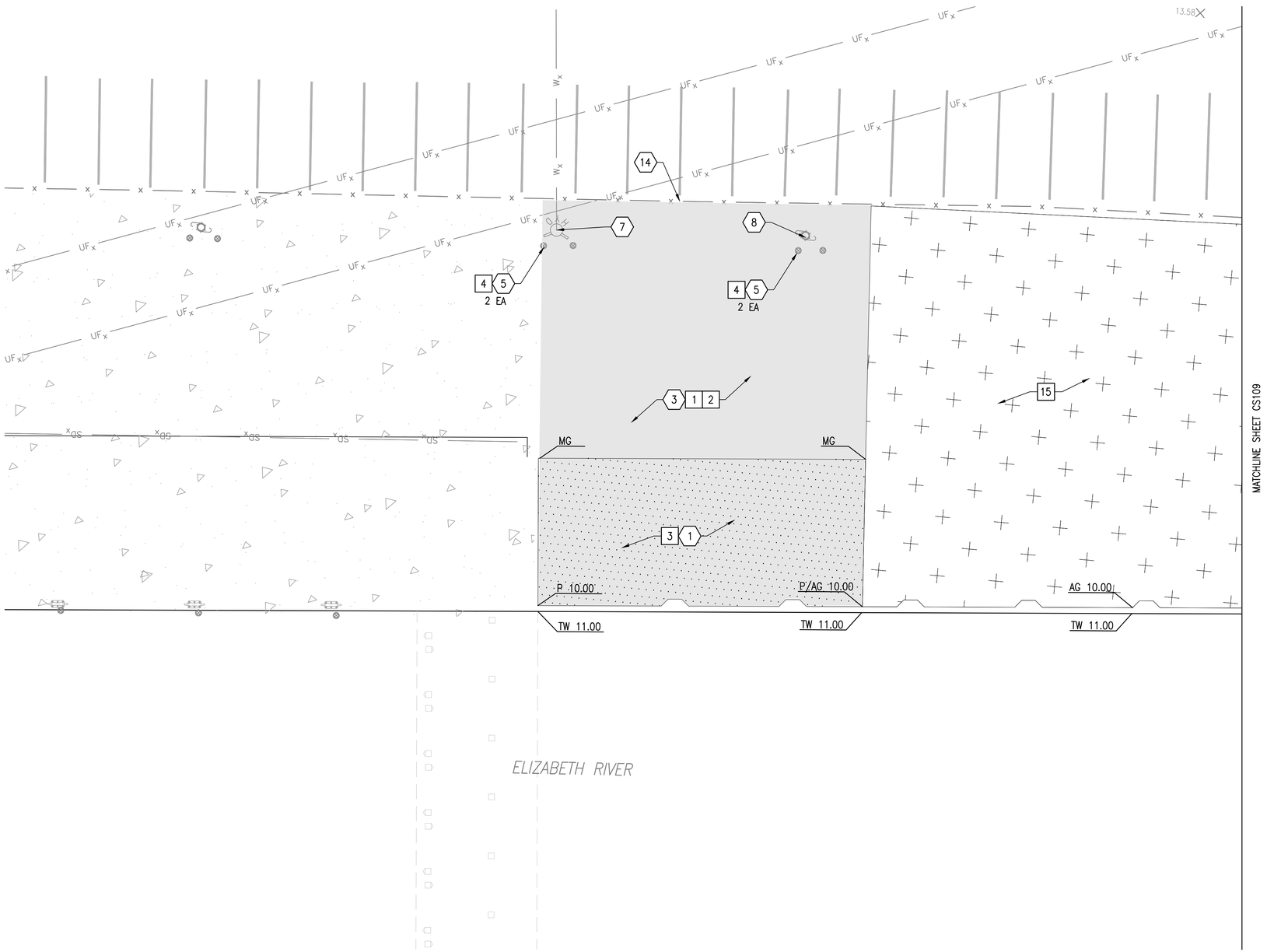
NAVFAC DRAWING NO. 12,729,667

SHEET 12 OF 158

CS107

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS107 PLOTTED: Friday, July 08, 2016 – 3:22pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

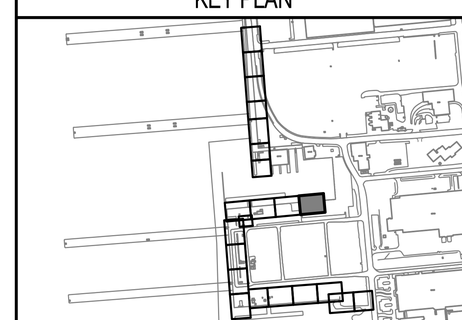
DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (8 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

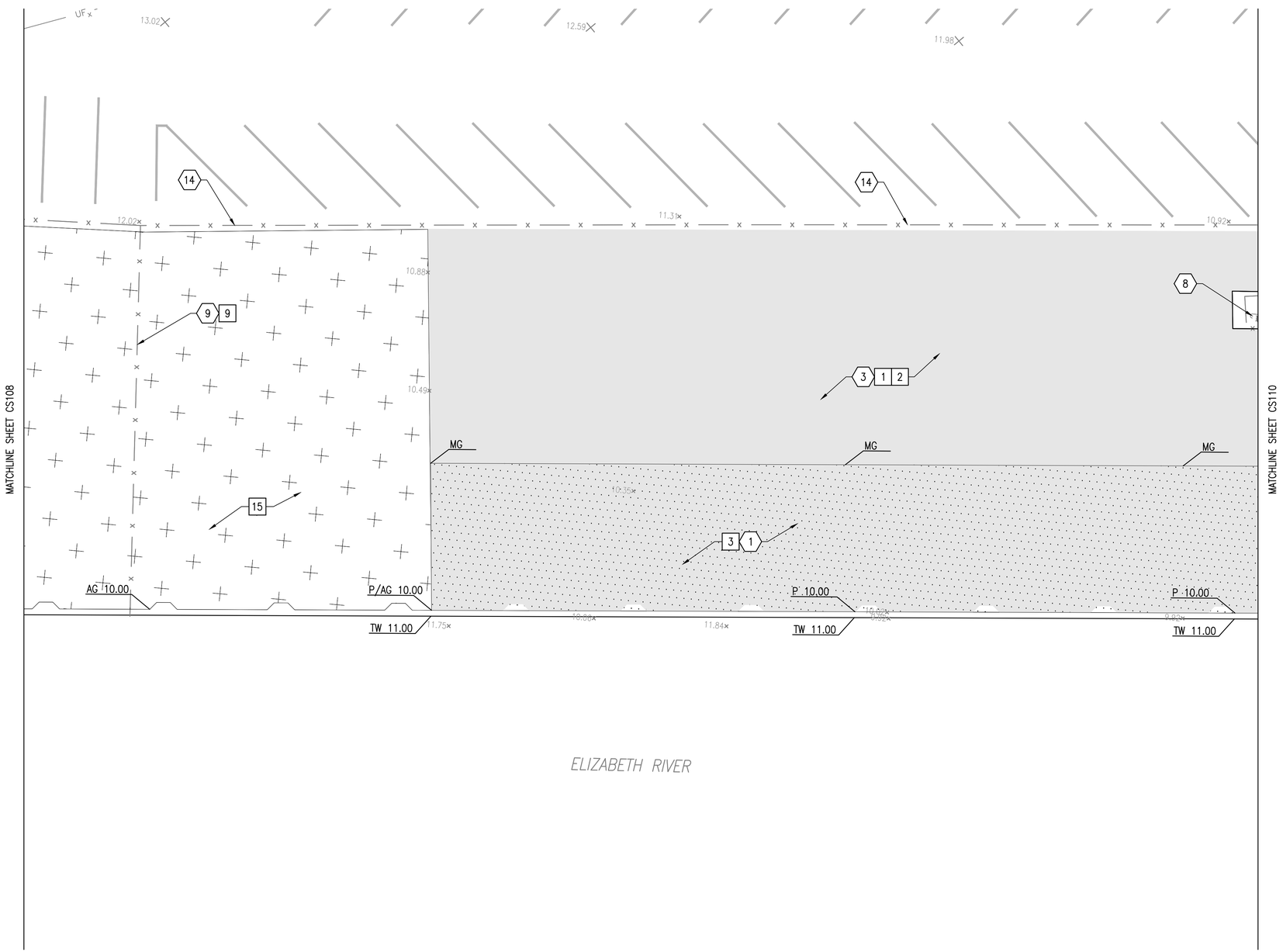
NAVFAC DRAWING NO. 12,729,668

SHEET 13 OF 158

CS108

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS108 PLOTTED: Friday, July 08, 2016 - 3:22pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

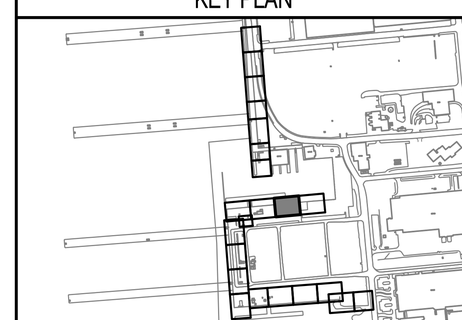
DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (9 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

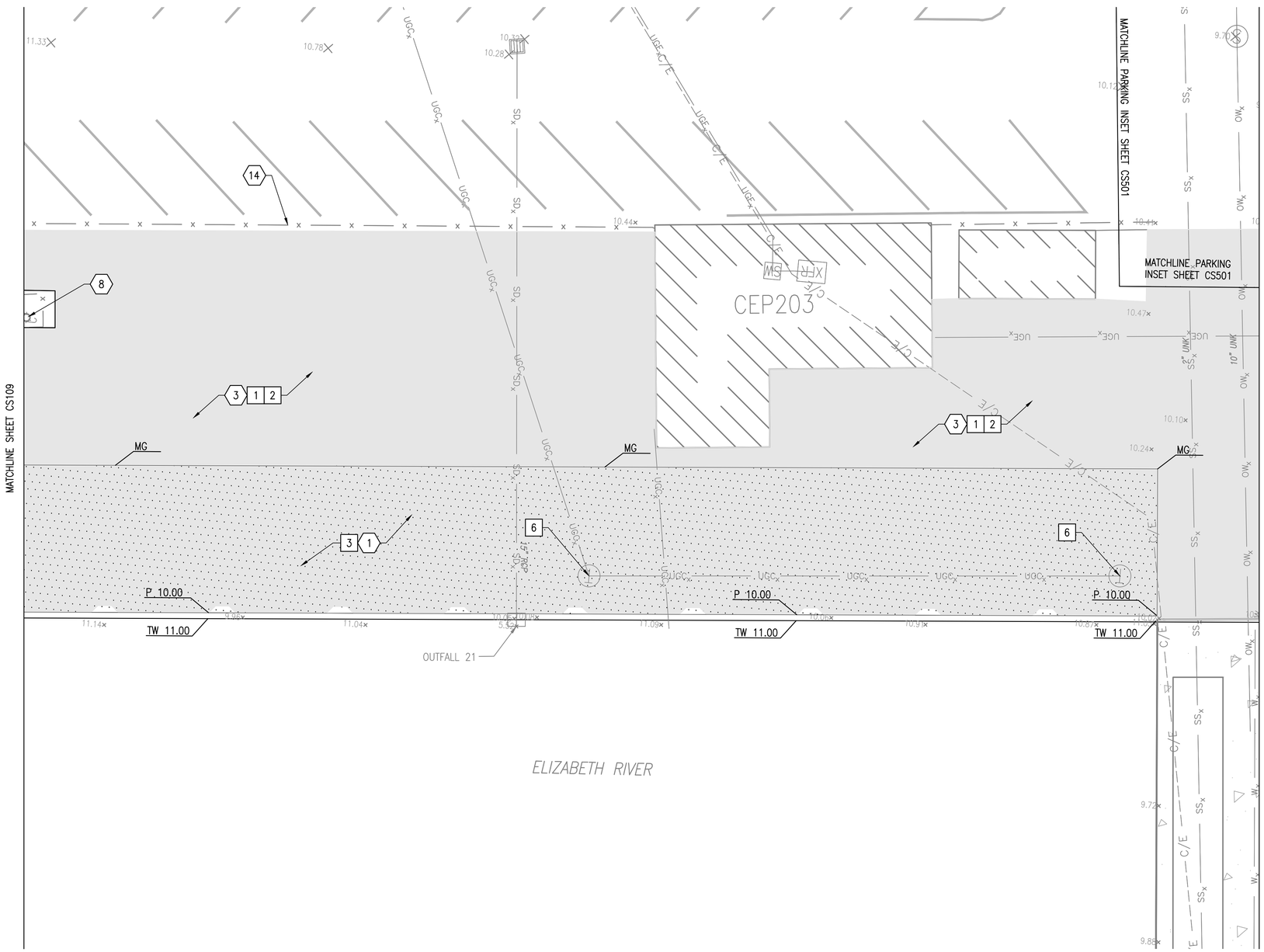
NAVFAC DRAWING NO. 12,729,669

SHEET 14 OF 158

CS109

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS109 PLOTTED: Friday, July 08, 2016 - 3:22pm USER: franklin.rulledge



CIVIL SITE PLAN

SCALE: 1" = 10'

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
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8. PROTECT LIGHT POLE.
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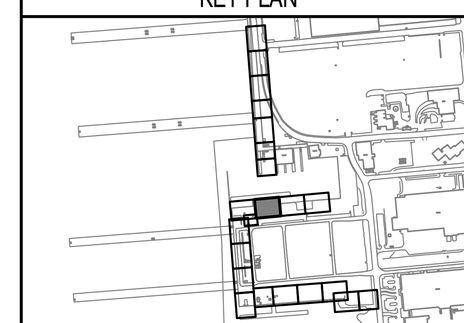
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

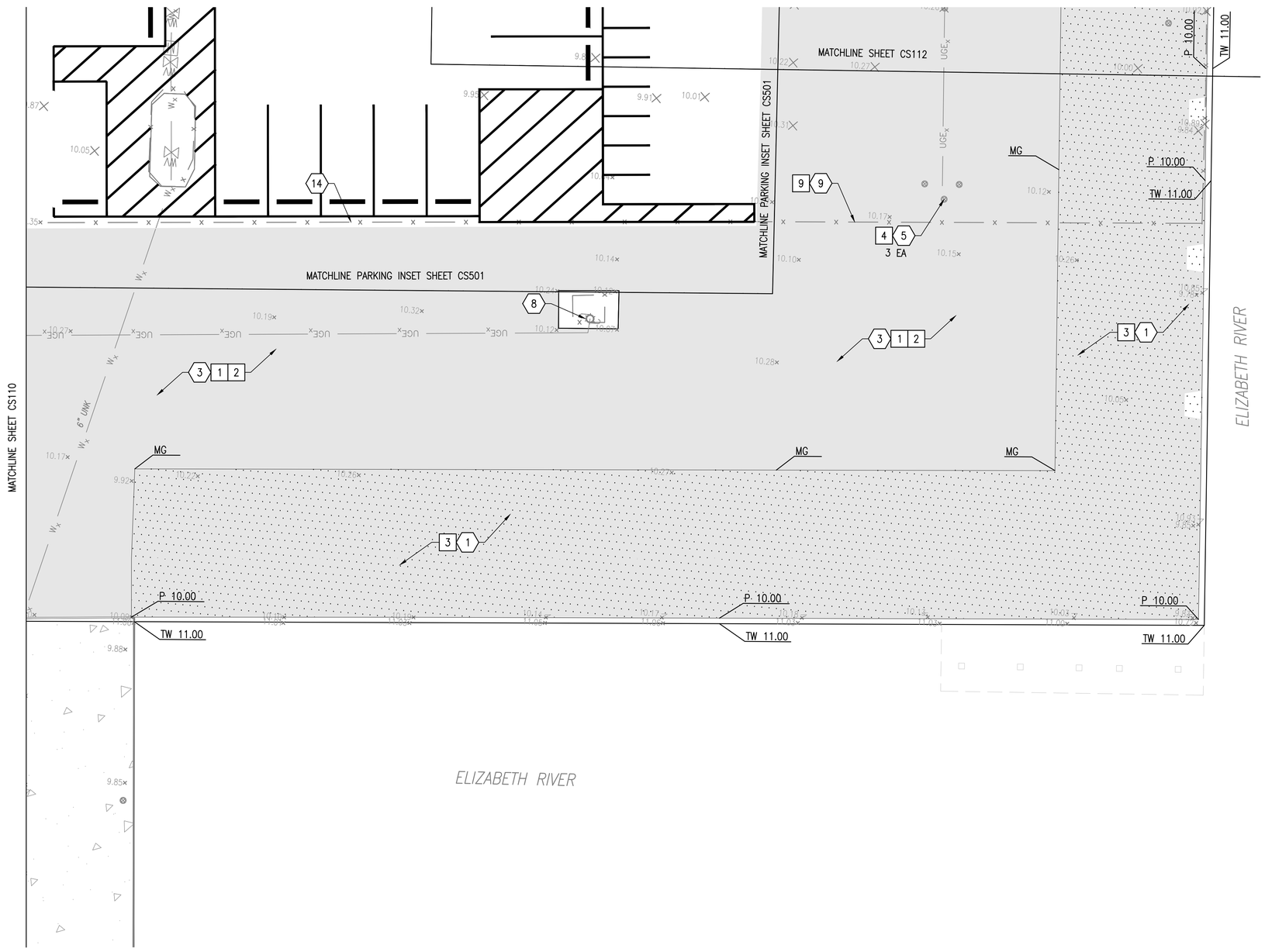
CIVIL SITE PLAN (10 OF 21)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,670
SHEET 15 OF 158

CS110

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS110 PLOTTED: Friday, July 08, 2016 - 3:22pm USER: franklin.rulledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
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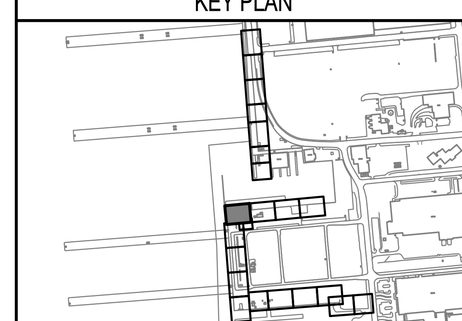
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

NORFOLK NAVAL STATION

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (11 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

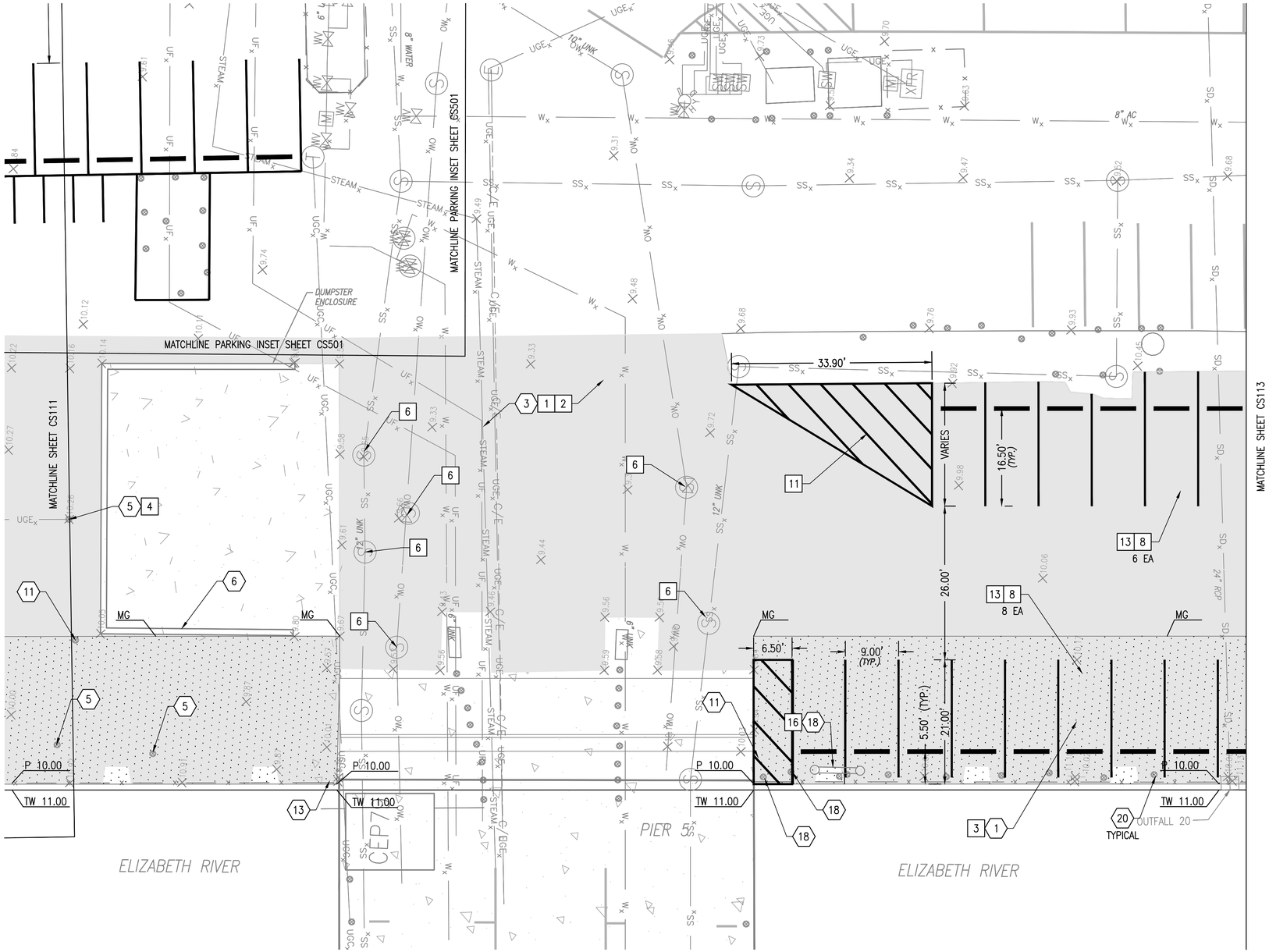
NAVFAC DRAWING NO. 12,729,671

SHEET 16 OF 158

CS111

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS111 PLOTTED: Friday, July 08, 2016 - 3:23pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

DEMOLITION KEYNOTES

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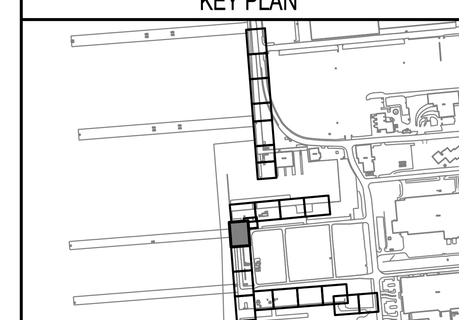
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

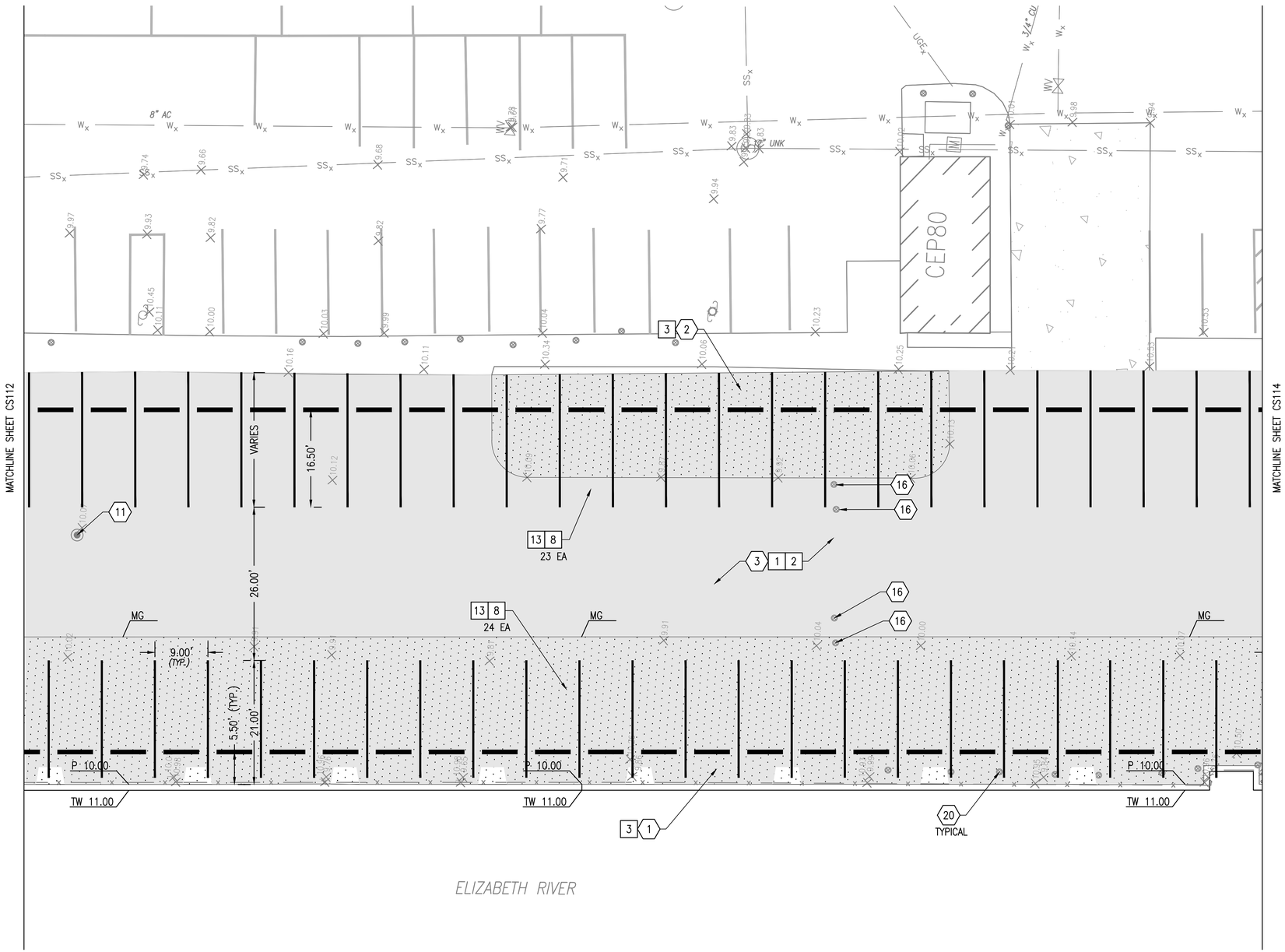
CIVIL SITE PLAN (12 OF 21)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,672
SHEET 17 OF 158

CS112

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS112 PLOTTED: Friday, July 08, 2016 - 3:23pm USER: franklin.rulledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

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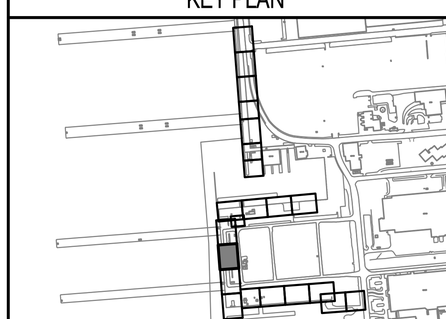
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

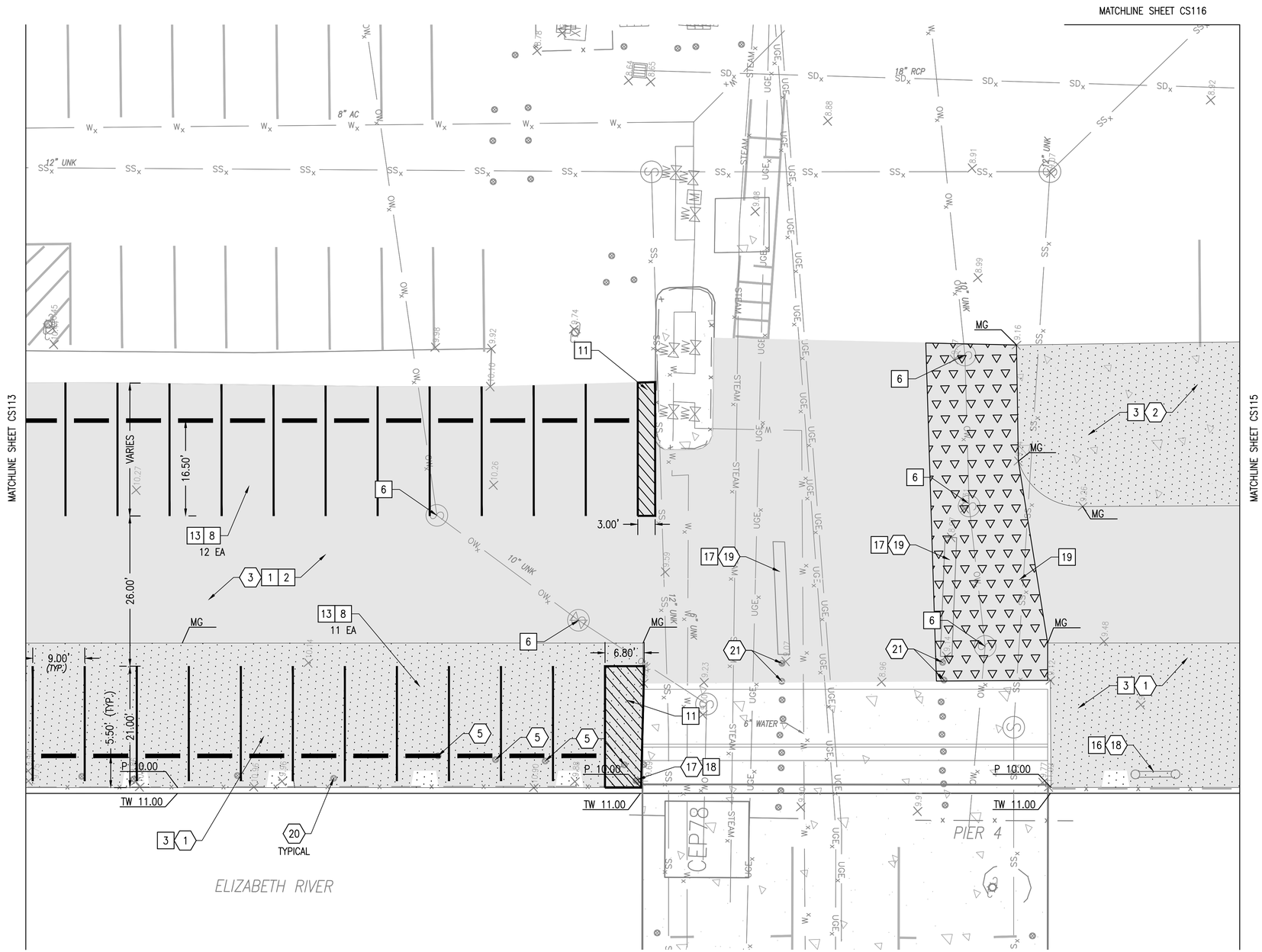
CIVIL SITE PLAN (13 OF 21)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO.: N/A
NAVFAC DRAWING NO. 12,729,673
SHEET 18 OF 158

CS113

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Wickerfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS113 PLOTTED: Friday, July 08, 2016 - 3:23pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
17. SALVAGE FIRE ALARM FOR REINSTALL.
18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½-INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
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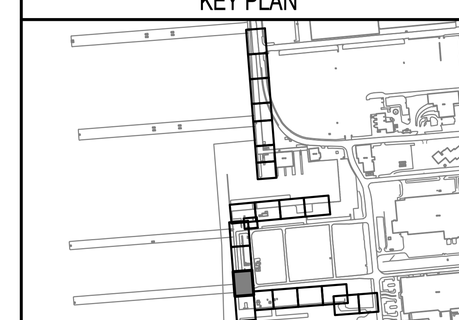
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"-3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND--MID-ATLANTIC
HAMPTON ROADS IPT - PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (14 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

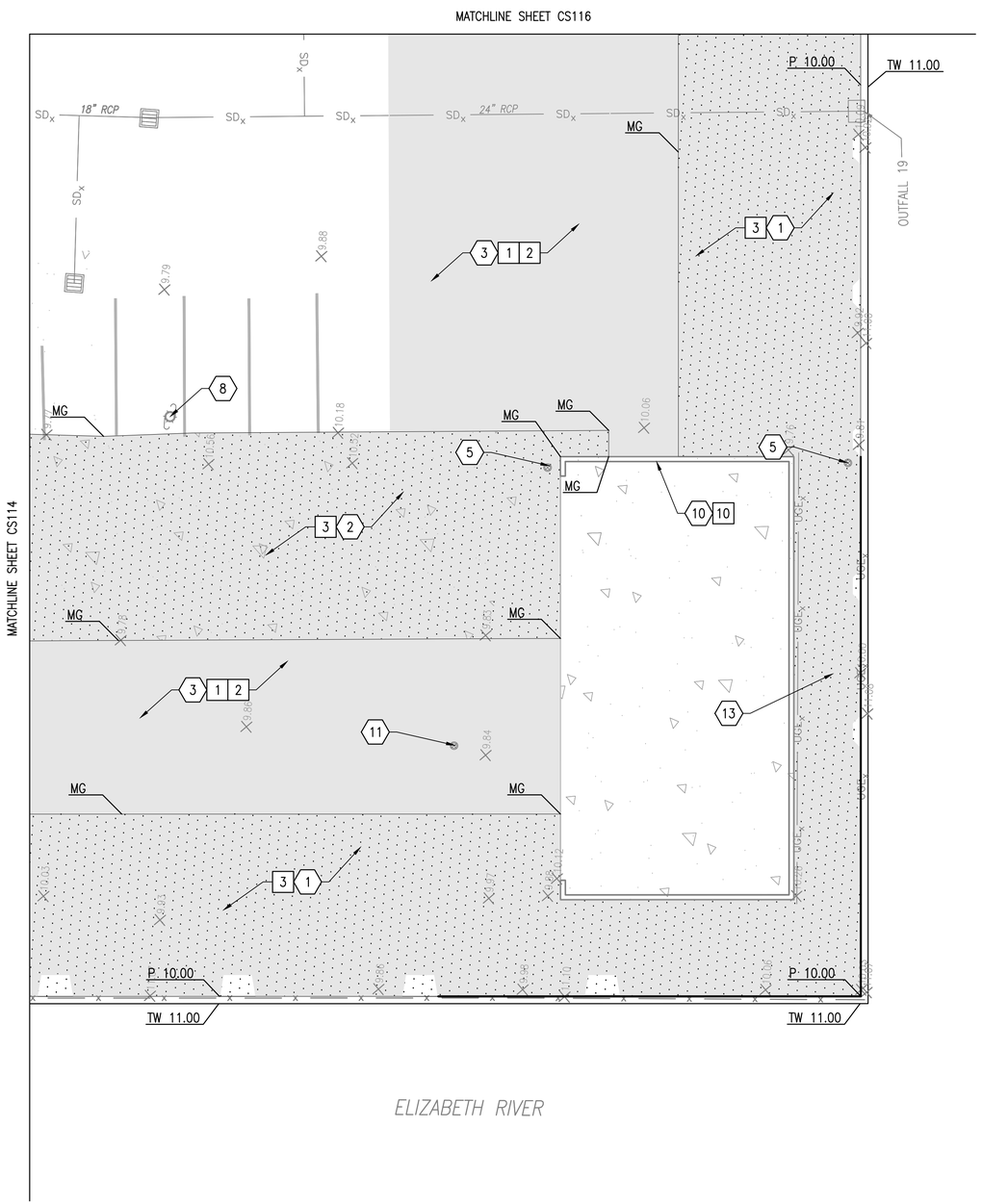
NAVFAC DRAWING NO. 12,729,674

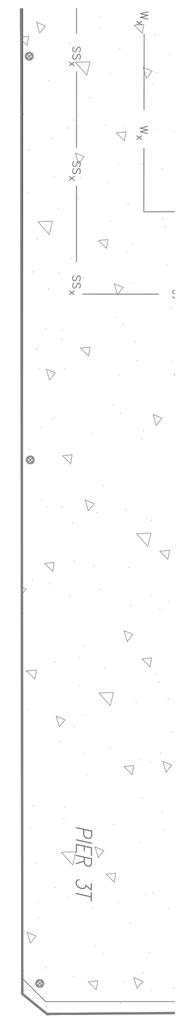
SHEET 19 OF 158

CS114

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS114 PLOTTED: Friday, July 08, 2016 - 3:24pm USER: franklin.rulledge





CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

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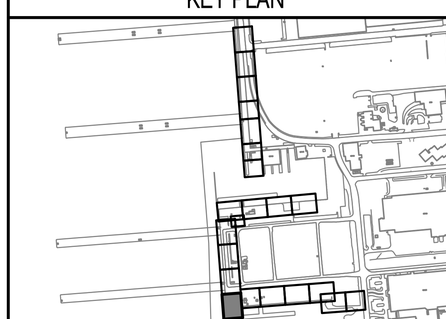
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

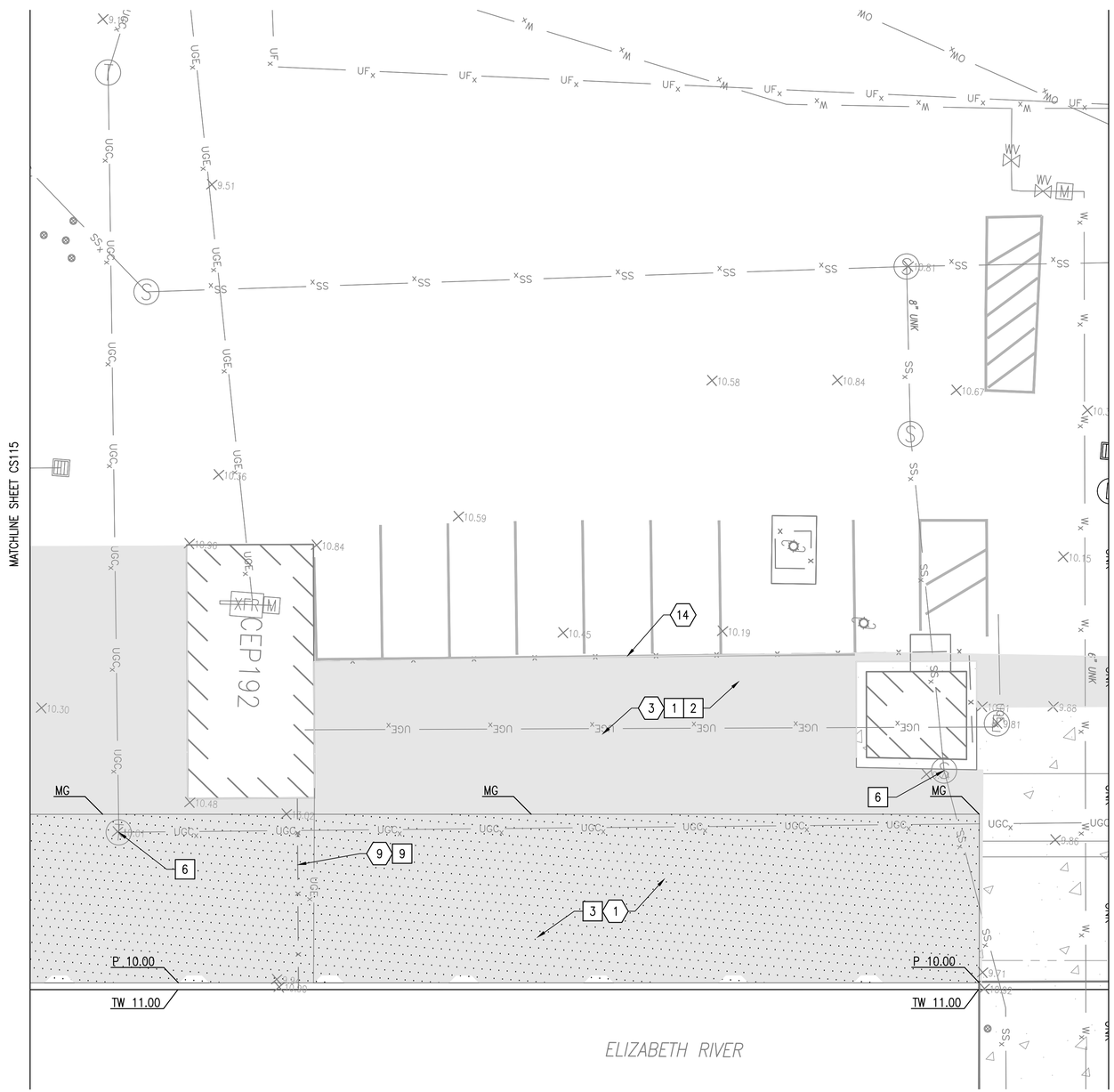
CIVIL SITE PLAN (15 OF 21)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,675
SHEET 20 OF 158

CS115

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS115 PLOTTED: Friday, July 08, 2016 - 3:24pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

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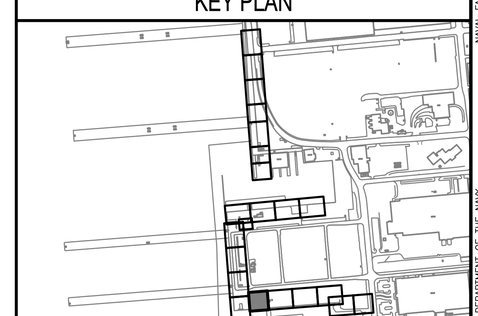
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (16 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

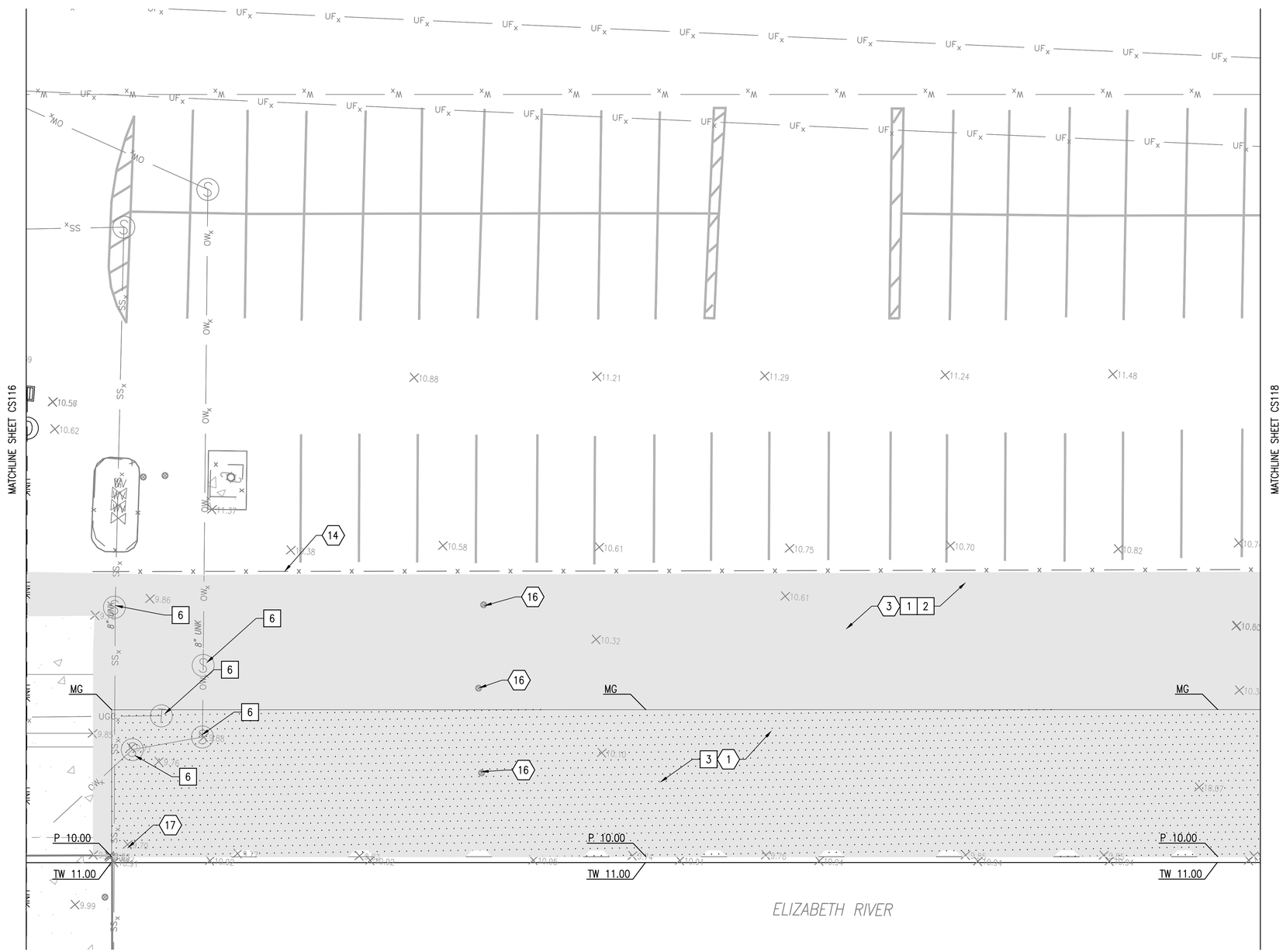
NAVFAC DRAWING NO. 12,729,676

SHEET 21 OF 158

CS116

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS116 PLOTTED: Friday, July 08, 2016 - 3:24pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
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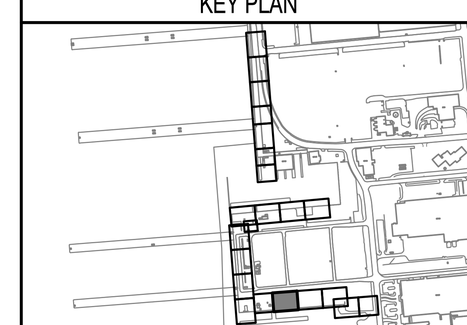
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

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FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

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FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (17 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

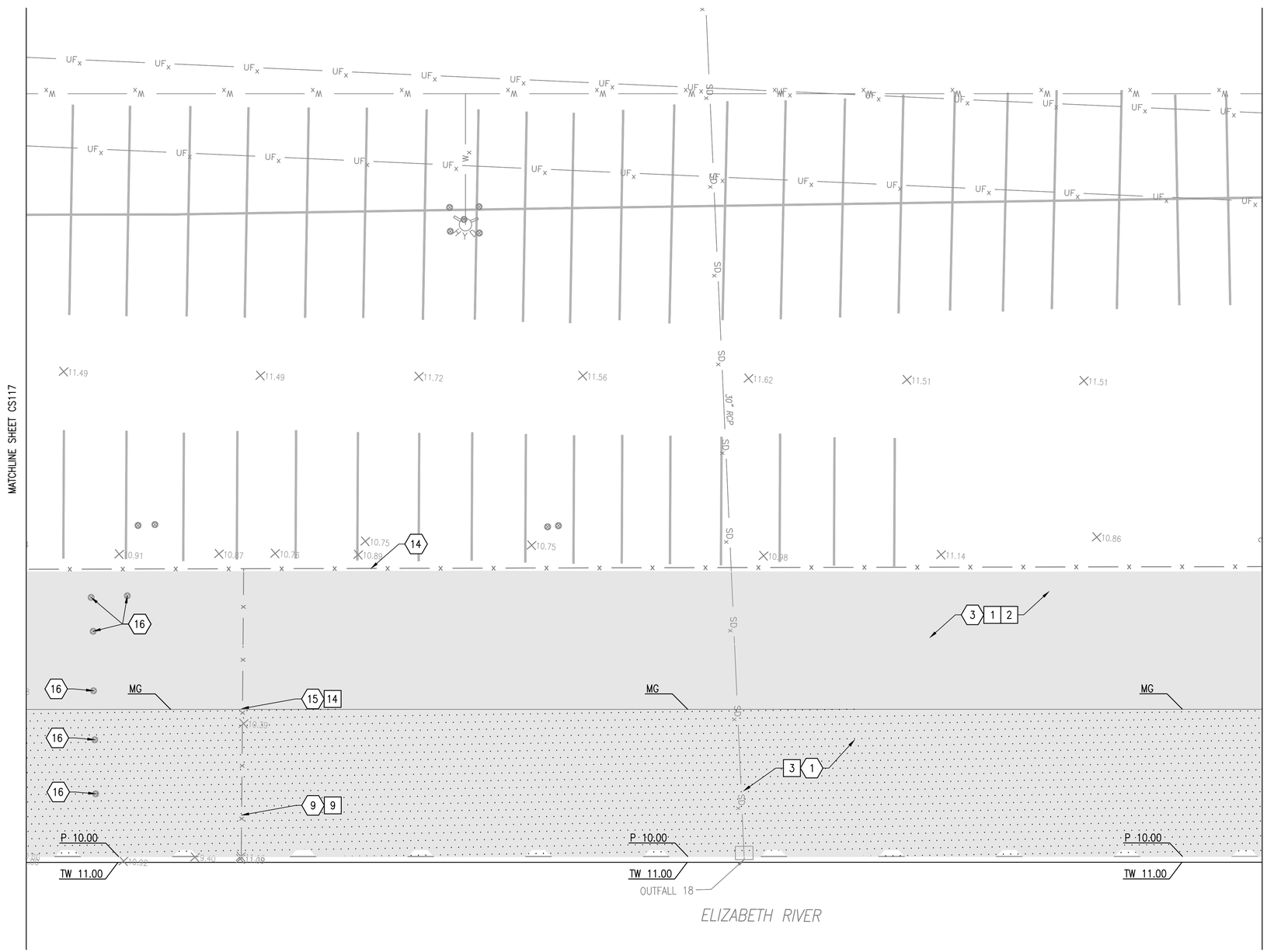
NAVFAC DRAWING NO. 12,729,677

SHEET 22 OF 158

CS117

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS117 PLOTTED: Friday, July 08, 2016 - 3:24pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

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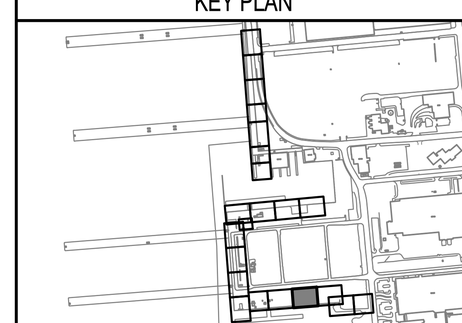
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (18 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

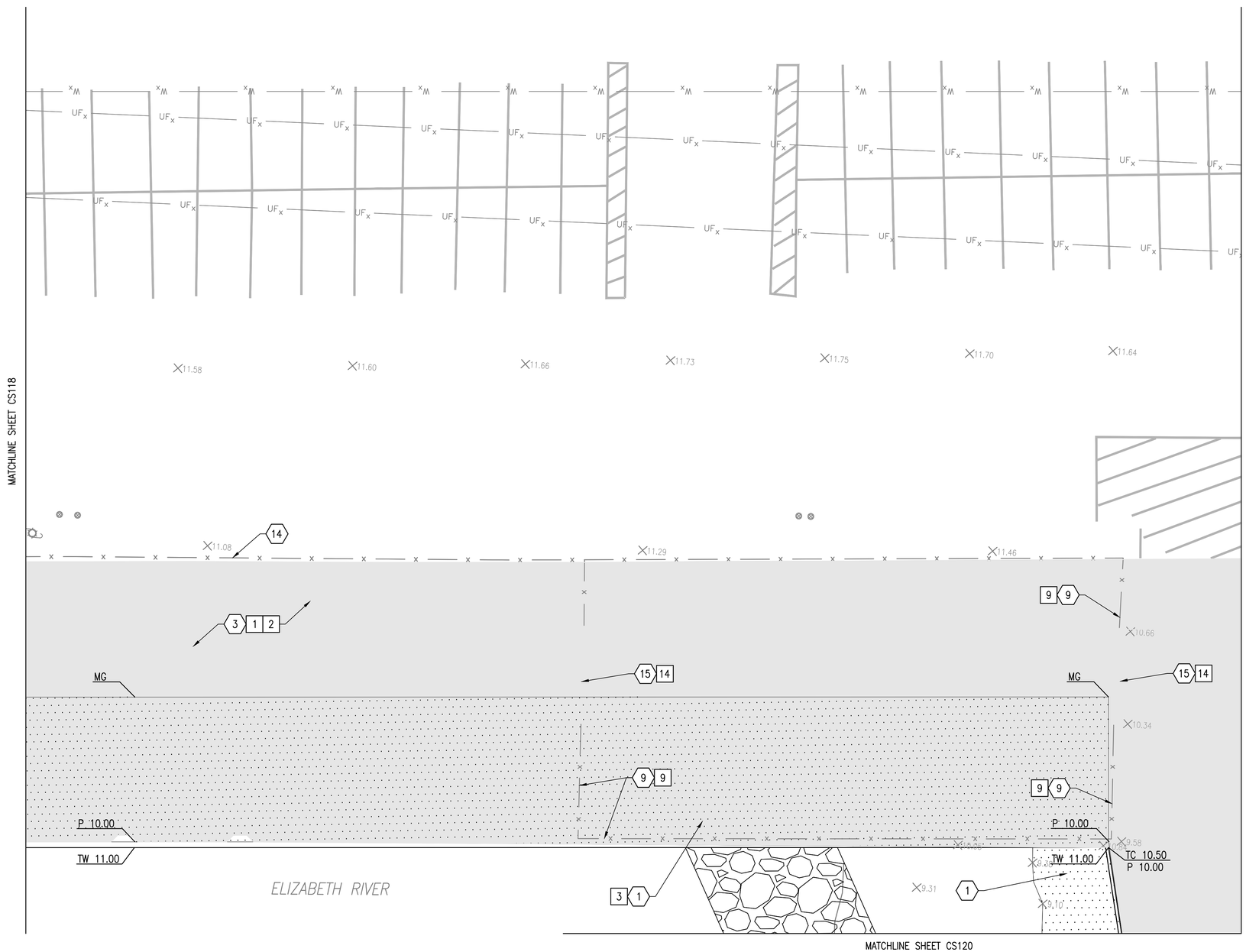
NAVFAC DRAWING NO. 12,729,678

SHEET 23 OF 158

CS118

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS118 PLOTTED: Friday, July 08, 2016 - 3:24pm USER: franklin.rulledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
14. PROTECT FENCE.
15. REMOVE AND SALVAGE GATE FOR REINSTALL.
16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
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18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½–INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
8. PROVIDE PARKING STALL. REFER TO SHEET CS501 FOR DETAIL.
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
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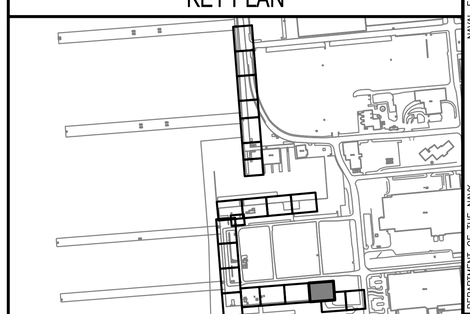
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (19 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

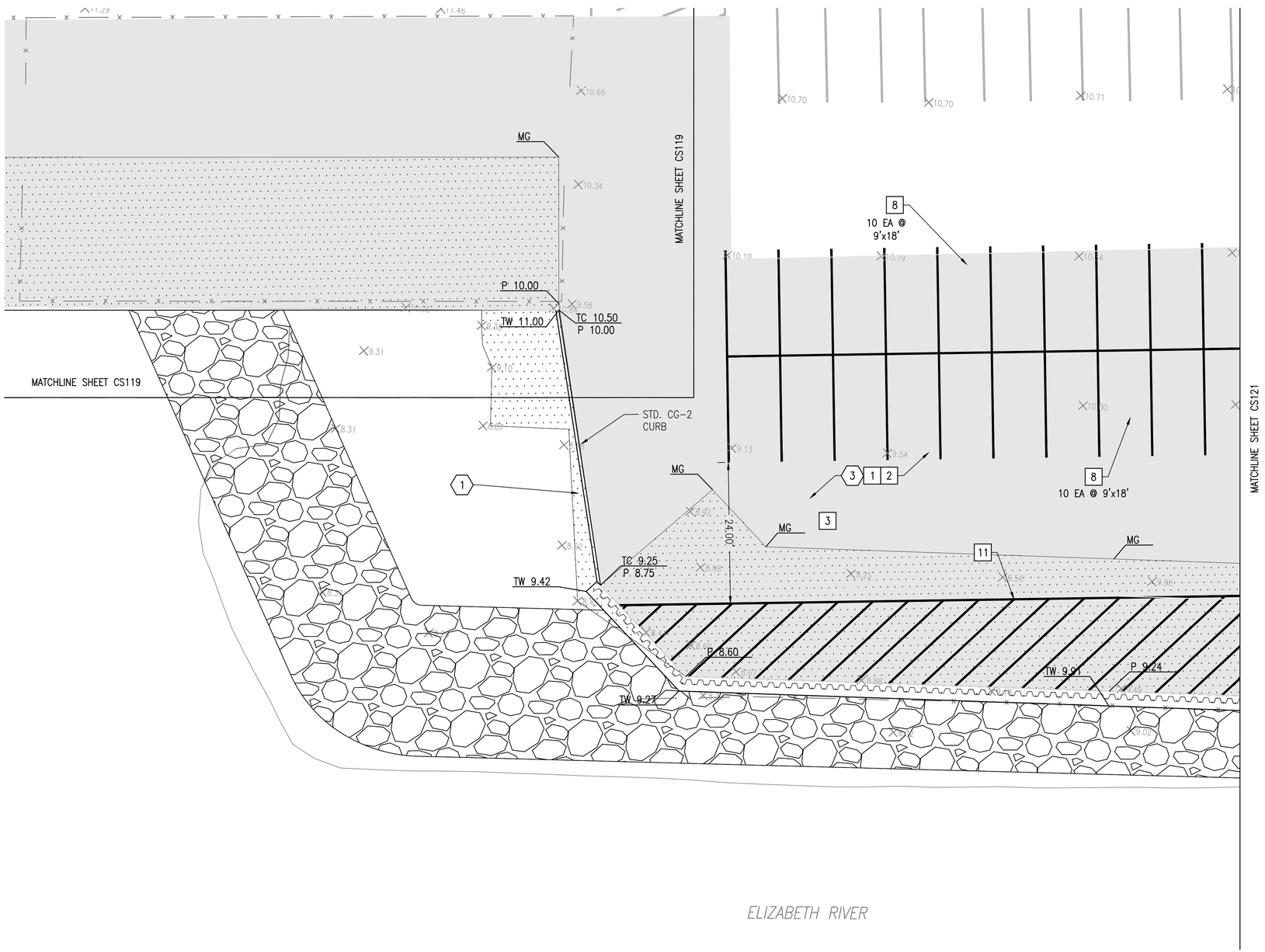
NAVFAC DRAWING NO. 12,729,679

SHEET 24 OF 158

CS119

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS119 PLOTTED: Friday, July 08, 2016 - 3:24pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
2. DEMOLISH FULL DEPTH CONCRETE PAVEMENT.
3. MILL 1½" OF BITUMINOUS CONCRETE PAVEMENT.
4. DEMOLISH EXISTING WHEEL STOPS.
5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
7. PROTECT FIRE HYDRANT.
8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
10. DEMOLISH CMU DUMPSTER ENCLOSURE WALL AND CONCRETE SLAB.
11. PROTECT EXISTING MONITORING WELL.
12. PROTECT ELECTRICAL MANHOLE (FRAME, COVER AND VAULT)
13. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATION ITEMS.
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18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
19. SALVAGE BARRICADE FOR REINSTALL.
20. COORDINATE WITH THE CONTRACTING OFFICER FOR THE GOV'T REMOVAL OF THE REMOVABLE SIGNS.
21. PROTECT EXISTING BOLLARD.
22. DEMOLISH FENCE
23. PROTECT SIGN.

NEW WORK KEYNOTES

1. APPLY TACK COAT PRIOR TO INSTALLING BITUMINOUS CONCRETE OVERLAY. (0.10 GAL/SY) REFER TO SHEET CS502 FOR DETAIL.
2. PROVIDE BITUMINOUS CONCRETE PAVEMENT OVERLAY, 1½-INCH THICK MINIMUM. REFER TO SHEET CS502 FOR DETAIL.
3. PROVIDE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS.
4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
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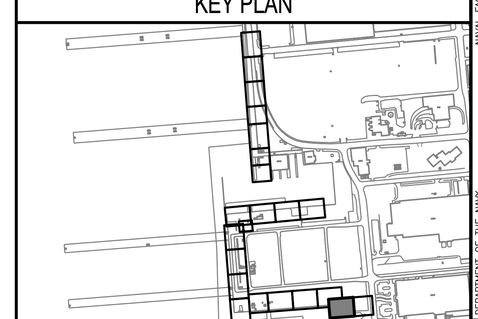
9. REINSTALL CHAIN LINK FENCE/GATE. PROVIDE FENCE POSTS. REFER TO SHEET CS502 FOR DETAIL.
10. PROVIDE DUMPSTER ENCLOSURE. REFER TO STRUCTURAL DRAWINGS FOR DETAILS AND GRADING.
11. PROVIDE CROSS HATCH LINES. REFER TO SHEET CS501 FOR DETAILS.
12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
13. PROVIDE WHEEL STOPS. REFER TO SHEET CS501 AND CS502.
14. REINSTALL GATE.
15. RESTORE AGGREGATE PAVEMENT, REFER TO SHEET CS502 FOR DETAIL.
16. PROVIDE PIER SIGN. REFER TO DETAIL SHEET CS502 FOR DETAIL.
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"-3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
-	-	-	-

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

CIVIL SITE PLAN (20 OF 21)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

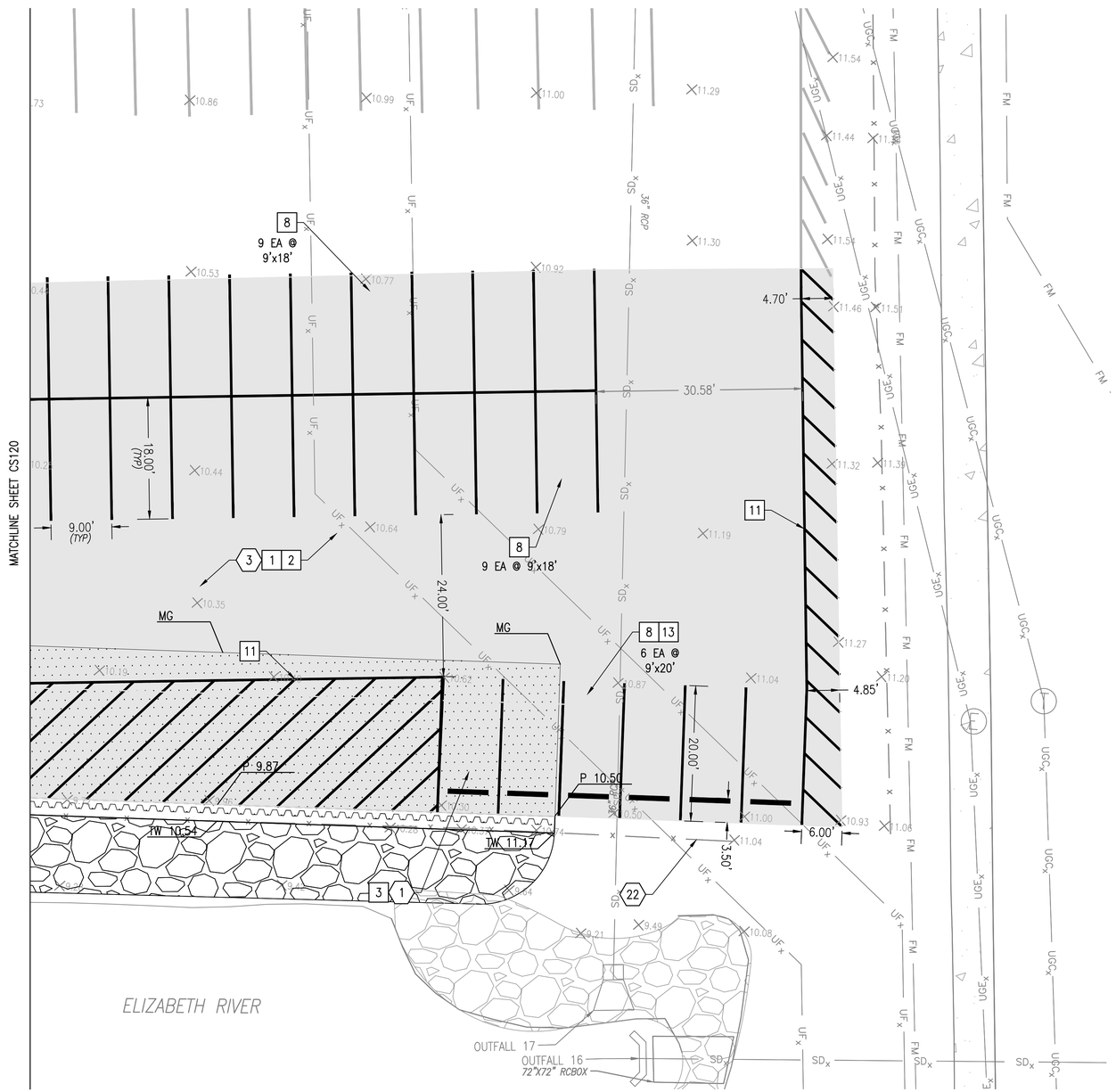
NAVFAC DRAWING NO. 12,729,680

SHEET 25 OF 158

CS120

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS120 PLOTTED: Friday, July 08, 2016 - 3:25pm USER: franklin.rutledge



CIVIL SITE PLAN

SCALE: 1" = 10'

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
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5. DEMOLISH EXISTING BOLLARDS.
6. PROTECT DUMPSTER ENCLOSURE.
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8. PROTECT LIGHT POLE.
9. REMOVE AND SALVAGE CHAIN LINK FENCE FABRIC. DEMOLISH FENCE POSTS AND CONCRETE FOUNDATION.
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23. PROTECT SIGN.

NEW WORK KEYNOTES

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4. PROVIDE BOLLARDS. REFER TO SHEET CS502 FOR DETAILS.
5. PROVIDE CONCRETE PAVEMENT. REFER TO SHEET CS502 FOR DETAILS. REFER TO JOINT PLAN ON SHEET CS503.
6. VERTICALLY ADJUST VALVE BOX/MANHOLE FRAME AND GRATE/COVER TO MATCH FINAL GRADE.
7. MILL TO EDGE OF EXISTING LANE LINE. DO NOT DISTURB EXISTING LANE LINE.
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12. PROVIDE EDGE LINES. REFER TO SHEET CS501 FOR DETAILS.
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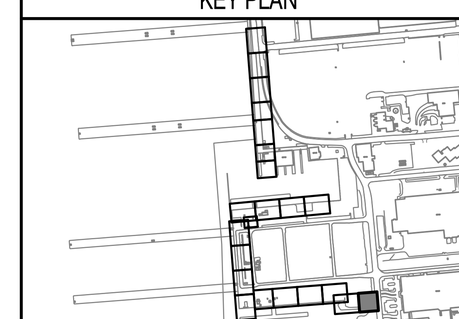
17. REINSTALL BARRICADE.
18. REINSTALL FIRE ALARM.
19. PROVIDE 0"–3" BITUMIN LEVELING LAYER PRIOR TO OVERLAY.

KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

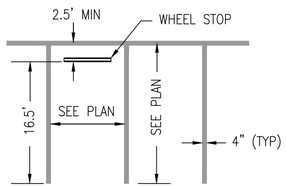
CIVIL SITE PLAN (21 OF 21)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,681
SHEET 26 OF 158

CS121

DRAWFORM REVISION: 10 MARCH 2009

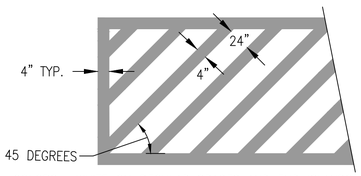
FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS121 PLOTTED: Friday, July 08, 2016 - 3:25pm USER: franklin.rutledge



NOTE: COLOR – WHITE
MATERIAL – THERMOPLASTIC

90° PARKING SPACE LINES

NOT TO SCALE

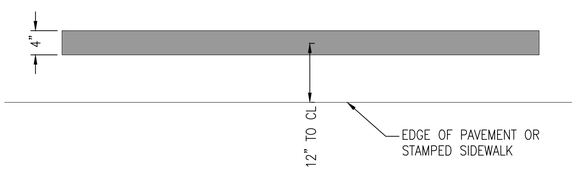


COLORS : WHITE ON REGULAR SPACES AND END ISLANDS.
BLUE ON ACCESSIBLE SPACES AND ACCESSIBLE AISLE.
OTHER COLORS AS NOTED.

MATERIAL: THERMOPLASTIC

CROSS HATCH LINES DETAIL

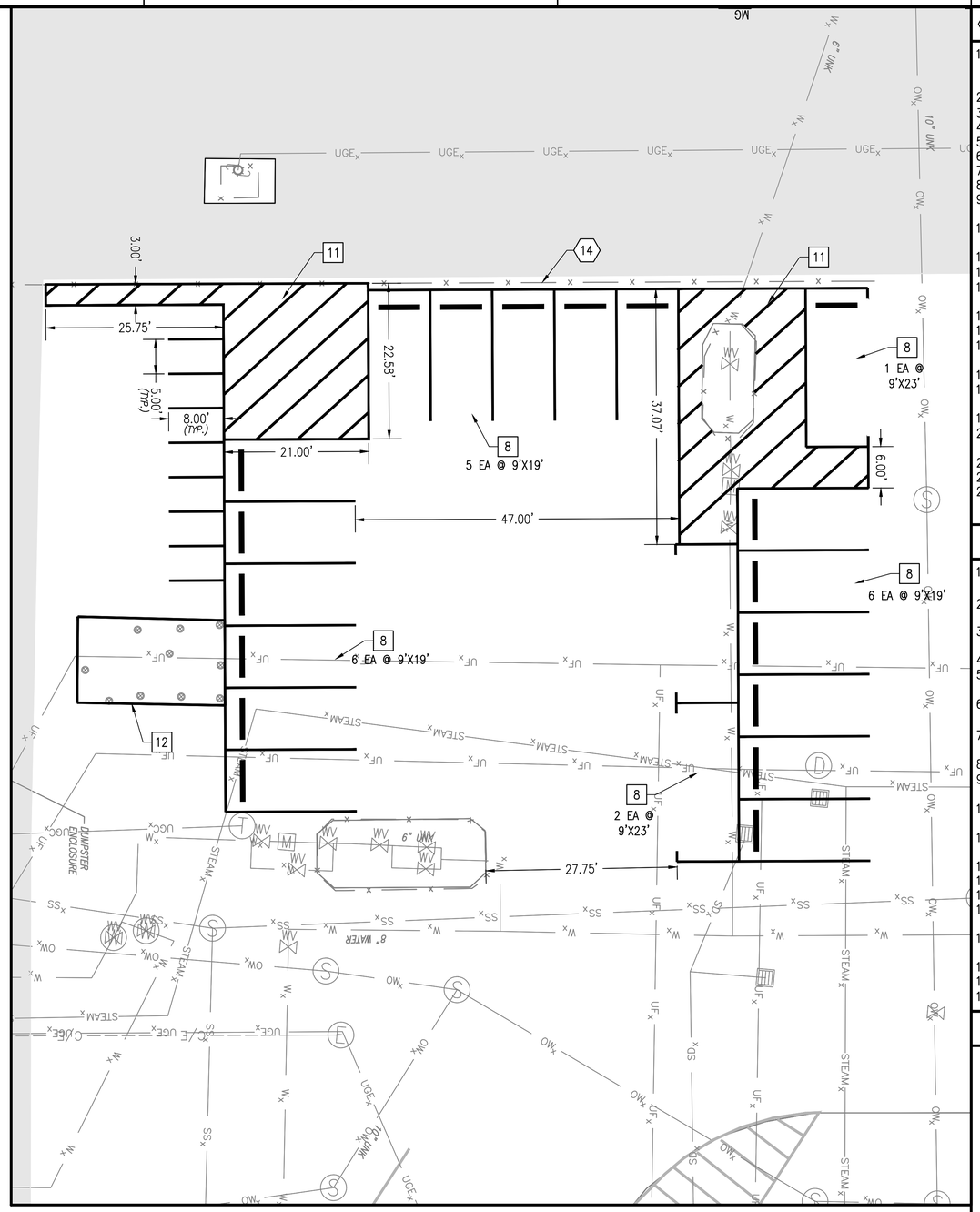
NOT TO SCALE



NOTE: COLOR – WHITE MATERIAL – THERMOPLASTIC

WHITE EDGE LINE MARKING

NOT TO SCALE



PAVING DETAIL

SCALE: 1" = 10'

PLAN NORTH

DEMOLITION KEYNOTES

1. DEMOLISH FULL DEPTH BITUMINOUS CONCRETE PAVEMENT. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF EXCAVATION FOR BULKHEAD MAINTENANCE REPAIRS.
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16. REMOVE EXISTING FENCE POST FOUNDATION TO 6" BELOW FINISHED GRADE.
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18. DEMOLISH PIER POST AND FOUNDATION. SALVAGE SIGN FOR REINSTALL.
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23. PROTECT SIGN.

NEW WORK KEYNOTES

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17. REINSTALL BARRICADE.
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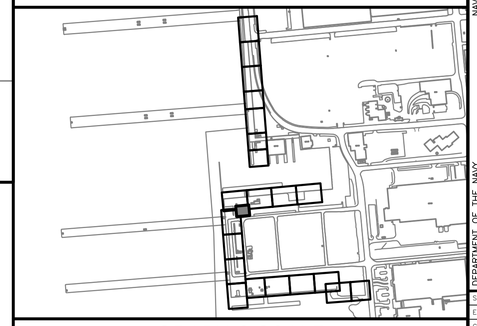
KEY PLAN



GRAPHIC SCALE

1"=10' 0' 10' 20'

SYM	DESCRIPTION	DATE	APPR
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–	–	–	–

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

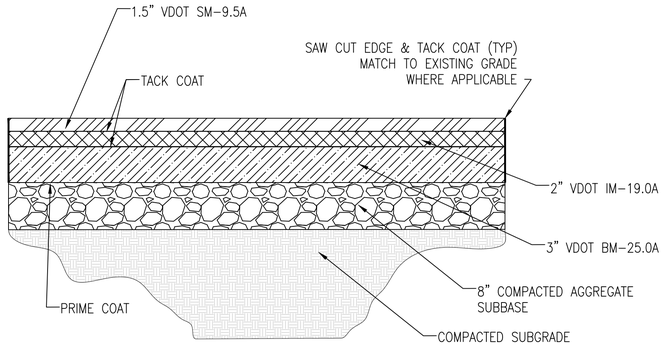
CIVIL SITE – DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,682
SHEET 27 OF 158

CS501

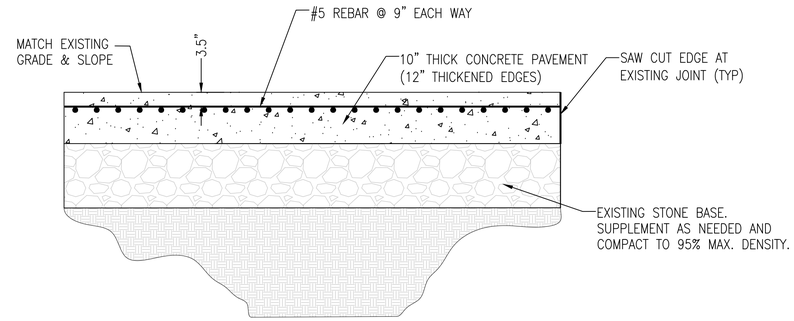
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS501 PLOTTED: Friday, July 08, 2016 – 3:25pm USER: franklin.rulledge

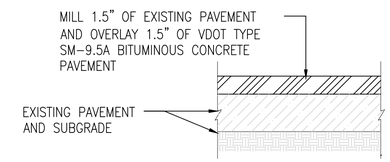


NEW BITUMINOUS CONCRETE PAVEMENT SECTION

NOT TO SCALE

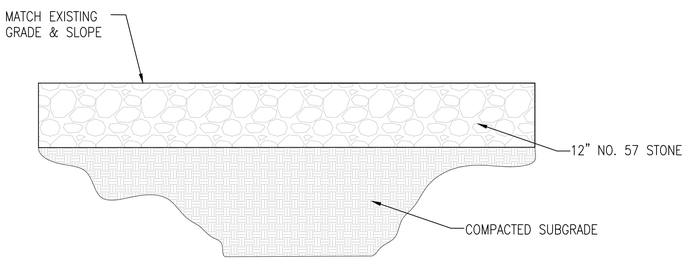


NEW CONCRETE PAVEMENT SECTION

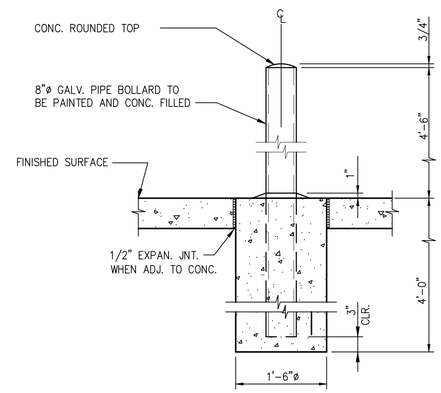


TYPICAL MILL AND OVERLAY SECTION

NOT TO SCALE

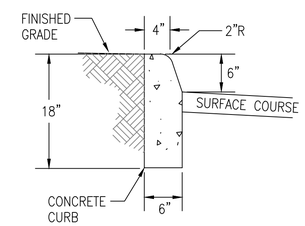


AGGREGATE PAVEMENT SECTION



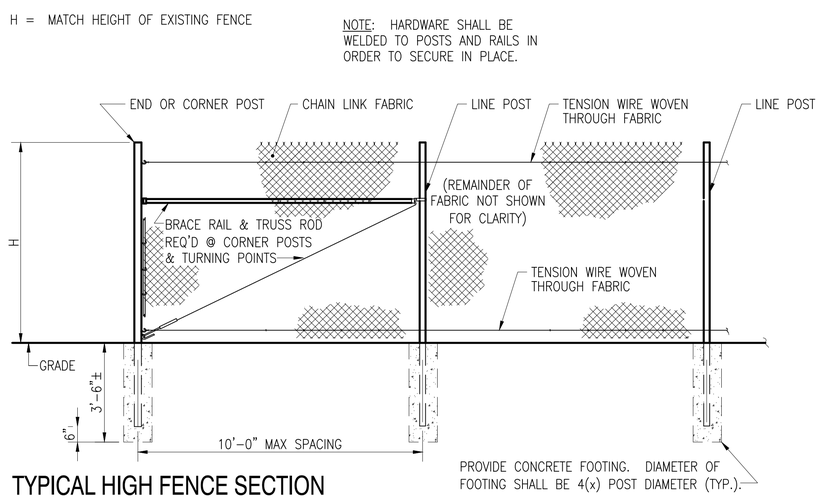
TYPICAL PIPE BOLLARD DETAIL

NOT TO SCALE



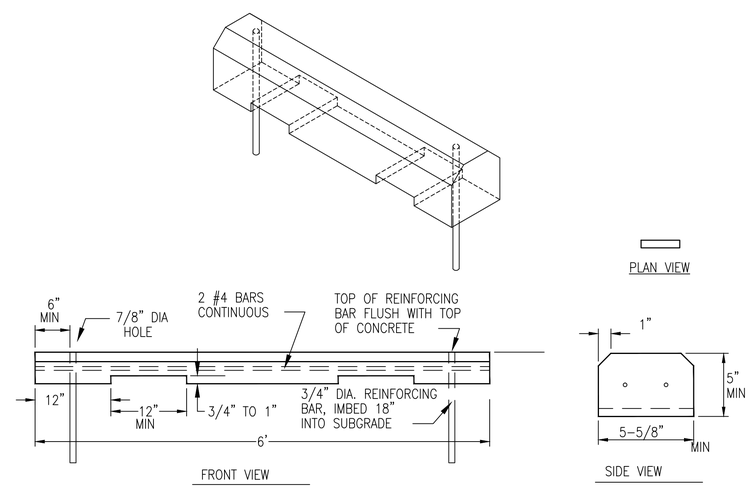
STANDARD CG-2 CURB

NOT TO SCALE



TYPICAL HIGH FENCE SECTION

NOT TO SCALE



TYPCIAL WHEEL STOP

NOT TO SCALE

SYM	DESCRIPTION	DATE	APPR

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016

DES FGR | DRW FGR | CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

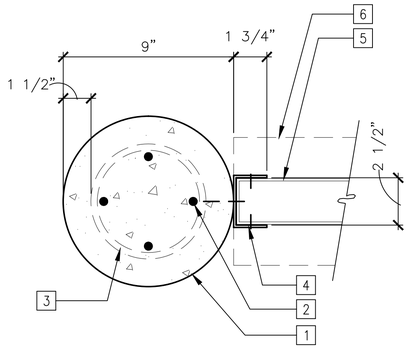
CIVIL SITE – DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,683
SHEET 28 OF 158

CS502

DRAWFORM REVISION: 10 MARCH 2009

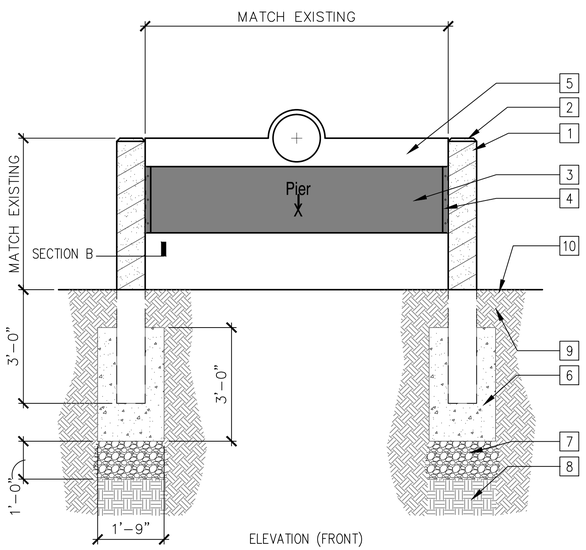
FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS502 PLOTTED: Friday, July 08, 2016 - 3:25pm USER: franklin.rutledge



1. CONCRETE POST (ROUND-TUBE FORMED WITH NATURAL FINISH)
2. (4)-#4 REBAR (CONT)
3. (6)-#3 REBAR TIES AT 1'-0" ON CENTER SPACING
4. ALUMINUM CHANNEL (COLOR: BLUE (PANTONE #19-4052 TPX) ALL SURFACES); ATTACH TO POST WITH STAINLESS STEEL BOLTS AND EXPANSION SHIELDS; ATTACH TO SIGN PANEL WITH STAINLESS STEEL SCREWS
5. SIGN PANEL – SALVAGE AND REUSE EXISTING SIGN PANEL
6. SIGN HEAD – SALVAGE AND REUSE EXISTING SIGN HEAD

SECTION B

SCALE: 3" = 1'-0"



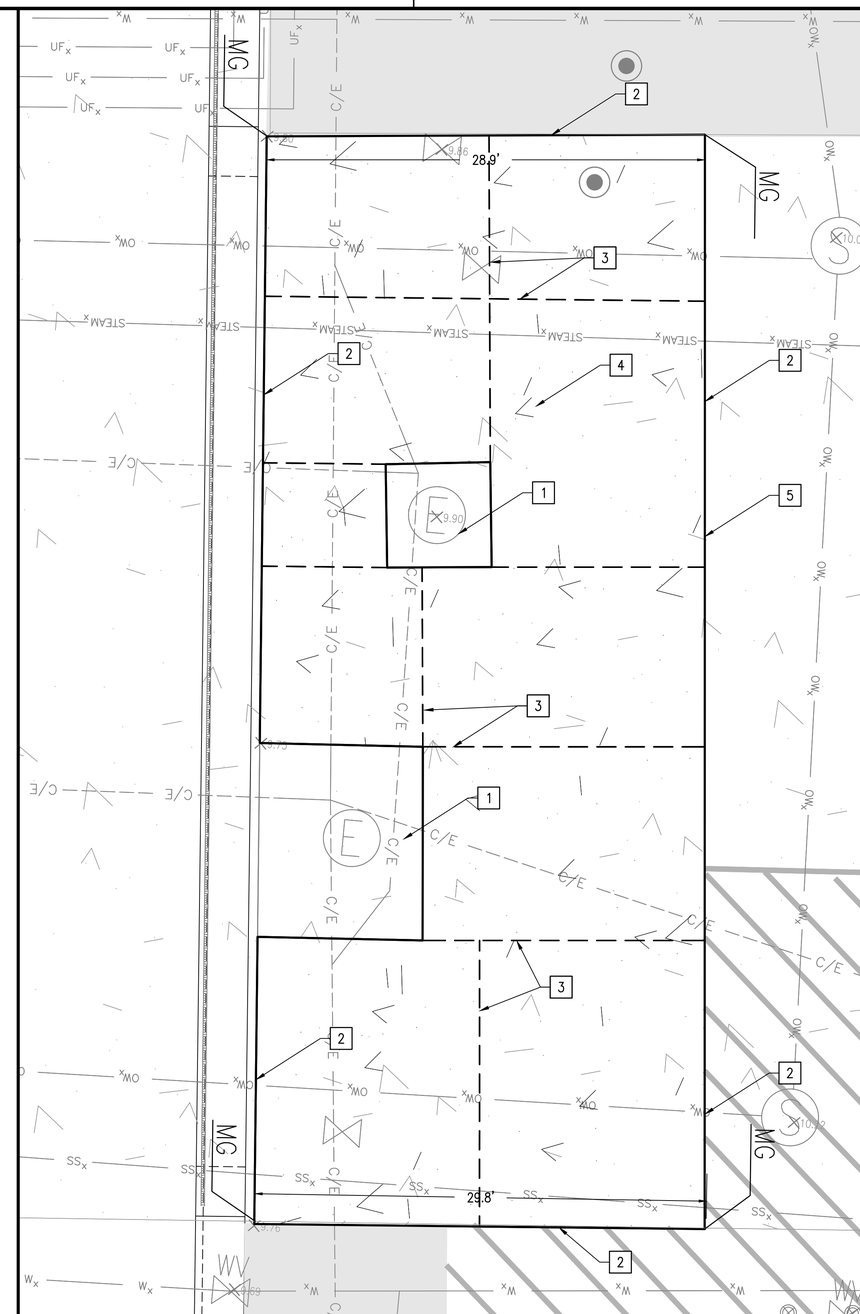
ELEVATION (FRONT)

1. CONCRETE POST (ROUND-TUBE FORMED WITH NATURAL FINISH)
2. 1-INCH CHAMFER
3. SIGN PANEL – SALVAGE AND REUSE EXISTING SIGN PANEL
4. ALUMINUM CHANNEL (COLOR: BLUE (PANTONE #19-4052 TPX) ALL SURFACES); ATTACH TO POST WITH STAINLESS STEEL BOLTS AND EXPANSION SHIELDS; ATTACH TO SIGN PANEL WITH STAINLESS STEEL SCREWS
5. SIGN HEAD – SALVAGE AND REUSE EXISTING SIGN HEAD
6. CONCRETE FOOTING
7. AGGREGATE BASE
8. COMPACTED SUBGRADE 95% TO 12" DEEP (TYPICAL)
9. BACKFILL SOIL OR UNDISTURBED SOIL (SEE PLAN)
10. FINISHED GRADE (SEE PLAN)

NOTES:
1. GRIND SMOOTH ALL WELDS AND REMOVED BURRS PRIOR TO POWDER-COATING.
2. PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION.

PIER SIGN

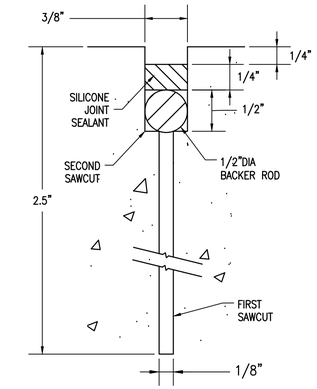
SCALE: 1/2" = 1'-0"



JOINT PLAN

SCALE: 1" = 5'

PLAN NORTH



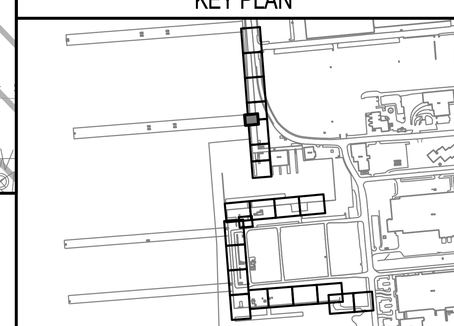
CONTRACTION JOINT

NOT TO SCALE

NEW CONCRETE WORK KEYNOTES

1. DO NOT DISTURB EXISTING CONCRETE ELECTRICAL VAULT.
2. EXPANSION JOINT (TYP.) ALONG PERIMETER OF SLAB AND AROUND EDGES OF EXISTING ELECTRICAL VAULTS.
3. CONTRACTION JOINT (TYP.).
4. PROVIDE CONCRETE PAVEMENT. REFER TO SHEETS CS104 AND CS105 FOR DEMO AND GRADING AND SHEET CS502 FOR DETAILS.
5. EXISTING JOINT.

KEY PLAN



GRAPHIC SCALE

1"=5' 0' 5' 10'

SYM	DESCRIPTION	DATE	APPR

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016

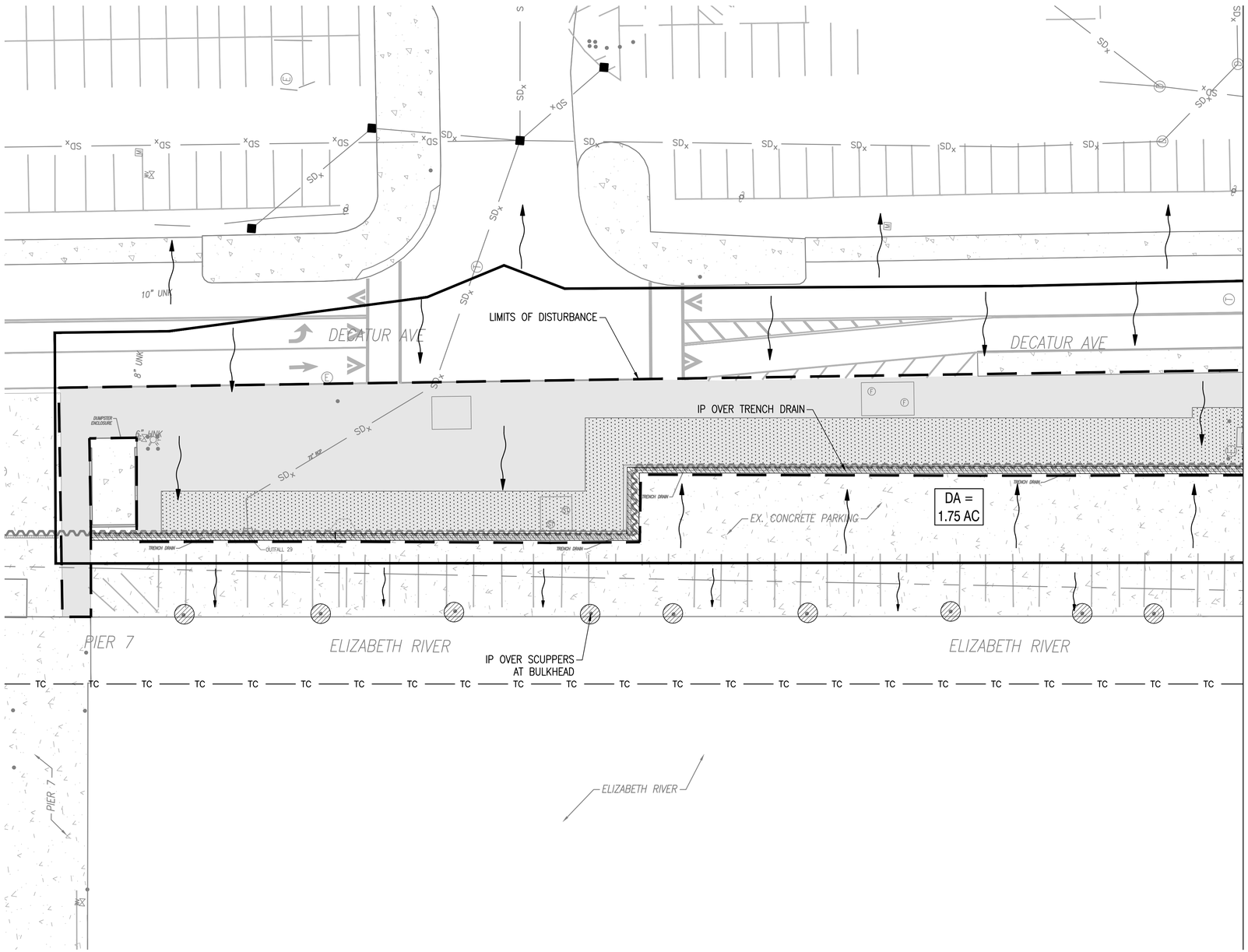
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION NORFOLK, VIRGINIA
CEP-175 AND Z-308 BULKHEAD REPAIR
CIVIL SITE – DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,684
SHEET 29 OF 158
CS503

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CS SERIES.dwg LAYOUT NAME: CS503 PLOTTED: Friday, July 08, 2016 - 3:26pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

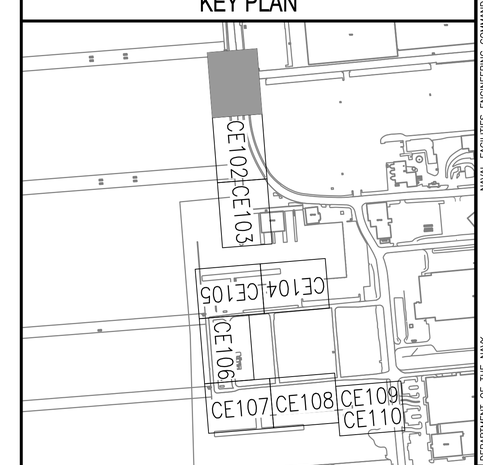
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SILT FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
	DRAINAGE DIVIDES
	LIMIT OF DISTURBANCE
	DRAINAGE FLOW ARROW
TC	TURBIDITY CURTAIN
DA	DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR

SEAL

A/E INFO

APPROVED FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN–PHASE 1&2 (1 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

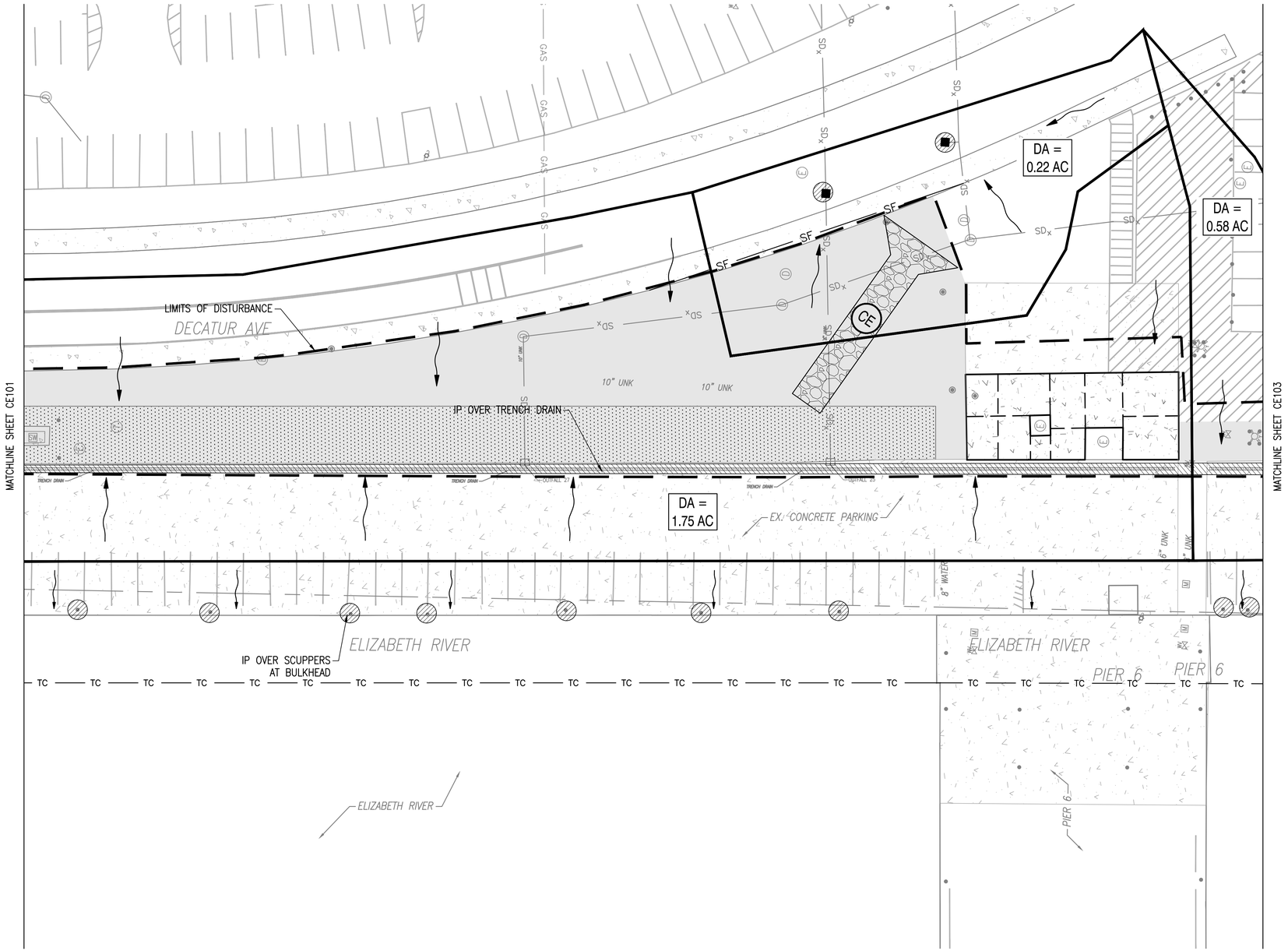
NAVFAC DRAWING NO. 12,729,685

SHEET 30 OF 158

CE101

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE101 PLOTTED: Friday, July 08, 2016 - 3:28pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

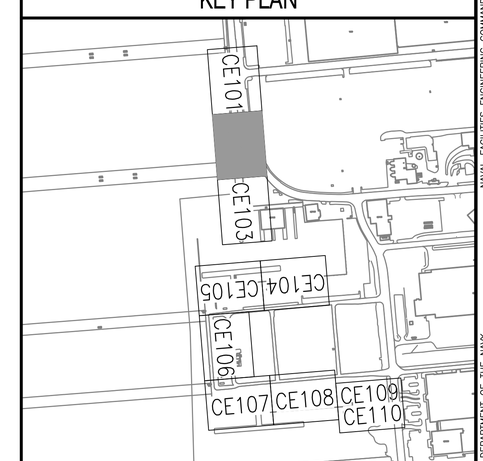
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SF	SILT FENCE
	IP	INLET PROTECTION
CE	CE	CONSTRUCTION ENTRANCE
		DRAINAGE DIVIDES
		LIMIT OF DISTURBANCE
		DRAINAGE FLOW ARROW
TC		TURBIDITY CURTAIN
DA		DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN–PHASE 1&2 (2 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

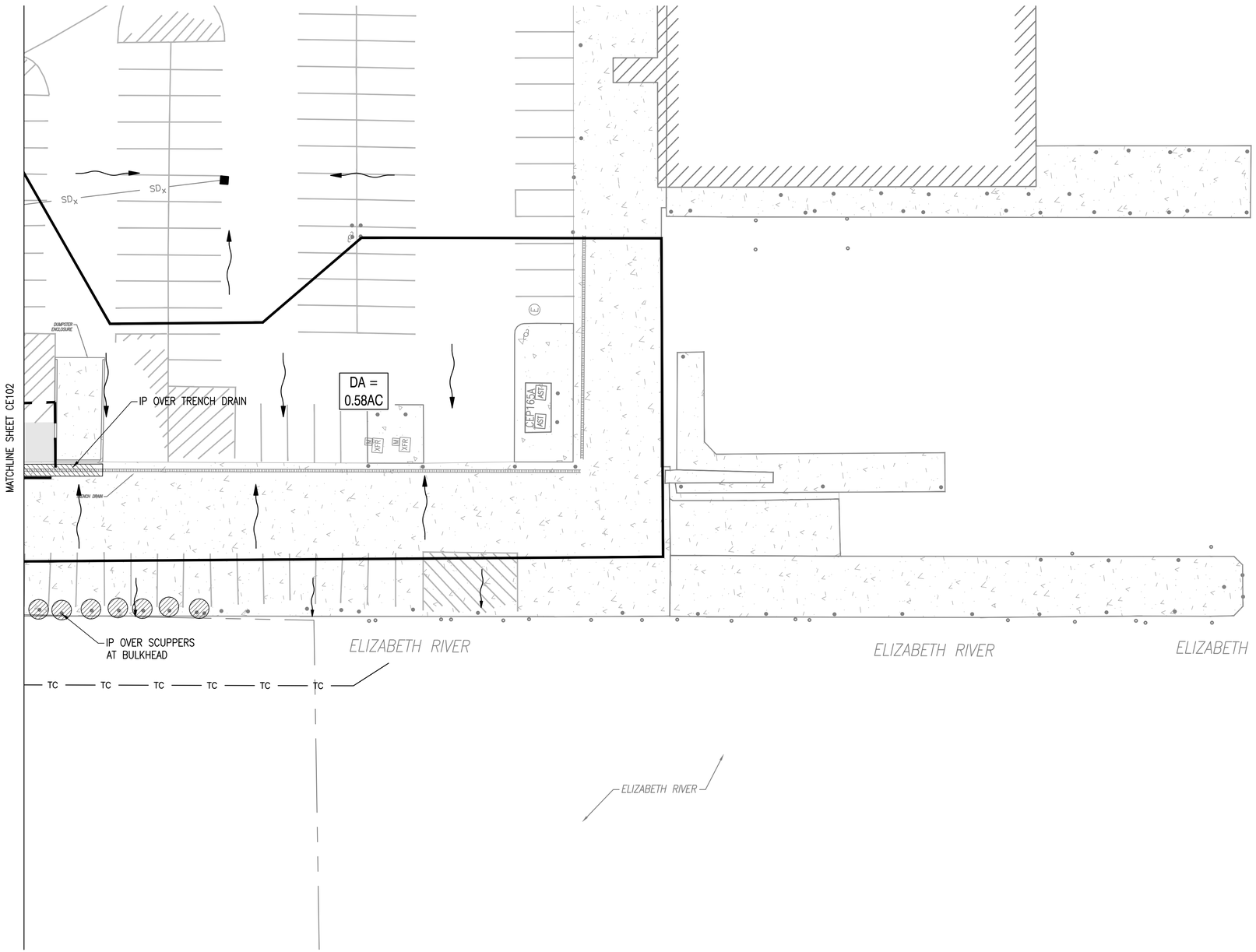
NAVFAC DRAWING NO. 12,729,686

SHEET 31 OF 158

CE102

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE102 PLOTTED: Friday, July 08, 2016 - 3:28pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

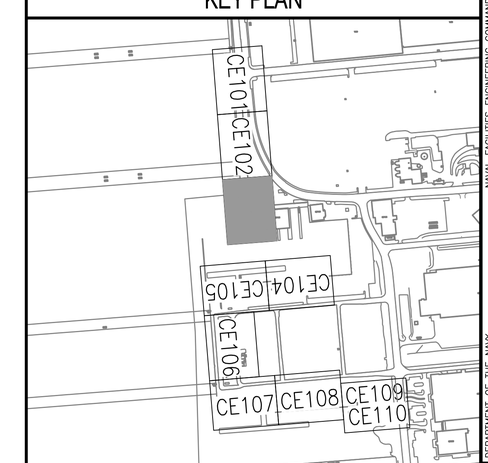
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SF	SILT FENCE
	IP	INLET PROTECTION
CE	CE	CONSTRUCTION ENTRANCE
		DRAINAGE DIVIDES
		LIMIT OF DISTURBANCE
		DRAINAGE FLOW ARROW
TC		TURBIDITY CURTAIN
DA		DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN–PHASE 1&2 (3 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO.: N/A

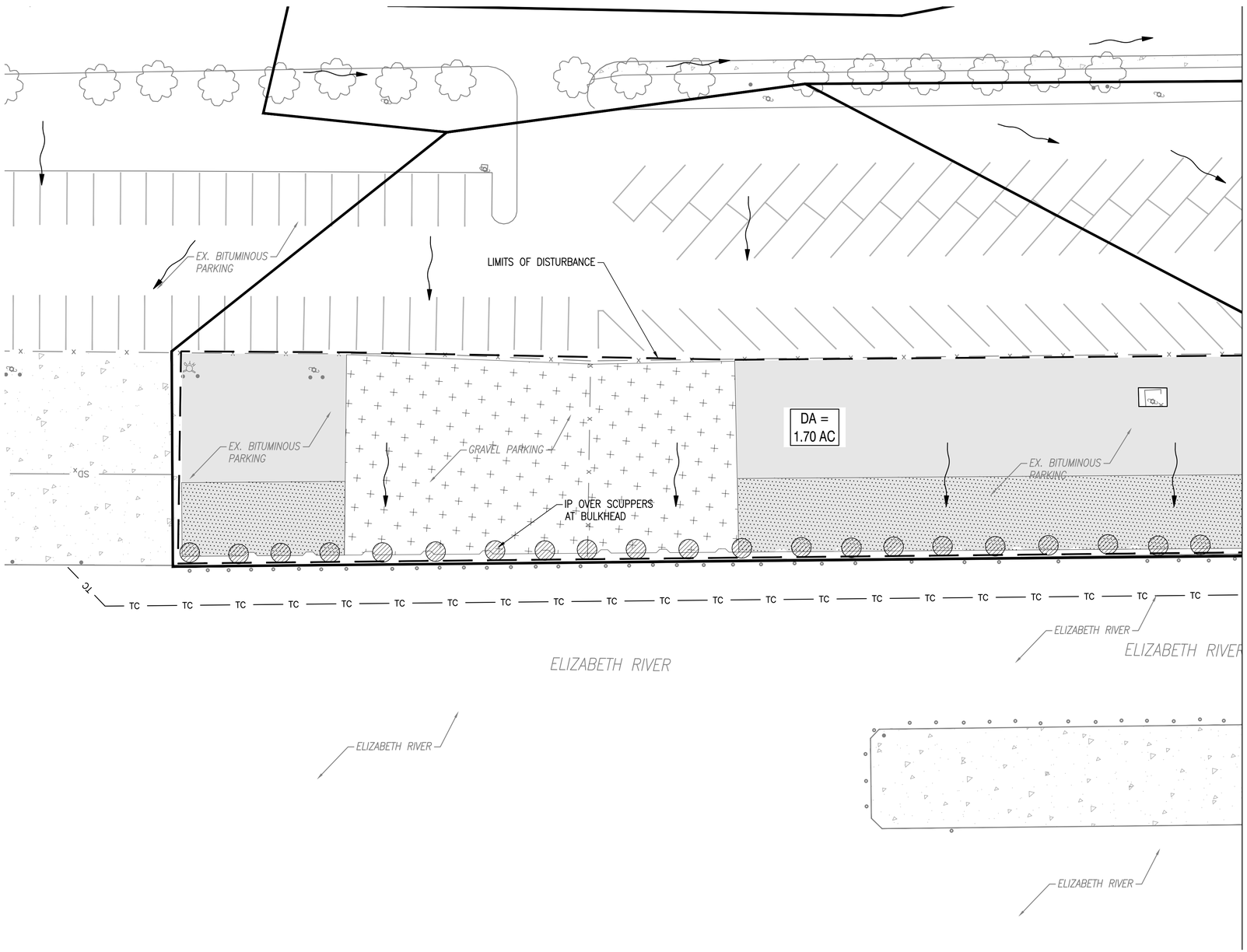
NAVFAC DRAWING NO. 12,729,687

SHEET 32 OF 158

CE103

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Wickerfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE103 PLOTTED: Friday, July 08, 2016 - 3:28pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

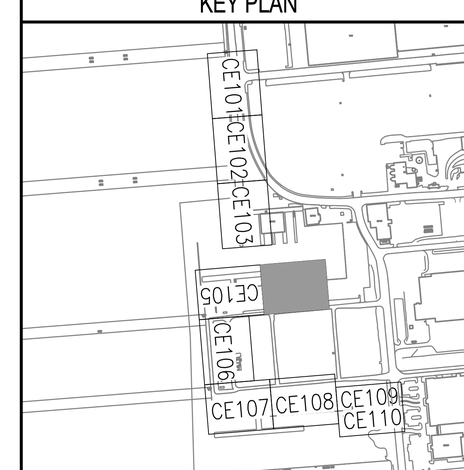
GENERAL LEGEND

- DEMO FULL DEPTH BITUMINOUS/CONCRETE
- BITUMINOUS MILL AND OVERLAY
- GRAVEL

EROSION CONTROL LEGEND

- SF — SILT FENCE
- IP — INLET PROTECTION
- CE — CONSTRUCTION ENTRANCE
- DRAINAGE DIVIDES
- LIMIT OF DISTURBANCE
- DRAINAGE FLOW ARROW
- TC — TURBIDITY CURTAIN
- DA — DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

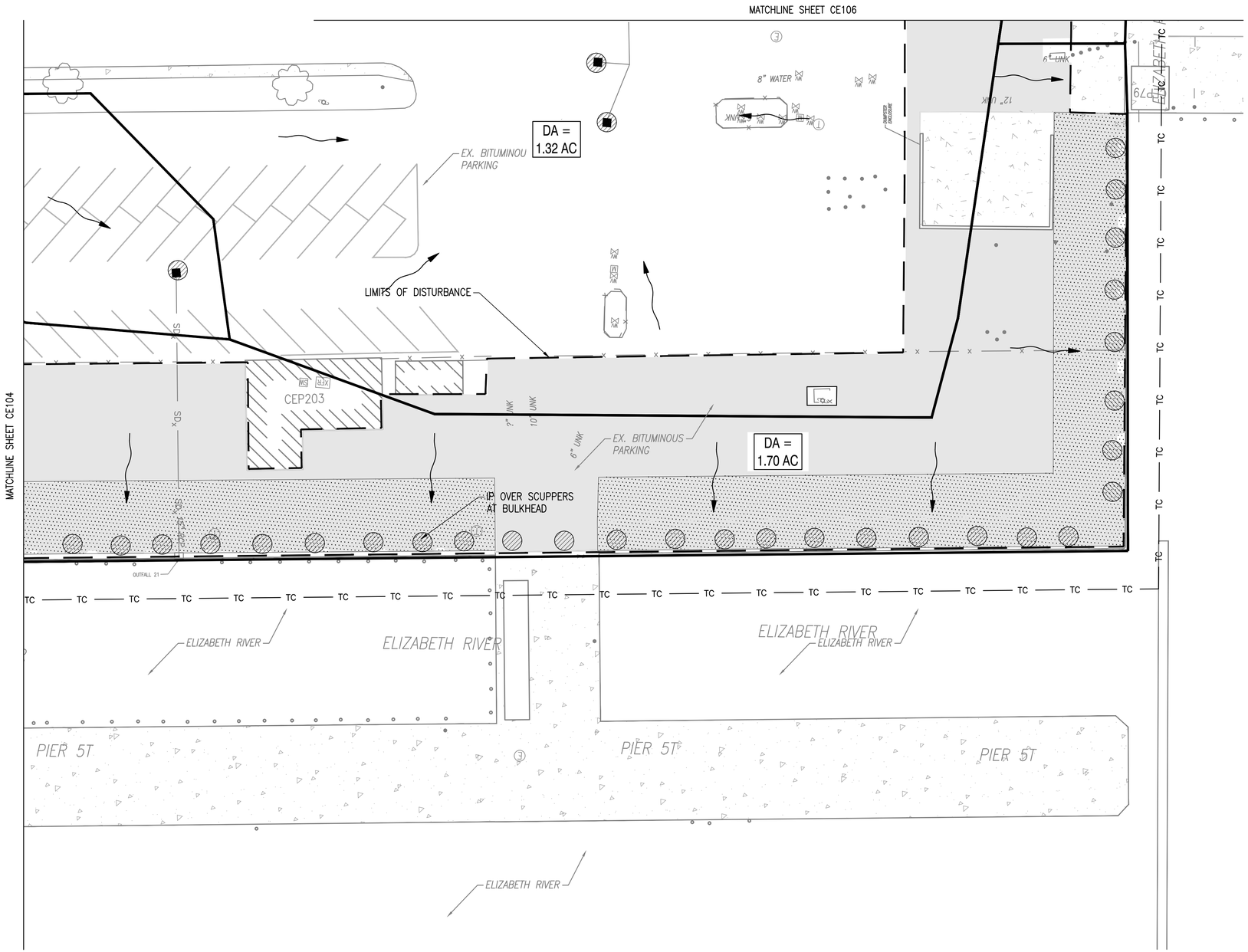
EROSION AND SEDIMENT CONTROL PLAN–PHASE 1&2 (4 OF 10)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,688
SHEET 33 OF 158

CE104

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1752-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE104 PLOTTED: Friday, July 08, 2016 - 3:29pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

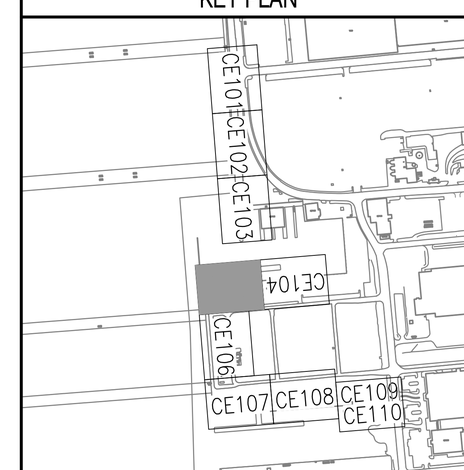
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SF	SILT FENCE
	IP	INLET PROTECTION
CE	CE	CONSTRUCTION ENTRANCE
		DRAINAGE DIVIDES
		LIMIT OF DISTURBANCE
		DRAINAGE FLOW ARROW
TC		TURBIDITY CURTAIN
DA		DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

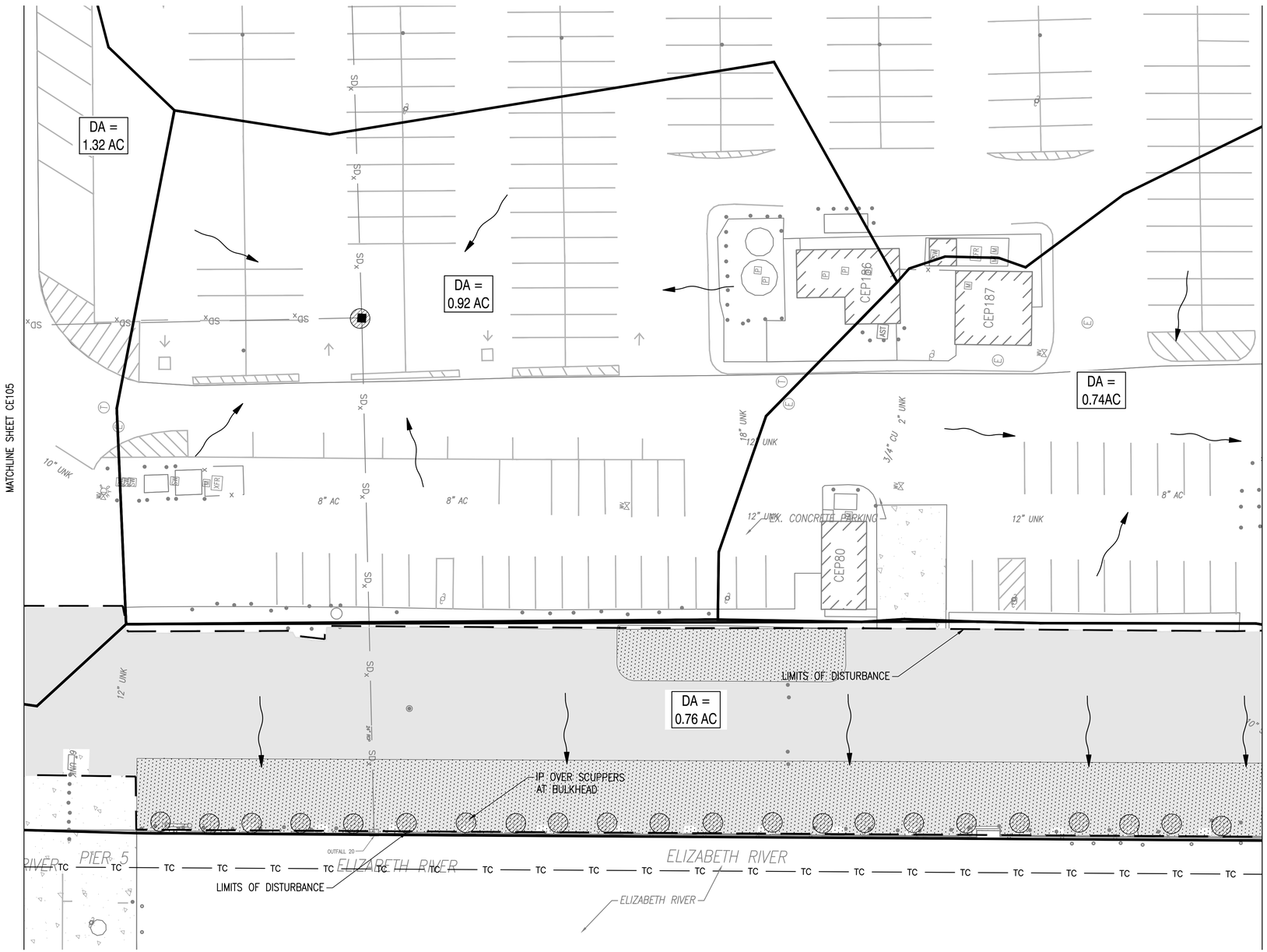
EROSION AND SEDIMENT CONTROL PLAN-PHASE 1&2 (5 OF 10)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,689
SHEET 34 OF 158

CE105

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE105 PLOTTED: Friday, July 08, 2016 - 3:29pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

NORTH

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

SYM	DESCRIPTION	DATE	APPR
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GENERAL LEGEND

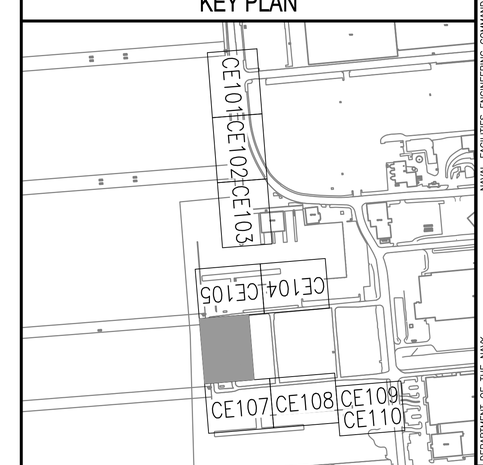
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

—— SF ——	(SF) SILT FENCE
	(IP) INLET PROTECTION
	(CE) CONSTRUCTION ENTRANCE
	DRAINAGE DIVIDES
	LIMIT OF DISTURBANCE
	DRAINAGE FLOW ARROW
—— TC ——	TURBIDITY CURTAIN
DA	DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC 7-12-16

ACTIVITY

DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN–PHASE 1&2 (6 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

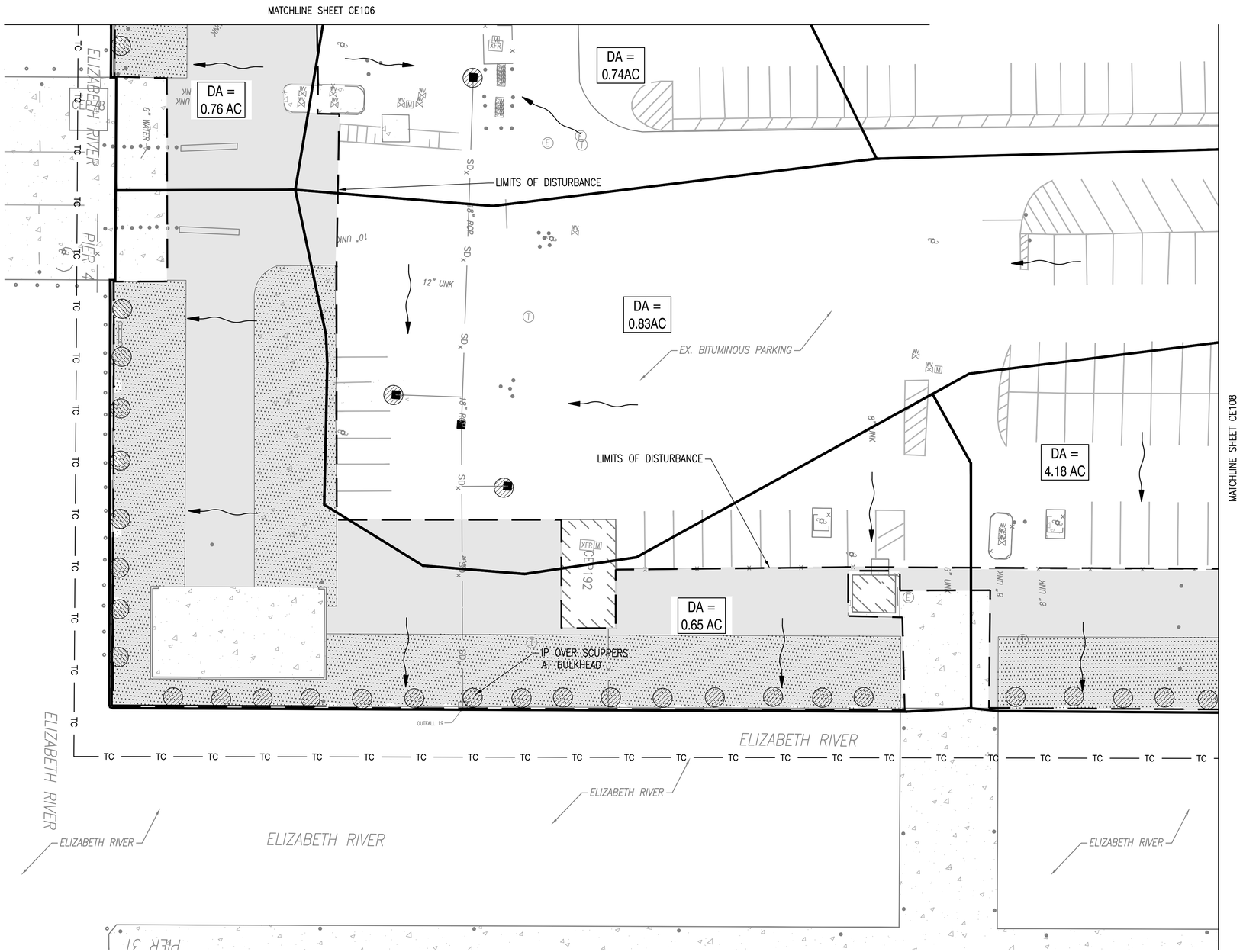
NAVFAC DRAWING NO. 12,729,690

SHEET 35 OF 158

CE106

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-1757-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE106 PLOTTED: Friday, July 08, 2016 - 3:29pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

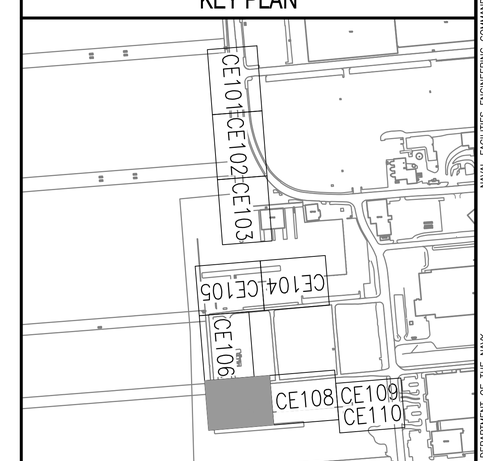
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SF	SILT FENCE
	IP	INLET PROTECTION
CE	CE	CONSTRUCTION ENTRANCE
		DRAINAGE DIVIDES
		LIMIT OF DISTURBANCE
		DRAINAGE FLOW ARROW
TC		TURBIDITY CURTAIN
DA		DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR

SEAL

A/E INFO

APPROVED FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS PT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN-PHASE 1&2 (7 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO.: N/A

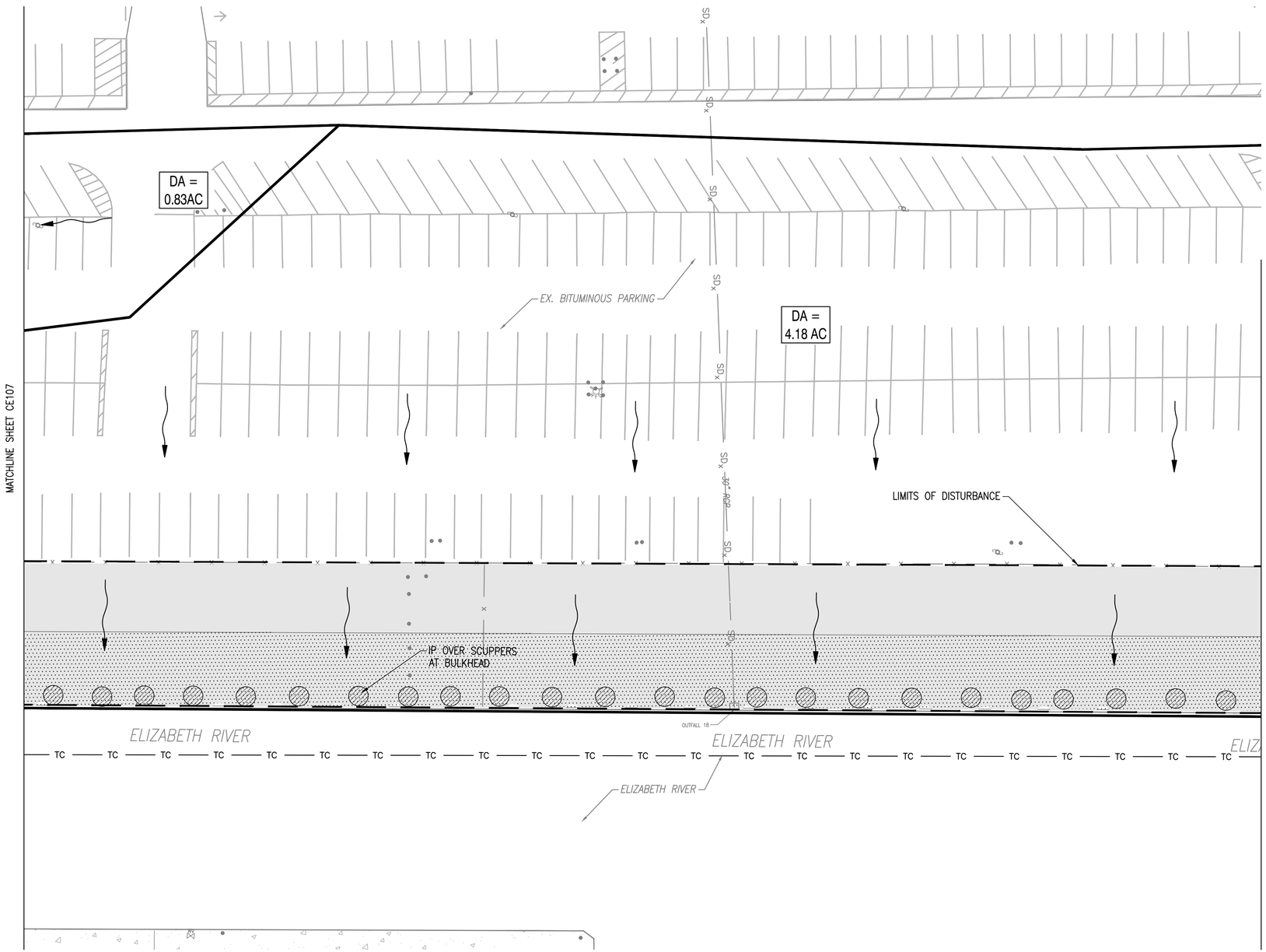
NAVFAC DRAWING NO. 12,729,691

SHEET 36 OF 158

CE107

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE107 PLOTTED: Friday, July 08, 2016 - 3:29pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

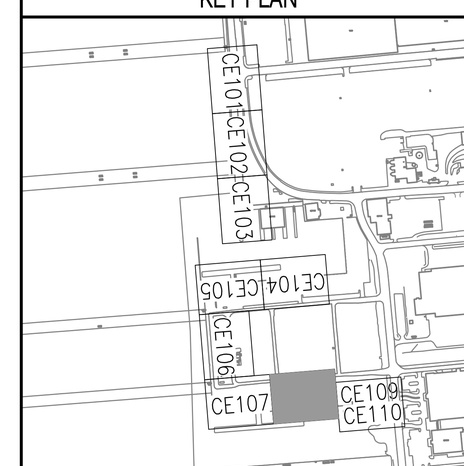
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SILT FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
	DRAINAGE DIVIDES
	LIMIT OF DISTURBANCE
	DRAINAGE FLOW ARROW
TC	TURBIDITY CURTAIN
DA	DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO.

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016

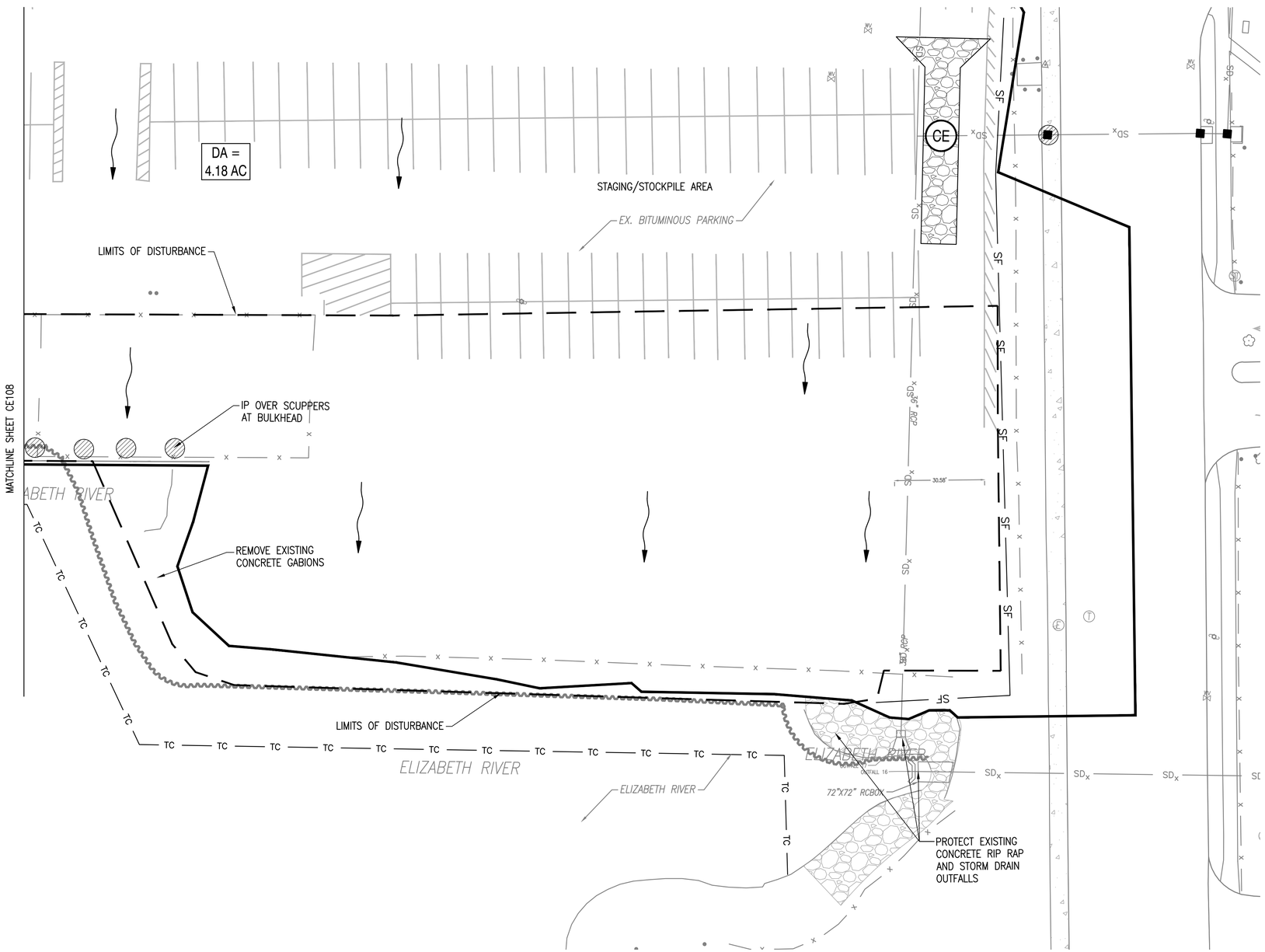
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT - PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA
CEP-175 AND Z-308 BULKHEAD REPAIR
EROSION AND SEDIMENT CONTROL PLAN-PHASE 1&2 (8 OF 10)

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,692
SHEET 37 OF 158
CE108

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE108 PLOTTED: Friday, July 08, 2016 - 3:29pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

NORTH

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
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SYM	DESCRIPTION	DATE	APPR

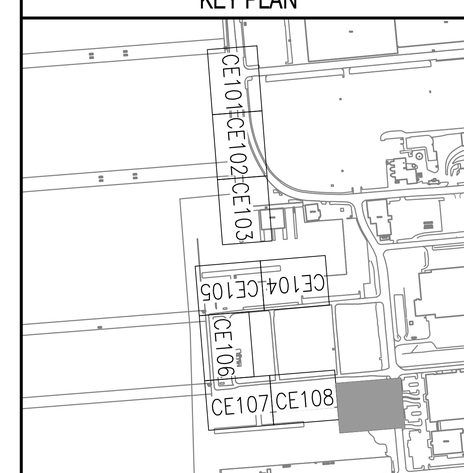
GENERAL LEGEND

- DEMO FULL DEPTH BITUMINOUS/CONCRETE
- BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SILT FENCE
IP	INLET PROTECTION
CE	CONSTRUCTION ENTRANCE
	DRAINAGE DIVIDES
	LIMIT OF DISTURBANCE
	DRAINAGE FLOW ARROW
TC	TURBIDITY CURTAIN
DA	DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
HAMPTON ROADS IPT - PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA
NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN–PHASE 1 (9 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

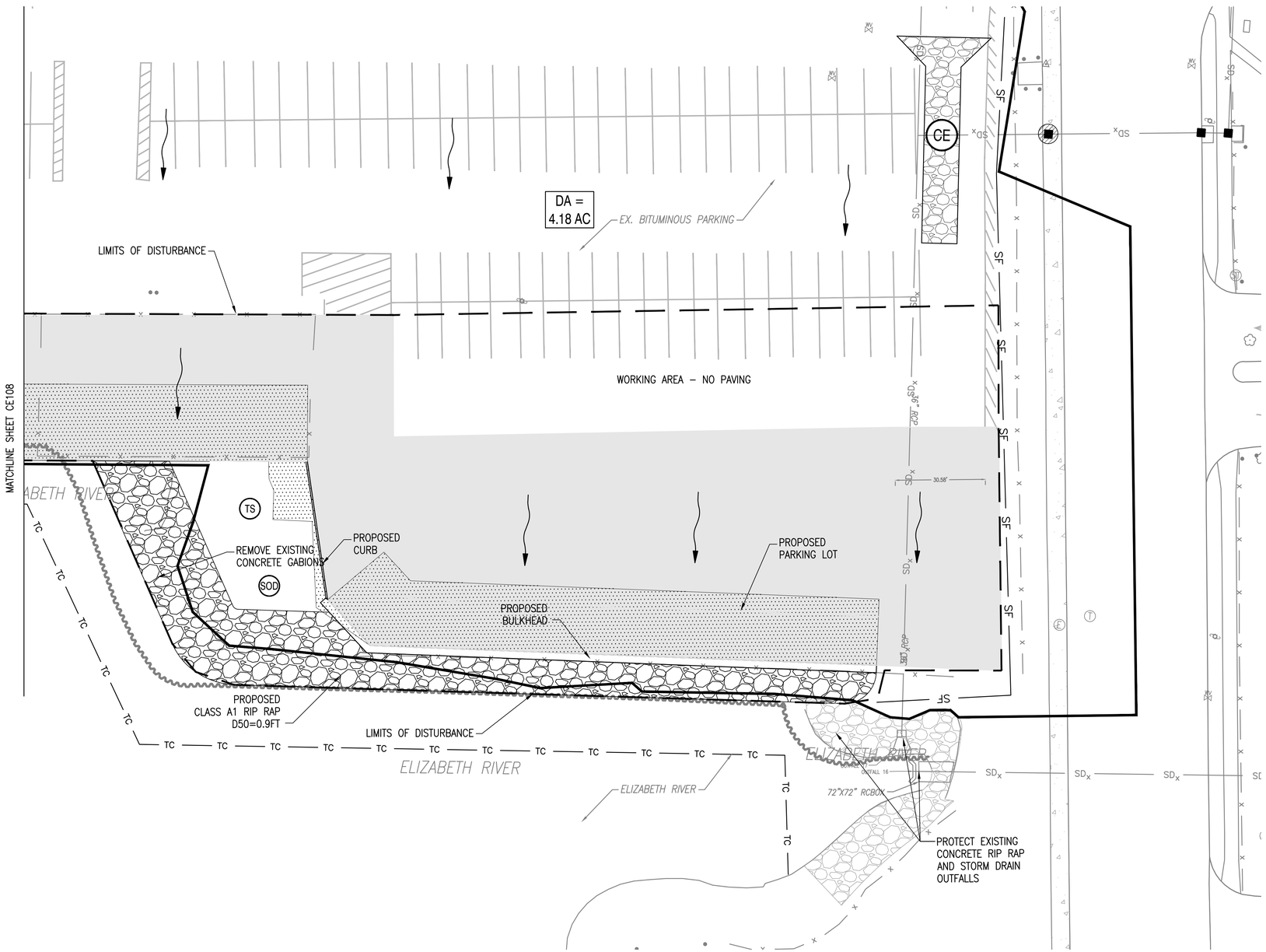
NAVFAC DRAWING NO. 12,729,693

SHEET 38 OF 158

CE109

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE109 PLOTTED: Friday, July 08, 2016 - 3:29pm USER: franklin.rutledge



THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

GENERAL SHEET NOTES

1. THIS PLAN IS FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.
2. REFER TO SHEET CE501 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. REFER TO SHEETS CE502 AND CE503 FOR EROSION AND SEDIMENT CONTROL DETAILS.
4. LOCATIONS OF INLET PROTECTION (IP) SHOWN ON SCUPPERS IS APPROXIMATE. CONTRACTOR MUST IDENTIFY ALL SCUPPER LOCATIONS AND PROVIDE IP AT EACH.

GENERAL LEGEND

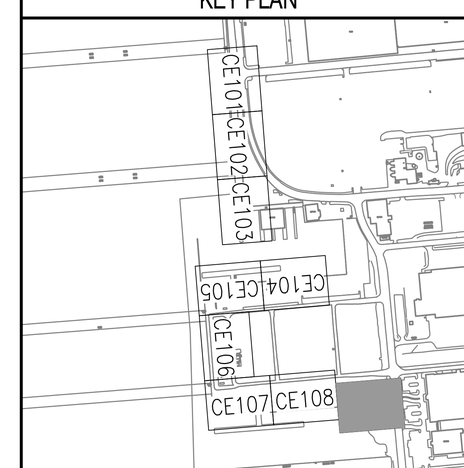
DEMO FULL DEPTH BITUMINOUS/CONCRETE

BITUMINOUS MILL AND OVERLAY

EROSION CONTROL LEGEND

SF	SF	SILT FENCE
	IP	INLET PROTECTION
	CE	CONSTRUCTION ENTRANCE
		DRAINAGE DIVIDES
		LIMIT OF DISTURBANCE
		DRAINAGE FLOW ARROW
TC		TURBIDITY CURTAIN
DA		DRAINAGE AREA

KEY PLAN



GRAPHIC SCALE

1"=20' 0' 10' 20' 40'

SYM	DESCRIPTION	DATE	APPR
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SEAL

A/E INFO

APPROVED: FOR COMMANDER NAVFAC 7-12-16

ACTIVITY: DAVE SEARS

SATISFACTORY TO DATE 6/17/2016

DES FGR DRW FGR CHK JWN

DESIGN MANAGER EDDY THEISZ

BRANCH MANAGER

CHIEF ENGINEER J. HASTE, P.E.

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HAMPTON ROADS IPT – PWD NORFOLK
NAVAL FACILITIES ENGINEERING COMMAND–MID-ATLANTIC
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION, NORFOLK, VIRGINIA

CEP-175 AND Z-308 BULKHEAD REPAIR

EROSION AND SEDIMENT CONTROL PLAN–PHASE 2 (10 OF 10)

SCALE: AS NOTED

EPROJECT NO.: 1370817

CONSTR. CONTR. NO. N/A

NAVFAC DRAWING NO. 12,729,694

SHEET 39 OF 158

CE110

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE110 PLOTTED: Friday, July 08, 2016 – 3:30pm USER: franklin.rutledge

EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS:

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN **SEVEN (7) DAYS** AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN **SEVEN (7) DAYS** TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN **FOURTEEN (14) DAYS**. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.

2. SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.

   A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE (3) ACRES.
   B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE (3) ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.

9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. ALL STORM SEWER INLETS THAT ARE MADE OPERATIONAL DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

14. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

   A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   C. EFFLUENT FROM DEWATERING OPERATJONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
   D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
   F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

17. WHERE CONSTRUCTION VEHICLES ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DEPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:

   A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

   B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
      (1) DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT; OR
      (2) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A 2- YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS. ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A 2-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.

   C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
      (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A 2-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR
      (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
      (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A 2-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
      (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENTS, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN-APPROVING AUTHORITY TO PREVENT DOWNSTREAM EROSION.

   D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.

   E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.

   F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE/SHE SHALL OBTAIN APPROVAL FROM THE LOCALITY OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.

   G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.

   H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.

   I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.

   J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

   K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL, AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:
FILL MATERIAL BEHIND THE EXISTING WALL IN THE CEP AND Z AREAS IS BEING LOST THROUGH GAPS IN THE BULKHEAD PANELS AND AT PENETRATIONS CREATING DEPRESSIONS AND SINK HOLES BEHIND THE BULKHEADS. THIS PROJECT CONSISTS OF EXCAVATING BEHIND THE BULKHEAD AND REPAIRING THE GAPS USING GROUT CURTAINS. IN THE AREA OF PATRIOT'S POINT (SHEETS CE109 AND 110), THE SHEET PILE BULKHEAD HAS COMPLETELY RUSTED AWAY CREATING SIGNIFICANT LOSS OF BACKFILL MATERIAL AND DANGEROUS CONDITIONS FOR PEDESTRIANS AND PARKING. THE BULKHEAD IN THIS AREA WILL BE COMPLETELY RECONSTRUCTED ON THE LANDWARD SIDE OF THE EXISTING BULKHEAD, THE PARKING LOT AREA WILL BE RE-ESTABLISHED AND THE NEW SLOPE WILL BE ESTABLISHED AND ARMORED WITH RIP RAP. ALSO INCLUDED IN THIS REPAIR WORK WILL BE AESTHETIC MILL AND PAVING OF ASPHALT ADJACENT TO THE REPAIR EXCAVATIONS GIVING A UNIFORM LOOK. LAND DISTURBANCE DUE TO THIS CONSTRUCTION IS 4.80 ACRES INCLUDING THE MILL AND OVERLAY AREAS. THE EXISTING SITE INCLUDES 4.72 ACRES OF IMPERVIOUS AREA (98%). THE PROPOSED SITE INCLUDES 4.72 ACRES OF IMPERVIOUS AREA (98%). SEDIMENT CONTROL FOR THE PROPOSED CONSTRUCTION ACTIVITIES WILL BE IN ACCORDANCE WITH THE POLICIES AND REQUIREMENTS OF THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK. THIS PLAN PROPOSES EROSION AND SEDIMENT CONTROL IN TWO SEPARATE PHASES. THE FIRST PHASE WILL ESTABLISH THE PRE-EXCAVATION CONTROLS. THE SECOND PHASE IS TAILORED TO CONTROL SEDIMENT WHILE EXCAVATING FOR BULKHEAD REPAIRS AND FINAL PAVEMENT RESTORATION WORK.

EXISTING SITE CONDITIONS:
THE EXISTING SITE IS FULLY DEVELOPED AND IS COVERED WITH PAVEMENT WITH SMALL AMOUNTS OF GRAVEL AND GRASS. THE EXISTING SLOPE RANGES FROM 0% TO 2%. THE ENTIRE AREA OF DISTURBANCE DRAINS TO TRENCH DRAINS ON THE BULKHEAD OR INTO STORM DRAINAGE SYSTEM THAT IS IMMEDIATELY PIPED THROUGH THE BULKHEAD. ALL STORMWATER FROM THIS AREA DRAINS IMMEDIATELY TO THE ELIZABETH RIVER.

ADJACENT PROPERTY:
THE "Z AREA" OF THIS PROJECT (SHEETS CE101, CE102 AND CE103) IS BOUNDED TO THE NORTH BY PIER 7 AND PARKING LOTS, THE SOUTH AND WEST BY THE ELIZABETH RIVER AND PIER 6, TO THE EAST BY DECATUR AVENUE. THE "CEP AREA" OF THIS PROJECT IS BOUNDED TO THE NORTH, SOUTH AND WEST BY THE ELIZABETH RIVER AND PIERS 3T, 4 AND 5, AND TO THE WEST BY PARKING LOTS. THE POTENTIAL FOR OFFSITE DAMAGES IS NEGLIGIBLE. THERE ARE NO KNOWN OFF SITE ENVIRONMENTALLY SENSITIVE AREAS. PERIMETER CONTROLS TO BE USED TO PROTECT THE ADJACENT AREAS INCLUDE SILT FENCE AND TURBIDITY CURTAINS. SEE THE EROSION CONTROL PLAN FOR ALL PERIMETER CONTROLS.

OFF-SITE AREAS:
IT IS EXPECTED THAT THE CONTRACTOR WILL OBTAIN FILL AND DISPOSE OF MATERIAL FROM OFFSITE LOCATIONS. ANY OFFSITE LAND-DISTURBING ACTIVITY ASSOCIATED WITH THIS PROJECT MUST HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN PROVIDED BY THE CONTRACTOR.

SOILS DATA:
ACCORDING TO THE USDA WEB SOIL SURVEY AND SITE INSPECTIONS, THE SITE IS INDICATED AS URBAN LAND.

CRITICAL AREAS:
SPECIAL CARE SHALL BE TAKEN ADJACENT TO PATRIOT'S POINT. DUE TO A FAILED BULKHEAD, SHEER CLIFFS UP TO 8-FEET HIGH HAVE DEVELOPED AS THE AREA BEHIND THE BULKHEAD ERODES. ASIDE FROM THE OBVIOUS SAFETY CONCERNS, THERE ARE TWO SIZEABLE STORMWATER OUTFALLS ADJACENT TO THIS AREA THAT COULD BE IMPACTED SHOULD A SIGNIFICANT AMOUNT OF FILL FALL INTO THE ELIZABETH RIVER AND BLOCK THEM.

SEDIMENT CONTROL PROGRAM:
SEDIMENT CONTROL SHALL BE ACCOMPLISHED THROUGH RAPID STABILIZATION AND BY THE INSTALLATION OF MECHANICAL DEVICES, AS SHOWN ON THE E&S PLAN:

STRUCTURAL PRACTICES:
1. TEMPORARY CONSTRUCTION ENTRANCE WITH OPTIONAL WASH RACK (CE) AND SETTLING AREA. THE CONTRACTOR TO SUPPLY WATER SOURCE BY CONNECTING TO EXISTING WATERLINE OR BY PROVIDING A WATER TRUCK/WATER TANK ON-SITE FOR WASHING VEHICLES BEFORE ENTERING THE PUBLIC ROAD.
2. TURBIDITY CURTAIN (TC), TYPE II
3. SILT FENCE (SF)
4. INLET PROTECTION (IP)
5. RIP RAP

VEGETATIVE PRACTICES:
1. EXCAVATION STOCKPILES – MATERIAL WILL BE EXCAVATED FOR THE PURPOSES OF ACCESSING THE LANDWARD SIDE OF THE BULKHEAD AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS SHALL BE LOCATED ON-SITE IN OPEN SPACE AREAS AND TO BE STABILIZED WITH TEMPORARY VEGETATION. SILT FENCES SHALL BE INCLUDED AROUND ALL STOCKPILE AREAS.
2. TEMPORARY SEEDING –ALL DENUDED AREAS THAT WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME PER MINIMUM STANDARD NO. 1 SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF THE YEAR IT IS APPLIED.
3. EROSION CONTROL BLANKETS OR MULCH –EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND ALLOW THE SEED TO GERMINATE PROPERLY. MULCH WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN THE SEEDING OPERATION.
4. ALL SILTATION CONTROL MEASURES ARE INTENDED TO PREVENT SEDIMENT FROM ENCROACHING INTO ENVIRONMENTALLY SENSITIVE AREAS OR ONTO ADJACENT PROPERTIES AND ROADWAYS. THE DEPARTMENT HAS THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS IN THE FIELD AS SITE CONDITIONS WARRANT. IN ADDITION, NO SEDIMENT TRAPS OR SEDIMENT BASINS MAY BE REMOVED WITHOUT THE PRIOR APPROVAL OF THE INSPECTOR. SEDIMENT CONTROL "MAINTENANCE PROGRAM" DESCRIBED BELOW.
5. OBTAIN INSPECTOR'S APPROVAL PRIOR TO THE REMOVAL OF THE REMAINING MECHANICAL SEDIMENT CONTROLS.

PERMANENT STABILIZATION:
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PROPOSED GROUND COVER IMMEDIATELY FOLLOWING FINISH GRADING. ANY PROPOSED SODDING SHALL BE DONE WITH BERMUDA GRASS. ANY PROPOSED PERMANENT SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE ACCORDING TO STD. & SPEC. 3.32, PERMANENT SEEDING, OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED. THIS WILL PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND ALLOW THE SEED TO GERMINATE PROPERLY. MULCH WILL BE USED ON RELATIVELY FLAT AREAS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER AND LIME WILL BE APPLIED PRIOR TO MULCHING.

STORMWATER MANAGEMENT:
THIS IS MAINTENANCE PROJECT AND STATED IN VIRGINIA CODE SECTION §62.1-44.15:34, PARAGRAPH C.7, POST CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS DO NOT APPLY.

DURING CONSTRUCTION, STORMWATER MANAGEMENT IS TO BE ADDRESSED BY THE EROSION AND SEDIMENTATION CONTROLS PROVIDED HEREIN. EXISTING STORM SEWERS WILL COLLECT AND DRAIN THE STORM WATER DIRECTLY TO THE ELIZABETH RIVER WHICH IS IMMEDIATELY ADJACENT TO THE SITE.

MAINTENANCE PROGRAM:
IN GENERAL ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL EVENT. THE FOLLOWING MEASURES WILL BE CHECKED IN PARTICULAR:

CONSTRUCTION ENTRANCES: INSPECTIONS SHALL BE MADE DAILY FOR ENTRANCE INTEGRITY; REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SILT FENCE: INSPECTIONS SHALL BE MADE DAILY FOR FENCE INTEGRITY; REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT IS TO BE REMOVED WHEN DEPOSITS REACH ONE-HALF THE FENCE HEIGHT.

SOD: SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE FOR THE FIRST FOUR WEEKS OR UNTIL THE ROOTS ARE ESTABLISHED. FERTILIZE AS REQUIRED IN TABLE 3.33-B. REPLACE SOD IF FAILURES OCCUR.

TEMPORARY SEEDING: INSPECTIONS SHALL BE MADE DAILY FOR ENTRANCE INTEGRITY; REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

MULCHING: ALL MULCHED AREAS SHALL BE INSPECTED PERIODICALLY, PARTICULARLY AFTER RAINSTORMS, TO CHECK FOR RILL EROSION; REPAIR AS NEEDED.

TURBIDITY CURTAIN: TURBIDITY CURTAIN SHALL BE DEPLOYED ACCORDING TO THE CONTRACTOR'S PHASING PLAN. WHEN MOVING TURBIDITY CURTAIN FROM ONE PHASE TO THE NEXT, REPAIRS TO GEOTEXTILE MATERIAL, ANCHORS AND CONNECTIONS SHALL BE MADE.

INLET PROTECTION: INSPECTIONS SHALL BE MADE AFTER EACH RAIN FOR FILTER INTEGRITY; REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT IS TO BE REMOVED WHEN ANY NOTICEABLE SEDIMENT HAS ACCUMULATED.

THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

PHASING OF LAND DISTURBING ACTIVITIES:
SEDIMENT CONTROL IS PROVIDED THROUGH A TWO-PHASED APPROACH.

PHASE I:
PHASE I OPERATIONS WILL INCLUDE ESTABLISHING STAGING/STOCKPILE AREAS AND PERIMETER CONTROLS, AS NEEDED. PHASE I CONTROLS SHALL BE ESTABLISHED IN A ONE (1) STEP PROCESS:

1. CONTRACTOR TO OBTAIN VPDES PERMIT. CONTRACTOR, RESPONSIBLE LAND DISTURBER AND CONSTRUCTION MANAGER SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE INSPECTOR PRIOR TO STARTING ANY LAND DISTURBING ACTIVITIES.
2. INSTALL CONSTRUCTION ENTRANCE (CE) AS SHOWN ON THE PLAN. PROVIDE THE CONSTRUCTION ENTRANCE WITH WASH RACK AND ESTABLISH PROTECTED STAGING AND EQUIPMENT PARKING AREAS.
3. INSTALL THE REMAINING MECHANICAL CONTROLS SUCH AS SILT FENCE (SF) AND INLET PROTECTION (IP) AS SHOWN ON THE PLAN.
4. INSTALL TURBIDITY CURTAIN AS SHOWN ON THE PLAN.
5. CONTACT THE INSPECTOR FOR AN E&S PERIMETER INSPECTION PRIOR TO REMOVAL OF ASPHALT FOR EXCAVATION PURPOSES.

PHASE II:
THE PHASE II SEDIMENT CONTROL MEASURES ARE INTENDED FOR THE FINAL STAGES OF SITE DEVELOPMENT. PHASE I CONTROL MEASURES THAT ARE FOUND TO BE IN CONFLICT SHALL BE REPLACED WITH APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES ONSITE. THE CONTRACTOR AND THE RESPONSIBLE LAND DISTURBER SHALL FOLLOW THE INSPECTOR'S DIRECTION IN PROVIDING ADDITIONAL CONTROL MEASURES NEEDED DURING THE DEVELOPMENT PROCESS, TO INSURE THAT SEDIMENT IS PREVENTED FROM POLLUTING OFF-SITE AREAS.

THE FOLLOWING SEQUENCE OF CONSTRUCTION IS SUGGESTED:

1. EXCAVATE FILL MATERIAL AND STOCKPILE IN DESIGNATED AREAS. DISPOSE OF UNSUITABLE MATERIAL PER SPECIFICATIONS.
2. MAKE REPAIRS TO BULKHEADS.
3. BACKFILL EXCAVATIONS PER SPECIFICATIONS.
4. MILL PAVEMENT PER PLAN.
5. INSTALL FINAL PAVEMENT.

DEVICES SHOWN ARE TO BE CONSIDERED AS MINIMUM EROSION AND SEDIMENTATION CONTROLS. ADDITIONAL CONTROLS MAY BE NECESSARY DUE TO CONTRACTOR'S PHASING OR OTHER UNANTICIPATED CONDITIONS. THE EROSION AND SEDIMENT CONTROL DEPARTMENT HAS THE RIGHT TO ADD OR REMOVE CONTROLS AS DEEMED NECESSARY IN THE FIELD. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADDITIONAL DEVICES AS NECESSARY IN ORDER TO CONTROL EROSION AND SEDIMENTATION AT NO ADDITIONAL COST TO THE GOVERNMENT. EROSION AND SEDIMENTATION MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION. CONTROLS MAY BE REMOVED AFTER THE AREAS ABOVE THEM HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE INSPECTOR.

SPECIAL CARE NOTES:
IT IS THE INTENT OF THIS PLAN TO PRECLUDE SEDIMENT POLLUTION FROM LEAVING THE DELINEATED CONSTRUCTION ZONES.

THE CONTRACTOR AND THE RESPONSIBLE LAND DISTURBER SHALL TAKE SPECIAL CARE TO PREVENT CONSTRUCTION DEBRIS AND MUD FROM BEING TRACKED ONTO SURROUNDING ROADS. CONSTRUCTION TRAFFIC SHALL ONLY ENTER AND EXIT THE CONSTRUCTION SITE VIA DESIGNATED LOCATIONS, WHICH HAVE WORKING CONSTRUCTION TRAFFIC WASH RACKS.

THE CONTRACTOR AND RESPONSIBLE LAND DISTURBER SHALL TAKE SPECIAL CARE TO PROTECT THE EXISTING VEGETATION AND STREAMS OUTSIDE OF THE DESIGNATED LIMITS OF WORK SHOWN ON THE PLANS.

EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-840-40 EROSION AND SEDIMENT CONTROL REGULATIONS.

2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

3. ALL APPROPRIATE EROSION CONTROL MEASURES SUCH AS, BUT NOT LIMITED TO, TREE PROTECTION, SILT FENCE, CONSTRUCTION ENTRANCE, SEDIMENT TRAPPING FACILITIES, AND INLET PROTOECTION SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND MUST BE REVIEWED AND APPROVED BY THE INSPECTOR BEFORE ANY CLEARING OPERATIONS BEGIN.

4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND LAND DISTURBANCE PERMIT MUST BE MAINTAINED AT THE SITE FOR THE DURATION OF ALL CONSTRUCTION AND LAND-DISTURBING ACTIVITIES.

5. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL APPROVED MEASURES AS SHOWN ON THE DRAWINGS. ANY ADDITIONAL MEASURES DEEMED REQUIRED BY THE PLAN APPROVING AUTHORITY SHALL BECOME PART OF THE EROSION AND SEDIMENT CONTROL PLAN FOR THE PROPERTY. ALL FIELD CHANGES MUST BE APPROVED BY THE PLAN APPROVING AUTHORITY.

6. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

7. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL MEASURES TO PREVENT SOIL FROM ERODING ONTO ADJACENT PROPERTY, STREETS, DRAINAGE SYSTEMS, AND WATERWAYS. ALL DEVICES SHALL BE CLEANED OF MUD, DEBRIS, AND OTHER ERODED MATERIAL DURING THE SITE CLEARING AND DEVELOPMENT. INSPECTION OF DEVICES SHALL BE CONDUCTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS OR AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER. ALL INSPECTION AND MAINTENANCE ACTIVITIES SHALL BE DOCUMENTED AND AVAILABLE FOR REVIEW AT THE PLAN REVIEWING AUTHORITIES REQUEST.

8. TEMPORARY AND PERMANENT SEEDING OPERATIONS SHALL BE INITIATED WITHIN SEVEN (7) DAYS AFTER REACHING FINAL GRADE OR UPON SUSPENSION OF GRADING OPERATIONS FOR ANTICIPATED DURATION OF GREATER THAN FOURTEEN (14) DAYS OR UPON COMPLETION OF GRADING OPERATIONS FOR A SPECIFIC AREA.

9. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE KEPT IN PLACE FOR THE DURATION OF THE CLEARING AND CONSTRUCTION OPERATIONS AND AT A MAXIMUM FOR THE SPECIFIED TIME FOR EACH MEASURE AS IDENTIFIED IN THE VESC HANDBOOK, OR WHEN FULL STABILIZATION HAS OCCURRED FOR THE ENTIRE SITE. A FINAL INSPECTION BY THE PLAN APPROVING AUTHORITY SHALL DETERMINE WHEN THIS FACT IS ACCOMPLISHED AND ALL TEMPORARY MEASURES AND DEVICES CAN BE REMOVED.

10. THE CONTRACTOR SHALL MONITOR AND TAKE PRECAUTIONS TO CONTROL DUST AND OTHER AIR POLLUTANTS, INCLUDING BUT NOT LIMITED TO USING WATER OR CHEMICALS, LIMITING THE NUMBER OF VEHICLES ALLOWED ONSITE, MINIMIZING THE OPERATING SPEED OF ALL VEHICLES, ETC. ALSO, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE DAILY SWEEPING SHOULD SEDIMENT ACCUMULATE ON PAVED SURFACES.

REGISTERED LAND DISTURBER:

THE CONTRACTOR SELECTED TO COMPLETE THE REGULATED LAND DISTURBING ACTIVITY AS SHOWN ON THESE DRAWINGS IS RESPONSIBLE FOR IMPLEMENTING THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS. PRIOR TO THE COMMENCEMENT OF THIS ACTIVITY, IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL LAW, THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL HOLDING A CERTIFICATE OF COMPETENCE WITH THE COMMONWEALTH OF VIRGINIA AS THE PERSON RESPONSIBLE FOR CARRYING OUT THE APPROVED PLAN, AND PROVIDE THE NAME OF THAT INDIVIDUAL TO THE PLAN APPROVING AUTHORITY.

SYM | DESCRIPTION | DATE | APPR

SEAL

A/E INFO

APPROVED [signature]
FOR COMMANDER NAVFAC 7-12-16

ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016

DES FGR | DRW FGR | CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER [signature]
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND~MID-ATLANTIC
HAMPTON ROADS IPT – PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA
CEP-175 AND Z-308 BULKHEAD REPAIR
EROSION AND SEDIMENT CONTROL – NOTES

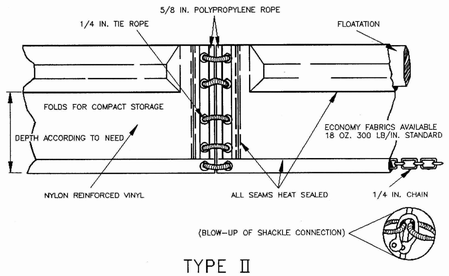
SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,695
SHEET 40 OF 158
CE501

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE501 PLOTTED: Friday, July 08, 2016 – 3:30pm USER: franklin.rutledge

TURBIDITY CURTAIN

TYPE I



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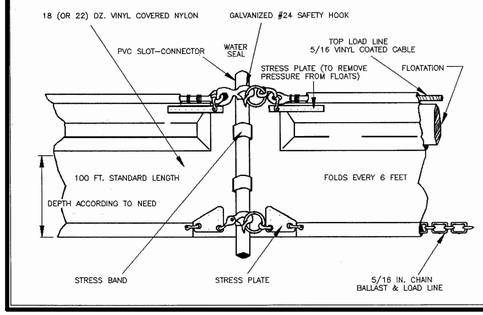
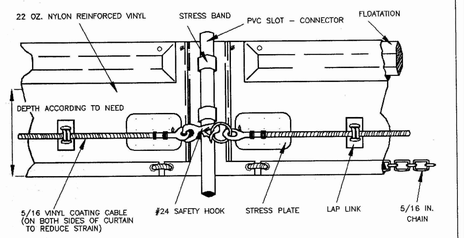
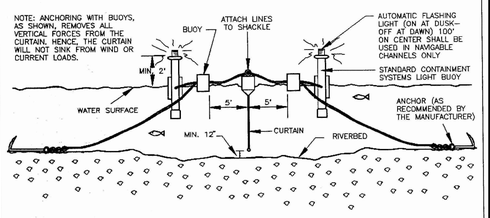


TURBIDITY CURTAIN

TYPE III

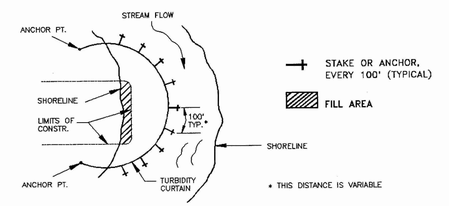


ORIENTATION WHEN INSTALLED
(TIDAL SITUATION - TYPE III)

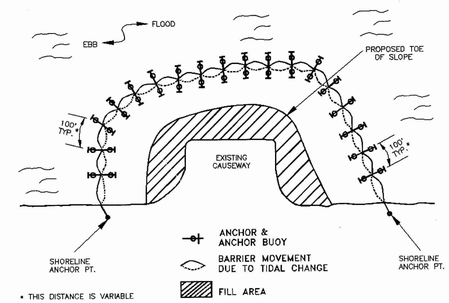


TURBIDITY CURTAIN

TYPICAL LAYOUTS:
STREAMS, PONDS & LAKES (PROTECTED & NON-TIDAL)

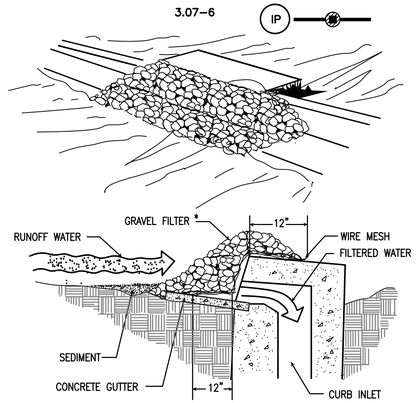


TIDAL WATERS AND/OR HEAVY WIND & WAVE ACTION



GRAVEL CURB INLET SEDIMENT FILTER

3.07-6 (IP)



SPECIFIC APPLICATION

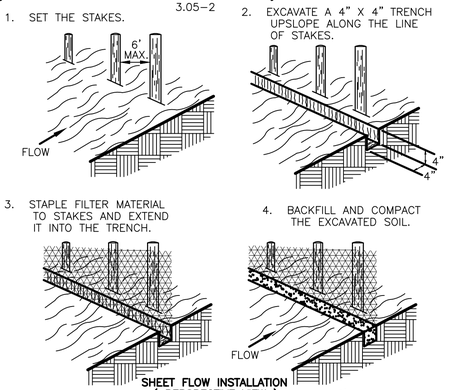
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS. INLET PROTECTION SHALL NOT BE REMOVED IF PONDING OCCURS.

* GRAVEL SHALL BE VDOT #3, #357 OR 5 COARSE AGGREGATE.

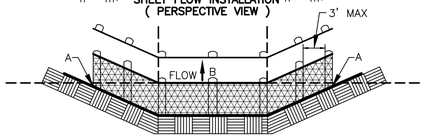
SILT FENCE (WITHOUT WIRE SUPPORT)

3.05-2 (SF) — SF —

1. SET THE STAKES.
2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)

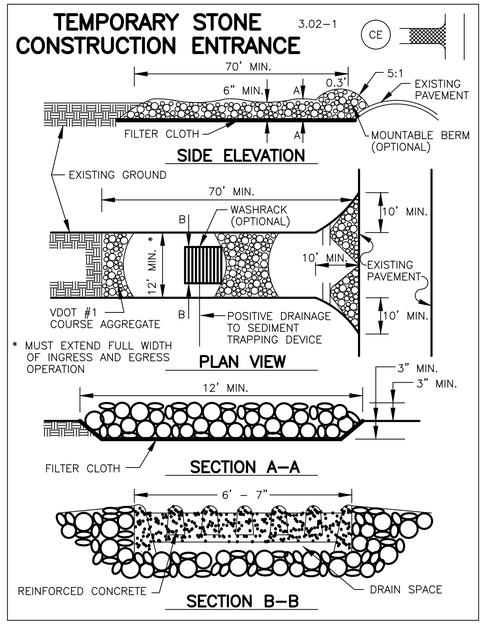


POINTS A SHOULD BE HIGHER THAN POINT B.

DRAINAGEWAY INSTALLATION
(FRONT ELEVATION)

TEMPORARY STONE CONSTRUCTION ENTRANCE

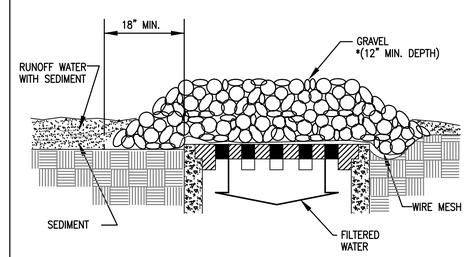
3.02-1 (CE)



STORM DRAIN INLET PROTECTION

3.07-2 (IP)

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS. INLET PROTECTION SHALL NOT BE REMOVED IF PONDING OCCURS.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

THIS DRAWING IS FOR BIDDING PURPOSES ONLY.
USE STATE APPROVED DRAWINGS FOR CONSTRUCTION

SYM	DESCRIPTION	DATE	APPR
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NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC 7-12-16

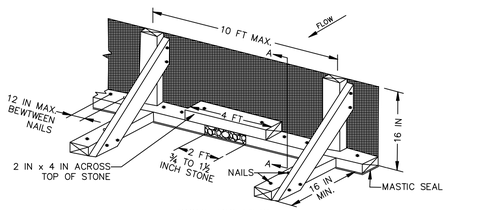
ACTIVITY
DAVE SEARS
SATISFACTORY TO DATE 6/17/2016
DES FGR DRW FGR CHK JWN
DESIGN MANAGER EDDY THEISZ
BRANCH MANAGER
CHIEF ENGINEER J. HASTE, P.E.
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND-MID-ATLANTIC
HAMPTON ROADS IPT - PWD NORFOLK
NORFOLK NAVAL STATION
NORFOLK NAVAL STATION
NORFOLK, VIRGINIA
CEP-175 AND Z-308 BULKHEAD REPAIR
EROSION AND SEDIMENT CONTROL - CONSTRUCTION DETAILS

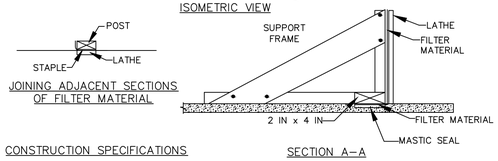
SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,696
SHEET 41 OF 158
CE502

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE502 PLOTTED: Friday, July 08, 2016 - 3:30pm USER: franklin.rutledge



ISOMETRIC VIEW



JOINING ADJACENT SECTIONS OF FILTER MATERIAL

SECTION A–A

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE FILTER MATERIAL, AS SPECIFIED.
3. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
4. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER FILTER MATERIAL.
5. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND FILTER MATERIAL UNDER 2x4.
6. WHERE TWO SECTIONS OF FILTER MATERIAL ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
7. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, FILTER MATERIAL, AND 2x4 TO PREVENT SEDIMENT–LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
8. SECURE BOARDS TO PAVEMENT WITH 4–5 INCH MINIMUM LENGTH NAILS.
9. REMOVE ACCUMULATED SEDIMENT AND DEBRIS PER CE501. REPLACE FILTER MATERIAL IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

SILT FENCE ON PAVEMENT

STANDARD SYMBOL

—— SF ——

TS

TABLE 3.31–B
(REVISED JUNE 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED

APPLICATION DATES	SPECIES	APPLICATION RATES
SEPT. 1 – FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (Lolium multi–florum) & CEREAL (WINTER) RYE (Secale cereale)	50–100 (lbs/acre)
FEB. 16 – APR. 30	ANNUAL RYEGRASS (Lolium multi–florum)	60–100 (lbs/acre)
MAY 1 – AUG. 31	GERMAN MILLET (Setaria italica)	50 (lbs/acre)

FERTILIZER AND LIME

* APPLY 10–10–10 FERTILIZER AT A RATE OF 450 LBS/AC (OR 10 LBS/1,000 SF)
* APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/AC (90 LBS /1,000 SF)

NOTES:
1–A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL pH OF SITE.
2–INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4–6 INCHES OF THE SOIL BY DISKING OR BY OTHER MEANS.
3–WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES AT http:/www.dcr.state.virginia.us/sw/e&s.htm#pubs

TEMPORARY SEEDING SPECIFICATIONS

REF: Erosion & Sediment Control Technical Bulletin No. 4

1992 SOD 3.33

TABLE 3.33–B

MAINTENANCE FERTILIZATION OF ESTABLISHED SOD

COOL SEASON GRASSES

4 LBS. NITROGREN (N) PER 1000 SQ. FT/YEAR
1 LB. PHOSPHORUS (P) PER 1000 SQ. FT/YEAR
2 LBS. POTASH (K) PER 1000 SQ. FT/YEAR

75% OF THE TOTAL REQUIREMENTS SHOULD BE APPLIED BETWEEN SEPTEMBER 1 AND DECEMBER 31ST. THE BALANCE SHOULD BE APPLIED DURING THE REMAINDER OF THE YEAR.

WARM SEASON GRASSES

APPLY 4–5 LBS. NITROGEN (N) PER 1000 SQ. FT. PER YEAR (BETWEEN MAY 1ST AND AUGUST 15TH).

PHOSPHORUS (P) AND POTASH (K) SHOULD ONLY BE APPLIED ACCORDING TO SOIL TESTS.

MAINTENANCE FERTILIZATIONS SHOULD UTILIZE SLOW RELEASE FERTILIZERS WHICH REDUCE THE NUMBER OF APPLICATIONS PER YEAR AND SUBSEQUENTLY REDUCE THE ADVERSE IMPACTS ON GROUND WATER.

SOURCE: VA. DSWC

SODDING MAINTENANCE

REF: PER STD. SPEC 3.33 – SODDING

RUNOFF CALCULATIONS:

PRE–DEVELOPED

	AREA (AC)	C VALUE	Tc (MIN)	2–YR INT.(IN/HR)	Q2 (CFS)	10–YR INT.(IN/HR)	Q10 (CFS)
IMPERVIOUS AREA	4.72	0.90					
PERVIOUS AREA	0.08	0.30					
TOTAL	4.80	0.89	5.00	5.60	22.93	7.00	28.66

POST–DEVELOPED

	AREA (AC)	C VALUE	Tc (MIN)	2–YR INT.(IN/HR)	Q2 (CFS)	10–YR INT.(IN/HR)	Q10 (CFS)
IMPERVIOUS AREA	4.72	0.90					
PERVIOUS AREA	0.08	0.30					
TOTAL	4.80	0.89	5.00	5.60	22.93	7.00	28.66

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SYM	DESCRIPTION	DATE	APPR
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FOR COMMANDER NAVFAC 7-12-16

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DAVE SEARS
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DEPARTMENT OF THE NAVY
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CEP-175 AND Z-308 BULKHEAD REPAIR
EROSION AND SEDIMENT CONTROL – CONSTRUCTION DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1370817
CONSTR. CONTR. NO. N/A
NAVFAC DRAWING NO. 12,729,697
SHEET 42 OF 158
CE503

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: P:\VA\NavalStationNorfolk\Waterfront\Bulkheads\2015_1370817_CEP-175Z-308Repair\B_Design\Drawings\Sheet\05_Civil\1370817-CE SERIES.dwg LAYOUT NAME: CE503 PLOTTED: Friday, July 08, 2016 – 3:30pm USER: franklin.rutledge