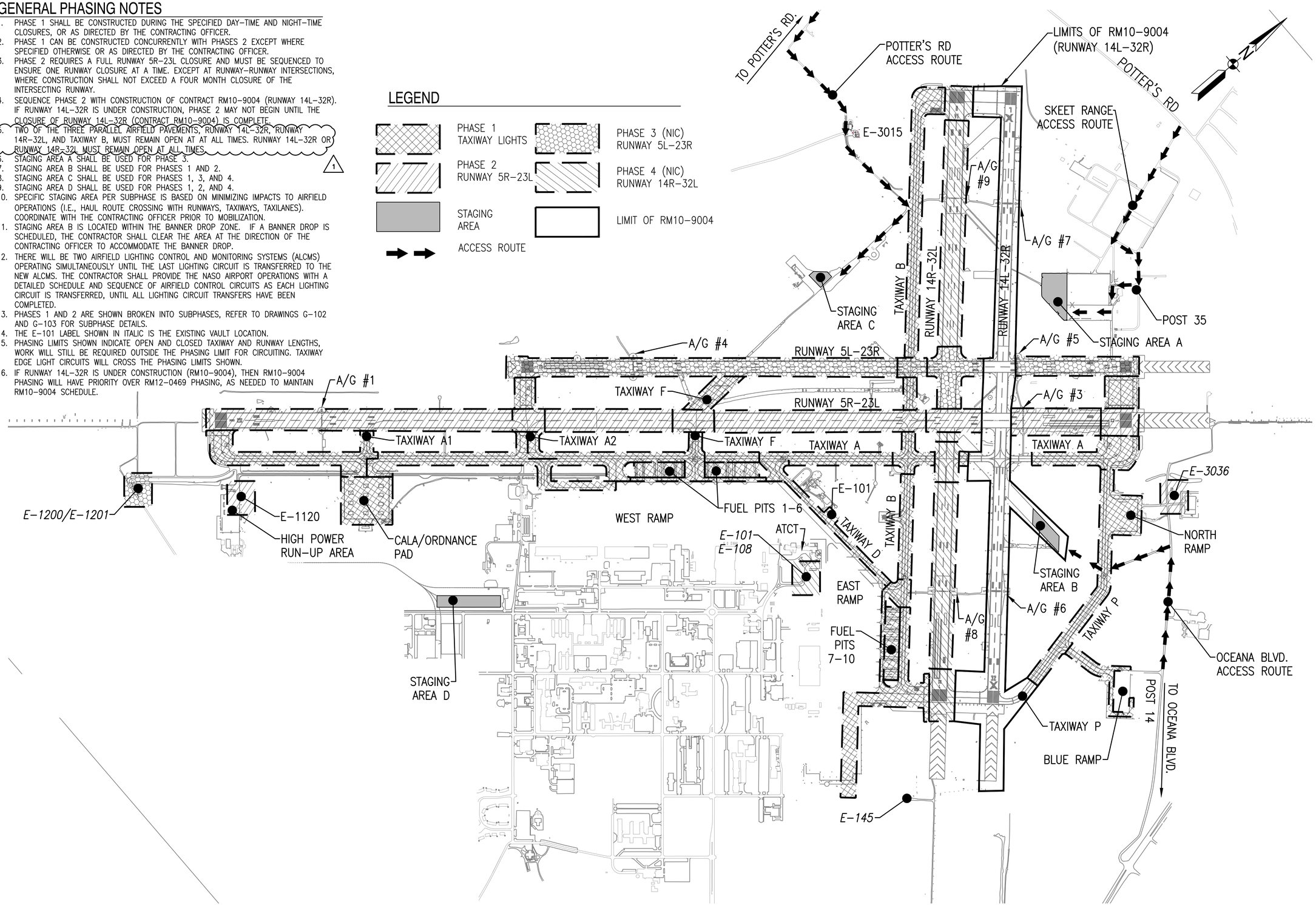
GENERAL PHASING NOTES

1. PHASE 1 SHALL BE CONSTRUCTED DURING THE SPECIFIED DAY-TIME AND NIGHT-TIME CLOSURES, OR AS DIRECTED BY THE CONTRACTING OFFICER.
2. PHASE 1 CAN BE CONSTRUCTED CONCURRENTLY WITH PHASES 2 EXCEPT WHERE SPECIFIED OTHERWISE OR AS DIRECTED BY THE CONTRACTING OFFICER.
3. PHASE 2 REQUIRES A FULL RUNWAY 5R-23L CLOSURE AND MUST BE SEQUENCED TO ENSURE ONE RUNWAY CLOSURE AT A TIME. EXCEPT AT RUNWAY-RUNWAY INTERSECTIONS, WHERE CONSTRUCTION SHALL NOT EXCEED A FOUR MONTH CLOSURE OF THE INTERSECTING RUNWAY.
4. SEQUENCE PHASE 2 WITH CONSTRUCTION OF CONTRACT RM10-9004 (RUNWAY 14L-32R). IF RUNWAY 14L-32R IS UNDER CONSTRUCTION, PHASE 2 MAY NOT BEGIN UNTIL THE CLOSURE OF RUNWAY 14L-32R (CONTRACT RM10-9004) IS COMPLETE.
5. TWO OF THE THREE PARALLEL AIRFIELD PAVEMENTS, RUNWAY 14L-32R, RUNWAY 14R-32L, AND TAXIWAY B, MUST REMAIN OPEN AT AT ALL TIMES. RUNWAY 14L-32R OR RUNWAY 14R-32L MUST REMAIN OPEN AT ALL TIMES. 1
6. STAGING AREA A SHALL BE USED FOR PHASE 3.
7. STAGING AREA B SHALL BE USED FOR PHASES 1 AND 2.
8. STAGING AREA C SHALL BE USED FOR PHASES 1, 3, AND 4.
9. STAGING AREA D SHALL BE USED FOR PHASES 1, 2, AND 4.
10. SPECIFIC STAGING AREA PER SUBPHASE IS BASED ON MINIMIZING IMPACTS TO AIRFIELD OPERATIONS (I.E., HAUL ROUTE CROSSING WITH RUNWAYS, TAXIWAYS, TAXILANES). COORDINATE WITH THE CONTRACTING OFFICER PRIOR TO MOBILIZATION.
11. STAGING AREA B IS LOCATED WITHIN THE BANNER DROP ZONE. IF A BANNER DROP IS SCHEDULED, THE CONTRACTOR SHALL CLEAR THE AREA AT THE DIRECTION OF THE CONTRACTING OFFICER TO ACCOMMODATE THE BANNER DROP.
12. THERE WILL BE TWO AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEMS (ALCMS) OPERATING SIMULTANEOUSLY UNTIL THE LAST LIGHTING CIRCUIT IS TRANSFERRED TO THE NEW ALCMS. THE CONTRACTOR SHALL PROVIDE THE NASO AIRPORT OPERATIONS WITH A DETAILED SCHEDULE AND SEQUENCE OF AIRFIELD CONTROL CIRCUITS AS EACH LIGHTING CIRCUIT IS TRANSFERRED, UNTIL ALL LIGHTING CIRCUIT TRANSFERS HAVE BEEN COMPLETED.
13. PHASES 1 AND 2 ARE SHOWN BROKEN INTO SUBPHASES, REFER TO DRAWINGS G-102 AND G-103 FOR SUBPHASE DETAILS.
14. THE E-101 LABEL SHOWN IN ITALIC IS THE EXISTING VAULT LOCATION.
15. PHASING LIMITS SHOWN INDICATE OPEN AND CLOSED TAXIWAY AND RUNWAY LENGTHS, WORK WILL STILL BE REQUIRED OUTSIDE THE PHASING LIMIT FOR CIRCUITING. TAXIWAY EDGE LIGHT CIRCUITS WILL CROSS THE PHASING LIMITS SHOWN.
16. IF RUNWAY 14L-32R IS UNDER CONSTRUCTION (RM10-9004), THEN RM10-9004 PHASING WILL HAVE PRIORITY OVER RM12-0469 PHASING, AS NEEDED TO MAINTAIN RM10-9004 SCHEDULE.

LEGEND

- PHASE 1 TAXIWAY LIGHTS
- PHASE 2 RUNWAY 5R-23L
- STAGING AREA
- ACCESS ROUTE
- PHASE 3 (NIC) RUNWAY 5L-23R
- PHASE 4 (NIC) RUNWAY 14R-32L
- LIMIT OF RM10-9004



SYM	DESCRIPTION	DATE	APPR
1	ADDED NOTE 5	4/29/15	MJT

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SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
OVERALL PROJECT PHASING

SCALE: 1" = 400'

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

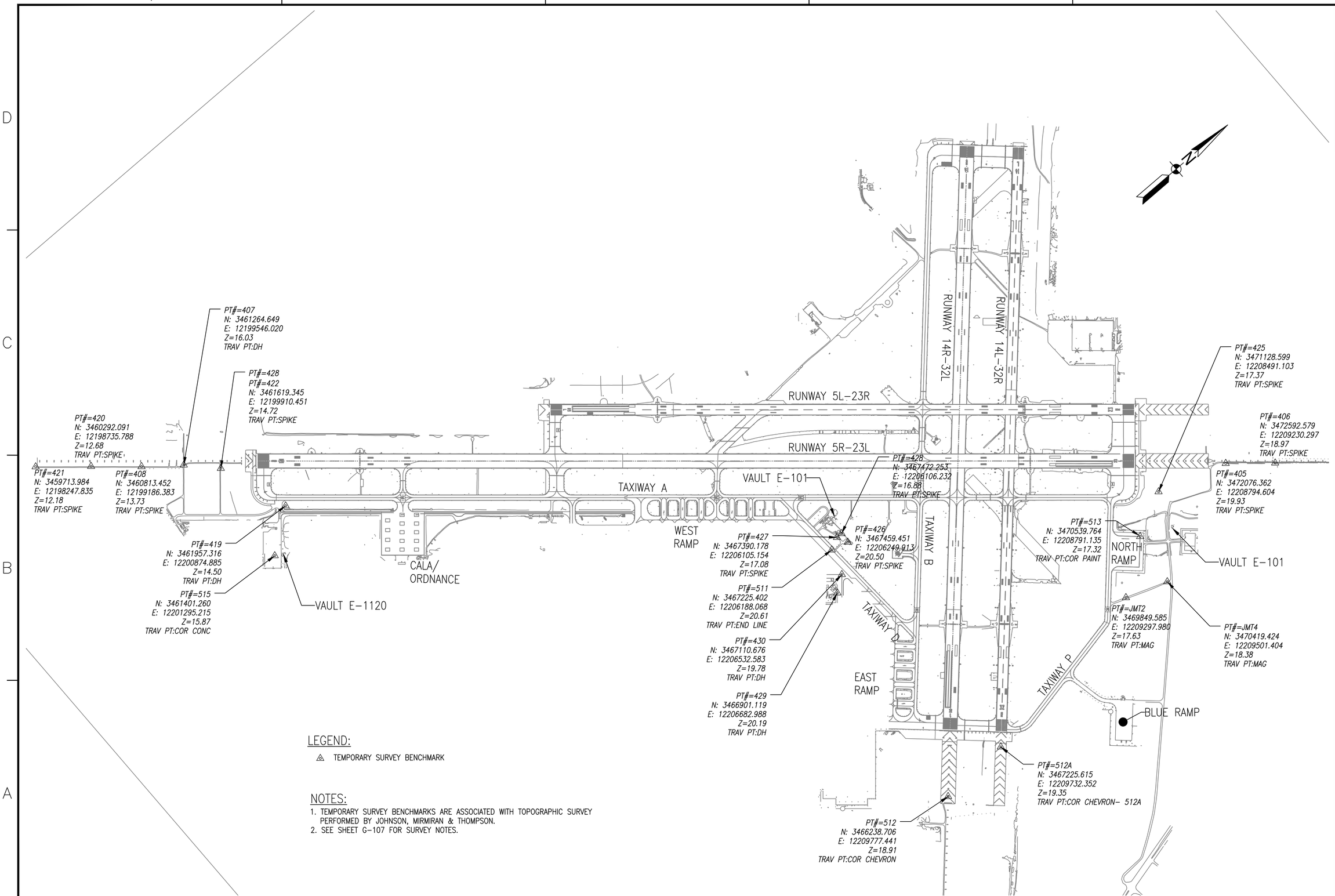
NAVFAC DRAWING NO. 12691542

SHEET 9 OF 368

G-101

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0683-008-G-101.dwg LAYOUT NAME: G-101 PLOTTED: Wednesday, April 29, 2015 - 9:37am USER: kwatson



LEGEND:

△ TEMPORARY SURVEY BENCHMARK

NOTES:

1. TEMPORARY SURVEY BENCHMARKS ARE ASSOCIATED WITH TOPOGRAPHIC SURVEY PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON.
2. SEE SHEET G-107 FOR SURVEY NOTES.

SYM	DESCRIPTION	DATE	APPR
1	UPDATED TEMPORARY SURVEY BENCHMARKS	4/29/15	MJT

NAVFAC

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NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
TEMPORARY BENCHMARK SURVEY CONTROL PLAN

SCALE: 1" = 400'
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691550
SHEET 17 OF 368

G-109

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0683-008-G-109.dwg LAYOUT NAME: G-109 PLOTTED: Wednesday, April 29, 2015 - 9:42am USER: kwatson

DEMOLITION KEYNOTES

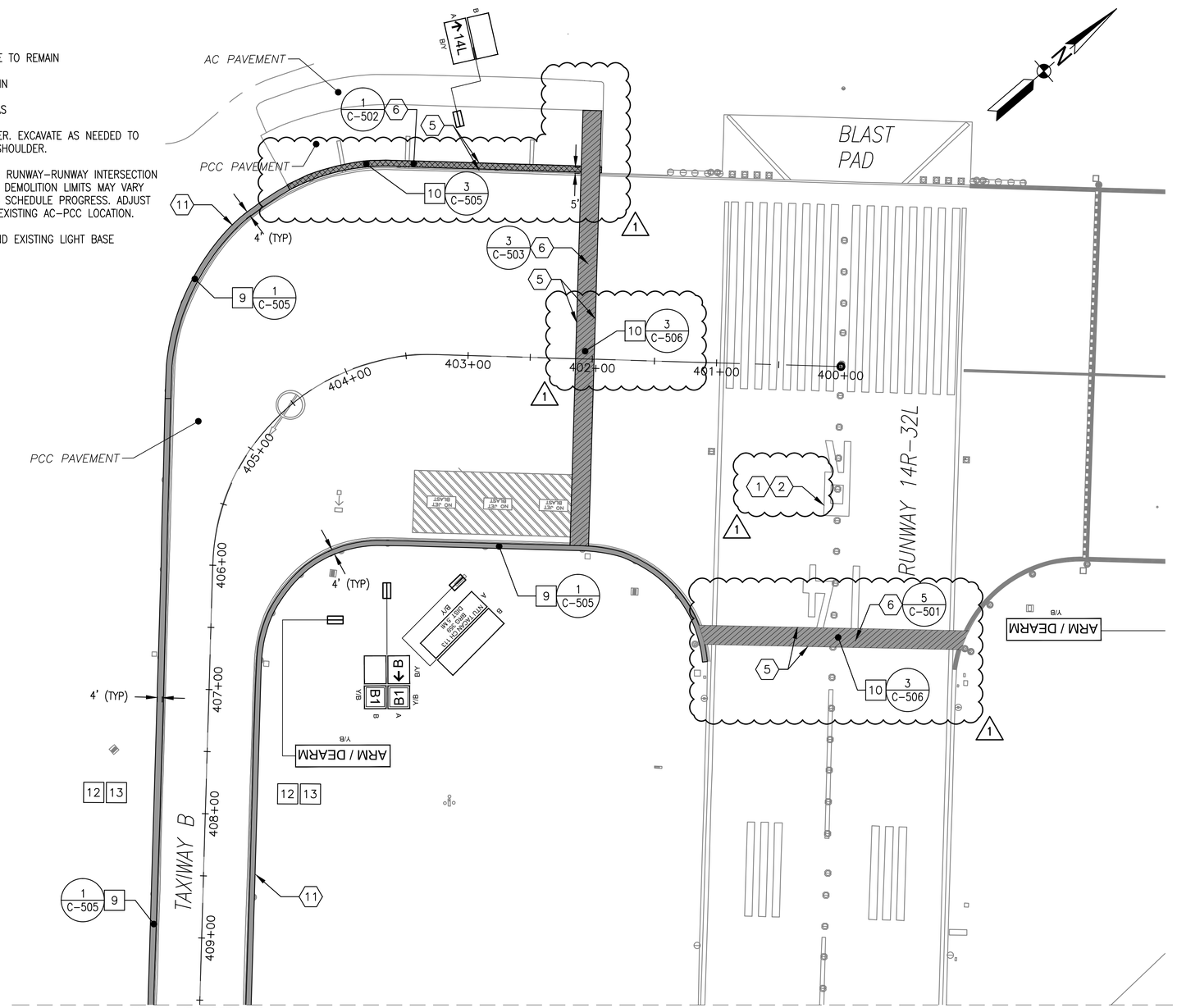
1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

LEGEND

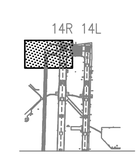
- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP A



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

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NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
HR IPT
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691556
SHEET 23 OF 368

C-102-A

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-102-A.dwg LAYOUT NAME: C-102-A PLOTTED: Tuesday, April 28, 2015 - 5:24pm USER: kwatson

DEMOLITION KEYNOTES

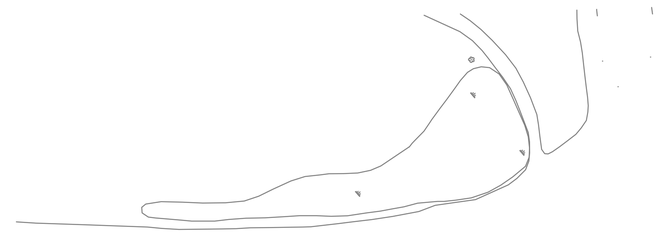
1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

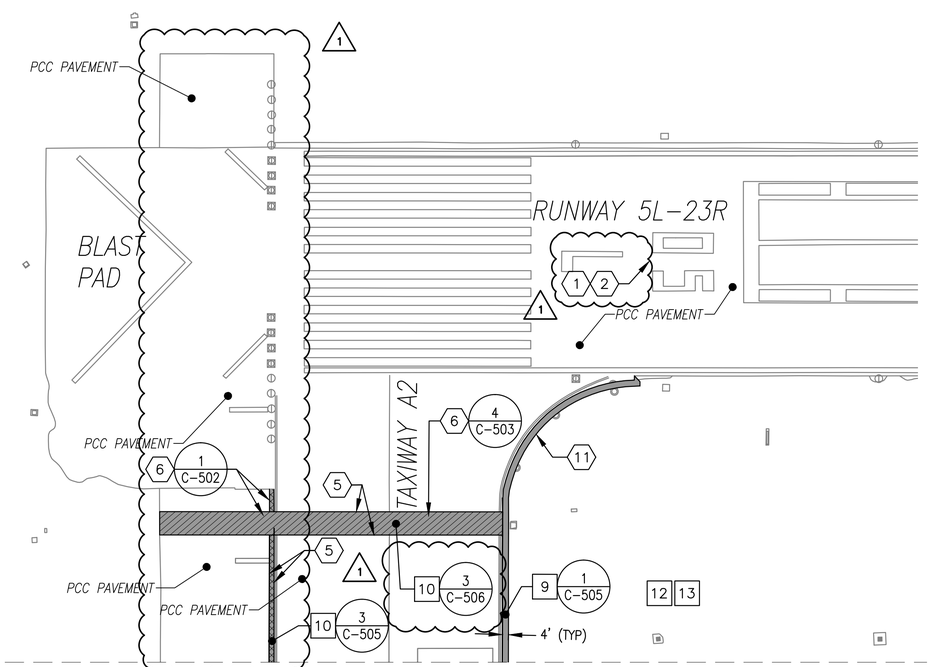
CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN



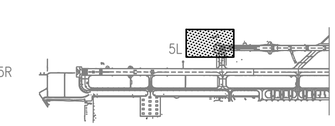


MATCHLINE SHEET C-123-B

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

SEAL

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A/E INFO

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DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691560
SHEET 27 OF 368
C-110-B

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-110-B.dwg LAYOUT NAME: C-110-B PLOTTED: Tuesday, April 28, 2015 - 5:31pm USER: kwatson

DEMOLITION KEYNOTES

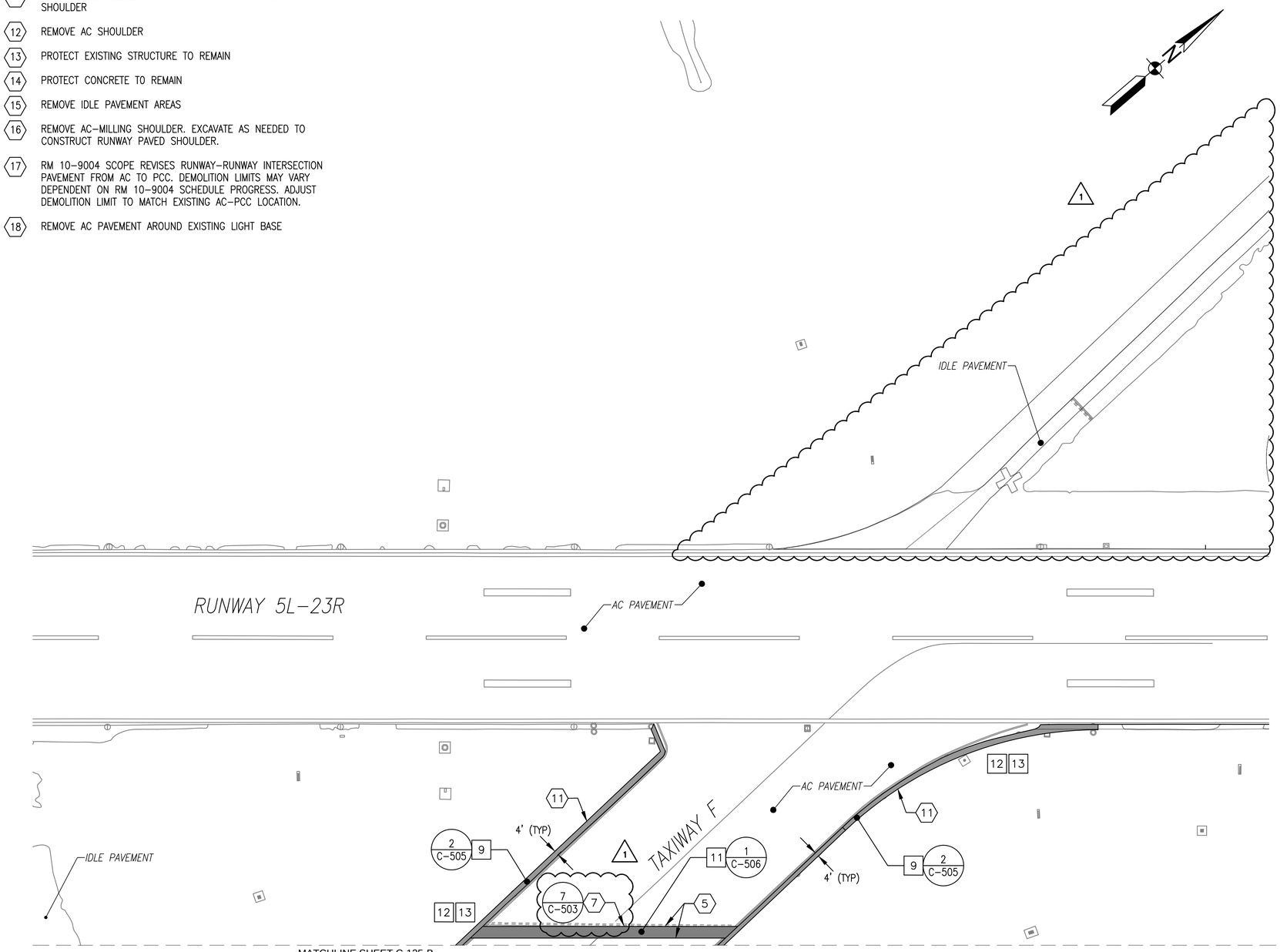
1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC–MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10–9004 SCOPE REVISES RUNWAY–RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10–9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC–PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

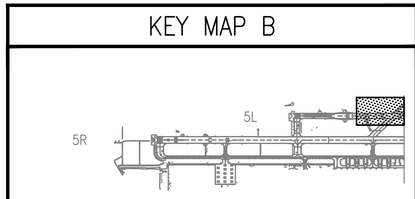


MATCHLINE SHEET C-125-B

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C–171 TO C–182 FOR NEW MARKING LAYOUT.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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A/E INFO

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FOR COMMANDER NAVFAC
ACTIVITY
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BRANCH MANAGER
CHIEF ENG/ARCH

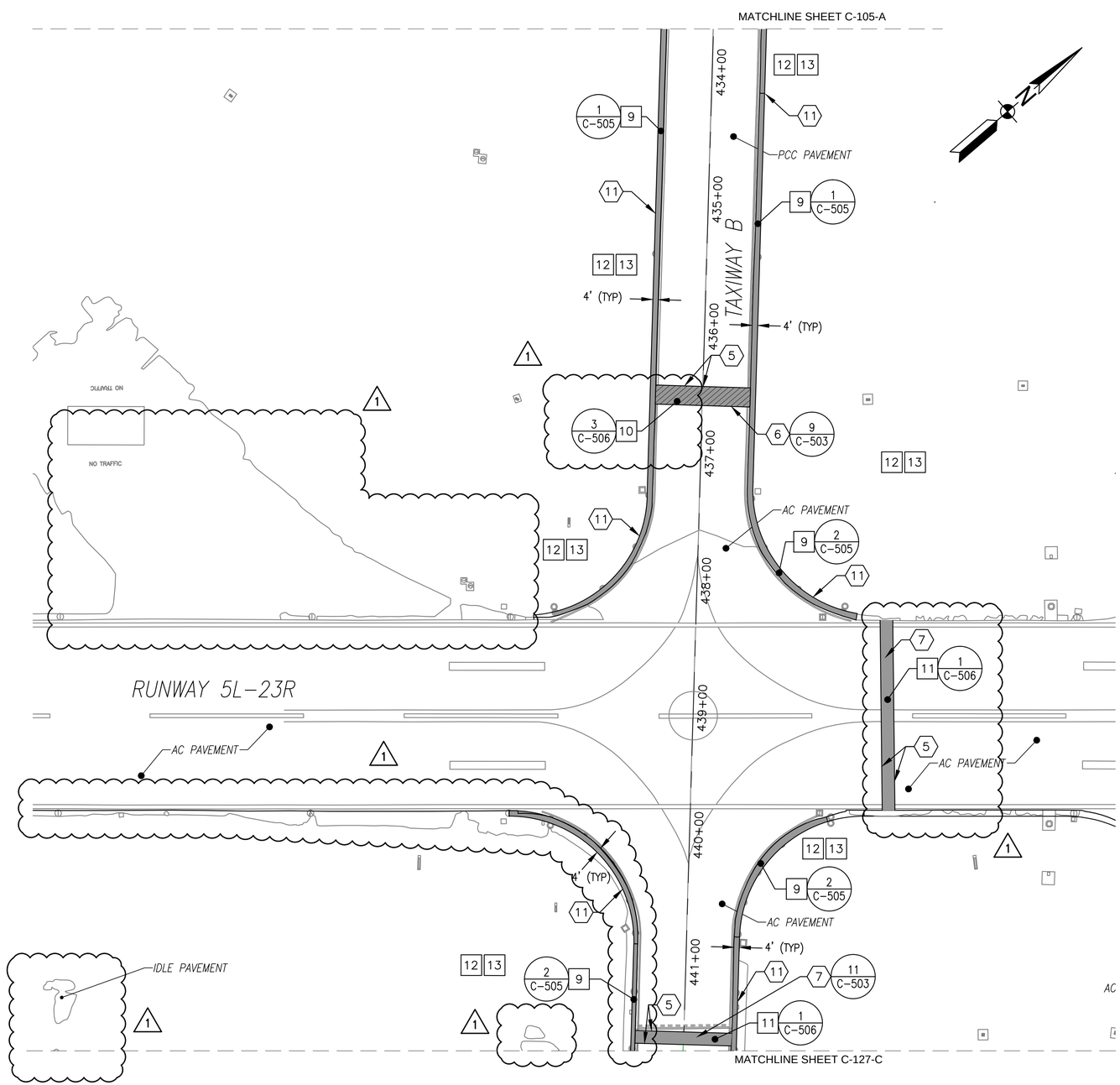
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

HIR IPT

SCALE: 1" = 50'–0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691561
SHEET 28 OF 368
C-112-B

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99... Misc\Aviation\Oceana\Task 008\GENERAL–CIVIL–Task 008\10–0863–008–C–112–B.dwg LAYOUT NAME: C–112–B PLOTTED: Tuesday, April 28, 2015 – 5:38pm USER: kwatson



DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
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6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
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9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
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16. REMOVE AC–MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
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18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
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11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

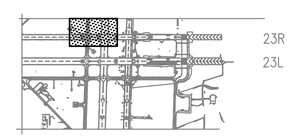
LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C–171 TO C–182 FOR NEW MARKING LAYOUT.

KEY MAP C



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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WEB: WWW.JMT.COM

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

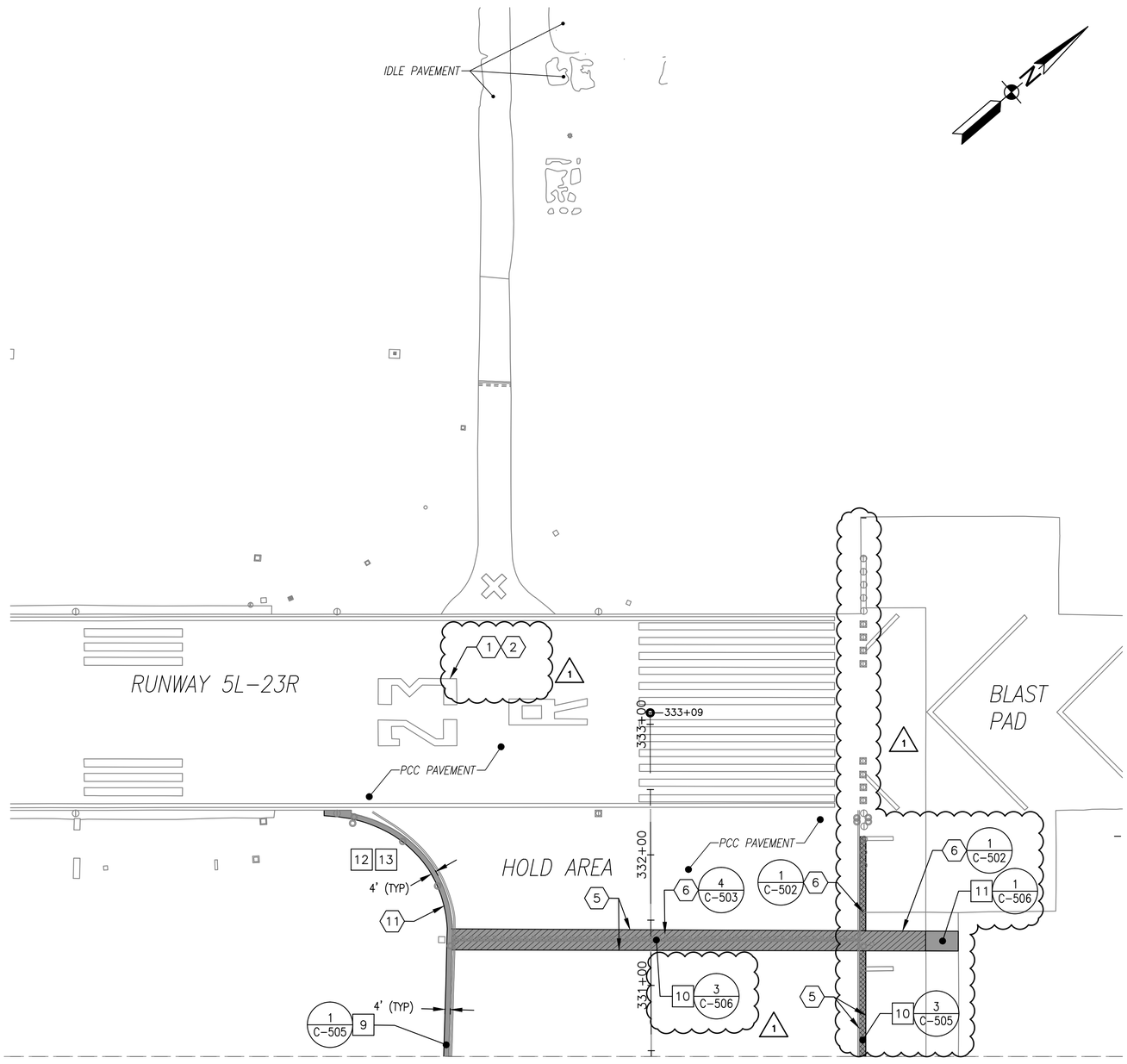
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRIGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'–0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691562
SHEET 29 OF 368
C-114-C

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99... Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-114-C.dwg LAYOUT NAME: C-114-C PLOTTED: Tuesday, April 28, 2015 - 5:45pm USER: kwatson



MATCHLINE SHEET C-129-C

DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

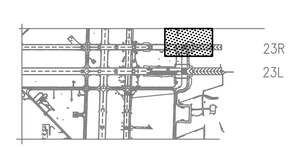
LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP C



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.
12691563

SHEET 30 OF 368

C-116-C

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99... Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-116-C.dwg LAYOUT NAME: C-116-C PLOTTED: Tuesday, April 28, 2015 - 5:52pm USER: kwatson

DEMOLITION KEYNOTES

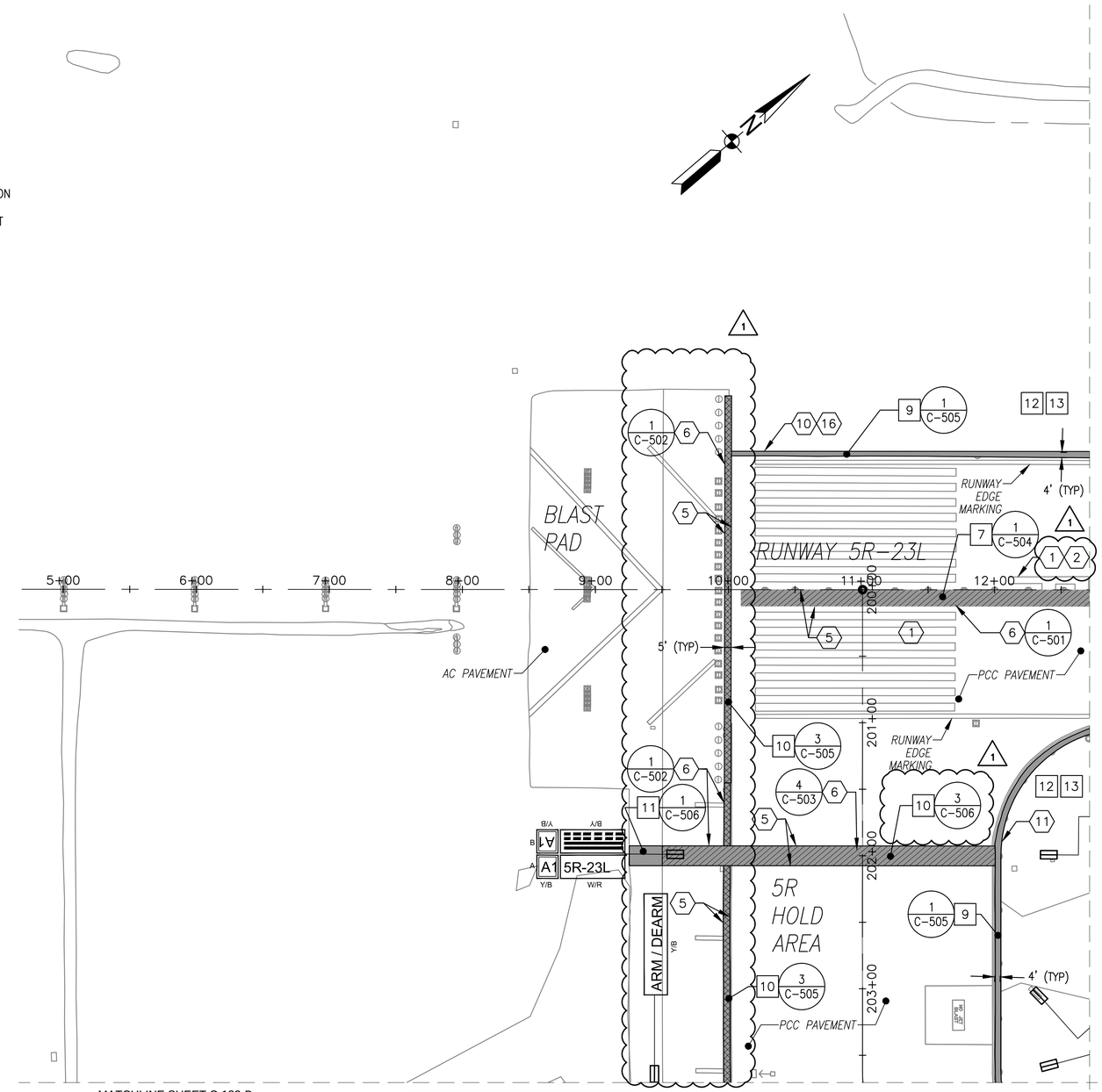
1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

LEGEND

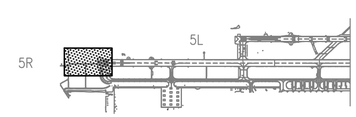
- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

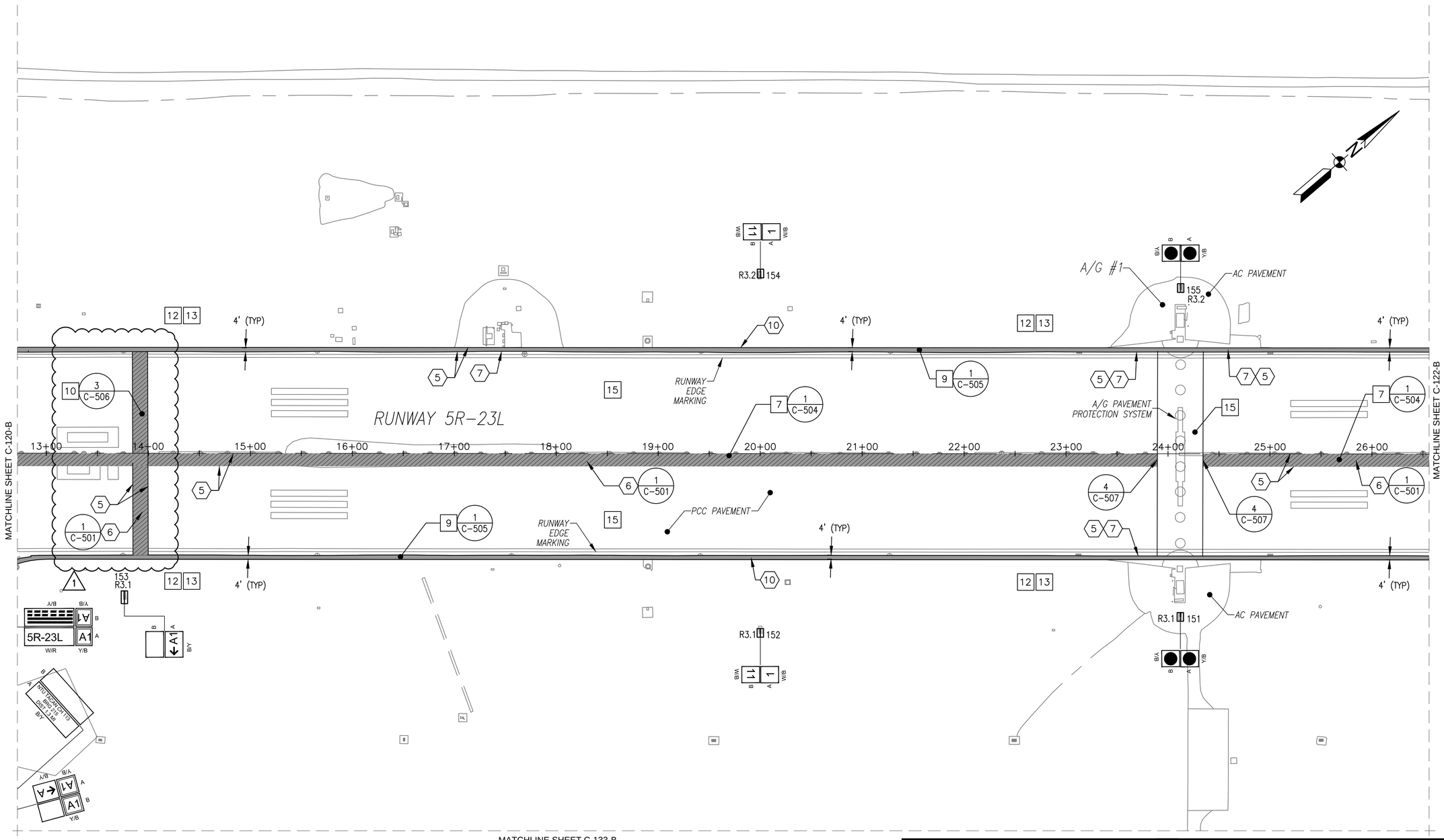
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

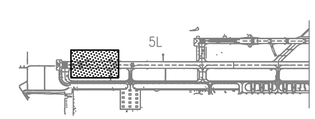
SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691564
SHEET 31 OF 368
C-120-B

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-120-B.dwg LAYOUT NAME: C-120-B PLOTTED: Tuesday, April 28, 2015 - 5:59pm USER: kwatson



KEY MAP B



GRAPHIC SCALE

1"=50'

0 50' 100' 200'

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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A/E INFO

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

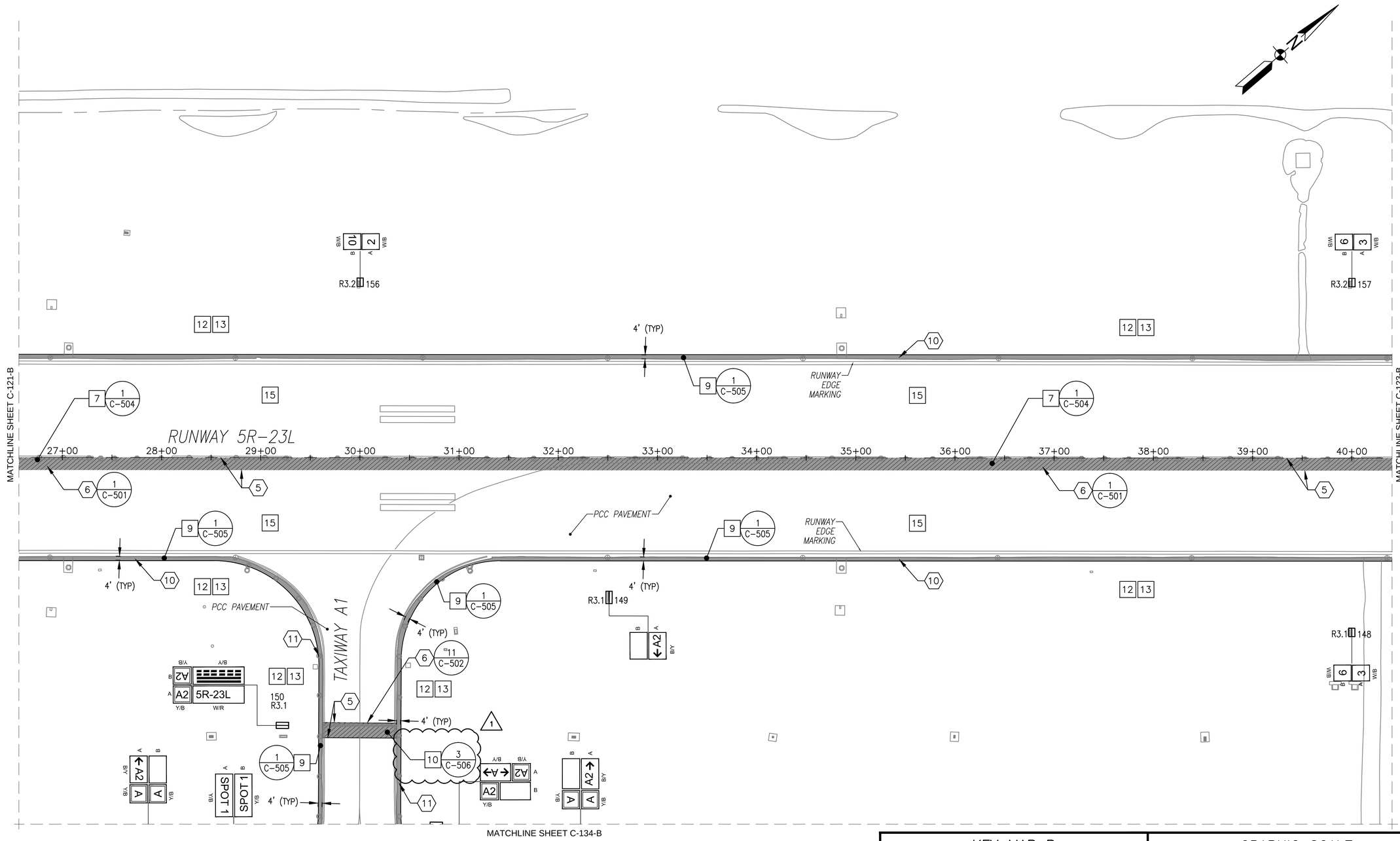
NAVFAC DRAWING NO.
12691565

SHEET 32 OF 368

C-121-B

DRAWFORM REVISION: 10 MARCH 2009

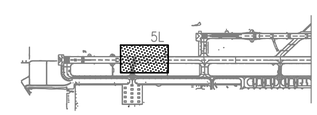
FILE NAME: Q:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-121-B.dwg LAYOUT NAME: C-121-B PLOTTED: Tuesday, April 28, 2015 - 6:00pm USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

NAVFAC

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A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

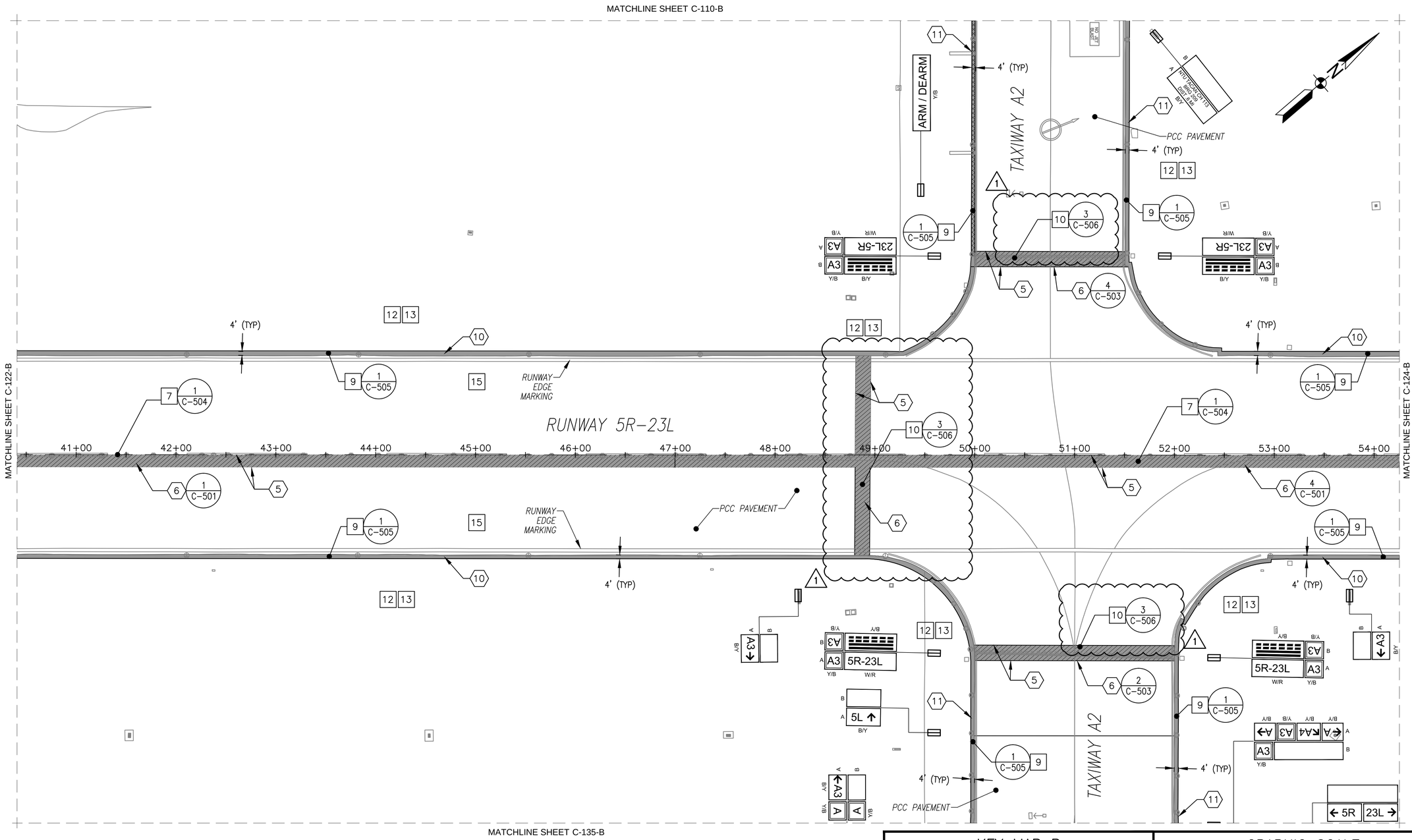
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691566
SHEET 33 OF 388

C-122-B

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-122-B.dwg LAYOUT NAME: C-122-B PLOTTED: Tuesday, April 28, 2015 - 6:01pm USER: kwatson

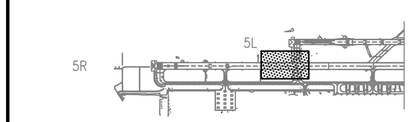


MATCHLINE SHEET C-135-B

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

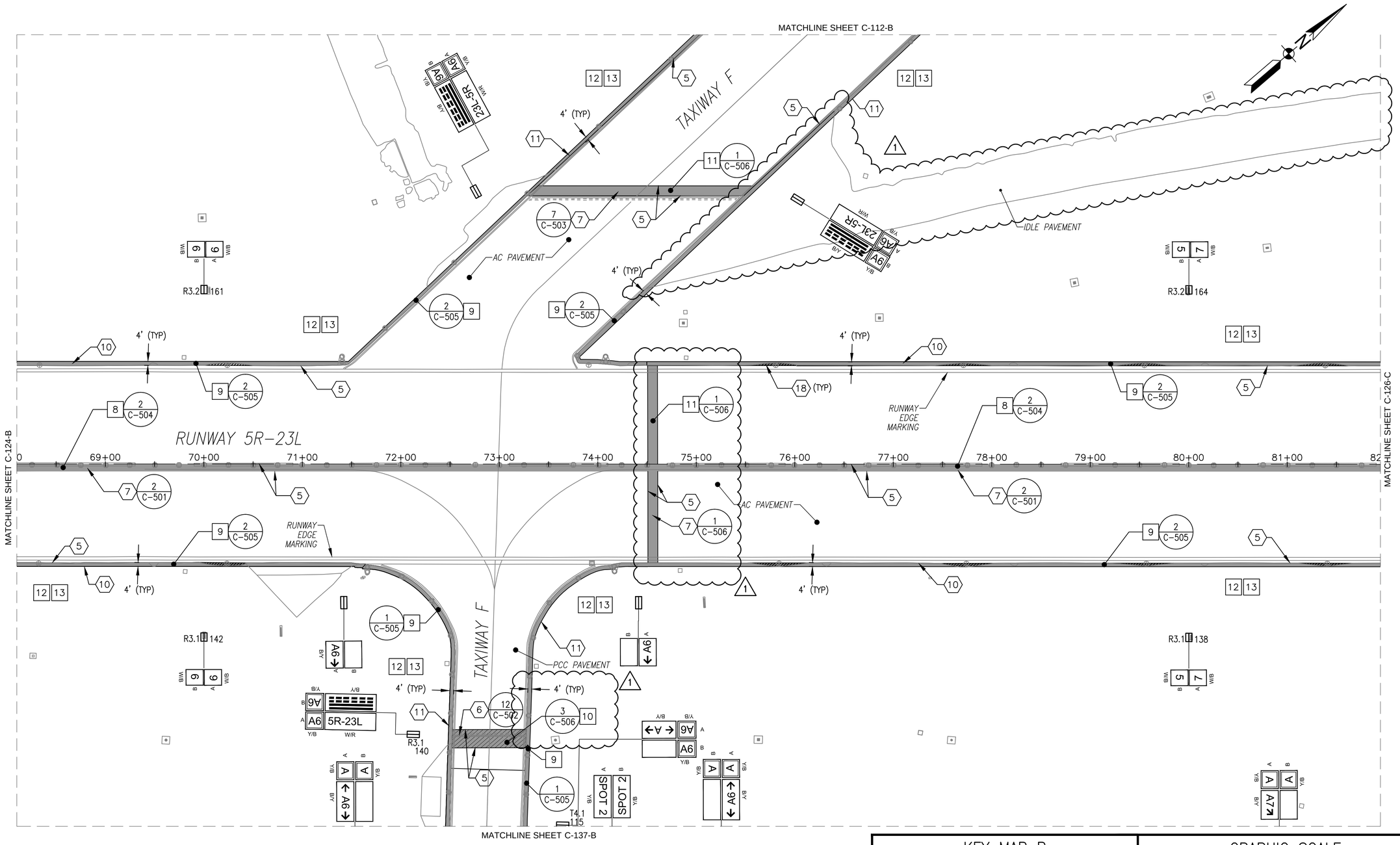
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691567
SHEET 34 OF 388

C-123-B

DRAWFORM REVISION: 10 MARCH 2009

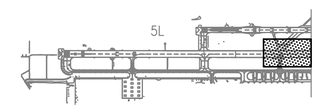
FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-123-B.dwg LAYOUT NAME: C-123-B PLOTTED: Tuesday, April 28, 2015 - 6:03pm USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

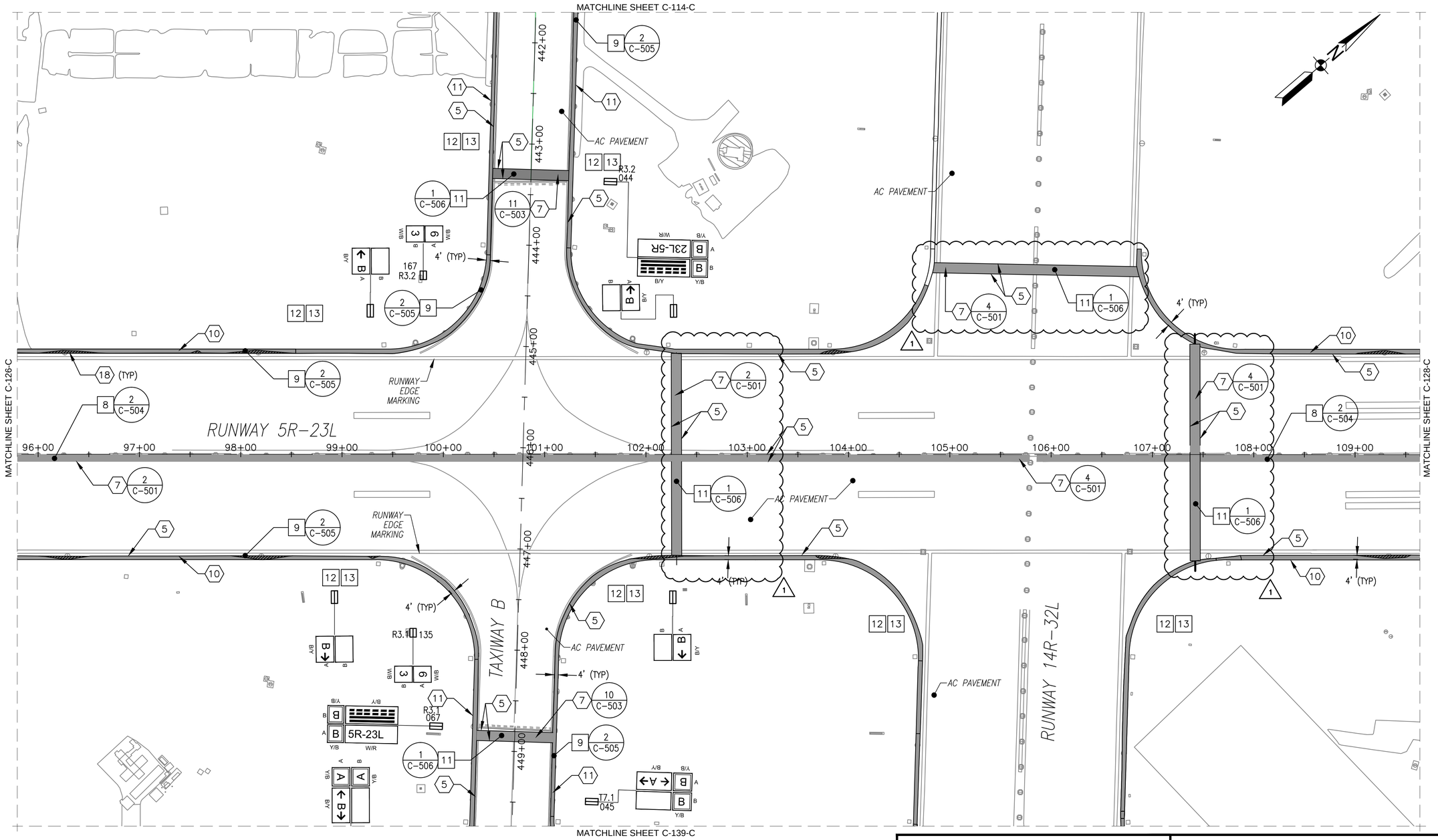
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691569
SHEET 36 OF 388

C-125-B

DRAWFORM REVISION: 10 MARCH 2009

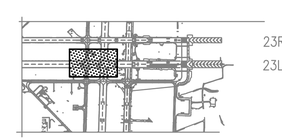
FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-125-B.dwg LAYOUT NAME: C-125-B PLOTTED: Wednesday, April 29, 2015 - 10:11am USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP C



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

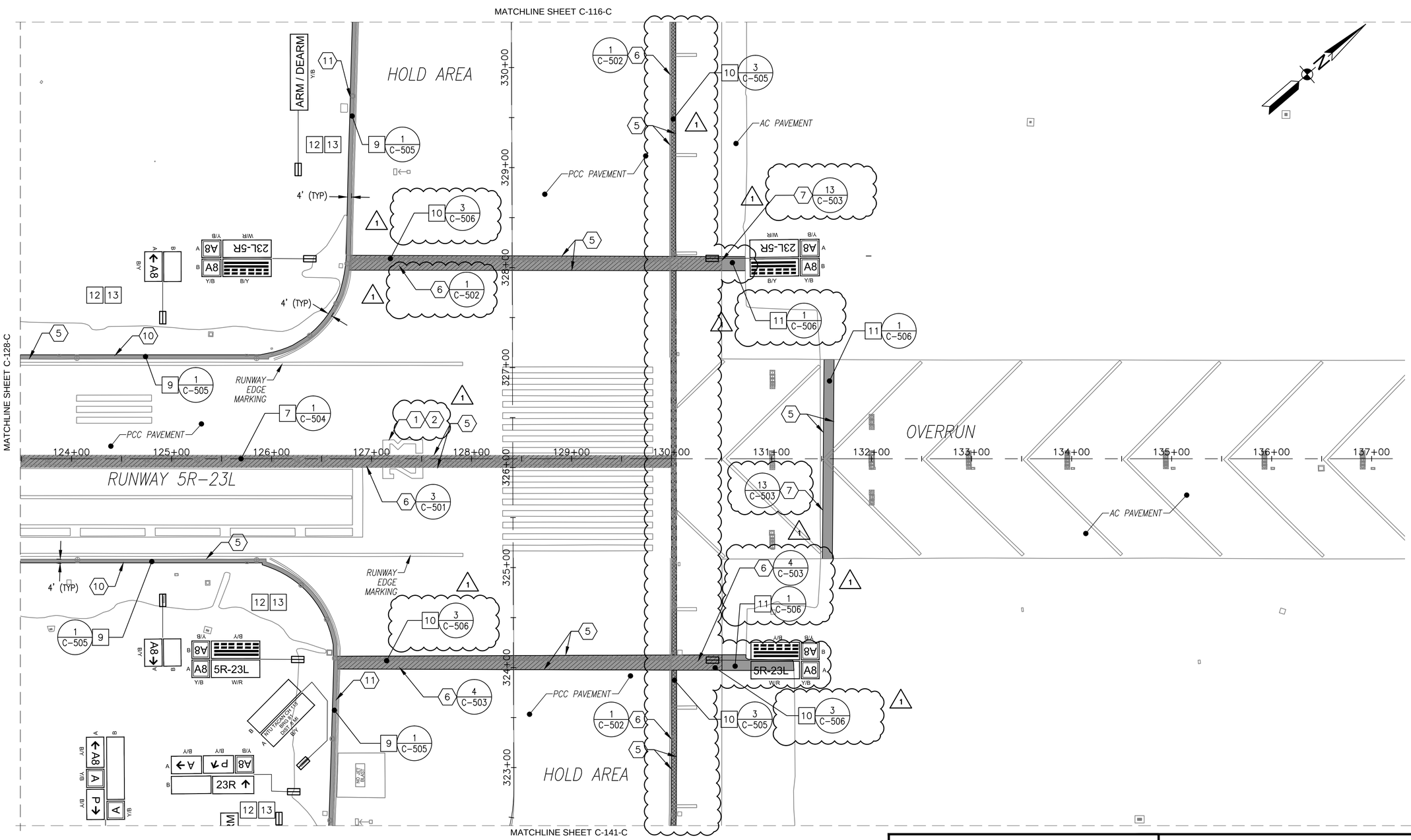
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691571
SHEET 38 OF 368

C-127-C

DRAWFORM REVISION: 10 MARCH 2009

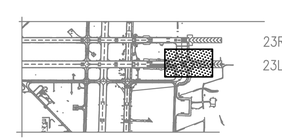
FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-127-C.dwg LAYOUT NAME: C-127-C PLOTTED: Tuesday, April 28, 2015 - 6:06pm USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP C



GRAPHIC SCALE

1"=50'

0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH AND CALLOUTS	4/29/15	MJT

NAVFAC

SEAL

JOHNSON, MIRMIRAN THOMPSON
Gannett Fleming
A Joint Venture
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Virginia Beach, Virginia, 23452
Telephone: (757)499-1895
WEB: WWW.JMT.COM

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

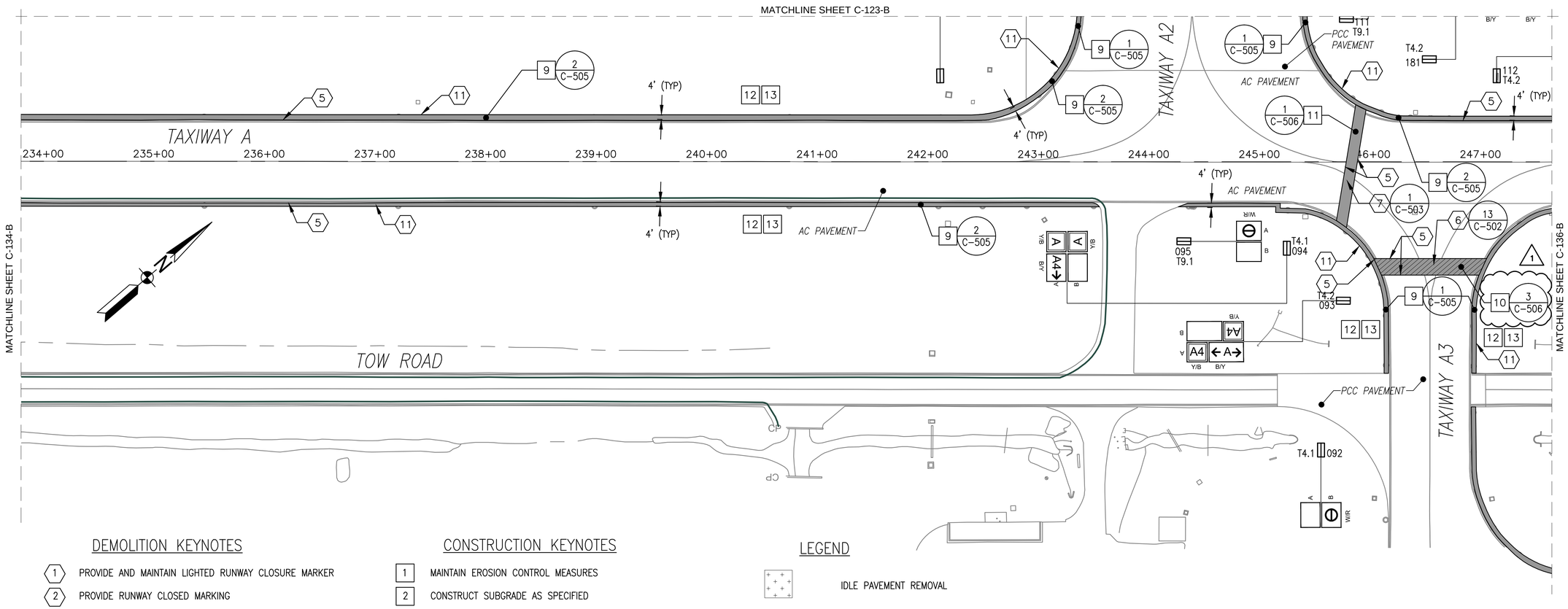
NAVFAC DRAWING NO. 12691573

SHEET 40 OF 368

C-129-C

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-129-C.dwg LAYOUT NAME: C-129-C PLOTTED: Tuesday, April 28, 2015 - 6:08pm USER: kwatson



DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

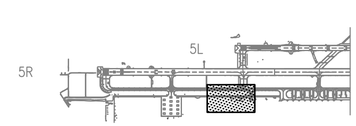
LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

SEAL

JOHNSON, MIRMIRAN THOMPSON
Gannett Fleming
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Telephone: (757)499-1895
WEB: WWW.JMT.COM

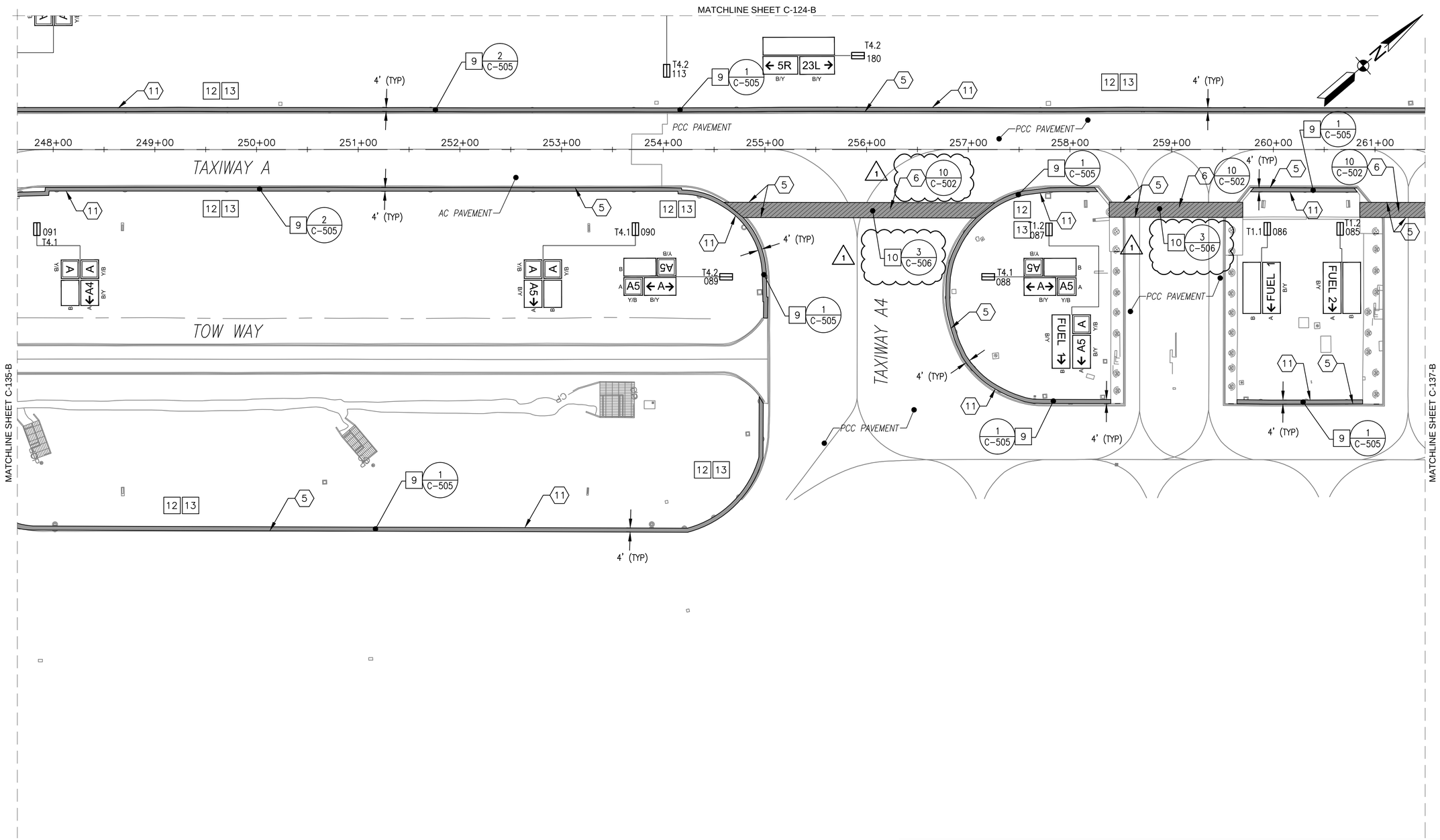
A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES MJT DRW DFD CHK ELO
PM/DM
BRANCH MANAGER
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691577
SHEET 44 OF 368
C-135-B
DRAWFORM REVISION: 10 MARCH 2009

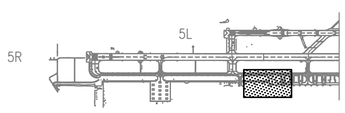
FILE NAME: Q:\PHIPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-135-B.dwg LAYOUT NAME: C-135-B PLOTTED: Tuesday, April 28, 2015 - 6:14pm USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP B



GRAPHIC SCALE

1"=50'

0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

NAVFAC

SEAL

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WEB: WWW.JMT.COM

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HRE IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRIGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

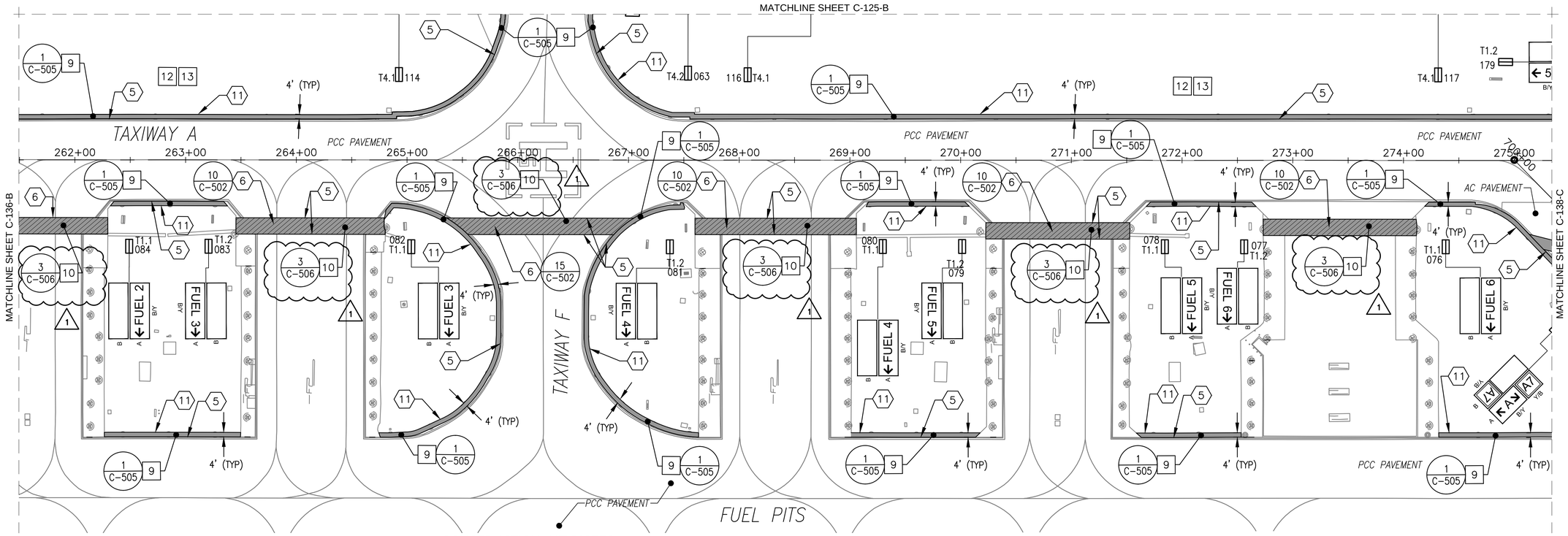
NAVFAC DRAWING NO.
12691578

SHEET 45 OF 368

C-136-B

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99... Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-136-B.dwg LAYOUT NAME: C-136-B PLOTTED: Tuesday, April 28, 2015 - 6:15pm USER: kwatson



DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

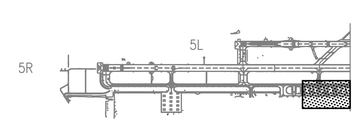
LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP B



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
HR IPT
NAVAL AIR STATION OCEANA
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

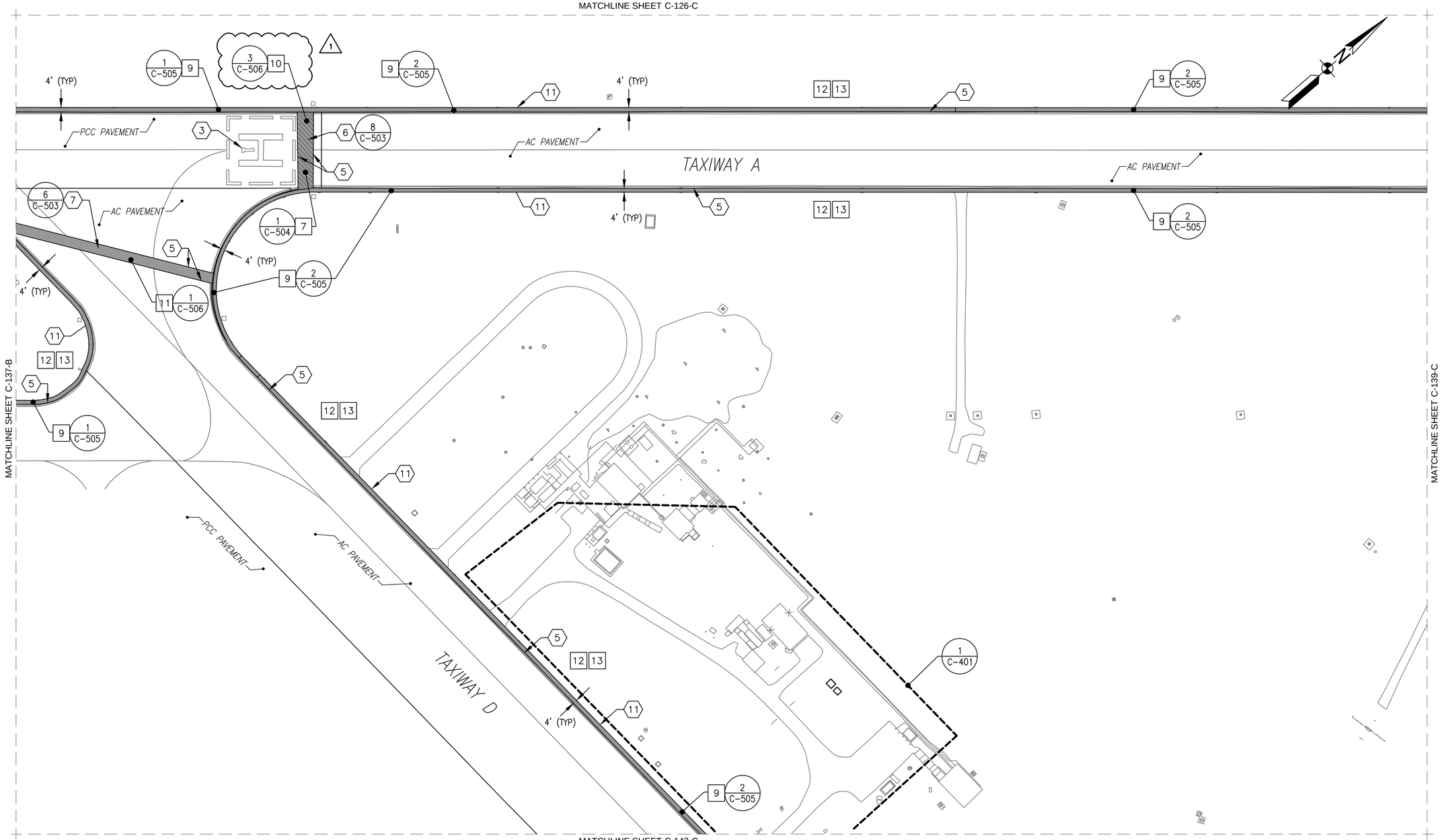
SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691579
SHEET 46 OF 368

C-137-B

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-137-B.dwg LAYOUT NAME: C-137-B PLOTTED: Tuesday, April 28, 2015 - 6:21pm USER: kwatson

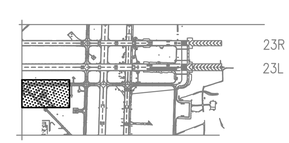
MATCHLINE SHEET C-126-C



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP C



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

NAVFAC

SEAL

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Gannett Fleming
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WEB: WWW.JMT.COM

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

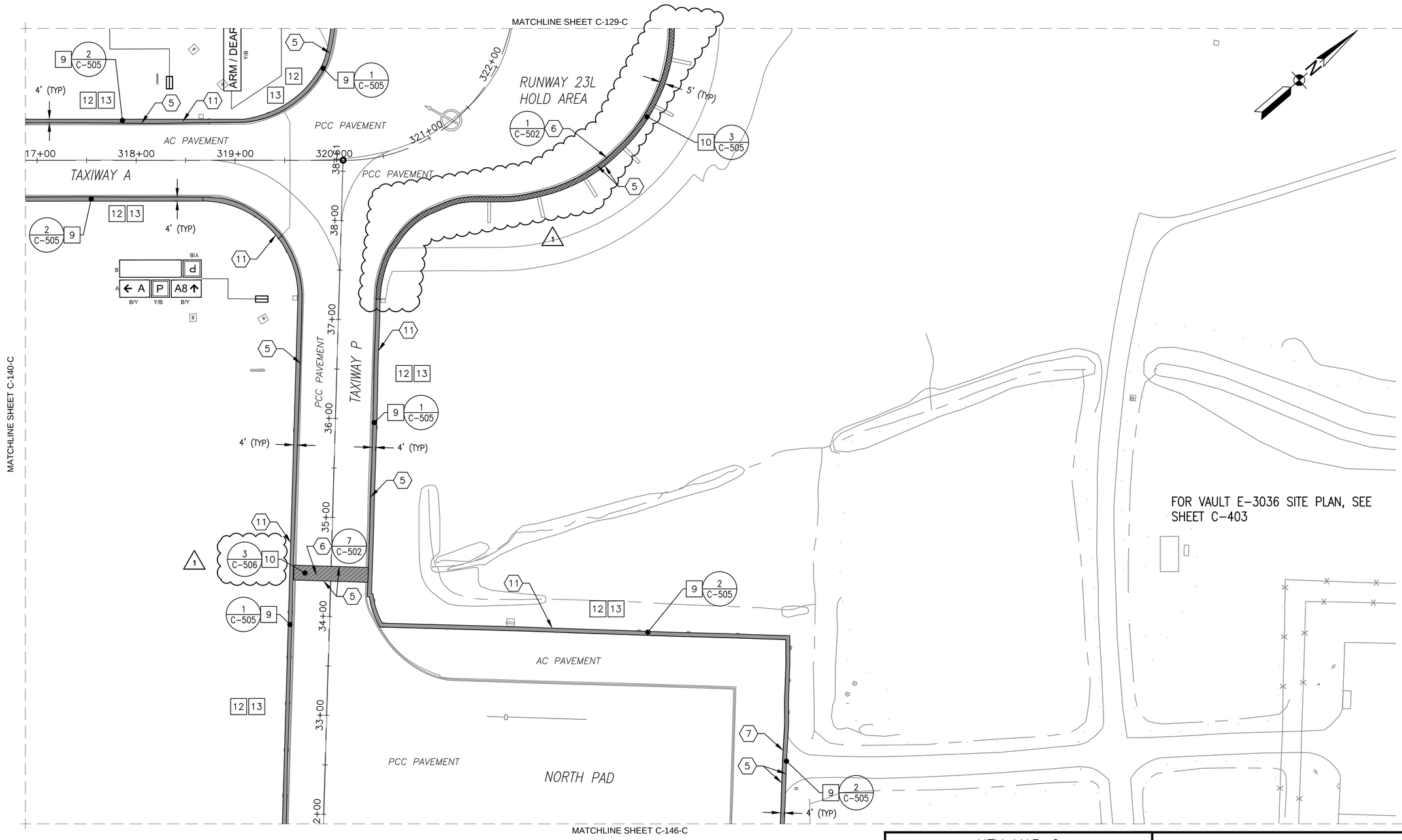
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691580
SHEET 47 OF 368

C-138-C

DRAWFORM REVISION: 10 MARCH 2009

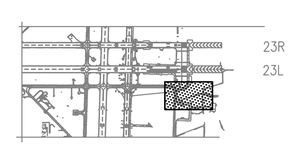
FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-138-C.dwg LAYOUT NAME: C-138-C PLOTTED: Tuesday, April 28, 2015 - 6:22pm USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.
2. SEE SHEET C-001 FOR DEMOLITION KEYNOTES, CONSTRUCTION KEYNOTES, AND LEGEND.

KEY MAP C



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

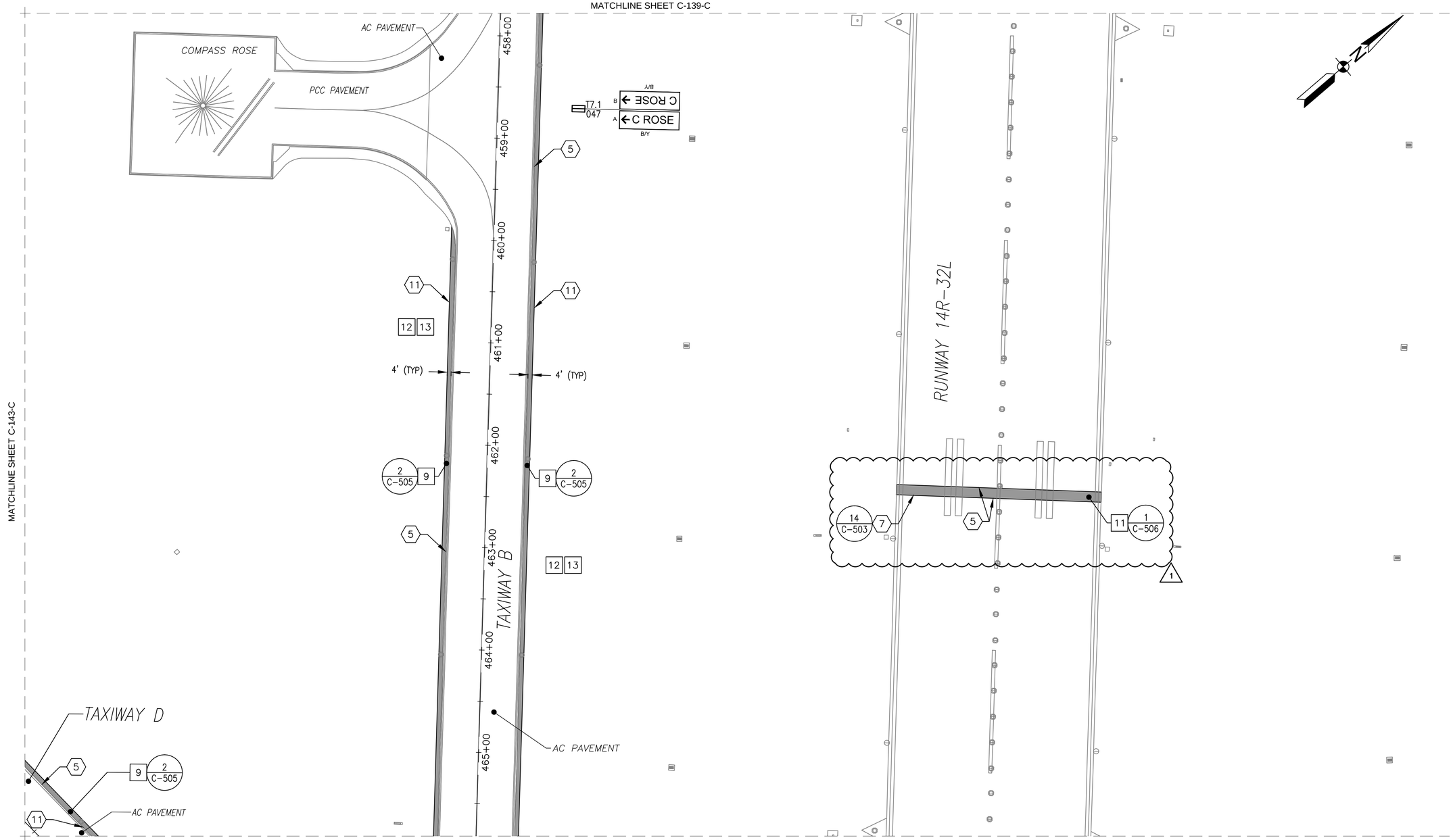
SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691583
SHEET 50 OF 368

C-141-C

DRAWFORM REVISION: 10 MARCH 2009

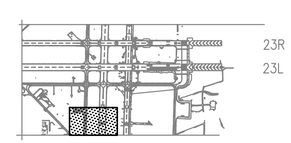
FILE NAME: Q:\PHIPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-141-C.dwg LAYOUT NAME: C-141-C PLOTTED: Tuesday, April 28, 2015 - 6:23pm USER: kwatson

MATCHLINE SHEET C-139-C



MATCHLINE SHEET C-150-D

KEY MAP C



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	ADDED UTILITY TRENCH AND CALLOUTS	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

APPROVED

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ACTIVITY

SATISFACTORY TO DATE

DES MJT | DRW DFD | CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

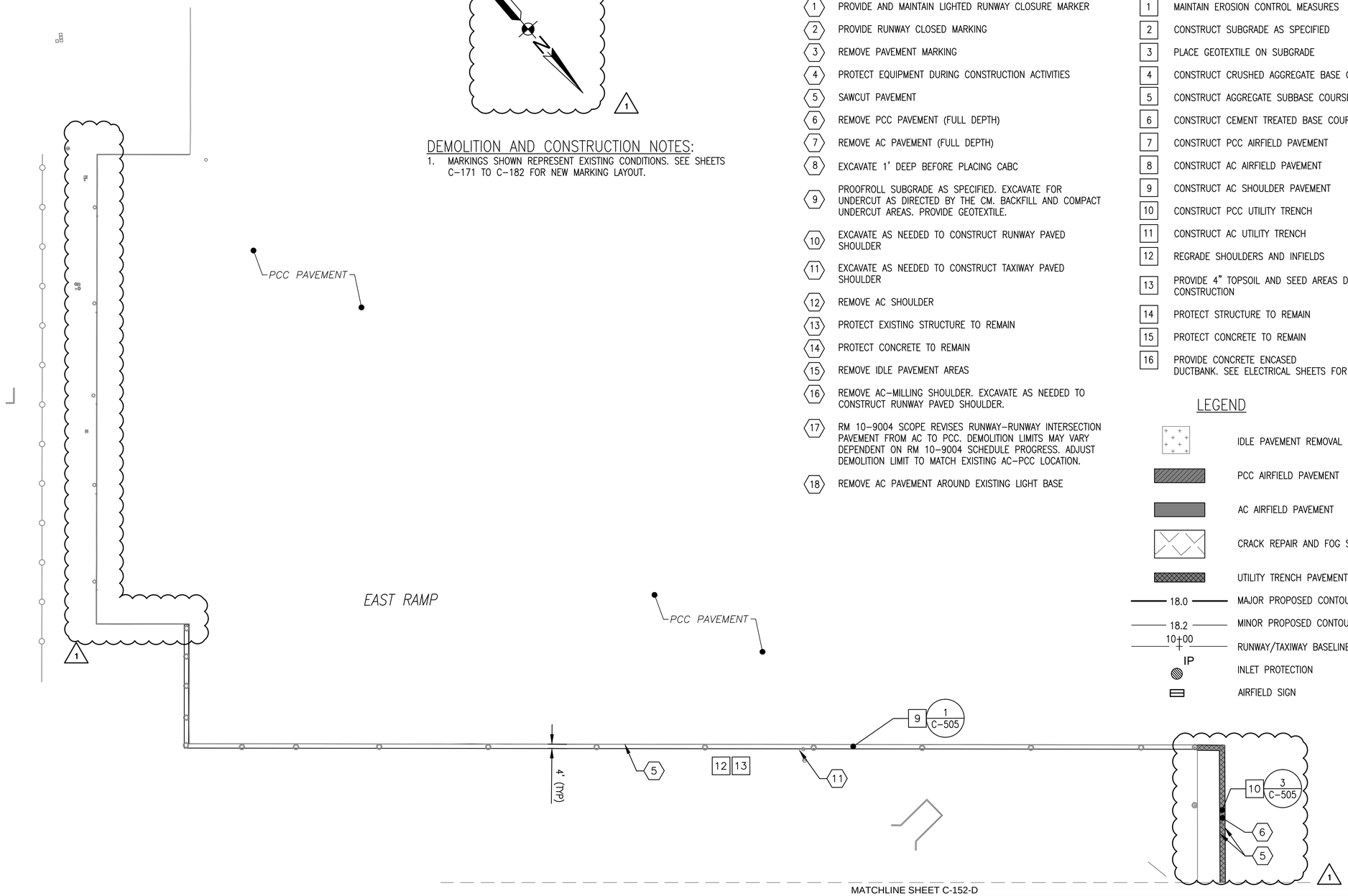
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'–0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691586
SHEET 53 OF 368

C-144-C

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-144-C.dwg LAYOUT NAME: C-144-C PLOTTED: Tuesday, April 28, 2015 - 6:25pm USER: kwatson



DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

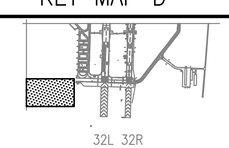
CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

KEY MAP D



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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WEB: WWW.JMT.COM

A/E INFO

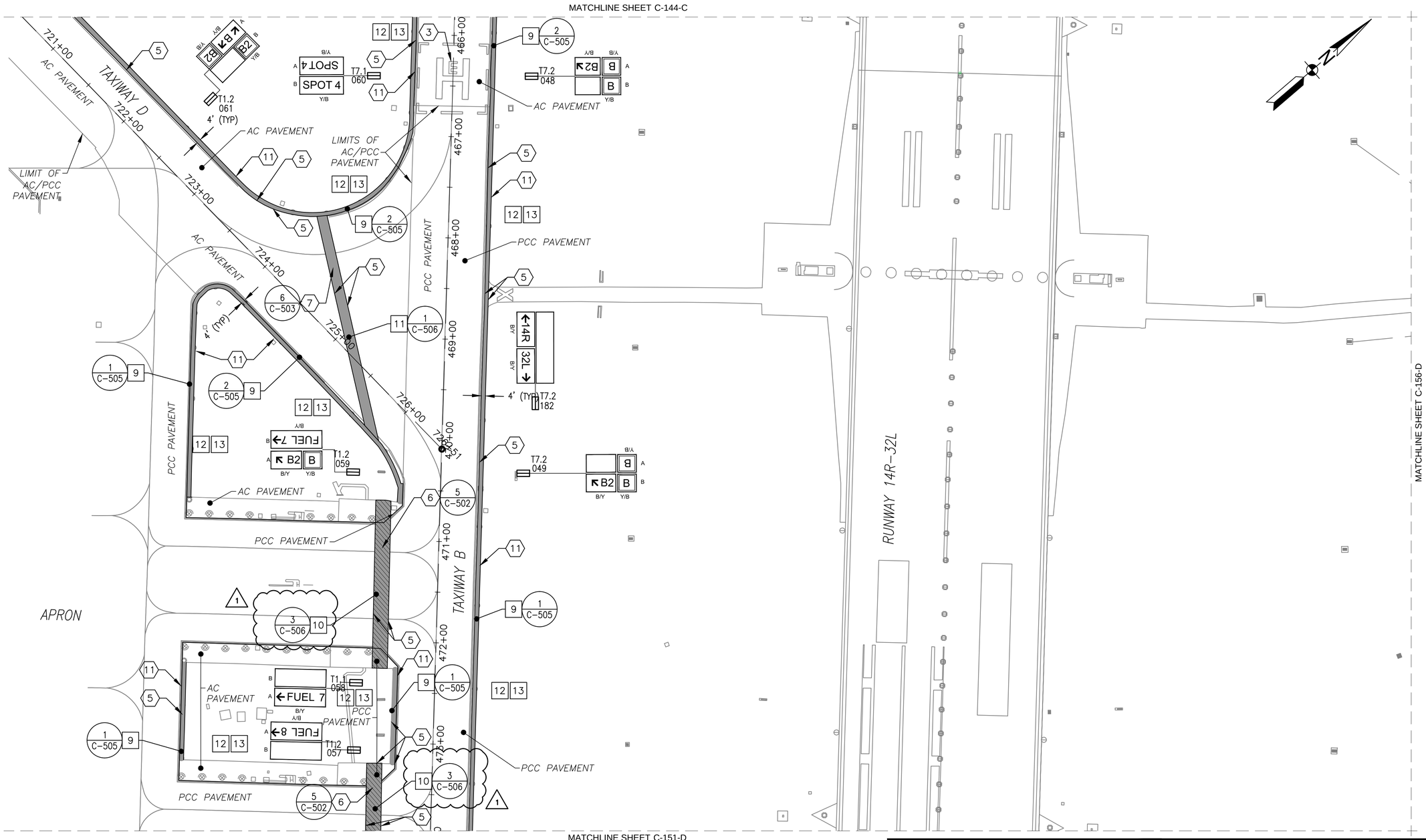
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES MJT DRW DFD CHK ELO
PM/DM
BRANCH MANAGER
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

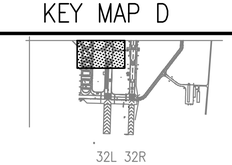
SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691588
SHEET 55 OF 368
C-149-D

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99... Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-149-D.dwg LAYOUT NAME: C-149-D PLOTTED: Tuesday, April 28, 2015 - 6:32pm USER: kwatson



KEY MAP D



GRAPHIC SCALE

1"=50'

0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

NAVFAC

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A/E INFO

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CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
HR IPT NAVAL AIR STATION OCEANA - VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

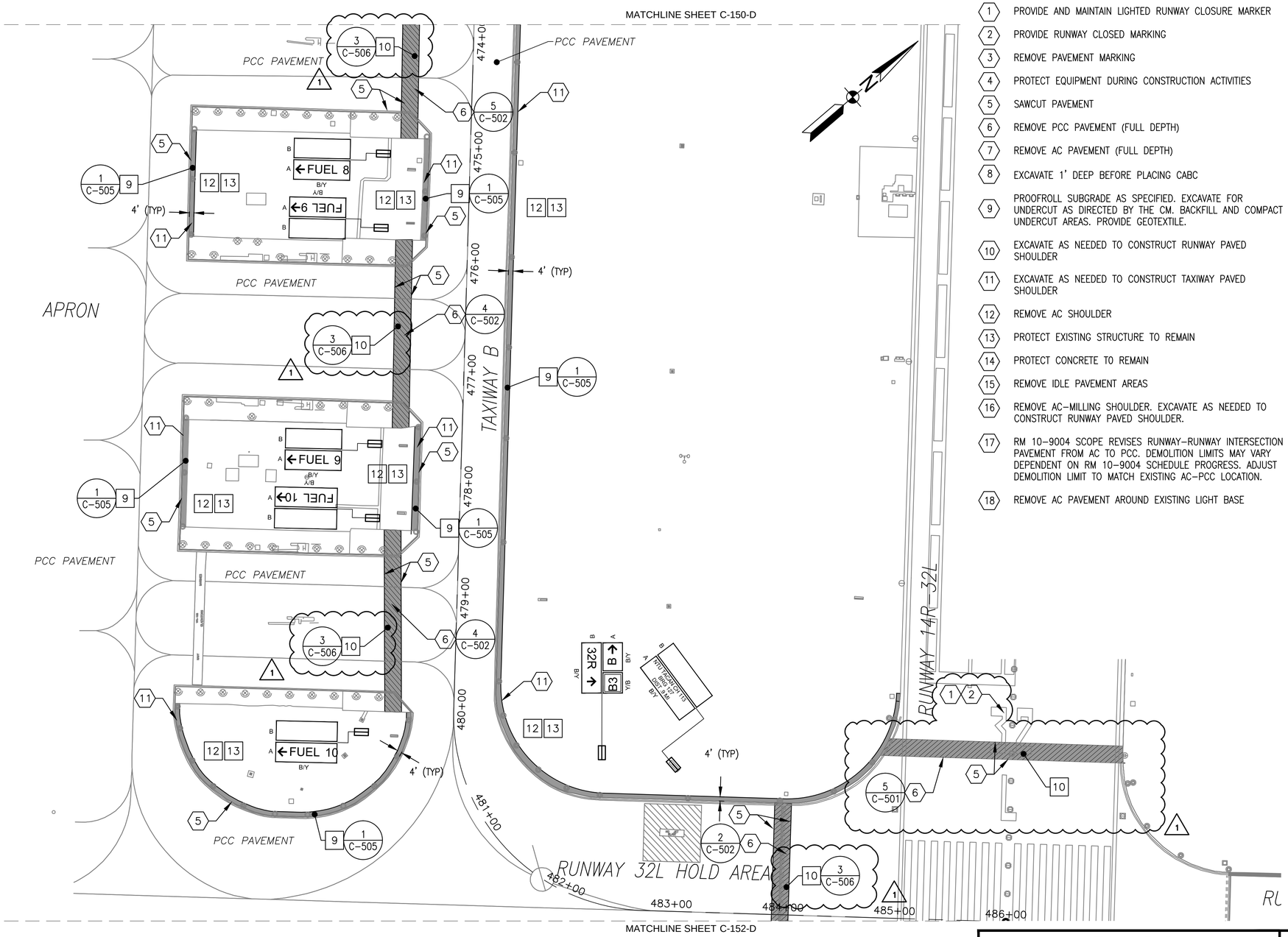
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691589
SHEET 56 OF 368

C-150-D

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-150-D.dwg LAYOUT NAME: C-150-D PLOTTED: Tuesday, April 28, 2015 - 6:33pm USER: kwatson



DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC–MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10–9004 SCOPE REVISES RUNWAY–RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10–9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC–PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

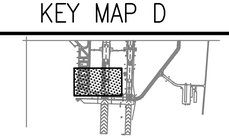
LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C–171 TO C–182 FOR NEW MARKING LAYOUT.

KEY MAP D



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	UPDATED UTILITY TRENCH CALLOUTS	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

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PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

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NAVAL FACILITIES ENGINEERING COMMAND
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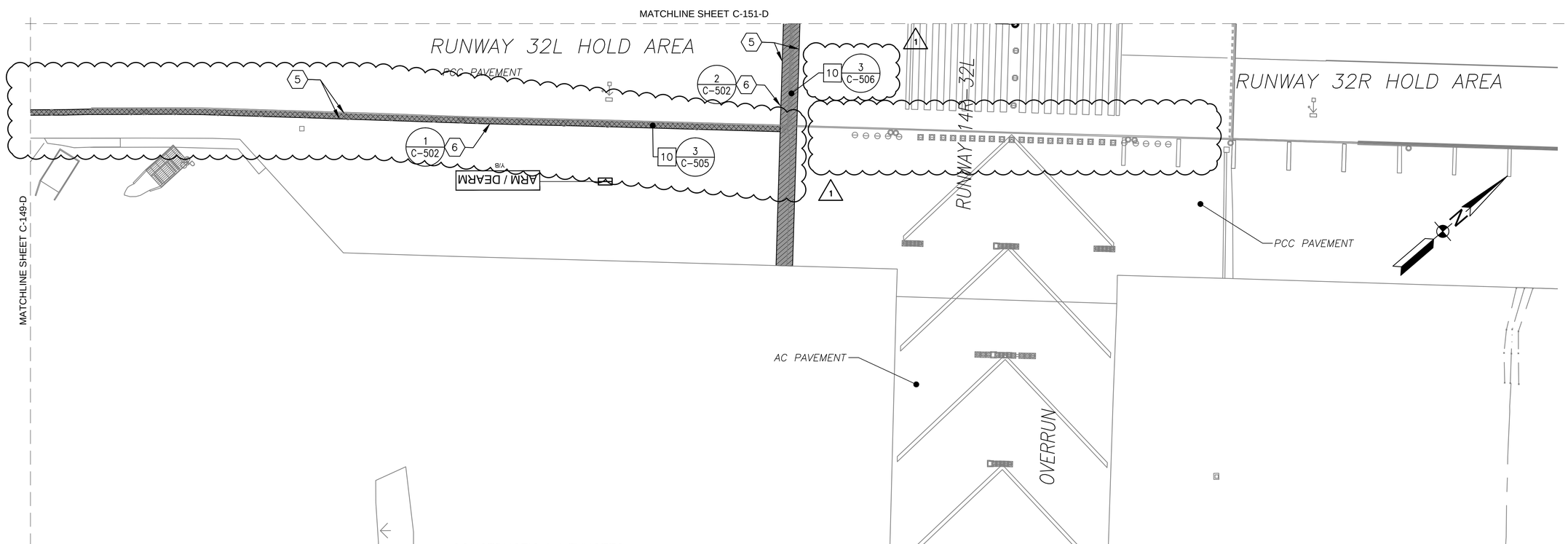
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'–0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691590
SHEET 57 OF 368

C-151-D

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-151-D.dwg LAYOUT NAME: C-151-D PLOTTED: Tuesday, April 28, 2015 - 6:40pm USER: kwatson



DEMOLITION KEYNOTES

1. PROVIDE AND MAINTAIN LIGHTED RUNWAY CLOSURE MARKER
2. PROVIDE RUNWAY CLOSED MARKING
3. REMOVE PAVEMENT MARKING
4. PROTECT EQUIPMENT DURING CONSTRUCTION ACTIVITIES
5. SAWCUT PAVEMENT
6. REMOVE PCC PAVEMENT (FULL DEPTH)
7. REMOVE AC PAVEMENT (FULL DEPTH)
8. EXCAVATE 1' DEEP BEFORE PLACING CABC
9. PROOFROLL SUBGRADE AS SPECIFIED. EXCAVATE FOR UNDERCUT AS DIRECTED BY THE CM. BACKFILL AND COMPACT UNDERCUT AREAS. PROVIDE GEOTEXTILE.
10. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER
11. EXCAVATE AS NEEDED TO CONSTRUCT TAXIWAY PAVED SHOULDER
12. REMOVE AC SHOULDER
13. PROTECT EXISTING STRUCTURE TO REMAIN
14. PROTECT CONCRETE TO REMAIN
15. REMOVE IDLE PAVEMENT AREAS
16. REMOVE AC-MILLING SHOULDER. EXCAVATE AS NEEDED TO CONSTRUCT RUNWAY PAVED SHOULDER.
17. RM 10-9004 SCOPE REVISES RUNWAY-RUNWAY INTERSECTION PAVEMENT FROM AC TO PCC. DEMOLITION LIMITS MAY VARY DEPENDENT ON RM 10-9004 SCHEDULE PROGRESS. ADJUST DEMOLITION LIMIT TO MATCH EXISTING AC-PCC LOCATION.
18. REMOVE AC PAVEMENT AROUND EXISTING LIGHT BASE

CONSTRUCTION KEYNOTES

1. MAINTAIN EROSION CONTROL MEASURES
2. CONSTRUCT SUBGRADE AS SPECIFIED
3. PLACE GEOTEXTILE ON SUBGRADE
4. CONSTRUCT CRUSHED AGGREGATE BASE COURSE
5. CONSTRUCT AGGREGATE SUBBASE COURSE
6. CONSTRUCT CEMENT TREATED BASE COURSE
7. CONSTRUCT PCC AIRFIELD PAVEMENT
8. CONSTRUCT AC AIRFIELD PAVEMENT
9. CONSTRUCT AC SHOULDER PAVEMENT
10. CONSTRUCT PCC UTILITY TRENCH
11. CONSTRUCT AC UTILITY TRENCH
12. REGRADE SHOULDERS AND INFIELDS
13. PROVIDE 4" TOPSOIL AND SEED AREAS DISTURBED DURING CONSTRUCTION
14. PROTECT STRUCTURE TO REMAIN
15. PROTECT CONCRETE TO REMAIN
16. PROVIDE CONCRETE ENCASED DUCTBANK. SEE ELECTRICAL SHEETS FOR DETAILS

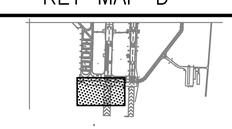
LEGEND

- IDLE PAVEMENT REMOVAL
- PCC AIRFIELD PAVEMENT
- AC AIRFIELD PAVEMENT
- CRACK REPAIR AND FOG SEAL
- UTILITY TRENCH PAVEMENT PATCH
- 18.0 — MAJOR PROPOSED CONTOUR
- 18.2 — MINOR PROPOSED CONTOUR
- 10+00 — RUNWAY/TAXIWAY BASELINE
- IP — INLET PROTECTION
- AIRFIELD SIGN

DEMOLITION AND CONSTRUCTION NOTES:

1. MARKINGS SHOWN REPRESENT EXISTING CONDITIONS. SEE SHEETS C-171 TO C-182 FOR NEW MARKING LAYOUT.

KEY MAP D



GRAPHIC SCALE

1"=50' 0 50' 100' 200'

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

SEAL

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A/E INFO

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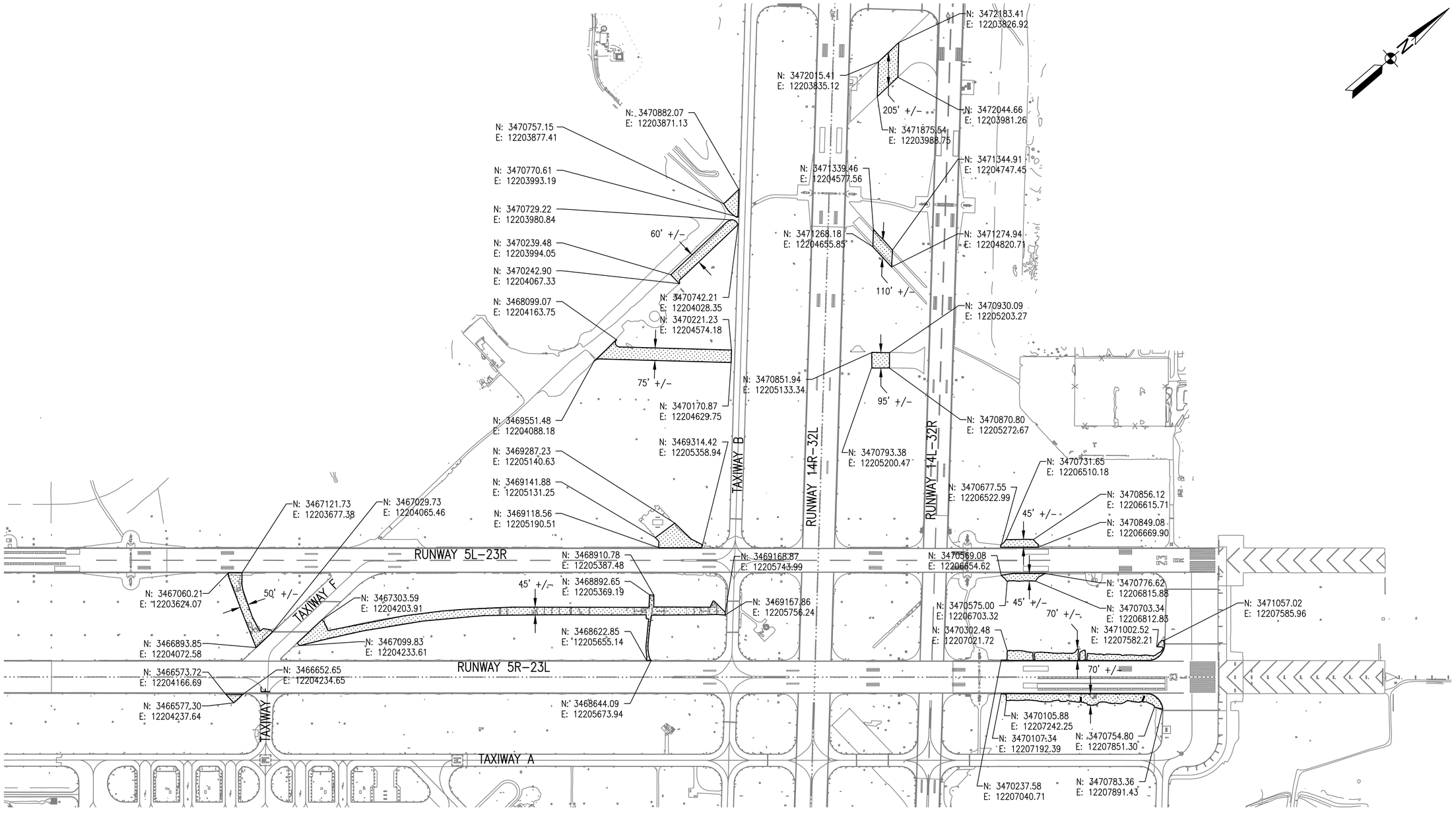
PM/DM
BRANCH MANAGER
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
DEMOLITION AND CONSTRUCTION PLAN

SCALE: 1" = 50'-0"
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691591
SHEET 58 OF 368
C-152-D

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99... Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-152-D.dwg LAYOUT NAME: C-152-D PLOTTED: Tuesday, April 28, 2015 - 6:45pm USER: kwatson



IDLE PAVEMENT REMOVAL NOTES:

1. REMOVE ALL CONCRETE AND ASPHALT PAVEMENT LAYERS WITHIN IDLE PAVEMENT SECTIONS. BACKFILL, TOPSOIL, AND SEED TO STABILIZE AND MATCH EXISTING GRADES.
2. IDLE PAVEMENT REMOVAL LIMITS SHALL BE OFFSET 5' MINIMUM FROM FULL STRENGTH PAVEMENT TO REMAIN.
3. IDLE PAVEMENT REMOVAL SHALL BE SEQUENCED WITH HAUL ROUTE OPERATION AND STAGING AREA USE, AS DIRECTED BY THE CONTRACTING OFFICER.
4. ALL IDLE PAVEMENT SHOWN ON THE DEMOLITION AND CONSTRUCTION PLANS IS TO BE DISREGARDED. THE IDLE PAVEMENT REMOVAL SHOWN ON THIS SHEET SUPERSEDES ALL OTHER IDLE PAVEMENT REMOVAL AREAS FOUND IN THE PLANS.

1

IDLE PAVEMENT REMOVAL PLAN

1" = 300'

LEGEND

IDLE PAVEMENT REMOVAL

SYM	DESCRIPTION	DATE	APPR
1	REVISE ALL IDLE PAVT. REMOVAL AREAS	4/29/15	MJT

NAVFAC

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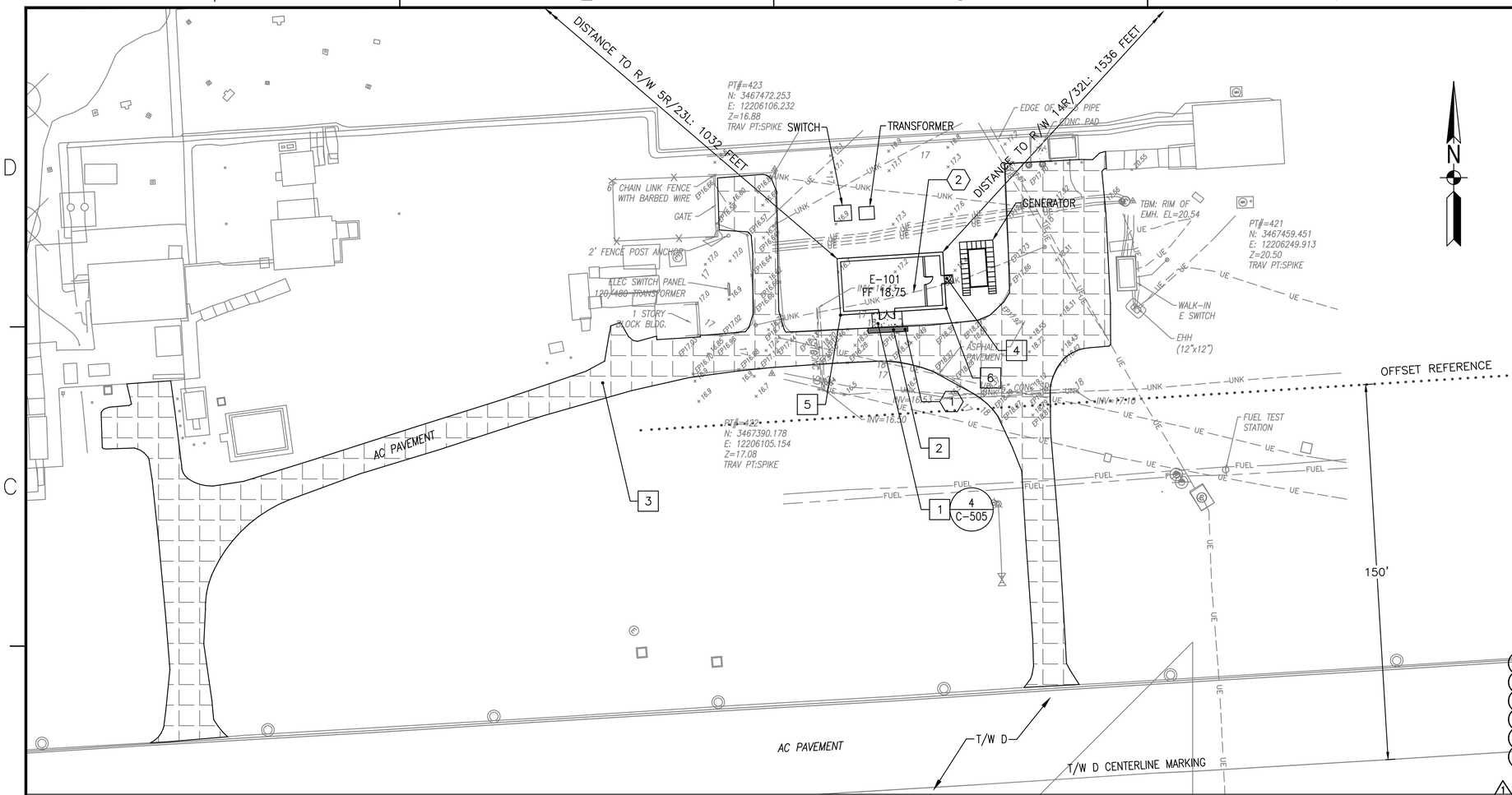
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
IDLE PAVEMENT REMOVAL PLAN

SCALE: 1" = 300'
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691609
SHEET 76 OF 368

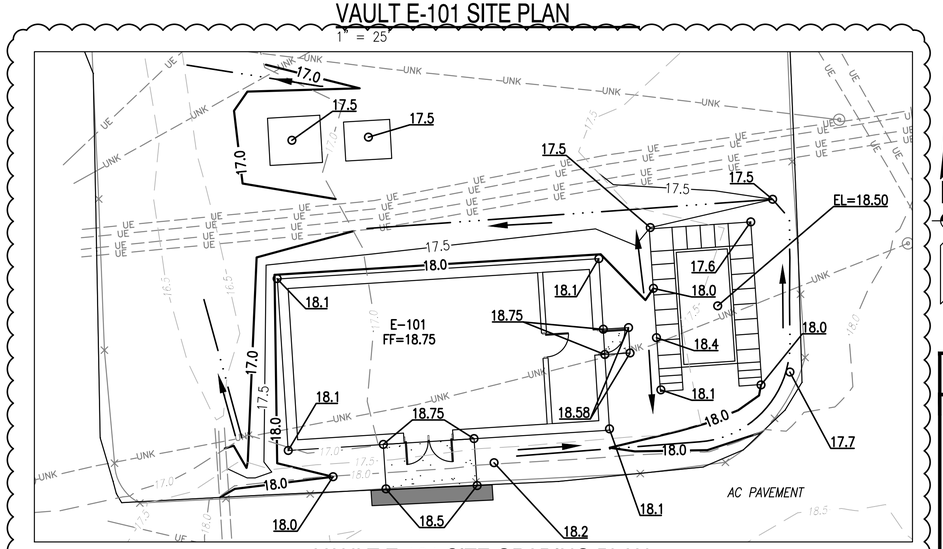
C-191

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: Q:\PHIFA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0683-008-C-191.dwg LAYOUT NAME: C-191 PLOTTED: Wednesday, April 29, 2015 - 7:57am USER: kwatson



VAULT E-101 SITE PLAN
1" = 25'



VAULT E-101 SITE GRADING PLAN
1" = 10'

GENERAL NOTES

1. REFER TO DRAWING C-138-C FOR ADDITIONAL WORK
2. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL WORK. SEE SHEETS S-402 AND A-402.
3. REFER TO ELECTRICAL DRAWING EA138-C AND E-404 FOR ADDITIONAL WORK
4. CONTRACTOR TO REPAIR ANY DAMAGE TO EXISTING SURFACES AND STRUCTURES TO ORIGINAL CONDITION
5. HYDROSEED ALL DISTURBED GRASS AREAS

DEMOLITION KEYNOTES

1. SAWCUT AND REMOVE EXISTING AC PAVEMENT AT CONCRETE PAD. PROTECT CUT EDGE AS REQUIRED.
2. REMOVE EXISTING ABANDONED UTILITY WITHIN GRASS AREA

CONSTRUCTION KEYNOTES

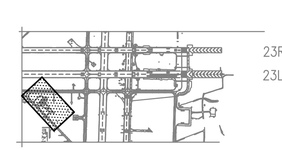
1. 6'X12' CONCRETE PAD. SLOPE AT ½" : 1' AWAY FROM BUILDING PROVIDE EXPANSION JOINT AT BUILDING FOUNDATION
2. 4" AC PAVEMENT OVER 6" RECYCLED CRUSHED CONCRETE OR CRUSHED AGGREGATE BASE COURSE
3. CRACK REPAIR AND FOG SEAL
4. 4'X4' CONCRETE SLAB 6" THICK SLOPE AT ¼":1' AWAY FROM BUILDING. PROVIDE EXPANSION JOINT AT BUILDING FACE.
5. CORNER: N=3467413.73 E=12206132.71
6. CORNER: N=3467416.41 E=12206175.12

LEGEND

DIRECTION OF FLOW

CENTERLINE OF SWALE

KEY MAP C



GRAPHIC SCALE

1"=25' 0 25' 50' 100'

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

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

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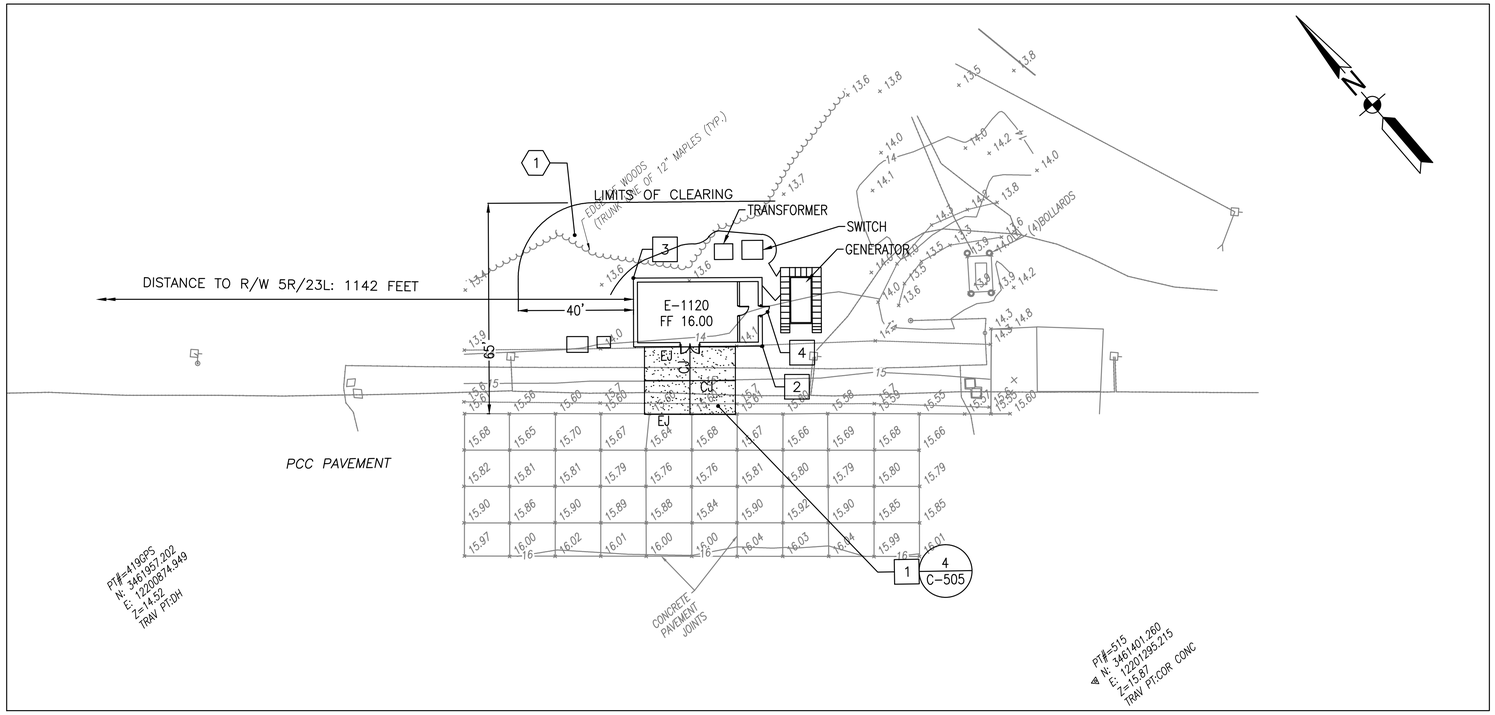
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
SITE PLAN – VAULT E-101

SCALE: AS NOTED
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691610
SHEET 62 OF 368
C-401

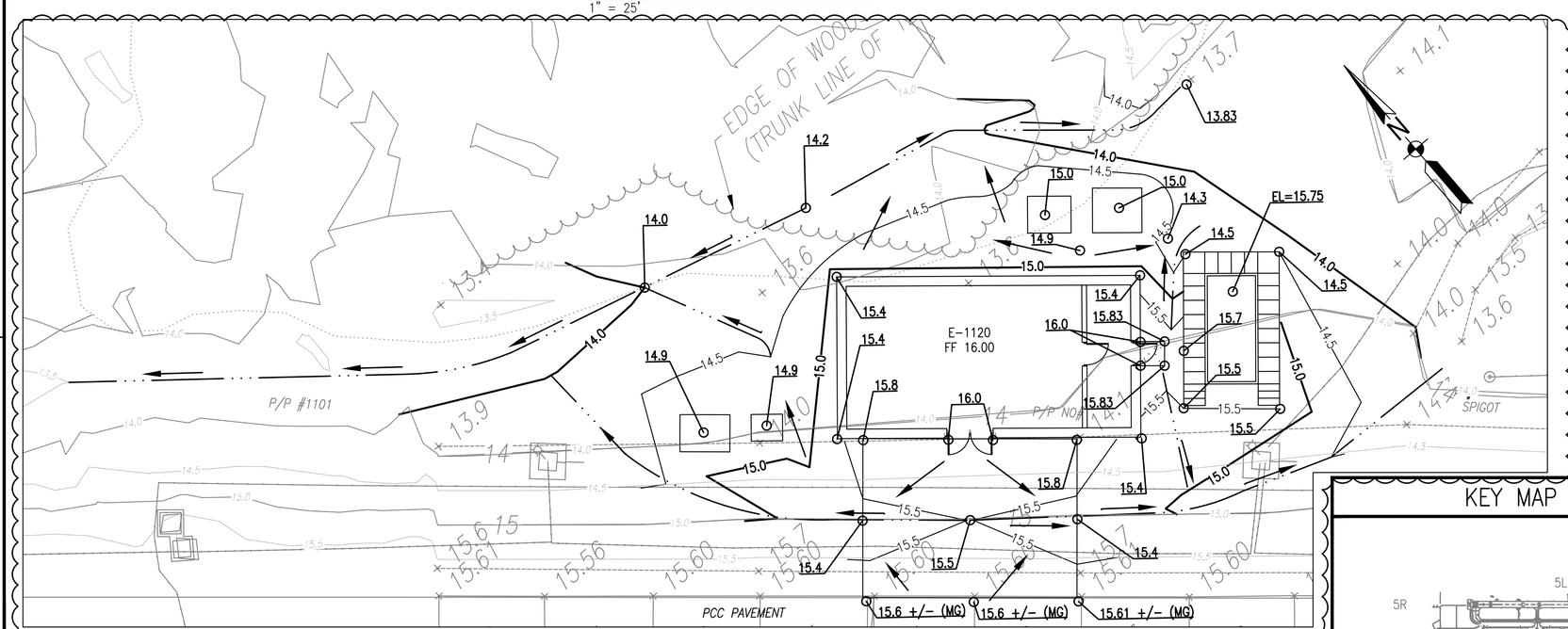
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: C:\Users\ddochille\Desktop\Vault Site Plans_42015 - Standard\Vault Site Plans_42015_recover.dwg LAYOUT NAME: E101 Site PLOTTED: Wednesday, April 29, 2015 - 10:55am USER: ddochille



VAULT E-1120 SITE PLAN

1" = 25'



VAULT E-1120 SITE GRADING PLAN

1" = 25'

GENERAL NOTES

1. REFER TO DRAWING C-123-B FOR ADDITIONAL WORK
2. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL WORK. SEE SHEETS S-403 AND A-403.
3. REFER TO ELECTRICAL DRAWING EA133-B AND E-407 FOR ADDITIONAL WORK
4. CONTRACTOR TO REPAIR ANY DAMAGE TO EXISTING SURFACES AND STRUCTURES TO ORIGINAL CONDITION
5. HYDROSEED ALL DISTURBED GRASS AREAS

DEMOLITION KEYNOTES

1. CLEAR AND GRUB TREES AND BRUSH

CONSTRUCTION KEYNOTES

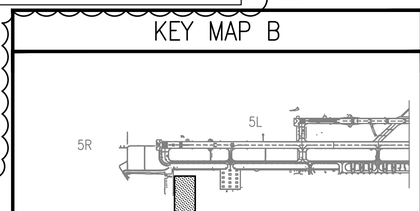
1. 22'X30' CONCRETE PAD. SLOPE AT $\frac{1}{4}$":1' AWAY FROM BUILDING. PROVIDE EXPANSION JOINT AT BUILDING FACE.
2. CORNER: N3461601.47 E12201266.07
3. CORNER: N3461556.69 E12201283.80
4. 4'X4' CONCRETE SLAB 6" THICK SLOPE AT $\frac{1}{4}$":1' AWAY FROM BUILDING. PROVIDE EXPANSION JOINT AT BUILDING FACE.

LEGEND

DIRECTION OF FLOW

CENTERLINE OF SWALE

KEY MAP B



GRAPHIC SCALE

1"=25' 0 25' 50' 100'

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

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
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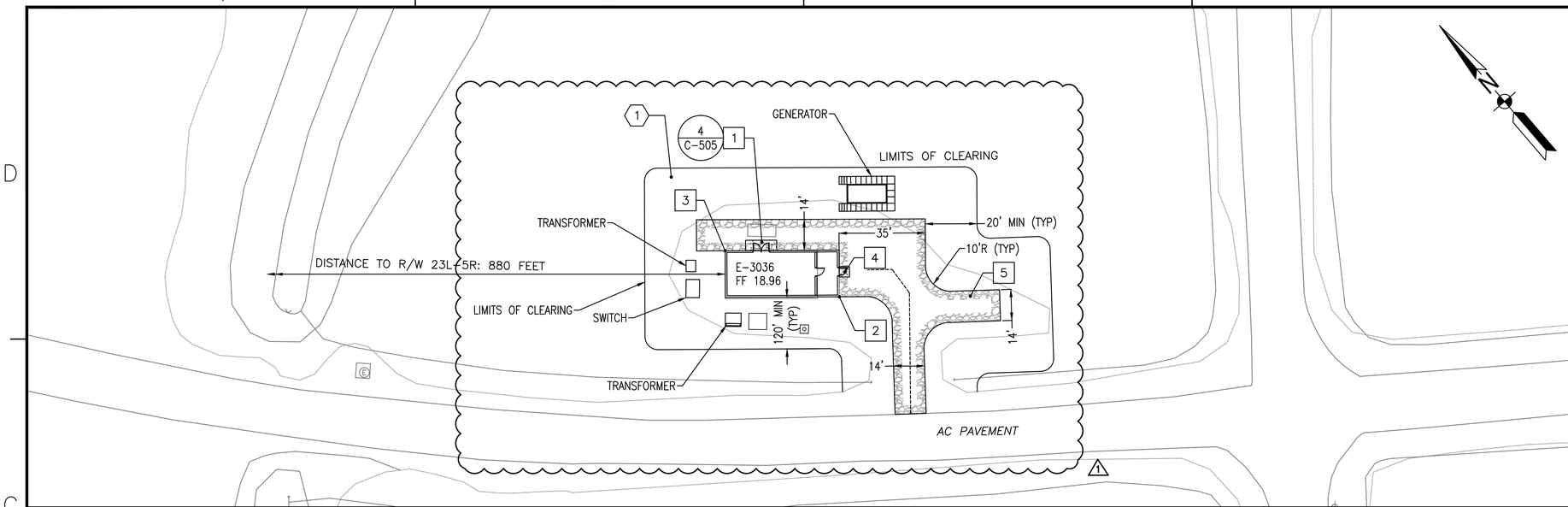
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
SITE PLAN – VAULT E-1120

SCALE: AS NOTED
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691611
SHEET 63 OF 368

C-402

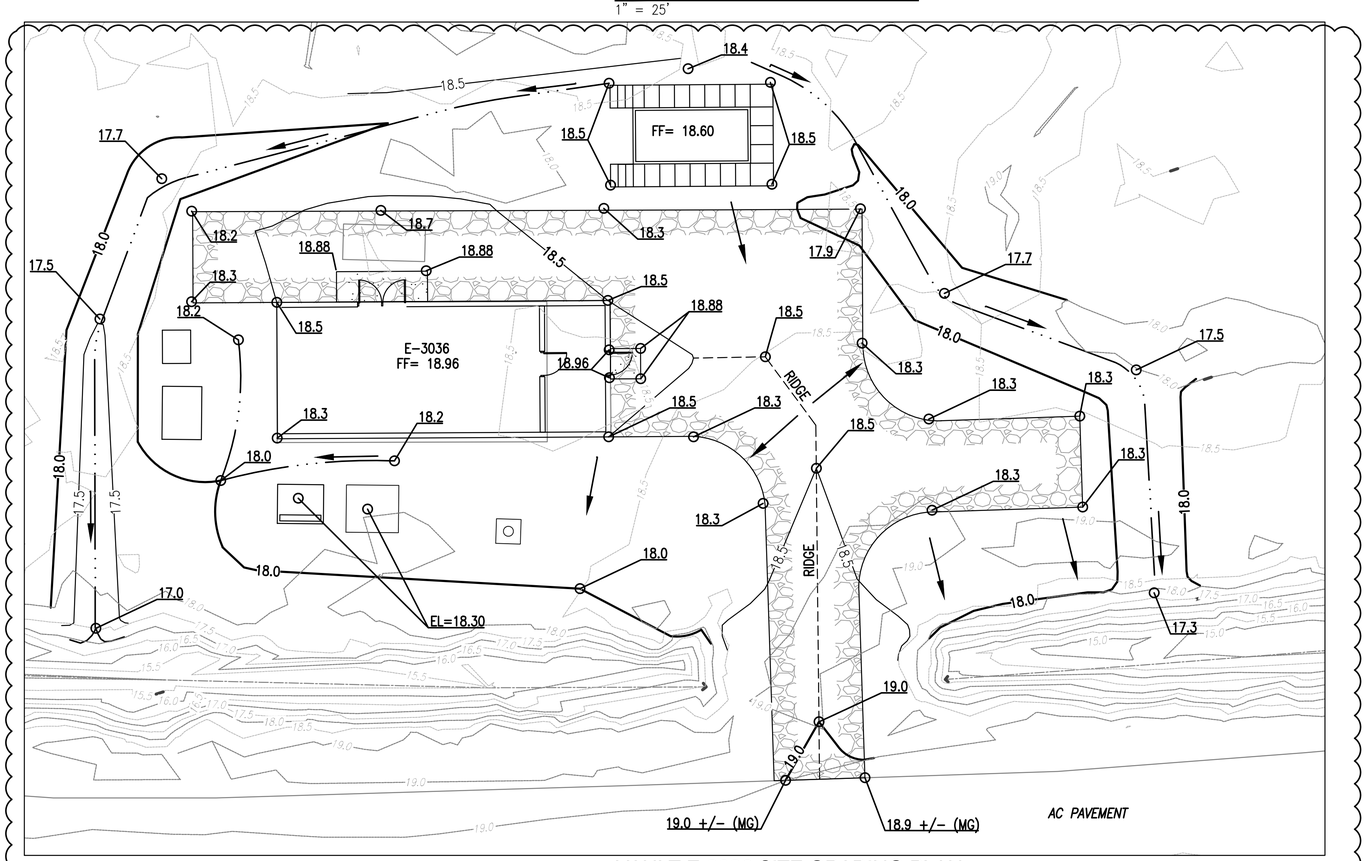
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: C:\Users\ddaschile\Desktop\Vault Site Plans_42015 - Standard\Vault Site Plans_42015_1120.dwg LAYOUT NAME: E1120 Site PLOTTED: Wednesday, April 29, 2015 - 11:02am USER: ddaschile



VAULT E-3036 SITE PLAN

1" = 25'



VAULT E-3036 SITE GRADING PLAN

1" = 10'

GENERAL NOTES

1. REFER TO DRAWING C-131-C FOR ADDITIONAL WORK
2. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL WORK
3. REFER TO ELECTRICAL DRAWING EA141-C AND E-401 FOR ADDITIONAL WORK
4. CONTRACTOR TO REPAIR ANY DAMAGE TO EXISTING SURFACES AND STRUCTURES TO ORIGINAL CONDITION
5. HYDROSEED ALL DISTURBED GRASS AREAS

DEMOLITION KEYNOTES

1. CLEAR AND GRUB TREES AND BRUSH

CONSTRUCTION KEYNOTES

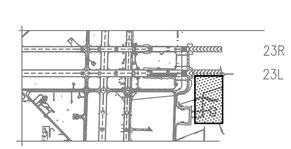
1. 12'X4' CONCRETE PAD. SLOPE AT ¼":1' AWAY FROM BUILDING. PROVIDE EXPANSION JOINT AT BUILDING FACE
2. CORNER: N3470936.41 E12208988.61
3. CORNER: N3470978.59 E12208966.69
4. 4'X4' CONCRETE SLAB 6" TH SLOPE AT ¼":1' AWAY FROM BUILDING. PROVIDE EXPANSION JOINT AT BUILDING FACE.
5. RCC ROAD 12" TH WITH GEOTEXTILE
6. CLEAR AND GRUB TREES AND BRUSH

LEGEND

DIRECTION OF FLOW

CENTERLINE OF SWALE

KEY MAP C



GRAPHIC SCALE

1"=25' 0 25' 50' 100'

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

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

NAVFAC

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES. WMM DRW MSC CHK MJT

PM/DM

BRANCH MANAGER

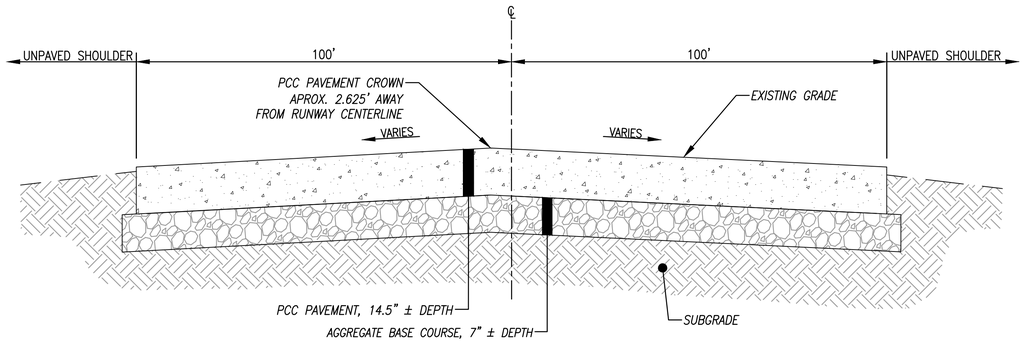
CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
SITE PLAN – VAULT E-3036

SCALE: AS NOTED
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12691612
SHEET 64 OF 368
C-403

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: C:\Users\ddochille\Desktop\Vault Site Plans_42015 – Standard\Vault Site Plans_42015_recover.dwg LAYOUT NAME: E3036 Site PLOTTED: Wednesday, April 29, 2015 – 10:58am USER: ddochille

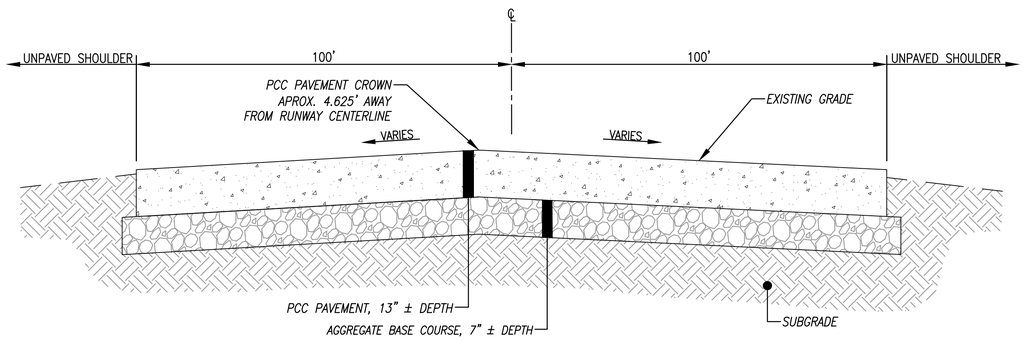


NOTE:

1. PAVEMENT DEPTHS ARE REPRESENTATIVE OF KEEL SECTION ONLY. INFORMATION PROVIDED BY GEOTECHNICAL INVESTIGATION. SEE CORE C-11 ON SHEET BB203.

RUNWAY 5R-23L - RW 5R END EXISTING PCC PAVEMENT SECTION (1)

NTS — C-120-B, C-121-B, C-122-B, C-124-B

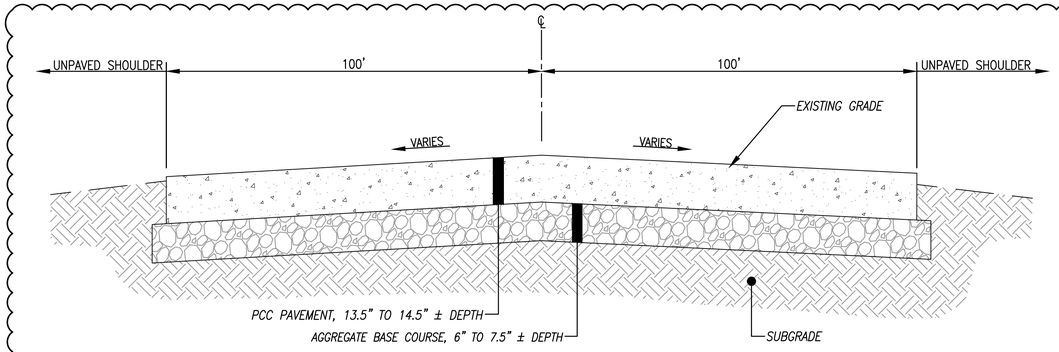


NOTE:

1. PAVEMENT DEPTHS ARE REPRESENTATIVE OF KEEL SECTION ONLY. INFORMATION PROVIDED BY GEOTECHNICAL INVESTIGATION. SEE CORE C-14 ON SHEET BB203.

RUNWAY 5R-23L - RW 23L END EXISTING PCC PAVEMENT SECTION (3)

NTS — C-128-C, C-129-C

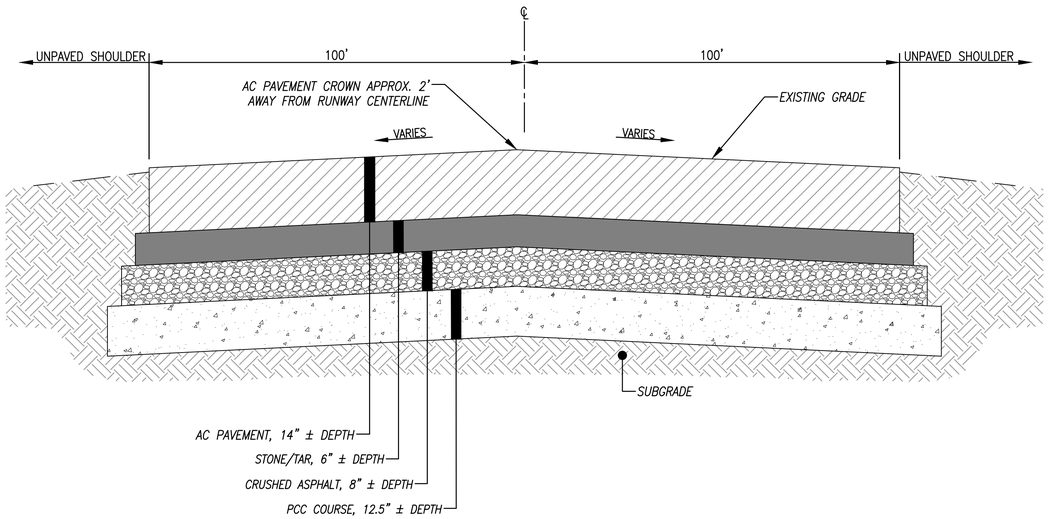


NOTE:

1. PAVEMENT DEPTHS ARE REPRESENTATIVE OF KEEL SECTION ONLY. INFORMATION PROVIDED BY GEOTECHNICAL INVESTIGATION. SEE CORE C-1 AND CORE C-3 ON SHEET BB202.

RUNWAY 14R-32L - RUNWAY 14R END AND 32L END EXISTING PCC PAVEMENT SECTION (5)

NTS — C-102-A, C-151-D

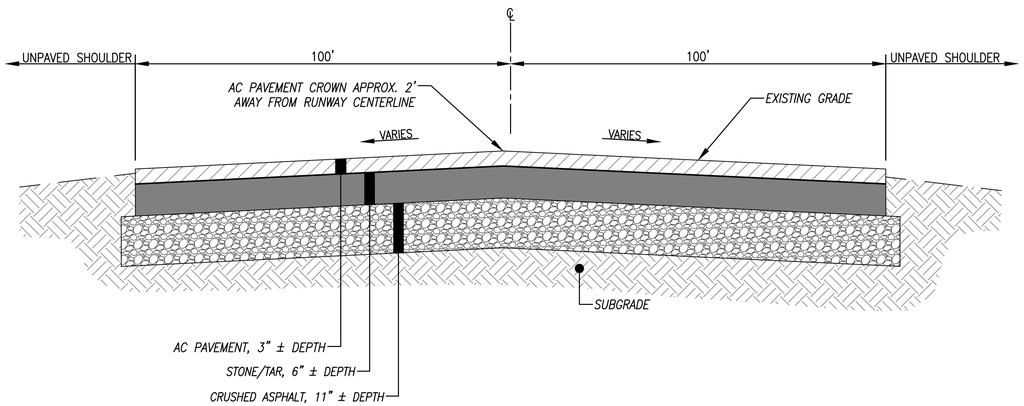


NOTE:

1. LIMITS OF PAVEMENT SECTION ARE UNKNOWN. INFORMATION PROVIDED BY GEOTECHNICAL INVESTIGATION. SEE CORE C-12 ON SHEET BB203.

RUNWAY 5R-23L EXISTING AC PAVEMENT SECTION (2)

NTS — C-124-B, C-125-B, C-126-C, C-127-C



NOTE:

1. LIMITS OF PAVEMENT SECTION ARE UNKNOWN. INFORMATION PROVIDED BY GEOTECHNICAL INVESTIGATION. SEE CORE C-13 ON SHEET BB203.

RUNWAY 5R-23L/14R-32L INTERSECTION EXISTING AC PAVEMENT SECTION (4)

NTS — C-127-C

NOTE:

1. THE PAVEMENT TYPES AND LAYER DEPTHS ARE DERIVED FROM BORING AND CORING INFORMATION. SEE SHEET B-001 FOR BORING AND CORING LOCATIONS. SEE SHEETS BB201 THROUGH BB203 FOR BORING AND CORING STRATA DESCRIPTIONS. PAVEMENT LAYER DEPTHS PROVIDED ARE APPROXIMATE BASED ON THE AVAILABLE DATA.
2. WHERE CORING AND BORING DATA DOES NOT EXIST, CONSTRUCTION HISTORY FROM THE AIRFIELD PAVEMENT CONDITION SURVEY PREPARED BY NAVFAC (FEBRUARY 2011) IS UTILIZED.
3. EXISTING CONDITION INFORMATION PROVIDED IS NOT A GUARANTEE OF ACTUAL FIELD CONDITIONS. THE EXISTING PAVEMENT DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE EXISTING PAVEMENT SECTIONS MAY VARY. THE CONTRACTOR SHALL COMPLETE DEMOLITION OF THE EXISTING SECTIONS IN THEIR ENTIRETY, REGARDLESS OF TYPE AND THICKNESS, AT NO ADDITIONAL COST TO THE GOVERNMENT.

SYM	DESCRIPTION	DATE	APPR
1	ADDED RUNWAY TYPICAL SECTION	4/29/15	MJT

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NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
EXISTING PAVEMENT SECTIONS

SCALE: AS NOTED

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

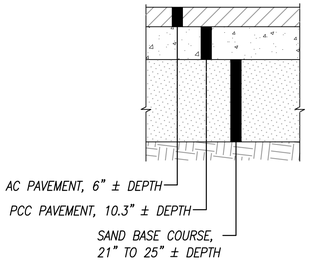
NAVFAC DRAWING NO.
12691613

SHEET 80 OF 368

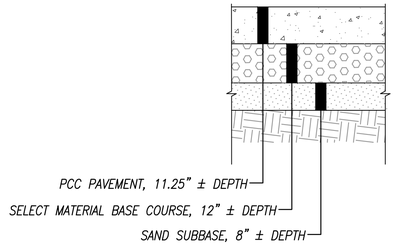
C-501

DRAWFORM REVISION: 10 MARCH 2009

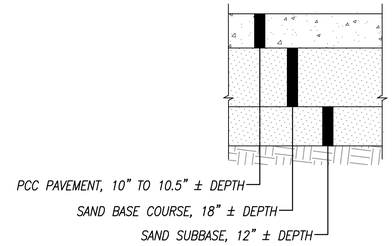
FILE NAME: Q:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-501.dwg LAYOUT NAME: C-501 PLOTTED: Tuesday, April 28, 2015 - 6:46pm USER: kwatson



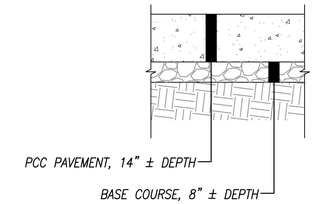
(T5-1) PAVEMENT SECTION 1
NTS C-133-B, C-135-B



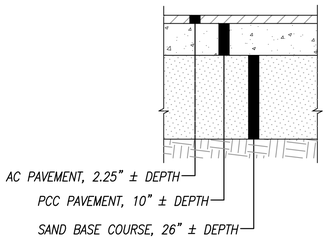
(HA5R2-1) PAVEMENT SECTION 2
NTS C-123-B



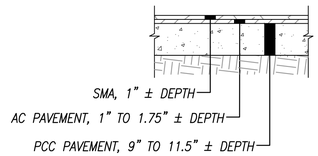
(HA14L-1, HA14R-1) HOLD AREA PAVEMENT SECTION 3
NTS C-102-A



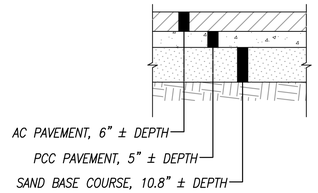
(HA5R1-1, HA23L-1, HA5L-1, HA23R-1) HOLD AREA PAVEMENT SECTION 4
NTS C-123-B, C-129-C, C-132-B



TAXIWAY A (T5-3)PAVEMENT SECTION 5
NTS C-139-C

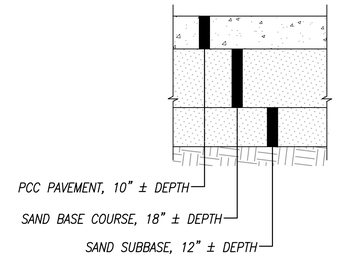


TAXIWAY D (DT-1) PAVEMENT SECTION 6
NTS C-138-C, C-150-D

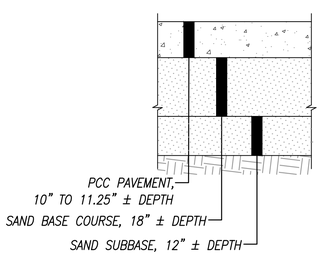


1

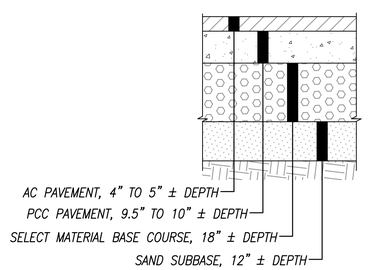
TAXIWAY F (FT-1) PAVEMENT SECTION 7
NTS C-112-B, C-125-B



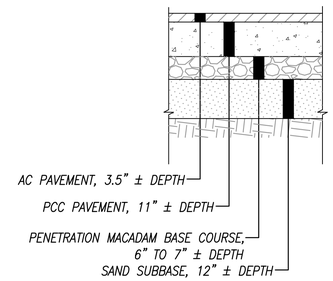
(T5-2A) PAVEMENT SECTION 8
NTS C-138-C



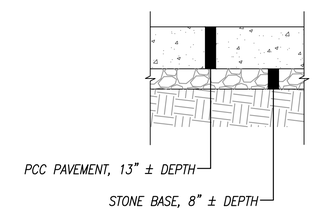
TAXIWAY B (T14-1) PAVEMENT SECTION 9
NTS C-114-C



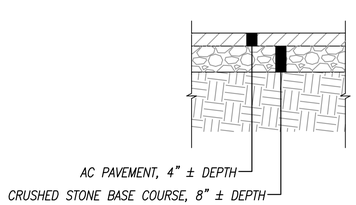
(T14-3A) PAVEMENT SECTION 10
NTS C-127-C



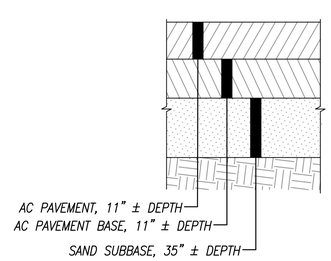
(T14-3) PAVEMENT SECTION 11
NTS C-114-C, C-127-C



(BP 23R-1) PAVEMENT SECTION 12
NTS C-116-C



(BP23R-3, OA5R-1) PAVEMENT SECTION 13
NTS C-129-C



(R14R-3) RUNWAY 14R-32L PAVEMENT SECTION 14
NTS C-144-C

1

NOTE:
1. THE PAVEMENT TYPES AND LAYER DEPTHS ARE DERIVED FROM BORING AND CORING INFORMATION. SEE SHEET B-001 FOR BORING AND CORING LOCATIONS. SEE SHEETS BB201 THROUGH BB203 FOR BORING AND CORING STRATA DESCRIPTIONS. PAVEMENT LAYER DEPTHS PROVIDED ARE APPROXIMATE BASED ON THE AVAILABLE DATA.
2. WHERE CORING AND BORING DATA DOES NOT EXIST, CONSTRUCTION HISTORY FROM THE AIRFIELD PAVEMENT CONDITION SURVEY PREPARED BY NAVFAC (FEBRUARY 2011) IS UTILIZED.
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SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

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A/E INFO

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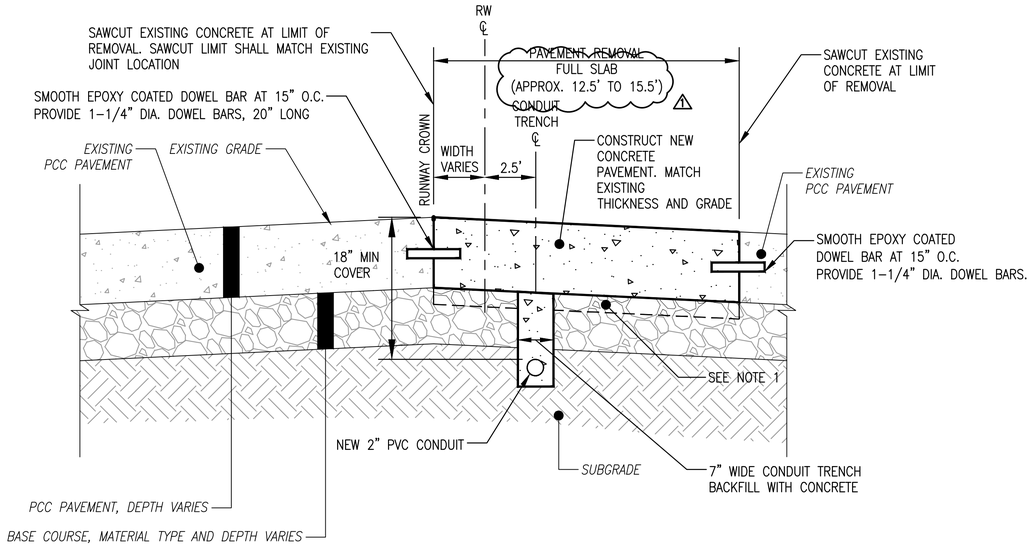
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA
HR IPT
NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
EXISTING PAVEMENT SECTIONS

SCALE: AS NOTED
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691615
SHEET 82 OF 368
C-503
DRAWFORM REVISION: 10 MARCH 2009

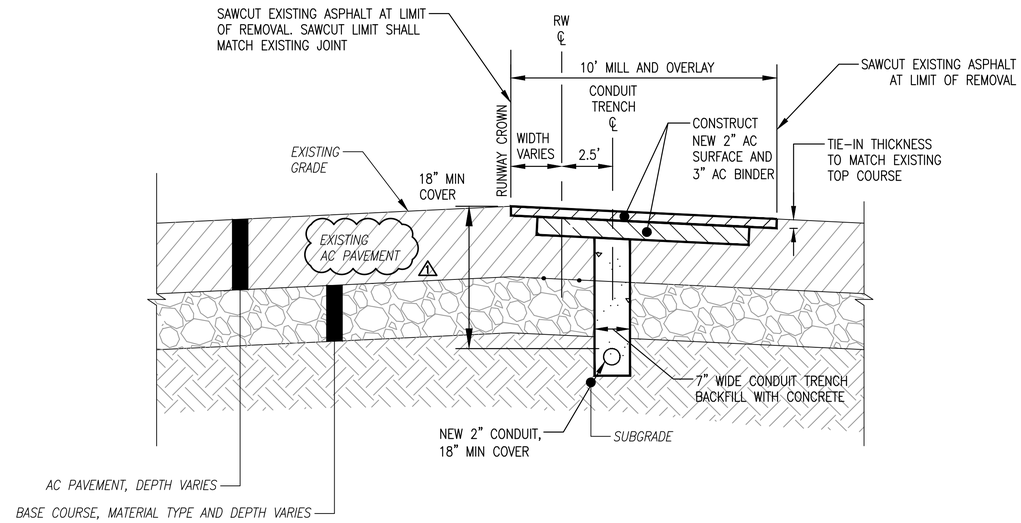
FILE NAME: Q:\PHIPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-503.dwg LAYOUT NAME: C-503 PLOTTED: Tuesday, April 28, 2015 - 6:47pm USER: kwatson



PCC AIRFIELD PAVEMENT SLAB RECONSTRUCTION - SECTION (1)

NTS C-102-A, C-110-B, C-116-C, C-120-B – C-125-B, C-128-C, C-129-C, C-135-B – C-137-B, C-138-C, C-150-D, C-151-D

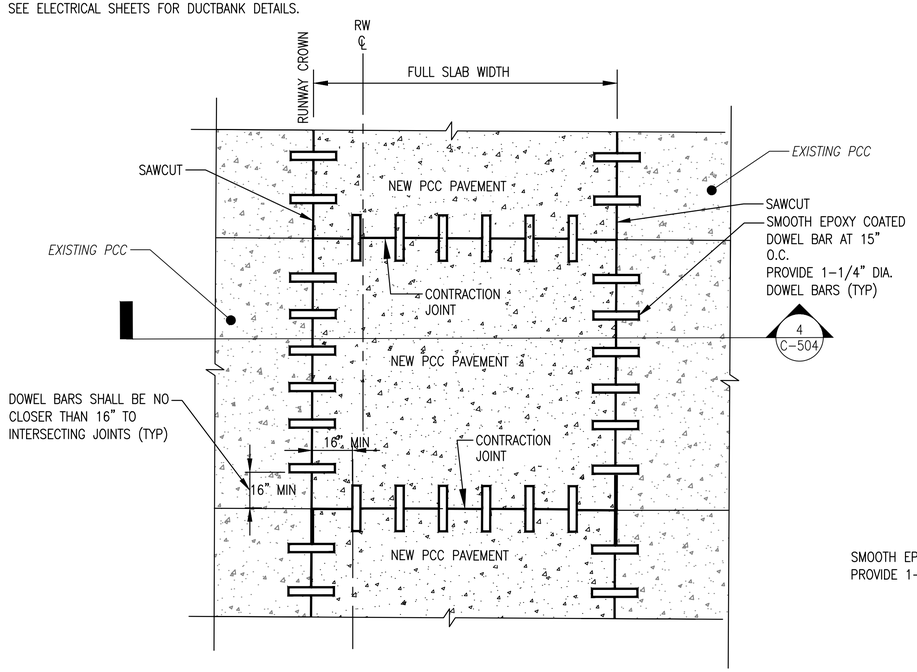
NOTES:
1. PRIOR TO PLACING CONCRETE, TEST BASE COURSE FOR REQUIRED COMPACTION. AS NECESSARY, REMOVE AND REPLACE BASE COURSE PER SPECIFICATION TO MEET COMPACTION REQUIREMENTS.
2. LOCATION OF RUNWAY CENTERLINE MAY NOT ALIGN WITH CROWN OF PAVEMENT OR CENTER SLAB JOINT AT ALL LOCATIONS. OFFSET CONDUIT TRENCH 2.5' FROM RUNWAY CENTERLINE AT ALL LOCATIONS.
3. SEE ELECTRICAL SHEETS FOR DUCTBANK DETAILS.



AC AIRFIELD PAVEMENT RECONSTRUCTION - SECTION (2)

NTS C-124-B, C-125-B, C-126-C, C-127-C, C-128-C

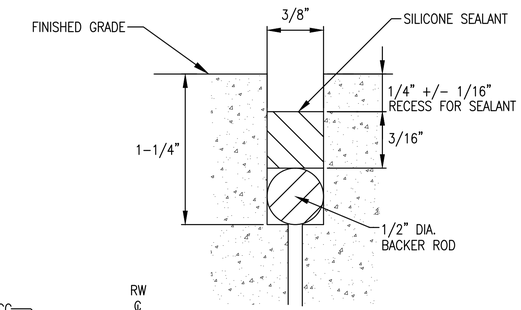
NOTES:
1. APPLY TACK COAT ON ALL MILLED SURFACES PRIOR TO PLACING AC PAVEMENT.
2. APPLY TACK COAT BETWEEN ALL AC PAVEMENT LIFTS.
3. APPLY TACK COAT ALONG THE VERTICAL JOINT BETWEEN AC PAVEMENTS.
4. SEE ELECTRICAL SHEETS FOR DUCTBANK DETAILS.



PCC AIRFIELD PAVEMENT RESTORATION JOINT DETAIL - PLAN VIEW (3)

NTS C-102-A, C-110-B, C-116-C, C-120-B – C-125-B, C-128-C, C-129-C, C-135-B – C-137-B, C-138-C, C-150-D, C-151-D

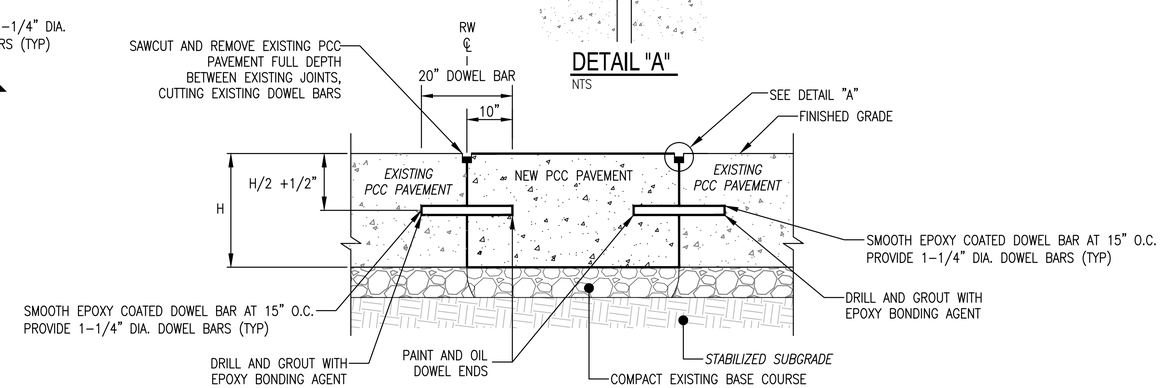
NOTES:
1. PRIOR TO PLACING, TEST BASE COURSE FOR REQUIRED COMPACTION. REMOVE AND REPLACE BASE COURSE TO MEET SPECIFICATION FOR COMPACTION.
2. LOCATION OF RUNWAY CENTERLINE MAY NOT ALIGN WITH CROWN OF PAVEMENT OR CENTER SLAB JOINT AT ALL LOCATIONS.
3. ALIGN NEW TRANSVERSE JOINTS WITH EXISTING TRANSVERSE JOINTS.



DETAIL "A"

NTS

NOTES:
1. SILICONE SEALANT SHALL BE DOW CORNING 890SL OR EQUIVALENT.
2. THE BACKER ROD SHALL BE CLOSED CELL POLYETHYLENE.
3. THE INITIAL SAWCUT SHALL BE MADE WITHIN 8 TO 10 HOURS OF THE CONCRETE PLACEMENT.
4. PRIOR TO PLACEMENT OF BACKER ROD AND SEALANT, JOINT SHALL BE WATER BLASTED TO REMOVE ALL CUTTING PASTE AND DEBRIS. PLACE BACKER ROD AND SEALANT IN DRY JOINT ONLY.



NEW PCC TO OLD PCC PAVEMENT JOINT DETAIL (4)

NTS C-102-A, C-110-B, C-116-C, C-120-B – C-125-B, C-128-C, C-129-C, C-135-B – C-137-B, C-138-C, C-150-D, C-151-D

NOTES:
1. NEW PCC PAVEMENT THICKNESS (H) MUST MATCH EXISTING PCC PAVEMENT THICKNESS.
2. PRIOR TO PLACING, TEST BASE COURSE FOR REQUIRED COMPACTION. REMOVE AND REPLACE BASE COURSE TO MEET SPECIFICATION FOR COMPACTION.
3. LOCATION OF RUNWAY CENTERLINE MAY NOT ALIGN WITH CROWN OF PAVEMENT OR CENTER SLAB JOINT AT ALL LOCATIONS.

SYM	DESCRIPTION	DATE	APPR
1	REVISED CALLOUTS DETAIL 1 AND 2	4/29/15	MJT

NAVFAC

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NAVAL FACILITIES ENGINEERING COMMAND
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NAVAL AIR STATION OCEANA
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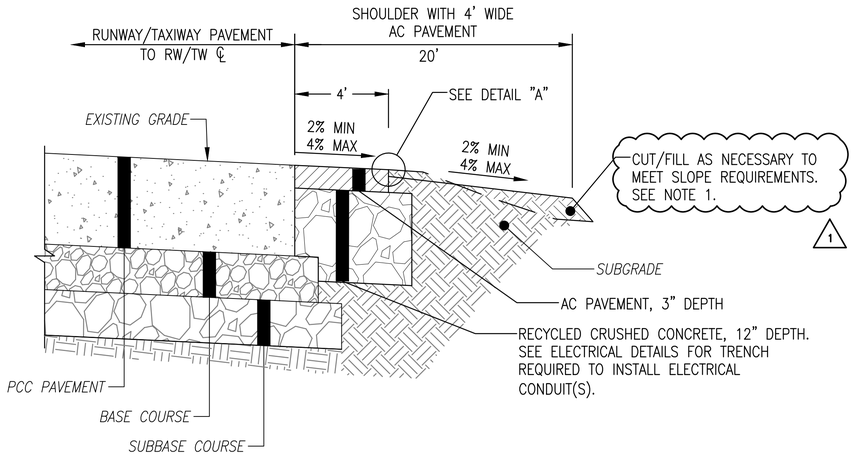
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
TYPICAL PAVEMENT SECTIONS AND CONSTRUCTION DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691616
SHEET 83 OF 368

C-504

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-504.dwg LAYOUT NAME: C-504 PLOTTED: Tuesday, April 28, 2015 - 6:47pm USER: kwatson

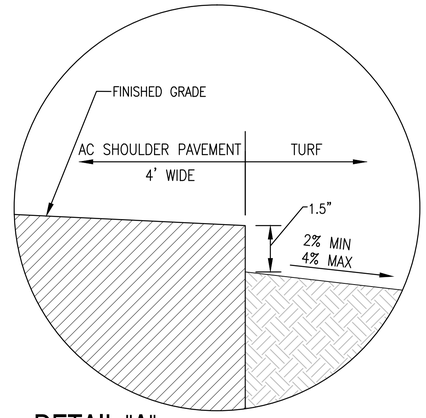


TYPICAL NEW AC SHOULDER AT PCC PAVEMENT (1)

NTS — ALL DEMOLITION AND CONSTRUCTION PLANS

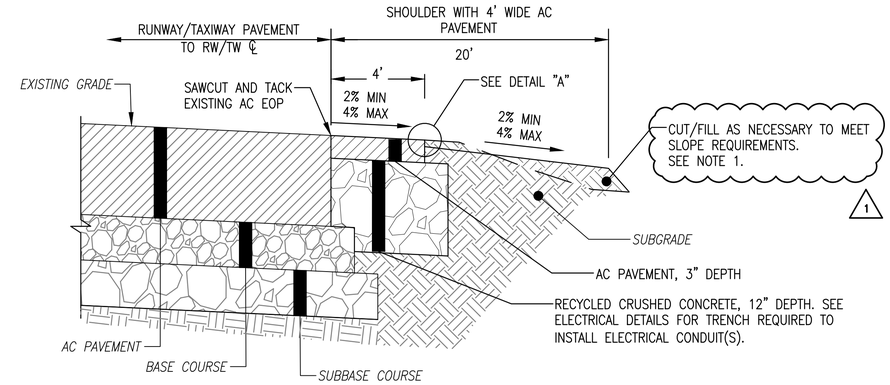
NOTE:

1. GRADE UNPAVED SHOULDER TO 20' WIDTH AS SHOWN. WHERE THE FINISHED GRADE TIE–IN TO EXISTING GRADE FALLS BEFORE THE 20' TRANSVERSE WIDTH, STABILIZE AND RESTORE THE EXISTING GRADE WITHIN THE 20' WIDE SOULDER. WHERE THE FINISHED GRADE TIE–IN IS BEYOND THE 20' TRANSVERSE GRADE, USE 3:1 CROSS–SLOPES TO CONSTRUCT THE TIE–IN
2. APPLY TACK COAT ALONG THE VERTICAL JOINT BETWEEN PCC AND AC PAVEMENTS
3. AT FUEL PITS AND APRON AREAS GRADING TO 20' WIDTH MAY NOT BE FEASIBLE OR NEEDED, AT THOSE LOCATIONS AND AS DIRECTED BY THE CONTRACTING OFFICER, GRADE TO 12' MINIMUM FROM THE APRON PAVEMENT.



DETAIL "A"

NTS

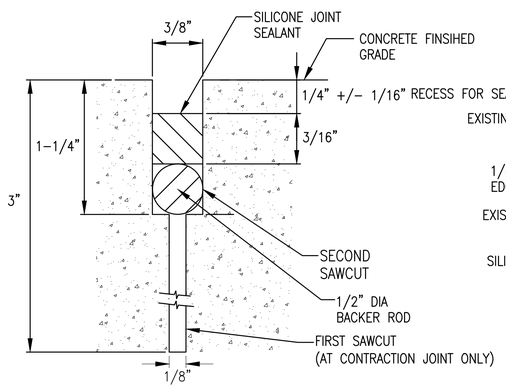


TYPICAL NEW AC SHOULDER AT AC PAVEMENT (2)

NTS — ALL DEMOLITION AND CONSTRUCTION PLANS

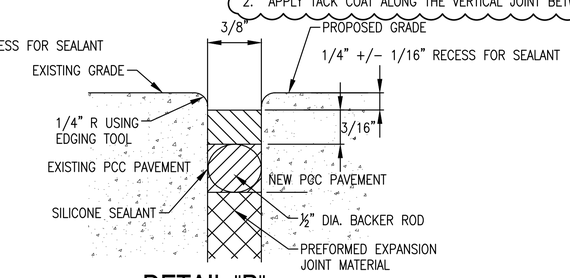
NOTES:

1. GRADE UNPAVED SHOULDER TO 20' WIDTH AS SHOWN. WHERE THE FINISHED GRADE TIE–IN TO EXISTING GRADE FALLS BEFORE THE 20' TRANSVERSE WIDTH, STABILIZE AND RESTORE THE EXISTING GRADE WITHIN THE 20' WIDE SOULDER. WHERE THE FINISHED GRADE TIE–IN IS BEYOND THE 20' TRANSVERSE GRADE, USE 3:1 CROSS–SLOPES TO CONSTRUCT THE TIE–IN.
2. APPLY TACK COAT ALONG THE VERTICAL JOINT BETWEEN AC PAVEMENTS.



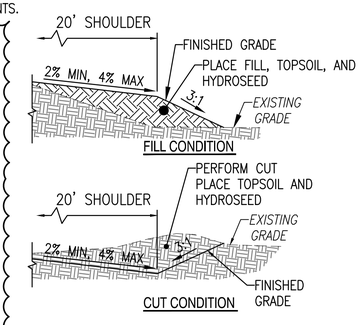
DETAIL "C"

NTS



DETAIL "B"

NTS



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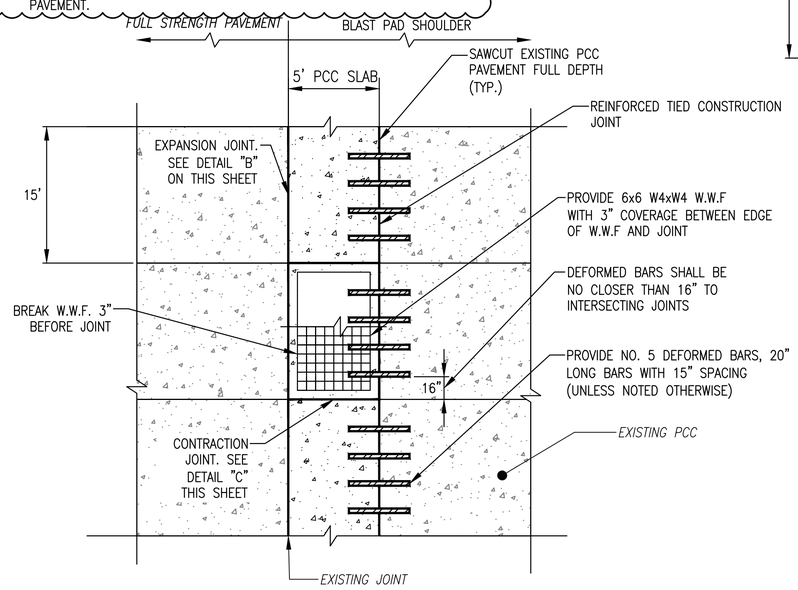
DETAIL "D"

NTS

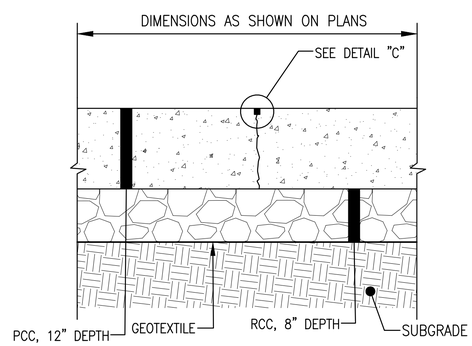


HOLD AREA EDGE LIGHTS PCC PAVEMENT UTILITY TRENCH RESTORATION (3)

NTS — C–102–A, C–110–B, C–116–C, C–120–B, C–129–C, C–132–B, C–152–D, C–141–C

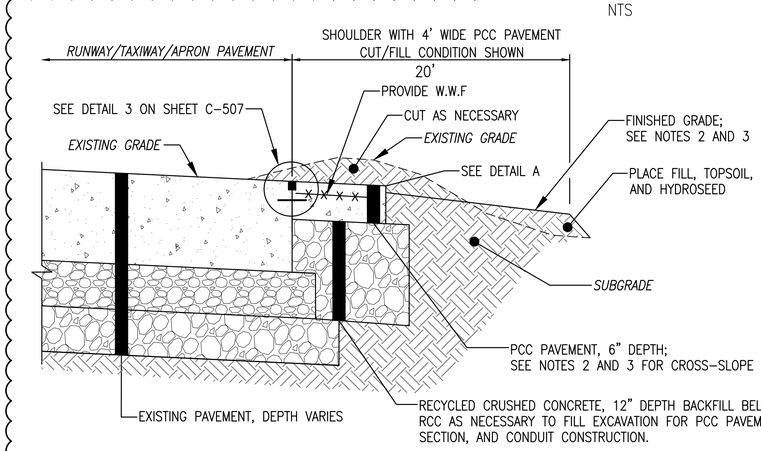
NOTE:

1. NEW PCC PAVEMENT THICKNESS (H) MUST MATCH EXISTING PCC BLAST PAD PAVEMENT THICKNESS.



VAULT CONCRETE PAD (4)

NTS



TYPICAL PCC SHOULDER WITH CUT/FILL CONDITION - BID OPTION 1 (5)

NTS

NOTES:

1. PROVIDE PCC SHOULDER AS BID OPTION FOR ALL NEW SHOULDER LOCATIONS ADJACENT TO EXISTING PCC PAVEMENT.
2. TRANSVERSE SLOPE FOR PAVED SHOULDER AT RUNWAY EDGES SHALL BE MINIMUM 2% AND MAXIMUM 3%. TRANSVERSE SLOPE FOR UNPAVED SHOULDER AT RUNWAYS SHALL BE MINIMUM 2% AND MAXIMUM 4%.
3. TRANSVERSE SLOPE FOR PAVED SHOULDER AT TAXIWAYS SHALL BE MINIMUM 2% AND MAXIMUM 4%. TRANSVERSE SLOPE FOR UNPAVED SHOULDER AT TAXIWAYS SHALL BE MINIMUM 2% AND MAXIMUM 4%.
4. SEE CROSS–SECTIONS FOR TRANSVERSE SLOPE AT SPECIFIC STATIONS.

SYM	DESCRIPTION	DATE	APPR
1	VARIOUS CHANGES	4/29/15	MJT

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A/E INFO

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES MJT DRW DFD CHK ELO

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT
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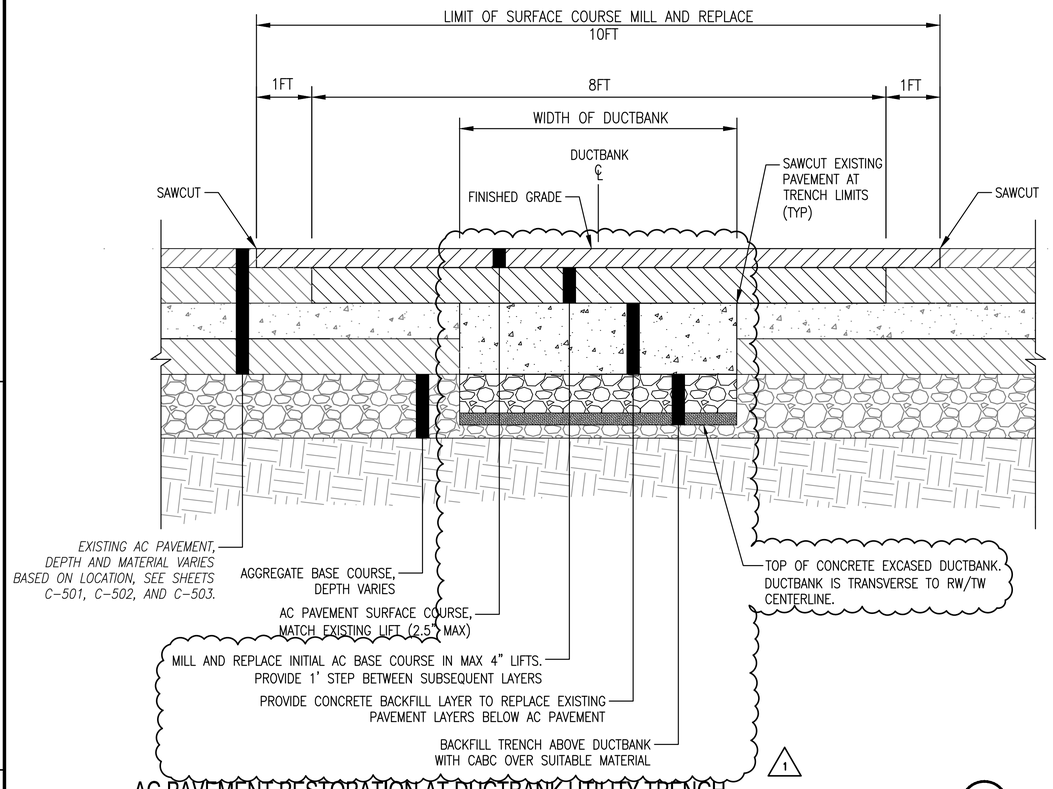
NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
TYPICAL PAVEMENT SECTIONS AND CONSTRUCTION DETAILS

SCALE: AS NOTED
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.: 12691617
SHEET 84 OF 368

C-505

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-505.dwg LAYOUT NAME: C-505 PLOTTED: Tuesday, April 28, 2015 - 6:47pm USER: kwatson



AC PAVEMENT RESTORATION AT DUCTBANK UTILITY TRENCH (1)

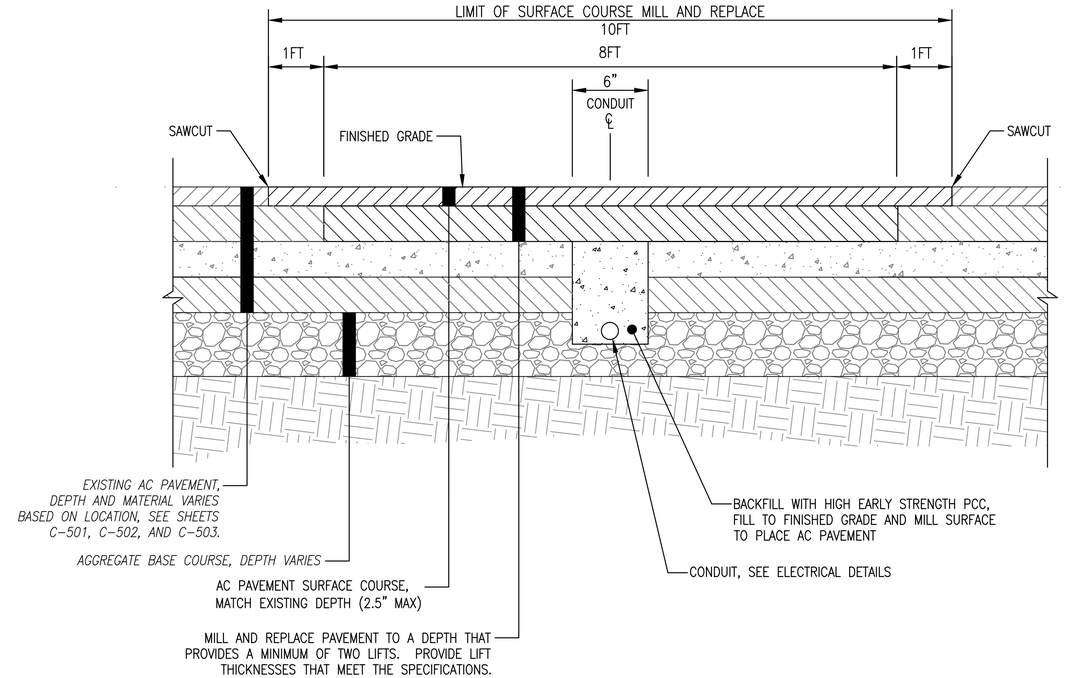
NTS

C-112-B, C-114-C, C-125-B, C-129-C, C-133-B, C-135-B, C-138-C, C-139-C, C-150-D, C-157-D

NOTES:

1. PLACE MINIMUM 6" TO MAXIMUM 12" CABC BELOW CONCRETE BACKFILL LAYER. WHERE OVER 12" EXISTS BETWEEN BOTTOM OF CONCRETE BACKFILL LAYER AND TOP OF THE CONCRETE ENCASED DUCTBANK, BACKFILL WITH SUITABLE MATERIAL.
2. SEE ELECTRICAL SHEETS FOR DUCTBANK DETAILS.
3. SEE SPECIFICATION SECTION 31 23 00.00 20 FOR DEWATERING REQUIREMENTS. CONTRACTOR SHALL PROTECT AND MAINTAIN BOTTOM OF EXCAVATION.
4. APPLY TACK COAT BETWEEN ALL AC PAVEMENT LIFTS.
5. APPLY TACK COAT ON ALL MILLED SURFACES PRIOR TO PLACING AC PAVEMENT.
6. APPLY TACK COAT ALONG THE VERTICAL JOINT BETWEEN AC PAVEMENTS.

1

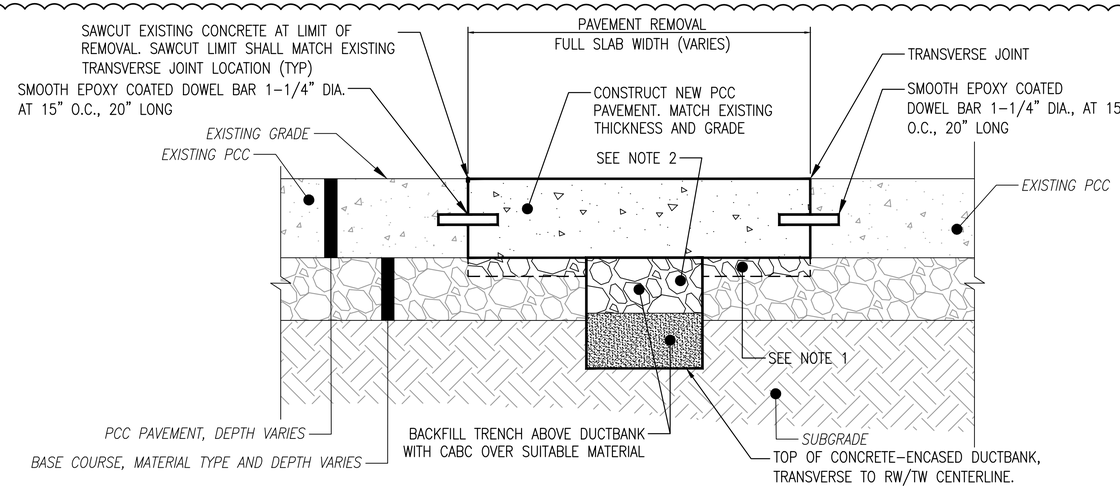


AC PAVEMENT RESTORATION AT LIGHTING CONDUIT UTILITY TRENCH (2)

NTS

NOTES:

1. SEE ELECTRICAL SHEETS FOR DUCTBANK DETAILS.
2. SEE SPECIFICATION SECTION 31 23 00.00 20 FOR DEWATERING REQUIREMENTS. CONTRACTOR SHALL PROTECT AND MAINTAIN BOTTOM OF EXCAVATION.
3. APPLY TACK COAT BETWEEN ALL AC PAVEMENT LIFTS.
4. APPLY TACK COAT ON ALL MILLED SURFACES PRIOR TO PLACING AC PAVEMENT.
5. APPLY TACK COAT ALONG THE VERTICAL JOINT BETWEEN AC PAVEMENTS.



PCC PAVEMENT RESTORATION AT DUCTBANK UTILITY TRENCH (3)

NTS

NOTES:

1. PRIOR TO PLACING CONCRETE, TEST BASE COURSE FOR REQUIRED COMPACTION. AS NECESSARY, REMOVE AND REPLACE BASE COURSE PER SPECIFICATION TO MEET COMPACTION REQUIREMENTS.
2. PLACE A MINIMUM 12" CABC BELOW NEW PCC PAVEMENT. WHERE LESS THAN 12" EXISTS BETWEEN THE TOP OF CONCRETE ENCASED DUCTBANK AND BOTTOM OF NEW CONCRETE PAVEMENT, PROVIDE CONCRETE BACKFILL OF TRENCH.
3. DOWEL BARS SHALL BE NO CLOSER THAN 16" TO INTERSECTING JOINTS.
4. SEE ELECTRICAL SHEETS FOR DUCTBANK DETAILS.

1

SYM	DESCRIPTION	DATE	APPR
1	REVISED UTILITY TRENCH DETAIL	4/29/15	MJT

NAVFAC

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A/E INFO

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BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
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NAVAL AIR STATION OCEANA VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
CONSTRUCTION DETAILS

SCALE: AS NOTED

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

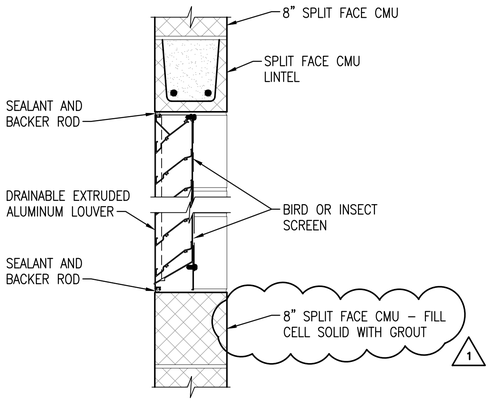
NAVFAC DRAWING NO.
12691618

SHEET 85 OF 368

C-506

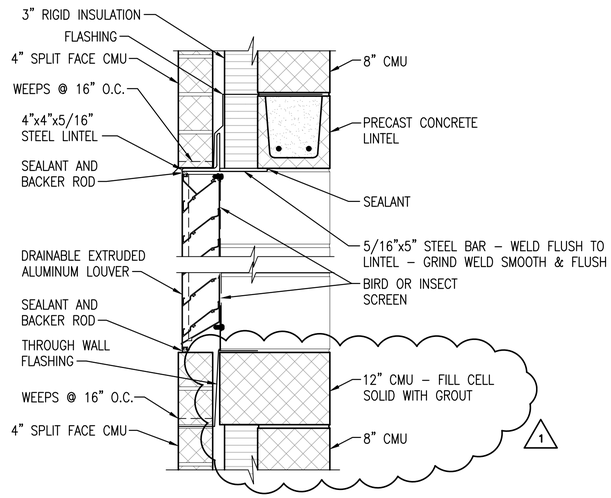
DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G:\PHPA\99_ Misc\Aviation\Oceana\Task 008\GENERAL-CIVIL_Task 008\10-0863-008-C-506.dwg LAYOUT NAME: C-506 PLOTTED: Wednesday, April 29, 2015 - 7:17am USER: kwatson



VAULT E-3036 (PHASE 2) LOUVER DETAIL (1)

SCALE: 1 1/2"=1'-0" A-501



VAULT E-101 (PHASE 1) & E-1120 (PHASE 2) LOUVER DETAIL (2)

SCALE: 1 1/2"=1'-0" A-502, A-503

GRAPHIC SCALE

1 1/2"=1'-0" 3 2 1 0 3" 6" 12" 24"

SYM	DESCRIPTION	DATE	APPR
1	REVISED LOUVER DETAILS	4/29/15	JRS

NAVFAC

SEAL

A/E INFO

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ACTIVITY

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DES DRE DRW DRE CHK JRS

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CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
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VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-3036, E-101 & E-1120 MISCELLANEOUS DETAILS

SCALE: AS SHOWN

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

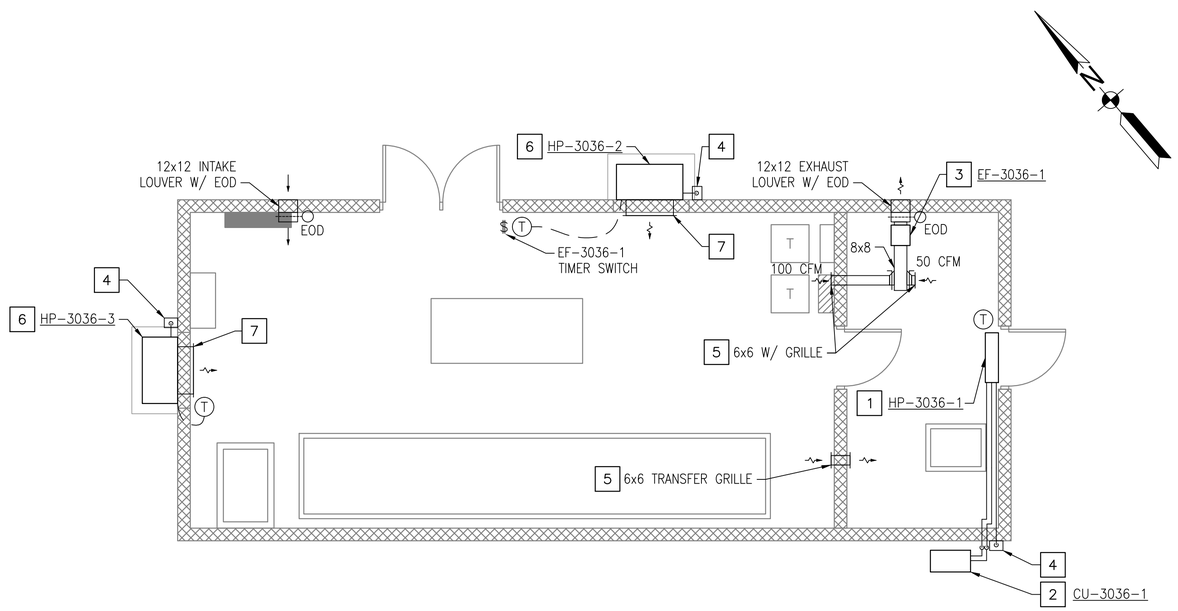
NAVFAC DRAWING NO. 12691642

SHEET 109 OF 368

A-602

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Architectural\Phase1\Task 008\10-0863-008-A-602.dwg LAYOUT NAME: Layout1 PLOTTED: Thursday, April 23, 2015 - 7:41am USER: jrothe



VAULT E-3036 - MECHANICAL PLAN

SCALE: 1/4"= 1'-0"

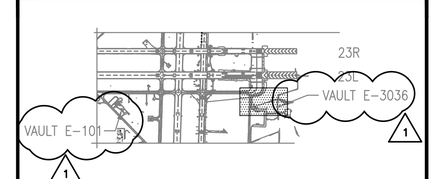
GENERAL SHEET NOTES

1. REFER TO DRAWING M-001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK.
3. REFER TO DRAWING ED402 FOR DEMOLITION WORK PLAN AND NOTES.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF WORK AS INDICATED ON DRAWING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
5. DAMAGE TO EXISTING FACILITIES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
7. PIPING ON THIS SHEET IS INTENDED TO BE DIAGRAMMATIC. COORDINATE WITH FIELD CONDITIONS FOR EXACT PIPE ROUTING. SEE MECHANICAL DETAILS ON DRAWING M-501 FOR CONNECTION DETAILS.
8. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL EQUIPMENT. SEE DRAWING E-403 FOR EQUIPMENT LOCATIONS.
9. REFER TO EQUIPMENT SCHEDULES ON DRAWING M-601 FOR ADDITIONAL INFORMATION.
10. THE WORK SHOWN ON THIS DRAWING IS TO BE COMPLETED UNDER PHASE 2.

CONSTRUCTION KEYNOTES

1. PROVIDE DUCTLESS HEAT PUMP SPLIT SYSTEM WITH PIPING AND CONTROLS. REFER TO DETAIL 2 ON DRAWING M-501 AND SCHEDULE ON DRAWING M-601.
2. INSTALL WALL-MOUNTED CONDENSING UNIT OUTDOORS. REFER TO MECHANICAL DETAIL 3 ON DRAWING M-501 FOR ADDITIONAL INFORMATION.
3. SUPPORT EXHAUST FAN FROM STRUCTURE ABOVE. COORDINATE EXHAUST FAN HEIGHT WITH ARCHITECTURAL LOUVER HEIGHT. FAN SHALL BE CONTROLLED BY WALL-MOUNTED TIMER SWITCH.
4. PROVIDE SPLASH BLOCK AT GRADE FOR CONDENSATE PIPING. PIPING SHALL BE LINE SIZE OF EQUIPMENT OUTLET.
5. PROVIDE WITH 6x6 GRILLE. BOTTOM OF GRILLE MIN. 9'-4" ABOVE FINISHED FLOOR.
6. PROVIDE WALL-MOUNTED PACKAGED HEAT PUMP UNIT. INSTALL 3 FEET ABOVE GRADE ON CONCRETE PEDESTAL. COORDINATE WITH STRUCTURAL DRAWINGS S-401 AND S-502. SEE DETAIL 6 ON DRAWING M-501 FOR ADDITIONAL INFORMATION. 1
7. PROVIDE 30x10 SUPPLY AND 30x16 RETURN GRILLE.

KEY MAP C



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

STM	DESCRIPTION	DATE	APPR
1	REVISED KEYNOTE	4/29/15	MJG

NAVFAC

SEAL

A/E INFO

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ACTIVITY

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DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
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VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
VAULT E-3036 – MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

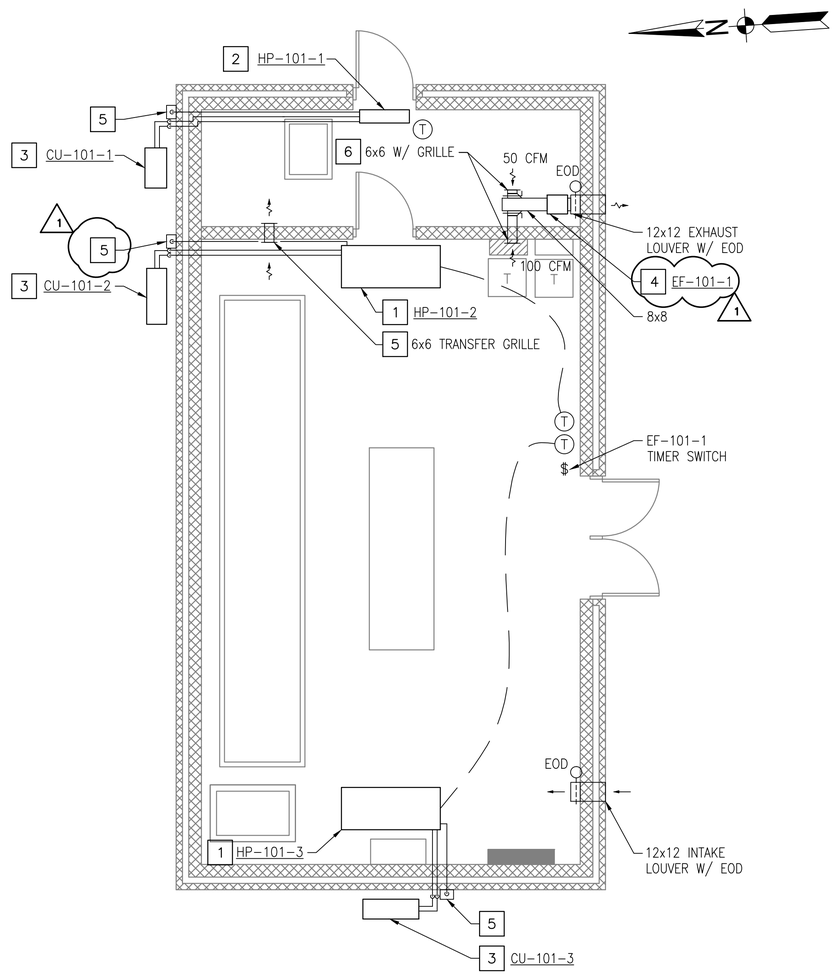
NAVFAC DRAWING NO.
12691644

SHEET 111 OF 368

M-401

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Mechanical\Planset\Task 008\10-0863-008-M-401.dwg LAYOUT NAME: M-401 PLOTTED: Thursday, April 23, 2015 - 7:40am USER: jrathe



VAULT E-101 - MECHANICAL PLAN

SCALE: 1/4"= 1'-0"

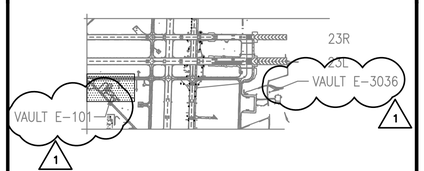
GENERAL SHEET NOTES

1. REFER TO DRAWING M-001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF WORK AS INDICATED ON DRAWING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
4. DAMAGE TO EXISTING FACILITIES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
6. PIPING ON THIS SHEET IS INTENDED TO BE DIAGRAMMATIC. COORDINATE WITH FIELD CONDITIONS FOR EXACT PIPE ROUTING. SEE MECHANICAL DETAILS ON DRAWING M-501 FOR CONNECTION DETAILS.
7. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL EQUIPMENT. SEE DRAWING E-406 FOR EQUIPMENT LOCATIONS.
8. INSTALL SPLIT SYSTEM INDOOR UNIT AND ASSOCIATED PIPING MINIMUM OF 9'-6" ABOVE FINISHED FLOOR.
9. REFER TO EQUIPMENT SCHEDULES ON DRAWING M-601 FOR MORE INFORMATION.
10. THE WORK SHOWN ON THIS DRAWING IS TO BE COMPLETED UNDER PHASE 1.

CONSTRUCTION KEYNOTES

1. PROVIDE DUCTLESS HEAT PUMP SPLIT SYSTEM WITH PIPING AND CONTROLS. REFER TO DETAIL 1 ON DRAWING M-501 AND SCHEDULE ON DRAWING M-601. INSTALL SPLIT SYSTEM INDOOR UNIT AND ASSOCIATED PIPING MINIMUM OF 9'-6" ABOVE FINISHED FLOOR.
2. PROVIDE DUCTLESS HEAT PUMP SPLIT SYSTEM WITH PIPING AND CONTROLS. REFER TO DETAIL 2 ON DRAWING M-501 AND SCHEDULE ON DRAWING M-601.
3. INSTALL WALL-MOUTED CONDENSING UNIT OUTDOORS. REFER TO MECHANICAL DETAIL 3 ON DRAWING M-501 FOR ADDITIONAL INFORMATION.
4. SUPPORT EXHAUST FAN FROM STRUCTURE ABOVE. COORDINATE EXHAUST FAN HEIGHT WITH ARCHITECTURAL LOUVER HEIGHT. FAN SHALL BE CONTROLLED BY WALL-MOUNTED TIMER SWITCH.
5. PROVIDE SPLASH BLOCK AT GRADE FOR CONDENSATE PIPING. PIPING SHALL BE LINE SIZE OF EQUIPMENT OUTLET. COORDINATE PIPE ROUTING WITH ELECTRICAL EQUIPMENT.
6. PROVIDE WITH 6x6 GRILLE. BOTTOM OF GRILLE MIN. 9'-4" ABOVE FINISHED FLOOR.

KEY MAP C



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

SYM	DESCRIPTION	DATE	APPR
1	REVISED KEYNOTE	4/29/15	MJG

NAVFAC

SEAL

A/E INFO

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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL AIR STATION OCEANA ~ VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-101 - MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

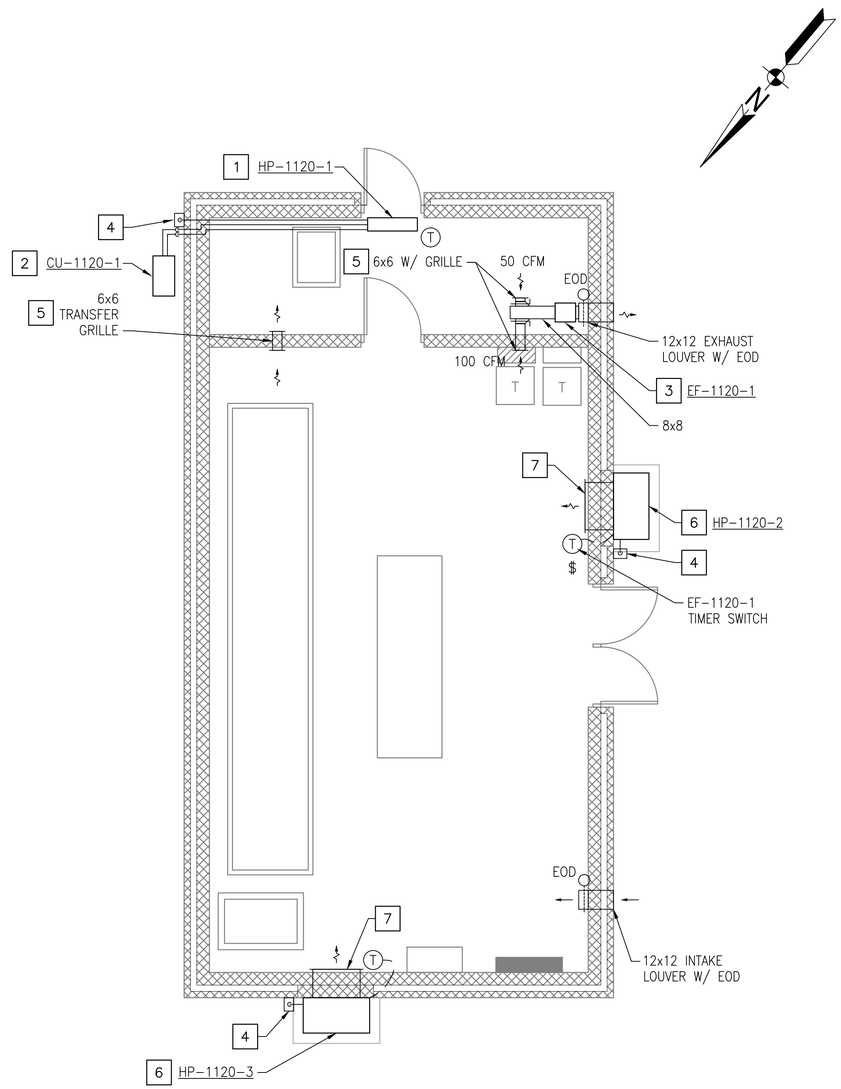
NAVFAC DRAWING NO.
12691645

SHEET 112 OF 368

M-402

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Mechanical\Planset\Task 008\10-0863-008-M-402.dwg LAYOUT NAME: M-402 PLOTTED: Thursday, April 23, 2015 - 7:40am USER: jrothe



VAULT E-1120 - MECHANICAL PLAN

SCALE: 1/4"= 1'-0"

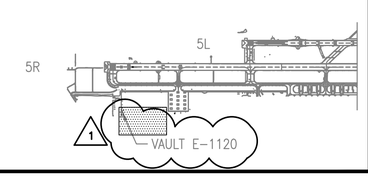
GENERAL SHEET NOTES

1. REFER TO DRAWING M-001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. REFER TO ARCHITECTURAL, CIVIL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF WORK AS INDICATED ON DRAWING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
4. DAMAGE TO EXISTING FACILITIES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
6. PIPING ON THIS SHEET IS INTENDED TO BE DIAGRAMMATIC. COORDINATE WITH FIELD CONDITIONS FOR EXACT PIPE ROUTING. SEE MECHANICAL DETAILS ON DRAWING M-501 FOR CONNECTION DETAILS.
7. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL EQUIPMENT. SEE DRAWING E-409 FOR EQUIPMENT LOCATIONS.
8. REFER TO EQUIPMENT SCHEDULES ON DRAWING M-601 FOR ADDITIONAL INFORMATION.
9. THE WORK SHOWN ON THIS DRAWING IS TO BE COMPLETED UNDER PHASE 2.

CONSTRUCTION KEYNOTES

1. PROVIDE DUCTLESS HEAT PUMP SPLIT SYSTEM WITH PIPING AND CONTROLS. REFER TO DETAIL 2 ON DRAWING M-501 AND SCHEDULE ON DRAWING M-601.
2. INSTALL WALL-MOUNTED CONDENSING UNIT OUTDOORS. REFER TO MECHANICAL DETAIL 3 ON DRAWING M-501 FOR ADDITIONAL INFORMATION.
3. SUPPORT EXHAUST FAN FROM STRUCTURE ABOVE. COORDINATE EXHAUST FAN HEIGHT WITH ARCHITECTURAL LOUVER HEIGHT. FAN SHALL BE CONTROLLED BY WALL-MOUNTED TIMER SWITCH.
4. PROVIDE SPLASH BLOCK AT GRADE FOR CONDENSATE PIPING. PIPING SHALL BE LINE SIZE OF EQUIPMENT OUTLET.
5. PROVIDE WITH 6x6 GRILLE. BOTTOM OF GRILLE MIN. 9'-4" ABOVE FINISHED FLOOR.
6. PROVIDE WALL-MOUNTED PACKAGED HEAT PUMP UNIT. INSTALL 3 FEET ABOVE GRADE ON CONCRETE PEDESTAL. COORDINATE WITH STRUCTURAL DRAWINGS S-403 AND S-501. SEE DETAIL 6 ON DRAWING M-501 FOR ADDITIONAL INFORMATION. (1)
7. PROVIDE 30x10 SUPPLY AND 30x16 RETURN GRILLE.

KEY MAP B



GRAPHIC SCALE

1/4"=1'-0"

1' 0 2' 4' 8'

SYM	DESCRIPTION	DATE	APPR
1	REVISED KEYNOTE	4/29/15	MJG

SEAL

A/E INFO

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ACTIVITY

SATISFACTORY TO DATE

DES KC DRW KC CHK MJG

PM/DM

BRANCH MANAGER

CHIEF ENG/ARCH

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
HR IPT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL AIR STATION OCEANA – VIRGINIA BEACH, VIRGINIA

NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA

ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2

VAULT E-1120 – MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.
12691646

SHEET 113 OF 368

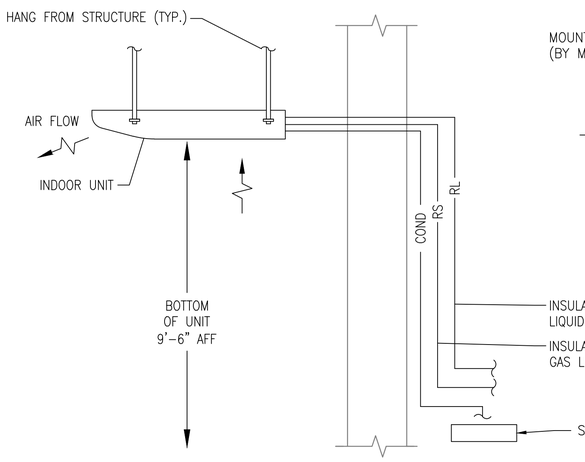
M-403

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Mechanical\Planset\Task 008\10-0863-008-M-403.dwg LAYOUT NAME: M-403 PLOTTED: Thursday, April 23, 2015 - 7:39am USER: jrothe

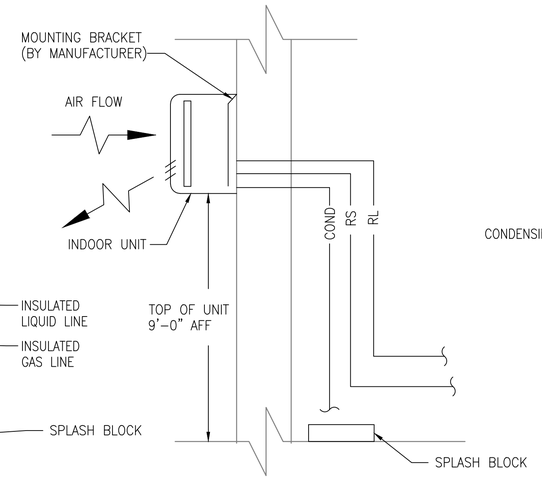
GENERAL SHEET NOTES

1. THE WORK SHOWN ON THIS DRAWING IS COMMON TO BOTH PHASE 1 AND PHASE 2.



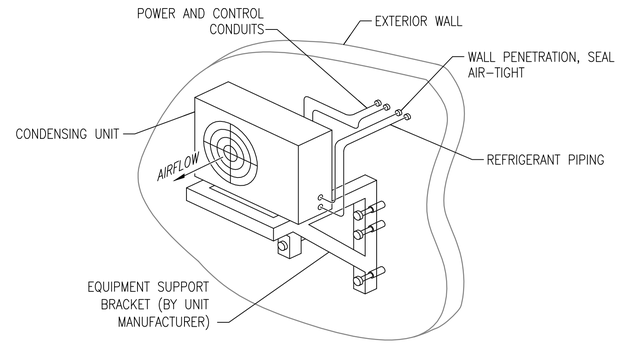
1. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MOUNTING AND REFRIGERANT PIPING DETAILS.
2. REFER TO MECHANICAL PLANS FOR REFRIGERANT PIPE ROUTING.
3. COORDINATE INSTALLATION OF UNIT WITH CLEARANCE REQUIREMENTS OF ELECTRICAL EQUIPMENT.

HEAT PUMP INDOOR UNIT DETAIL (1)
NTS



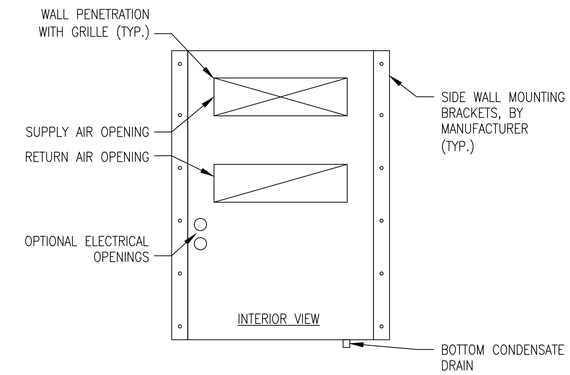
1. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MOUNTING AND REFRIGERANT PIPING DETAILS
2. REFER TO THIS SHEET FOR REFRIGERANT PIPE ROUTING.

HEAT PUMP INDOOR UNIT DETAIL (2)
NTS



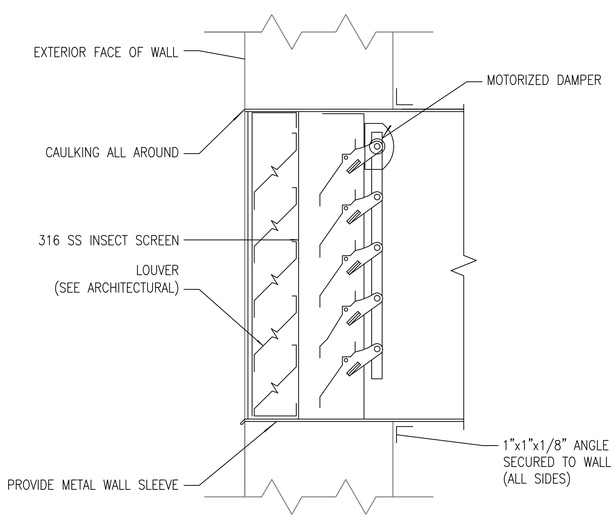
1. MOUNT UNIT 6" MINIMUM FROM MOUNTING WALL.
2. MOUNT TO WALL TO PROVIDE 3 FEET OF CLEARANCE FROM GRADE TO BOTTOM OF UNIT.
3. REFER TO MECHANICAL PLANS FOR GENERAL REFRIGERANT PIPE ROUTING.
4. PIPING SHALL BE INSULATED. SEE SPECIFICATIONS FOR MORE INFORMATION.

HEAT PUMP OUTDOOR UNIT DETAIL (3)
NTS



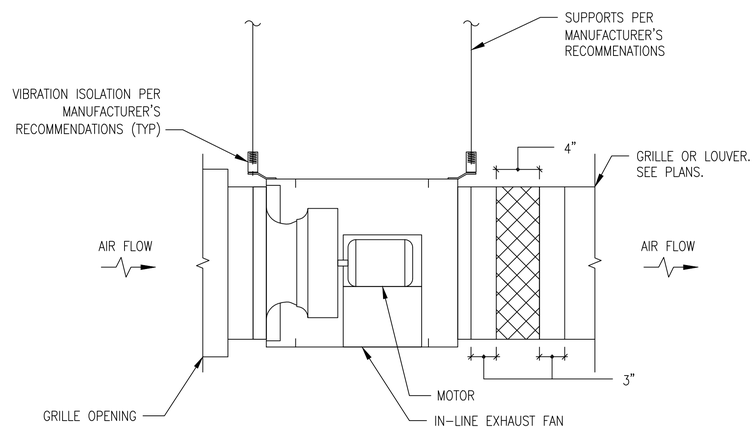
1. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION AND WALL OPENING WITH ARCHITECTURAL AND STRUCTURAL.
3. WEIGHT OF UNIT SHALL BE CARRIED BY 3-FOOT TALL CONCRETE PEDESTAL. SET UNIT ON CONCRETE PEDESTAL PRIOR TO FASTENING TO WALL. BOTTOM INSTALLATION BRACKET NOT REQUIRED.

PACKAGED HEAT PUMP MOUNTING DETAIL (4)
NTS

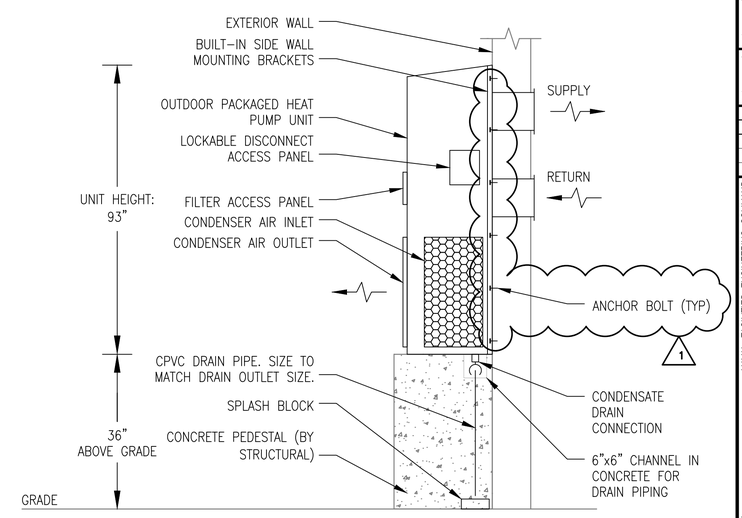


1. INTAKE LOUVERS SHALL BE PROVIDED AS STORM PROOF TYPE.

INTAKE/EXHAUST LOUVER DETAIL (5)
NTS



IN-LINE EXHAUST FAN DETAIL (6)
NTS



1. SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION AND WALL OPENING WITH ARCHITECTURAL AND STRUCTURAL.
3. WEIGHT OF UNIT SHALL BE CARRIED BY 3-FOOT TALL CONCRETE PEDESTAL. SET UNIT ON CONCRETE PEDESTAL PRIOR TO FASTENING TO WALL.

PACKAGED HEAT PUMP DETAIL (7)
NTS

SYM	DESCRIPTION	DATE	APPR
1	REVISED PKG HP DETAIL	4/29/15	MJG

NAVFAC

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A/E INFO

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NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
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NAVAL AIR STATION OCEANA
VIRGINIA BEACH, VIRGINIA
ENERGY AND RELIABILITY
MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
MECHANICAL DETAILS

SCALE: NOT TO SCALE

EPROJECT NO.: 1291651

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 12691647

SHEET 114 OF 368

M-501

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Mechanical\Planset\Task 008\10-0863-008-M-501.dwg LAYOUT NAME: M-501 PLOTTED: Thursday, April 23, 2015 - 7:39am USER: jrothe

SPLIT SYSTEM AIR-TO-AIR HEAT PUMP SCHEDULE

MARK	INDOOR UNIT										OUTDOOR UNIT											REMARKS
	FAN DATA				COIL PERFORMANCE																	
			ELECTRICAL		COOLING			HEATING							ELECTRICAL					MIN. SYSTEM EFFICIENCY		
	TOTAL CFM	OA CFM	VOLT/PH	NEMA STARTER	TOTAL (MBH)	SENS. (MBH)	EAT (°FDB/°FWB)	DESIGN (MBH)	SUPP. HTG (KW)	EAT (°FDB)	NOMINAL TONS	NO. COMPRESSORS	STAGES	REFRIGERANT TYPE	VOLTS/PH	MCA	MOCP	FLA	C.O.P.	SEER	HSPF	
HP-3036-1 / CU-3036-1	381	0	208/1	4X	9.0	8.1	80	12.0	0	55	0.75	1	INVERTER	R-410A	208/1	8	15	2.9	4.4	24	12.5	1, 2, 3, 5, 6, 7
HP-101-1 / CU-101-1	381	0	208/1	4X	9.0	8.1	80	12.0	0	55	0.75	1	INVERTER	R-410A	208/1	8	15	2.9	4.4	24	12.5	1, 2, 3, 5, 6, 7
HP-101-2 / CU-101-2	830	0	208/1	4X	36.0	26.1	80	37.5	0	55	3.0	1	INVERTER	R-410A	208/1	27	30	18.6	2.6	14	8.1	1, 2, 3, 4, 5, 6, 7
HP-101-3 / CU-101-3	830	0	208/1	4X	36.0	26.1	80	37.5	0	55	3.0	1	INVERTER	R-410A	208/1	27	30	18.6	2.6	14	8.1	1, 2, 3, 4, 5, 6, 7
HP-1120-1 / CU-1120-1	381	0	208/1	4X	9.0	8.1	80	12.0	0	55	0.75	1	INVERTER	R-410A	208/1	8	15	2.9	4.4	24	12.5	1, 2, 3, 5, 6, 7

NOTES:
1. MINIMUM SEER/HSPF SHALL BE NO LESS THAN THE RECOMMENDED EFFICIENCY LISTED BY ENERGY STAR AND FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP) FOR THE EQUIPEMENT LISTED. SEE WWW.EREN.DOE.GOV/FEMP/PROCUREMENT FOR REQUIREMENTS.
2. PROVIDE THERMOSTAT WITH LOCKABLE ENCLOSURE.
3. SYSTEM SHALL BE CONTROLLED BY INTEGRAL AUTOMATIC CONTROLS VIA WALL-MOUNTED WIRED CONTROLLER.
4. INSTALL INDOOR UNIT TO PROVIDE 9'-6" OF CLEARANCE FROM BOTTOM OF UNIT.
5. REFRIGERANT PIPING SHALL BE INSULATED.
6. PROVIDE MANUFACTURER'S REQUIRED EQUIPMENT CLEARANCES FOR UNITS.
7. PROVIDE OUTDOOR UNIT WITH MANUFACTURER WALL-MOUNTING BRACKET.

1

AIR-COOLED PACKAGED TERMINAL HEAT PUMP SCHEDULE

MARK	FAN DATA		COOLING			HEATING			ELECTRICAL				C.O.P.	MIN. SYSTEM EFFICIENCY	REFRIGERANT TYPE	REMARKS
	TOTAL CFM	OA CFM	TOTAL (MBH)	SENS. (MBH)	EAT (°FDB/°FWB)	DESIGN (MBH)	SUPP. HTG (KW)	EAT (°FDB)	VOLTS/PH	MCA	MOCP	FLA		EER		
HP-3036-2	1,650	0	57.5	47.0	80	54.0	0	55	480/3	16	20	15.6	3.2	10.7	R-410A	1, 2, 3, 4, 5, 6, 7
HP-3036-3	1,650	0	57.5	47.0	80	54.0	0	65	480/3	16	20	15.6	3.2	10.7	R-410A	1, 2, 3, 4, 5, 6, 7
HP-1120-2	1,650	0	57.5	47.0	80	54.0	0	55	480/3	16	20	15.6	3.2	10.7	R-410A	1, 2, 3, 4, 5, 6, 7
HP-1120-3	1,650	0	57.5	47.0	80	54.0	0	65	480/3	16	20	15.6	3.2	10.7	R-410A	1, 2, 3, 4, 5, 6, 7

NOTES:
1. MINIMUM SEER/HSPF SHALL BE NO LESS THAN THE RECOMMENDED EFFICIENCY LISTED BY ENERGY STAR AND FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP) FOR THE EQUIPEMENT LISTED. SEE WWW.EREN.DOE.GOV/FEMP/PROCUREMENT FOR REQUIREMENTS.
2. PROVIDE THERMOSTAT WITH LOCKABLE ENCLOSURE.
3. SYSTEM SHALL BE CONTROLLED BY INTEGRAL AUTOMATIC CONTROLS VIA WALL-MOUNTED WIRED CONTROLLER.
4. PROVIDE MANUFACTURER'S REQUIRED EQUIPMENT CLEARANCES FOR UNITS.
5. PROVIDE OUTDOOR UNIT WITH MANUFACTURER WALL-MOUNTING BRACKET.
6. INSTALL OUTDOOR UNIT ON 3-FOOT TALL CONCRETE PEDESTAL (PROVIDED BY STRUCTURAL). SEE DETAIL ON DRAWING S-502 FOR ADDITIONAL INFORMATION.
7. PROVIDE UNIT WITH VARIABLE SPEED BLOWER MOTOR AND STAINLESS STEEL CABINET.

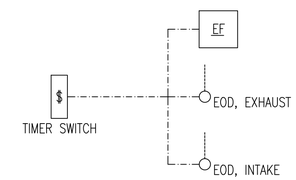
1

EXHAUST FAN SCHEDULE

MARK	AIRFLOW CFM	ESP (IN W.G.)	MOTOR DATA			NEMA STARTER	DRIVE TYPE	CONFIGURATION	DAMPER		LOCATION	REMARKS
			HP	RPM	VOLT/PH				TYPE	SIZE		
EF-3036-1	150	0.3	1/6	1725	120/1	4X	DIRECT	IN-LINE	EOD	12"x12"	VAULT E-3036	1
EF-101-1	150	0.3	1/6	1725	120/1	4X	DIRECT	IN-LINE	EOD	12"x12"	VAULT E-101	1
EF-1120-1	150	0.3	1/6	1725	120/1	4X	DIRECT	IN-LINE	EOD	12"x12"	VAULT E-1120	1

NOTES:
1. PROVIDE WALL-MOUNTED TIMER SWITCH FOR FAN CONTROL.

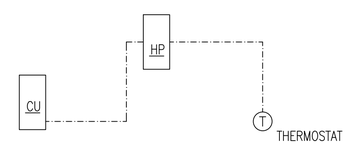
SEQUENCES OF OPERATION



1. EXHAUST FANS

EXHAUST FANS SHALL PROVIDE NORMAL VENTILATION WHEN THE SPACE IS OCCUPIED AND SHALL ENERGIZE AND DE-ENERGIZE VIA A WALL-MOUNTED TIMER SWITCH. FANS SHALL PROVIDE VENTILATION AT A FIXED, NON-ADJUSTABLE SETTING. TIMER DURATION SHALL BE USER ADJUSTABLE.

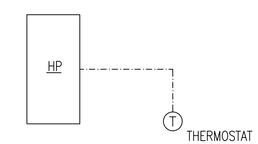
INTAKE AND EXHAUST ELECTRIC OPERATED DAMPERS SHALL BE INTERLOCKED WITH THE ASSOCIATED EXHAUST FAN. DAMPERS SHALL OPEN WHEN THE ASSOCIATED EXHAUST FAN IS ENABLED. DAMPERS SHALL CLOSE WHEN THE ASSOCIATED EXHAUST FAN IS DISABLED. THE INTAKE AND EXHAUST DAMPERS SHALL BE PROVED OPEN THROUGH END SWITCHES PRIOR TO FAN STARTING.



2. SPLIT SYSTEM HEAT PUMPS

EACH UNIT SHALL BE PROVIDED WITH A DEDICATED WALL-MOUNTED WIRED CONTROLLER. CONTROLS SHALL BE SET TO AUTOMATIC MODE. UNITS SHALL PROVIDE COOLING OR HEATING TO MAINTAIN AN ADJUSTABLE SPACE TEMPERATURE SETPOINT, AS DETERMINED BY THE UNIT'S CONTROLLER/THERMOSTAT.

1 ROOM TEMPERATURE SETPOINTS SHALL BE 80 DEG F (ADJUSTABLE) FOR COOLING AND 55 DEG F (ADJUSTABLE) FOR HEATING.



3. PACKAGED HEAT PUMPS

EACH UNIT SHALL BE PROVIDED WITH A DEDICATED WALL-MOUNTED THERMOSTAT. CONTROLS SHALL BE SET TO AUTOMATIC MODE. UNITS SHALL PROVIDE COOLING OR HEATING TO MAINTAIN AN ADJUSTABLE SPACE TEMPERATURE SETPOINT, AS DETERMINED BY THE UNIT'S CONTROLLER/THERMOSTAT.

1 ROOM TEMPERATURE SETPOINTS SHALL BE 80 DEG F (ADJUSTABLE) FOR COOLING AND 55 DEG F (ADJUSTABLE) FOR HEATING.

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MODERNIZATION OF AIRFIELD LIGHTING - PHASE 1 AND 2
MECHANICAL SCHEDULES AND CONTROLS

SCALE: NONE
EPROJECT NO.: 1291651
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12691648
SHEET 115 OF 368
M-601

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: H:\56427 NAS Oceana\Mechanical\Planset\Task 008\10-0863-008-M-601.dwg LAYOUT NAME: M-601 PLOTTED: Thursday, April 23, 2015 - 7:38am USER: jrothe