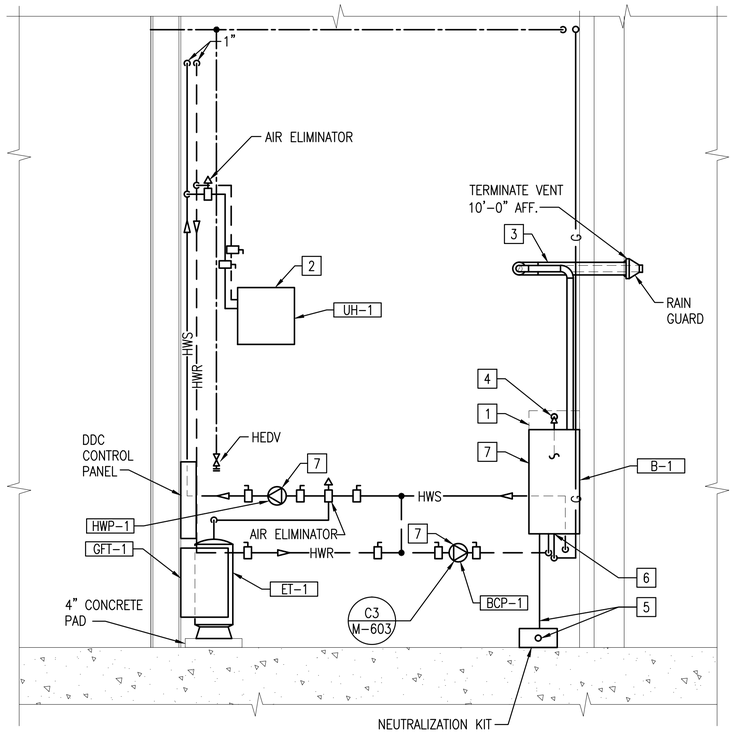
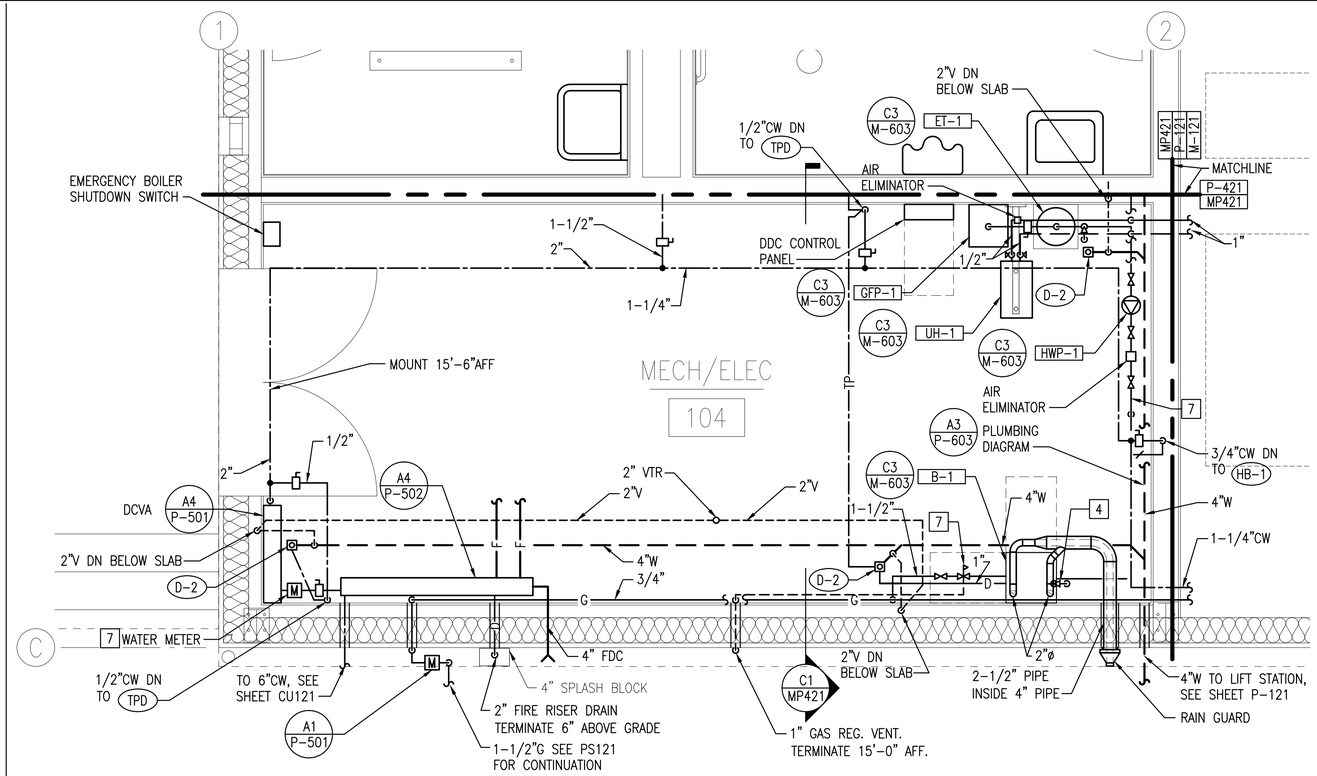


SONOBUOY ISSUE/STORAGE FACILITY ENLARGED MECHANICAL ROOM SECTION

SCALE: 1/2"=1'-0" MP421 (C1)



SONOBUOY ISSUE/STORAGE FACILITY ENLARGED MECHANICAL ROOM PLAN

SCALE: 1/2"=1'-0" M-121, P-121, P-421 (C3)

SHEET NOTES:

1. SLOPE ALL WASTE PIPING AT 0.25"/LF.

SHEET KEY NOTES:

1. BOILER REQUIRES MINIMUM 6" OF VERTICAL CLEARANCE FOR SERVICING.
2. INSTALL UH-1 MAX. 8'-0" ABOVE FINISHED FLOOR TO BOTTOM OF UNIT. PROVIDE WALL BRACKET SUPPORT.
3. 2" BOILER VENT AND INTAKE INSTALLED IN CONCENTRIC DIRECT VENT SIDEWALL PER MANUFACTURERS INSTRUCTIONS.
4. 1" RELIEF VALVE PIPED TO FLOOR DRAIN.
5. 1-1/2" CONDENSATE DRAIN PIPED TO FLOOR DRAIN.
6. NATURAL GAS CONNECTION TO BOILER.
7. MOUNT EQUIPMENT TO WALL. SEE C3/M-603.

1/2" = 1'-0"

0 2 4 6

SYM	DESCRIPTION	DATE	APPR

NAVFAC

LARRY D. SWARTZ STATE OF WASHINGTON 27501 REGISTERED PROFESSIONAL ENGINEER
2-18-15
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A/E INFO

APPROVED
FOR COMMANDER NAVFAC 3/2/15

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE
DES: BCD DRW: JML CHK: LDS
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
SONOBUOY ISSUE/STORAGE MECH RM
ENLARGED PLANS & SECTIONS

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030490
SHEET 236 OF 302

MP421

DRAWFORM REVISION: 10 MARCH 2009

L:\PROJECTS\214024 - Navy - 11\DOB - NASWI\P252 Hangar\Drawings\Part A\MP421.dwg, 2/18/2015 6:22:17 PM, lr

SYMBOLS AND ABBREVIATIONS

TELECOM
OUTLET (WALL MOUNTED)

TELECOM OUTLET TYPES
1/0 — INDICATES QUANTITY OF VOICE AND DATA JACKS. VOICE JACKS LISTED FIRST. E.G. 1/0 INDICATES ONE VOICE JACK AND NO DATA JACKS. PULLSTRING ALWAYS PROVIDED. WHERE NO QUANTITY IS NOTED, PROVIDE 2 VOICE JACKS, 2 DATA JACKS, AND PULLSTRING. INSTALL AT +18 INCHES AFF

W — TELEPHONE HANDSET OUTLET (WALL MOUNTED) AT +43 INCHES AFF

TELECOM - MISCELLANEOUS
CABLE TRAY WITH FLANGE SIDE RAILS AND LADDER RUNGS

TGB — TELECOMMUNICATIONS GROUNDING BAR

TMGB — TELECOMMUNICATIONS MAIN GROUNDING BAR

FIRE ALARM
FA ANTENNA

D — SMOKE DETECTOR (DUCT MOUNTED)

STROBE LIGHT (WALL MOUNTED)

F — HORN (WALL MOUNTED)

F — HORN AND STROBE LIGHT (WALL MOUNTED)

F — MANUAL STATION (WALL MOUNTED)

F — SPEAKER (WALL MOUNTED)

FAT — TRANCEIVER

FACP — CONTROL PANEL

FATC — TERMINAL CABINET

FS — SPRINKLER FLOW SWITCH CONNECTION

PS — SPRINKLER PRESSURE SWITCH CONNECTION

LA — DRY-PIPE LOW AIR PRESSURE SUPERVISORY SWITCH

PANELBOARDS
208V SYSTEM PANELBOARD

480V SYSTEM PANELBOARD

EQUIPMENT
EQUIPMENT CABINET

E — EQUIPMENT CONNECTION, E = EMERGENCY POWER

GROUND BAR, LENGTH TO SCALE

MOTOR CONNECTION, SINGLE PHASE

MOTOR CONNECTION, 3 PHASE

SPD — SURGE PROTECTIVE DEVICE

T — TRANSFORMER, <30KVA, NOT TO SCALE

T — TRANSFORMER, 30KVA OR GREATER, DRAWN TO SCALE

RA — REMOTE ANNUNCIATOR (GENERATOR)

ELECTRONIC SECURITY
IM — MASTER INTERCOM STATION, AUDIO ONLY, DOOR RELEASE

IS — SLAVE INTERCOM STATION, AUDIO ONLY, DOOR INTERCONNECT

S — SPEAKER (CEILING, FLUSH MOUNTED)

S — SPEAKER (WALL, SURFACE MOUNTED)

ELECTRICAL RISER
FEEDER SIZE IDENTIFICATION

AVAILABLE FAULT CURRENT IDENTIFICATION

ARRESTOR, SURGE

ARRESTOR, LIGHTNING

AUTOMATIC TRANSFER SWITCH

SPACE — BUS SPACE

CONTACT, NORMALLY OPEN AND NORMALLY CLOSED

CIRCUIT BREAKER

FUSE OR CURRENT LIMITER

FUSE (ISOLATING)

FUSED SWITCH

GROUND

PUSHBUTTON

SPLICE

TRANSFORMER

TRANSFORMER, CURRENT

C — CONTACTOR

G — ENGINE-GENERATOR

M — METER

R — RELAY

G — RELAY, GFI

SPD — SURGE PROTECTIVE DEVICE

CONTROLS
FUSED DISCONNECT SWITCH (FUSE RATING INDICATED)

DISCONNECT SWITCH

MOTOR STARTER

MANUAL MOTOR STARTER

COMBINATION MOTOR STARTER FUSED DISCONNECT SWITCH

ENCLOSED CIRCUIT BREAKER

PUSH BUTTON CONTROL STATION

M — MOTOR RATED TOGGLE SWITCH

ICS — INDUSTRIAL CONTROL SYSTEM

VFD — VARIABLE FREQUENCY DRIVE

EMERGENCY SHUTDOWN SWITCH

LIGHTING SWITCHES AND CONTROLS
$a — LOWER-CASE LETTER NEAR SWITCH DENOTES CIRCUIT CONTROLLED (TYP)

$ — SINGLE POLE SWITCH

$3 — 3-WAY SWITCH

$o — OCCUPANCY SENSOR SWITCH

OS — CEILING MOUNTED OCCUPANCY SENSOR SWITCH

PC — PHOTOCELL CONTROL

PS — PHOTO SENSOR CONTROL

TC — ASTRONOMIC TIME CLOCK

LIGHTING
CIRCUITS: EMERGENCY / NORMAL

N/A — a — LOWER-CASE LETTER NEAR FIXTURE DENOTES SWITCH LEG, TYP

RECESSED FLUORESCENT FIXTURE, DRAWN TO SCALE

SURFACE MOUNTED FLUORESCENT FIXTURE, DRAWN TO SCALE

FLUORESCENT STRIP FIXTURE, LENGTH TO SCALE

WALL MOUNTED FLUORESCENT FIXTURE, LENGTH TO SCALE (NUMBER OF MOUNTING POINTS WILL VARY WITH FIXTURE LENGTH)

LINEAR PENDANT MOUNTED FIXTURE, LENGTH TO SCALE (NUMBER OF MOUNTING POINTS WILL VARY WITH FIXTURE LENGTH)

N/A — EXIT SIGN, FILLED SIDES ARE ILLUMINATED, DIRECTIONAL ARROWS AS INDICATED

N/A — EMERGENCY BATTERY PACK

N/A — EXIT WITH EMERGENCY BATTERY PACK

$## — FIXTURE IDENTIFICATION

D — DIMMER SWITCH

D3 — 3-WAY DIMMER SWITCH

CIRCUITS
RACEWAY CONCEALED IN CEILING OR WALL

RACEWAY BELOW SLAB OR UNDERGROUND

— P — UNDERGROUND ELECTRICAL RACEWAY

— C — UNDERGROUND TELECOMMUNICATIONS RACEWAY

— UFO — UNDERGROUND FIBER OPTIC

RACEWAY UP

RACEWAY DOWN

RACEWAY STUB-OUT WITH BUSHING

CIRCUIT CONTINUATION

HOME RUN TO PANEL OR LOCATION NOTED WITH PANEL AND CIRCUIT NUMBERS INDICATED

J — JUNCTION BOX

PB — PULL BOX

RECEPTACLE TYPES
AC — MOUNTED 3" ABOVE COUNTER BACKSPLASH

G — GROUND FAULT CIRCUIT INTERRUPTER

WP — GROUND FAULT CIRCUIT INTERRUPTER WITH WEATHER PROOF COVER

RECEPTACLES
DUPLEX RECEPTACLE 120V

DOUBLE DUPLEX RECEPTACLE 120V

SPLIT WIRED RECEPTACLE, 120V, TOP SWITCHED

RECEPTACLE 208V OR 240V, THREE PHASE

RECEPTACLE 480V, THREE PHASE

SITE AND LANDSCAPE LIGHTING
LIGHTING STANDARD: FIXTURES, POLE, AND BASE

TAXIWAY AND APRON EDGE LIGHTS

MISCELLANEOUS
GROUND POINT

HH — HANDHOLE

WORK DEFINITION
— KEY NOTE

— DEMO WORK KEY NOTE

— REVISION IDENTIFICATION

— EQUIPMENT IDENTIFICATION

— EQUIPMENT IDENTIFICATION

0 / E-000 — DETAIL REFERENCE

0 / E-000 — SECTION REFERENCE W/ORIGINATING SHEET REFERENCE

0 / E-000 — EXTERIOR ELEVATION REFERENCE

XX / XX E-000 XX / XX — INTERIOR ELEVATION REFERENCE

PLAN NORTH — PROJECT NORTH REFERENCE W/TRUE NORTH REFERENCE

NEW WORK

EXISTING

REMOVE EXISTING ELECTRICAL EQUIPMENT

GENERAL NOTES
1. COMPLY WITH THE NATIONAL ELECTRICAL CODE AS ADOPTED AND AMENDED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

2. THE LOCATIONS OF ELECTRICAL DEVICES OR LIGHTING FIXTURES INDICATED ON ARCHITECTURAL PLANS ELEVATIONS OR SECTIONS TAKE PRECEDENCE OVER LOCATIONS INDICATED ON THE ELECTRICAL DRAWINGS.

3. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LIGHTING FIXTURE LOCATIONS.

4. FOR LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT OR OCCUPANT SENSING AUTOMATIC CONTROLS, AUTOMATIC SHUT-OFF CONTROLS, OCCUPANCY SENSORS, OR AUTOMATIC TIME SWITCHES THE LIGHTING CONTROLS SHALL BE TESTED TO ENSURE THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT, AND SYSTEMS ARE CALIBRATED, ADJUSTED, AND OPERATE IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS. SEQUENCE OF OPERATION SHALL ALSO BE FUNCTIONALLY TESTED TO ENSURE IT IS OPERATING IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE CONTRACTING OFFICER.

5. CAP AND SEAL ALL RACEWAYS ABANDONED UNDER THIS PROJECT A MINIMUM OF 12" BELOW FINISHED GRADE.

6. BRANCH CIRCUITING: EXTEND CONDUCTORS FROM HOMERUN J-BOXES TO EACH DEVICE OR EQUIPMENT AND CONNECT TO THE CIRCUIT INDICATED. PROVIDE DEDICATED NEUTRAL WITH EACH SINGLE PHASE CIRCUIT. PROVIDE EQUIPMENT GROUND CONDUCTOR IN EACH RACEWAY.

ABBREVIATIONS

AC	3" ABOVE COUNTER BACKSPLASH	C	CONDUIT	FO	FIBER OPTIC(AL)	N	NEUTRAL	TELECOM	TELECOMMUNICATIONS	WP	WEATHERPROOF
AFF	ABOVE FINISHED FLOOR	CO	CONDUIT ONLY	G,GND	GROUND	PB	PULLBOX	TGB	TELECOMMUNICATIONS GROUNDING BUSBAR	XFMR	TRANSFORMER
AG	ABOVE GRADE	CTRL	CONTROL	GFI,GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PNL	PANEL, PANELBOARD			ø	PHASE
A,AMP	AMPERE	CU	COPPER			PR	PAIR	TMH	TELECOMMUNICATIONS MANHOLE	z	ZONE
ATS	AUTOMATIC TRANSFER SWITCH	D	DATA	HH	HANDHOLE	R	RACEWAY	TTB	TELEPHONE TERMINAL BOARD		
AWG	AMERICAN WIRE GAUGE	EV	ELECTRIC VAULT	HP	HORSEPOWER	RO	RACEWAY ONLY	TYP	TYPICAL		
BC	BARE COPPER	EMH	ELECTRIC MANHOLE	IJ-BOX	JUNCTION BOX	RECEPT	RECEPTACLE	UFO	UNDERGROUND FIBER OPTIC		
CB	CIRCUIT BREAKER	FA	FIRE ALARM	MH	MANHOLE	SE	SERVICE ENTRANCE RATED	UG	UNDER GROUND		
CCTV	CLOSED CIRCUIT TELEVISION	FACP	FIRE ALARM CONTROL PANEL	MM	MULTIMODE	SM	SINGLEMODE	UTP	UNSHIELDED TWISTED PAIR		
CKT	CIRCUIT	FLED	FLIGHT LINE ELECTRICAL DISTRIBUTION	MNGG	MOBILE NITROGEN GAS GENERATOR	SPECS	SPECIFICATIONS	V	VOLT OR VOICE		
COMM	COMMUNICATIONS			MTD	MOUNTED	SW	SWITCH	W	WIRE, WATT, OR WALLPHONE		

SHEET	DESCRIPTION	NAVFAC NUMBER
E-813	DETAILS	16030551
E-814	DETAILS	16030552
E-815	DETAILS	16030553
E-816	DETAILS	16030554
E-817	DETAILS	16030555
E-818	DETAILS	16030556

DRAWING LIST

SHEET	DESCRIPTION	NAVFAC NUMBER
E-001	ELECTRICAL LEGEND	16030491
E-002	OVERALL SITE PLAN – ELECTRICAL	16030492
ED101	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030495
ED102	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030496
ED103	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030497
ED104	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030498
ED105	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030499
ED106	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030500
ED107	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030501
ED108	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030502
ED109	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030503
ED110	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030504
ED111	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030505
ED112	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030506
ED113	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030507
ED114	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030508
ED115	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030509
ED116	PARTIAL SITE PLAN – ELECTRICAL DEMOLITION	16030510
ED601	BASE POWER ONE-LINE DIAGRAM – DEMOLITION	16030511
ED602	BASE POWER ONE-LINE DIAGRAM – DEMOLITION	16030512
ED603	BASE POWER ONE-LINE DIAGRAM – DEMOLITION	16030513
ES101	PARTIAL SITE PLAN – ELECTRICAL	16030514
ES102	PARTIAL SITE PLAN – ELECTRICAL	16030515
ES103	PARTIAL SITE PLAN – ELECTRICAL	16030516
ES104	PARTIAL SITE PLAN – ELECTRICAL	16030517
ES105	PARTIAL SITE PLAN – ELECTRICAL	16030518
ES106	PARTIAL SITE PLAN – ELECTRICAL	16030519
ES107	PARTIAL SITE PLAN – ELECTRICAL	16030520
ES108	PARTIAL SITE PLAN – ELECTRICAL	16030521
ES109	PARTIAL SITE PLAN – ELECTRICAL	16030522
ES111	PARTIAL SITE PLAN – ELECTRICAL	16030523
ES117	PARTIAL SITE PLAN – ELECTRICAL	16030524
ES118	PARTIAL SITE PLAN – ELECTRICAL	16030525
ES119	PARTIAL SITE PLAN – ELECTRICAL	16030526
E-111	POWER PLAN – LOX PLANT	16030527
E-121	POWER PLAN – SONOBUOY ISSUE/STORAGE FACILITY	16030528
E-141	ELECTRICAL PLAN – AIRCRAFT RINSE RACK FACILITY	16030529
E-211	LIGHTING PLAN – LOX PLANT	16030530
E-221	LIGHTING PLAN – SONOBUOY ISSUE/STORAGE FACILITY	16030531
E-311	TECHNOLOGY PLAN – LOX PLANT	16030532
E-321	TECHNOLOGY PLAN – SONOBUOY ISSUE/STORAGE FACILITY	16030533
E-501	LIGHTING DETAILS	16030534
E-502	LIGHTING DETAILS	16030535
E-601	BASE POWER ONE-LINE DIAGRAM	16030536
E-602	BASE POWER ONE-LINE DIAGRAM	16030537
E-611	LOX ONE-LINE DIAGRAM – POWER	16030538
E-612	LOX RISER DIAGRAMS – TECHNOLOGY	16030539
E-621	SONOBUOY ONE-LINE DIAGRAM – POWER	16030540
E-622	SONOBUOY RISER DIAGRAMS – TECHNOLOGY	16030541
E-623	SONOBUOY RISER DIAGRAM – FIRE ALARM	16030542
E-641	RINSE RACK ONE-LINE DIAGRAM – POWER	16030543
E-642	RINSE RACK RISER DIAGRAMS – TECHNOLOGY	16030544
E-711	LOX PANEL SCHEDULES	16030545
E-712	LOX PANEL SCHEDULES	16030546
E-721	SONOBOUY ISSUE/STORAGE FACILITY PANEL SCHEDULES	16030547
E-741	RINSE RACK PANEL SCHEDULES	16030548
E-811	DETAILS	16030549
E-812	DETAILS	16030550

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FOR COMMANDER NAVFAC

ACTIVITY: NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND AULT FIELD – OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

ELECTRICAL LEGEND

SCALE: AS NOTED

EPROJECT NO.:

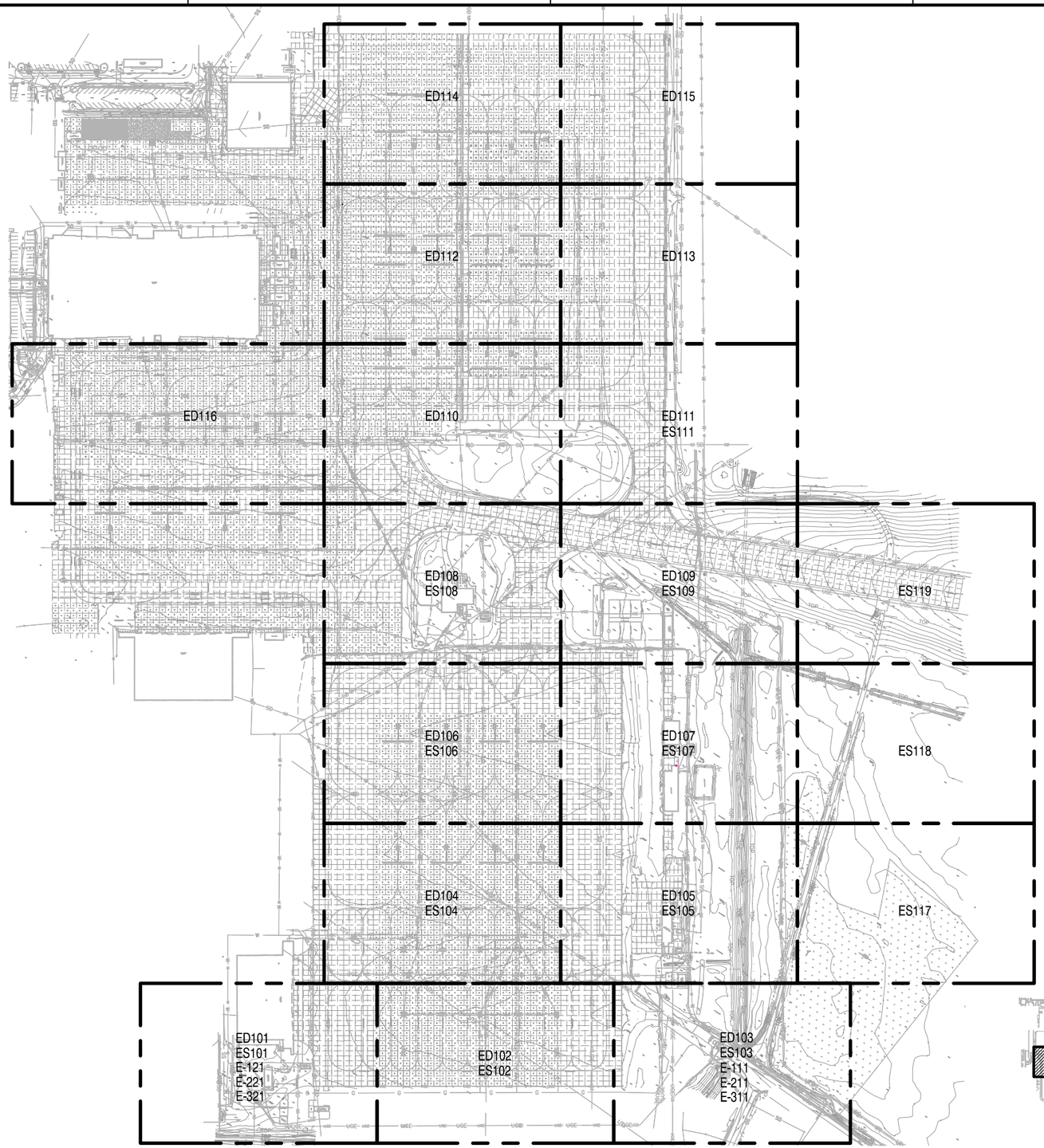
CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030491

SHEET 237 OF 302

E-001

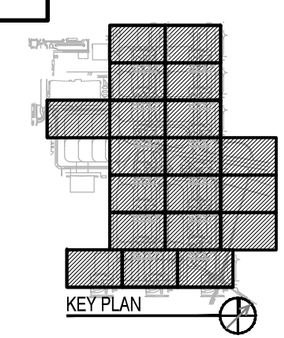
DRAWFORM REVISION: 10 MARCH 2009



OVERALL SITE PLAN - ELECTRICAL
1"=150'-0"

PLAN NORTH

0 150 300 350



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

OVERALL SITE PLAN - ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

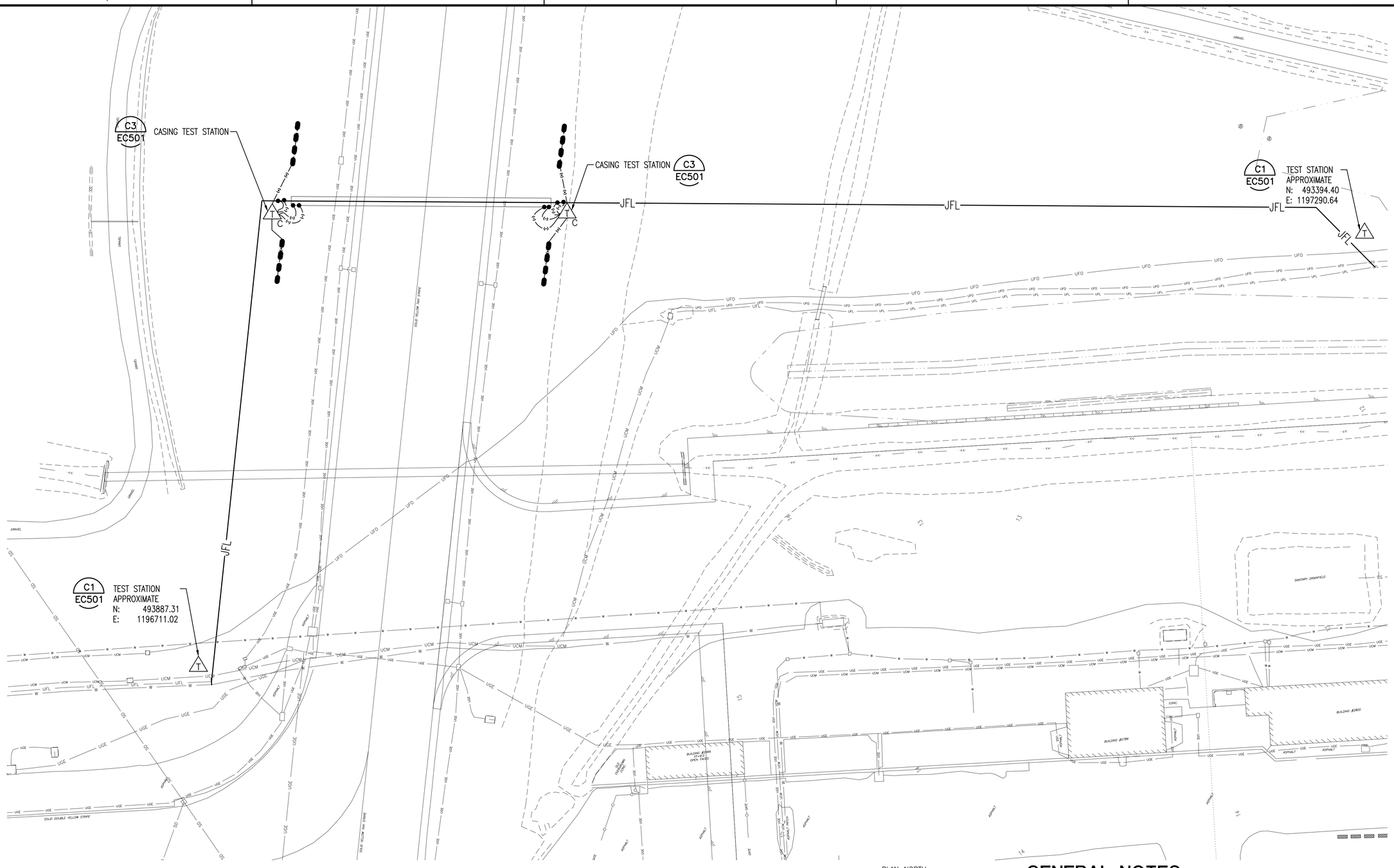
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030492

SHEET 238 OF 302

E-002

DRAWFORM REVISION: 10 MARCH 2009



CATHODIC PROTECTION SYSTEM - PLAN

SCALE: NONE

GENERAL NOTES

1. SEE LEGEND, ABBREVIATIONS, AND LOCATION ON SHEET DP101.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER
12FEB2015
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(800) 426-3111 A/E INFO

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FOR COMMANDER NAVFAC 3/2/15

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES: KSM DRW: XXX CHK: XXX

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

FUEL LINE RE-ALIGNMENT
CATHODIC PROTECTION SYSTEM PLAN

SCALE: AS NOTED

EPROJECT NO.:

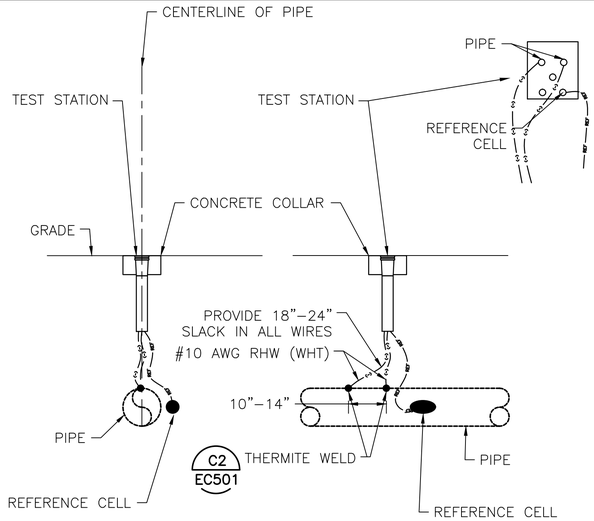
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030493

SHEET 239 OF 302

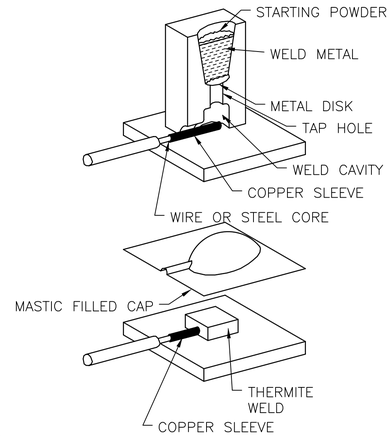
EC101

DRAWFORM REVISION: 10 MARCH 2009



TEST STATION (C1 / EC101)

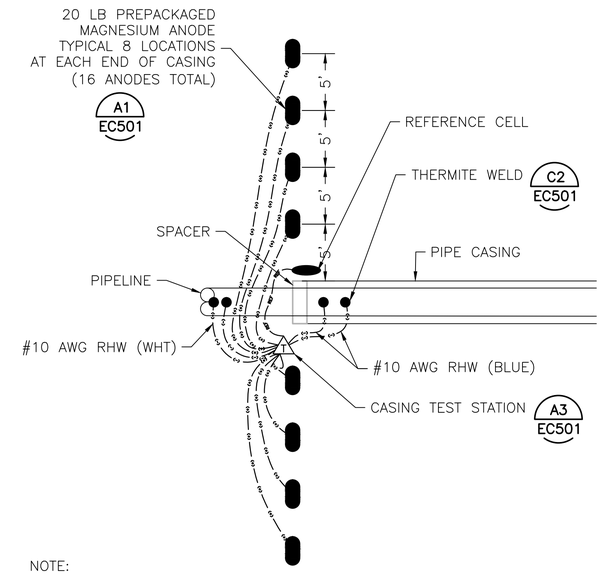
SCALE: NONE



NOTES:
1. CLEAN WELD AREA TO BRIGHT METAL.
2. WELD CABLE TO PIPE USING EXOTHERMIC WELD.
3. ADAPTER SLEEVE REQUIRED FOR EXOTHERMIC WELDING OF #6 AWG WIRE OR SMALLER.
4. CLEAN SLAG FROM WELD AREA AND TEST FOR ADHESION.
5. INSULATE WELD WITH MASTIC FILLED CAP OR APPROVED EQUAL.
6. ALL CLEANED AREA NOT COVERED BY MASTIC FILLED CAP SHALL BE COVERED WITH 125 MIL MASTIC TAPE OR APPROVED EQUAL.

THERMITE WELD (C2 / EC501)

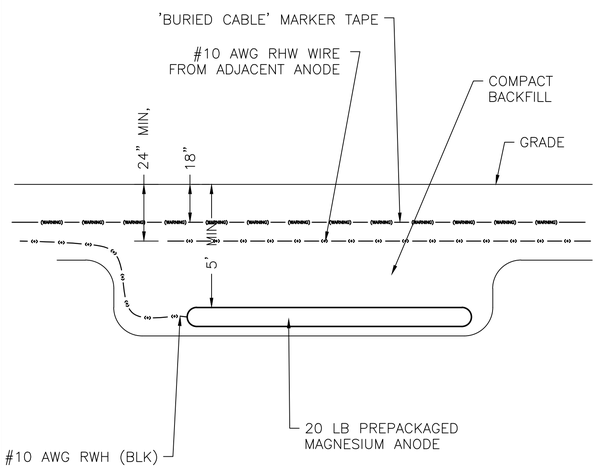
SCALE: NONE



NOTE:
1. FILL INTERSTITIAL SPACE BETWEEN CASING AND PIPE WITH A PETROLATUM TYPE COMPOUND.
2. ANODES MAY ALSO BE INSTALLED IN A SINGLE LOCATION UTILIZING A DEEPWELL AT EACH END OF THE CASING.

CASING TEST STATION (C3 / EC101)

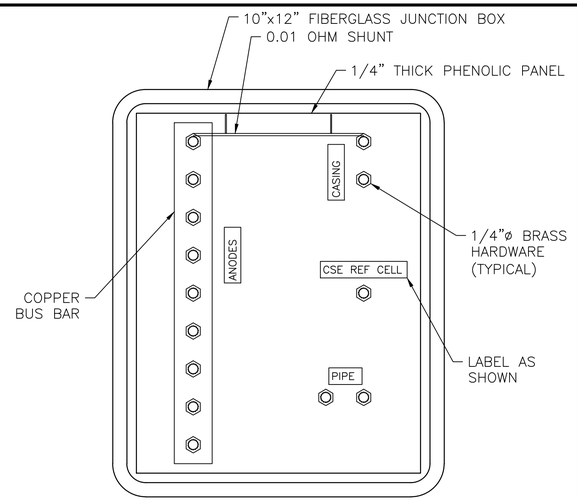
SCALE: NONE



NOTE:
1. ANODES MAY BE INSTALLED VERTICALLY OR HORIZONTALLY.

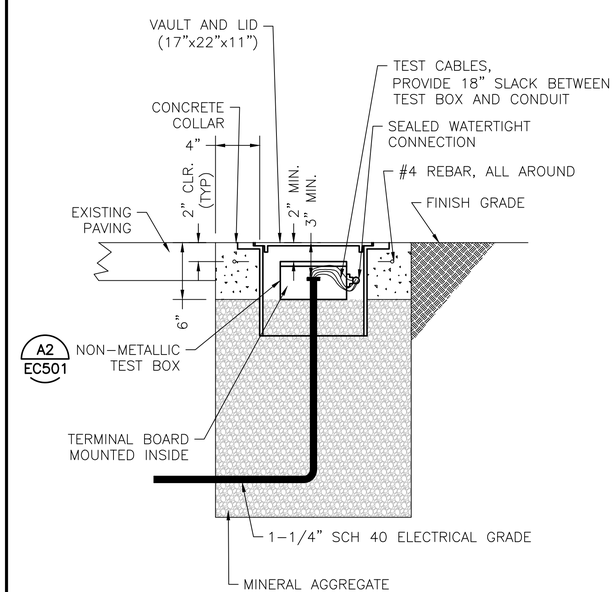
ANODE INSTALLATION (A1 / EC501)

SCALE: NONE



CASING BOX TEST STATION (A2 / EC501)

SCALE: NONE



CASING TEST STATION VAULT (A3 / EC501)

SCALE: NONE

SYM	DESCRIPTION	DATE	APPR

NAVFAC

ERIC J. SHADLEY, STATE OF WASHINGTON, 24349, REGISTERED PROFESSIONAL ENGINEER
12FEB2015 SEAL

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Woodinville, WA
(800) 426-3111 A/E INFO

APPROVED
FOR COMMANDER NAVFAC 3/2/15

ACTIVITY: NAS WHIDBEY ISLAND
SATISFACTORY TO DATE

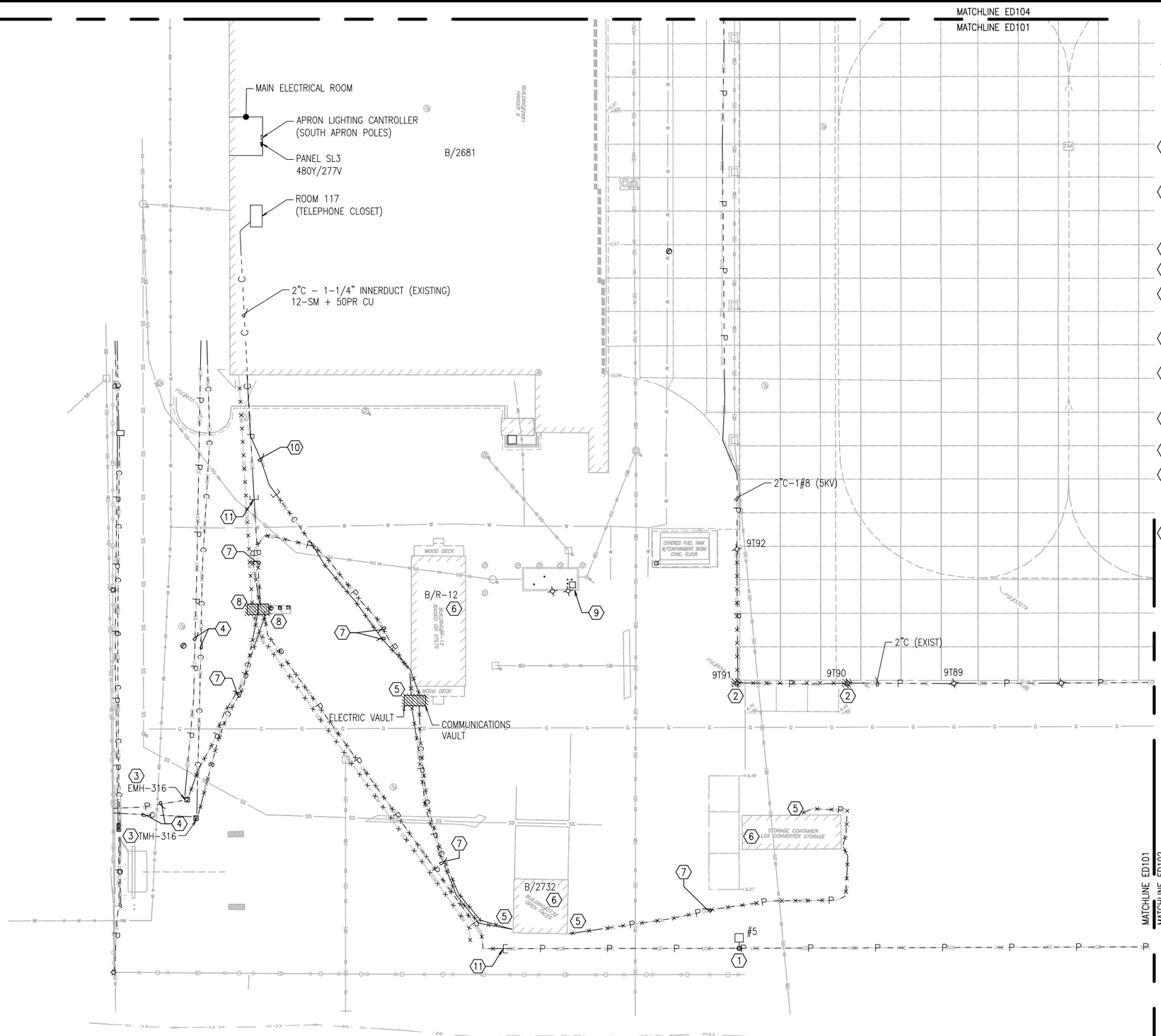
DES: E.S. DRW: R.H. CHK: R.G.
<<CPM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
FUEL LINE RE-ALIGNMENT CATHODIC PROTECTION DETAILS

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030494
SHEET 240 OF 302

EC501

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

PLAN NORTH

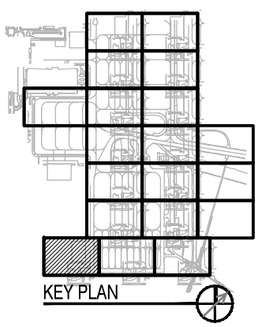
0 20 40 60

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-100 FOR LOCATION OF B368.

DEMOLITION WORK KEY NOTES:

1. 50' LIGHT POLE WITH (1) FLOOD LIGHT AND (1) RED BEACON TO REMAIN. FED FROM PANEL SL3 IN B2681 MAIN ELECTRICAL ROOM.
2. DEMOLISH EXISTING APRON EDGE LIGHTING AND APPURTENANCES. REFEED REMAINING LIGHTS AS INDICATED ON SHEET ES101. REMOVE EXISTING CABLING BACK TO #9T89.
3. EXISTING VAULT TO REMAIN.
4. EXISTING UNDERGROUND DUCTBANKS TO REMAIN.
5. DEMOLISH EXISTING PANEL AND/OR TELECOMMUNICATION SERVICE CONNECTION TO BUILDING.
6. EXISTING BUILDING TO BE REMOVED BY GOVERNMENT.
7. REMOVE EXISTING CONDUCTORS FROM EXISTING UNDERGROUND RACEWAYS. DEMOLISH RACEWAYS WHERE CONFLICTING WITH CONSTRUCTION.
8. DEMOLISH EXISTING ABOVE GRADE ELECTRICAL EQUIPMENT AND HANDHOLES.
9. EXISTING LIFT STATION TO REMAIN.
10. RETAIN APPROXIMATELY 30' OF EXISTING UNDERGROUND 2" TELECOMMUNICATIONS CONDUIT AND 1-1/4" INNERDUCT FROM B2681, ROOM 117, AND EXTEND AS INDICATED ON SHEET ES101.
11. INTERCEPT EXISTING APRON PERIMETER LIGHTING CIRCUITS AND EXTEND AS INDICATED ON SHEET ES101.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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SEAL

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FOR COMMANDER NAVFAC

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES	KMD	DRW	AM	CHK	GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030495
SHEET 241 OF 302
ED101

DRAWFORM REVISION: 10 MARCH 2009

MATCHLINE ED104
MATCHLINE ED102

MATCHLINE ED105
MATCHLINE ED102

MATCHLINE ED101
MATCHLINE ED102

MATCHLINE ED102
MATCHLINE ED103

(1) (DEMO AND REPLACE 4 CONCRETE PANELS)

(DEMO AND REPLACE 2 CONCRETE PANELS) (1)

(DEMO AND REPLACE 1 CONCRETE PANEL) (1)

#46

#49

#50

DUCT BANK

(2)

#6 (4)

#7 (3)

#8 (4)

#9 (4)

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED, AND ASSOCIATED CURBING AND PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.
3. 50' LIGHT POLE WITH (2) FLOOD LIGHTS TO REMAIN. FED FROM PANEL SL3 IN B2681 MAIN ELECTRICAL ROOM.
4. 50' LIGHT POLE WITH (2) FLOOD LIGHTS, (2) RED BEACONS, AND (1) CCTV CAMERA TO REMAIN. FED FROM PANEL SL3 IN B2681 MAIN ELECTRICAL ROOM.

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

PLAN NORTH

0 20 40 60

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

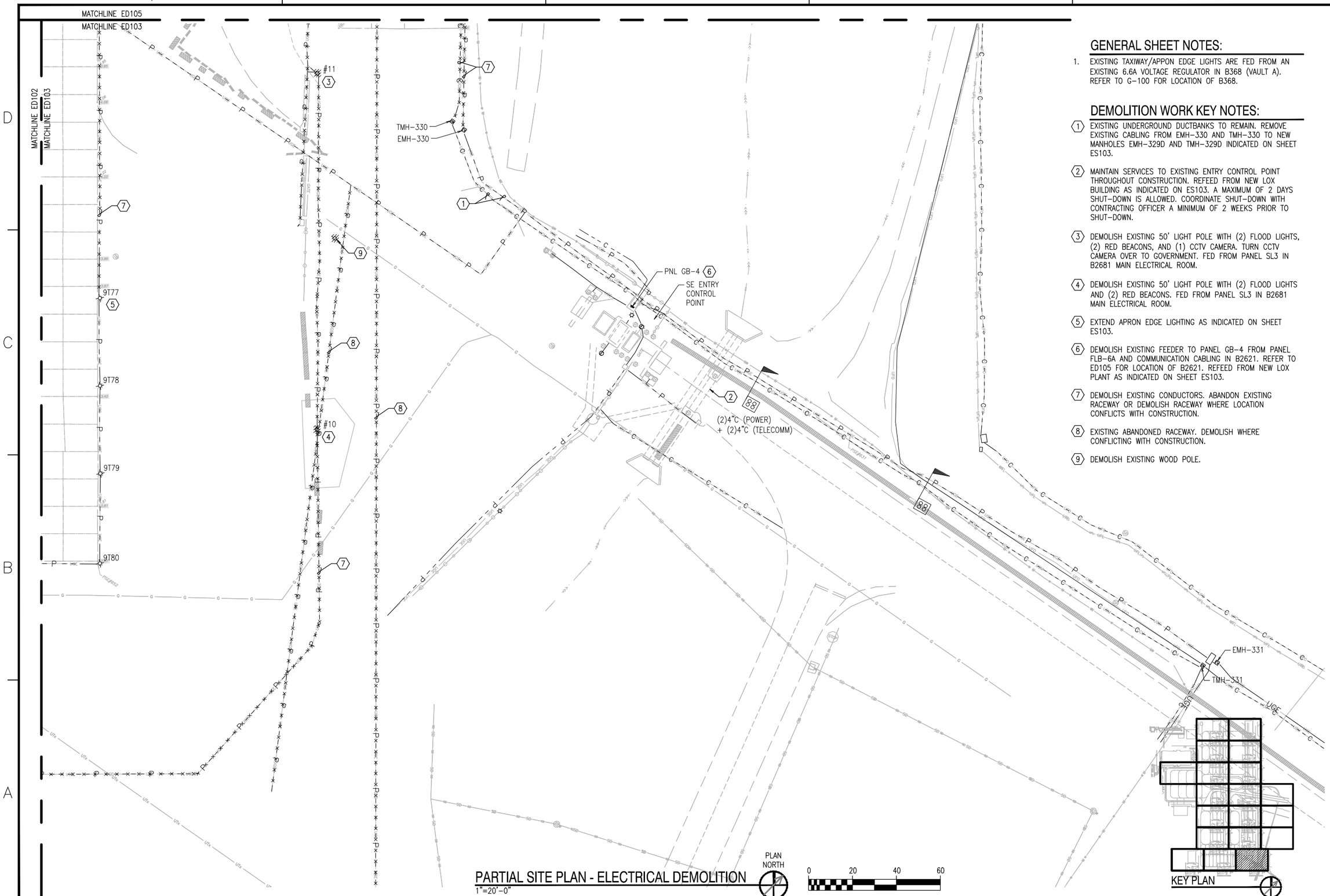
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030496

SHEET 242 OF 302

ED102

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-100 FOR LOCATION OF B368.

DEMOLITION WORK KEY NOTES:

1. EXISTING UNDERGROUND DUCTBANKS TO REMAIN. REMOVE EXISTING CABLING FROM EMH-330 AND TMH-330 TO NEW MANHOLES EMH-329D AND TMH-329D INDICATED ON SHEET ES103.
2. MAINTAIN SERVICES TO EXISTING ENTRY CONTROL POINT THROUGHOUT CONSTRUCTION. REFEED FROM NEW LOX BUILDING AS INDICATED ON ES103. A MAXIMUM OF 2 DAYS SHUT-DOWN IS ALLOWED. COORDINATE SHUT-DOWN WITH CONTRACTING OFFICER A MINIMUM OF 2 WEEKS PRIOR TO SHUT-DOWN.
3. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS, (2) RED BEACONS, AND (1) CCTV CAMERA. TURN CCTV CAMERA OVER TO GOVERNMENT. FED FROM PANEL SL3 IN B2681 MAIN ELECTRICAL ROOM.
4. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS AND (2) RED BEACONS. FED FROM PANEL SL3 IN B2681 MAIN ELECTRICAL ROOM.
5. EXTEND APRON EDGE LIGHTING AS INDICATED ON SHEET ES103.
6. DEMOLISH EXISTING FEEDER TO PANEL GB-4 FROM PANEL FLB-6A AND COMMUNICATION CABLING IN B2621. REFER TO ED105 FOR LOCATION OF B2621. REFEED FROM NEW LOX PLANT AS INDICATED ON SHEET ES103.
7. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING RACEWAY OR DEMOLISH RACEWAY WHERE LOCATION CONFLICTS WITH CONSTRUCTION.
8. EXISTING ABANDONED RACEWAY. DEMOLISH WHERE CONFLICTING WITH CONSTRUCTION.
9. DEMOLISH EXISTING WOOD POLE.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030497
SHEET 243 OF 302

ED103

DRAWFORM REVISION: 10 MARCH 2009

MATCHLINE ED106
MATCHLINE ED104

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED AND ASSOCIATED CURBING PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.

MATCHLINE ED104
MATCHLINE ED105

6 DUCTS IN CONCRETE ENV

(DEMO AND REPLACE 1 CONCRETE PANEL) 1

#44

(DEMO AND REPLACE 1 CONCRETE PANEL) 1

#42

4 DUCTS IN CONCRETE ENV

ELECTRIC VAULT

(DEMO AND REPLACE 4 CONCRETE PANELS) 1

#45

(DEMO AND REPLACE 2 CONCRETE PANELS) 1

#47

(DEMO AND REPLACE 2 CONCRETE PANELS) 1

#48

DUCT BANK

2"C ENCASED IN CONCRETE

MATCHLINE ED104
MATCHLINE ED101

MATCHLINE ED104
MATCHLINE ED102

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

PLAN NORTH

0 20 40 60

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

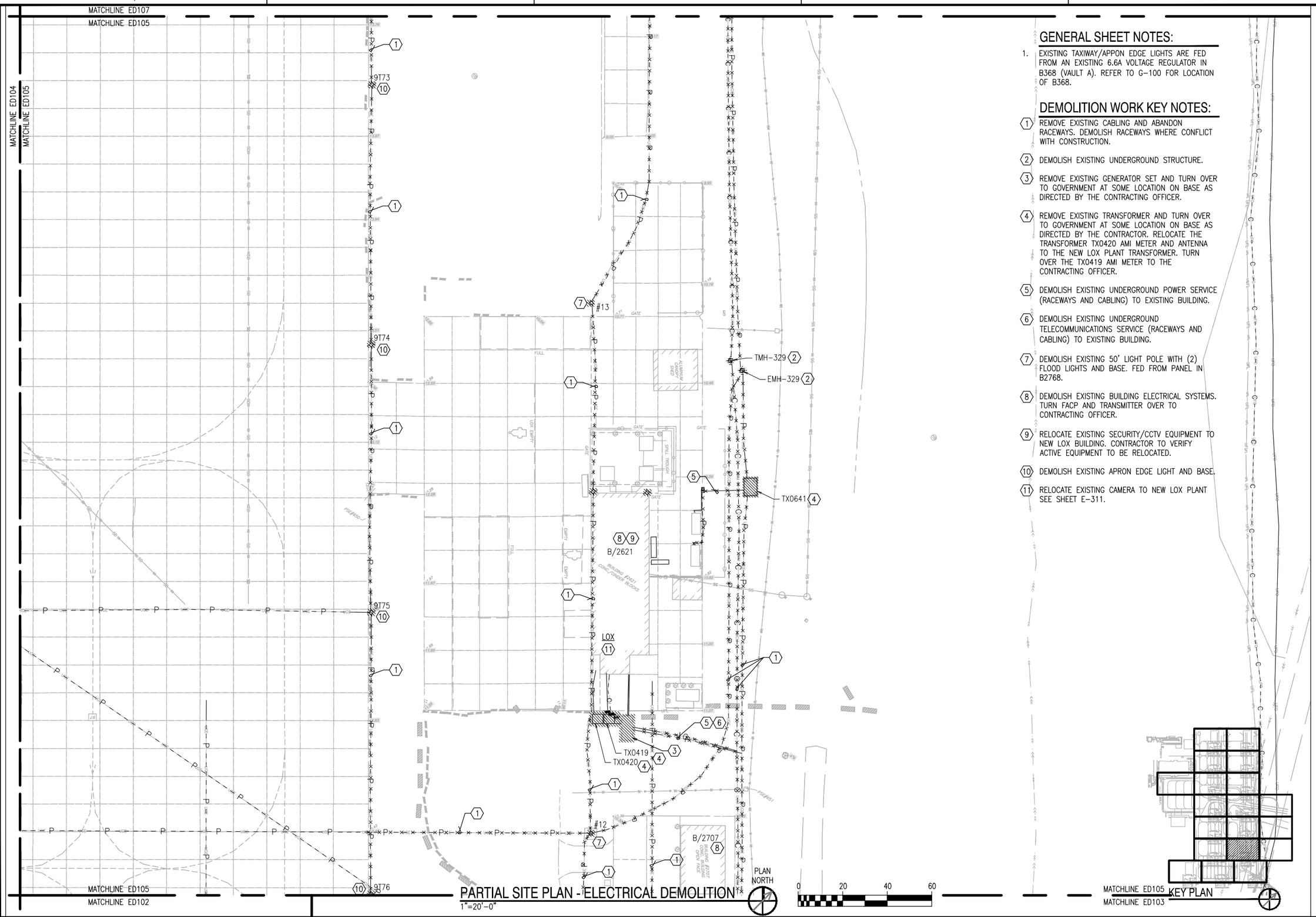
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030498

SHEET 244 OF 302

ED104

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

KEY PLAN

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-100 FOR LOCATION OF B368.

DEMOLITION WORK KEY NOTES:

1. REMOVE EXISTING CABLING AND ABANDON RACEWAYS. DEMOLISH RACEWAYS WHERE CONFLICT WITH CONSTRUCTION.
2. DEMOLISH EXISTING UNDERGROUND STRUCTURE.
3. REMOVE EXISTING GENERATOR SET AND TURN OVER TO GOVERNMENT AT SOME LOCATION ON BASE AS DIRECTED BY THE CONTRACTING OFFICER.
4. REMOVE EXISTING TRANSFORMER AND TURN OVER TO GOVERNMENT AT SOME LOCATION ON BASE AS DIRECTED BY THE CONTRACTOR. RELOCATE THE TRANSFORMER TX0420 AMI METER AND ANTENNA TO THE NEW LOX PLANT TRANSFORMER. TURN OVER THE TX0419 AMI METER TO THE CONTRACTING OFFICER.
5. DEMOLISH EXISTING UNDERGROUND POWER SERVICE (RACEWAYS AND CABLING) TO EXISTING BUILDING.
6. DEMOLISH EXISTING UNDERGROUND TELECOMMUNICATIONS SERVICE (RACEWAYS AND CABLING) TO EXISTING BUILDING.
7. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS AND BASE. FED FROM PANEL IN B2768.
8. DEMOLISH EXISTING BUILDING ELECTRICAL SYSTEMS. TURN FACP AND TRANSMITTER OVER TO CONTRACTING OFFICER.
9. RELOCATE EXISTING SECURITY/CCTV EQUIPMENT TO NEW LOX BUILDING. CONTRACTOR TO VERIFY ACTIVE EQUIPMENT TO BE RELOCATED.
10. DEMOLISH EXISTING APRON EDGE LIGHT AND BASE.
11. RELOCATE EXISTING CAMERA TO NEW LOX PLANT SEE SHEET E-311.

SYM	DESCRIPTION	DATE	APPR

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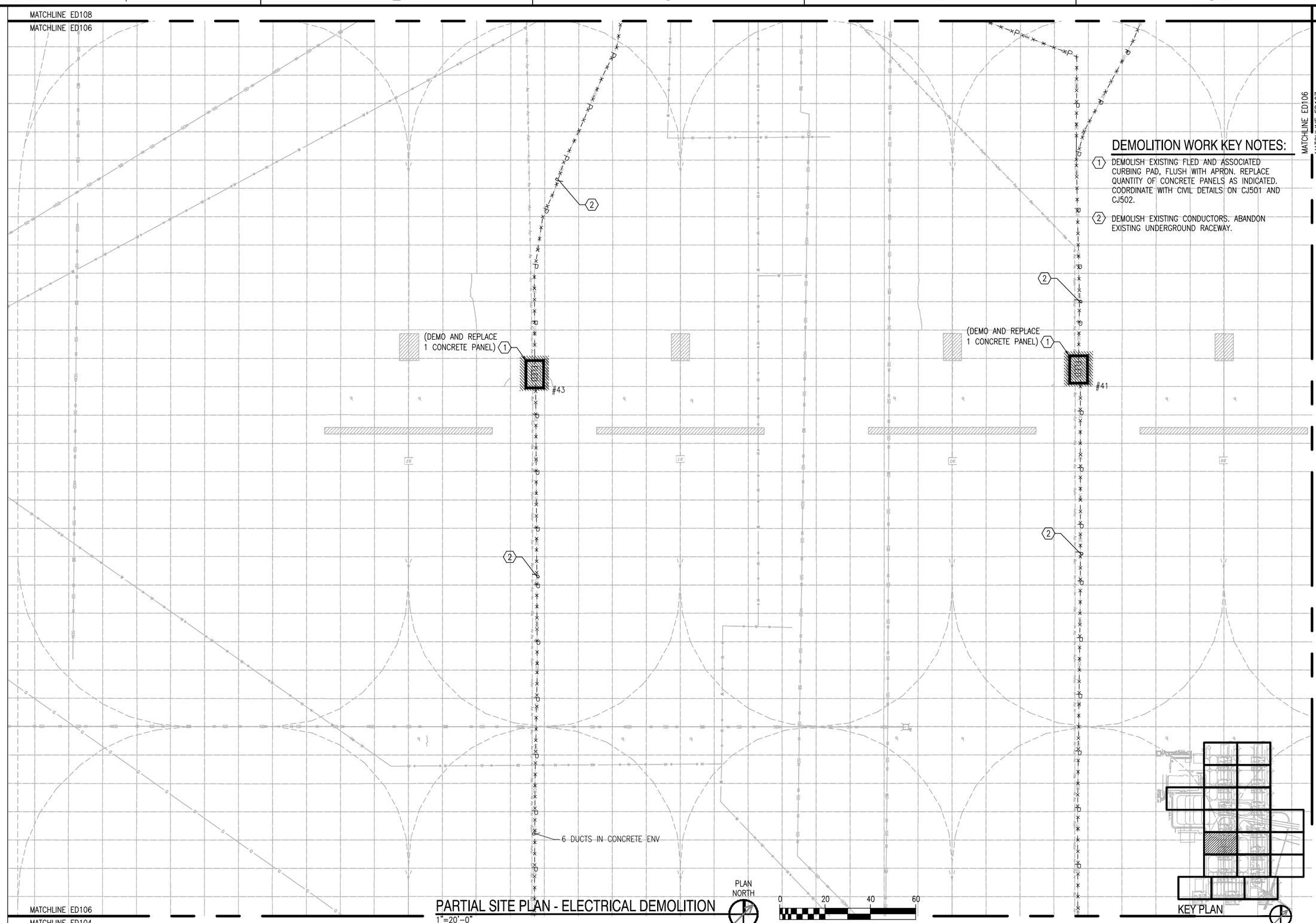
ACTIVITY
NAS WHIDBEY ISLAND
SATISFACTORY TO DATE
DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030499
SHEET 245 OF 302
ED105

DRAWFORM REVISION: 10 MARCH 2009



DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED AND ASSOCIATED CURBING PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY

NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

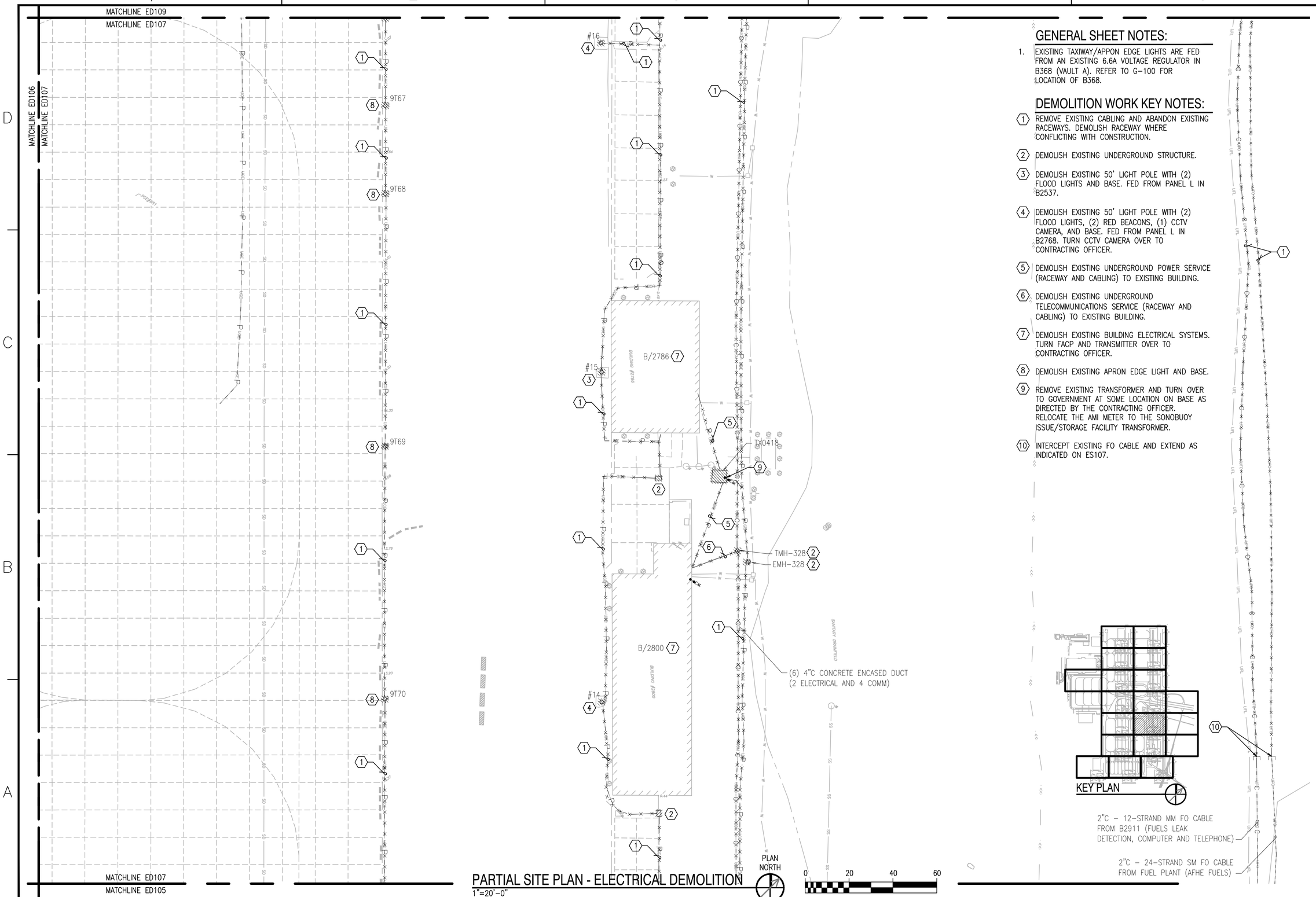
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030500

SHEET 246 OF 302

ED106

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-100 FOR LOCATION OF B368.

DEMOLITION WORK KEY NOTES:

1. REMOVE EXISTING CABLING AND ABANDON EXISTING RACEWAYS. DEMOLISH RACEWAY WHERE CONFLICTING WITH CONSTRUCTION.
2. DEMOLISH EXISTING UNDERGROUND STRUCTURE.
3. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS AND BASE. FED FROM PANEL L IN B2537.
4. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS, (2) RED BEACONS, (1) CCTV CAMERA, AND BASE. FED FROM PANEL L IN B2768. TURN CCTV CAMERA OVER TO CONTRACTING OFFICER.
5. DEMOLISH EXISTING UNDERGROUND POWER SERVICE (RACEWAY AND CABLING) TO EXISTING BUILDING.
6. DEMOLISH EXISTING UNDERGROUND TELECOMMUNICATIONS SERVICE (RACEWAY AND CABLING) TO EXISTING BUILDING.
7. DEMOLISH EXISTING BUILDING ELECTRICAL SYSTEMS. TURN FACP AND TRANSMITTER OVER TO CONTRACTING OFFICER.
8. DEMOLISH EXISTING APRON EDGE LIGHT AND BASE.
9. REMOVE EXISTING TRANSFORMER AND TURN OVER TO GOVERNMENT AT SOME LOCATION ON BASE AS DIRECTED BY THE CONTRACTING OFFICER. RELOCATE THE AMI METER TO THE SONOBUOY ISSUE/STORAGE FACILITY TRANSFORMER.
10. INTERCEPT EXISTING FO CABLE AND EXTEND AS INDICATED ON ES107.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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50476
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APPROVED
FOR COMMANDER NAVFAC 3/2/15

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030501
SHEET 247 OF 302

ED107

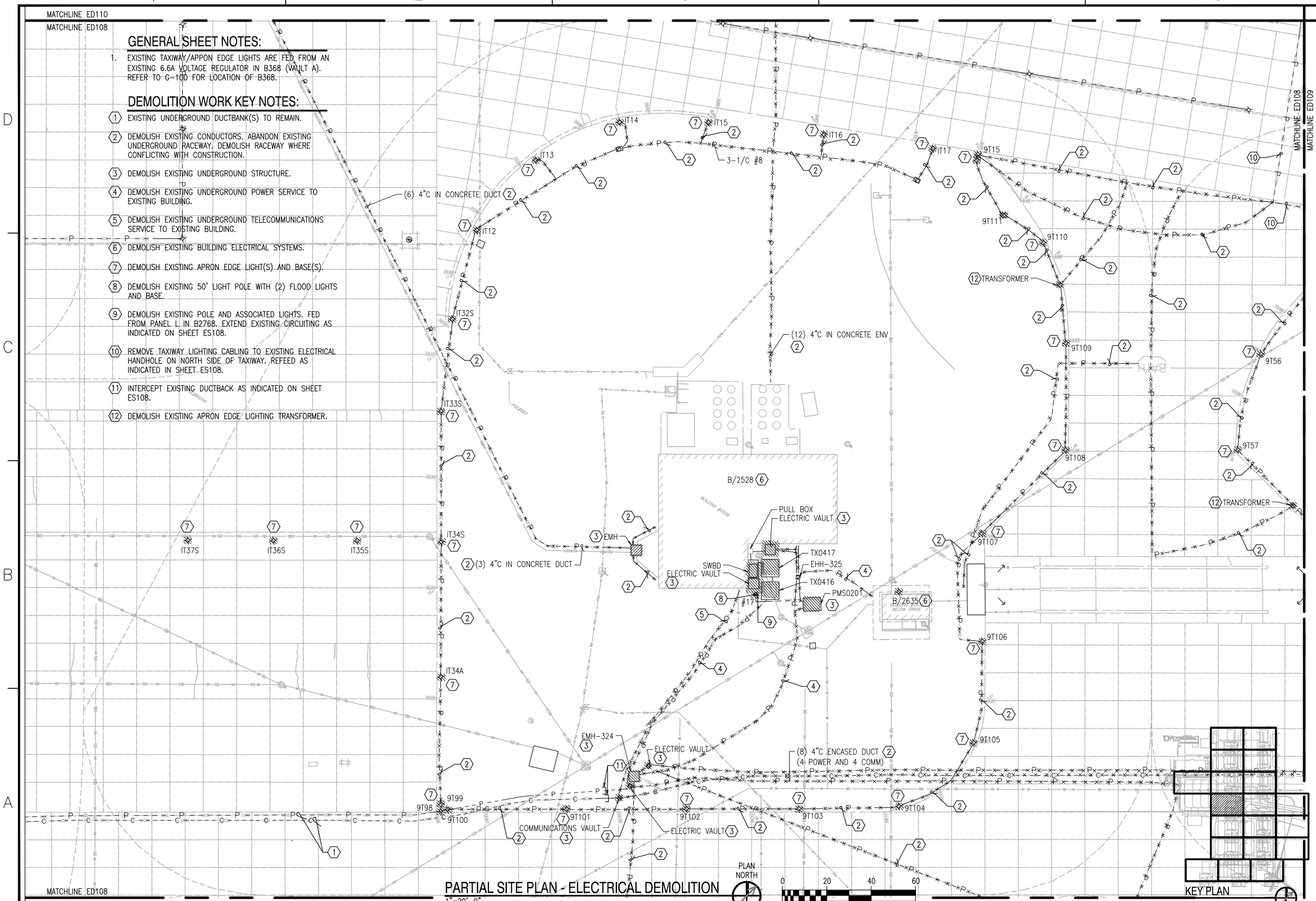
DRAWFORM REVISION: 10 MARCH 2009

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-100 FOR LOCATION OF B368.

DEMOLITION WORK KEY NOTES:

1. EXISTING UNDERGROUND DUCTBANK(S) TO REMAIN.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY. DEMOLISH RACEWAY WHERE CONFLICTING WITH CONSTRUCTION.
3. DEMOLISH EXISTING UNDERGROUND STRUCTURE.
4. DEMOLISH EXISTING UNDERGROUND POWER SERVICE TO EXISTING BUILDING.
5. DEMOLISH EXISTING UNDERGROUND TELECOMMUNICATIONS SERVICE TO EXISTING BUILDING.
6. DEMOLISH EXISTING BUILDING ELECTRICAL SYSTEMS.
7. DEMOLISH EXISTING APRON EDGE LIGHT(S) AND BASE(S).
8. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS AND BASE.
9. DEMOLISH EXISTING POLE AND ASSOCIATED LIGHTS. FED FROM PANEL L IN B2768. EXTEND EXISTING CIRCUITING AS INDICATED ON SHEET ES108.
10. REMOVE TAXIWAY LIGHTING CABLING TO EXISTING ELECTRICAL HANDHOLE ON NORTH SIDE OF TAXIWAY. REFEED AS INDICATED IN SHEET ES108.
11. INTERCEPT EXISTING DUCTBACK AS INDICATED ON SHEET ES108.
12. DEMOLISH EXISTING APRON EDGE/ LIGHTING TRANSFORMER.



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

KEY PLAN

STM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

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A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES	KMD	DRW	AM	CHK	GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<CCC>>

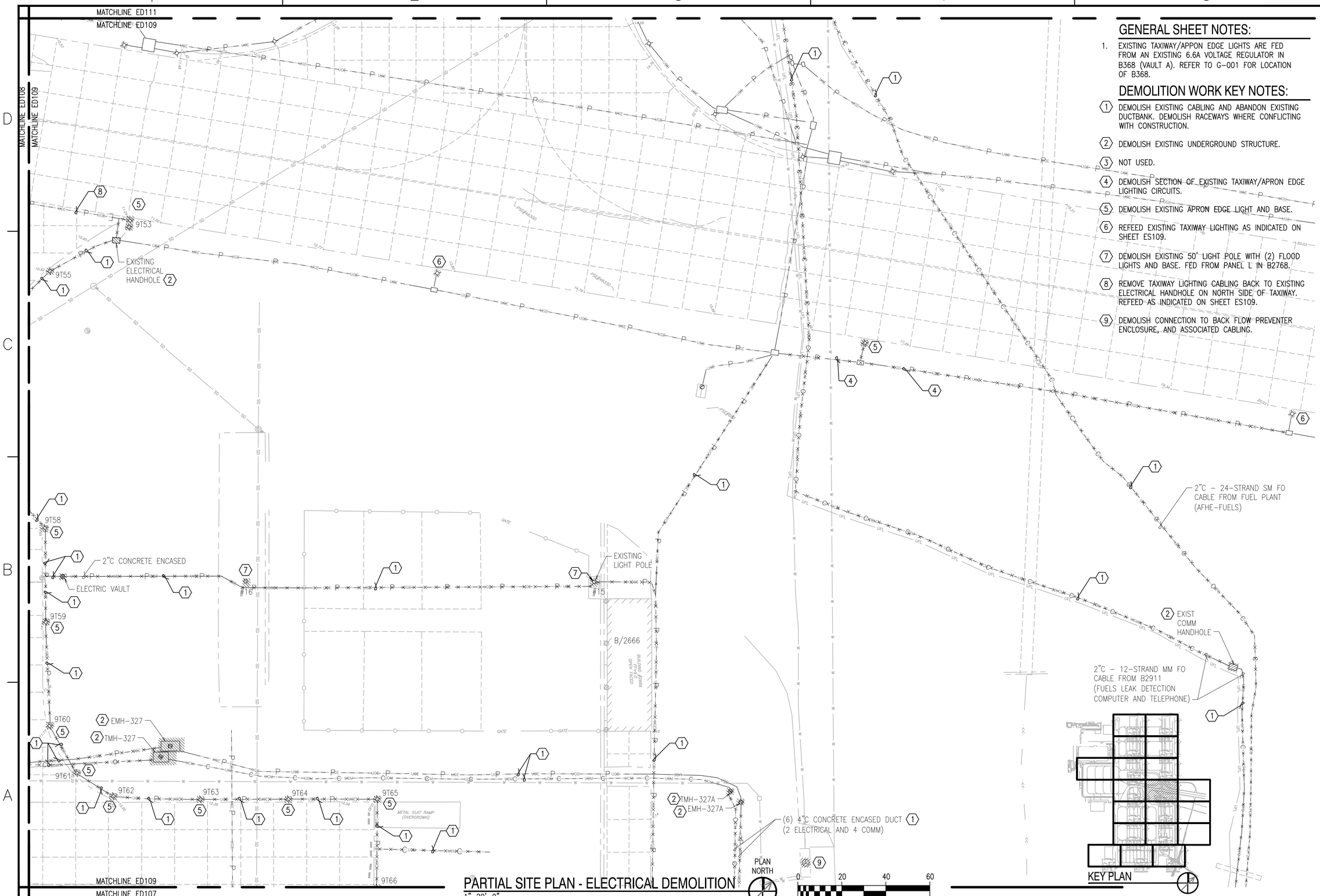
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030502
SHEET 248 OF 302
ED108

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-001 FOR LOCATION OF B368.

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING CABLING AND ABANDON EXISTING DUCTBANK. DEMOLISH RACEWAYS WHERE CONFLICTING WITH CONSTRUCTION.
2. DEMOLISH EXISTING UNDERGROUND STRUCTURE.
3. NOT USED.
4. DEMOLISH SECTION OF EXISTING TAXIWAY/APRON EDGE LIGHTING CIRCUITS.
5. DEMOLISH EXISTING APRON EDGE LIGHT AND BASE.
6. REFEED EXISTING TAXIWAY LIGHTING AS INDICATED ON SHEET ES109.
7. DEMOLISH EXISTING 50' LIGHT POLE WITH (2) FLOOD LIGHTS AND BASE. FED FROM PANEL L IN B2768.
8. REMOVE TAXIWAY LIGHTING CABLING BACK TO EXISTING ELECTRICAL HANDHOLE ON NORTH SIDE OF TAXIWAY. REFEED AS INDICATED ON SHEET ES109.
9. DEMOLISH CONNECTION TO BACK FLOW PREVENTER ENCLOSURE, AND ASSOCIATED CABLING.

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE
DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
AULT FIELD – OAK HARBOR, WA

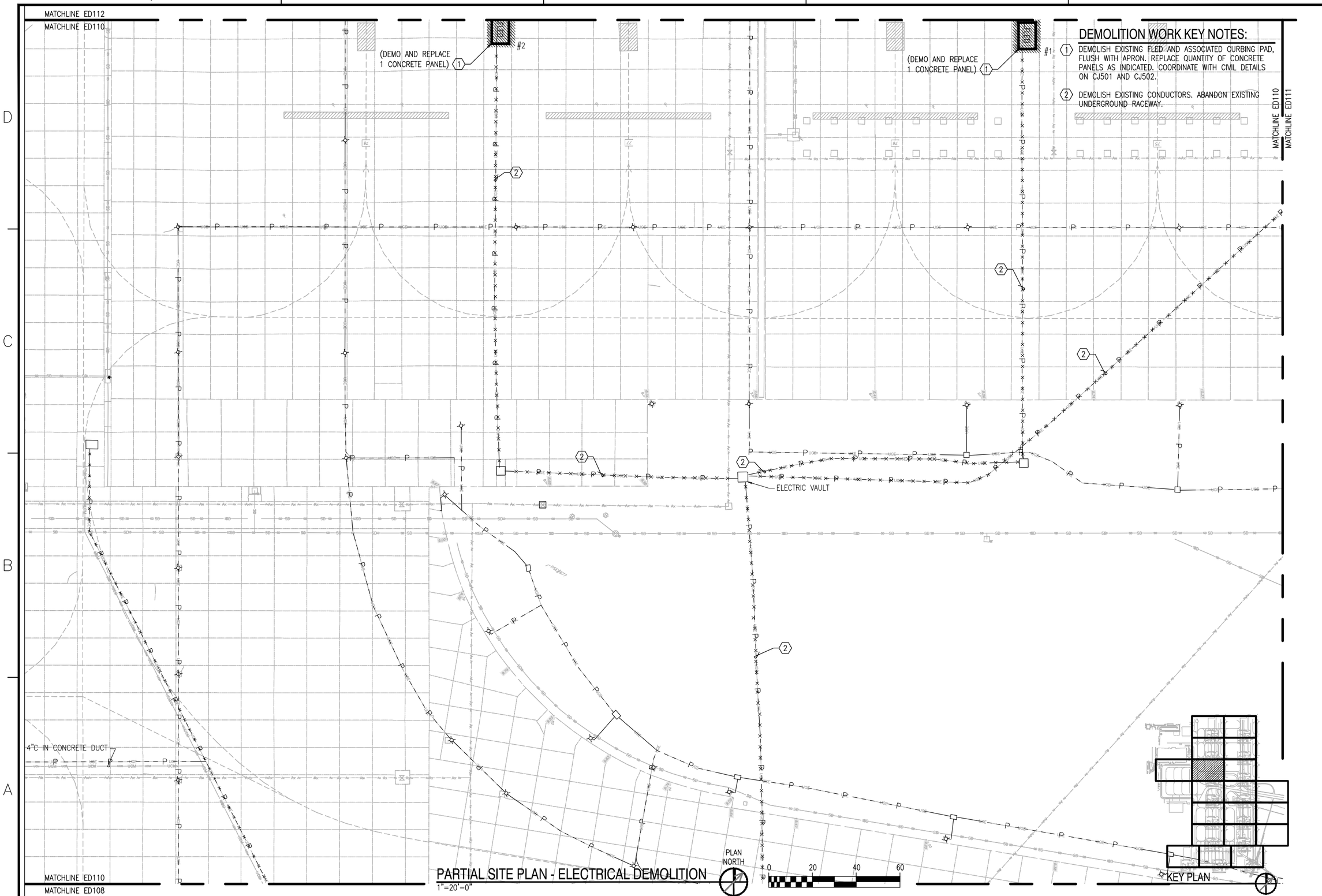
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030503
SHEET 249 OF 302

ED109

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED AND ASSOCIATED CURBING PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.

SYM	DESCRIPTION	DATE	APPR

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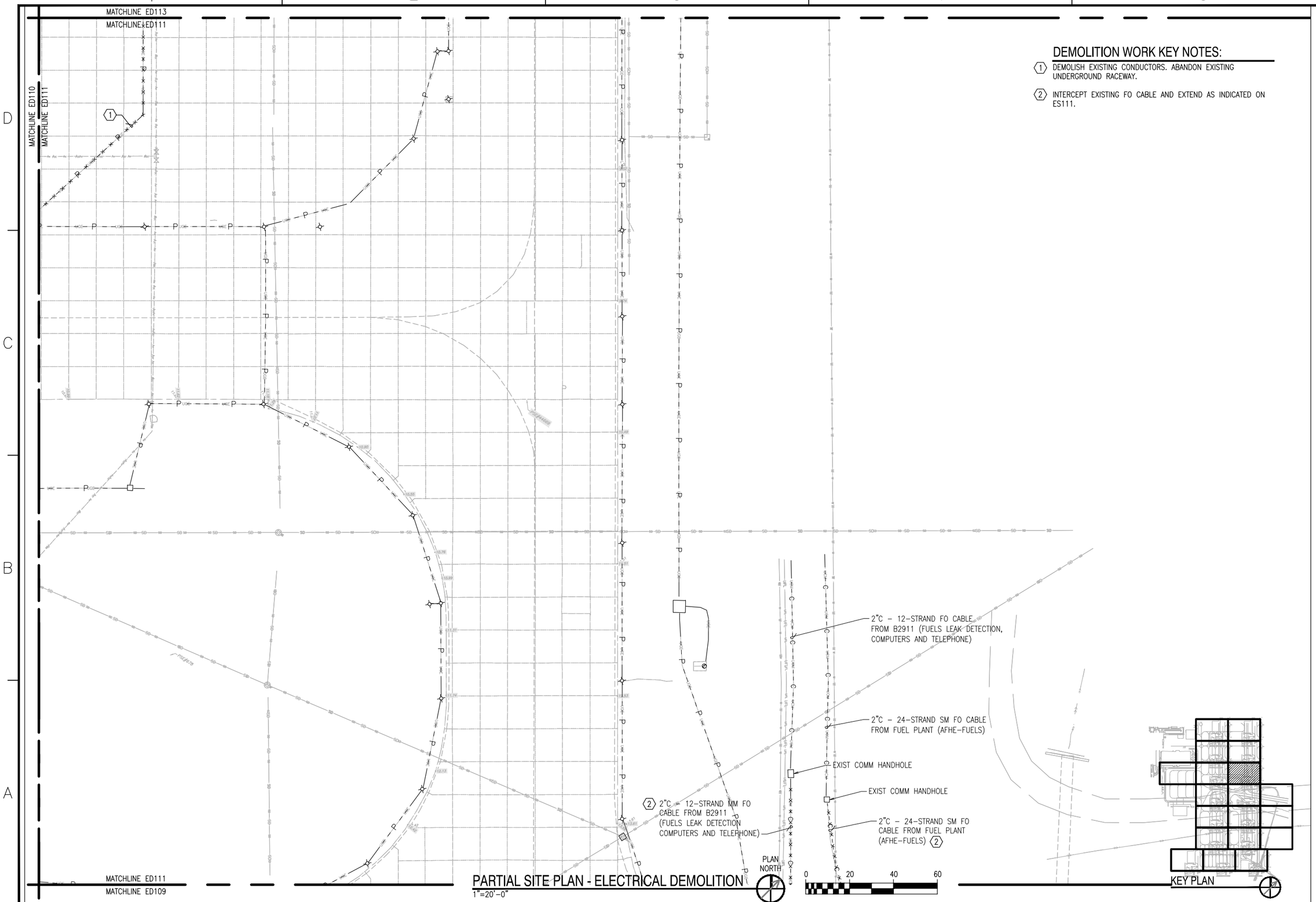
SATISFACTORY TO DATE
DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030504
SHEET 250 OF 302
ED110

DRAWFORM REVISION: 10 MARCH 2009



DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.
2. INTERCEPT EXISTING FO CABLE AND EXTEND AS INDICATED ON ES111.

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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SATISFACTORY TO DATE

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<<PM/DM>> JOSEPH KISIDAY

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CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030505

SHEET 251 OF 302

ED111

DRAWFORM REVISION: 10 MARCH 2009

MATCHLINE ED114

MATCHLINE ED112

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED AND ASSOCIATED CURBING PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.

MATCHLINE ED112

MATCHLINE ED113

(DEMO AND REPLACE 1 CONCRETE PANEL) 1

#4

(DEMO AND REPLACE 1 CONCRETE PANEL) 1

#3

2

MATCHLINE ED112

MATCHLINE ED110

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

PLAN NORTH

0 20 40 60

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY

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SATISFACTORY TO DATE

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BRANCH MANAGER

CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

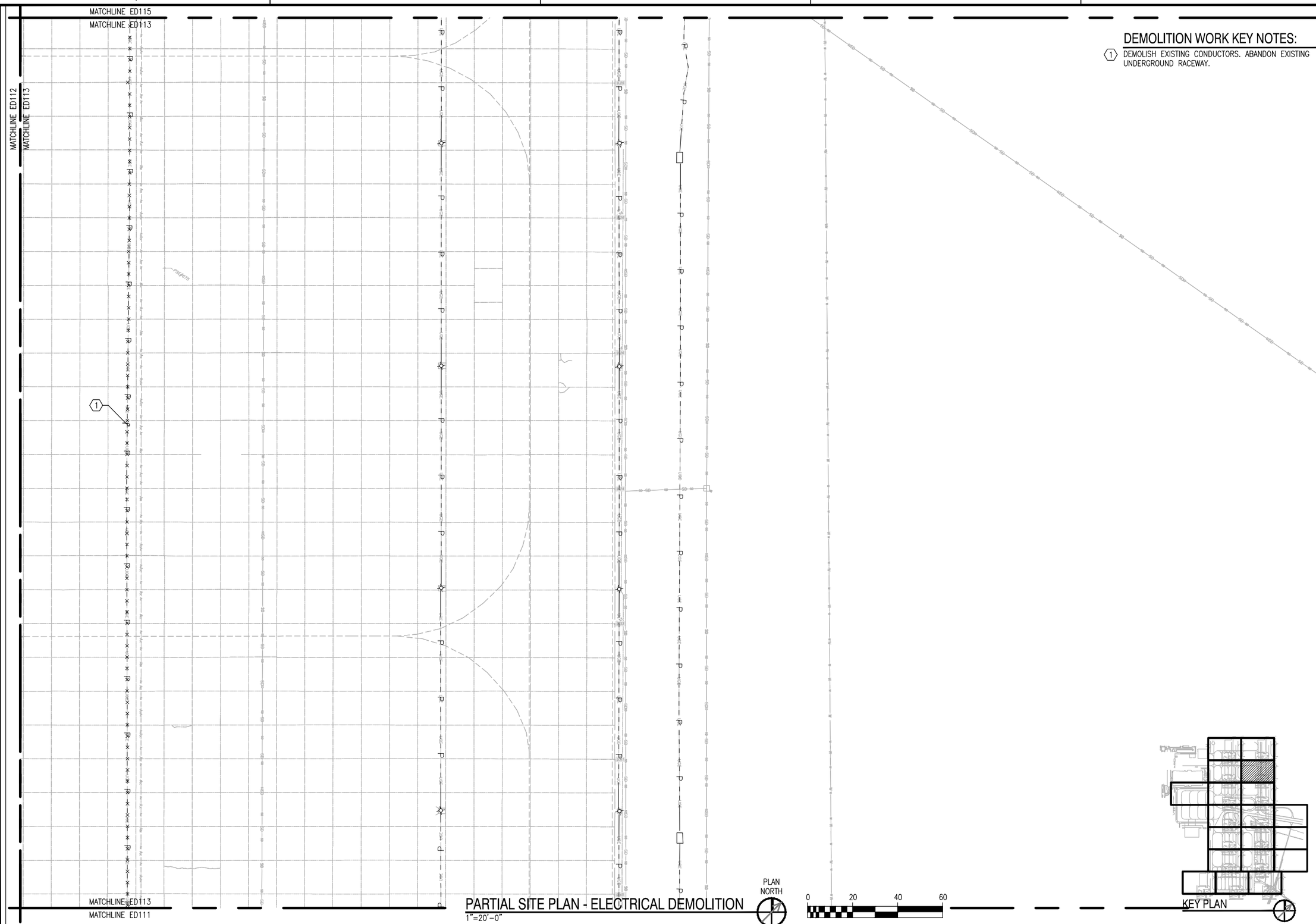
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030506

SHEET 252 OF 302

ED112

DRAWFORM REVISION: 10 MARCH 2009



DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

STM	DESCRIPTION	DATE	APPR

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CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL AIR STATION WHIDBEY ISLAND OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030507

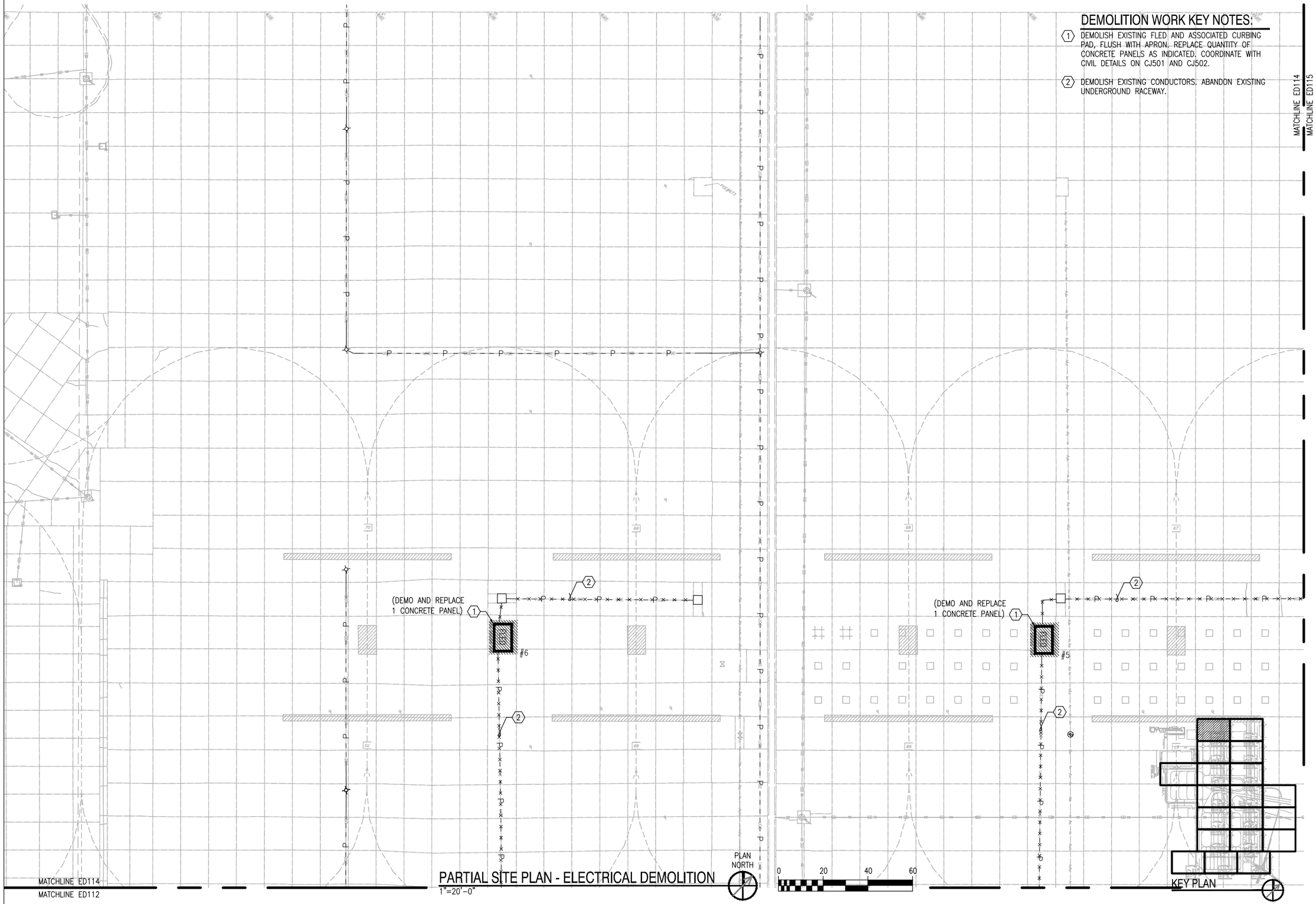
SHEET 253 OF 302

ED113

DRAWFORM REVISION: 10 MARCH 2009

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED AND ASSOCIATED CURBING PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

SYM	DESCRIPTION	DATE	APPR

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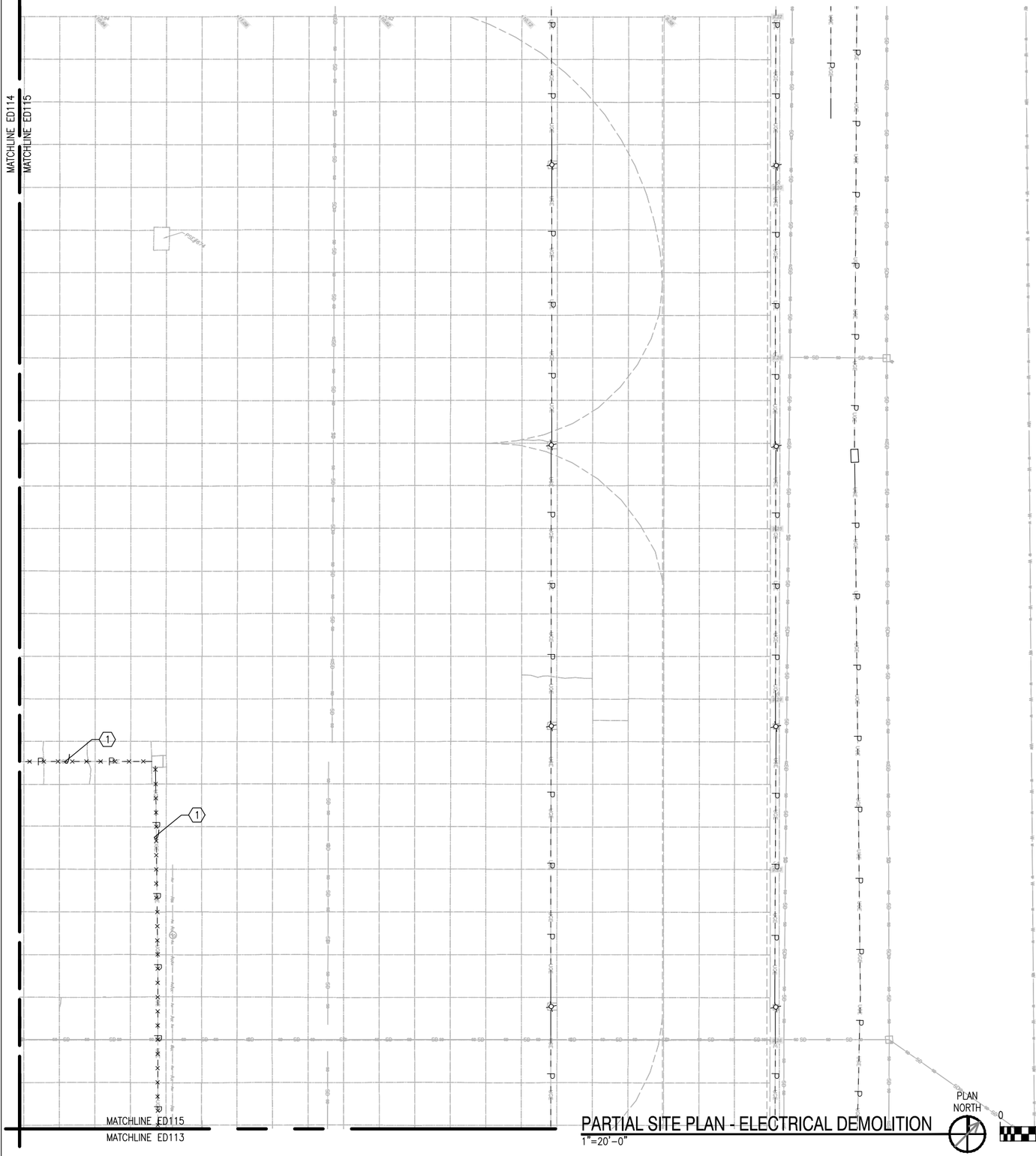
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030508
SHEET 254 OF 302
ED114

DRAWFORM REVISION: 10 MARCH 2009

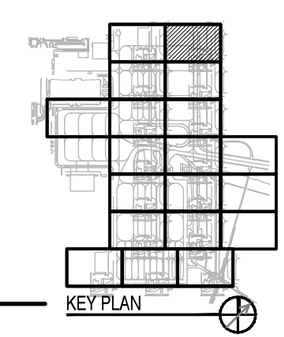


PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

1"=20'-0"

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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BRANCH MANAGER

CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND

OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030509

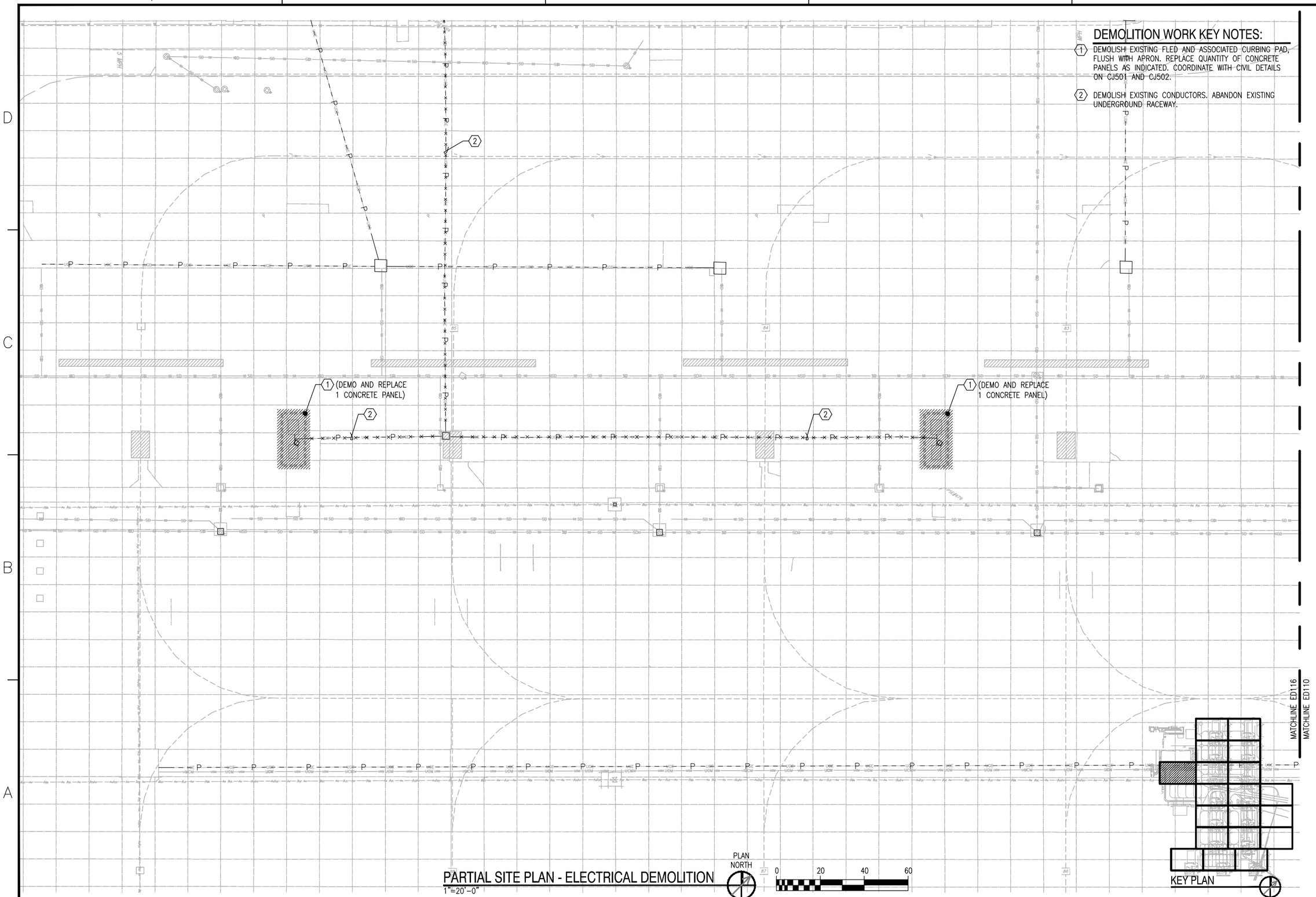
SHEET 255 OF 302

ED115

DRAWFORM REVISION: 10 MARCH 2009

DEMOLITION WORK KEY NOTES:

1. DEMOLISH EXISTING FLED AND ASSOCIATED CURBING PAD, FLUSH WITH APRON. REPLACE QUANTITY OF CONCRETE PANELS AS INDICATED. COORDINATE WITH CIVIL DETAILS ON CJ501 AND CJ502.
2. DEMOLISH EXISTING CONDUCTORS. ABANDON EXISTING UNDERGROUND RACEWAY.



PARTIAL SITE PLAN - ELECTRICAL DEMOLITION
1"=20'-0"

PLAN NORTH

0 20 40 60

SYM	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE

DES	KMD	DRW	AM	CHK	GLL
<<PM/DM>>	JOSEPH KISIDAY				

BRANCH MANAGER

CHIEF ENG/ARCH

<<XX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN - ELECTRICAL DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030510

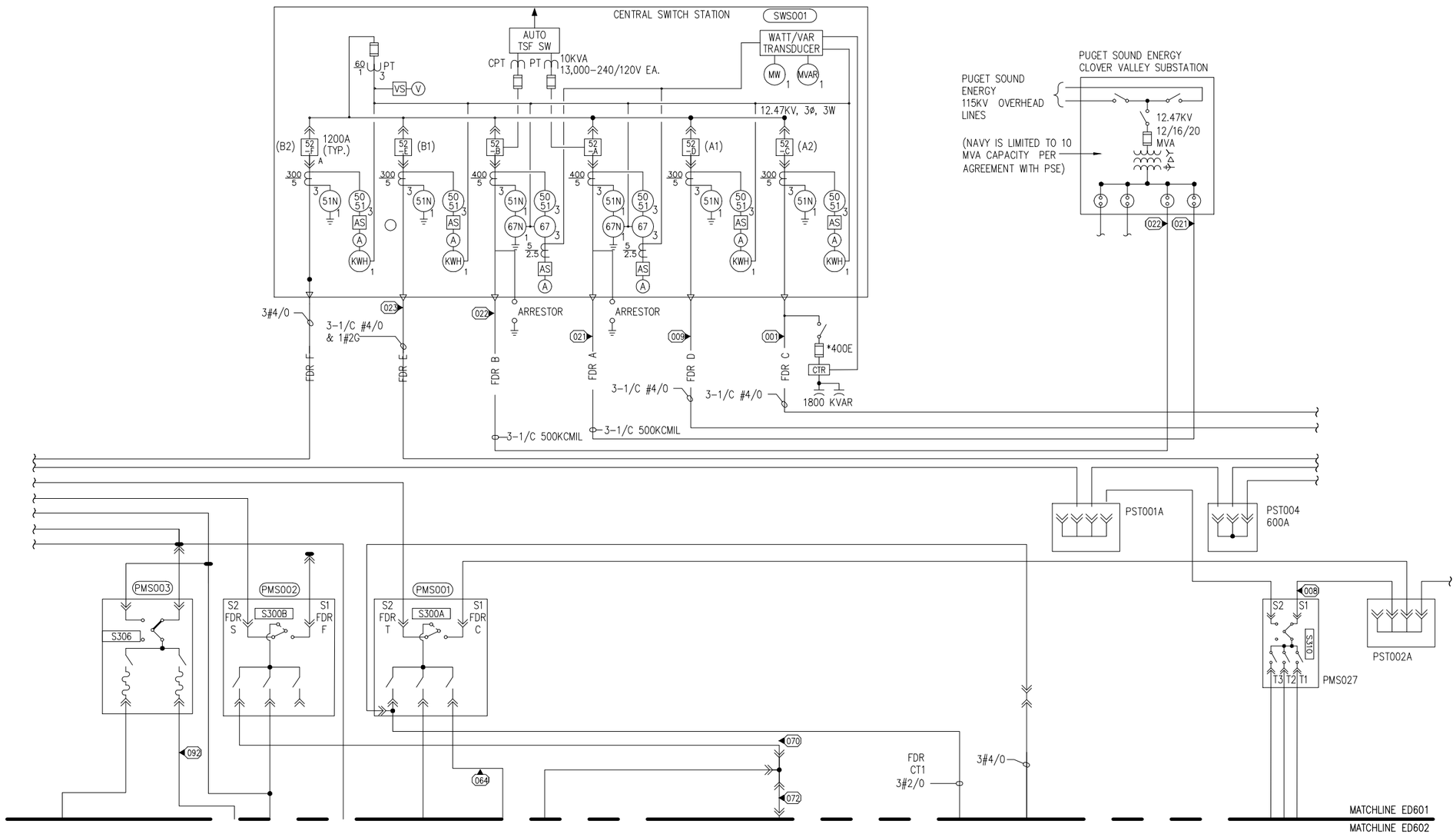
SHEET 256 OF 302

ED116

DRAWFORM REVISION: 10 MARCH 2009

GENERAL SHEET NOTES:

1. NO WORK ON THIS SHEET. SHOWN FOR REFERENCE ONLY.



BASE POWER ONE-LINE DIAGRAM - DEMOLITION

NTS

A1

SYM	DESCRIPTION	DATE	APPR

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CHIEF ENG/ARCH
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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
BASE POWER ONE-LINE DIAGRAM - DEMOLITION

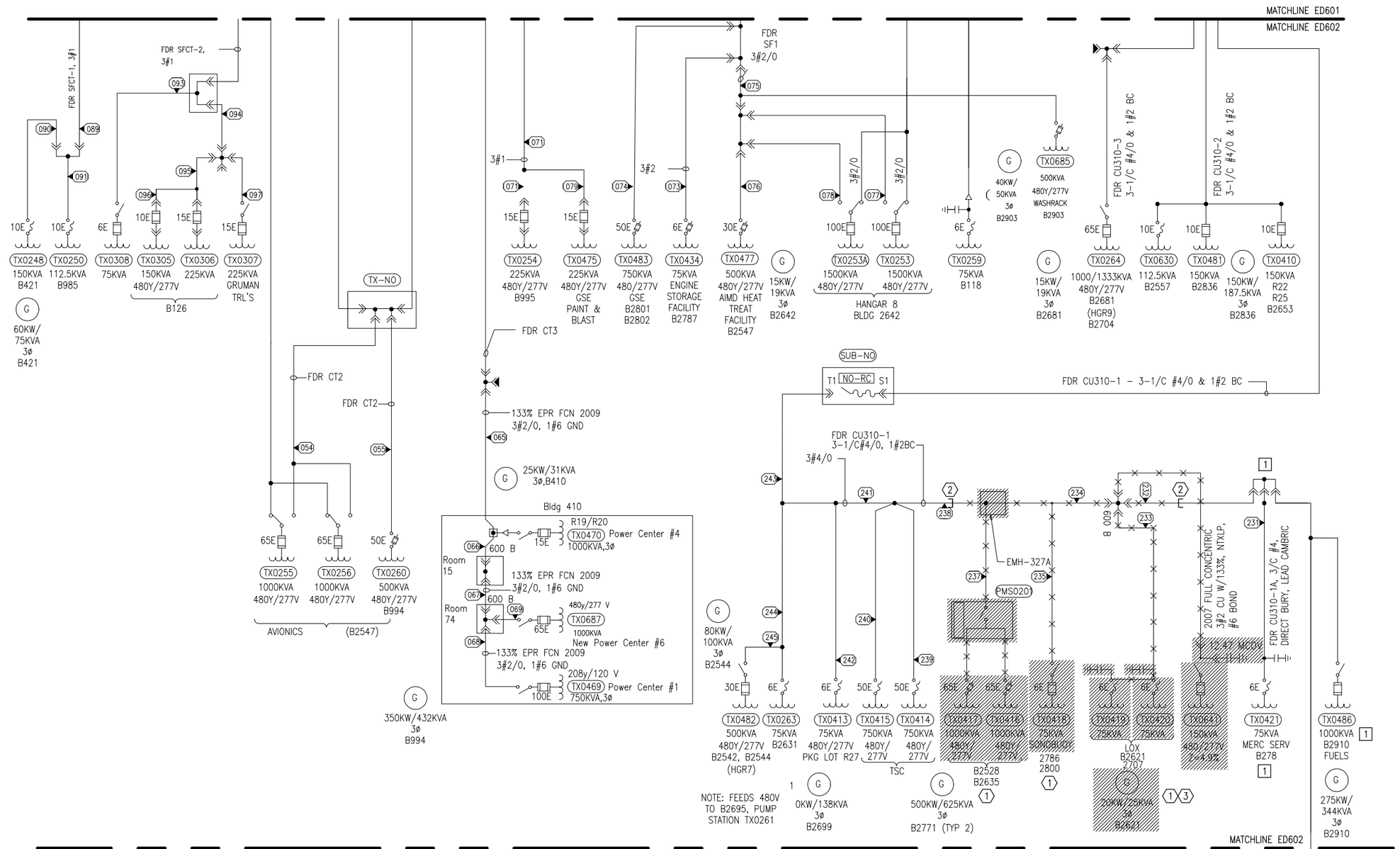
SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030511
SHEET 257 OF 302
ED601
DRAWFORM REVISION: 10 MARCH 2009

DEMOLITION KEY NOTES:

1. DEMOLISH EXISTING TRANSFORMER, GENERATOR AND ABOVE GRADE SWITCH AND ASSOCIATED 15KV CABLING.
2. INTERCEPT EXISTING FEEDERS AND EXTEND AS INDICATED ON E-602.
3. DEMOLISH EXISTING GENERATOR-SET AND TURN OVER TO GOVERNMENT.

KEY NOTES:

1. PRIOR TO DEMOLITION OF A SECTION OF FEEDER CU310-1, SWITCH B278 AND B2910 TO FEEDER CU310-C. SWITCH BACK TO FEEDER CU310-1 UPON COMPLETION OF FEEDER CU310-1. REFER TO SHEET ED603.



BASE POWER ONE-LINE DIAGRAM - DEMOLITION

NTS

ED602 A1

SYM	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE

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<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

BASE POWER ONE-LINE DIAGRAM - DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030512

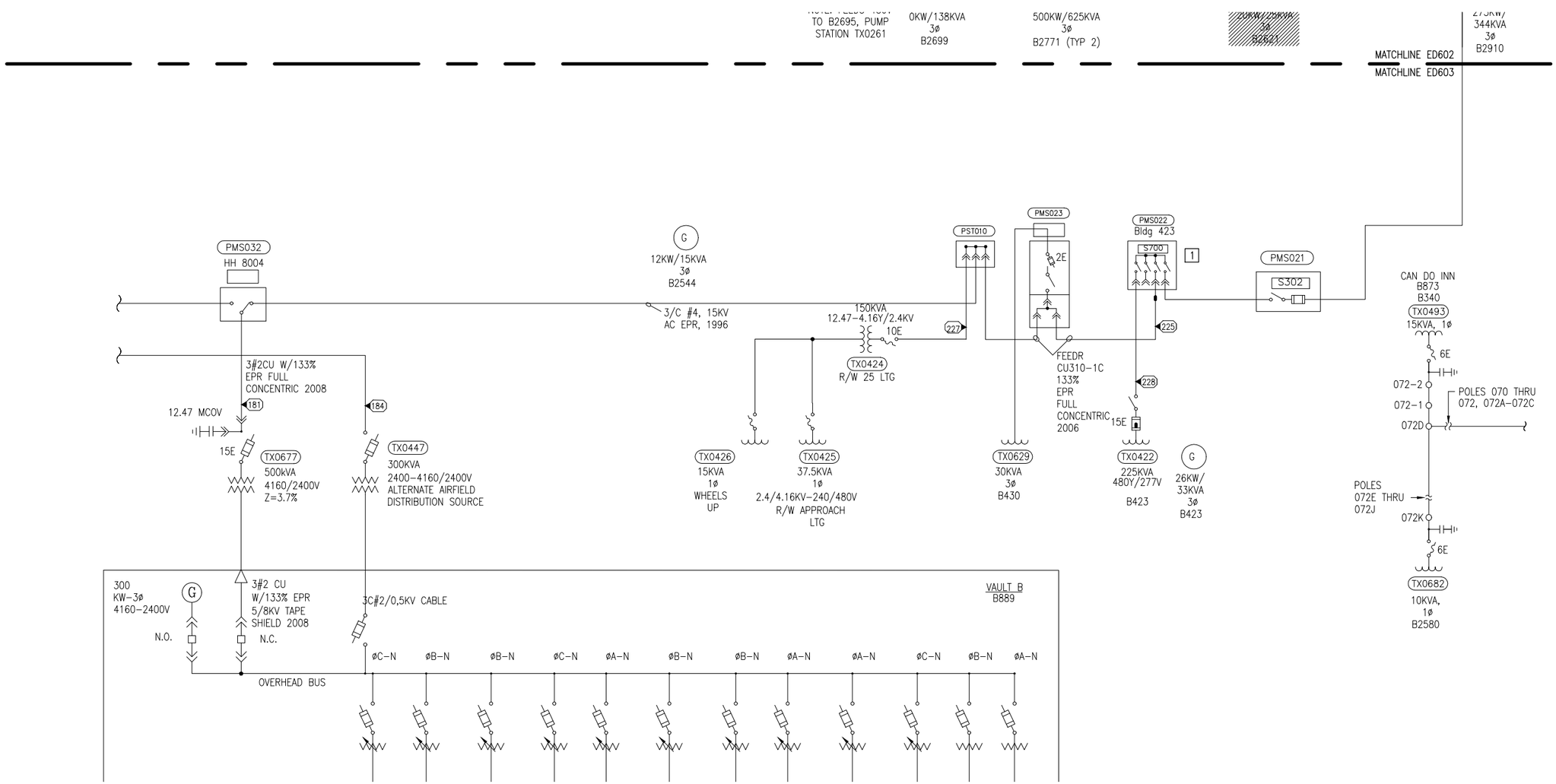
SHEET 258 OF 302

ED602

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. PRIOR TO DEMOLITION OF A SECTION OF FEEDER CU310-1, SWITCH B278 AND B2910 TO FEEDER CU310-C. SWITCH BACK TO FEEDER CU310-1 UPON COMPLETION OF FEEDER CU310-1. REFER TO SHEET ED602.



BASE POWER ONE-LINE DIAGRAM - DEMOLITION

NTS

ED602 A1

SYM	DESCRIPTION	DATE	APPR

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NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES	KMD	DRW	AM	CHK	GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

BASE POWER ONE-LINE DIAGRAM - DEMOLITION

SCALE: AS NOTED

EPROJECT NO.:

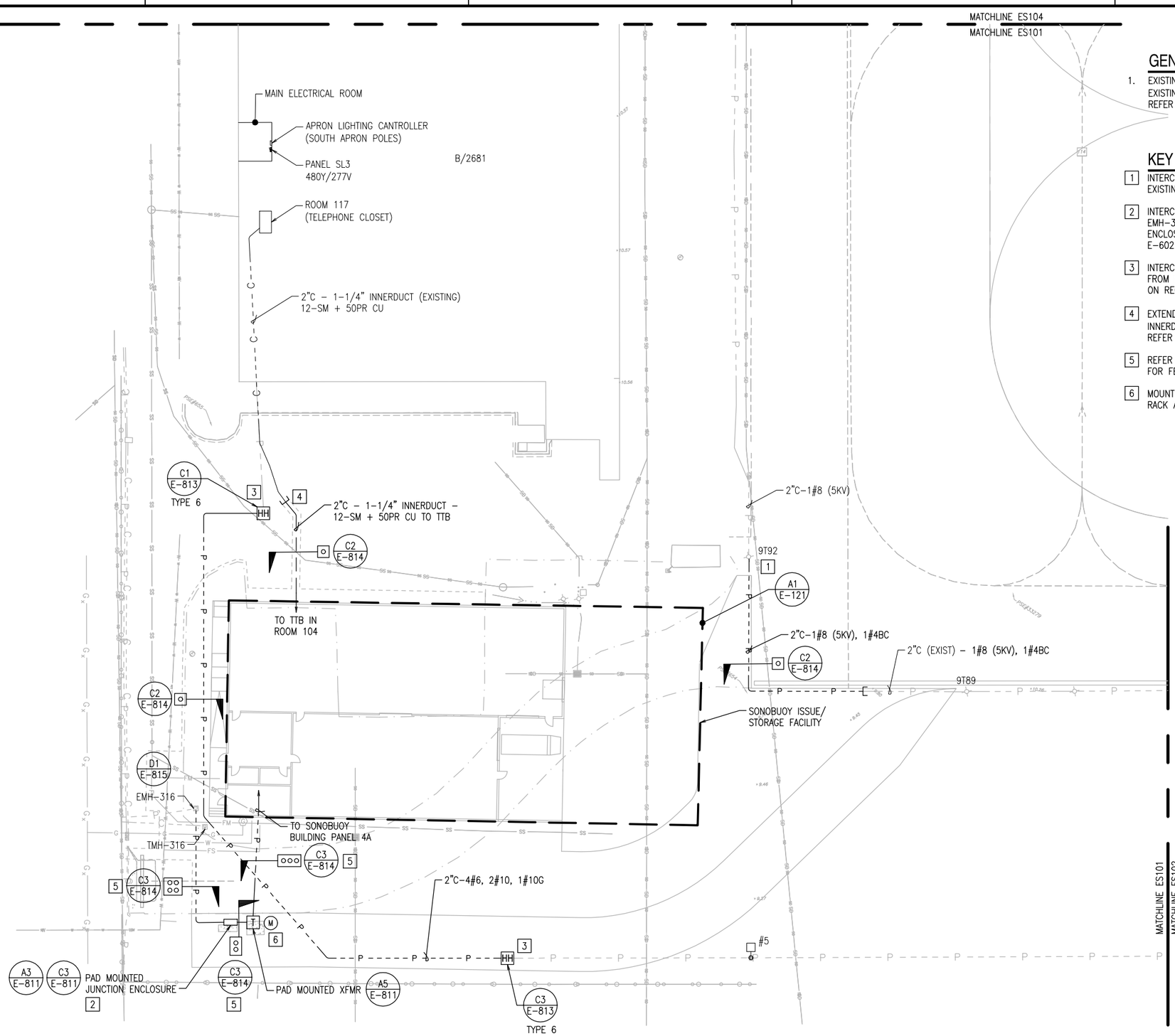
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030513

SHEET 259 OF 302

ED603

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

PLAN NORTH

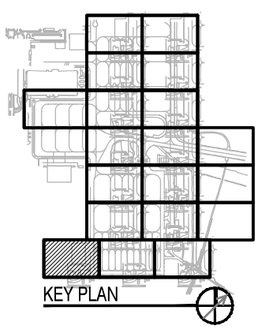
0 20 40 60

GENERAL SHEET NOTES:

1. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-001 FOR LOCATION OF B368.

KEY NOTES:

1. INTERCEPT EXISTING APRON EDGE LIGHTING CIRCUIT AT EXISTING LIGHT AND EXTEND TO REMAINING LIGHT 9T89.
2. INTERCEPT EXISTING FEEDER CU310-3 IN EXISTING MANHOLE EMH-316 AND EXTEND TO ABOVE GRADE JUNCTION ENCLOSURE. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-602.
3. INTERCEPT EXISTING SOUTH APRON POLE LIGHT CIRCUITS FROM PANEL SL3 IN B2681 AND EXTEND. INDICATE CIRCUITS ON RECORD DRAWINGS.
4. EXTEND 2" TELECOMMUNICATIONS CONDUIT AND 1-1/4" INNERDUCT TO TTB IN SONOBUOY ISSUE/STORAGE FACILITY. REFER TO SHEET E-321.
5. REFER TO ONE LINE DIAGRAM ON SHEETS E-602 AND E-621 FOR FEEDERS AND ADDITIONAL REQUIREMENTS.
6. MOUNT RELOCATED AMI POWER METER ON METAL STRUT RACK ADJACENT TO TRANSFORMER.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE

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<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030514

SHEET 260 OF 302

ES101

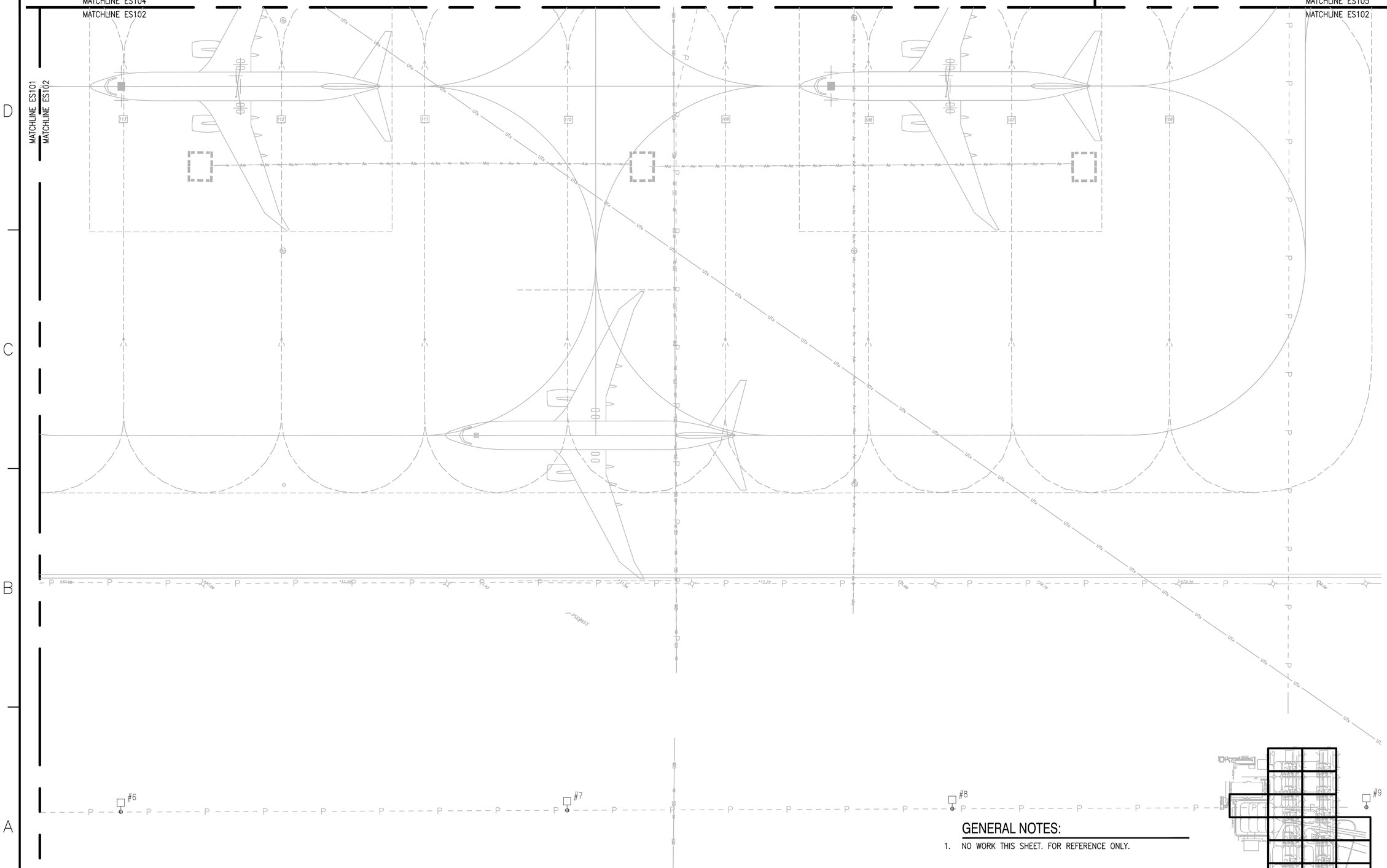
DRAWFORM REVISION: 10 MARCH 2009

MATCHLINE ES104
MATCHLINE ES102

MATCHLINE ES105
MATCHLINE ES102

MATCHLINE ES101
MATCHLINE ES102

MATCHLINE ES102
MATCHLINE ES103



GENERAL NOTES:

1. NO WORK THIS SHEET. FOR REFERENCE ONLY.

PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

PLAN NORTH

0 20 40 60

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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A/E INFO

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FOR COMMANDER NAVFAC 3/2/15

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

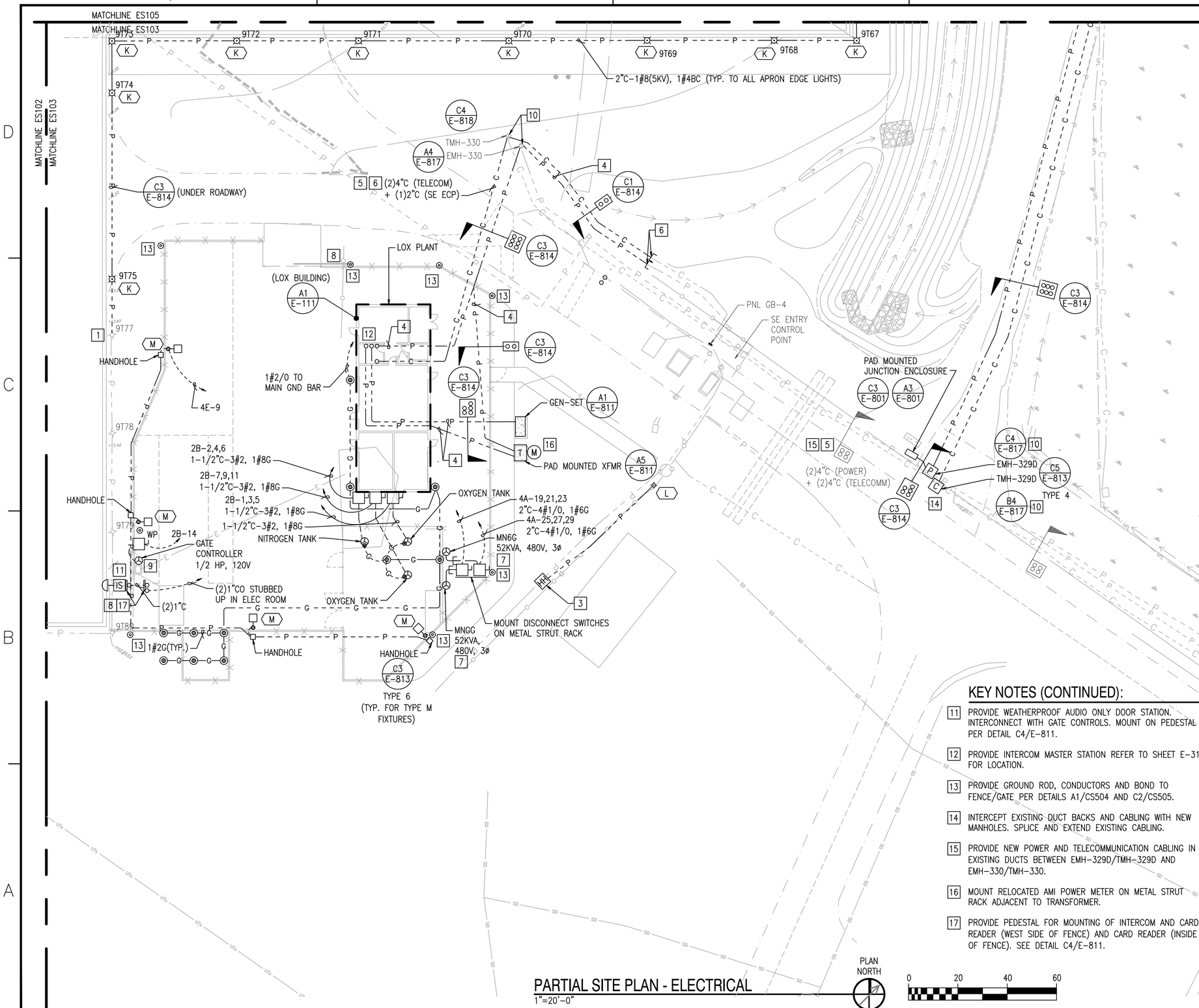
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030515

SHEET 261 OF 302

ES102

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

GENERAL SHEET NOTES:

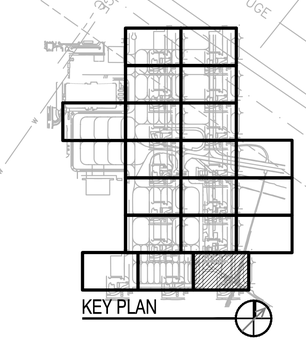
1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.
2. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A).
3. REFER TO G-001 FOR LOCATIONS OF B368.
4. REFER TO POWER ONE-LINE DIAGRAMS ON SHEETS E-602 AND E-611 FOR FEEDERS AND ADDITIONAL REQUIREMENTS.
5. ALL UNDERGROUND DUCTS ON THIS SHEET SHALL BE CONCRETE ENCASED, PER DETAIL C2/E-814, UNLESS INDICATED OTHERWISE.

KEY NOTES:

1. REFEED EXISTING APRON EDGE LIGHTING CIRCUIT.
2. NOT USED.
3. INTERCEPT EXISTING FLIGHTLINE FENCE LIGHTING CIRCUIT AND EXTEND TO TYPE "L" FIXTURE.
4. REFER TO ONE-LINE DIAGRAM ON SHEET E-611 FOR FEEDERS.
5. REFER TO TELECOM RISER DIAGRAM C1/E-612.
6. INTERCEPT EXISTING UG RACEWAY SERVING ENTRY CONTROL POINT EQUIPMENT. CONNECT RELOCATED SECURITY EQUIPMENT IN LOX PLANT TO EXISTING SE ENTRY CONTROL POINT EQUIPMENT. PROVIDE 2"C WITH: 1-3/C CABLE (GRAY-SHELDED), 4-CABLES (BLACK) AND 8-CABLES (SIMILAR TO BELDEN # E-108998). CONFIRM EXACT CABLE TYPES IN FIELD.
7. PROVIDE 100A, 4P STAINLESS STEEL DISCONNECT SWITCH. CONNECT TO MNGG WITH MIL-L-22992, CLASS L #44-12 RECEPTACLE AND #44-12 CABLE. ROUTE CABLE IN 2"C MOUNTED ON FINISHED GRADE. PROVIDE CABLE STRAIN RELIEF, CABLE SEALING ADAPTER AND THREADED CAP WITH CHAIN.
8. STUB UP CONDUITS +12"AG TO SUPPORT GFGI ACCESS CONTROL SYSTEM AT PEDESTAL PER DETAIL C4/E-811.
9. PROVIDE CONNECTIONS TO GATE CONTROLLER AND ALL ASSOCIATED CONTROLS AS REQUIRED FOR COMPLETE OPERATION.
10. PROVIDE MANHOLE COVER SECURITY SYSTEM.

KEY NOTES (CONTINUED):

11. PROVIDE WEATHERPROOF AUDIO ONLY DOOR STATION. INTERCONNECT WITH GATE CONTROLS. MOUNT ON PEDESTAL PER DETAIL C4/E-811.
12. PROVIDE INTERCOM MASTER STATION REFER TO SHEET E-311 FOR LOCATION.
13. PROVIDE GROUND ROD, CONDUCTORS AND BOND TO FENCE/GATE PER DETAILS A1/CS504 AND C2/CS505.
14. INTERCEPT EXISTING DUCT BACKS AND CABLING WITH NEW MANHOLES. SPLICE AND EXTEND EXISTING CABLING.
15. PROVIDE NEW POWER AND TELECOMMUNICATION CABLING IN EXISTING DUCTS BETWEEN EMH-329D/TMH-329D AND EMH-330/TMH-330.
16. MOUNT RELOCATED AMI POWER METER ON METAL STRUT RACK ADJACENT TO TRANSFORMER.
17. PROVIDE PEDESTAL FOR MOUNTING OF INTERCOM AND CARD READER (WEST SIDE OF FENCE) AND CARD READER (INSIDE OF FENCE). SEE DETAIL C4/E-811.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD ~ OAK HARBOR, WA

OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030516

SHEET 262 OF 302

ES103

DRAWFORM REVISION: 10 MARCH 2009

MATCHLINE ES106

MATCHLINE ES104

GENERAL SHEET NOTES:

1. NO WORK THIS SHEET. FOR REFERENCE ONLY.

MATCHLINE ES104

MATCHLINE ES105

ELECTRIC VAULT

MATCHLINE ES104

MATCHLINE ES101

PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

PLAN NORTH

0 20 40 60

MATCHLINE ES104

MATCHLINE ES102

KEY PLAN

STM	DESCRIPTION	DATE	APPR

NAVFAC

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SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

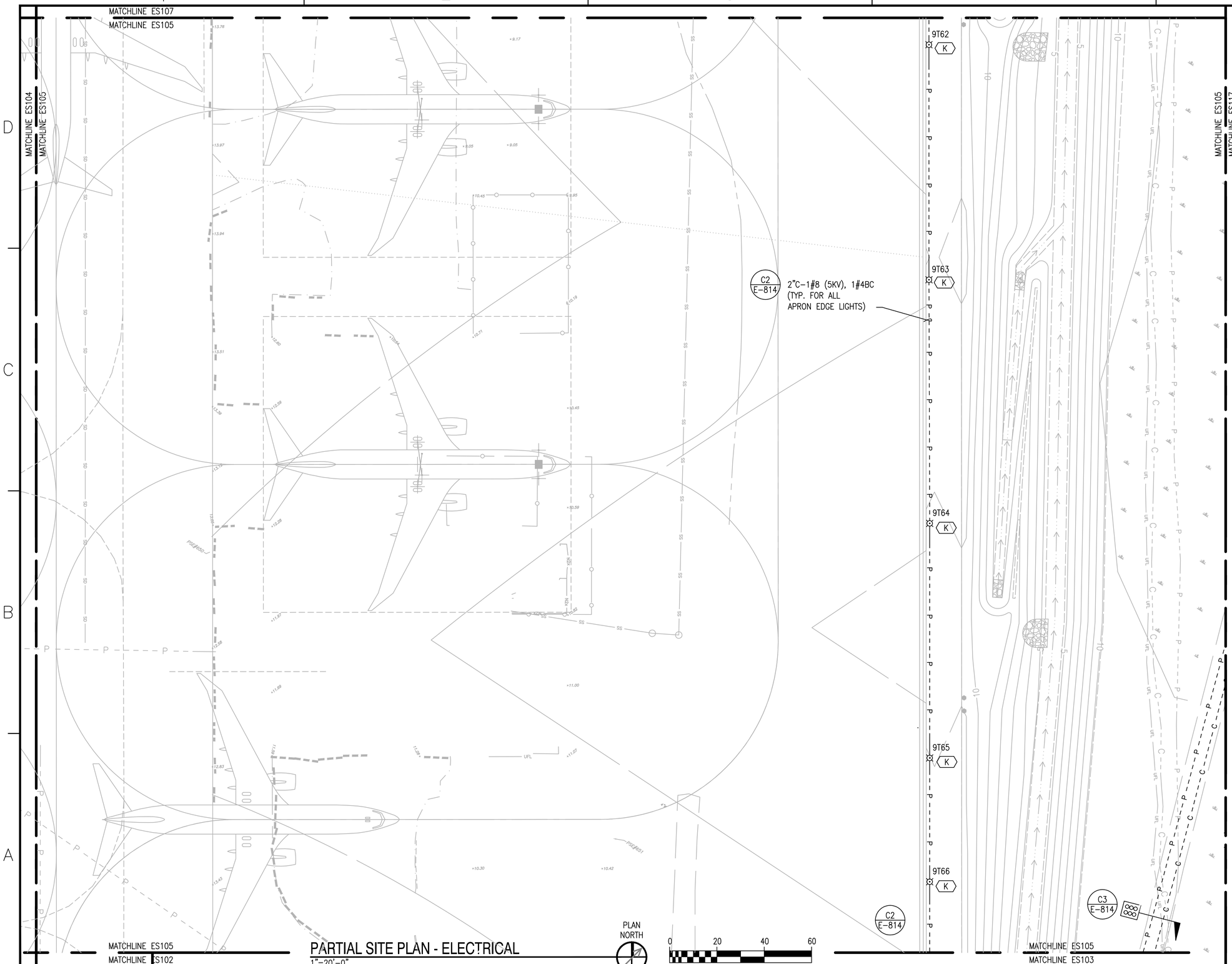
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030517

SHEET 263 OF 302

ES104

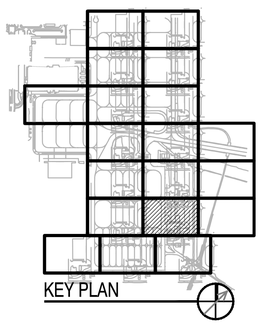
DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL
1"=20'-0"

GENERAL SHEET NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.
2. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-001 FOR LOCATION OF B368.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE

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<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030518

SHEET 264 OF 302

ES105

DRAWFORM REVISION: 10 MARCH 2009

MATCHLINE ES108

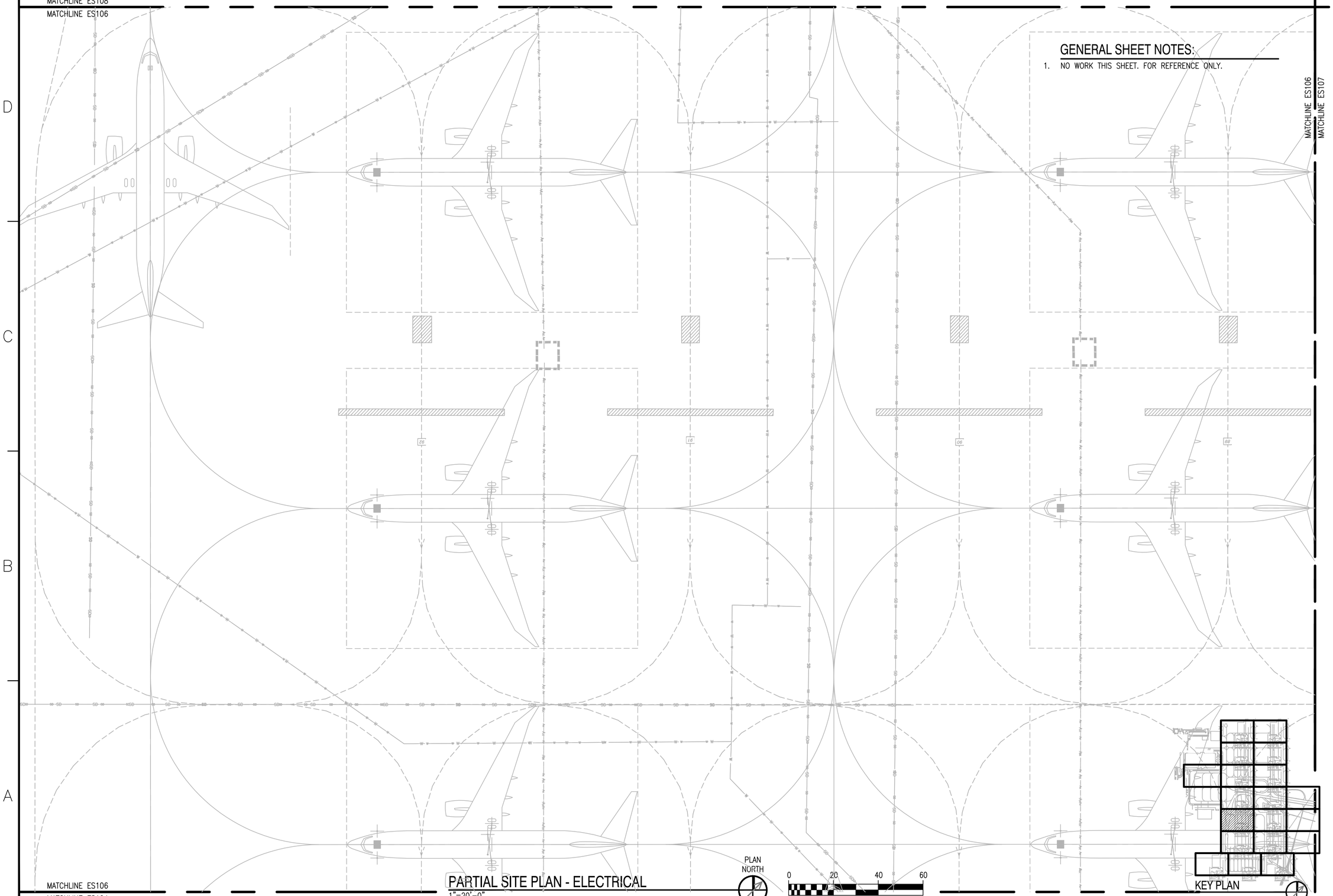
MATCHLINE ES106

GENERAL SHEET NOTES:

1. NO WORK THIS SHEET. FOR REFERENCE ONLY.

MATCHLINE ES106

MATCHLINE ES107



MATCHLINE ES106

MATCHLINE ES104

PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

PLAN NORTH

0 20 40 60

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY

NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES. KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
AULT FIELD – OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

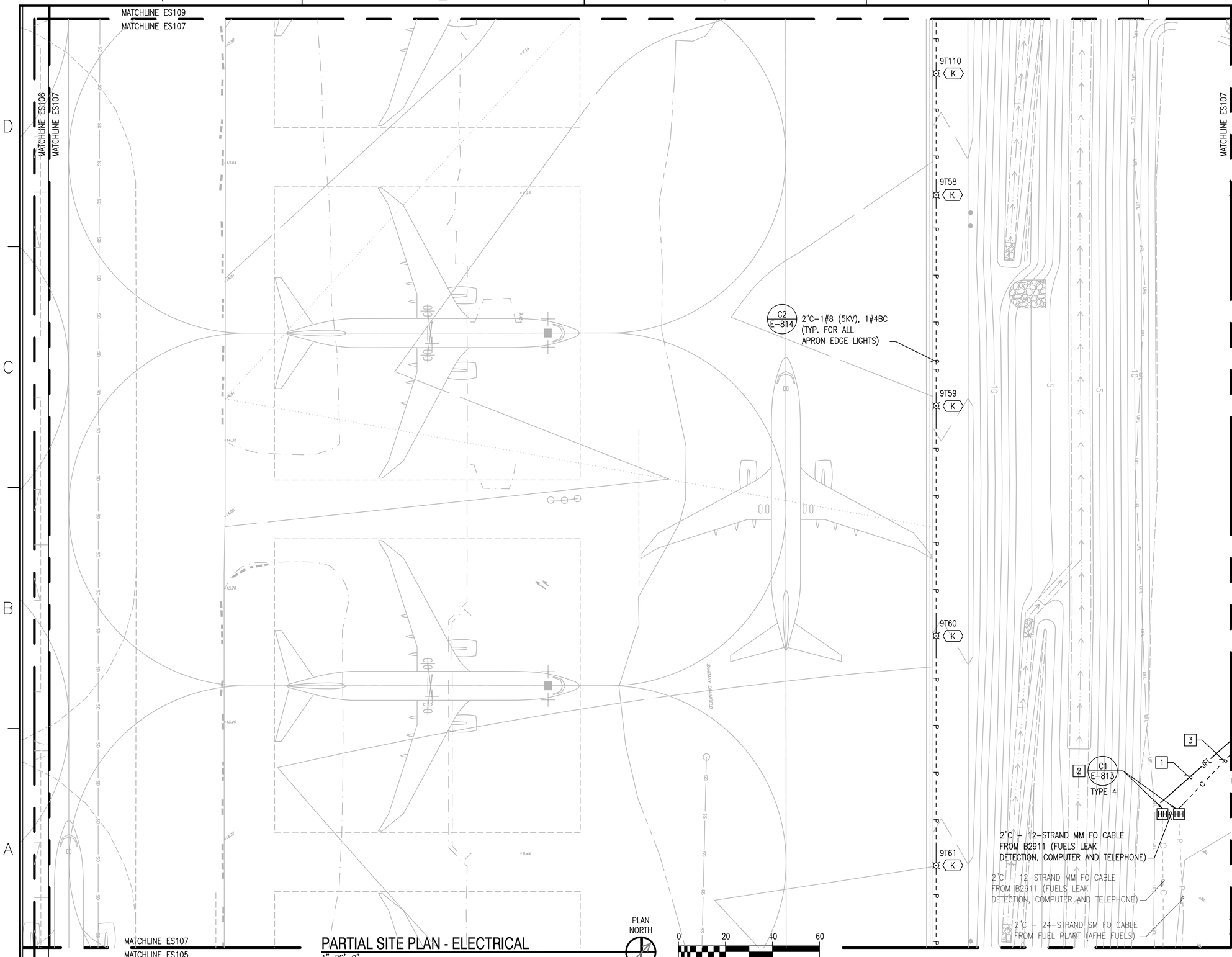
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030519

SHEET 265 OF 302

ES106

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL

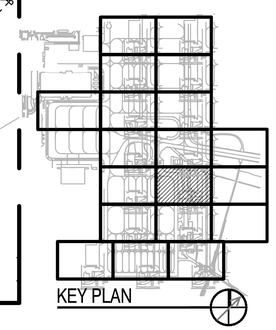
1"=20'-0"

GENERAL SHEET NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.
2. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO G-001 FOR LOCATION OF B368.

KEY NOTES:

1. NEW JET FUEL LINE ROUTE. REFER TO DP201.
2. SPLICE TO EXISTING FO CABLES AND EXTEND.
3. 4"CO + 4"C - 24-STRAND SM FO CABLE (AFHE-FUELS) + 12-STRAND MM FO CABLE (FUELS LEAK DETECTION COMPUTERS AND TELEPHONE). ROUTE CABLING IN SEPARATE INNERDUCTS.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030520

SHEET 266 OF 302

ES107

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. PROVIDE COMMUNICATION MANHOLE AND INTERCEPT EXISTING COMMUNICATION DUCTBANK. SPLICE AND EXTEND EXISTING CABLING.
2. PROVIDE 1#8 (5KV) SERIES LIGHTING CABLING IN EXISTING RACEWAY. SPLICE TO EXISTING CIRCUIT IN EXISTING ELECTRICAL HANDHOLE ON NORTH SIDE OF TAXIWAY.
3. PROVIDE ELECTRICAL MANHOLE AND INTERCEPT EXISTING ELECTRICAL DUCTBANK. SPLICE AND EXTEND EXISTING CABLING.

MATCHLINE ES108
MATCHLINE ES109

EMH-325A
C5 / E-813
D4 / E-815
TMH-325A
B4 / E-815
C3 / E-814
C3 / E-814
B1 / E-815
A3 / E-813
TYPE 5
A1 / E-815
EMH-324A
TMH-324A

MATCHLINE ES108
MATCHLINE ES106

PARTIAL SITE PLAN - ELECTRICAL
1"=20'-0"

PLAN NORTH

0 20 40 60

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN - ELECTRICAL

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030521
SHEET 267 OF 302
ES108

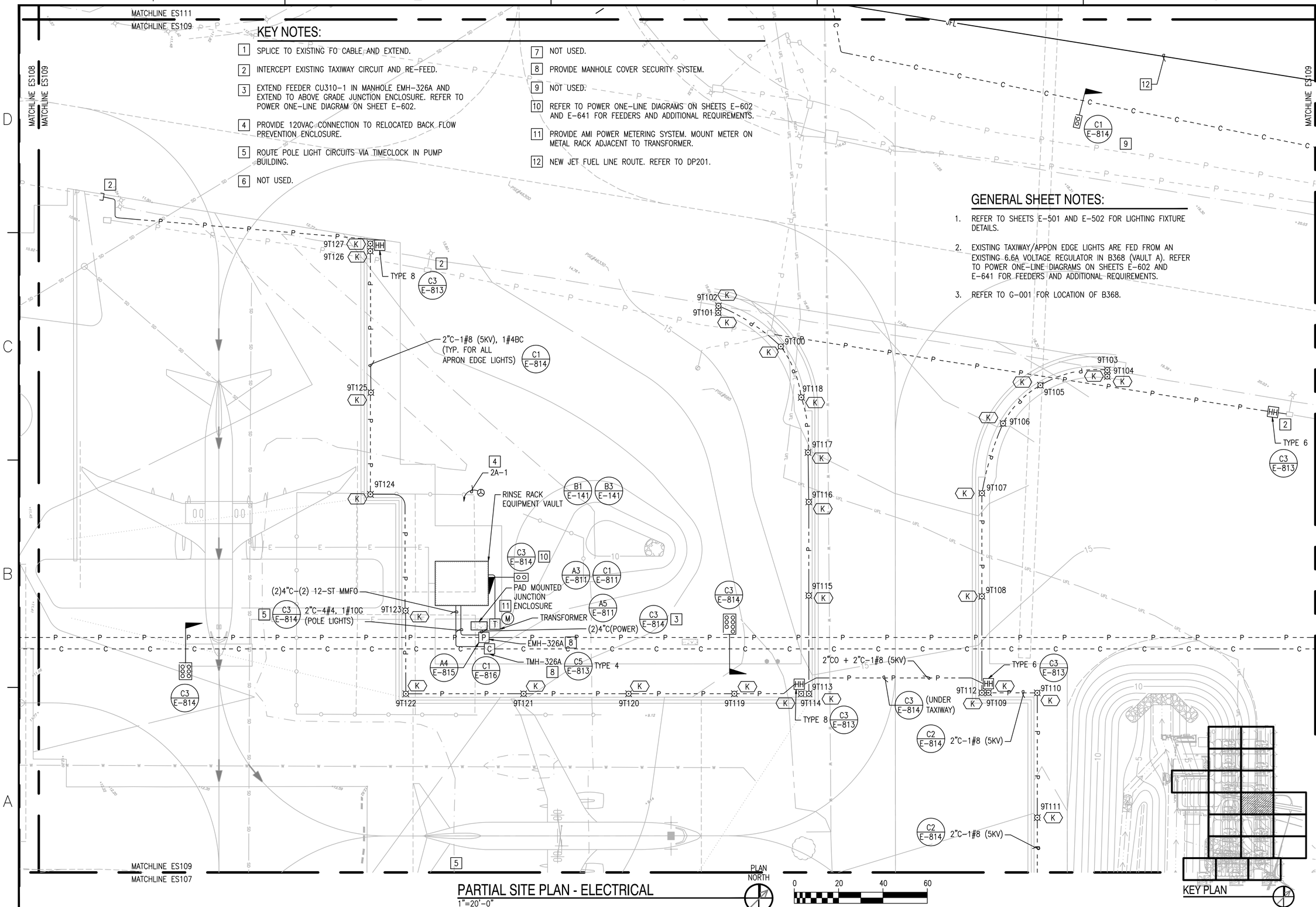
DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. SPLICE TO EXISTING FO CABLE AND EXTEND.
2. INTERCEPT EXISTING TAXIWAY CIRCUIT AND RE-FEED.
3. EXTEND FEEDER CU310-1 IN MANHOLE EMH-326A AND EXTEND TO ABOVE GRADE JUNCTION ENCLOSURE. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-602.
4. PROVIDE 120VAC CONNECTION TO RELOCATED BACK FLOW PREVENTION ENCLOSURE.
5. ROUTE POLE LIGHT CIRCUITS VIA TIMECLOCK IN PUMP BUILDING.
6. NOT USED.
7. NOT USED.
8. PROVIDE MANHOLE COVER SECURITY SYSTEM.
9. NOT USED.
10. REFER TO POWER ONE-LINE DIAGRAMS ON SHEETS E-602 AND E-641 FOR FEEDERS AND ADDITIONAL REQUIREMENTS.
11. PROVIDE AMI POWER METERING SYSTEM. MOUNT METER ON METAL RACK ADJACENT TO TRANSFORMER.
12. NEW JET FUEL LINE ROUTE. REFER TO DP201.

GENERAL SHEET NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.
2. EXISTING TAXIWAY/APPON EDGE LIGHTS ARE FED FROM AN EXISTING 6.6A VOLTAGE REGULATOR IN B368 (VAULT A). REFER TO POWER ONE-LINE DIAGRAMS ON SHEETS E-602 AND E-641 FOR FEEDERS AND ADDITIONAL REQUIREMENTS.
3. REFER TO G-001 FOR LOCATION OF B368.



PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

SYM	DESCRIPTION	DATE	APPR

NAVFAC

CRAIG L. LINTWOOD STATE OF WASHINGTON 50476 REGISTERED PROFESSIONAL ENGINEER

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A/E INFO

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FOR COMMANDER NAVFAC 3/2/15

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES	KMD	DRW	AM	CHK	GLL

<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

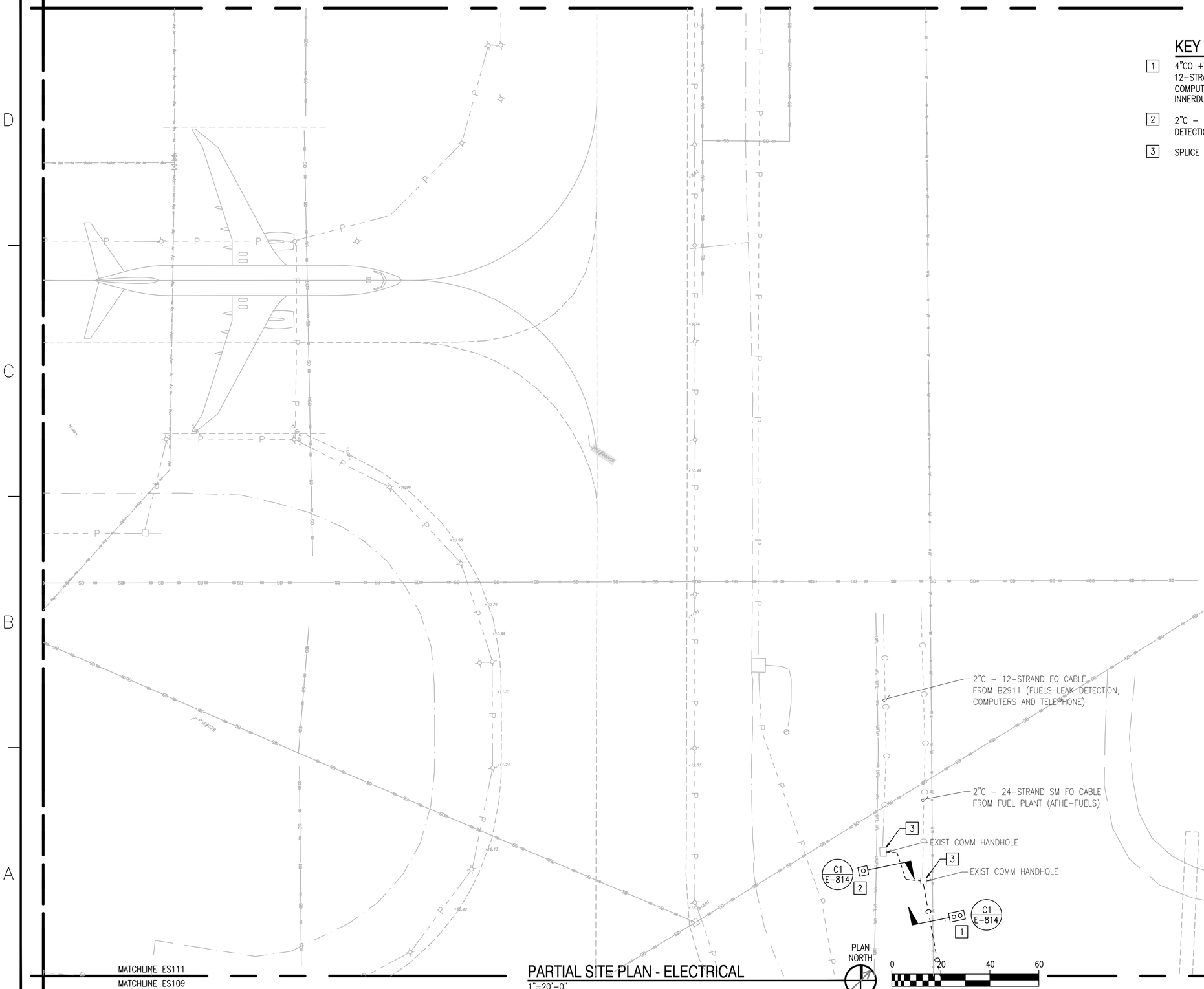
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN - ELECTRICAL

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.: N44255-15-C-6003
NAVFAC DRAWING NO.: 16030522
SHEET 268 OF 302
ES109

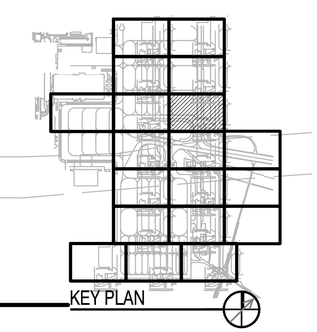
DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. 4"CO + 4"C – 24–STRAND SM FO CABLE (AFHE–FUELS) + 12–STRAND MM FO CABLE (FUELS LEAK DETECTION COMPUTERS AND TELEPHONE). ROUTE CABLING IN SEPARATE INNERDUCTS.
2. 2"C – 12–STRAND MM FO CABLE FROM B2911 (FUELS LEAK DETECTION, COMPUTERS AND TELEPHONE).
3. SPLICE TO EXISTING FO CABLE AND EXTEND.



PARTIAL SITE PLAN - ELECTRICAL
1"=20'-0"



KEY PLAN

STM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

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A/E INFO

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FOR COMMANDER NAVFAC 3/2/15

ACTIVITY
NAS WHIDBEY ISLAND

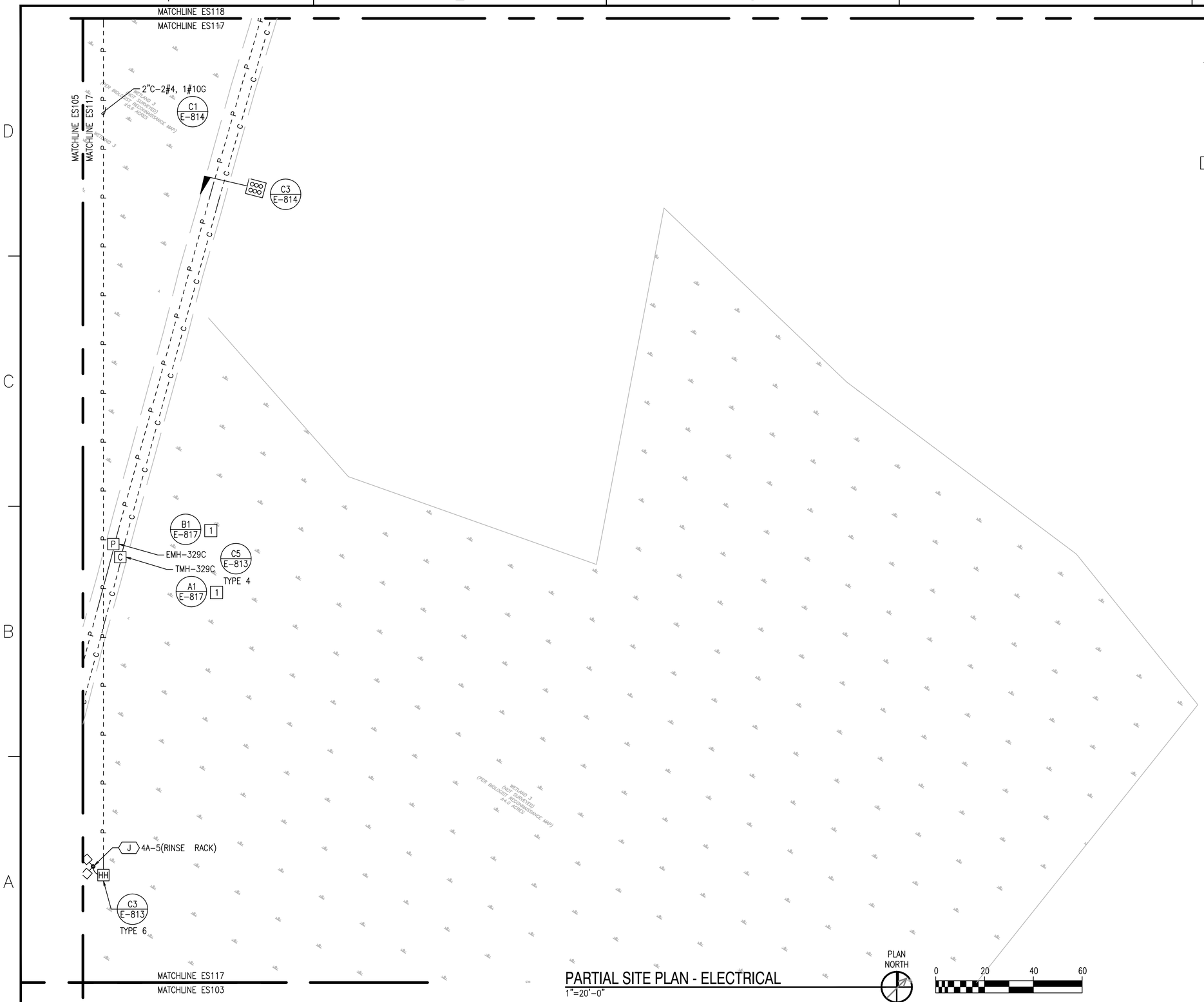
SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
ALT FIELD – OAK HARBOR, WA
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255–15–C–6003
NAVFAC DRAWING NO. 16030523
SHEET 269 OF 302
ES111

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

PLAN NORTH

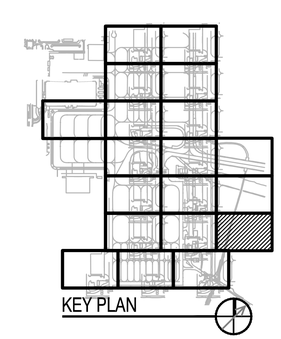
0 20 40 60

GENERAL SHEET NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.

KEY NOTES:

1 PROVIDE MANHOLE COVER SECURITY SYSTEM.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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ACTIVITY

NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

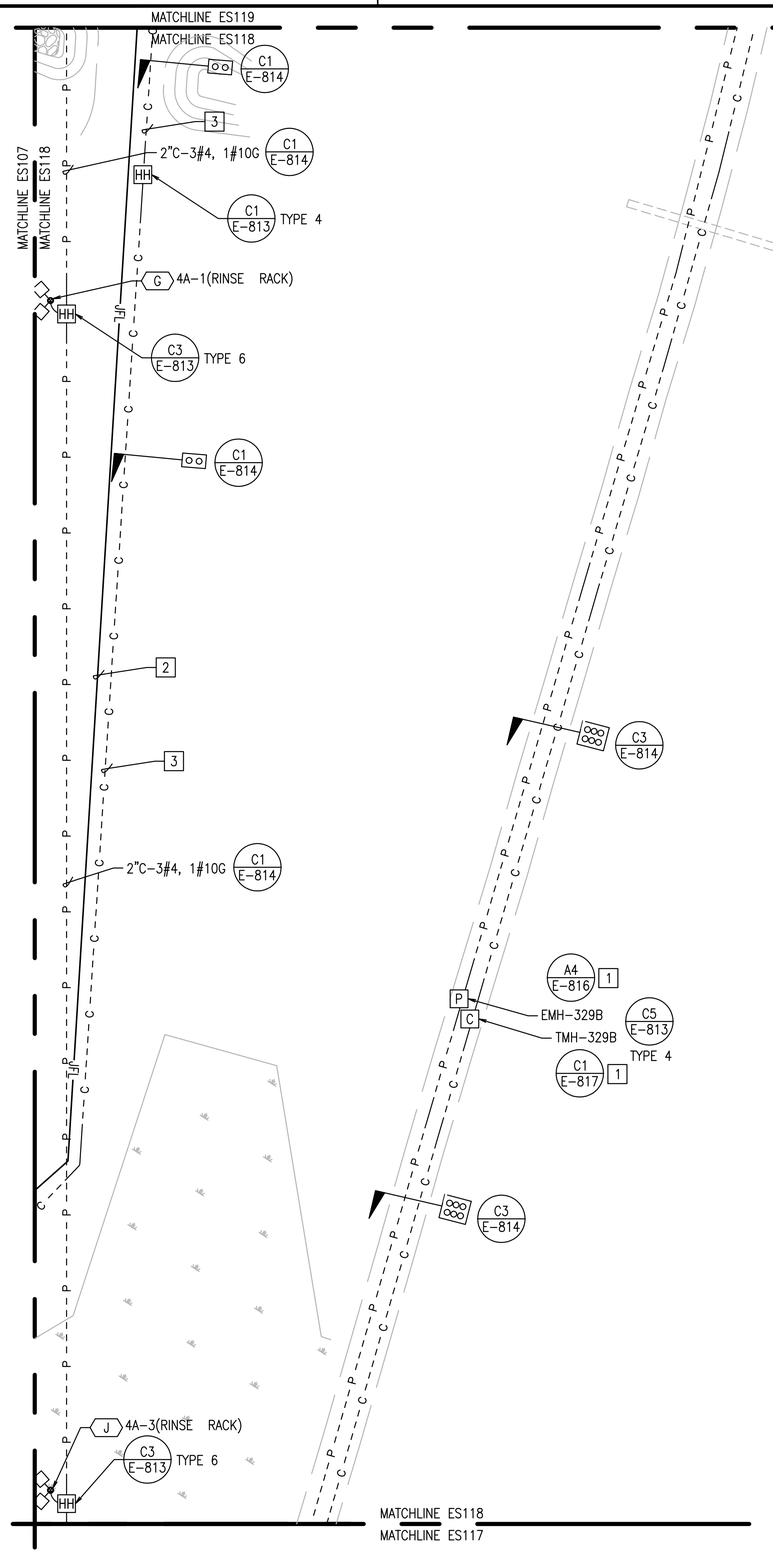
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030524

SHEET 270 OF 302

ES117

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL

1"=20'-0"

PLAN NORTH

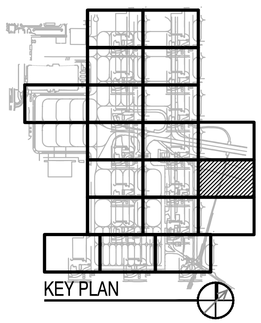
0 20 40 60

GENERAL SHEET NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.

KEY NOTES:

1. PROVIDE MANHOLE COVER SECURITY SYSTEM.
2. NEW JET FUEL LINE ROUTE. REFER TO DP201.
3. 4"CO + 4"C - 24-STRAND SM FO CABLE (AFHE-FUELS) + 12-STRAND MM FO CABLE (FUELS LEAK DETECTION COMPUTERS AND TELEPHONE). ROUTE CABLING IN SEPARATE INNERDUCTS.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL

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BRANCH MANAGER

CHIEF ENG/ARCH

<<CKK>>

DEPARTMENT OF THE NAVY
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NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

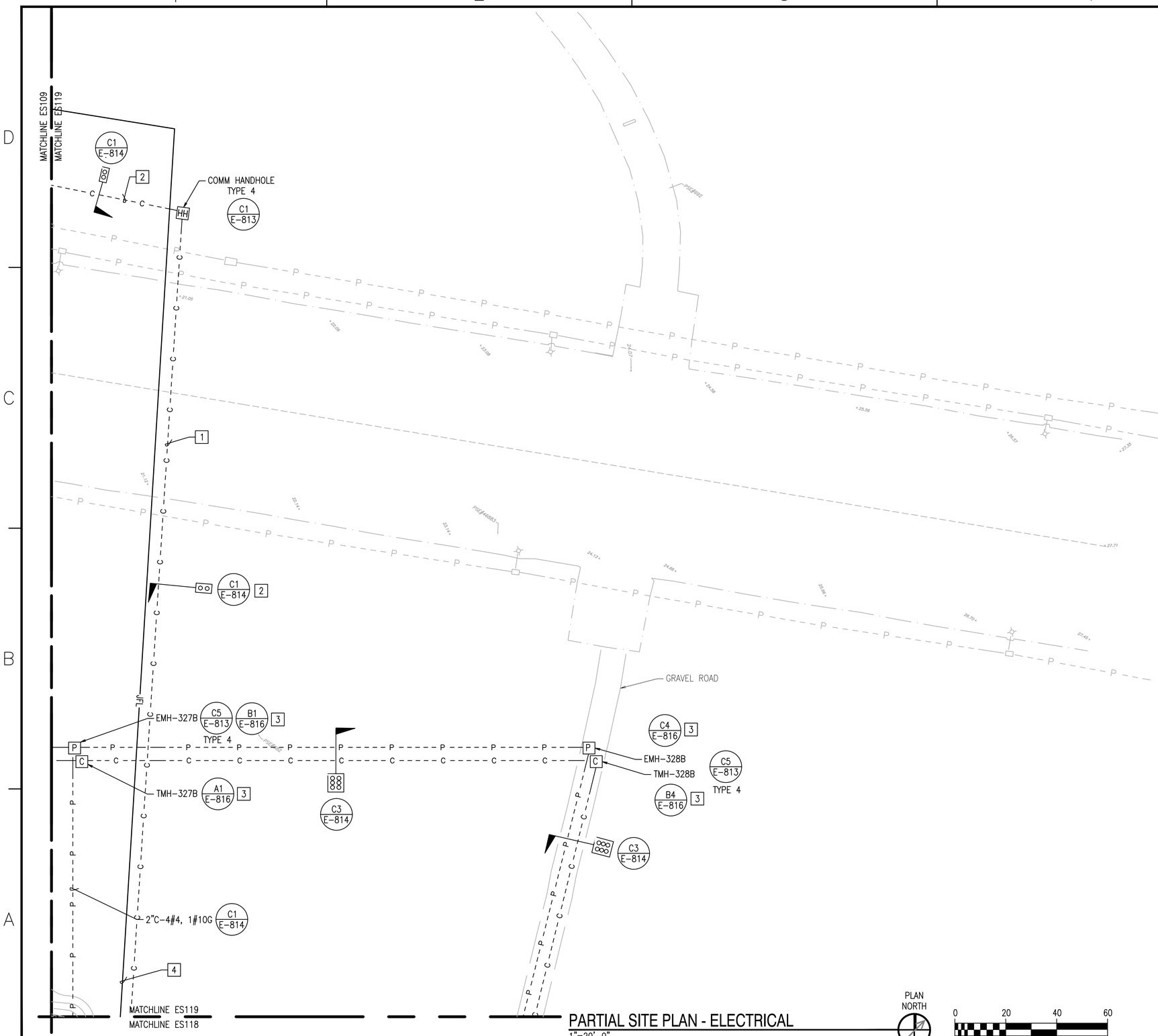
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030525

SHEET 271 OF 302

ES118

DRAWFORM REVISION: 10 MARCH 2009



PARTIAL SITE PLAN - ELECTRICAL
1"=20'-0"

PLAN NORTH

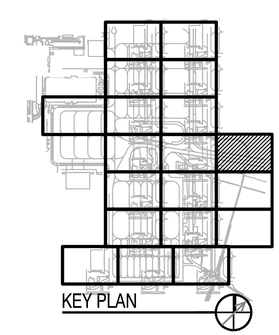
0 20 40 60

GENERAL SHEET NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.

KEY NOTES:

1. PROVIDE DIRECTIONAL BORE AND STEEL CASING UNDER TAXIWAY. ROUTE ADJACENT TO FUEL LINE BORE. REFER TO SHEET DP201.
2. 4"CO + 4"C – 24-STRAND SM FO CABLE (AFHE-FUELS) + 12-STRAND MM FO CABLE (FUELS LEAK DETECTION, COMPUTERS AND TELEPHONE). ROUTE CABLING IN SEPARATE FABRIC INNER DUCTS.
3. PROVIDE MANHOLE COVER SECURITY SYSTEM.
4. NEW JET FUEL LINE ROUTE. REFER TO DP201.



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES. KMD DRW AM CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND
AULT FIELD – OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

PARTIAL SITE PLAN – ELECTRICAL

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030526

SHEET 272 OF 302

ES119

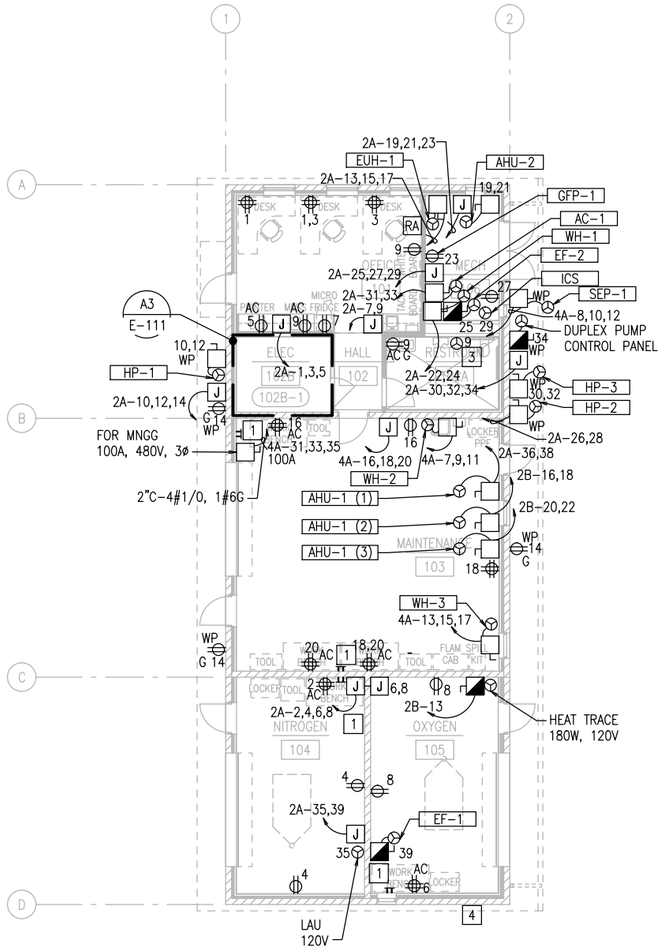
DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-611.

KEY NOTES:

1. STATIC GROUND BAR. MOUNT +48" AFF. SEE DETAILS A1/E-612 AND A2/E-812.
2. PROVIDE CONNECTION TO DXU-1 FROM HP-1.
3. PROVIDE CONNECTIONS TO P-1 AUTO-FLUSH TRANSFORMER AND ASSOCIATED CONTROL DEVICES.
4. PROVIDE CONNECTIONS TO EMERGENCY SHOWER ALARM LIGHT AND AUDIBLE ALARM. SEE C4/P-501.



POWER PLAN - LOX PLANT

1/8"=1'-0" ES103 A1

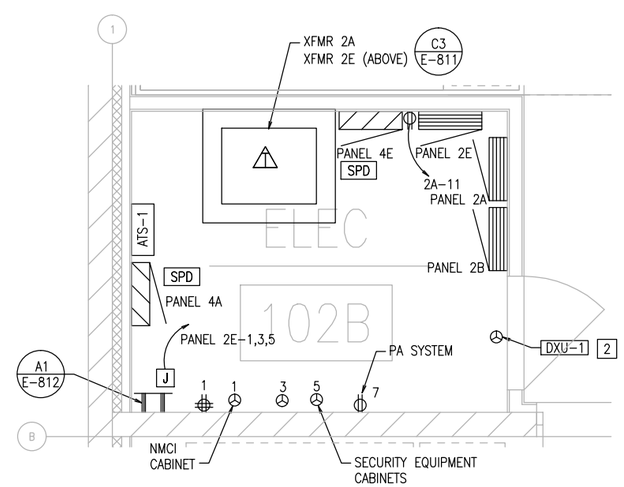
PLAN NORTH

1/8" = 1'-0"

0 4 8 16 24

	MOTOR	HP	VOLTAGE	PHASE	AMP	KVA	CONDUIT	WIRE	GROUND	DISCONNECT	STARTER
1	AC-1	5	208	1	24.00	5.00	1	2#8	1#10	30C	
2	AHU-1		208	1	72.00	15.00	1	2#2	1#6	30C	
3	AHU-2		460	3	44.00	35.00	1.25	3#6	1#10	60	
4	AHU-3		460	3	133.00	108.00	2	3#1/0	1#6	200	
5	EF-1		208	1	12.00	2.50	3/4	2#12	1#12	30	
6	EF-2		208	1	34.00	7.07	1	2#8	1#10	60	
7	EF-3		208	1	12.00	2.50	3/4	2#12	1#12	30	
8	DXU-1		208	1	7.00	0.91	3/4	2#12	1#12	30	
9	GS		125	1	15.00	1.88	3/4	2#12	1#12	30	
10	EUH-1	0.25	208	1	12.50	2.6	3/4	2#12	1#12	30	
11	SEP-1	0.5	460	3	4.50	3.47	3/4	2#12	1#12	30	
12	SP-1	0.17	125	1	4.42	0.51	3/4	2#12	1#12	30	
13	SP-2	0.17	125	1	4.42	0.51	3/4	2#12	1#12	30	
14	P-1		208	1	53.00	11.02	1	2#6	1#8	60	
15	P-2		208	1	43.00	8.94	3/4	2#8	1#10	60	
16	P-3		208	1	22.00	4.58	3/4	2#12	1#10	30	
17	P-4		208	1	34.00	7.07	3/4	2#12	1#10	60	
18	SP-3		125	1	15.00	1.88	3/4	2#12	1#12	30	
19	BATCH SYSTEM FEEDER	0.25	125	1	3.50	0.7	3/4	2#12	1#12	30	

MECHANICAL EQUIPMENT CONNECTION SCHEDULE



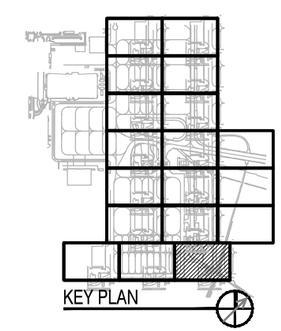
PARTIAL PLAN - ELECTRICAL ROOM

1/2"=1'-0" E-111 A3

PLAN NORTH

1/2" = 1'-0"

0 1 2 4 6



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SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
POWER PLAN – LOX PLANT

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030527

SHEET 273 OF 302

E-111

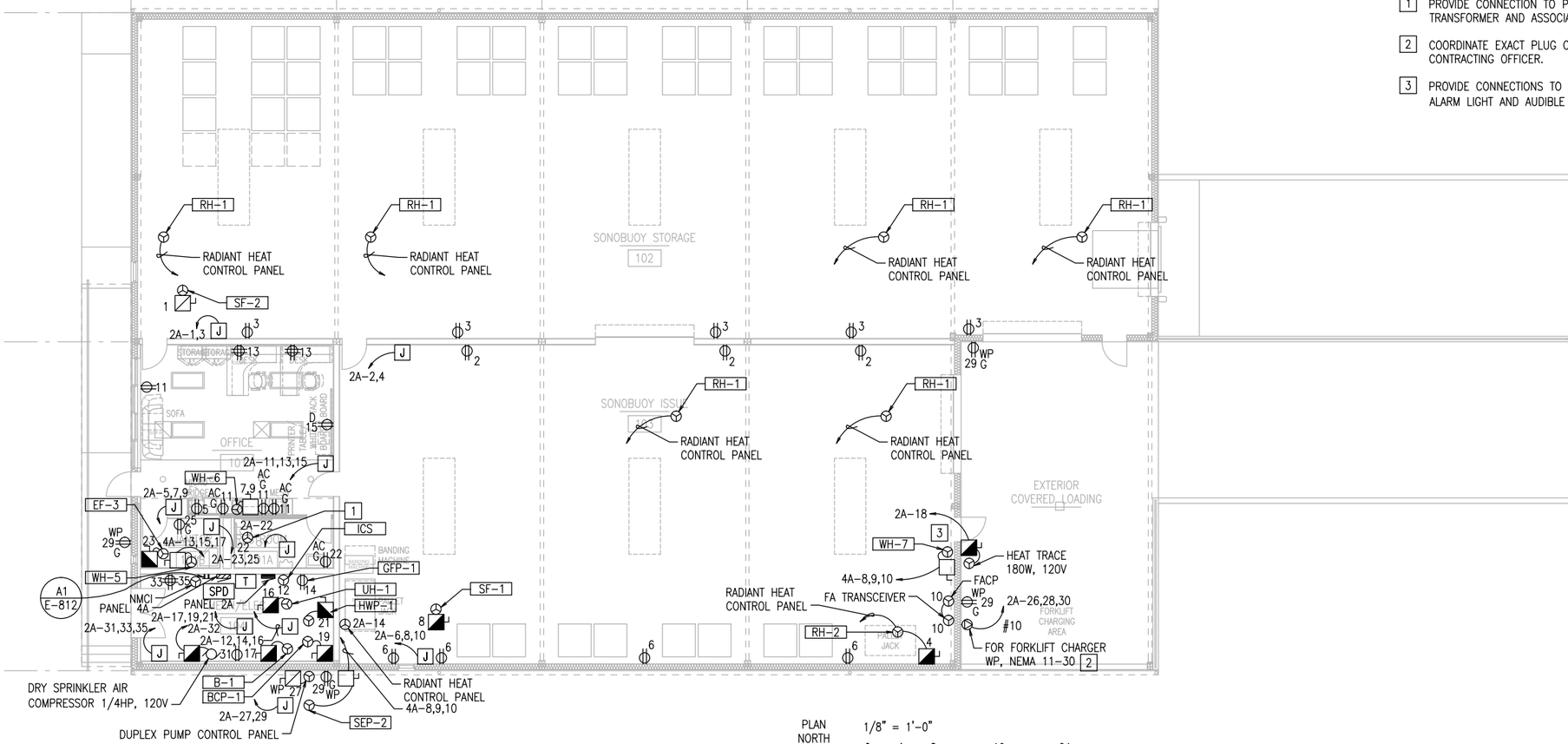
DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-612.

KEY NOTES:

1. PROVIDE CONNECTION TO P-1 AUTO-FLUSH TRANSFORMER AND ASSOCIATED CONTROL DEVICES.
2. COORDINATE EXACT PLUG CONFIGURATION WITH CONTRACTING OFFICER.
3. PROVIDE CONNECTIONS TO EMERGENCY SHOWER ALARM LIGHT AND AUDIBLE ALARM. SEE C4/P-501.



POWER PLAN - SONOBUOY ISSUE/STORAGE FACILITY (A1)

1/8"=1'-0"

ES101

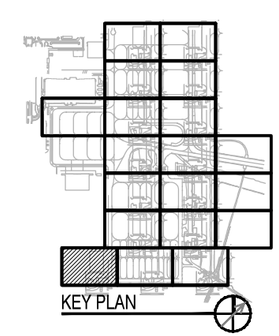
PLAN NORTH

1/8" = 1'-0"

0 4 8 16 24

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

MECHANICAL EQUIPMENT CONNECTION SCHEDULE											
	MOTOR	HP	VOLTAGE	PHASE	FLA	KW	CIRCUIT	WIRE	GROUND	DISCONNECT	STARTER
1	WH-5		480	3	48.00	36.00	1.25	3#6	1#8	60	
2	WH-6		208	1	87.00	18.00	1	2#3	1#8	100	
3	WH-7		480	3	133.00	128.00	1	3#1/0	1#6	200	
4	EF-1	0.25	115	1	5.80	0.70	3.4	2#12	1#12	30	
5	EF-2	0.25	115	1	5.80	0.70	3.4	2#12	1#12	30	
6	CS		115	1	13.00	0.70	3.4	2#12	1#12	30	
7	EF-3	0.25	115	1	5.80	0.70	3.4	2#12	1#12	30	
8	SEP-2	2.2	480	3	4.60	3.67	3.4	2#12	1#12	30	
9	DUPLEX PUMP CONTROL PANEL		115	1	13.00	0.78	3.4	2#12	1#12	30	
10	GFP-1	0.25	115	1	5.80	0.70	3.4	2#12	1#12	30	
11	B-1		115	1	20.00	2.30	3.4	2#12	1#12	30	
12	BCP-1		115	1	1.96	0.11	3.4	2#12	1#12	30	
13	FWP-1	0.17	115	1	4.40	0.51	3.4	2#12	1#12	30	
14	UH-1		115	1	1.30	0.07	3.4	2#12	1#12	30	
15	FWP-1	0.33	115	1	7.20	0.83	3.4	2#12	1#12	30	
16	FWP-2	0.75	115	1	13.80	1.69	3.4	2#12	1#12	30	



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<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

POWER PLAN - SONOBUOY ISSUE/STORAGE FACILITY

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030528

SHEET 274 OF 302

E-121

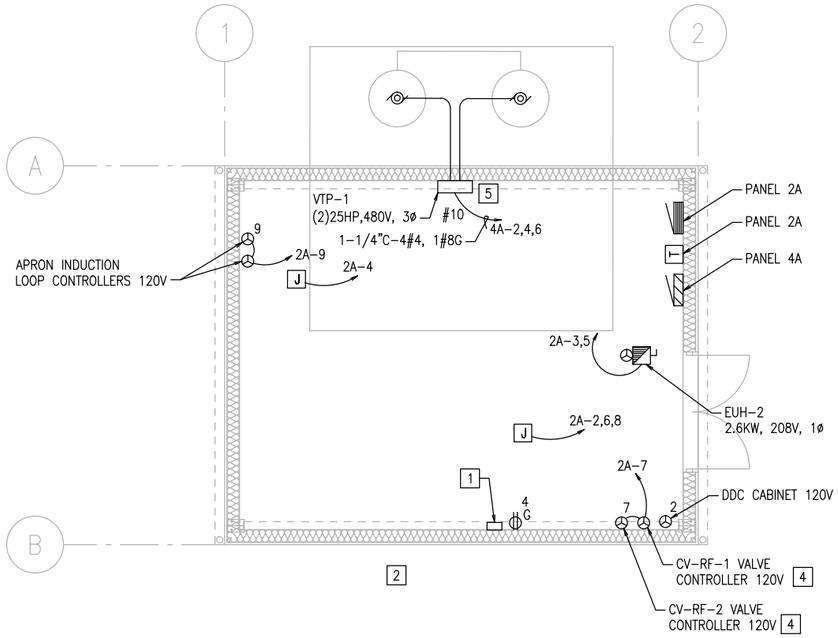
DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

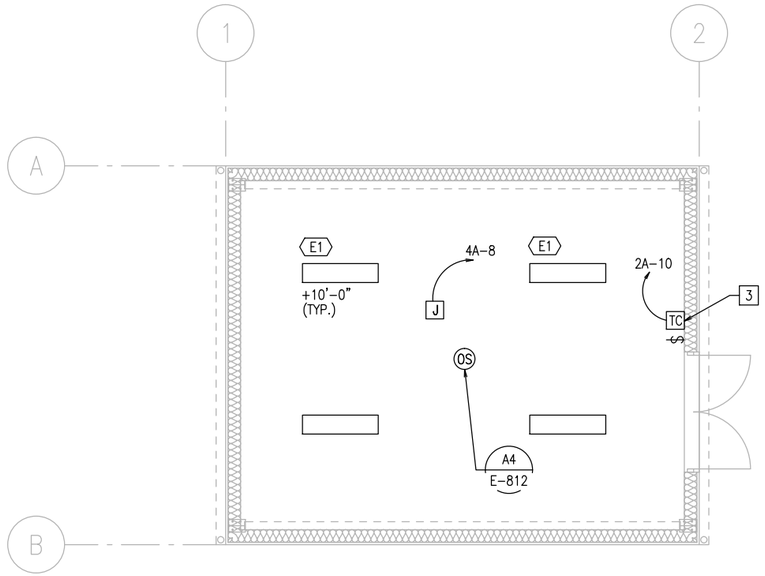
1. REFER TO POWER ONE-LINE DIAGRAM ON SHEET E-641 FOR FEEDERS AND ADDITIONAL REQUIREMENTS.
2. REFER TO SHEET E-642 FOR TELECOMMUNICATIONS RISER DIAGRAMS.

KEY NOTES:

1. PROVIDE 24-PORT MM FO CONNECTION PANEL.
2. PROVIDE 2-STRAND MM FO CABLE TO DDC CABINET.
3. ROUTE EAST APRON POLE LIGHTS CIRCUITS THRU ASTRONOMIC TIME CLOCK.
4. EXTEND CIRCUIT TO ASSOCIATED VALVE.
5. PROVIDE CONNECTIONS TO OVERFLOW ALARM LIGHT AND AUDIBLE ALARM.



PUMP STATION - ELECTRICAL (B1)
SCALE: 1/4"=1'-0" ES109



PUMP STATION - LIGHTING (B3)
SCALE: 1/4"=1'-0" ES109

SYM	DESCRIPTION	DATE	APPR

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CHIEF ENG/ARCH
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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
ELECTRICAL PLANS - AIRCRAFT RINSE RACK FACILITY

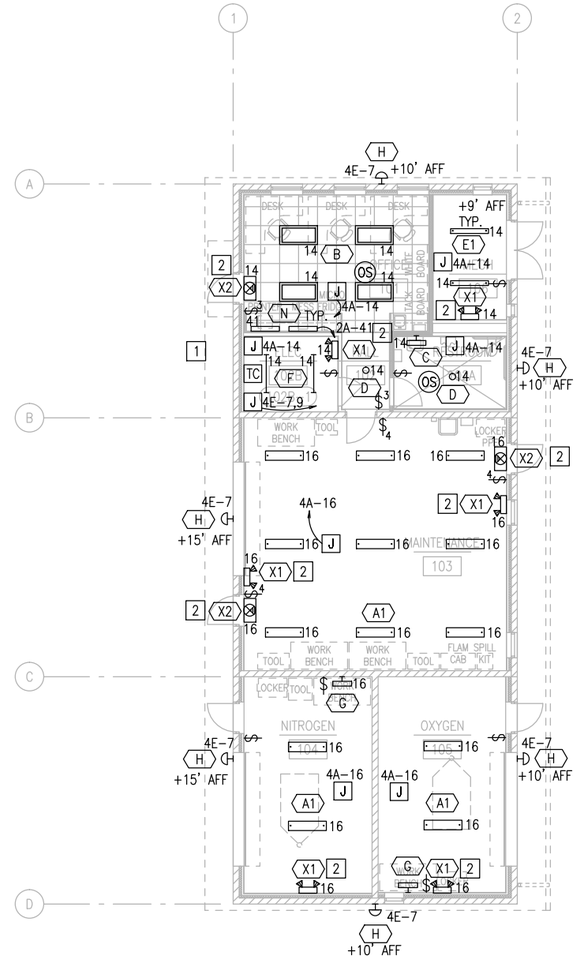
SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030529
SHEET 275 OF 302
E-141
DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.
2. REFER TO DETAIL A4/E-812 FOR OCCUPANCY SENSOR CONTROLS.

KEY NOTES:

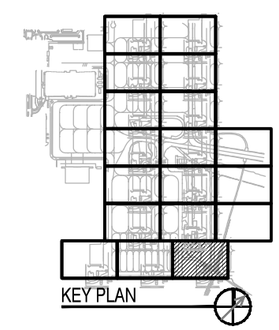
1. ASTRONOMIC TIME CLOCK SHALL CONTROL ALL EXTERIOR WALL FIXTURES (TYPE H).
2. PROVIDE UNSWITCHED HOT CONDUCTOR TO LIGHT FIXTURE BATTERY PACK.



LIGHTING PLAN - LOX PLANT
1/8"=1'-0"

PLAN NORTH

1/8" = 1'-0"
0 4 8 16 24



SYM	DESCRIPTION	DATE	APPR

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CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

LIGHTING PLAN – LOX PLANT

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030530

SHEET 276 OF 302

E-211

DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. REFER TO SHEETS E-501 AND E-502 FOR LIGHTING FIXTURE DETAILS.
2. REFER TO DETAIL A4/E-812 FOR OCCUPANCY SENSOR CONTROLS.

KEY NOTES:

1. PROVIDE UNSWITCHED HOT CONDUCTOR TO LIGHT FIXTURE BATTERY PACK.
2. ASTRONOMIC TIME CLOCK SHALL CONTROL ALL EXTERIOR WALL PACK FIXTURES (TYPE H).
3. PHOTOCELL SHALL CONTROL ALL EXTERIOR COVERED LOADING FIXTURES.
4. PHOTOCELL SHALL DIM ALL ASSOCIATED FIXTURES WITH SAME SWITCH LEG.

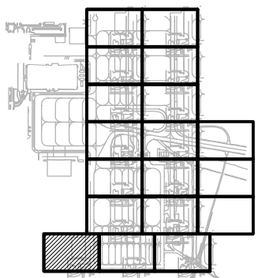
LIGHTING PLAN - SONOBUOY ISSUE/STORAGE FACILITY

1/8"=1'-0"

PLAN NORTH

1/8" = 1'-0"

0 4 8 16 24



KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY

NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES	KMD	DRW	AM	CHK	GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<CCC>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

LIGHTING PLAN - SONOBUOY ISSUE/STORAGE FACILITY

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030531

SHEET 277 OF 302

E-221

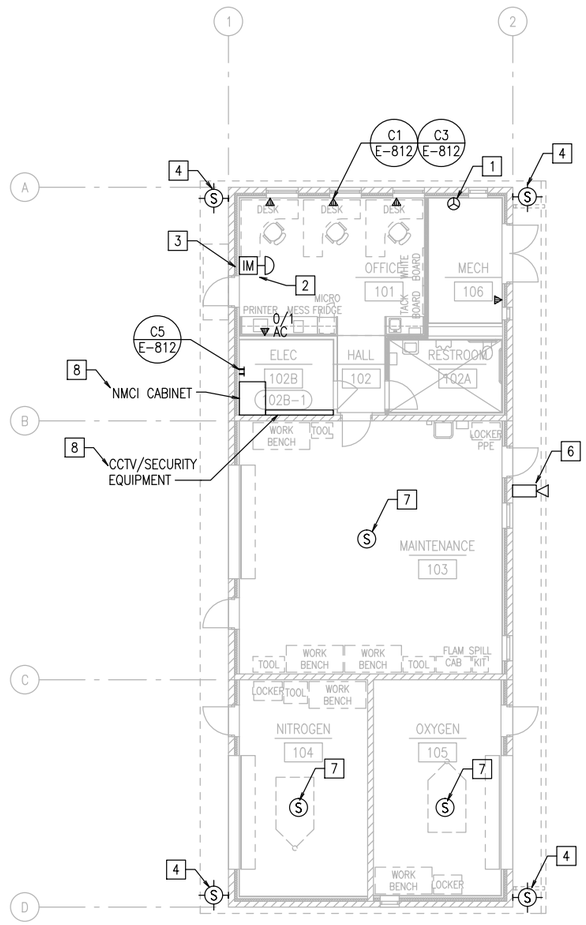
DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. REFER TO DIAGRAM C1/E-612 FOR ADDITIONAL TELECOM SERVICE INFORMATION.

KEY NOTES:

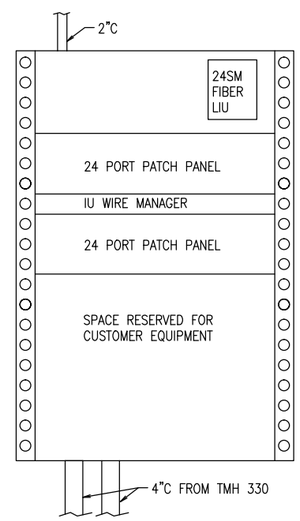
1. PROVIDE 2-STRAND MM FO CABLE TO ICS CABINET.
2. PROVIDE INTERCOM MASTER STATION.
3. PROVIDE PAGING ADAPTOR.
4. PROVIDE WALL MOUNTED EXTERIOR SPEAKER. SEE DETAIL A4 ON SHEET E-612.
5. CONTRACTOR TO VERIFY ACTIVE EQUIPMENT TO BE RELOCATED FROM EXISTING LOX BUILDING B2621.
6. RELOCATE CCTV CAMERA FROM EXISTING LOX BUILDING B2621. MOUNT CAMERA ON POST, ATTACHED TO BUILDING, AT +18' ABOVE GROUND LEVEL.
7. PROVIDE CEILING MOUNTED SPEAKER. SEE DETAIL A4 ON SHEET E-612.
8. REFER TO DETAIL A3 AND A4 ON THIS SHEET.



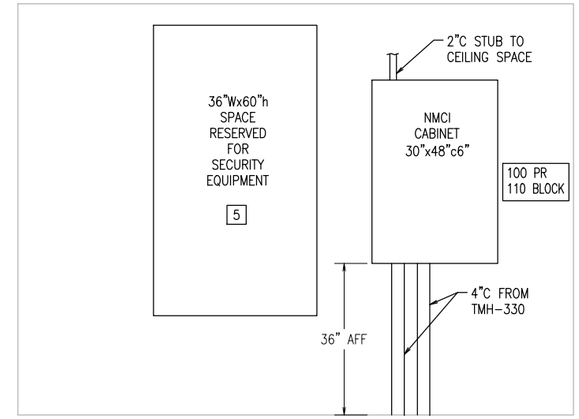
TECHNOLOGY PLAN - LOX PLANT
1/8"=1'-0"

PLAN NORTH

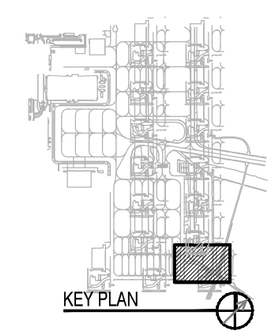
1/8" = 1'-0"
0 4 8 16 24



ELEVATION - NMCI CABINET
SCALE: NONE
E-311 A3



ELEVATION
SCALE: NONE
E-311 A4



STM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND
SATISFACTORY TO DATE
DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
TECHNOLOGY PLAN – LOX PLANT

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030532
SHEET 278 OF 302
E-311

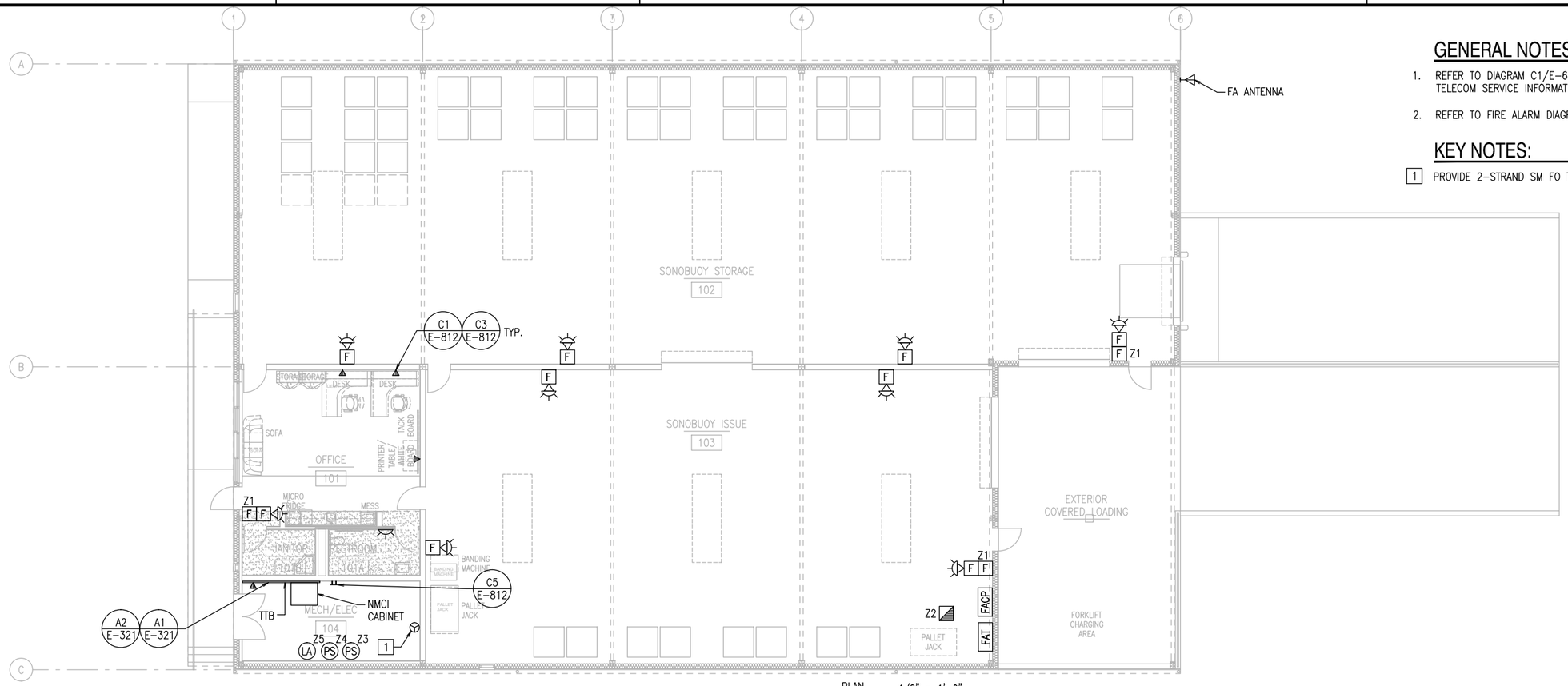
DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. REFER TO DIAGRAM C1/E-622 FOR ADDITIONAL TELECOM SERVICE INFORMATION.
2. REFER TO FIRE ALARM DIAGRAM A1/E-623.

KEY NOTES:

1 PROVIDE 2-STRAND SM FO TO ICS CABINET.



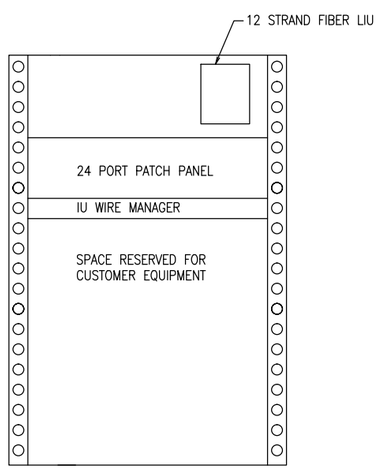
TECHNOLOGY PLAN - SONOBUOY ISSUE/STORAGE FACILITY

1/8"=1'-0"

PLAN NORTH

1/8" = 1'-0"

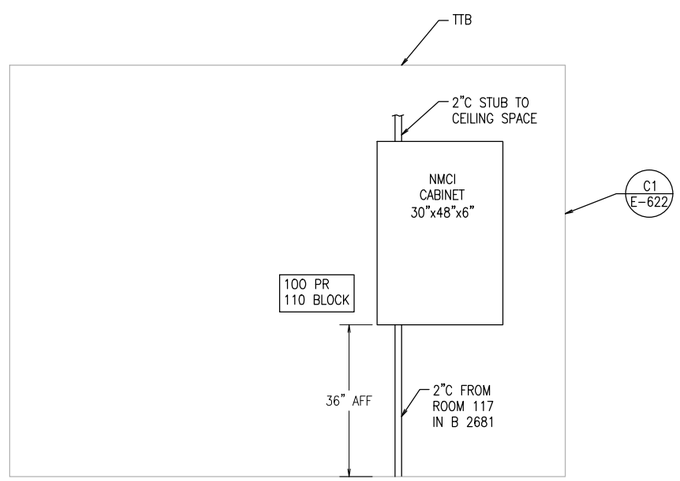
0 4 8 16 24



ELEVATION - NMCI CABINET

SCALE: NONE

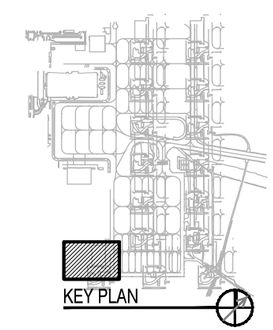
E-321 A1



ELEVATION

SCALE: NONE

E-321 A2



KEY PLAN

STM	DESCRIPTION	DATE	APPR

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<<PM/DM>> JOSEPH KISIDAY

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<<XXX>>

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NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

TECHNOLOGY PLAN - SONOBUOY ISSUE/STORAGE FACILITY

SCALE: AS NOTED

EPROJECT NO.:

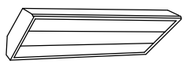
CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030533

SHEET 279 OF 302

E-321

DRAWFORM REVISION: 10 MARCH 2009

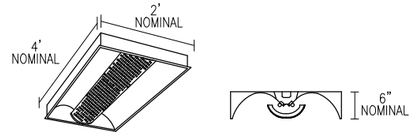


LUMINAIRE REQUIREMENTS

1. HOUSING SHALL BE 0.032" MIN. THICKNESS DIE FORMED COLD ROLLED STEEL, CHEMICALLY TREATED FOR RUST AND FINISHED WITH WHITE BAKED ENAMEL OR POLYESTER FINISH. PROVIDE TOP AND END KNOCKOUTS.
2. HOUSING WELDED OR SECURED BY SCREWS OR RIVETS INTO ONE ASSEMBLY. PROVIDE INTERNAL PROVISIONS FOR GROUNDING.
3. REFLECTOR SHALL BE 0.026" MIN. THICKNESS STEEL PROVIDE 30 SHIELDING CENTER VEE. CHEMICALLY TREAT FOR RUST AND FINISH WITH WHITE BAKED ENAMEL, PORCELAIN ENAMEL, OR POLYESTER FINISH. MINIMUM REFLECTANCE SHALL BE 85%.
4. THE LUMINAIRE SHALL NOT PERMANENTLY DISTORT WHEN LIFTED BY ONE CORNER.
5. LIGHT SOURCE –
   TYPE A1 – LONG LIFE LEDS, COUPLED WITH HIGH–EFFICIENCY ELECTRICAL DRIVER, 5000K WITH CRI≥ 80. 9,000 LUMENS, INPUT WATTS: 105W MOUNT FIXTURE AT +15' AFF.
   TYPE A2 – (4) LAMP 32W T8. ELECTRONIC BALLAST, < 10% THD. 9700 LUMENS. 0–10VDC PROGRAMMABLE DIMMING. MOUNT FIXTURE AT +18' AFF.
6. CERTIFICATION – UL LISTED AND LABELED.

HIGH BAY LENSED FIXTURE (C1)

NTS — TYPES A1, A2

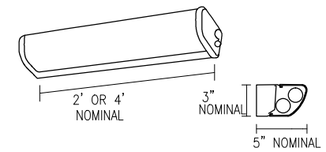


LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE–FORMED, COLD–ROLLED STEEL, WITH REINFORCEMENT RIBS FOR RIGIDITY. ENDCAPS SECURED WITH TABS, SCREWS OR RIVETS. FIXTURE SHALL NOT PERMANENTLY DEFORM OUT OF "SQUARE" WHEN PICKED UP FROM ANY CORNER.
2. FINISH – MULTI–STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. REFLECTORS – TWO–PIECE CURVED ALUMINUM WITH MATTE WHITE FINISH.
4. LIGHT BASKET – PERFORATED STEEL (HOLES OR SLOTS) WITH SAME FINISH AS HOUSING, AND WHITE OPAL ACRYLIC OVERLAY.
5. LAMPS – TWO LINEAR FLUORESCENT 32 WATT T8.
6. BALLAST – CLASS P, THERMALLY–PROTECTED, HIGH POWER FACTOR (≥.95), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION FOR BALLAST OPTIONS AND SPECIFICS.
7. CERTIFICATION – UL LISTED AND LABELED.

DIRECT/INDIRECT RECESSED 2' X 4' FLUORESCENT (C2)

NTS — TYPE B

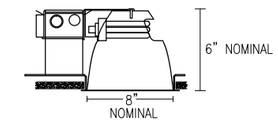


LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE–FORMED, COLD–ROLLED STEEL. ENDCAPS WHEN USED SHALL BE MADE FROM SAME MATERIAL AS HOUSING.
2. FINISH – MULTI–STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. DIFFUSER – 100% ACRYLIC, CLEAR PRISMATIC, OR WHITE OPAL ACRYLIC. DECORATIVE TREATMENTS ON DIFFUSER ENDS OPTIONAL.
4. LAMPS – ONE 24W T5HO LINEAR FLUORESCENT.
5. BALLAST – CLASS P, THERMALLY–PROTECTED, HIGH POWER FACTOR (≥.95), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION FOR BALLAST OPTIONS AND SPECIFICS.
6. CERTIFICATION – UL LISTED AND LABELED.

FLUORESCENT VANITY LIGHT FIXTURE (C3)

NTS — TYPE C

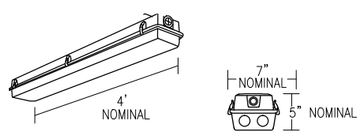


LUMINAIRE REQUIREMENTS:

1. HOUSING – ONE–PIECE, DIE–STAMPED, COLD ROLLED STEEL OR ACRYLIC–ENAMELED ALUMINUM. PROVIDE WITH PRE–WIRED JUNCTION BOX HAVING SNAP–ON ACCESS COVER. ACCESS TO JUNCTION BOX FROM BELOW CEILING SHALL BE PROVIDED THROUGH FIXTURE AFTER REMOVAL OF REFLECTOR.
2. REFLECTOR AND TRIM – ONE–PIECE, CLEAR, SPUN ALUMINUM, IRIDESCENCE–SUPRESSED, WITH PAINTED WHITE SELF TRIM. OTHER FINISHES AND TYPES AVAILABLE.
3. BALLAST – CLASS P, MULTI–VOLT (120V–277V INPUT), HIGH POWER FACTOR (≥ .95), PROGRAMMED RAPID START ELECTRONIC TYPE WITH 10% TOTAL HARMONIC DISTORTION. BALLAST SHALL BE CAPABLE OF UNIVERSALLY OPERATING 26W, 32W, OR 42 WATT LAMPS.
4. LAMPS – MULTI–TUBE, COMPACT FLUORESCENT WITH 4–PIN BASE. PROVIDE WITH 32W LAMP.
5. CERTIFICATION – UL LISTED AND LABELED.

FLUORESCENT WRAPAROUND (C4)

NTS — TYPE D

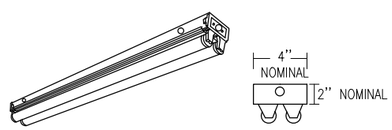


LUMINAIRE REQUIREMENTS:

1. HOUSING – ONE–PIECE, IMPACT–RESISTANT, FIBERGLASS REINFORCED POLYESTER WITH ENCLOSED COLD–ROLLED STEEL WIREWAY.
2. FINISH – STEEL REFLECTOR WITH MULTI–STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. LENS – 100% CLEAR ACRYLIC OPTICAL DIFFUSER. STIPPLED INTERIOR SURFACES AND SMOOTH EXTERIOR. CLOSED CELL NEOPRENE GASKET WITH CAPTIVE NONMETALLIC, SNAP ACTION CAM LATCHES TO SECURE LENS TO HOUSING.
4. LAMPS – (2) 32W LINEAR FLOURESCENT.
5. BALLAST – CLASS P, THERMALLY–PROTECTED, HIGH POWER FACTOR (≥.95), ELECTRONIC TYPE WITH SOUND RATING A.
   TYPE E1 – CLASS P, THERMALLY–PROTECTED, HIGH POWER FACTOR (≥ .95), ELECTRONIC TYPE WITH SOUND RATING A.
   TYPE E2 – 0–10V DIMMING ELECTRONIC BALLAST, <10% THD.
6. CERTIFICATION – UL LISTED AND LABELED. SUITABLE FOR DAMP OR WET LOCATION.

PENDENT-MOUNTED FIBERGLASS HOUSING FLUORESCENT (A1)

NTS — TYPES E1,E2

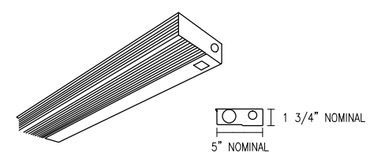


LUMINAIRE REQUIREMENTS:

1. ENDCAPS SECURED WITH TABS, SCREWS OR RIVETS AND USED FOR JOINERS WHEN CONNECTING FIXTURES IN ROWS.
2. FINISH – MULTI–STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. CHANNEL COVER – DIE–FORMED, COLD–ROLLED STEEL; SECURED WITH QUARTER–TURN LATCH.
4. LAMPS – TWO LINEAR FLUORESCENT 32WATT T8.
5. BALLAST – CLASS P, THERMALLY–PROTECTED, HIGH POWER FACTOR (≥95), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION FOR BALLAST OPTIONS AND SPECIFICS.
6. CERTIFICATION – UL LISTED AND LABELED.
7. ACCESSORIES – WIRE GUARD AND SYMMETRICAL REFLECTOR

FLOURESCENT STRIP FIXTURE (A2)

NTS — TYPE F

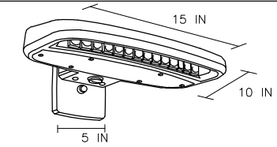


LUMINAIRE REQUIREMENTS:

1. HOUSING – 0.060" EXTRUDED ALUMINUM HOUSING WITH INJECTION MOLDED POLYCARBONATE ENDCAPS SECURED WITH TABS, SCREWS OR RIVETS.
2. FINISH – MULTI–STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. LENS – 100% ACRYLIC, CLEAR PRISMATIC OR WHITE TRANSLUCENT DIFFUSER WITH LINEAR RIBS FOR EVEN ILLUMINATION.
4. LAMPS – (2) 17W T8 LINEAR FLUORESCENT LAMPS.
5. BALLAST – CLASS P, THERMALLY–PROTECTED, HIGH POWER FACTOR (≥.95), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION FOR BALLAST OPTIONS AND SPECIFICS.
6. CERTIFICATION – UL LISTED AND LABELED.
7. FIXTURE LENGTH – 2' NOMINAL LENGTH.

DIRECT/INDIRECT WALL MOUNTED LIGHT FIXTURE (A3)

NTS — TYPE G



LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE–CAST OR EXTRUDED ALUMINUM WITH INTEGRAL PASSIVE COOLING MECHANISM. HEAT SINK SHALL BE INCORPORATED DIRECTLY INTO HOUSING OR DRIVER COMPARTMENT TO ENSURE MAXIMUM HEAT TRANSFER AND DISSIPATION.
2. FINISH – MULTI–STAGE PRE–TREATMENT, FINISHED WITH BAKED–ON POLYESTER POWDER COAT. FINISH SHALL PASS 2500 HOUR SALT SPRAY TEST PER ASTM B117. STANDARD FINISH IS DARK BRONZE, WITH OTHER CUSTOM COLORS AVAILABLE.
3. POWER SUPPLY/LED DRIVER – CLASS 1 DRIVER SHALL OPERATE AT 120/277 VOLTS, 50/60 HZ, WITH OTHER VOLTAGES OPTIONAL; POWER FACTOR GREATER THAN 0.9 AND THD LESS THAN 20% AT FULL LOAD. MINIMUM EFFICACY SHALL BE 60 LM/W AT MAXIMUM 600mA OPERATING CURRENT. TOTAL LUMINAIRE WATTS: 45W.
4. LED OPTICAL ASSEMBLY – PRECISION MOLDED ACRYLIC LENS PROVIDED FOR MULTIPLE HIGH–POWERED LEDS PRODUCING NEMA TYPE III DISTRIBUTION OR AS OTHERWISE INDICATED. BUG UPLIGHT RATING OF U0, WITH GLARE RATING AS DETERMINED BY LIGHTING ZONE INSTALLED. MINIMUM COLOR RENDERING INDEX (CRI) SHALL BE 70 FOR CORRELATED COLOR TEMPERATURE (CCT) OF 4000–4500 DEGREES K. LIGHT OUTPUT SHALL BE A MINIMUM OF 3900 LUMENS.
5. CERTIFICATION – UL AND/OR ETL LISTED FOR DAMP OR WET LOCATIONS AS INDICATED, AND RoHS COMPLIANT.
6. OTHER – THE ABOVE SKETCH IS A NON–PROPRIETY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS AND IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER'S PREFERENCE. ALL DIMENSIONS ARE NOMINAL AND VARY PER MANUFACTURER.

LED WALL PACK (A4)

NTS — TYPE H

SYM	DESCRIPTION	DATE	APPR

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BRANCH MANAGER
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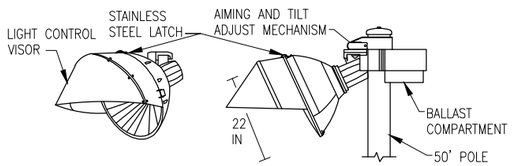
NAVAL AIR STATION WHIDBEY ISLAND — AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND — OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

LIGHTING DETAILS

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030534
SHEET 280 OF 302
E-501

DRAWFORM REVISION: 10 MARCH 2009

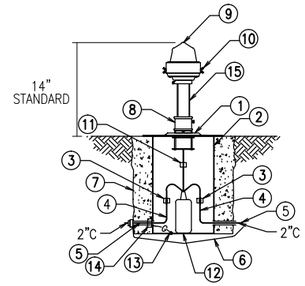


LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE CAST ALUMINUM HOUSING, MOUNTING PLATE, AND AIMING KNUCKLE. ALL HARDWARE SHALL BE STAINLESS STEEL OR ALUMINUM.
2. FINISH – MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FINISH SHALL PASS 2500 HOUR SALT SPRAY TEST PER ASTM B117.
3. REFLECTOR – ONE-PIECE, HYDROFORMED OR SEGMENTED, ANODIZED, SPECULAR ALUMINUM.
4. LENS AND FRAME – DIE CAST, ANODIZED ALUMINUM FRAME WITH ONE-PIECE MOLDED, HIGH TEMPERATURE SILICONE OR NEOPRENE GASKET. LENS SHALL BE TEMPERED GLASS. FRAME SHALL BE HINGED AT ONE END AND BE PROVIDED WITH LATCHES FOR SECURING WITHOUT THE NEED FOR TOOLS.
5. LIGHT SOURCE – 1200 WATT LED WITH TYPE 4 DISTRIBUTION.
6. LED DRIVER WITH 132,300 MAINTAINED LUMEN OUTPUT 110 LUMENS/WATT, ≥0.95 POWER FACTOR,<15% THD, WITH MINIMUM STARTING TEMPERATURE OF MINUS 22 DEGREES F.
7. CERTIFICATION – UL AND/OR ETL LISTED FOR WET LOCATIONS.
8. PROVIDE OPTIONS – NEMA DISTRIBUTION TYPE 3, EXTERNAL VISOR, INTERNAL LOUVER, AND FUSING.
9. OTHER – THE ABOVE SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS AND IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER'S PREFERENCE. ALL DIMENSIONS ARE NOMINAL AND VARY PER MANUFACTURER.
10. QUANTITY OF HEADS AS INDICATED ON SITE PLANS.
11. REFER TO POLE BASE DETAIL A1/E-814.

LED APRON LUMINAIRE (C1)

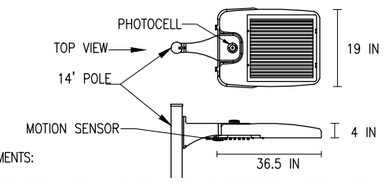
NTS — TYPE J



1. 3/8" THICK, HEAVY DUTY BASE PLATE WITH 11.25" BOLT-HOLE PATTERN.
2. L-867 BASE.
3. PRIMARY LEAD WITH L-823 PRIMARY CONNECTOR-RECEPTACLE.
4. TWO-FOOT SLACK FOR CONNECTIONS (MINIMUM).
5. 1/C #8 5KV, L-823 PRIMARY CONNECTOR PLUG.
6. BARE COPPER COUNTERPOISE WIRE.
7. FOUR-INCHES CONCRETE BACKFILL REQUIRED.
8. FRANGIBLE COUPLING AND DISCONNECT PLUG.
9. BLUE GLASS GLOBE WITH LONG LIFE LED LAMP.
10. SINGLE-LATCH CLAMPING BAND.
11. SECONDARY LEAD, 600V, WITH RECEPTACLE.
12. L-830 ISOLATION TRANSFORMER.
13. INSULATED COPPER #4 BARE COPPER GROUND WIRE BONDED TO LIGHT BASE.
14. 1" STEEL COLUMN.

ELEVATED APRON EDGE LIGHT (C2)

NTS — TYPE K

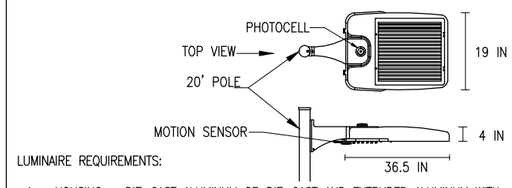


LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE-CAST ALUMINUM OR DIE-CAST AND EXTRUDED ALUMINUM WITH INTEGRAL, SELF-CLEANING HEAT SINK FINS, RIBS, OR EQUIVALENT PASSIVE COOLING MECHANISM. HEAT SINK SHALL BE INCORPORATED DIRECTLY INTO HOUSING TO ENSURE MAXIMUM HEAT TRANSFER AND DISSIPATION.
2. FINISH – MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FINISH SHALL PASS 2500 HOUR SALT SPRAY TEST PER ASTM B117. FINISH COLOR DARK BRONZE.
3. POWER SUPPLY/LED DRIVER – PROVIDE IN SEPARATE COMPARTMENT ACCESSIBLE WITHOUT THE USE OF HAND TOOLS. CLASS 1 DRIVER SHALL OPERATE AT 120/277V, 50/60 HZ; OTHER VOLTAGES OPTIONAL. POWER FACTOR GREATER THAN 0.9 AND THD LESS THAN 20% AT FULL LOAD. MINIMUM EFFICACY SHALL BE 60 LM/W AT MAXIMUM 1000 mA OPERATING CURRENT. TOTAL LUMINAIRE WATTS: 72.
4. LED OPTICAL ASSEMBLY – 20 LED ARRAYS WITH (1) 20 LED LIGHT ENGINE. 6200 LUMEN MINIMUM OUTPUT PROVIDE WITH EQUIVALENT NEMA TYPE III, DISTRIBUTION. BUG UPLIGHT RATING OF U0, WITH BACKLIGHT AND GLARE RATINGS AS DETERMINED BY LIGHTING ZONE INSTALLED. MINIMUM COLOR RENDERING INDEX (CRI) SHALL BE 70 FOR CORRELATED COLOR TEMPERATURE (CCT) OF 4000 K TO 4500 DEGREES K. LIGHT OUTPUT SHALL BE A MINIMUM OF 6000 LUMENS.
5. SURGE PROTECTION – 6 kV MINIMUM, COMPLIANT WITH ANSI C62.41.2.
6. CERTIFICATION – UL AND/OR ETL LISTED, MINIMUM IP65 RATED PER ANSI/IEC 60529, AND RoHS COMPLIANT.
7. PROVIDE OPTIONS – PHOTOCELL AND RECEPTACLE, SHORTING CAP, BIRD SPIKES, 0-10 VOLT DIMMING DRIVER, AND MOTION SENSOR.
8. OTHER – THE ABOVE SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS AND IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER'S PREFERENCE. ALL DIMENSIONS ARE NOMINAL AND VARY PER MANUFACTURER.
9. REFER TO POLE BASE DETAIL A4/E-814.

LED AREA LUMINAIRE (C3)

NTS — TYPE L

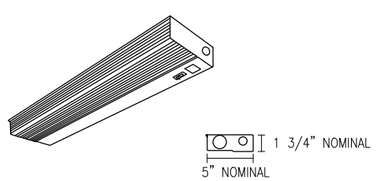


LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE-CAST ALUMINUM OR DIE-CAST AND EXTRUDED ALUMINUM WITH INTEGRAL, SELF-CLEANING HEAT SINK FINS, RIBS, OR EQUIVALENT PASSIVE COOLING MECHANISM. HEAT SINK SHALL BE INCORPORATED DIRECTLY INTO HOUSING TO ENSURE MAXIMUM HEAT TRANSFER AND DISSIPATION.
2. FINISH – MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FINISH SHALL PASS 2500 HOUR SALT SPRAY TEST PER ASTM B117. FINISH COLOR DARK BRONZE.
3. POWER SUPPLY/LED DRIVER – PROVIDE IN SEPARATE COMPARTMENT ACCESSIBLE WITHOUT THE USE OF HAND TOOLS. CLASS 1 DRIVER SHALL OPERATE AT 120/277V, 50/60 HZ; OTHER VOLTAGES OPTIONAL. POWER FACTOR GREATER THAN 0.9 AND THD LESS THAN 20% AT FULL LOAD. MINIMUM EFFICACY SHALL BE 60 LM/W AT MAXIMUM 1000 mA OPERATING CURRENT. TOTAL LUMINAIRE WATTS: 72.
4. LED OPTICAL ASSEMBLY – 20 LED ARRAYS WITH (1) 20 LED LIGHT ENGINE. 6200 LUMEN MINIMUM OUTPUT PROVIDE WITH EQUIVALENT NEMA TYPE III, DISTRIBUTION. BUG UPLIGHT RATING OF U0, WITH BACKLIGHT AND GLARE RATINGS AS DETERMINED BY LIGHTING ZONE INSTALLED. MINIMUM COLOR RENDERING INDEX (CRI) SHALL BE 70 FOR CORRELATED COLOR TEMPERATURE (CCT) OF 4000 K TO 4500 DEGREES K. LIGHT OUTPUT SHALL BE A MINIMUM OF 6000 LUMENS.
5. SURGE PROTECTION – 6 kV MINIMUM, COMPLIANT WITH ANSI C62.41.2.
6. CERTIFICATION – UL AND/OR ETL LISTED, MINIMUM IP65 RATED PER ANSI/IEC 60529, AND RoHS COMPLIANT.
7. PROVIDE OPTIONS – PHOTOCELL AND RECEPTACLE, SHORTING CAP, BIRD SPIKES, 0-10 VOLT DIMMING DRIVER, AND MOTION SENSOR.
8. OTHER – THE ABOVE SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS AND IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER'S PREFERENCE. ALL DIMENSIONS ARE NOMINAL AND VARY PER MANUFACTURER.
9. REFER TO POLE BASE DETAIL A2/E-814.

LED AREA LUMINAIRE (C5)

NTS — TYPE M



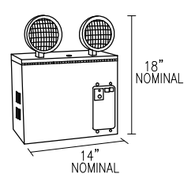
LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE-FORMED, COLD-ROLLED STEEL, WITH REINFORCEMENT RIBS FOR RIGIDITY. ENDCAPS SECURED WITH TABS, SCREWS OR RIVETS.
2. FINISH – MULTI-STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH REFLECTANCE (MINIMUM 85%), BAKED WHITE ENAMEL FINISH.
3. LENS – 100% ACRYLIC, CLEAR PRISMATIC OR WHITE TRANSLUCENT DIFFUSER WITH LINEAR RIBS FOR EVEN ILLUMINATION.
4. LAMPS – LINEAR FLUORESCENT 30W T8.
5. BALLAST – CLASS P, THERMALLY-PROTECTED, HIGH POWER FACTOR (≥.95), ELECTRONIC TYPE WITH SOUND RATING A. SEE SPECIFICATION FOR BALLAST OPTIONS AND SPECIFICS.
6. CERTIFICATION – UL LISTED AND LABELED.
7. FIXTURE TYPES –

   TYPE N – 3' LENGTH WITH 1-T8 FLUORESCENT LAMP AND ROCKER SWITCH

FOURESCENT UNDER-CABINET TASK LIGHT (A1)

NTS — TYPE N

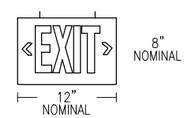


LUMINAIRE REQUIREMENTS:

1. HOUSING – HEAVY-GAUGE STEEL WITH BAKED-ON DARK BROWN ENAMEL FINISH. ACCESS INTO TOP OF FIXTURE BY FULL PIANO HINGE COVER.
2. INTERNAL COMPONENTS – FULLY AUTOMATIC, SOLID STATE, CONSTANT VOLTAGE, CURRENT-LIMITED BATTERY CHARGER; MAINTENANCE-FREE LEAD-ACID BATTERY; AND BUILT-IN OVERLOAD PROTECTION;.
3. FACEPLATE INDICATORS – LED AC-ON INDICATOR AND INTEGRAL TEST SWITCH.
4. LAMP HEADS – UL FLAME RATED THERMOPLASTIC; FULLY ADJUSTABLE HORIZONTALLY AND VERTICALLY. SEALED BEAM, PAR 36 HALOGEN LAMPS SHALL BE 12 WATTS.
5. MOUNTING – DIRECTLY TO WALL USING MOUNTING HOLES IN REAR OF CABINET, ACCESSORY WALL BRACKETS, OR MOUNTING SHELF.
6. CERTIFICATION – UL LISTED AND LABELED. COMPLIES WITH UL 924 AND NFPA 101 REQUIREMENTS.
7. VOLTMETER, AMMETER, THREE-CONDUCTOR CORD SET, AND WIRE GUARD.

INDUSTRIAL EMERGENCY LIGHTING UNIT (A2)

NTS — TYPE X1

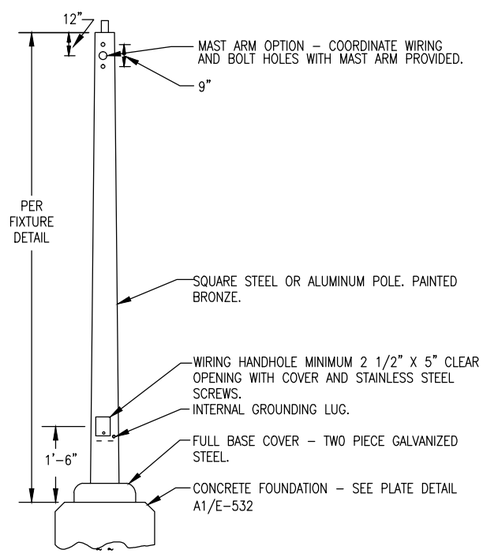


LUMINAIRE REQUIREMENTS:

1. HOUSING – DIE-CAST ALUMINUM OR HIGH-IMPACT, UV-STABILIZED, INJECTION-MOLDED THERMOPLASTIC. SINGLE OR DOUBLE-FACED AS INDICATED.
2. FINISH (ON CAST ALUMINUM HOUSING ONLY) – TEXTURED POWDER COAT FINISH
3. LETTERS/CHEVRONS – MINIMUM 6" HIGH. GREEN LETTERS PROVIDE CHEVRONS AS INDICATED EITHER LEFT, RIGHT OR BOTH DIRECTIONS AS INDICATED. CHEVRONS PUNCHED OUT THROUGH HOUSING AS REQUIRED.
4. EMERGENCY PACK – SOLID-STATE, CONSTANT-CURRENT TYPE BATTERY CHARGER WITH MAINTENANCE-FREE, NICKEL-CADMIUM BATTERY, AC-ON INDICATOR LAMP AND TEST SWITCH.
5. MOUNTING – UNIVERSAL MOUNTING KIT FOR CEILING, WALL OR END-OF-FIXTURE MOUNTING.
6. ILLUMINATION – PROVIDED BY GREEN HIGH-OUTPUT LEDS INSIDE OF FIXTURE HOUSING. PROVIDE POLYSTYRENE DIFFUSER IN COLOR INDICATED WITH FREQUENCY-MATCHED SILKSCREEN COATING FOR MAXIMUM LED LIGHT OUTPUT.

LED EXIT LIGHT (A3)

NTS — TYPE X2



LIGHT POLE (A4)

NTS

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY: NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD	DRW AM	CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

LIGHTING DETAILS

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030535

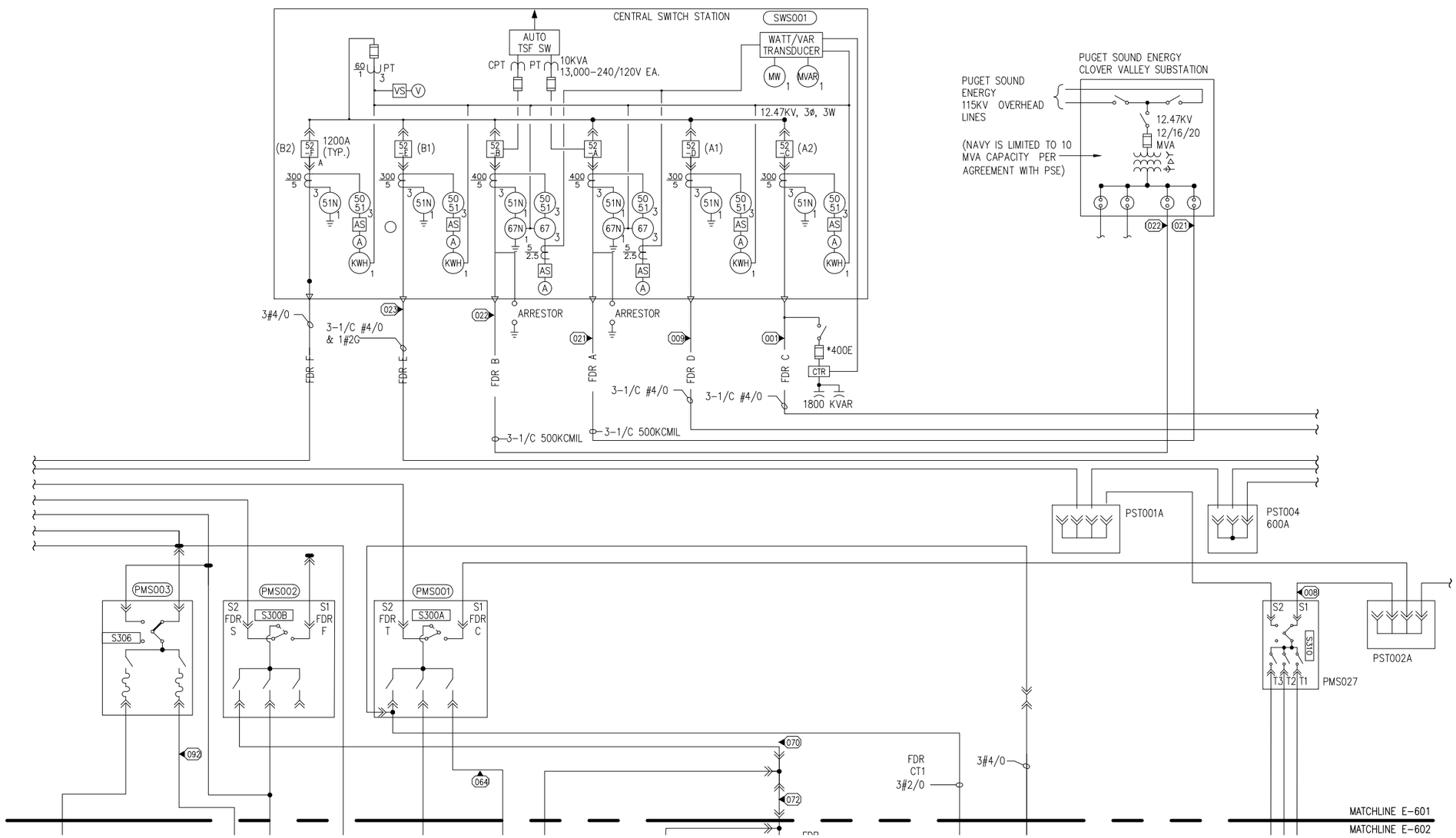
SHEET 281 OF 302

E-502

DRAWFORM REVISION: 10 MARCH 2009

GENERAL NOTES:

1. SHEET SHOWN FOR REFERENCE ONLY.



BASE POWER ONE-LINE DIAGRAM

NTS

SYM	DESCRIPTION	DATE	APPR

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NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
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NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

BASE POWER ONE-LINE DIAGRAM

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030536

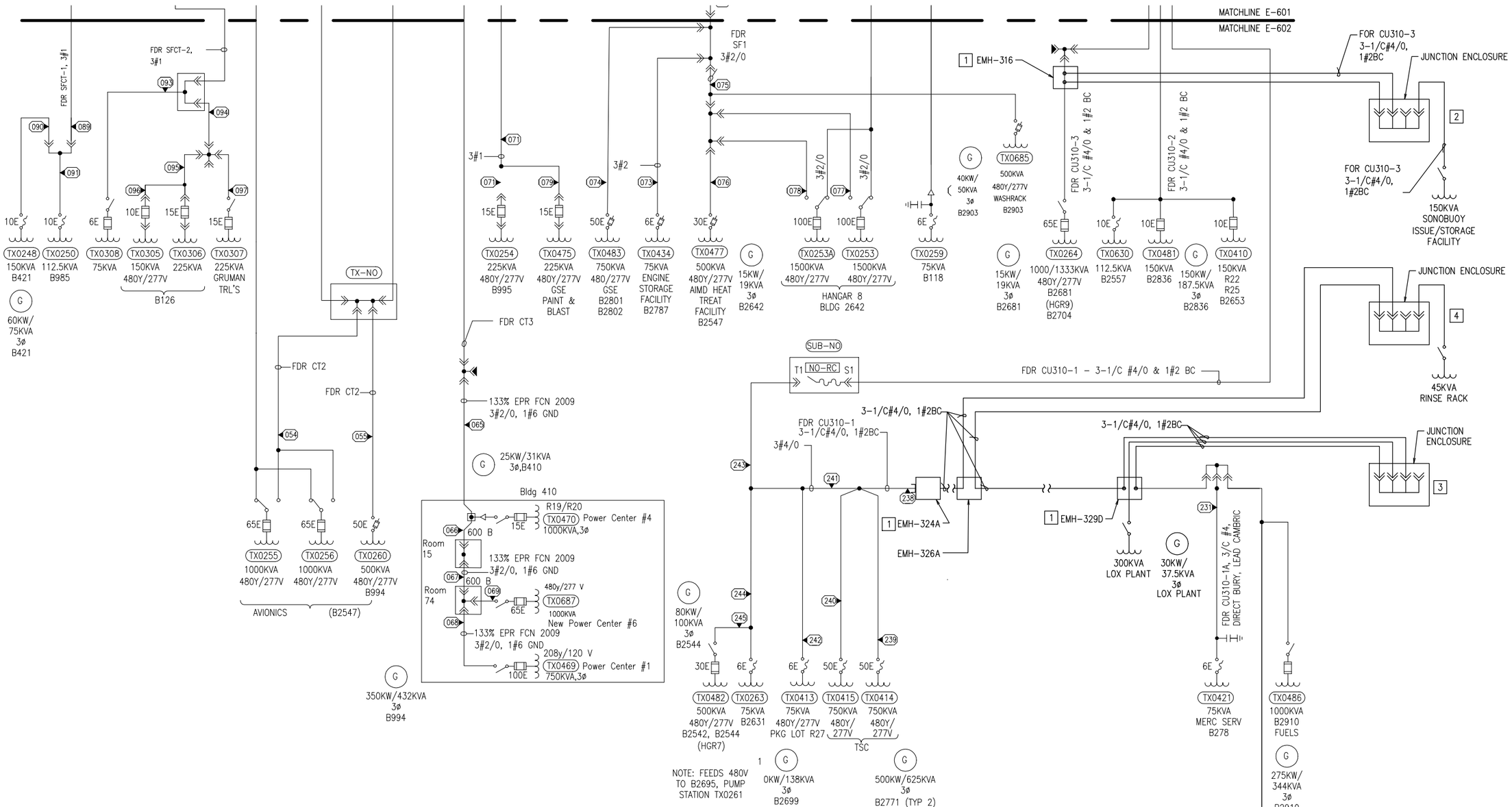
SHEET 282 OF 302

E-601

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. SPLICE EXISTING 15KV FEEDER AND EXTEND.
2. REFER TO SHEET E-621 FOR CONTINUATION.
3. REFER TO SHEET E-611 FOR CONTINUATION.
4. REFER TO SHEET E-641 FOR CONTINUATION.



BASE POWER ONE-LINE DIAGRAM

NTS

SYM	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND

NAVAL FACILITIES ENGINEERING COMMAND – NORTHWEST
AULT FIELD – OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

BASE POWER ONE-LINE DIAGRAM

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030537

SHEET 283 OF 302

E-602

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. 200 AMP LOAD BREAK ELBOW (TYPICAL).
2. COMBINATION BAYONET EXPULSION FUSE AND OIL IMMERSED CURRENT LIMITING FUSE.
3. LIGHTNING ARRESTOR.
4. NOT USED.
5. RELOCATE EXISTING AMI METER AND ANTENNA FROM EXISTING TRANSFORMER TX0419 AND CONNECT TO NEW LOX PLANT TRANSFORMER. MOUNT ON METAL STRUT RACK ADJACENT TO TRANSFORMER.
6. REFEED EXISTING SE ENTRY CONTROL POINT POWER PANEL.
7. STUB 5'-0" FROM TRANSFORMER PAD.

PANEL NAMING CONVENTION

1. FIRST NUMBER INDICATES VOLTAGE: 2 = 208 VOLTS, 4 = 480 VOLTS.
2. SECOND LETTER INDICATES SET: A OR B.

GENERAL SHEET NOTES:

1. SHORT CIRCUIT CALCULATIONS BASED ON INFINITE AVAILABLE FAULT CURRENT AT PRIMARY SIDE OF PAD MOUNTED TRANSFORMER.
2. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE (E-111) FOR LOADS, DISCONNECT SIZES, AND CONDUCTOR SIZES OF MECHANICAL EQUIPMENT, UNLESS INDICATED OTHERWISE.
3. REFER TO PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS (E-711 AND E-712).

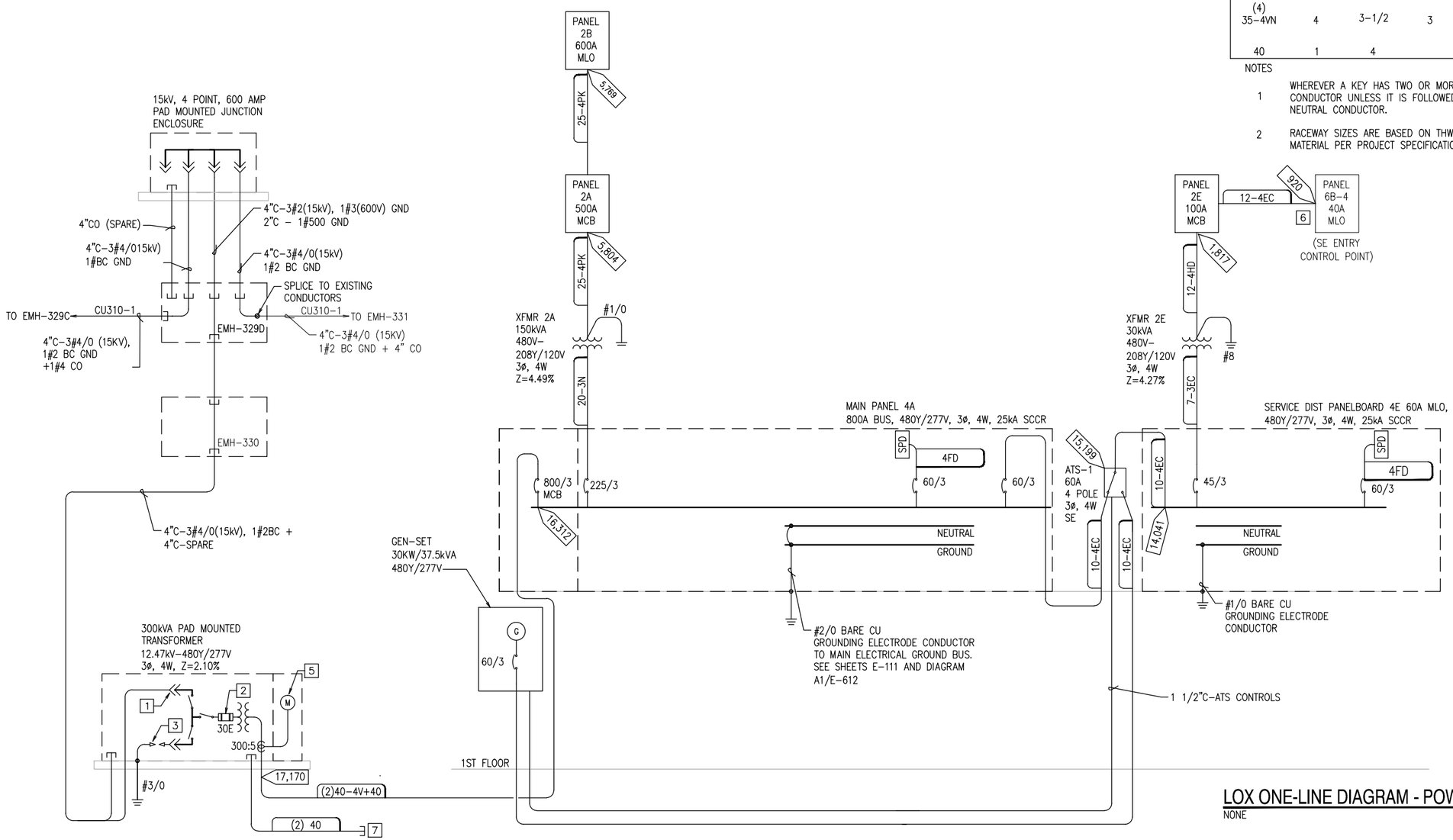
FEEDER/BRANCH CIRCUIT KEY

RACEWAY KEY			CONDUCTOR KEY (AWG OR KCMIL)				
5=1/2"	15=1.5"	35=3.5"	A=14	F=4	L=2/0	R=350	X=750
7=3/4"	20=2"	40=4"	B=12	G=3	M=3/0	T=400	
10=1"	25=2.5"	50=5"	C=10	H=2	N=4/0	U=500	
12=1.25"	30=3"	60=6"	D=8	J=1	P=250	V=600	
(#)= PARALLELED QUANTITY			E=6	K=1/0	Q=300	W=700	

KEY EXAMPLE	RACEWAY QUANTITY	RACEWAY SIZE	PHASE QUANTITY	PHASE SIZE	NEUTRAL QUANTITY	NEUTRAL SIZE	GROUND SIZE
5-2C	1	1/2	2	10			
12-3FE	1	1-1/4	3	4			6
20-4ME	1	2	3	3/0	1	3/0	6
20-4M	1	2	3	3/0	1	3/0	
15-3HLD	1	1-1/2	3	2	1	2/0	8
25-3RL^	1	2-1/2	3	350	1	2/0	
30-5PF	1	3	3	250	2	250	4
20-3J2KE	1	2	3	1	2	1/0	6
(4) 35-4VN	4	3-1/2	3	600 (RACEWAY ONLY)	1	600	4/0
40	1	4					

NOTES

1. WHEREVER A KEY HAS TWO OR MORE LETTERS THE LAST LETTER IS A GROUND CONDUCTOR UNLESS IT IS FOLLOWED BY THE SYMBOL "^" IN WHICH CASE IT IS A NEUTRAL CONDUCTOR.
2. RACEWAY SIZES ARE BASED ON THW COPPER WIRE, UTILIZE RACEWAY AND WIRE MATERIAL PER PROJECT SPECIFICATIONS



LOX ONE-LINE DIAGRAM - POWER

NONE ES103 A1

SYM	DESCRIPTION	DATE	APPR

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DES	KMD	DRW	AM	CHK	GLL

<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
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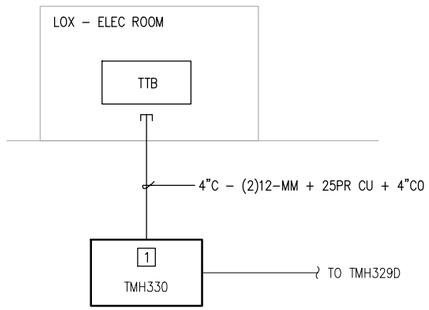
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
LOX ONE-LINE DIAGRAM - POWER

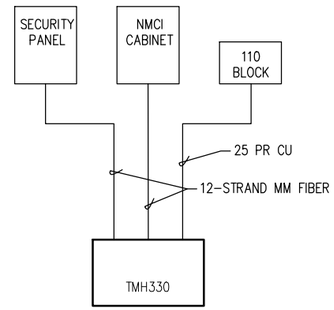
SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030538
SHEET 284 OF 302
E-611

DRAWFORM REVISION: 10 MARCH 2009



LOX TELECOM RISER DIAGRAM

SCALE: NONE — E-311 — C1

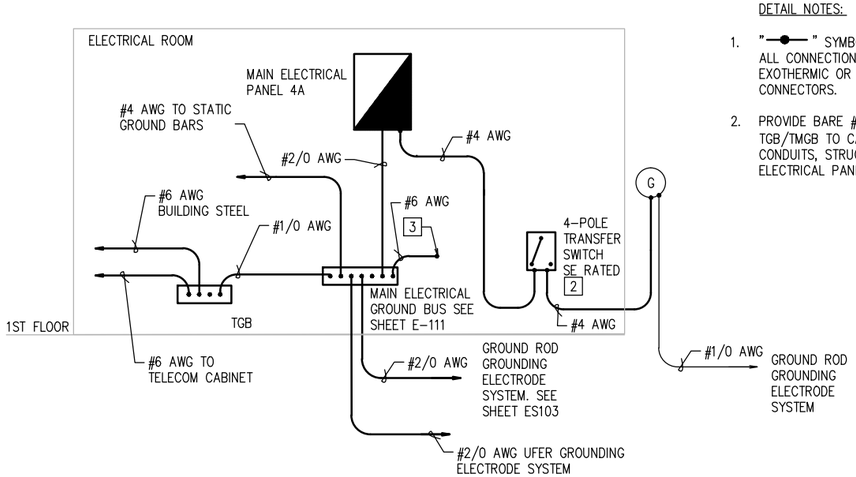


LOX TELECOM SERVICE DIAGRAM

SCALE: NONE — E-311 — C3

KEY NOTES:

1. ROUTE NEW FIBER AND TELEPHONE CABLING FROM TMH330 TO THE LOX PLANT. COORDINATE OUTAGES WITH BASE AND SPLICE NEW CABLES IN TMH330 AND JUNCTION BOX.
2. PROVIDE SYSTEM BONDING JUMPER BETWEEN GROUNDING ELECTRODE AND NEUTRAL IN SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH.
3. BOND TO STRUCTURAL STEEL AND UNDERGROUND METAL WATER PIPE.
4. INTERCONNECT GATE OPEN CONTROLS TO INTERCOM MASTER STATION.

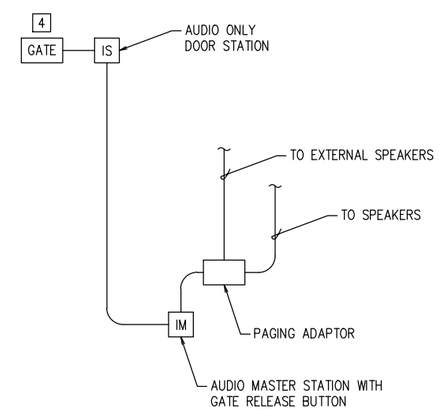


LOX GROUNDING RISER DIAGRAM

SCALE: NONE — E-111, E-611 — A1

DETAIL NOTES:

1. "—●—" SYMBOLIZES AN EXOTHERMIC WELD. ALL CONNECTIONS SHALL BE MADE WITH EXOTHERMIC OR MECHANICAL COMPRESSION CONNECTORS.
2. PROVIDE BARE #6 AWG COPPER FROM TGB/TMGB TO CABLE TRAYS, EQUIPMENT RACKS CONDUITS, STRUCTURAL STEEL, WATER PIPES, ELECTRICAL PANELS, ETC., PER J-STD-607-A.



IC/PA RISER - LOX FACILITY

SCALE: NONE — E-311 — A4

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY: NAS WHIDBEY ISLAND

SATISFACTORY TO — DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
LOX RISER DIAGRAMS – TECHNOLOGY

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030539

SHEET 285 OF 302

E-612

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. 200 AMP LOAD BREAK ELBOW (TYPICAL).
2. COMBINATION BAYONET EXPULSION FUSE AND OIL IMMERSED CURRENT LIMITING FUSE.
3. LIGHTNING ARRESTOR.
4. RELOCATE EXISTING AMI METER AND ANTENNA FROM EXISTING TRANSFORMER TX0418 AND CONNECT TO NEW SONOBUOY ISSUE/STORAGE TRANSFORMER. MOUNT ON METAL STRUT RACK ADJACENT TO TRANSFORMER.
5. SPLICE TO EXISTING CONDUCTORS.
6. STUB 5'-0" FROM TRANSFORMER PAD.

PANEL NAMING CONVENTION

1. FIRST NUMBER INDICATES VOLTAGE: 2 = 208 VOLTS, 4 = 480 VOLTS.
2. SECOND LETTER INDICATES SET: A OR B.

GENERAL SHEET NOTES:

1. SHORT CIRCUIT CALCULATIONS BASED ON INFINITE AVAILABLE FAULT CURRENT AT PRIMARY SIDE OF PAD MOUNTED TRANSFORMER.
2. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE (E-121) FOR LOADS, DISCONNECT SIZES, AND CONDUCTOR SIZES OF MECHANICAL EQUIPMENT, UNLESS INDICATED OTHERWISE.
3. REFER TO PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS (E-721).

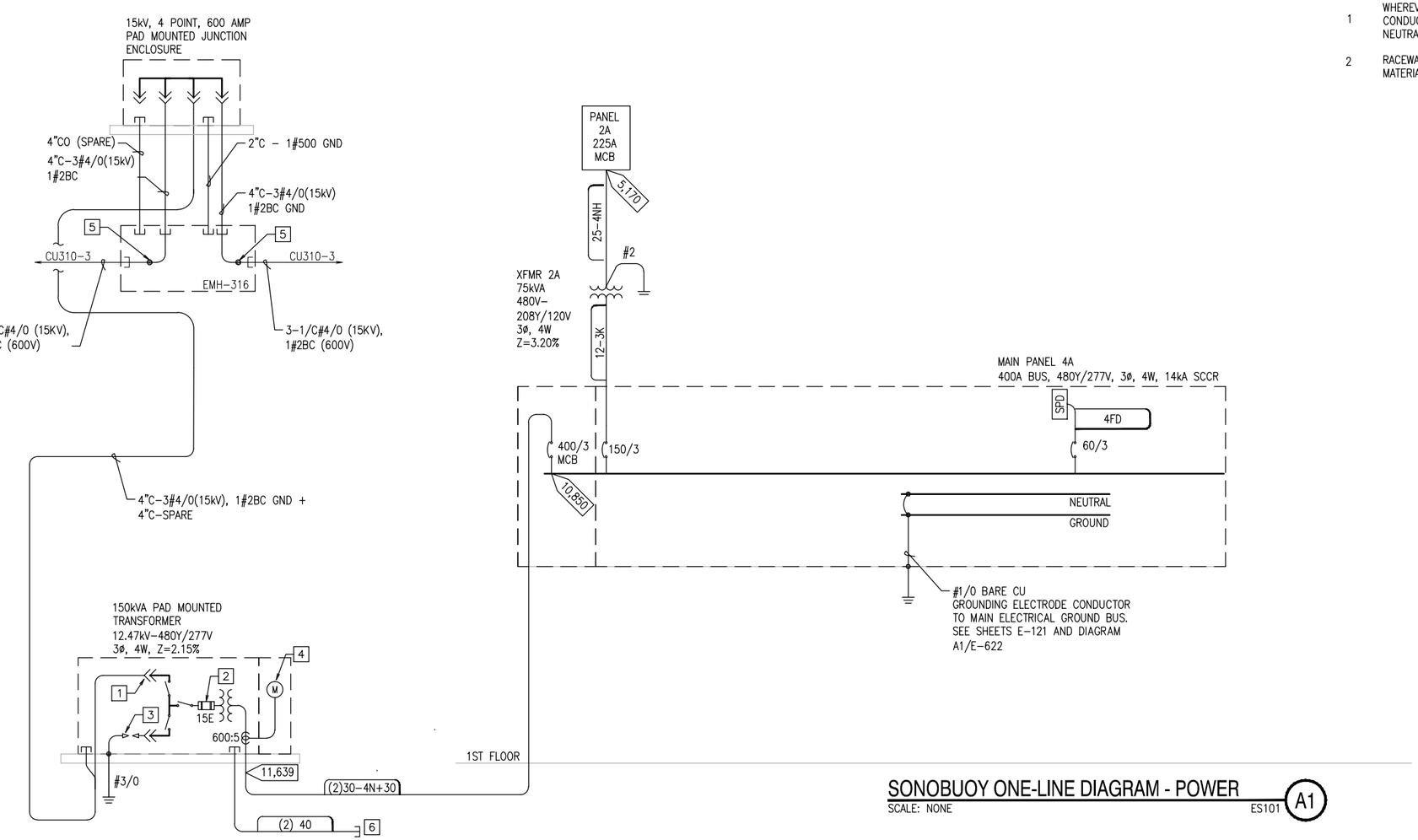
FEEDER/BRANCH CIRCUIT KEY

RACEWAY KEY			CONDUCTOR KEY (AWG OR KCMIL)				
5=1/2"	15=1.5"	35=3.5"	A=14	F=4	L=2/0	R=350	X=750
7=3/4"	20=2"	40=4"	B=12	G=3	M=3/0	T=400	
10=1"	25=2.5"	50=5"	C=10	H=2	N=4/0	U=500	
12=1.25"	30=3"	60=6"	D=8	J=1	P=250	V=600	
(#)= PARALLELED QUANTITY			E=6	K=1/0	Q=300	W=700	

KEY EXAMPLE	RACEWAY QUANTITY	RACEWAY SIZE	PHASE QUANTITY	PHASE SIZE	NEUTRAL QUANTITY	NEUTRAL SIZE	GROUND SIZE
5-2C	1	1/2	2	10			
12-3FE	1	1-1/4	3	4			6
20-4ME	1	2	3	3/0	1	3/0	6
20-4M	1	2	3	3/0	1	3/0	
15-3HLD	1	1-1/2	3	2	1	2/0	8
25-3RL^	1	2-1/2	3	350	1	2/0	
30-5PF	1	3	3	250	2	250	4
20-3J2KE (4)	1	2	3	1	2	1/0	6
35-4VN	4	3-1/2	3	600 (RACEWAY ONLY)	1	600	4/0
40	1	4					

NOTES

1. WHEREVER A KEY HAS TWO OR MORE LETTERS THE LAST LETTER IS A GROUND CONDUCTOR UNLESS IT IS FOLLOWED BY THE SYMBOL "^" IN WHICH CASE IT IS A NEUTRAL CONDUCTOR.
2. RACEWAY SIZES ARE BASED ON THW COPPER WIRE, UTILIZE RACEWAY AND WIRE MATERIAL PER PROJECT SPECIFICATIONS



SONOBUOY ONE-LINE DIAGRAM - POWER

SCALE: NONE

ES101 A1

STM	DESCRIPTION	DATE	APPR

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NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL

<<PM/DM>> JOSEPH KISIDAY

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND - NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
SONOBUOY ONE-LINE DIAGRAM - POWER

SCALE: AS NOTED

EPROJECT NO.:

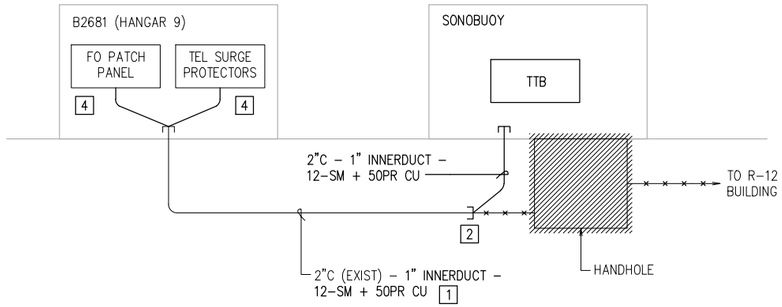
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030540

SHEET 286 OF 302

E-621

DRAWFORM REVISION: 10 MARCH 2009



TELECOM SERVICE DIAGRAM

SCALE: NONE

E-321 C1

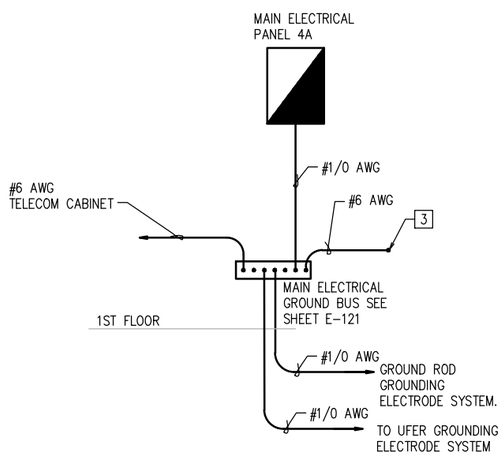


DIAGRAM NOTES

1. "—●—" SYMBOLIZES AN EXOTHERMIC WELD. ALL CONNECTIONS SHALL BE MADE WITH EXOTHERMIC OR MECHANICAL COMPRESSION CONNECTORS.
2. PROVIDE BARE #6 AWG COPPER FROM TGB TO EQUIPMENT CABINETS, CONDUITS, STRUCTURAL STEEL, WATER PIPES, ELECTRICAL PANELS, ETC., PER J-STD-607-A.

GROUNDING RISER DIAGRAM

SCALE: NONE

E-611, E-621 A1

KEY NOTES:

1. REMOVE EXISTING CABLING AND PROVIDE CABLING THRU EXISTING RACEWAYS TO SONOBUOY BUILDING.
2. INTERCEPT AND EXTEND EXISTING RACEWAYS.
3. BOND TO STRUCTURAL STEEL AND UNDERGROUND METAL PIPE WATER.
4. EXTEND CABLING FROM EXISTING TERMINATION POINT.

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
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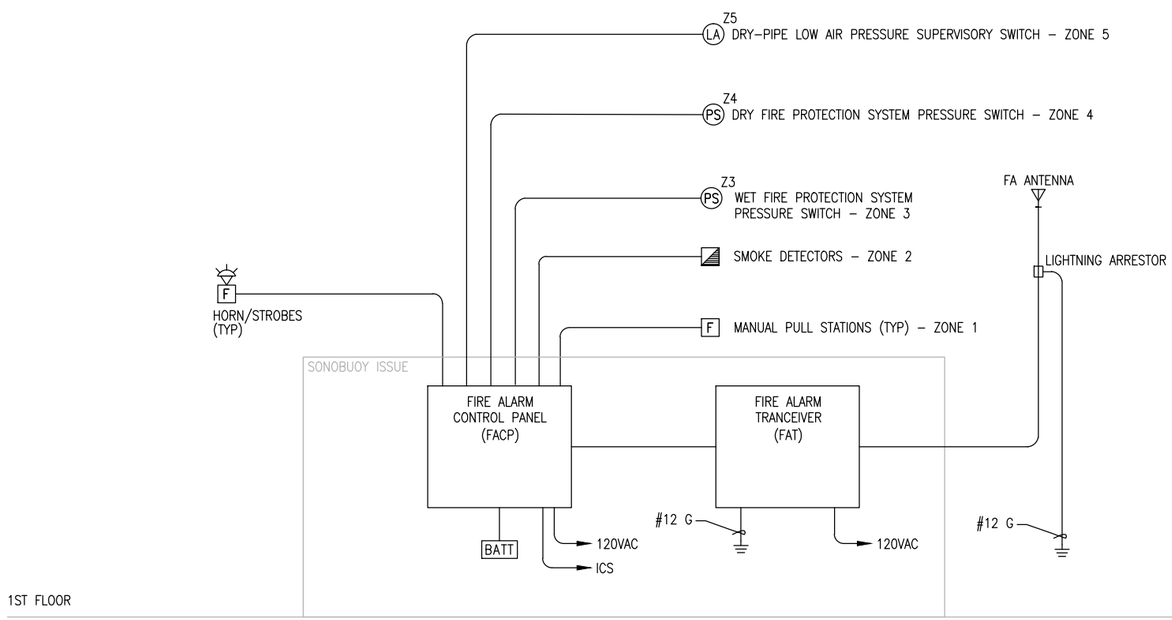
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
SONOBUOY RISER DIAGRAMS – TECHNOLOGY

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030541
SHEET 287 OF 302

E-622

DRAWFORM REVISION: 10 MARCH 2009



SONOBUOY RISER DIAGRAM - FIRE ALARM (A1)

SCALE: NONE

E-321

SYM	DESCRIPTION	DATE	APPR

NAVFAC

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NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

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CHIEF ENG/ARCH

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AULT FIELD – OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A

SONOBUOY RISER DIAGRAM – FIRE ALARM

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030542

SHEET 288 OF 302

E-623

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. 200 AMP LOAD BREAK ELBOW (TYPICAL).
2. COMBINATION BAYONET EXPULSION FUSE AND OIL IMMERSED CURRENT LIMITING FUSE.
3. LIGHTNING ARRESTOR.
4. PROVIDE METER COMPATIBLE WITH BASE ADVANCED METERING INFRASTRUCTURE SYSTEM. EXISTING AMI IS BASED ON SQUARE D ION 8600 POWER LOGIC EQUIPMENT.

PANEL NAMING CONVENTION

1. FIRST NUMBER INDICATES VOLTAGE: 2 = 208 VOLTS, 4 = 480 VOLTS.
2. SECOND LETTER INDICATES SET: A OR B.

GENERAL NOTES:

1. SHORT CIRCUIT CALCULATIONS BASED ON INFINITE AVAILABLE FAULT CURRENT AT PRIMARY SIDE OF PAD MOUNTED TRANSFORMER.
2. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE (E-641) FOR LOADS, DISCONNECT SIZES, AND CONDUCTOR SIZES OF MECHANICAL EQUIPMENT, UNLESS INDICATED OTHERWISE.
3. REFER TO PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS (E-741).

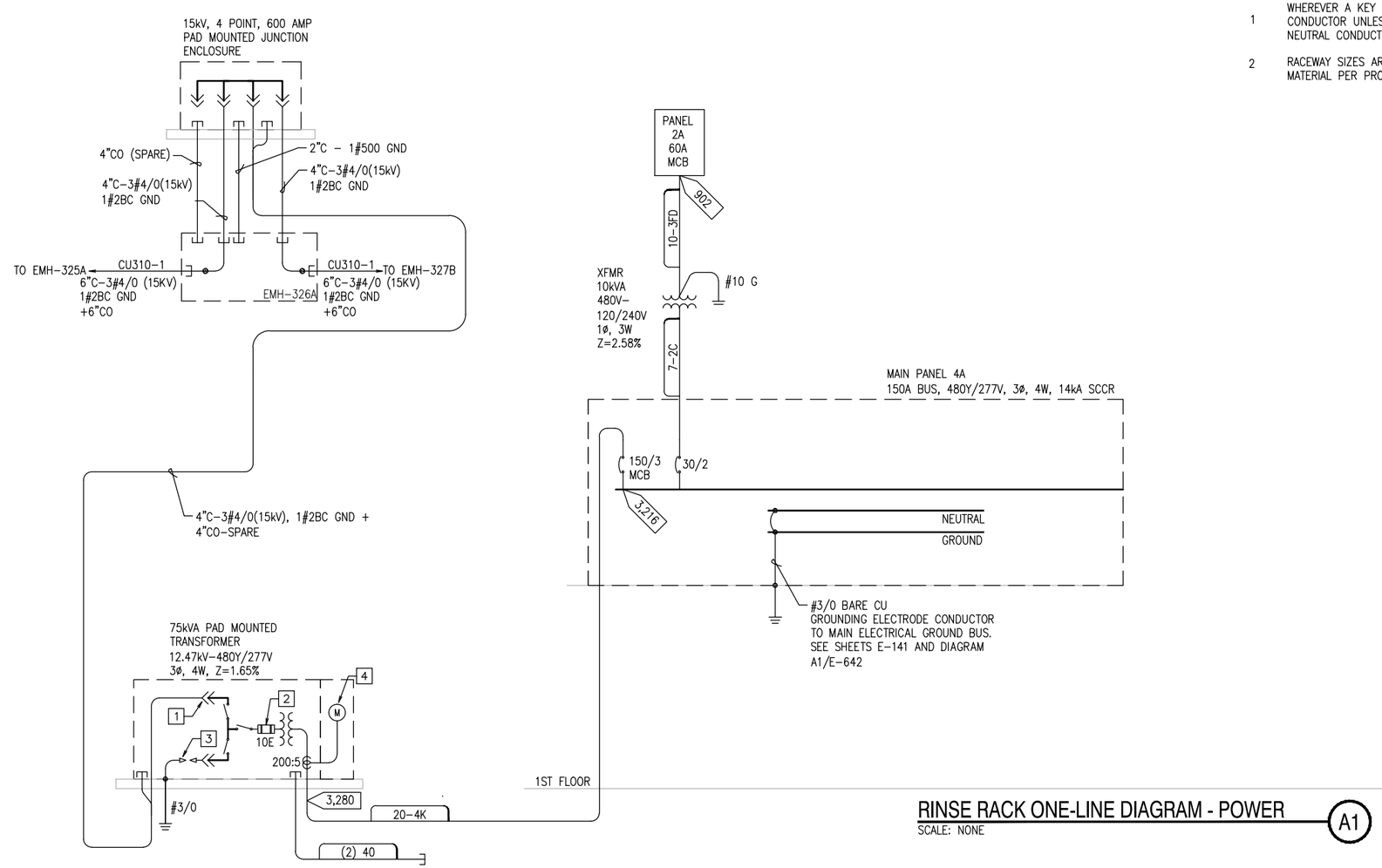
FEEDER/BRANCH CIRCUIT KEY

RACEWAY KEY			CONDUCTOR KEY (AWG OR KCMIL)				
5=1/2"	15=1.5"	35=3.5"	A=14	F=4	L=2/0	R=350	X=750
7=3/4"	20=2"	40=4"	B=12	G=3	M=3/0	T=400	
10=1"	25=2.5"	50=5"	C=10	H=2	N=4/0	U=500	
12=1.25"	30=3"	60=6"	D=8	J=1	P=250	V=600	
(#)= PARALLELED QUANTITY			E=6	K=1/0	Q=300	W=700	

KEY EXAMPLE	RACEWAY QUANTITY	RACEWAY SIZE	PHASE QUANTITY	PHASE SIZE	NEUTRAL QUANTITY	NEUTRAL SIZE	GROUND SIZE
5-2C	1	1/2	2	10			
12-3FE	1	1-1/4	3	4			6
20-4ME	1	2	3	3/0	1	3/0	6
20-4M	1	2	3	3/0	1	3/0	
15-3HLD	1	1-1/2	3	2	1	2/0	8
25-3RL^	1	2-1/2	3	350	1	2/0	
30-5PF	1	3	3	250	2	250	4
20-3J2KE	1	2	3	1	2	1/0	6
(4) 35-4VN	4	3-1/2	3	600	1	600	4/0
40	1	4		(RACEWAY ONLY)			

NOTES

1. WHEREVER A KEY HAS TWO OR MORE LETTERS THE LAST LETTER IS A GROUND CONDUCTOR UNLESS IT IS FOLLOWED BY THE SYMBOL "^" IN WHICH CASE IT IS A NEUTRAL CONDUCTOR.
2. RACEWAY SIZES ARE BASED ON THW COPPER WIRE, UTILIZE RACEWAY AND WIRE MATERIAL PER PROJECT SPECIFICATIONS



RINSE RACK ONE-LINE DIAGRAM - POWER

SCALE: NONE

A1

SYM	DESCRIPTION	DATE	APPR

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SATISFACTORY TO DATE

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CHIEF ENG/ARCH

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NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

RINSE RACK ONE-LINE DIAGRAM – POWER

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030543

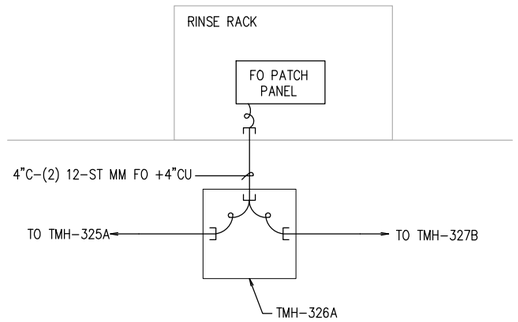
SHEET 289 OF 302

E-641

DRAWFORM REVISION: 10 MARCH 2009

KEY NOTES:

1. BOND TO STRUCTURAL STEEL AND UNDERGROUND METAL PIPE WATER.



TELECOM SERVICE DIAGRAM

SCALE: NONE

E-141 C1

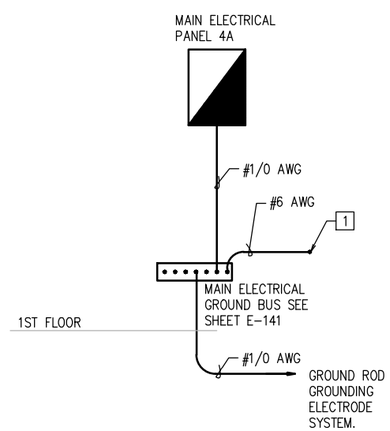


DIAGRAM NOTES

1. "—●—" SYMBOLIZES AN EXOTHERMIC WELD. ALL CONNECTIONS SHALL BE MADE WITH EXOTHERMIC OR MECHANICAL COMPRESSION CONNECTORS.
2. PROVIDE BARE #6 AWG COPPER FROM TGB TO EQUIPMENT CABINETS, CONDUITS, STRUCTURAL STEEL, WATER PIPES, ELECTRICAL PANELS, ETC., PER J-STD-607-A.

GROUNDING RISER DIAGRAM

SCALE: NONE

E-641 A1

SYM	DESCRIPTION	DATE	APPR

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OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
RINSE RACK

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030544
SHEET 290 OF 302

E-642

DRAWFORM REVISION: 10 MARCH 2009

Sparling | Panel
Name: PANEL 4A | 277/480V | 3 PH | 4W | 800A Main CB | Type: Panelboard
Location: LOX ELECTRICAL RM 102B | Surface Mounted | 25,000 AIC
Serves: | Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Panel PANEL 2A VIA XFMR 2A	41.38	225/3	CB	X			60/3	CB	0.10	Equip SPD	2
3	-------PANEL 2A VIA XFMR 2A	47.19	-------	---		X		-------	---	0.10	-------SPD	4
5	-------PANEL 2A VIA XFMR 2A	40.64	-------	---			X	-------	---	0.10	-------SPD	6
7	Mech WH-2	12.00	60/3	C	X			20/3	C	1.23	Mech SEP-1	8
9	-------WH-2	12.00	-------	---		X		-------	---	1.23	-------SEP-1	10
11	-------WH-2	12.00	-------	---			X	-------	---	1.23	-------SEP-1	12
13	Mech WH-3	36.00	175/3	C	X			20/1	CB	0.54	Lighting RMS 101,102,102A,102B,106	14
15	-------WH-3	36.00	-------	---		X		20/1	CB	1.41	Lighting RMS 103,104,105	16
17	-------WH-3	36.00	-------	---			X	20/1	CB	0.00	Spare	18
19	Equip MNGG	17.33	100/3	CB	X			30/3	CB	0.00	Spare	20
21	-------MNGG	17.33	-------	---		X		-------	---	0.00	-------	22
23	-------MNGG	17.33	-------	---			X	-------	---	0.00	-------	24
25	Equip MNGG	17.33	100/3	CB	X			30/3	CB	0.00	Spare	26
27	-------MNGG	17.33	-------	---		X		-------	---	0.00	-------	28
29	-------MNGG	17.33	-------	---			X	-------	---	0.00	-------	30
31	Equip MNGG	17.33	100/3	CB	X			30/3	CB	0.00	Spare	32
33	-------MNGG	17.33	-------	---		X		-------	---	0.00	-------	34
35	-------MNGG	17.33	-------	---			X	-------	---	0.00	-------	36
37	Lighting APRON POLE LIGHT	2.40	20/1	CB	X			60/3	CB	5.50	Panel PANEL 4E VIA ATS	38
39	Lighting APRON POLE LIGHT	2.40	20/1	CB		X		-------	---	5.65	-------PANEL 4E VIA ATS	40
41	Lighting APRON POLE LIGHT	2.40	20/1	CB			X	-------	---	4.02	-------PANEL 4E VIA ATS	42

Rev:
Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	151.16	157.98	148.39

* Circuit Breaker Code
G = GFCI | H = HID Rated
S = Shunt Trip | C = HACR Rated
D = Switching Duty | # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	214.89	x 100%	214.89	258	x 100%	258
Lighting	11.06	x 100%	11.06	13	x 125%	17
Mech	223.56	x 100%	223.56	269	125% of Largest	301
Recept	8.02	10 KVA @ 100%, rest @ 50%	8.02	10	x 100%	10
	457.53	550 Amps	457.53	550		586

Sparling | Panel
Name: PANEL 2A | 120/208V | 3 PH | 4W | 500A Main CB | Type: Panelboard
Location: LOX ELECTRICAL RM 102B | Surface Mounted | 10,000 AIC
Serves: | Feed Thru Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Recept OFFICE - DESK	0.54	20/1	CB	X			20/1	CB	0.36	Recept NITROGEN RM WORKBENCH	2
3	Recept OFFICE - DESK	0.54	20/1	CB		X		20/1	CB	0.36	Recept NITROGEN RM	4
5	Recept OFFICE PRINTER	1.00	20/1	CB			X	20/1	CB	0.36	Recept OXYGEN RM WORKBENCH	6
7	Recept OFFICE - MICRO FRIDGE	0.90	20/1	CB	X			20/1	CB	0.36	Recept OXYGEN RM	8
9	Recept RMS 101,102A	0.54	20/1	CB		X		20/2	C	1.25	Mech HP-1	10
11	Recept RM 102B - ELECTRICAL	0.18	20/1	CB			X	-------	---	1.25	-------HP-1	12
13	Mech EUH-1	1.30	20/2	C	X			20/1	CB	0.54	Recept EXTERIOR	14
15	-------EUH-1	1.30	-------	---		X		20/1	CB	0.54	Recept MAINTENANCE RM NORTH	16
17	Spare	0.00	20/1	CB			X	20/1	CB	0.54	Recept MAINTENANCE RM	18
19	Mech AHU-2	2.40	25/2	C	X			20/1	CB	0.54	Recept MAINTENANCE RM SOUTH WORKBENCH	20
21	-------AHU-2	2.40	-------	---		X		90/2	C	7.50	Mech WH-1	22
23	Mech GFP-1	0.67	20/1	C			X	-------	---	7.50	-------WH-1	24
25	Mech EF-2	0.51	20/1	C	X			45/2	C	3.54	Mech HP-2	26
27	Recept RM 106 - MECHANICAL	0.18	20/1	CB		X		-------	---	3.54	-------HP-2	28
29	Equip ICS	1.73	20/1	CB			X	20/2	C	1.25	Mech HP-3	30
31	Mech AC-1	4.15	50/2	C	X			-------	---	1.25	-------HP-3	32
33	-------AC-1	4.15	-------	---		X		20/1	CB	1.73	Equip DUPLEX PUMP CONTROL PANEL	34
35	Equip IAU	0.50	20/1	CB			X	60/2	C	5.50	Mech AHU-1(1)	36
37	Spare	0.00	20/1	CB	X			-------	---	5.50	-------AHU-1(1)	38
39	Mech EF-1	0.51	20/1	C		X		20/1	CB	0.00	Spare	40
41	Lighting RM 101 - OFFICE UNDERCABINET	0.10	20/1	CB			X	20/1	CB	0.00	Spare	42

Rev:
Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	21.88	24.53	20.57

* Circuit Breaker Code
G = GFCI | H = HID Rated
S = Shunt Trip | C = HACR Rated
D = Switching Duty | # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	52.66	x 100%	52.66	146	x 100%	146
Lighting	0.10	x 100%	0.10	0	x 125%	0
Mech	68.97	x 100%	68.97	191	125% of Largest	202
Recept	7.48	10 KVA @ 100%, rest @ 50%	7.48	21	x 100%	21
	129.21	359 Amps	129.21	359		369

Sparling | Panel
Name: PANEL 4E | 277/480V | 3 PH | 4W | 60A | Main lugs only | Type: Panelboard
Location: LOX ELECTRICAL RM 102B | Surface Mounted | 25,000 AIC
Serves: | Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Panel PANEL 2E VIA XFMR 2E	5.09	45/3	CB	X			0/1		0.00	Space	2
3	-------PANEL 2E VIA XFMR 2E	4.55	-------	---		X		0/1		0.00	Space	4
5	-------PANEL 2E VIA XFMR 2E	3.92	-------	---			X	0/1		0.00	Space	6
7	Lighting EXTERIOR WALL PACKS	0.31	20/1	CB	X			0/1		0.00	Space	8
9	Lighting EXTERIOR-GATE/YARD LIGHTS	1.00	20/1	CB		X		0/1		0.00	Space	10
11	Spare	0.00	20/1	CB			X	0/1		0.00	Space	12
13	Spare	0.00	20/1	CB	X			0/1		0.00	Space	14
15	Spare	0.00	20/1	CB		X		0/1		0.00	Space	16
17	Spare	0.00	20/1	CB			X	0/1		0.00	Space	18
19	Spare	0.00	20/1	CB	X			0/1		0.00	Space	20
21	Spare	0.00	20/1	CB		X		0/1		0.00	Space	22
23	Spare	0.00	20/1	CB			X	0/1		0.00	Space	24
25	Space	0.00	0/1		X			0/1		0.00	Space	26
27	Space	0.00	0/1			X		0/1		0.00	Space	28
29	Space	0.00	0/1				X	0/1		0.00	Space	30
31	Space	0.00	0/1		X			0/1		0.00	Space	32
33	Space	0.00	0/1			X		0/1		0.00	Space	34
35	Space	0.00	0/1				X	0/1		0.00	Space	36
37	Space	0.00	0/1		X			60/3	CB	0.10	Equip SPD	38
39	Space	0.00	0/1			X		-------	---	0.10	-------SPD	40
41	Space	0.00	0/1				X	-------	---	0.10	-------SPD	42

Rev:
Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	5.50	5.65	4.02

* Circuit Breaker Code
G = GFCI | H = HID Rated
S = Shunt Trip | C = HACR Rated
D = Switching Duty | # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	5.93	x 100%	5.93	7	x 100%	7
Lighting	1.81	x 100%	1.81	2	x 125%	3
Mech	6.89	x 100%	6.89	8	125% of Largest	10
Recept	0.54	10 KVA @ 100%, rest @ 50%	0.54	1	x 100%	1
	15.17	18 Amps	15.17	18		21

Sparling | Panel
Name: PANEL 2B | 120/208V | 3 PH | 4W | 600A | Main lugs only | Type: Panelboard
Location: LOX ELECTRICAL RM 102B | Surface Mounted | 10,000 AIC
Serves: | Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Equip OXYGEN TANK	4.80	50/3	CB	X			50/3	CB	4.80	Equip NITROGEN TANK	2
3	-------OXYGEN TANK	4.80	-------	---		X		-------	---	4.80	-------NITROGEN TANK	4
5	-------OXYGEN TANK	4.80	-------	---			X	-------	---	4.80	-------NITROGEN TANK	6
7	Equip OXYGEN TANK	4.80	50/3	CB	X			20/2	CB	1.50	Equip GEN-SET JACKET HEATER	8
9	-------OXYGEN TANK	4.80	-------	---		X		-------	---	1.50	-------GEN-SET JACKET HEATER	10
11	-------OXYGEN TANK	4.80	-------	---			X	0/1	CB	1.20	Equip GEN-SET BATTERY CHARGER	12
13	Equip HEAT TRACE	0.18	20/1	G	X			20/1	CB	1.13	Equip VEHICLE GATE	14
15	Spare	0.00	20/1	CB		X		40/2	C	4.47	Mech AHU-1(2)	16
17	Spare	0.00	20/1	CB			X	-------	---	4.47	-------AHU-1(2)	18
19	Spare	0.00	20/1	CB	X			25/2	C	2.29	Mech AHU-1(3)	20
21	Spare	0.00	20/1	CB		X		-------	---	2.29	-------AHU-1(3)	22
23	Spare	0.00	20/1	CB			X	20/1	CB	0.00	Spare	24
25	Space	0.00	0/1		X			0/1		0.00	Space	26
27	Space	0.00	0/1			X		0/1		0.00	Space	28
29	Space	0.00	0/1				X	0/1		0.00	Space	30
31	Space	0.00	0/1		X			0/1		0.00	Space	32
33	Space	0.00	0/1			X		0/1		0.00	Space	34
35	Space	0.00	0/1				X	0/1		0.00	Space	36
37	Space	0.00	0/1		X			0/1		0.00	Space	38
39	Space	0.00	0/1			X		0/1		0.00	Space	40
41	Space	0.00	0/1				X	0/1		0.00	Space	42

Rev:
Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	19.50	22.66	20.07

* Circuit Breaker Code
G = GFCI | H = HID Rated
S = Shunt Trip | C = HACR Rated
D = Switching Duty | # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	48.71	x 100%	48.71	135	x 100%	135
Mech	13.52	x 100%	13.52	38	125% of Largest	44
	62.23	173 Amps	62.23	173		179

PANEL KEY

PANEL 4A	PANEL 2A
PANEL 4E	PANEL 2B

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DES KMD | DRW AM | CHK GLL
<<PM/DM>> JOSEPH KISIDAY
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CHIEF ENG/ARCH
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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
LOX PANEL SCHEDULES

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030545
SHEET 291 OF 302
E-711
DRAWFORM REVISION: 10 MARCH 2009

Sparling — Panel

Name: PANEL 2E — 120/208V — 3 PH — 4W — 100A Main CB — Type: Panelboard

Location: LOX RM 102B - ELECTRICAL — Surface Mounted — 10,000 AIC

Serves: — Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Recept NMCI	0.36	20/1	CB	X			20/1	CB	0.00	Spare	2
3	Equip SECURITY CABINET	0.50	20/1	CB		X		20/1	CB	0.00	Spare	4
5	Equip SECURITY CABINET	0.50	20/1	CB			X	20/1	CB	0.00	Spare	6
7	Equip PA SYSTEM	1.00	20/1	CB	X			20/1	CB	0.00	Spare	8
9	Spare	0.00	20/1	CB		X		20/1	CB	0.00	Spare	10
11	Spare	0.00	20/1	CB			X	20/1	CB	0.00	Spare	12
13	Space	0.00	0/1			X		0/1		0.00	Space	14
15	Space	0.00	0/1				X	0/1		0.00	Space	16
17	Space	0.00	0/1				X	0/1		0.00	Space	18
19	Space	0.00	0/1			X		0/1		0.00	Space	20
21	Space	0.00	0/1				X	0/1		0.00	Space	22
23	Space	0.00	0/1				X	0/1		0.00	Space	24
25	Space	0.00	0/1			X		0/1		0.00	Space	26
27	Space	0.00	0/1				X	0/1		0.00	Space	28
29	Space	0.00	0/1				X	0/1		0.00	Space	30
31	Space	0.00	0/1			X		0/1		0.00	Space	32
33	Space	0.00	0/1				X	0/1		0.00	Space	34
35	Space	0.00	0/1				X	0/1		0.00	Space	36
37	Space	0.00	0/1			X		40/3	CB	3.73	Panel PANEL 6B-4	38
39	Space	0.00	0/1			X		-------	---	4.05	-------PANEL 6B-4	40
41	Space	0.00	0/1				X	-------	---	3.42	-------PANEL 6B-4	42

Rev:		PH A	PH B	PH C
Revised Ckts Marked * Existing Ckts Marked #	Connected KVA	5.09	4.55	3.92

* Circuit Breaker Code
G = GFCI — H = HID Rated
S = Shunt Trip — C = HACR Rated
D = Switching Duty — # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	5.63	x 100%	5.63	16	x 100%	16
Lighting	0.50	x 100%	0.50	1	x 125%	2
Mech	6.89	x 100%	6.89	19	125% of Largest	23
Recept	0.54	10 KVA @ 100%, rest @ 50%	0.54	1	x 100%	1
	13.56	38 Amps	13.56	38		42

Sparling — Panel

Name: PANEL 6B-4 — 120/208V — 3 PH — 4W — 40A Main lugs only — Type: Panelboard

Location: SE ENTRY CONTROL POINT — Surface Mounted — 10,000 AIC

Serves: — Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Spare	0.00	15/1	CB	X			20/1	CB	0.50	Equip HPU CTRL	2
3	Mech SUMP PUMP	1.13	20/1	CB		X		20/1	CB	1.00	Equip TURN STYLE	4
5	Lighting FLOOD LIGHT	0.50	15/1	CB			X	20/1	CB	1.00	Equip COMM POWER	6
7	Mech HPU	1.92	20/3	CB	X			20/3	CB	0.00	Spare	8
9	-------HPU	1.92	-------	---		X		-------	---	0.00	-------	10
11	-------HPU	1.92	-------	---			X	-------	---	0.00	-------	12
13	Recept IN CABINET	0.18	20/1	CB	X			20/1	CB	1.13	Equip GATE MOTOR	14
15	Space	0.00	0/1			X		0/1		0.00	Space	16
17	Space	0.00	0/1				X	0/1		0.00	Space	18
19	Space	0.00	0/1		X			0/1		0.00	Space	20
21	Space	0.00	0/1			X		0/1		0.00	Space	22
23	Space	0.00	0/1				X	0/1		0.00	Space	24
25	Space	0.00	0/1		X			0/1		0.00	Space	26
27	Space	0.00	0/1			X		0/1		0.00	Space	28
29	Space	0.00	0/1				X	0/1		0.00	Space	30

Rev:		PH A	PH B	PH C
Revised Ckts Marked * Existing Ckts Marked #	Connected KVA	3.73	4.05	3.42

* Circuit Breaker Code
G = GFCI — H = HID Rated
S = Shunt Trip — C = HACR Rated
D = Switching Duty — # = See Note
A = AFCI

Notes: EXISTING PANEL

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	3.63	x 100%	3.63	10	x 100%	10
Lighting	0.50	x 100%	0.50	1	x 125%	2
Mech	6.89	x 100%	6.89	19	125% of Largest	23
Recept	0.18	10 KVA @ 100%, rest @ 50%	0.18	0	x 100%	0
	11.20	31 Amps	11.20	31		35

PANEL KEY	
PANEL 2E	PANEL 6B-4

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY: NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

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NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

LOX PANEL SCHEDULES

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030546

SHEET 292 OF 302

E-712

DRAWFORM REVISION: 10 MARCH 2009

Sparling — Panel

Name: PANEL 4A — 277/480V — 3 PH — 4W — 400A — Main CB — Type: Panelboard

Location: SONOBOUY MECH/ELEC RM 104 — Surface Mounted — 14,000 AIC

Serves: — Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Lighting RM 102 - SONOBOUY STORAGE	3.27	20/1	CB	X			150/3		16.27	Panel PANEL 2A VIA XFMR 2A	2
3	Lighting RM 103 - SONOBOUY ISSSUE	2.08	20/1	CB		X		-------	---	18.74	-------PANEL 2A VIA XFMR 2A	4
5	Lighting EXTERIOR/COVERED LOADING	0.91	20/1	CB			X	-------	---	11.74	-------PANEL 2A VIA XFMR 2A	6
7	Lighting RMS 101,101A,101B,104	0.67	20/1	CB	X			20/3	C	1.22	Mech SEP-2	8
9	Spare	0.00	20/1	CB		X		-------	---	1.22	-------SEP-2	10
11	Spare	0.00	20/1	CB			X	-------	---	1.22	-------SEP-2	12
13	Mech WH-5	12.00	60/3	CB	X			175/3	C	36.00	Mech WH-7	14
15	-------WH-5	12.00	-------	---		X		-------	---	36.00	-------WH-7	16
17	-------WH-5	12.00	-------	---			X	-------	---	36.00	-------WH-7	18
19	Spare	0.00	30/3	CB	X			30/3	CB	0.00	Spare	20
21	-------	0.00	-------	---		X		-------	---	0.00	-------	22
23	-------	0.00	-------	---			X	-------	---	0.00	-------	24
25	Spare	0.00	20/1	CB	X			20/1	CB	0.00	Spare	26
27	Spare	0.00	20/1	CB		X		20/1	CB	0.00	Spare	28
29	Spare	0.00	20/1	CB			X	20/1	CB	0.00	Spare	30
31	Space	0.00	0/1		X			0/1		0.00	Space	32
33	Space	0.00	0/1			X		0/1		0.00	Space	34
35	Space	0.00	0/1				X	0/1		0.00	Space	36
37	Space	0.00	0/1		X			60/3	CB	0.10	Equip SPD	38
39	Space	0.00	0/1			X		-------	---	0.10	-------SPD	40
41	Space	0.00	0/1				X	-------	---	0.10	-------SPD	42

Rev:

Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	69.53	70.14	61.96

* Circuit Breaker Code

G = GFCI — H = HID Rated
S = Shunt Trip — C = HACR Rated
D = Switching Duty — # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	15.65	x 100%	15.65	19	x 100%	19
Lighting	7.01	x 100%	7.01	8	x 125%	11
Mech	172.93	x 100%	172.93	208	125% of Largest	240
Recept	6.04	10 KVA @ 100%, rest @ 50%	6.04	7	x 100%	7
	201.63	243 Amps	201.63	243		277

Sparling — Panel

Name: PANEL 2A — 120/208V — 3 PH — 4W — 225A — Main CB — Type: Panelboard

Location: SONOBOUY MECH/ELEC RM 104 — Surface Mounted — 10,000 AIC

Serves: — Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Mech SF-2	0.67	20/1	C	X			20/1	CB	0.54	Recept RM 103 - SONOBOUY ISSUE NORTH	2
3	Recept SONOBOUY STORAGE RM 102	0.90	20/1	CB		X		20/1	C	1.59	Mech RH-2	4
5	Equip MICRO-FRIDGE	0.90	20/1	CB			X	20/1	CB	0.54	Recept RM 103 - SONOBOUY ISSUE SOUTH	6
7	Mech WH-6	9.00	100/2	CB	X			20/1	C	0.67	Mech SF-1	8
9	-------WH-6	9.00	-------	---		X		20/1	CB	0.50	Equip FACP	10
11	Recept OFFICE	0.72	20/1	CB			X	20/1	CB	1.73	Equip ICS	12
13	Recept OFFICE - DESKS	0.72	20/1	CB	X			20/1	C	0.67	Mech GFP-1 AND RADIANT HEAT CTRL PNL	14
15	Recept OFFICE - PRINTER	1.00	20/1	CB		X		20/1	C	0.10	Mech UH-1	16
17	Mech B-1	2.30	25/1	C			X	20/1	G	0.18	Equip HEAT TRACE	18
19	Mech BCP-1	0.10	20/1	C	X			20/1	CB	0.00	Spare	20
21	Mech HWP-1	0.51	20/1	C		X		20/1	CB	0.18	Recept RM 101A - RESTROOM	22
23	Mech EF-3	0.67	20/1	C			X	20/1	CB	0.10	Lighting RM 101 - OFFICE UNDERCABINET	24
25	Recept RM 101B - JANITOR	0.18	20/1	CB	X			30/3	CB	2.88	Equip FORKLIFT CHARGER	26
27	Equip DUPLEX PUMP CONTROL PANEL	1.73	20/1	CB		X		-------	---	2.88	-------FORKLIFT CHARGER	28
29	Recept EXTERIOR	0.72	20/1	CB			X	-------	---	2.88	-------FORKLIFT CHARGER	30
31	Recept RM 104 - ELECTRICAL	0.18	20/1	CB	X			15/1	CB	0.67	Equip DRY SPRINKLER AIR COMPRESSOR	32
33	Recept RM 104 - ELECTRICAL	0.36	20/1	CB		X		20/1	CB	0.00	Spare	34
35	Equip RM 104 - NMCI CABINET	1.00	20/1	CB			X	20/1	CB	0.00	Spare	36
37	Spare	0.00	20/1	CB	X			20/1	CB	0.00	Spare	38
39	Spare	0.00	20/1	CB		X		20/1	CB	0.00	Spare	40
41	Spare	0.00	20/1	CB			X	20/1	CB	0.00	Spare	42

Rev:

Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	16.27	18.74	11.74

* Circuit Breaker Code

G = GFCI — H = HID Rated
S = Shunt Trip — C = HACR Rated
D = Switching Duty — # = See Note
A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amps	NEC Feed %	NEC Feed Amps
Equip	15.35	x 100%	15.35	43	x 100%	43
Lighting	0.10	x 100%	0.10	0	x 125%	0
Mech	25.26	x 100%	25.26	70	125% of Largest	83
Recept	6.04	10 KVA @ 100%, rest @ 50%	6.04	17	x 100%	17
	46.75	130 Amps	46.75	130		142

PANEL KEY	
PANEL 4A	PANEL 2A

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY: NAS WHIDBEY ISLAND

SATISFACTORY TO — DATE

DES KMD | DRW AM | CHK GLL

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NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND — OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

SONOBOUY/ISSUE/STORAGE FACILITY — PANEL SCHEDULES

SCALE: AS NOTED

EPROJECT NO.:

CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030547

SHEET 293 OF 302

E-721

DRAWFORM REVISION: 10 MARCH 2009

Sparling — Panel

Name: PANEL 4A — 277/480V — 3 PH — 4W — 150A — Main CB — Type: Panelboard

Location: RINSE RACK — Surface Mounted — 14,000 AIC

Serves: — Single Lugs

#	Description	Load	CB	*	A	B	C	CB	*	Load	Description	#
1	Lighting EAST APRON POLE LIGHTS	2.40	20/3	CB	X			100/3	CB	18.07	Motors VTP-1	2
3	-------EAST APRON POLE LIGHTS	2.40	-------	---		X		-------	---	18.07	-------VTP-1	4
5	-------EAST APRON POLE LIGHTS	2.40	-------	---			X	-------	---	18.07	-------VTP-1	6
7	Panel PANEL 2A	3.05	30/2		X			20/1	CB	0.25	Lighting LTG	8
9	-------PANEL 2A	2.48	-------	---		X		20/1	CB	0.00	Spare	10
11	Spare	0.00	20/1	CB			X	20/1	CB	0.00	Spare	12
13	Spare	0.00	20/1	CB	X			20/1	CB	0.00	Spare	14
15	Space	0.00	0/1			X		0/1		0.00	Space	16
17	Space	0.00	0/1				X	0/1		0.00	Space	18
19	Space	0.00	0/1		X			0/1		0.00	Space	20
21	Space	0.00	0/1			X		0/1		0.00	Space	22
23	Space	0.00	0/1				X	0/1		0.00	Space	24
25	Space	0.00	0/1		X			0/1		0.00	Space	26
27	Space	0.00	0/1			X		0/1		0.00	Space	28
29	Space	0.00	0/1				X	0/1		0.00	Space	30

Rev:

Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B	PH C
Connected KVA	23.77	22.95	20.47

* Circuit Breaker Code

G = GFCI — H = HID Rated

S = Shunt Trip — C = HACR Rated

D = Switching Duty — # = See Note

A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amp	NEC Feed %	NEC Feed Amps
Equip	2.75	x 100%	2.75	3	x 100%	3
Lighting	7.45	x 100%	7.45	9	x 125%	11
Mech	2.60	x 100%	2.60	3	125% of Largest	4
Motors	54.20	x 100%	54.20	65	125% of Largest	81
Recept	0.18	10 KVA @ 100%, rest @ 50%	0.18	0	x 100%	0
	67.18	81 Amps	67.18	81		100

Sparling — Panel

Name: PANEL 2A — 120/240V — 1 PH — 3W — 60A — Main CB — Type: Panelboard

Location: RINSE RACK — Surface Mounted — 10,000 AIC

Serves: — Single Lugs

#	Description	Load	CB	*	A	B	CB		Load	Description	#
1	Equip BACKFLOW PREVENTER ENCLOSURE	0.50	20/1	CB	X		20/1	CB	0.50	Equip DDC CAB NET	2
3	Mech Equip-2	1.30	20/1	CB		X	20/1	CB	0.18	Recept	4
5	-------Equip-2	1.30	-------	---	X		15/1	CB	0.50	Equip Cv-RF-1	6
7	Spare	0.00	20/1	CB		X	15/1	CB	0.50	Equip Cv-RF-2	8
9	Spare	0.00	20/1	CB	X		0/1		0.00	Space	10
11	Spare	0.00	20/1	CB		X	0/1		0.00	Space	12

Rev:

Revised Ckts Marked * Existing Ckts Marked #

	PH A	PH B
Connected KVA	2.80	1.98

* Circuit Breaker Code

G = GFCI — H = HID Rated

S = Shunt Trip — C = HACR Rated

D = Switching Duty — # = See Note

A = AFCI

Notes:

Load Type	Conn KVA	NEC Demand Factor	Dem. KVA	Dem. Amp	NEC Feed %	NEC Feed Amps
Equip	2.00	x 100%	2.00	8	x 100%	8
Mech	2.60	x 100%	2.60	11	125% of Largest	14
Recept	0.18	10 KVA @ 100%, rest @ 50%	0.18	1	x 100%	1
	4.78	20 Amps	4.78	20		23

PANEL KEY	
PANEL 4A	PANEL 2A

#	DATE	DESCRIPTION	STM	APPR

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ACTIVITY: NAS WHIDBEY ISLAND

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NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

RINSE RACK PANEL SCHEDULES

SCALE: AS NOTED

EPROJECT NO.:

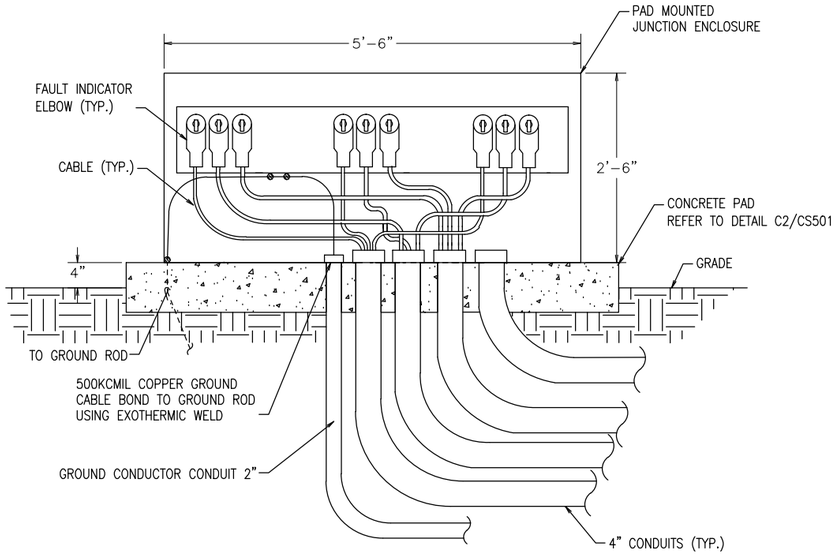
CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030548

SHEET 294 OF 302

E-741

DRAWFORM REVISION: 10 MARCH 2009



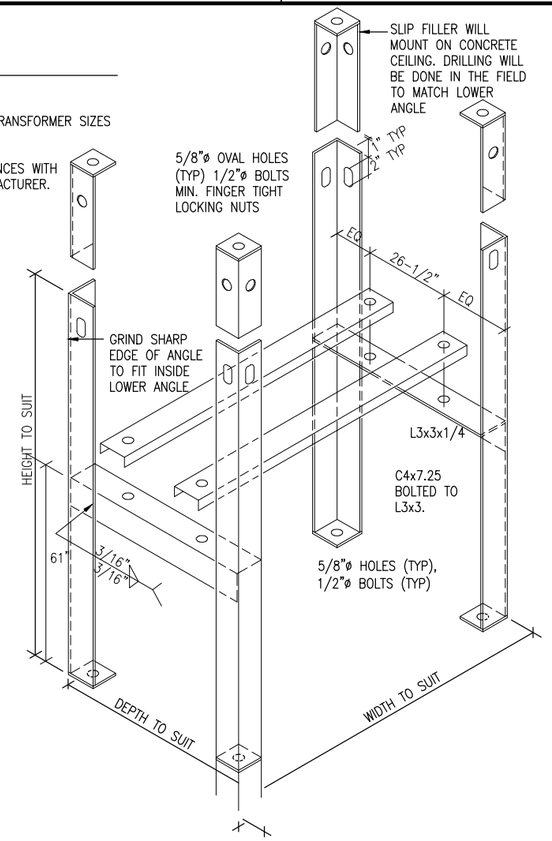
PAD MOUNTED JUNCTION ENCLOSURE SECTION DETAIL (C1)

SCALE: 1"=1'-0" ES101, ES103, ES109, E-611, E-621, E-641

0 0.5 1 2 3
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

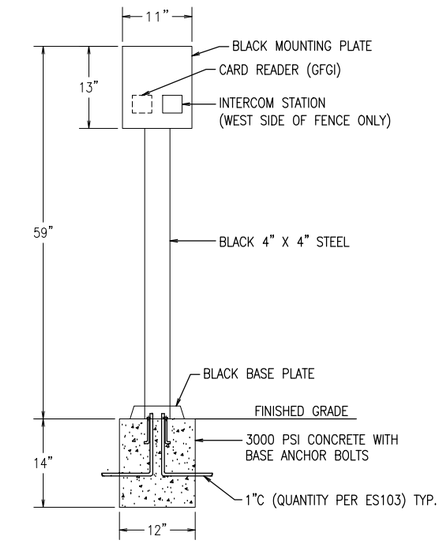
DETAIL NOTES:

1. ALL BOLTS A307.
2. DESIGNED FOR K13 TRANSFORMER SIZES UP TO 150 KVA.
3. CONFIRM ALL CLEARANCES WITH TRANSFORMER MANUFACTURER.



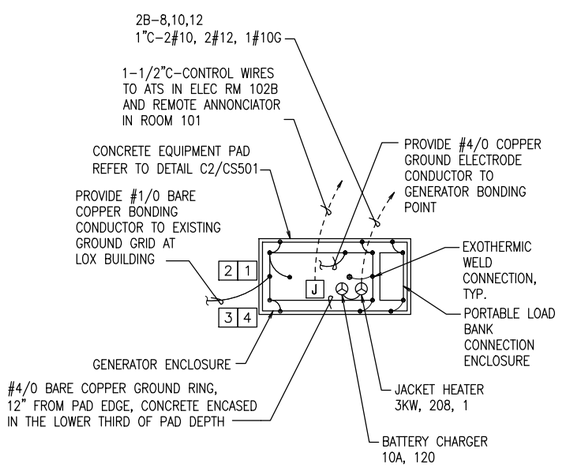
TRANSFORMER SUPPORT DETAIL (C3)

NTS E-111



GATE PEDESTAL DETAIL (C4)

NTS ES103



GENERATOR PAD (A1)

1/4"=1'-0" ES103

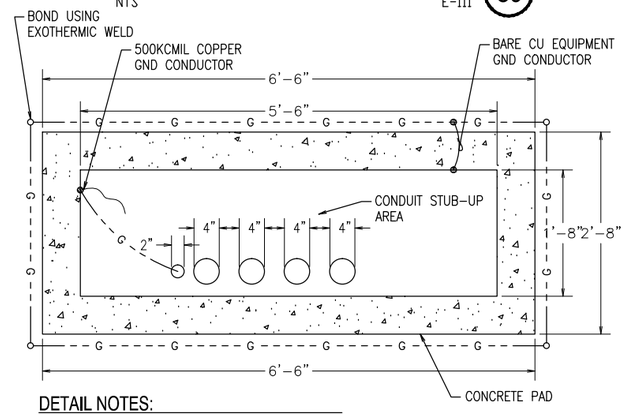
0 2 4 8 12
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

GENERAL NOTES:

1. COORDINATE ELECTRICAL REQUIREMENTS FOR GENERATOR FOUNDATION PAD WITH CIVIL AND STRUCTURAL DRAWINGS.

KEY NOTES:

1. PROVIDE #4/0 BARE COPPER BONDING CONDUCTOR, TERMINAL LUGS, AND EXOTHERMIC WELD CONNECTIONS. BOND GENERATOR SKID FRAME TO GROUND RING WITH COMPRESSION LUG TERMINALS BOLTED TO SKID FRAME, BOND CONDUCTOR TO GROUND RING WITH EXOTHERMIC WELD CONNECTIONS. TYPICAL (4) PLACES.
2. PROVIDE #2 BARE COPPER CONDUCTOR, BOND TO STEEL REINFORCEMENT IN CONCRETE EQUIPMENT PAD AND TO GROUND RING, TYPICAL (2) PLACES.
3. COORDINATE EQUIPMENT PAD EXACT DIMENSIONS AND ANCHORING REQUIREMENTS WITH EQUIPMENT PROVIDERS AND STRUCTURAL ENGINEER.
4. COORDINATE CONDUIT ROUTING AND STUB-UPS WITH PAD DESIGN.



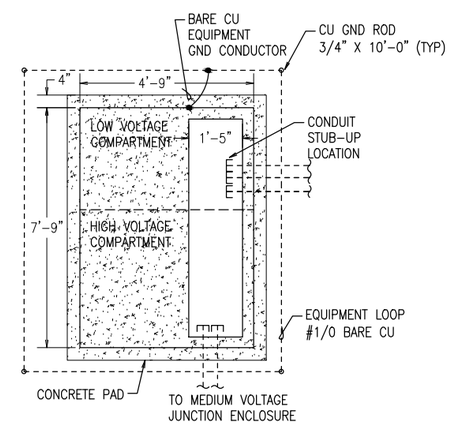
DETAIL NOTES:

1. PROVIDE JUNCTION ENCLOSURE CONCRETE PAD TO MATCH ENCLOSURE PROVIDED.
2. REFER TO DETAIL C2/CS501.

JUNCTION ENCLOSURE CONCRETE PAD DETAIL (A3)

SCALE: 1"=1'-0" ES109

0 0.5 1 2 3
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.



DETAIL NOTES:

1. CONCRETE PAD SIZE BASED ON TYPICAL 500KVA TRANSFORMER. CONTRACTOR PROVIDE PAD BASED ON ACTUAL TRANSFORMER PROVIDED.
2. REFER TO DETAIL C2/CS501.

ENLARGED PAD MOUNT XFMR PLAN (A5)

SCALE: 1/2"=1'-0" ES101, ES103, ES109

0 1 2 4 6
1 inch plotted — Feet
If measurement is other than 1 inch then the plot is reduced.

SYM	DESCRIPTION	DATE	APPR

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<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
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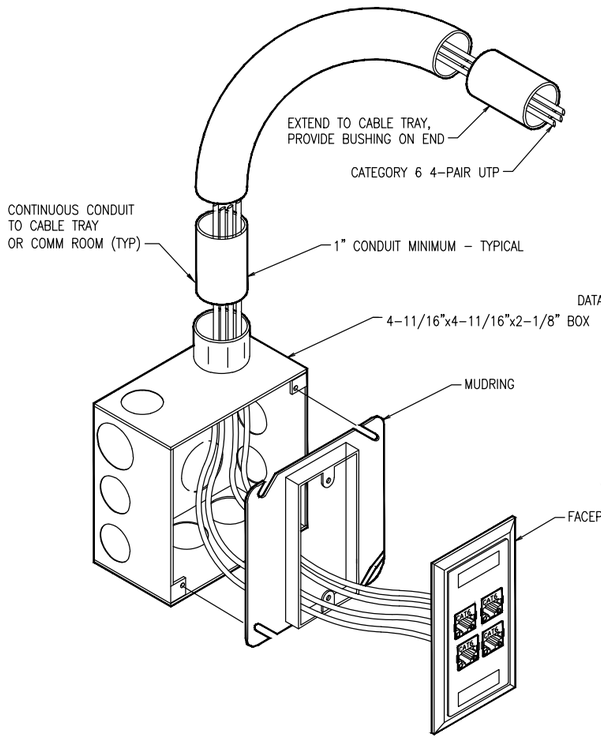
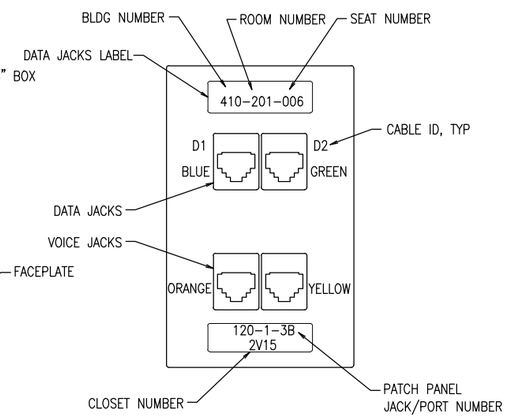
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
DETAILS

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030549
SHEET 295 OF 302
E-811
DRAWFORM REVISION: 10 MARCH 2009



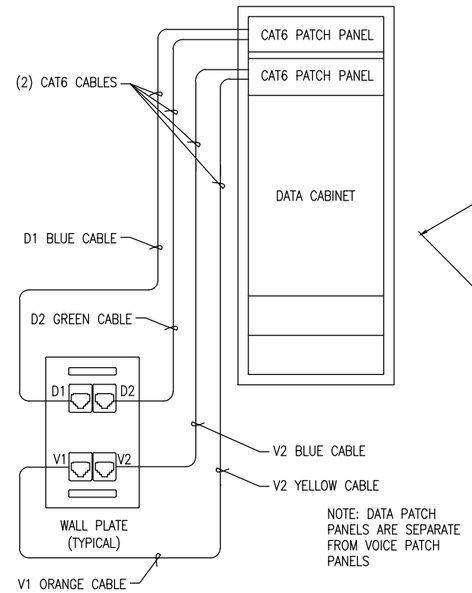
COMM OUTLET & J-BOX DETAIL (TYPICAL) C1

NTS E-311, E-321



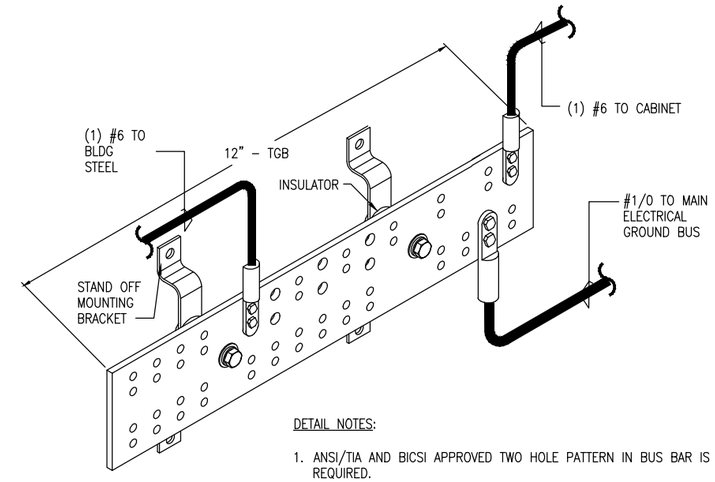
COMM OUTLET - CABLING SCHEME (TYP.) C3

NTS E-311, E-321



COMM OUTLET - V/D UNCLASSIFIED (TYP.) C4

NTS



DETAIL NOTES:

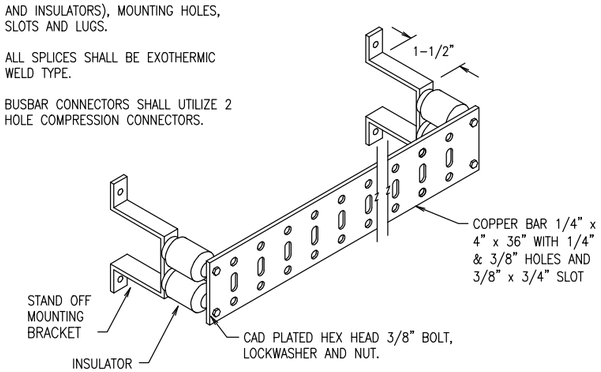
1. ANSI/TIA AND BICSI APPROVED TWO HOLE PATTERN IN BUS BAR IS REQUIRED.
2. PROVIDE TWO HOLE, IRREVERSIBLE, COMPRESSION TYPE LUGS ONLY.
3. REFER TO TELECOMMUNICATION PLANS FOR EXACT LOCATIONS.
4. SIZING OF THE TGB SHALL BE PER ANSI J-STD-607-A.
5. ALL BONDING CONDUCTORS SHALL BE CONTINUOUS AND ROUTED IN THE SHORTEST POSSIBLE STRAIGHT LINE PATH TO THE TMGB/TGB.

TELECOM GROUND BAR (TMGB/TGB) C5

NTS E-311, E-321

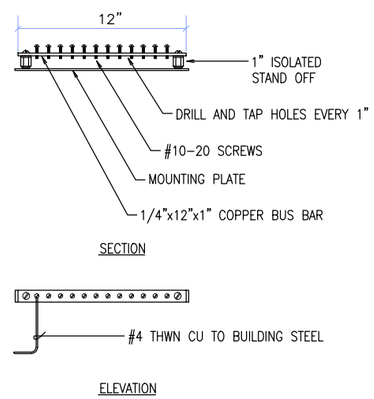
DETAIL NOTES:

1. PROVIDE COMPLETE WITH APPROPRIATE MOUNTING HARDWARE (BOLTS, NUTS, LOCKWASHERS, STAND OFF BRACKETS AND INSULATORS), MOUNTING HOLES, SLOTS AND LUGS.
2. ALL SPLICES SHALL BE EXOTHERMIC WELD TYPE.
3. BUSBAR CONNECTORS SHALL UTILIZE 2 HOLE COMPRESSION CONNECTORS.



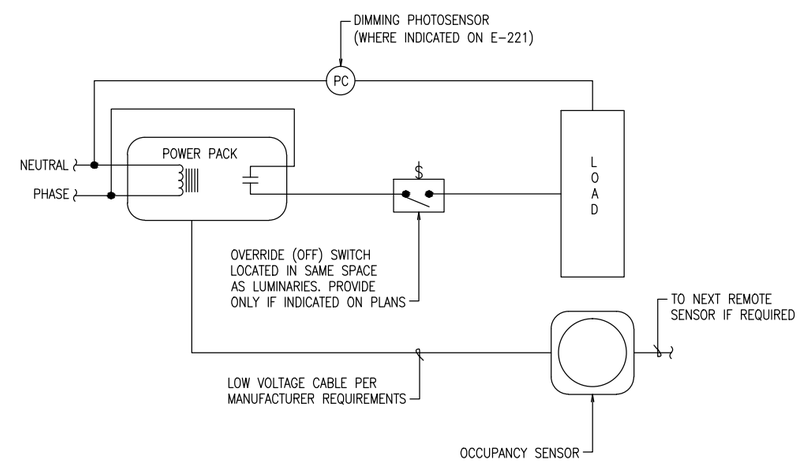
ELECTRICAL GROUND BUS A1

NTS E-111, E-121



ELECTRICAL STATIC DISCHARGE GROUND BUS A2

NTS E-111



OCCUPANCY SENSOR CONTROL DETAIL A4

NTS E-141, E-211, E-221

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DES	KMD	DRW	AM	CHK	GLL
<<PM/DM>>	JOSEPH KISIDAY				

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

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NAVAL FACILITIES ENGINEERING COMMAND
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
DETAILS

SCALE: AS NOTED

EPROJECT NO.:

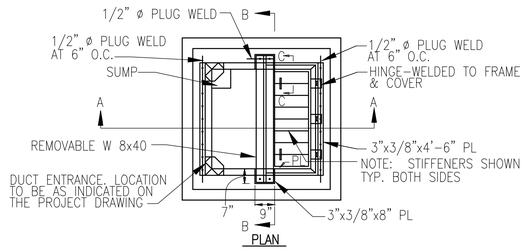
CONSTR. CONTR. NO.
N44255-15-C-6003

NAVFAC DRAWING NO.
16030550

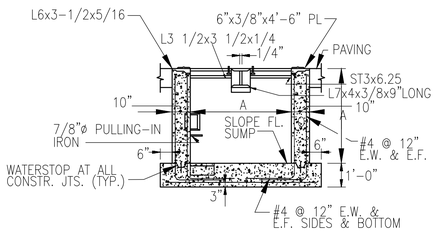
SHEET 296 OF 302

E-812

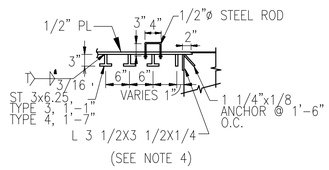
DRAWFORM REVISION: 10 MARCH 2009



PLAN



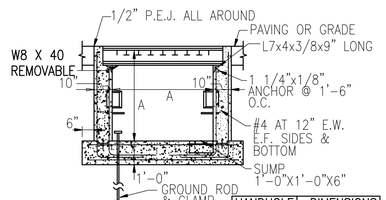
SECTION A-A



SECTION C-C

NOTES:

1. ENTRANCE OF DUCTS INTO HANDHOLE MAY BE MADE ON SIDE FACES OR CORNERS AS REQUIRED.
2. FOR DETAILS OF CABLE RACKS, DUCT ENTRANCE AND PULLING-IN IRONS, SEE PLATE UG-7.
3. HANDHOLE AND COVER IS DESIGNED FOR MAXIMUM SINGLE WHEEL LOAD OF 50,000 LB. OR DUAL WHEEL LOAD OF 90,000 LB.
4. COVER SHALL BE MADE OF STRUCTURAL STEEL CONFORMING TO ASTM A 36/A 36M.
5. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000 PSI.
6. COVER SHALL BE BOLTED SHUT.

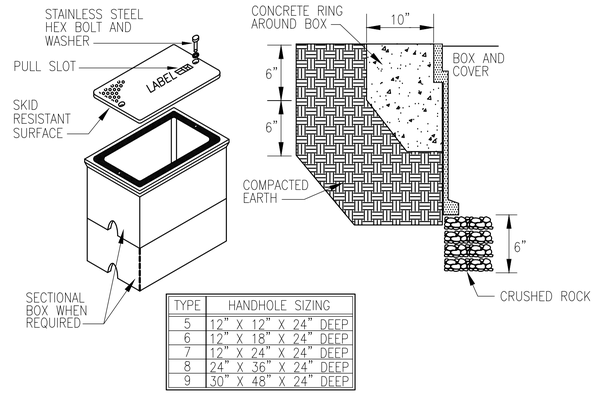


SECTION B-B

HANDHOLE TYPE	DIMENSIONS A
3	3'-0"
4	4'-0"

STANDARD ELECTRICAL MANHOLE (TRAFFIC/AIRFIELD) TYPES 3 & 4 (C1)

NTS ES101, ES107, ES117



TYPE	HANDHOLE SIZING
5	12" X 12" X 24" DEEP
6	12" X 18" X 24" DEEP
7	12" X 24" X 24" DEEP
8	24" X 36" X 24" DEEP
9	30" X 48" X 24" DEEP

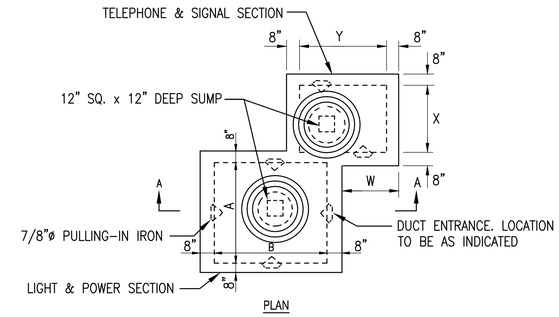
HANDHOLE REQUIREMENTS

1. HOUSING SHALL BE A POLYMER CONCRETE REINFORCED WITH A HEAVY WEAVE FIBERGLASS REINFORCING WITH COMPRESSIVE STRENGTH OF NO LESS THAN 10,000 PSI.
2. COVER AND BOX SHALL WITHSTAND A SERVICE LOAD OF NO LESS THAN 15,000 LBS OVER A 10" x 10" AREA.
3. PROVIDE STAINLESS STEEL BOLTS AND INSERTS.
4. PROVIDE WITH (2) 2 1/2" MOUSEHOLES.
5. PROVIDE LABEL "ELECTRICAL" FOR POWER HANDHOLES OR "COMM" FOR COMMUNICATION HANDHOLES, OR AS INDICATED.

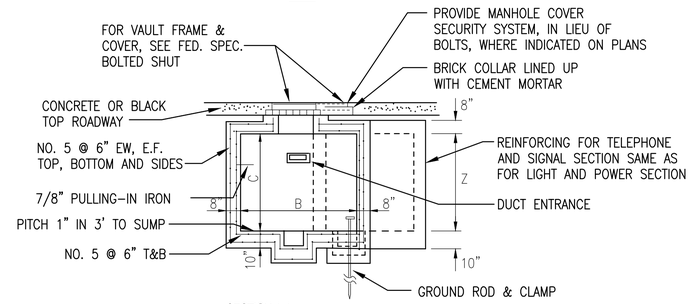
STANDARD ELECTRICAL HANDHOLE (NONTRAFFIC)
(COMPOSITE/FIBERGLASS) TYPES 5, 6, 7, 8 & 9

HANDHOLE (C3)

NTS ES101, ES103, ES105, ES107, ES109



PLAN



SECTION A-A

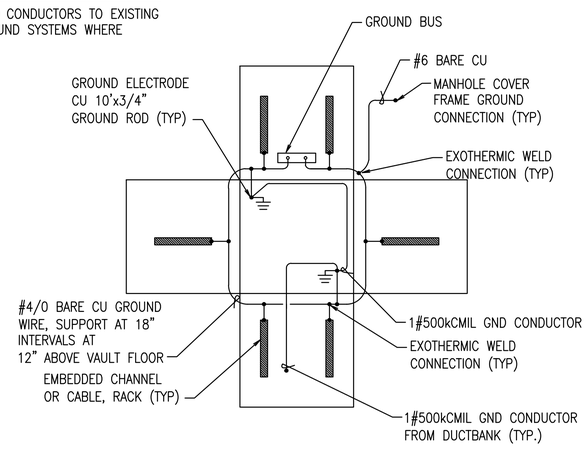
TYPE	VAULT DIMENSIONS						
	POWER SECTION			SIGNAL SECTION			
	A	B	C	W	X	Y	Z
3	6'-0"	6'-0"	6'-6"	3'-0"	4'-0"	4'-0"	6'-0"
4	6'-0"	6'-0"	6'-6"	4'-0"	5'-0"	6'-0"	6'-6"
5	6'-0"	8'-0"	6'-6"	3'-0"	4'-0"	4'-0"	6'-0"
6	6'-0"	8'-0"	6'-6"	4'-0"	5'-0"	6'-0"	6'-6"

STANDARD ELECTRICAL VAULTS (TRAFFIC) TYPES 3,4,5 AND 6 (C5)

NTS ES108, ES109, ES117, ES118, ES119

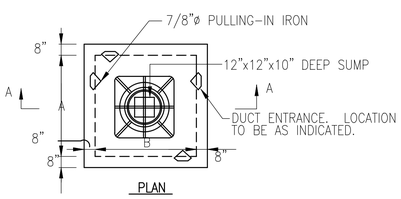
DETAIL NOTES:

1. BOND GROUND CONDUCTORS TO EXISTING MANHOLE GROUND SYSTEMS WHERE APPLICABLE.

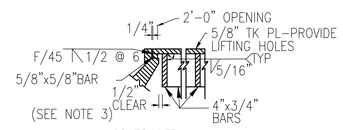


MANHOLE FOLDOUT - TYP. GROUNDING (A1)

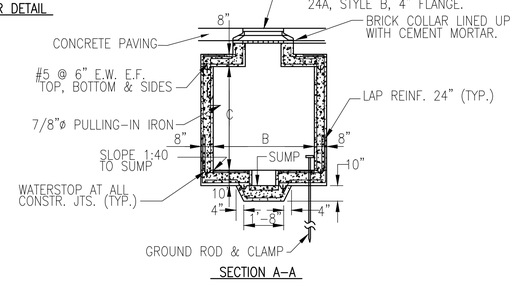
NTS



PLAN



COVER DETAIL



SECTION A-A

NOTES:

1. MANHOLE AND COVERS ARE DESIGNED FOR MAXIMUM WHEEL LOAD OF 50,000 LB OR DUAL WHEEL LOAD OF 90,000 LB.
2. FOR DETAILS OF CABLE RACKS, DUCT ENTRANCE AND PULLING-IN IRONS, SEE PLATE UG-7.
3. COVER SHALL BE MADE OF STRUCTURAL STEEL CONFORMING TO ASTM A 36/A 36M.
4. MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI.
5. COVER SHALL BE BOLTED SHUT.
6. PROVIDE MANHOLE COVER SECURITY SYSTEM, IN LIEU OF BOLTS, WHERE INDICATED ON PLANS.

MANHOLE DIMENSIONS			
TYPE	A	B	C(AT HIGH PT.)
5	6'-0"	6'-0"	6'-6"
6	6'-0"	8'-0"	6'-6"

STANDARD ELECTRICAL MANHOLE (AIRFIELD) TYPES 5 & 6 (A3)

NTS

SYM	DESCRIPTION	DATE	APPR

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<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
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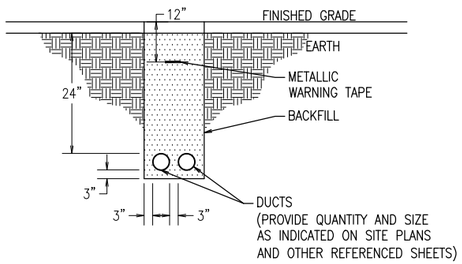
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A
DETAILS

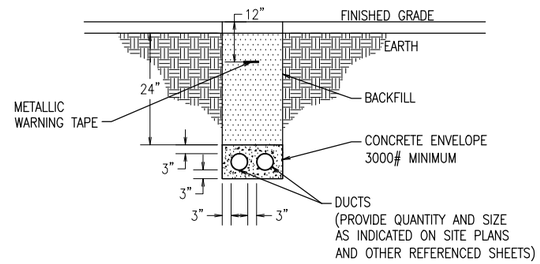
SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO. N44255-15-C-6003
NAVFAC DRAWING NO. 16030551
SHEET 297 OF 302
E-813

DRAWFORM REVISION: 10 MARCH 2009



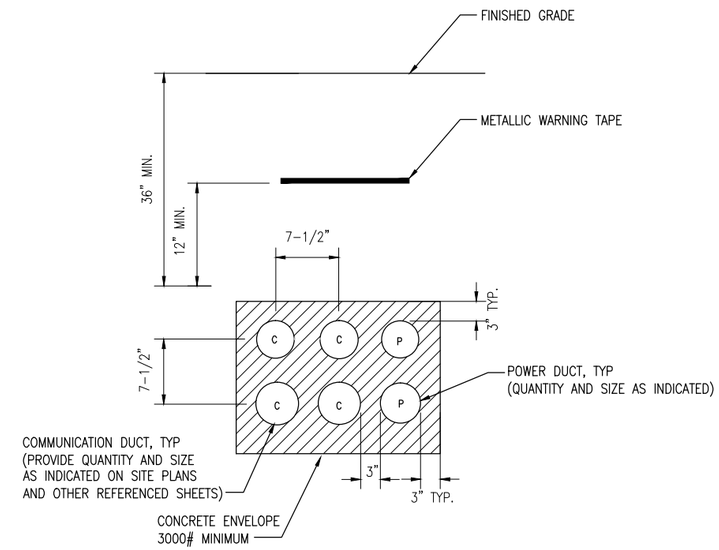
TYPICAL DIRECT BURIED RACEWAY DETAIL (C1)

NTS — ES103, ES109, ES111, ES117, ES118, ES119



TYPICAL CONCRETE ENCASED DUCTBANK DETAIL (C2)

NTS — ES101, ES103, ES105, ES107, ES109

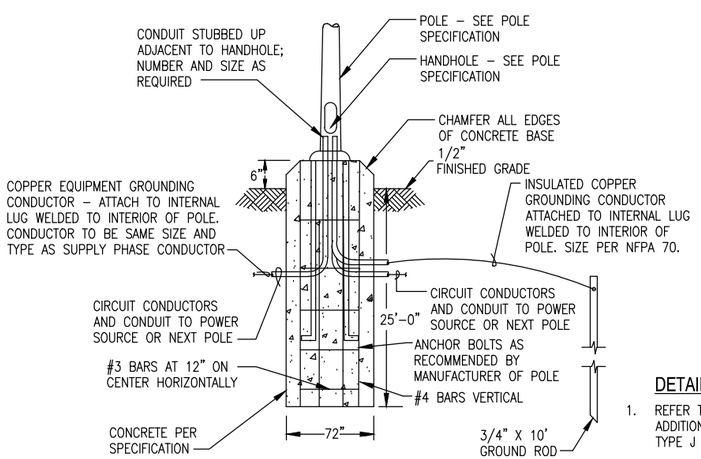


DETAIL NOTE:

1. MAINTAIN 3" MIN. SPACING BETWEEN POWER AND COMMUNICATION DUCTS.

TYPICAL CONCRETE ENCASED DUCT BANK DETAIL (C3)

NTS — ES101, ES103, ES107, ES108, ES109, ES117, ES118, ES119

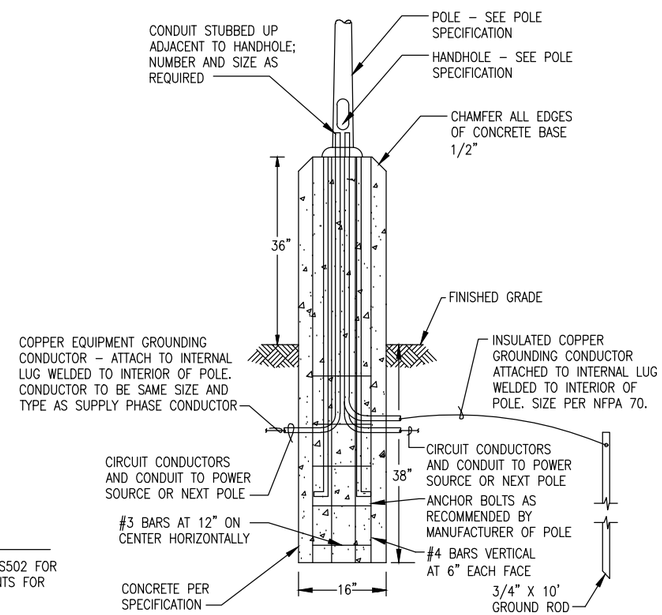


DETAIL NOTE:

1. REFER TO DETAIL C4/CS502 FOR ADDITIONAL REQUIREMENTS FOR TYPE J FIXTURES.

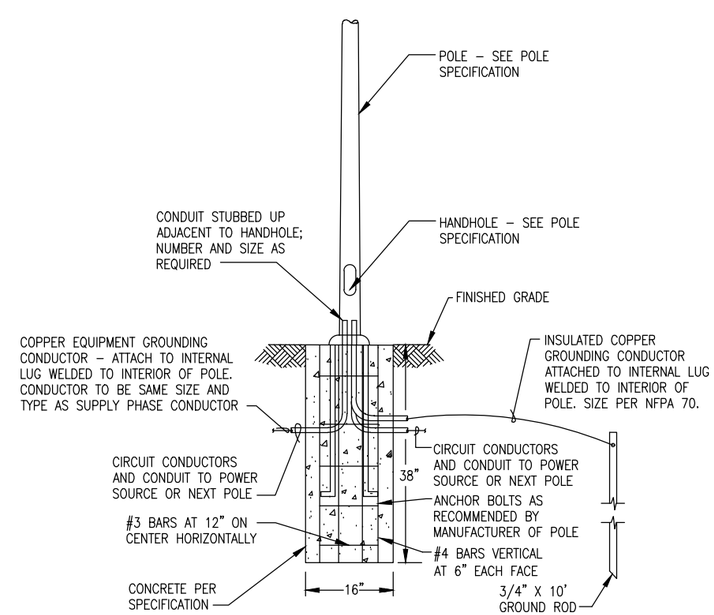
ANCHOR BASE POLE FOUNDATION (A1)

NTS — E-502



ANCHOR BASE POLE FOUNDATION (A2)

NTS — E-502



ANCHOR BASE POLE FOUNDATION (A4)

NTS — E-502

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BRANCH MANAGER

CHIEF ENG/ARCH

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DEPARTMENT OF THE NAVY
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NAVAL AIR STATION WHIDBEY ISLAND — AULT FIELD - OAK HARBOR, WA

NAVAL AIR STATION WHIDBEY ISLAND — OAK HARBOR, WA

FY-15 MCON PROJECT P-259 P-8A AIRCRAFT APRON EXPANSION - PART A

DETAILS

SCALE: AS NOTED

EPROJECT NO.:

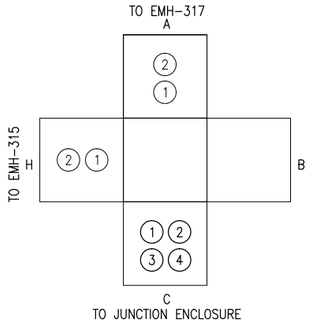
CONSTR. CONTR. NO. N44255-15-C-6003

NAVFAC DRAWING NO. 16030552

SHEET 298 OF 302

E-814

DRAWFORM REVISION: 10 MARCH 2009

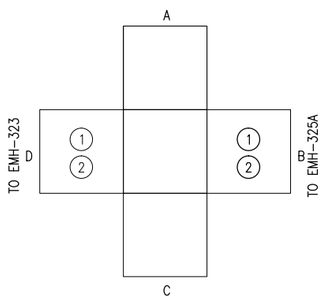


MANHOLE EMH-316 DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
A	1	4 (EXIST)	3#4/0 (15KV), 1#2BC G	EMH-317	FEEDER CU310-3
	2	4 (EXIST)		EMH-317	SPARE
C	1	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-3
	2	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-3
	3	4		JUNCTION	SPARE
	4	2	1#500KCMIL G	JUNCTION	DUCTBANK GROUND
D	1	4 (EXIST)	3#4/0 (15KV), 1#2BC G	EMH-315	FEEDER CU310-3
	2	4 (EXIST)		EMH-315	SPARE

MANHOLE FOLD-OUT - EMH-316

NTS ES101 D1

PLAN NORTH

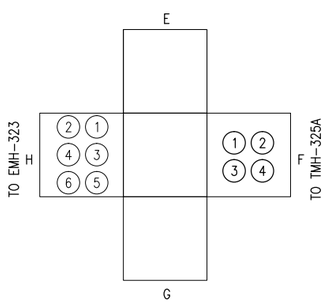


MANHOLE EMH-324A DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
B	1	4	3#4/0 (15KV), 1#2BC G	EMH-323	FEEDER CU310-1
	2	4			SPARE
D	1	4 (EXIST)	3#4/0 (15KV), 1#2BC G	EMH-325A	FEEDER CU310-1 (EXIST)
	2	4 (EXIST)			SPARE (EXIST)

MANHOLE FOLD-OUT - EMH-324A

NTS ES108 B1

PLAN NORTH



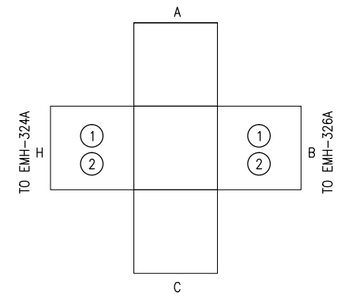
MANHOLE TMH-324A DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
F	1	4	75PR #22GA COPPER	TMH-325A	TELEPHONE
			12-STRAND MM FO	TMH-325A	DATA/ICS
	2	4	48-STRAND SM FO	TMH-325A	B423, B425, B2911
	3	4		TMH-325A	SPARE
	4	4		TMH-325A	SPARE
H	1	4 (EXIST)	75PR #22GA COPPER	TMH-323	TELEPHONE (EXIST)
			12-STRAND MM FO	TMH-323	DATA/ICS (EXIST)
	2	4 (EXIST)	48-STRAND SM FO	TMH-323	B423, B425, B2911 (ESIXT)
	3	4 (EXIST)		TMH-323	SPARE (EXIST)
	4	4 (EXIST)		TMH-323	SPARE (EXIST)
	5	4 (EXIST)		TMH-323	SPARE (EXIST)
	6	4 (EXIST)		TMH-323	SPARE (EXIST)

NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

MANHOLE FOLD-OUT - TMH-324A

NTS ES108 A1

PLAN NORTH

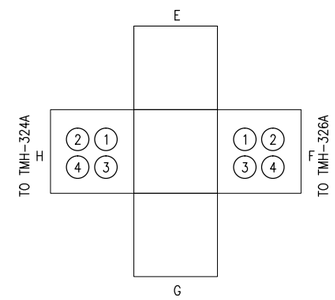


MANHOLE EMH-325A DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
B	1	4	3#4/0 (15KV), 1#2BC G	EMH-324A	FEEDER CU310-1
	2	4			SPARE
D	1	4	3#4/0 (15KV), 1#2BC G	EMH-326A	FEEDER CU310-1
	2	4			SPARE

MANHOLE FOLD-OUT - EMH-325A

NTS ES108 D4

PLAN NORTH



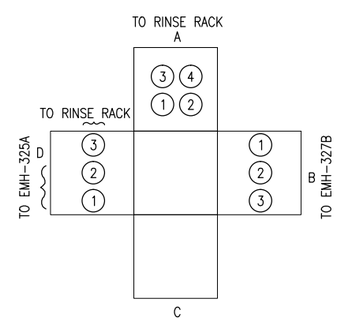
MANHOLE TMH-325A DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
F	1	4	75PR #22GA COPPER	TMH-326B	TELEPHONE
			12-STRAND MM FO	TMH-326B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-326B	B423, B425, B2911
	3	4		TMH-326B	SPARE
	4	4		TMH-326B	SPARE
H	1	4	75PR #22GA COPPER	TMH-324A	TELEPHONE
			12-STRAND MM FO	TMH-324A	DATA/ICS
	2	4		TMH-324A	SPARE
	3	4		TMH-324A	SPARE
	4	4		TMH-324A	SPARE

NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

MANHOLE FOLD-OUT - TMH-325A

NTS ES108 B4

PLAN NORTH



MANHOLE EMH-326B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
A	1	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-1
	2	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-1
	3	4		JUNCTION	SPARE
	4	2	1#500KCMIL G	JUNCTION	DUCTBANK GROUND
B	1	4	3#4/0 (15KV), 1#2BC G	EMH-327B	FEEDER CU310-1
	2	4		EMH-327B	SPARE
	3	2	4#4 1#10G	EMH-327B	EAST APRON POLE LTS
D	1	4	3#4/0 (15KV), 1#2BC G	EMH-325A	FEEDER CU310-1
	2	4		EMH-325A	SPARE
	3	2	4#4 1#10G	PNL 6A	EAST APRON POLE LTS

MANHOLE FOLD-OUT - EMH-326A

NTS ES109 A4

PLAN NORTH

STM	DESCRIPTION	DATE	APPR

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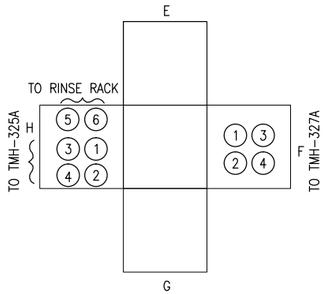
ACTIVITY
NAS WHIDBEY ISLAND
SATISFACTORY TO DATE
DES KMD DRW AM CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
DETAILS

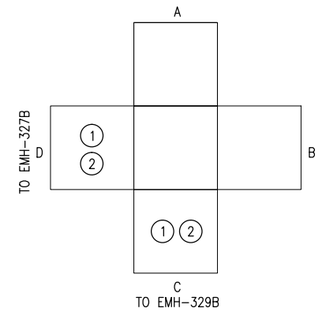
SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030553
SHEET 299 OF 302
E-815
DRAWFORM REVISION: 10 MARCH 2009



MANHOLE TMH-326B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
F	1	4	75PR #22GA COPPER	TMH-327B	TELEPHONE
			12-STRAND MM FO	TMH-327B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-327B	B423, B425, B2911
	3	4		TMH-327B	SPARE
	4	4		TMH-327B	SPARE
H	1	4	75PR #22GA COPPER	TMH-325A	TELEPHONE
			12-STRAND MM FO	TMH-325A	DATA/ICS
	2	4	48-STRAND SM FO	TMH-325A	B423, B425, B2911
	3	4		TMH-325A	SPARE
	4	4		TMH-325A	SPARE
	5	4	(2) 12-STRAND MM FO	RINSE RACK	DATA/ICS
	6	4		RINSE RACK	SPARE

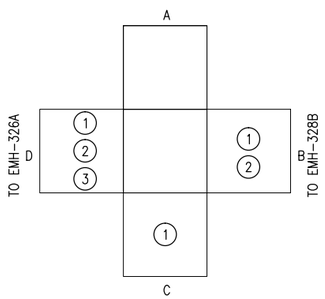
NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

MANHOLE FOLD-OUT - TMH-326A
NTS ES109 C1 PLAN NORTH



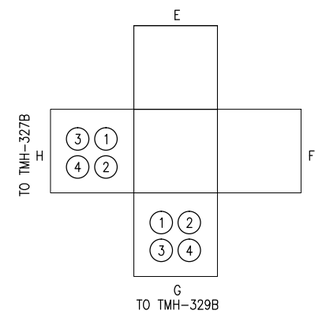
MANHOLE EMH-328B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
C	1	4	3#4/0 (15KV), 1#2BC G	EMH-329B	FEEDER CU310-1
	2	4		EMH-329B	SPARE
D	1	4	3#4/0 (15KV), 1#2BC G	EMH-327B	FEEDER CU310-1
	2	4		EMH-327B	SPARE

MANHOLE FOLD-OUT - EMH-328B
NTS ES119 C4 PLAN NORTH



MANHOLE EMH-327B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
B	1	4	3#4/0 (15KV), 1#2BC G	EMH-326B	FEEDER CU310-1
	2	4		EMH-326B	SPARE
C	1	2	4#4,1#10G	EMH-326B	EAST APRON POLT LTS
D	1	4	3#4/0 (15KV), 1#2BC G	EMH-328B	FEEDER CU310-1
	2	4		EMH-328B	SPARE
	3	2	4#4,1#10G	POLE LTS	EAST APRON POLT LTS

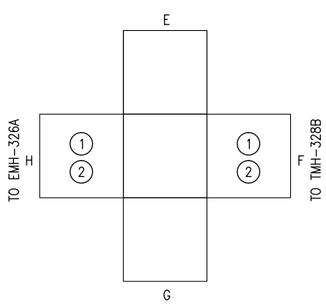
MANHOLE FOLD-OUT - EMH-327B
NTS ES119 B1 PLAN NORTH



MANHOLE TMH-328B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
G	1	4	75PR #22GA COPPER	TMH-329B	TELEPHONE
			12-STRAND MM FO	TMH-329B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-329B	B423, B425, B2911
	3	4		TMH-329B	SPARE
	4	4		TMH-329B	SPARE
H	1	4	75PR #22GA COPPER	TMH-327B	TELEPHONE
			12-STRAND MM FO	TMH-327B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-327B	B423, B425, B2911
	3	4		TMH-327B	SPARE
	4	4		TMH-327B	SPARE

NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

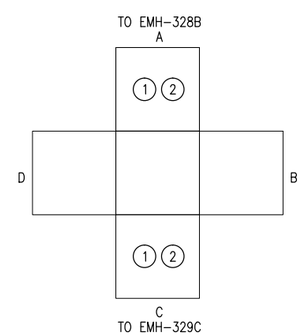
MANHOLE FOLD-OUT - TMH-328B
NTS ES119 B4 PLAN NORTH



MANHOLE TMH-327B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
F	1	4	75PR #22GA COPPER	TMH-328B	TELEPHONE
			12-STRAND MM FO	TMH-328B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-328B	B423, B425, B2911
	3	4		TMH-328B	SPARE
	4	4		TMH-328B	SPARE
H	1	4	75PR #22GA COPPER	TMH-326B	TELEPHONE
			12-STRAND MM FO	TMH-326B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-326B	B423, B425, B2911
	3	4		TMH-326B	SPARE
	4	4		TMH-326B	SPARE

NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

MANHOLE FOLD-OUT - TMH-327B
NTS ES119 A1 PLAN NORTH



MANHOLE EMH-329B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
A	1	4	3#4/0 (15KV), 1#2BC G	EMH-328B	FEEDER CU310-1
	2	4		EMH-328B	SPARE
C	1	4	3#4/0 (15KV), 1#2BC G	EMH-329C	FEEDER CU310-1
	2	4		EMH-329C	SPARE

MANHOLE FOLD-OUT - EMH-329B
NTS ES118 A4 PLAN NORTH

SYM	DESCRIPTION	DATE	APPR

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<<PM/DM>> JOSEPH KISIDAY
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CHIEF ENG/ARCH
<<OOO>>

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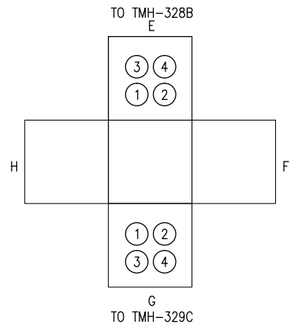
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
DETAILS

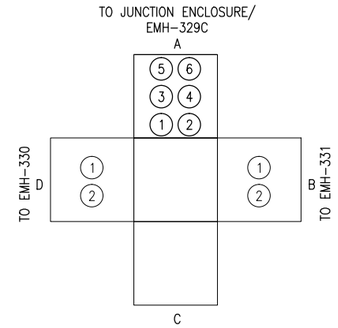
SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
NAVFAC DRAWING NO.
16030554
SHEET 300 OF 302
E-816
DRAWFORM REVISION: 10 MARCH 2009



MANHOLE TMH-329B DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
E	1	4	75PR #22GA COPPER	TMH-328B	TELEPHONE
			12-STRAND MM FO	TMH-328B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-328B	B423, B425, B2911
	3	4		TMH-328B	SPARE
	4	4		TMH-328B	SPARE
G	1	4	75PR #22GA COPPER	TMH-329C	TELEPHONE
			12-STRAND MM FO	TMH-329C	DATA/ICS
	2	4	48-STRAND SM FO	TMH-329C	B423, B425, B2911
	3	4		TMH-329C	SPARE
	4	4		TMH-329C	SPARE

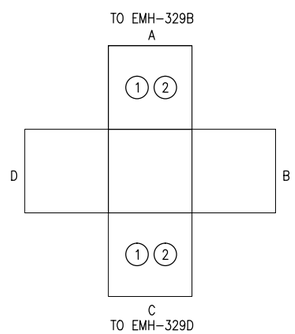
NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

MANHOLE FOLD-OUT - TMH-329B
NTS ES118 C1 PLAN NORTH



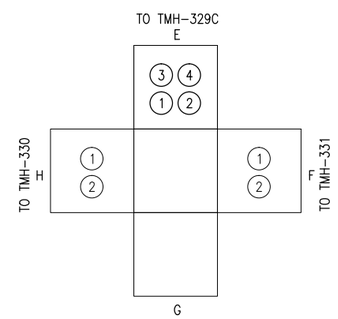
MANHOLE EMH-329D DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
A	1	4	3#4/0 (15KV), 1#2BC G	EMH-329C	FEEDER CU310-1
	2	4		EMH-329C	SPARE
	3	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-1
	4	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-1
	5	4	3#4/0 (15KV), 1#2BC G	JUNCTION	FEEDER CU310-1
	6	2	1#500KCM, G	JUNCTION	DUCTBANK GROUND
B	1	4 (EXIST)	3#4/0 (15KV), 1#2BC G		FEEDER CU310-1 (EXIST)
	2	4 (EXIST)			SPARE (EXIST)
C	1	4 (EXIST)	3#4/0 (15KV), 1#2BC G	EMH-329D	FEEDER CU310-1
	2	4 (EXIST)		EMH-329D	SPARE

MANHOLE FOLD-OUT - EMH-329D
NTS ES103 C4 PLAN NORTH



MANHOLE EMH-329C DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
A	1	4	3#4/0 (15KV), 1#2BC G	EMH-329B	FEEDER CU310-1
	2	4		EMH-329B	SPARE
C	1	4	3#4/0 (15KV), 1#2BC G	EMH-329D	FEEDER CU310-1
	2	4		EMH-329D	SPARE

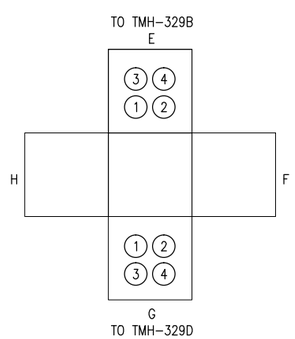
MANHOLE FOLD-OUT - EMH-329C
NTS ES118 B1 PLAN NORTH



MANHOLE TMH-329D DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
E	1	4	75PR #22GA COPPER	TMH-329C	TELEPHONE
			12-STRAND MM FO	TMH-329C	DATA/ICS
	2	4	48-STRAND SM FO	TMH-329C	B423, B425, B2911
	3	4		TMH-329C	SPARE
	4	4		TMH-329C	SPARE
F	1	4 (EXIST)	50PR #22GA COPPER	TMH-331	TELEPHONE (EXIST)
			12-STRAND MM FO	TMH-331	DATA/ICS (EXIST)
	2	4 (EXIST)	48-STRAND SM FO	TMH-331	B423, B425, B2911
H	1	4 (EXIST)	25PR #22GA COPPER	TMH-330	SPARE
			(2) 12-STRAND MM FO	TMH-330	
	2	4 (EXIST)		TMH-330	SPARE

NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

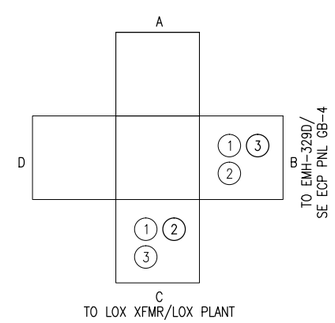
MANHOLE FOLD-OUT - TMH-329D
NTS ES103 B4 PLAN NORTH



MANHOLE TMH-329C DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
E	1	4	75PR #22GA COPPER	TMH-329B	TELEPHONE
			12-STRAND MM FO	TMH-329B	DATA/ICS
	2	4	48-STRAND SM FO	TMH-329B	B423, B425, B2911
	3	4		TMH-329B	SPARE
	4	4		TMH-329B	SPARE
G	1	4	75PR #22GA COPPER	TMH-329D	TELEPHONE
			12-STRAND MM FO	TMH-329D	DATA/ICS
	2	4	48-STRAND SM FO	TMH-329D	B423, B425, B2911
	3	4		TMH-329D	SPARE
	4	4		TMH-329D	SPARE

NOTES:
1. PROVIDE 4-CELL FABRIC INNERDUCT IN OCCUPIED COMMUNICATION DUCTS

MANHOLE FOLD-OUT - TMH-329C
NTS ES118 A1 PLAN NORTH



MANHOLE EMH-330 DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
B	1	4 (EXIST)	3#4/0 (15KV), 1#2BC G	EMH-329D	FEEDER CU310-1
	2	4 (EXIST)		EMH-329D	SPARE
	3	4 (EXIST)		EMH-329D	SPARE
C	1	4	3#4/0 (15KV), 1#2BC G	LOX XFMR	FEEDER CU310-1
	2	4		LOX XFMR	SPARE
	3	1-1/4	4#6,1#10G	LOX PNL 4E	SE ECP PNL GB-4

MANHOLE FOLD-OUT - EMH-330
NTS ES103 A4 PLAN NORTH

SYM	DESCRIPTION	DATE	APPR

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CHIEF ENG/ARCH
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NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
NAVAL AIR STATION WHIDBEY ISLAND
AULT FIELD – OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
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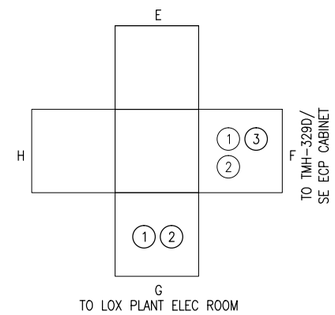
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
DETAILS

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255–15–C–6003
NAVFAC DRAWING NO.
16030555
SHEET 301 OF 302
E-817
DRAWFORM REVISION: 10 MARCH 2009

MANHOLE TMH-330 DUCTBANK SCHEDULE					
FACE	DUCT #	DIAM. (INCHES)	CABLING	TO	SERVICE
F	1	4 (EX 5")	25PR #22GA COPPER	TMH-329D	TELEPHONE
			(2) 12-STRAND MM FO	TMH-329D	DATA/CS
	2	4 (EX 5")		TMH-329D	SPARE
	3	2	PER DRAWING ES103	SE ECP	SECURITY
G	1	4	25PR #22GA COPPER	LOX TB	TELEPHONE
			(2) 12-STRAND MM FO	LOX TB	DATA/CS
			PER DRAWING ES103	LOX ESS	SECURITY
	2	4		LOX TB	SPARE

NOTES:
1. PROVIDE A-CEL FABRICATION REDUCTION OCCUPIED COMMUNICATION DUCTS



MANHOLE FOLD-OUT - TMH-330D

NTS

ES103 C4

PLAN NORTH

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

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FOR COMMANDER NAVFAC

ACTIVITY
NAS WHIDBEY ISLAND

SATISFACTORY TO DATE

DES KMD | DRW AM | CHK GLL
<<PM/DM>> JOSEPH KISIDAY
BRANCH MANAGER
CHIEF ENG/ARCH
<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION WHIDBEY ISLAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NORTHWEST
AULT FIELD - OAK HARBOR, WA
NAVAL AIR STATION WHIDBEY ISLAND
OAK HARBOR, WA
FY-15 MCON PROJECT P-259 P-8A AIRCRAFT
APRON EXPANSION - PART A
DETAILS

SCALE: AS NOTED
EPROJECT NO.:
CONSTR. CONTR. NO.
N44255-15-C-6003
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SHEET 302 OF 302

E-818

DRAWFORM REVISION: 10 MARCH 2009