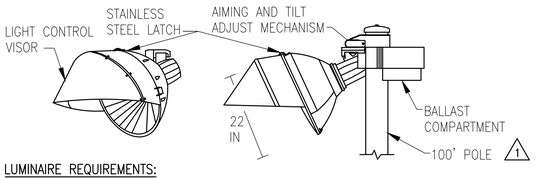
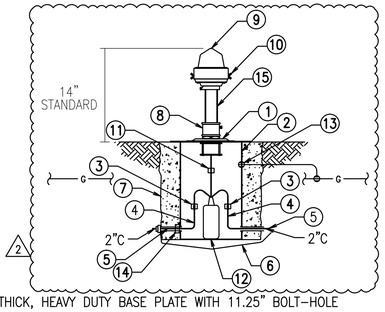


LUMINAIRE REQUIREMENTS:

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)

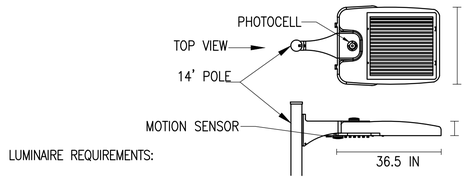
NTS — TYPE J



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. #4 BARE COPPER COUNTERPOISE GROUND WIRE BONDED TO LIGHT BASE. (2)
14. 1" STEEL COLUMN.

ELEVATED APRON EDGE LIGHT (C2)

NTS — TYPE K

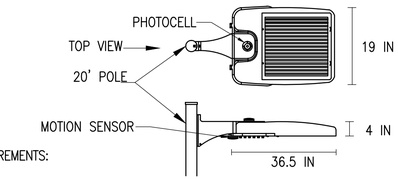


LUMINAIRE REQUIREMENTS:

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

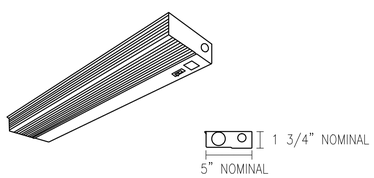


LUMINAIRE REQUIREMENTS:

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



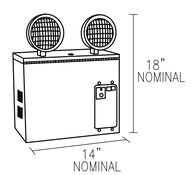
LUMINAIRE REQUIREMENTS:

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

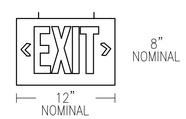


LUMINAIRE REQUIREMENTS:

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

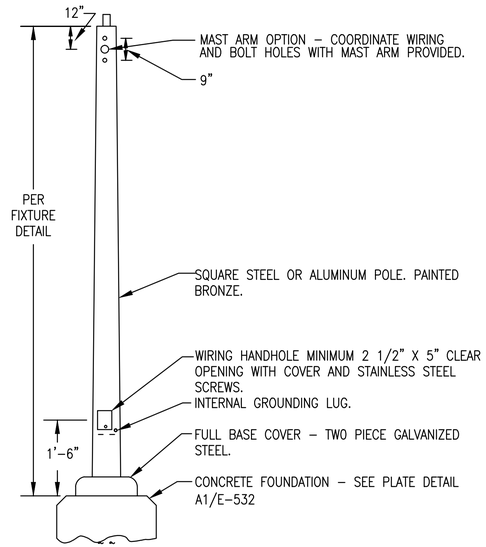


LUMINAIRE REQUIREMENTS:

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
1	AMENDMENT 005	3/27/15	GLL
2	AMENDMENT 006	3/27/15	GLL

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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

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