ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
(A)	INDICATES LIGHTING FIXTURE TYPE. "TYP." INDICATES THAT ALL SIMILAR FIXTURES WITHIN THE SPACE ARE OF THE SAME TYPE, U.O.N.
○	CEILING OUTLET WITH LIGHTING FIXTURE OR DEVICE AS INDICATED.
○H	WALL MOUNTED OUTLET WITH LIGHTING FIXTURE OR DEVICE AS INDICATED.
▭	FLUORESCENT LIGHTING FIXTURE.
▭	FLUORESCENT FIXTURE WITH EMERGENCY BATTERY PACK. OR IN EMERGENCY CIRCUIT
⊗ H⊗	CEILING OR WALL MOUNTED EXIT LIGHT FIXTURE WITH ARROWS AS INDICATED.
⊖	DUPLEX CONVENIENCE RECEPTACLE, 18" A.F.F./U.O.N.
⊕	QUAD (DOUBLE DUPLEX) RECEPTACLE.
⊖	DUPLEX OUTLET WITH ISOLATED GROUND.
⊖	DUPLEX CONVENIENCE OUTLET, MOUNTED ABOVE COUNTERTOP OR BACKSPLASH.
⊖WP	WP INDICATES WEATHERPROOF.
©⊖	CLOCK OUTLET, AT 7'-6" ABOVE FLOOR, UNLESS INDICATED OTHERWISE.
▼⊖	SPECIAL PURPOSE RECEPTACLE, AS INDICATED ON DRAWINGS.
⊖	DUPLEX RECEPTACLE FLUSH FLOOR MOUNTED
∿∿∿	FLEXIBLE CONDUIT CONNECTION.
———	INDICATES CONDUIT RUN, CONCEALED UNLESS INDICATED OTHERWISE.
A-1,3,5 OR A-1/3/5	INDICATES HOME RUN, TO PANEL OR LOCATION INDICATED. "A" INDICATES PANEL "A". TICKS DENOTE THE NUMBER OF CONDUCTORS. /INDICATES GROUND WIRE. NO TICKS INDICATES TWO (2) WIRES. COMMAS SEPARATE SINGLE POLE BRANCH CIRCUITS; SLASHES SEPARATE DIFFERENT POLES OF MULTIPOLE BRANCH CIRCUITS.
(J)	JUNCTION BOX, FLUSH MOUNTED IN CEILING, U.O.N.
(J)H	JUNCTION BOX, FLUSH MOUNTED IN WALL, 7'-6" A.F.F./U.O.N.
▶	TELEPHONE OUTLET, 18" A.F.F./U.O.N.
▶	TELEPHONE/DATA OUTLET, 18" A.F.F./U.O.N.
▷	DATA/COMPUTER OUTLET 18"AFF/U.O.N.
○48"	INDICATES OUTLET OR DEVICE MOUNTED 48" ABOVE FLOOR.
⊠	MAGNETIC MOTOR STARTER OR CONTACTOR.
⊓∿∿∿	ELECTRIC DUCT HEATER & DISCONNECT.
⊓□	CODE SIZED & RATED DISCONNECT SWITCH.
⊓□ 60/30	FUSED DISCONNECT SWITCH: 3=NO. OF POLES; 60=SWITCH SIZE; 50=FUSE SIZE. (0 INDICATES "NON-FUSED").
Ⓣ	THERMOSTAT.
⊡	PUSHBUTTON, MOUNTED 4'-0" A.F.F./U.O.N.
T	TRANSFORMER.
SM ⊠	MANUAL MOTOR STARTER W/ OVERLOADS, 48" A.F.F./U.O.N.
S	SINGLE POLE TOGGLE SWITCH, 20A, 120/277V, MOUNTED 4'-0" A.F.F./U.O.N.
S_D	DIMMER SWITCH
S_3, S_4	THREE WAY AND 4 WAY TOGGLE SWITCHES, 20A, 120/277V, MOUNTED 4'-0" A.F.F./U.O.N.
S_P	SWITCH WITH PILOT LIGHT, MOUNTED 4'-0" A.F.F./U.O.N.
▬	ELECTRIC PANELBOARD
ϟ	ELECTRIC MOTOR. "DM" INDICATES A/C DAMPER MOTOR.
◁	TV OUTLET 60" A.F.F./ U.O.N.
○□	PARKING LOT LUMINAIRE, POLE AND POLE BASE.
●———	CONDUIT ELBOW DOWN
———○	CONDUIT STUB UP
P	POWER OUTLET BOX FOR MODULAR FURNITURE CONNECTION . 4"x4"x2 3/4" W/ BRUSHED STAINLESS STEEL COVER PLATE.
T D	COMBINATION TELEPHONE/COMPUTER DATA OUTLETS FOR MODULAR FURNITURE CONNECTION. 4"x4"x2 3/4" W/BRUSHED STAINLESS STEEL COVER PLATE.

NOTES:

1.- NOT ALL SYMBOLS ARE USED.
2.- R OR EL DENOTES RELOCATED.
3.- E DENOTES EXISTING.
4.- ER DENOTES EXISTING TO BE REMOVED.

ABBREVIATIONS

A.I.C.S.	AMPS INTERRUPTING CAPACITY SYMMETRICAL
A.H.U.	AIR HANDLING UNIT
A.T.M.	AUTOMATIC TELLER MACHINE
E.W.H.	ELECTRIC WATER HEATER
LTG	LIGHTING
A.F.F.	ABOVE FINISHED FLOOR.
U.O.N.	UNLESS OTHERWISE NOTED.
E.W.C.	ELECTRIC WATER COOLER.
E.C.	EMPTY CONDUIT.
C.	CONDUIT.
C.U.	CONDENSING UNIT.
CKT.	CIRCUIT.
CPT.	CONTROL POWER TRANSFORMER.
MTD.	MOUNTED.
REF:	REFER TO ITEM, DETAIL OR DRAWING INDICATED.
TYP.	TYPICAL.
G.F.I.	GROUND FAULT INTERRUPTER.
WP	WEATHERPROOF.
BKR.	BREAKER.
SURF.	SURFACE MOUNTED.
N.I.C.	NOT IN CONTRACT.
N.T.S.	NOT TO SCALE.
R.G.S.C.	RIGID GALVANIZED STEEL CONDUIT.
P.V.C.	POLYVINYLCHLORIDE
R.T.U.	ROOFTOP UNIT.
XFMR	TRANSFORMER
RECEPT.	RECEPTACLE
DIST.	DISTRIBUTION
GND	GROUND
JB	JUNCTION BOX
W/	WITH
P.A.	PUBLIC ADDRESS
SHT.	SHEET
B.B.	BACKBOARD
FLUOR.	FLUORESCENT
N.L.	NIGHT LIGHT
(1) ⟨1⟩	DESIGNATION FOR NOTE. SEE KEY NOTES.

GENERAL NOTES - ELECTRICAL

1 GENERAL CONDITIONS: THE GENERAL CONDITIONS FORM A PART OF THE SPECIFICATIONS FOR THIS TRADE AND EACH SUBCONTRACTOR MUST READ THE GENERAL CONDITIONS AS WELL AS THE SPECIFICATIONS FOR WORK OF THE OTHER TRADES TO ASCERTAIN WHAT WORK AND MATERIALS HE MUST SUPPLY TO THE OTHER CONTRACTORS.

2 SITE INVESTIGATION: IT SHALL BE THE RESPONSIBILITY OF BIDDERS TO VISIT THE SITE OF THE WORK AND TO ACQUAINT THEMSELVES WITH ALL INFORMATION REGARDING THE BUILDING.

3 MATERIALS: THE MATERIALS USED SHALL ALL CONFORM TO LOCAL CODE REQUIREMENTS. ALL MATERIALS USED SHALL BE LISTED OR SHALL BEAR U.L. APPROVAL.

4 DESIGN: THE INSTALLATION OF THE WIRING SYSTEM ON THESE DRAWINGS SHALL CONFORM TO THE REGULATIONS OF THE LOCAL CODES AND ORDINANCES, N.E.C. AND LOCAL UTILITY COMPANIES.

5 GUARANTEE: THE SUB-CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE THAT ALL WORK EXECUTED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE FINAL ACCEPTANCE AND THAT HE WILL AT HIS OWN EXPENSE, REPAIR AND REPLACE ALL WORK WHICH BECOMES DEFECTIVE DURING THE TIME OF THE GUARANTEE.

6 CONDUCTORS: ALL CONDUCTORS SHALL BE OF 98% CONDUCTIVITY COPPER. CONDUCTOR INSULATION SHALL BE TYPE THW OR THWN FOR NO. 8 AWG AND LARGER AND TYPE THHN/THWN FOR NO. 10 AWG OR SMALLER UNLESS OTHERWISE NOTED ON PLANS OR IN THE SCHEDULES.

7 RACEWAYS: ALL CONDUCTORS SHALL BE IN RACEWAYS AS FOLLOWS:

A PVC SCHEDULE 40 SHALL BE USED UNDERGROUND, IN CONCRETE, OR UNDER GROUND FLOOR SLAB.

B I.M.C. OR R.G.S.C. SHALL BE USED WHERE EXPOSED OUTDOORS, UP TO A POINT 12" BELOW GRADE WHERE TRANSITIONS TO PVC SHALL BE MADE.

C FLEXIBLE CONDUIT SHALL BE USED FOR CONNECTION TO ALL VIBRATING EQUIPMENT AND TO ALL RECESSED MOUNTED FIXTURES. FLEXIBLE CONDUIT SHALL BE LIQUID-TIGHT WHERE EXPOSED TO WEATHER.

D ELECTRICAL METALLIC TUBING SHALL BE USED INDOORS, WHERE CONCEALED, ABOVE GRADE.

ELECTRICAL SPECIFICATIONS

A.- OVERALL INSTALLATION: THE INSTALLATION SHALL COMPLY WITH THE FOLLOWING:

1- LIFE SAFETY CODE (NFPA 101).
2- NATIONAL ELECTRICAL (NFPA 70).
3- INTERNATIONAL ENERGY CONSERVATION CODE.
4- LOCAL CODES AND REGULATIONS.

B.- CONDUCTORS CALCULATIONS: CONDUCTORS CALCULATIONS ARE BASED ON 75'C. ALL CONDUCTORS TO BE COPPER.THWN.

1. GENERAL: THE GENERAL AND SPECIAL CONDITIONS AND REQUIREMENTS OF THE CONTRACT AND SPECIFICATIONS AS WELL AS PLANS AND SPECIFICATIONS OF OTHER DISCIPLINES AND TRADES SHALL BE A PART OF THE WORK HEREBY SPECIFIED. THESE SPECIFICATIONS AND ACCOMPANYING PLANS ARE INTENDED TO PROVIDE FOR THE COMPLETE FURNISHING AND INSTALLATION OF THE ELECTRICAL SYSTEMS. TO PROVIDE MEANS TO FURNISH AND INSTALL.

2. COMPLIANCE: WORKMANSHIP, MATERIALS AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE EDITION OF THE SBC, NEC, NFPA, NEMA, ASTM, OSHA, UL, ANSI, HRS HEALTH AGENCIES AND OTHER APPLICABLE NATIONAL, STATE AND LOCAL CODES AND PERTAINING REGULATIONS ESTABLISHED BY THE RULING AUTHORITY HAVING JURISDICTION. CONTRACTORS SHALL ALSO MEET THE REQUIREMENTS STRICT THAN THOSE STANDARDS CITED ABOVE.

3. WORKMANSHIP: ALL WORK SHALL BE PERFORMED BY CONTRACTORS LICENSED IN THEIR RESPECTIVE DISCIPLINE. WORK SHALL BE DONE IN A FIRST CLASS MANNER, FULLY OPERATIVE, AND TO THE ACCEPTANCE OF THE ARCHITECT AND ALL NECESSARY LABOR AND MATERIAL REQUIRED FOR THE COMPLETION OF THE WORK INCLUDING BUT NOT LIMITED TO RELATED WORK SUCH AS CONNECTION OF EXISTING SYSTEMS, EXCAVATIONS AND BACK FILLING.

4. MATERIALS: CONTRACTOR SHALL PROVIDE ALL NEW MATERIALS OF AMERICAN MANUFACTURE, BEARING THE UNDERWRITER'S LABORATORY (UL) LABEL AS APPLICABLE. MATERIALS SHALL BE NEW, SUITABLE FOR THE APPLICATION AND ABOVE STANDARD QUALITY NORMALLY USED FOR THE PURPOSE AS CALLED FOR ON PLANS. SUPPLEMENTAL MATERIALS, PRODUCTS AND COMPONENTS NECESSARY TO COMPLY WITH THE INTENT OF THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS, BUT NOT NOTED OR SPECIFIED ON THESE SECTIONS, SHALL BE RESPONSIBLE FOR PROVISIONS AND COORDINATION OF DELIVERY OF MATERIALS. EQUIPMENT MARRED DURING SHIPMENT OR INSTALLATION SHALL BE TOUCHED UP AND REFINISHED TO FACTORY FINISH, REPLACED WHERE NOT ACCEPTABLE.

5. PERMITS AND INSURANCE: CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, TAXES, INSPECTIONS, TESTS, FINES AND OTHER ITEMS AS REQUIRED FOR THE INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEMS AS OUTLINED HEREIN AND SHOWN ON PLANS. CONTRACTOR SHALL PROVIDE ALL REQUIRED INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

6. EXISTING CONDITIONS: THIS DESIGN IS BASED ON FIELD OBSERVATIONS, DEVIATIONS ARE POSSIBLE. PRIOR TO BID THE CONTRACTOR SHALL VISIT THE JOB SITE AND DETERMINE THE EXTENT OF REVISION TO EXISTING EQUIPMENT AND WIRING TO ACCOMMODATE CHANGES AND ADDITIONS, ALL THE NECESSARY REROUTING, RELOCATING AND/ OR REMOVAL OF EXISTING EQUIPMENT, WIRING ETC. SHALL BE INCLUDED IN THE SCOPE OF THIS WORK. EXTRAS SHALL NOT BE ALLOWED FOR FAILURE OF THE CONTRACTOR'S PART TO COMPLY WITH ABOVE.

7. PLANS: DRAWING ARE BASICALLY DIAGRAMS INTENDED TO DEPICT APPROXIMATELY EQUIPMENT LOCATIONS AND ARRANGEMENTS, NOT TO SHOW EVERY MINOR DETAIL. PLANS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION AND DIMENSIONS.

8. INTERFERENCE: THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES SO THAT INTERFERENCE WITH EXISTING CONDITIONS, CONDUITS, PIPING, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL MEMBERS BE AVOIDED.

9. SUBSTITUTIONS: PRODUCTS AND MATERIALS CALLED OUT BY TRADE NAME AND/OR CATALOG NUMBERS ESTABLISH A STANDARD OF QUALITY, APPEARANCE, PERFORMANCE AND DIMENSION. CONTRACTORS SHALL BASE HIS PROPOSAL ON THOSE ITEMS AS THEY SHALL BE CONSIDERED AS A STANDARD BASIS OF BIDDING. REQUESTS FOR SUBSTITUTION SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT/ENGINEER, DEMONSTRATING THAT PRODUCT IS OF COMPARABLE AND BASIC DESIGN, CONSTRUCTION, STANDARDS AND WARRANTIES, DIMENSIONS TO FIT WITHOUT CHANGE, AND DOES NOT CAUSE EXTRA WORK TO OTHER TRADES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EQUALITY OF SUBSTITUTION: ARCHITECT/ENGINEER WILL UNDER NO CIRCUMSTANCES, BE REQUIRED TO PROVE SUCH ITEM IS OR IS NOT OF EQUAL QUALITY TO THE SPECIFIED ITEM. ARCHITECT/ENGINEER EXPENSES INCURRED SHALL BE PAID BY THE CONTRACTOR.

10. RECORD DRAWING: MAINTAIN A COMPLETE SET OF PRINTS FOR INDICATING ALL CHANGES. USED COLORED PENS TO MARK CHANGES AT THE TIME OF EXECUTION AND DELVER THE SET TO THE ARCHITECT/ENGINEER UPON COMPLETION. CONTRACTOR SHALL STAMP "AS BUILT" ON PRINTS AND PLANS, DATE AND SIGN IN INK.

11. DATA/TELECOMMUNICATION SYSTEMS:
A.- FOR DATA/TELECOMMUNICATION SYSTEMS UTILIZE CONTRACTOR EXPERIENCED IN THE INSTALLATION OF COMMUNICATION SYSTEMS AND CERTIFIED BY BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL.

12. CUTTING AND PATCHING:
A.- MAJOR CUTTING, PATCHING AND PAINTING REQUIRED BY THIS CONTRACT WILL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. ALL SURFACES SHALL BE RETURNED TO ORIGINAL CONDITIONS AFTER THE INSTALLATION OF THE EQUIPMENT.

13. FIELD CHANGES:
A.- THE ELECTRICAL CONTRACTOR SHALL CONSULT THE ENGINEER BEFORE THE IMPLEMENTATION OF FIELD CHANGES, MODIFICATIONS OR ADDITIONS COVERING ELECTRICAL EQUIPMENT, ELECTRICAL INSTALLATION, DISTRIBUTION OF THE ELECTRICAL LOADS, ELECTRICAL RISER OR SERVICE ENTRANCE THAT DEVIATES FROM THE ORIGINAL SIGNED, SEALED AND APPROVED ELECTRICAL PANS.

B.- PROPOSED ELECTRICAL CHANGES, ADDITIONS AND MODIFICATIONS THAT DEVIATE FROM THE ORIGINAL SIGNED, SEALED PLANS ORIGINALLY APPROVED BY THE BUILDING DEPT. WHICH ARE INTENDED TO BE INCLUDED BY THE ELECTRICAL CONTRACTOR IN ITS "AS BUILT" DRAWINGS SHALL BE REVIEWED BY THE ENGINEER FOR A WRITTEN APPROVAL BEFORE THE CHANGES, MODIFICATIONS OR ADDITIONS ARE IMPLEMENTED. THE ENGINEER SHALL NOT BE RESPONSIBLE AND WILL NOT INTEGRATE FIELD CHANGES INTO THE ORIGINAL PLANS THAT HAVE NOT BEEN CONSULTED AND PRE-APPROVED BEFORE THEIR FIELD IMPLEMENTATION.

C.- THE INTEGRATION BY THE ENGINEER OF FIELD CHANGES, MODIFICATIONS AND ADDITIONS INTO THE ORIGINAL SET OF PLANS TO CREATE A FINAL OF "AS BUILT" PLANS IS NOT INCLUDED IN THE ORIGINAL CONTRACT AND SHALL BE CONSIDERED AN OPTIONAL ITEM.

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	File	Lumens	LLF
▯	EX1	3	EXISTING 2X4 3 LAMP FLUORESCENT (RECESSED)	2GT8_3_32_A12_1_3_ADDE.ies	2850	0.60
▢	EX2	3	EXISTING 2X2 2 LAMP FLUORESCENT (RECESSED)	2GT8_2_U316_A12_ADDE.ies	2600	0.60
▢	EX3	2	EXISTING MH SURFACE MOUNT	VR3C_70M_120.ies	5000	0.60
▢	SA1	2	LITHONIA LIGHTING TWF1 100M TB TWF1BBW DDB LPI (WALL MT @ 12 FT AFG))	TWF1_100M.ies	8500	0.75
▢	SA2	4	LITHONIA LIGHTING TWF1 70M TB TWF1BBW DDB LPI (WALL MT @ 12 FT AFG)	TWF1_100M.ies	5500	0.75
▢ ▫	SB	2	LITHONIA LIGHTING KVF2 250M SYMFL VOLTAGE RP09 SCWA DDB LPI (POLE MT @ 15 FT AFG)	KVF2_400M_SYMFL_(PULSE_START).ies	19500	0.75

NOTES:

1. ALL "EX" TYPE FIXTURES (Existing) SHOULD BE EXEMPT FROM REQUIREMENTS.
2. ALL NEW LUMINAIRES ARE FULL CUT-OFF.
2. THE TOTAL LUMEN/ACRE VALUES ARE WITHIN THE REQUIREMENTS.
3. THE PHOTOMETRIC DESIGN, AS REFLECTED IN THE READINGS, AT THE PROPERTY ARE EXPECTED TO BE WITHIN ALLOWANCE PER ORDINANCE. FINAL ADJUSTMENT MAY BE NECESSARILY UPON SURVEY DEPICTING PROPERTY LIMITS.

STATISTICS

Description	Avg	Max	Min	Max/Min	Avg/Min
New ATM Zone	3,3 fc	31,7 fc	0,0 fc	N / A	N / A
Spill Light at Street	0.8 fc	1,9 fc	0,0 fc	N / A	N / A

INSTALLATION DIMENSIONS

INSTALLATION DIMENSIONS FOR NEW OR RELOCATED LIGHT FIXTURES AND POLES ARE SHOWN ON PLANS EXCEPT FOR LIGHT FIXTURES THAT MAINTAIN THE SAME LOCATION.

CLEARING THE AREA FOR PROPER ILLUMINATION

THE CONTRACTOR SHALL TRIM TREES AND LANDSCAPING AROUND THE AFFECTED AREA IN ORDER TO COMPLY WITH BANK OF AMERICA LANDSCAPING STANDARD 300-L1.

ATM ILLUMINATION REQUIREMENTS

THE ILLUMINATION LEVELS SHALL COMPLY WITH THE 10 FOOTCANDLES AT 5' RADIUS FROM ATM UNIT AND 2 FOOTCANDLES AT 60' RADIUS FROM THE ATM UNIT.

THE PROPOSED PHOTOMETRIC COMPLIANCE DESIGN IS BASED ON THE LIGHT FIXTURES PROVIDED IN THE LUMINAIRE SCHEDULE.

WHEN THE PERFORMANCE OF THE EXISTING TO REMAIN LIGHT FIXTURES DO NOT MEET THE DESIGN CRITERIA CALLED FOR IN THE STATISTICS, THESE MUST BE REPLACED WITH THE ONES PROPOSED.

FINAL ADJUSTMENTS TO AIMING ANGLE/DIRECTION OF FIXTURES MAY BE REQUIRED TO ELIMINATE LIGHT TRESPASS OR GLARE ONTO ADJOINING PROPERTIES OR ROADWAYS.

SUBSTITUTION OF THE LIGHT FIXTURES WILL RESULT IN A DIFFERENT ILLUMINATION COVERAGE AND PATTERN. SUBSTITUTION OF LIGHTING FIXTURE WILL NOT BE PERMITTED.

1

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STATE OF NORTH CAROLINA #52695
RAYMUNDO FEITO #11887
Architect • Seal/Signature

Construction Documents for:

BANK OF AMERICA DRIVE-UP ATM INSTALLATION

at:
CARRBORO BANKING CENTER
104 EAST MAIN STREET,
CARRBORO, NC 27510

Issue	Date & Issue Description	Drawn By	Checked By
01	12/31/12	JG	P&G
	PERMIT ISSUE		
02	06/04/13	JG	P&G
	BLDG COMMENTS		

Date & Delta Description	Drawn By	Checked By

ARCHITECTURE•PLANNING•INTERIOR DESIGN•SPACE PLANNING

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Project Number
12374
CAD File Name
BOA-CARRBORO-D/U ATM CDs
Description
GENERAL NOTES, SYMBOLS, AND LIGHT FIXTURE SCHEDULE.
Scale
SEE PLAN

Consultant • Seal/Signature

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ELECTRICAL PLANS

E-1.0

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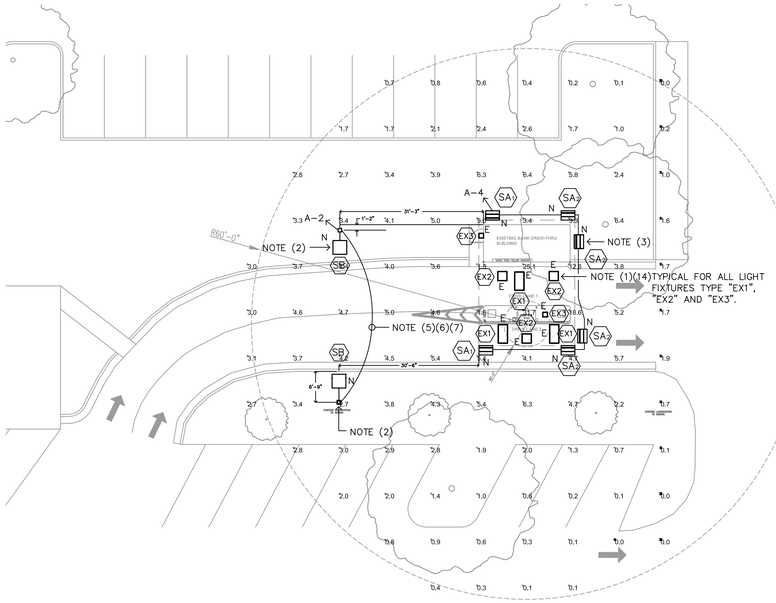


PARTIAL PHOTOMETRIC PLAN

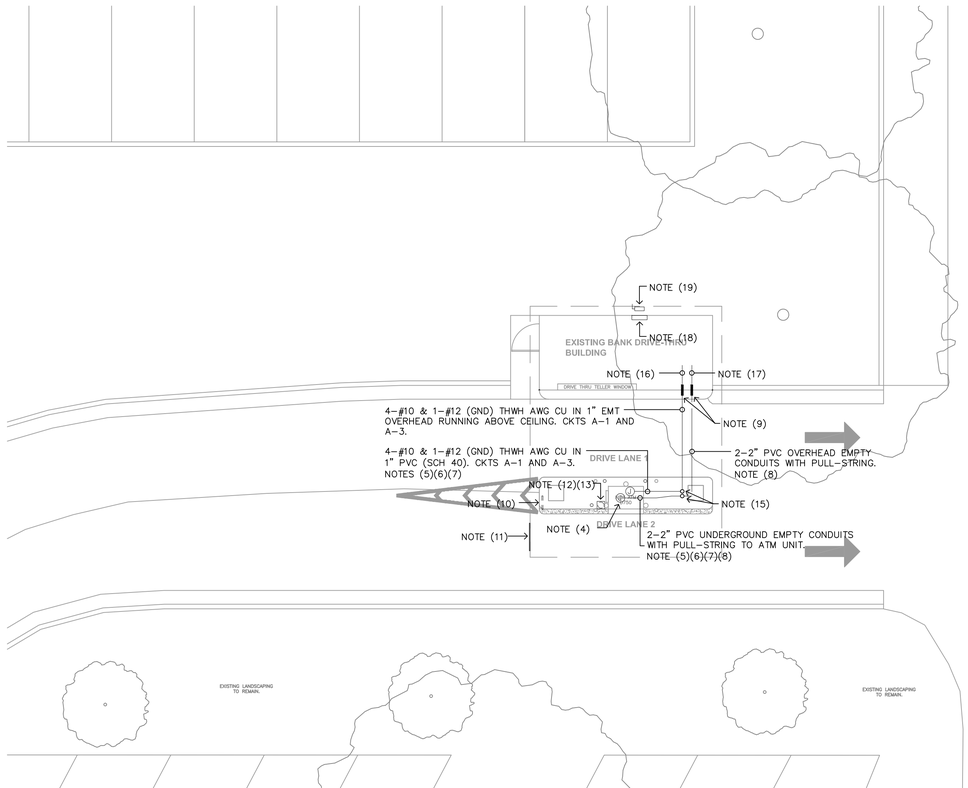
Scale:1/16" = 1'-0"

N

1

N DENOTES NEW LIGHT FIXTURE.

E DENOTES EXISTING TO REMAIN.



ELECTRICAL POWER PLAN

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

N

NUMBERED NOTES

(1) EXISTING LUMINAIRE TO REMAIN CLEAN AND RE-LAMP AS REQUIRED.
(2) NEW CUTOFF LUMINARIE MOUNTED ON CONCRETE POLE. REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
(3) NEW FLOOD LIGHT FIXTURE TO BE INSTALLED UNDER THIS CONTRACT. REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
(4) REFER TO ATM UNIT DRAWING FOR EXACT LOCATION OF CONDUITS STUB UP.
(5) PRIOR TO DIGGING OR TRENCHING VERIFY THE LOCATION OF ALL UNDER GROUND LINES. CALL NORTH CAROLINA 811 AT LEAST 48 HRS IN ADVANCE TO TRENCHING OR EXCAVATING.
(6) INSTALL UNDERGROUND CONDUITS IN TRENCH.
(7) RUN PVC CONDUITS 18" MINIMUM BELOW GRADE. SAW CUT ISLAND/ROAD AS REQUIRED TO ALLOW CONDUIT'S INSTALLATION. AFTER CONDUITS INSTALLATION RESTORE PAVEMENT/ISLAND TO ITS ORIGINAL CONDITIONS.
(8) EMPTY CONDUITS FOR SECURITY, DATA/TELEPHONE, ALARM WIRING ETC; PULL STRING CORD SHALL BE PROVIDED. VERIFY WITH ARCHITECT THE FINAL TERMINATION POINT FOR THESE CONDUITS.
(9) PROVIDE FIRE STOP SEAL AT THE CONDUIT POINT OF ENTRANCE INTO THE BULDING CEILING SPACE.
(10) REMOVE EXISTING VEHICULAR SIGNAGE AT DRIVE THRU CANOPY.
(11) PROVIDE A NEW DRIVE UP ATM SIGN, PER B.O.A. STANDARD.
(12) EXISTING V.A.T. TO BE REMOVED ALONG WITH ALL ASSOCIATED EQUIPMENT.
(13) PULL THE WIRES BACK TO THE PANEL AND REMOVE THEM; AFTER REMOVAL, IDENTIFY ASSOCIATED CIRCUIT BREAKERS AS SPARE.
(14) PROPOSED ILLUMINATION AND PHOTOMETRIC ARE BEING DESIGNED TAKING INTO CONSIDERATION BANK OF AMERICA STANDARDS (LIGHT FIXTURES); WHERE INDICATED, THE CONTRACTOR MUST INSTALL/REPLACE/RE-LAMP WITH NEW LIGHT FIXTURES AS CALLED FOR IN THE SCHEDULE. UNLESS, AFTER FIELD VERIFICATIONS THE EXISTING FIXTURES ARE FOUND IN GOOD CONDITIONS AND THE SAME MEET THE PERFORMANCE OF THE SPECIFIED REPLACEMENT. THE CONTRACTOR MUST PROVIDE CERTIFICATION THAT EXISTING TO REMAIN FIXTURES MEET THE SPECIFIED REQUIREMENTS.
(15) CONDUIT RUNNING VERTICALLY TRANSITIONING FROM OVERHEAD TO UNDERGROUND, RUN CONDUITS THRU EXISTING COLUMN EXTERIOR SURFACE AND PROVIDE PULL BOX ABOVE CEILING, AS REQUIRED.
(16) OVERHEAD CONDUITS TO EXISTING ELECTRICAL PANEL "A".
(17) OVERHEAD CONDUITS TO TELECOMMUNICATION ACTIVE EQUIPMENT.
(18) EXISTING PANEL "A" TO REMAIN. CONTRACTOR SHALL INTERCEPT EXISTING CONDUIT AND FEEDER COMING FROM MAIN BUILDING (PANEL "MDP") AND RE-ROUTE THEM TO THE NEW SAFETY SWITCH AS INDICATED ON THIS DRAWINGS. REFER TO PARTIAL PROPOSED ELECTRICAL RISER DIAGRAM FOR DETAILS.
(19) NEW SAFETY SWITCH. REFER TO PARTIAL PROPOSED ELECTRICAL RISER DIAGRAM FOR DETAILS.

PANEL A — EXISTING

MANUFACTURER : BRYANT
MOUNTING : FLUSH
LOCATION : INTERIOR WALL
FEEDER : EXISTING 100A ELECTRICAL FEEDER
MAIN : M.L.O.
MAXIMUM CAPACITY : 125A
VOLTAGE : 120/208 V, 3 PH, 4 W
A.I.C. : 10,000 A

	PROTECTION POL	PROTECTION AMPS	DESCRIPTION	WIRES, CONDUIT	CKT.	BUS (KVA) A	BUS (KVA) B	BUS (KVA) C	CKT.	WIRES, CONDUIT	DESCRIPTION	PROTECTION POL	PROTECTION AMPS	
(B)-	1	30	NEW ATA	2-#10, 1"	1	2.88	0.60		2	3-#8, 1"	SITE LIGHTING	1	20	-(B)(T)
(B)-	1	20	NEW ATA TOP LIGHT	2-#10, 1"	3		0.10	1.84	4	3-#10, 3/4"	SITE LIGHTING	1	25	-(B)(T)
(C)-			SPACE		5			–	6		SPACE			-(C)
(A)-	*	*	EXISTING LOAD	EXISTING	7	1.50	1.50		8	EXISTING	EXISTING LOAD	*	*	-(A)
(A)-	*	*	EXISTING LOAD	EXISTING	9		1.50	1.50	10	EXISTING	EXISTING LOAD	*	*	-(A)
(A)-	*	*	EXISTING LOAD	EXISTING	11			1.50	12	EXISTING	EXISTING LOAD	1	20	-(A)
(A)-	*	*	EXISTING LOAD	EXISTING	13	1.50	–		14	EXISTING	EXISTING LOAD	1	20	-(A)
(A)-	*	*	EXISTING LOAD	EXISTING	15		1.50	1.20	16	EXISTING	A/C	2	20	-(A)
(A)-	1	20	EXISTING LOAD	EXISTING	17			–	18					
(C)-			SPACE		19	–	–		20		SPACE			-(C)
			CONNECTED LOAD PER PHASE (KVA)			7.98	7.64	2.70						

SERVICE	CONNECTED LOAD		FACTOR		DEMAND LOAD		DIVERSITY		DIVERSITY LOAD
L – LIGHTING	2.54	X	1.25	=	3.18	X	1.25	=	–
R – RECEPTACLES (FIRST 10 KVA)	–	X	1.00	=	–	X	1.00	=	–
R – RECEPTACLES (REMAINING)	–	X	0.50	=	–	X	0.50	=	–
H – H.V.A.C.	2.40	X	1.00	=	2.40	X	1.00	=	–
E – GENERAL EQUIPMENT	13.38	X	1.00	=	13.38	X	1.00	=	–
K – KITCHEN EQUIPMENT	–	X	–	=	–	X	–	=	–
S – SUB-FEEDER	–	X	1.00	=	–	X	1.00	=	–
LM – BIGGEST MOTOR LOAD	–	X	0.25	=	–	X	0.25	=	–
TOTAL KVA	18.32 KVA				18.96 KVA				* KVA
TOTAL AMPS (KVA / 208 X $\sqrt{3}$)	51 AMPS				53 AMPS				* AMPS

(A)- EXISTING C.B., BRANCH CIRCUIT AND CONDUITS TO REMAIN.
(B)- PROVIDE NEW C.B., BRANCH CIRCUIT AND CONDUITS AS INDICATED.
(C)- EXISTING SPACE TO REMAIN AS IS.
(*)- DENOTES 20A/20A AMPERAGE RATING TANDEM CIRCUIT BREAKER.
(T)- CONTROLLED BY EXISTING EXTERIOR LIGHTING CONTACTOR AND TIME CLOCK. CONTRACTOR SHALL VERIFY SPARE CAPACITY ON SUCH LIGHTING CONTACTOR TO BE USED BY THIS CIRCUIT, OTHERWISE, NEW CONTACTOR SHALL BE PROVIDED.

LOAD BASED ON FIELD OBSERVATIONS AND/OR MAXIMUM CIRCUIT CAPACITY.

THE EXISTING ELECTRICAL PANEL IS ADEQUATE TO HANDLE THE ADDITIONAL LOAD

ADC
ARCHITECTURAL DESIGN COLLABORATIVE
235 ALCAZAR AVENUE
CORAL GABLES, FL 33134
OFFICE: (305) 442-1188
FAX: (305) 445-1509
WWW. ADCINTERNATIONAL.NET

STATE OF NORTH CAROLINA #52695
RAYMUNDO FEITO #11887
Architect • Seal/Signature

Construction Documents for:

BANK OF AMERICA DRIVE-UP ATM INSTALLATION

at:
CARRBORO BANKING CENTER
104 EAST MAIN STREET,
CARRBORO, NC 27510

Issue	Date & Issue Description	Drawn By	Checked By
01	12/31/12	JG	P&G
	PERMIT ISSUE		
02	06/04/13	JG	P&G
	BLDG COMMENTS		

Date & Delta Description	Drawn By	Checked By

ARCHITECTURE•PLANNING•INTERIOR DESIGN•SPACE PLANNING

Client Information

C.B. RICHARD ELLIS
3604 TRAIL 23
DURHAM, NC 27707
PH: 919-280-8447
CONTACT: Dan O'Toole

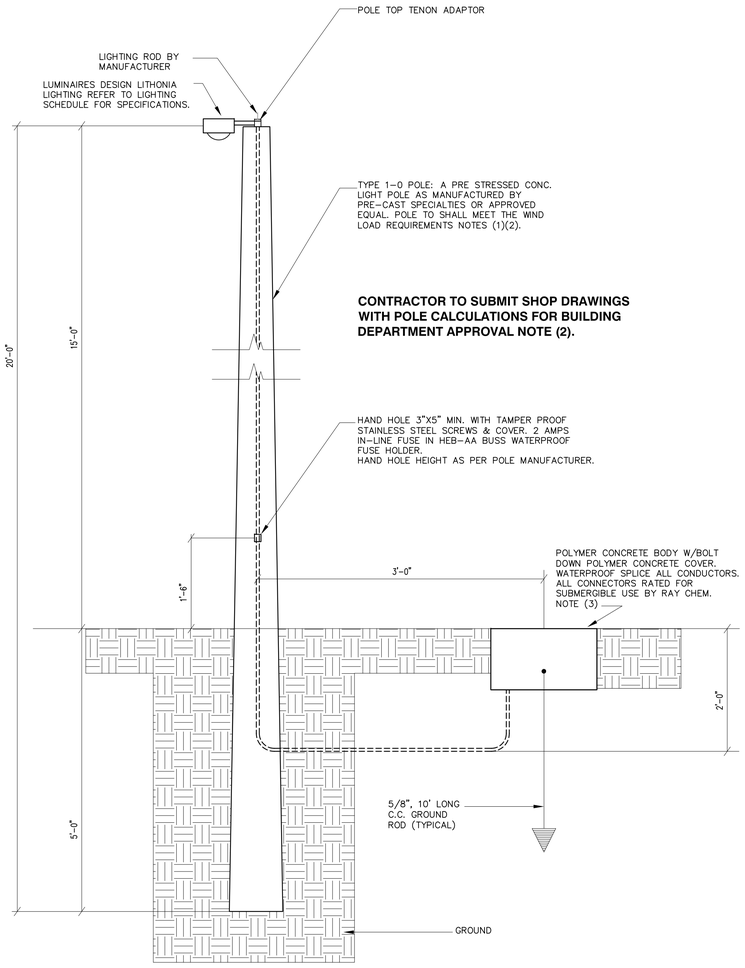
Project Number
12374
CAD File Name
BOA-CARRBORO-D/U ATM CDs
Description
PHOTOMETRIC LIGHTING PLAN, ELECTRICAL POWER PLAN, NOTES AND ELECTRICAL PANEL SCHEDULE.
Scale
SEE PLAN

Consultant • Seal/Signature

P&G ENGINEERING DESIGN GROUP CORP. CA-29977
21 SW 102 Ct. Miami, FL. 33174
Ph. 786.863-7
Fax. 305. 220.
LUIS O. PEREZ
NORTH CAROLINA, PE 039629

ELECTRICAL PLANS

E-2.0

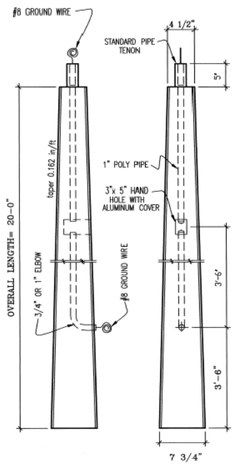


POLE DIRECTLY BURIED IN THE GROUND

NOTES ON POLE:

1.- PRESTRESSED CONCRETE POLE MINIMUM HEIGHT 20' TO PROVIDE 15' AFF AND PROVIDED WITH TOP TENON.
2.- POLE AND LIGHTING FIXTURES ASSEMBLY SHALL MEET WITH STATE AND LOCAL CODES WIND LOAD REQUIREMENTS.SUBMIT WIND LOAD CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER FOR APPROVAL.
3.- HAND HOLE TO BE 3"X5" MINIMUM,AND TO HAVE A WEATHERPROOF GASKETTED COVER.
4.- POLE TENON ADAPTOR SHALL BE COORDINATED WITH LIGHTING FIXTURE MANUFACTURER.
5.- FOR COORDINATION ON POLE TENON ADAPTOR AND LIGHT FIXTURES EPA CALL LITHONIA REPRESENTATIVE GROVER SALZER (954)615-0460.

1



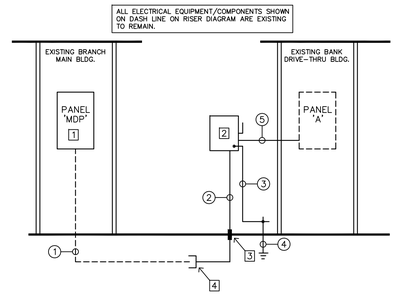
LENGTH OF POLE	20 FT.		
EMBEDMENT SPECIFIED	5 FT.		
HEIGHT ABOVE GROUND	15 FT.		
WEIGHT	770 LBS.		
WIND VELOCITY (mph)	120	140	150
MAXIMUM EPA* (sq. ft.)	8	4	3

Above embedment shown in Rock. Other embedment depth may be required for other soil condition.

STANDARD PIPE TENON SIZE	
Nominal Diameter (in)	Outside Diameter (in)
2"	2 3/8"
2 1/2"	2 7/8"
3"	3 1/2"
3 1/2"	4"
4"	4 1/2"

Please order tenon by nominal diameter.

20 ft. TYPE I-0 POLE



PARTIAL ELECTRICAL RISER DIAGRAM

N.T.S.

ELECTRICAL RISER LEGEND

1. EXISTING CONDUIT AND BRANCH CIRCUIT TO BE INTERCEPTED AND RE-ROUTED AS INDICATED. CONTRACTOR SHALL REPLACE EXISTING WIRING (EXISTING 100A FEEDER).
2. NEW CONDUIT MATCHING EXISTING CONDITIONS. CONTRACTOR SHALL PROVIDE ADDITIONAL PULL BOX IF REQUIRED PER FIELD CONDITIONS.
3. #4 THWN CU GND.
4. 1-5/8"X10' GND ROD.
5. NEW 4-#2 & 1-#4 GND THWN CU WIRE IN NEW 1-1/4" RMC.

1. EXISTING ELECTRICAL PANEL "MDP" TO BE REUSED. (3 POLE-100A C.B. SERVING EXISTING PANEL "A")
2. PROVIDE NEW HEAVY-DUTY SERVICE DISCONNECT 3 POLE/100A MAX./100A FUSES, 240 VAC, 10 kAIC, NEMA 3R.
3. PROVIDE TRANSITION FROM PVC TO GALVANIZED RIGID CONDUIT, IF REQUIRED.
4. INTERCEPT EXISTING CONDUIT AND PROVIDE PULL BOX IF REQUIRED..

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Client Information

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DURHAM, NC 27707
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CONTACT: Dan O'Toole

Project Number
12374
CAD File Name
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Description
LIGHTING POLE DETAILS
Scale
SEE PLAN

Consultant • Seal/Signature

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21 SW 102 Ct. Miami, FL. 33174
PH. 786.863-
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LUIS O. PEREZ
NORTH CAROLINA, PE 039629

ELECTRICAL PLANS

E-3.0

ARCHITECTURE • PLANNING • INTERIOR DESIGN • SPACE PLANNING

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — Use for parking lots, streets and surrounding areas.

CONSTRUCTION — Heavy gauge die-formed aluminum housing is fabricated using robotic continuous seam-weld process for weather-tight integrity. Integral structural support plate for mounting arm and electrical components ensures rigidity and strength. Hinged aluminum door frame incorporates stainless steel hardware. Continuous silicone gasketing surrounds lens for weather-tight seal. Optional tool-less hardware is available to maximize installation and maintenance ease.

Lens: Thermal shock resistant tempered glass lens. Choice of contoured drop lens or flat lens is available in standard product.

Standard finish is dark bronze corrosion resistant electrostatically applied powder paint. Optional linear embossed accent reveals are available.

OPTICS — Most flat lens configurations meet full-cutoff criteria. See www.lithonia.com for details. Vertical-lamp reflectors are 1-piece spun and formed anodized aluminum. Specialized distributions available for either drop lens or flat lens. Reflectors are independently designed to optimize light output for the lens type. Horizontal-lamp reflectors also available.

ELECTRICAL — All electrical components are mounted to a heavy-gauge plate to maximize heat dissipation and ensure structural integrity for optimal component life. Ballast: Constant wattage autotransformer. Metal Halide: Super CWA (pulse start ballast), 88% efficient and EISA legislation compliant, is required for 175-400W (SCWA option) for US shipments only. CSA, NOM or INTL required for probe start shipments outside of the US. Pulse-start ballast (SCWA) required for 200W, 320W, 350W, 450W, 750W, 775W or 875W. Ballast is 100% factory-tested.

Socket: Mogul-base porcelain socket with copper alloy, nickel-plated screw shell and center contact. Vertically-oriented for types SYM, ASY, and VFA distributions. Horizontal position-oriented for types R2, R3 and R4. UL listed 1500W-600V, 4kV pulse rated. Reflectors are rotatable and interchangeable.

INSTALLATION — Extruded aluminum arm with integral splice compartment. Standard arm is 9″ in length. Aluminum fitter for 4" to 6" OD poles.

LISTINGS — UL Listed to US and Canadian safety standards (see Options). NOM Certified (see options). UL listed for 25°C ambient and wet locations. Optical chamber IP65 rated.

WARRANTY — 1-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Specifications subject to change without notice.

Square Area Lighting

KVF2

METAL HALIDE: 175-1000W
HIGH PRESSURE SODIUM: 250-1000W
20' to 40' Mounting

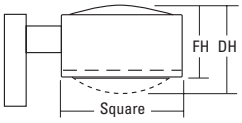
Specifications

Square: 21-1/2 (54.6)
Flat lens height: 14 (35.5)
Drop lens height: 17 (43.2)
Arm mount
EPA: 2.8 ft² (0.25 m²), incl. arm
*Weight: 53 lbs (24 kg)

Post top
EPA: 2.8 ft² (0.25 m²)
Weight: +2 lbs to *
Overall Height: 22-3/4 (57.8)

* Weight as configured in example below.

Dimensions in inches (centimeters)unless otherwise specified.



Mounting Option	Drilling Template
SPxx, RPxx, WBxx WWxx	5 6 7

ORDERING INFORMATION

For shortest lead times, configure products using **bolded options**.

Example: KVF2 400M SYMDL TB SCWA SP09 LPI

KVF2												
Series	**Wattage**			**Distribution**			**Voltage**	**Ballast**		**Mounting**		
KVF2	Metal halide 175M[1] 200M[2] 250M[3] 320M[2] 350M[1,2]	**400M[3]** 450M[1,2] 750M[2] 775M[2,4] 875M[2,4] **1000M[5]**	High pressure sodium[6] 250S 400S 750S 1000S[7]	Vertical lamp:[8] **SYM**__ Symmetric square **ASY**__ Asymmetric **VFA**__ Vertical forward throw automotive Horizontal lamp:[8] R2__ Type II R3__ Type III	High-performance horizontal lamp:[9] SR2FL Type II roadway SR3FL Type III asymmetric SR4SCFL Type IV forward throw, sharp cutoff SR4WFL Type IV forward throw, wide		120 208[10] 240[10] 277 **347** 480[10] TB[11] 23050HZ[12]	**(blank)** Magnetic ballast CWI Constant wattage isolated SCWA Super CWA ballast Note: For shipments to U.S. territories, SCWA must be specified to comply with EISA.		Type SP__ Square pole RP__ Round pole WB__ Wall bracket WW__ Wood pole or wall bracket PT__ Post top; opentop pole	Size[13] 06 6″ arm **09** 9″ arm 12 12″ arm 4 4″ OD 4.5 4.5″ OD 5 5″ OD 6 6″ OD

Options				**Finish**[20]				**Lamp** *(required)*	
Shipped installed in fixture			Shipped separately[17]	**(blank)**	Dark bronze	DBLXD	Black	**LPI**	Lamp included
SF	Single fuse 120, 277, 347V[14]	EHS	External houseside shield (matches fixture finish)[17, 18, 19]	DBL	Black	DNAXD	Natural aluminum	**L/LP**	Less lamp
DF	Double fuse 208, 240, 480V[14]	EHSB	External houseside shield black (painted black to maximize light control)[17, 19]	DGC	Charcoal gray	DWHXD	White		
KW1	KiloWatch® 120V control relay[14, 15]	**CSA**	Listed and labeled to comply with Canadian Standards	DMB	Medium bronze	DDBTXD	Textured dark bronze		
KW4	KiloWatch® 277V control relay[14, 15]	NOM	NOM certified[12]	DNA	Natural aluminum	DBLBXD	Textured black		
PER	NEMA twist-lock receptacle only (photocontrol not included)	INTL	Available for 175M probe start shipping outside the U.S.	DWH	White	DNATXD	Textured natural aluminum		
QRS	Quartz restrike system[16]	REGC1	California Title 20 effective 1/1/2010	Super Durable Finishes		DWHGXD	Textured white		
QRSTD	QRS time delay[12, 16]	VG	Vandal guard[18, 19]	DDBXD	Dark bronze				
EA	Embossed accent	PE1	NEMA twist-lock PE (120,208,240V)						
		PE3	NEMA twist-lock PE (347V)						
		PE4	NEMA twist-lock PE (480V)						
		PE7	NEMA twist-lock PE (277V)						
		SC	Shorting cap						

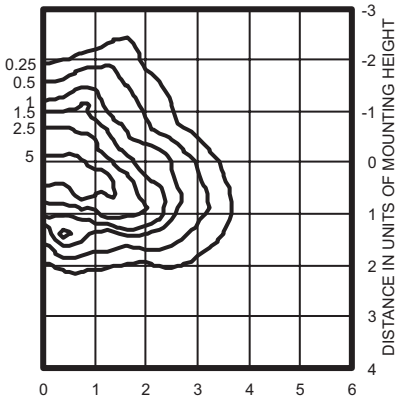
Notes

1 These wattages do not comply with California Title 20 regulations.
2 Must be ordered with SCWA.
3 These wattages require the REGC1 option to be chosen for shipments into California for Title 20 compliance. 250M REGC1 in not available in 347 or 480V.
4 Must specify voltage (120, 208, 240, 277, 347 or 480). Not available in TB. 208, 240, and 480v not available in Canada.
5 Use reduced jacketed lamp.
6 Not available with SCWA. 750S – must specify voltage (120, 208, 240, 277, 347 or 480); available with SYM, ASY or VFA only.
7 Available in ASYDL, SYMDL or VFADL. Standard ED25 lamp.
8 For drop lens, specify DL. For flat lens, specify FL. Example: SYMDL or R2FL.
9 Not available with 750M, 775M, 875M, 1000W or post top.
10 Must specify CWI for use in Canada.
11 Optional multi-tap ballast (120, 208, 240, 277V; 120, 277, 347V in Canada).
12 Consult factory for available wattages.
13 12" arm required when two or more luminaires are oriented on a 90° drilling pattern.
14 Not available with TB. Must specify voltage.
15 Available in vertical lamp orientation only for 200-400M SCWA. Any orientation on 250S or 400S only.
16 Maximum allowable wattage lamp included.
17 May be ordered as an accessory.
18 Specify finish when ordered as an accessory.
19 Prefix with KVF2 when ordering as an accessory. Order as KVF2EHSFL U for high-performance reflectors.
20 See www.lithonia.com/archcolors for additional color options.

KVF2 Arm-Mounted Area Lighting

KVF2 250M SR2FL TEST NO: LTL11250P

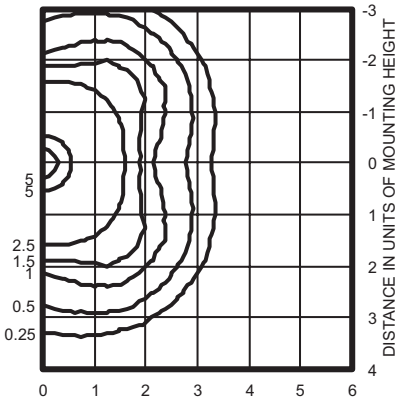
ISOILLUMINANCE PLOT (Footcandle)



250W pulse start metal halide lamp, rated 22500 lumens. Footcandle values based on 20' mounting height.
Classification: Type II, Short, Full Cutoff

KVF2 400M SYMFL TEST NO: LTL9432P

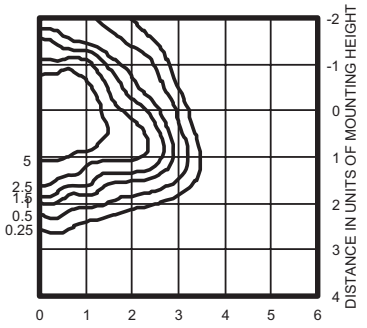
ISOILLUMINANCE PLOT (Footcandle)



400W pulse start metal halide lamp, rated 42000 lumens. Footcandle values based on 20' mounting height.
Classification: Type IV, Short, Full Cutoff

KVF2 400S R3FL TEST NO: LTL11324

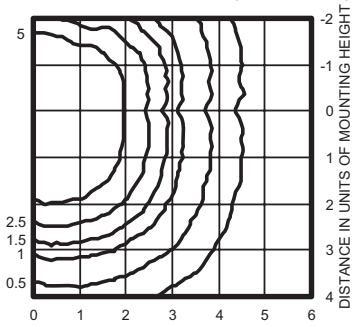
ISOILLUMINANCE PLOT (Footcandle)



400W lamp, rated 50000 lumens. Footcandle values based on 20' mounting height.
Classification: Type II, Medium, Full Cutoff

KVF2 1000M ASYDL TEST NO: LTL11381

ISOILLUMINANCE PLOT (Footcandle)



1000W lamp, rated 110000 lumens. Footcandle values based on 20' mounting height.
Classification: Type IV, Short, Cutoff

Mounting Height Correction Factor

(Multiply the fc level by the correction factor)

25 ft.= 0.64

30 ft.= 0.45

40 ft= 0.25

$$\left(\frac{\text{Existing Mounting Height}}{\text{New Mounting Height}}\right)^2 = \text{Correction Factor}$$

Notes

1 Photometric data for other distributions can be accessed from the Lithonia Lighting Web site (www.lithonia.com)

2 For electrical characteristics, consult outdoor technical data specification sheets on www.lithonia.com.

3 Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory and actual field measurements. Dimensions and specifications are based on the most current available data and are subject to change.

Accessories: Tenon Mounting Slipfitter*
Order as separate catalog number.

Tenon O.D.	One	Two@180°	Two@90°	Three@120°	Three@90°	Four@90°
2-3/8 (6.0)	T20-190	T20-280	T20-290	T20-320	T20-390	T20-490
2-7/8 (7.3)	T25-190	T25-280	T25-290	T25-320	T25-390	T25-490
4 (10.2)	T35-190	T35-280	T35-290	T35-320	T35-390	T35-490

* Arm mount only.

LITHONIA LIGHTING®
An AcuityBrands Company

KVF2-M-S

OUTDOOR: One Lithonia Way Conyers, GA 30012 Phone: 800-279-8041 Fax: 770-918-1209 www.lithonia.com

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — For building- and wall-mounted applications.

CONSTRUCTION — Rugged, die-cast, single-piece aluminum housing. Die-cast doorframe has impact-resistant, tempered glass lens. Doorframe is fully sealed with a closed-cell silicone gasket.

Finish: Standard finish is textured dark bronze (DDBT) polyester powder finish, with other architectural colors available.

OPTICS — Hydroformed reflector for superior uniformity and control. Vertical lamp orientation for improved lamp output and life.

ELECTRICAL — HID 70W-150W utilizes a high-reactance, high power factor ballast. 175W utilizes a constant-wattage autotransformer ballast. Super CWA Pulse Start ballasts, 88% efficient and EISA legislation compliant, are required for 151-200W (must order SCWA option) for US shipments only. CSA, NOM or INTL required for probe start shipments outside of the US. 200M is only available with SCWA. HEB maximum wattage 100M. Quick-disconnect plugs easily disconnect reflector from ballast and fixture from supply wires. Ballasts are precision-wound and 100% factory tested. Ceramic metal halide lamps are recommended for use in applications where superior color rendition, lumen maintenance and longer lamp life are desired.

Socket: For HID porcelain, medium-base socket (G12 for 70MHCT6) with copper alloy, nickel-plated screw shell and center contact.

INSTALLATION — Universal mounting plate with integral mounting bolts supports the fixture for easy, one-person installation.

LISTINGS — CSA Certified to U.S. and Canadian standards. Down orientation only. NOM Certified (see Options). **IP65 rated**. HID-175W and below-listed to 40° C ambient. 200W listed to 25° C ambient. The ELED option is listed to 25°C ambient. ELED: U.S. Patent No. 7,737,640.

Note: Specifications subject to change without notice.

Wall-Mounted Luminaire

TWF1

METAL HALIDE: 70M-200M
HIGH PRESSURE SODIUM: 70S-150S

Specifications

Width: 16 (40.6)

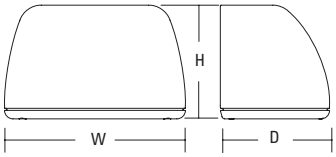
Height: 10 1/16 (25.6)

Depth: 9-5/8 (24.4)

*Weight: 24 lbs (10.9 kg)

All dimensions are inches (centimeters) unless otherwise indicated.

*Weight as configured in example below.



NIGHTTIME FRIENDLY™
Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: TWF1 100M TB LPI

TWF1							
Series	**Wattage**	**Voltage**	**Ballast**	**Mounting**	**Options**	**Finish**[16]	**Lamp**[17]
TWF1	Metal halide 70M 100M 150M 175M 200M Ceramic metal halide[1] 70MHC 100MHC 150MHC 70MHCT6 High pressure sodium 70S 100S 150S	120 208[2] 240[2] 277 347 480[2] TB[3] 23050HZ[4]	(blank) Magnetic ballast CWI Constant wattage isolated HEB Electronic ballast[5] SCWA Super CWA pulse start ballast[6] Note: For shipments to U.S. territories, SCWA must be specified to comply with EISA.	(blank) Surface mount Shipped separately[7] BBW Surface mount[8]	Shipped installed in fixture SF Single fuse (120, 277, 347V, n/a TB) DF Double fuse (208, 240, 480V, n/a TB) QRSTD Quartz restrike with time delay[9,10] QRS Quartz restrike system[9,10] EC Emergency circuit[9, 10] ELED Emergency LED secondary source battery pack (-4° F min. operating temperature)[10, 11, 12] 2ELED Emergency LED secondary source (two modules) battery pack (-4° F min. operating temperature)[10, 11, 12, 13] DC12 Emergency circuit 12-volt (35W lamp included)[10, 13] 2DC12 Emergency circuit 12-volt (two 35W lamp included)[10, 13] DC2012 Emergency circuit 12-volt (20W lamp included)[10, 13] 2DC2012 Emergency circuit 12-volt (two 20W lamp included)[10, 13, 14] PE Photoelectric cell-button type (n/a TB or 480V)[12, 15] CSA CSA certified NOM NOM certified[4] INTL International shipment for 175M Shipped separately[7] WG Wire guard VG Vandal guard	(blank) Dark bronze, textured DSST Sandstone, textured DNAT Natural aluminum, textured DWHG White, textured DBLB Black, textured CR Corrosion-resistant finish CRT Non-stick protective coating (black only)	LPI Lamp included L/LP Less lamp

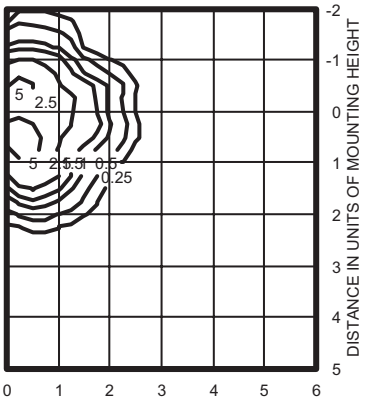
Notes

1 Must be ordered with lamp included (LPI). 70MHCT6 requires HEB ballast option.
2 Must specify CWI in Canada.
3 Optional multi-tap ballast (120, 208, 240, 277V; 120, 277, 347V in Canada--ships as 120/347.
4 Consult factory for availability.
5 Available in 70W or 100W metal halide only. HEB voltage must be specified as MVOLT, 120, 208, 240 or 277 only.
6 Not available with HPS, 70M or 100M.
7 May be ordered as an accessory. Prefix with TWF1.
8 Must specify finish when ordered as an accessory. Not available with ELED or 2ELED.
9 Maximum allowable wattage lamp included.
10 Cannot be ordered with any other emergency option.
11 Maximum wattage 100M and 70S. Only available in 120V or 277V.
12. Must specify voltage.
13 Not available with SF or DF.
14 Consult factory for maximum HID wattage available with this option.
15 Must be ordered with fixture; cannot be field installed.
16 See www.lithonia.com/archcolors for additional color options.
17 Must be specified.

TWF1 Metal Halide, High Pressure Sodium, Wall Mounted

TWF1 100M TEST NO: LTL18073

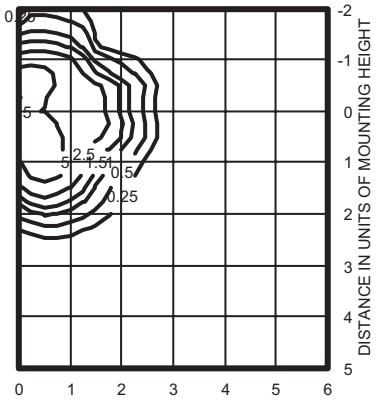
ISOILLUMINANCE PLOT (Footcandle)



100W pulse start metal halide lamp, horizontal lamp orientation Footcandle values based on 12' mounting height, 8500 rated lumens.
Luminaire Efficiency: 56.3%

TWF1 150M TEST NO: LTL18072

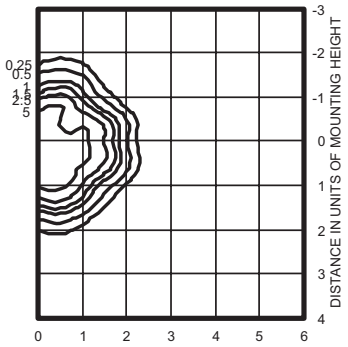
ISOILLUMINANCE PLOT (Footcandle)



150W pulse start metal halide lamp, horizontal lamp orientation Footcandle values based on 12' mounting height, 12900 rated lumens.
Luminaire Efficiency: 56.3%

TWF2 250S TEST NO: LTL18477

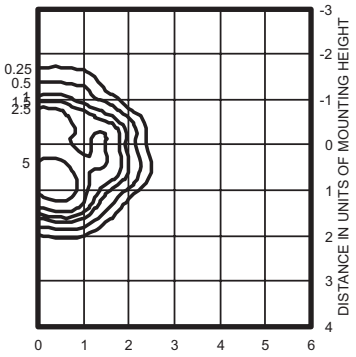
ISOILLUMINANCE PLOT (Footcandle)



250W lamp, rated 29000 lumens. Footcandle values based on 20' mounting height.
Classification: Unclassified (Type II, Very Short), Full Cutoff
Luminaire Efficiency: 60.8%

TWF2 250M TEST NO: LTL18478

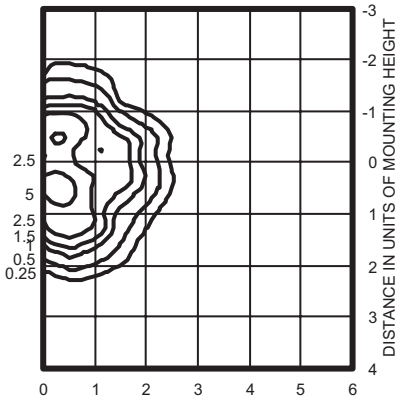
ISOILLUMINANCE PLOT (Footcandle)



250W pulse start metal halide lamp, rated 22000 lumens. Footcandle values based on 20' mounting height.
Classification: Unclassified (Type II, Very Short), Full Cutoff
Luminaire Efficiency: 60.2%

TWF1 200M TEST NO: LTL18074

ISOILLUMINANCE PLOT (Footcandle)



200W pulse start metal halide lamp, rated 21000 lumens. Footcandle values based on 20' mounting height.
Classification: Unclassified (Type III, Very Short), Full Cutoff
Luminaire Efficiency: 56.3%

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