Stantec Consulting Services Inc.
778 Main Street Suite 8, South Portland ME 04106-5447

February 23, 2016

Ms. Jean Fraser
City of Portland Planning
389 Congress Street
Portland, ME 04101

Subject: 421 Warren Avenue Site Plan Revision
Email Comments Received by Jean Fraser Dated February 16, 2016
Letter of Response #1

Dear Ms. Fraser:

Our office has received and reviewed your comments dated February 16, 2016 associated with the proposed Site Plan Revision at 421 Warren Avenue in Portland. For ease of reference, we have provided a summarized version of the comments below in *italics* followed by our response.

Comment 1:

Location and baffling of the new generator: *The B4 zone includes noise limits of 60 DbA night and 65 DbA day and its location so near the boundary may make that difficult. Also it needs some kind of screening or enclosure. I would like to see the specs for the sound generation (when operating) for that unit as my experience tells me it may be too close to the boundary. Could it go farther back on the site?*

Response:

The specifications associated with the proposed generator accompany this letter. The noise levels associated with the generator are as follows:

- Exercising at 7 meter (23') = 54 dba
- Normal operation at 7 meters (23') = 60 dba

The generator is to be used only in emergency situations and thus we believe its operating noise level is well within acceptable levels. Further, the generator is located to the side of the building. The nearest building (containing Harbor Auto Body) is located approximately 72 feet to the east and that building is also owned by Peter Holmes, who has indicated no objection to the placement of the generator. For these reasons, we see no need to relocate the generator.

Comment 2:

Parking: *Please amend the site plan (attached) so that there is no parking shown in front of the garage doors and main entrance for the two bay in-shop area for glass repairs with a customer waiting area. The area in front of the entrance door should be striped and ideally there should be ADA access and ADA parking for customers waiting to go into the bay. Maybe a sign saying "customer parking" so those spaces get reserved?*

Response:

The Site Plan has been modified to realign the parking area striping to avoid conflict with overhead and entry doors. We have also added an ADA space at the front of the office area. The site will contain at least 35 parking spaces which is considered more than enough for the intended use and expected parking demand.

Comment 3:

Lighting: *We approved the lighting plan (attached) based on it being a commercial use with no or little public use. Now that the public are on the site at the end near Warren, I think the lighting needs to evaluated in terms of safety for customers. If customers need to park in the parking spaces away from the building there is no light there. I'd like it documented that the public safety and public security (CPTED) issues (site plan standards) here has been addressed.*

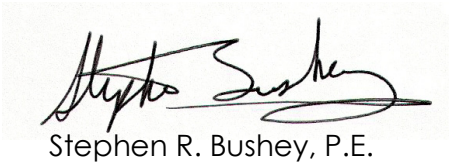
Response:

The Lighting Plan has been updated to provide two additional building mounted light fixtures. These have been added to the front left corner of the building and in the area of the new loading dock. We believe there is adequate lighting along the front of the building to assure safety and security. There are existing pole mounted lights along the main project entrance off Warren Avenue; therefore, provide some lighting coverage along the entrance. On this basis, the owner is seeking to not install any additional pole mounted lights on the outside of the new parking area.

If you have any questions with regards to the information submitted, please contact our office.

Regards,

STANTEC CONSULTING SERVICES INC.



Stephen R. Bushey, P.E.
Associate
Phone: 207-775-1121
Fax: 207-879-0896
sbushey@fstinc.com

Attachment

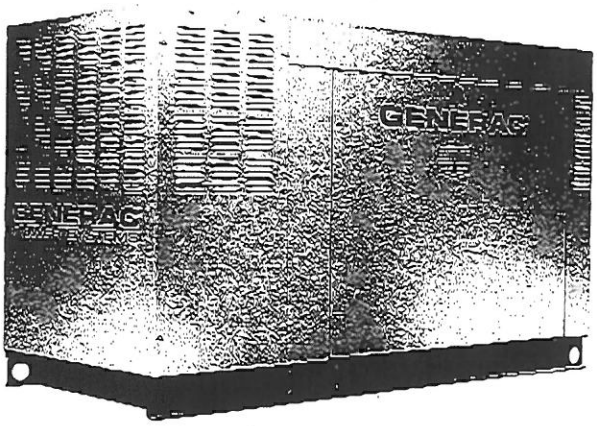
c: Peter Holmes
John Kraft – Safelight
Jim Biskup – Biskup Construction

r:\stantec\195350330 safelight warren ave\civil\admin\working_documents\ltr_fraser_lor1_2016-02-23.docx

QT025

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
25 kW 60 Hz



GENERAC 2.4L ENGINE
Naturally Aspirated
Gaseous Fueled
QTO25A

STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 10 Amp static battery charger
- Battery and battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line
- Coolant heater

FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with H100 digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration Isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

QT025

GENERATOR SPECIFICATIONS

TYPE	Synchronous
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<5%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR OUTPUT LEADS 3 PHASE	4 wire
BEARINGS	Sealed Ball
COUPLING	Flexible Disc
LOAD CAPACITY (STANDBY RATING)	25 kW
EXCITATION SYSTEM	Direct

NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

VOLTAGE REGULATOR

TYPE	Full Digital
SENSING	3 Phase
REGULATION	± 1/4%
FEATURES	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

GENERATOR FEATURES

- ❒ Revolving field heavy duty generator
- ❒ Directly connected to the engine
- ❒ Operating temperature rise 120 °C above a 40 °C ambient
- ❒ Insulation is Class H rated at 150 °C rise
- ❒ All prototype models have passed three phase short circuit testing

CONTROL PANEL FEATURES

❒ TWO FOUR LINE LCD DISPLAYS READ:

- Voltage (all phases)
- Power factor
- kVAR
- Engine speed
- Run hours
- Fault history
- Coolant temperature
- Low oil pressure shutdown
- Overvoltage
- Low coolant level
- Not in auto position (flashing light)
- Transfer SW type
- Current (all phases)
- kW
- Transfer switch status
- Low fuel pressure
- Service reminders
- Oil pressure
- Time and date
- High coolant temperature shutdown
- Overspeed
- Low coolant level
- Exercise speed

❒ INTERNAL FUNCTIONS:

- I^2T function for alternator protection from line to neutral and line to line short circuits
- Emergency stop
- Programmable auto crank function
- 2 wire start for any transfer switch
- Communicates with the Generac HTS transfer switch
- Built-in 7 day exerciser
- Adjustable engine speed at exerciser
- RS232 port for GenLink® control
- RS485 port remote communication
- Canbus addressable
- Governor controller and voltage regulator are built into the master control board
- Temperature range -40 °C to 70 °C

ENGINE SPECIFICATIONS

MAKE	Generac
MODEL	Inline 4
CYLINDERS	4
DISPLACEMENT	2.4 Liter
BORE	3.41
STROKE	3.94
COMPRESSION RATIO	8.5:1
INTAKE AIR SYSTEM	Naturally Aspirated
VALVE SEATS	Hardened
LIFTER TYPE	Hydraulic

GOVERNOR SPECIFICATIONS

TYPE	Electronic
FREQUENCY REGULATION	Isochronous
STEADY STATE REGULATION	± 0.25
ADJUSTMENTS FOR:	
Speed	Yes
Droop	Yes

ENGINE LUBRICATION SYSTEM

OIL PUMP	Gear
OIL FILTER	Full flow spin-on cartridge
CRANKCASE CAPACITY	4 Quarts

ENGINE COOLING SYSTEM

TYPE	Closed
WATER PUMP	Belt driven
FAN SPEED	2150
FAN DIAMETER	18 inches
FAN MODE	Pusher
COOLANT HEATER	1000W 120V

FUEL SYSTEM

FUEL TYPE	Natural gas, propane vapor
CARBURETOR	Down Draft
SECONDARY FUEL REGULATOR	Standard
FUEL SHUT OFF SOLENOID	Standard
OPERATING FUEL PRESSURE	5" - 14" H_2O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	12V 30 Amp
STATIC BATTERY CHARGER	2 Amp
RECOMMENDED BATTERY	Group 26, 525CCA
SYSTEM VOLTAGE	12 Volts

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

QT025

GENERAC®
POWER SYSTEMS, INC.

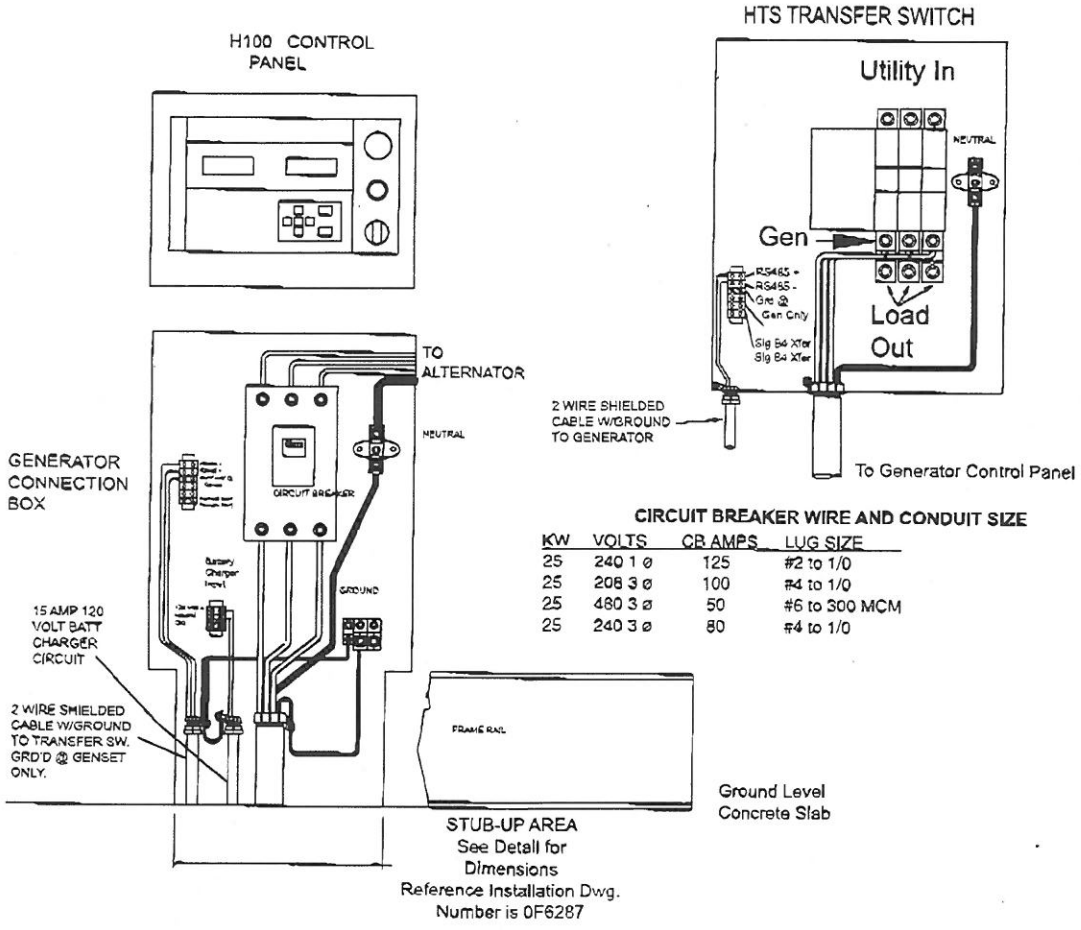
OPERATING DATA

	QT025		
KW RATING	25		
ENGINE SIZE	2.4 Liter 4 cylinder		
GENERATOR OUTPUT VOLTAGE/KW - 60Hz	**KW**	**AMP**	**CB Size**
120/240V, 1-phase, 1.0 pf	25	104	125
120/208V, 3-phase, 0.8 pf	25	87	100
277/480V, 3-phase, 0.8 pf	25	38	50
120/240V, 3-phase, 0.8 pf	25	75	80
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%			
Single phase or 208 3-phase	43		
480V 3-phase	57		
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)	**Natural Gas**	**Propane**	
	(ft^3/hr.)	(gal/hr.)	cu ft/hr
Exercise cycle	60	0.65	24
25% of rated load	140	1.53	56
50% of rated load	220	2.40	87
75% of rated load	300	3.27	119
100% of rated load	380	4.15	151
ENGINE COOLING			
Air flow (inlet air including alternator and combustion air) ft^3/min.	1,500		
System coolant capacity US gal.	2.5		
Heat rejection to coolant BTU/hr.	95,000		
Max. operating air temp. on radiator °C (°F)	60 (150)		
Max. ambient temperature °C (°F)	50 (140)		
COMBUSTION AIR REQUIREMENTS			
Flow at rated power 60 Hz cfm	70		
SOUND EMISSIONS IN DBA			
Exercising at 7 meters	54		
Normal operation at 7 meters	60		
EXHAUST			
Exhaust flow at rated output 60 Hz cfm	220		
Exhaust temp. at muffler outlet °F	975		
ENGINE PARAMETERS			
Rated synchronous RPM 60 Hz	1800		
HP at rated KW 60 Hz	40		
POWER ADJUSTMENT FOR AMBIENT CONDITIONS			
Temperature Deration			
3% for every 10 °C above - °C	25		
1.65% for every 10 °F above - °F	77		
Altitude Deration			
1% for every 100 m above - m	183		
3% for every 1000 ft. above - ft.	600		

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

KW rating is based on LPG Fuel and may derate with natural gas.

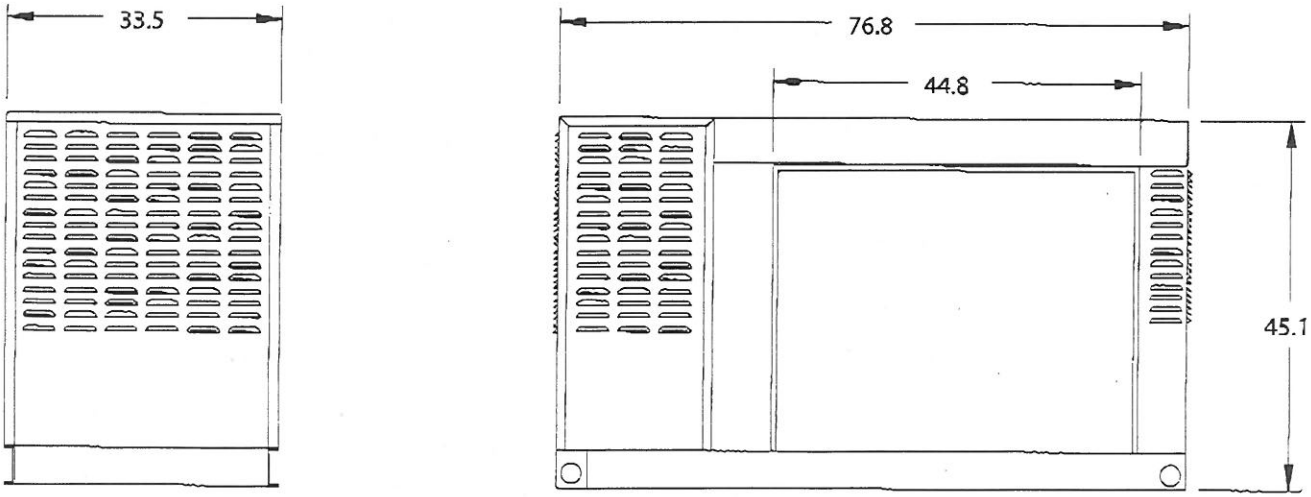
INTERCONNECTIONS



CIRCUIT BREAKER WIRE AND CONDUIT SIZE

KW	VOLTS	CB AMPS	LUG SIZE
25	240 1 ø	125	#2 to 1/0
25	208 3 ø	100	#4 to 1/0
25	480 3 ø	50	#6 to 300 MCM
25	240 3 ø	80	#4 to 1/0

INSTALLATION LAYOUT



GENERAC® POWER SYSTEMS, INC. • P.O. BOX 8 • WAUKESHA, WI 53187
262/544-4811 • FAX 262/544-4851

Bulletin 0173110SBY / Printed in USA 05.06, rev: 03.07

DIMENSIONAL STANDARD	REQUIRED DIMENSION - B4	PROVIDED
MINIMUM LOT SIZE	10,000 SF	418,393 S.F.
MINIMUM STREET FRONTAGE	60 FEET	140.51 FEET
MINIMUM FRONT YARD	20 FEET OR THE AVERAGE DEPTH OF THE FRONT YARDS ON EITHER SIDE. AVERAGE DEPTH = 1 FOOT	54.85 FEET
MINIMUM REAR YARD	20 FEET	>20 FEET
MINIMUM SIDE YARD	1 OR 2 STORIES = 10 FEET 3 OR MORE STORIES = 12 FEET	20 FEET
MAXIMUM LOT COVERAGE	40% FOR LOTS CONTAINING 20 OR MORE UNITS; 50% FOR LOTS CONTAINING FEWER THAN 20 UNITS.	<40%
MINIMUM LOT WIDTH	60 FEET	>150 FEET
MAXIMUM STRUCTURE HEIGHT	65 FEET EXCEPT ON LOTS IN EXCESS OF 5 ACRES, 90 FEET IS PERMITTED IF EACH OF THE SETBACKS REQUIRED IS INCREASED BY 1 FOOT IN DISTANCE FOR EACH FOOT OF HEIGHT ABOVE 65 FEET	
IMPERVIOUS SURFACE RATIO	80%	<30%

PLAN NOTES

1. THE SUBJECT PARCEL IS NOT LOCATED WITHIN FLOOD HAZARD ZONE AS INDICATED ON FIRM PANEL 2300510006C.
2. OWNER OF RECORD:
   PH WARREN AVENUE, LLC
   C/O 401 WARREN AVENUE
   PORTLAND, MAINE 04103
   CCRD BOOK 30781, PAGE 74
3. SEE FULL PLAN SET TITLED "SITE DEVELOPMENT PLANS FOR MULTI-UNIT COMMERCIAL BUILDING" BY FAY, SPOFFORD & THORNDIKE, INC. DATED APRIL, 2014.
4. SEE COVER SHEET FOR TAX MAP AND LOT REFERENCES. THIS SITE IS LOCATED IN THE B4 ZONE PER THE CITY OF PORTLAND ZONING MAP.
5. SOLID WASTE REMOVAL SHALL BE BY PRIVATE WASTE HAULER UNDER DIRECT CONTRACT TO THE OWNER.
6. ACCESS AND UTILITY RIGHTS SUBJECT TO SHARED ACCESS AND UTILITY AGREEMENT BETWEEN 424 WARREN AVENUE LLC AND P H WARREN AVE, LLC (PROPERTIES ARE CURRENTLY UNDER COMMON OWNERSHIP).
7. TOTAL WETLAND IMPACT = 14,323 SF

PLAN REFERENCES

1. BOUNDARY SURVEY, WARREN AVENUE, PREPARED FOR REALTY RESOURCES CHARTERED, ALFRED J. WAXLER, BY SURVEY, INC. (JOB NO. 04-131) DATED DECEMBER 2004. THE VERSION OF THE PLAN REFERENCED BY FST, INC. WAS UNSIGNED.
2. PLAN DEPICTING THE RESULTS OF A PARTIAL BOUNDARY SURVEY, EXISTING CONDITIONS AND PROPOSED LOT DIVISION MADE FOR P H WARREN AVE, LLC BY NADEAU LAND SURVEYS DATE 01.07.2014 (JOB #2131442BT).

WAIVERS REQUESTED

1. WAIVER FROM SECTION 14-526(4)(b)(i)(b) BICYCLE PARKING SPACES.

SIGN LEGEND

R1-1	R7-8	
STOP	RESERVED PARKING	CUSTOMER PARKING ONLY
24"x24"	12"x18"	12"x18"
A	B	C

LOADING DOCK
EXTERIOR STAIRS
OHD
MAN DOOR, TYP.
90'
10'
20'
10' WIDE ROOF STONE DRIP STRIP
PROPOSED EXPANSION
20' x 90'
1,800 SF
N13° 29' 55"W 83.96
S76° 30' 05"W 50.00
N13° 29' 55"W 286.47
PROPOSED PAVEMENT MARKINGS (TYP)
248.03
S83° 52' 45"W
370.13
S24° 30' 45"W
234.88
S06° 07' 15"E
SWITCHGRASS (8) (PINACUM VIRGATUM 'HEAVY METAL')
6' x 10' EMERGENCY BACK-UP GENERATOR PAD
S83° 52' 45"W 140.51
WARREN AVENUE

30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

NORTH

REV	DATE	DESCRIPTION
7	02.19.16	ADDED SCREENING FOR GENERATOR AND REVISED PAVEMENT MARKINGS/SIGNAGE
6	02.01.16	ADDED BUILDING EXPANSION AND GENERATOR PAD - SITE PLAN AMENDMENT
5	08.11.14	ADDED PLANTING SCHEDULE AND RELEASE TO CITY - FINAL PLANS
4	07.23.14	ADDED DOORS FOR SUBMISSION TO STATE FIRE MARSHALL
3	07.03.14	FINAL PLAN SUBMISSION TO CITY PER CONDITIONS OF APPROVAL
2	04.17.14	FINAL PLAN SUBMISSION TO CITY
1	02.10.14	SUBMITTED TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE
STEPHEN R. BUSHEY
LICENSED
PROFESSIONAL ENGINEER
2/19/16

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT: PH WARREN AVENUE, LLC
COMMERCIAL SITE
421 WARREN AVENUE

SHEET TITLE: SITE LAYOUT AND UTILITY PLAN

CLIENT: PH WARREN AVENUE, LLC
C/O PETER HOLMES
12 WILDWOOD LANE
SCARBOROUGH, ME 04074

ENGINEERS FST Since 1914
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	DED	DATE:	NOVEMBER 2013
DESIGNED:	SRB	SCALE:	1" =30'
CHECKED:	SRB	JOB NO.	195350330
FILE NAME:	SP-M104-SITE		
SHEET	C-3.0		

LIGHT FIXTURE LEGEND

LIGHT FIXTURE A
RAB LIGHTING – WPLEDFC52 – 52 WATT LED
WALL MOUNTED – MOUNTING HEIGHT = 17FT+/–
COLOR: TO BE SELECTED BY OWNER

LIGHT FIXTURE B
RAB LIGHTING – WPLED18 – 18 WATT LED
WALL MOUNTED – MOUNTING HEIGHT = 10FT+/–
COLOR: TO BE SELECTED BY OWNER

NOTES:

* PHOTOMETRIC DATA GENERATED UTILIZING DESIGN MASTER PHOTOMETRIC SOFTWARE
* GRID SPACING = 20' X 20'
* LIGHT LOSS FACTOR = 0.90 (LED)
* LIGHT LEVELS ARE NOT ADJUSTED FOR ELEVATION DIFFERENCES OR BUFFER VEGETATION
* PHOTOMETRIC IES FILES OBTAINED FROM FIXTURE MANUFACTURERS
* ALL FIXTURES TO BE FULL CUTOFF FIXTURES

S76° 30' 05"W
50.00

EXISTING LIGHT POLE
TO REMAIN

N13° 29' 55"W
83.96

RELOCATE EXISTING
LIGHT POLE

EXISTING LIGHT POLE
TO REMAIN

S24° 30' 45"W
370.43

248.03
S83° 52' 45"W

S06° 07' 15"E
234.62

S83° 52' 45"W
140.51

WARREN AVENUE

30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

NORTH

REV	DATE	DESCRIPTION
5	02.19.16	REVISED FOR RESUBMISSION TO CITY
4	08.11.14	RELEASED TO CITY - FINAL PLANS
3	07.03.14	FINAL PLAN SUBMISSION TO CITY PER CONDITIONS OF APPROVAL
2	04.17.14	FINAL PLAN SUBMISSION TO CITY
1	02.10.14	SUBMITTED TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE
STEPHEN R. BUSHEY
No. 7429
LICENSED PROFESSIONAL ENGINEER
2/19/16

P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT: PH WARREN AVENUE, LLC
COMMERCIAL SITE
421 WARREN AVENUE

SHEET TITLE
LIGHTING AND PHOTOMETRICS PLAN

CLIENT: PH WARREN AVENUE, LLC
C/O PETER HOLMES
12 WILDWOOD LANE
SCARBOROUGH, ME 04074

ENGINEERS FST Since 1914
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS · PLANNERS · SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	RJW	DATE:	NOVEMBER 2013
DESIGNED:	SRB	SCALE:	1" =30'
CHECKED:	SRB	JOB NO.	SP-M104
FILE NAME:	SP-M104-PHOTOMETRICS		
SHEET	C-3.1		