

NOTES ON WIRING

QS CONTROL LINK

THE QS CONTROL LINK HAS A FREE WIRING TOPOLOGY (DAISY CHAIN, T-TAP, ETC). THE SYSTEM WIRING ILLUSTRATED BY THIS DRAWING HAS BEEN LAID OUT TO ENSURE APPROPRIATE POWER TO EACH DEVICE. IF FOR ANY REASON THE SYSTEM IS TO BE WIRED DIFFERENTLY THAN WHAT IS SHOWN, PLEASE CONFIRM ALL DEVICE POWER REQUIREMENTS ARE MET (PLEASE REFER TO "QS LINK POWER REQUIREMENTS" FOR INDIVIDUAL DEVICE POWER REQUIREMENTS).

FOR QS CONTROL WIRE LENGTHS TOTALING LESS THAN 500 FT (153 M), USE LUTRON CABLE GRX-CBL-346S (4 CONDUCTOR NON-PLENUM), GRX-PCBL-346S (4 CONDUCTOR PLENUM), OR QS-CBL-LSZH (4 CONDUCTOR LOW-SMOKE ZERO-HALOGEN). OTHERWISE USE 2 #18 AWG (1.0 SQ MM) + 2 #22 AWG (0.5 SQ MM) TWISTED AND SHIELDED OR EQUIVALENT (BELDEN #9461). FOR QS CONTROL WIRE LENGTHS TOTALING UP TO 2,000FT, USE GRX-CBL-46L (4 CONDUCTOR NON-PLENUM) OR GRX-PCBL-46L (4 CONDUCTOR PLENUM). TOTAL QS CONTROL WIRE LENGTH MUST NOT EXCEED 2,000 FT (600 M).

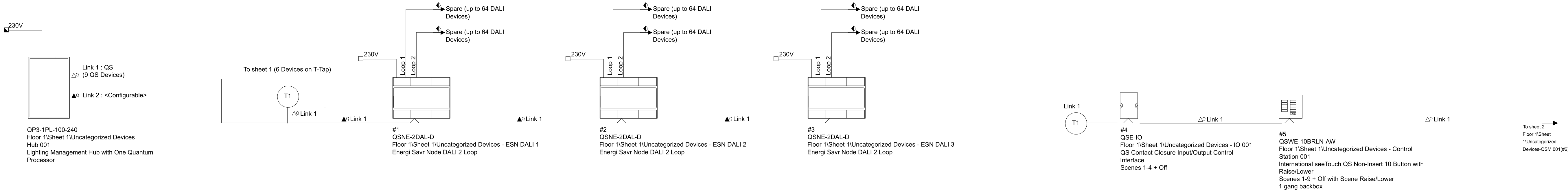
ECOSYSTEM BUS/LOOP\*

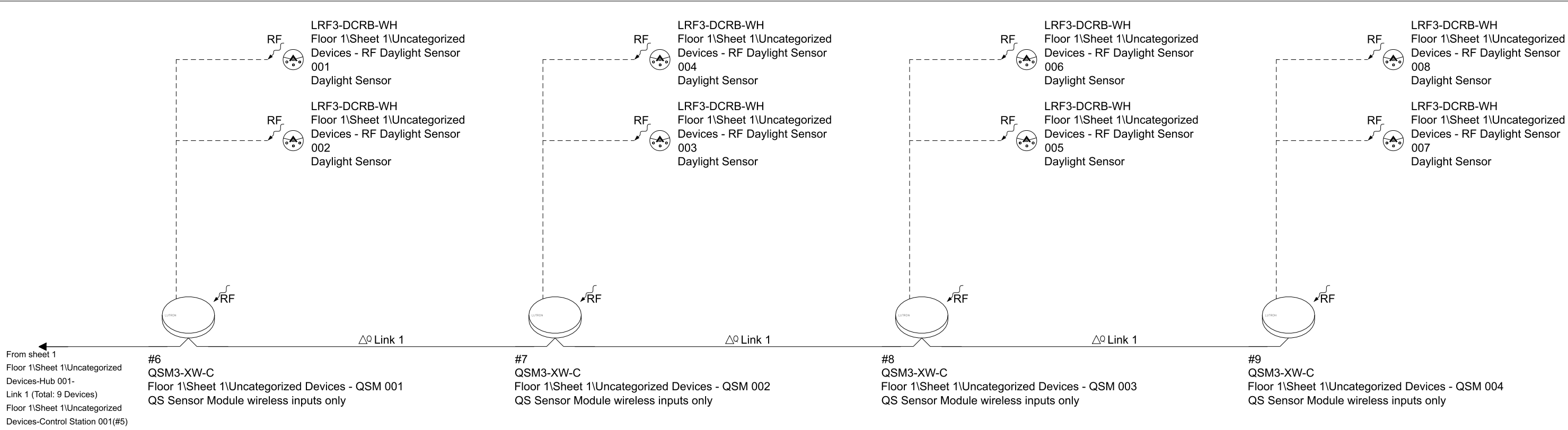
THIS IS A TOPOLOGY-FREE AND POLARITY-FREE WIRING (DAISY-CHAIN, T-TAP, HOME-RUN ETC.). KEEP ALL THE BALLASTS/MODULES IN ONE ROOM ON THE SAME LOOP WHENEVER POSSIBLE. ECOSYSTEM LOOPS ARE SHOWN ON THE LIGHTING PLANS. IF THERE IS A DISCREPANCY, AND IF ROOMS ARE WIRED ON A DIFFERENT LOOP THAN THE ONE SHOWN, LUTRON NEEDS TO BE NOTIFIED AS THIS INFORMATION IS IMPORTANT FOR PROGRAMMING THE SYSTEM. USE LUTRON CABLE C-CBL-216-GR1 (2 #16 CONDUCTOR NON-PLENUM) OR C-PCBL-216-CL-1 (2 #16 CONDUCTOR PLENUM RATED). OTHERWISE USE 2 #16 AWG (1.5 SQ MM) BY OTHERS. LOOP LENGTH IS LIMITED BY THE WIRE GAUGE USED FOR E1 AND E2 AS FOLLOWS:

WIRE GAUGE	MAX LOOP LENGTH
#18 AWG (1.0 SQ MM)	550 FT (167M)
#16 AWG (1.5 SQ MM)	900 FT (274M)
#14 AWG (2.5 SQ MM)	1,400 FT (426 M)
#12 AWG (4 SQ MM)	2,200 FT (670M)

QS LINK POWER REQUIREMENTS	
DEVICE	PDUS
QS DEVICES THAT SUPPLY PDU	
DIN RAIL POWER SUPPLY	+75
MYROOM DIN RAIL POWER SUPPLY	+30
QS PLUG-IN POWER SUPPLY, QS J-BOX POWER SUPPLY	+8
ENERGI SAVR NODE WITH ECOSYSTEM, ENERGI SAVR NODE WITH DALI, ENERGI SAVR NODE WITH T-SERIES TUNABLE-WHITE	+30
ENERGI SAVR NODE FOR 0–10 V, ENERGI SAVR NODE WITH SOFTSWITCH, ENERGI SAVR NODE FOR 0–10 V (DIN RAIL), ENERGI SAVR NODE WITH SOFTSWITCH (DIN RAIL)	+14
ENERGI SAVR NODE PHASE ADAPTIVE (DIN RAIL), 1 A MYROOM DIN RAIL POWER MODULE SWITCHING, 1 A MYROOM DIN RAIL POWER MODULE PHASE ADAPTIVE	+4
ENERGI SAVR NODE WITH DALI (DIN RAIL), ENERGI SAVR NODE WITH ECOSYSTEM (DIN RAIL)	+3
QS MOTOR GROUP CONTROLLER (DIN RAIL), HOMEWORKS QS DIN RAIL POWER MODULES	0
GRAFIK EYE QS (ALL MODELS EXCEPT GRAFIK EYE QS DALI WITH KNX), QS TIMECLOCK	+3
QP2 QUANTUM LIGHTING HUB	LINK A : 0 LINKS B,C,D : +33 EACH
QP3 QUANTUM LIGHTING HUB	LINKS A,B : +33 EACH
QS DEVICES THAT CONSUME PDU	
QS WALLSTATION (SEETOUGH, ARCHITRAVE, SIGNATURE SERIES, QS PICO, KEYSWITCH, SINGLE COLUMN PALLADIOM), QS SLIDER, GRAFIK T SLIDER, QS INFRARED (IR) EYE, WALLBOX INPUT CLOSURE INTERFACE	-1
QS NETWORK INTERFACE, QS DMX INTERFACE, ENERGI SAVR NODE PROGRAMMING INTERFACE, QS WALLSTATION (DOUBLE COLUMN PALLADIOM)	-2
QS SENSOR MODULE (QSM), NOT INCLUDING ATTACHED WIRED SENSORS (SEE SECTION BELOW FOR MORE INFORMATION), QS CONTACT CLOSURE INTERFACE, PALLADIOM ROOM THERMOSTAT	-3
GUESTROOM CONTROL UNIT	-8
SENSORS & DEVICES THAT CONSUME PDUS WHEN WIRED TO A QSM	
LUTRON DAYLIGHT SENSOR, LUTRON INFRARED (IR) RECEIVER, PICO WIRED CONTROLLER	-0.5
ECOSYSTEM WALLSTATION	-1
LOS C SERIES OCCUPANCY SENSOR, HIGH BAY OCCUPANCY SENSOR	-2

LUTRON SERVICES		
QTY	SERVICE TITLE (MODEL NUMBER)	SERVICE DESCRIPTION
	THE QUANTITY OF SERVICES BELOW ARE TO BE INCLUDED AS PART OF THIS PROJECT'S SCOPE OF WORK AND SPECIFIED INTO THE WRITTEN SPEC DOCUMENTS	
PRE-STARTUP SERVICES		
	ONSITE PRE-WIRE VISIT (LSC-PREWIRE)	AN ONSITE VISIT WITH THE ELECTRICAL CONTRACTOR TO DISCUSS LOGISTICAL CONSTRUCTION CONSIDERATIONS INCLUDING THE WIRING AND MOUNTING OF SYSTEM DEVICES, THE CONSTRUCTION SCHEDULE, AND LUTRON DOCUMENTATION. QUANTITY DICTATES THE NUMBER OF VISITS PURCHASED.
	SYSTEM & NETWORK INTEGRATION CONSULTATION (LSC-INT-VISIT)	A CONSULTATIVE VISIT WITH THIRD PARTY INTEGRATORS TO CONFIRM THE SPECIFIED SEQUENCE OF OPERATION AND DISCUSS INTEGRATION PROCEDURES NEEDED IN ORDER TO INTEGRATE WITH THE LUTRON EQUIPMENT. THIS MAY INCLUDE ANY OF THE FOLLOWING THIRD PARTY SYSTEMS: BMS, BAS, IT, NON-LUTRON SHADES, BACNET, AV, OR ENERGY DASHBOARDS.
	SENSOR LAYOUT & TUNING (LSC-SENS-LT)	LUTRON WILL TAKE RESPONSIBILITY FOR LUTRON-PROVIDED SENSOR PLACEMENT AND PERFORMANCE BY CREATING SENSOR LAYOUTS AND COORDINATING SENSOR PLACEMENT BEFORE AND AFTER INSTALLATION. ONCE THE BUILDING IS OCCUPIED, LUTRON WILL RETURN UP TO TWO TIMES TO PERFORM SENSOR FINE-TUNING.
STARTUP SUPPORT SERVICES		
(THESE SERVICES ARE ADDITIONAL TO YOUR SPECIFIED STARTUP BASED ON YOUR REQUIREMENTS)		
	AFTER HOURS STARTUP (LSC-AH-SU)	STARTUP PROVIDED BETWEEN THE HOURS OF 5:00PM – 7:00AM, MONDAY - FRIDAY. THIS SCOPE OF WORK DOES NOT INCLUDE HOLIDAY OR WEEKEND WORK. ADDITIONAL FEES MAY APPLY FOR WORK TO BE COMPLETED ON WEEKENDS (FRIDAY 5:00PM – MONDAY 7:00AM).
	ONSITE SCENE & LEVEL TUNING (LSC-AF-VISIT)	AN ONSITE VISIT WITH THE SPECIFIER OR CUSTOMER REPRESENTATIVE TO REVIEW THE DESIGN INTENT, FINE-TUNE THE SCENE LEVEL PROGRAMMING, AND MAKE ADJUSTMENTS TO TIMECLOCKS.
	ONSITE PERFORMANCE-VERIFICATION WALKTHROUGH (LSC-WALK)	AN ONSITE WALKTHROUGH WITH FACILITY REPRESENTATIVES OR PROJECT COMMISSIONING AGENTS TO DEMONSTRATE THAT THE SYSTEM FUNCTIONALITY MEETS THE DESIGN INTENT. THIS MAY INCLUDE ANY OF THE FOLLOWING ONSITE ACTIVITIES – CONSULTATION/TRAINING DEMOS, FUNCTIONAL TESTING ASSISTANCE, OR INVENTORY OF LUTRON EQUIPMENT.
POST-STARTUP SERVICES		
	CUSTOMER-SITE SOLUTION TRAINING (LSC-TRAINING-SP)	A VISIT TO TEACH SYSTEM USERS HOW TO OPERATE AND MAINTAIN THE LIGHTING CONTROL SYSTEM.
	SYSTEM OPTIMIZATION (LSC-SYSOPT-SP)	AN ONSITE CONSULTATIVE VISIT TO IDENTIFY AND IMPLEMENT LIGHTING CONTROL ADJUSTMENTS TO SAVE ADDITIONAL ENERGY AND CREATE A MORE PRODUCTIVE WORK ENVIRONMENT.
MAINTENANCE & SUPPORT SERVICES		
	SOFTWARE MAINTENANCE AGREEMENT (LSC-SMA-SP)	PROVIDES COMPATIBILITY TESTING RESULTS OF QUANTUM WITH OPERATING SYSTEM PATCHES AND WEB BROWSER UPDATES. INCLUDES AN ELECTIVE FREE SOFTWARE UPGRADE LICENSE.
1	ENHANCED SILVER (LSC-E8S)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A FIRST-AVAILABLE RESPONSE TIME; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	ENHANCED GOLD (LSC-E8G)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A 72-HOUR RESPONSE TIME AND AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	ENHANCED PLATINUM (LSC-E8P)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A 24-HOUR RESPONSE TIME AND AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	SILVER TECHNOLOGY SUPPORT PLAN (LSC-SILV-IW)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR WITH A FIRST-AVAILABLE ONSITE OR REMOTE RESPONSE TIME.
	GOLD TECHNOLOGY SUPPORT PLAN (LSC-GOLD-IW)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON LABOR WITH A 72-HOUR ONSITE OR REMOTE RESPONSE TIME. ALSO INCLUDES AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT EACH YEAR.
	PLATINUM TECHNOLOGY SUPPORT PLAN (LSC-PLAT-IW)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR WITH A 24-HOUR ONSITE OR REMOTE RESPONSE TIME. ALSO INCLUDES AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT EACH YEAR.
	PREVENTIVE MAINTENANCE VISIT(S) (LSC-SCH-MAINT)	SCHEDULED MAINTENANCE VISIT TO PERFORM PREVENTIVE MAINTENANCE, MINOR PROGRAMMING, AND CONDUCT SYSTEM TRAININGS. QUANTITY IS IN ADDITION TO ANY YEARLY VISITS SPECIFIED WITH AN ENHANCED WARRANTY OR TECHNOLOGY SUPPORT PLAN.
PLEASE GO TO <a href="http://WWW.LUTRON.COM/SERVICES">WWW.LUTRON.COM/SERVICES</a> FOR FURTHER INFORMATION.		





# One-Line

## Wire Legend

- △ QS Control Link (Connect wires 1, 2, 3 and 4)\*
- ▲ QS Control Link (Connect wires 1, 3 and 4. Do not connect wire 2)\*
- ▽ Panel Control Link (Connect wires 1, 2, 3, 4 and 5)\*
- ▼ Panel Control Link (Connect wires 1, 2, 3 and 4. Do not connect wire #5)\*
- ▷ Panel Control Link (Connect wires 1, 3, 4 and 5. Do not connect wire #2)\*
- < QS Sivoia Shade Control Link\*
- ▲ Belden Cable 1387LA(Or Equivalent)
- Normal Input Power 2 #12 AWG (4 sq mm) + ground
- Normal-Emergency Input Power 2 #12 AWG (4 sq mm) + ground
- ③ 3 Phase 4 wire Input Power, 4 #12 AWG (4 sq mm) + ground
- 2 #12 AWG (4 sq mm) + ground
- 3 #12 AWG (4 sq mm) + ground
- ◆ 0-10 V Signal: 2#18AWG (1.0 sq mm)
- 2#18 AWG (1.0 sq mm)
- ∞ 3#18 AWG (1.0 sq mm)
- ◇ EcoSystem Bus/Loop\*
- ◆ DALI Loop
- ◇ T-Series Tunable-White Loop
- Lutron Sensor Cable C-CBL-522S or use 4#22 AWG (1.0 sq mm)
- Lutron Sensor Cable C-CBL-522S or use 3#22 AWG (1.0 sq mm)
- DMX Cable. Use Lutron GRX-CBL-DMX-250/GRX-CBL-DMX-500 or Beldon #9729 (Non-plenum) or Beldon #89729 (Plenum) or Dura Flex 22/4 WA Cable.
- Ethernet cable. CAT5E or better cable for Lutron Network terminated with RJ45 connectors (not provided by Lutron). 328 ft (100 m) maximum run.
- Fiber optic cable for Lutron Network terminated with appropriate fiber optic connectors (not provided by Lutron). Requires dedicated fiber optic link (single-mode or multi-mode)
- — RF Connection
- Wired Connection

\*Please refer to Notes on Wiring for more wiring guidelines.  
\*\*Refer to Load Schedule for feed and load information

### Project Name:

2130625

### Location:

Paris, Mainland

### Project Number:

1.1

### Created by:

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### File Name:

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For detailed definition of product capabilities refer to product specification submittal sheets.

▲ NOT FOR CONSTRUCTION



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