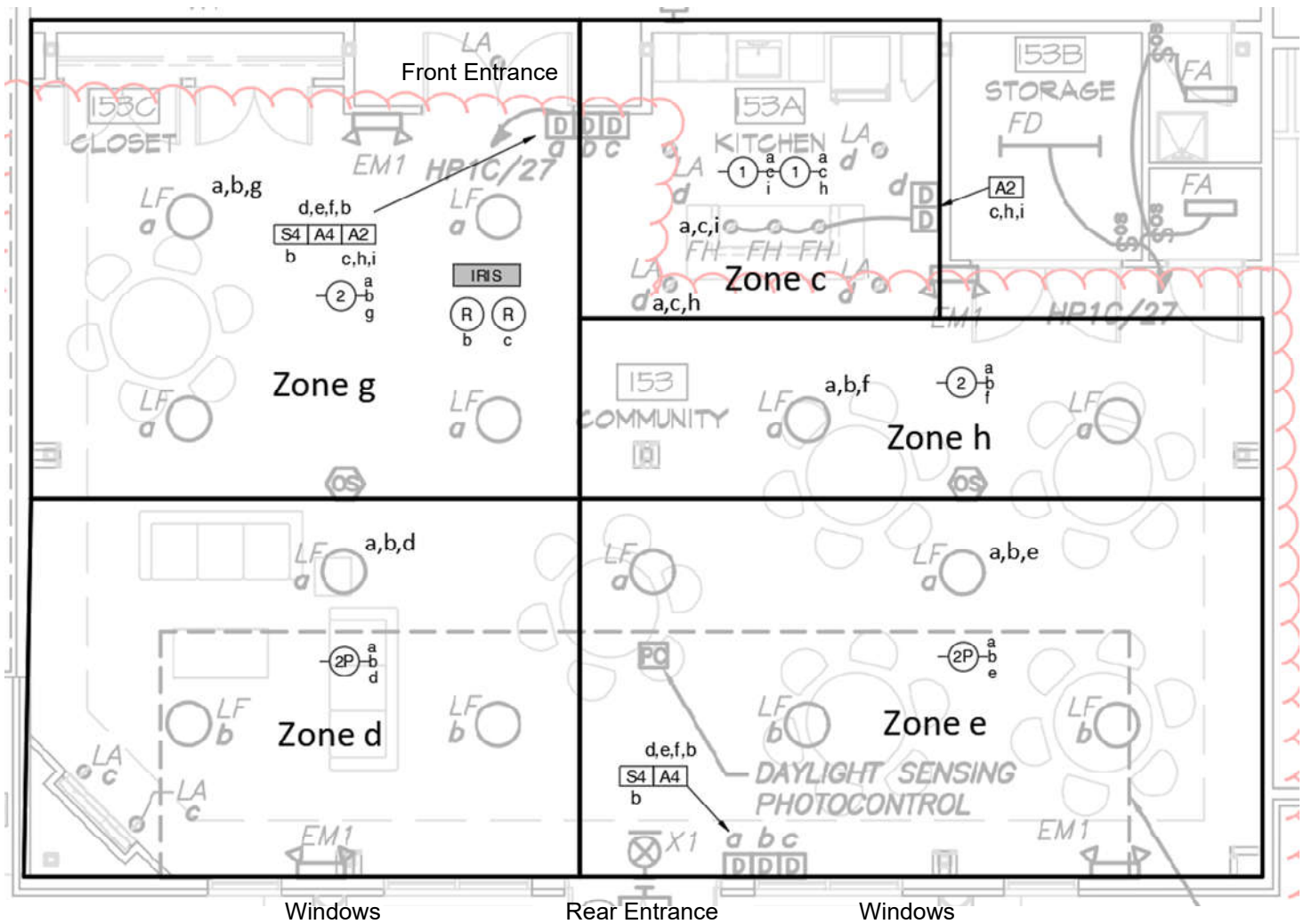


# ARCHITECTURAL LIGHTING CONTROL CASE STUDY

Windows, Daylighting, 0-10v Dimming Fixtures, 5 Zones



## Sequence of Operation

The area consists of a community room with general seating area and open kitchen. Energy measures are manual on at 50%, auto-off for entire room, and daylight responsive controls for zones adjacent to windows. Both the community room and kitchen have independent manual on/off controls and dimmable subzones.

Daylight responsive zones d,e operate continuously and independently, allow manual dimming, and reset their setpoints each time a dimming adjustment is detected.

Kitchen controls A2 located at the front entrance and in the kitchen provide on/off control of the whole kitchen and R/L adjustment of the room and island light subzones.

Community room controls are located at the front and rear entrances. The S4 controls for zone b provides on/off and proportional dimming for the whole room while the A4 controls provide R/L adjustment of all four subzones.

Scene controls, not provided, could be added and up to four scenes set with the manual controls and captured at the IRIS control panel.

**Zone Table**

Zone	Group	Parents	Description	Fixtures	Dim	Switch	Day
a	1		Whole room and occupancy		x	x	
b	2	a	Community Room		x	x	
c	3	a	Kitchen		x	x	
d	4	a,b	SE Community Room	LA,LF	x		x
e	5	a,b	NE Community Room	LF	x		x
f	6	a,b	SW Community Room	LF	x		
g	7	a,b	NW Community Room	LF	x		
h	8	a,c	Kitchen Floor	LA	x		
i	9	a,c	Kitchen Island	LF	x		

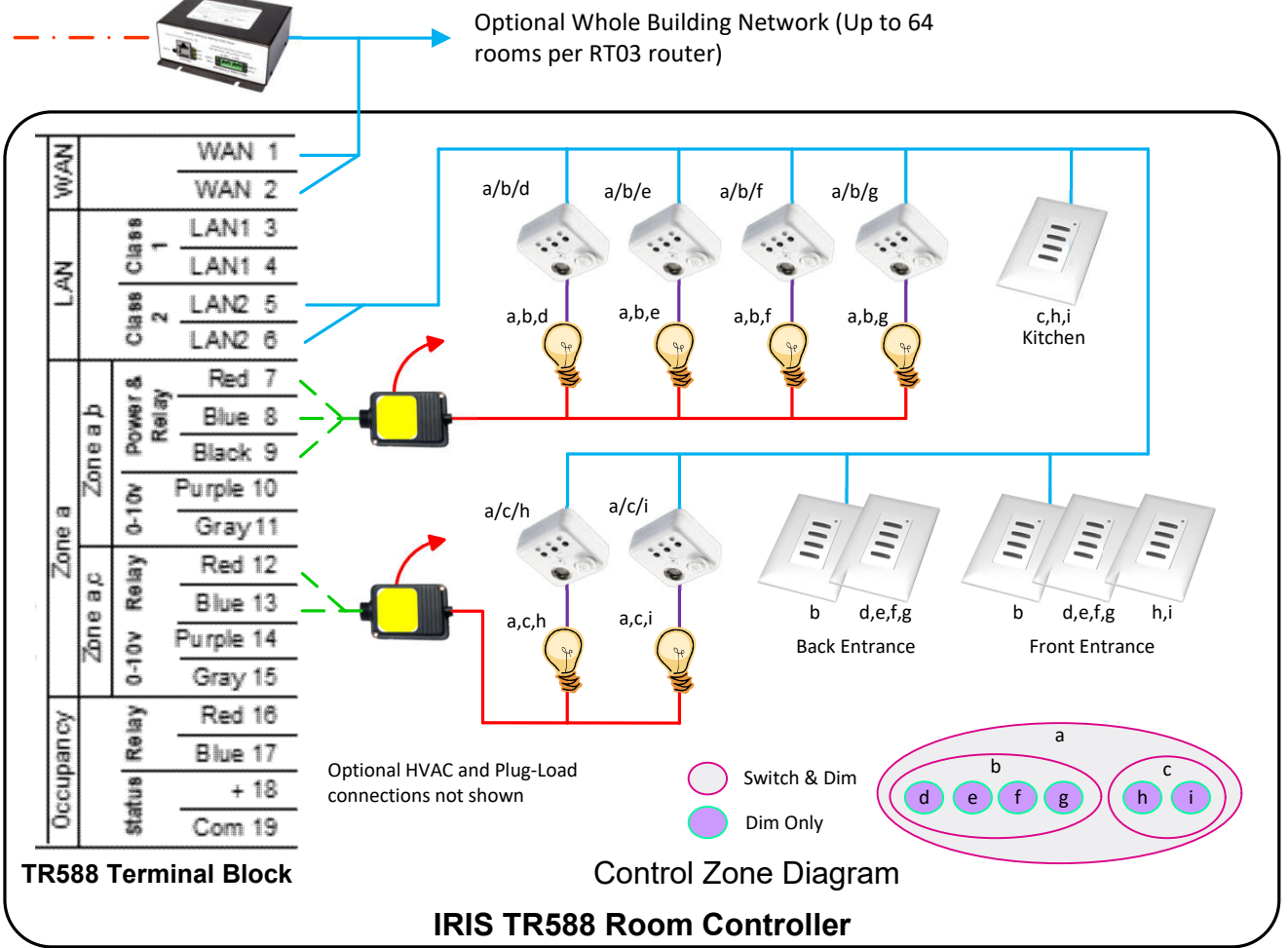
## Symbol Legend

- (R) Relay, 20A, SPST Power Pack
- IRIS IRIS Room Controller
- (2) Dual tech occupancy sensor with orientation and sensor Type.
  - x = occupancy and room level control,
  - y = user control subzone,
  - z = daylighting and user control subzone.
- (2P) Dual tech occupancy sensor with integral light sensor and daylight-response control
  - x = occupancy and room level control,
  - y = user control subzone,
  - z = daylighting and user control subzone.
- (S4) One zone On/Off, R/L
- (A4) Four zone dimmer. R/L for each zone.
- (A2) Two zone dimmer. On/Off for parent zone and R/L for each child subzone.

# ARCHITECTURAL LIGHTING CONTROL CASE STUDY

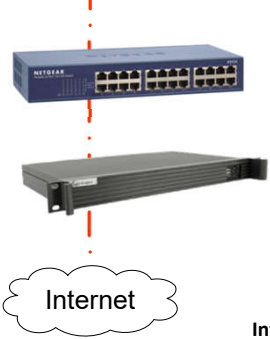
## IRIS Wiring Schematic

To Additional RT03 Routers. (256 max)



### Symbol Zoning Legend

**Sensors:** Tier 1 - whole Room & Occupancy/Tier 2 -User Subzone/Tier 3 - Daylighting & User Subzone  
**User Controls:** Controlled zones  
**Light Loads:** Controlled by zones



**NT124 Network Switches** – As required to provide connections and boost power throughout the building.

**NPC3 Lighting Server** – One per building. As required to support whole building networking and provide system level control functions, and securely connection to Internet.

**Internet (By Others)** – Optional connection for remote connection to lighting server

- Switched or 0-10v Dimmable Light Sources. *Daylighting, partial-on, partial-off, and low-dim warning period functions require dimming.*
- PPUV 20A relay & 24vdc power supply
- LS230 Scout sensors with or without daylighting option.
- TR218 User Control.

Wire/Cable Legend
Power Feed
Switched Load
24vdc Relay
16vdc Control Bus
0-10v Dimming
Ethernet

### Room Operation

Each room is individually powered and controlled with multi-station user controls, vacancy or occupancy logic, daylighting, plug-load control, and HVAC interface. User controls, sensors, and DALI devices can be added or removed as needed up to the power and address limit of the control bus.

### Full Building Operation

Each room is operated by a single RT588 room control which can be further networked into a full building lighting control system.