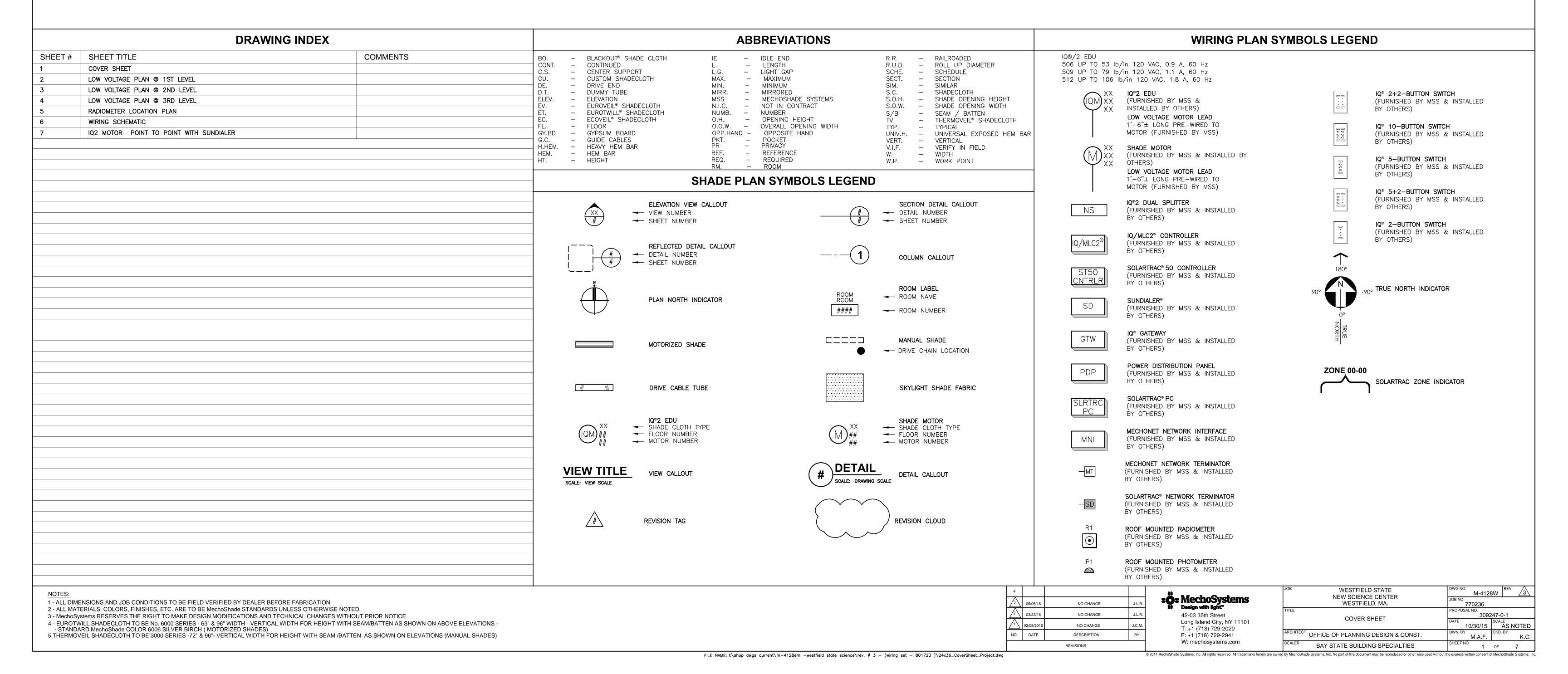
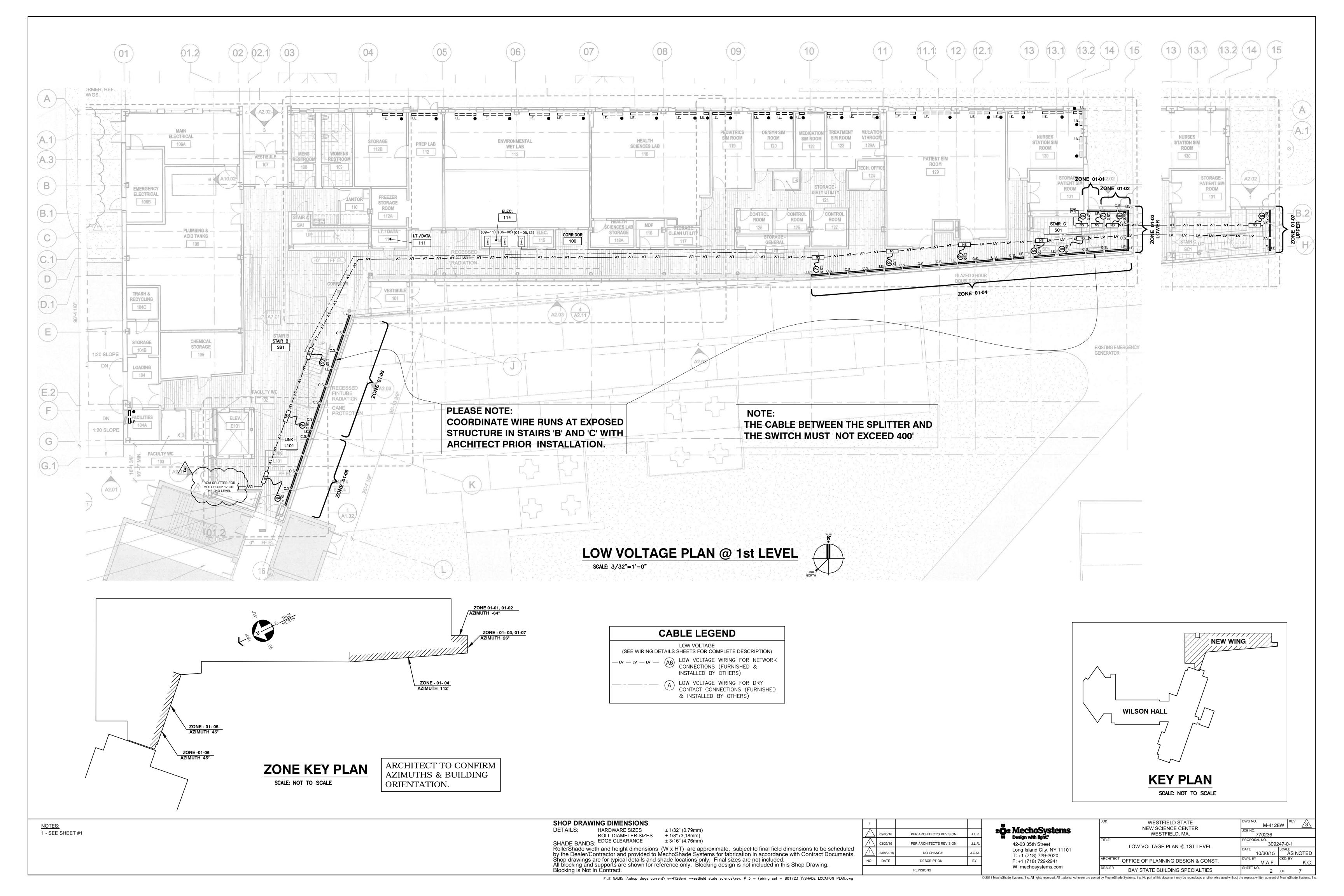
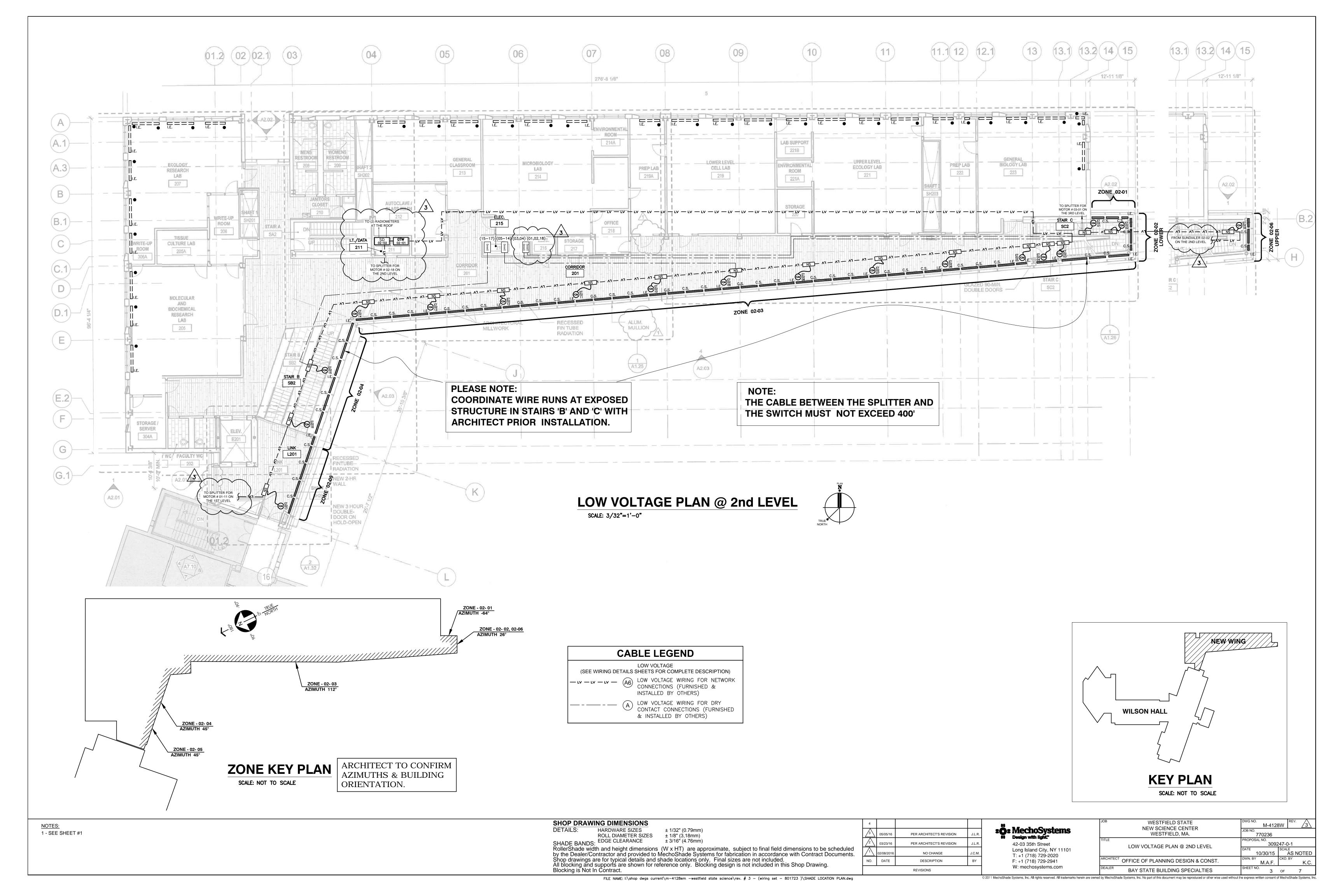
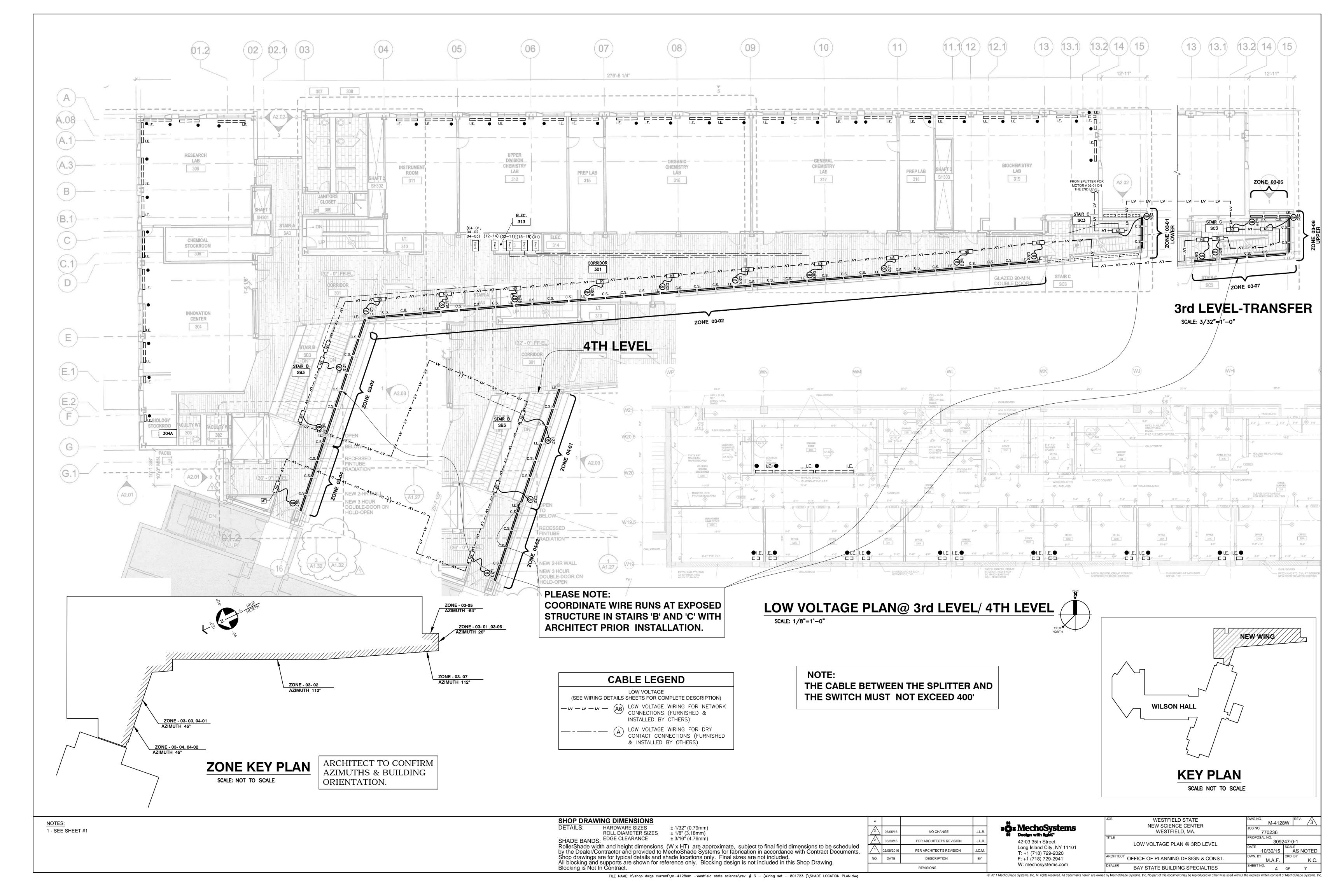
WESTFIELD STATE NEW SCIENCE CENTER

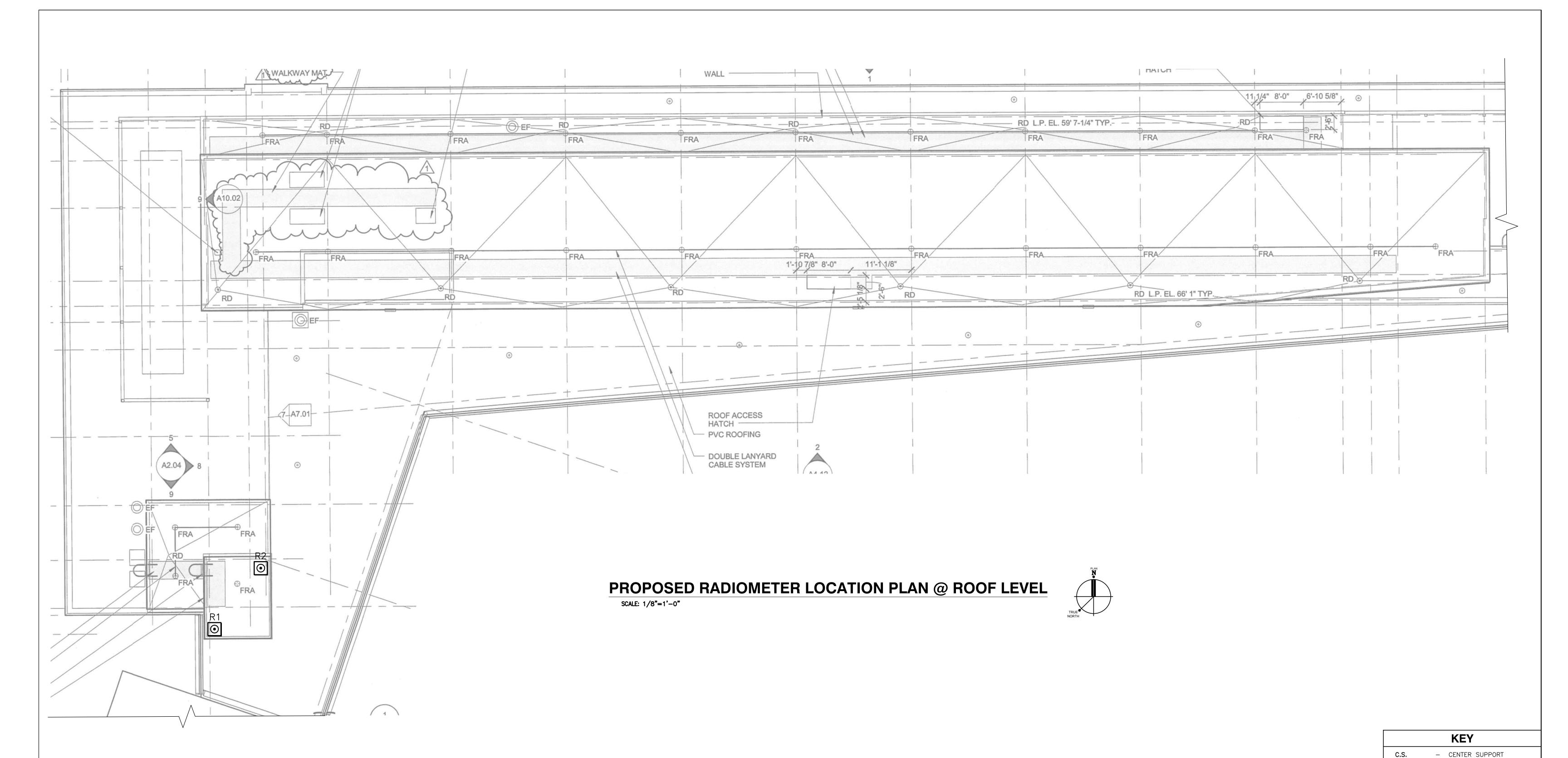
WESTFIELD, MA.











PLEASE NOTE: I. PLEASE MAKE SURE THERE IS NOT ANY TALLER STRUCTURE CASTING SHADOW ON THE RADIOMETERS.

- 2. RADIOMETERS MUST BE MOUNTED ON A STRUCTURE TO ENSURE THAT THEY WILL NOT BE COVERED BY SNOW.
- 3. RADIOMETERS MUST BE MOUNTED FACING UP AND MUST BE LEVELED.
- 4. CONNECTIONS MUST BE MADE IN A WATERPROOF
- NEMA 4 ENCLOSURE. 5. RADIOMETER LOCATIONS TO BE FINALIZED AT THE TIME OF INSTALLATION.

WIRING PLAN EQUIPMENT KEY



DRIVE END

OPENING HEIGHT

OPENING WIDTH

VERIFY IN FIELD

NOT IN CONTRACT

 ROLL UP DIAMETER SHADE CLOTH

OVERALL OPENING WIDTH

SHADE OPENING HEIGHT

SHADE OPENING WIDTH

IDLE END

 EXTERNAL RADIOMETERS (FURNISHED BY MSS & INSTALLED BY OTHERS)

WESTFIELD STATE M-4128W 3 NEW SCIENCE CENTER WESTFIELD, MA. 770236

SHOP DRAWING DIMENSIONS

1 - SEE SHEET #1

HAKDWARE SIZES ± 1/32" (0.79mm)
ROLL DIAMETER SIZES ± 1/8" (3,18mm)
± 1/8" (3,18mm)

SHADE BANDS: EDGE CLEARANCE ± 3/16" (4.76mm)
RollerShade width and the

RollerShade width and height dimensions (W x HT) are approximate, subject to final field dimensions to be scheduled by the Dealer/Contractor and provided to MechoShade Systems for fabrication in accordance with Contract Documents. Shop drawings are for typical details and shade locations only. Final sizes are not included.

All blocking and supports are shown for reference only. Blocking design is not included in this Shop Drawing. Blocking is Not In Contract.

NO CHANGE NO CHANGE DESCRIPTION REVISIONS

NO CHANGE

MechoSystems
Design with light." 42-03 35th Street Long Island City, NY 11101 T: +1 (718) 729-2020 F: +1 (718) 729-2941

W: mechosystems.com

309247-0-1 RADIOMETER LOCATION PLAN 10/30/15 SCALE AS NOTED $^{ ext{T}}$ OFFICE OF PLANNING DESIGN & CONST. M.A.F. BAY STATE BUILDING SPECIALTIES 5 OF 7

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D.E.

I.E.

0.0.W.

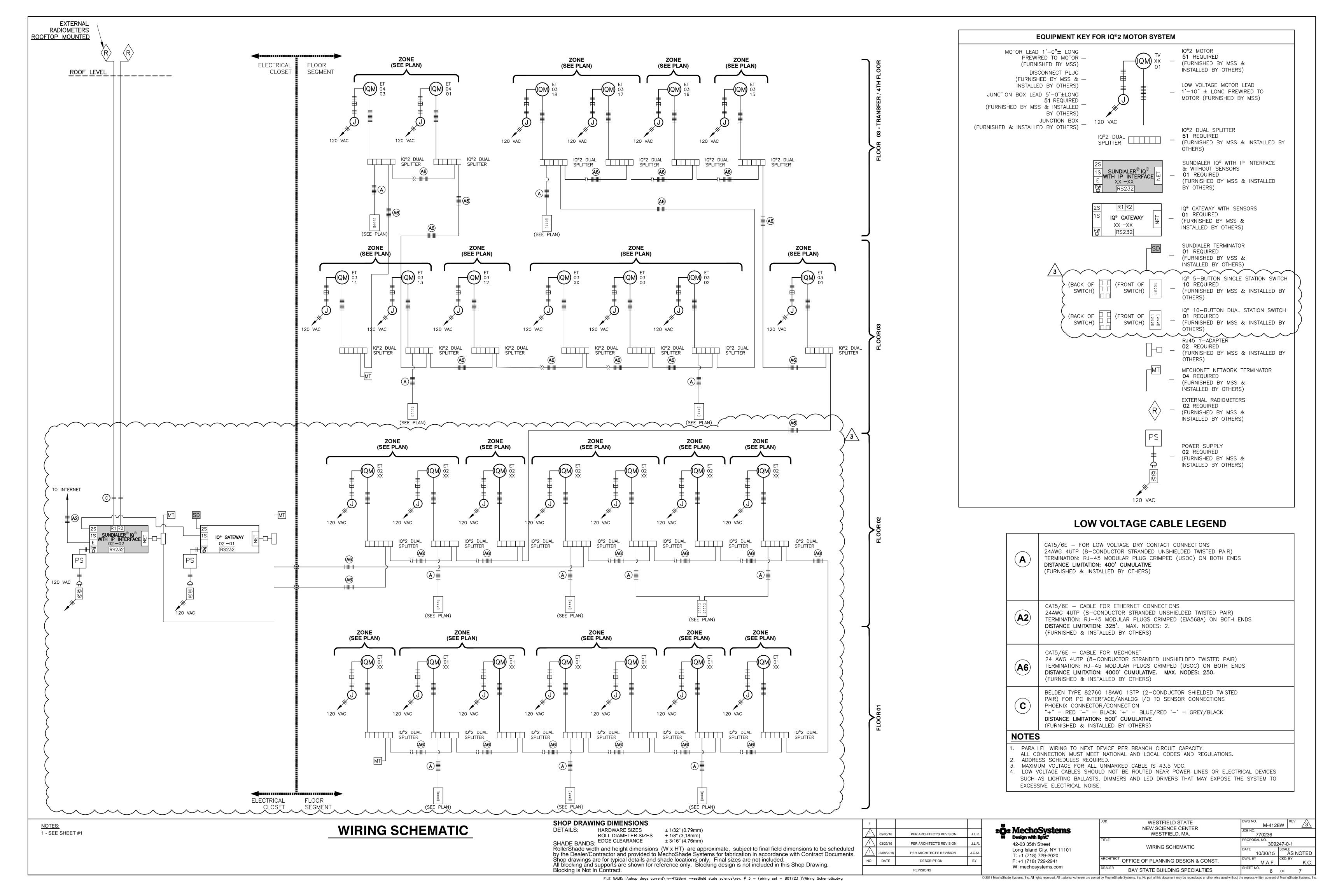
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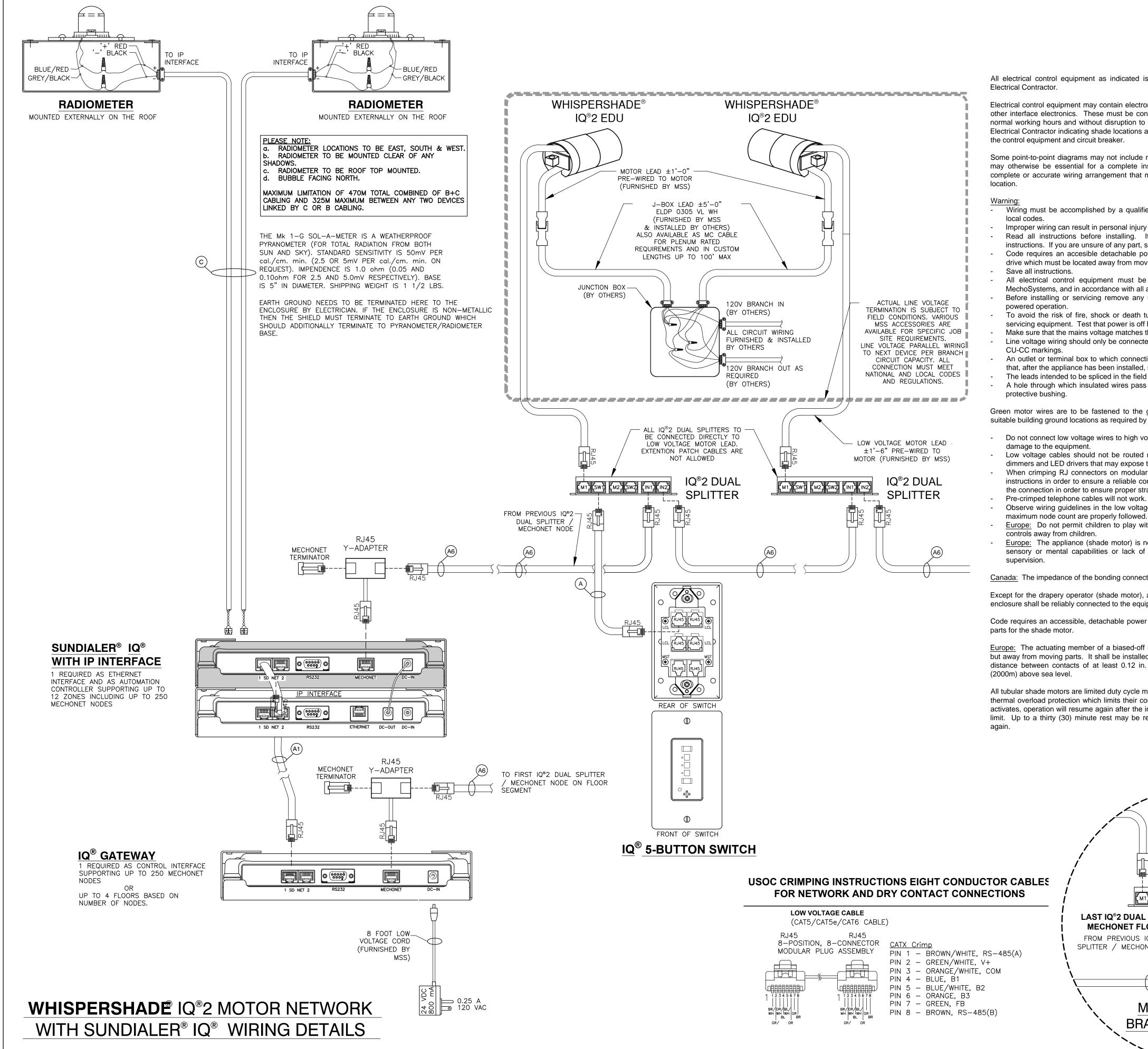
S.O.W.

V.I.F.

N.I.C.

O.W. R.U.D.





1 - SEE SHEET #1

STANDARD ELECTRICAL NOTES

All electrical control equipment as indicated is furnished-only by MechoSystems, installed and wired by the Electrical Contractor.

Electrical control equipment may contain electromechanical relays, adjustment points, fuses, indicator lights, and other interface electronics. These must be conveniently accessible for future servicing and adjustments during normal working hours and without disruption to the existing operations. This equipment shall be labeled by the Electrical Contractor indicating shade locations and specific motors which are controlled, and it shall be labeled at the control equipment and circuit breaker.

Some point-to-point diagrams may not include motor disconnect plugs, junction boxes and cable raceways that may otherwise be essential for a complete installation. The point-to-point diagrams may also not depict a complete or accurate wiring arrangement that meets all applicable national and local codes for a given project

- Wiring must be accomplished by a qualified electrician in accordance with all the applicable national and
- Improper wiring can result in personal injury and / or damage to equipment and sorraoundings. Read all instructions before installing. It is important for the safety of each person to follow these
- instructions. If you are unsure of any part, stop and contact a qualified installer.
- Code requires an accesible detachable power cord, swithc or disconnect at the point of installtion for the drive which must be located away from moving parts.
- All electrical control equipment must be wired in accordance with the wiring diagrams prepared by MechoSystems, and in accordance with all applicable national (i.e. United States: N.E.C.) and local codes.
- Before installing or servicing remove any unnecessary cords and disable any equipment not needed for
- To avoid the risk of fire, shock or death turn off the power at the circuit breaker or fuse before wiring or servicing equipment. Test that power is off before proceeding.
- Make sure that the mains voltage matches the ratings on the product labels.
- Line voltage wiring should only be connected using copper or copper-clad aluminum wire with the CC-CU or CU-CC markings. An outlet or terminal box to which connections to the power supply circuit will be made shall be located so
- that, after the appliance has been installed, such connections are accessible for inspection.
- The leads intended to be spliced in the field shall have insulation not less than 1/32 in. (0.8mm) thick.
- A hole through which insulated wires pass in a sheet metal wall shall be provided with a smooth, rounded

Green motor wires are to be fastened to the grounding point on grounded junction boxes, conduits or other suitable building ground locations as required by code.

- Do not connect low voltage wires to high voltage power. Improper wiring can result in personal injury and/or
- Low voltage cables should not be routed near power lines or electrical devices such as lighting ballasts, dimmers and LED drivers that may expose the system to excessive electrical noise.
- When crimping RJ connectors on modular cable or CAT5/6 cable, care must be taken to follow crimping instructions in order to ensure a reliable connection. The outer jacket must be captured within the crimp on the connection in order to ensure proper strain relief.
- Observe wiring guidelines in the low voltage cabling legend in order to ensure maximum cable lengths and maximum node count are properly followed.
- Europe: Do not permit children to play with the appliance (shade motors) or fixed controls. Keep remote
- controls away from children. Europe: The appliance (shade motor) is not intended for use by children or people with reduced physical,
- sensory or mental capabilities or lack of experience and knowledge unless given proper instruction or

Canada: The impedance of the bonding connection to the shade motor must be at least 0.1 Ohms.

Except for the drapery operator (shade motor), all exposed dead metal parts and all dead metal parts within the enclosure shall be reliably connected to the equipment-bonding terminal or lead

Code requires an accessible, detachable power cord or switch at the point of installation and away from moving

Europe: The actuating member of a biased-off switch shall be located within direct sight of the shade assembly but away from moving parts. It shall be installed at a minimum height of 4.92 ft. (1.5m) and possess an opening distance between contacts of at least 0.12 in. (3mm). Controls are all certified in installation up to 6562 ft. (2000m) above sea level.

All tubular shade motors are limited duty cycle motors that are not rated for continuous use. They possess built-in thermal overload protection which limits their continuous use to approximately five (5) minutes. Once protection activates, operation will resume again after the internal temperatures within the motor return to below the thermal limit. Up to a thirty (30) minute rest may be required in order for the motor to sustain regular operation once

(M1) (SW1) (M2) (SW2) (IN1) (IN2)

MECHONET FLOOR

BRANCH TERMINATION

DETAIL

LAST IQ®2 DUAL SPLITTER ON

FROM PREVIOUS IQ®2 DUAL -

SPLITTER / MECHONET NODE

MECHONET FLOOR BRANCH

ElectroShade® and WhisperShade® standard motors possess a line voltage motor lead which is a 4-conductor (line1, line2, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately one foot (1 ft. or 305mm) long with a 4-conductor disconnect plug.

STANDARD (BI-DIRECTIONAL) LINE VOLTAGE TUBULAR MOTORS (a.k.a "Standard Motors")

The standard ElectroShade® and WhisperShade® junction box lead is a 4-conductor (line1, line2, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately five feet (5 ft. or 1525mm) long with a mating 4-conductor

For all standard motors:

- Shade motors must not be wired in parallel or series "daisy chained" fashion. Only one motor may be wired to each set of motor connections or it will cause premature motor burnout and void any applicable warranty.
- Do not wire two (2) or more motors to one (1) SPDT (single-pole, double-throw) switch.
- A single DPDT (double-pole, double-throw) switch may be wired to up to two (2) standard motors IF each is wired to a separate pole of the switch. Please refer to Drawing No. M-160 for a point-to-point connection.
- Do not wire two (2) or more switches to one (1) motor.
- All wiring diagrams have been prepared for right-hand motors, regular roll or left-hand motors, reverse roll which are wired similarly. Right-hand motors, reverse roll and left-hand motors, regular roll require switching the red and black motor wires at the controller or switch wiring connections. This will prevent the motors from running in the opposite directions. (NOTE: for the IQ/MLC2 the direction of rotation can be changed in the programming of the controller without changing the wiring.)

INTELLIGENT (BI-DIRECTIONAL) LINE VOLTAGE TUBULAR MOTORS (a.k.a. "Intelligent Motors")

The ElectroShade® and WhisperShade® intelligent motors possess a line voltage motor leads which is a 3-conductor (line, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately one foot (1 ft. or 305mm) long with a 4-conductor or 3-conductor disconnect plug.

The standard ElectroShade® and WhisperShade® junction box lead is a 4-conductor (line1, line2, neutral, earth) or 3-conductor (line, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately five feet (5 ft. or 1525mm) long with a mating 4-conductor or 3-conductor disconnect plug.

For all intelligent motors such as I-Con®, IQ®, IQ2, RTS, ILT and ILT2; parallel or series "daisy-chained" wiring is permitted up to the capacity of the branch circuit relative to code requirements.

FTS MOTORS

The ElectroShade® FTS motors possess a line voltage motor lead which is a 5-conductor, 18 AWG stranded, PVC-iacketed cable approximately one foot (1 ft. or 305mm) long with a 6-conductor disconnect plug.

The standard ElectroShade® FTS junction box lead is a 5-conductor, 18 AWG stranded, PVC-jacketed cable approximately five feet (5 ft. or 1525mm) long with a mating 6-conductor disconnect plug.

One of four FTS systems can be wired on a single push-button switch. Please refer to Drawing No. XXXXX for point-to-point connection.

09/26/2012

LOW VOLTAGE CABLE LEGEND

CAT5/6E - CABLE FOR ETHERNET CONNECTIONS



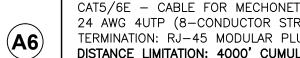
CAT5/6E - FOR LOW VOLTAGE DRY CONTACT CONNECTIONS 24AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUG CRIMPED (USOC) ON BOTH ENDS DISTANCE LIMITATION: 400' CUMULATIVE (FURNISHED & INSTALLED BY OTHERS)



CAT5/6E - CABLE FOR SDNET 24AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS. DISTANCE LIMITATION: 4000' CUMULATIVE. MAX. NETWORK NODES: 16. (FURNISHED & INSTALLED BY OTHERS)



24AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (EIA568A) ON BOTH ENDS **DISTANCE LIMITATION: 325'.** MAX. NODES: 2. (FURNISHED & INSTALLED BY OTHERS)



24 AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS DISTANCE LIMITATION: 4000' CUMULATIVE. MAX. NODES: 250. (FURNISHED & INSTALLED BY OTHERS)

BELDEN TYPE 82760 18AWG 1STP (2-CONDUCTOR SHIELDED TWISTED PAIR) FOR PC INTERFACE/ANALOG I/O TO SENSOR CONNECTIONS PHOENIX CONNECTOR/CONNECTION "+" = RED "-" = BLACK '+' = BLUE/RED '-' = GREY/BLACK DISTANCE LIMITATION: 500' CUMULATIVE

NOTES

PARALLEL WIRING TO NEXT DEVICE PER BRANCH CIRCUIT CAPACITY. ALL CONNECTION MUST MEET NATIONAL AND LOCAL CODES AND REGULATIONS.

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- ADDRESS SCHEDULES REQUIRED. MAXIMUM VOLTAGE FOR ALL UNMARKED CABLE IS 43.5 VDC.
- LOW VOLTAGE CABLES SHOULD NOT BE ROUTED NEAR POWER LINES OR ELECTRICAL DEVICES

(FURNISHED & INSTALLED BY OTHERS)

SUCH AS LIGHTING BALLASTS, DIMMERS AND LED DRIVERS THAT MAY EXPOSE THE SYSTEM TO EXCESSIVE ELECTRICAL NOISE.

SHOP DRAWING DIMENSIONS

Blocking is Not In Contract.

HARDWARE SIZES ± 1/32" (0.79mm) ROLL DIAMETER SIZES ± 1/8" (3,18mm)

EDGE CLEARANCE ± 3/16" (4.76mm)

RollerShade width and height dimensions (W x HT) are approximate, subject to final field dimensions to be scheduled by the Dealer/Contractor and provided to MechoShade Systems for fabrication in accordance with Contract Documents Shop drawings are for typical details and shade locations only. Final sizes are not included. All blocking and supports are shown for reference only. Blocking design is not included in this Shop Drawing

NO CHANGE DESCRIPTION

REVISIONS

MECHONET

TERMINATOR

OPTIONAL SECOND

SHADE MOTOR

(BLACKOUT OR

SOLAR SHADE)

PLUGGED INTO

(2 MOTORS PER

SPLITTER MAX.)

SAME DUAL

SPLITTER

BACK-TO-BACK

:Ö: MechoSystems 42-03 35th Street Long Island City, NY 11101 T: +1 (718) 729-2020 F: +1 (718) 729-2941

W: mechosystems.com

WESTFIELD STATE M-4128W **NEW SCIENCE CENTER** WESTFIELD, MA. 770236 309247-0-1 IQ2 MOTOR POINT TO POINT WITH SUNDIALER 10/30/15 AS NOTED OFFICE OF PLANNING DESIGN & CONST. M.A.F. BAY STATE BUILDING SPECIALTIES 7 of 7