

Boulder Design Advisory Board Agenda

Wednesday, January 14, 2015
1777 Broadway, West Conference Room
4 – 6 p.m.

The following items will be discussed:

1. Call to Order
2. [Approval of Minutes](#)
3. [Lumos Solar](#)
4. Envision East Arapahoe
5. Board Matters

For further information on these projects, please contact:

Sam Assefa at 303.441.4277 assefas@bouldercolorado.gov or

For administrative assistance, please contact:

Susan Meissner at 303.441.4464 meissners@bouldercolorado.gov

CITY OF BOULDER
BOULDER DESIGN ADVISORY BOARD MINUTES
December 17, 2014
1739 Broadway, 401 Conference Room

A permanent set of these minutes and a tape recording (maintained for a period of seven years) are retained in Central Records (telephone: 303-441-3043). Minutes and streaming audio are also available on the web at: <http://www.bouldercolorado.gov/>

BDAB MEMBERS PRESENT:

David Biek
Jamison Brown
Fenno Hoffman, Chair
Jeff Dawson
Michelle Lee

BDAB MEMBERS ABSENT:

PLANNING BOARD EX-OFFICIO MEMBER PRESENT:

Bryan Bowen

STAFF PRESENT:

Sam Assefa, Senior Urban Designer

BOARD DISCUSSION:

1. Approval of Minutes

BDAB approved the November 12, 2014 BDAB minutes.

2. Debrief on Joint Boards Session with Victor Dover

S. Assefa summarized Victor Dover's takeaways from his meetings with City Council, various boards and community members. He noted that while there are differences in opinion regarding design, there was consensus between Planning Board and BDAB that the current tools for project evaluation lack clarity and do not serve the boards well. Dover reported his findings to Council and will provide a draft recommendation by June. Areas of focus will be to identify short and long-term areas for improvement, propose an approach to clarify the guidelines and to establish more of a standard. This will be discussed with Council before and during their retreat and will inform Design Excellence. Quarterly joint engagement among the boards will be planned for 2015.

2. Public Participation

Stan Weeks, Boulder, has a woodworking shop in town, and expressed concerns about growth in Boulder.

3. Edits to the Downtown Design Guidelines

- **F. Hoffman** walked the board through his edits to the Design Guidelines. He thought that an educational component was important in conjunction with a section of clear standards, metrics and images.

- **J. Brown** questioned the relevance of the background information. There is a place for this sort of educational material, but he thought the Guidelines should be a tool.
- BDAB members agreed that the Design Guidelines need to be short, clear and efficient. Consider discussing the historical precedents and context in a separate document and/or more concisely as a particular guideline.
- **B. Bowen** recommended that the Guidelines address how to successfully insert new buildings into an historic context, clear policies for buildings with step-backs, mechanical system design considerations, and how to design successful large-scale and 55 foot buildings.
- **S. Assefa** encouraged the board to consider what images should be included. The visual analysis tools would be helpful for staff, council and the public to understand the issues.
- **D. Biek** asked that they promote architecture that creates a rhythm. Designers can create dynamic streetscapes if we give them a framework. Do not mandate too much; allow projects to evolve naturally.
- The board would like to devise a list of successful buildings for a later analysis.
- Consider how to encourage attractive buildings given the current building technologies, financial constraints, etc.
- Buildings are only one part of the larger public realm and placemaking. A larger framework of policies and possible form-based code must inform land use, scale, etc. Chapters one and two of the current Design Guidelines should be incorporated into a form-based code. Village centers and road widths must also be addressed if Boulder chooses not to have one large downtown area. There are gaps in Boulder's current planning that do not address these issues.
- **F. Hoffman** felt that mountain views can be more striking if seen throughout the day from various and framed perspectives. Lowering all buildings to maintain consistent views is not the best answer to this issue.
- Provide more perspective views of all areas of the city; not just downtown.
- Address alleys and pathways. Buildings and their relevant frontages should be considered via a form-based code.

Review Process

- Find means to have a more predictable process. By the time a building gets to Site Review, major issues including allowable heights should be resolved.
- BDAB could better serve applicants if the entire review process were clarified and if the board were integrated into the process earlier in the project.
- BDAB members agreed that the "silos" created by different board processes in the city breed distrust from applicants and the public. Look for effective means to break down silos.

Recommendations:

- Board members agreed that **F. Hoffman's** edits to the Design Guidelines are on the right track but should be reduced to a ten page document that clearly addresses architectural design elements.
- Accompany the reduced guidelines with a memo explaining why they have been altered and why the board recommended that the omitted areas be handled separately.

- BDAB members agreed that the Design Guidelines cannot effectively resolve urban design issues relating to mass, scale and height, placemaking, etc. They recommended that these be addressed separately through a form-based code and/or per Victor Dover's recommendations. BDAB reviews individual building designs; larger urban-scale issues must be addressed more holistically.
- Board members agreed that the best role for BDAB would be as an architectural peer review for projects. Architects find it helpful and also appreciate the input in educating their clients in design decisions.
- The city should use BDAB's resources in drafting the Design Guidelines, providing guidance as requested by other boards, and for input on larger form-based code decisions.
- Remove items from the design guidelines that are outside of BDAB's purview or that are detrimental to good architecture, namely the gateway architecture provision.
- Board members asked **F. Hoffman** to draft the revised abridged document in accordance with his redlines. They did not feel that it was necessary to continue going through the edits in detail.

Next Steps:

- **S. Assefa** recommended that BDAB submit a recommendation to Council in time for their retreat in January. It would be ideal to have a rough draft of the ten page document by that time.
- **F. Hoffman** requested input from the board members on the vertical scaling and horizontal façade pattern descriptions.
- **J. Brown** recommended that he research other precedents and use visual preference tools. Look at buildings that other people like and devise standards accordingly. Use visual preference examples from other places to avoid emotional attachments to buildings.
- BDAB members agreed to send **F. Hoffman** applicable images of buildings.
- **J. Brown** said he would craft a brief statement about the discussion.

APPROVED BY:

Board Chair

DATE



City of Boulder Planning and Development Services

1739 Broadway, third floor • PO Box 791 • Boulder, CO 80306

Phone: 303-441-1880 • Fax: 303-441-3241 • Web: boulderplandevop.net

*Revised
July 2013
402.pdf*

BOULDER DESIGN ADVISORY BOARD APPLICATION

Date of Application _____ **Address of Property for Review** _____

Applicant's Name _____ **Phone** _____

Address _____

Relationship to Project (e.g.: architect, contractor, etc.) _____

Owner's Name and Address _____ **Phone** _____

Project Description

Lot Size _____

Proposed Additional Bldg. Sq. Ft. _____

Total Existing Bldg. Sq Ft. _____

Proposed Bldg. Height _____

Existing Bldg Height _____

Submission Deadlines

The Boulder Design Advisory Board generally meets on the second Wednesday of every month. The deadline for submitting your application is 4 p.m. on the last Wednesday of the month, two weeks prior to the meeting date that you wish to attend. Come in person to the Planning and Development Services Center, 1739 Broadway, third floor, to submit your application and materials to a Project Specialist.

Please see the attached "Submission Requirements" sheet for guidance on what we need.

What to Bring to Your Review

At the time of the meeting, please bring at least one set of rendered drawings and material samples.

Committee Comments about the Proposal:

For submittal questions or project-content questions, please contact Sam Assefa, (303) 441-4277, assefas@bouldercolorado.gov. For administrative questions about BDAB, please contact Susan Meissner, (303) 441-4464, meissners@bouldercolorado.gov You can visit our Web site at: www.boulderplandevop.net and click on Boulder Design Advisory Board (BDAB).



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BDAB Application Submission Requirements

Application requirements for design review will vary depending upon the complexity and scale of the project to be reviewed, and the specific requirements of the reviewing body. In general, the applicant should provide the appropriate architectural drawings, sketches, and photographs of existing buildings and their sites to allow the reviewing body to fully understand the nature and scope of the exterior changes and any significant design issues.

For BDAB, four (4) paper copies and all electronic files on a CD or thumb drive. Copies of all relevant information listed below must be submitted *to a project specialist* in the Planning and Development Services Center no later than 4 p.m. on the last Wednesday of the month, two weeks prior to the BDAB meeting. *[Please DO NOT send a courier; a representative from your organization needs to bring the plans to the project specialist in person so the specialist can check that submission requirements have been met, which prevents problems with the application.]* Applications should be well organized and contain sufficient information to allow reviewers to fully understand the proposed building design or alteration, including relevant urban design information such as how the project fits within its surrounding context, and how it relates to adjacent buildings and properties.

At a minimum, BDAB applications should include the following information:

- A map illustrating the location of the project as well as photographs of the project site and the surrounding area.
- A site plan in a clear graphic style should be presented in the context of the city blocks surrounding the project. Site boundaries and dimensions should be clearly marked and special issues such as floodplain, shadows, land restrictions and the existing site conditions need to be highlighted.
- All relevant floor plans, building sections, and exterior elevations should be illustrated at a scale sufficient to fully understand the proposed design.
- Provide exterior wall elevations in color showing material and color selections.

Additional information that may be required for BDAB:

The following additional information may be required if the proposal modifies the permitted “by-right” building height, or if the project is of significant complexity that the two dimensional drawings described above do not fully illustrate the design issues:

- A simple mass model if the project is of significant size and complexity, showing the surrounding context.
- Color perspective sketches illustrating the proposed project and its surroundings, from street level, to present the project from the pedestrian’s viewpoint.
- An analysis of the shadow impact of the proposed project is important, especially for projects on the south side of downtown streets.

Visit our Web site at: www.boulderplandevlop.net; click on Boulder Design Advisory Board (BDAB)

Preliminary Design 929 Pearl Street Photovoltaic Awning Project

September 29, 2014

Christopher Klinga, PE
VP of Product Development
Lumos Solar LLC
3550 Frontier Avenue
Boulder, CO 80301
(303) 407 7991
cklinga@lumossolar.com
www.lumossolar.com

929 Pearl Street Photovoltaic Awning Project

Concept Feasibility Design

69 modules 17.25 kW



Preliminary Design

74 functional modules (18.5 kW) + 8 dummy modules = 82 modules total



Overview

Lumos is pleased to offer this preliminary design package of custom solar awnings, located at 929 Pearl St. Boulder CO, for Conscience Bay. The Preliminary Design Package is the second step in a fully integrated four stage design process as shown below. Please review the following architectural details and make any necessary comments in the comment sheets provided. If you feel a design can be finalized based on your comments please sign and return the entire package to a Lumos representative to receive your fixed bid price.

The Lumos Process:

- 1) **Complementary Concept Feasibility**
Initial site visit, layout, system sizing and customer interest
- 2) **Preliminary Design Package**
Design solution resulting in a fixed bid price upon approval
- 3) **Construction Design Package**
Final design deliverable resulting in a final design set for permitting and construction
- 4) **Project Management**
Engineering support throughout construction process resulting in a completed project

Project Description

929 Pearl Street Photovoltaic Awning Project consists of the structural and electrical engineering analysis and design of several solar canopy structures. These structures include flashing and module seal to ensure a waterproof, overhead design.

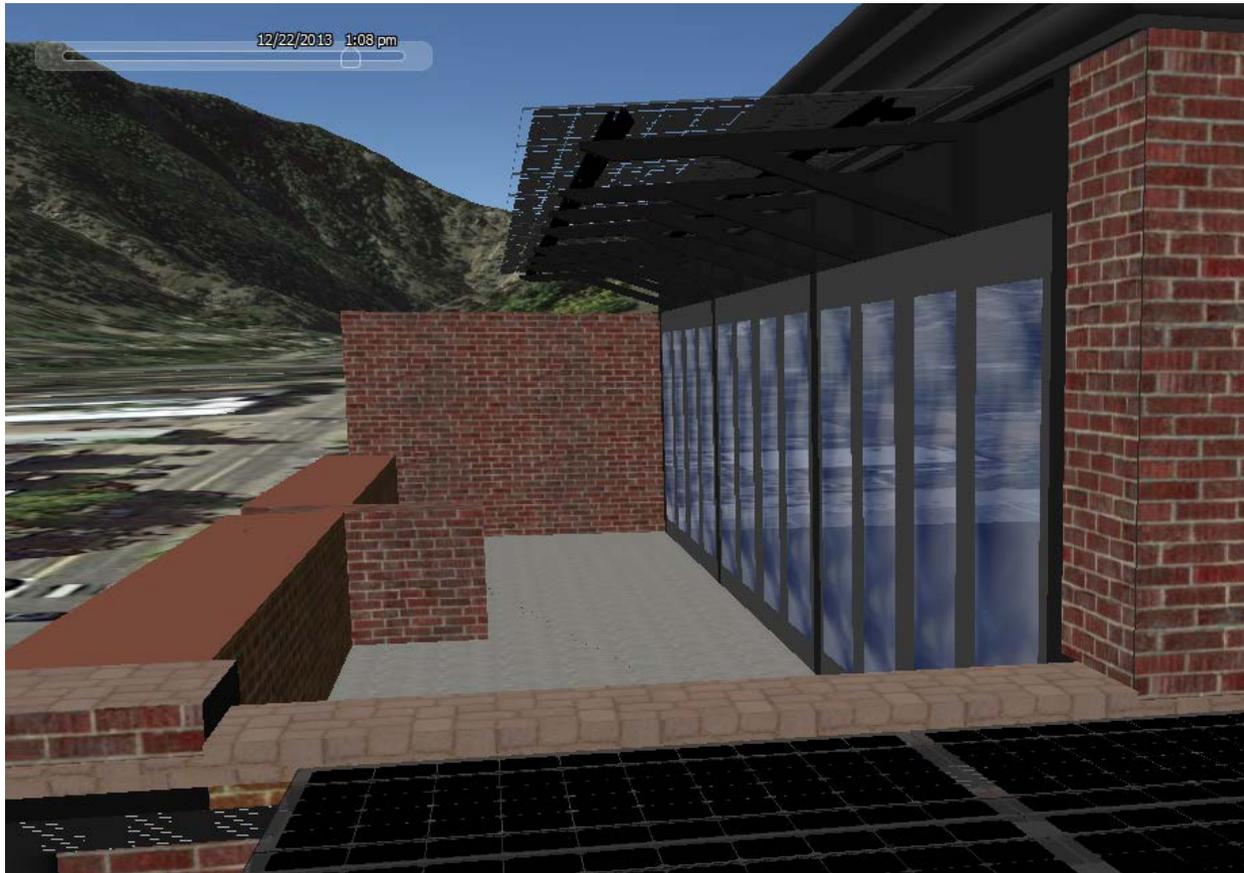
System Name:	929 Pearl Street Photovoltaic Awning Project
System Address:	929 Pearl Street Boulder, CO 80302
Total System Size:	18.5 kW DC
Module Type:	(74) Lumos LSX250 Gen 2, 250 Watt Modules (8) Lumos LSX Glass Dummy Modules

3rd Floor Awning Array:	2.75 kW, 11 Modules, Portrait, 5° tilt to the SE (165° Azimuth) Annual Energy Production (no shade): 3,793 kwh
Patio Array:	11.25kW, 45 Modules, Landscape, 2.2° tilt to the SW (255° Azimuth) Annual Energy Production (no shade): 14,779 kwh
Patio Doorway Awning #1:	0 kW, 6 Dummy LSX Glass Panels, Portrait, 1° tilt to the south Annual Energy Production: 0 kwh
Patio Doorway Awning #2:	0 kW, 2 Dummy LSX Glass Panels, Landscape, 1° tilt to the south Annual Energy Production: 0 kwh
Ground Floor Array:	4.5kW, 18 Modules, Portrait, 10° tilt to the south Annual Energy Production (no shade): 6,476 kwh

Total Production

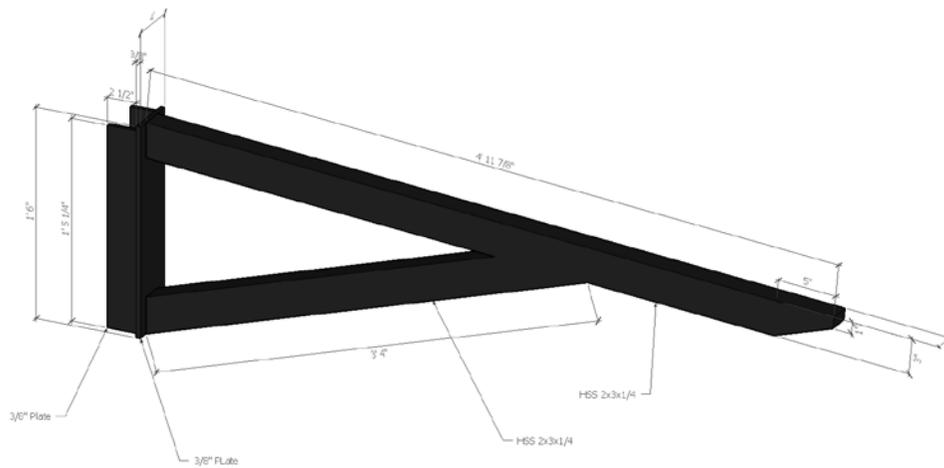
25,048 kWh assuming no shade

3rd Floor Awning Array



Key Features

2 x 3" tube steel support structure

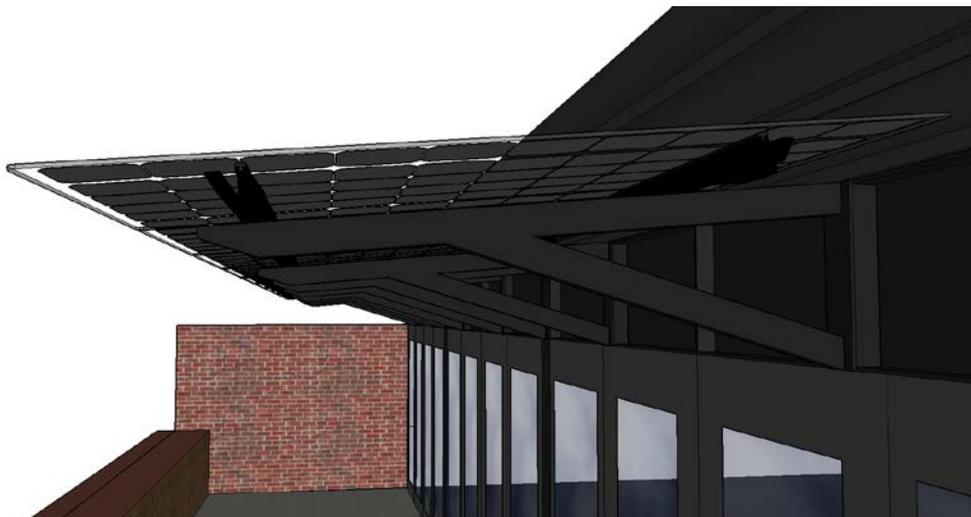


- LSX Rail fasteners hidden within tube steel (self-tapping screws)
- Tube steel frame shop fabricated, frame welded to lintel at site
- Module to module is sealed via LSX Seal tape
- Array is not flashed
- 8 Triangles Total - 2 triangles centered at each of 3 opening, 2 triangle at column points

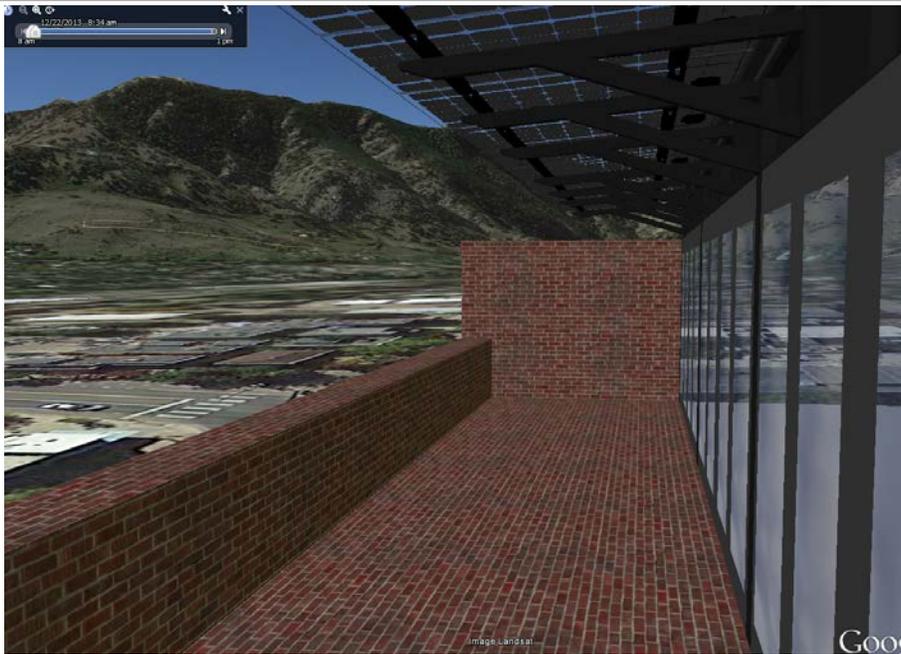


Critical Dimensions

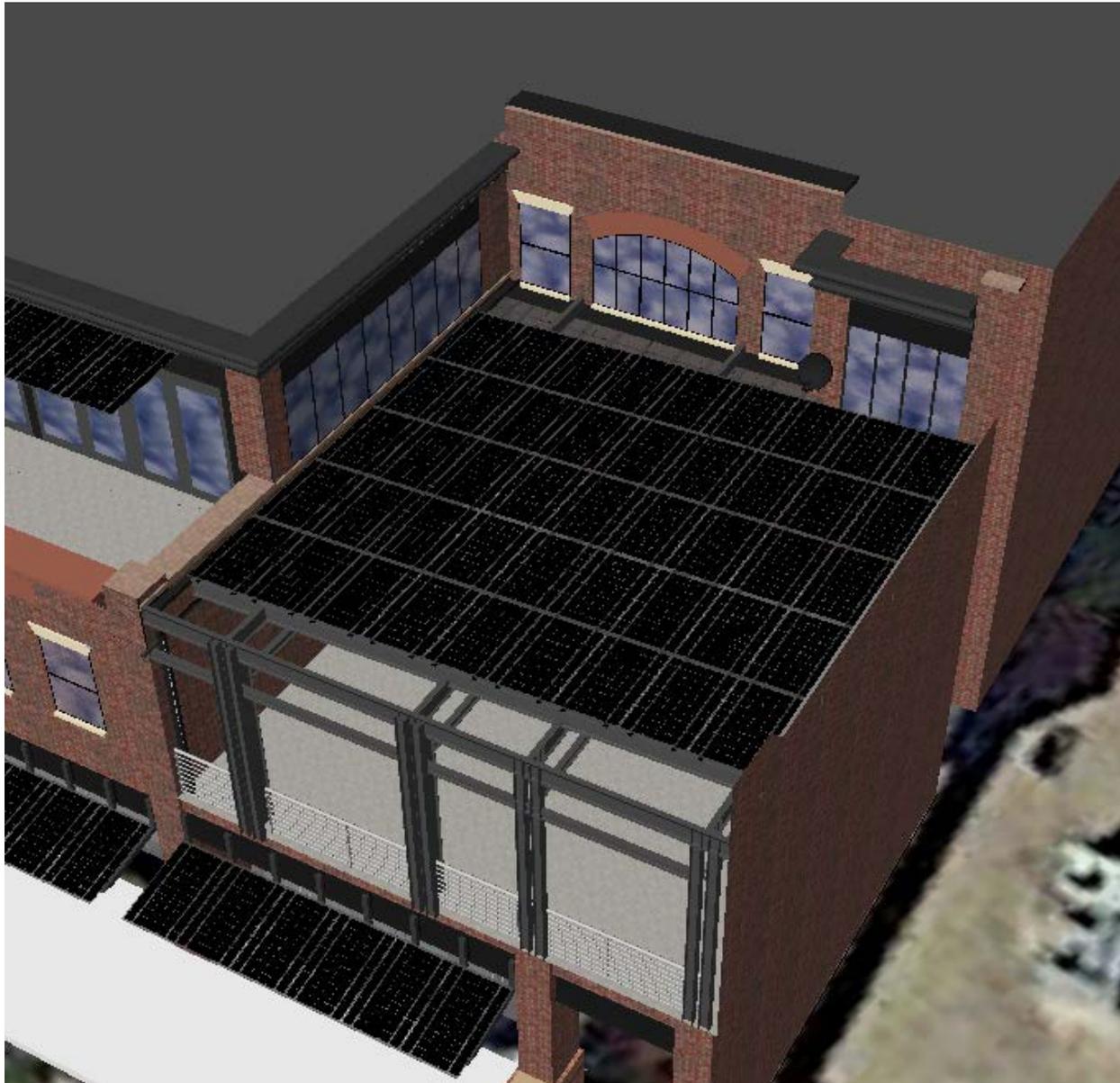
- Awning overhang - 5' -8.5" from lintel face, 9' -10" from floor
- Module start – 3.25" from lintel
- Cornice Overhang : ~2'
- Tilt: 5 deg
- Change in Elevation: 6" over 5' -5.25"



View from interior. To be verified with cardboard for final approval

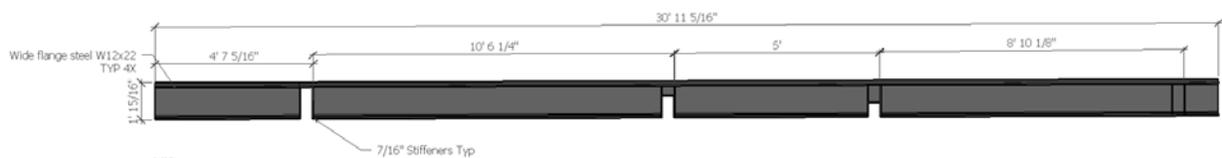


Patio Array



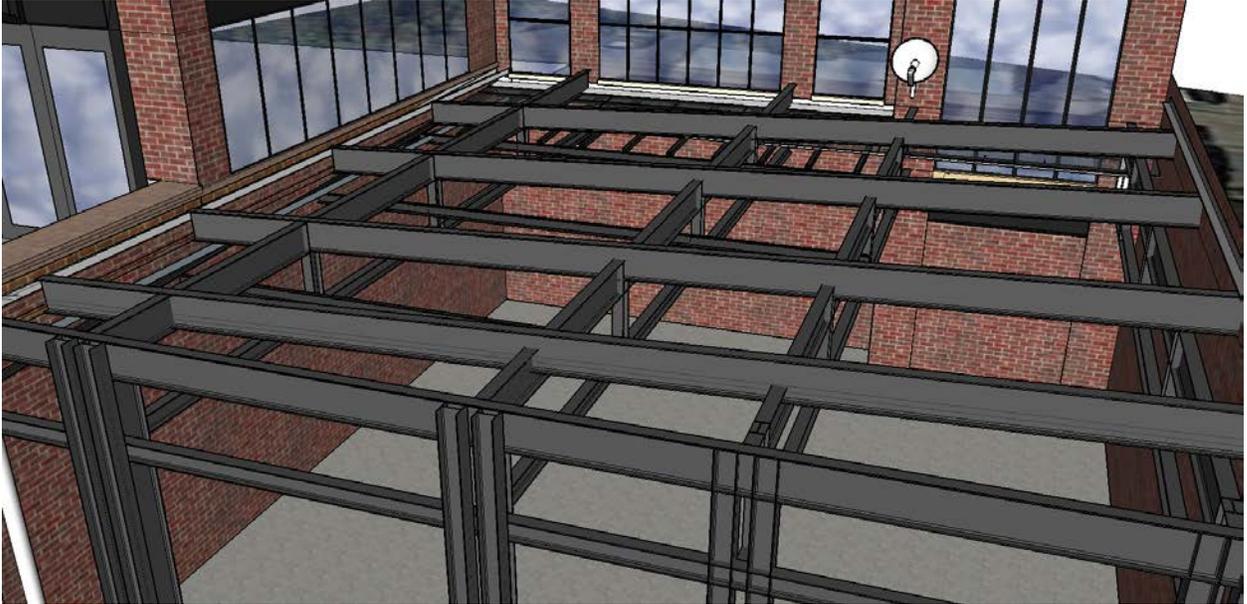
Key Features

Support structure to be added to existing frame: 4 notched W12x22 wide flange beam sections

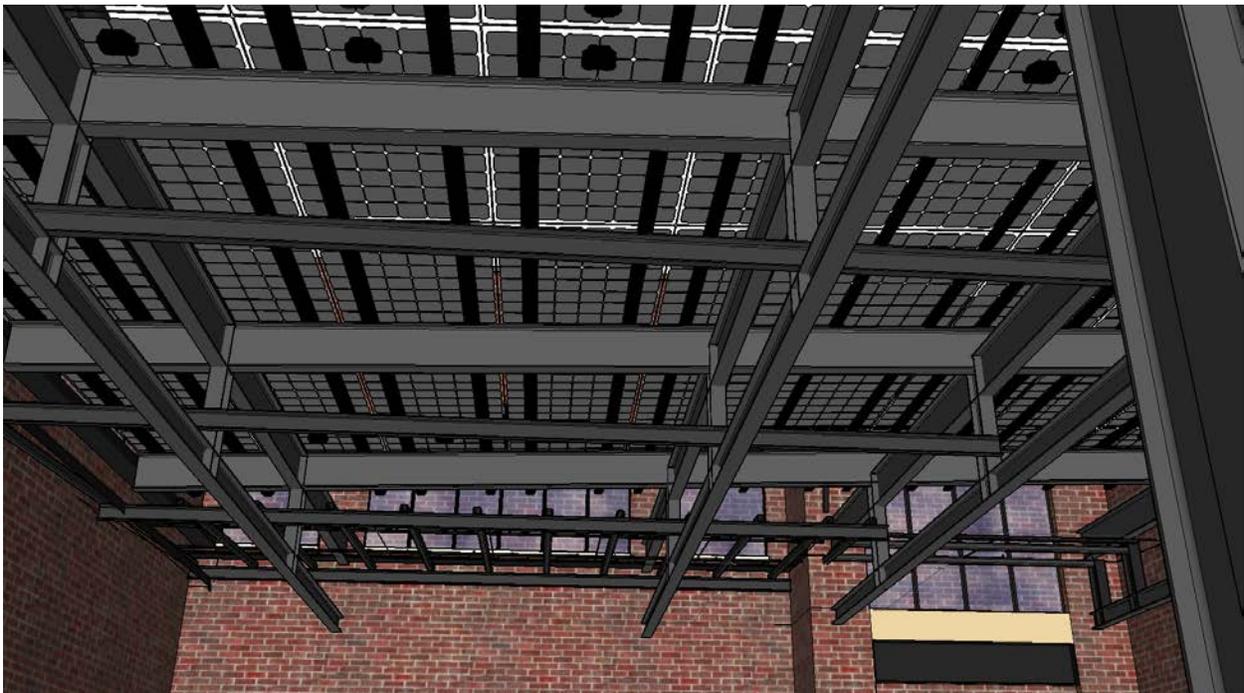


- Notched beams are welded into place after being shop fabricated
- 4 beams craned from street at same time as removal of ornamental steel

- 4 beams located at current truss stiffener locations
- Potential for 5 beams if final engineering requires it



- Option to powder coat and touch up or paint entire structure at once
- LSX Rail fasteners visible at wide flange connection points (self-tapping screws)
- LSX Rail runs along the long side of the module (landscape rail)



- Main array passes over lower dummy array by ~3'
- Module to module gap is sealed via LSX Seal tape

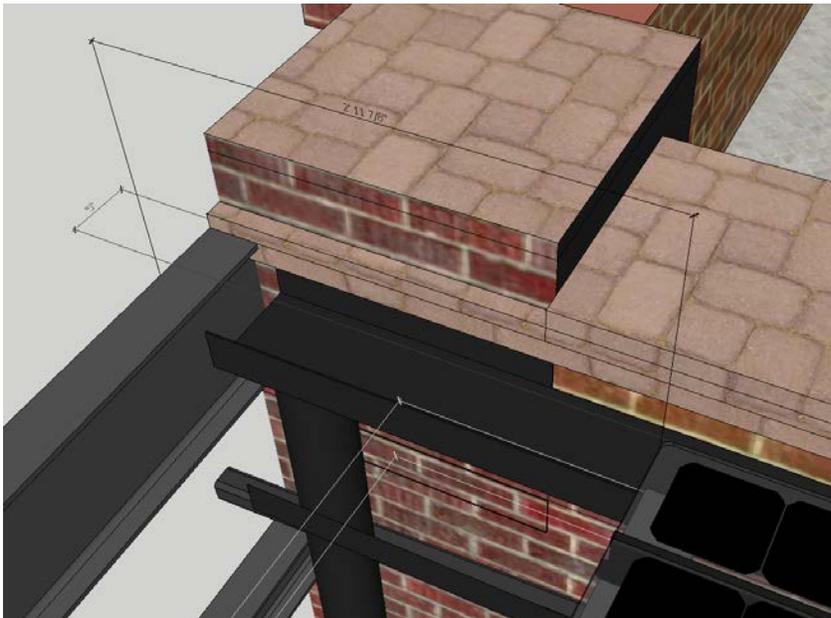
- Array is flashed at west facing wall
 - *West Facing Wall Integration and flashing detail*
 - *Array 11" from top of brick at high point*



Critical Dimensions

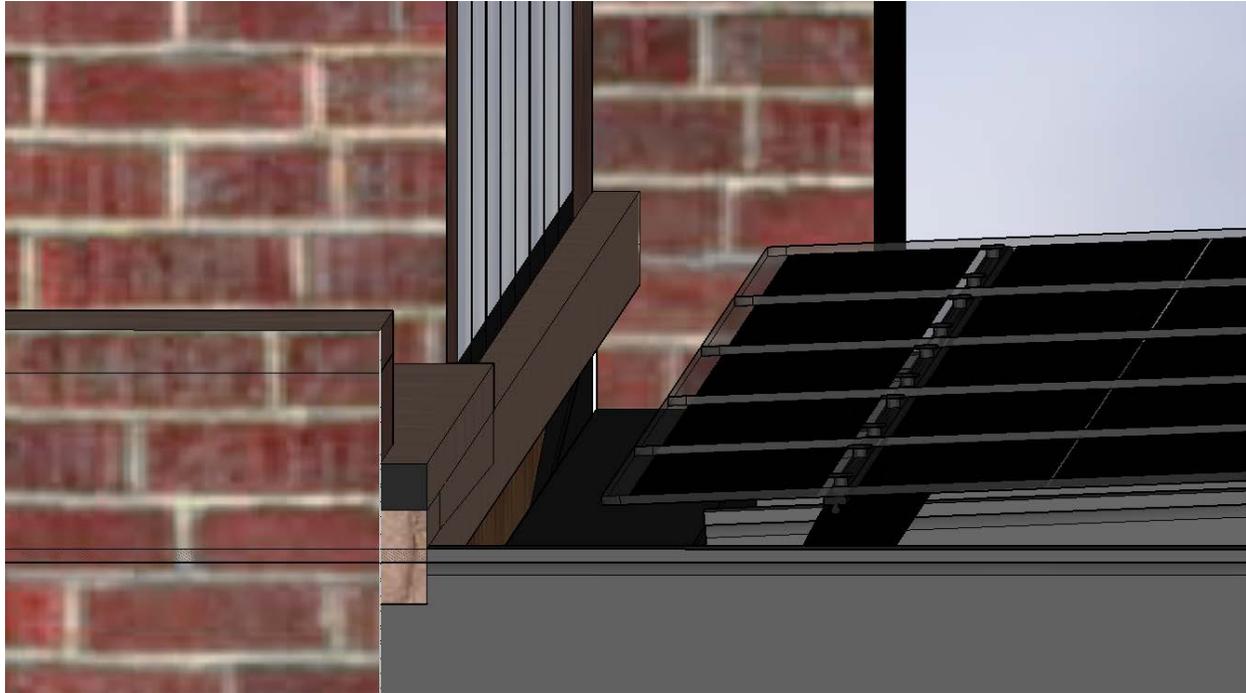
- 3' to South
- 5" to East Wall
- 7" Gutter

South West Corner of Patio Array



Array at level of brick sill

Note: Gutter below modules and window sill



Distance from North Wall
4'8"



Distance from Second North Wall
1' 8"

Overhangs lower dummy array by ~ 33" (#1) and
~19" (#2)



Overview of Array
5 modules wide x 9 modules tall/deep
328.5" wide x 371" deep



Patio Street View



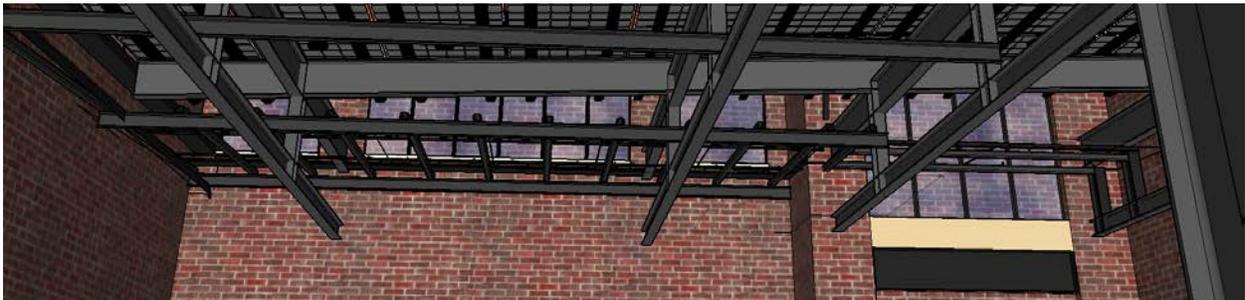
View from patio

Note: previous awning tube steel removed

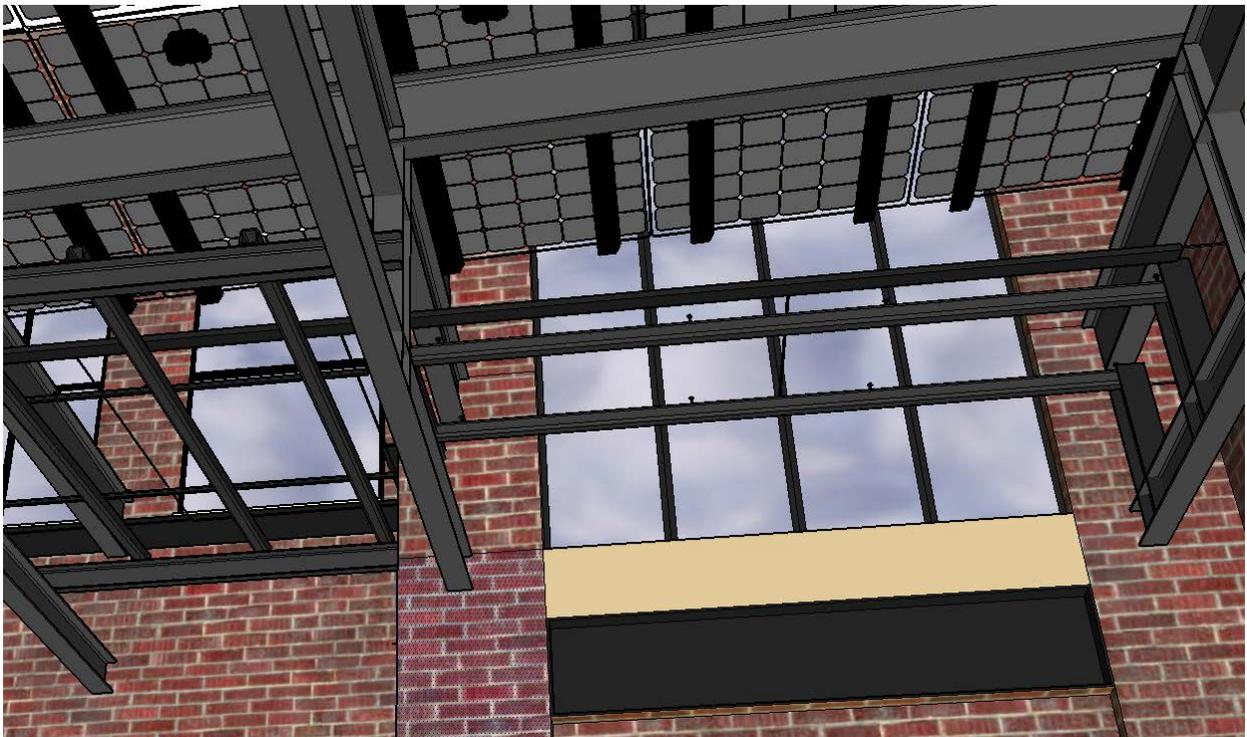


View looking back at conference room wall

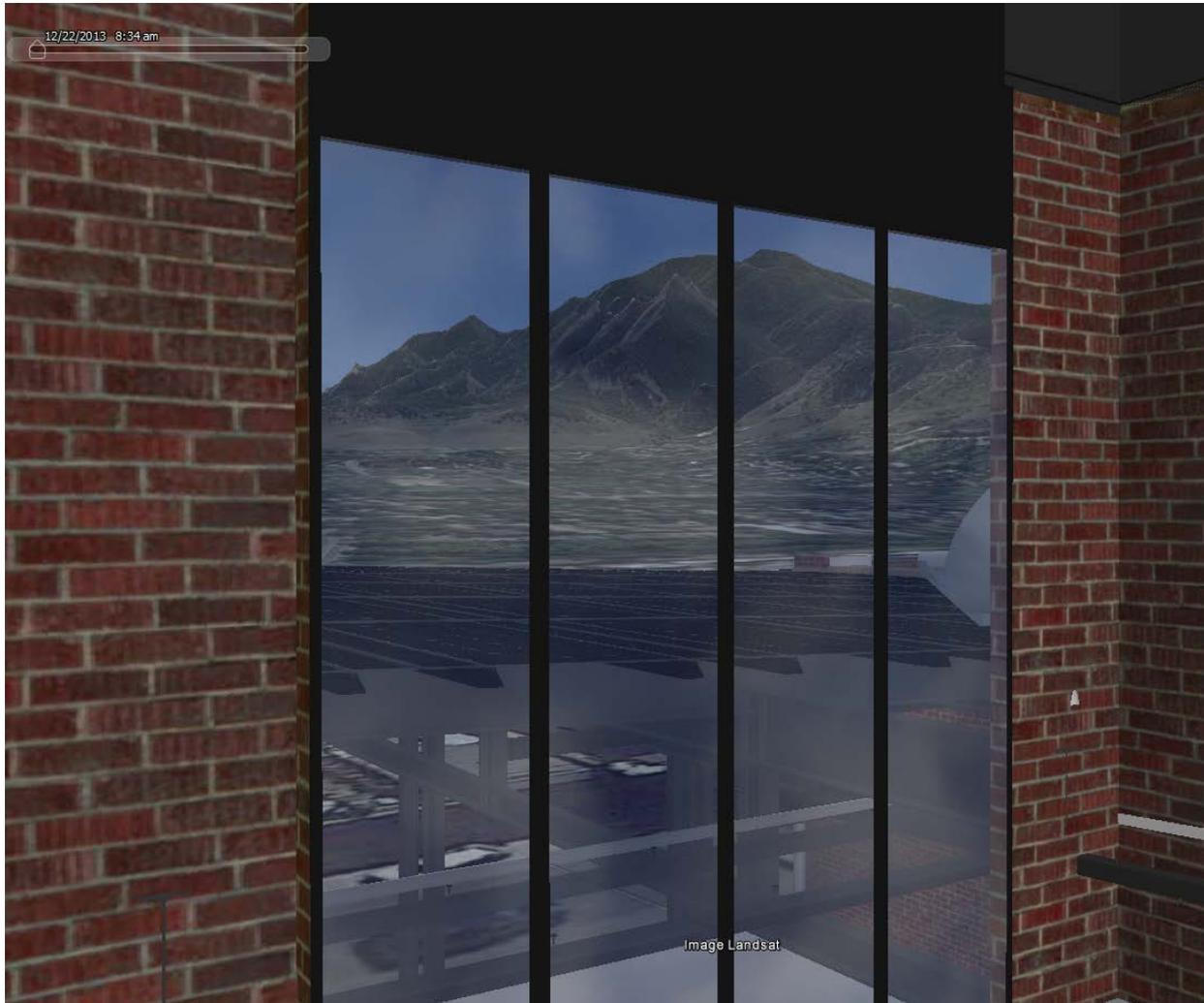
Note: 2.5" x 2.5" tube is cut short



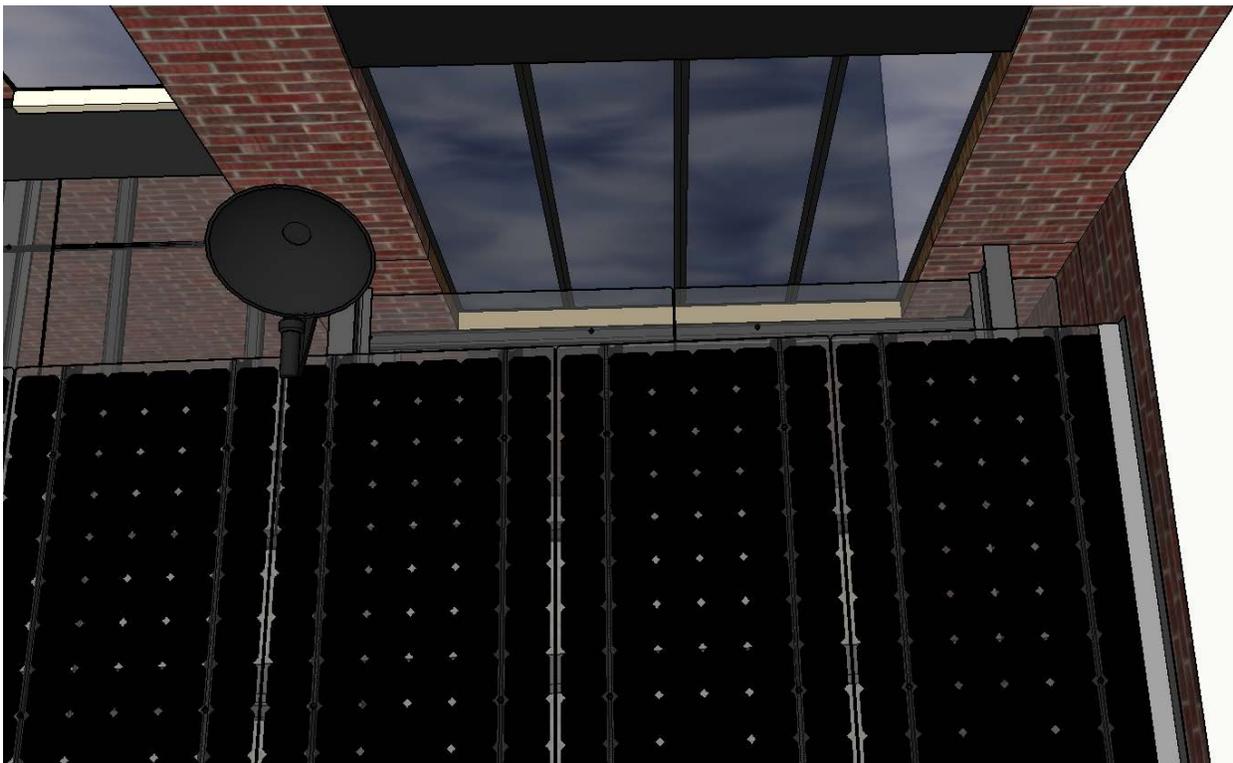
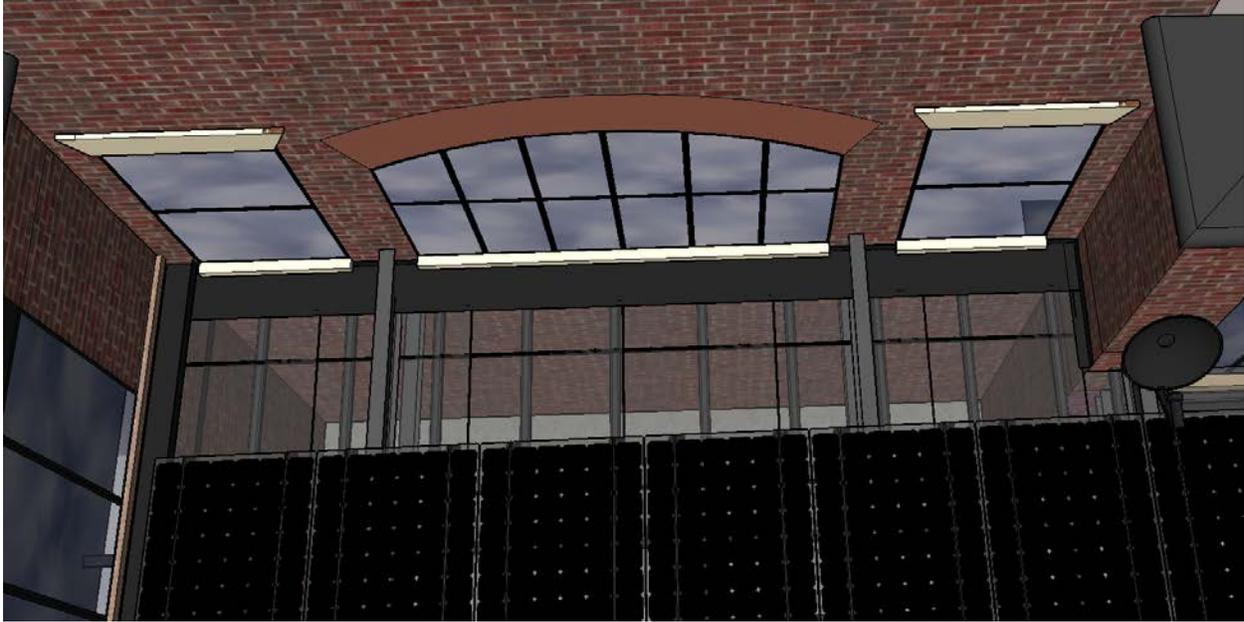
Awning overlap from below



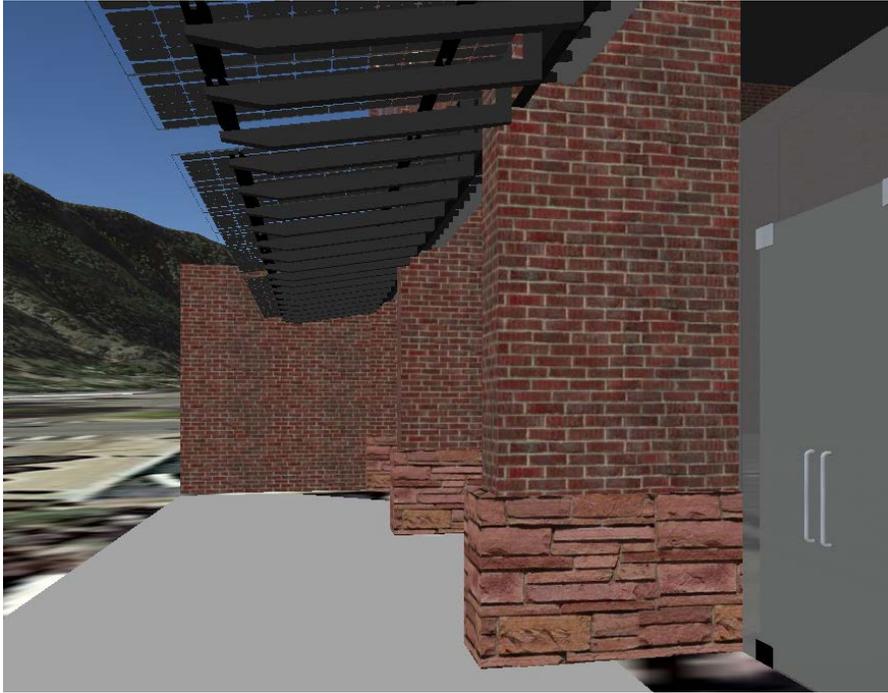
View from hallway



Awning overlap from above

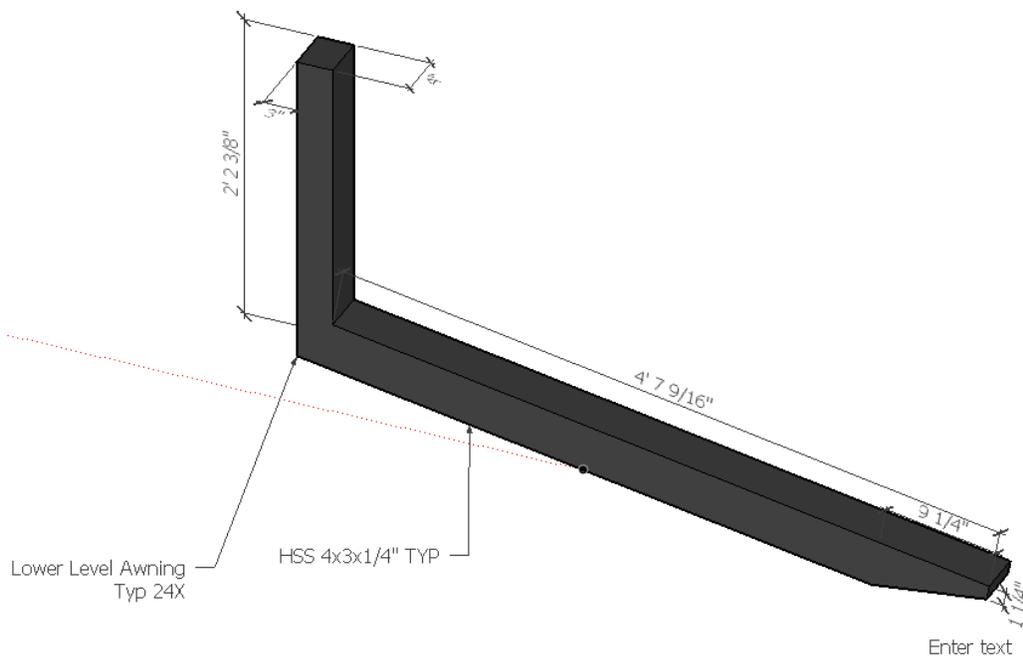


Ground Floor Awning Array



Key Features

- The existing structure needs to be eliminated due to the inadequacy of the supports
- 4 x3" tube steel support structure (24X)
- 8 supports per bay on same interval as existing structural supports

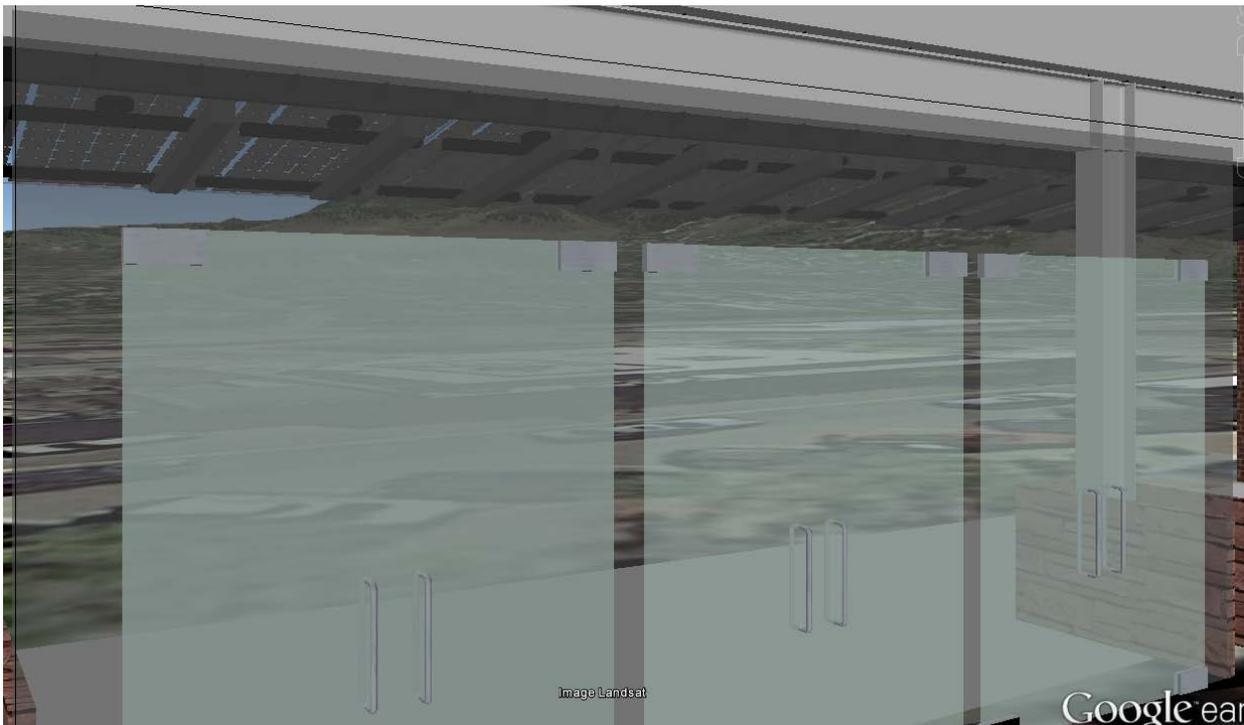


- LSX Rail fasteners hidden within tube steel (self-tapping screws)
- Tube steel frame shop fabricated, frame welded to lintel at site
- Module to module is sealed via LSX Seal tape
- Array is not flashed
- 24 Supports Total - 8 supports per opening
- All lower signage to be mounted on top of awning structure

Critical Dimensions

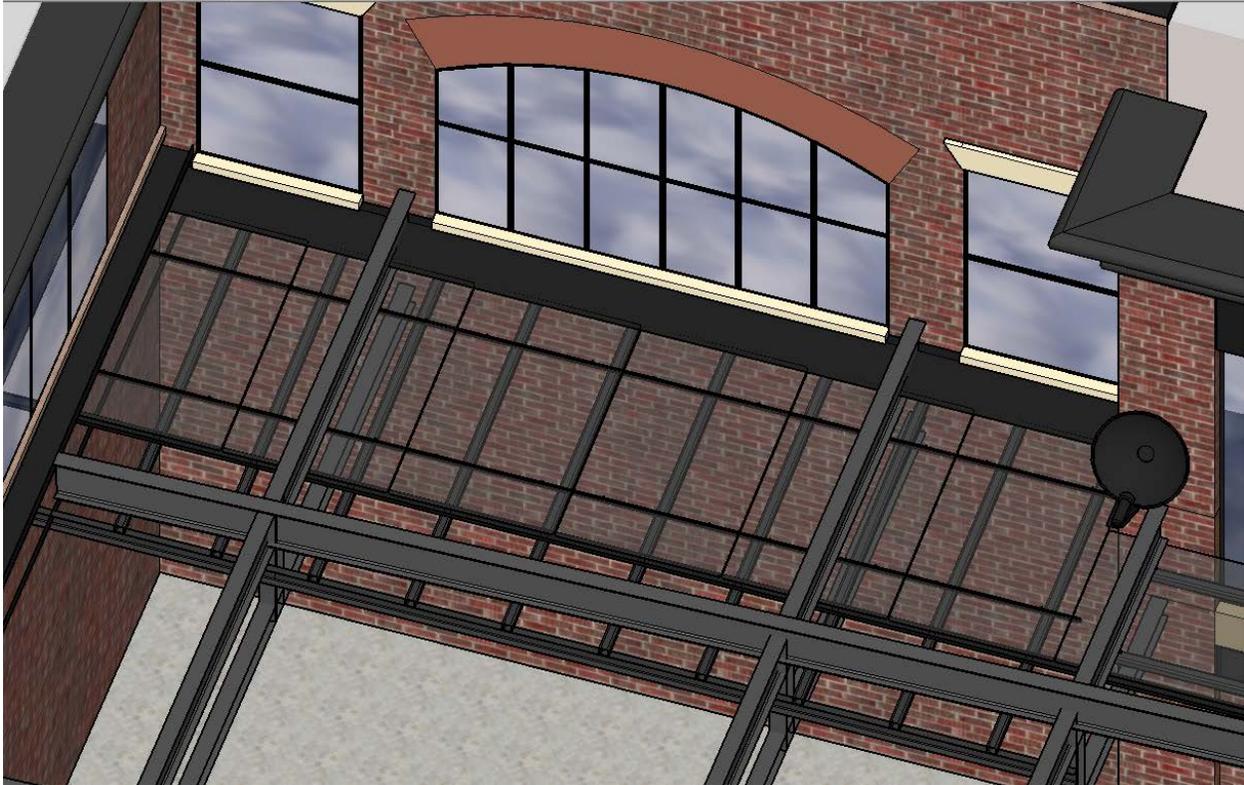
- Brick Opening - 20' 8" TYP
- Awning Width – 20'-7 ¼"
- Awning centered on opening
- Awning overhang - 5' -10" from lintel stiffener face
- Module edge is 9'-4" from ground
- Array higher than existing awning (10 deg vs 26 deg tilt)
- Module start – 5" from lintel
- Tilt: 10 deg
- Change in Elevation: 11.625" over 5' -5.25"

View from storefront



Patio Doorway Awning #1

Key Features



- Lumos T-Track mounted across existing 2.5x2.5" HSS tube steel structure
- Tube steel ideally cut back to first support to eliminate visual impact of tube system
- Gutter placed at end of array on top of support tubes
- 6 clear nonfunctional modules wide in portrait (no cells, no wiring)
- LSX T-Track fasteners hidden within tube steel (self-tapping screws)
- Module to module is sealed via LSX Seal tape
- Array is flashed on south wall and west wall
- Array is placed under the gutter on the east wall

Critical Dimensions

- Brick Opening - 20' 9" 7/16"
- Awning Width – 20'-7 1/4"
- Awning centered on opening
- Flashing starts at bottom of existing concrete sill
- Awning overhang - 6' -6" from brick to end of module
- Module edge is 12'-1" from ground
- Module start – 12" from brick
- Flashing Depth – 14"
- Tilt: 2.6 deg

Patio Doorway Awning #2

Key Features



- Lumos T-Track sistered to 2.5x2.5" HSS tube steel structure that will be added to the existing structure
- Gutter is integral with Awning #1
- 2 clear nonfunctional modules wide in landscape (no cells, no wiring)
- Awning is not flashed to the adjacent window
- LSX T-Track fasteners hidden within tube steel (self-tapping screws)
- Module to module is sealed via LSX Seal tape
- Array is flashed on south wall and west wall
- Array is flashed on the west facing wall if necessary
- Array is placed under the gutter on the east wall

Critical Dimensions

- Awning overhang - identical to adjacent array, 3' 6" from brick
- Module edge is 12'-1" from ground
- Module start - 1" from brick
- Tilt: 2.6 deg

General Assumptions:

- Structural support members for solar elements can be attached to existing building via field welding
- Field welded joints to be field painted
- Paint options to be noted in each of the comment pages within this document
- All lower signage to be mounted on top of awning structure
- Electrical conduit from array to interconnection routed on roof of building and down the east end of the north wall
- Inverters to be located on north side of building above parking garage roof
- Material procurement is directly between Conscience Bay and Lumos.

Inclusions:

- Design and Permit Package - Electrical design and PE stamped letter of approval.
- Obtain City of Boulder electrical and building permit.
- Permit fees and taxes.
- Installation of all, racking attachments, module rail, DC wiring, modules, inverter, and AC Wiring – interconnection will be a load side tap in main service disconnect.
- Installation of E Gauge monitoring, consumption and production.
- All material and equipment, other than what’s outlined in equipment provided section.
- All sub-contractors will have valid insurance that reflects the requirements for this project.
- System testing and commissioning.
- Installation will be done according to NEC 2014.

Exclusions:

- 2.5” x 2.5” tube steel structure to be removed under patio awning to be representative of all renderings shown, if completed to be completed by Farout or others
- Ground floor existing awnings and main canopy steel ornament to be removed by Farout Construction. To be contracted directly with Conscience Bay.

Proposed Payment Terms for Fixed Bid Price:

50% down payment due upon agreement approval, schedule dependent.
40% due upon completion of installation and passing final inspection
10% due upon commissioning and walk through

General Comments

Preliminary Design Package Approval

The Preliminary Design Package once approved gives Lumos the necessary information to secure fixed bids for the project. Once a preliminary design is approved, Conscience Bay will receive a fixed bid price within a one week period.

Customer Approval

Please sign below stating approval per the comments provided in this document.

(Lumos Representative)

(Signature of Client)

(Date)

(Date)

(Printed Name/Title)

(Printed Name/Title)

Conscience Bay Company

Pre existing Conditions

Ground Floor



Second Floor Patio



Third Floor





LSX250 Series

An innovative approach to photovoltaic modules

Features

Frameless Module

No Module Grounding

Constrained Module Positioning

Unique Through-Bolt Mounting

Available with black, clear or white back sheet

Benefits

- No aluminum = lower embodied energy
- Lower profile

- No ground lugs
- No continuous module equipment ground

- Perfect alignment
- Speeds installation time

- Innovative design options
- Tamper resistant mounting

- Aesthetic options for different applications



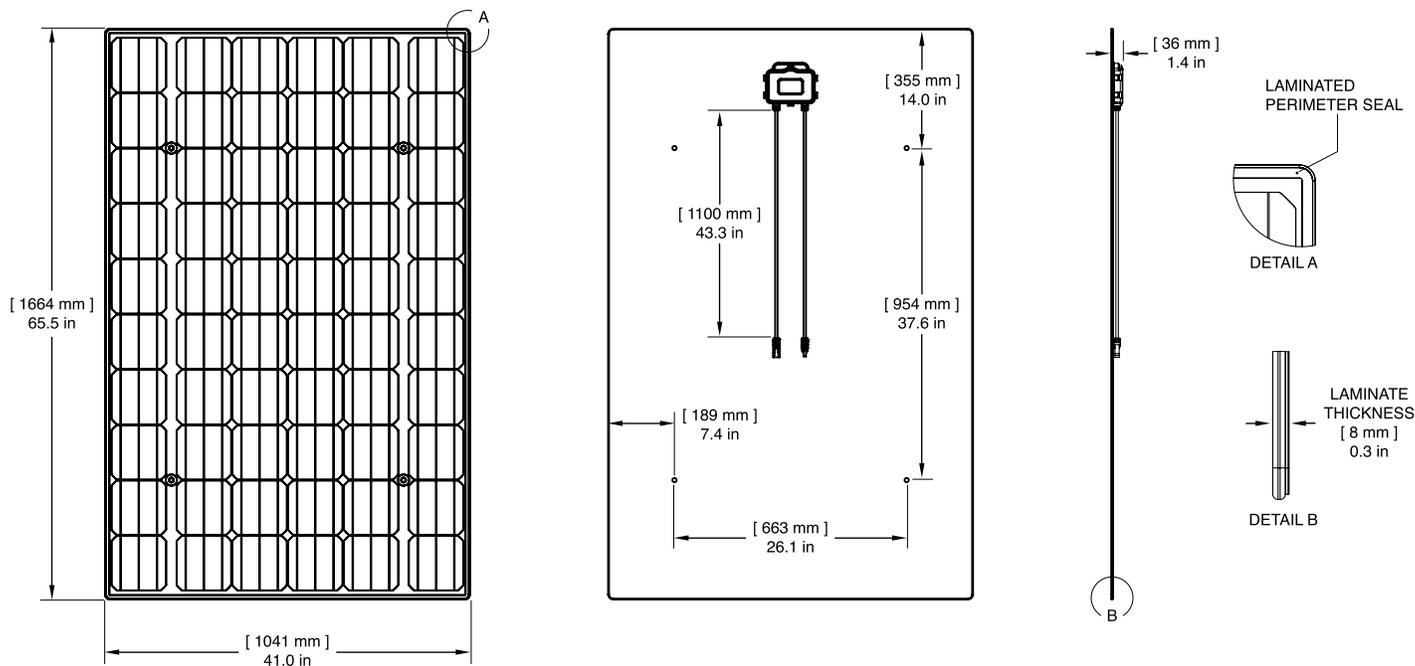
MADE IN CANADA



LSX250 Series



MADE IN CANADA



Electrical Specifications

Model	LSX245-60M-B/W/C*	LSX250-60M-B/W/C*	LSX255-60M-B/W/C*	LSX260-60M-B/W/C*
Rated Power @ STC	245 W	250 W	255 W	260 W
Rated Power @ PTC	217.9 W	222.5 W	227.0 W	231.4 W
Nominal Voltage	24 V	24 V	24 V	24 V
Peak Power Voltage (Vmp)	30.0 V	30.1 V	30.2 V	30.3 V
Maximum Power Current (Imp)	8.17 A	8.31 A	8.43 A	8.57 A
Open Circuit Voltage (Voc)	37.2 V	37.3 V	37.5 V	37.6 V
Short Circuit Current (Isc)	8.69 A	8.78 A	8.86 A	8.94 A
Operating Temperature	-40 °C to 85 °C			
Max System Voltage	1000 V	1000 V	1000 V	1000 V
Max Series Fuse Rating	15 A	15 A	15 A	15 A
Power Tolerance	-0/+3%	-0/+3%	-0/+3%	-0/+3%
Module Efficiency	14.1%	14.4%	14.7%	15.0%

*B-Black Backsheet

*W-White Backsheet

*C-Clear Backsheet

Mechanical Specifications

Solar Cell	Monocrystalline 6" x 6" (156 mm x 156 mm)
Number of Cells	60 (6 x 10)
Bypass Diodes	6
Module Dimensions	65.5" x 41.0" x 1.4" (1664 mm x 1041 mm x 36 mm)
Module Area	18.65 ft ² (1.73 m ²)
Module Weight	64 lb (29 kg)
Module Weight / Area	3.4 PSF (16.6 kg/m ²)
Front Glass	0.24" (6 mm) FT Low-Iron PV Glass
Backsheet	Black, White, or Clear
Clear Module - Light Transmittance	Portrait = 12% Landscape = 10%
LSX Rail Assembly Options	3, 4, & 5 Portrait Module Lengths 2 & 3 Landscape Module Lengths
Output Cables	12 Awg. PV Wire and MC4 Connectors
Static Load	-50/+113 PSF (-2400/+5400 Pa) Portrait
Hail	Max. Diameter 2" (51 mm) at 72 mph (32 m/s)
Fire Rating	Class C
Warranty	12 years at 90% of rated power output 25 years at 80% of rated power output
Certification	IEC, UL-1703 & CEC listed

Temperature Coefficients

Nominal Operating Cell Temperature (NOCT)	47 ±2 °C
Power Temperature Coefficient	-0.48% / °C
Voltage Temperature Coefficient (Voc)	-0.35% / °C
Current Temperature Coefficient (Isc)	+0.05% / °C

PATENT PENDING

Specifications are subject to change without notice. Lumos reserves the right of final interpretation and revision of this datasheet.

Version 201407-LSX60M-2.0

3550 Frontier Ave.
Boulder, CO 80301
877.301.3582
www.lumosolar.com

01 15 DA Pac ag 64
LUMOS

929 Pearl Canopy

SOLAR PHOTOVOLTAIC SYSTEM

929 Pearl Street, Boulder,
CO 80302

LUMOS
3550 Frontier Ave.
Boulder, CO 80301
(877) 301-3582
www.lumosolar.com

PROJECT TITLE
929 Pearl
PROJECT ADDRESS
929 Pearl Street, Boulder, CO 80302



SITE PLAN

CODE REFERENCES

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERTINENT CODES, REGULATIONS, LAWS AND ORDINANCES AS REQUIRED BY THE STATE OF INSTALLATION AND THE LOCAL AUTHORITIES HAVING JURISDICTION INCLUDING, BUT NOT LIMITED TO:
INTERNATIONAL BUILDING CODE

INDEX OF DRAWINGS:

T1	-	TITLE SHEET
P1.0	-	PROJECT OVERVIEW
S1.0	-	GROUND FLOOR AWNING 1 AND 2
S2.0	-	GROUND FLOOR AWNING 3
S3.0	-	2nd FLOOR CONFERENCE ROOM AND ENTRY AWNING SYSTEM
S4.0	-	2nd FLOOR PATIO CANOPY
S5.0	-	3rd FLOOR AWNING
A1.0	-	ARRAY FLASHING DETAILS

DESIGN SCHEDULE		REVISION #:	0
APPROX TOTAL SYSTEM SIZE:	17.75 kWDC - STC		
SYSTEM TILT:	[10, 2.5, 30] DEGREES		
COMPANY:	LUMOS SOLAR		
PROJECT:	929 PEARL		
PRODUCT MODEL:	CUSTOM CANOPIES AND AWNINGS		
SOLAR MODULE:	LSX250 SERIES GEN 2 - CLEAR BACKSHEET		
SOLAR RACKING:	LSX DIRECT MOUNT		

DIMENSIONS SHOWN MADE TO GEN 2 LSX250 MODULE SPECS

DESIGN CRITERIA:	IBC 2012
WIND SPEED (Vult):	130 MPH
EXPOSURE CATEGORY:	"B"
ROOF SNOW LOAD:	30 PSF
LIVE LOAD:	20 PSF
ASHRAE HIGH TEMPERATURE:	65°C
ASHRAE LOW TEMPERATURE:	-25°C
BUILDING/STRUCTURE HEIGHT:	~25'
RISK CATEGORY:	II



THESE DRAWINGS WERE NOT PREPARED BY ANCHOR ENGINEERING, INC. BUT HAVE BEEN REVIEWED FOR STRUCTURAL ADEQUACY

REV	DESCRIPTION	DATE	DBI	CB

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PROJECT NUMBER
102914

DRAWN BY
Brian Rafferty

CUST APPROVAL

DATE

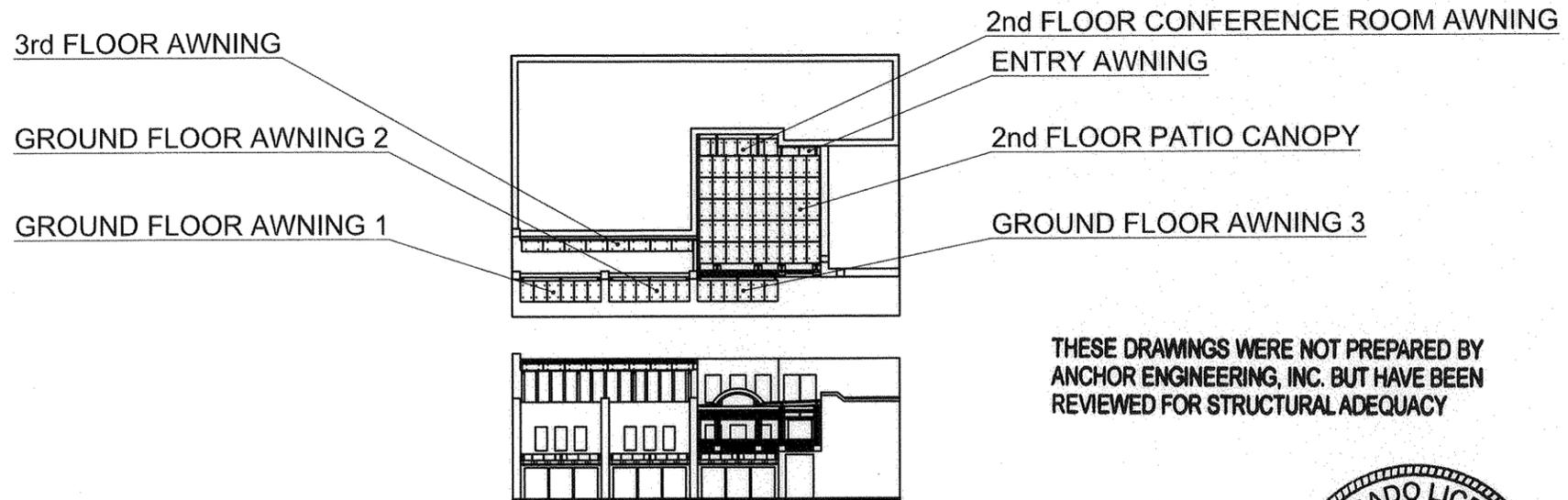
DATE
11/25/2014

ORIGINAL SIZE
11"X17"

SHEET SIZE
ANSI_B

DRAWING SCALE
NTS

T1



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CODE
DESIGN IS BASED ON THE INTERNATIONAL BUILDING CODE.
CONSTRUCTION SHALL COMPLY WITH APPLICABLE SECTIONS OF THIS CODE.

DESIGN LOADS:	IBC 2012
BUILDING OCCUPANCY CATEGORY:	II
REDUCED ROOF SNOW LOAD (PSF):	30
SNOW IMPORTANCE FACTOR (Is):	1.00
WIND SPEED (Vult, Mph):	130
EXPOSURE CATEGORY:	"B"
WIND IMPORTANCE FACTOR (Iw);	NA for 2012 IBC
SEISMIC DESIGN CATEGORY:	B
Ss: 0.202	S1: 0.061
Sds: 0.215	Sd1: 0.098
ANALYSIS TYPE: EQUIVALENT LATERAL FORCE	
R: 1.25	REDUNDANCY FACTOR: 1.3

STRUCTURAL AND MISCELLANEOUS STEEL
CONFORM TO THE FOLLOWING:
WIDE FLANGE AND WT SHAPES: ASTM A992
CONNECTION PLATES FOR WIDE FLANGE MEMBERS: ASTM A36
MISCELLANEOUS CHANNELS, ANGLES, AND PLATE: ASTM A36
RECTANGULAR AND ROUND HSS SECTIONS: ASTM A500, GRADE B

STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED, POWDER COATED, PAINTED, OR HAVE OTHER APPROVED PROTECTIVE COATING.

WELDING SHALL BE IN ACCORDANCE WITH LATEST AWS STANDARDS USING E70XX ELECTRODES. FILLER MATERIAL FOR ALL DEMAND CRITICAL WELDS SHALL CONFORM TO AWS D1.1 CURRENT EDITION, PROVIDING A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FOOT- POUNDS AT A TEMPERATURE OF -20 DEGREES FAHRENHEIT WHEN TESTED IN ACCORDANCE WITH AWS A5 AND 40 FOOT-POUNDS AT 70 DEGREES FAHRENHEIT WHEN STEEL IS NORMALLY ENCLOSED AND MAINTAINED AT 50 DEGREES F OR HIGHER. FOR SERVICE TEMPERATURES LOWER THAN 50 F, THE QUALIFICATION TEMPERATURE SHALL BE 20 F ABOVE THE LOWEST ANTICIPATED SERVICE TEMPERATURE, OR AT A LOWER TEMPERATURE.

ALL EXPOSED STRUCTURAL STEEL SHALL COMPLY WITH AES STANDARDS. HIGH STRENGTH BOLTS (H.S.B.) SHALL CONFORM TO ASTM A325 TYPE N, USE UNLESS OTHERWISE SPECIFIED.

ANCHOR BOLTS SHALL CONSIST OF ASTM F1554 THREADED ROD WITH A MINIMUM YIELD STRENGTH (FY) = 36 KSI, UNO. REFERENCE PLANS FOR REQ. DIAMETER AND EMBEDMENT DEPTH.

COORDINATION
DETAILS SHOWN ARE TYPICAL, SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS. QUESTIONS OF IDENTIFICATION OF APPLICABLE DETAIL OR STRUCTURAL MEMBER SHALL BE BROUGHT TO ARCHITECT FOR RESOLUTION BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS AS TO LAYOUT, DETAILS, DIMENSIONS, AND ELEVATIONS. ALL QUESTIONS, DISCREPANCIES, AND CONFLICTS SHALL BE REPORTED TO THE ARCHITECT FOR ADJUSTMENT BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES INCLUDING TEMPORARY SHORES AND BRACING TO RIGIDLY AND SAFELY SUPPORT STRUCTURAL ELEMENTS, EARTH, OR NEIGHBORING STRUCTURES DURING CONSTRUCTION.

DRAWING SCALE
ALL SCALES SHOWN AS: 1:48 ARE EQUIVALENT TO: 1/4" = 1' - 0"



1. GROUND FLOOR AWNING 1 AND 2 SCHEDULE		REVISION:	0
STRUCTURAL MEMBERS:	(3) AWNING BRACKETS PER AWNING		
SOLAR RACKING:	AWNING SUPPORTS: HSS 4x4x1/4 - RAILS: HSS 4x3x3/16		
SOLAR MODULE ATTACHMENT:	LSX DIRECT MOUNT		
SOLAR MODULE:	(6) LSX250 MODULES IN PORTRAIT		
2. GROUND FLOOR AWNING 3 SCHEDULE		REVISION:	0
STRUCTURAL MEMBERS:	(3) AWNING BRACKETS PER AWNING		
SOLAR RACKING:	AWNING SUPPORTS: HSS 4x4x1/4 - RAILS: HSS 4x3x3/16		
SOLAR MODULE ATTACHMENT:	LSX DIRECT MOUNT		
SOLAR MODULE:	(6) LSX250 MODULES IN PORTRAIT		
3. 2nd FLOOR CONFERENCE ROOM AND ENTRY AWNING SYSTEM SCHEDULE		REVISION:	0
<i>2nd FLOOR CONFERENCE ROOM SECTION</i>			
STRUCTURAL MEMBERS:	HSS 2.5x2.5x1/4 @ 24" OC (EXISTING)		
SOLAR RACKING:	LSX T-TRACK		
SOLAR MODULE ATTACHMENT:	LSX BOLT		
<i>ENTRY SECTION</i>			
SOLAR MODULE:	(6) DUMMY LSX250 MODULES IN PORTRAIT		
STRUCTURAL MEMBERS:	HSS 2.5x2.5x1/4		
SOLAR RACKING:	LSX T-TRACK		
SOLAR MODULE ATTACHMENT:	LSX BOLT		
SOLAR MODULE:	(2) DUMMY LSX250 MODULES IN LANDSCAPE		
4. 2nd FLOOR PATIO CANOPY SCHEDULE		REVISION:	0
SUPPORT BEAMS:	(4) W12x22		
SOLAR RACKING:	HSS 2.5x2.5x1/4 (EXISTING: CUT & REUSE)		
SOLAR MODULE ATTACHMENT:	LSX DIRECT MOUNT		
SOLAR MODULE:	9 ROWS OF 5 IN LANDSCAPE, LSX250 SERIES GEN 2 - CLEAR BACKSHEET		
5. 3rd FLOOR AWNING SCHEDULE		REVISION:	0
STRUCTURAL MEMBERS:	(4) HSS 3x3x3/16 TRIANGLES		
SOLAR RACKING:	HSS 3x3x3/16		
SOLAR MODULE ATTACHMENT:	LSX BOLT		
SOLAR MODULE:	(8) LSX250 MODULES IN LANDSCAPE		

1	Ground Floor Array 1 and 2:	1.5kW, 6 Modules, Portrait, 10° tilt to the south
2	Ground Floor Array 3:	1.5kW, 6 Modules, Portrait, 10° tilt to the south
3	Conference Room Awning	0 kW, 6 Dummy LSX Glass Panels, Portrait, ~1° tilt to the south
	Entry Awning	0 kW, 2 Dummy LSX Glass Panels, Landscape, ~1° tilt to the south
4	2nd Floor Patio Array:	11.25kW, 45 Modules, Landscape, 2.2° tilt to the SW (255° Azimuth)
5	3rd Floor Awning Array:	2kW, 8 Modules, Portrait, 30° tilt to the SE (165° Azimuth)

LUMOS
3550 Frontier Ave.
Boulder, CO 80301
(877) 301-3582
www.lumosolar.com

PROJECT TITLE
929 Pearl
PROJECT ADDRESS
929 Pearl Street, Boulder, CO 80302

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PROJECT NUMBER
102914

DRAWN BY
Brian Rafferty

DATE
11/25/2014

ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B

SCALE
NTS

DRAWING

S0.0

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1
S5.0

1
S1.0

1
S3.0

1
S4.0

1
S2.0

1
S0.1

OVERALL PROJECT - PLAN VIEW

1/8" = 1' - 0"



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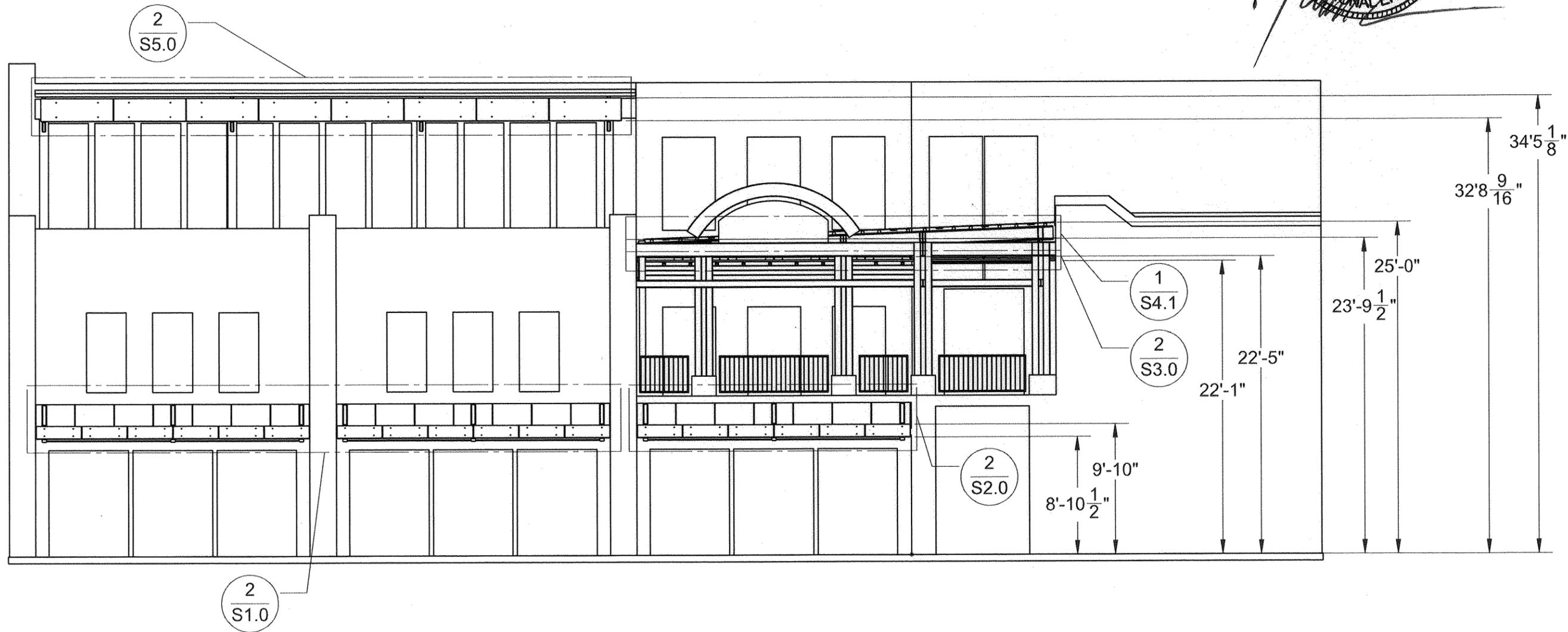
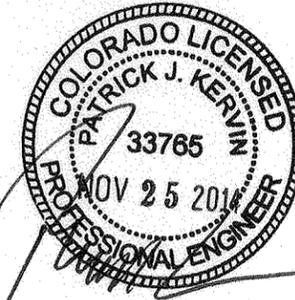
DATE
11/25/2014

ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B

SCALE
1:96

DRAWING
S0.1

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NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE APPROXIMATE.
 LOWER DIMENSION INDICATES EVE HEIGHT.
 HIGHER DIMENSION INDICATES MAX MODULE HEIGHT.

1 OVERALL PROJECT - ELEVATIONS
 S0.2 1/8" = 1' - 0"

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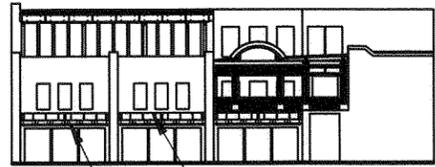
DRAWN BY
 Brian Rafferty

DATE
 11/25/2014

ORIGINAL SIZE
 11"X17"
 SHEET SIZE
 ANSI_B

SCALE
1:96

DRAWING
S0.2



GROUND FLOOR AWNING 2
GROUND FLOOR AWNING 1

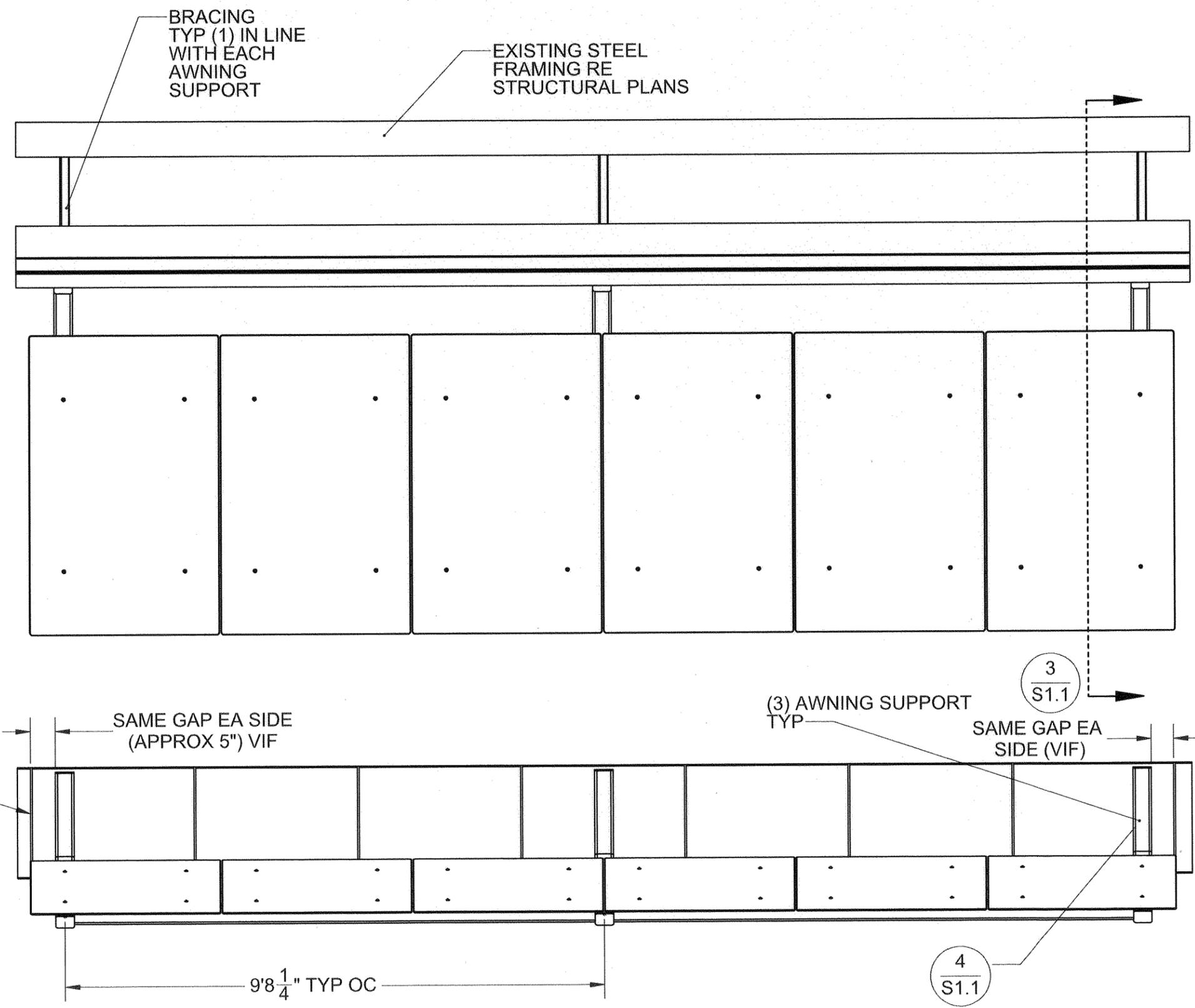
1 GROUND FLOOR AWNING PLAN VIEW
1/2" = 1' - 0"

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2 GROUND FLOOR AWNING FRONT VIEW
1/2" = 1' - 0"

EXISTING 3/8" STIFFENER



GROUND FLOOR AWNING 1 AND 2 STRUCTURE DETAILS

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DATE
11/25/2014

ORIGINAL SIZE
11"X17"
SHEET SIZE
ANSI_B

SCALE
NTS

DRAWING

S1.0



GROUND FLOOR AWNING 1
GROUND FLOOR AWNING 2

GROUND FLOOR ARRAY FRAMING
TYP ALL GROUND FLOOR ARRAYS

HATCH INDICATES ADDED
STRUCTURES/COMPONENTS

EXISTING 3/8"
STIFFENER PLATE

AWNING SUPPORT

5'5 1/2" LSX MODULE

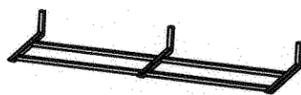
3'1 9/16"

11 1/2"

3

GROUND FLOOR AWNING SIDE VIEW

1" = 1' - 0"



1/4"
1/4"

WELD AWNING SUPPORTS TO EXISTING LINTEL, TYP

5

S1.1

2

S1.1

1/4" PL

1/8"

L2x2x1/8

L2x2x1/8 BRACING
BEHIND EACH
AWNING SUPPORT

1/4" PL

5

BRACING DETAILS

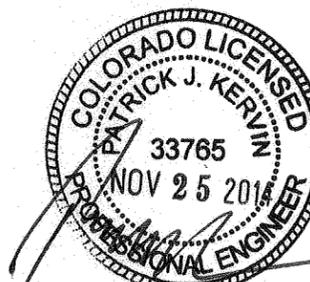
1" = 1' - 0"

1/4" PL
TYP T&B

(E) PL, F.V.

EA END

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PROVIDE MITER CUT &
BEVEL ONE HSS &
PROVIDE 1/4"
COMPLETE JOINT PEN
GROOVE WELD ALL
AROUND TUBE TUBE
CONNECTION TYP

CAP END

CAP END TYP

HSS 4x4x1/4

6'1 9/16"

1'6 5/16"

1'9 1/2"

4

TYP AWNING SUPPORT
(ALL GROUND FLOOR AWNINGS)

1/2" = 1' - 0"

LSX DIRECT MOUNT SCREW

ISOLATOR STRIP

LSX MODULE

1/8"

1/8"

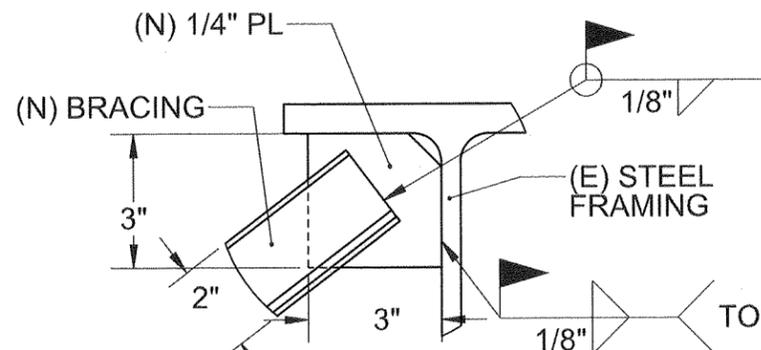
AWNING SUPPORT

HSS 4x3x3/16

1

CONNECTION DETAIL

4" = 1' - 0"



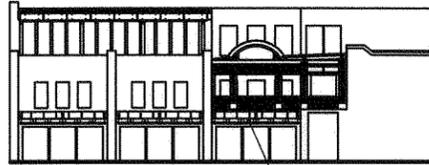
2

BRACING CONNECTION

3" = 1' - 0"

TOP, SIDE TYP

GROUND FLOOR AWNING 1 AND 2 STRUCTURE DETAILS



GROUND FLOOR
AWNING 3

1 GROUND FLOOR AWNING 3 PLAN VIEW
1/2" = 1' - 0"

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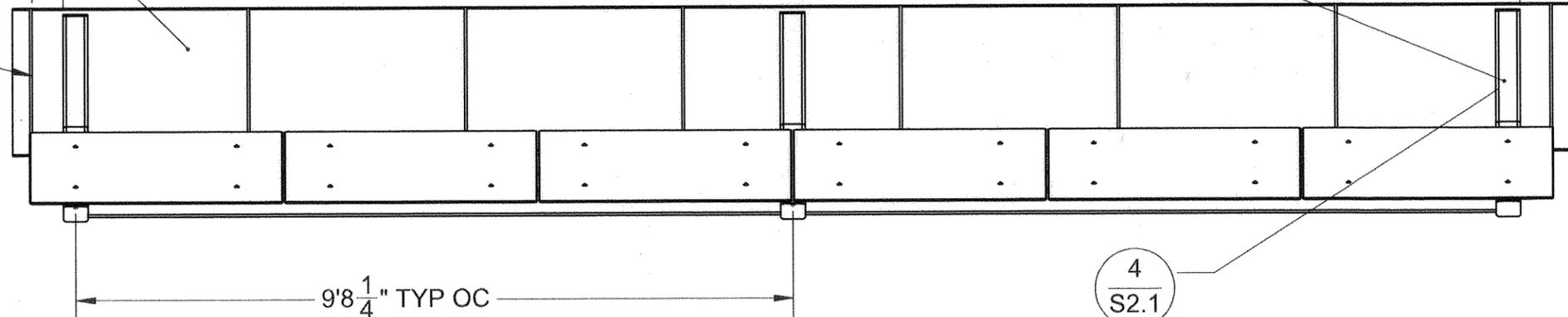


2 GROUND FLOOR AWNING 3 FRONT VIEW
1/2" = 1' - 0"

EXISTING JOISTS
RE: STRUCTURAL PLANS

EXISTING 3/8"
STIFFENER

SAME GAP EA SIDE
(APPROX 5") VIF



4
S2.1

GROUND FLOOR AWNING 3 STRUCTURE DETAILS

BRACING
TYP (1) IN LINE
WITH EACH
AWNING
SUPPORT

WHERE EXISTING JOISTS
ARE NOT ALIGNED WITH
AWNING SUPPORT,
BRACE ADJACENT
JOISTS. 1 EA SIDE TYP



3550 Frontier Ave.
Boulder, CO 80301
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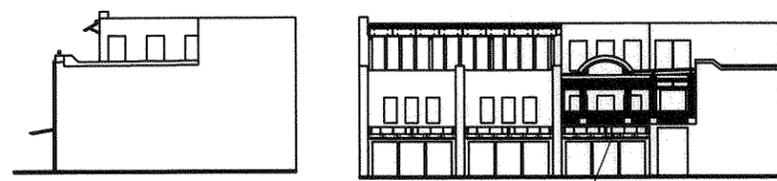
DRAWN BY
Brian Rafferty

DATE
11/25/2014

ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B

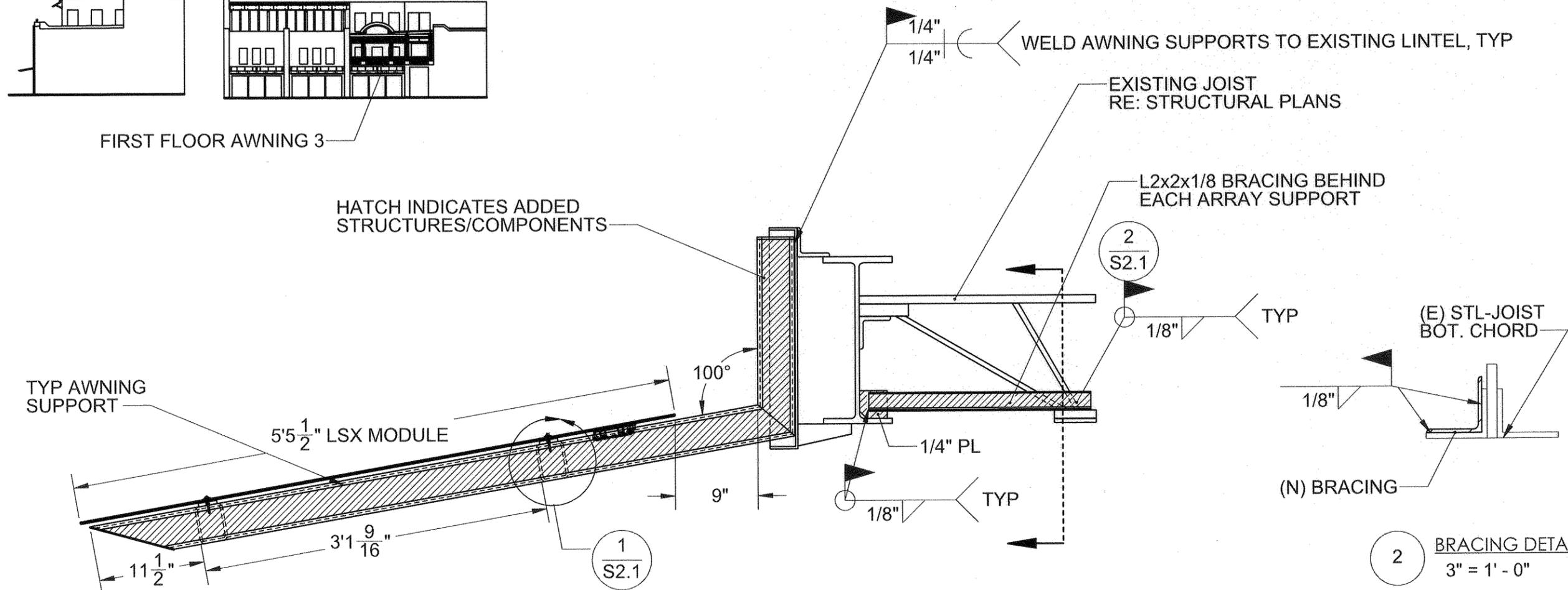
SCALE
NTS

DRAWING
S2.0



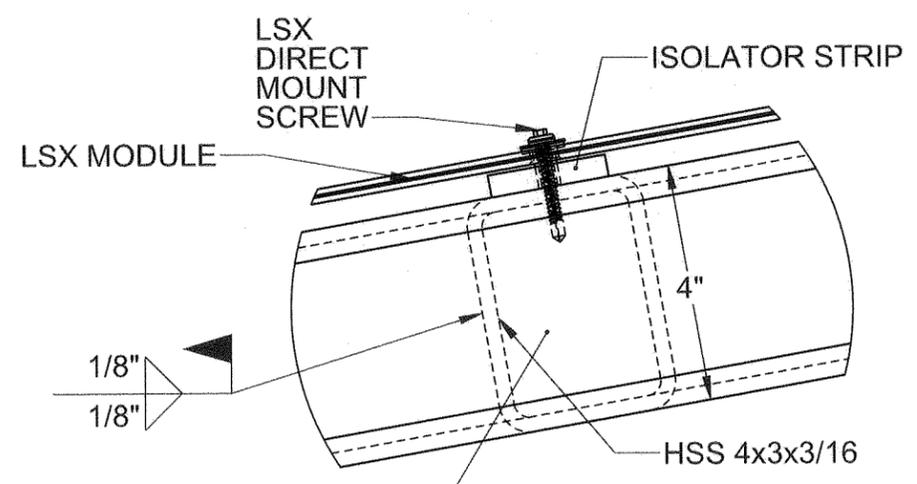
FIRST FLOOR AWNING 3

HATCH INDICATES ADDED STRUCTURES/COMPONENTS



3 GROUND FLOOR AWNING SIDE VIEW
1" = 1' - 0"

2 BRACING DETAILS
3" = 1' - 0"



1 CONNECTION DETAIL
4" = 1' - 0"

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GROUND FLOOR AWNING 3 STRUCTURE DETAILS

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PROJECT NUMBER 102914	DRAWN BY Brian Rafferty
DATE 11/25/2014	ORIGINAL SIZE 11"x17"
SHEET SIZE ANSI_B	SCALE NTS
DRAWING S2.1	

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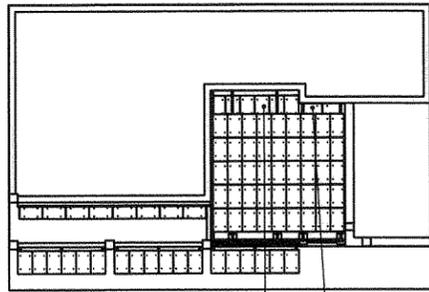
DRAWN BY
 Brian Rafferty

DATE
 11/25/2014

ORIGINAL SIZE
 11" X 17"
 SHEET SIZE
 ANSI_B

SCALE
NTS

DRAWING
S3.0

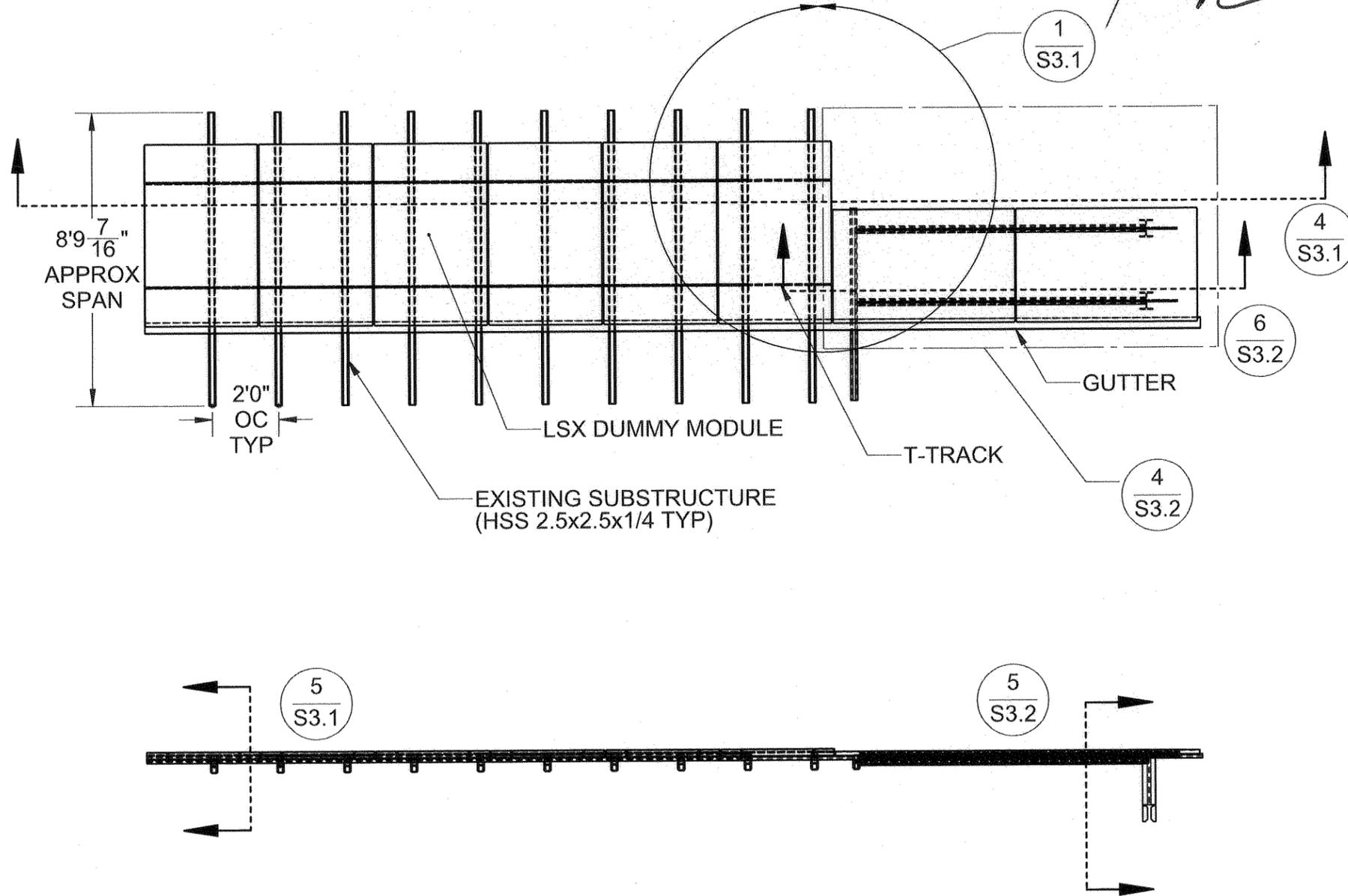


2nd FLOOR
 CONFERENCE
 ROOM AWNING

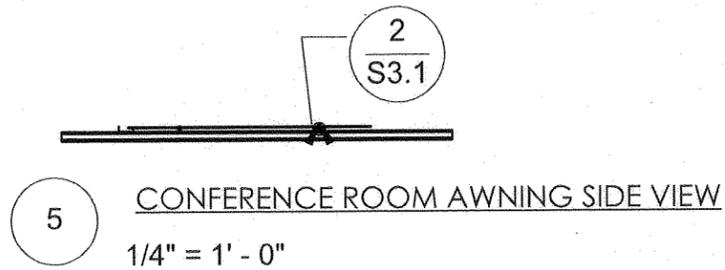
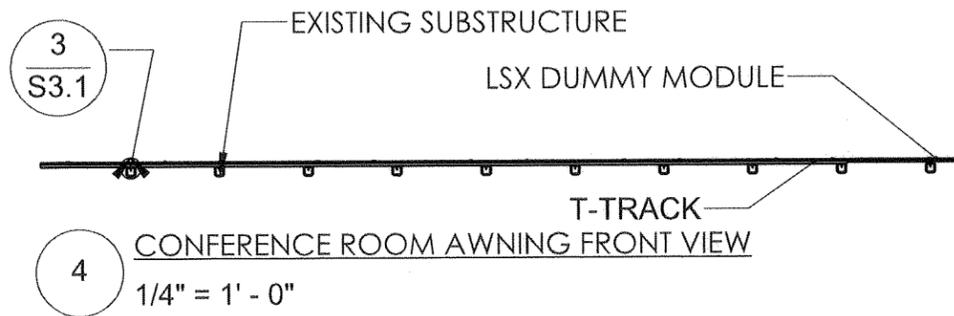
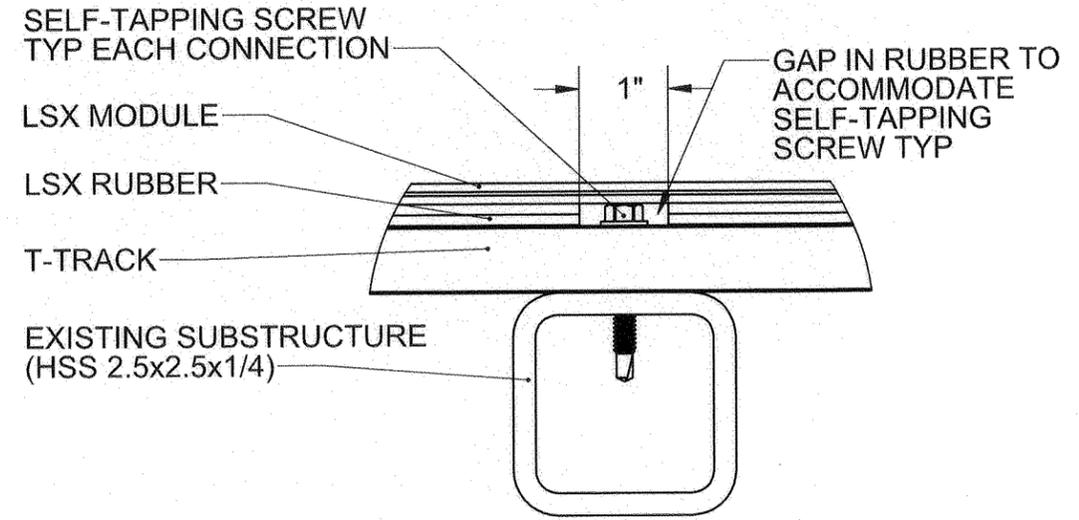
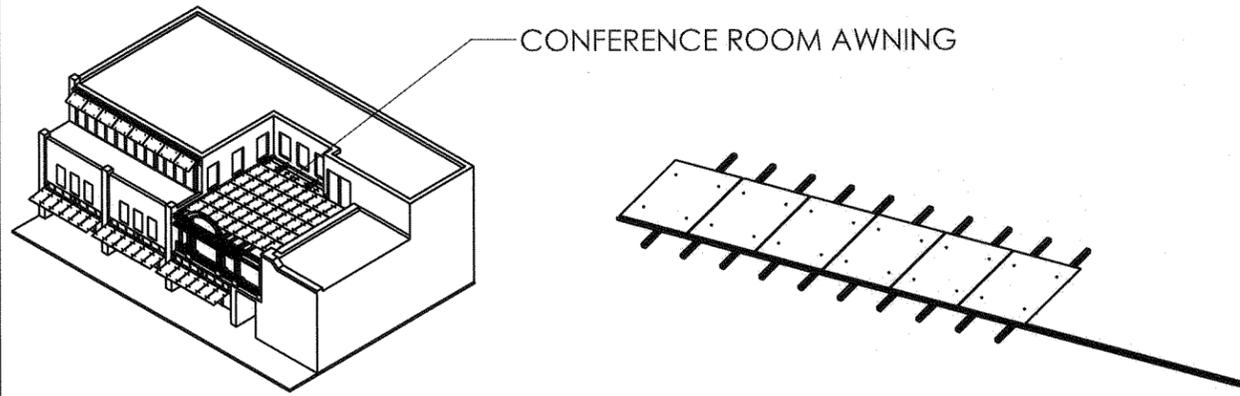
ENTRY SYSTEM
 AWNING

1 2nd FLOOR CONFERENCE ROOM AND ENTRY AWNING SYSTEM PLAN VIEW
 1/4" = 1' - 0"

2 2nd FLOOR CONFERENCE ROOM AND ENTRY AWNING SYSTEM FRONT VIEW
 1/4" = 1' - 0"

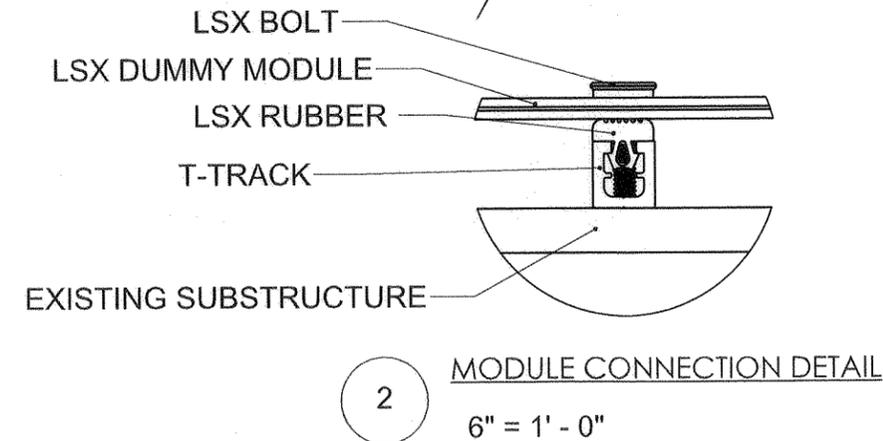
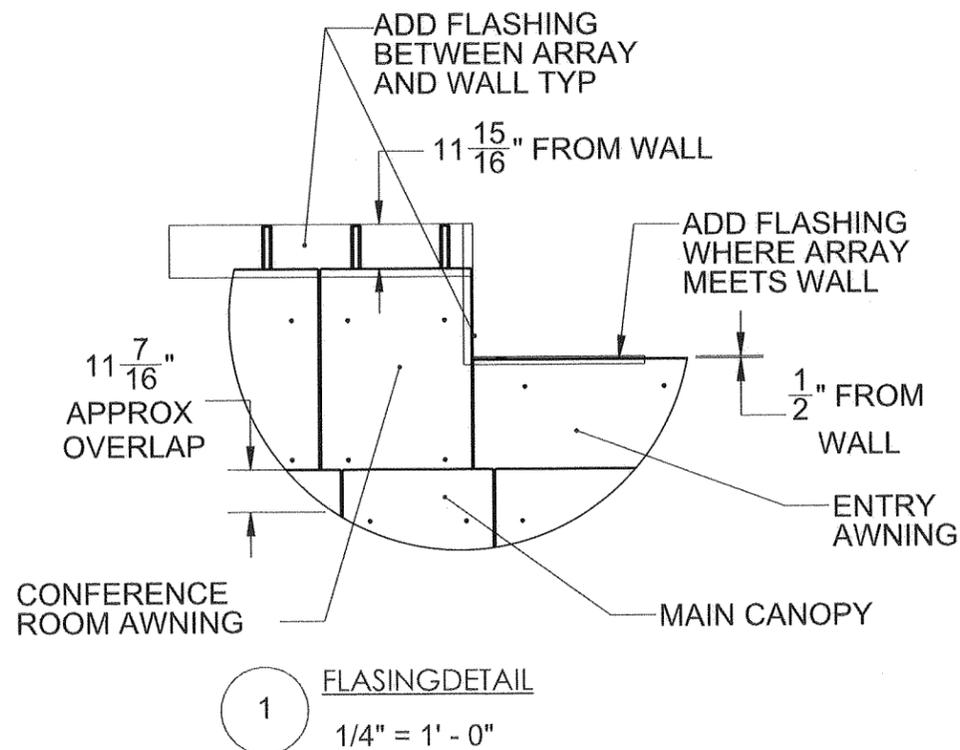


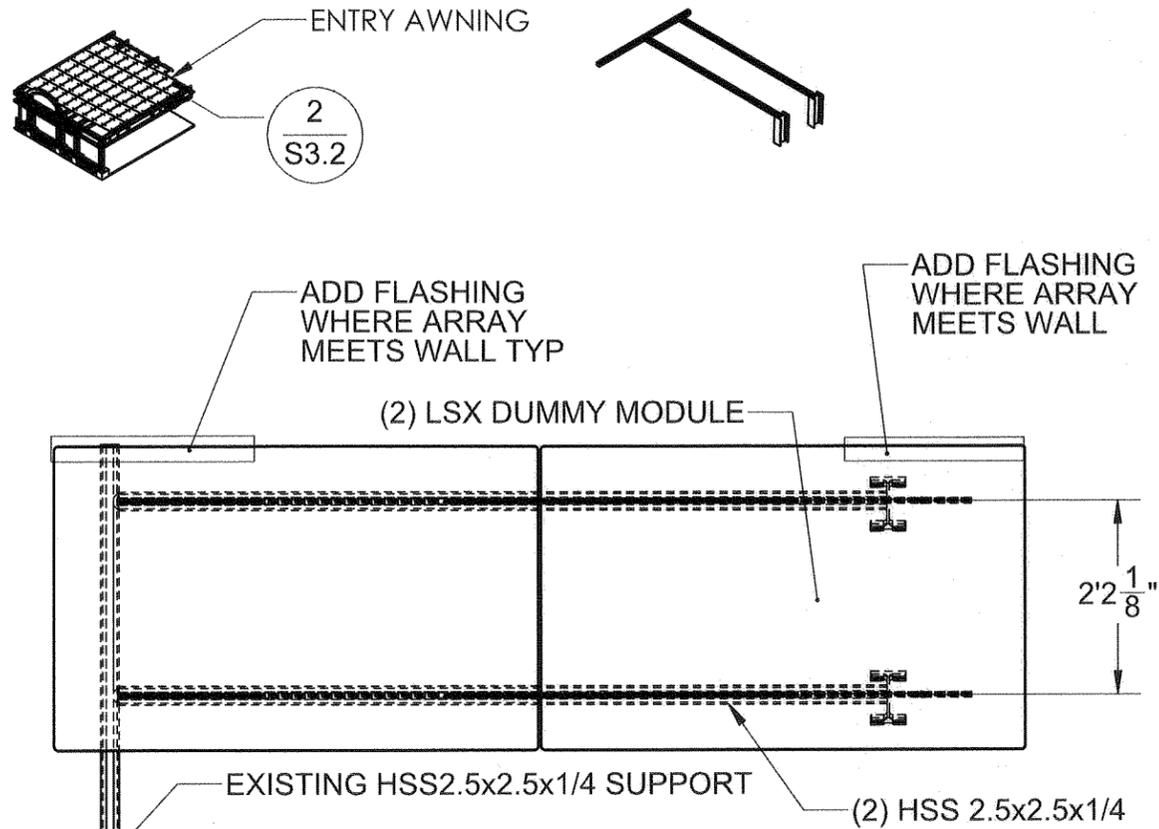
GROUND FLOOR AWNING 3 STRUCTURE DETAILS



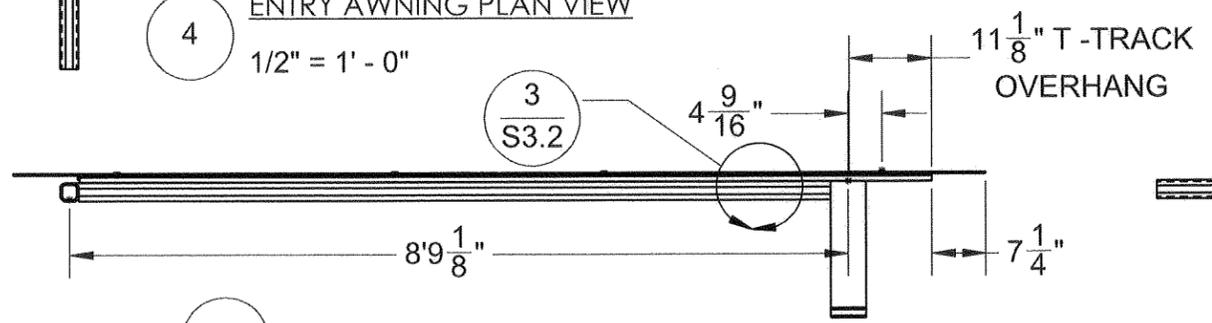
3 T-TRACK CONNECTION DETAIL
6" = 1' - 0"

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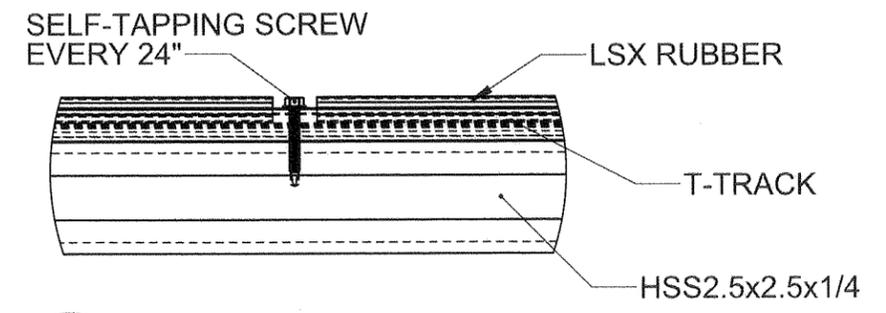




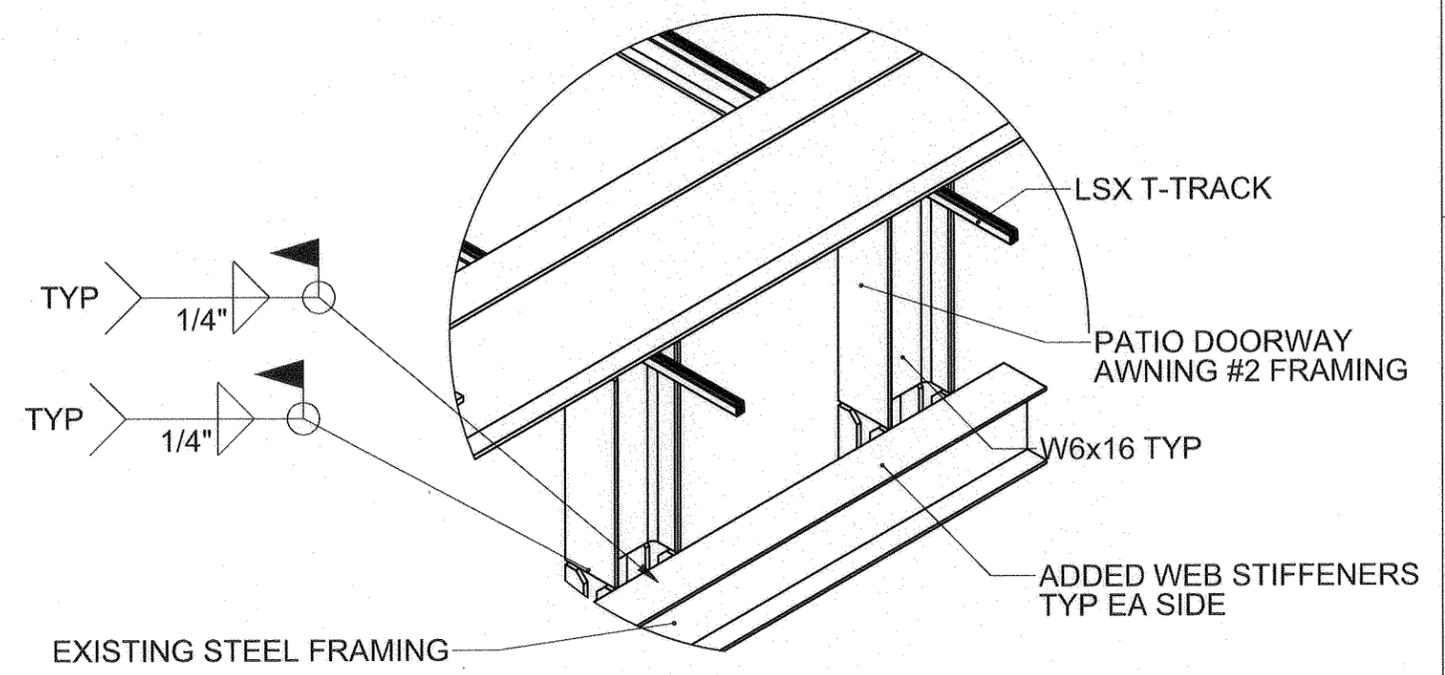
4 ENTRY AWNING PLAN VIEW
1/2" = 1' - 0"



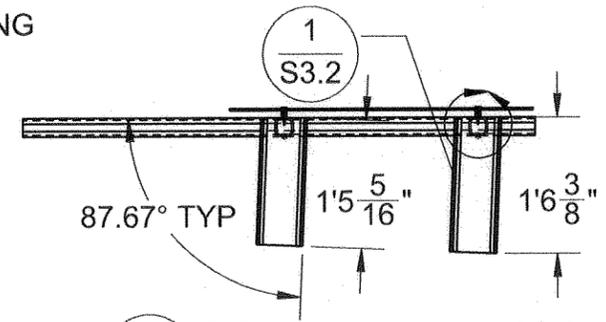
6 ENTRY AWNING FRONT VIEW
1/2" = 1' - 0"



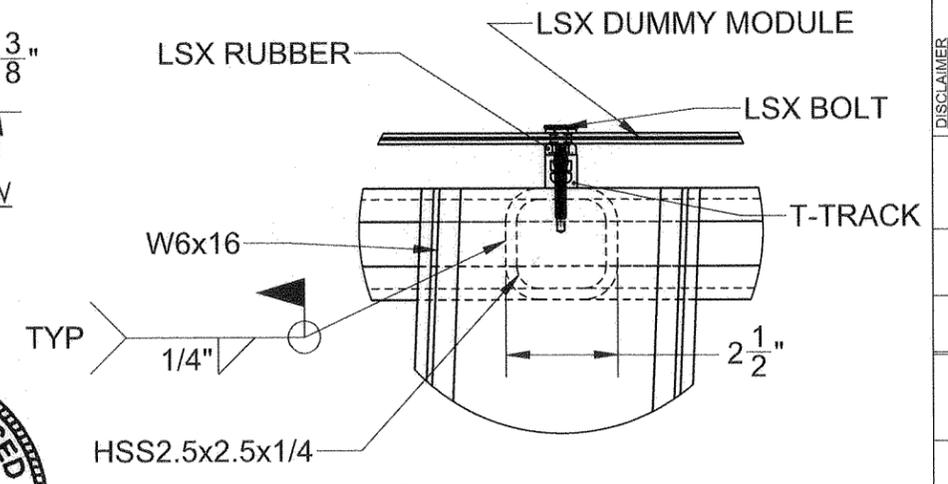
3 T-TRACK CONNECTION DETAIL
3" = 1' - 0"



2 FRAMING CONNECTION DETAIL
1" = 1' - 0"

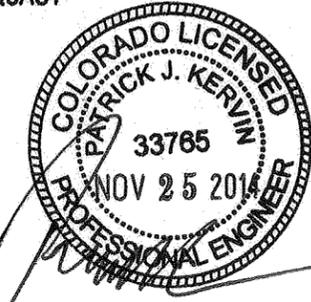


5 ENTRY AWNING SIDE VIEW
1/2" = 1' - 0"



1 MODULE CONNECTION DETAIL
3" = 1' - 0"

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PROJECT NUMBER
102914

DRAWN BY
Brian Rafferty

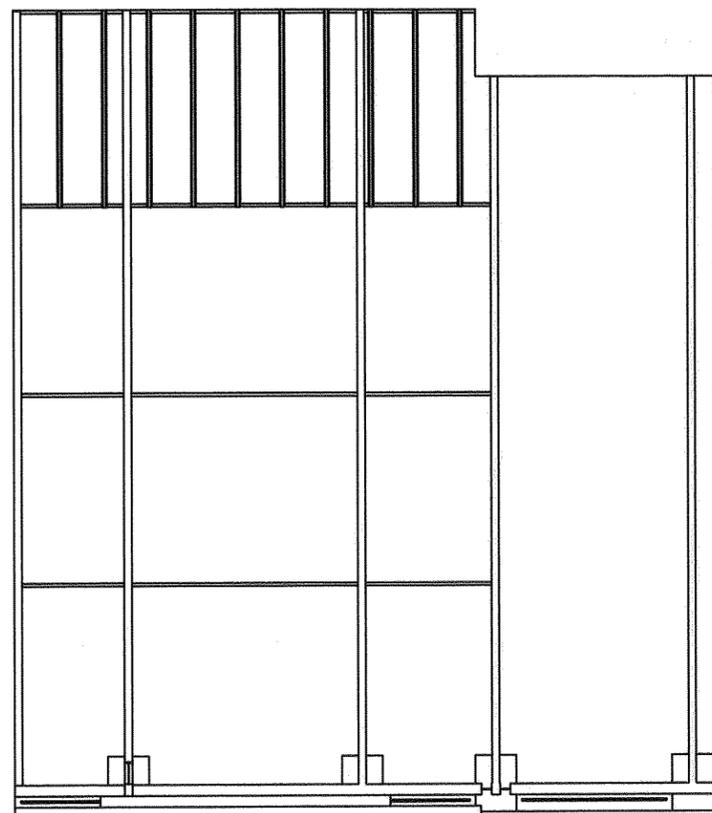
DATE
11/25/2014

ORIGINAL SIZE
11"X17"
SHEET SIZE
ANSI_B

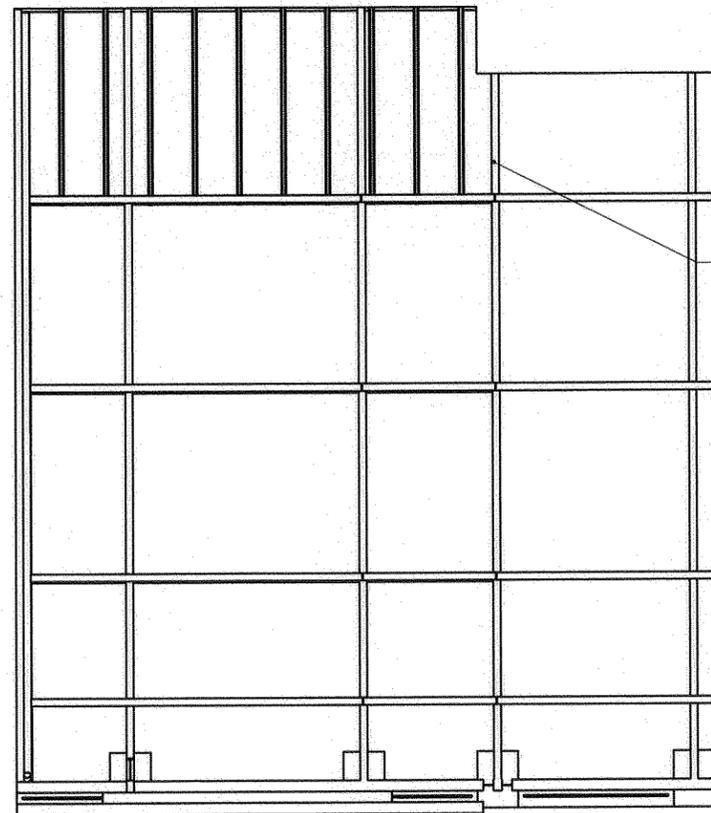
SCALE
NTS

DRAWING

S3.2

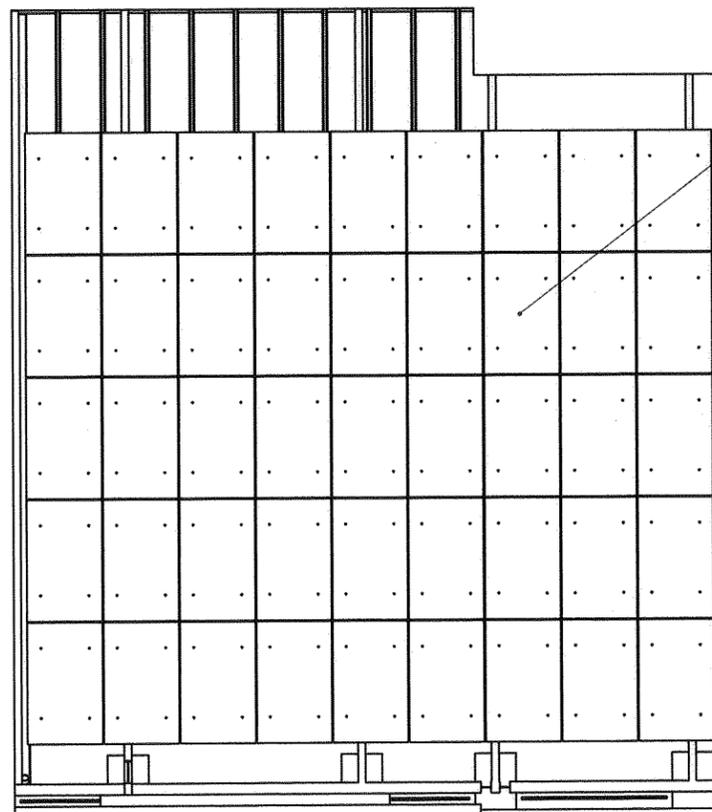


2nd FLOOR PATIO CANOPY PLAN VIEW EXISTING STRUCTURE



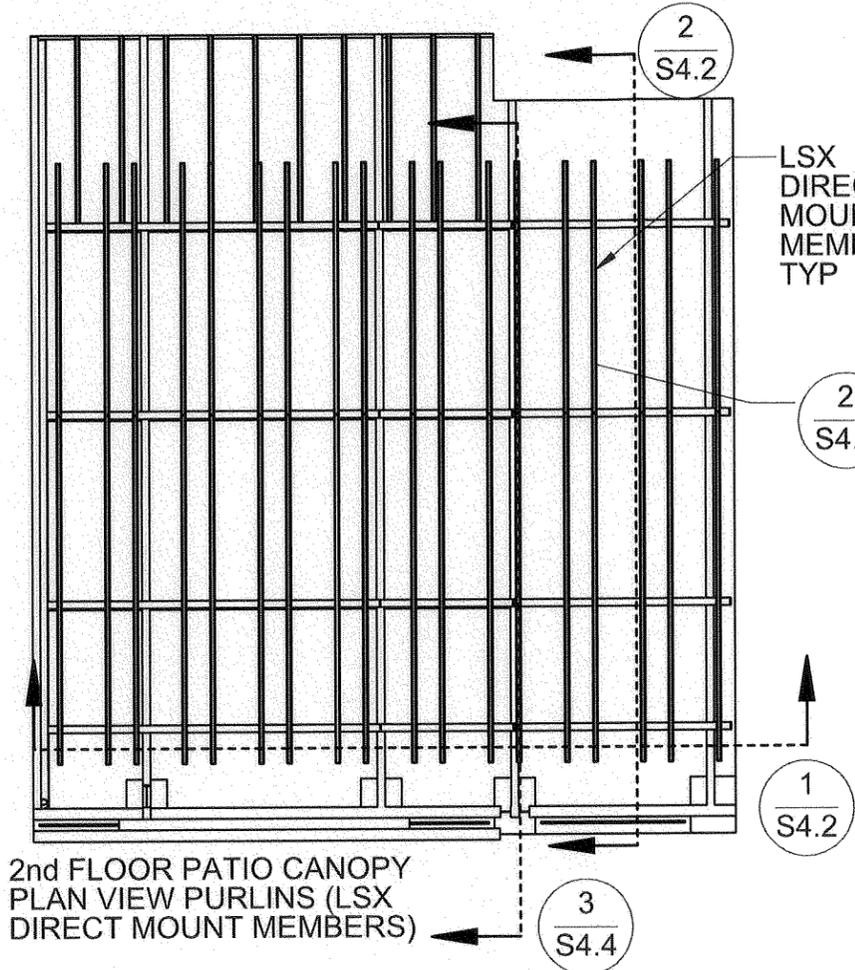
2nd FLOOR PATIO CANOPY PLAN VIEW MAIN SUPPORTS

SUPPORT BEAM TYP



LSX MODULE TYP

2nd FLOOR PATIO CANOPY PLAN VIEW WITH MODULES



2nd FLOOR PATIO CANOPY PLAN VIEW PURLINS (LSX DIRECT MOUNT MEMBERS)

LSX DIRECT-MOUNT MEMBER TYP

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1

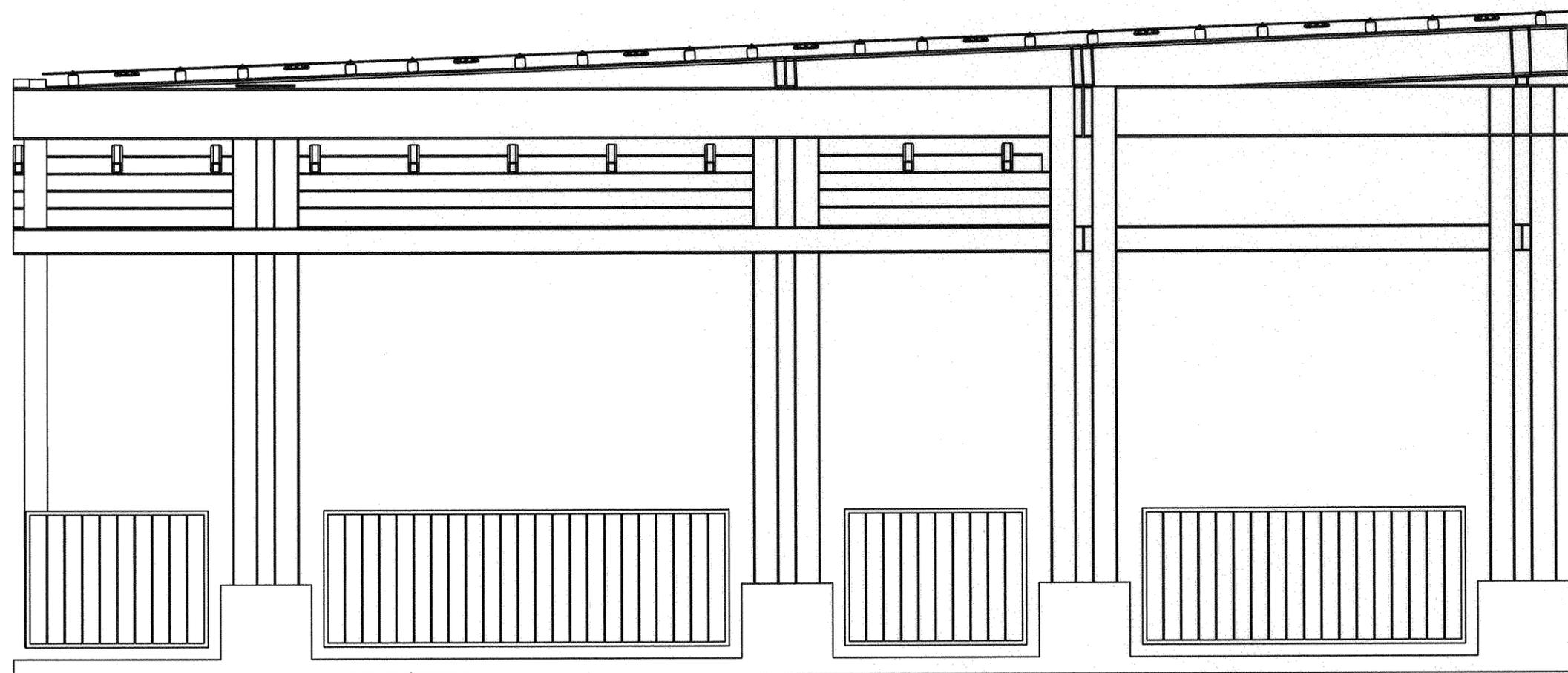
2nd FLOOR CANOPY PLAN VIEW
1/8" = 1' - 0"

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Boulder, CO 80301
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929 Pearl Street, Boulder, CO 80302

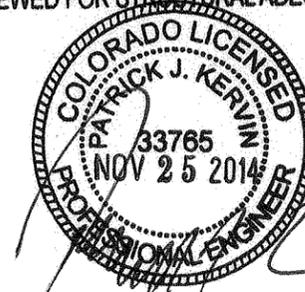
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102914
DRAWN BY
Brian Rafferty
DATE
11/25/2014
ORIGINAL SIZE
11"X17"
SHEET SIZE
ANSI_B
SCALE
1:96
DRAWING
S4.0



1 2nd FLOOR CANOPY FRONT VIEW
3/8" = 1' - 0"

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2ND FLOOR CANOPY

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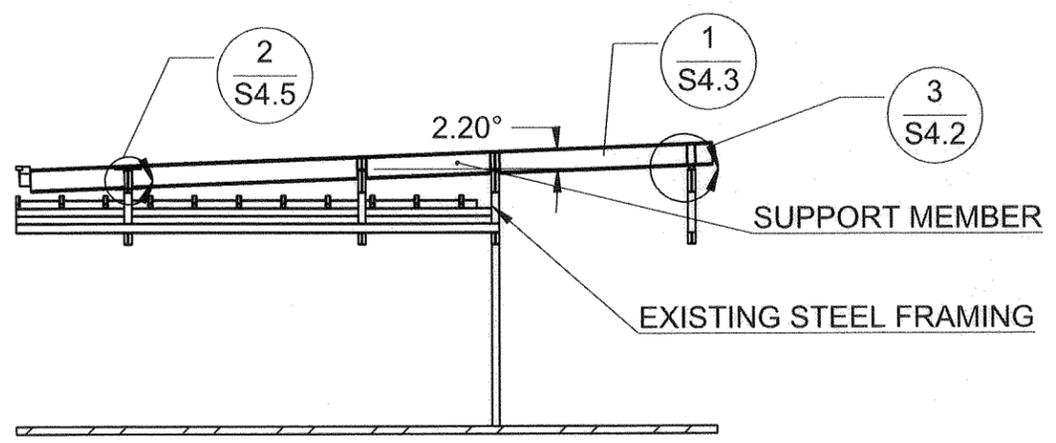
DRAWN BY
Brian Rafferty

DATE
11/25/2014

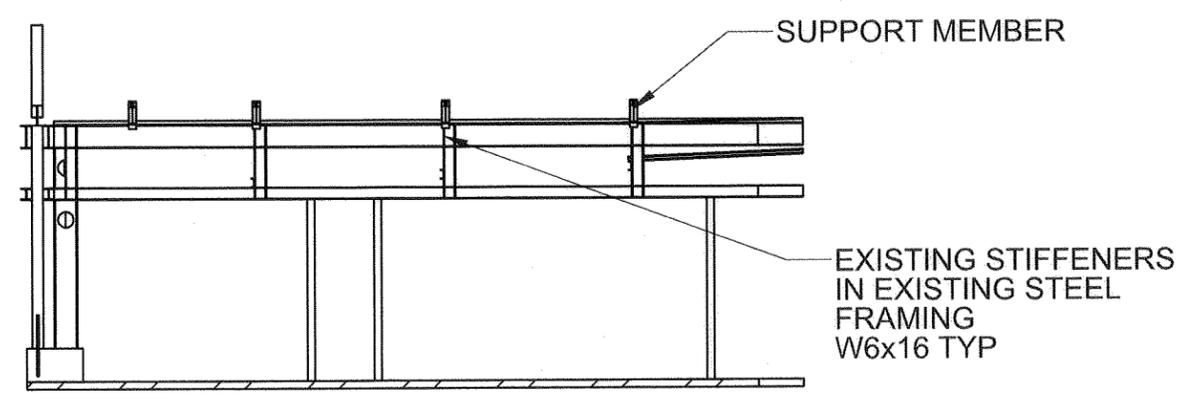
ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B

SCALE
NTS

DRAWING
S4.1

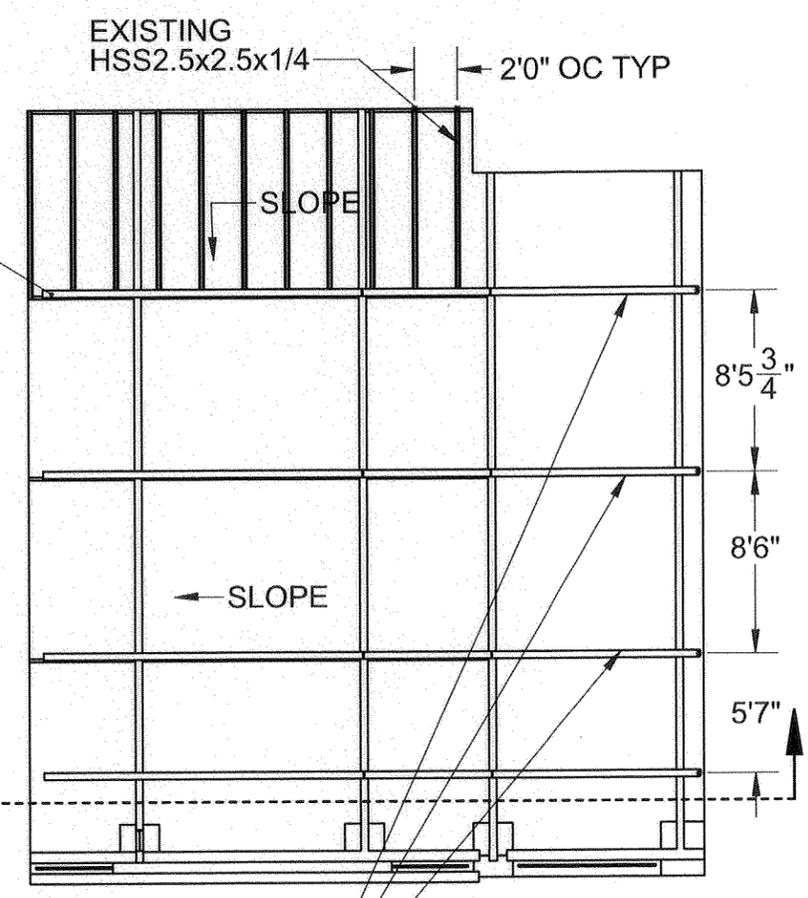


1 **2nd FLOOR CANOPY FRONT VIEW**
 1/8" = 1' - 0"



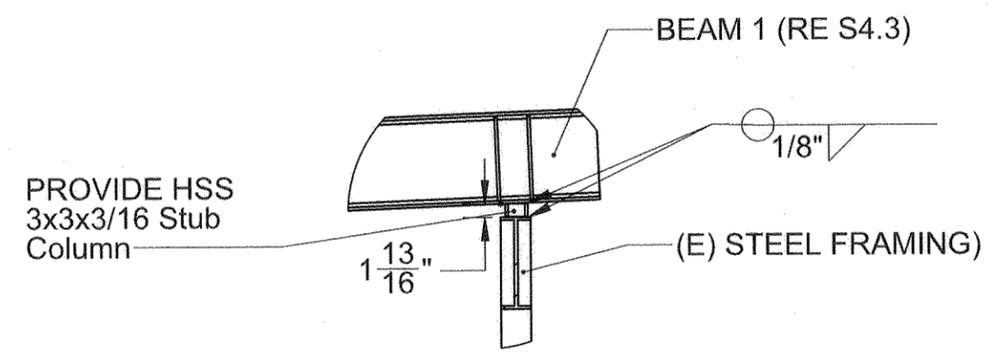
2 **2nd FLOOR CANOPY SIDE VIEW**
 1/8" = 1' - 0"

(4) W12x22 SUPPORT MEMBER



SUPPORT MEMBER SPACING TO COINCIDE WITH EXISTING STIFFENERS IN EXISTING STEEL FRAMING

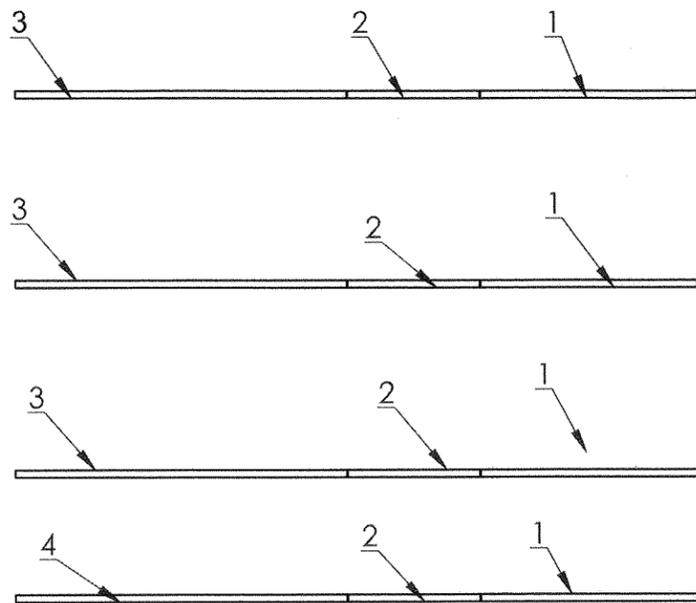
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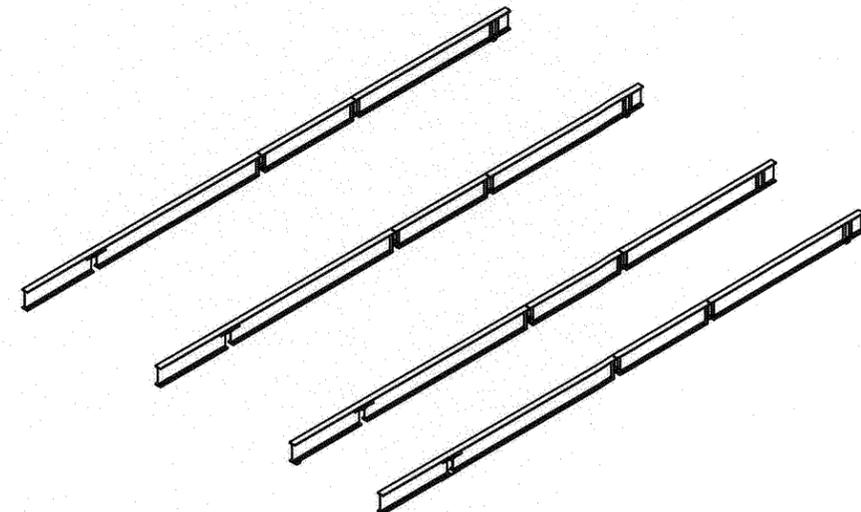
3 **BEAM 1 TO EXISTING FRAMING CONNECTION**
 1/2" = 1' - 0"



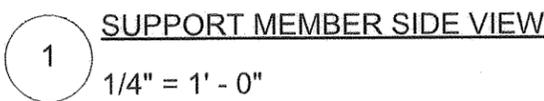
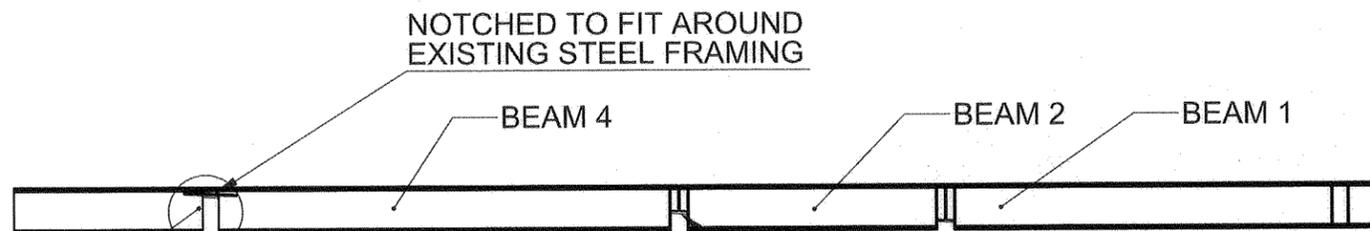
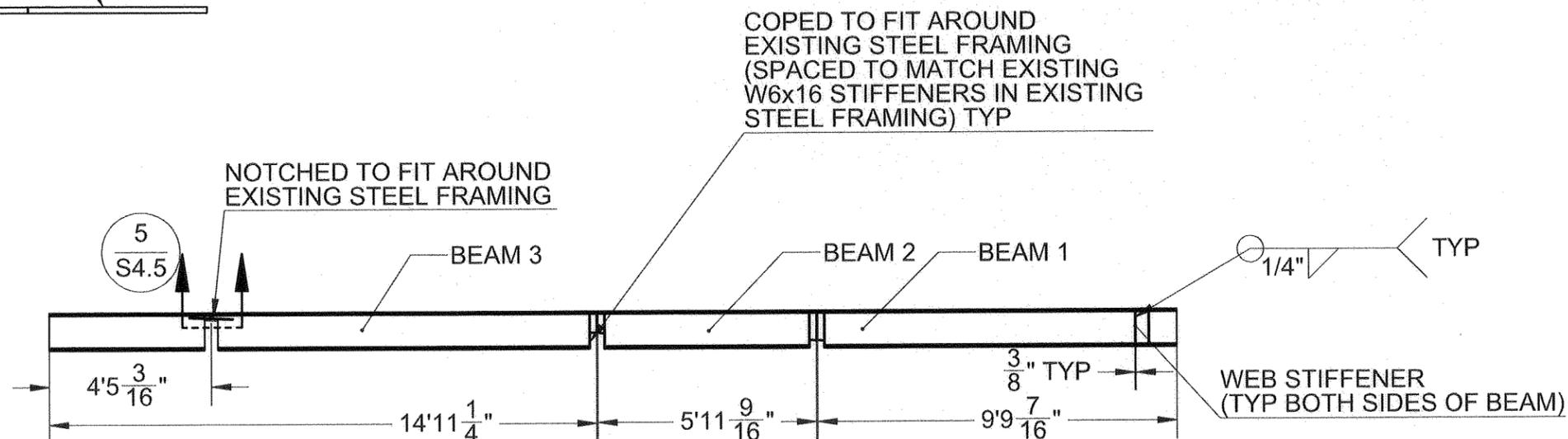
PATIO ARRAY STRUCTURE DETAILS



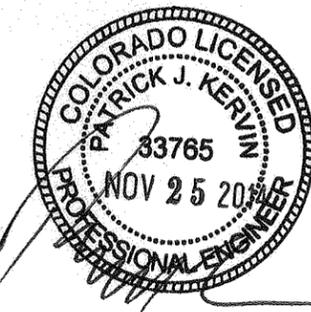
BEAM LAYOUT



PATIO ARRAY FRAMING



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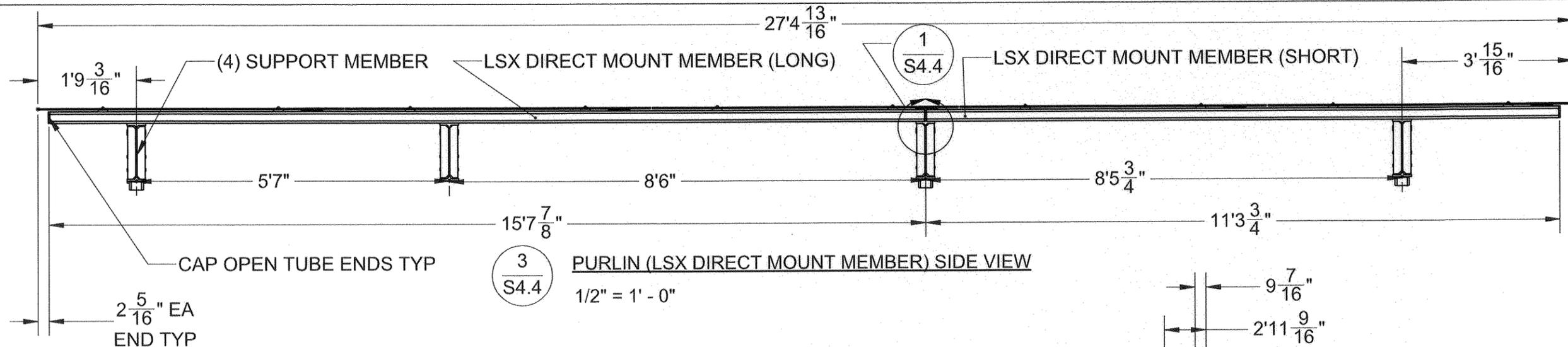
PATIO ARRAY SUPPORT BEAM DETAILS

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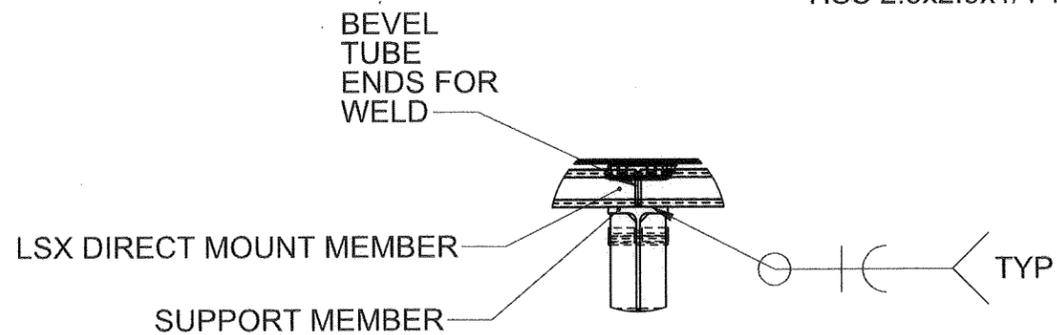
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PROJECT NUMBER
102914
DRAWN BY
Brian Rafferty
DATE
11/25/2014
ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B
SCALE
NTS
DRAWING
S4.3

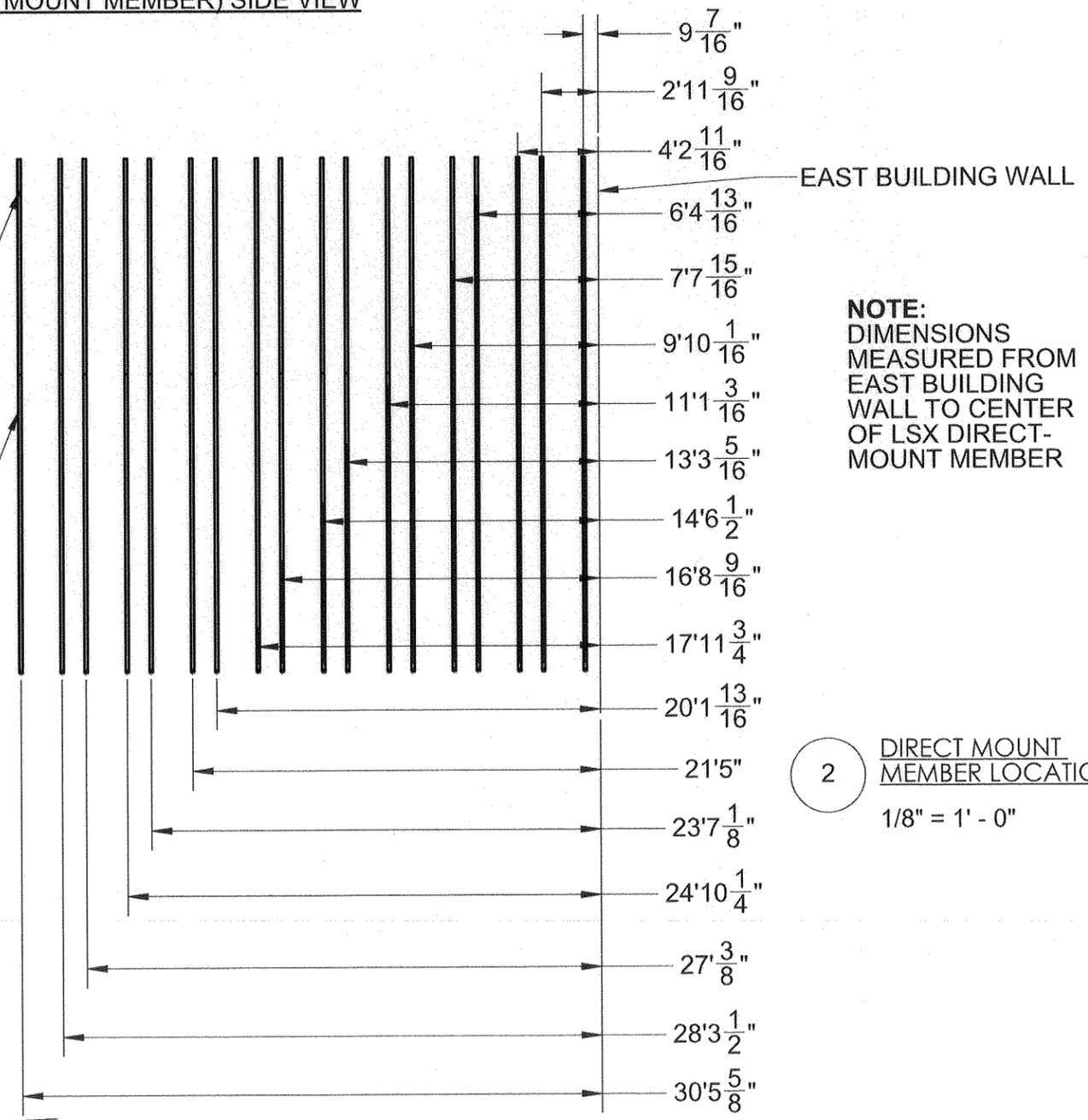
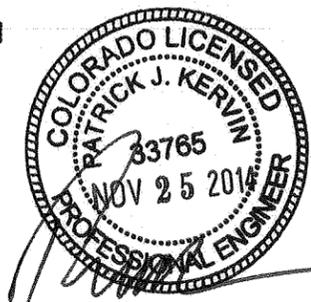


(18) LSX DIRECT-MOUNT MEMBER (SHORT)
 HSS 2.5x2.5x1/4 TYP

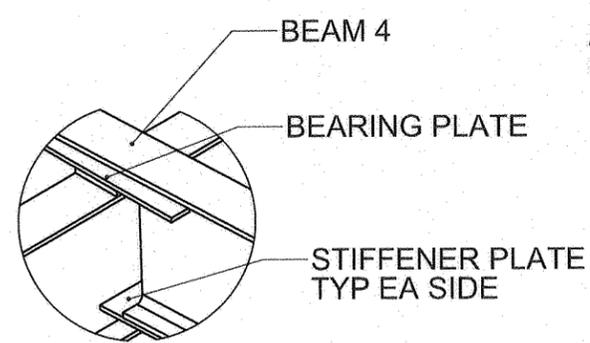
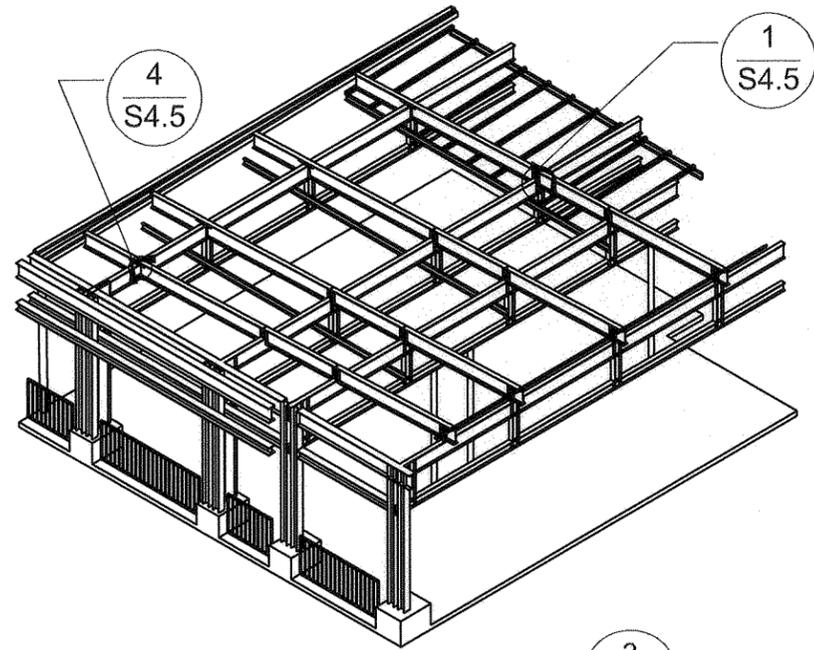
(18) LSX DIRECT-MOUNT MEMBER (LONG)
 HSS 2.5x2.5x1/4 TYP



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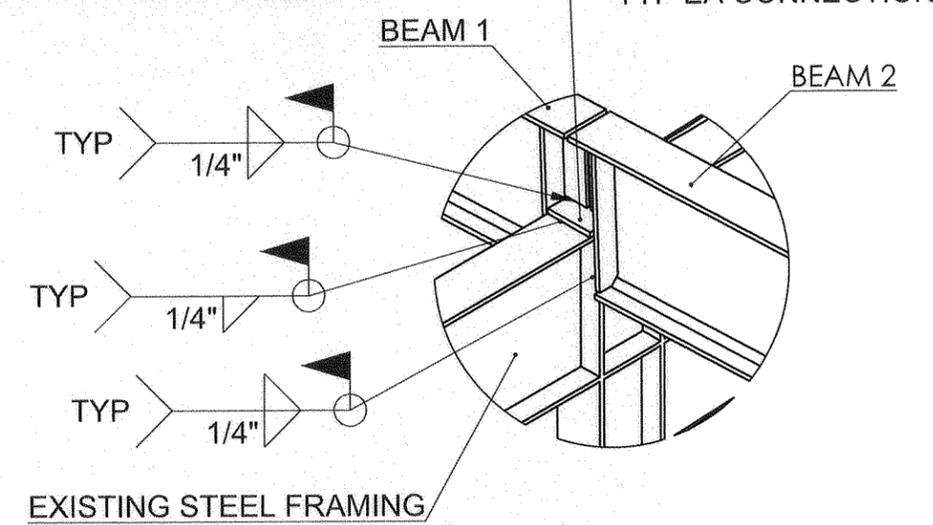


PATIO ARRAY LSX DIRECT MOUNT MEMBER DETAILS

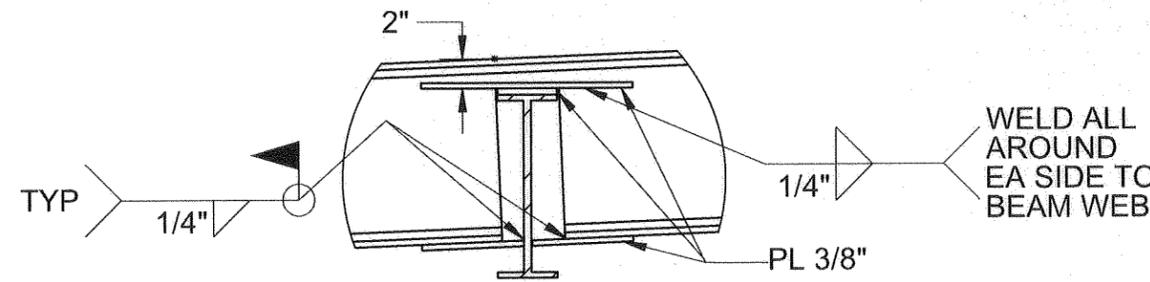
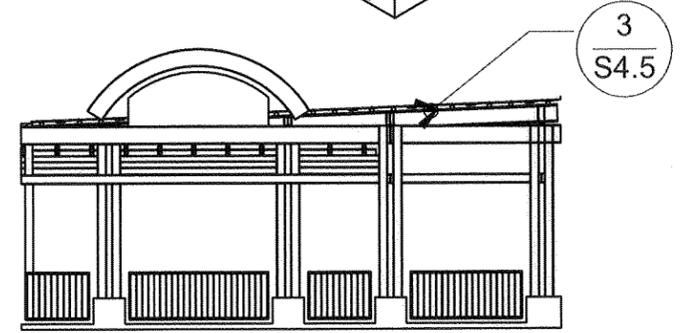


4 SUPPORT MEMBER CONNECTION DETAIL
1" = 1' - 0"

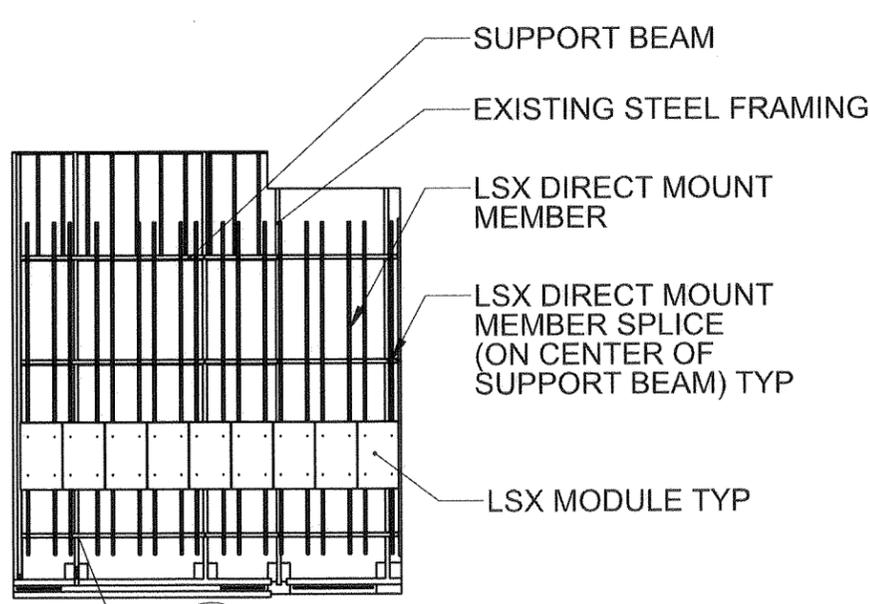
THESE DRAWINGS WERE NOT PREPARED BY ANCHOR ENGINEERING, INC. BUT HAVE BEEN REVIEWED FOR STRUCTURAL ADEQUACY



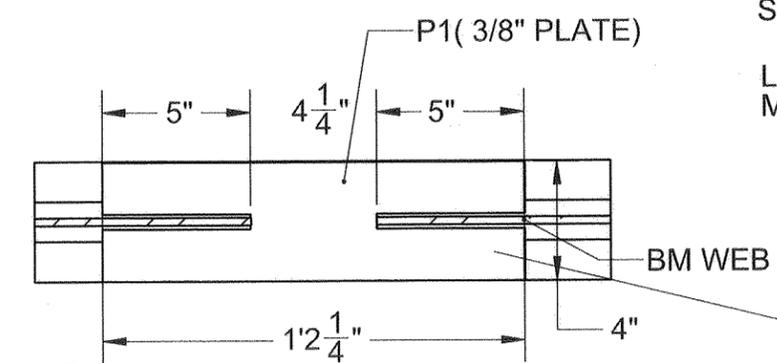
1 SUPPORT MEMBER CONNECTION DETAIL
1" = 1' - 0"



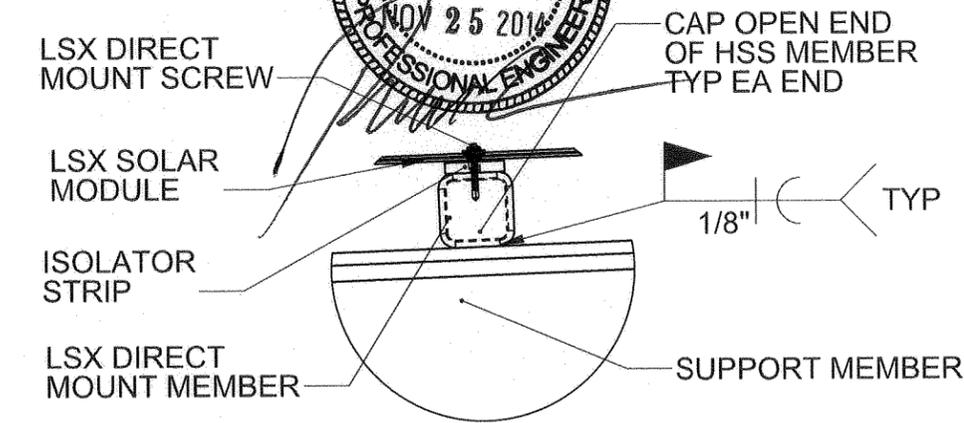
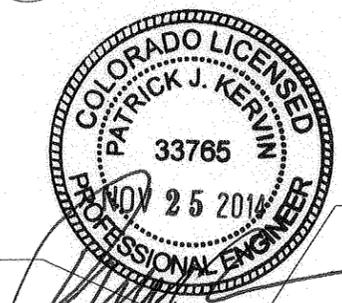
2 SUPPORT MEMBER CONNECTION DETAIL
1" = 1' - 0"



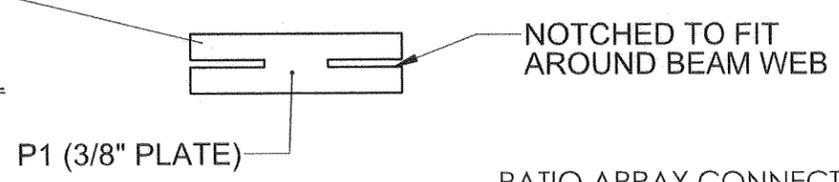
5
S4.5



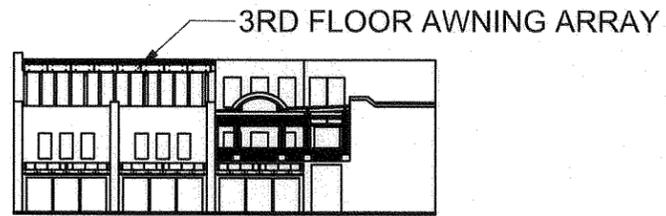
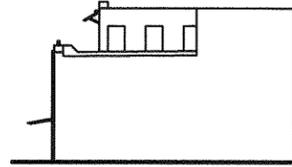
5 BEAM 3 AND 4 LOW END PLATE DETAIL
2" = 1' - 0"



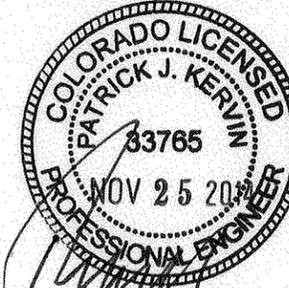
3 LSX DIRECT MOUNT MEMBER CONNECTION DETAIL
2" = 1' - 0"



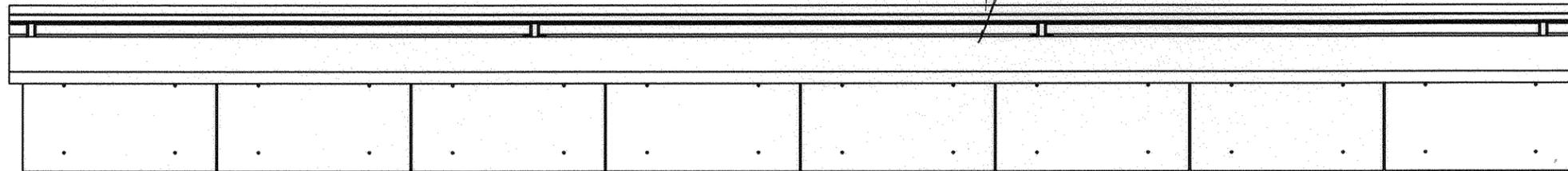
PATIO ARRAY CONNECTION DETAILS



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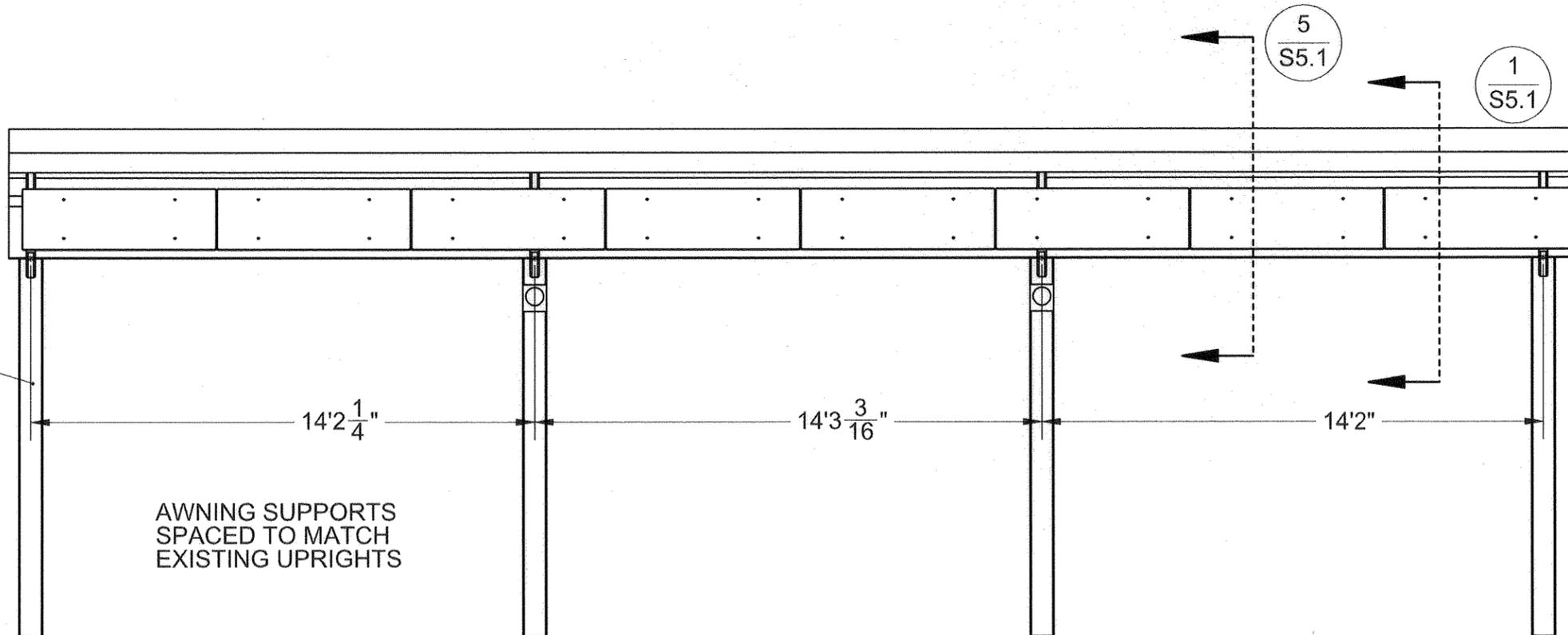


1 3RD FLOOR AWNING PLAN VIEW
1/4" = 1' - 0"



2 3RD FLOOR AWNING FRONT VIEW
1/4" = 1' - 0"

EXISTING UPRIGHTS (4x)
RE: STRUCTURAL PLANS



AWNING SUPPORTS SPACED TO MATCH EXISTING UPRIGHTS

3RD FLOOR AWNING ARRAY STRUCTURE DETAILS



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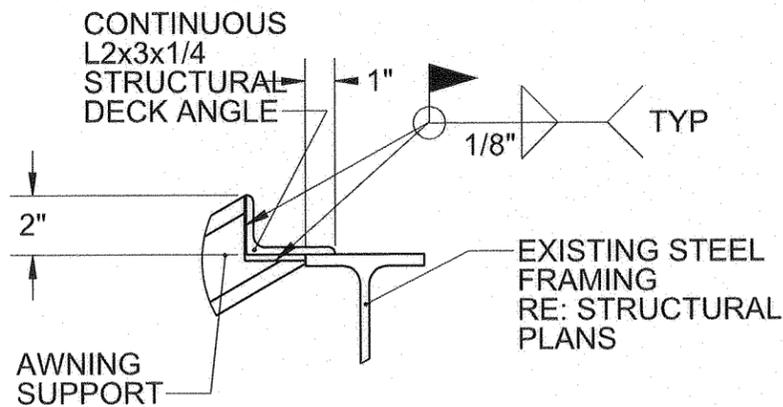
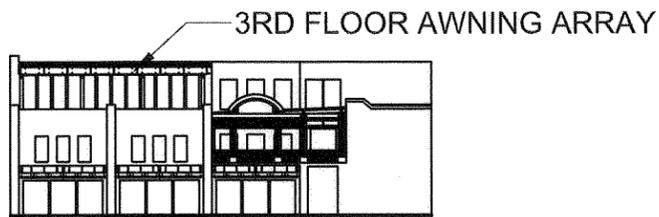
DRAWN BY
Brian Rafferty

DATE
11/25/2014

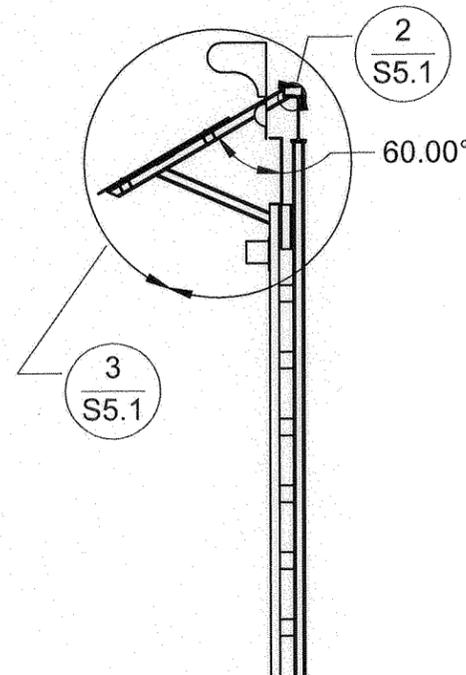
ORIGINAL SIZE
11"X17"
SHEET SIZE
ANSI_B

SCALE
NTS

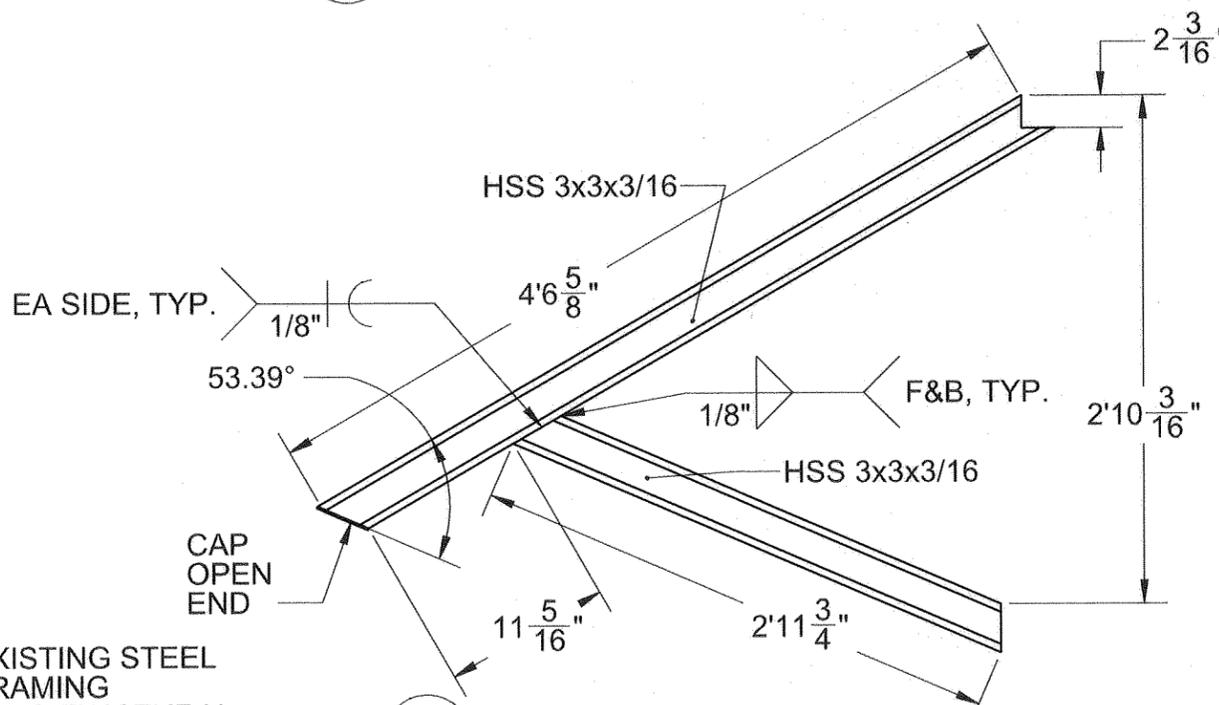
DRAWING
S5.0



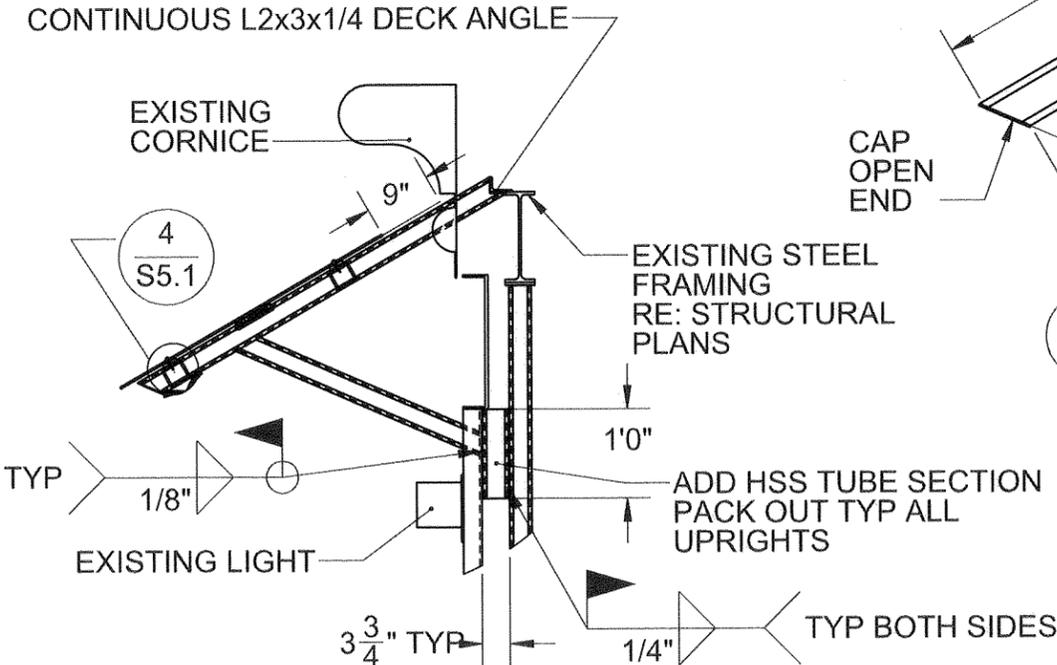
2 ANGLE TO EXISTING FRAMING CONNECTION
2" = 1' - 0"



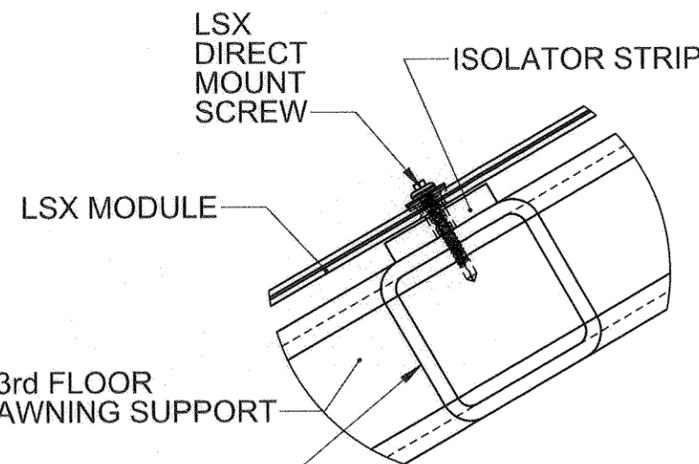
1 3rd FLOOR AWNING SIDE VIEW
1/4" = 1' - 0"



5 3rd FLOOR AWNING SUPPORT TYP
1" = 1' - 0"

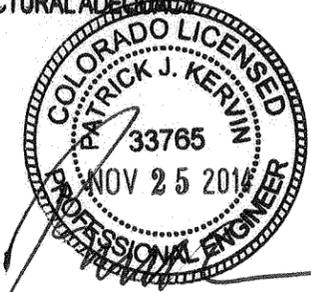


3 ANGLE TO EXISTING FRAMING CONNECTION
1/2" = 1' - 0"



4 3rd FLOOR AWNING CONN DETAIL
4" = 1' - 0"

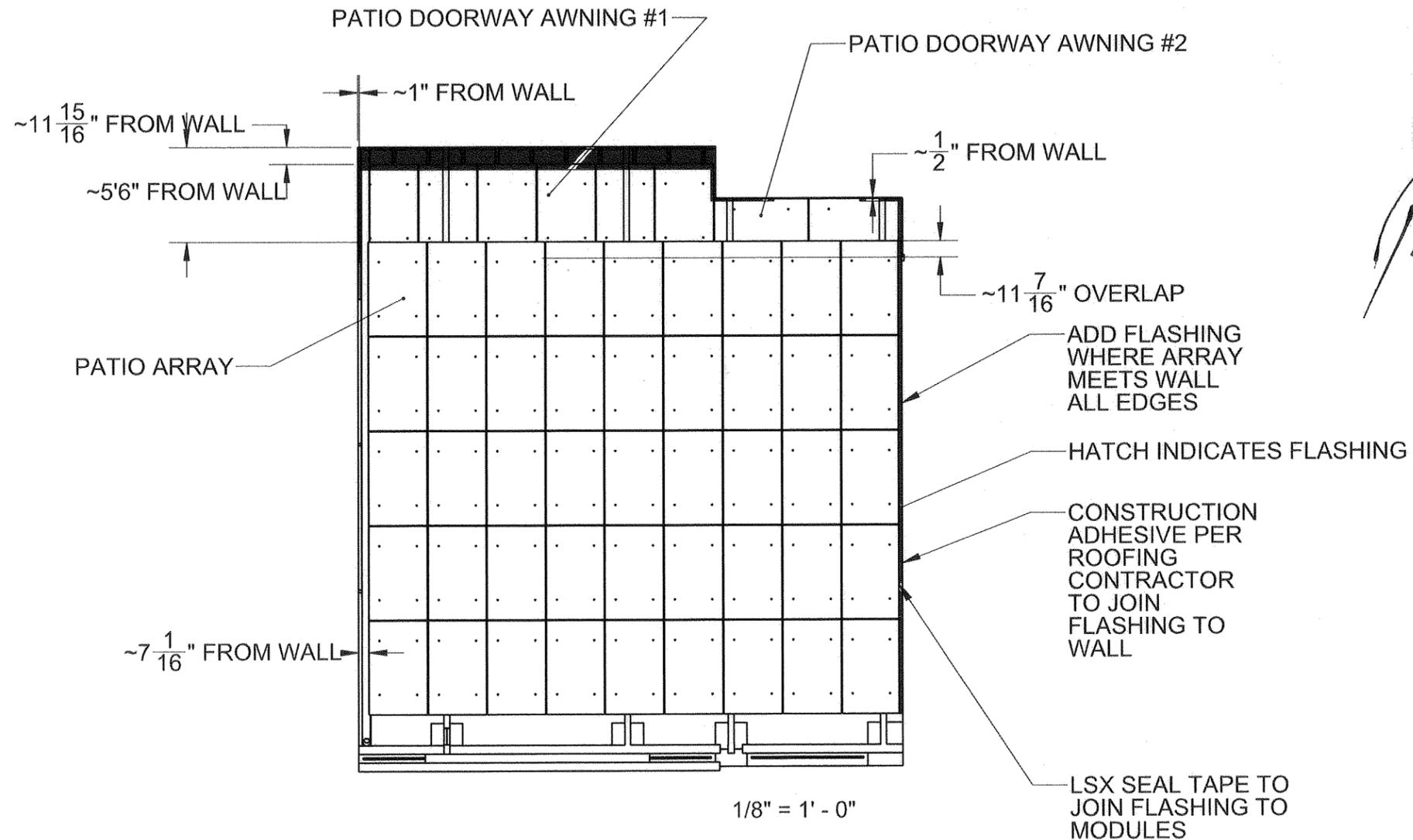
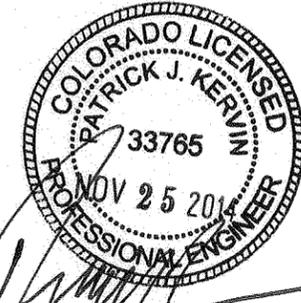
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3RD FLOOR AWNING ARRAY STRUCTURE DETAILS

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DATE	11/25/2014
ORIGINAL SIZE	11"X17"
SHEET SIZE	ANSI_B
SCALE	NTS
DRAWING	S5.1

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~ INDICATES APPROXIMATE DIMENSION

MIN MODULE-FLASHING OVERLAP: 1.5"

PATIO ARRAY LOCATIONS AND FLASHING NOTES

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 3550 Frontier Ave.
 Boulder, CO 80301
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 www.lumosolar.com

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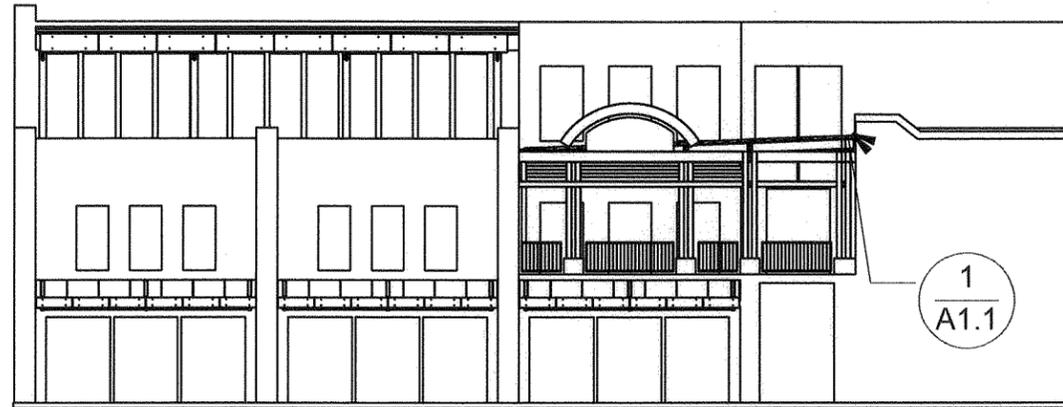
DRAWN BY
 Brian Rafferty

DATE
 11/25/2014

ORIGINAL SIZE
 11"x17"
 SHEET SIZE
 ANSI_B

SCALE
NTS

DRAWING
A1.0



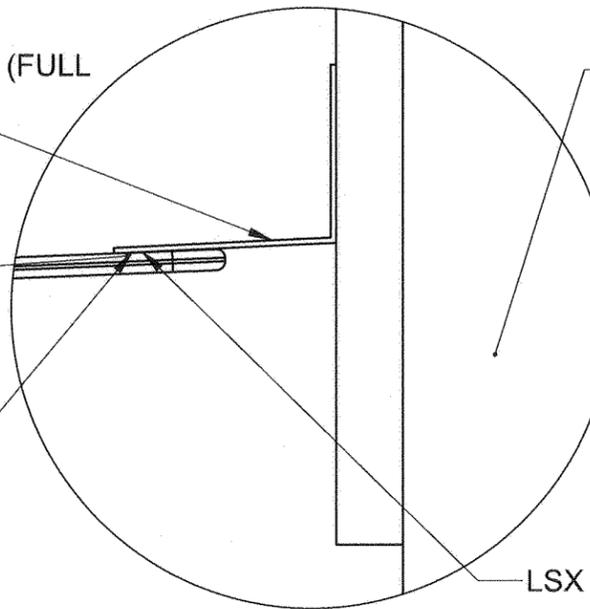
GALVANIZED STEEL FLASHING (FULL LENGTH OF ARRAY)

HIGH EDGE OF PATIO ARRAY

EXISTING BRICK WALL

OVERLAP TO CELLS

LSX SEAL TAPE

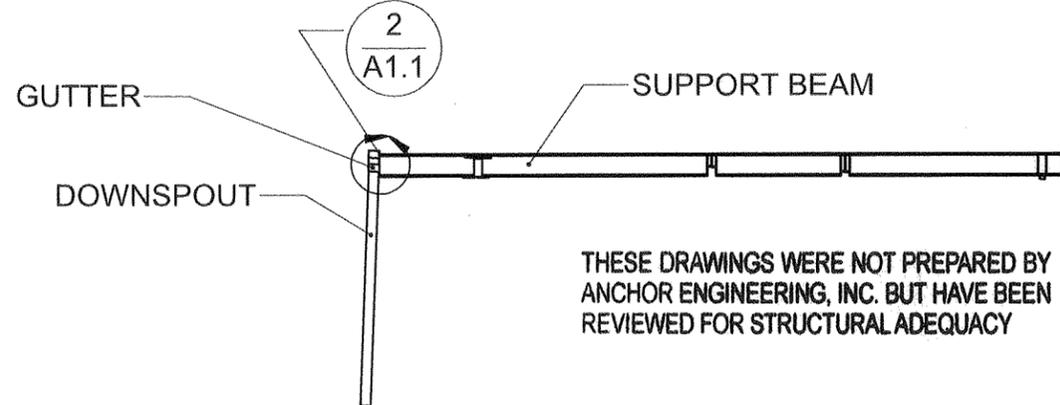
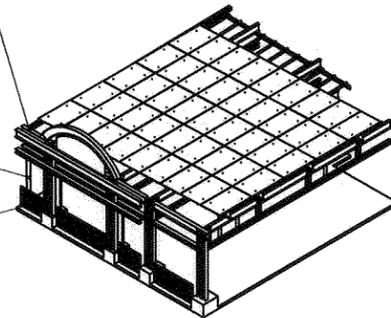


1 TYPICAL FLASHING DETAIL
6" = 1' - 0"

GUTTER ON LOW END OF PATIO ARRAY (FULL LENGTH OF PATIO)

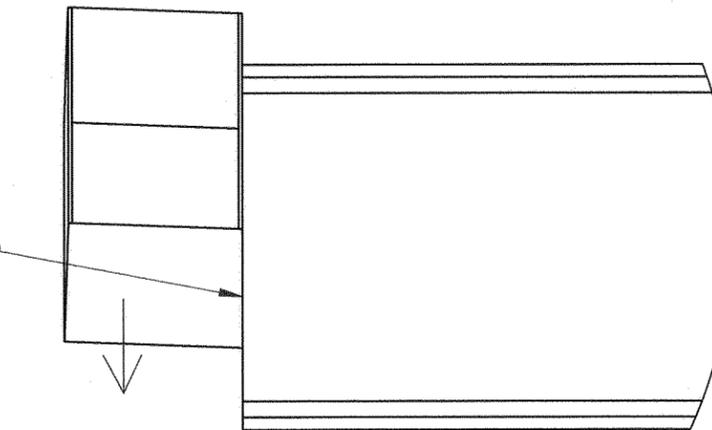
DOWNSPOUT

EXISTING DRAIN



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TYP 1/4"



GUTTER TILTED TOWARD SOUTH

2 LOW SIDE GUTTER DETAIL
6" = 1' - 0"



PATIO ARRAY WATER MANAGEMENT DETAILS

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PROJECT NUMBER
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DRAWN BY
Brian Rafferty

DATE
11/25/2014

ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B

SCALE
NTS

DRAWING

A1.1

ALTA/ACSM LAND TITLE SURVEY

LOT 1, 2, 3 AND A PORTION OF A. WRIGHT'S, TOURTELLOT & SQUIRES ADDITION, LOCATED IN THE
SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 1 NORTH, RANGE 71 WEST OF THE 6TH P.M.,
CITY OF BOULDER, COUNTY OF BOULDER, STATE OF COLORADO
SHEET 1 OF 2

Parcel Description (PROVIDED BY TITLE COMPANY)

PARCEL A:

LOTS 1 AND 2, EXCEPT THE NORTHERLY 10 FEET THEREOF, TOURTELLOT AND SQUIRES ADDITION TO BOULDER, COUNTY OF BOULDER, STATE OF COLORADO.

FURTHER DESCRIBED AS FOLLOWS:

THAT PORTION OF LOTS 1 AND 2, TOURTELLOT AND SQUIRES ADDITION TO BOULDER, COUNTY OF BOULDER, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF LOT 1; THENCE SOUTH 14 DEGREES 56 MINUTES 01 SECONDS EAST, ALONG THE EAST LINE OF LOT 1, A DISTANCE OF 10.0 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 14 DEGREES 56 MINUTES 01 SECONDS EAST ALONG THE EAST LINE OF LOT 1, A DISTANCE OF 140.00 FEET TO THE SOUTHEAST CORNER OF LOT 1; THENCE SOUTH 75 DEGREES 00 MINUTES 00 SECONDS WEST, ALONG THE SOUTH LINE OF LOTS 1 AND 2, A DISTANCE OF 100.13 FEET TO THE SOUTHWEST CORNER OF LOT 2; THENCE NORTH 14 DEGREES 57 MINUTES 13 SECONDS WEST, ALONG THE WEST LINE OF LOT 2, A DISTANCE OF 140.00 FEET TO A POINT THAT IS 10.0 FEET FROM THE NORTH LINE OF LOT 2; THENCE NORTH 75 DEGREES 00 MINUTES 00 SECONDS EAST, ALONG A LINE THAT IS PARALLEL AND 10 FEET, AS MEASURED PERPENDICULARLY, FROM THE NORTH LINE OF LOTS 1 AND 2, A DISTANCE OF 100.18 FEET TO THE POINT OF BEGINNING.

PARCEL B:

ALL THAT PORTION OF LOT 3 AND A. WRIGHT'S LOT IN TOURTELLOT AND SQUIRES ADDITION TO BOULDER, COUNTY OF BOULDER, STATE OF COLORADO, ACCORDING TO THE RECORDED PLAT THEREOF RECORDED IN PLAT BOOK 2 AT PAGE 42, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF LOT 3, TOURTELLOT AND SQUIRES ADDITION TO BOULDER; THENCE SOUTH 75 DEGREES 00 MINUTES 00 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 3, A DISTANCE OF 56.04 FEET TO THE SOUTHWEST CORNER OF SAID LOT 3; THENCE CONTINUING SOUTH 75 DEGREES 00 MINUTES 00 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID A. WRIGHT'S LOT IN TOURTELLOT AND SQUIRES ADDITION TO BOULDER, A DISTANCE OF 22.97 FEET TO THE EASTERLY LINE OF A CINDER BLOCK BUILDING KNOWN AS 915 PEARL STREET AND 2020 9TH STREET; THENCE NORTH 14 DEGREES 58 MINUTES 56 SECONDS WEST ALONG THE EASTERLY LINE OF SAID CINDER BLOCK BUILDING AND ALONG SAID EASTERLY LINE EXTENDED NORTHERLY, A DISTANCE OF 140.00 FEET; THENCE NORTH 75 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 79.08 FEET TO THE EASTERLY LINE OF SAID LOT 3; THENCE SOUTH 14 DEGREES 57 MINUTES 13 SECONDS EAST ALONG THE EASTERLY LINE OF SAID LOT 3, A DISTANCE OF 140.00 FEET TO THE POINT OF BEGINNING;

TOGETHER WITH ALL THAT PORTION OF A. WRIGHT'S LOT AND LOT 3, TOURTELLOT AND SQUIRES ADDITION TO BOULDER, COUNTY OF BOULDER, STATE OF COLORADO, ACCORDING TO THE RECORDED PLAT THEREOF RECORDED IN PLAT BOOK 2 AT PAGE 42, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWESTERLY CORNER OF THAT TRACT OF LAND DESCRIBED IN FILM 1550 AS RECEPTION NO. 947165 OF THE BOULDER COUNTY, COLORADO RECORDS; THENCE NORTH 14 DEGREES 57 MINUTES 13 SECONDS WEST, 10.00 FEET TO THE NORTHWESTERLY CORNER OF SAID TRACT OF LAND DESCRIBED IN FILM 1550 AS RECEPTION NO. 947165; THENCE SOUTH 75 DEGREES 00 MINUTES 00 SECONDS WEST, 74.16 FEET ALONG THE SOUTHERLY LINE OF LOTS 6 AND 7 IN SAID TOURTELLOT AND SQUIRES ADDITION TO BOULDER; THENCE SOUTH 15 DEGREES 00 MINUTES 00 SECONDS EAST, 10.00 FEET; THENCE NORTH 75 DEGREES 00 MINUTES 00 SECONDS EAST, 74.15 FEET TO THE POINT OF BEGINNING, COUNTY OF BOULDER, STATE OF COLORADO.



Vicinity Map
NOT TO SCALE

Boundary Closure Report

Segment #	Course	Length
#1	:Course: S14°53'24"E	Length: 140.02'
#2	:Course: S75°00'00"W	Length: 179.12'
#3	:Course: N14°59'45"W	Length: 140.10'
#4	:Course: N75°01'29"E	Length: 0.99'
#5	:Course: N14°58'31"W	Length: 10.00'
#6	:Course: N75°01'29"E	Length: 74.16'
#7	:Course: S14°58'46"E	Length: 10.00'
#8	:Course: N75°01'29"E	Length: 4.00'
#9	:Course: N75°01'29"E	Length: 100.23'

Perimeter: 658.62'
Error Closure: 0.00 Course: N21°02'53"E
Error North: 0.003 East: 0.001

Precision 1: 658620000.00

Notes

- LAND TITLE GUARANTEE COMPANY COMMITMENT ORDER NUMBER ABZ70326656, DATED FEBRUARY 16, 2012 AT 5:00 P.M., WAS ENTIRELY RELIED UPON FOR RECORDED INFORMATION REGARDING RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY. THE PROPERTY SHOWN AND DESCRIBED HEREON IS ALL OF THE PROPERTY DESCRIBED IN SAID TITLE COMMITMENT.
- ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
- THIS ALTA/ACSM LAND TITLE SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF CONSCIENCE BAY COMPANY A DELAWARE LIMITED LIABILITY COMPANY, 10TH AND PEARL LLC, A COLORADO LIMITED LIABILITY COMPANY, WEST PEARL LLC, FIRST AMERICAN TITLE INSURANCE COMPANY AND LAND TITLE GUARANTEE COMPANY, NAMED IN THE STATEMENT HEREON. SAID STATEMENT DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT AN EXPRESS STATEMENT BY THE SURVEYOR NAMING SAID PERSON.
- THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
- BASIS OF BEARINGS: AN ASSUMED BEARING OF S75°00'00"W ALONG THE NORTH R.O.W. LINE OF PEARL STREET, BETWEEN A FOUND 3/4" BRASS TAG IN CHISELED CROSS "LS 22376" AT THE SOUTHEAST CORNER OF LOT 1, TOURTELLOT & SQUIRES ADDITION AND A FOUND CHISELED CROSS IN CONC. WALL AT THE NORTHEAST INTERSECTION OF R.O.W. LINES OF PEARL STREET AND 9TH STREET AS SHOWN HEREON. ALL BEARINGS SHOWN HEREON ARE RELATIVE THERETO.
- ONLY SURFACE EVIDENCE OF UTILITIES VISIBLE AT THE TIME OF THE FIELD WORK IS SHOWN HEREON. ALL UNDERGROUND UTILITIES MUST BE FIELD LOCATED BY THE APPROPRIATE AGENCY OR UTILITY COMPANY PRIOR TO ANY EXCAVATION, PURSUANT TO C.R.S. SEC. 9-1.5-103.
- ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT AND/OR BOUNDARY MONUMENT OR ACCESSORY, COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE C.R.S. SEC 18-4-508.
- THE DISTANCE MEASUREMENTS SHOWN HEREON ARE U.S. SURVEY FOOT.
- SUBSURFACE BUILDINGS, IMPROVEMENTS OR STRUCTURES ARE NOT NECESSARILY SHOWN. BUILDINGS AND OTHER IMPROVEMENTS OR STRUCTURES ON ADJACENT PROPERTIES THAT ARE MORE THAN FIVE (5) FEET FROM ANY OF THE PROPERTY LINES OF THE SUBJECT PROPERTY ARE NOT NECESSARILY SHOWN.
- DATES OF FIELD WORK: FEBRUARY 21, 2012
- THE FOLLOWING DOCUMENTS ARE MENTIONED IN THE ABOVE REFERENCED TITLE COMMITMENT AND APPEAR TO AFFECT THE SUBJECT PROPERTY BUT CANNOT BE SHOWN GRAPHICALLY. THE FOLLOWING LIST CONTAINS THE TITLE COMMITMENT EXCEPTION NUMBER, DATE RECORDED, RECEPTION NUMBER AND/OR BOOK AND PAGE.

#9	NOVEMBER 6, 1978	REC. #308221	GENERAL IMPROVEMENT DISTRICT
	MAY 13, 1981	REC. #445960	GENERAL IMPROVEMENT DISTRICT
#10	SEPTEMBER 19, 1988	REC. #942760	DECLARATION OF USE (PARCEL A)
#14	DECEMBER 21, 1995	REC. #1571391	MEMORANDUM OF LEASE
#16	JULY 29, 1997	REC. #1717886	DEVELOPMENT AGREEMENT (PARCEL B)
#17	DECEMBER 22, 1997	REC. #1757050	DEVELOPMENT AGREEMENT (PARCEL B)
#19	JUNE 18, 1999	REC. #1951362	HISTORIC DISTRICT
	AUGUST 31, 1999	REC. #1976824	HISTORIC DISTRICT
- THE FOLLOWING DOCUMENTS ARE MENTIONED IN THE ABOVE REFERENCED TITLE COMMITMENT AND DO NOT APPEAR TO AFFECT THE SUBJECT PROPERTY. THE FOLLOWING LIST CONTAINS THE TITLE COMMITMENT EXCEPTION NUMBER, DATE RECORDED, RECEPTION NUMBER AND/OR BOOK AND PAGE.

#12	NOVEMBER 24, 1993	REC. #1365056	RIGHT-OF-WAY LEASE
-----	-------------------	---------------	--------------------
- RAILING EXTENDS INTO R.O.W. OF PEARL STREET AS SHOWN HEREON. EXCEPTION #20 (REC. #2945073, JULY 24, 2008) MENTIONED IN THE TITLE COMMITMENT APPEARS TO PROVIDE FOR A LEASE OF THE RIGHT-OF-WAY FOR THE PURPOSES OF PATIO SEATING.
- THE WORD "CERTIFY" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THIS SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.

Surveyor's Certificate

TO CONSCIENCE BAY COMPANY A DELAWARE LIMITED LIABILITY COMPANY, 10TH AND PEARL LLC, A COLORADO LIMITED LIABILITY COMPANY, WEST PEARL LLC, FIRST AMERICAN TITLE INSURANCE COMPANY AND LAND TITLE GUARANTEE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES NONE OF THE ITEMS OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON FEBRUARY 21, 2012.

PURSUANT TO COLORADO STATE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS RULE 6.2.2 THE UNDERSIGNED FURTHER CERTIFIES THAT THIS MAP OR PLAT WAS PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, IS ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, IS IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE AND IS NOT A GUARANTY OR WARRANTY, EXPRESSED OR IMPLIED.



JOHN B. GUYTON
COLORADO P.L.S. #16406
CHAIRMAN & CEO, FLATIRONS, INC.

FSI JOB NO. 12-59-404

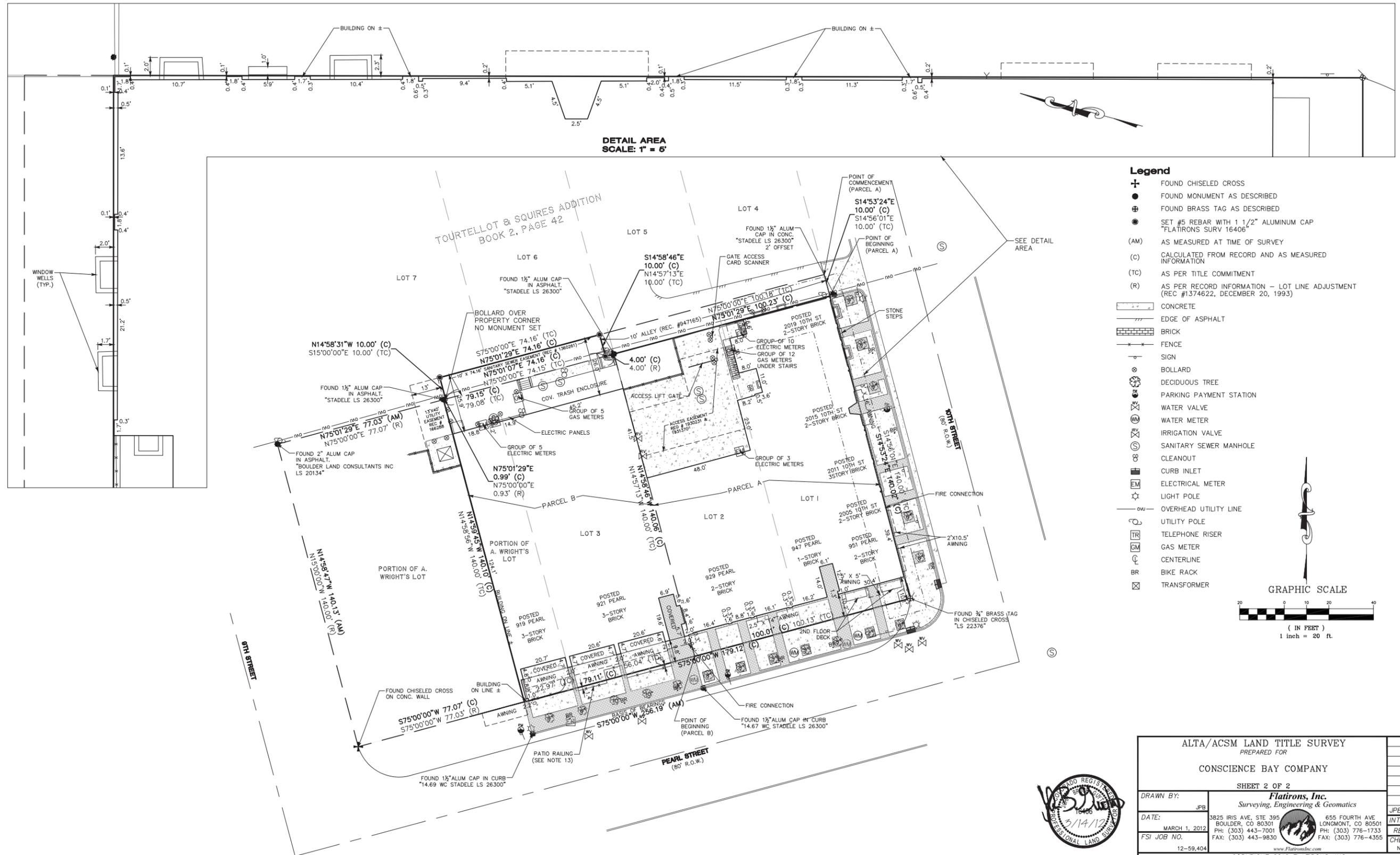
ALTA/ACSM LAND TITLE SURVEY		PREPARED FOR	
CONSCIENCE BAY COMPANY AND LAND TITLE GUARANTEE COMPANY		SHEET 1 OF 2	
DRAWN BY: JPB		Flatirons, Inc. Surveying, Engineering & Geomatics	
DATE: MARCH 1, 2012	3825 IRIS AVE, STE 395 BOULDER, CO 80301 PH: (303) 443-7001 FAX: (303) 443-9830	655 FOURTH AVE LONGMONT, CO 80501 PH: (303) 776-1733 FAX: (303) 776-4355	JPB 3/14/12 INT: DATE: REVISIONS: CHECKED BY: NV/ETB/WW
FSI JOB NO. 12-59-404	www.FlatironsInc.com		
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Depositing Certificate

SUBMITTED TO BOULDER COUNTY LAND USE FOR RECORDING ON THIS _____ DAY OF _____, 20__

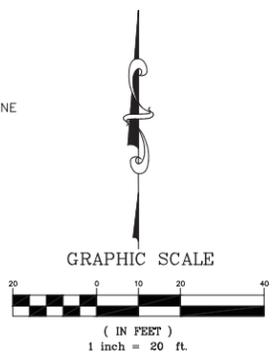
ALTA/ACSM LAND TITLE SURVEY

LOT 1, 2, 3 AND A PORTION OF A. WRIGHT'S, TOURTELLOT & SQUIRES ADDITION, LOCATED IN THE
SOUTHEAST QUARTER OF SECTION 25, TOWNSHIP 1 NORTH, RANGE 71 WEST OF THE 6TH P.M.,
CITY OF BOULDER, COUNTY OF BOULDER, STATE OF COLORADO
SHEET 2 OF 2



- Legend**
- ⊕ FOUND CHISELED CROSS (PARCEL A)
 - ⊕ FOUND MONUMENT AS DESCRIBED
 - ⊕ FOUND BRASS TAG AS DESCRIBED
 - ⊕ SET #5 REBAR WITH 1 1/2" ALUMINUM CAP "FLATIRONS SURV 16406"
 - (AM) AS MEASURED AT TIME OF SURVEY
 - (C) CALCULATED FROM RECORD AND AS MEASURED INFORMATION
 - (TC) AS PER TITLE COMMITMENT
 - (R) AS PER RECORD INFORMATION - LOT LINE ADJUSTMENT (REC #1374622, DECEMBER 20, 1993)

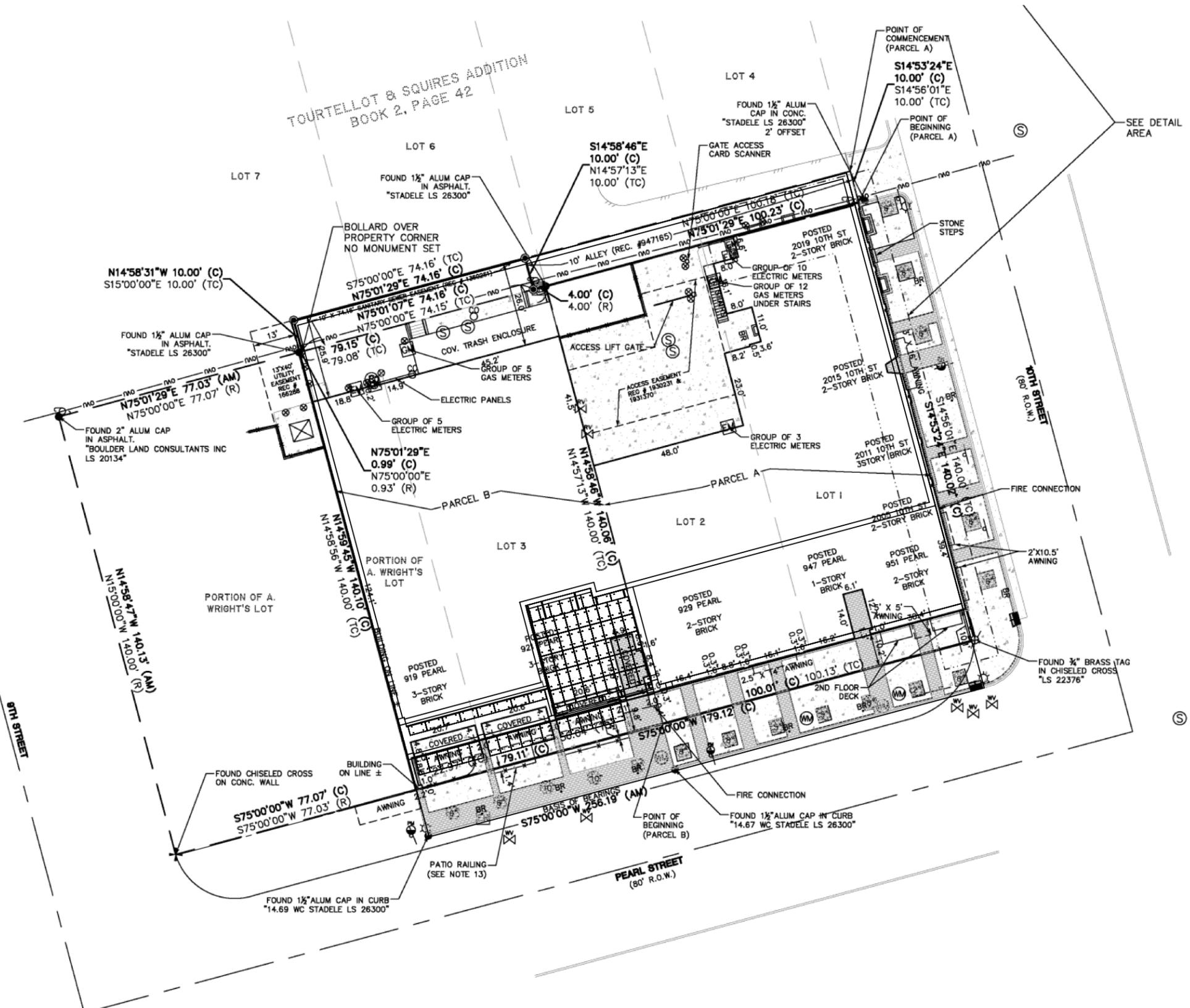
- ▭ CONCRETE
- ▭ EDGE OF ASPHALT
- ▭ BRICK
- ▭ FENCE
- ⊕ SIGN
- ⊕ BOLLARD
- ⊕ DECIDUOUS TREE
- ⊕ PARKING PAYMENT STATION
- ⊕ WATER VALVE
- ⊕ WATER METER
- ⊕ IRRIGATION VALVE
- ⊕ SANITARY SEWER MANHOLE
- ⊕ CLEANOUT
- ⊕ CURB INLET
- ⊕ ELECTRICAL METER
- ⊕ LIGHT POLE
- OW — OVERHEAD UTILITY LINE
- ⊕ UTILITY POLE
- ⊕ TELEPHONE RISER
- ⊕ GAS METER
- ⊕ CENTERLINE
- ⊕ BIKE RACK
- ⊕ TRANSFORMER



ALTA/ACSM LAND TITLE SURVEY PREPARED FOR		
CONSCIENCE BAY COMPANY		
SHEET 2 OF 2		
DRAWN BY:	JPB	JPB 3/14/12
DATE:	MARCH 1, 2012	INT: DATE:
FSI JOB NO.	12-59,404	CHECKED BY:
3825 IRIS AVE, STE 395 BOULDER, CO 80301 PH: (303) 443-7001 FAX: (303) 443-9830		655 FOURTH AVE LONGMONT, CO 80501 PH: (303) 776-1733 FAX: (303) 776-4355
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TOURELLOT & SQUIRES ADDITION
BOOK 2, PAGE 42



- Legend**
- + FOUND CHISELED CROSS
 - FOUND MONUMENT AS DESCRIBED
 - ⊕ FOUND BRASS TAG AS DESCRIBED
 - ⊙ SET #5 REBAR WITH 1 1/2" ALUMINUM CAP "FLATIRONS SURV 16406"
 - (AM) AS MEASURED AT TIME OF SURVEY
 - (C) CALCULATED FROM RECORD AND AS MEASURED INFORMATION
 - (TC) AS PER TITLE COMMITMENT
 - (R) AS PER RECORD INFORMATION - LOT LINE ADJUSTMENT (REC #1374622, DECEMBER 20, 1993)
- CONCRETE
 - EDGE OF ASPHALT
 - BRICK
 - FENCE
 - SIGN
 - BOLLARD
 - DECIDUOUS TREE
 - PARKING PAYMENT STATION
 - WATER VALVE
 - WATER METER
 - IRRIGATION VALVE
 - SANITARY SEWER MANHOLE
 - CLEANOUT
 - CURB INLET
 - ELECTRICAL METER
 - LIGHT POLE
 - OVERHEAD UTILITY LINE
 - UTILITY POLE
 - TELEPHONE RISER
 - GAS METER
 - CENTERLINE
 - BIKE RACK
 - TRANSFORMER

PROPOSED AWNINGS AND CANOPY
OVERLAID ON EXISTING SITE SURVEY

ORIGINAL SITE SURVEY RE:

ALTA/ACSM LAND TITLE SURVEY
LOT 1, 2, 3 AND A PORTION OF A. WRIGHT'S
TOURELLOT & SQUIRES ADDITION, LOCATED
IN THE SOUTHEAST QUARTER SECTION
25...SHEET 2 OF 2
DATED MARCH 1, 2012

1 FUTURE PROJECT - SITE PLAN
G1.2 1" = 35' - 0"

DISCLAIMER
THIS DRAWING IS THE PROPERTY OF LUMOS, LLC (LUMOS). THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY LUMOS. NO PART IS TO BE DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION FROM LUMOS.

PROJECT NUMBER
102914

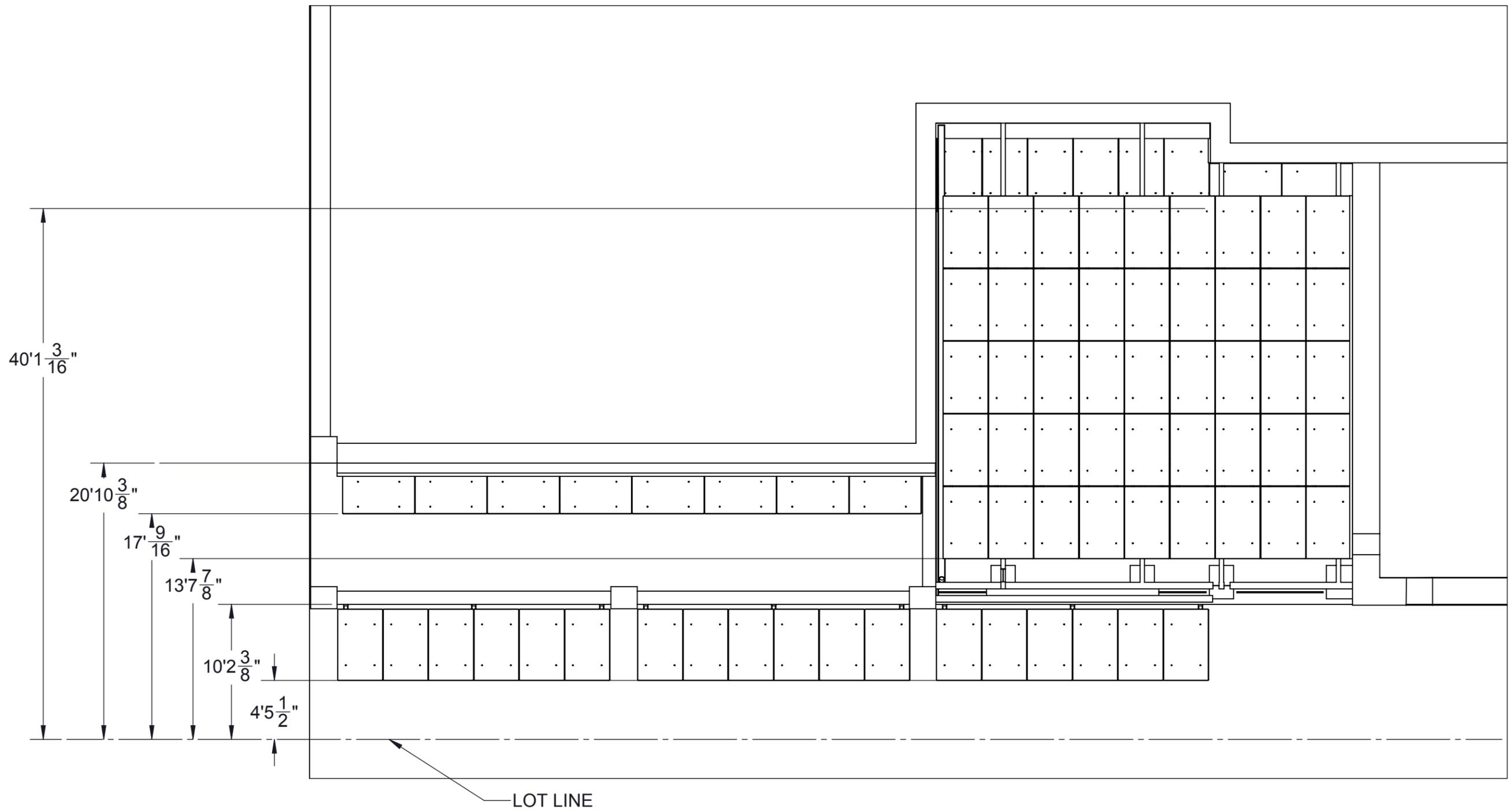
DRAWN BY
Brian Rafferty

DATE
12/18/2014

ORIGINAL SIZE
11"x17"
SHEET SIZE
ANSI_B

SCALE
1:420

DRAWING
G1.2



IBC 2012 TABLE 705.2 COMPLIANCE			
ZONE	FIRE SEPARATION DISTANCE (FSD):	MIN DISTANCE TO FSD LINE:	DISTANCE TO FSD LINE > MIN?:
GROUND FLOOR AWNING 1 AND 2	>5ft	40"	YES
GROUND FLOOR AWNING 3	>5ft	40"	YES
2nd FLOOR CONFERENCE ROOM AND ENTRY AWNING SYSTEM	>5ft	40"	YES
2nd FLOOR PATIO CANOPY	>5ft	40"	YES
3rd FLOOR AWNING	>5ft	40"	YES

TABLE 705.2 MINIMUM DISTANCE OF PROJECTION	
FIRE SEPARATION DISTANCE (FSD)	MINIMUM DISTANCE FROM LINE USED TO DETERMINE FSD
0 feet to less than 2 feet	Projections not permitted
2 feet to less than 5 feet	24 inches
5 feet or greater	40 inches

1
G1.3
FUTURE PROJECT - FSD DETAIL
 1/8" = 1' - 0"

BDAB COMMENTS

Name: _____

MEETING DATE: Jan 14, 2014

ADDRESS: 929 Pearl Canopy

DESCRIPTION: Scope of work includes structural reinforcement of existing awning system, small demolition of section of existing awning, as well as small awning addition.

APPLICANT:

Relevant Guidelines:

2.2 Consider the Alignment of Architectural Features and Established Patterns With Neighboring Buildings

The alignment of architectural features, from one building to the next, creates visual continuity and establishes a coherent visual context throughout the downtown. While new building forms are expected, building facades should be designed to reinforce these patterns and support downtown’s established visual character...

-
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-
-
-

2.5 Maintain a Human Building Scale, Rather than Monolithic or Monumental Scale

Avoid large featureless facade surfaces. Facade elements that are familiar to the pedestrian help establish a sense of scale and create visual patterns that link buildings within a block, while allowing individual identity of each building. Smaller scale

-
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-
-
-

2.8 Shade Storefront Glass by Appropriate Means

To permit good visibility into storefront windows, and to create pedestrian interest, use awnings or, for buildings with recessed first floors, consider arcades. Note: See Section 6: Extensions into the public right-of-way discussion on revocable lease and allowable dimensions.

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-
-

5.1 Signs Should be Designed as an Integral Part of The Overall Building Design

C. Awning Signs:

Awnings should be used to add visual interest to a building, provide shade, and add variety to the streetscape. They should be positioned to emphasize special shapes or details of the facade, to draw attention to the shop entrances or to emphasize a display window. Awning signs may be illustrated with letters or symbols.

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Additional Comments:

-
-
-
-
-