

# OLBRICH BOTANICAL GARDENS ROOF REPLACEMENT

3300 ATWOOD AVENUE  
 MADISON, WI

CITY OF MADISON CONTRACT # 6828



**Architecture:** **Dimension IV Madison Design Group**  
 6515 Grand Teton Plaza, Suite 120, Madison WI 53719  
 p608.829.4444 www.dimensionivmadison.com

**Structural Engineering:** **OTIE**  
 5100 Eastpak Blvd., Suite 200 Madison, WI 53718  
 p608.241.6717 www.otie.com

**Landscape Architect:** **Thomas Dunbar, FASLA**  
 2628 Blue Aster Blvd. Sun Prairie, WI 53590  
 p608.381.0828 dunbar.tom@gmail.com

## LIST OF DRAWINGS

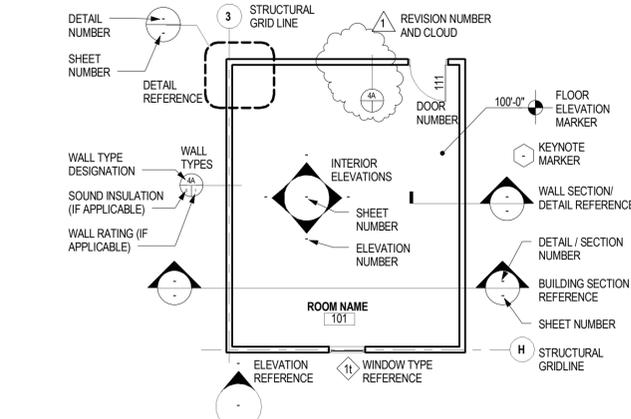
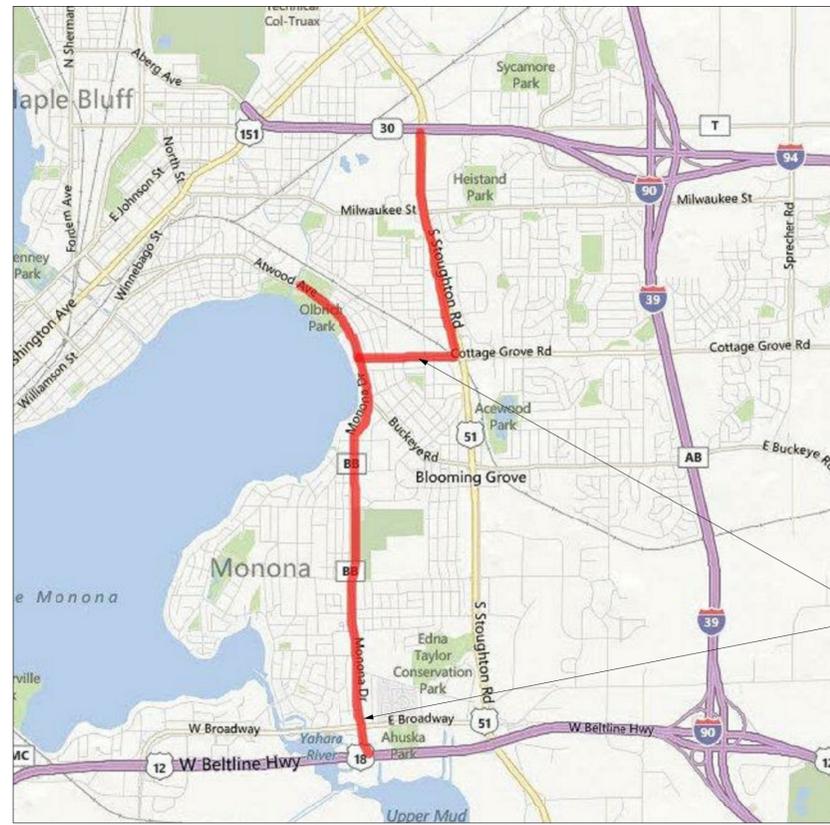
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**BID SET**

PROJECT # 12017

12/11/2012

**G0.1**



TRUCK ROUTES

### ARCHITECTURAL ABBREVIATIONS LEGEND

+	- AND	FIN	- FINISH	PREFAB	- PREFABRICATED
@	- AT	FLR	- FLOOR	PERIM	- PERIMETER
AB	- ANCHOR BOLT	FND	- FOUNDATION	PC	- PLUMBING CONTRACTOR
AB	- ABOVE FINISH FLOOR	FOM	- FACE OF MASONRY	PIC	- PRECAST / PRESTRESSED
ALT	- ALTERNATE	FOS	- FACE OF STUD	PIT	- POST TENSIONED
ALUM	- ALUMINUM	FTG	- FOOTING	PT	- PRESSURE TREATED
ARCH	- ARCHITECT / ARCHITECTURAL	FUT	- FUTURE		
		FV	- FIELD VERIFY		
BRD	- BOARD	GA	- GAUGE	R	- RADIUS
BLK	- BLOCK (CMU)	GALV	- GALVANIZED	RD	- ROOF DRAIN
BOT	- BOTTOM	GB	- GRAB BAR	REINF	- REINFORCING
		GC	- GENERAL CONTRACTOR	REQD	- REQUIRED
CB	- CATCH BASIN	GYP	- GYPSUM	RM	- ROOM
CIP	- CAST-IN-PLACE			SCHED	- SCHEDULE
CL	- CONSTRUCTION JOINT	HC	- HVAC CONTRACTOR	SHT	- SHEET
CJ	- CENTERLINE	HM	- HOLLOW METAL	SIM	- SIMILAR
CLG	- CEILING	HORIZ	- HORIZONTAL	SOG	- SLAB ON GRADE
CLJ	- CONTROL JOINT	HT	- HEIGHT	SPEC	- SPECIFICATION
CLR	- CLEAR DISTANCE	HVAC	- HEATING, VENTILATION & AIR CONDITIONING	SQ	- SQUARE
CMU	- CONCRETE MASONRY UNIT	HR	- HOUR	SS	- STAINLESS STEEL
CO	- CASED OPENING	ID	- INSIDE DIAMETER	STL	- STEEL
COL	- COLUMN	I.F.	- INSIDE FACE	STR	- STRUCTURAL
CONC	- CONCRETE	INSUL	- INSULATION	THK	- THICKNESS
CONT	- CONTINUOUS	INT	- INTERIOR	TOL	- TOP OF LEDGE ELEVATION
CU	- CUBIC	JBE	- JOIST BEARING ELEVATION	TOP	- TOP OF PIER ELEVATION
		JT	- JOINT	TP	- TOLLET PAPER DISPENSER
DBL	- DOUBLE	L	- STEEL ANGLE DESIGNATION	TS	- (SEE HIGH STRENGTH STEEL DESIGNATION)
DF	- DRINKING FOUNTAIN	LAM	- LAMINATE	TYP	- TYPICAL
DIM	- DIAMETER	LVL	- LAMINATED VENEER LUMBER	TOW	- TOP OF WALL ELEVATION
DN	- DOWN	MAX	- MAXIMUM	UL	- UNDERWRITERS LAB
DS	- DOWN SPOUT	MBW	- MASONRY BEARING WALL	UNO	- UNLESS NOTED OTHERWISE
DTL	- DETAIL	MFG	- MANUFACTURER		
DWG	- DRAWING	MIN	- MINIMUM	VB	- VAPOR BARRIER
EA	- EACH	MO	- MASONRY OPENING	VERT	- VERTICAL
EC	- ELECTRICAL CONTRACTOR	MTL	- METAL	VIF	- VERIFY IN FIELD
EIFS	- EXTERIOR INSULATION FINISH SYSTEM	NIC	- NOT IN CONTRACT	W	- WIDTH
EL	- ELEVATION	NOM	- NOMINAL	WI	- WITH
ELEV	- ELEVATOR	NTS	- NOT TO SCALE	WO	- WITHOUT
ENG	- ENGINEER	NO	- NUMBER	WC	- WATER CLOSET
EQ	- EQUAL	OC	- ON CENTER	WD	- WOOD
EXIST	- EXISTING	OD	- OUTSIDE DIAMETER	WRB	- WEATHER RESISTANT BARRIER
EXP	- EXPANSION	O.F.	- OUTSIDE FACE	WWF	- WELDED WIRE FABRIC
EXT	- EXTERIOR	OH	- OVERHEAD		
		OPCI	- OWNER PROVIDED, CONTRACTOR INSTALLED		
		OPOI	- OWNER PROVIDED, OWNER INSTALLED		
		OPNG	- OPENING		
		OPP	- OPPOSITE		

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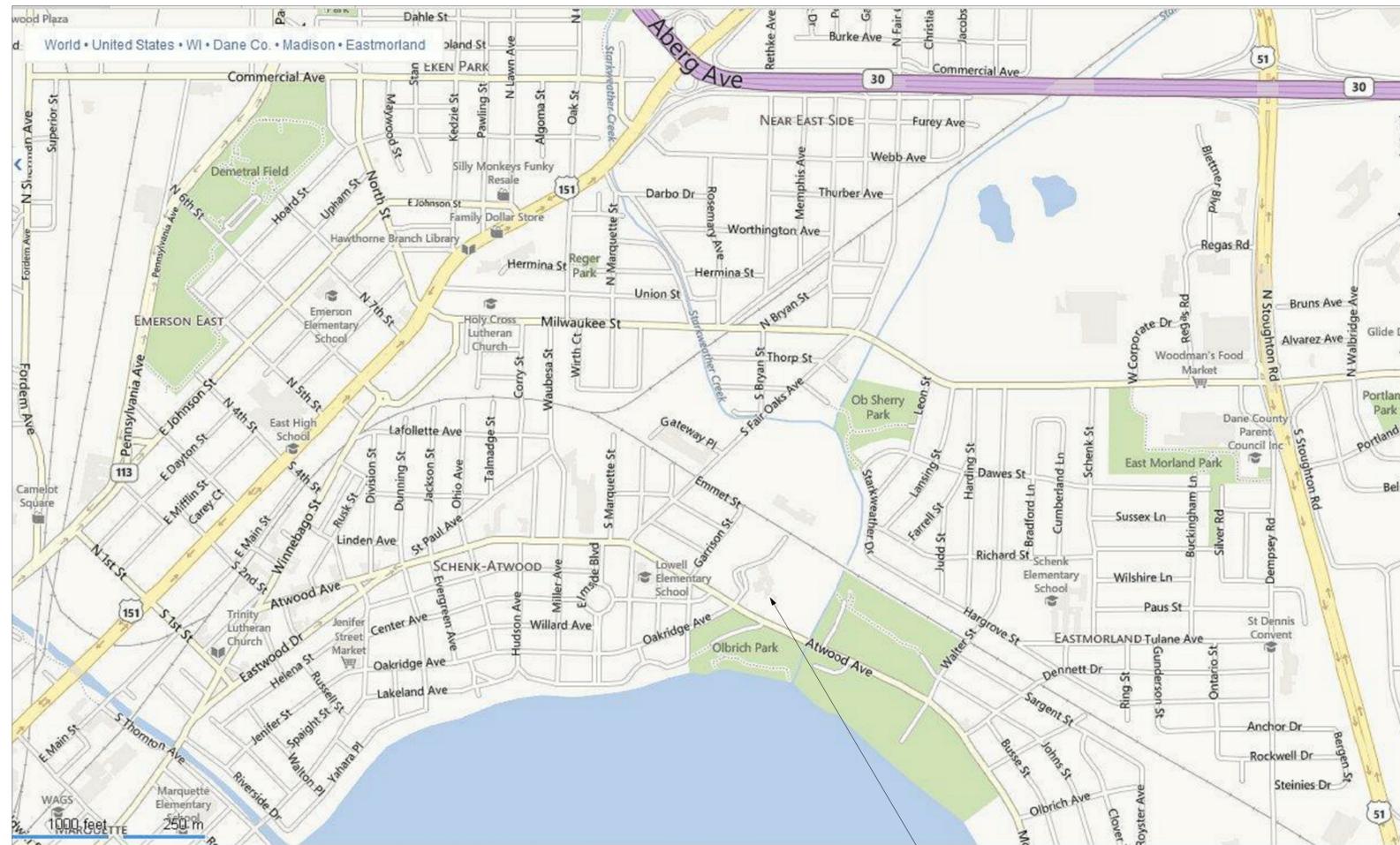
dimensionvmadison.com

## CITY OF MADISON DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION

CITY-COUNTY BUILDING, ROOM 115  
210 MARTIN LUTHER KING JR BLVD  
MADISON, WI 53703

## OLBRICH BOTANICAL GARDENS ROOF REPLACEMENT

3300 ATWOOD AVENUE  
MADISON, WI



PROJECT LOCATION

### PROJECT/ BUILDING DATA:

EXISTING 1 STORY BUILDING ROOF REPLACEMENT

BUILDING AREAS  
TOTAL BUILDING AREA = UNALTERD

### CODE INFORMATION SUMMARY:

APPLICABLE CODE  
2009 WISCONSIN COMMERCIAL BUILDING CODE

CONSTRUCTION TYPE  
TYPE IIB = EXISTING 1 STORY BUILDING

OCCUPANCY  
B- BUSINESS  
A3- ASSEMBLY

FIRE SPRINKLER  
BUILDING IS NOT SPRINKLERED

FIRE RESISTANCE RATING BUILDING ELEMENTS  
STRUCTURAL FRAME = NO RATING  
BEARING WALLS (EXTERIOR AND INTERIOR) = NO RATING  
NON-BEARING WALLS (EXTERIOR) =  
1 HOUR < 10' TO PROPERTY LINE  
NO RATING > 10' TO PROPERTY LINE  
FLOOR = NO RATING  
ROOF = NO RATING

DATE OF ISSUE: 12/11/2012

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## PROJECT INFORMATION

# GO.2

**CITY OF MADISON  
DEPARTMENT OF  
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CITY ENGINEERING  
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**OLBRICH BOTANICAL  
GARDENS ROOF  
REPLACEMENT**

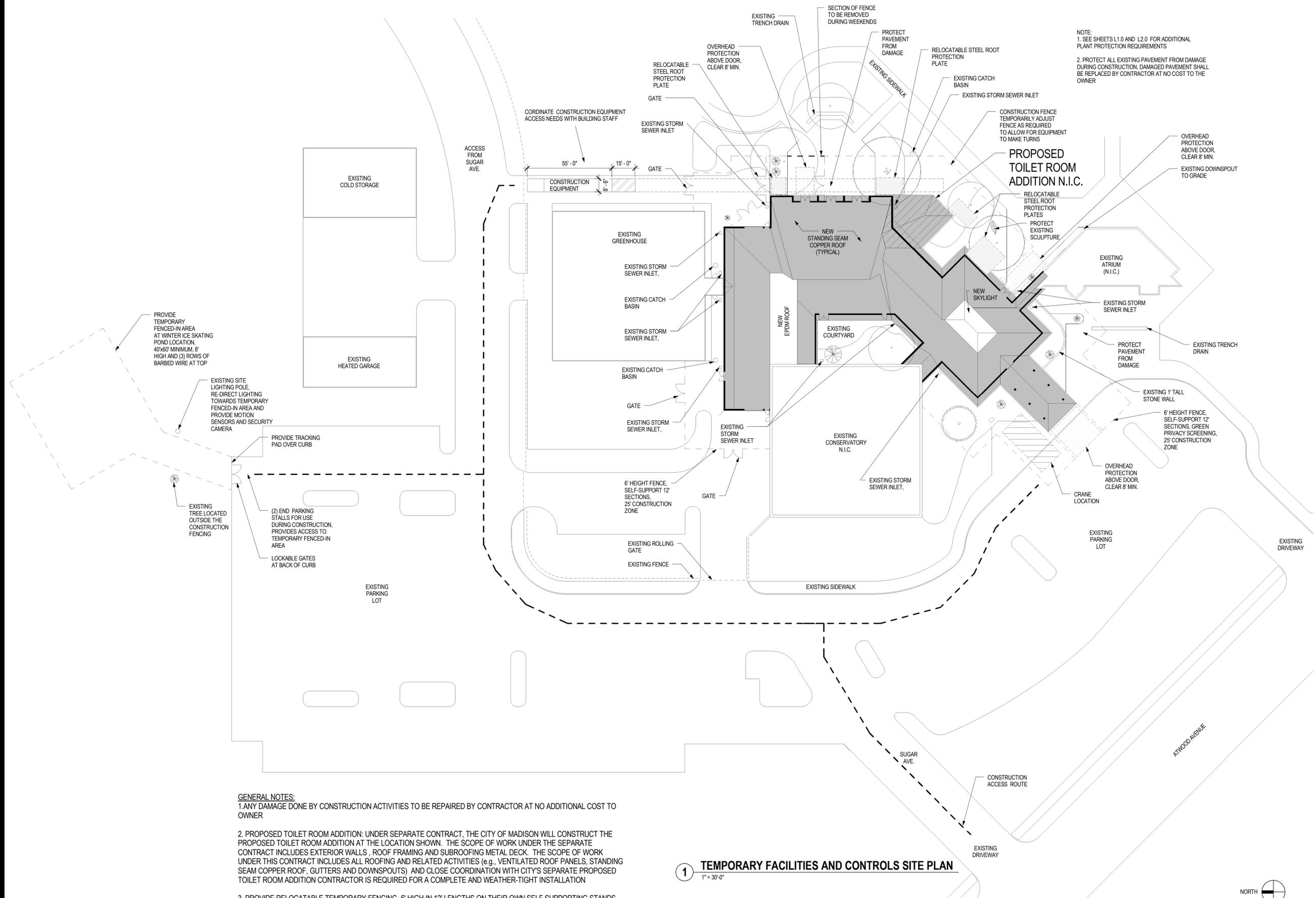
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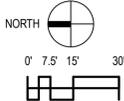
**TEMPORARY  
FACILITIES AND  
CONTROL SITE PLAN**

**C1.0**



**GENERAL NOTES:**  
 1. ANY DAMAGE DONE BY CONSTRUCTION ACTIVITIES TO BE REPAIRED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER  
 2. PROPOSED TOILET ROOM ADDITION: UNDER SEPARATE CONTRACT, THE CITY OF MADISON WILL CONSTRUCT THE PROPOSED TOILET ROOM ADDITION AT THE LOCATION SHOWN. THE SCOPE OF WORK UNDER THE SEPARATE CONTRACT INCLUDES EXTERIOR WALLS, ROOF FRAMING AND SUBROOFING METAL DECK. THE SCOPE OF WORK UNDER THIS CONTRACT INCLUDES ALL ROOFING AND RELATED ACTIVITIES (e.g., VENTILATED ROOF PANELS, STANDING SEAM COPPER ROOF, GUTTERS AND DOWNSPOUTS) AND CLOSE COORDINATION WITH CITY'S SEPARATE PROPOSED TOILET ROOM ADDITION CONTRACTOR IS REQUIRED FOR A COMPLETE AND WEATHER-TIGHT INSTALLATION  
 3. PROVIDE RELOCATABLE TEMPORARY FENCING, 6' HIGH IN 12' LENGTHS ON THEIR OWN SELF SUPPORTING STANDS, CHAINLINK WITH GREEN PRIVACY SCREENING SLATS, AT LOCATIONS SHOWN APPROXIMATELY 25' OUTSIDE OF THE DRIPLINE, QUANTITY AS REQUIRED AND RELOCATED AS REQUIRED DURING CONSTRUCTION ACTIVITIES WITHIN THAT PARTICULAR AREA OR PHASE, SEE SPECS.

**1 TEMPORARY FACILITIES AND CONTROLS SITE PLAN**  
1" = 30'-0"



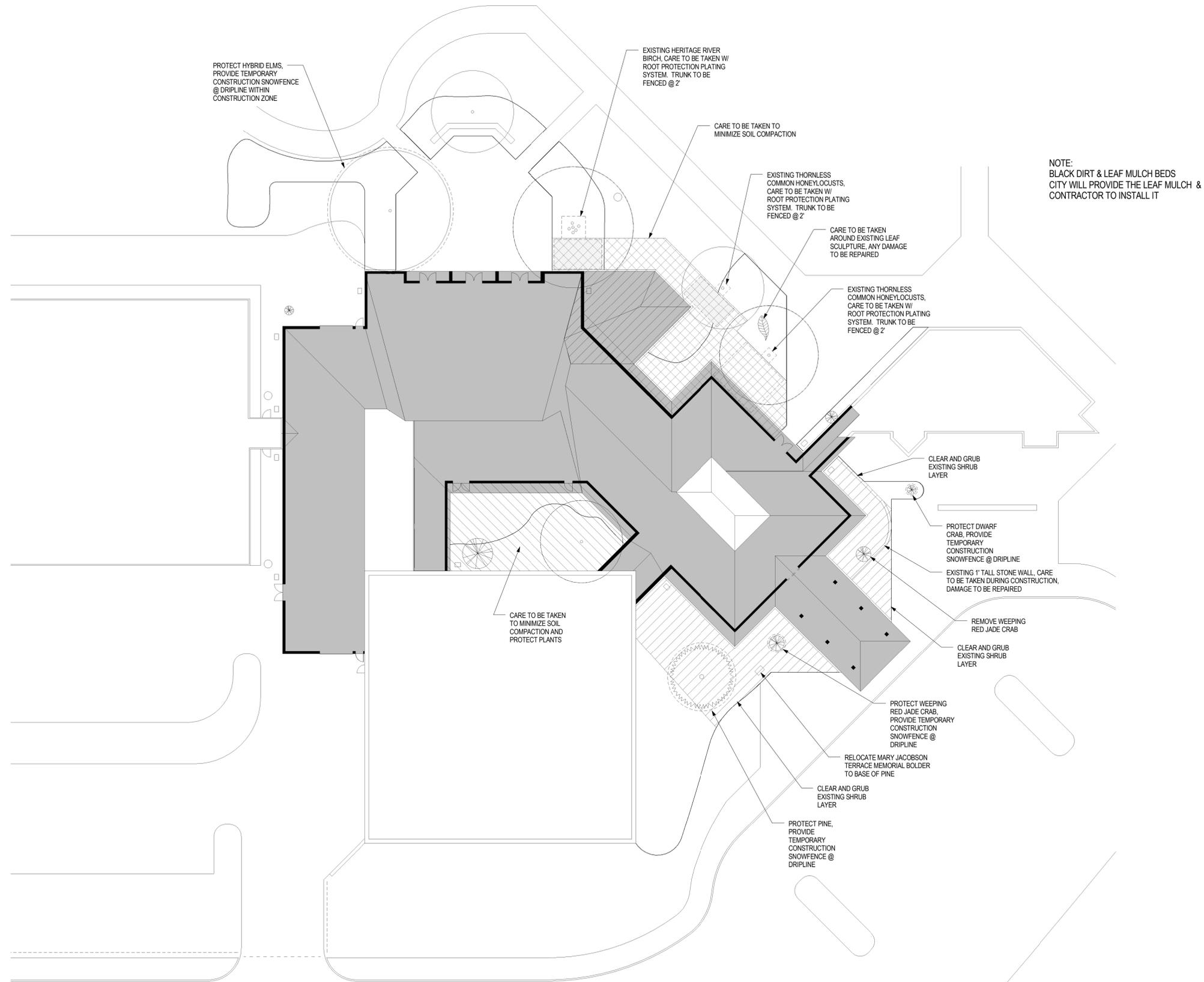


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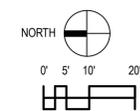
**1** LANDSCAPE DEMOLITION/CLEARING, GRUBBING AND PROTECTION  
1" = 20'-0"

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**LANDSCAPE  
DEMOLITION/  
CLEARING, GRUBBING  
& PROTECTION PLAN**

**L2.0**



## STRUCTURAL DESIGN CRITERIA

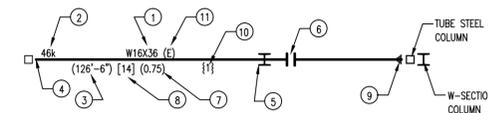
- THESE NOTES SUPPLEMENT THE SPECIFICATIONS. PROJECT SPECIFICATIONS SHALL BE REFERRED TO FOR CLARIFICATIONS AND ADDITIONAL INFORMATION. IN CASE OF CONFLICT BETWEEN PROJECT SPECIFICATIONS AND THESE NOTES, THESE NOTES SHALL GOVERN.
- GOVERNING BUILDING CODE: 2009 IBC AS AMENDED BY THE STATE OF WISCONSIN.
- DESIGN LOADS
 

ROOF	
LIVE LOAD SNOW	30 PSF + DRIFTING
SUPERIMPOSED DEAD LOAD	
TOP CHORD	10 PSF
BOTTOM CHORD	10 PSF
SNOW LOADS	
GROUND SNOW ( $P_g$ )	30 PSF
SNOW LOAD IMPORTANCE FACTOR ( $I_s$ )	1.0
SNOW LOAD EXPOSURE FACTOR ( $C_e$ )	1.0
ROOF THERMAL LOAD FACTOR ( $C_t$ ) AT BUILDING	1.1
BASE ROOF SNOW LOAD AT BUILDING	23.1 PSF
WIND LOADS	
BASIC WIND SPEED	90 MPH
BUILDING OCCUPANCY CATEGORY	II
WIND LOAD IMPORTANCE FACTOR ( $I_w$ )	1.0
WIND EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	$\pm .18$
MAIN WINDFORCE-RESISTING SYSTEM:	
MWFERS SELECTED EDGE STRIP DISTANCE, (2a)	23.2 FT
CALCULATED HORIZONTAL LOADS	
	END ZONE      INTERIOR ZONE
	WALL      ROOF      WALL      ROOF
TRANSVERSE CASE #1:	19.2 psf    -5.6 psf    12.8 psf    -3.1 psf
TRANSVERSE CASE #2:	N/A psf    N/A psf    N/A psf    N/A psf
LONGITUDINAL:	14.3 psf    -7.5 psf    9.5 psf    -4.5 psf
CALCULATED VERTICAL LOADS	
	END ZONE      INTERIOR ZONE
	WINDWARD    LEeward    WINDWARD    LEeward
TRANSVERSE CASE #1:	-17.2 psf    -11.7 psf    -12.0 psf    -8.9 psf
TRANSVERSE CASE #2:	N/A psf    N/A psf    N/A psf    N/A psf
LONGITUDINAL:	-17.2 psf    -9.9 psf    -12.0 psf    -7.6 psf
COMPONENTS AND CLADDING:	
(SEE ASCE/SEI 7-SECTION 6 FOR ZONE DEFINITIONS AND DIAGRAMS)	
COMPONENT AND CLADDING SELECTED EDGE STRIP DISTANCE, (a)	11.6 FT
TRIBUTARY WIND LOAD AREAS	10 ft <sup>2</sup> 50 ft <sup>2</sup> 100 ft <sup>2</sup>
ROOF (MONOSLOPE):	
ZONE 1 (NEGATIVE)	14.9 psf    14.0 psf    13.6 psf
ZONE 2 (NEGATIVE)	26.0 psf    21.2 psf    19.0 psf
ZONE 3 (NEGATIVE)	38.4 psf    32.6 psf    30.1 psf
WALLS:	
ZONE 4 (NEGATIVE)	17.7 psf    16.0 psf    15.2 psf
ZONE 5 (NEGATIVE)	21.8 psf    18.5 psf    16.9 psf
ZONE 4&5 (POSITIVE)	16.4 psf    14.6 psf    13.9 psf
SEISMIC LOADS	
SEISMIC USE GROUP / OCCUPANCY CATEGORY	II
SEISMIC IMPORTANCE FACTOR ( $I_e$ )	1.0
SEISMIC SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENT ( $S_a$ )	0.128
SPECTRAL RESPONSE COEFFICIENT ( $S_w$ )	0.08
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC FORCE RESISTING SYSTEM:	
STRUCTURAL STEEL SYSTEM	
NOT DETAILED FOR SEISMIC	
$R = 3.0$ $\Omega_b = 3.0$ $C_d = 3.0$	
ANALYSIS PROCEDURE:	
EQUIVALENT LATERAL FORCE PROCEDURE	
ALLOWABLE SOIL BEARING PRESSURE FOR FOOTINGS	3,000 PSF (FROM ORIGINAL DESIGN)
MINIMUM 28 DAY COMPRESSIVE STRENGTH ( $f'_c$ )	
FOOTINGS	3,000 PSI
PIERS, WALLS	4,000 PSI
SLAB-ON-GRADE (INTERIOR)	3,500 PSI
SLAB-ON-GRADE (EXTERIOR)	4,500 PSI
COVER ON MILD STEEL REINFORCEMENT	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	
#5 BARS AND SMALLER	1 1/2"
#6 BARS AND LARGER	2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	1"
CONCRETE REINFORCEMENT YIELD STRENGTH ( $F_y$ )	
ALL DEFORMED MILD STEEL	60,000 PSI
WELDED WIRE FABRIC	65,000 PSI
DESIGN STRESSES	
MASONRY (NORMAL WEIGHT) MEETING ASTM C90	$f'_m = 2250$ PSI
GROUT: MIN COMPRESSIVE STRENGTH AT 28 DAYS MEETING ASTM C476	3000 PSI
STRUCTURAL STEEL YIELD STRENGTH ( $F_y$ )	
TUBES	46,000 PSI
WF BEAMS	50,000 PSI
WF COLUMNS	50,000 PSI
BOLTS FOR STANDARD FRAME CONNECTIONS	
BOLTS FOR SINGLE SHEAR TAB CONNECTIONS	3/4" DIAMETER A325
ANCHOR RODS	3/4" DIAMETER A325
WELDING ELECTRODES	E70

## GENERAL NOTES

- STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THE SHOP DRAWINGS AND WORK.
- NO OPENING SHALL BE MADE IN ANY STRUCTURAL BEAM, COLUMN, SUPPORT FLOOR, LOAD BEARING WALL, FOOTING, OR FOUNDATION WALL WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER. OPENINGS IN NON-LOAD BEARING WALLS REQUIRE THE ARCHITECT'S APPROVAL.
- THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON NEW STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION.
- FIREPROOFING METHODS AND MATERIALS FOR STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR RATING REQUIREMENTS, FIREPROOFING METHODS AND MATERIALS.
- ALL SECTIONS, DETAIL AND NOTES SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE NOTED.
- WHEN CONFLICTS ARE NOTED ON THE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE A/E FOR RESOLUTION PRIOR TO FABRICATION OR INSTALLATION.

## STEEL BEAM NOMENCLATURE



- INDICATES BEAM SIZE
- INDICATES CONNECTION DESIGNED BY FABRICATOR TO DELIVER 46K VERTICAL LOAD TO CL OF COL OR CONNECTING MEMBERS
- INDICATES T/ STEEL EL = 126'-6"
- INDICATES BEAM FRAMING INTO FACE OF COLUMN
- INDICATES BEAM CONTINUOUS OVER COLUMN
- INDICATES TYPICAL BEAM SHEAR SPLICE
- INDICATES REQUIRED UPWARD CAMBER IN BEAM (INCHES)
- INDICATES NUMBER OF 3/4" X 5" SHEAR STUDS FULLY WELDED TO TOP OF BEAM PER SPAN
- INDICATES MOMENT CONNECTION
- INDICATES TYPE OF STUD CONFIGURATION. SEE DETAIL
- INDICATES THE BEAM IS EXISTING

## ABBREVIATIONS

T/ PIER	TOP OF PIER
T/ FTG	TOP OF FOOTING
T/ WALL	TOP OF WALL
T/ LEDGE	TOP OF LEDGE
T/ CONC	TOP OF CONCRETE
T/ STEEL	TOP OF STEEL, TOP OF SLAB
FN	FOUNDATION
FX	FOOTING CALL-OUT
BPXX	BASE PLATE CALL-OUT
PX	PIER CALL-OUT
CJ	CONTROL JOINTS
T/ SLAB	TOP OF SLAB
EL	ELEVATION
T/ PC	TOP OF PRECAST
WWF	WELDED WIRE FABRIC
JBE	JOIST BEARING ELEVATION
T/ DECK	TOP OF (METAL) DECK
T/ CAISSON	TOP OF CAISSON
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

**NOTE:**  
INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE STRUCTURAL DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE ACTUAL EXISTING FIELD CONDITIONS. OTIE MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THE NEW WORK. REPORT DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS TO THE A/E FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE A/E IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACT.

## OLBRICH BOTANICAL GARDEN ROOFING REPLACEMENT

3300 ATWOOD AVENUE  
MADISON, WI



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Madison, Wisconsin 53718  
p608.241.6717 f608.241.3914

OTIE.com

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OTIE PROJECT # 2012080

STRUCTURAL  
DESIGN  
CRITERIA

**S1.0**

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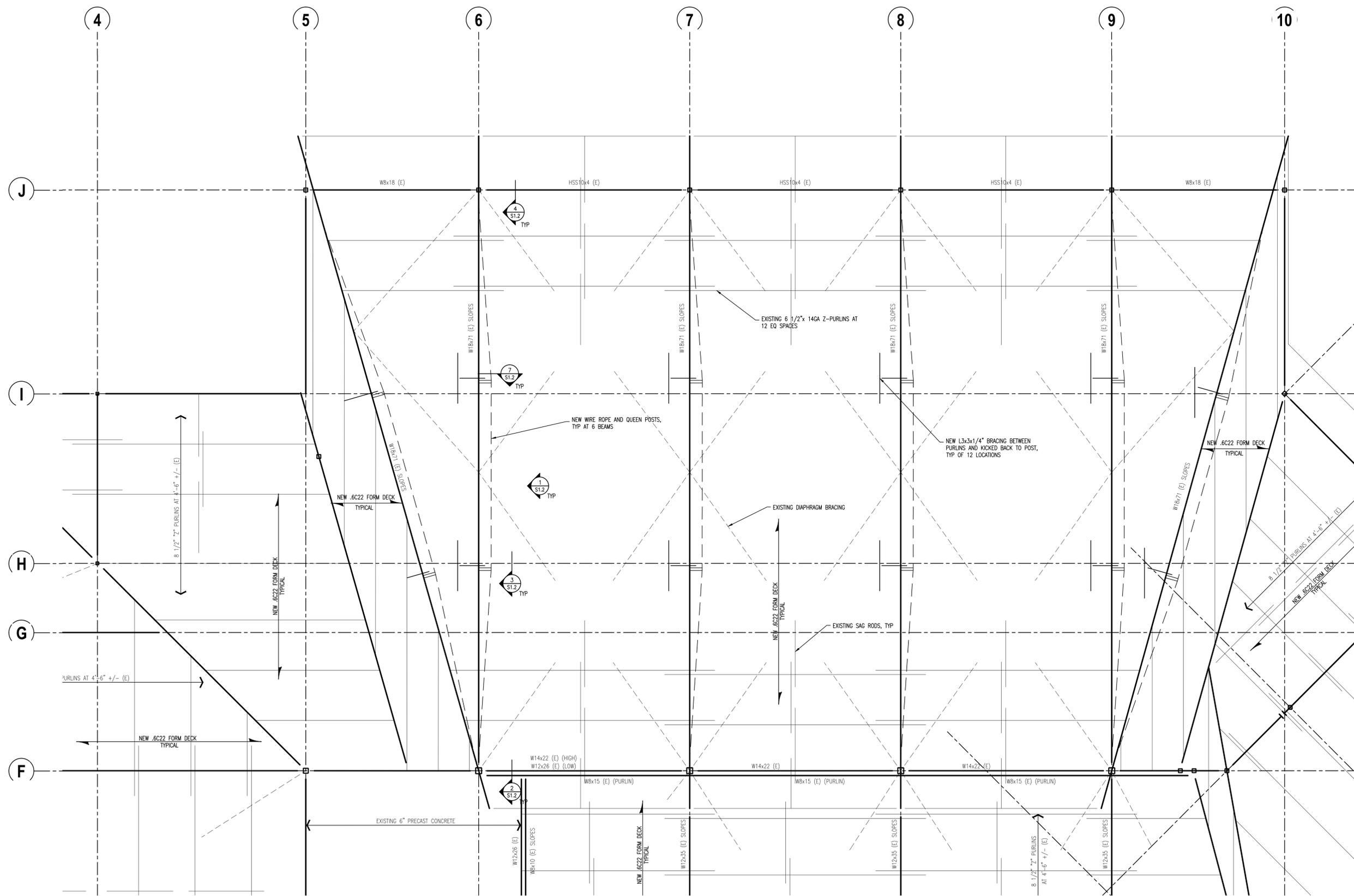
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OTIE.com

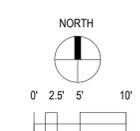
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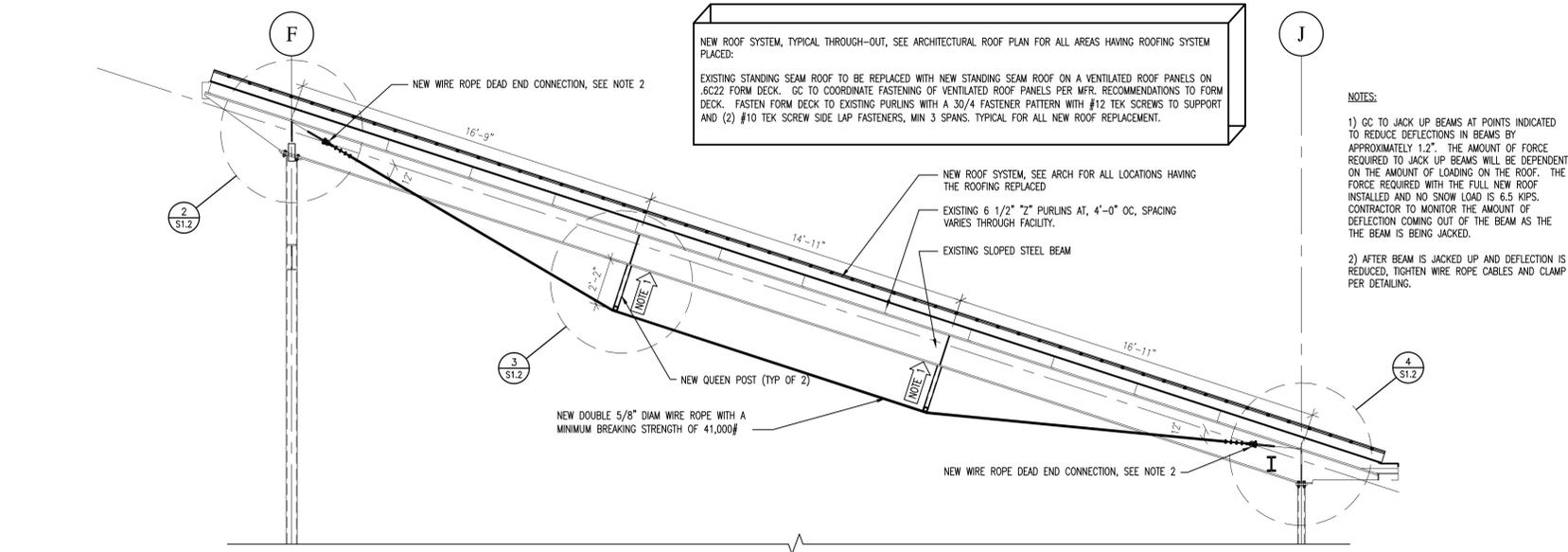
**ROOF PLAN**



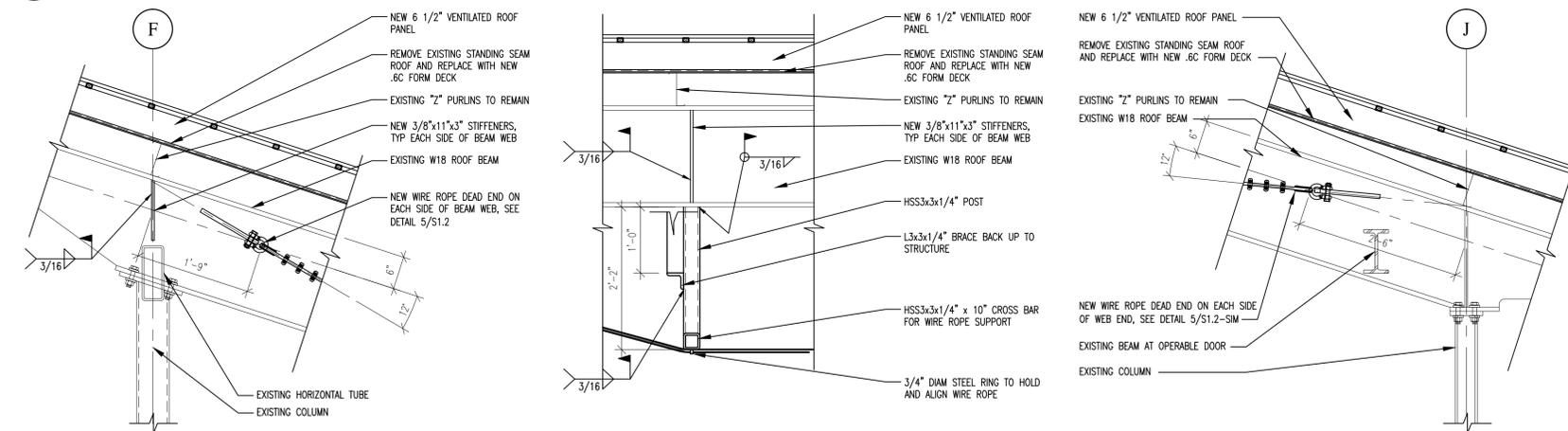
**1**  
**S1.1**  
**ROOF FRAMING PLAN  
OVER THE COMMONS**  
SCALE: 1/4"=1'-0"



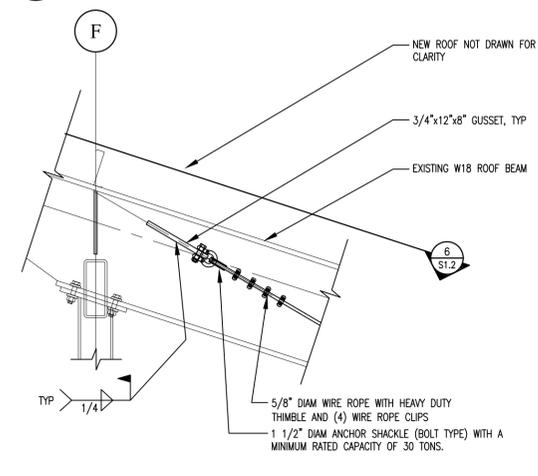
**S1.1**



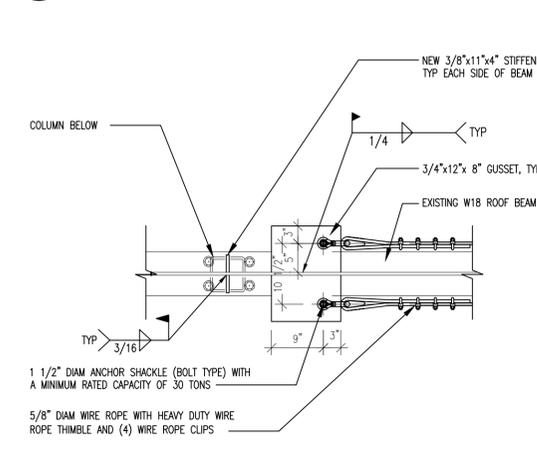
**1 SECTION THRU THE COMMONS**  
SCALE: 1/4"=1'-0"  
SDetail 001 (16)



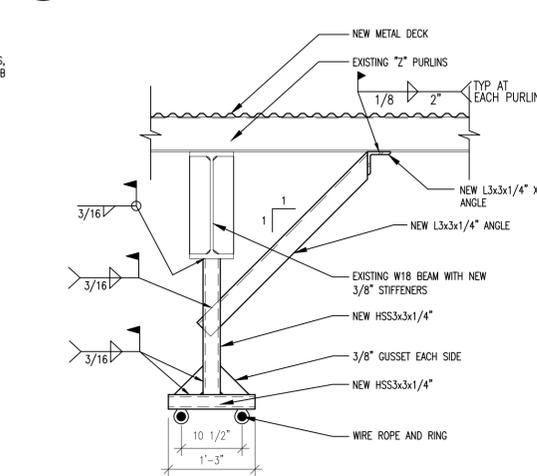
**2 WIRE ROPE CONNECTION AT HIGH POINT**  
SCALE: 3/4"=1'-0"  
SDetail 002 (16)



**3 WIRE ROPE / POST CONNECTION**  
SCALE: 3/4"=1'-0"  
SDetail 002 (16)



**4 WIRE ROPE CONNECTION AT LOW POINT**  
SCALE: 3/4"=1'-0"  
SDetail 002 (16)



**5 WIRE ROPE DEAD END DETAIL**  
SCALE: 3/4"=1'-0"  
SDetail 002 (16)

**6 PLAN VIEW OF WIRE ROPE DEAD END**  
SCALE: 3/4"=1'-0"  
SDetail 002 (16)

**7 NEW POST DETAIL**  
SCALE: 3/4"=1'-0"  
SDetail 002 (16)

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DETAILS

**S1.2**

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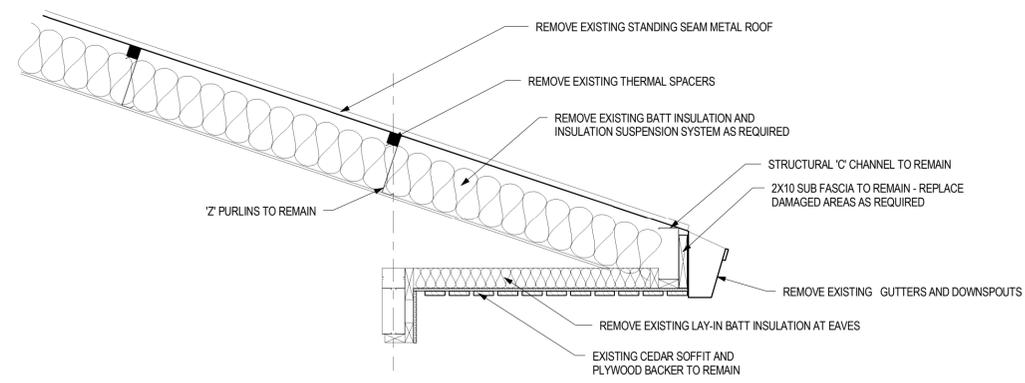
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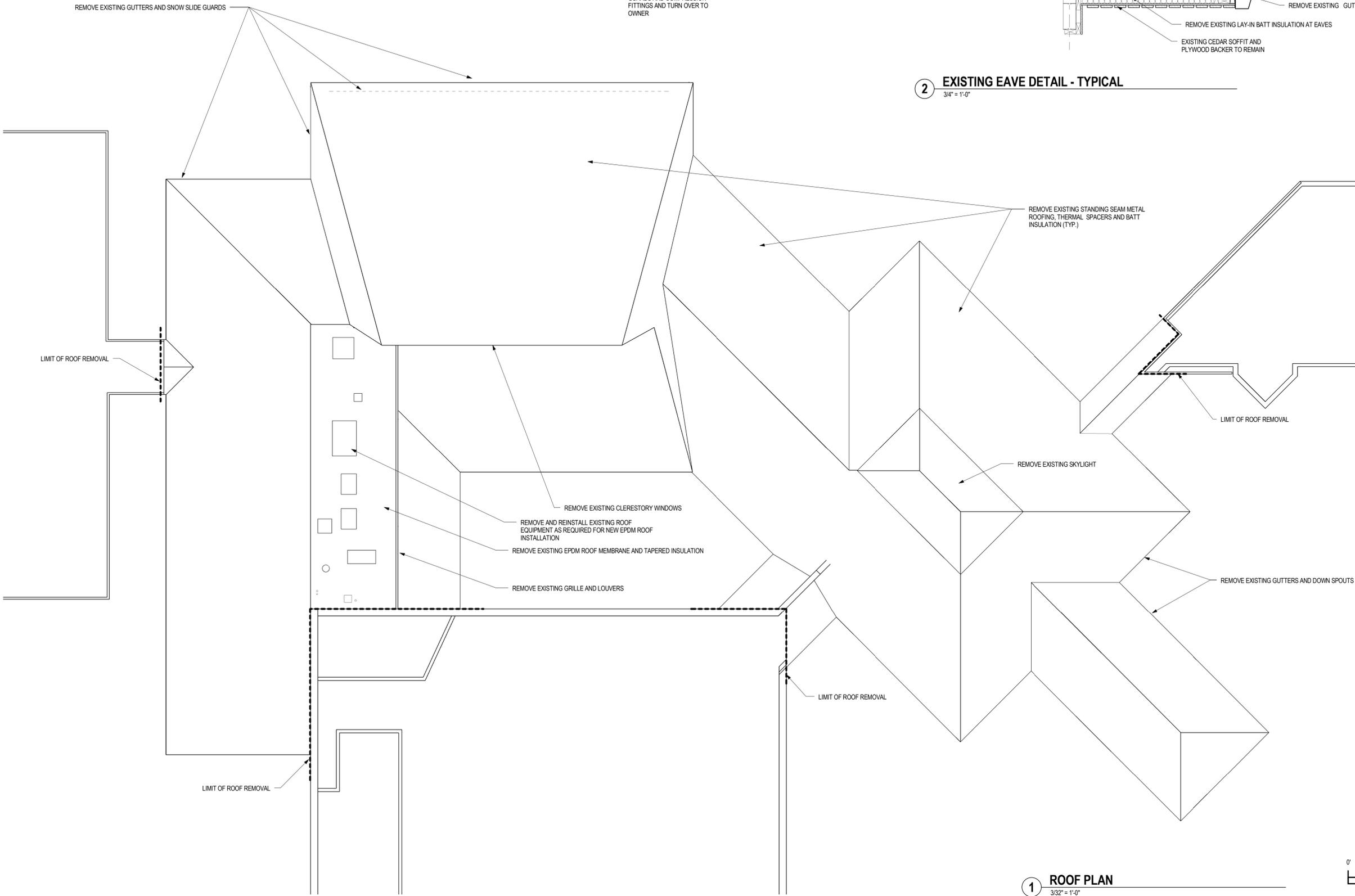
**ROOF DEMOLITION  
PLAN**

**D1.3**

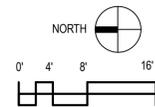


**2 EXISTING EAVE DETAIL - TYPICAL**  
3/4" = 1'-0"

NOTE:  
SALVAGE EXISTING SNOW SLIDE  
GUARDS AND COMPRESSION  
FITTINGS AND TURN OVER TO  
OWNER



**1 ROOF PLAN**  
3/32" = 1'-0"



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**OLBRICH BOTANICAL  
GARDENS ROOF  
REPLACEMENT**

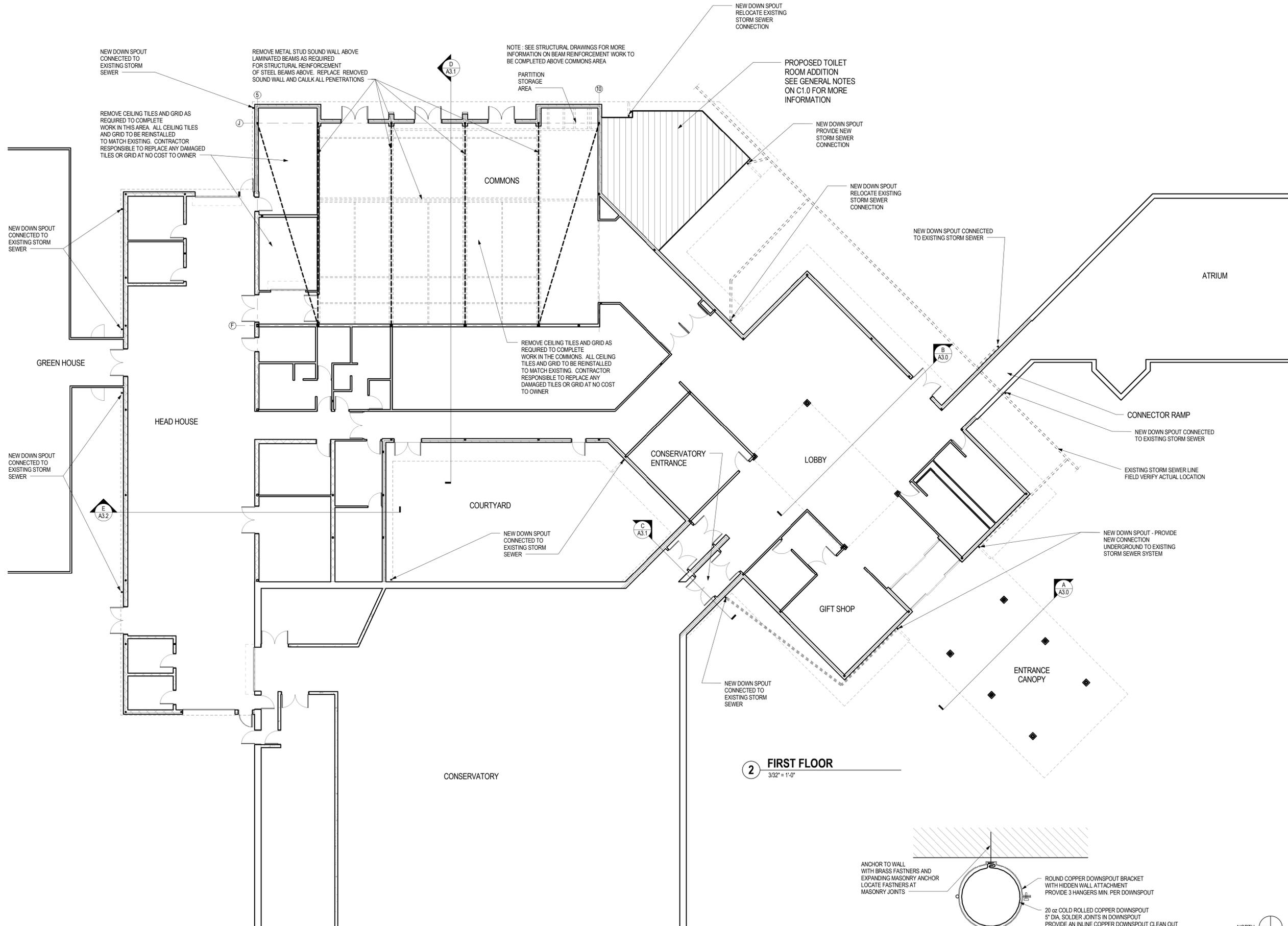
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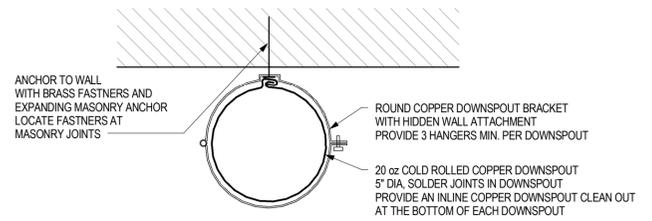
PROJECT # 12017

**FIRST FLOOR PLAN**

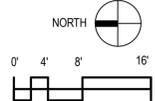
**A1.1**



**2 FIRST FLOOR**  
3/32" = 1'-0"



**1 TYPICAL DOWN SPOUT DETAIL**  
3" = 1'-0"

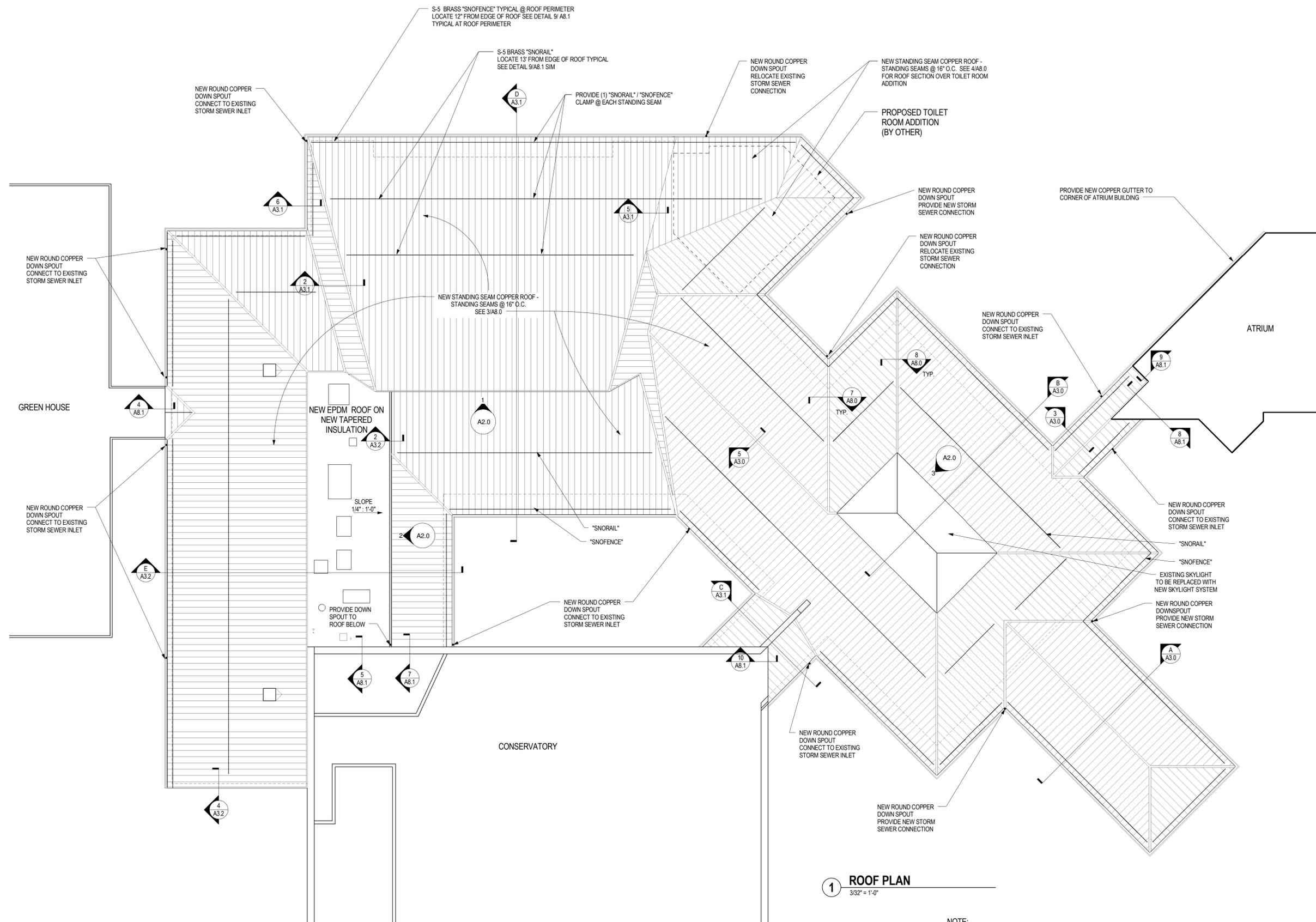


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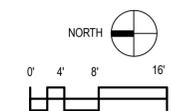
**OLBRICH BOTANICAL  
GARDENS ROOF  
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**1 ROOF PLAN**  
3/32" = 1'-0"

NOTE:  
1. PROVIDE A MINIMUM OF 1 "SNORAIL" / "SNOFENCE"  
CLAMP AT EVERY OTHER STANDING SEAM EXCEPT AS  
NOTED ON PLAN



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**ROOF PLAN**

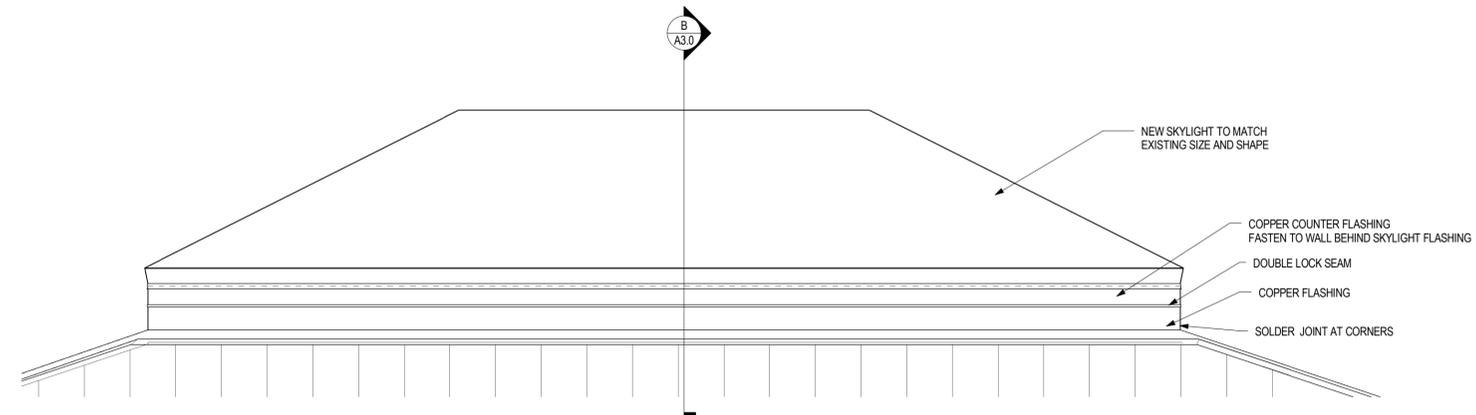
**A1.3**

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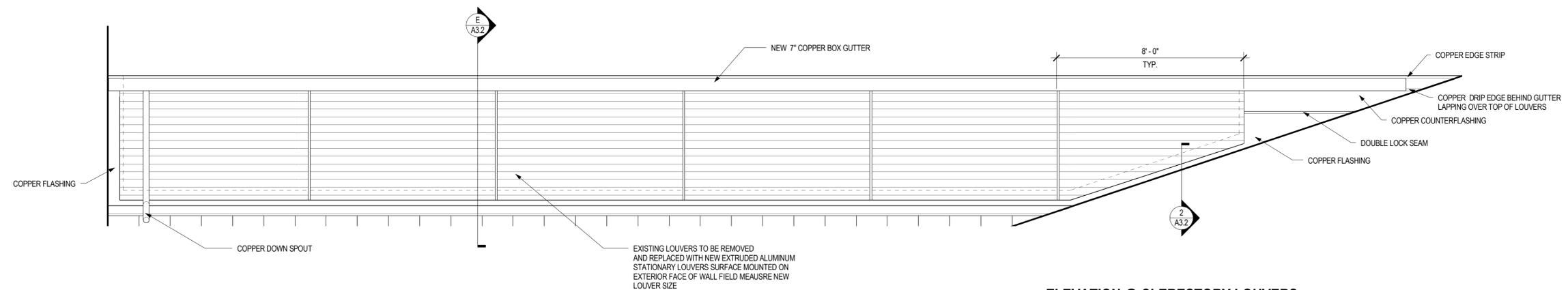
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**OLBRICH BOTANICAL  
GARDENS ROOF  
REPLACEMENT**

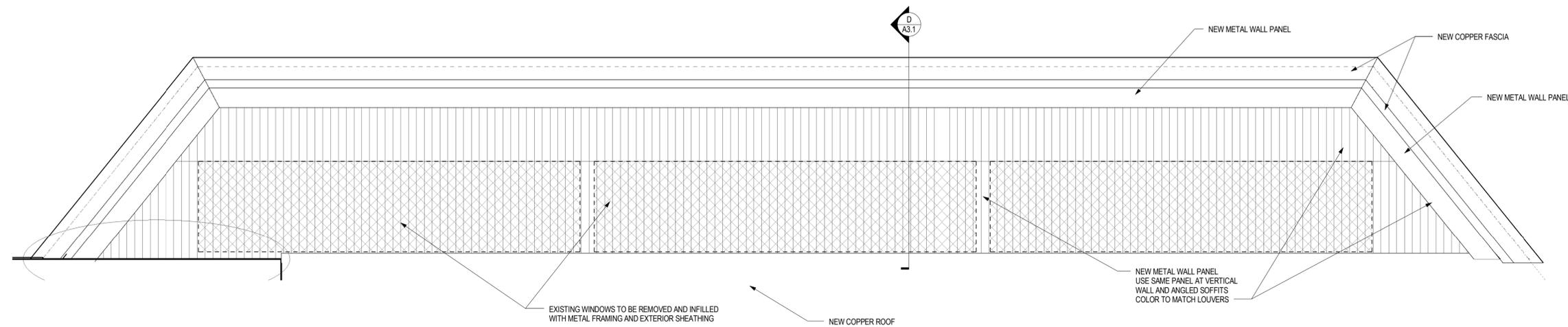
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**3 ELEVATION @ SKYLIGHT**  
3/8" = 1'-0"



**2 ELEVATION @ CLERESTORY LOUVERS**  
3/8" = 1'-0"



**1 ELEVATIONS @ CLERESTORY WINDOWS**  
3/8" = 1'-0"

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**EXTERIOR ELEVATIONS**

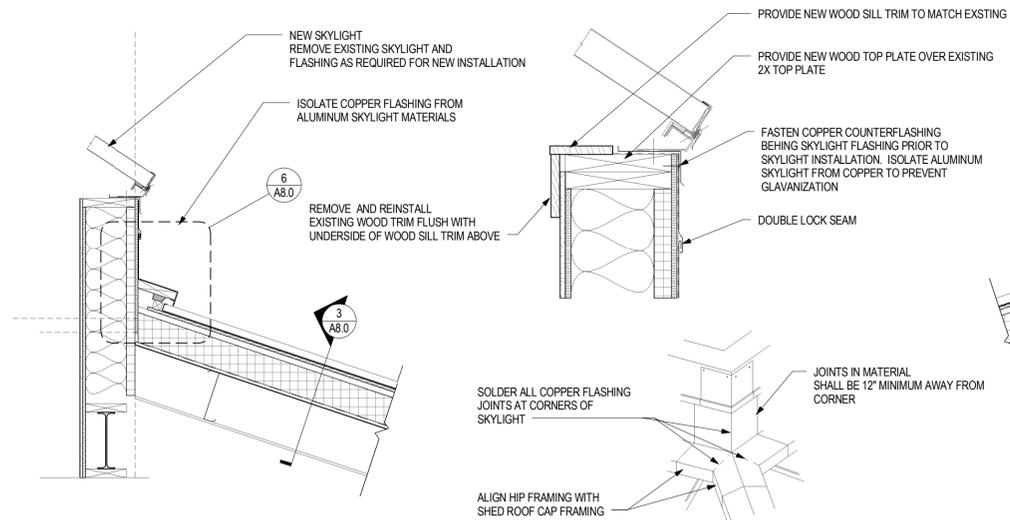
**A2.0**

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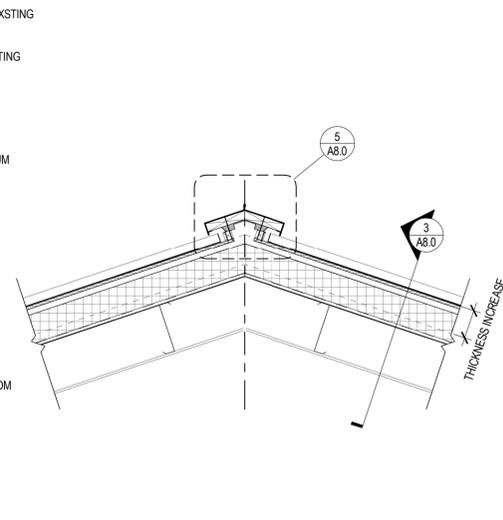
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**OLBRICH BOTANICAL  
GARDENS ROOF  
REPLACEMENT**

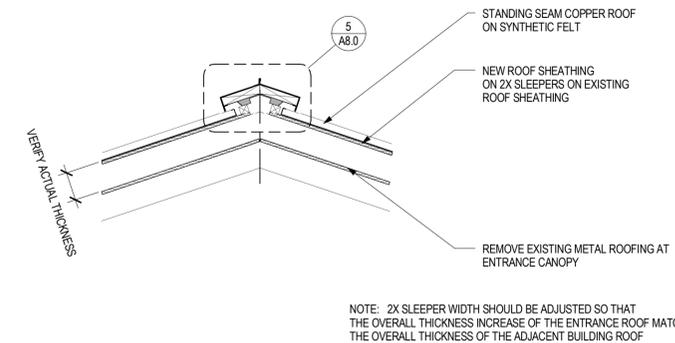
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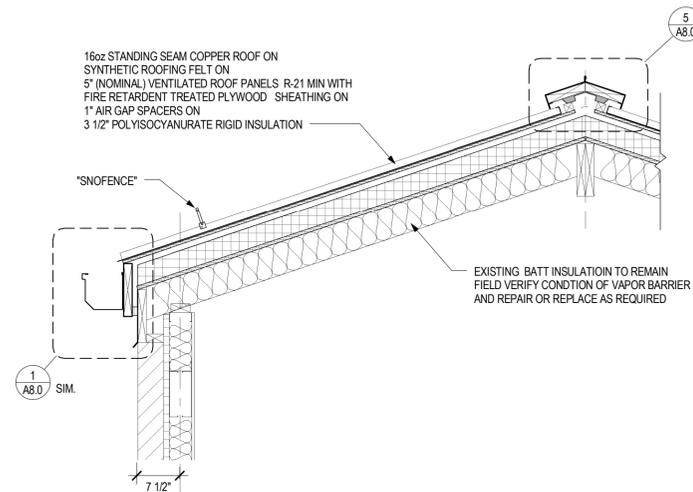
**6 ROOF TRANSITION @ SKYLIGHT**  
3/4" = 1'-0"



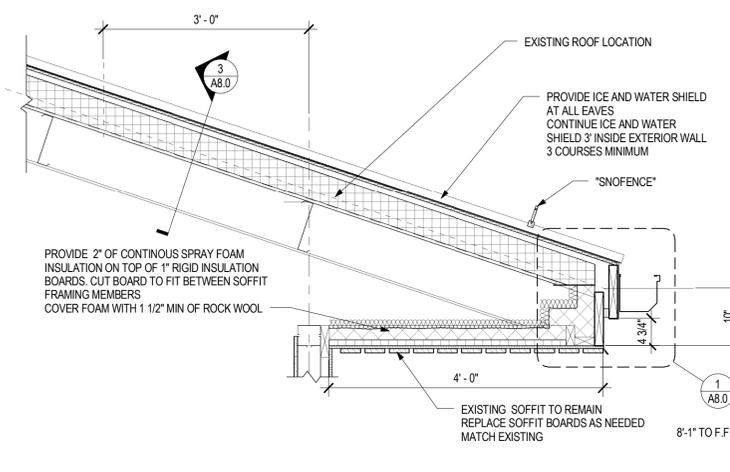
**5 RIDGE DETAIL - TYPICAL**  
3/4" = 1'-0"



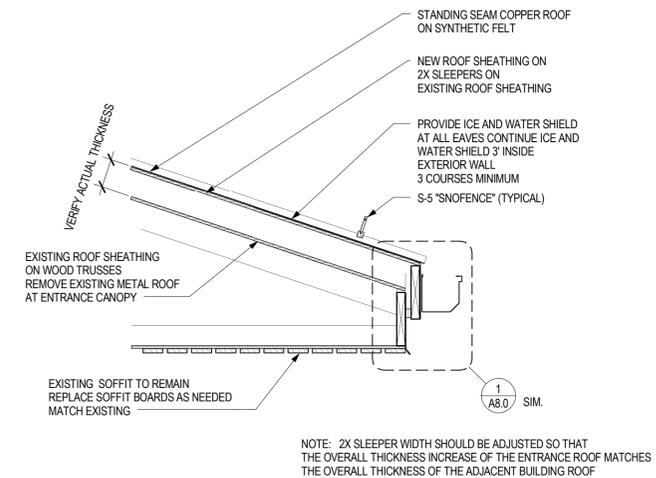
**4 RIDGE DETAIL @ ENTRANCE CANOPY**  
3/4" = 1'-0"



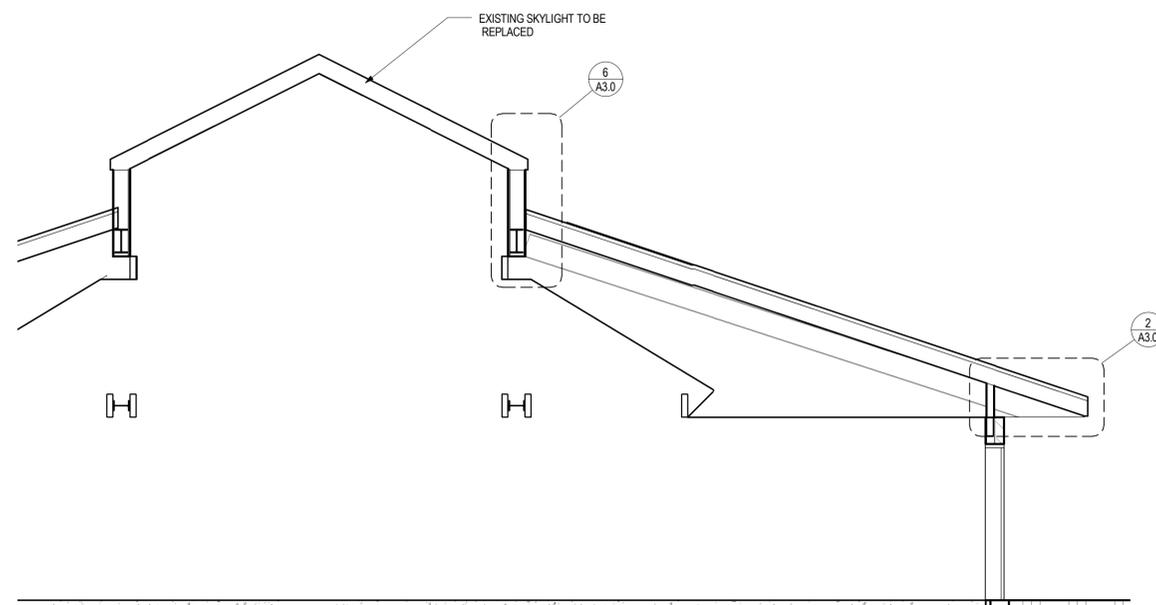
**3 EAVE DETAIL @ CONNECTION RAMP**  
3/4" = 1'-0"



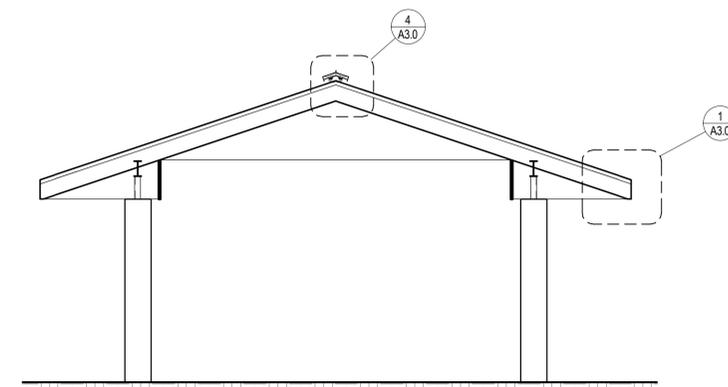
**2 EAVE DETAIL @ TYPICAL OVERHANG**  
3/4" = 1'-0"



**1 EAVE DETAIL @ ENTRANCE CANOPY**  
3/4" = 1'-0"



**B BUILDING SECTION @ LOBBY**  
1/4" = 1'-0"



**A BUILDING SECTION @ ENTRANCE CANOPY**  
1/4" = 1'-0"

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**ROOF SECTIONS & DETAILS**

**A3.0**

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**OLBRICH BOTANICAL  
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REPLACEMENT**

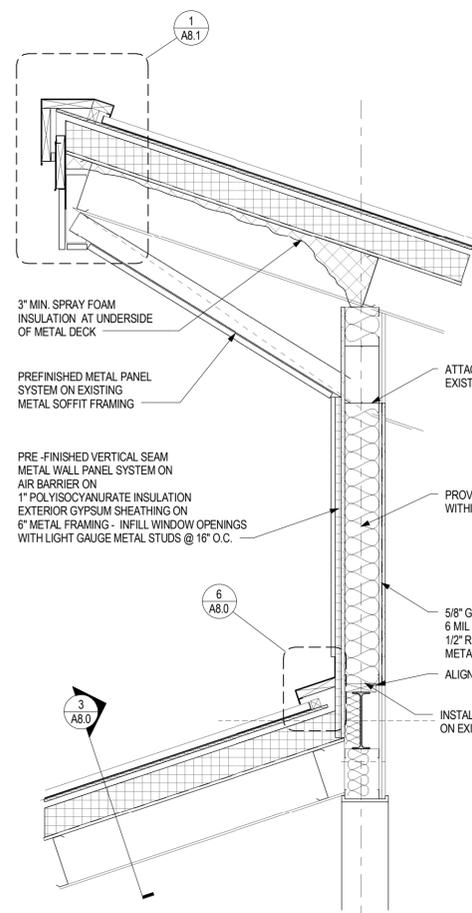
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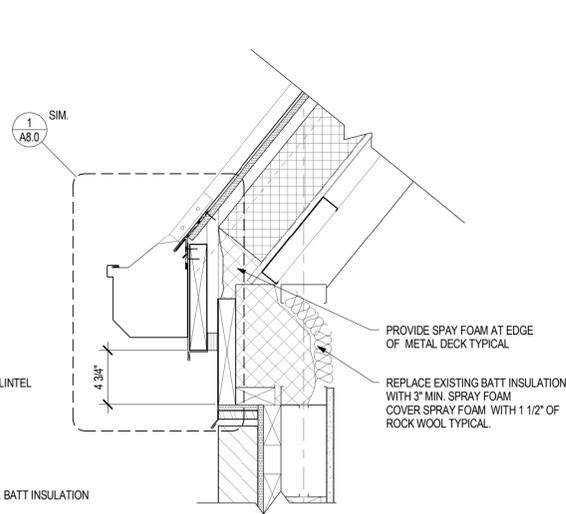
PROJECT # 12017

**ROOF SECTIONS &  
DETAILS**

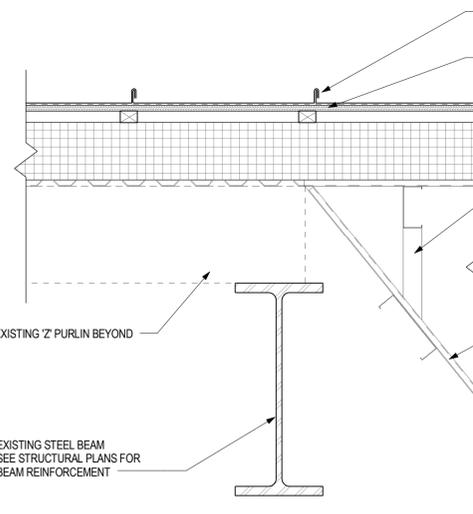
**A3.1**



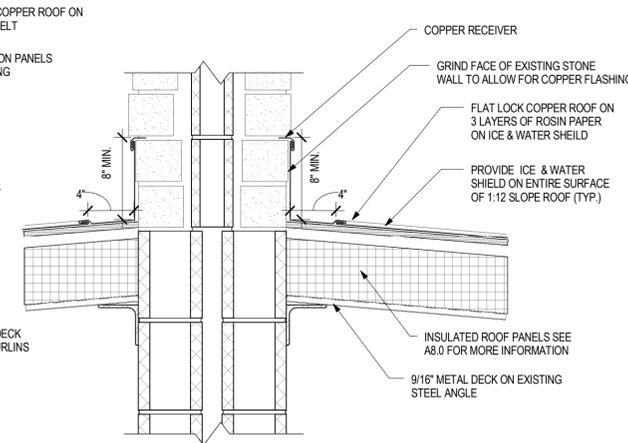
**3 ROOF DETAIL @ CLERESTORY**  
3/4" = 1'-0"



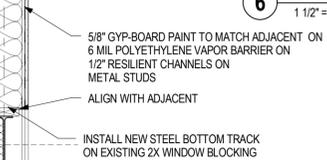
**6 EAVE DETAIL @ STEEP PITCH**  
1 1/2" = 1'-0"



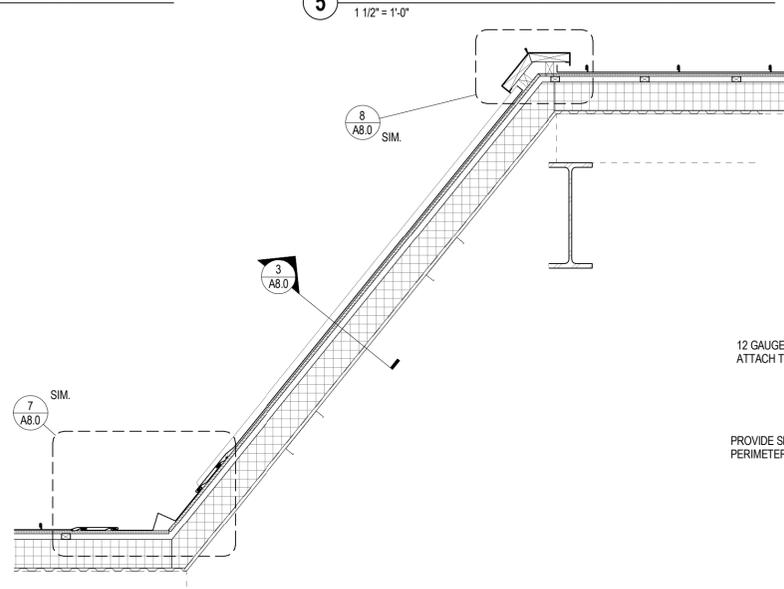
**5 ROOF TRANSITION - EXISTING TO NEW**  
1 1/2" = 1'-0"



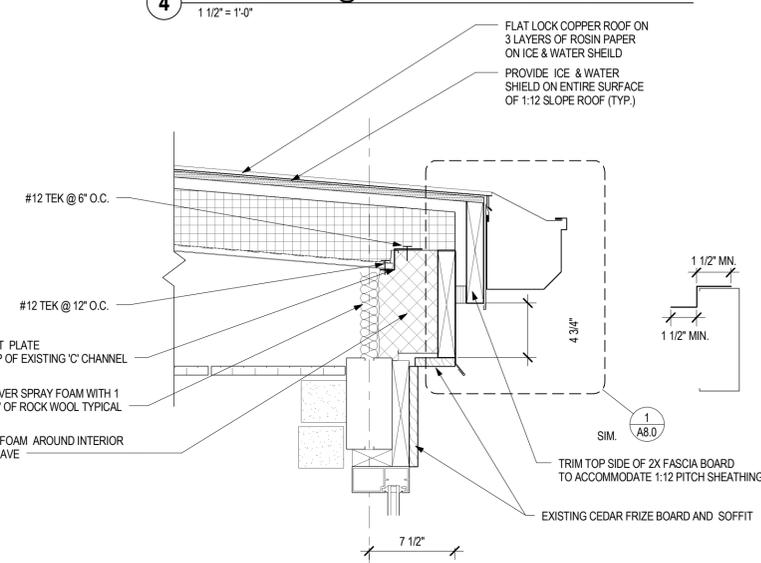
**4 RIDGE DETAIL @ CONSERVATORY ENTRANCE**  
1 1/2" = 1'-0"



**3 A3.1**



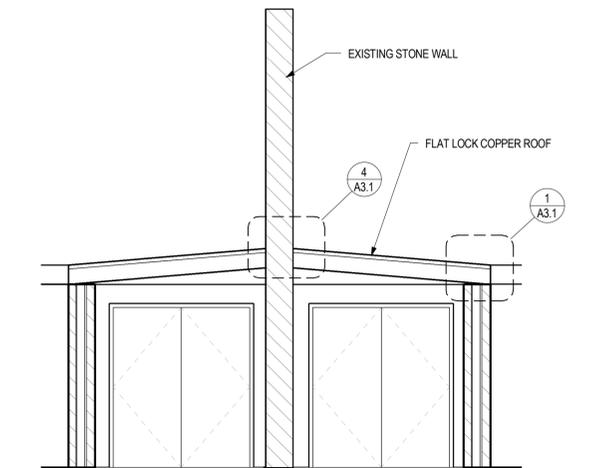
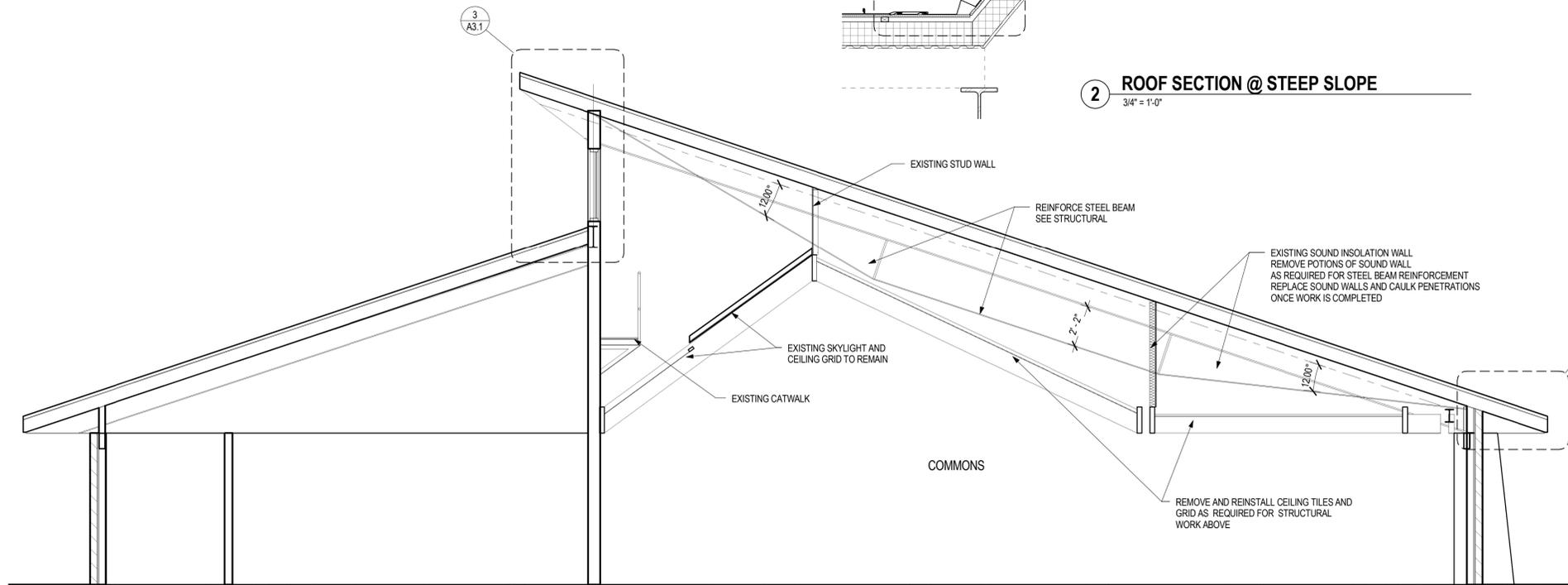
**2 ROOF SECTION @ STEEP SLOPE**  
3/4" = 1'-0"

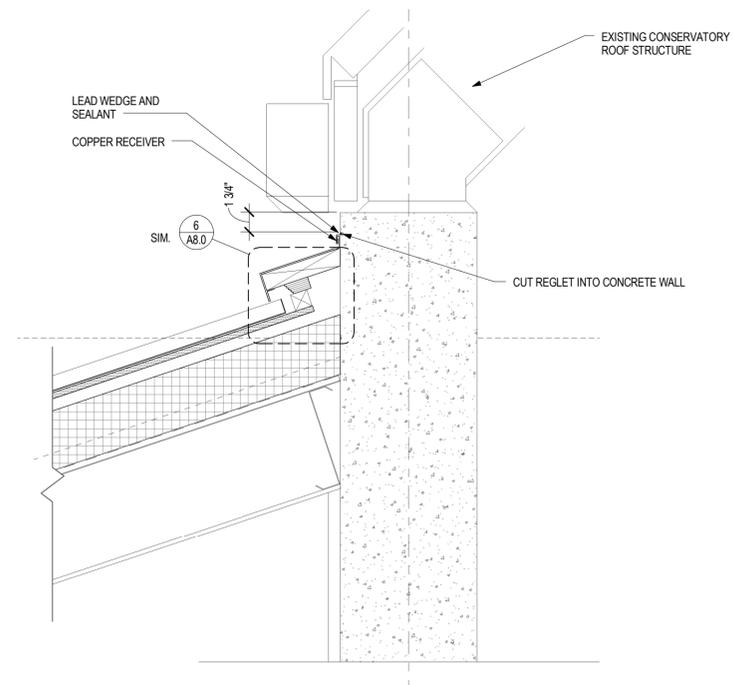


**1 EAVE DETAIL @ CONSERVATORY ENTRANCE**  
1 1/2" = 1'-0"

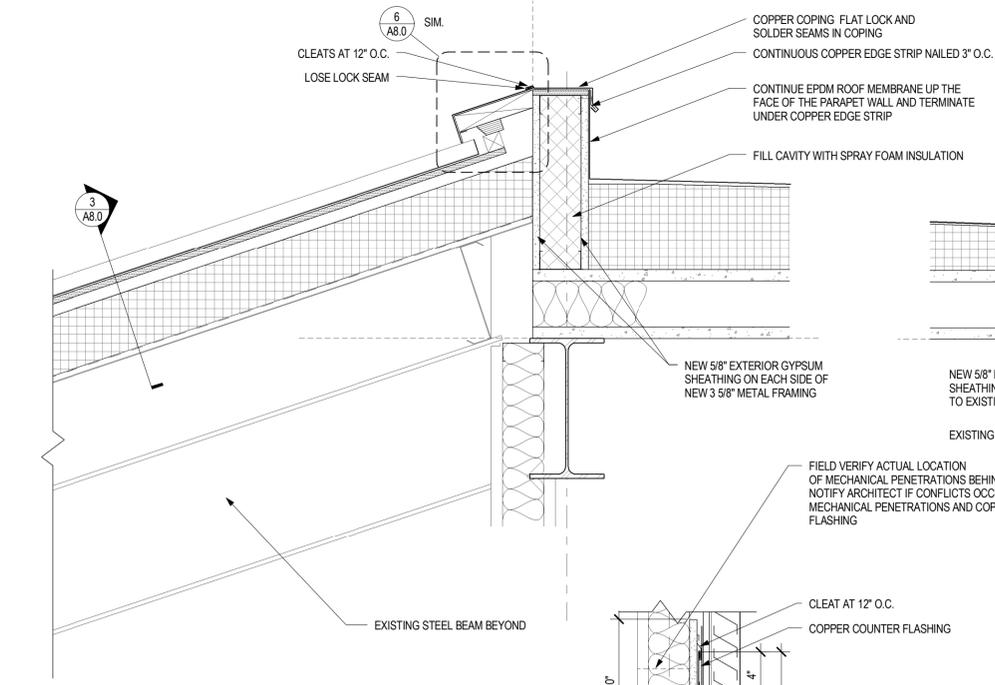
**D BUILDING SECTION @ COMMONS**  
1/4" = 1'-0"

**C BUILDING SECTION @ CONSERVATORY ENTRANCE**  
1/4" = 1'-0"

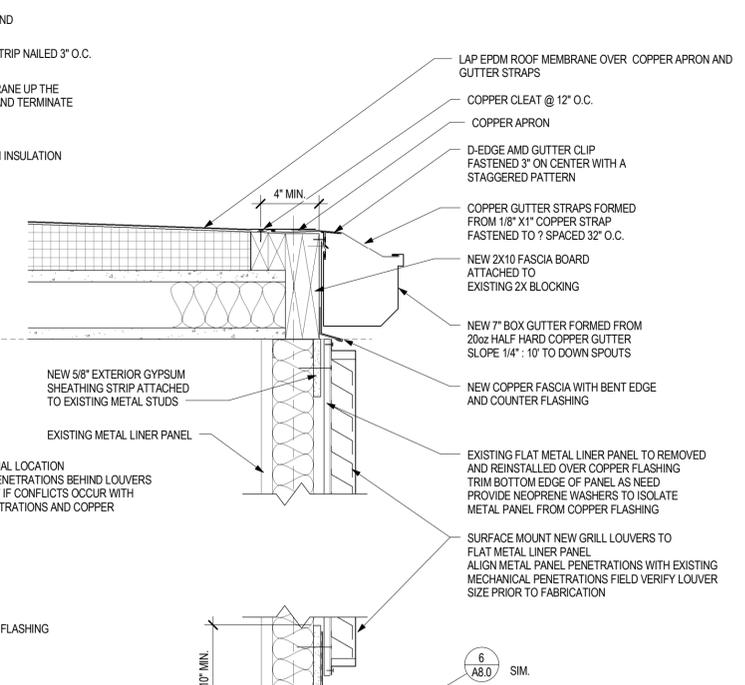




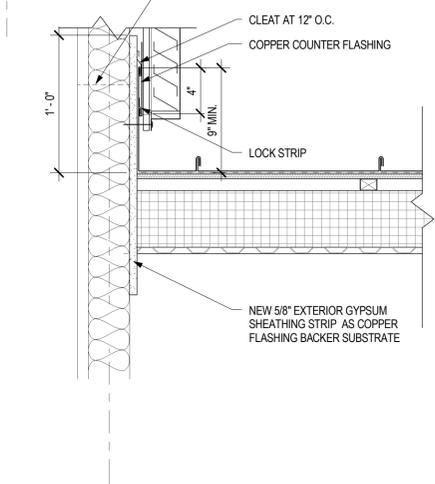
**6 ROOF TRANSITION @ CONSERVATORY**  
1 1/2" = 1'-0"



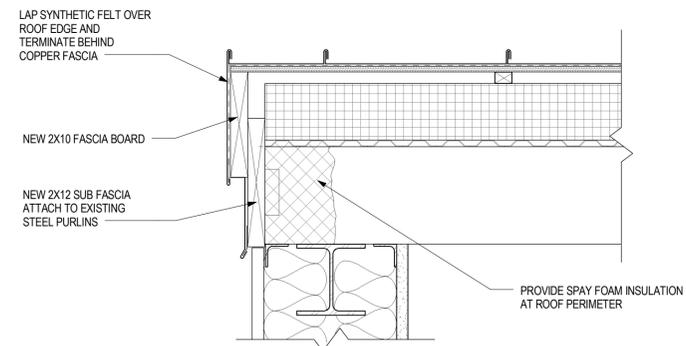
**5 ROOF TRANSITION DETAIL**  
1 1/2" = 1'-0"



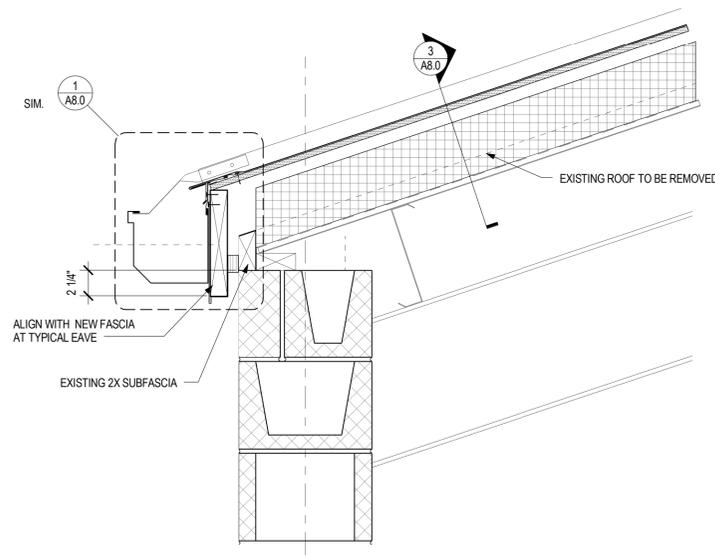
**1 ROOF DETAIL @ LOUVERS**  
1 1/2" = 1'-0"



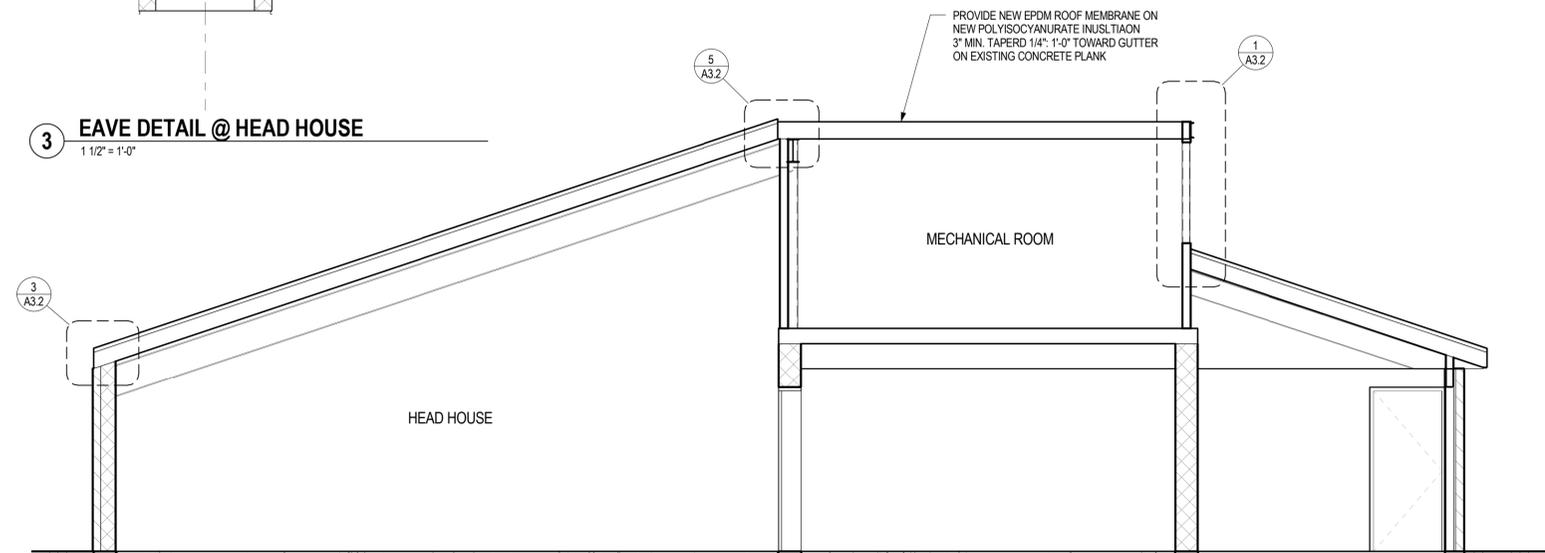
**2 VALLEY DETAIL @ LOUVERS**  
1 1/2" = 1'-0"



**4 RAKE DETAIL**  
1 1/2" = 1'-0"



**3 EAVE DETAIL @ HEAD HOUSE**  
1 1/2" = 1'-0"



**E BUILDING SECTION @ HEAD HOUSE**  
1/4" = 1'-0"

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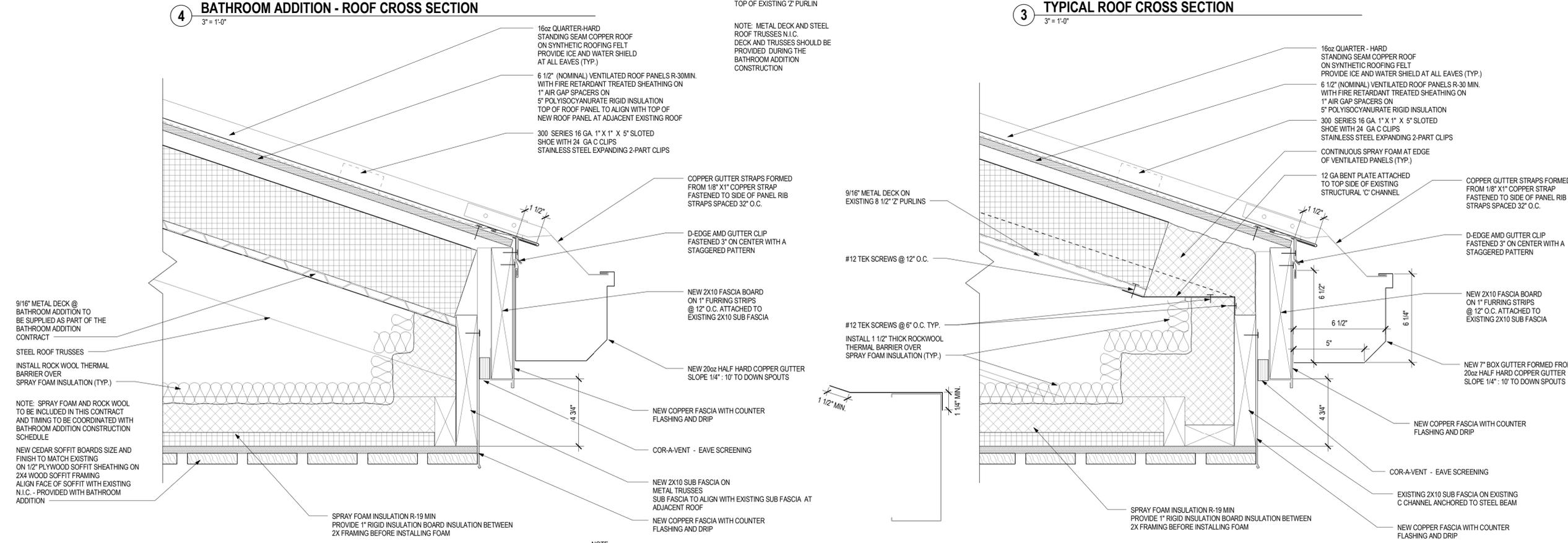
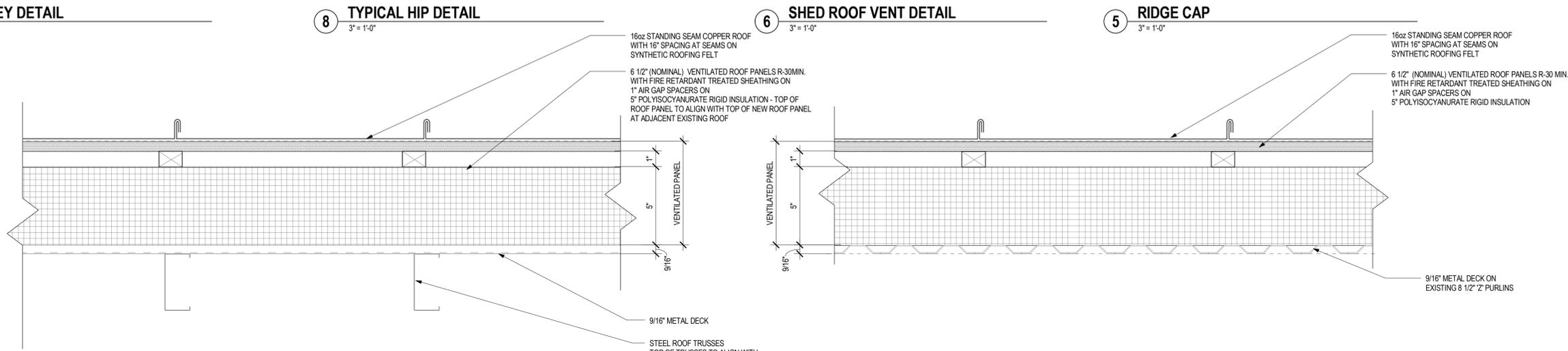
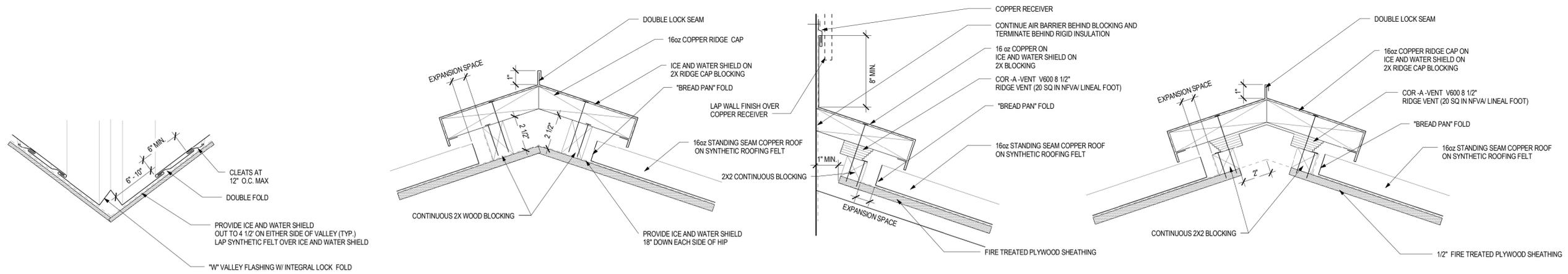
**ROOF SECTIONS &  
DETAILS**

**CITY OF MADISON  
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**OLBRICH BOTANICAL  
GARDENS ROOF  
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**DETAILS**

**A8.0**

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**OLBRICH BOTANICAL  
GARDENS ROOF  
REPLACEMENT**

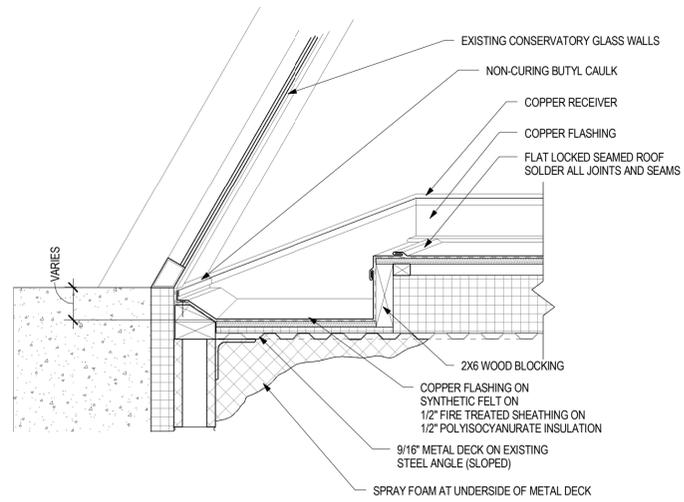
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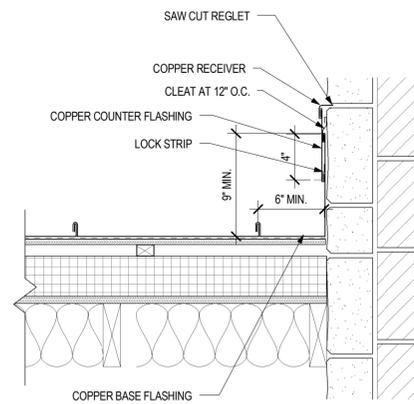
PROJECT # 12017

DETAILS

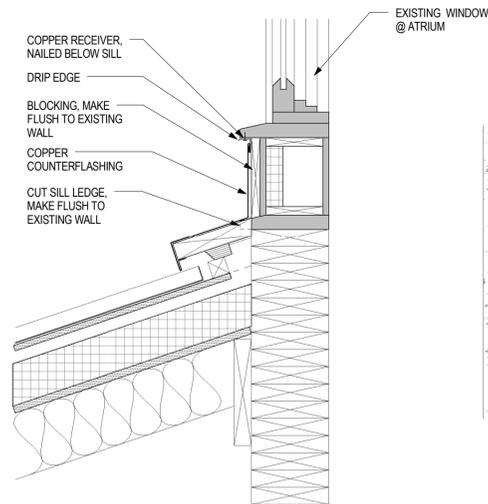
**A8.1**



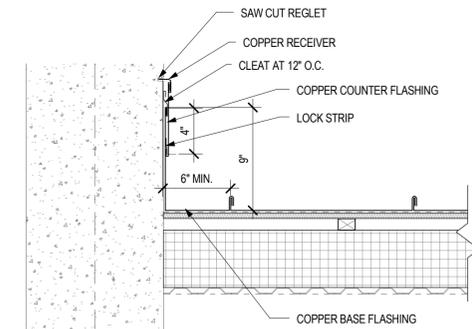
**10 VALLEY GUTTER @ CONSERVATORY**  
1 1/2" = 1'-0"



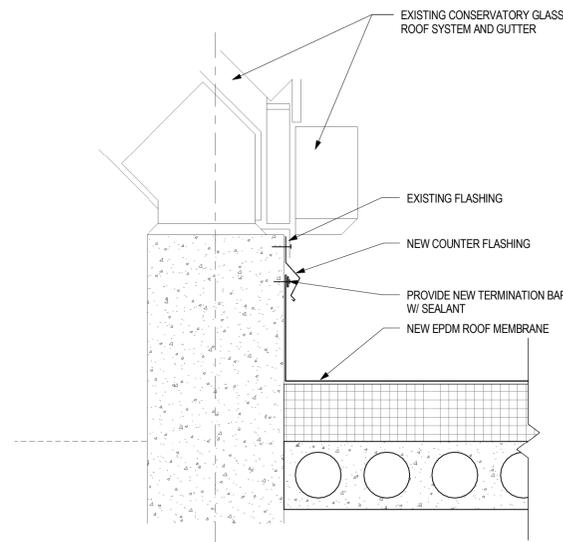
**9 STEPPED FLASHING @ ATRIUM**  
1 1/2" = 1'-0"



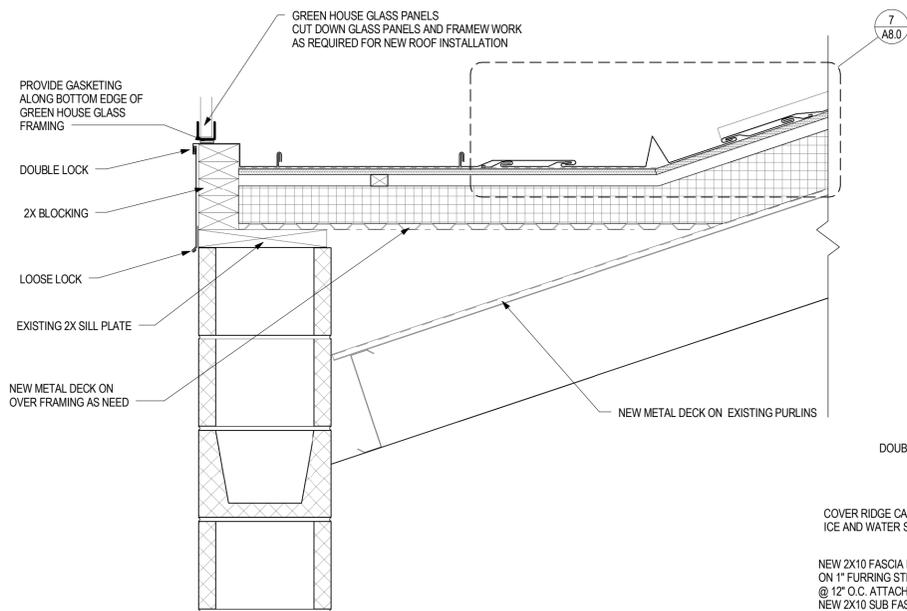
**8 ROOF TRANSITION @ ATRIUM**  
1 1/2" = 1'-0"



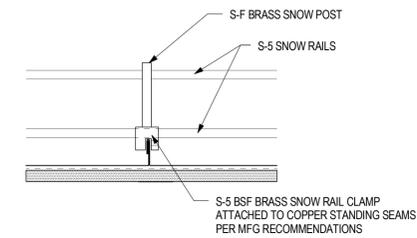
**7 STEPPED FLASHING @ CONCRETE WALL**  
1 1/2" = 1'-0"



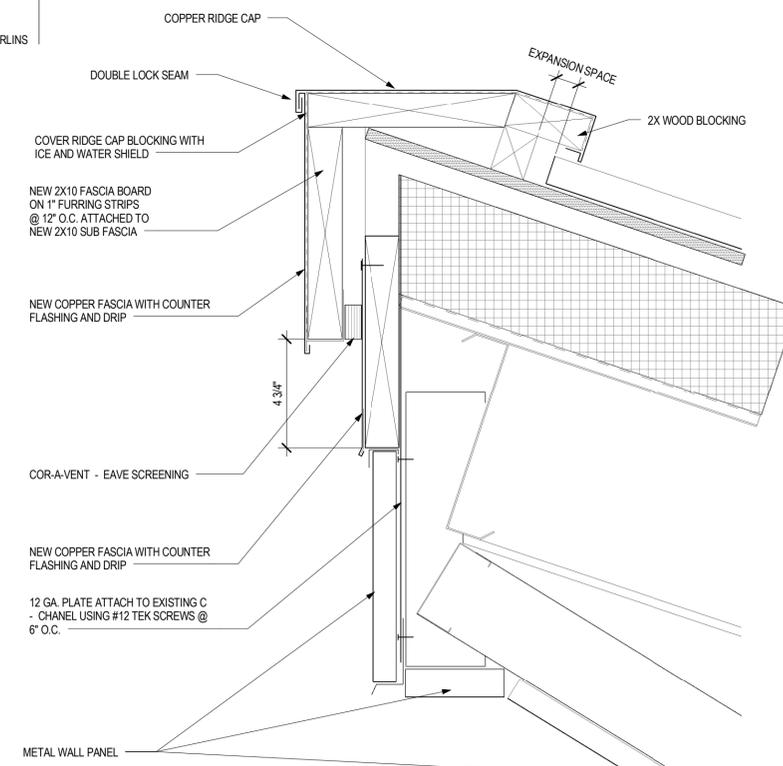
**5 ROOF TRANSITION @ FLAT ROOF**  
1 1/2" = 1'-0"



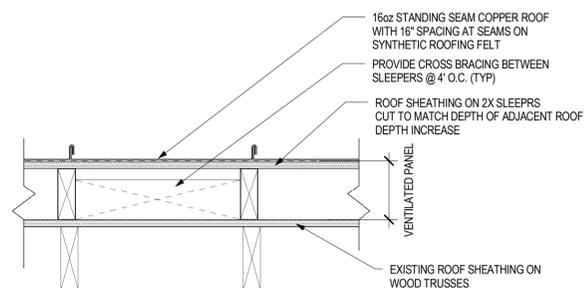
**4 RAKE DETAIL @ GREEN HOUSE**  
1 1/2" = 1'-0"



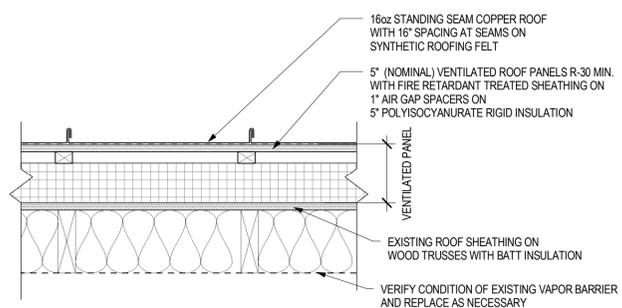
**6 "SNOFENCE" DETAIL**  
3" = 1'-0"  
\*SNORAIL\* DETAIL SIMILAR WITHOUT TOP RAIL AND SNOW POST.



**1 RIDGE DETAIL @ CLERESTORY**  
3" = 1'-0"



**3 ROOF CROSS SECTION @ ENTRANCE CANOPY**  
1 1/2" = 1'-0"



**2 ROOF CROSS SECTION @ CONECTOR RAMP**  
1 1/2" = 1'-0"