



PROJECT DESCRIPTION	
REMOVE NORTH EXTERIOR WALL OF EXISTING MULTI-USE ROOM AT NORTHWEST CORNER OF LIBRARY, AND EXPAND TO THE NORTH. EXPANDED MEETING ROOM TO INCLUDE A NEW KITCHEN, A RECONFIGURED BOOK DROP ROOM, AND STORAGE. EXTERIOR OF NEW CONSTRUCTION WILL BE STUCCO AND COPPER.	
PROJECT DATA	
ADDRESS:	100 FAIRGROUNDS DRIVE PETALUMA, CA. 94962
OWNER:	CITY OF PETALUMA DEPT. OF FACILITIES AND SERVICES 555 NORTH MCDOWELL BLVD. PETALUMA, CA. 94962
OCCUPANCY:	GROUP A3
CONSTRUCTION:	TYPE V-N
CODES:	2007 CALIFORNIA BUILDING CODE (CBC) 2001 CALIFORNIA MECHANICAL CODE (CMC) 2001 CALIFORNIA PLUMBING CODE (CPC) 2001 NATIONAL ELECTRICAL CODE (NEC)

AREA SUMMARY	
EXISTING LIBRARY FLOOR AREA:	24,822 S.F.
EXISTING FLOOR AREA INCLUDED IN SCOPE OF WORK:	1,468 S.F.
ADDITIONAL NEW FLOOR AREA:	1,125 S.F.
TOTAL FLOOR AREA INCLUDED IN SCOPE OF WORK:	2,593 S.F.

OCCUPANCY LOAD			
ROOM	AREA	OCC. LOAD FACTOR	NUMBER OF OCCUPANTS
MEETING	1650 S.F.	1.35	235
KITCHEN	128 S.F.	200	300
STORAGE	173 S.F.	300	1
TOTAL NUMBER OF OCCUPANTS			237

237 X 2 = 474 INCHES OF EXIT WIDTH REQUIRED. TWO EXITS REQUIRED. SEE FLOOR PLAN FOR EXITS PROVIDED.

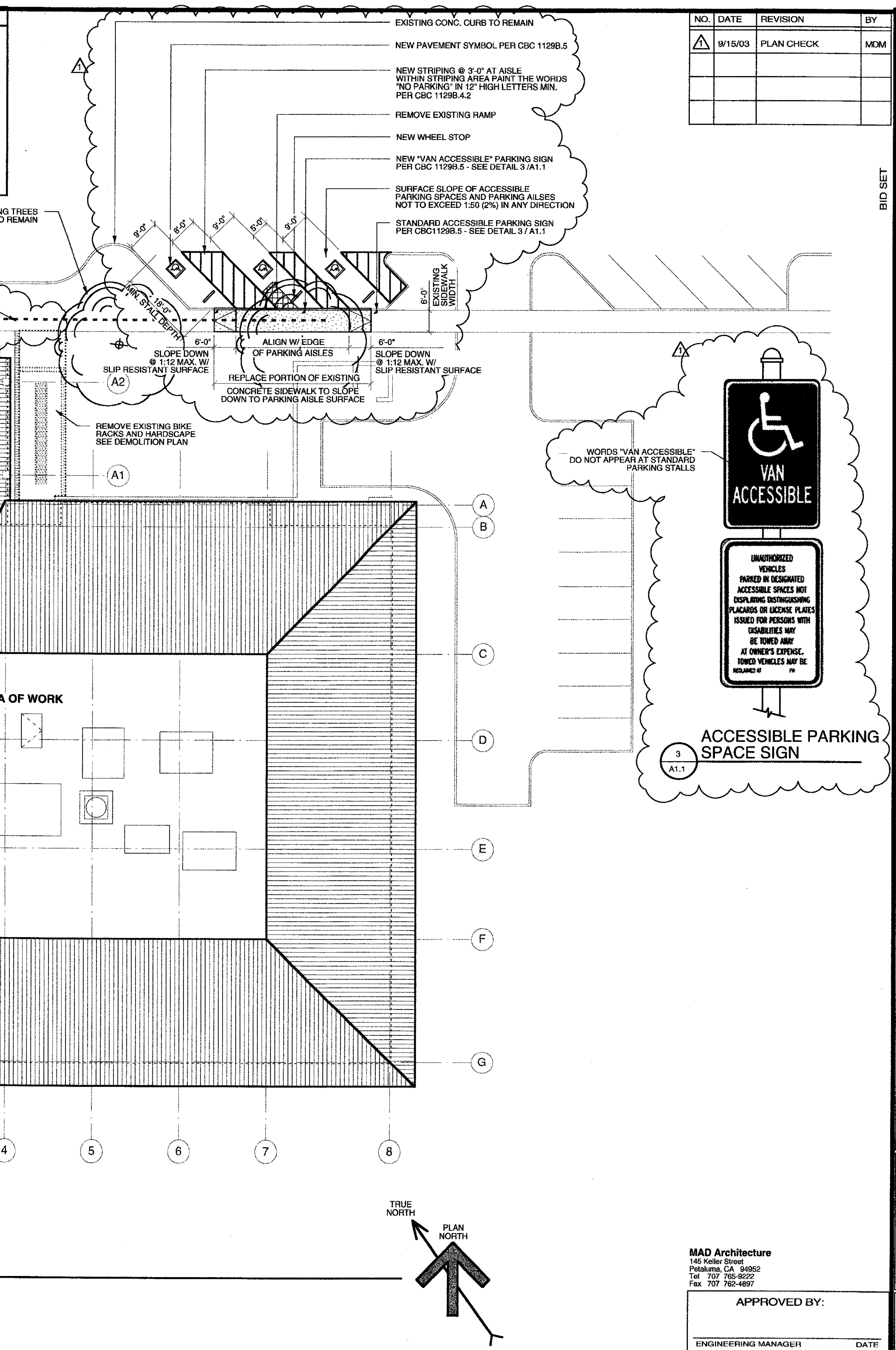
NOTE: THE BOOKSTORE IS AN ACCESSORY USE TO THE LIBRARY. NOT TO THE MEETING ROOM, AND IS THEREFORE NOT INCLUDED IN THE OCCUPANCY/EXITING SUMMARY.

ABBREVIATIONS					
∠	Angle	F.A.	Fire Alarm	PRCST.	Pre-Cast
∠	Angle	F.B.	Flat	PL.	Plat
∠	Angle	F.D.	Floor Drain	P.L.A.M.	Plastic Laminate
∠	Centerline	FDN.	Foundation	PLAS.	Plaster
∠	Diameter or Round	F.E.	Fire Extinguisher	PLYWD.	Plywood
∠	Finish	F.F.C.	Fire Extinguisher Cabinet	PT.	Paint
∠	Finish	F.H.C.	Fire Hose Cabinet	PT.	Paint
∠	Finish	FIN.	Finish	P.T.D.	Paper Towel Dispenser
∠	Finish	FL.	Flgor	P.T.D./R.	Combination Paper Towel
∠	Area Drain	FLASH.	Flashing	Dispenser & Receptacle	
∠	Adjustable	FLOOR.	Fluorescent	FTN	Partition
∠	Aggregate	F.O.C.	Face of Concrete		
∠	Aluminum	F.O.B.	Face of Brick	Q.T.	Quarry Tile
∠	Approximate	F.O.S.	Face of Stud		
∠	Architectural	FRRF.	Fireproof	R.	Raint
∠	Address	F.S.	Full Size	R.A.D.	Radiant
∠	Asphalt	FT.	Floor or Feet	R.D.	Roof Drain
∠	Asphalt	FTG.	Footing	R.E.P.	Reference
∠	Board	FURR.	Furring	R.F.R.	Refrigerator
∠	Bituminous	FUT.	Futem	RGR.	Register
∠	Building	REINF.	Reinforced		
∠	Block	GA.	Change	RQD.	Required
∠	Block	GA.L.V.	Galvanized	RSHL.	Reinforced
∠	Beam	G.B.	Grid Bar	R.M.	Room
∠	Beam	GL.	Glass	R.O.	Rough Opening
∠	Bottom	GND.	Ground	R.W.D.	Redwood
∠	Cabinet	GR.	Grade	R.W.L.	Rain Water Leader
∠	Catch Basin	GYP.	Gypsum		
∠	Cement	S.	South		
∠	Ceramic	H.B.	Hose Bibb	S.C.	Solid Core
∠	Cast Iron	H.C.	Hollow Core	S.C.D.	Seat Cover Dispenser
∠	Corner Guard	H.D.W.D.	Hardwood	SCHED.	Schedule
∠	Casting	HDWB.	Hardwood	S.D.	Shop
∠	Cladding	H.M.	Hollow Metal	SECT.	Section
∠	Closet	HORIZ.	Horizontal	SH.	Shelf
∠	Clear	HR.	Hour	SHR.	Shower
∠	Cased Opening	HGT.	Height	SHT.	Sheet
∠	Column	SIM.	Similar		
∠	Concrete	I.D.	Inside Diameter (Dim.)	S.N.D.	Sanitary Napkin Dispenser
∠	Connection	INSUL.	Insulation	S.N.R.	Sanitary Napkin
∠	Construction	INT.	Interior	SPEC.	Specification
∠	Continuous	INT.	Interior	SQ.	Square
∠	Counter	JAN.	Janitor	S.S.	Stainless Steel
∠	Counter	JT.	Joint	S.S.K.	Stainless Steel
∠	Counter	KIT.	Kitchen	STA.	Station
∠	Center	KFT.	Kitchen	STD.	Standard
∠	Double	LAB.	Laboratory	STL.	Size
∠	Department	L.A.M.	Laminate	STOR.	Storage
∠	Drinking Fountain	LAV.	Lavatory	STR.	Structural
∠	Door	LCK.	Locker	SUSP.	Suspended
∠	Diameter	L.T.	Light	SYM.	Symmetrical
∠	Dimension	L.V.	Lock	TRD.	Tread
∠	Dispense	M.A.X.	Maximum	T.B.	Towel
∠	Down	M.C.	Medicine Cabinet	T.C.	Top of Curb
∠	Door	M.E.C.H.	Mechanical	T.E.L.	Telephone
∠	Door	M.E.M.B.	Membrane	T.R.	Terrazzo
∠	Draw	MET.	Metal	T.&O.	Tongue and
∠	Drawspout	M.F.	Manufacturer	T.H.	Threshold
∠	Dry Standpipe	M.H.	Manhole	T.P.	Top of Pavement
∠	Draw	M.I.N.	Minimum	T.P.D.	Toilet Paper Dispenser
∠	Draw	M.I.R.	Mirror	T.V.	Television
∠	East	MISC.	Miscellaneous	T.W.	Top of Wall
∠	Fac	M.O.	Masonry	TYP.	Typical
∠	Expansion Joint	MTD.	Mounted		
∠	Elevation	MULL.	Mullion	UNF.	Unfinished
∠	Electrical	MUL.	Mullion	UNF.	Unfinished
∠	Elevator	N.	North	UNO.N.	Unless Otherwise Noted
∠	Emergency	N.I.C.	Not in Contract	UR.	Urinal
∠	Encl.	NO. or #	Number	VERT.	Vertical
∠	Electrical Panelboard	NOM.	Nomina	VEST.	Vestibule
∠	Equal	N.T.S.	Not To Scale		
∠	Equipment	O.A.	Overall	W.	West
∠	Electric Water Cooler	O.B.S.	Obscure	W/W.	With
∠	Existing	O.C.	On Center	W.C.	Water
∠	Exposed	O.D.	Outside Diameter (Dim)	W.D.	Wood
∠	Expansion Joint	O.F.	Office	W/O.	Without
∠	Exterior	OPNG.	Opening	WP.	Waterproof
∠	Opposite	OPP.	Opposite	WSCT.	Walnut
∠		WT.	Weight		

PARKING REQUIREMENTS
PARKING REQUIREMENTS ARE CURRENTLY UNDER SEPARATE REVIEW BY THE CITY OF PETALUMA PLANNING DEPARTMENT. NO NEW ADDITIONAL PARKING IS PROPOSED AS PART OF THIS PROJECT.

FIRE SPRINKLER REQUIREMENTS
ALL NEW SPACES IN THE SCOPE OF WORK SHALL HAVE NEW FIRE SPRINKLERS INSTALLED AS PART OF THIS PROJECT. FIRE SPRINKLER LAYOUT WILL BE SUBMITTED SEPARATELY BY SPRINKLER CONTRACTOR FOR APPROVAL FROM CITY OF PETALUMA FIRE MARSHAL'S OFFICE. SPACES IDENTIFIED ON PLANS TO BE SPRINKLED INCLUDE THE MEETING ROOM, KITCHEN, STORAGE, AND BOOKSHOP ROOM. EXISTING BOOKSTORE IS NOT INCLUDED WITH AREAS TO RECEIVE NEW FIRE SPRINKLERS.

GENERAL NOTES
1. WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES, ORDINANCES AND REGULATIONS.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
3. DO NOT SCALE DRAWINGS, EXCEPT FULL SIZE (1:1) DETAILS. ALL DIMENSIONS AND FIT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
4. DIMENSIONS ARE TO FACE OF STUD (FOS) OR CENTERLINE OF COLUMN UNLESS NOTED OTHERWISE.
5. CONDITIONS OF THE CONSTRUCTION NOT SPECIFICALLY SHOWN OR NOTED IN THE DRAWINGS OR SPECIFICATIONS SHALL BE OF CONSISTENT CONSTRUCTION AND QUALITY AS DETAILED AND NOTED FOR SIMILAR CONDITIONS.



NO.	DATE	REVISION	BY
1	9/15/03	PLAN CHECK	MDM

BID SET

DESIGNED BY: Mary Dooley

CHECKED BY: Ae Shown

DRAWN BY: Mike Magee

DATE: November 21, 2003

SCALE: AS SHOWN

CAD FILE NO.

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
CITY OF PETALUMA  
555 MCDOWELL BOULEVARD NORTH - PETALUMA - CALIFORNIA - 94962 - 707-776-4303

2003 PETALUMA REGIONAL LIBRARY  
100 FAIRGROUNDS DRIVE  
MEETING ROOM EXPANSION  
PROJECT NO. 9028

SITE PLAN  
PROJECT  
INFORMATION

A1.1

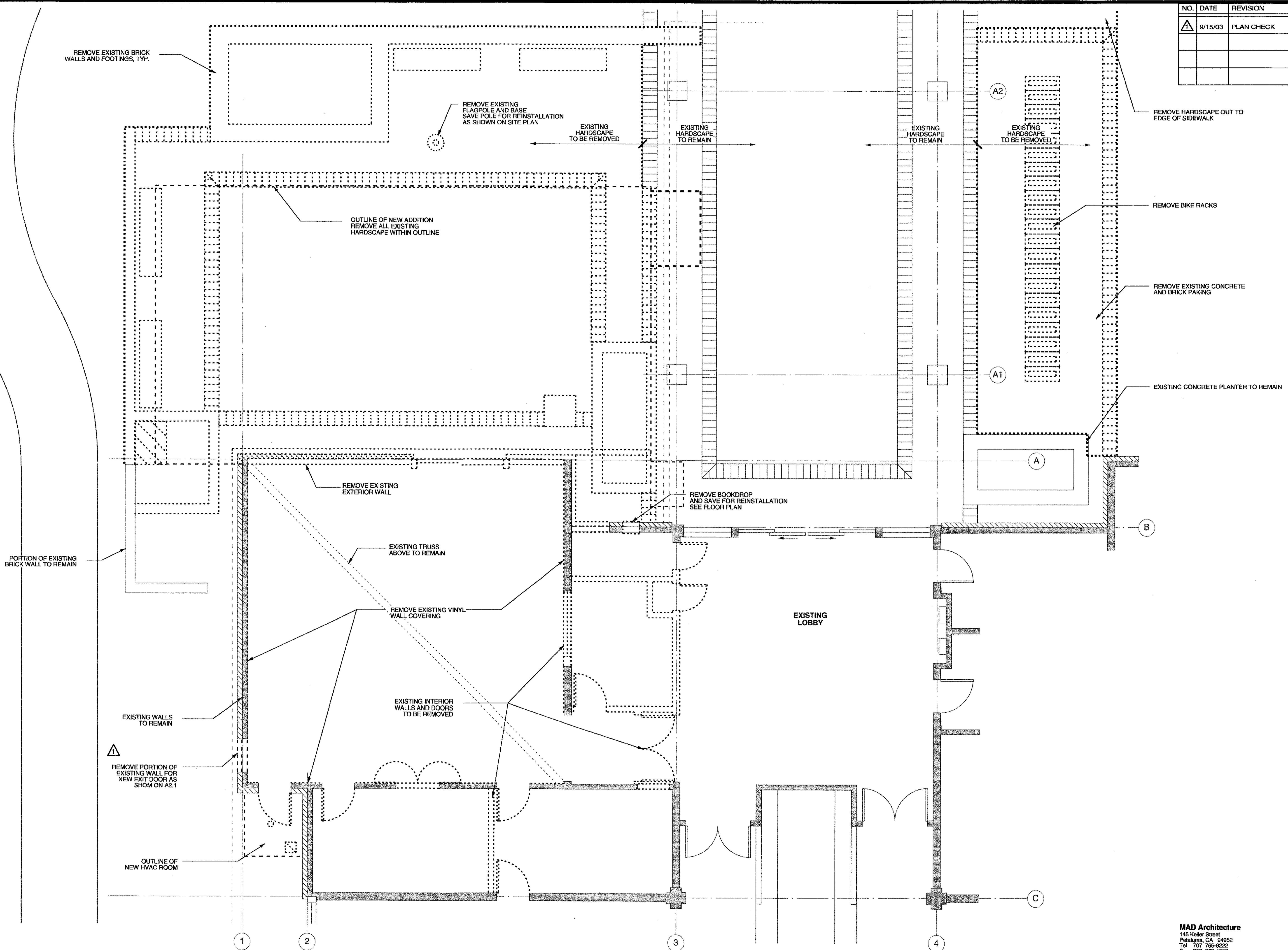
MAD Architecture  
145 Keller Street  
Petaluma, CA 94962  
Tel 707 765-9222  
Fax 707 762-4897

APPROVED BY: \_\_\_\_\_

ENGINEERING MANAGER

DATE: \_\_\_\_\_

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**1**  
A1.2  
**DEMOLITION PLAN**  
0 1 2 4 8 FEET

NOTE: ALL ITEMS SHOWN TO BE REMOVED ARE TO BE REMOVED FROM SITE AND DISPOSED OF BY CONTRACTOR PER SPECIFICATIONS



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145 Keller Street  
Petaluma, CA 94952  
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BID SET  
DATE: November 21, 2003  
DESIGNED BY: Mary Dooley  
SCALE: As Shown  
CHECKED BY: As Shown  
DRAWN BY: Mike Magee  
CADD FILE NO.

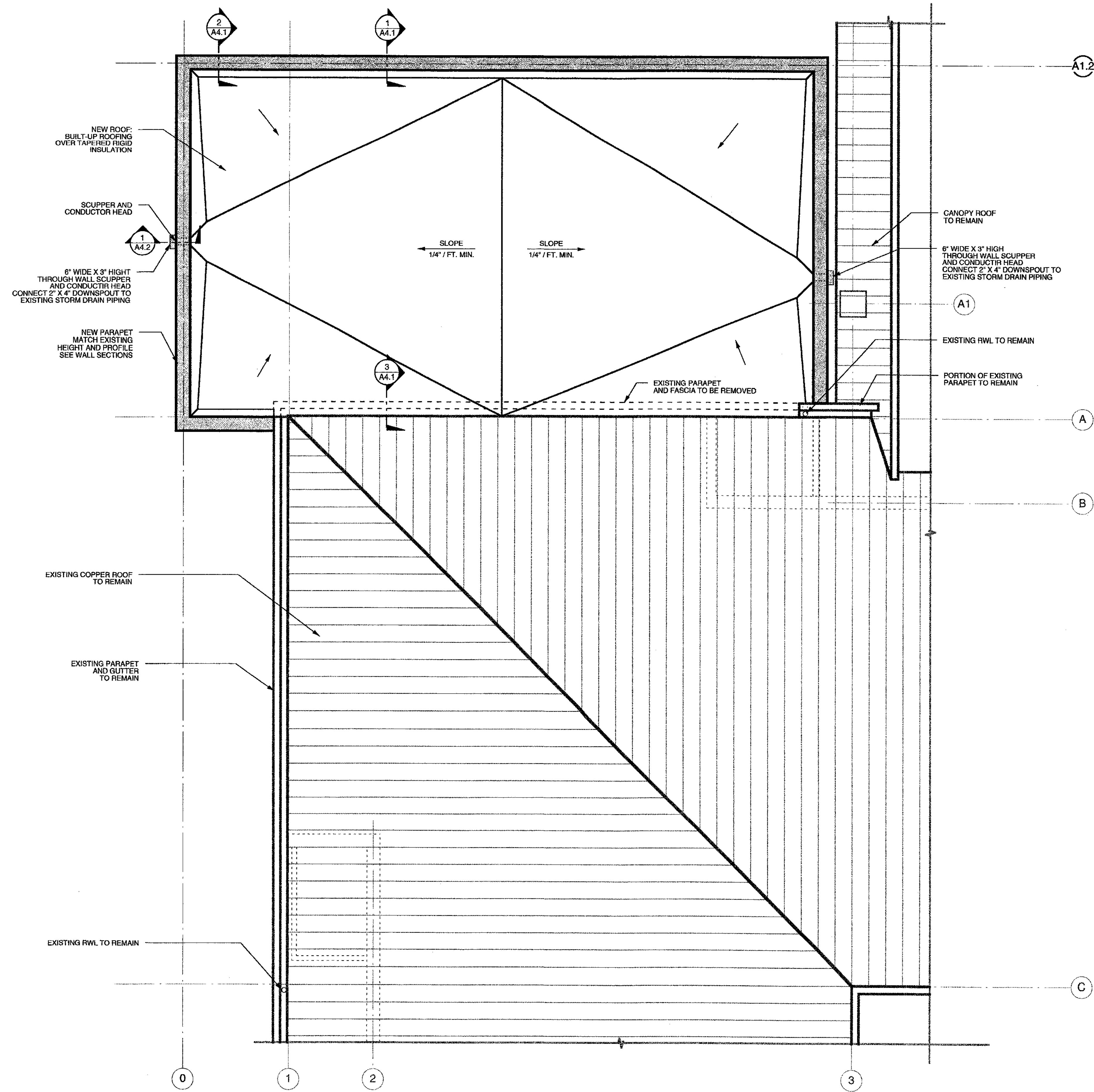
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**DEMOLITION PLAN**

**A1.2**

NO.	DATE	REVISION	BY
△	9/15/03	PLAN CHECK	MDM



1 ROOF PLAN  
A1.3  
0 1 2 4 8 FEET



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CHECKED BY: As Shown  
DRAWN BY: Mike Magee  
DATE: November 21, 2003  
SCALE: As Shown  
CAD FILE NO.:

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ROOF PLAN

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A1.3

NO.	DATE	REVISION	BY
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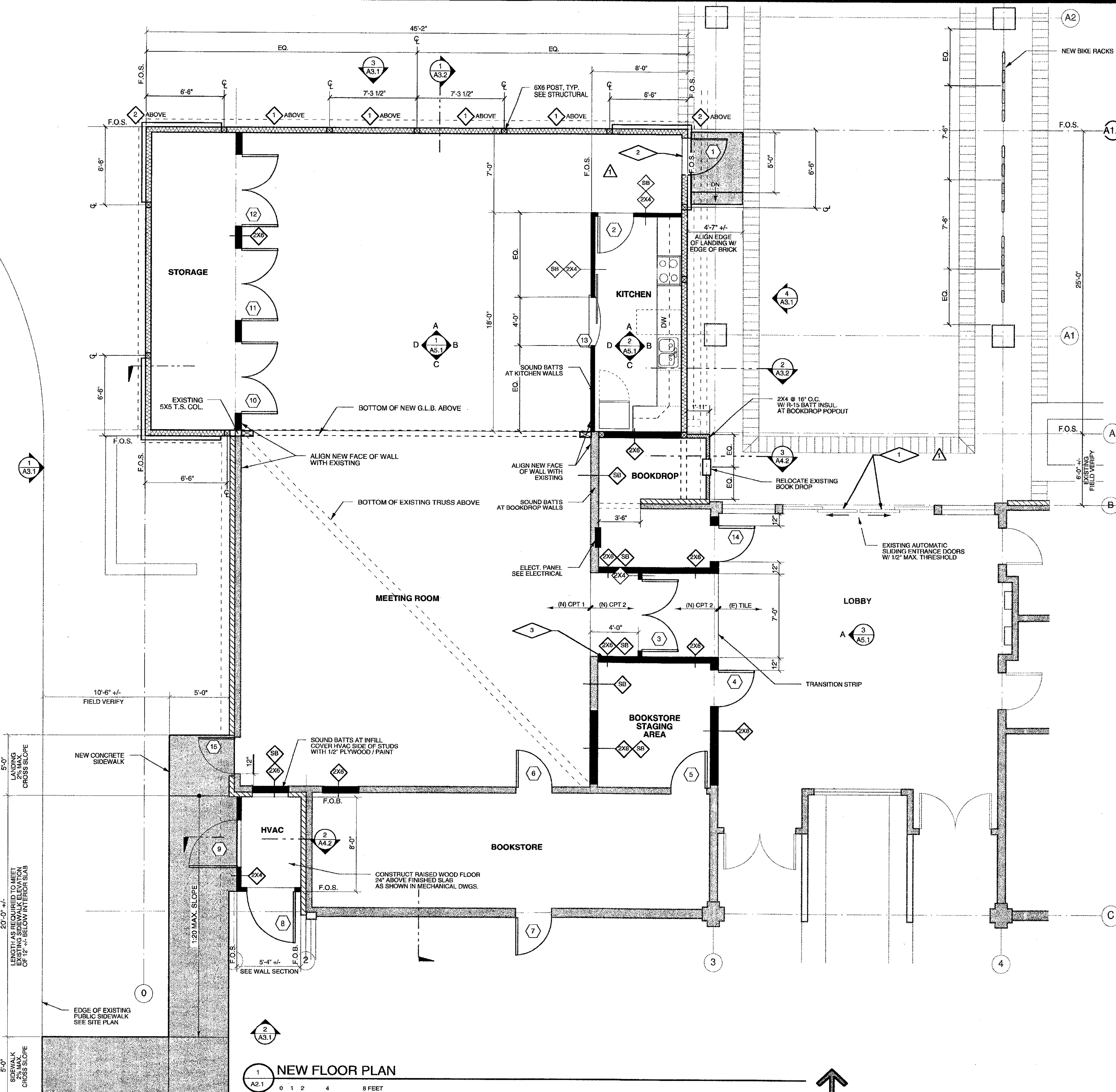
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 CHECKED BY: As Shown  
 DESIGNED BY: Mike Magee

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**FLOOR PLAN**

**A2.1**



**LEGEND**

- EXISTING BRICK VENEER
- EXISTING WOOD STUD WALL TO REMAIN
- NEW EXTERIOR WALL  
2X6 @ 16" O.C. WITH R-21 BATT INSUL. U.N.O.  
- SEE FINISH SCHEDULE FOR INTERIOR FINISH  
- SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISH
- NEW WALL WOOD STUDS @ 16" O.C.  
- SEE FINISH SCHEDULE FOR INTERIOR FINISH  
- SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISH
- STUD SIZE SHOWN ON PLAN
- SOUND BATT INSUL. IN WALL

**EXTERIOR ELEVATION SYMBOL**

- ELEVATION NUMBER
- SHEET NUMBER

**INTERIOR ELEVATION SYMBOL**

- ELEVATION NUMBER
- SHEET NUMBER

**BUILDING SECTION SYMBOL**

- SECTION NUMBER
- SHEET NUMBER

**DOOR / WINDOW SYMBOLS**

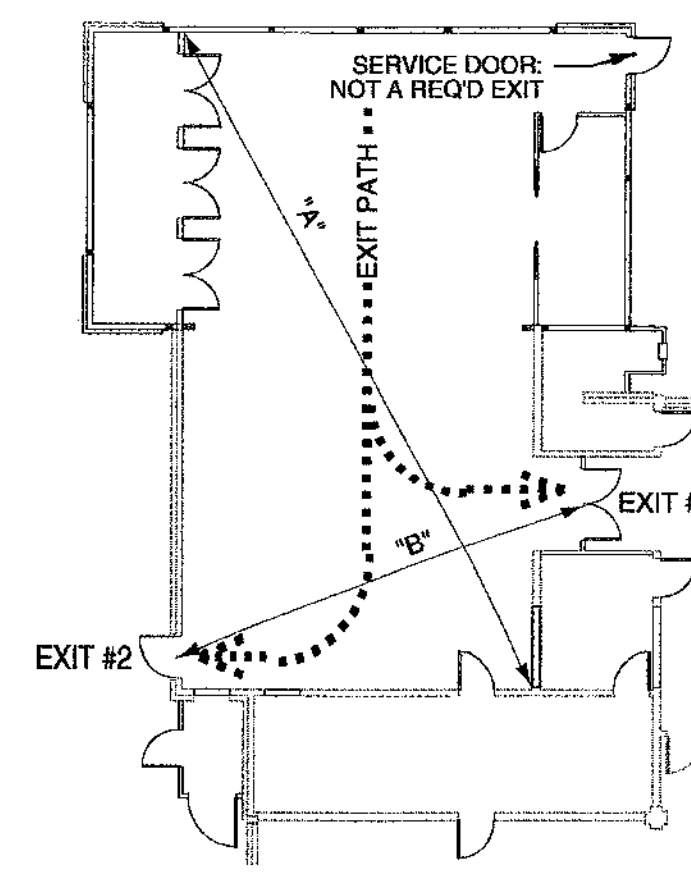
- DOOR SYMBOL  
SEE DOOR SCHEDULE
- WINDOW SYMBOL  
SEE EXTERIOR ELEVATIONS AND WINDOW SCHEDULE

**SIGNAGE LEGEND**

- SIGN NUMBER
- INTERNATIONAL SYMBOL OF ACCESSIBILITY ON EXISTING AUTOMATIC ENTRANCE DOORS
- "WARNING: THIS IS NOT AN ADA COMPLIANT EXIT"
- "MAXIMUM OCCUPANCY OF MEETING ROOM: 235 PERSONS"

NOTE: SIGN NUMBERS 1 AND 2 SHALL MEET ALL REQUIREMENTS OF CBC 1117B.5.

**EXITING SUMMARY**



- EXIT WIDTH**
- EXIT #1: 72 INCHES
- EXIT #2: 36 INCHES
- TOTAL: 108 INCHES
- REQUIRED: 47.4 INCHES (SEE A1.1)
- EXIT SEPARATION**
- DIMENSION "A": 60 FEET (MAXIMUM OVERALL DIMENSION OF AREA SERVED)
- DIMENSION "B": 35 FEET (DISTANCE BETWEEN REQUIRED EXITS)
- 35 FEET IS GREATER THAN 1/2 OF 60 FEET

- NOTES**
- SEE FLOOR PLAN FOR SPECIFIC BUILDING DIMENSIONS AND DOOR CONFIGURATIONS.
  - SEE DOOR AND HARDWARE SCHEDULE ON SHEET A7.1 FOR DOOR SIZES AND HARDWARE REQUIREMENTS.
  - MEANS OF EGRESS SHALL BE ILLUMINATED WITH AT LEAST ONE-FOOT CANDLE AT THE FLOOR LEVEL. SEE ELECTRICAL FOR EMERGENCY LIGHTING AND EXIT SIGNAGE.

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 145 Keller Street  
 Petaluma, CA 94952  
 Tel 707 765-9222  
 Fax 707 762-4887

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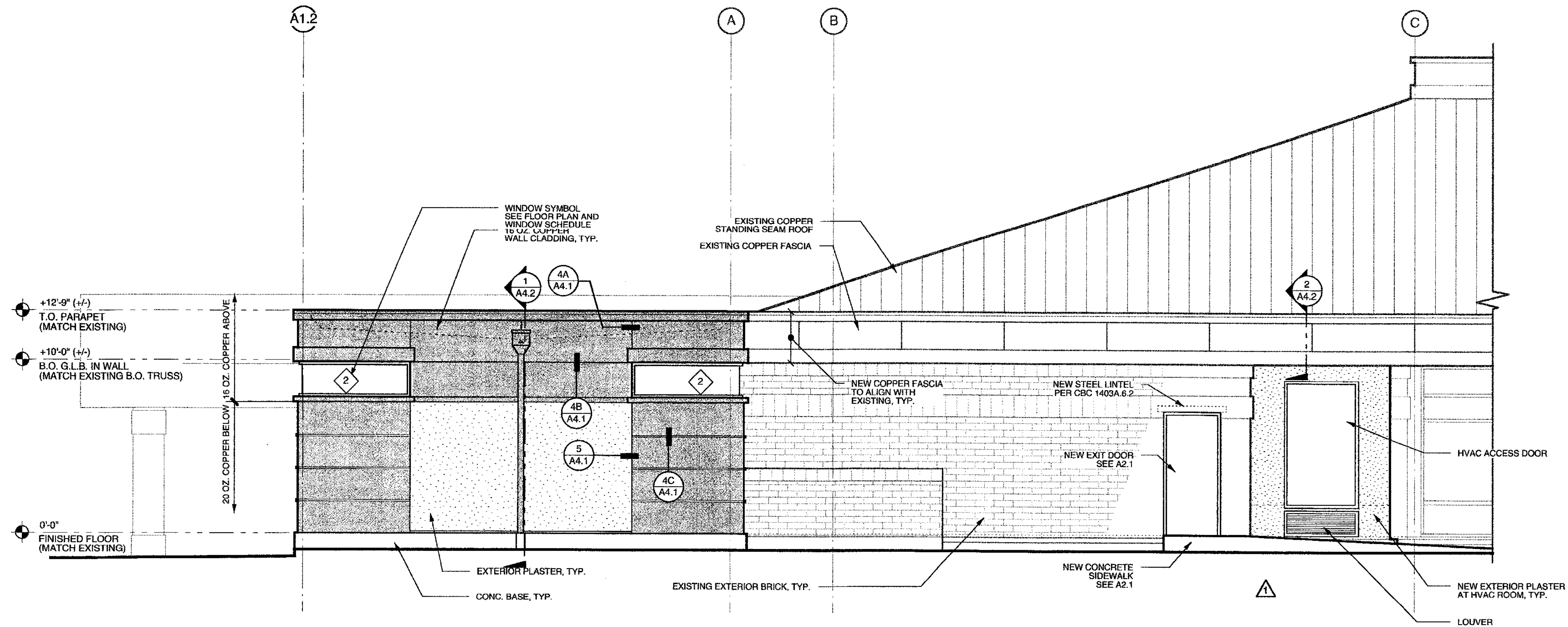
DATE: November 21, 2003  
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 DRAWN BY: Mike Magsee

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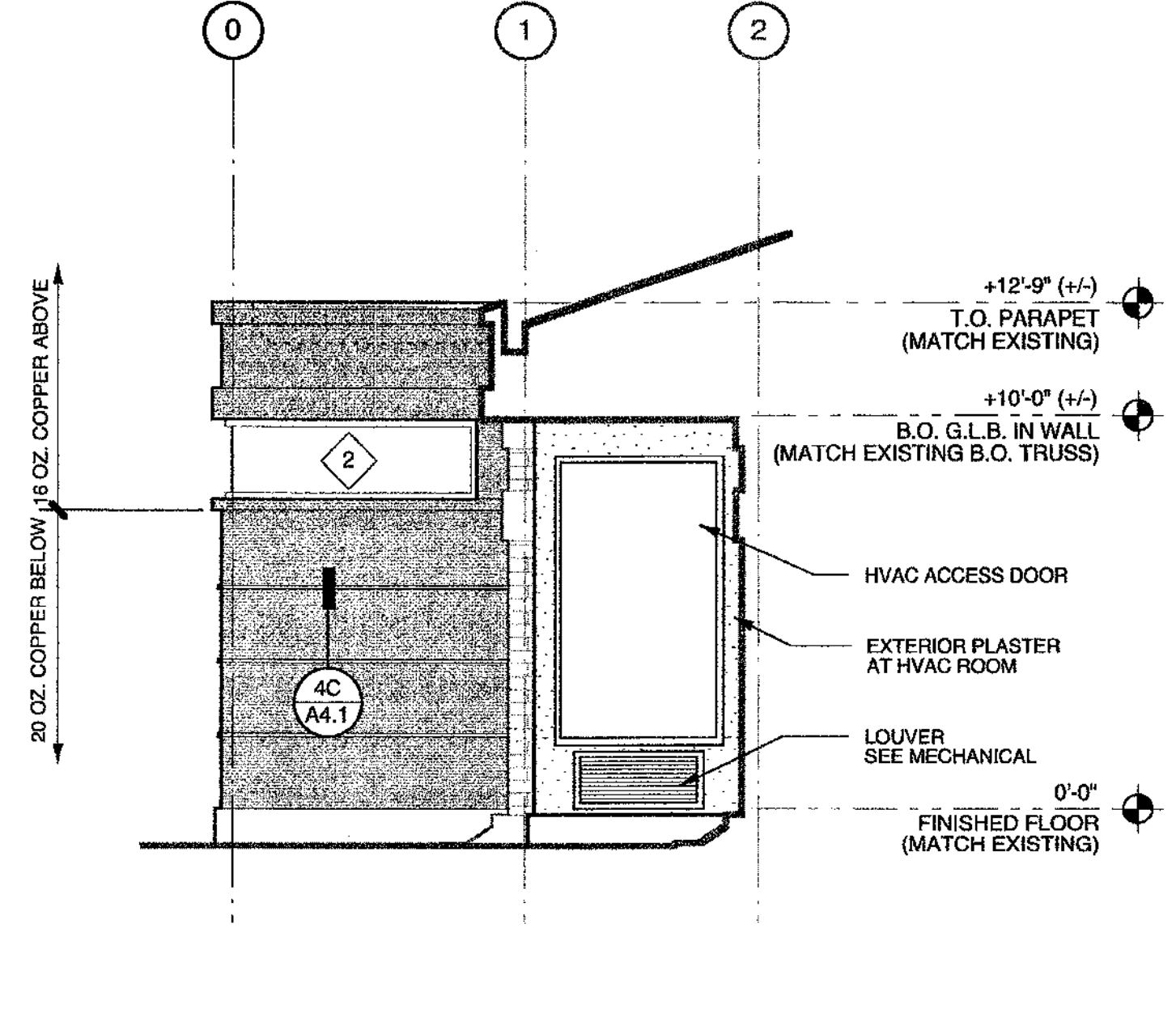
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**EXTERIOR ELEVATIONS**

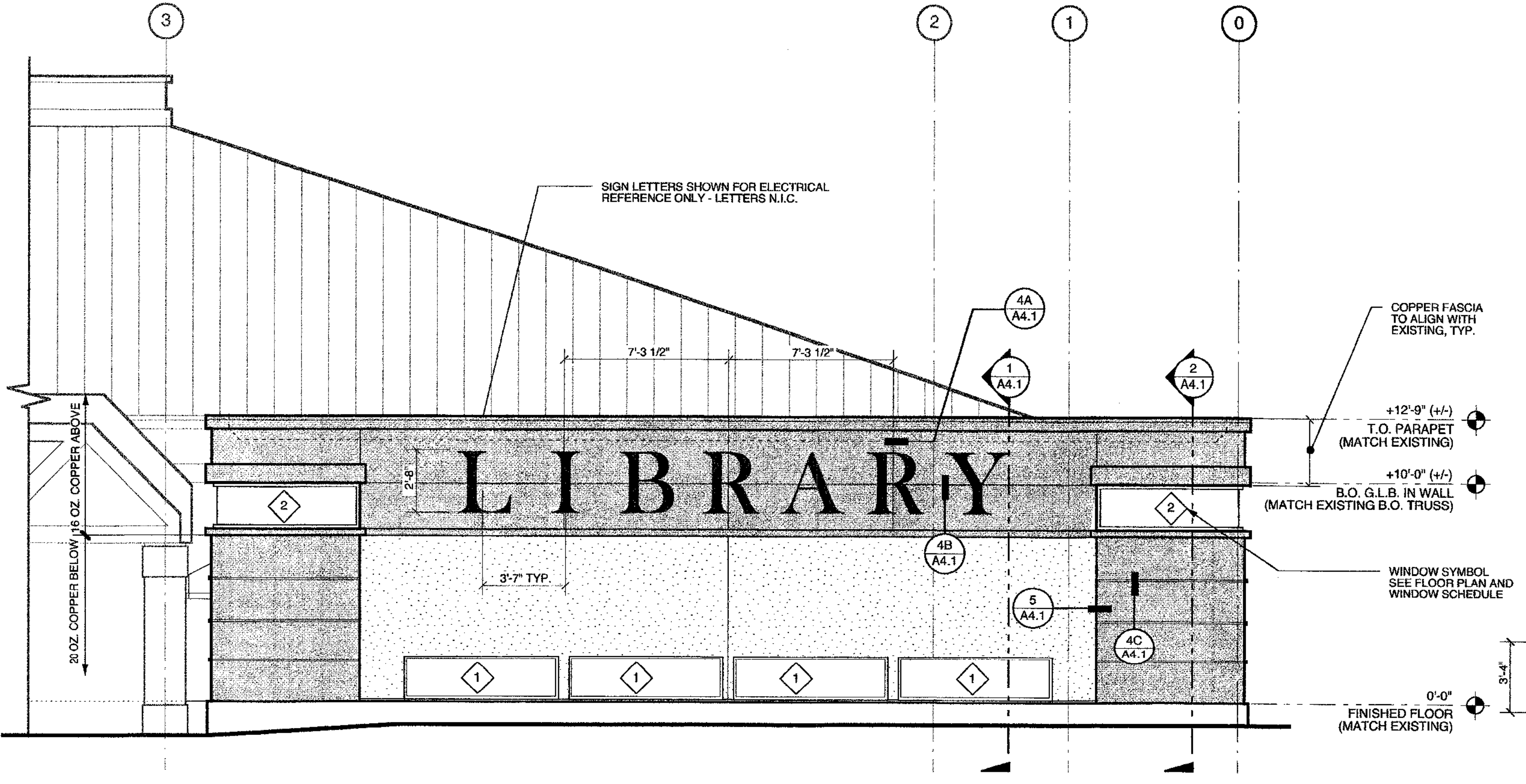
A3.1



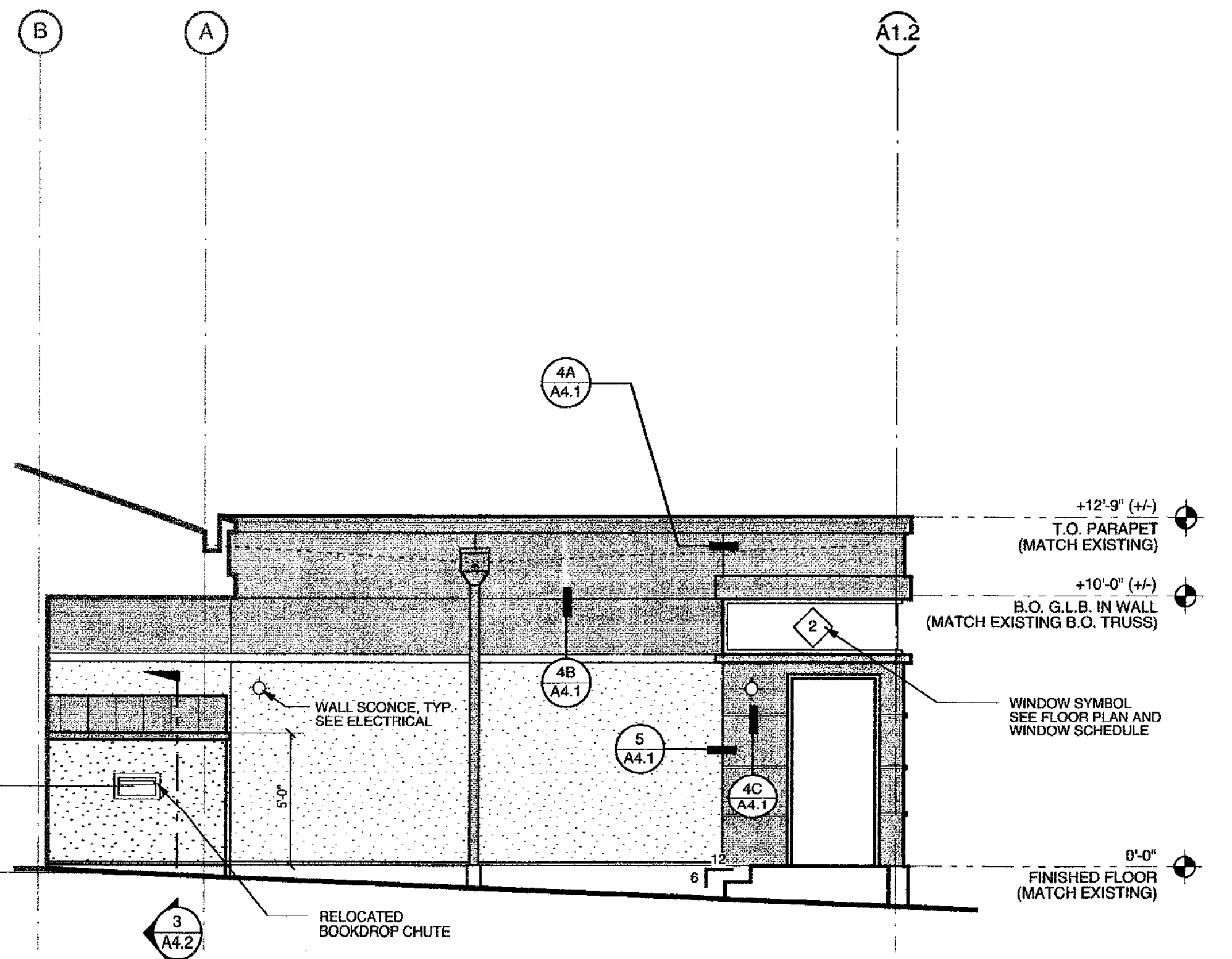
1 WEST ELEVATION  
 A3.1 0 1 2 4 8 FEET



2 SOUTH ELEVATION  
 A3.1 0 1 2 4 8 FEET



3 NORTH ELEVATION  
 A3.1 0 1 2 4 8 FEET



4 EAST ELEVATION  
 A3.1 0 1 2 4 8 FEET

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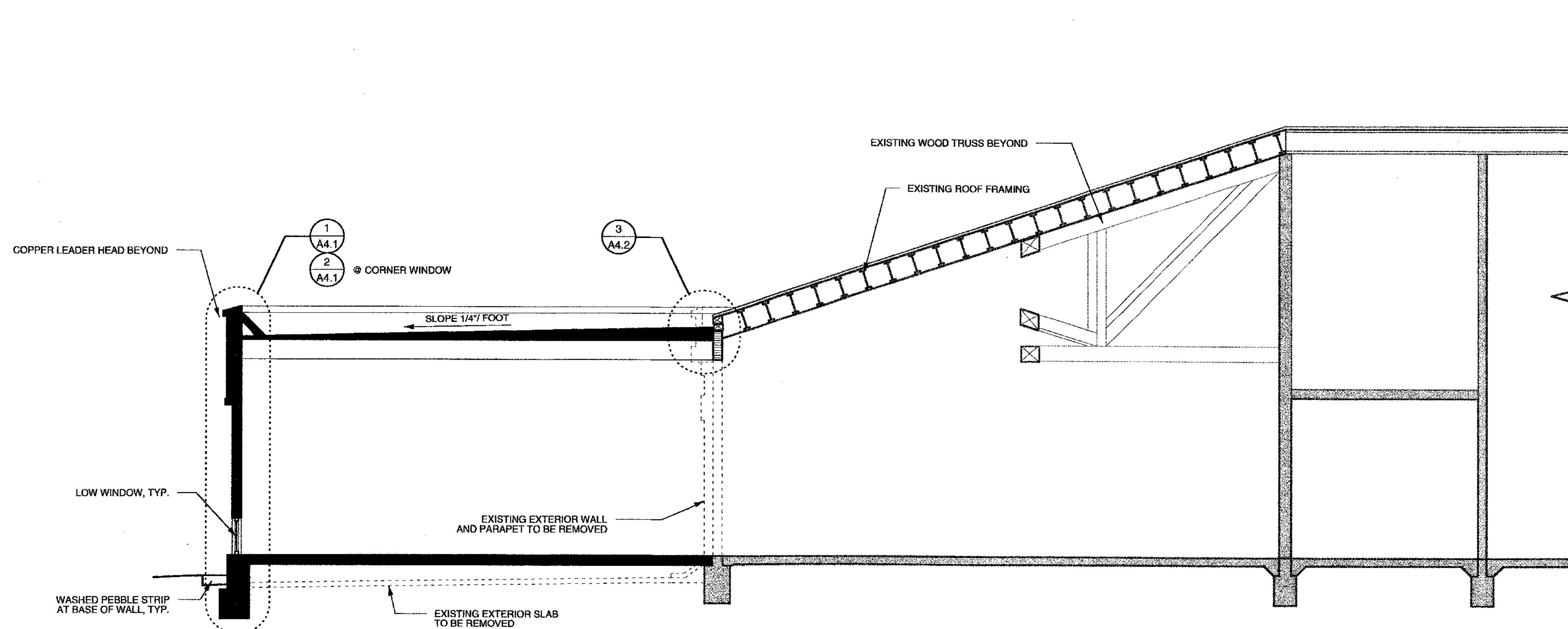
DATE: November 21, 2003  
 DRAWN BY: As Shown  
 CHECKED BY: Mike Magee

DESIGNED BY: May Dooley  
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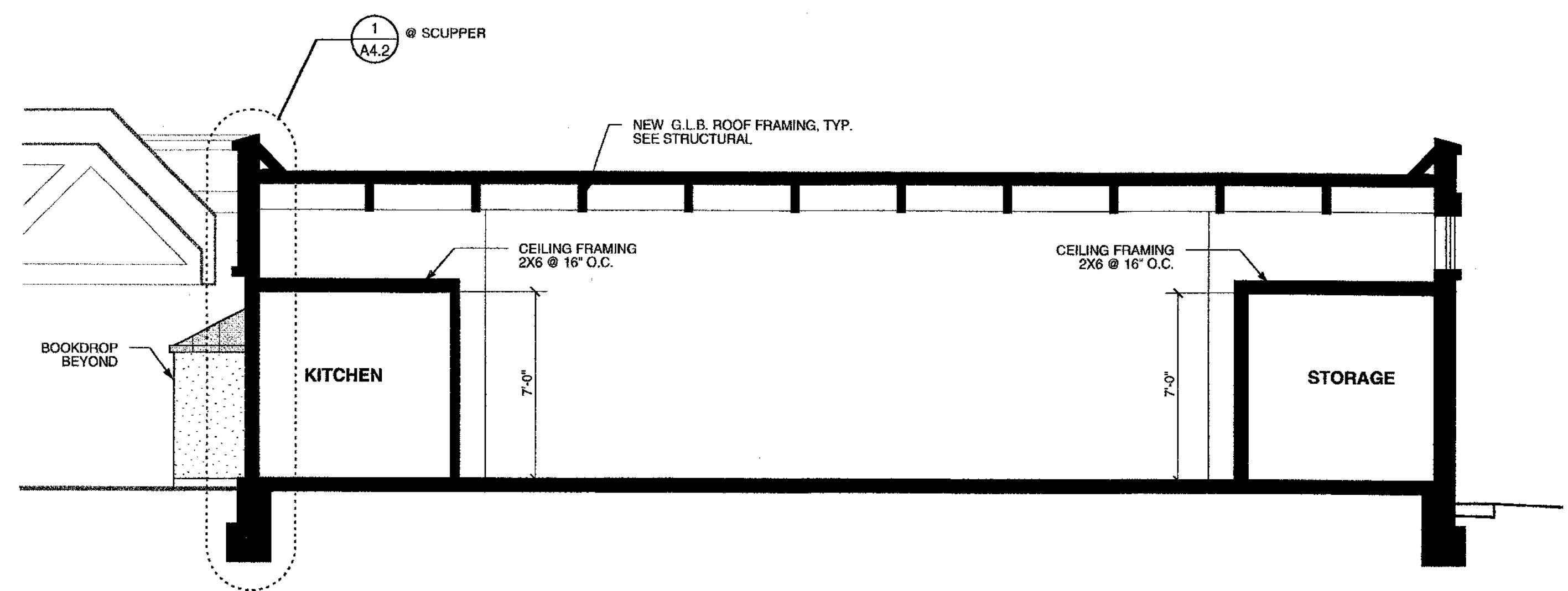
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**BUILDING SECTIONS**

**A3.2**



**1 BUILDING SECTION**  
 A3.2 0 1 2 4 8 FEET



**2 BUILDING SECTION**  
 A3.2 0 1 2 4 8 FEET

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 145 Keller Street  
 Petaluma, CA 94952  
 Tel: 707 765-9222  
 Fax: 707 762-4897

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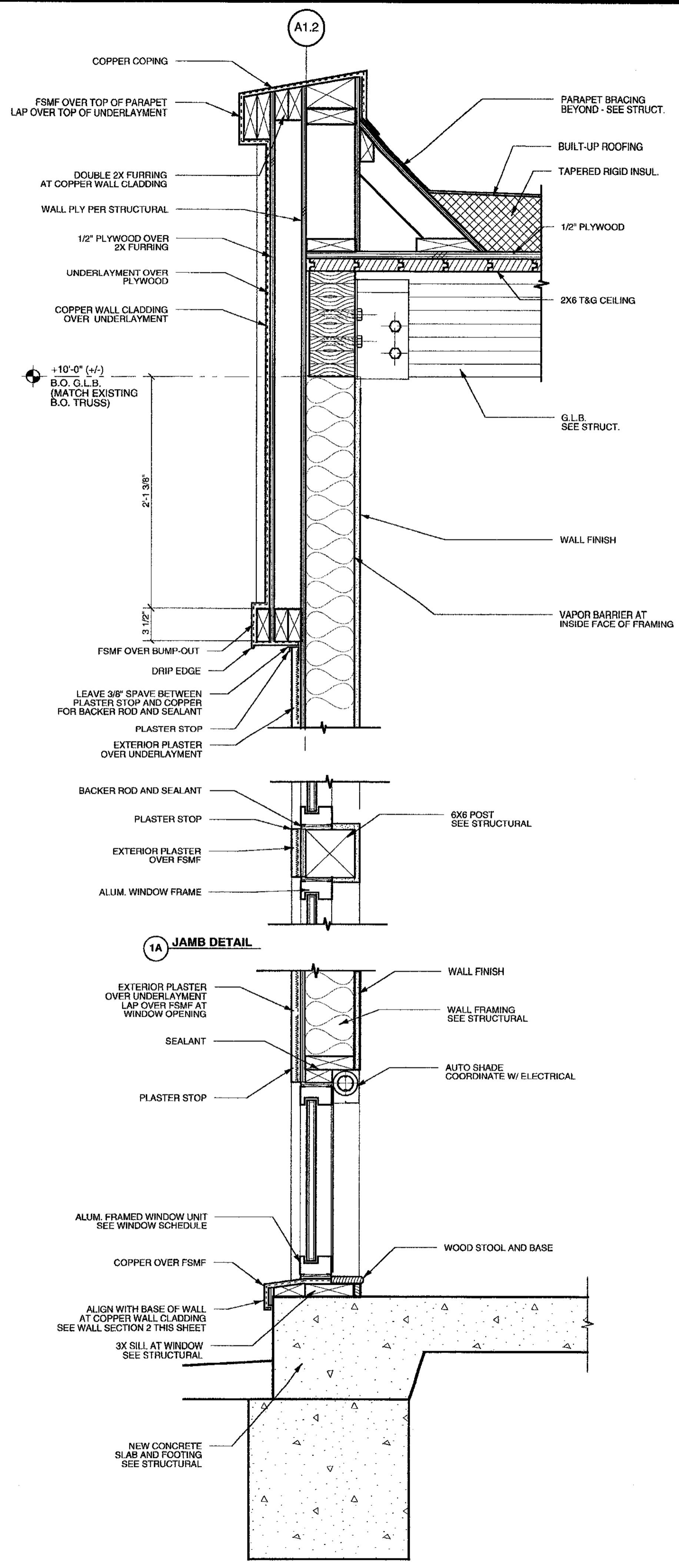
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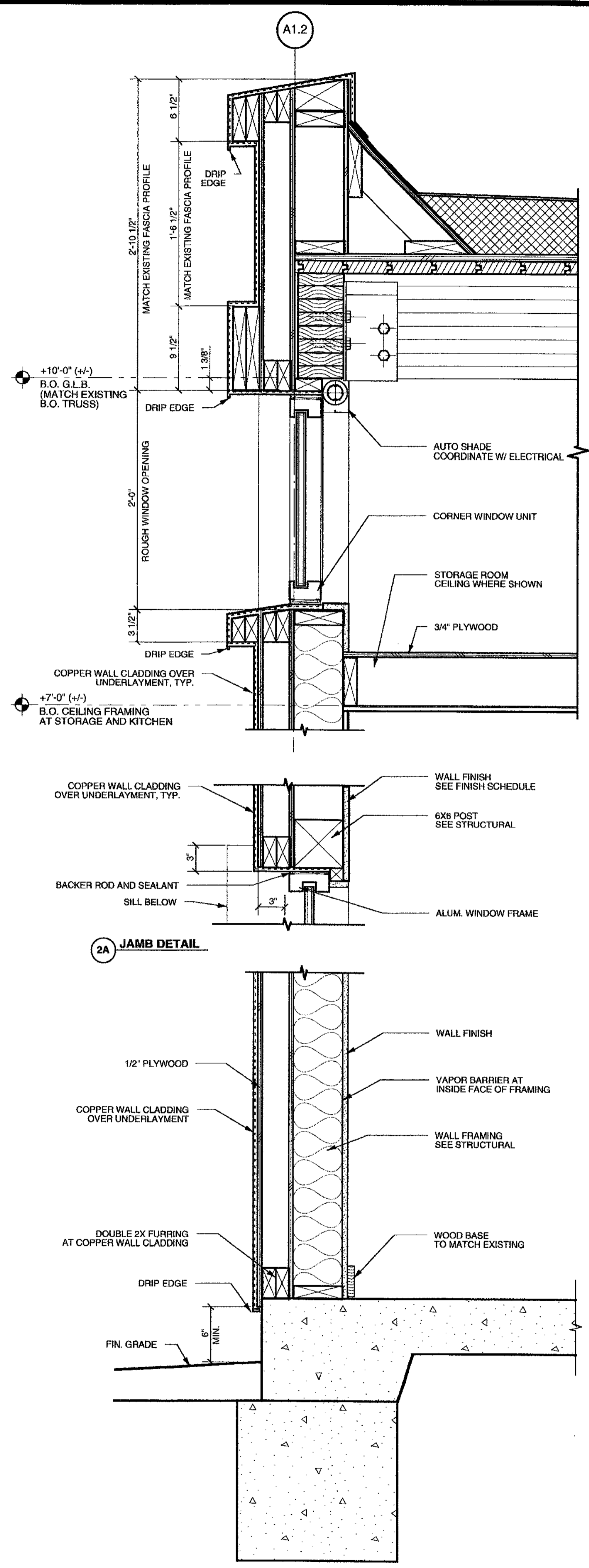
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**WALL SECTIONS**

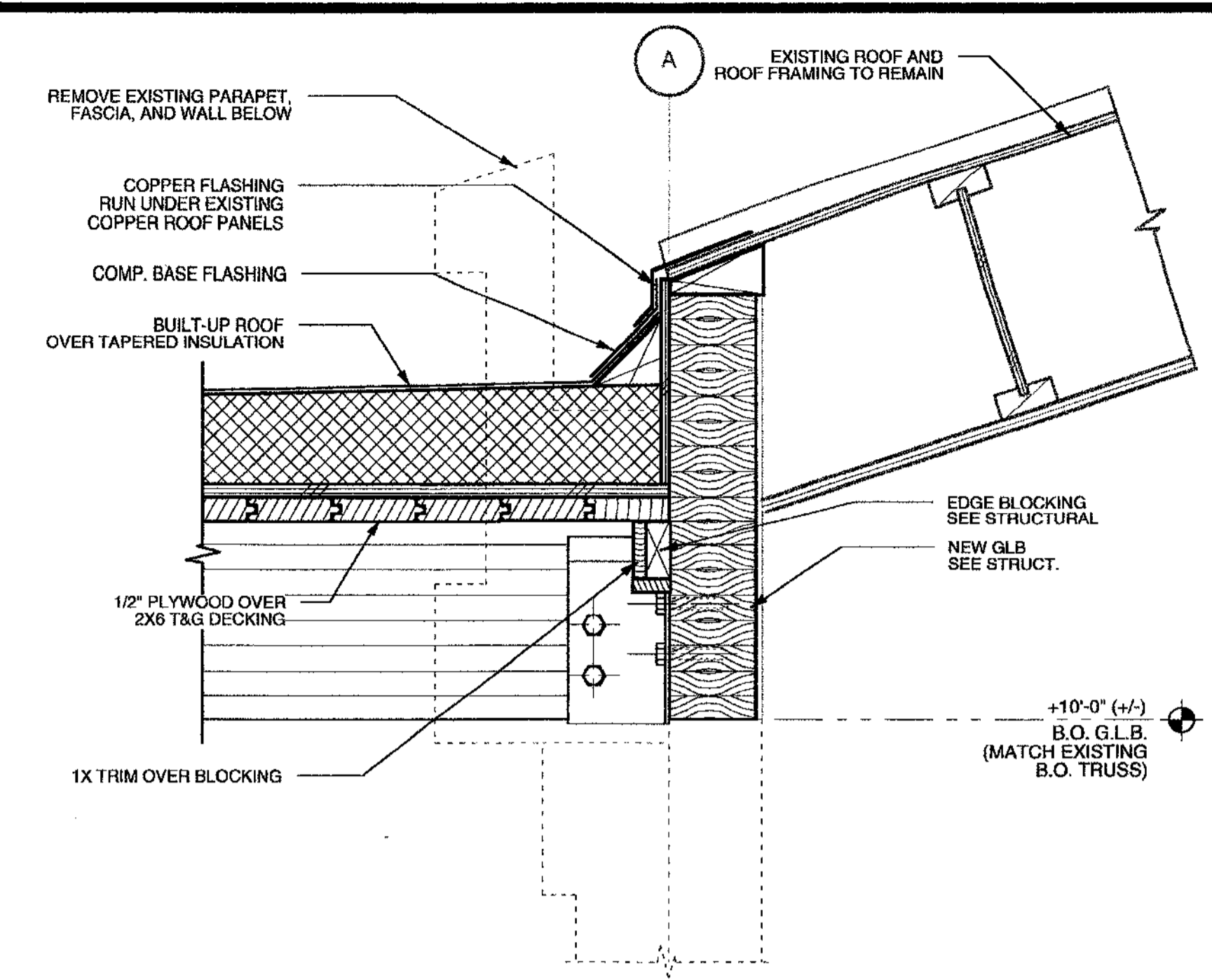
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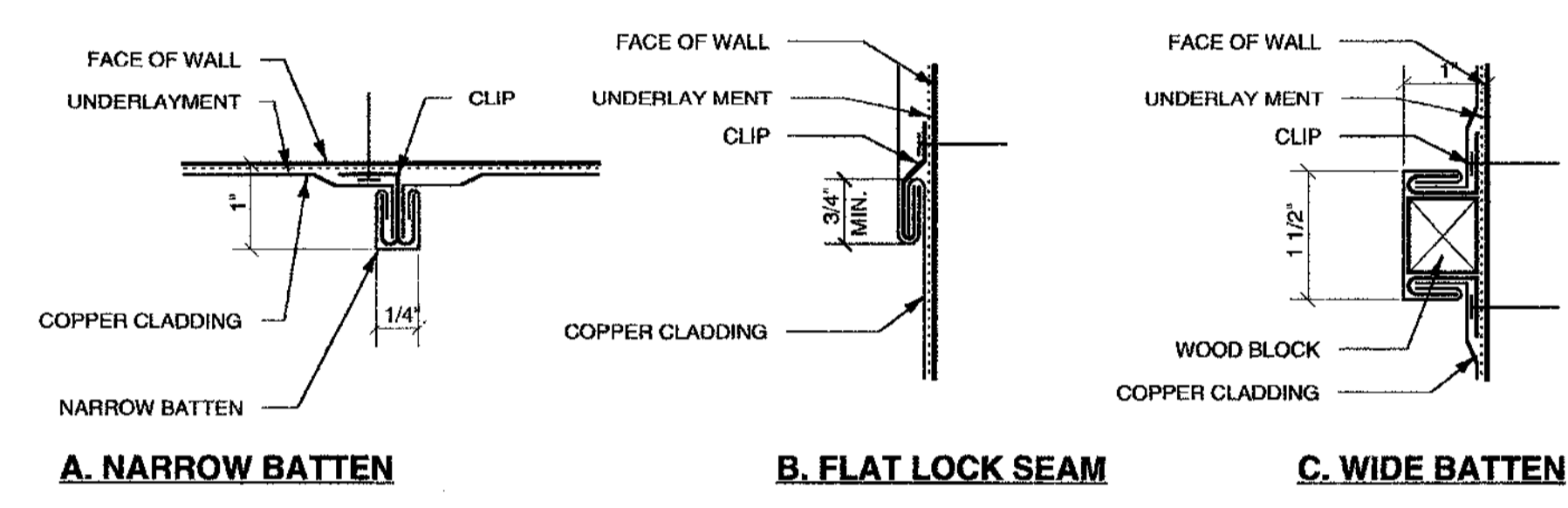
**1 WALL SECTION** (SEE SHEET A8.1 FOR ENLARGED WINDOW DETAILS)  
 A4.1 0 2 4 6 12 INCHES



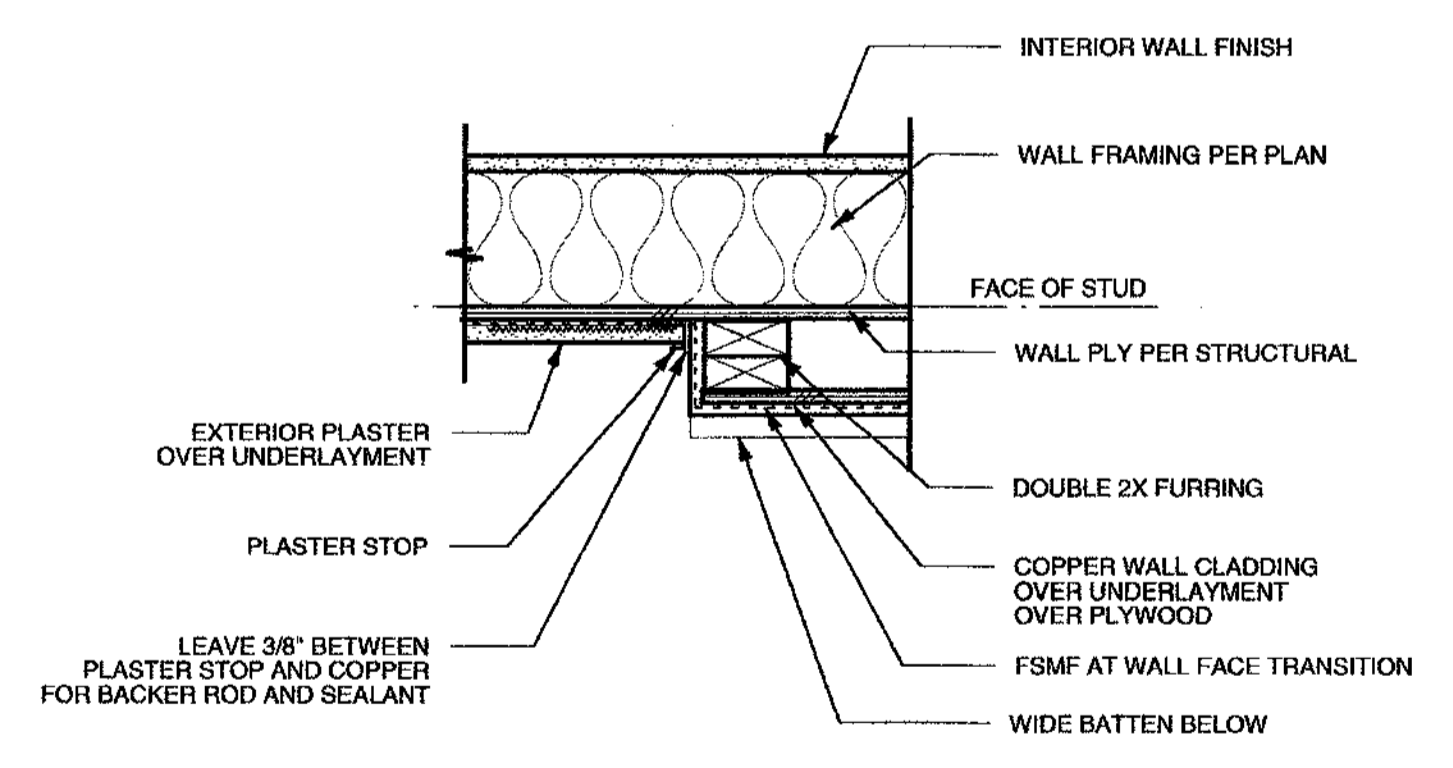
**2 WALL SECTION** (SEE SHEET A8.1 FOR ENLARGED WINDOW DETAILS)  
 A4.1 0 2 4 6 12 INCHES



**3 WALL SECTION**  
 A4.1 0 2 4 6 12 INCHES



**4 COPPER CLADDING JOINTS**  
 A4.1 0 1 2 3 INCHES



**5 EXTERIOR DETAIL**  
 A4.1 0 2 4 6 12 INCHES

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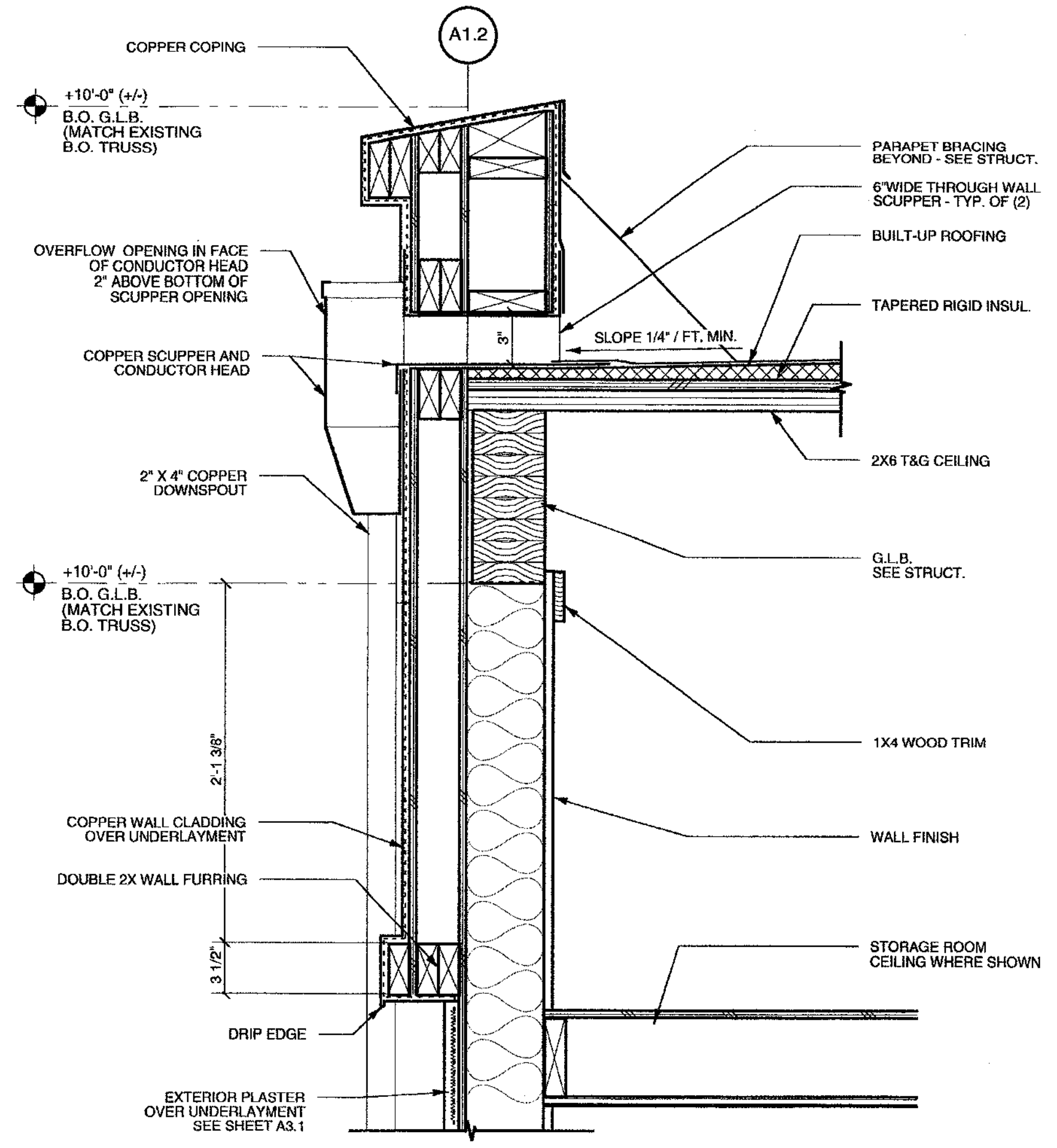
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 DRAWN BY: Mike Magee

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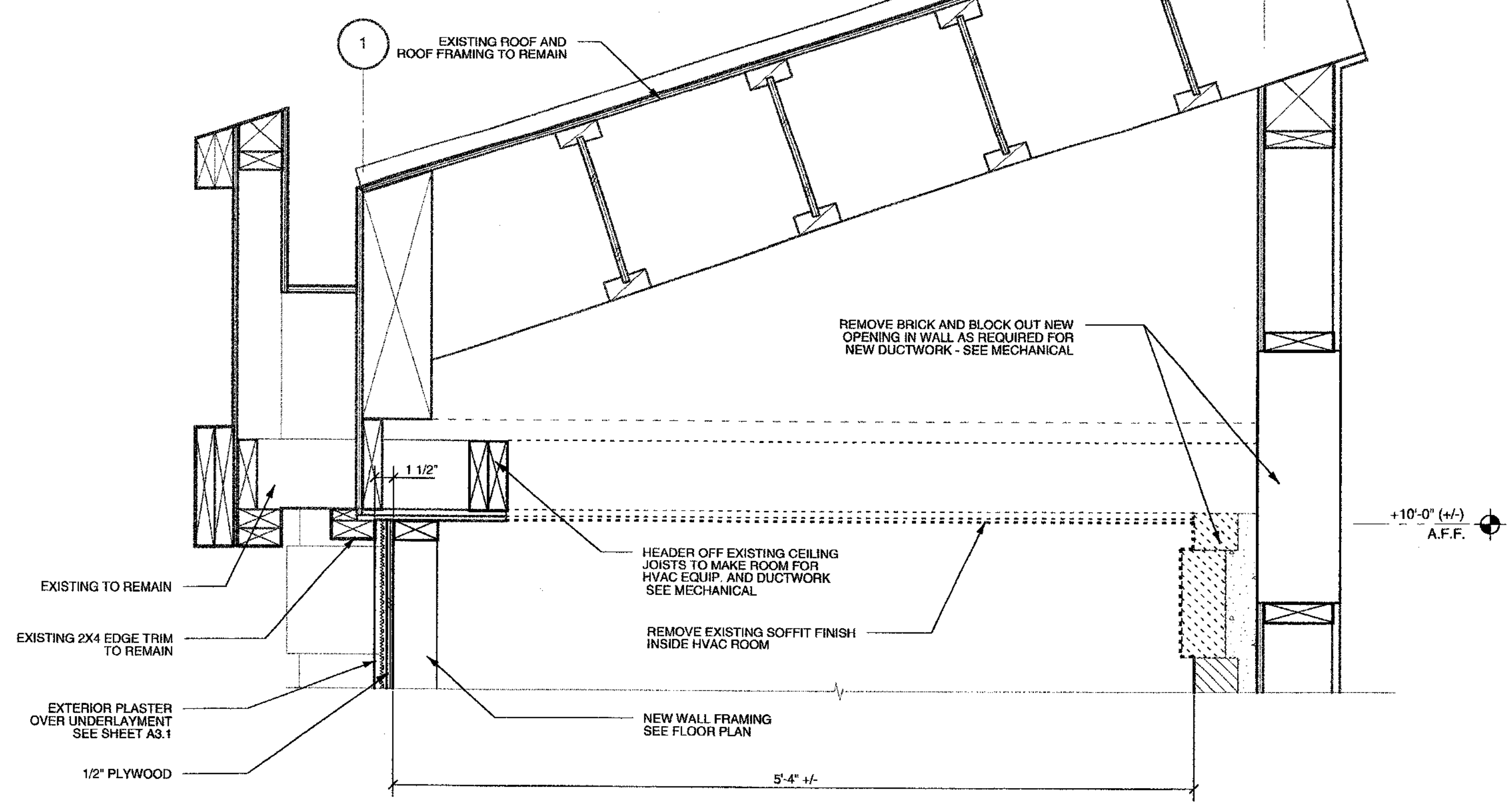
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**WALL SECTIONS**

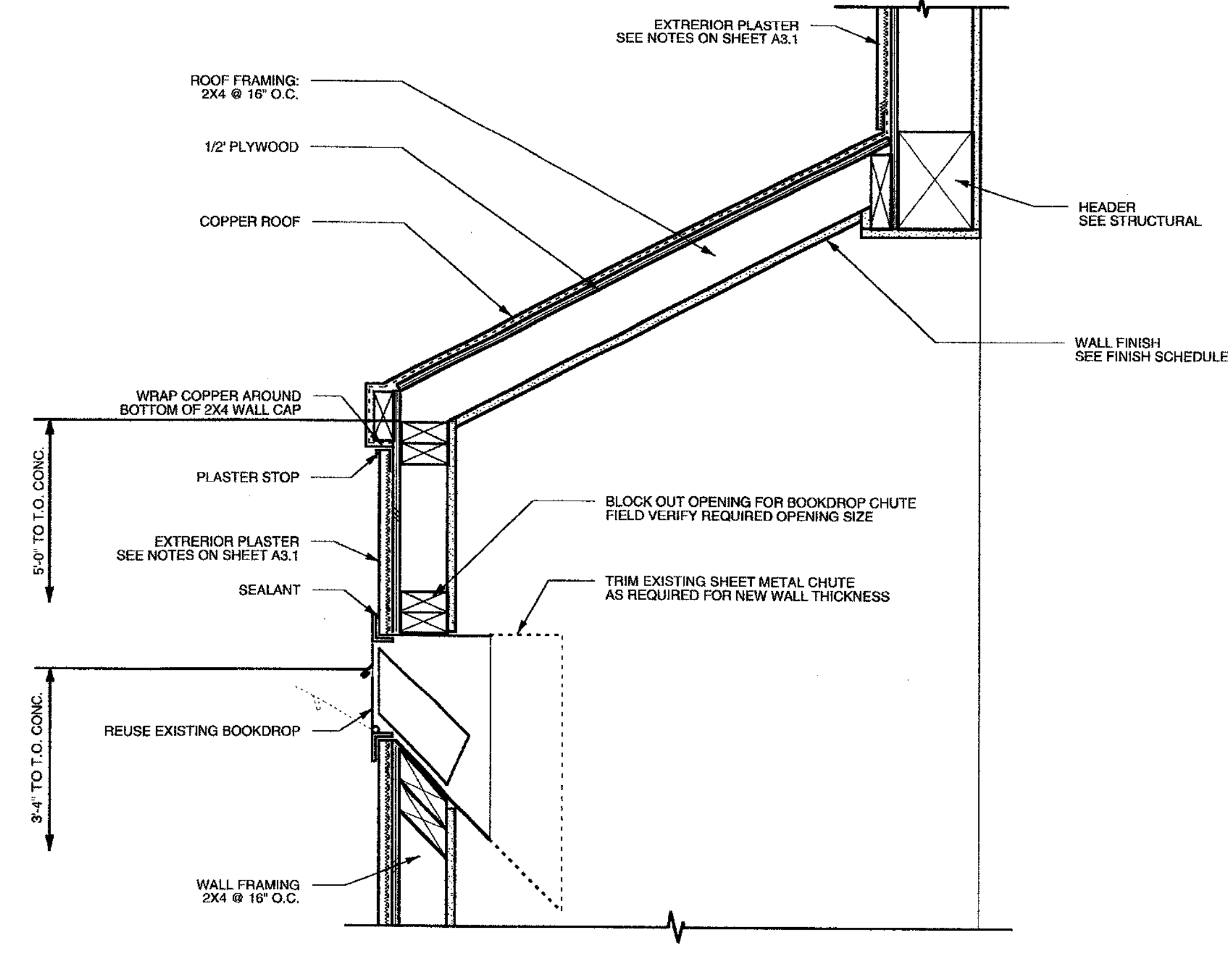
**A4.2**



**1 WALL SECTION**  
 A4.2 0 2 4 6 12 INCHES



**2 WALL SECTION**  
 A4.2 0 2 4 6 12 INCHES



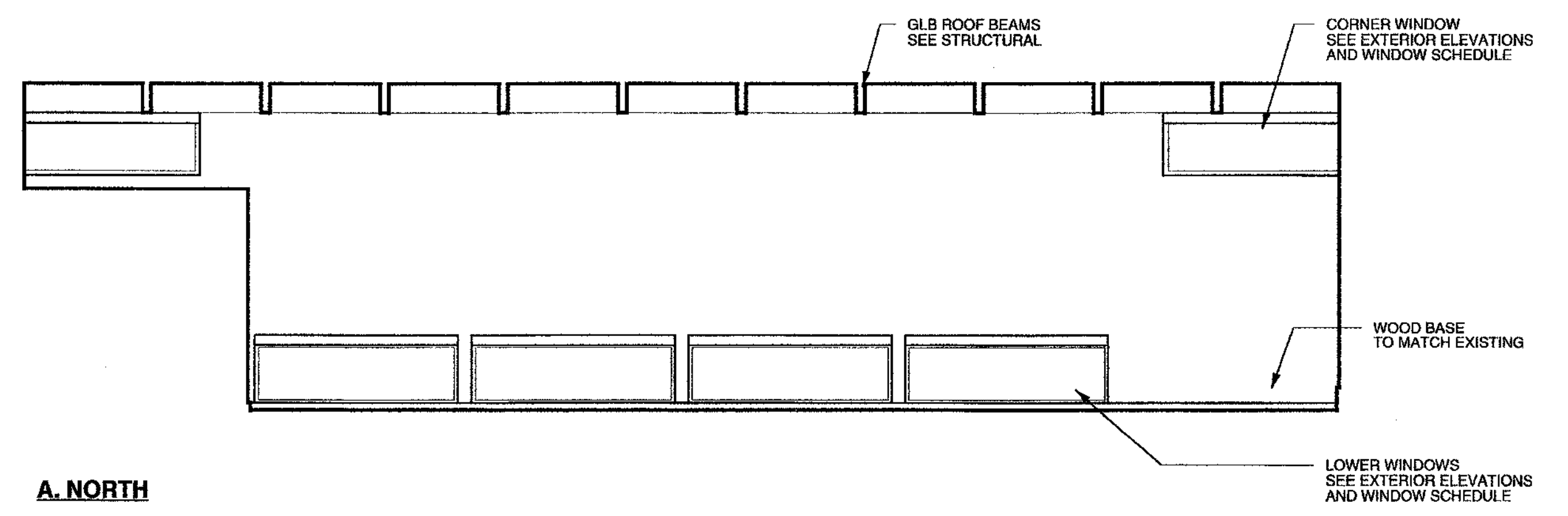
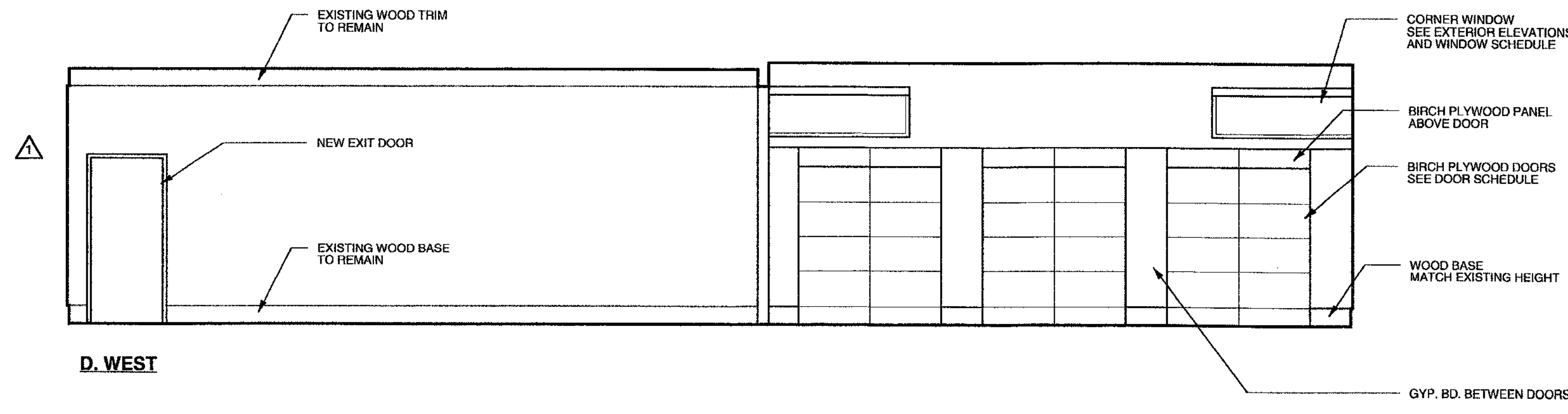
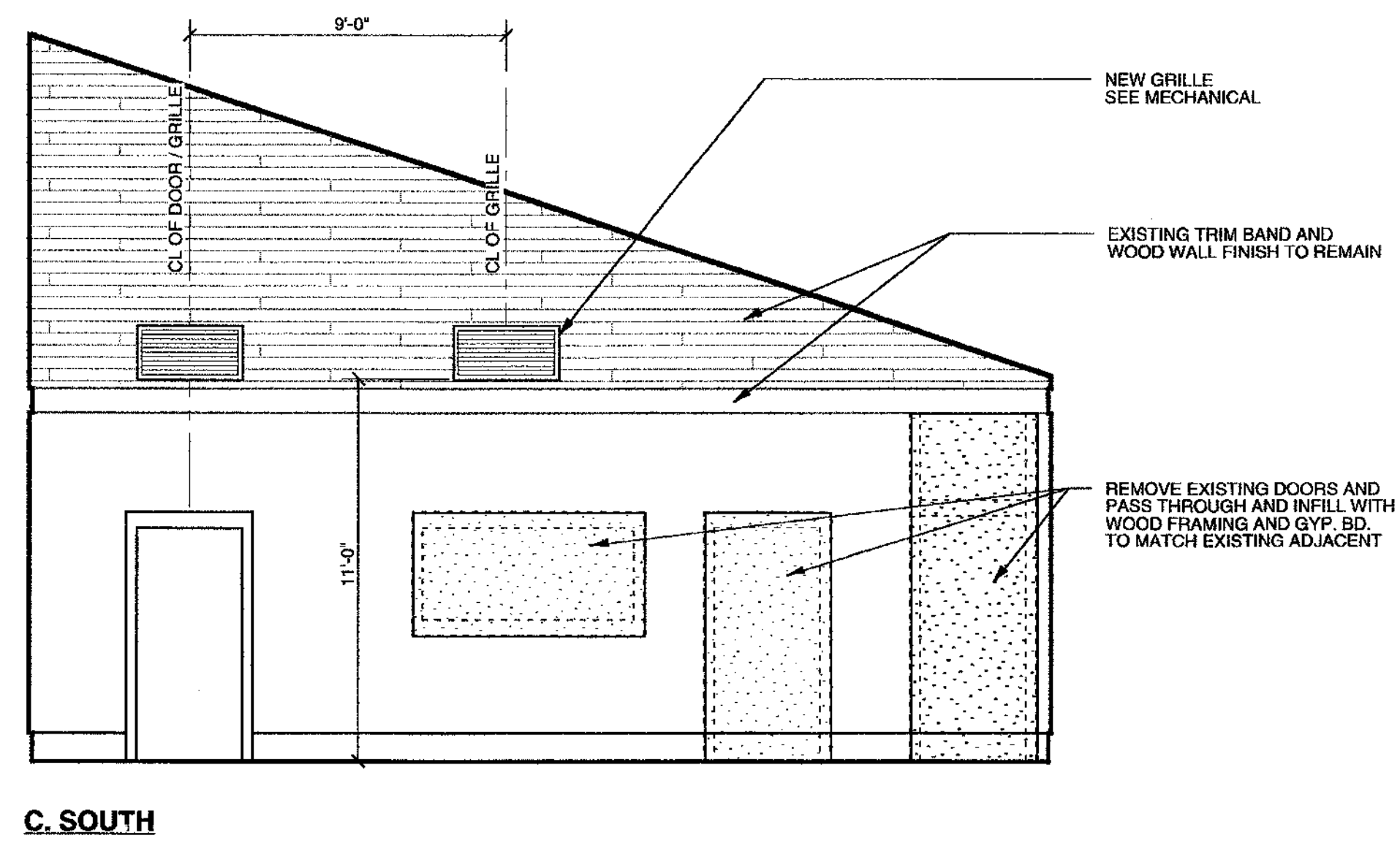
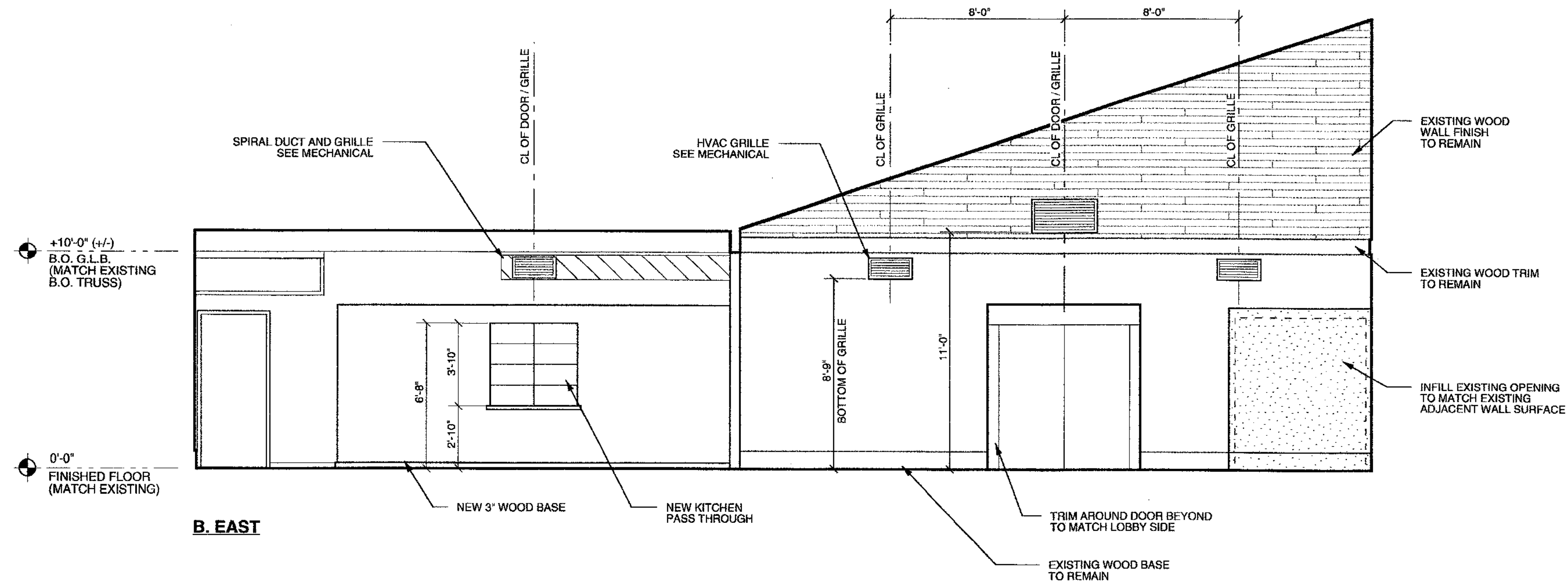
**3 WALL SECTION**  
 A4.2 0 2 4 6 12 INCHES

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 Petaluma, CA 94952  
 Tel 707 765-9222  
 Fax 707 762-4887

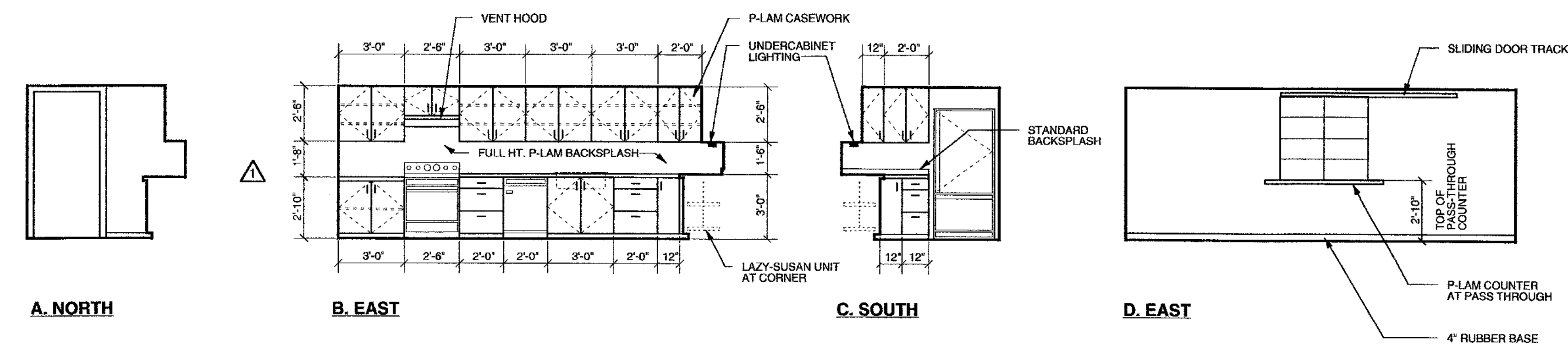
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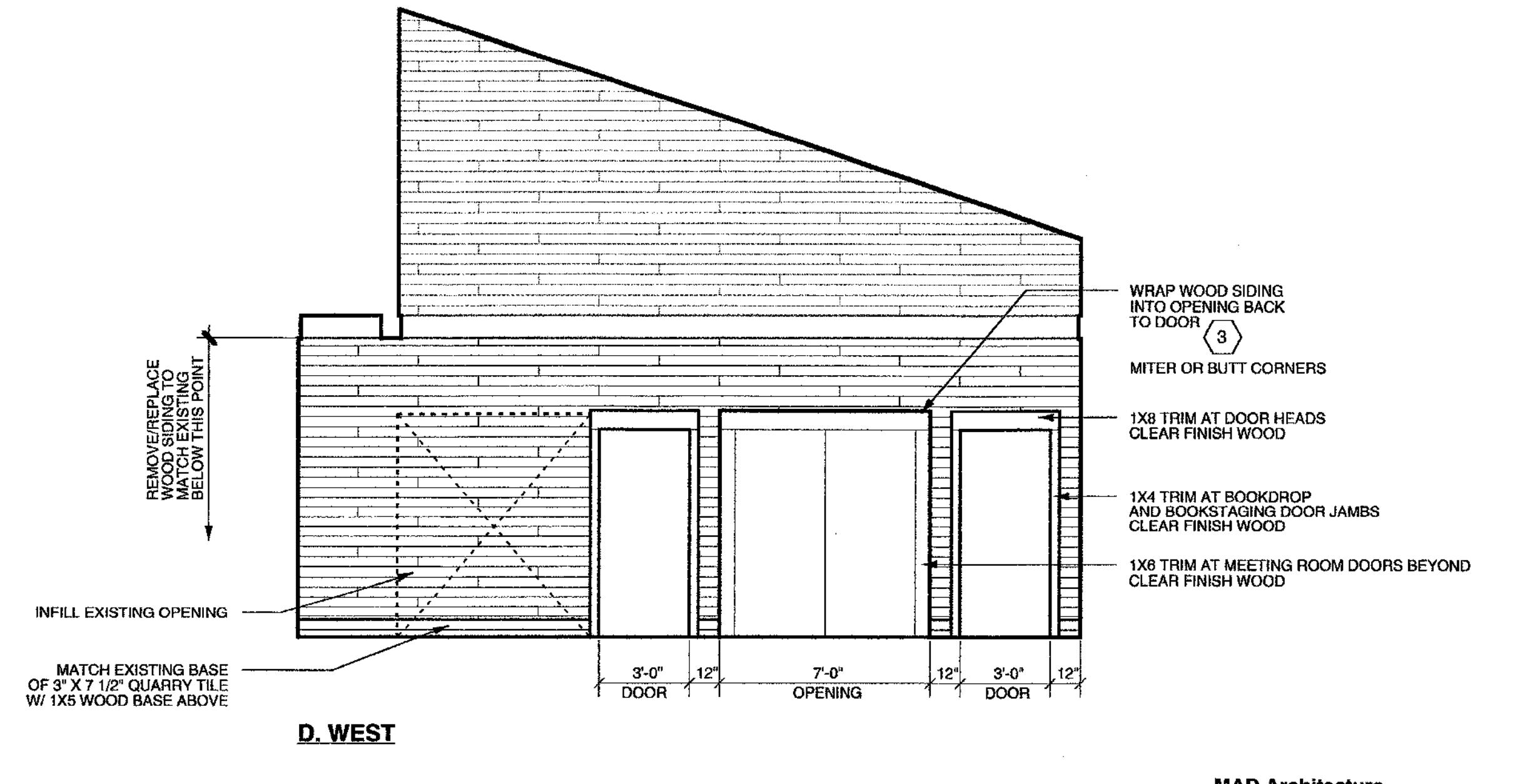
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 CHECKED BY: As Shown  
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**CITY OF PETALUMA**  
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1 INTERIOR ELEVATION - MEETING ROOM  
 A5.1 0 1 2 4 8 FEET



2 INTERIOR ELEVATION - KITCHEN  
 A5.1 0 1 2 4 8 FEET

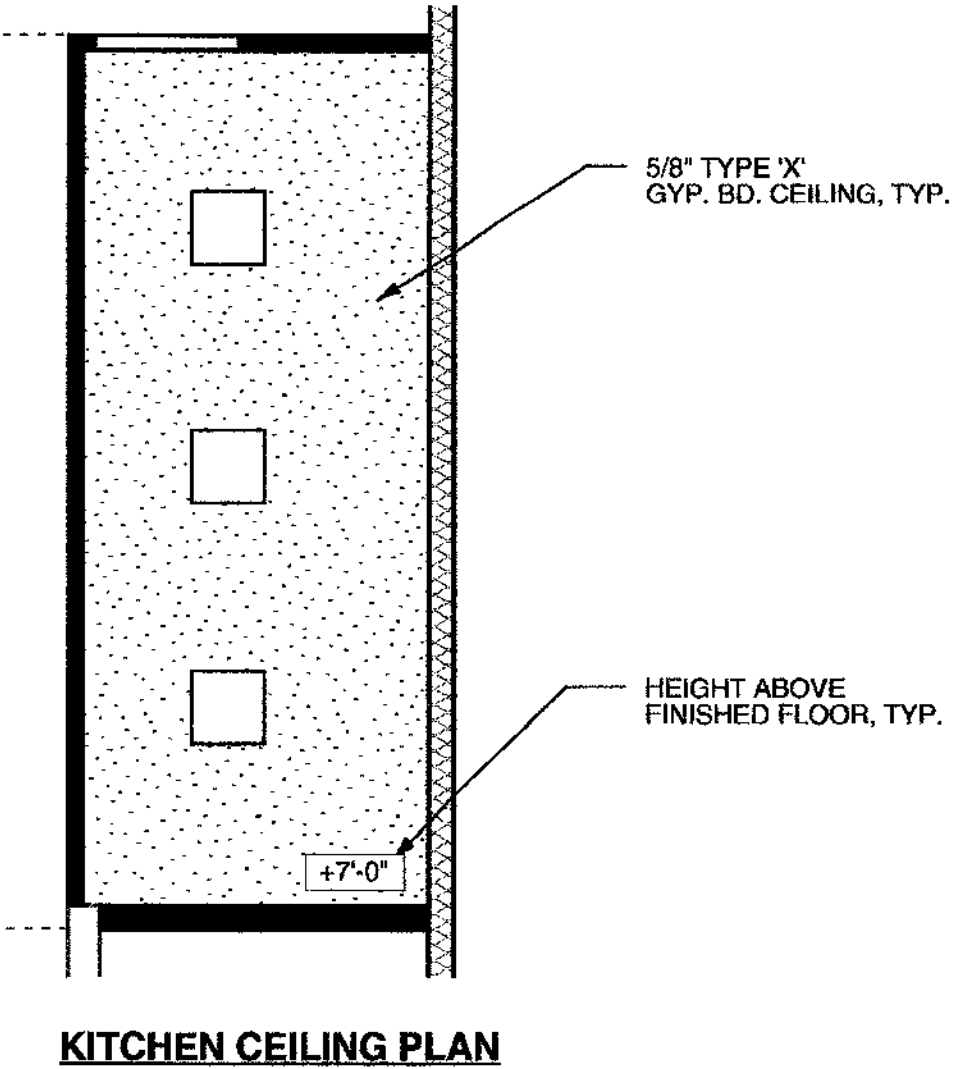
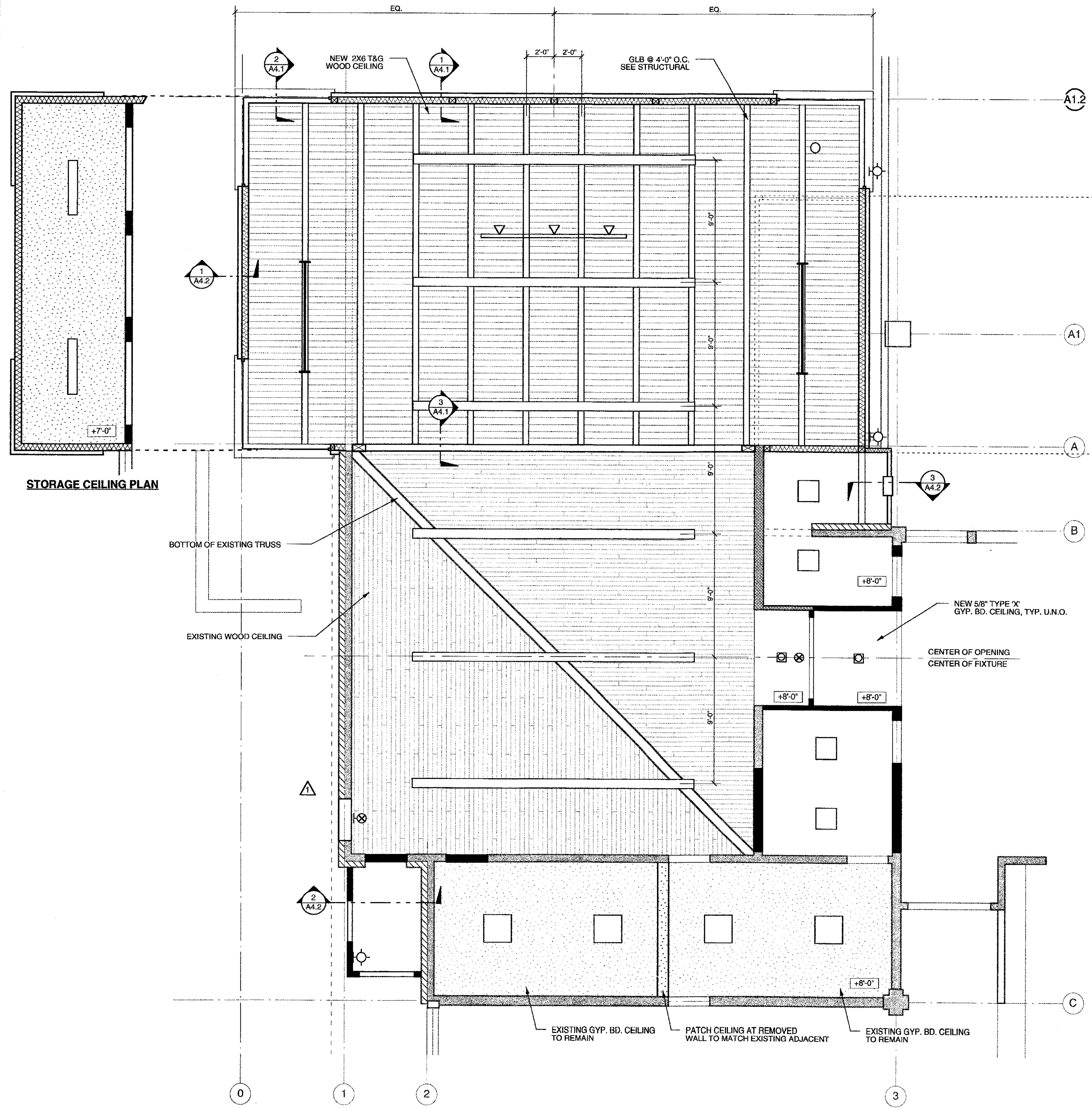


3 INTERIOR ELEVATION - LOBBY  
 A5.1 0 1 2 4 8 FEET

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**INTERIOR ELEVATIONS**  
**A5.1**

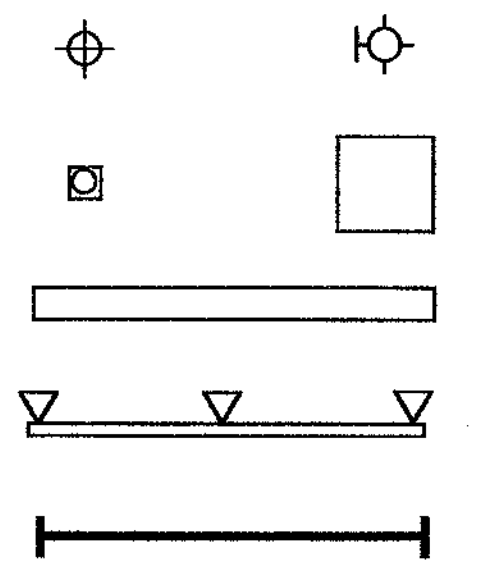
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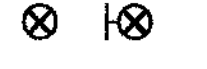
STORAGE CEILING PLAN

KITCHEN CEILING PLAN

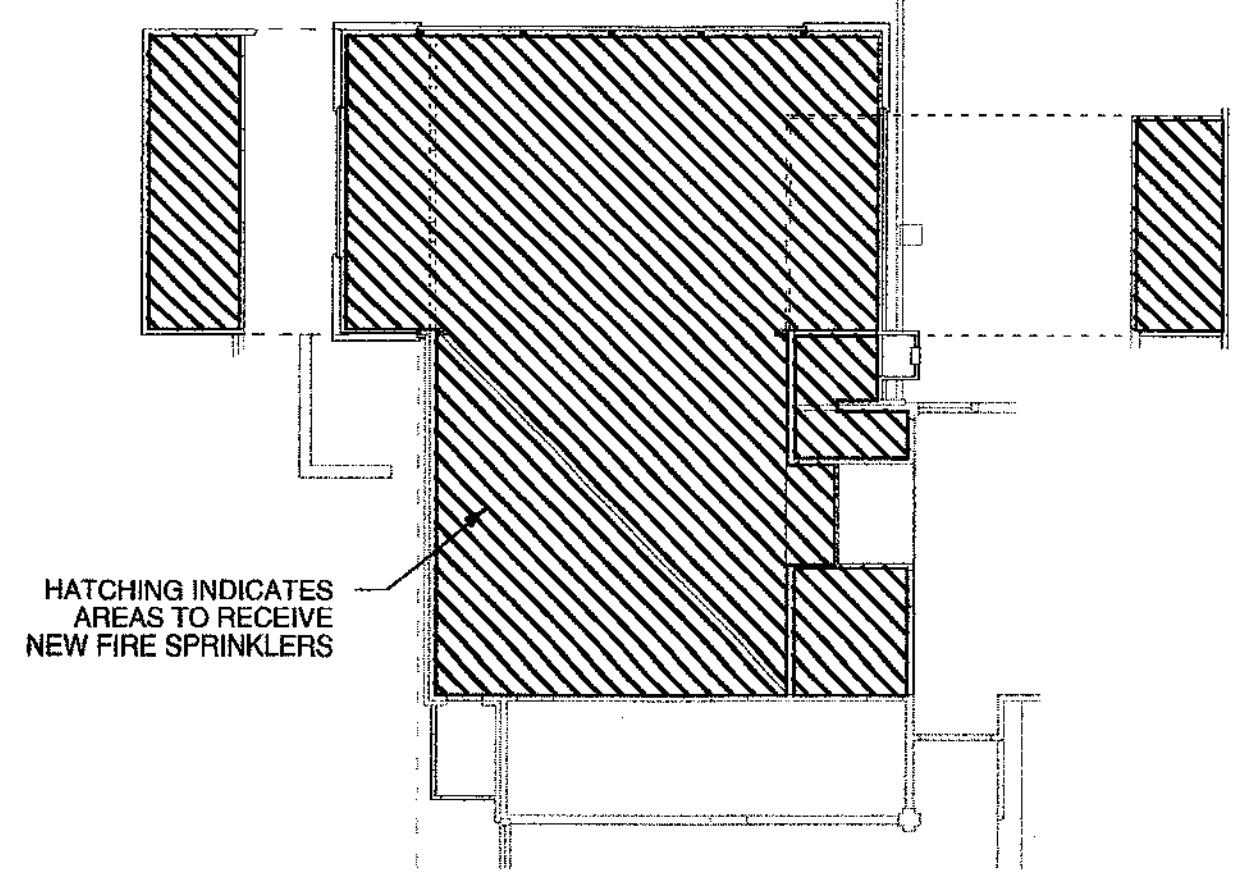
**LIGHTING SYMBOLS**  
SEE ELECTRICAL DRAWINGS FOR DESCRIPTION



**EXIT SIGNS**  
SEE ELECTRICAL DRAWINGS FOR DESCRIPTION



**FIRE SPRINKLERS KEY PLAN**  
SEE FIRE SPRINKLER NOTES ON SHEET A1.1



1 REFLECTED CEILING PLAN  
A6.1  
0 1 2 4 8 FEET



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REFLECTED  
CEILING PLAN

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A6.1

# FINISH SCHEDULE

NO.	DATE	REVISION	BY
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ROOM NAME	FLOORS		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILINGS		NOTES
	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	
MEETING ROOM	CPT-1		WOOD	STAIN	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	WOOD	STAIN	SEE FLOOR PLAN FOR CPT-1 IN MEETING ROOM, CPT-2 IN ENTRY ALCOVE
KITCHEN	VCT		RUBBER		M.R. GWB	PAINT	M.R. GWB	PAINT	M.R. GWB	PAINT	M.R. GWB	PAINT	GWB	PAINT	
BOOKDROP	VCT		RUBBER		GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	
LOBBY	(E) TILE		MATCH (E)		(E) WOOD		(E) WOOD		(E) WOOD		MATCH (E)	MATCH (E)			
BOOKSTORE STAGING	CPT-2		RUBBER		GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	
BOOKSTORE	VCT		RUBBER		GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	
HVAC	PWD				PWD	PAINT	(E) BRICK		PWD	PAINT	PWD	PAINT	PWD	PAINT	
STORAGE	CARPET		RUBBER		GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	GWB	PAINT	

**GENERAL INTERIOR FINISH NOTES:**

- SEE INTERIOR ELEVATIONS, INTERIOR DETAILS & SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**MATERIAL ABBREVIATIONS:**

- GWB: 5/8" TYPE X GYPSUM BOARD  
 WOOD: HARDWOOD TRIM  
 PWD: PLYWOOD  
 CARPET: CARPET  
 VCT: VINYL COMPOSITION TILE  
 RUBBER: RUBBER BASE  
 MATCH (E): MATCH EXISTING ADJACENT

**FINISH ABBREVIATIONS:**

- STAIN: TRANSPARENT FINISH FOR WOOD  
 PAINT: PAINT

## DOOR SCHEDULE

1 DOOR SYMBOL - SEE FLOOR PLANS

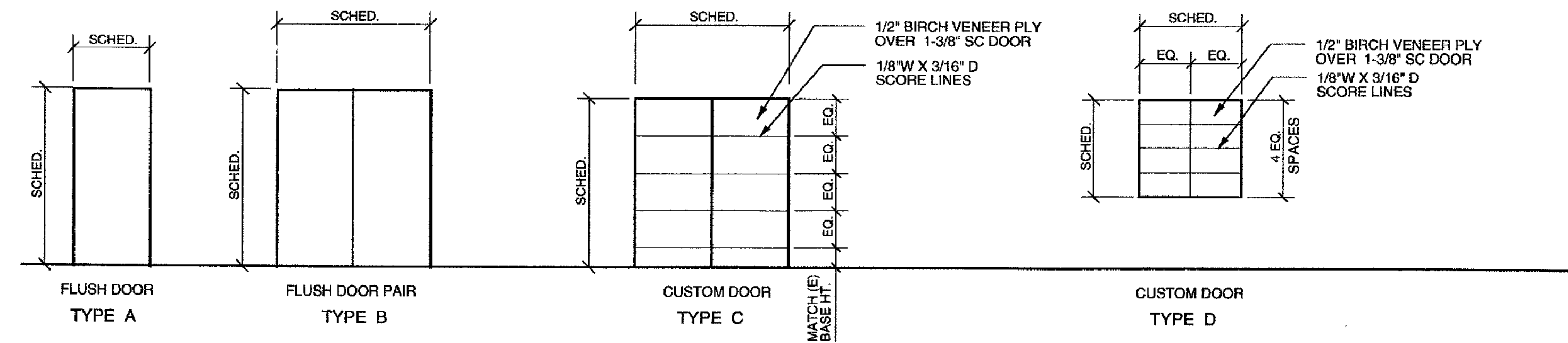
NO.	LOCATION	DESCRIPTION	TYPE	FRAME	SIZE (W x H)	SEE DETAIL	HARDWARE GROUP	NOTES
1	MEETING ROOM	HOLLOW METAL	A	HM	3'-0" x 6'-8" x 1 3/4"	7 / A8.1	1	
2	KITCHEN	SOLID CORE WOOD	A	WD	3'-0" x 6'-8" x 1 3/4"	5 / A8.1	3	
3	LOBBY ENTRANCE	SOLID CORE WOOD	B	WD	6'-0" x 6'-8" x 1 3/4"	2 / A8.1	6	
4	BOOKSTORE STAGING	SOLID CORE WOOD	A	WD	3'-0" x 6'-8" x 1 3/4"	2 / A8.1	4	
5	BOOKSTORE STAGING	SOLID CORE WOOD	A	WD	3'-0" x 6'-8" x 1 3/4"	2 / A8.1	3	
6	BOOKSTORE	SEE NOTES	A	WD	3'-0" x 6'-8" x 1 3/4" (FIELD VERIFY)	2 / A8.1	4	EXIST. DOOR - REHANG TO SWING IN OPP. DIRECTION
7	BOOKSTORE	SEE NOTES	A	WD	3'-0" x 6'-8" x 1 3/4" (FIELD VERIFY)	2 / A8.1	4	EXIST. DOOR - REHANG TO SWING IN OPP. DIRECTION
8	HVAC	HOLLOW METAL	A	HM	4'-0" x 6'-0" x 1 3/4"	7 / A8.1	7	HM FRAME @ SILL
9	HVAC	HOLLOW METAL	A	HM	3'-0" x 6'-0" x 1 3/4"	7 / A8.1	7	HM FRAME @ SILL
10	STORAGE	SOLID CORE WOOD	C	WD	6'-0" x 6'-8" x 1 7/8" (+/-)	5 / A8.1	8	1/2" BIRCH PLY VENEER GLUED OVER 1-3/8" SC DOOR
11	STORAGE	SOLID CORE WOOD	C	WD	6'-0" x 6'-8" x 1 7/8" (+/-)	5 / A8.1	8	1/2" BIRCH PLY VENEER GLUED OVER 1-3/8" SC DOOR
12	STORAGE	SOLID CORE WOOD	C	WD	6'-0" x 6'-8" x 1 7/8" (+/-)	5 / A8.1	8	1/2" BIRCH PLY VENEER GLUED OVER 1-3/8" SC DOOR
13	KITCHEN	SOLID CORE WOOD	D	WD	4'-4" x 3'-10" x 1 7/8" (+/-)	6 / A8.1	9	1/2" BIRCH PLY VENEER GLUED OVER 1-3/8" SC DOOR
14	BOOKDROP	SOLID CORE WOOD	A	WD	3'-0" x 6'-8" x 1 3/4"	2 / A8.1	5	REPLACE EXISTING BOOKDROP DOOR
15	MEETING ROOM EXIT	HOLLOW METAL	A	HM	3'-0" x 6'-8" x 1 3/4"	7 / A8.1	2	



## DOOR NOTES

- ALL DIMENSIONS LISTED IN SCHEDULE ARE NOMINAL. VERIFY ACTUAL DIMENSIONS WITH MANUFACTURER'S SPECIFICATIONS.
- VERIFY ALL ROUGH OPENING DIMENSIONS WITH MANUFACTURER'S SPECIFICATIONS.
- NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, REQUIRED ROUGH OPENING DIMENSIONS, AND/OR FIELD CONDITIONS.
- ALL DOORS AND DOOR HARDWARE SHALL MEET ADA REQUIREMENTS FOR EASE OF OPERATION, OPENING FORCE, THRESHOLD HEIGHT, MANEUVERING CLEARANCES, AND ANY OTHER APPLICABLE REQUIREMENTS. SEE FLOOR PLANS AND HARDWARE SCHEDULE.

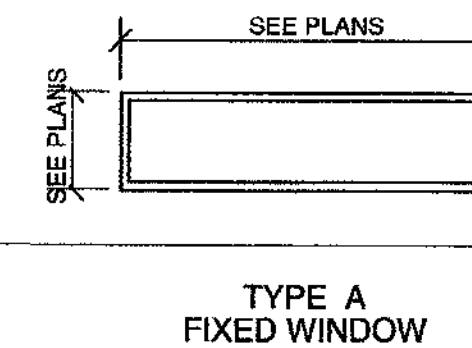
## DOOR TYPES



## WINDOW NOTES

- ALL DIMENSIONS LISTED IN SCHEDULE ARE NOMINAL. VERIFY ACTUAL DIMENSIONS WITH MANUFACTURER'S SPECIFICATIONS.
- VERIFY ALL ROUGH OPENING DIMENSIONS WITH MANUFACTURER'S SPECIFICATIONS.
- NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, REQUIRED ROUGH OPENING DIMENSIONS, AND/OR FIELD CONDITIONS.

## WINDOW TYPES



## WINDOW SCHEDULE

1 WINDOW SYMBOL - SEE EXTERIOR ELEVATIONS

NO.	LOCATION	QUANTITY	TYPE	SIZE (W x H)	GLAZING	HEAD	JAMB	SILL	NOTES
1	MEETING ROOM	4	A	6'-10" (+/-) x 2'-0"	SAFETY	3 / A8.1	3 / A8.1	3 / A8.1	VERIFY STRUCTURAL POST LOCATIONS FOR ROUGH OPENING
2	MEETING ROOM	2	A	SEE PLANS		4 / A8.1	4 / A8.1	4 / A8.1	CORNER WINDOW WITH BUTT GLAZING AT OUTER CORNER

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 DRAWN BY: Mike Magee  
 CHECKED BY: Mary Dooley  
 DESIGNED BY: Mary Dooley  
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**CITY OF PETALUMA**  
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 MEETING ROOM EXPANSION  
 PROJECT NO. 9028  
**SCHEDULES**

**MAD Architecture**  
 145 Keller Street  
 Petaluma, CA 94952  
 Tel 707 766-9222  
 Fax 707 762-4887

APPROVED BY:

ENGINEERING MANAGER DATE:

**A7.1**

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1	9/15/03	PLAN CHECK	MDM

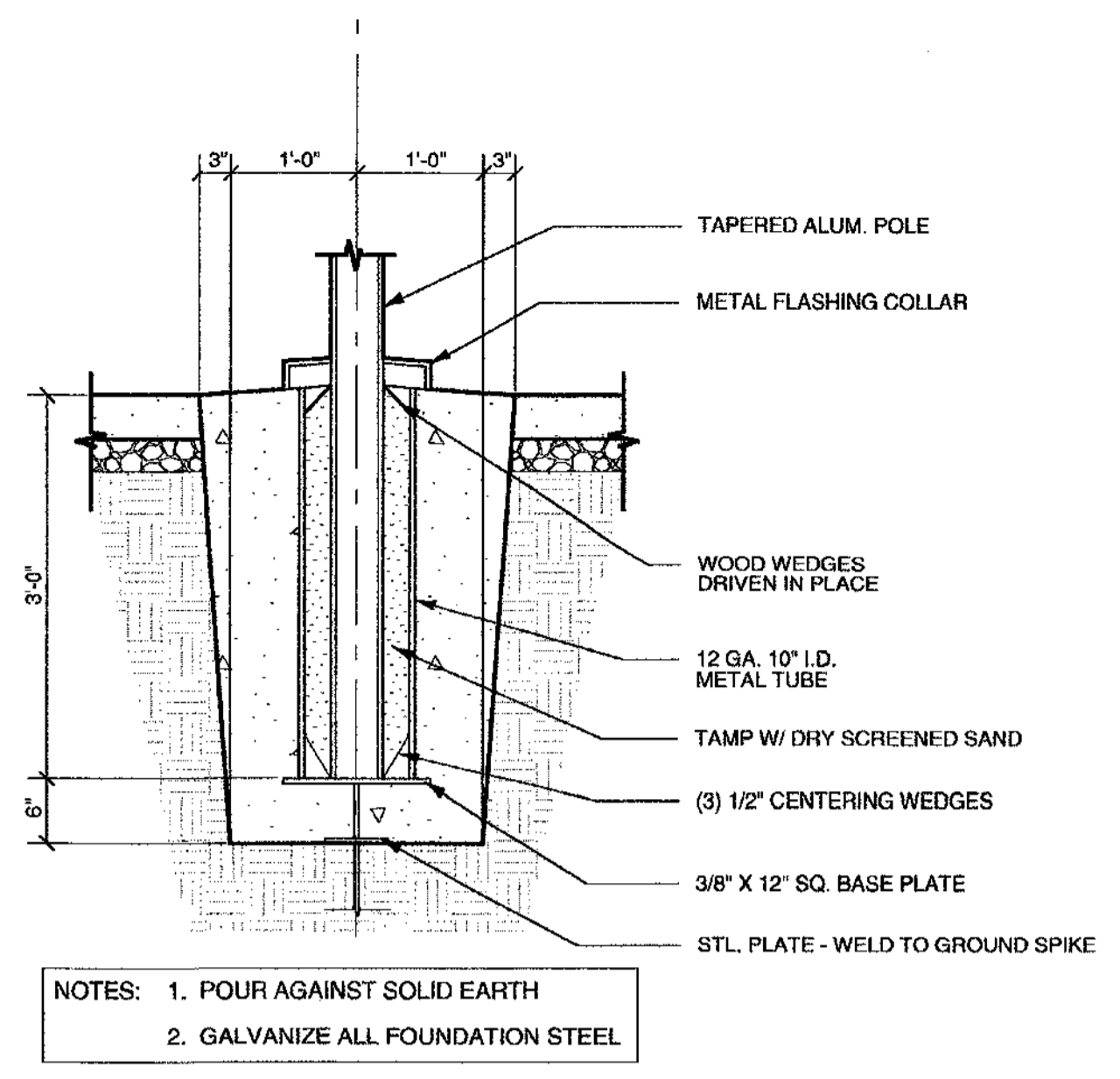
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 CHECKED BY: As Shown  
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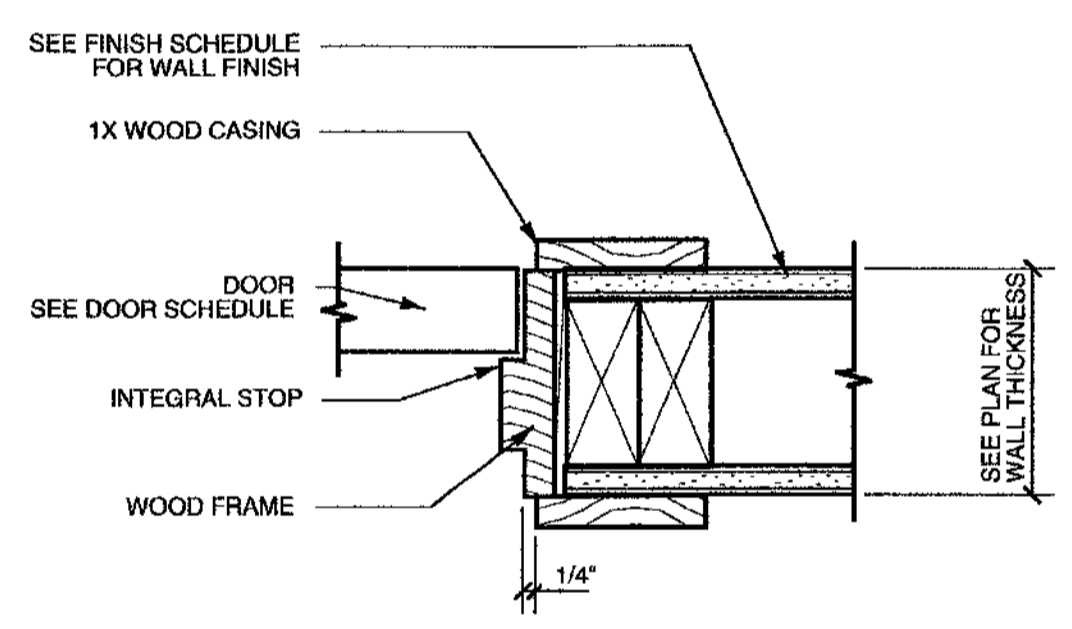
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 PROJECT NO. 9028

**DETAILS**

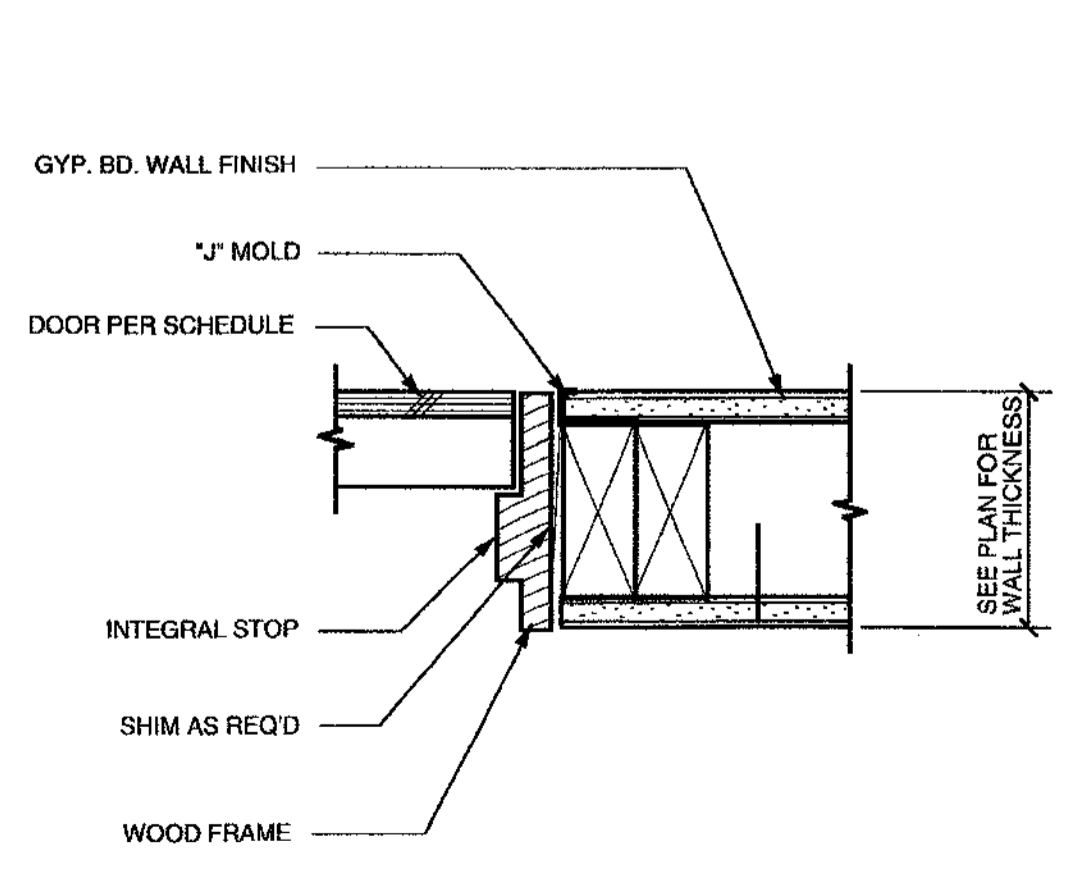
**A8.1**



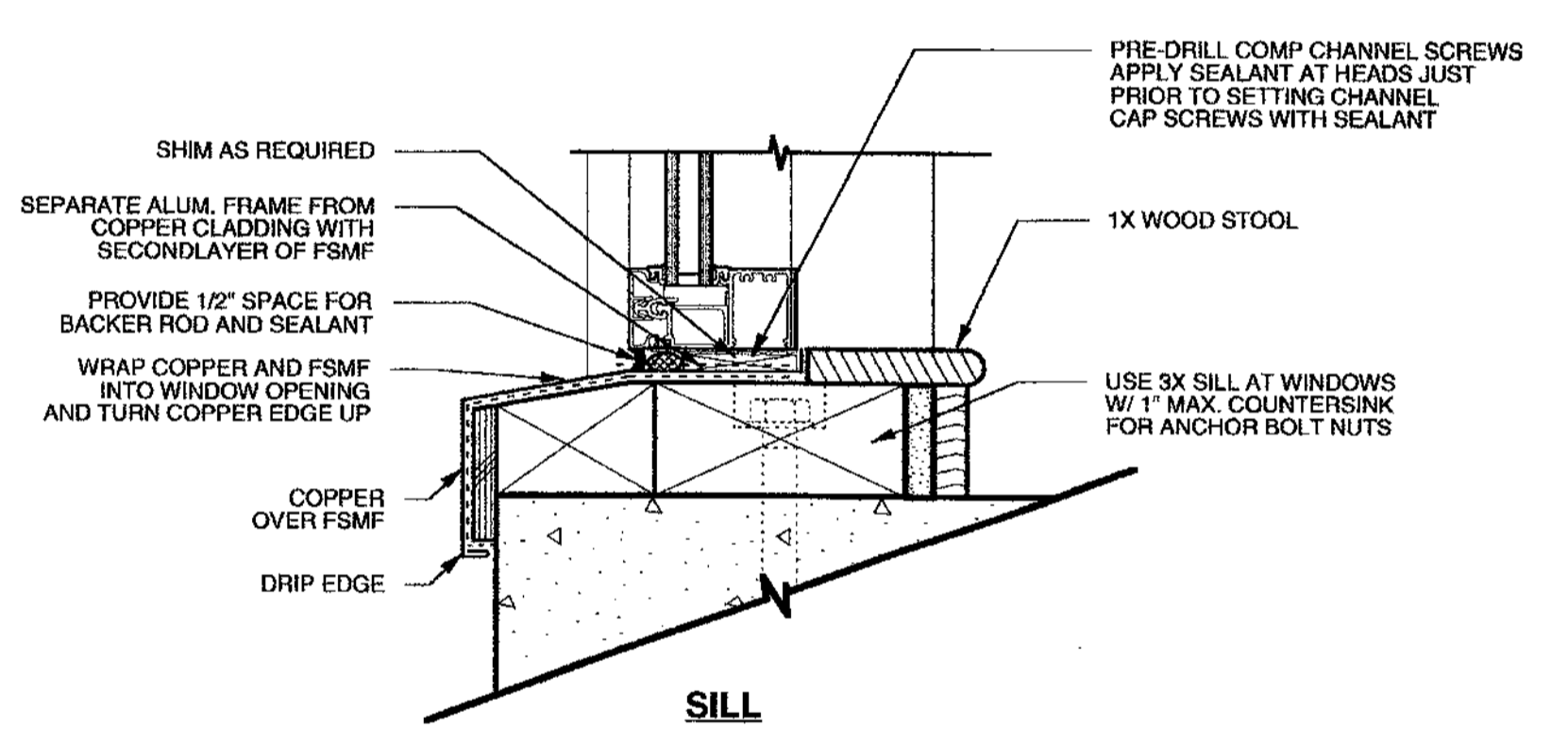
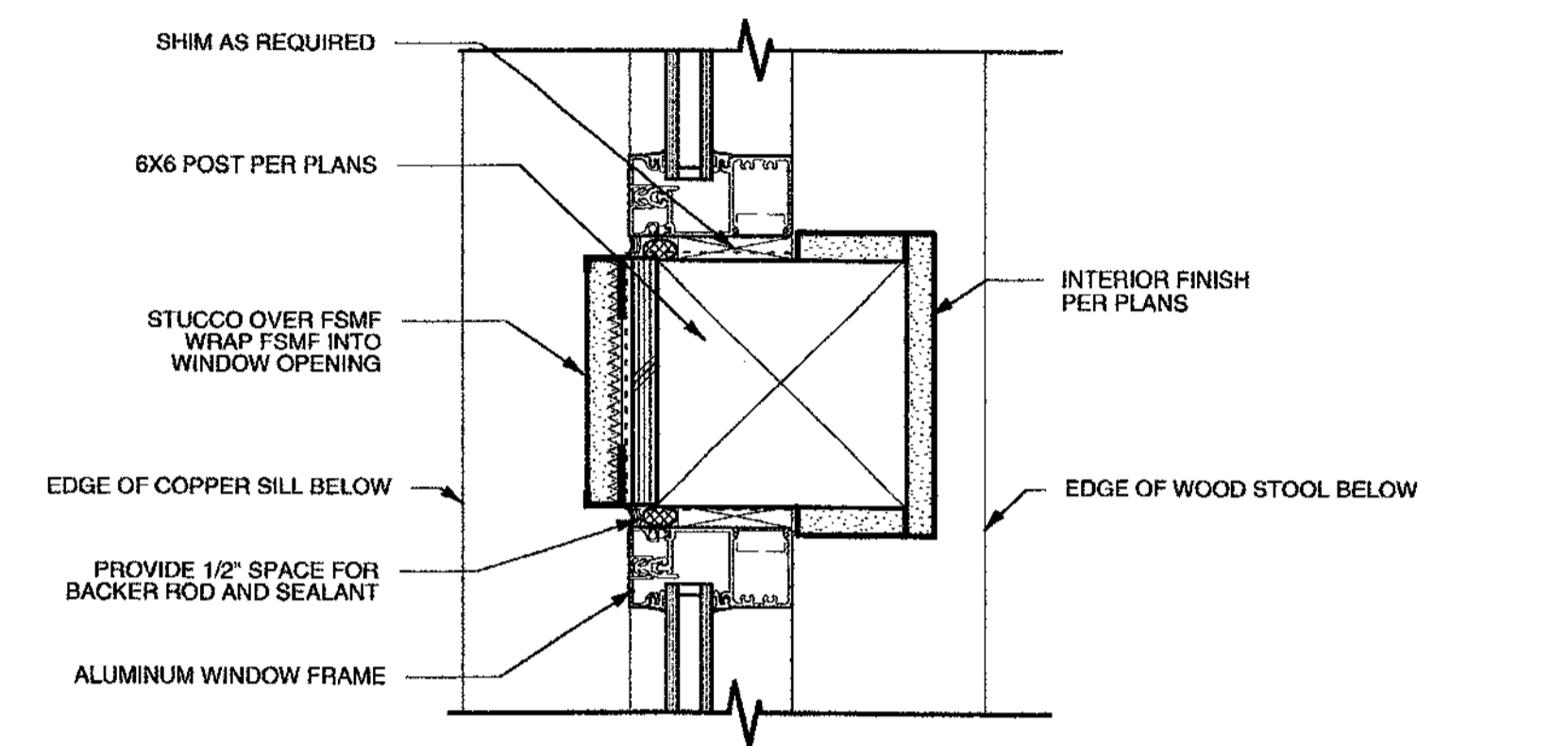
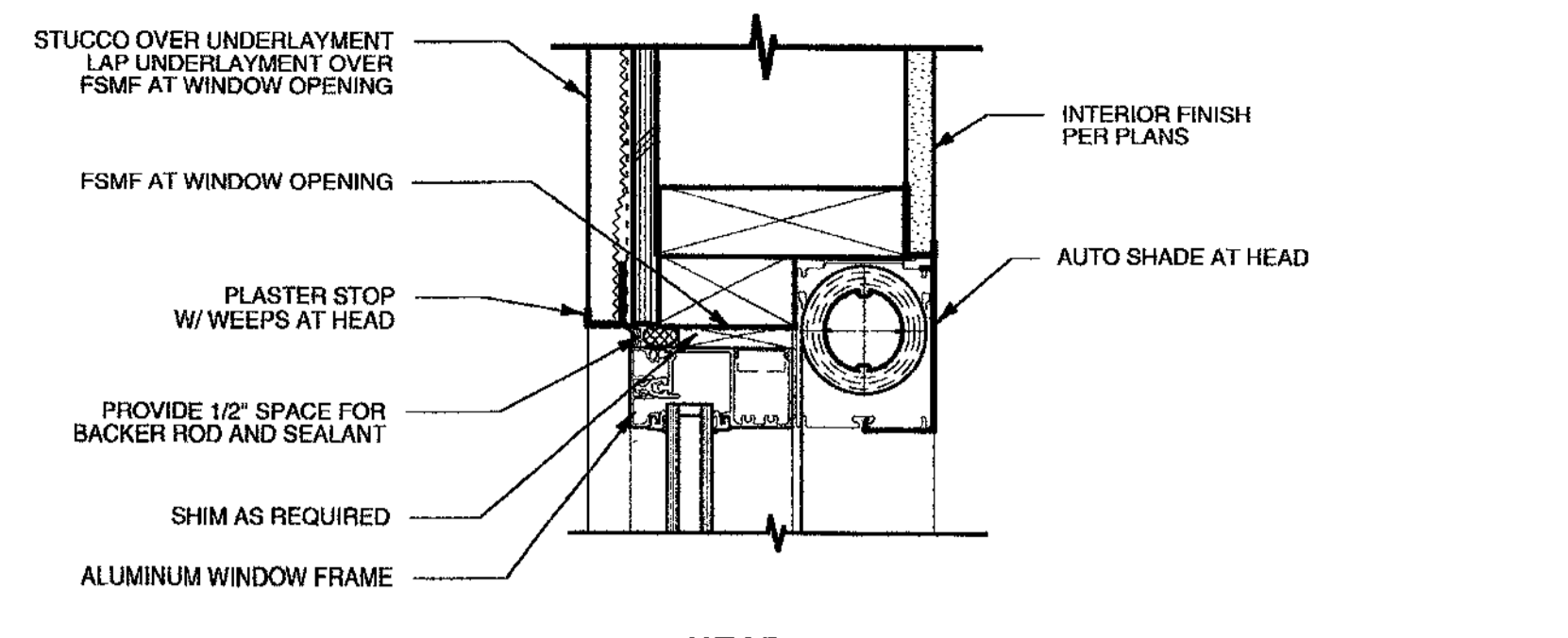
**1 FLAGPOLE BASE**  
 A8.1  
 0 4 8 12 24 INCHES



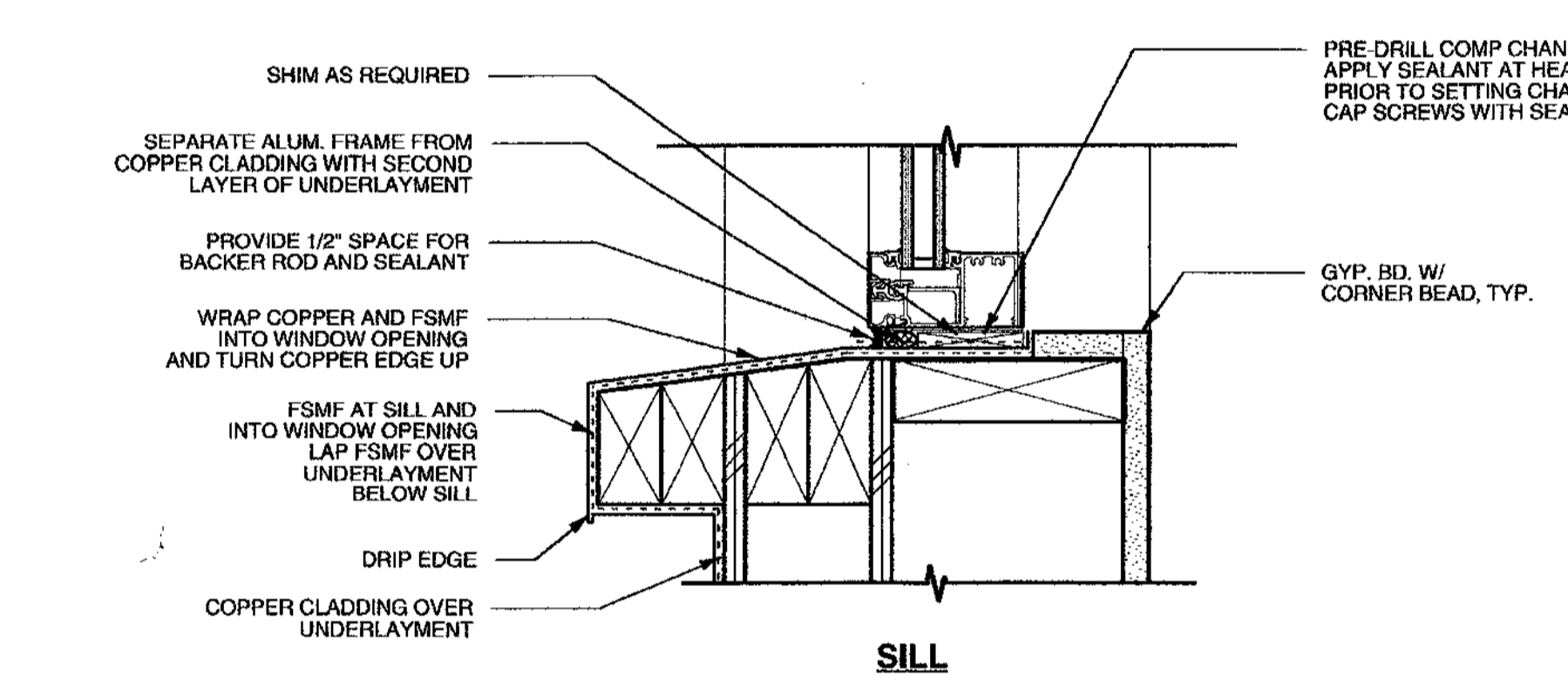
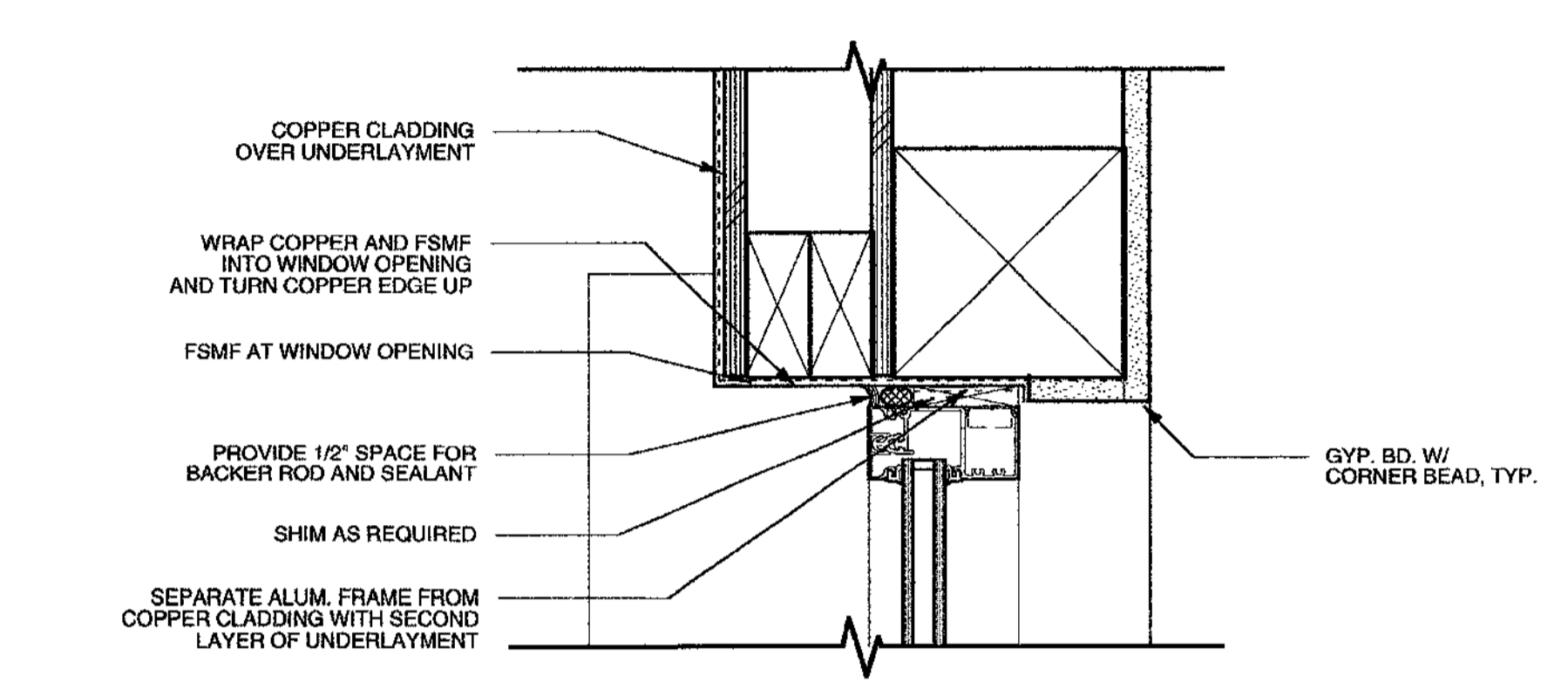
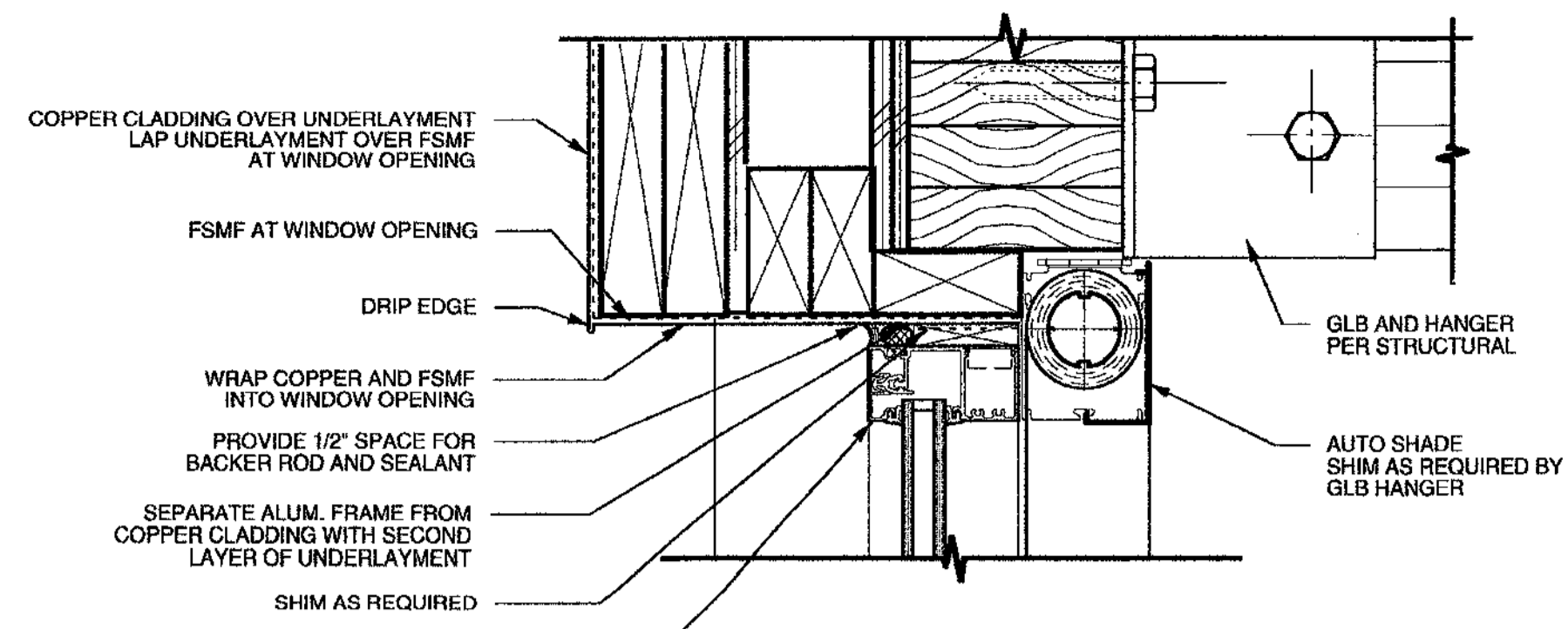
**2 INTERIOR DOOR JAMB (HEAD SIM.)**  
 A8.1  
 0 2 4 8 INCHES



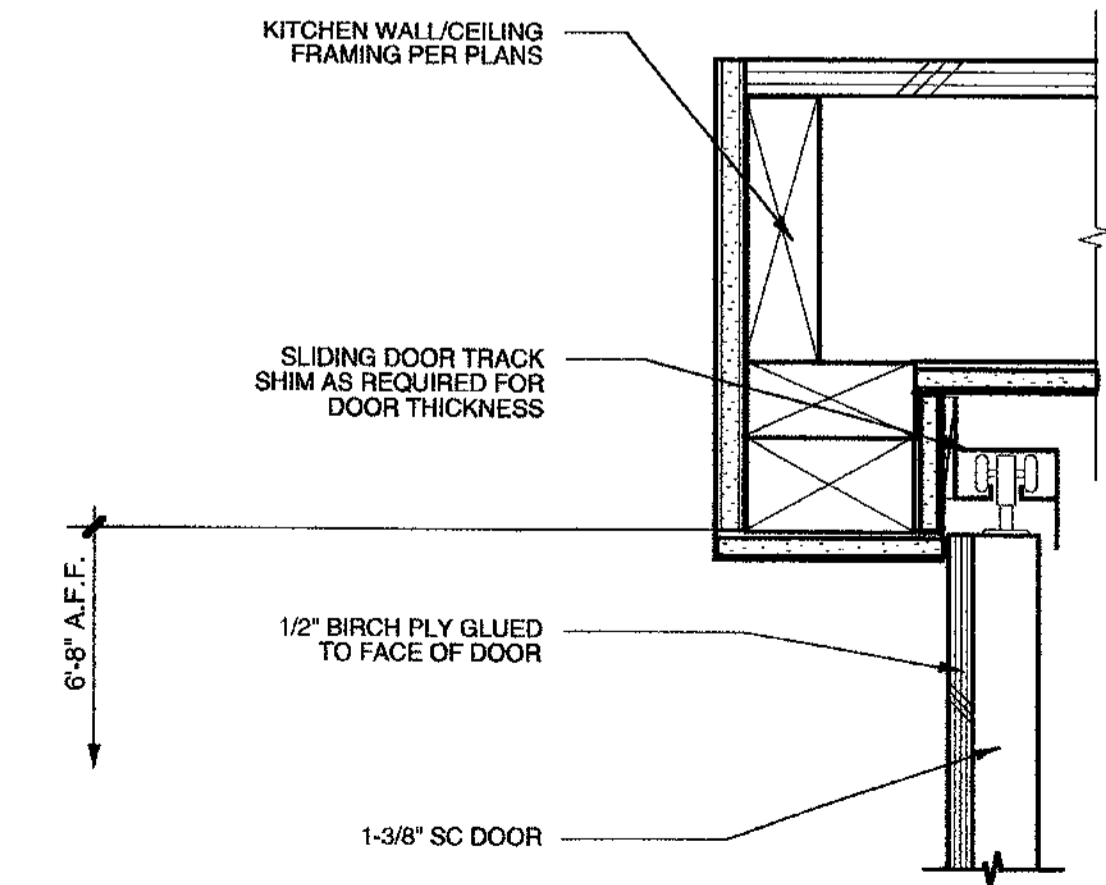
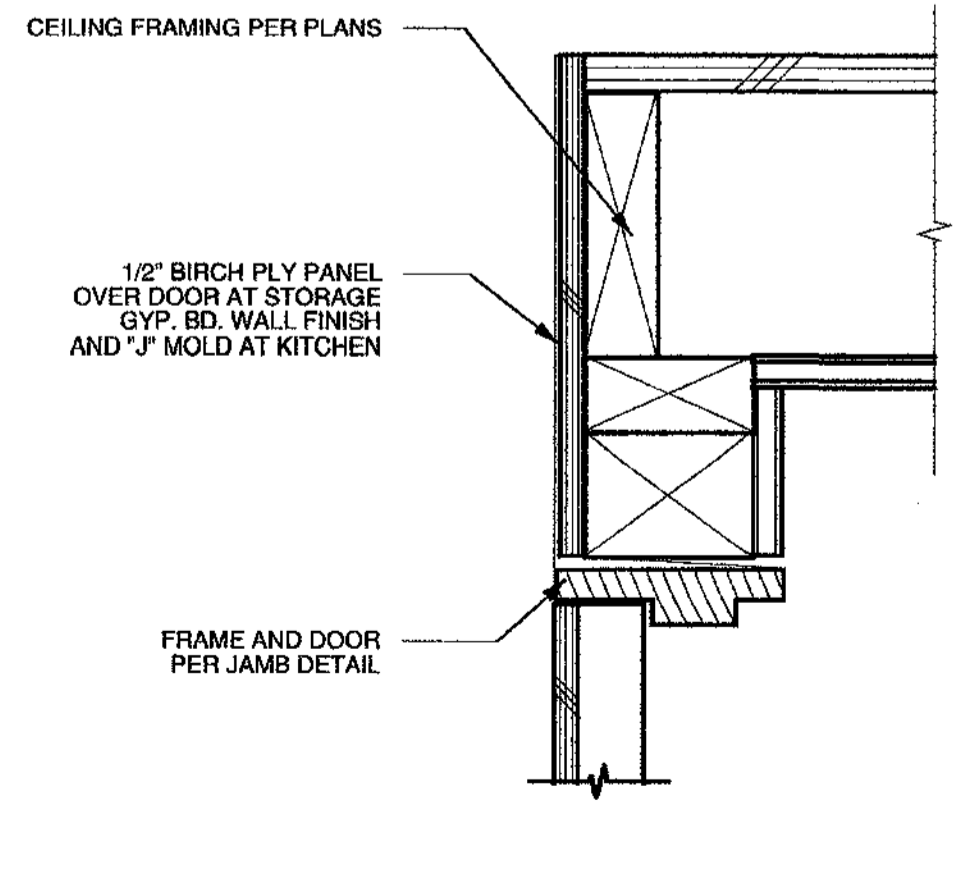
**5 INTERIOR DOOR JAMB**  
 A8.1  
 0 2 4 8 INCHES



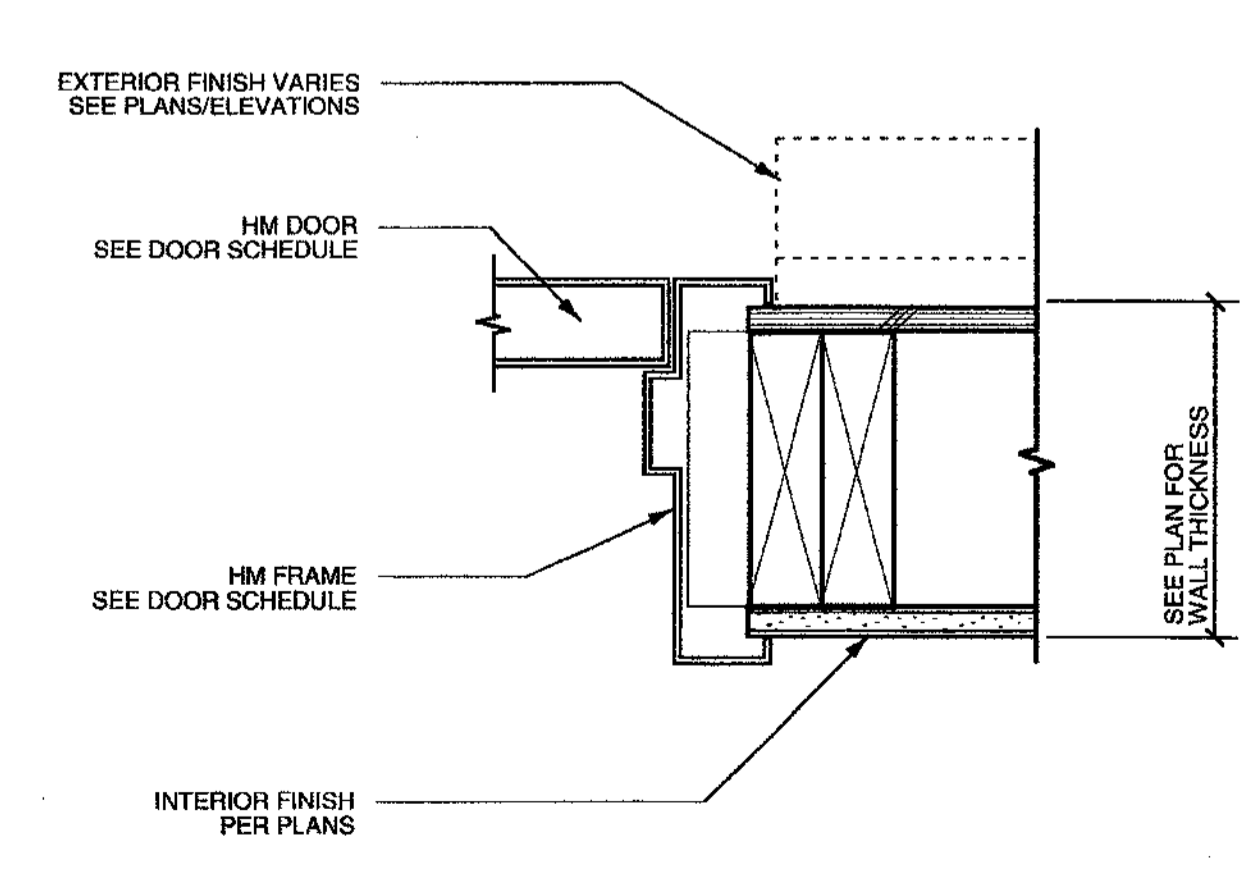
**3 LOWER WINDOW DETAIL**  
 A8.1  
 0 1 2 3 6 INCHES



**4 UPPER WINDOW DETAIL**  
 A8.1  
 0 1 2 3 6 INCHES



**6 INTERIOR DOOR HEAD (JAMB SIM.)**  
 A8.1  
 0 2 4 8 INCHES



**7 EXTERIOR DOOR JAMB (HEAD SIM.)**  
 A8.1  
 0 2 4 8 INCHES

MAD Architecture  
 145 Keller Street  
 Petaluma, CA 94952  
 Tel: 707 765-9222  
 Fax: 707 762-4897

APPROVED BY: \_\_\_\_\_  
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NO.	DATE	REVISION	BY
9-11-03		DOOR AT GRID ①	KZ
10-9-03		SPECIFICATION	KZ

**ZFA STRUCTURAL ENGINEERS**  
 122 FOURTH STREET  
 SUITE 2, SANTA ROSA  
 CALIFORNIA 95404  
 PH: (707) 526-0992  
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DESIGNED BY: November 21, 2003  
 DRAWN BY: As-Shom  
 CHECKED BY: As-Shom  
 ZFA

**A STRUCTURAL SPECIFICATIONS**

**Concrete Construction**

- Concrete shall be hard rock concrete (5 sack cement per cu yd min.) and meet the following minimum ultimate compressive strengths at 28 days:
 

Location	Min. Strength 28 Days PSI	Aggregate Size-Inches	Slump, Inches	Tolerance
Slab on Grade	2,500	1" #4	3 1/2"	+ 1/2"
Foundations	2,500	1" #4	3 1/2"	+ 1/2"
- Concrete mix design and testing shall meet the requirements of Section 1903, 1905 and 1701 of the 2001 CBC, and these specifications. Cement to be in accordance with ASTM 150 type II.
- Reinforcing steel shall conform to ASTM A-615, Grade 60 for #5 and larger bars and Grade 40 for #4 and all dowels and ties. Steel shall be kept clean and free of rust. Submit shop drawings for review prior to installation.
- Welded wire fabric shall conform with ASTM A-185, and shall be lapped 12" minimum.
- Slabs, beams, walls and other concrete shall be kept continuously wet for 48 hours, after placement, and shall be kept damp for 7 days after placement. Slabs shall have cure/sealer applied immediately after finishing if other finishes are not affected. When cure sealer can not be applied, slab shall be kept continuously wet or covered with curing paper. Cure shall be of a type that will not be detrimental to sealers to be applied later.
- Anchor bolts - A36 or A307.
- Mechanical couplers for reinforcing steel to be by Bar Lock.

**Structural Steel**

- Steel Grades:
 

WF Shapes & Plates	ASTM A-572 Gr 50 w/ req. per AISC Technical Bulletin #3 dated March 1997 (A-992 for WF)
C and L Shapes	ASTM A-36
Pipes	ASTM A-53 Grade B fy=35ksi (36ksi effective)
Round HSS	ASTM A-500 Grade B fy=42ksi
Square and Rectangular HSS	ASTM A-500 Grade B fy=46ksi
Machine Bolts	ASTM A-307 (MS)
High Strength Bolts	ASTM A-325 (HSS)
- Workmanship and details shall conform to the AISC specifications and the CBC unless noted otherwise.
- Bolt holes shall be 1/16" larger in diameter than the bolt.
- Welding electrodes shall meet AWS requirements and electrodes shall be E70XX for shielded metal arc, F7X-EXXX for submerged arc (shop welds only), ER70S-X for gas metal arc and EXXX for flux core (unless noted otherwise).
- All structural welds shall be inspected and certified by a qualified testing agency. Certification shall be submitted to the Architect and the Building Department.
- Temporary shoring and bracing shall be used and shall be adequate for all loads to which it may be subjected. Leave temporary bracing and shoring in place as long as may be required for safety, AND until final framing construction is completed.
- Grout under column base plates to be Master Builders Emenco #713.
- Drilled expansion concrete bolts are Simpson Wedge All, Hilli Kwik Bolt II, ITW/Ranset TuboL. Concrete inserts and ferrule loop inserts are by Burke Concrete Company.

**Wood Construction (Carports) Summary - See Project Manual**

- Minimum grades of sawn lumber (unless noted otherwise): Posts and beams 4x and larger to be DF #1. Joists, rafters and 2x8 studs to be DF #1. 2x4 studs, 2x6 studs and plates to be DF #2. Beams and posts to be free of heart center (FCHC).
- It shall be the responsibility of the Contractor to ensure that the maximum moisture content of wood at the time of installation shall be not more than 22% at loading shall be not more than 14%, at close-in shall be not more than 15%.
- Nails to be of common wire where nailing is specified on the drawings. Cement coated sinker nails may be substituted for 16d common nails. Nails used in exterior applications to be galvanized. Pre-drill nail holes where wood tends to split.
- Metal framing clips, hangers, etc. are by Simpson Strong Tie, 4120 Dublin Blvd. #400 Dublin, CA, Catalog C-2002. Nailing shall be in accordance with the manufacturer's instructions with a nail provided for each punched hole.
- Bolts shall be unfinished machine bolts per ASTM-307. Length of bolts shall be such that the bolt projection is not less than 1/16" nor more than 1/2" past end of nut. Bolt holes in wood shall be 1/32" larger than bolt sizes (UNO). Provide washers under head and nut where bolt heads would bear on wood. Nuts shall be tightened when placed and retightened before closing in of walls or other construction. Do not crush wood when tightening.
- Wood against CMU or concrete shall be pressure treated douglas fir (PTDF).

**Plywood Sheathing Summary - See Project Manual**

- Structural plywood shall conform to PS1-95, stamped and graded by APA, with exterior glue. Plywood sheets shall abut along centerline of framing member with nailing spaced not less than 3/8" from edge of sheets. Gun nailing and nails to be approved by the Engineer prior to use. Plywood nails of common wire with full round heads are required.

**Glue-Laminated Beams Summary - See Project Manual**

- All glue-laminated beams shall be Douglas Fir, Combination 24F-V4 for simple spans; Combination 24F-V8 for continuous beams and cantilevers. Appearance to be architectural where in permanent view and industrial otherwise, manufactured with exterior glue conforming to the 2001 CBC 2303. Provide AITC certificate of inspection or equivalent to Architect and Building Department prior to erection. Glue-laminated beam cambers are as specified on drawings. No camber shown means no camber to be provided.

**B GENERAL NOTES**

- Design Criteria: 2001 California Building Code  
 Wind Loads: 80 mph, Exposure C (enclosed), I = 1.0,  
 Seismic Loads: Seismic Zone 4, I = 1.0, Soil Profile Type = S<sub>1</sub>,  
 Seismic Source Type = A, Distance to Seismic Source = 7km.
- Refer to sheet "S1.0" for standard details of construction. Refer to the project specifications for materials and methods.
- Building dimensions shown are for general reference only. See Architectural drawings (SAD) for all actual building dimensions. Any discrepancies are to be brought to the attention of the Architect/Engineer so clarification can be made prior to commencing work. All dimensions related to existing conditions shall be verified by the contractor and submitted in writing to the Architect/Engineer for review prior to construction.
- Drawings shall NOT be scaled. All dimensions and fit shall be determined and verified by the contractor prior to commencing work.
- Details not fully or specifically shown shall be of same nature as other similar conditions.
- Refer to Architectural drawing for sidewalk slabs and dimensions.
- Elevations on plans and details "E" are to heights above finished ground floor elevation reference 0'-0".
- Coordination of Mechanical, plumbing, electrical, and site utility systems with the structural system is the responsibility to the General Contractor. Use details 4 and 11. At conditions where these details do not appear to apply, notify the Structural Engineer prior to installation. At conditions where field modifications of mechanical, plumbing, electrical or site utilities affect structural systems, notify Structural Engineer prior to installation.
- Verify weights and locations of mechanical units with Mechanical Engineer prior to placement. Units varying over 10% in weight shall be reviewed by the Structural Engineer prior to installation (mechanical weights shown are maximum). Contractor to verify mechanical unit sizes and weights as installed prior to installation of special framing to ensure correct placement directly under curbs, etc.
- Shoring and bracing design, materials and installation shall be provided by the General Contractor, and shall be adequate for all loads. Leave in place as long as may be required for safety and until final structural construction is completed.
- Special inspection for the following items are required per 2001 CBC Section 1701, and the T&E list:  
 A. Epoxy holdown anchors into existing foundation.

**C FOUNDATION NOTES**

- All soils work shall be done in accordance with the specifications, the requirements of the Geotechnical Report noted below and Chapter 18 of the 2001 CBC. Foundation design pressures are 2,000 psf DL + LL. All foundations shall bear on firm, undisturbed, native soils or engineered fill at or exceeding depths shown on the drawings. Increase depth as required by Geotechnical Engineer. All footing excavations shall be as neat as practicable. Over-excavations in depth shall be filled with concrete, and in width may be filled with lean concrete or compacted approved backfill. All loose soils shall be removed from excavations prior to placement of reinforcing or concrete. Geotechnical Report by:  
 MILLER PACIFIC  
 SAN RAFAEL, CA  
 DATED 9-10-03
- Use 5/8" diameter x 12" (18" at curbs) anchor bolts (AB) at 48"oc where not otherwise noted. See shear wall schedule for additional requirements. Anchor bolts are to be tied in place prior to placement of concrete. All anchor bolts require 3/16" x 2" square plate washer at foundation sill plate.
- Typical Slab: 5" concrete reinforced with #3 @ 12"oc each way mid-depth over 2" sand, 10 mil Vapor barrier, and 4" minimum free draining compacted crushed rock on subgrade per the specifications, and Geotechnical recommendations as approved by the Geotechnical Engineer.
- Provide control joint per plan and (S1.0) (15'-0"oc max. UNO). Submit joint layout plan for review prior to placement.
- SW ◊ refers to shear walls. See Shear Wall Schedule (E) and notes for specific requirements, and the plan for location.
- Do not undercut existing foundations. Notify Engineer for review and possible revisions, if existing foundation conditions are not as shown.

**D WOOD FRAMING NOTES**

- Headers, beams, posts, and etc., are per (S1.0) and (S1.0) where not noted on plan and details.
- All beams and joists shall be seat cut for full uniform bearing at supports, beam seats and column caps.
- The General Contractor shall measure glulam beam sizes and cambers as delivered to the job site and shall report his findings to the Engineer prior to erection. No camber shown means no camber to be provided. (S1.0) indicates camber (S10 = 3000' radius).
- Typical Roof Sheathing: 1/2" APA rated sheathing (32/16) Exp 1 CD with 10d @ 6"oc edges (PEN) UNO on plan. Note: 2x T&G provide blocking at all edges.
- All nails to be of common wire with full round heads. When nails to be used for rough framing are specified, cement coated sinker nails may be substituted for 16d common nails UNO. Nail length to be sufficient to meet UBC penetration requirements. Nails must not be overdriven. All nailing not noted or detailed otherwise per UBC Table 23-B-1 or sheet "S1.0" standard details.  
 8d = 0.131" shank diameter  
 10d = 0.148" shank diameter  
 16d = 0.182" shank diameter
- Splice double top plates per (S1.0) UNO on plans and details.
- Stud walls are 2x6 @ 16"oc UNO.
- For roof drainage, top of framing between noted points is a straight line.
- All mechanical supply and return openings to be between framing UNO.
- TS or pipe column at ends of walls or at wall openings are to be trimmed with stud attached to column with 1/2" diameter stud bolt or carriage bolt @ 32"oc and 12" from ends. Refer to details for other requirements.
- Indicates TS column  
 Indicates wood post
- Joists and rafters are per plan, with "U" hangers (skewed as required) at flush beams UNO. Hanger size to be correct full size for joist size (i.e. U210 for 2x10). Solid block 2x2 joists at 8'-0"oc maximum. Hangers for panelized roof construction are per plan.
- Provide double floor joists at all parallel walls and blocking at all perpendicular walls.
- Round holes in steel plates to be 1/16" oversize. Slotted holes in steel plates shall be 1/16" wider than the bolt diameter and have a length of 2 times the bolt diameter. The direction of the slotted length is indicated on the details (VSH or HSH). Install bolt at the center line of the hole. Bolt holes in wood shall be round and 1/32" oversize. Cut off bolt threaded end flush with nut when required by finishes and 1" maximum from nut otherwise.
- All bolted or nailed strap connections shall have an equal number of bolts or nails each side of the splice joint. The first bolt or nail from each side of the spliced or strapped member shall be equidistant from the splice. Straps using 16d nails on 2x material to be installed on the 1-1/2" edge of the member.
- Indicates PEN per note #4 and #5 above, along full length of member.
- The Contractor shall verify that the moisture content of all framing lumber and plywood meet the requirements of the specifications at the time of installation and at close-in. The Contractor shall provide allowance for differential shrinkage between floors, etc.
- Venting is required in enclosed framing areas. SAD. Drill blocking and ledgers and provide skip blocking as detailed.

**E SHEAR WALL SCHEDULE NOTES**

- PEN = Plywood edge nailing. Block all unsupported edges with 2x material UNO. Block edges with 3x material where nailing is 4"oc or less. See (S1.0) for nail stagger at all 3x's.
- Field nailing to be 12"oc UNO.
- All plywood nails to be common wire. See (S1.0) note #5 and specifications for other nail requirements.
- All exterior walls not designated as SW ◊ are to be sheathed with 15/32" ply (32/16) CD, EXP 1 and nailed with 8d @ 6"oc edges and 12"oc field.
- Shear wall lengths, where noted, are minimum. Do not locate hold-downs from these dimensions. SAD for actual wall lengths.
- HD refers to Simpson Strong Tie Co. hold-downs. Install per (S1.0) and (S1.0) UNO. Post for HD5A to be 4x minimum. Post for HD6A and larger to be 6x minimum. Post width to match stud wall width. See plans for other requirements.
- Edge nail wall ply to studs or posts with hold-downs.
- Portions of interior wall surfaces adjacent to specified shear walls shall be sheathed for the full, uninterrupted length per Note #4 or with gypsum board of the same thickness to provide an even wall surface for finish materials.
- Where panels are applied on both faces of a wall and nail spacing is less than 8"oc on either side, panel joints shall be offset to fall on different framing members or framing shall be 3x or thicker and nails on each side shall be staggered.
- Anchor bolts to have square plate washers per (S1.0) note #2 at foundation sill plates with spacing per schedule.
- No openings are allowed in Shear Walls unless shown on the Structural plans. Coordinate any openings not shown with the Structural Engineer.

SW	SHEATHING	NAILING (PEN)	ANCHORAGE (See note 10.)	REMARKS
◊	15/32" CD (32/16) EXP 1	10d @ 6"oc	4x @ 48"oc	
◊	15/32" CD (32/16) EXP 1	10d @ 4"oc	4x @ 32"oc	3x min at all ply edge splices & fdn sill plates
◊	1/2" STRUC 1 BOTH SIDES	10d @ 3"oc	4x @ 8"oc	3x min at all ply edge splices & for all posts

\* 2x foundation sill plate may be used if anchor bolt spacing is reduced by 1/4.

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 15 Keller Street  
 Berkeley, CA 94702  
 Tel: (415) 752-9777  
 Fax: (415) 762-4857

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 PROJECT NO. 9028  
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 CITY OF PETALUMA  
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STRUCTURAL NOTES

SO.1



NO.	DATE	REVISION	BY
9-11-03		DOOR AT GRID C	KZ
10-9-03		SPECIFICATION	KZ

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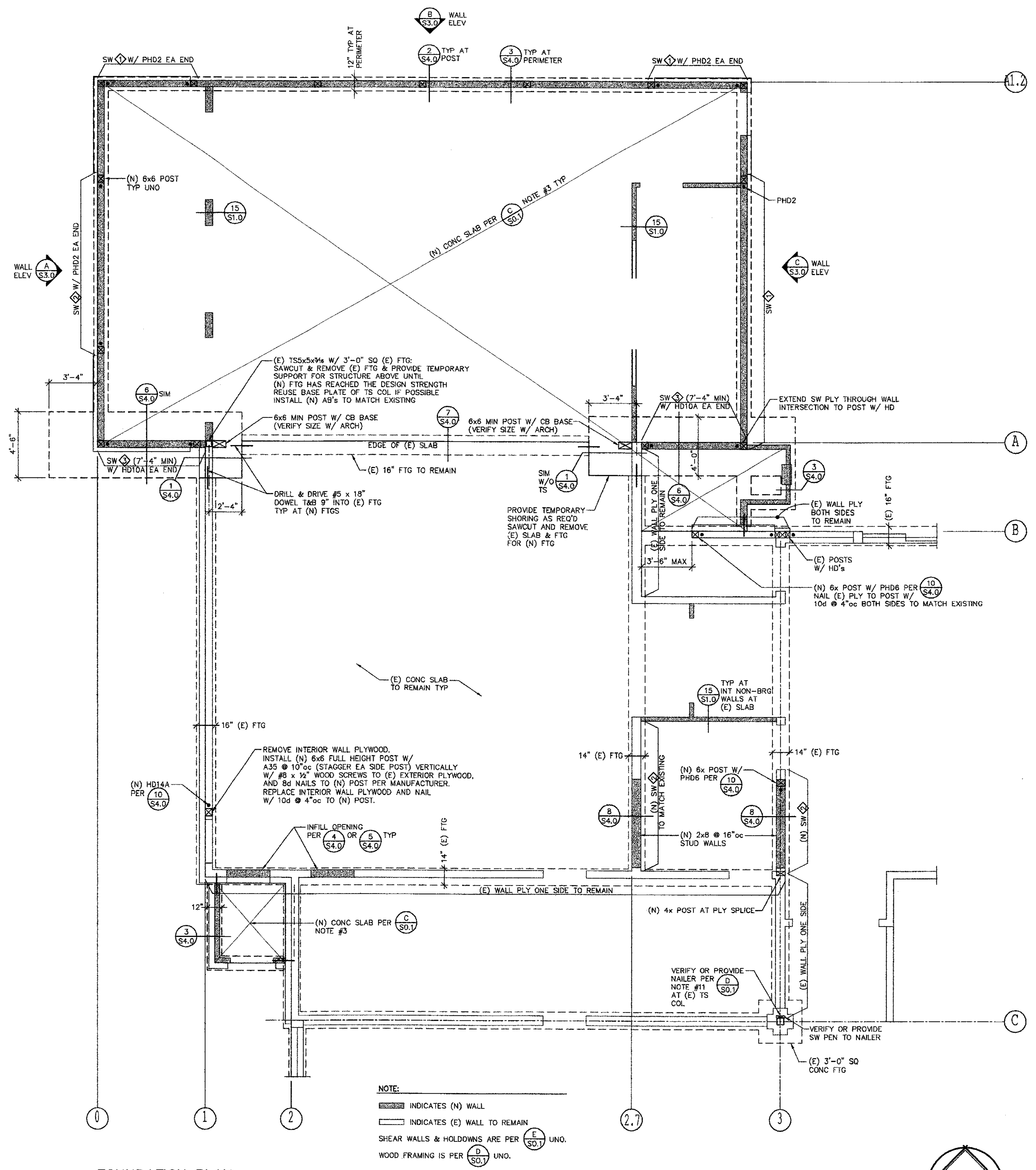
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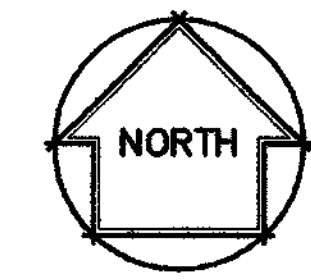
**FOUNDATION PLAN**

**S2.0**



**FOUNDATION PLAN**

SCALE: 1/4"=1'-0"



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 145 Keller Street  
 Petaluma, CA 94952  
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W:\Projects\2002 Projects\2003 Petaluma Library\S2-0-fund Nov 24, 03 - 8:55am By: jrfk



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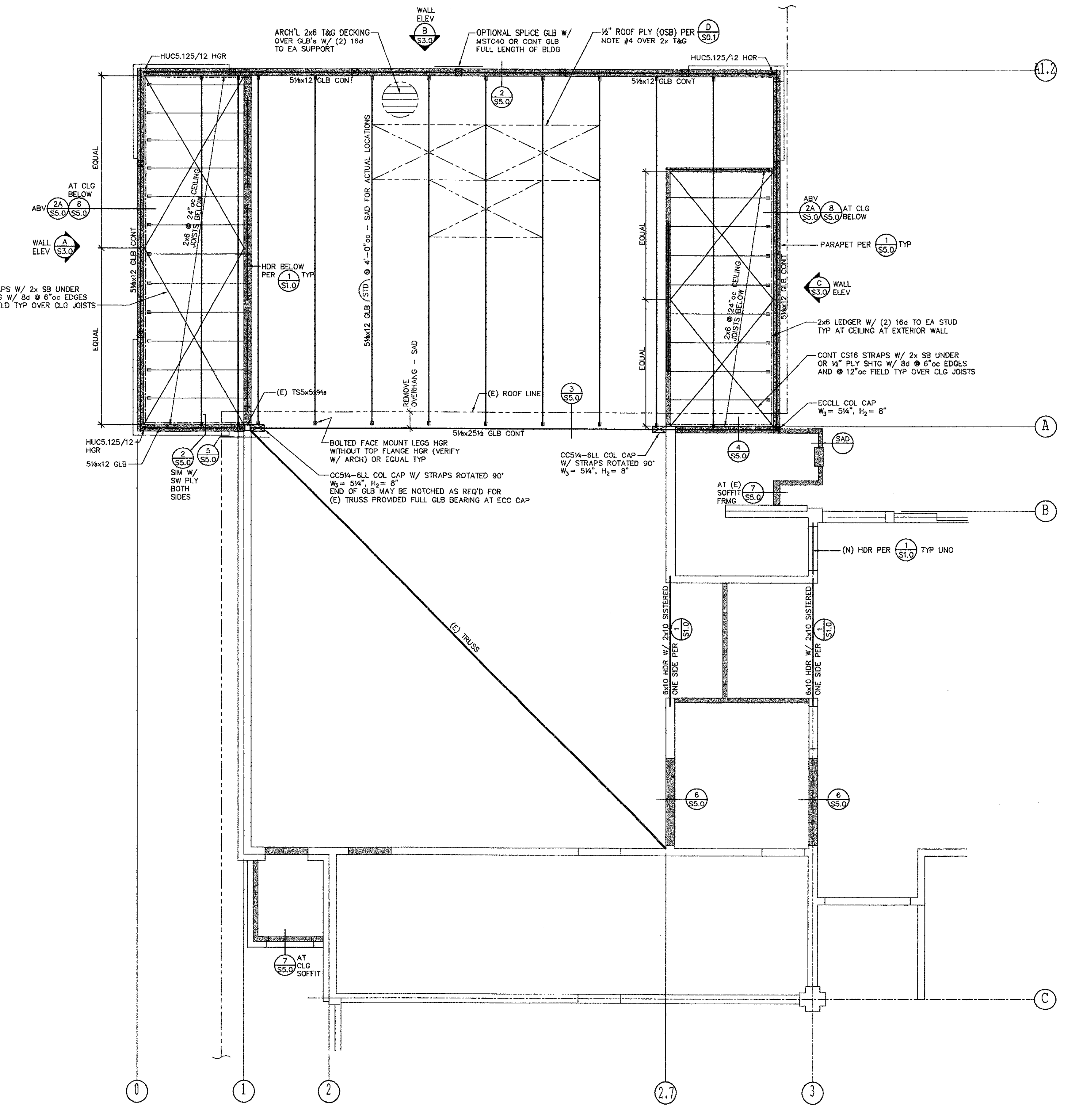
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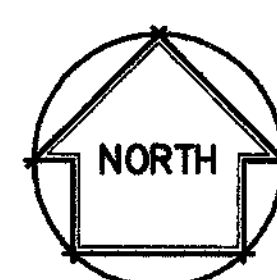
ROOF FRAMING  
PLAN

S2.1



ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

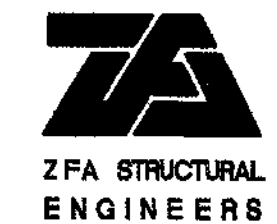


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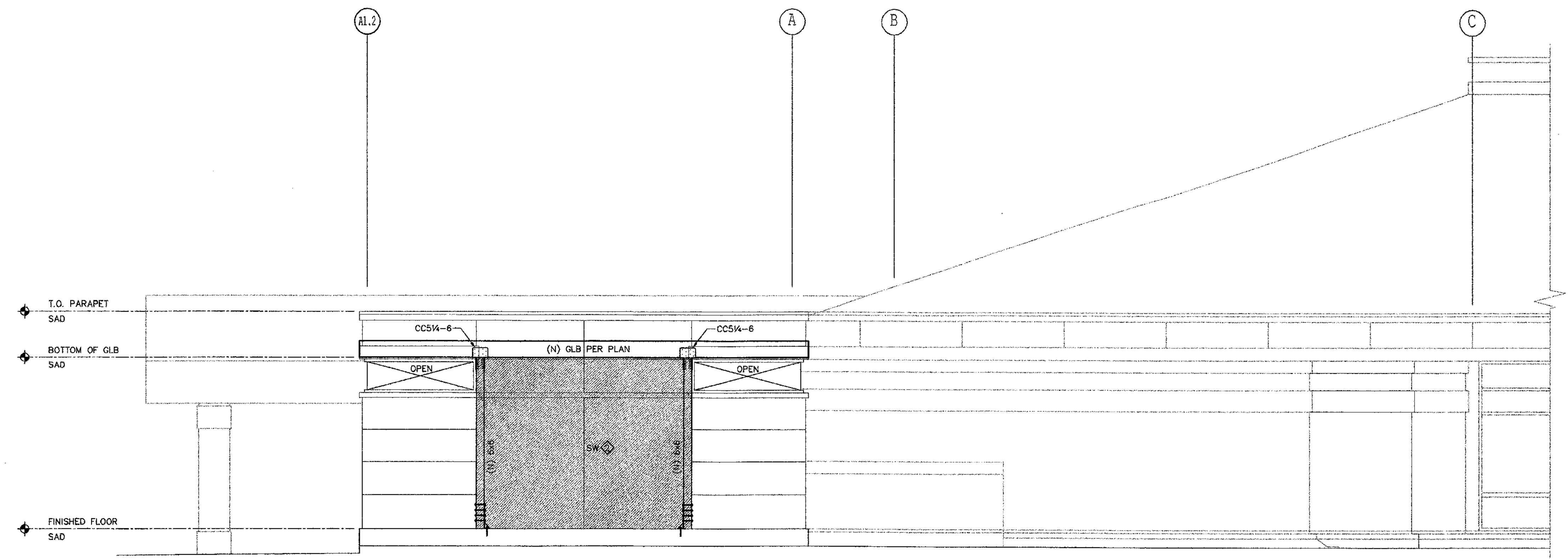
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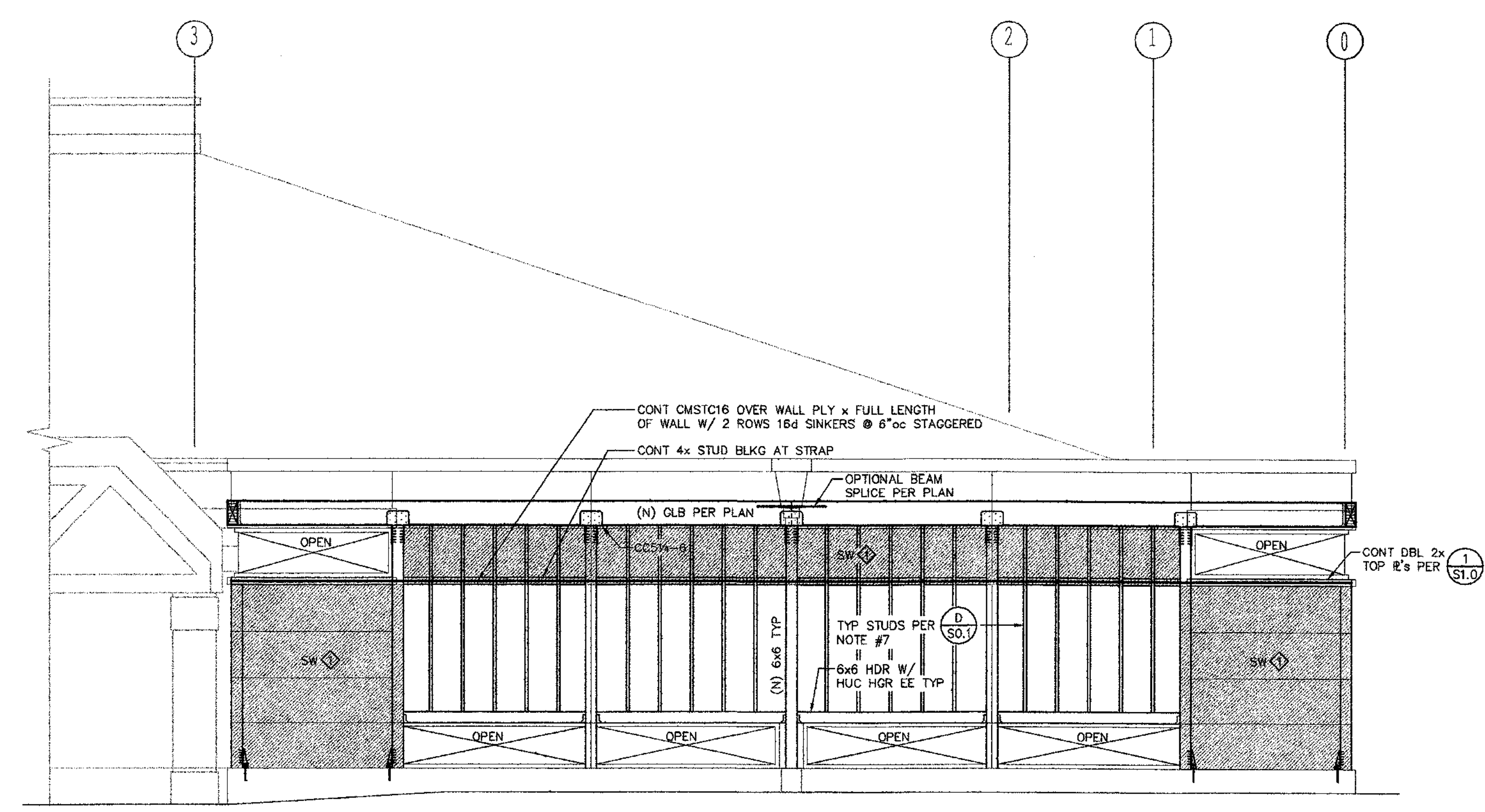
**WALL FRAMING ELEVATIONS**

**S3.0**



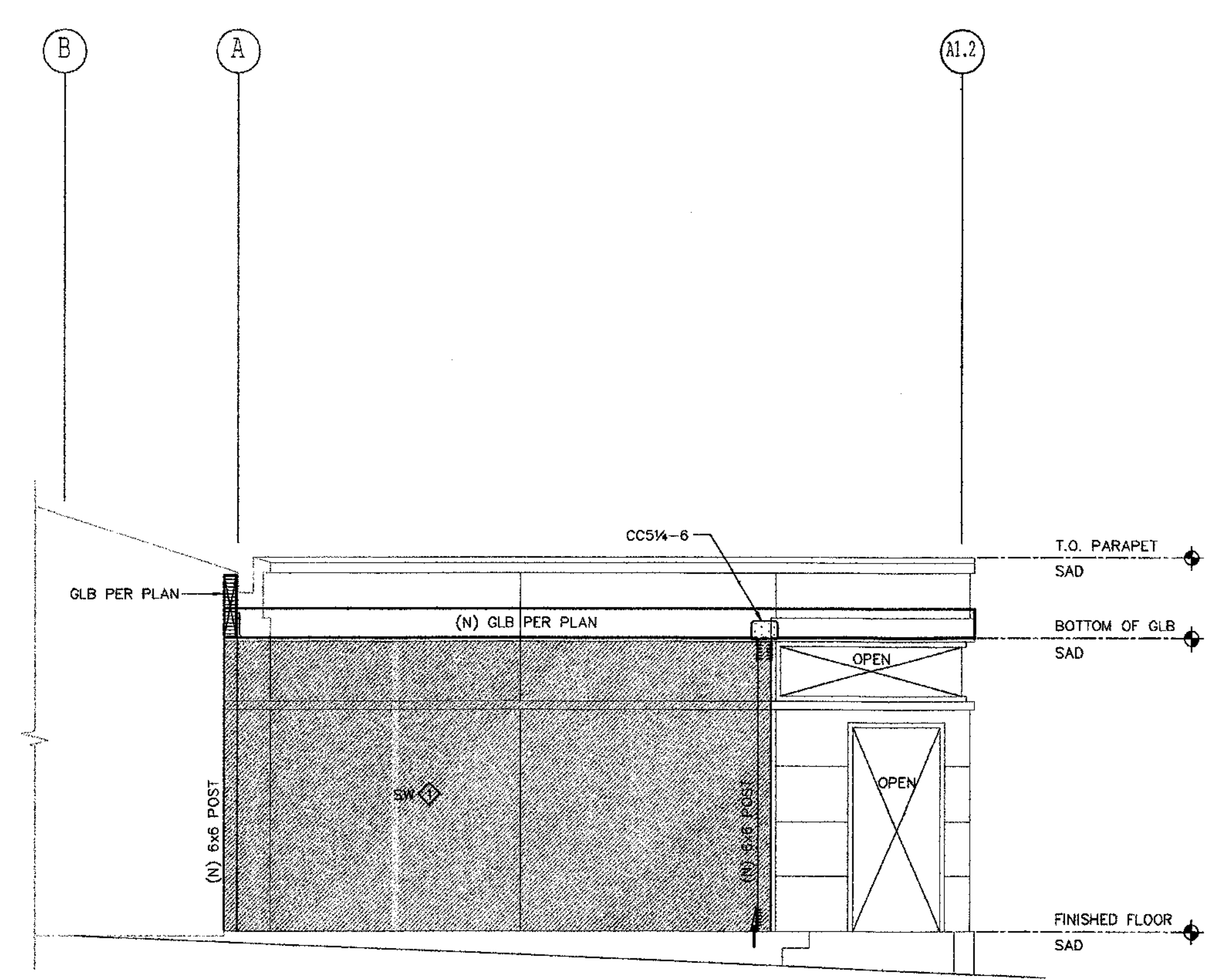
**A WEST ELEVATION**

SCALE: 1/4"=1'-0"



**B NORTH ELEVATION**

SCALE: 1/4"=1'-0"



**C EAST ELEVATION**

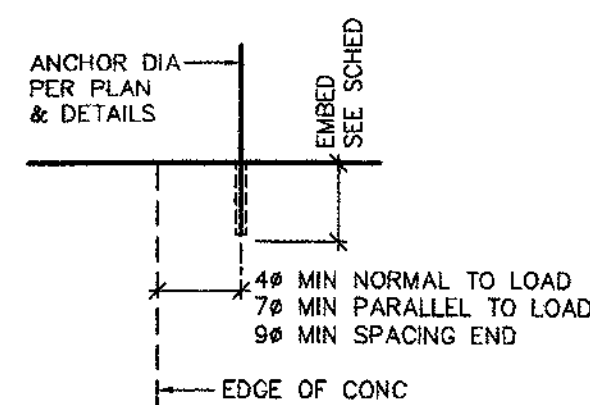
VAD Architecture  
 115 Keller Street  
 Petaluma, CA 94952  
 Tel: 707 762-7222  
 Fax: 707 762-4097

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 SCALE: 1/4"=1'-0"

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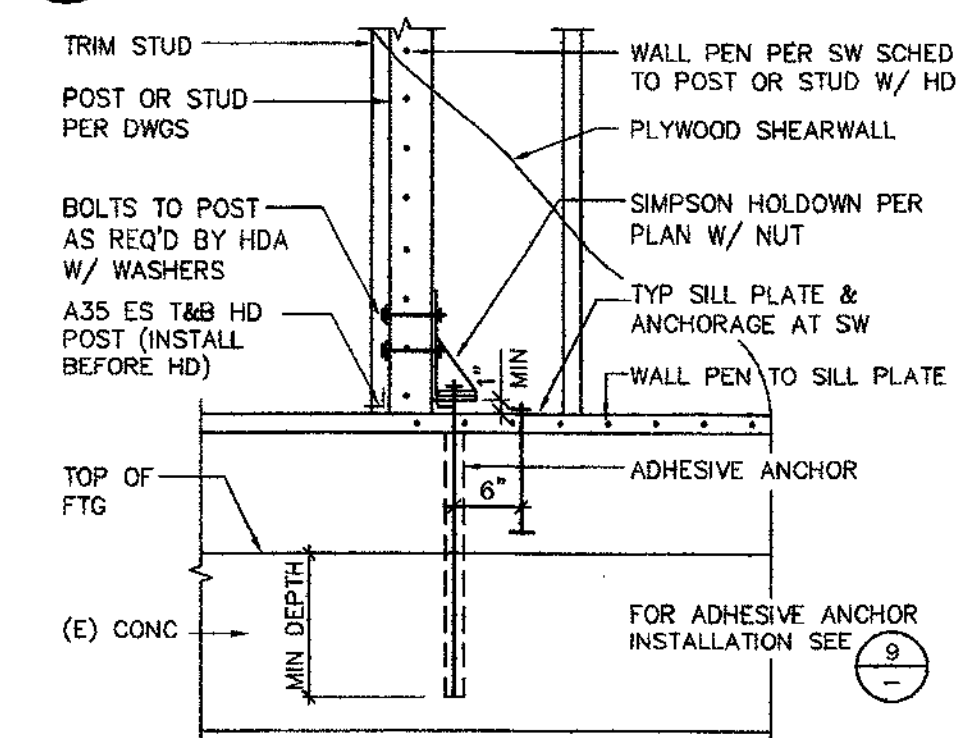
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ADHESIVE ANCHORS IN 2500 PSI MIN CONCRETE				
ANCHOR	MINIMUM	ALLOWABLE	LOADS#	
THIRD ROD	REBAR	EMBEDMENT	SHEAR	TENSION
3/8"Ø	#3	3 1/4"	1085	1970
1/2"Ø	#4	4 1/4"	1930	2839
5/8"Ø	#5	5"	3025	4320
3/4"Ø	#6	6 3/4"	4360	5511
7/8"Ø	#7	7 3/4"	5925	8575
1"Ø	#8	9"	7740	9848



- NOTES:**
- Install adhesive anchors per manufacturer's, ICBO report and the following instructions.
    - Drill hole 1/8" larger than anchor diameter.
    - Thoroughly clean hole with oil free compressed air and a nylon brush as required to remove particulate debris and to achieve a relatively dust free surface on hole sides. Holes are permitted to be damp but all standing water must be removed.
    - Material from the first two trigger pulls must be discarded, to ensure that only properly mixed product is used.
    - After the initial amount of epoxy has been discarded, completely fill the hole with the mixed adhesive.
    - Insert threaded rod or deformed steel reinforcement with a twisting motion to ensure coverage of the threads or bar surface with adhesive. Threaded rods or deformed steel reinforcement dowels must be free of oil, scale and rust.
    - Anchors should not be loaded until the cure time has passed, a minimum of 24 hours.
  - When drilling holes in existing concrete, use care and caution to avoid cutting or damaging the existing reinforcing bars. Maintain a minimum clearance of 1" between reinforcement and the drilled-in anchor.
  - Acceptable adhesive anchors are: Simpson Set, ICBO No. ER-5279; Hilti HY-150, ICBO No. ER-5193; based on a minimum concrete strength of F<sub>c</sub>=2500 psi.
  - Threaded rods to A36 or A307 minimum grades.
  - Values for shear and tension shown are full maximum values based on 14 diameters edge distance in the direction of load, 5 diameters edge distance normal to load, and 18 diameters spacing each way. Interpolate down for smaller edge distances and spacings per the standard calculation to a minimum of 7 diameters, 4 diameters and 9 diameters respectively.

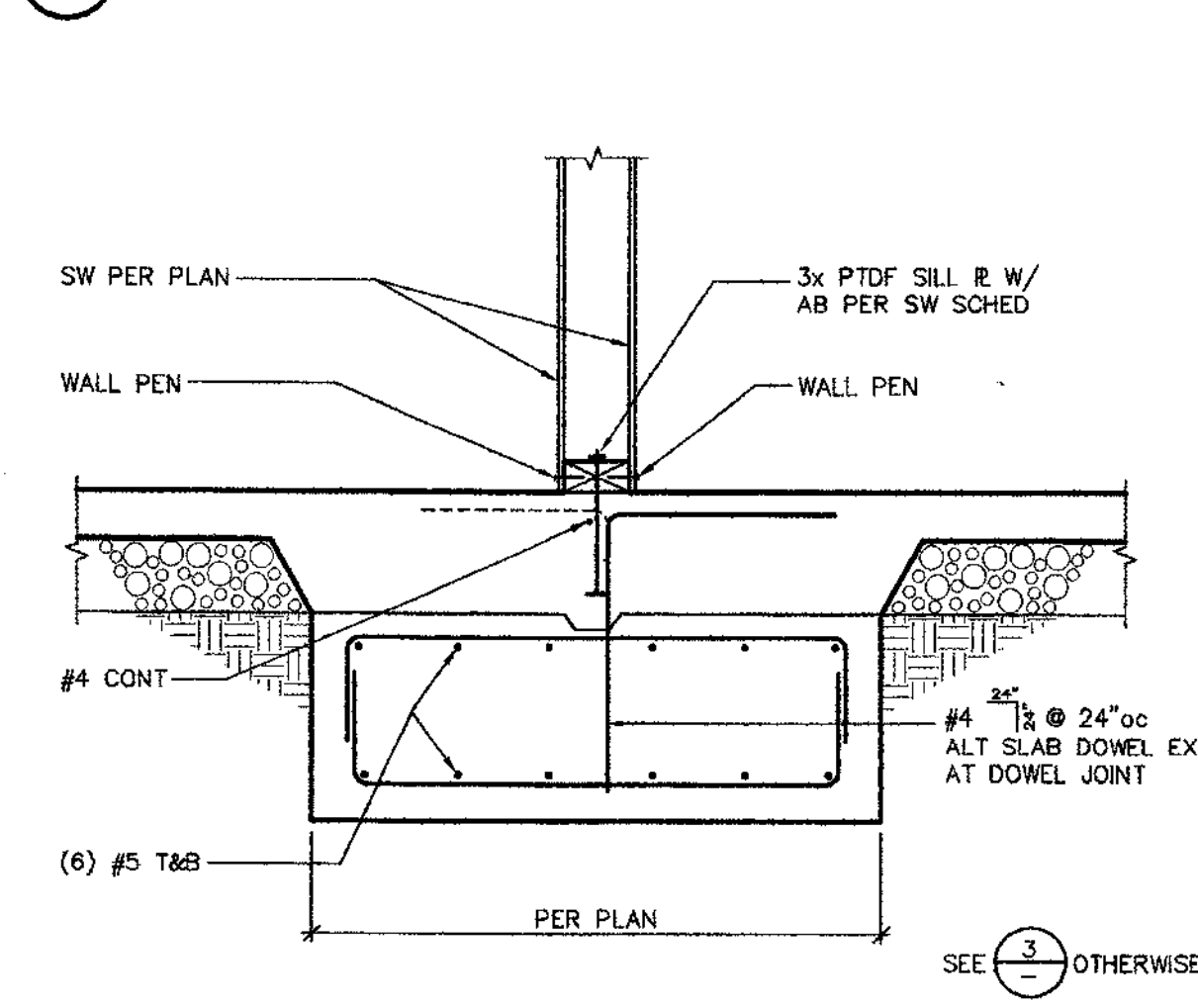
**9 INSPECTED ADHESIVE ANCHOR IN CONCRETE (ICBO)** 30-01-04



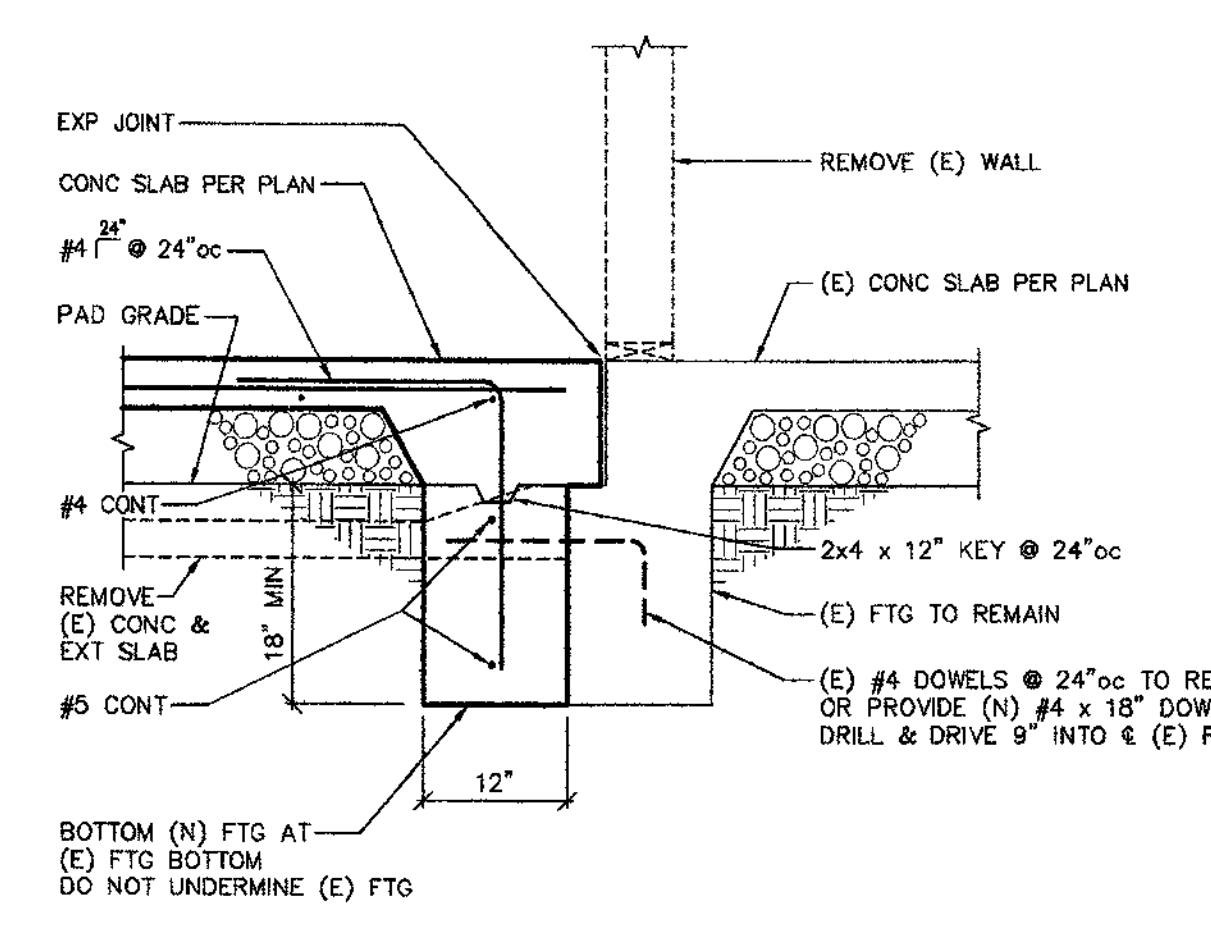
HOLDOWN	THREADED ROD	DEPTH	TEST
HD2A	3/8"Ø	12"	5520
HD5A	3/4"Ø	12"	7960
HD6A	7/8"Ø	15"	11020
HD6A	3/4"Ø	15"	15820
HD10A	3/8"Ø	15"	19800
HD14A	1"Ø	15"	-

**10 TYPICAL ADHESIVE HOLDOWN** 60-01-03

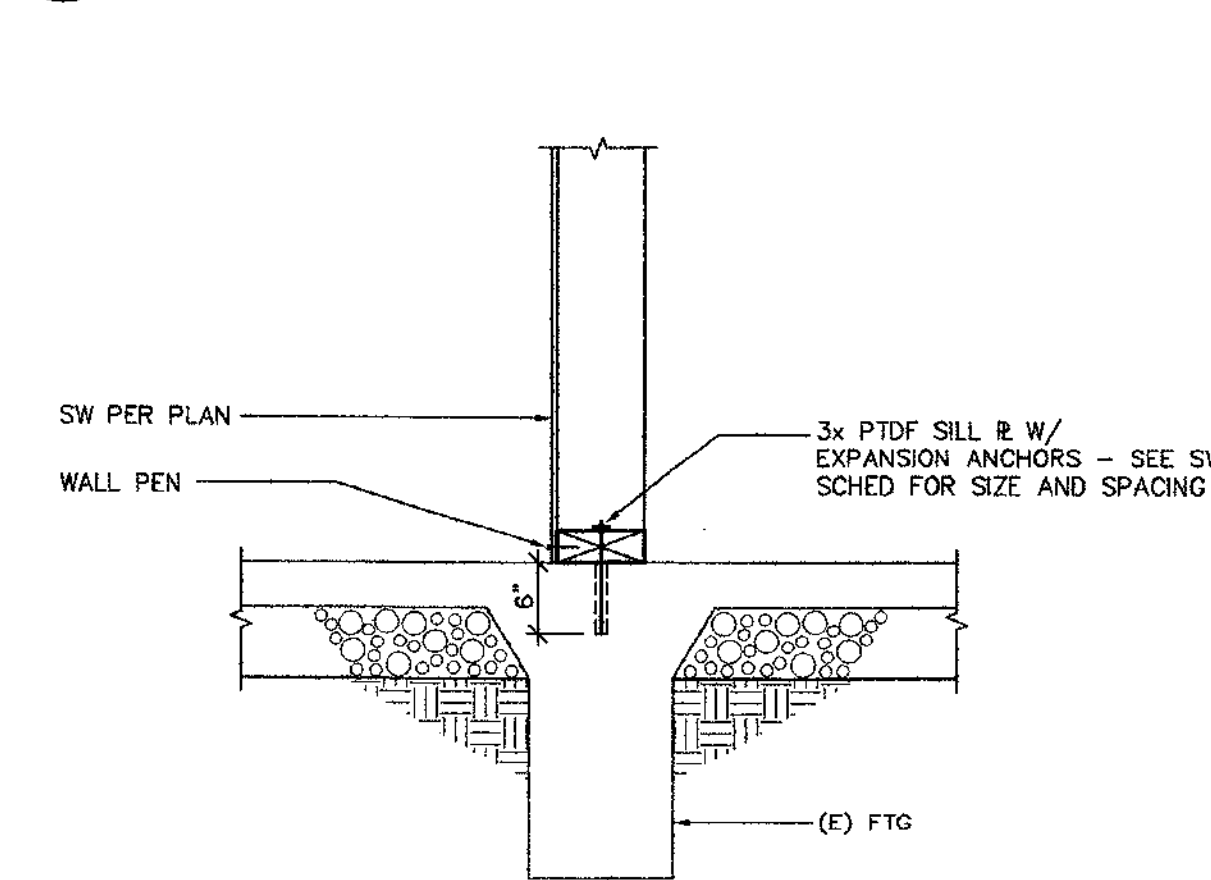
**5 DOOR INFILL AT EXISTING WALL** 76-01-04



**6**

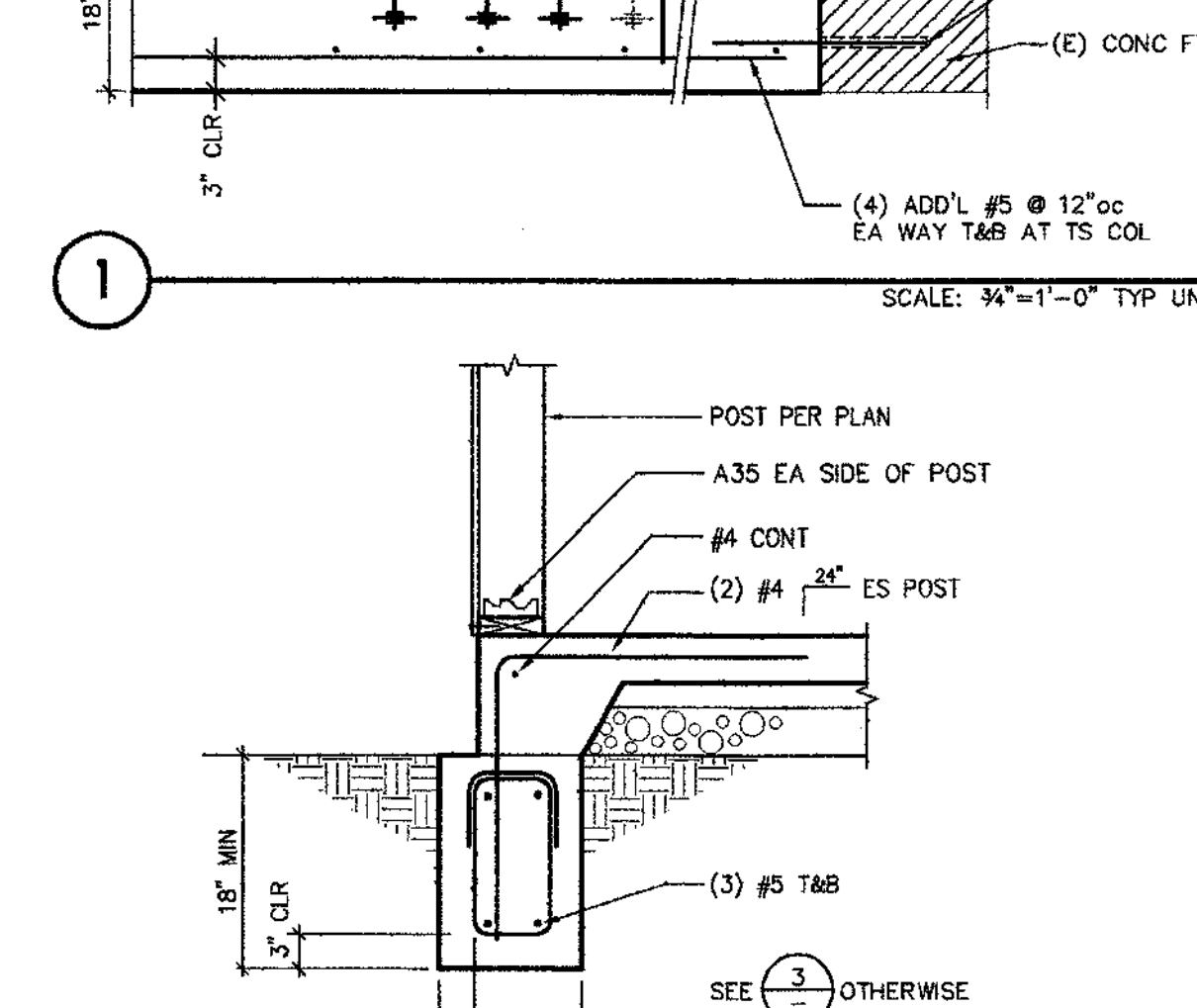


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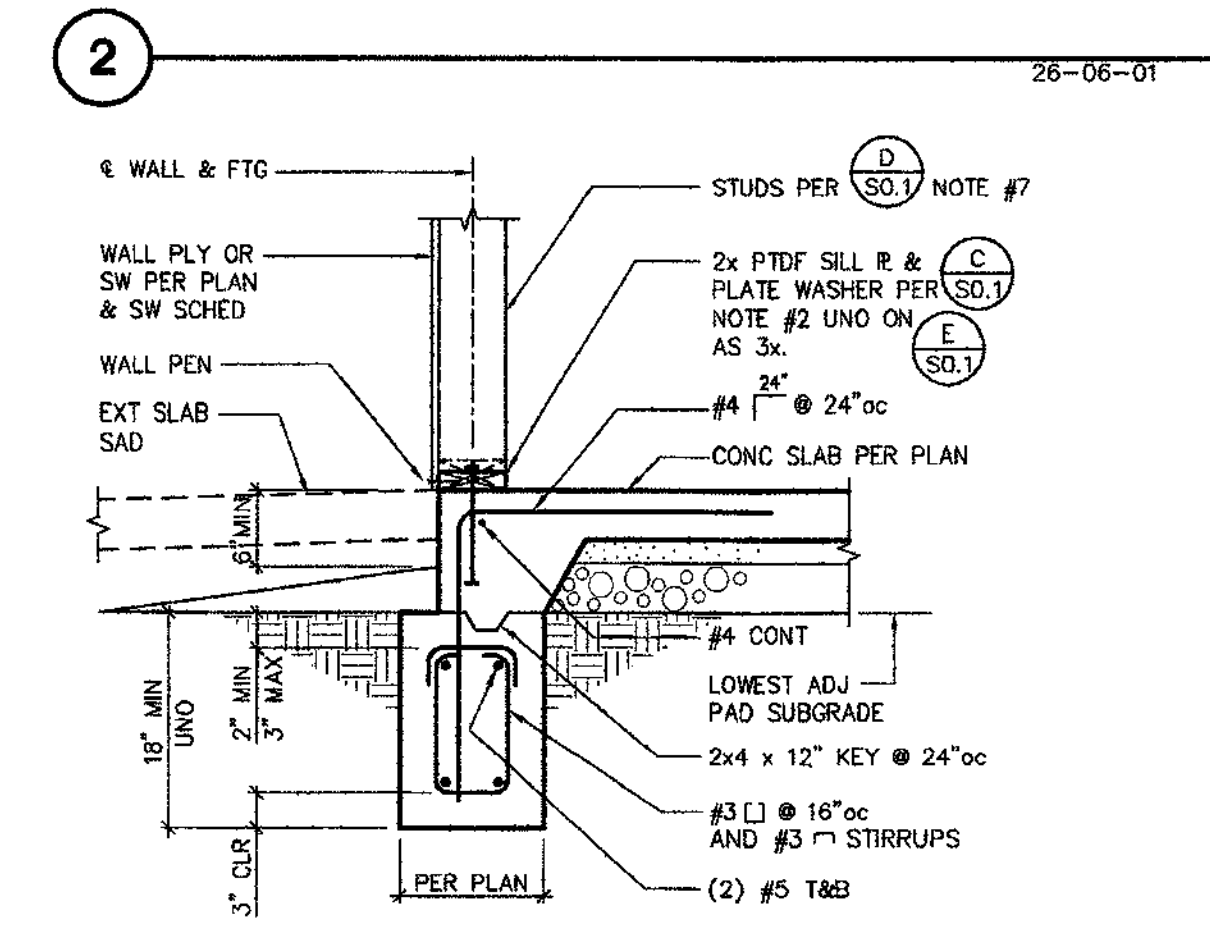


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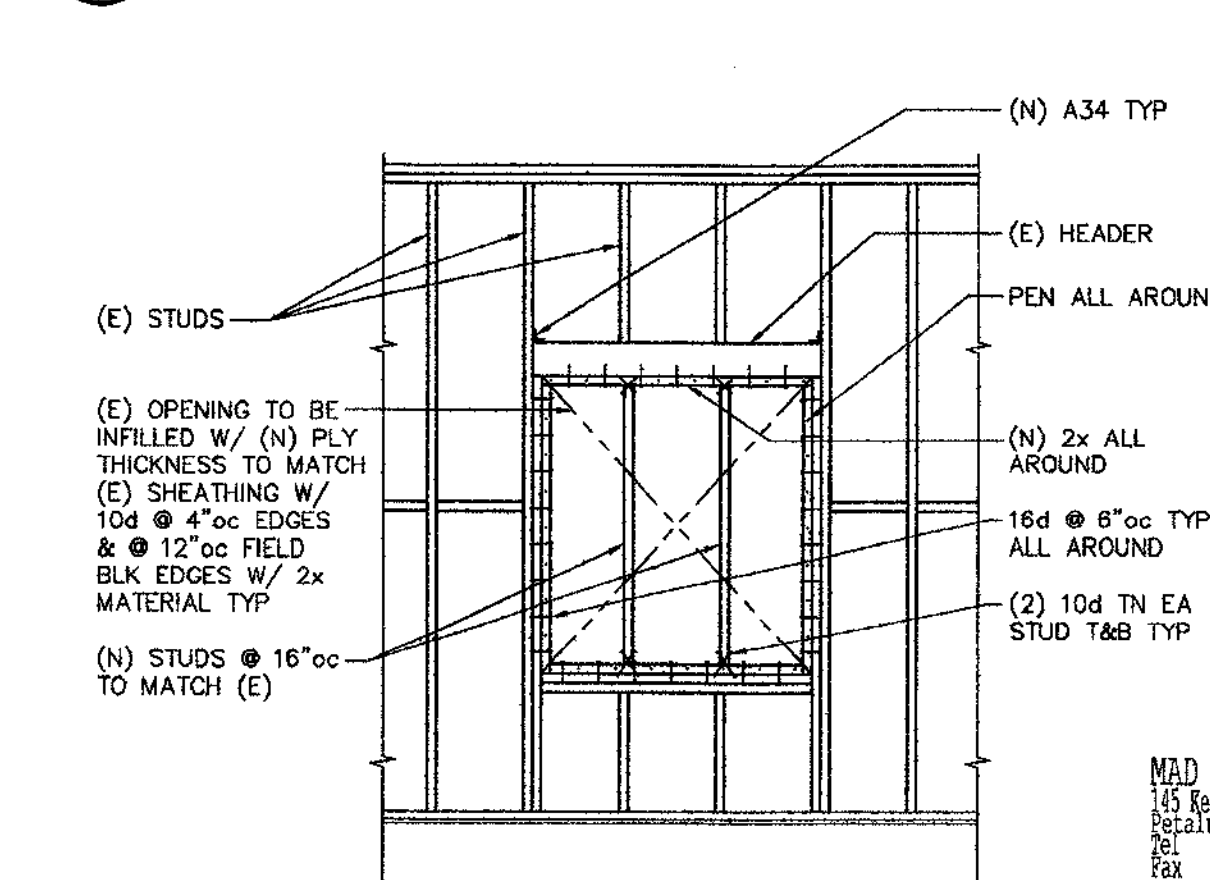
**1 WINDOW INFILL AT EXISTING WALL** 76-01-03



**1**



**2**



**3**

**4 WINDOW INFILL AT EXISTING WALL** 76-01-03

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Fax: 707 536-4851

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SUBMITTED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

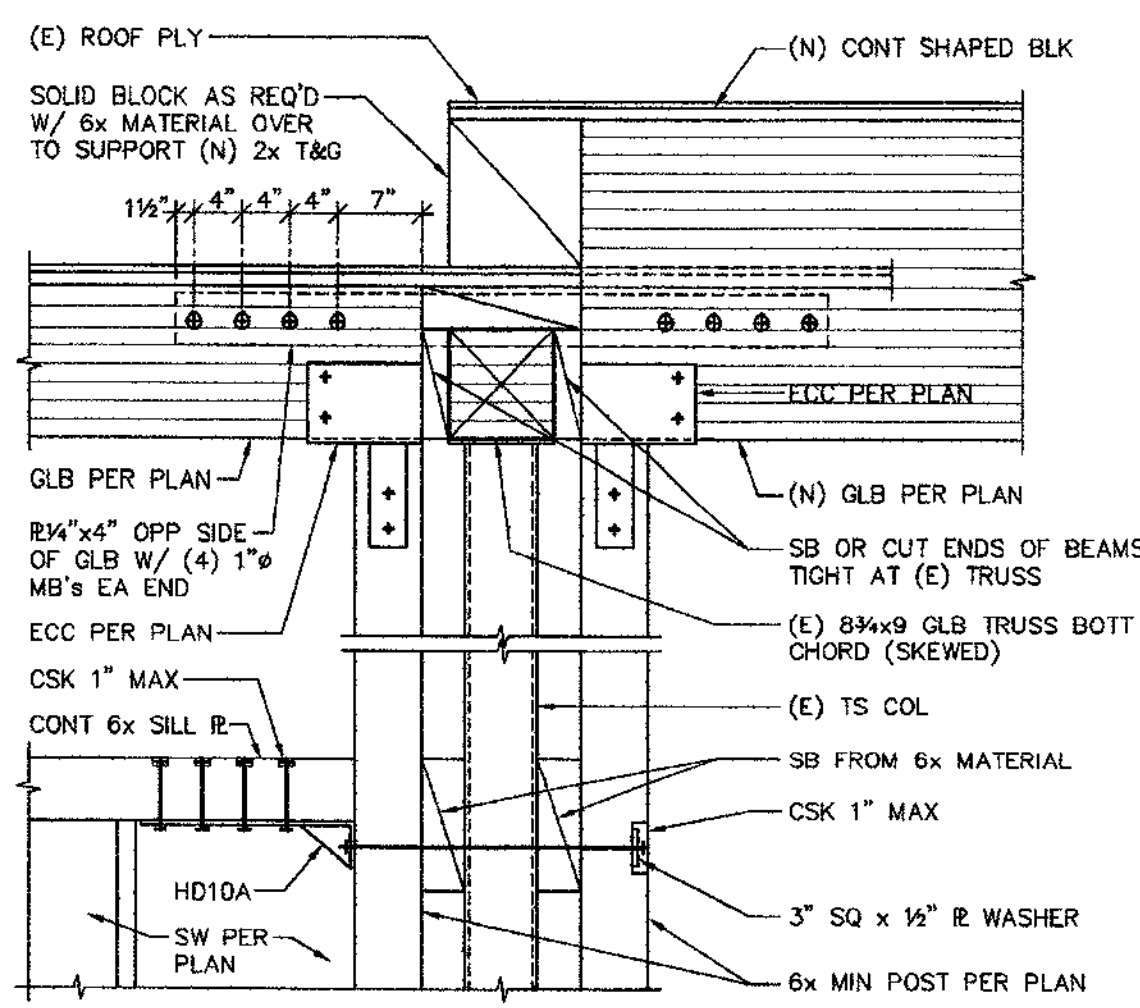
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 BIDDING NO. 02339

November 21, 2003  
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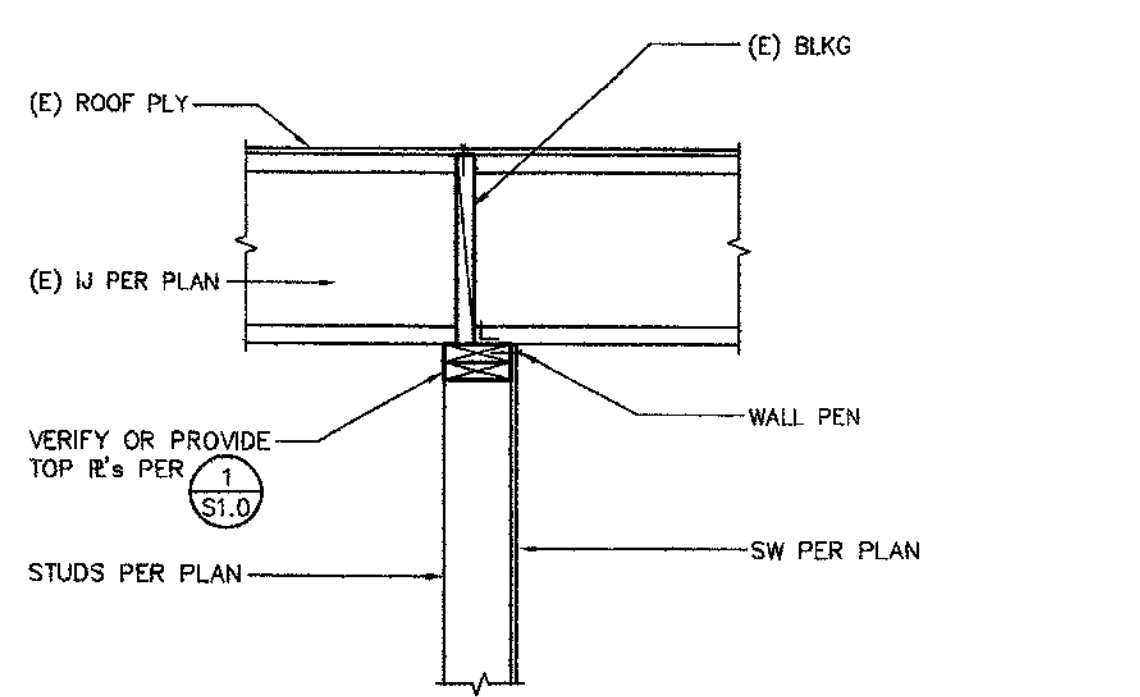
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**S4.0**

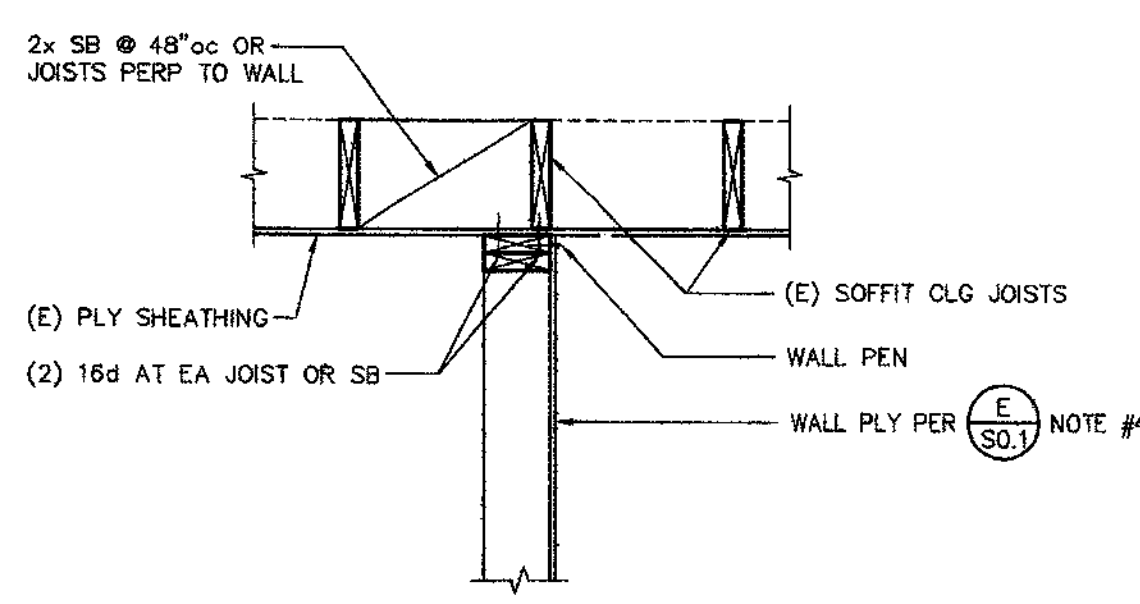
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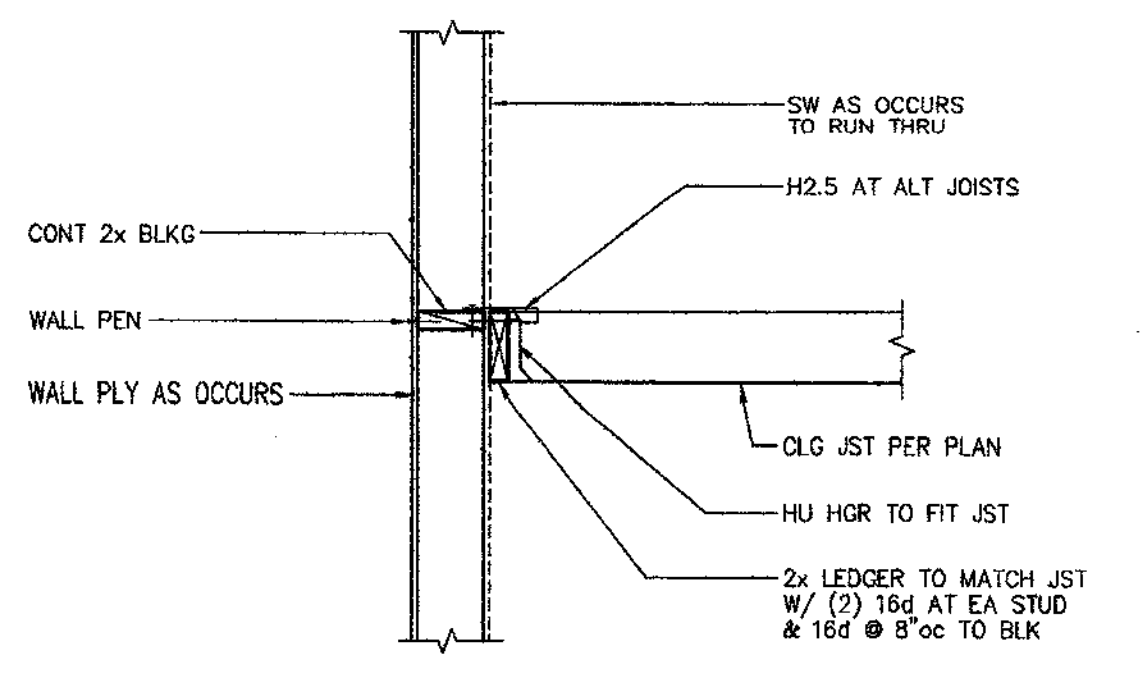
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**6** 61-32-02



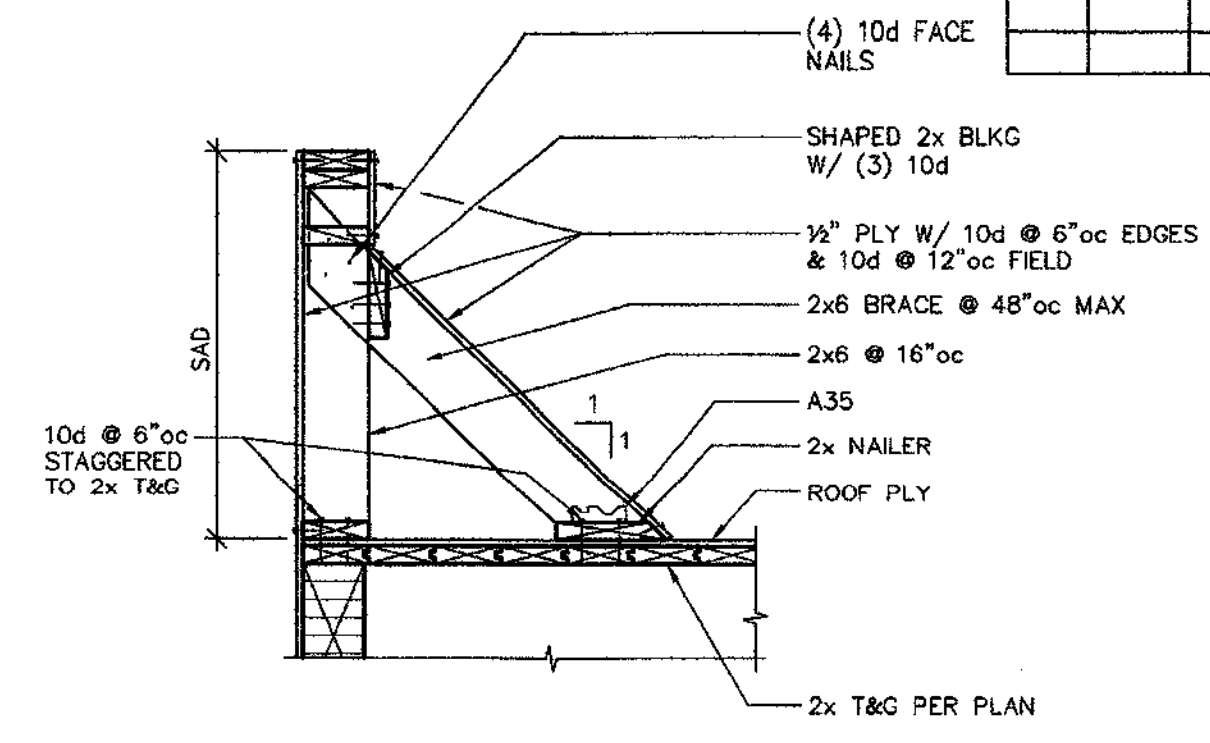
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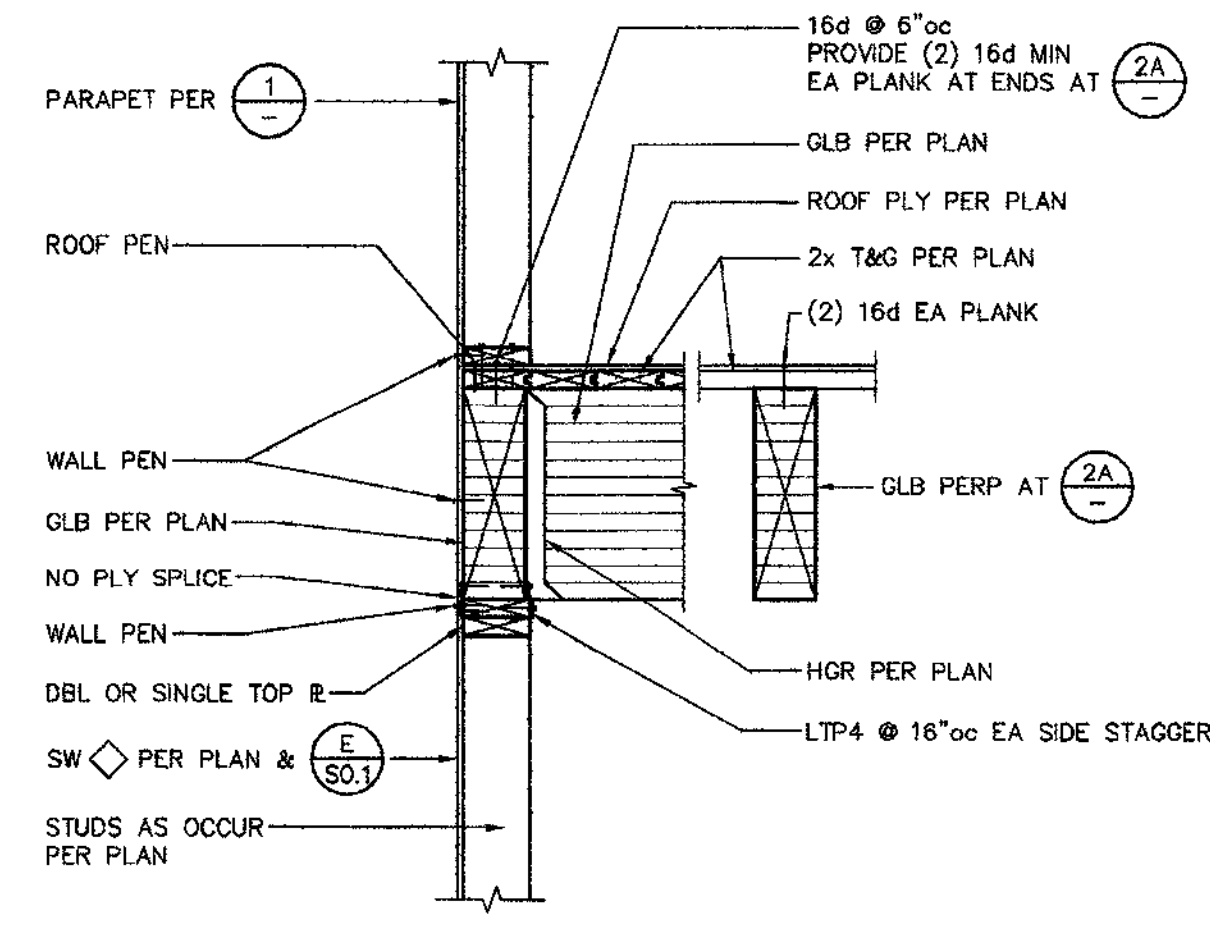
**8** CEILING JOISTS (SPAN TO WALLS) 60-10-02

NO.	DATE	REVISION	BY
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10-9-03		SPECIFICATION	KZ

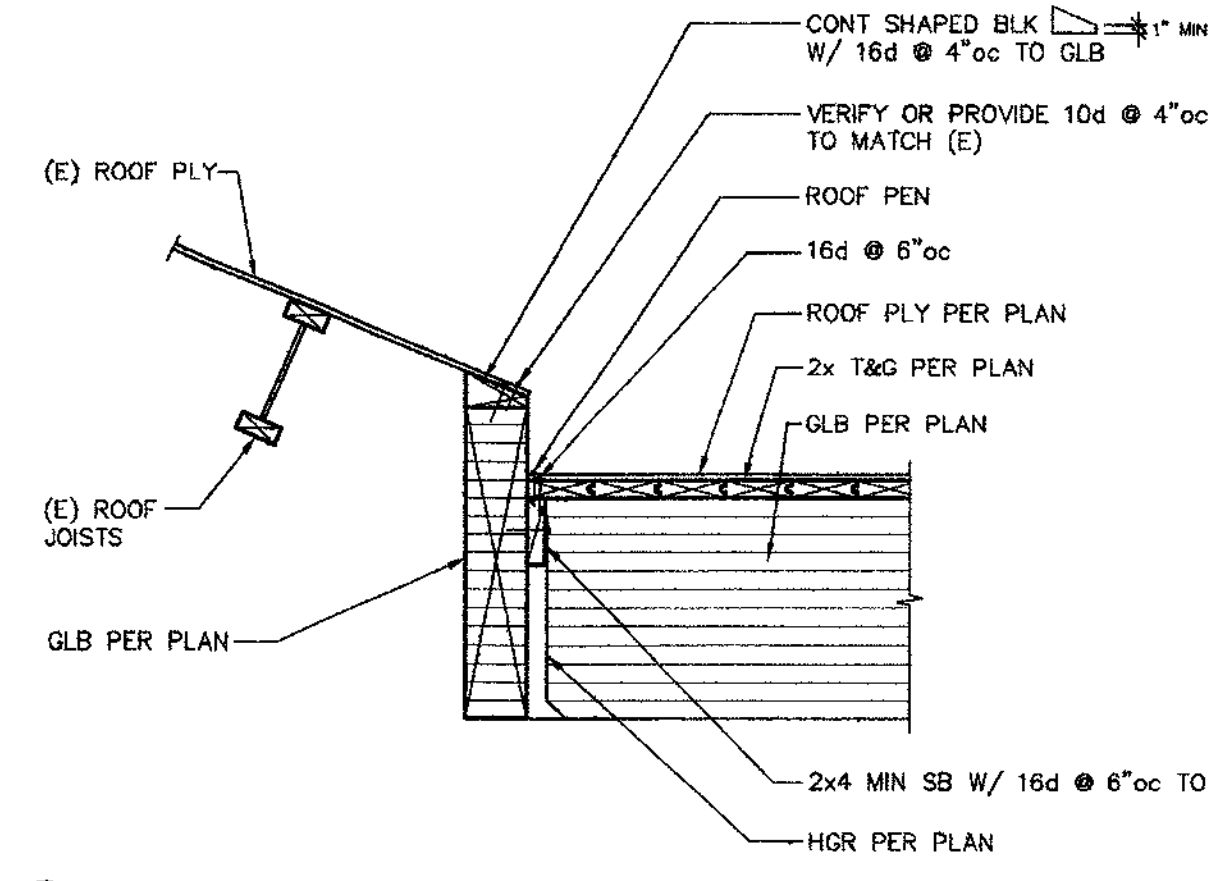
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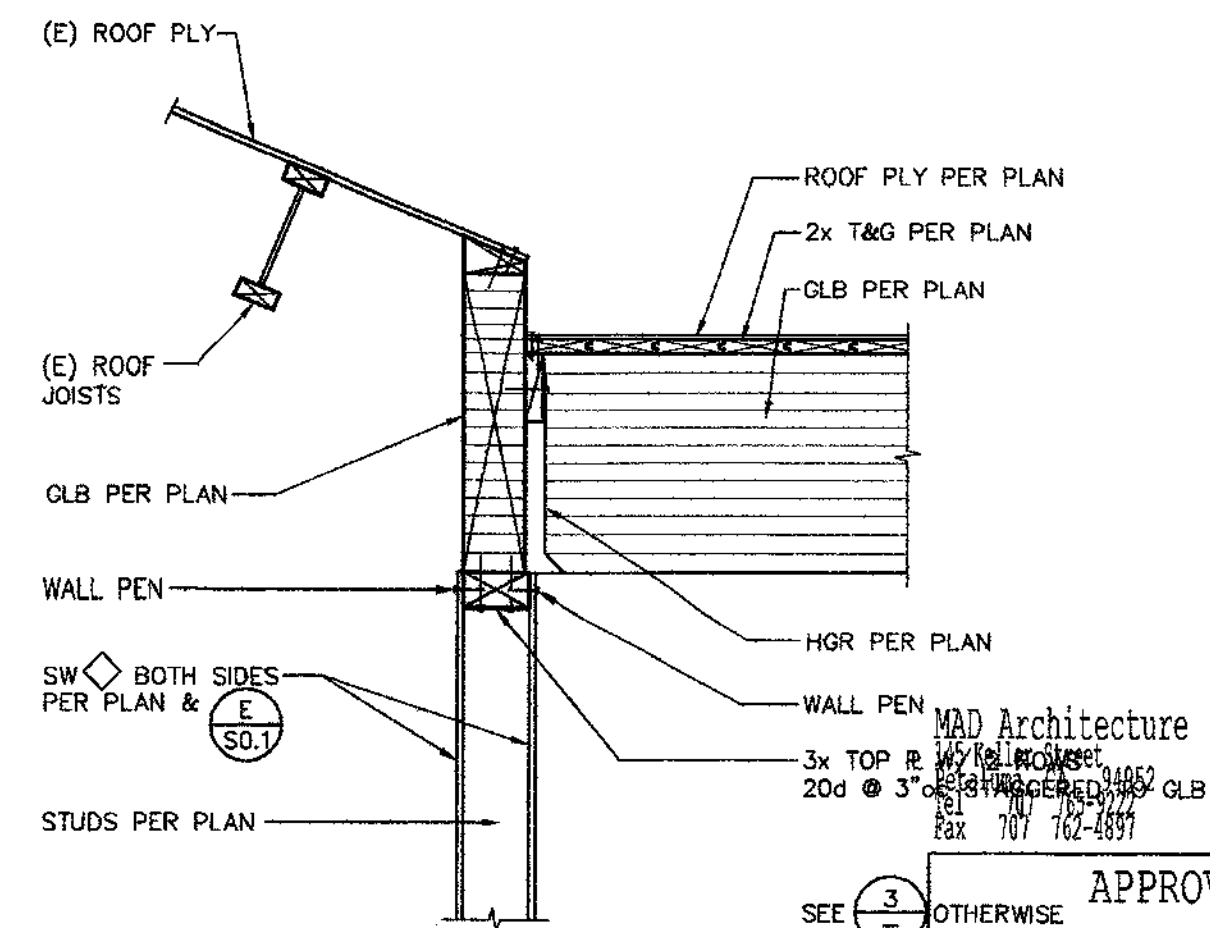
**1** PARAPET DETAIL SCALE: 3/4"=1'-0" TYP UNO



**2 2A**



**3**



**4**

MAD Architecture  
15711 W. 116th Avenue  
Suite 100, Redmond, WA 98073  
Tel: 206-881-1234  
Fax: 206-881-1234

APPROVED BY: \_\_\_\_\_  
ENGINEERING MANAGER DATE

DESIGNED BY: November 21, 2003  
 CHECKED BY: DAF  
 DRAWN BY: ZFA  
 BID SET  
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 CITY OF PETALUMA  
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 PROJECT NO. 9028  
 STRUCTURAL DETAILS  
**\$5.0**

NO.	DATE	REVISION	BY

DESIGNED BY: **W. L. ...**  
 CHECKED BY: **AS SHOWN**  
 DRAWN BY: **HS/2/221**  
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SYMBOL LIST, GENERAL  
 NOTES, SHEET INDEX  
 AND PANEL SCHEDULES

**E0.1**

### GENERAL NOTES

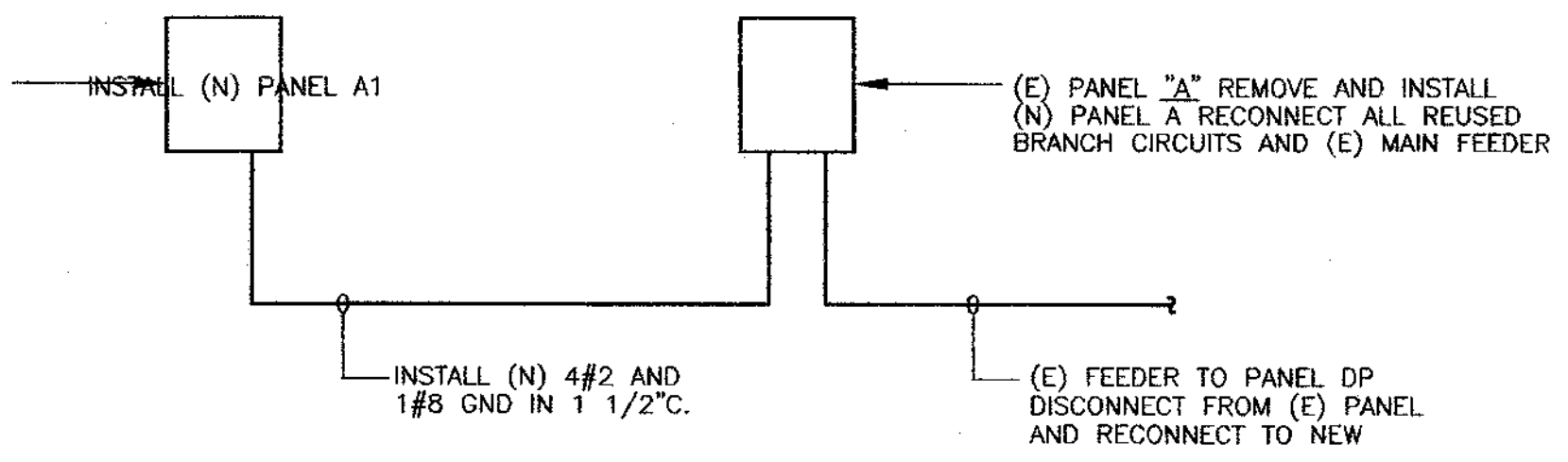
- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, (NEC) LOCAL UTILITY COMPANY REGULATIONS AND ALL STATE AND MUNICIPAL CODES AND ORDINANCES. ALL EQUIPMENT USED SHALL BE UNDERWRITER LABORATORY (UL) LISTED.
- CIRCUITRY AND CONDUIT ROUTING SHOWN ON THE PLANS IS DIAGRAMMATIC ONLY. THE CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS WHICH EXIST IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION WHEREVER INDICATED ON THE PLANS.
- COORDINATE ALL ELECTRICAL WORK WITH THE OTHER TRADES.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH THE MECHANICAL PLUMBING DRAWINGS AND THE CONTROL DRAWINGS. THE REQUIREMENTS OF ALL EQUIPMENT SHALL BE VERIFIED PRIOR TO THE INSTALLATION OF THE ELECTRICAL WORK.
- SEE THE MECHANICAL AND CIVIL DRAWINGS FOR ADDITIONAL EQUIPMENT AND WIRING AND CONNECTIONS BY THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY VOLTAGES AND HORSEPOWER OR KW RATINGS OF ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
- ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.
- ELECTRICAL CONTRACTOR TO INCLUDE IN HIS BID ALL LINE VOLTAGE TO MOTORS AND LOW VOLTAGE CONTROL WIRING IN CONDUIT TO MECHANICAL EQUIPMENT. ELECTRICAL CONTRACTOR TO REFER TO MECHANICAL DRAWINGS FOR CONTROL WIRING DIAGRAMS. EXACT LOCATION OF ALL DEVICES SHALL BE COORDINATED WITH THE REFRIGERATION AND CONTROLS CONTRACTOR FOR ALL CONTROL DEVICES.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE CUTTING AND PATCHING RELATED TO THE ELECTRICAL WORK UNLESS OTHERWISE NOTIFIED AND TO COORDINATE WITH THE GENERAL CONTRACTOR.
- WHEN CORD AND PLUG ARE SUPPLIED BY THE EQUIPMENT MANUFACTURER, PROVIDE ELECTRICAL OUTLET TO MATCH PLUG.
- ALL ELECTRICAL EQUIPMENT USED OUTDOORS SHALL BE WEATHERPROOF.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF ALL FOUNDATION, FLOOR, AND WALL PENETRATIONS WITH THE GENERAL CONTRACTOR.
- INSTALL FIRE RATED PADS AROUND ALL OUTLET BOXES AND CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND ASSEMBLIES. AND AT ALL LOCATIONS WHERE OUTLET BOXES ARE NOT SEPARATED BY A MINIMUM OF ONE STUD SPACE OR 24" FIRE RATED PADS SHALL BE FSP FIRESTOP PUTTY PADS, HEVI-DUTY/NELSON OR EQUIVALENT.
- ALL UL LISTED EQUIPMENT SHALL BE INSTALLED AS PER LISTING OR LABELING, I.E.; MAXIMUM FUSE SIZE MEANS FUSE PROTECTION REQUIRED.
- ALL EQUIPMENT SHALL BE LISTED BY AN ACCEPTED TESTING LABORATORY AND BEAR THE LISTING STICKER IN AN ACCESSIBLE LOCATION.
- MAINTAIN "AS BUILT" RECORDS AT ALL TIMES, SHOWING THE EXACT LOCATIONS OF ALL UNDERGROUND CONDUITS AND SERVICES INSTALLED UNDER THIS CONTRACT, INCLUDING ALL CIRCUIT IDENTIFICATIONS WHERE APPLICABLE. PROVIDE OWNER WITH A SET OF "AS BUILT" REPRODUCIBLES. "AS BUILT" COMMENTS SHALL BE WRITTEN IN A LEGIBLE MANNER AND OF A STYLE SIMILAR TO THE CONTRACT DOCUMENTS.
- UPON COMPLETION OF THE WORK, THE INSTALLATION SHALL TEST FREE FROM GROUNDS AND SHORT CIRCUITS.
- ALL MATERIAL AND EQUIPMENT FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS AND SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THE FINAL ACCEPTANCE BY THE OWNER OR HIS REPRESENTATIVE. SHOULD ANY PROBLEMS DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIAL AND LABOR TO CORRECT THE PROBLEMS WITHOUT COST TO THE OWNER.
- COORDINATE WITH THE OWNER THE EXACT RECEPTACLE CONFIGURATION FOR ALL OWNER FURNISHED EQUIPMENT.

### ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION	REMARKS
	LIGHT FIXTURE DESIGNATION	
	FLUORESCENT FIXTURE	SURFACE OR RECESSED SURFACE OR PENDANT
	FLUORESCENT STRIP LIGHT	
	INCANDESCENT, FLUORESCENT, OR H.I.D. FIXTURE	SURFACE, RECESS OR PENDANT
	INCANDESCENT, FLUORESCENT, OR H.I.D. FIXTURE	WALL MOUNTED
	EXIT SIGN, ARROWS AS NOTED, SINGLE FACE	
	EMERGENCY LIGHT FIXTURE	
	SPST TOGGLE SWITCH, LETTER ADJACENT INDICATES FIXTURE OR LAMP SWITCHED	+42" U.O.N.
	3-WAY TOGGLE SWITCH	+42" U.O.N.
	4-WAY TOGGLE SWITCH	+42" U.O.N.
	DIMMER SWITCH, LEVITON #TPX06-IL FOR CONTROL OF "D" FIXTURES	
	DIMMER SWITCH, LEVITON #TPM10-IL FOR CONTROL OF "B" FIXTURES	
	15 AMP, 120 VOLT, 3PG DUPLEX RECEPTACLE	+15" U.O.N.
	15 AMP, 120 VOLT, 3PG DUPLEX RECEPTACLE SURGE SUPPRESSION TYPE HUBBLE #52625	+15" U.O.N.
	15 AMP, 120 VOLT, 3PG DOUBLE DUPLEX RECEPTACLE	+15" U.O.N.
	15 AMP, 120 VOLT, 3PG DUPLEX RECEPTACLE WITH GROUND FAULT CURRENT INTERRUPTER	
	JUNCTION BOX	
	COMMUNICATIONS OUTLET WITH 4 CAT5 JACKS RUN 4-6PAIR CABLES FROM EACH OUTLET TO THE DATA RACK.	+15" U.O.N.
	CLOCK	
	SPEAKER	
	FLUSH MOUNTED PANELBOARD	
	FUSED DISCONNECT SWITCH	
	MOTOR	
	MOTION DETECTOR	
	BRANCH CIRCUIT WIRING IN CEILING OR WALL, U.O.N.	
	INDICATES CONDUIT INSTALLED UNDERGROUND	
	BRANCH CIRCUIT WIRING, NUMBER OF SLASH MARKS INDICATE NUMBER OF CONDUCTORS, NO SLASH MARKS INDICATE 2 #12 AWG, GROUND WIRE NOT INDICATED	
	DETAIL DESIGNATION	
	NUMBERED SHEET NOTE DESIGNATION	
	ELECTRICAL CONTRACTOR	
	WEATHERPROOF	
	UNLESS OTHERWISE NOTED	
	CONDUIT ONLY WITH PULLWIRE	
	ABOVE FINISH FLOOR	
	EXISTING	
	NEW	
	CENTER LINE	
	GROUND FAULT CURRENT INTERRUPTER	
	FIRE ALARM SYSTEM PULL STATION	+48" U.O.N.
	FIRE ALARM SYSTEM HORN/STROBE, MATCH (E) DEVICES ON SITE, CONNECT COMPLETE.	+80" U.O.N.
	SMOKE DETECTOR MAINTAIN (E) DEVICES	

### SHEET INDEX

E0.1	ELECTRICAL SYMBOL LIST, GENERAL NOTES AND SHEET INDEX
E0.2	TITLE 24 AND FIXTURE SCHEDULE
E1.1	ELECTRICAL DEMOLITION PLAN
E2.1	NEW POWER FLOOR PLAN
E3.1	NEW LIGHTING FLOOR PLAN



**1 SINGLE LINE DIAGRAM**  
E0.1 SCALE: NOT TO SCALE

**(N) PANEL A**

TYPE: VOLT: 120/208 3Ø 4W  
MTG: RECESSED  
MAIN BRKR: MLO

MAIN BUS: 225 AMP  
NEUT. BAR: 225 AMP  
GRD. BAR: 225 AMP

EQUIPMENT	LOAD	BREAKER POLE TRIP	CIRCUITS	BREAKER POLE TRIP	LOAD	EQUIPMENT
(E) CKTS		1 20	1 2	1 20		(E) CKTS
			3 4			
			5 6			
			7 8			
			9 10			
			11 12			
			13 14			
			15 16			
			17 18			
			19 20			
			21 22			
GFI		1 15	23 24			
			25 26			
			27 28			
			29 30			
			31 32			
			33 34			
			35 36			
			37 38			
			39 40			
			41 42			

CONNECTED LOAD:  
FEEDER SIZE:

- RECONNECT ALL (E) REUSED CIRCUITS TO (N) PANEL
- INSTALL (N) FEEDER TO (N) PANEL A1. CONCEAL IN WALL OR ABOVE CEILING CUT AND PATCH AS REQUIRED.

**(N) PANEL A1**

TYPE: VOLT: 120/208 3Ø 4W  
MTG: RECESSED  
MAIN BRKR: MLO

MAIN BUS: 125 AMP  
NEUT. BAR: 125 AMP  
GRD. BAR: 125 AMP

EQUIPMENT	LOAD	BREAKER POLE TRIP	CIRCUITS	BREAKER POLE TRIP	LOAD	EQUIPMENT
RECEPTACLES KITCHEN	180	1 20	1 2	1 20	360	RECEPTACLES MAIN ROOM
RECEPTACLES KITCHEN	180		3 4		180	
			5 6		500	
			7 8		500	
			9 10		700	KITCHEN
			11 12		500	
			13 14		500	
			15 16		400	
			17 18		500	TRACK LIGHTING
			19 20		1200	KITCHEN DISHWASHER
			21 22		500	KITCHEN RANGE/OVEN
			23 24		500	EXIT WALL PACKS
			25 26			
			27 28			
			29 30		1000	DATA RACK RECEPTACLE
			31 32			SPARE
			33 34			
			35 36			
			37 38			
			39 40			SPACE
			41 42			SPACE

CONNECTED LOAD:  
FEEDER SIZE:

- INSTALL BRANCH CIRCUIT AND CONTROL WIRING REQUIRED BY MANUFACTURE.

**HSI** consulting electrical engineers  
 Hansen & Slaughter, Inc.  
 44 Woodland Avenue  
 San Rafael, California 94901  
 415-454-0561  
 fax 415-454-0559  
 cad@hansen-slaughter.com

APPROVED BY:

ENGINEERING MANAGER DATE

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**CERTIFICATE OF COMPLIANCE (Part 1 of 3) LTG-1**

PROJECT NAME: PETALUMA REGIONAL LIBRARY DATE: 07-30-03  
 PROJECT ADDRESS: 100 FAIRGROUNDS DRIVE  
 PRINCIPAL DESIGNER-LIGHTING: RAY SLAUGHTER (415) 454-0561  
 DOCUMENTATION AUTHOR: RAY SLAUGHTER (415) 454-0561

**GENERAL INFORMATION**  
 DATE OF PLANS: 07-30-03 BUILDING CONDITIONED FLOOR AREA: 2519 CLIMATE ZONE:  
 BUILDING TYPE:  NONRESIDENTIAL  HIGH RISE RESIDENTIAL  HOTEL/MOTEL GUEST ROOM  
 PHASE OF CONSTRUCTION:  NEW CONSTRUCTION  ALTERATION  ADDITION  (INDICATE ROOMS) (See attached)  
 METHOD OF LIGHTING COMPLIANCE:  COMPLETE BLDG.  AREA CATEGORY  TAILORED  PERFORMANCE

**STATEMENT OF COMPLIANCE**  
 This Certificate of Compliance lists the building features and performance specifications need to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building lighting requirements. The documentation preparer hereby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR: RAY SLAUGHTER SIGNATURE: DATE:

The Principal Lighting Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the lighting requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146, and 149 of Title 24, Part 6.

Please check one:  
 I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am a licensed architect.  
 I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.  
 I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

(These sections of the Business and Professions Code are printed in full in the Nonresidential Manual)  
 PROFESSIONAL ENGINEER/ARCHITECT/CONTRACTOR: RAY SLAUGHTER SIGNATURE: LIC. NO.: E.10745 DATE: 06-30-05

**LIGHTING MANDATORY MEASURES**  
 Indicate location on plans of Note Block for Mandatory Measures

**INSTRUCTIONS TO APPLICANT**  
 For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.  
 LTG-1: Required on plans for all submittals.  
 LTG-2: Required for all submittals.  
 LTG-3: Optional. Use only if lighting control credits are taken.  
 LTG-4: Optional. Use only if Tailored Method is used.

**CERTIFICATE OF COMPLIANCE (Part 2 of 3) LTG-1**

PROJECT NAME: PETALUMA REGIONAL LIBRARY DATE: 07-30-03

**INSTALLED LIGHTING SCHEDULE**

Code	LUMINAIRE DESCRIPTION	TYPE	LAMPS	Watts	BALLASTS	No. of Ballast	No. of Lumin.	Watts/Lumin.	TOTAL WATTS
A	FLUOR	15	32	ELECT	8	3	434	1302	
A1	FLUOR	15	32	ELECT	8	3	434	1302	
B	FLUOR	1	75	ELECT	1	6	75	450	
C	FLUOR	2	32	ELECT	1	11	64	704	
D	FLUOR	1	13	ELECT	1	6	23	138	
E	FLUOR	2	32	ELECT	1	2	64	128	
F	FLUOR	2	32	ELECT	1	2	64	128	
H	FLUOR	1	18	ELECT	1	2	26	52	
K	FLUOR	1	18	ELECT	1	1	26	26	

Lighting Schedule on plans shows Exterior Lighting Meets

Efficacy and Control Requirements of § 130 (c)  
 Control Requirements of § 131 (f)

**MANDATORY AUTOMATIC CONTROLS**

CONTROL LOCATION (Room #)	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Exterior, etc.)	SPACE CONTROLLED	NOTE TO FIELD

**CONTROLS FOR CREDIT**

CONTROL LOCATION (Room # or Req. #)	CONTROL IDENTIFICATION	CONTROL TYPE (Occupant, Daylight, Timing, etc.)	LUMINAIRE(S) CONTROLLED TYPE	NOTE TO FIELD

**NOTES TO FIELD - For Building Department Use Only**

Nonresidential Compliance Form January 2001

**PORTABLE LIGHTING WORKSHEET (Part 3 of 3) LTG-1**

PROJECT NAME: PETALUMA REGIONAL LIBRARY DATE: 07-30-03

**TABLE 1A - PORTABLE LIGHTING NOT SHOWN ON PLANS FOR OFFICE AREA > 250 SQUARE FEET**

A	B	C	D
ROOM # OR ZONE ID	DEFAULT	AREA (SF)	TOTAL WATTS (B x C)
	0.02		
	0.02		
	0.02		
	0.02		
	0.02		
	0.02		
TOTAL			

**TABLE 1B - PORTABLE LIGHTING SHOWN ON PLANS FOR OFFICE AREA > 250 SQUARE FEET**

A	B	C	D	E	F	G
ROOM # OR ZONE ID	PORTABLE LIGHTING DISCRPTION (S) PER TASK AREA	LMIN. (S) WATTS PER TASK AREA	TASK AREA (SF)	NUMBER OF TASK AREAS	TOTAL AREA (SF) (D x E)	TOTAL WATTS (C x E)
TOTAL						

**TABLE 1C - PLANS SHOWN PORTABLE LIGHTING IS NOT REQUIRED FOR OFFICE AREAS > 250 SQUARE FEET**

ROOM# OR ZONE ID	TOTAL AREA (SF)	Designer need to provide detailed documentation that the lighting level provided by the overhead lighting meets the need of the space. The details include luminaires types, CU, and mounting locations relative to work areas.
TOTAL		

**BUILDING SUMMARY - PORTABLE LIGHTING**

BUILDING SUMMARY	TOTAL AREA (SF) (FROM TABLES 1A+1B+1C)	TOTAL WATTS (FROM TABLES 1A+1B)
BUILDING TOTAL		

ENTER ON LTG-1 AND 2 Portable Lighting

Nonresidential Compliance Form January 2001

**LIGHTING COMPLIANCE SUMMARY LTG-2**

PROJECT NAME: PETALUMA REGIONAL LIBRARY DATE: 07-30-03

**ACTUAL LIGHTING POWER**

LUMINAIRE NAME	TYPE DESCRIPTION	NUMBER OF LUMINAIRES	WATTS PER LUMINAIRE (Including Ballast)	CEC	DEFAULT	TOTAL WATTS
A	FLUOR	3	434	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1302
A1	FLUOR	3	434	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1302
B	MR-16	6	75	<input checked="" type="checkbox"/>	<input type="checkbox"/>	450
C	FLUOR	11	64	<input checked="" type="checkbox"/>	<input type="checkbox"/>	704
D	FLUOR	6	23	<input checked="" type="checkbox"/>	<input type="checkbox"/>	138
E	FLUOR	2	64	<input checked="" type="checkbox"/>	<input type="checkbox"/>	128
F	FLUOR	2	64	<input checked="" type="checkbox"/>	<input type="checkbox"/>	128
H	FLUOR	2	26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	52
K	FLUOR	1	26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26

Subtotal from this page: 4230  
 Plus subtotal from continuation page: --  
 Portable Lighting (From LTG-1 Part 3 of 3): --  
 Less control credit watts (From LTG-3): --  
 Adjusted actual watts: 4230

**ALLOWED LIGHTING POWER (Choose One Method)**

**COMPLETE BUILDING METHOD**

BUILDING CATEGORY (From 146(b) Table 1-10)	WATTS PER SF	COMPLETE BLDG. AREA	ALLOWED WATTS

**AREA CATEGORY METHOD**

AREA CATEGORY (From 146(b) Table 1-10)	WATTS PER SF	AREA (SF)	ALLOWED WATTS
AUTITORIUM	2.0	1675	3350
KITCHEN	1.7	112	190
BOOK STORAGE	1.5	540	810
STORAGE	.6	192	115
TOTALS		2519	4465

**TAILORED METHOD**

TOTAL ALLOWED WATTS (From LTG-4):

Nonresidential Compliance Form January 2001

**FIXTURE SCHEDULE**

TYPE	DESCRIPTION & MANUFACTURER	LAMPS	INPUT WATTS W/ BALLAST	MOUNTING	REMARKS
A	PENDANT FLUORESCENT WITH ONE LAMP ON EMERGENCY BALLAST SWITCHED AT END OF FIXTURE PEERLESS #10CRMB3-32-5-95-20-R12-120-DEB-ISE-EL-3CKT-F2-XX-ACC-ELS. WITH DIMMING BALLAST	15-F32 T8	434	PENDANT	AIRCRAFT CABLE HUNG. BOTTOM OF FIXTURE 9'-0" AFF (1)
A1	PENDANT FLUORESCENT SAME AS A EXCEPT ON EMERGENCY LAMP PEERLESS #10CRMB-3-32-5-95-20-R12-120-DEB-3CKT-F2-XX-ACC WITH DIMMING BALLAST	15-F32 T8	434	PENDANT	AIRCRAFT CABLE HUNG. BOTTOM OF FIXTURE 9'-0" AFF (1)
B	TRACK 36" 2 CKT. TRACK WITH TRACK FIXTURE 75WMR16 PRESCOLITE TRACK #TT4 CUT TO FIT PRESCOLITE FIXTURE #T503	75W PAR-30 SPOT	450	SURFACE	3-36" TRACK 6-TRACK HEADS
C	SURFACE 2'x2' FLUORESCENT WELLMADE #186-SDP-2UT8-SSB	FB031	64	SURFACE	
D	NOT USED				
E	SURFACE 2 LAMP FLUORESCENT WELLMADE #183-P-248T8-SSB	2-F32 T8	64	SURFACE	
F	SURFACE 2 LAMP FLUORESCENT WITH REFLECTOR WELLMADE #204-148T8-SSDB-S WITH DIMMING BALLAST	2-F32 T8	64	SURFACE	MOUNT TO WASH ABOVE CEILING (1)
G	WALL PACK DOWN LIGHT KIM #LLF10-70HPS120-DB-P-PL	1-70W HPS		SURFACE	SEE ARCH DWGS. FOR MOUNTING
H	RECESSED DOWN LIGHT PRESCOLITE #CFR618EBDM-ST372-WITH DIMMING BALLAST	2-18W PL QUAD	26	RECESSED	(1)
I	EXIT SIGN W/90MIN. BATTERY BACKUP. DAYLITE #LX-S-G-W-E				
J	KEYLESS PORCELIN SCKOKET EAGLE OR EQUAL	1-75W A-19			
K	SURFACE CAN WITH DIMMING BALLAST PRESSCOLITE #CFB26TEBDM	1-26W PL QUAD	26	SURFACE	COLOR PER ARCH. (1)
L	SIGNAGE LIGHT. LIGHTS FOR LETTERS. PROVIDE AND INSTALLED BY HALO ILLUMINATOR ELECTRICAL CONTRACTOR TO PROVIDE POWER AND CONTROL TO EQUIPMENT PHOTOCCELL ON, TIMECLOCK OFF				PROVIDE J-BOX FOR EACH LETTER, FIELD LOCATE AS DIRECTED BY SIGN SUPPLIER
L1	UNDER CABINET 24" LONG FIXTURE ALKCO #SF317	1-F17T8	24	MOUNTED TO UNDERSIDE OF WALL CABINET	
L2	SAME AS L1 EXCEPT 36" LONG ALKCO #SF325	1-F25T8	32	MOUNTED TO UNDERSIDE OF WALL CABINET	
M	EMERGENCY WALL PACK 90 MIN. BATTERY BACKUP DUAL LITE #LZSERIES			WALL MTD. CONNECT TO UNSWITCHED 120V CKT.	

(1) PROVIDE FOR COMPATIBLE DIMMING BALLAST AND DIMMER CONTROL.

**MANDATORY MEASURE NOTES**

BUILDING LIGHTING SHUT-OFF  
 The building lighting shut-off system consists of an automatic time switch, with a zone for each floor.

OVERRIDE FOR BUILDING LIGHTING SHUT-OFF  
 The automatic building shut-off system is provided with a manual, accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.

AUTOMATIC CONTROL DEVICES CERTIFIED  
 All automatic control devices are certified, all alternate equipment shall be certified and installed as directed by the manufacturer.

FLUORESCENT BALLAST AND LUMINAIRES CERTIFIED  
 All fluorescent fixtures specified for the project are certified and listed in the Appliance Efficiency Standards Directory. All installed fixtures shall be certified.

TANDEM WIRING FOR TWO-LAMP BALLASTS  
 All one and three lamp fluorescent fixtures are tandem wired with (2) lamp ballast where required by the California Energy Efficiency Standards, Non-Residential, Article #132.

INDIVIDUAL ROOM/AREA CONTROLS  
 Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.

UNIFORM REDUCTION FOR INDIVIDUAL ROOMS  
 All rooms and areas greater than 100 square feet and more than 1.2 watts per square foot of lighting load is controlled with bi-level switching for uniform reduction of lighting within the room.

DAYLIT AREA CONTROL  
 All rooms with windows and skylights, that are greater than 250 square feet, and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylight area controlled by a separate switch.

CONTROL OF EXTERIOR LIGHTS  
 Exterior mounted fixtures and service from the electrical panel inside the building are controlled with a directional photocell control on the roof or celestial timeclock and a corresponding relay in the electrical panel.

NO.	DATE	REVISION	BY

DESIGNED BY: November 21, 2003  
 CHECKED BY: As Shown  
 DRAWN BY: HSI/2221

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
 CITY OF PETALUMA  
 550 MICHELLE BULEWARD NORTH - PETALUMA, CALIFORNIA - 94952-7078-9403

2003 PETALUMA REGIONAL LIBRARY  
 100 FAIRGROUNDS DRIVE  
 MEET ROOM EXPANSION  
 PROJECT NO. 9028

TITLE 24 AND FIXTURE SCHEDULE

**HSI** consulting electrical engineers  
 Hansen & Slaughter, Inc.  
 44 Woodland Avenue  
 San Rafael California 94901  
 415-454-0561  
 fax 415-454-0559  
 cad@hansen-slaughter.com

APPROVED BY: \_\_\_\_\_  
 ENGINEERING MANAGER DATE

E0.2

NO.	DATE	REVISION	BY

### DEMOLITION SHEET NOTES

- 1 REMOVE (E) PANEL AND INSTALL (N) RECONNECT ALL REUSED BRANCH CIRCUITS AND MAIN FEEDER.
- 2 REMOVE (E) RECEPTACLES INCLUDING BRANCH CIRCUIT WIRING IN WALL BEING REMOVED.
- 3 REMOVE EXISTING SWITCH BANK AND WIRING.
- 4 (E) SURFACE PA SYSTEM TO BE REMOVED INCLUDING BRANCH CKT WIRING AND SYSTEMS WIRING TO (E) SPEAKERS AND MICROPHONE JACKS.
- 5 (E) SYSTEMS TERMINAL CABINET TO BE REMOVED INTERCEPT (E) U.G. CONDUITS AND EXTEND TO (N) CABINET LOCATION.
- 6 REMOVE (E) SWITCH AND INSTALL BLANK COVER PLATE. REWORK (E) BRANCH CIRCUIT WIRING FOR NEW LIGHTING.
- 7 RELOCATE (E) FIRE ALARM PULLSTATION AND HORN STROBE. RECONNECT COMPLETE TO FIRE ALARM PANEL.
- 8 (E) SPEAKER OUTLET AND WIRING TO REMAIN.
- 9 (E) MOTORIZED PROJECTION SCREEN TO BE REMOVED INCLUDING BRANCH CIRCUIT.
- 10 (E) WALL MICROPHONE JACK AND PHONE OUTLET TO BE REMOVED.
- 11 REMOVE (E) FIXTURE, AND BRANCH CIRCUIT WIRING OR REWORK FOR NEW FIXTURES SHOWN ON NEW LIGHTING PLAN.
- 12 REMOVE (E) FIXTURE, SWITCH AND BRANCH CIRCUIT WIRING.
- 13 (E) RECEPTACLE TO REMAIN.
- 14 (E) SYSTEMS CLOCK REMOVE, REPLACE AND RECONNECT TO SYSTEM WHEN CONSTRUCTION IS COMPLETE.
- 15 REMOVE (E) EXIT SIGN AND INSTALL BLANK COVER PLATE.
- 16 REMOVE (E) BRANCH CIRCUIT TO EXHAUST FAN.
- 17 (E) FLOOR RECEPTACLE TO REMAIN.
- 18 REMOVE (E) TRAC AND TRAC FIXTURES ON BOTTOM OF (E) TRUSS
- 19 (E) COMMUNICATIONS ACCESS AT FLOOR.
- 20 (E) FLOOR DUCT SYSTEM POWER AND COMMUNICATIONS DUCT TO REMAIN. INTERCEPT (E) COMMUNICATIONS DUCT AND EXTEND TO (N) PULLBOX. SEE (N) POWER PLAN.

SCHEDULE

REMOVE EXISTING BRICK WALLS AND FOOTINGS, TYP.

OUTLINE OF NEW ADDITION REMOVE ALL EXISTING HARDSCAPE WITHIN OUTLINE

EXISTING HARDSCAPE TO BE REMOVED

EXISTING HARDSCAPE TO REMAIN

PORTION OF EXISTING BRICK WALL TO REMAIN

EXISTING WALLS TO REMAIN

OUTLINE OF NEW HVAC ROOM

REMOVE EXISTING EXTERIOR WALL

EXISTING TRUSS ABOVE TO REMAIN

EXISTING INTERIOR WALLS AND TRUSS TO BE REMOVED

REMOVE BOOKDROP AND SINK FOR REINSTALLATION SEE FLOOR PLAN

(E) SWITCH BANK FOR LIGHTING

(E) SURFACE TERMINAL CABINET

(E) PNL LA

**1 ELECTRICAL DEMOLITION PLAN**  
 E1.1 SCALE: 1/4"=1'-0"



**HSI** consulting electrical engineers  
 Hansen & Slaughter, Inc.  
 44 Woodland Avenue  
 San Rafael, California 94901  
 415 - 454 - 0551  
 fax 415 - 0659  
 cad@hansen-slaughter.com

APPROVED BY: \_\_\_\_\_

ENGINEERING MANAGER DATE

BID SET

DATE: November 21, 2003  
 SCALE: As Shown  
 PROJECT NO: HSI/2221

DESIGNED BY:  
 CHECKED BY:  
 DRAWN BY:

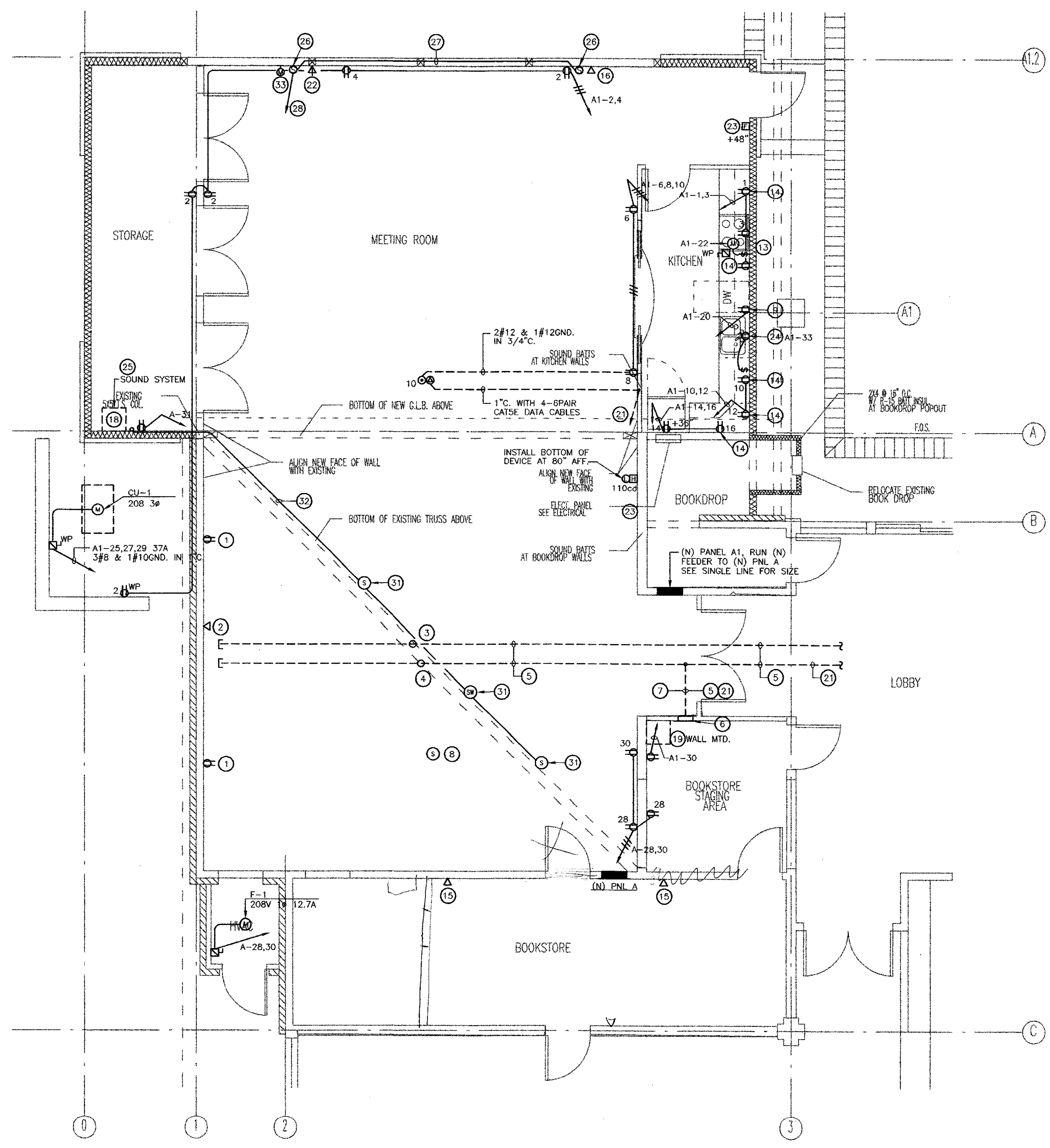
DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
 555 MACDONELL BOULEVARD NORTH - PETALUMA, CALIFORNIA - 94927-7074-800

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 100 FAIRGROUNDS DRIVE  
 MEETING ROOM EXPANSION  
 PROJECT NO. 9028

ELECTRICAL DEMOLITION  
 PLAN

**E1.1**

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**SHEET NOTES**

- 1 (E) RECEPTACLE TO REMAIN.
- 2 (E) COMMUNICATIONS OUTLET TO REMAIN.
- 3 (E) FLOOR RECEPTACLE TO REMAIN.
- 4 (E) FLOOR COMMUNICATIONS OUTLET TO REMAIN.
- 5 (E) FLOOR DUCT POWER AND COMMUNICATIONS SYSTEM. INTERCEPT (E) COMMUNICATIONS DUCT AND EXTEND TO (N) SYSTEMS TERMINAL CABINET. CUT AND PATCH AS REQUIRED.
- 6 INSTALL (N) 12"x16"x4" DEEP TERMINAL CABINET FOR COMMUNICATIONS SYSTEM. RUN (N) 6 PAIR CATSE TO (E) MAIN TELEPHONE BD ON 2ND FLOOR APPROXIMATELY 200' SOUTH WEST ON 2ND FLOOR.
- 7 INSTALL (N) 1 1/2" C. FROM (E) COMMUNICATIONS FLOOR DUCT TO (N) TERMINAL CABINET (NOTE #6)
- 8 (E) CEILING SPEAKER TO REMAIN.
- 9 RECEPTACLE FOR DISHWASHER LOCATE BELOW SINK.
- 10 NOT USED
- 11 NOT USED
- 12 NOT USED
- 13 SWITCH FOR HOOD FAN
- 14 INSTALL RECEPTACLE ABOVE COUNTER BACKSPLASH. ALL RECEPTACLES WITHIN 6'-0" OF SINK SHALL BE GFI PER N.E.C
- 15 INSTALL (N) DATA OUTLET AT +18 AFF. RUN DATA CABLE IN WALL BACK TO DATA CABINET IN BOOKSTORE STAGING AREA.
- 16 SAME AS NOTE #15 EXCEPT RUN (N) CABLE IN 3/4" C.
- 17 NOT USED
- 18 SECURE PORTABLE SOUND SYSTEM TO WALL. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR PORTABLE SOUND AND IMPAIRED EQUIPMENT UNTIL BUILDING KEYS ARE RETURNED TO OWNER. SEE NOTE #25
- 19 DATA RACK LOCATION, RACK BY OWNER.
- 20 COMBINATION DATA AND POWER FLOOR BOX WALKER #RFB4-C1-1 AND ACCESSORIES WITH 1 DUPLEX RECEPTACLE AND 1-4PORT DATA OUTLET.
- 21 ELECTRICAL CONTRACTOR TO PULL IN 1-(N) TV COAX 75 OHM CABLE AND (N) 2-CATSE DATA CABLES IN (E) FLOOR RACEWAY SYSTEM. TO TV SYSTEM & DATA RACK IN MAIN TELE RM. AT 2ND FLOOR.
- 22 RUN COAX 75 OHM CABLE BACK TO 3WAY SPLICE CONNECTOR AT MAIN TELEPHONE TERMINAL BOARD ON 2ND FLOOR VIA (N) TERMINAL CABINET IN BOOK STORE STAGING AREA ROOM.
- 23 INSTALL (N) FIRE ALARM HORN/STROBE DEVICE OR PULLSTATION. TIE INTO (E) FIRE ALARM SYSTEM. INSTALL AS TO MAINTAIN SUPERVISION OF (E) AND (N) DEVICE.
- 24 SWITCHED RECEPTACLE FOR GARBAGE DISPOSAL LOCATE RECEPTACLE BELOW SINK. LOCATE SWITCH ABOVE BACKSPLASH.
- 25 INCLUDE HEARING IMPAIRED SYSTEM.
- 26 SPEAKER JACK +48 AFF
- 27 3/4" C. INCLUDING SPEAKER WIRE
- 28 RUN 3/4" C. INCLUDING SPEAKER WIRE TO SOUND SYSTEM IN STORAGE ROOM NOTE 18
- 29 NOT USED
- 30 NOT USED
- 31 SPEAKER OR SUB WOOFER SECURE TO TOP OF BOTTOM CORD OF (E) TRUSS. VERIFY LOCATION WITH PCD PRIOR TO ROUGH IN.
- 32 RUN 3/4" C. INCLUDING SYSTEM SPEAKER WIRE TO SOUND SYSTEM IN STORAGE ROOM.
- 33 WALL MIC. OUTLET +18" AFF RUN 3/4" C. INCLUDING SYSTEM WIRING TO SOUND SYSTEM IN STORAGE ROOM.

NO.	DATE	REVISION	BY

**1** NEW POWER FLOOR PLAN  
E2.1 SCALE: 1/4"=1'-0"



**HSI** consulting electrical engineers  
Hansen & Slaughter, Inc.  
44 Woodland Avenue  
San Rafael, California 94901  
415 - 454 - 0561  
fax 415 - 454 - 0559  
csd@hansen-slaughter.com

APPROVED BY: \_\_\_\_\_

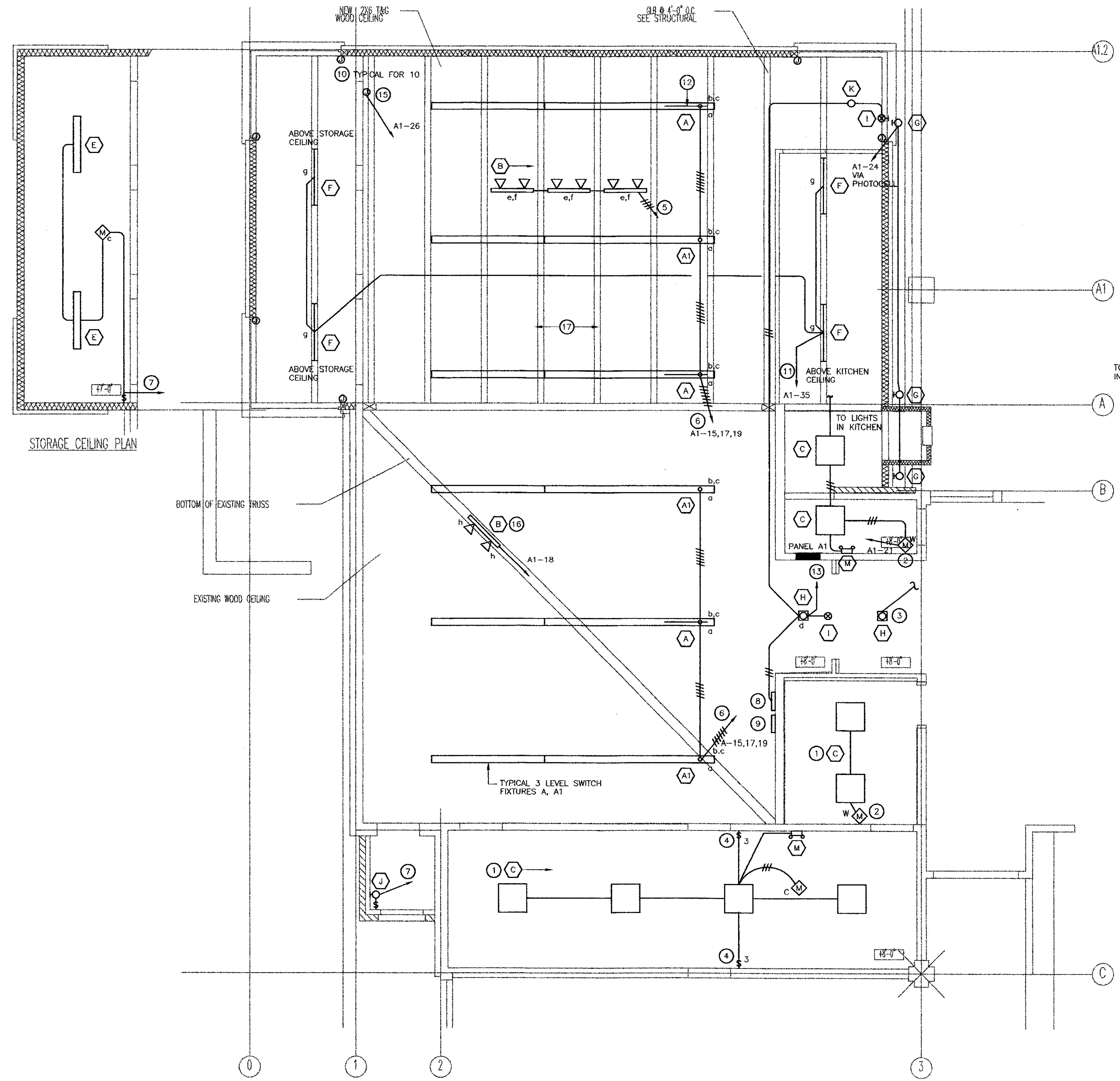
ENGINEERING MANAGER DATE

BID SET  
 DATE: November 21, 2003  
 SCALE: As Shown  
 DRAWN BY: HS/2/221  
 DESIGNED BY:  
 CHECKED BY:  
 DRAWN BY:  
 DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
 555 MADWELL BOULEVARD NORTH - PETALUMA, CALIFORNIA 94952-7074-303  
 2003 PETALUMA REGIONAL LIBRARY  
 100 FAIRGROUNDS DRIVE  
 MEETING ROOM EXPANSION  
 PROJECT NO. 9028  
 NEW POWER FLOOR PLAN  
**E2.1**

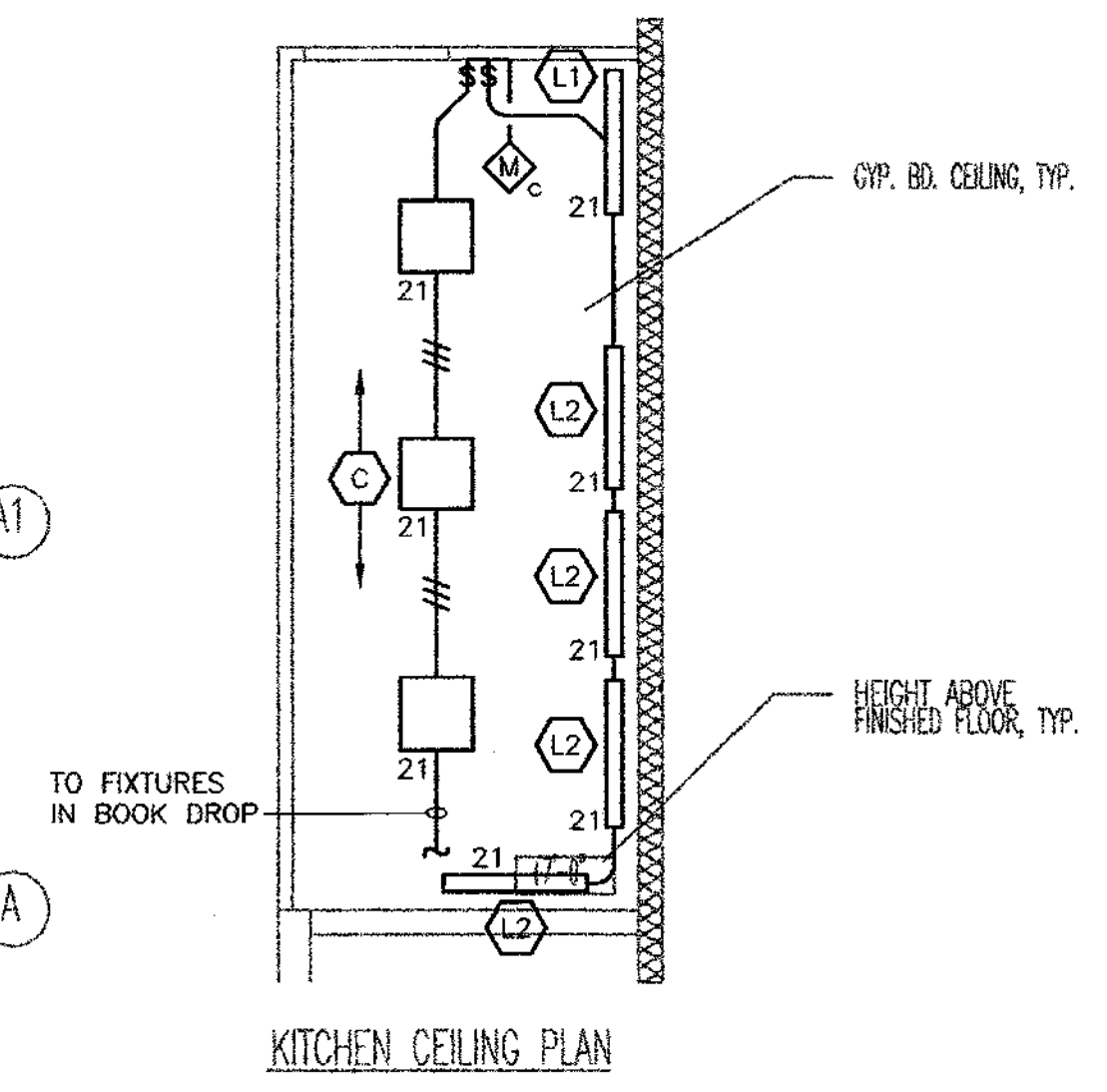
\\f:\e\_server\vd\2002\2221\petalumel\lbnr\c\0\2221E2.1.dwg Mon, Nov 24 14:51:39 2003 THIERRY



NO.	DATE	REVISION	BY



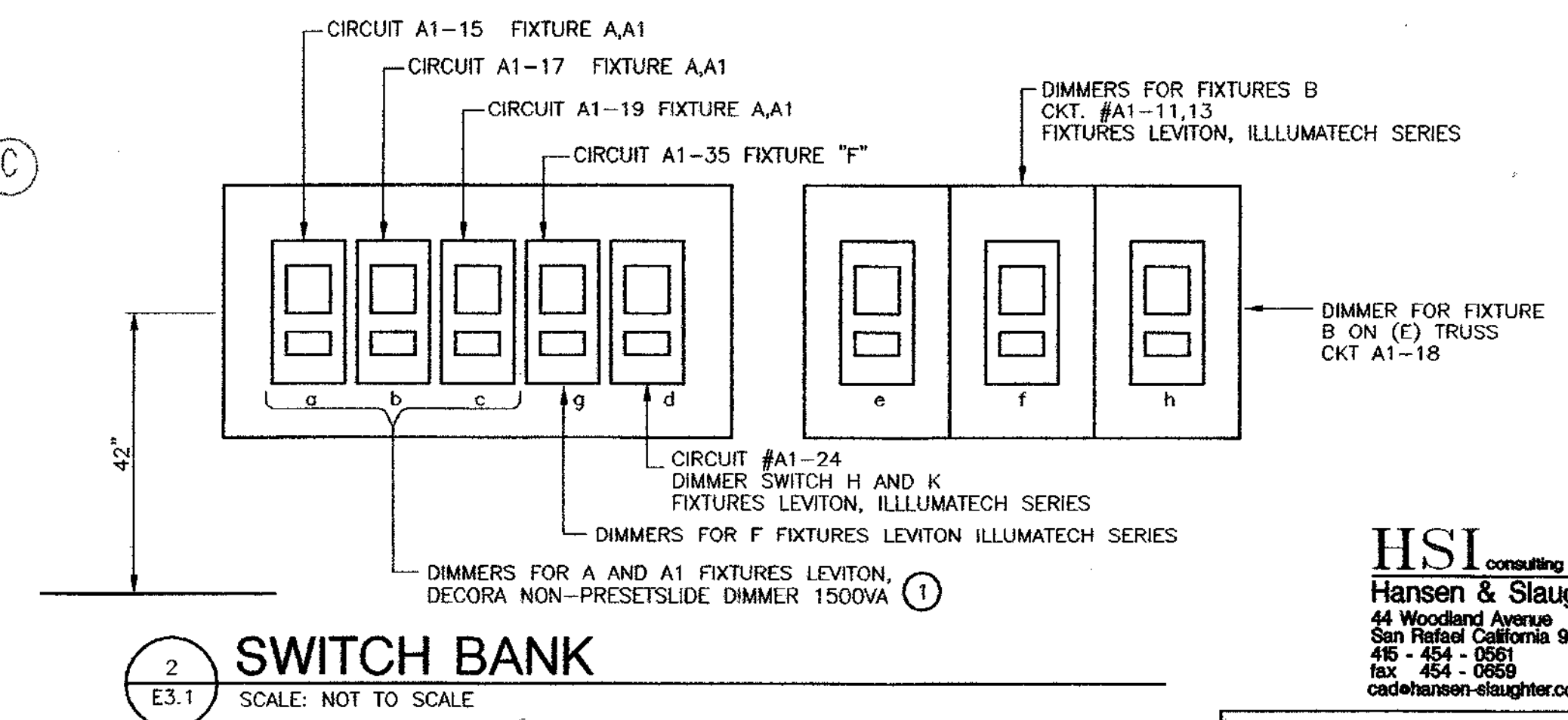
**1 NEW LIGHTING FLOOR PLAN**  
 SCALE: 1/4"=1'-0"



**KITCHEN CEILING PLAN**

**SHEET NOTES**

- INSTALL (N) FIXTURES, CONNECT TO (E) LIGHTING CIRCUIT IN AREA REWORK AS REQUIRED.
- INSTALL (N) SWITCH OR (N) MOTION SENSOR IN (E) WALL CUT AND PATCH AS REQUIRED CONCEAL ALL (N) BRANCH CIRCUIT IN WALL. SEE NOTE #14.
- INSTALL (N) RECESSED FIXTURES CONNECT TO SWITCH ON WITH ADJACENT FIXTURES IN LOBBY RUN 2#12 AND 1#12 GROUND TO (E) SWITCHED CIRCUIT.
- (E) 3WAY SWITCH REMOVE AND REWORK (E) BRANCH CIRCUIT TO ACHIEVE (N) SWITCHING SHOWN.
- 4#12 AND 1#12 GROUND IN 3/4". TO A1-11,13 VIA LIGHTING CONTROLS.
- 7#12 AND 1#12 GROUND IN 3/4". TO A1-15,17,19 VIA DIMMERS.
- CONNECT TO NEAREST UNSWITCHED 120 VOLT CIRCUIT.
- NEW SWITCH BANK SEE DETAIL 2/E3.1
- LOCATION FOR CONTROL SWITCHES FOR WINDOW SHADES.
- POWER FOR ELECTRIC SHADES TYPICAL FOR 10. FOR UPPER AND LOWER WINDOWS. INSTALL U-BOX AT EACH CONTROL SHADE MOTOR. VERIFY LOCATIONS WITH SHADE MANUFACTURE.
- CONNECT TO CKT. A1-35 VIA WALL DIMMER SWITCH G AT SWITCH BANK
- INDICATES LOCATION OF CENTER OF END FIXTURE ON SWITCHED EMERGENCY BALLAST.
- 2#12 AND 1#12 GROUND IN 3/4". TO A1-24 VIA DIMMER "d" AT SWITCH BANK.
- WALL MOTION TO BE MYTECH: #LP-2-120-W CEILING MOTION TO BE MYTECH: #OMNI-DT1000 WITH POWER PACK. W=WALL, C=CEILING
- CIRCUIT ON ROOF FOR SIGNAGE A1-26 VERIFY LOCATION OF SIGN AND NUMBER OF JUNCTION BOXES REQUIRED.
- INSTALL 24" TRACK FIXTURE "B" WITH TWO HEADS ON TOP OF BOTTOM OPEN TRUSS. RUN CONDUIT ALONG TOP OF BOTTOM TRUSS TO (N) SWITCH BANK SEE DETAIL 2/E3.1
- MOUNT BOTTOM OF A AND A1 FIXTURE 9'-0" AFF



**2 SWITCH BANK**  
 SCALE: NOT TO SCALE

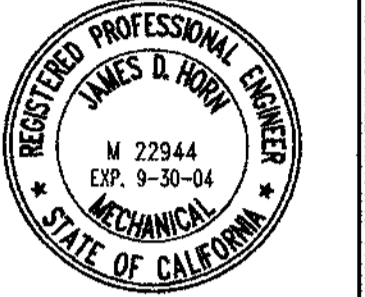
**HSI**  
 Hansen & Slaughter, Inc.  
 44 Woodland Avenue  
 San Rafael, California 94901  
 415-454-0551  
 fax: 415-454-0550  
 cad@hansen-slaughter.com

APPROVED BY: \_\_\_\_\_  
 ENGINEERING MANAGER DATE \_\_\_\_\_

BID SET  
 DATE: November 21, 2003  
 SCALE: AS SHOWN  
 PROJECT NO: HS2221  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
 555 MARWELL BOULEVARD NORTH - PETALUMA, CALIFORNIA - 94952-7077-4303  
 2003 PETALUMA REGIONAL LIBRARY  
 100 FAIRGROUNDS DRIVE  
 MEETING ROOM EXPANSION  
 PROJECT NO. 8028  
 NEW LIGHTING FLOOR PLAN  
**E3.1**

NO.	DATE	REVISION	BY:

**HORN**  
engineers  
521 Mendocino Avenue  
Santa Rosa, CA 95401  
(707) 546-1333  
www.hornengineers.com



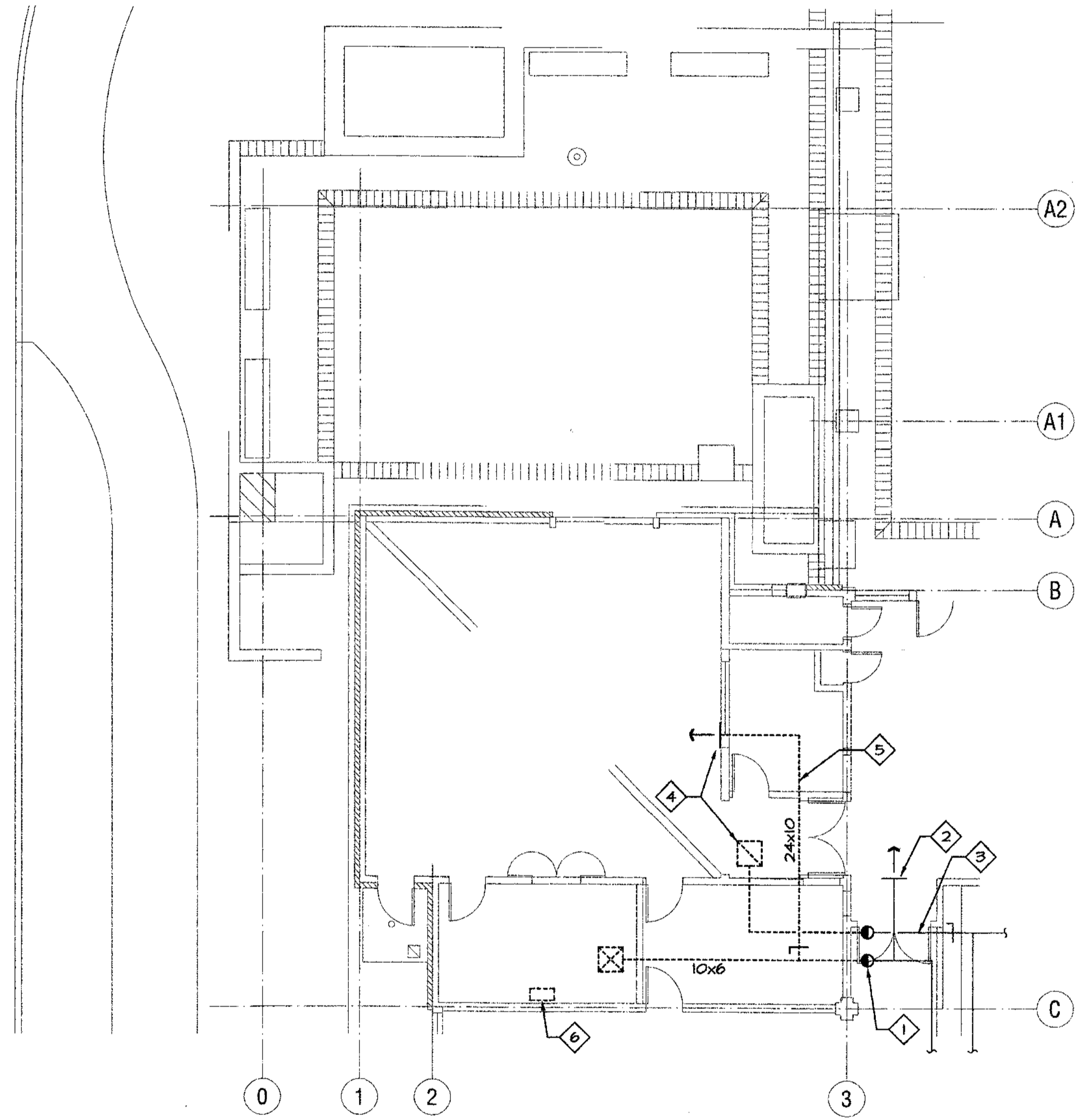
DATE: November 24, 2003  
SCALE: As Shown  
GAD FILE NO.  
DESIGNED BY: Mary Dooley  
CHECKED BY: JN  
DRAWN BY: JN

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
855 MADWELL BOULEVARD NORTH - PETALUMA - CALIFORNIA - 94952 - 707-778-4303

2003 PETALUMA REGIONAL LIBRARY  
100 FAIRGROUNDS DRIVE  
MEETING ROOM EXPANSION  
PROJECT NO. 902B

HVAC & PLUMBING  
DEMOLITION PLAN

MP2.0



- DEMOLITION NOTES**
- 1 REMOVE DUCTWORK TO POINT SHOWN ON PLANS. CAP DUCTS.
  - 2 (E) SUPPLY GRILLE TO REMAIN.
  - 3 (E) DUCTWORK TO REMAIN.
  - 4 REMOVE (E) DUCTWORK.
  - 5 REMOVE (E) GRILLES & REGISTERS.
  - 6 REMOVE (E) SINK. CAP AND CONCEAL (E) PIPING.

 **HVAC & PLUMBING DEMOLITION PLAN**  
SCALE: 1/8"=1'-0"

MAD Architecture  
145 Keller Street  
Petaluma, CA 94952  
Tel 707 765 - 9222  
Fax - 707 762 - 4897

APPROVED BY:  
MIKE HASS  
ENGINEERING MANAGER  
DATE

**MISCELLANEOUS SYMBOLS**

- AIR TERMINAL TYPE (SEE SCHEDULE)
- AIR FLOW, CFM
- NECK SIZE (IF ABSENT - SEE SCHEDULE)
- UNIT TYPE
- UNIT NUMBER
- DETAIL NUMBER (WITH OPTIONAL FIGURE LETTER)
- DRAWING REFERENCE NUMBER
- SHEET NOTE - NEW & RENOVATION WORK
- SHEET NOTE - DEMOLITION WORK
- THERMOSTAT - MOUNTED 48" ABOVE FINISHED FLOOR

**DUCTWORK LEGEND**

NOT ALL OF THESE SYMBOLS MAY NECESSARILY APPEAR ON THE DRAWINGS.

- 4-WAY SUPPLY AIR DIFFUSER
- 3-WAY SUPPLY AIR DIFFUSER
- 2-WAY SUPPLY AIR DIFFUSER (OPPOSING)
- 2-WAY SUPPLY AIR DIFFUSER (OBLIQUE)
- 1-WAY SUPPLY AIR DIFFUSER
- RETURN AIR REGISTER
- EXHAUST AIR REGISTER
- SUPPLY AIR REGISTER
- RETURN OR EXHAUST AIR REGISTER
- INTERNALLY LINE DUCT
- SUPPLY AIR DUCT
- RETURN AIR DUCT
- EXHAUST AIR DUCT
- MITERED ELBOW WITH TURNING VANES
- RADIUS ELBOW WITH TURNING VANES
- RADIUS ELBOW WITHOUT TURNING VANES
- FLEXIBLE CONNECTOR
- FLEXIBLE DUCT RUN-OUT
- MANUAL VOLUME DAMPER
- FIRE DAMPER
- SMOKE/FIRE DAMPER
- AUTOMATIC (CONTROL) DAMPER
- RECTANGULAR TO ROUND TRANSITION

**GENERAL HVAC ABBREVIATIONS**

NOT ALL OF THESE ABBREVIATIONS MAY NECESSARILY APPEAR ON THE DRAWINGS.

- AD ACCESS DOOR
- AFC ABOVE FINISHED CEILING
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AL ACOUSTICAL LINING
- BDD BACKDRAFT DAMPER
- BF BELOW FLOOR
- BHP BRAKE HORSEPOWER
- BP BYPASS DAMPER
- BTUH BRITISH THERMAL UNITS PER HOUR
- CD CONDENSATE DRAIN
- CFM CUBIC FEET PER MINUTE
- DB DRY BULB TEMPERATURE, °F
- DIA DIAMETER IN INCHES
- DN DOWN
- (E) EXISTING
- EA EXHAUST AIR / EXHAUST AIR DUCT
- EAT ENTERING AIR TEMPERATURE, °F
- EC ELECTRICAL CONTRACTOR
- EFF EFFICIENCY
- EMS ENERGY MANAGEMENT SYSTEM
- ESP EXTERNAL STATIC PRESSURE
- \*F DEGREES FAHRENHEIT
- FBO FURNISHED BY OTHERS
- FD FIRE DAMPER
- FLA FULL LOAD AMPERES
- FT FEET
- GC GENERAL CONTRACTOR
- HP HORSEPOWER
- INS INCHES
- LAT LEAVING AIR TEMPERATURE
- LBS WEIGHT IN POUNDS
- MAX MAXIMUM
- MBH THOUSANDS OF BTU'S PER HOUR
- MCA MINIMUM CIRCUIT AMPERES
- MFR MANUFACTURER
- MIN MINIMUM
- MOCP MAXIMUM OVER CURRENT PROTECTION
- (N) NEM
- N/A NOT APPLICABLE
- NIC NOT IN CONTRACT
- OA OUTSIDE AIR / OUTSIDE AIR DUCT
- OBD OPPOSED BLADE DAMPER
- PD PRESSURE DROP
- PSI POUNDS PER SQUARE INCH (GAUGE)
- RA RETURN AIR / RETURN AIR DUCT
- S SWITCH
- SA SUPPLY AIR / SUPPLY AIR DUCT
- SAD SEE ARCHITECTURAL DRAWINGS
- SD SMOKE DETECTOR
- SED SEE ELECTRICAL DRAWINGS
- SP STATIC PRESSURE
- SPD SEE PLUMBING DRAWINGS
- SQ FT SQUARE FEET
- SSD SEE STRUCTURAL DRAWINGS
- STM STEAM
- TSP TOTAL STATIC PRESSURE
- TYP TYPICAL
- UN UNLESS OTHERWISE NOTED
- V/PHZ VOLTS / PHASE / HERTZ
- VD VOLUME DAMPER
- W WITH
- WO WITHOUT
- WC WATER COLUMN
- WB WET BULB TEMPERATURE, °F
- WT WEIGHT
- φ DIAMETER IN INCHES

**HVAC GENERAL NOTES**

- PROVIDE ALL EQUIPMENT, FIXTURES AND MATERIALS REQUIRED TO COMPLETE AND MAKE OPERATIONAL THE MECHANICAL SYSTEMS SHOWN ON THESE DRAWINGS AND DESCRIBED IN DIVISION-15 OF THE SPECIFICATIONS.
- PRODUCT MANUFACTURER'S NAMES AND MODEL NUMBERS ARE SHOWN ON THE DRAWINGS TO ESTABLISH A BASIS OF DESIGN AND A STANDARD OF QUALITY AND PERFORMANCE. SUBSTITUTIONS MAY BE PROPOSED IN ACCORDANCE WITH THE REQUIREMENTS LISTED IN DIVISION 15 SPECIFICATION SECTIONS.
- THE MECHANICAL WORK SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.
- THE DRAWINGS ARE DIAGRAMMATIC. INSTALL EQUIPMENT, DUCTWORK AND PIPING TO SUIT PROJECT CONDITIONS.
- REFER TO THE CERTIFIED SHOP DRAWINGS FOR THE EXACT DIMENSIONS OF ALL EQUIPMENT.
- FASTEN ALL EQUIPMENT, DUCTWORK AND PIPING TO THE BUILDING STRUCTURE IN CONFORMANCE WITH ALL CODES AND REGULATIONS.
- A DUCT CONNECTED TO A ROUND NECK SUPPLY OR RETURN DIFFUSER SHALL NOT BE SMALLER IN DIAMETER THAN THE NECK OF THE DIFFUSER IT SERVES.
- ALL SQUARE DUCT ELBOWS SHALL BE EQUIPPED WITH DOUBLE THICKNESS TURNING VANES.
- PROVIDE VOLUME DAMPERS AT ALL BRANCH TAKE-OFFS TO AIR TERMINALS IN SUPPLY AND RETURN DUCTWORK AND WHERE SHOWN ON THE FLOOR PLANS.
- PROVIDE DUCT LINING WHERE SPECIFIED OR NOTED ON THE PLANS. INCREASE THE SIZE OF THE DUCT TO MAINTAIN THE NET INTERNAL FREE AREA.
- FLUE VENTS AND EXHAUST AIR DISCHARGE OPENINGS SHALL BE LOCATED AT LEAST 10' AWAY FROM OR 3' ABOVE OUTDOOR AIR INTAKE OPENINGS. COORDINATE FOR PLUMBING VENTS TO BE 10' AWAY FROM AIR INTAKE OPENINGS.
- WHERE A DETAIL IS REFERENCED, REFER TO THE DETAIL AND FIGURE NOTED. SOME DETAILS ARE UNREFERENCED AND ARE INTENDED AS STANDARD CONSTRUCTION REQUIREMENTS.

**SHEET NOTES**

- INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION. (CMC SECTION 303)

**SEISMIC RESTRAINT NOTES**

**GENERAL**

ALL MECHANICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE (2001), SECTION 1632 - "LATERAL FORCE ON ELEMENTS OF STRUCTURES, NON-STRUCTURAL COMPONENTS AND EQUIPMENT SUPPORTED BY STRUCTURES."

ALL MECHANICAL COMPONENTS SHALL RESIST THE EFFECTS OF SEISMIC FORCES FOR ZONE 4 AND AS MODIFIED BY THE NEAR SOURCE FACTOR. EXISTING DUCTWORK SHALL REMAIN AS INSTALLED.

**HVAC DUCTWORK AND PIPING SYSTEMS**

ALL PIPES AND DUCTS SHALL BE BRACED AS REQUIRED BY CBC SECTION 1632.

DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PROVISIONS CONTAINED IN PART 4, TITLE 24, CALIFORNIA MECHANICAL CODE.

**SEISMIC RESTRAINT EXCEPTIONS:**

- FUEL PIPING LESS THAN 1 INCH INSIDE DIAMETER.
- NON-MEDICAL GAS PIPING LESS THAN 2.5 INCHES INSIDE DIAMETER, OR PIPING SUSPENDED BY INDIVIDUAL HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE STRUCTURAL SUPPORT FOR THE HANGER.
- RECTANGULAR AIR-HANDLING DUCTS LESS THAN 6 SQUARE FOOT IN CROSS-SECTIONAL AREA, OR ROUND AIR-HANDLING DUCTS LESS THAN 20 INCHES IN DIAMETER, OR DUCTS SUSPENDED BY HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE DUCT TO THE BOTTOM OF THE STRUCTURAL SUPPORT FOR THE HANGER.

IN ADDITION TO THE CODE REQUIREMENTS LISTED ABOVE, ALL EQUIPMENT, DUCTWORK AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE SMACNA SEISMIC RESTRAINT GUIDELINES FOR MECHANICAL SYSTEMS.

**HAZARDOUS MATERIALS NOTE**

IF DURING THE COURSE OF THIS WORK THE CONTRACTOR OBSERVES THE EXISTENCE OF HAZARDOUS MATERIALS, THE CONTRACTOR SHALL IMMEDIATELY TERMINATE FURTHER WORK IN THAT AREA AND NOTIFY THE OWNER OF THE CONDITION. THE OWNER WILL, AFTER CONSULTATION WITH THE ARCHITECT OR ENGINEER DETERMINE FURTHER COURSE OF ACTION.

AIR TERMINAL SCHEDULE						
TAG	MAKE & MODEL	SERVICE	SIZE		FRAME TYPE	NOTES
			CFM RANGE	NECK SIZE		
A	TITUS TDC	CEILING SUPPLY	0 - 180 160 - 260	6" 8"	SURFACE MOUNTED	2
B	TITUS 301 RL	WALL SUPPLY	SEE PLANS	SEE PLANS	I	2, 3
C	GREENHECK 65J-150	WALL LOUVER	SEE PLANS	SEE PLANS	N/A	4
D	TITUS TDC	CEILING RETURN	0 - 150 160 - 260	6" 8"	SURFACE MOUNTED	2
E	TITUS 50P	CEILING EXHAUST	SEE PLANS	SEE PLANS	I	2

- NOTES:
- OPPOSED BLADE DAMPER IN NECK
  - STANDARD WHITE FINISH
  - 22.5 DEGREE DEFLECTION
  - COLOR AS SELECTED BY ARCHITECT

FURNACE SCHEDULE												
TAG	MAKE & MODEL	AIR FLOW CFM	PD INS. P.L.C.	HEATING			ELECTRICAL				OPER. WEIGHT LBS.	NOTES
				INPUT MBH	OUTPUT MBH	AFUE %	V/PHZ	FLA	MCA	MOCP		
F	REZTOR CAUA-250	3000	1.0	250	200	80	200/1/60	N/A	N/A	N/A	300	1, 2, 3, 4

- NOTES:
- NATURAL GAS 2-STAGE HEATING
  - HORIZONTAL COMBUSTION AIR INLET/VENT TERMINAL ASSEMBLY
  - COMBINATION STARTER/DISCONNECT SWITCH
  - PROVIDE WITH ACUB-040 COOLING COIL (CC-1)
  - WHITE RODGERS #1F95-371 PROGRAMMABLE THERMOSTAT

CONDENSING UNIT SCHEDULE									
TAG	MAKE & MODEL	COOLING		ELECTRICAL				OPER. WEIGHT LBS.	NOTES
		TOTAL MBH	EER	V/PHZ	FLA	MCA	MOCP		
CU	TRANE T1AC40A3	93.1	11.6	200/3/60	27.1	37.0	60	322	1, 2, 3, 4, 5, 6, 7, 8

- NOTES:
- COOLING CAPACITY IS BASED ON ARI STANDARD CONDITIONS
  - PART-WINDING-START TIME DELAY RELAY
  - HOT GAS BYPASS
  - LOW AMBIENT START PACKAGE
  - FILTER/DRYER
  - HIGH & LOW PRESSURE SWITCHES
  - CRANKCASE HEATER
  - COIL GUARD

EQUIPMENT SCHEDULE			
TAG	MAKE & MODEL	DESCRIPTION	OPER. WEIGHT LBS.
GH	GREENHECK GRSR-30	CURB MOUNTED GRAVITY HOOD, MOTORIZED DAMPER AND ACTUATOR WITH HINGED ACCESS.	30

NO.	DATE	REVISION	BY

**HORN**  
ENGINEERS  
1500 S. FAIRGROUNDS AVENUE  
PETALUMA, CA 94901  
(707) 762-4892  
www.hornengineers.com



DESIGNED BY: Mary Dooley  
CHECKED BY: JH  
DRAWN BY: JN  
DATE: November 24, 2003  
SCALE: As Shown  
CAD FILE NO.

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
555 McDOWELL BOULEVARD NORTH - PETALUMA, CALIFORNIA - 94952 - 707-778-4033

2003 PETALUMA REGIONAL LIBRARY  
100 FAIRGROUNDS DRIVE  
MEETING ROOM EXPANSION  
PROJECT NO. 9028

MECHANICAL  
NOTES, LEGEND,  
& SCHEDULES

MAD Architecture  
145 Keller Street  
Petaluma, CA 94952  
Tel 707 765-9222  
Fax 707 762-4897

APPROVED BY:

MIKE HASS  
ENGINEERING MANAGER

MO.1

**MECHANICAL MANDATORY MEASURES** Part 1 of 2 **MECH-MM**

PROJECT NAME: Meeting Room Expansion DATE: 7/30/2003

DESCRIPTION	Designer	Enforcement
<b>Equipment and Systems Efficiencies</b>		
<input type="checkbox"/> 111 Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.		
<input type="checkbox"/> 115(a) Fan type central furnaces shall not have a pilot light.		
<input type="checkbox"/> 123 Piping, except that conveying fluids at temperatures between 50 and 105 degrees Fahrenheit, or within HVAC equipment, shall be insulated in accordance with Standards Section 123.		
<input checked="" type="checkbox"/> 124 Air handling duct systems shall be installed and insulated in compliance with Sections 601, 603 and 604 of the Uniform Mechanical Code.		
<b>Controls</b>		
122(e) Each space conditioning system shall be installed with one of the following:		
<input checked="" type="checkbox"/> 122(e)1 Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (d)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends; incorporate an automatic holiday "shut-off" feature that turns off all loads for at least 24 hours, then resumes the normally scheduled operation; and has program backup capabilities that prevent the loss of the device's program and time setting for at least 10 hours if power is interrupted; or		
<input type="checkbox"/> 122(e)1B An occupancy sensor to control the operating period of the system; or		
<input type="checkbox"/> 122(e)1C A 4-hour timer that can be manually operated to control the operating period of the system.		
<input checked="" type="checkbox"/> 122(e)2 Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setback cooling thermostat setpoint.		
<input type="checkbox"/> 122(g) Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone: shall not exceed 25,000 square feet; shall be provided with isolation devices, such as valves or dampers, that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above.		
<input checked="" type="checkbox"/> 122(a&b) Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum.		
<input checked="" type="checkbox"/> 122(c) Thermostats shall have numeric setpoints in degrees Fahrenheit (F) and adjustable setpoint stops accessible only to authorized personnel.		
<input type="checkbox"/> 112(b) Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone.		

EnergyPro 3.1 By EnergySoft User Number: 1274 Job Number: 160.3 Page:14 of 15

**CERTIFICATE OF COMPLIANCE** Part 1 of 2 **MECH-1**

PROJECT NAME: Meeting Room Expansion DATE: 7/30/2003

PROJECT ADDRESS: 100 Fairgrounds Drive Petaluma

PRINCIPAL DESIGNER - MECHANICAL: Horn Engineers, Inc. TELEPHONE: (707) 546-1332

DOCUMENTATION AUTHOR: HORN ENGINEERS TELEPHONE: (707) 546-1332

GENERAL INFORMATION: BUILDING CONDITIONED FLOOR AREA: 2,430 sq. Ft. CLIMATE ZONE: 2

BUILDING TYPE:  NONRESIDENTIAL  HIGH RISE RESIDENTIAL  HOTEL/MOTEL GUEST ROOM

PHASE OF CONSTRUCTION:  NEW CONSTRUCTION  ADDITION  ALTERATION  EXISTING + ADDITION

METHOD OF MECHANICAL COMPLIANCE:  PRESCRIPTIVE  PERFORMANCE

STATEMENT OF COMPLIANCE: This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR: Jay Takacs SIGNATURE: DATE:

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in Sections 110 through 115, 120 through 124, 140 through 142, 144 and 145.

Please check one:

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer or I am a licensed architect.

I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1.

PRINCIPAL MECHANICAL DESIGNER - NAME: Horn Engineers, Inc. SIGNATURE: DATE: LIC. #:

MECHANICAL MANDATORY MEASURES: Indicate location on plans of Note Block for Mandatory Measures

INSTRUCTIONS TO APPLICANT: For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

MECH-1: Required on plans for all submittals. Parts 2 may be incorporated in schedules on plans.

MECH-2: Required for all submittals, but may be incorporated in schedules on plans.

MECH-3: Required for all submittals unless required outdoor ventilation rates and airflow are shown on plans per Section 4.3.4.

MECH-4: Required for Prescriptive submittals.

MECH-5: Optional. Performance use only for mechanical distribution summary.

EnergyPro 3.1 By EnergySoft User Number: 1274 Job Number: 160.3 Page:10 of 15

**CERTIFICATE OF COMPLIANCE** Part 1 of 2 **ENV-1**

PROJECT NAME: Meeting Room Expansion DATE: 7/30/2003

PROJECT ADDRESS: 100 Fairgrounds Drive Petaluma

PRINCIPAL DESIGNER - ENVELOPE: Ozborndogli Architecture TELEPHONE: (707) 542-3770

DOCUMENTATION AUTHOR: HORN ENGINEERS TELEPHONE: (707) 546-1332

GENERAL INFORMATION: BUILDING CONDITIONED FLOOR AREA: 2,430 sq. Ft. CLIMATE ZONE: 2

BUILDING TYPE:  NONRESIDENTIAL  HIGH RISE RESIDENTIAL  HOTEL/MOTEL GUEST ROOM

PHASE OF CONSTRUCTION:  NEW CONSTRUCTION  ADDITION  ALTERATION  EXISTING + ADDITION

METHOD OF ENVELOPE COMPLIANCE:  COMPONENT  OVERALL ENVELOPE  PERFORMANCE

STATEMENT OF COMPLIANCE: This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building envelope requirements.

The documentation preparer hereby certifies that the document is accurate and complete.

DOCUMENTATION AUTHOR: Jay Takacs SIGNATURE: DATE:

The Principal Envelope Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the envelope requirements contained in Sections 110, 116 through 118, and 140, 142, 143 or 149 of Title 24, Part 6.

Please check one:

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the state of California as a civil engineer or mechanical engineer, or I am a licensed architect.

I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538, and 6737.1.

PRINCIPAL ENVELOPE DESIGNER - NAME: Ozborndogli Architecture SIGNATURE: DATE: LIC. #:

ENVELOPE MANDATORY MEASURES: Indicate location on plans of Note Block for Mandatory Measures

INSTRUCTIONS TO APPLICANT: For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

ENV-1: Required on plans for all submittals. Part 2 may be incorporated in schedules on plans.

ENV-2: Used for all submittals; choose appropriate version depending on method of envelope compliance.

ENV-3: Optional. Use if default U-values are not used. Choose appropriate version for assembly U-value to be calculated.

EnergyPro 3.1 By EnergySoft User Number: 1274 Job Number: 160.3 Page:2 of 15

NO.	DATE	REVISION:	BY:



DESIGNED BY: Mary Dooley  
 CHECKED BY: JN  
 DRAWN BY: JN  
 DATE: November 24, 2003  
 SCALE: As Shown  
 CAD FILE NO.:  
 DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
 555 MADWELL BOULEVARD NORTH - PETALUMA - CALIFORNIA - 94952 - 707-776-4900  
 PROJECT NO. 9028  
 TITLE 24  
**M1.0**

**MECHANICAL MANDATORY MEASURES** Part 2 of 2 **MECH-MM**

PROJECT NAME: Meeting Room Expansion DATE: 7/30/2003

Description	Designer	Enforcement
<b>Ventilation</b>		
<input checked="" type="checkbox"/> 121(e) Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans.		
<input checked="" type="checkbox"/> 121(f) Gravity or automatic dampers interlocked and closed on fan shutdown shall be provided on the outside air intakes and discharges of all space conditioning and exhaust systems.		
<input checked="" type="checkbox"/> 121(g) All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.		
<input checked="" type="checkbox"/> 121(f)1 Air Balancing: The system shall be balanced in accordance with the National Environmental Balancing Bureau (NEBB) Procedural Standards (1983), or Associated Air Balance Council (AABC) National Standards (1989); or		
<input type="checkbox"/> 121(f)2 Outside Air Certification: The system shall provide the minimum outside air as shown on the mechanical drawings, and shall be measured and certified by the installing licensed C-20 mechanical contractor and certified by (1) the design mechanical engineer, (2) the installing licensed C-20 mechanical contractor, or (3) the person with overall responsibility for the design of the ventilation system; or		
<input type="checkbox"/> 121(f)3 Outside Air Measurement: The system shall be equipped with a calibrated local or remote device capable of measuring the quantity of outside air on a continuous basis and displaying that quantity on a readily accessible display device; or		
<input type="checkbox"/> 121(f)4 Another method approved by the Commission.		
<b>Service Water Heating Systems</b>		
<input type="checkbox"/> 113(b)2 If a circulating hot water system is installed, it shall have a control capable of automatically turning off the circulating pump(s) when hot water is not required.		
<input type="checkbox"/> 113(b)3B Lavatories in restrooms of public facilities shall be equipped with controls to limit the outlet temperature to 110 degrees F.		
<input type="checkbox"/> 113(b)3C Lavatories in restrooms of public facilities shall be equipped with one of the following:  Outlet devices that limit the flow of hot water to a maximum of 0.5 gallons per minute.  Foot actuated control valves, and outlet devices that limit the flow of hot water to a maximum of 0.75 gallons per minute.  Proximity sensor actuated control valves, and outlet devices that limit the flow of hot water to a maximum of 0.75 gallons per minute.  Self-closing valves, and outlet devices that limit the flow of hot water to a maximum of 2.5 gallons per minute, and 0.25 gallons/cycle (circulating system).  Self-closing valves, and outlet devices that limit the flow of hot water to a maximum of 2.5 gallons per minute, and 0.50 gallons/cycle (non-circulating system).  Self-closing valves, and outlet devices that limit the flow of hot water to a maximum of 2.5 gallons per minute, and 0.75 gallons/cycle (foot switches and proximity sensor controls).		

EnergyPro 3.1 By EnergySoft User Number: 1274 Job Number: 160.3 Page:15 of 15

**CERTIFICATE OF COMPLIANCE** Part 2 of 2 **MECH-1**

PROJECT NAME: Meeting Room Expansion DATE: 7/30/2003

**SYSTEM FEATURES**

SYSTEM NAME	MECHANICAL SYSTEMS	NOTE TO FIELD
TIME CONTROL	Programmable Switch	
SETBACK CONTROL	Heating Required	
ISOLATION ZONES	n/a	
HEAT PUMP THERMOSTAT?	n/a	
ELECTRIC HEAT?	n/a	
FAN CONTROL	Constant Volume	
VAV MINIMUM POSITION CONTROL?	No	
SIMULTANEOUS HEAT/COOL?	No	
HEATING SUPPLY RESET	Constant Temp	
COOLING SUPPLY RESET	Constant Temp	
HEAT REJECTION CONTROL	n/a	
VENTILATION	Air Balance	
OUTDOOR DAMPER CONTROL	Auto	
ECONOMIZER TYPE	Fixed Temp (Non-Integ)	
DESIGN O.A. CFM (MECH-3, COLUMN 1)	792 cfm	
HEATING EQUIPMENT TYPE	Gas Furnace	
HEATING EQUIPMENT EFFICIENCY	82% AFUE	
COOLING EQUIPMENT TYPE	Split DX	
COOLING EQUIPMENT EFFICIENCY	11.6 EER	
MAKE AND MODEL NUMBER	TRANSCORPOR T1090CALA SS	
PIPE INSULATION REQUIRED?	Yes	
PIPE/DUCT INSULATION PROTECTED?	Yes	
HEATING DUCT LOCATION R-VALUE	Ducts in Attic 4.2	
COOLING DUCT LOCATION R-VALUE	Ducts in Attic 4.2	
VERIFIED SEALED DUCTS IN CEILING/ROOF SPACE?	No	

CODE TABLES: Enter code from table below into columns above.

HEAT PUMP THERMOSTAT?	TIME CONTROL	SETBACK CTRL.	ISOLATION ZONES	FAN CONTROL
S: Prog. Switch O: Occupancy Sensor M: Manual Timer	H: Heating C: Cooling B: Both	Enter Number of Isolation Zones.	I: Inlet Vanes P: Variable Pitch W: FFD O: Other C: Curve	A: Air W: Water N: Not Required EC: Economizer Control See Section 144(e)3

NOTES TO FIELD - For Building Department Use Only

EnergyPro 3.1 By EnergySoft User Number: 1274 Job Number: 160.3 Page:11 of 15

**ENVELOPE COMPLIANCE SUMMARY** Part 2 of 2 **ENV-1**

PROJECT NAME: Meeting Room Expansion DATE: 7/30/2003

**OPAQUE SURFACES**

#	Surface Type	Framing Type	Area	U-Fac.	Act. Azm.	Tilt Y/N	Solar Gain	Form 3 Reference	Location / Comments
1	Wall	Wood	35	0.059	90	90	X	R-21 Wall (W 21 2x6 16)	ZONE1
2	Door	None	21	0.681	90	90	X	Hollow Metal Door	ZONE1
3	Wall	Wood	208	0.059	0	90	X	R-21 Wall (W 21 2x6 16)	ZONE1
4	Wall	Wood	272	0.058	270	90	X	R-21 Wall (Brick Veneer)	ZONE1
5	Roof	Wood	200	0.028	0	0	X	R-38 Roof (R 38 2x14 16)	ZONE1
6	Wall	Wood	30	0.059	0	90	X	R-21 Wall (W 21 2x6 16)	ZONE1
7	Wall	Wood	240	0.059	270	90	X	R-21 Wall (W 21 2x6 16)	ZONE1
8	Roof	Wood	200	0.028	0	0	X	R-38 Roof (R 38 2x14 16)	ZONE1
9	Wall	Wood	170	0.059	90	90	X	R-21 Wall (W 21 2x6 16)	ZONE1
10	Roof	Wood	140	0.028	0	0	X	R-38 Roof (R 38 2x14 16)	ZONE1
11	Wall	Wood	40	0.059	90	90	X	R-21 Wall (W 21 2x6 16)	ZONE1
12	Roof	Wood	80	0.028	0	0	X	R-38 Roof (R 38 2x14 16)	ZONE1
13	Roof	Wood	80	0.028	0	0	X	R-38 Roof (R 38 2x14 16)	ZONE1
14	Wall	Wood	40	0.058	0	90	X	R-21 Wall (Brick Veneer)	ZONE1
15	Roof	Wood	330	0.028	0	0	X	R-38 Roof (R 38 2x14 16)	ZONE1

**FENESTRATION SURFACES**

Site Assembled Glazing  Check box if Building is <= 100,000 sqft of CFA and >= 10,000 sqft vertical glazing then NFRC Certification is required. Follow NFRC 100-SB Procedures and submit NFRC Label Certificate Form.

#	Type	Area	U-Fac.	Act. Azm.	SHGC	Glazing Type	Location / Comments
1	Window	14	0.990	90	0.74	Single Non/MI Clear Default	ZONE1
2	Window	14	0.990	0	0.74	Single Non/MI Clear Default	ZONE1
3	Window	14	0.990	0	0.74	Single Non/MI Clear Default	ZONE1
4	Window	14	0.990	0	0.74	Single Non/MI Clear Default	ZONE1
5	Window	14	0.990	0	0.74	Single Non/MI Clear Default	ZONE1
6	Window	14	0.990	0	0.74	Single Non/MI Clear Default	ZONE1
7	Window	14	0.990	0	0.74	Single Non/MI Clear Default	ZONE1
8	Window	14	0.990	270	0.74	Single Non/MI Clear Default	ZONE1
9	Window	14	0.990	270	0.74	Single Non/MI Clear Default	ZONE1

**EXTERIOR SHADING**

#	Exterior Shade Type	SHGC	Window Hgt. Wd.	Overhang Len. Hgt. I. Ext. RExt.	Left Fin Dist. Len. Hgt.	Right Fin Dist. Len. Hgt.
1	None	0.76				
2	None	0.76				
3	None	0.76				
4	None	0.76				
5	None	0.76				
6	None	0.76				
7	None	0.76				
8	None	0.76				
9	None	0.76				

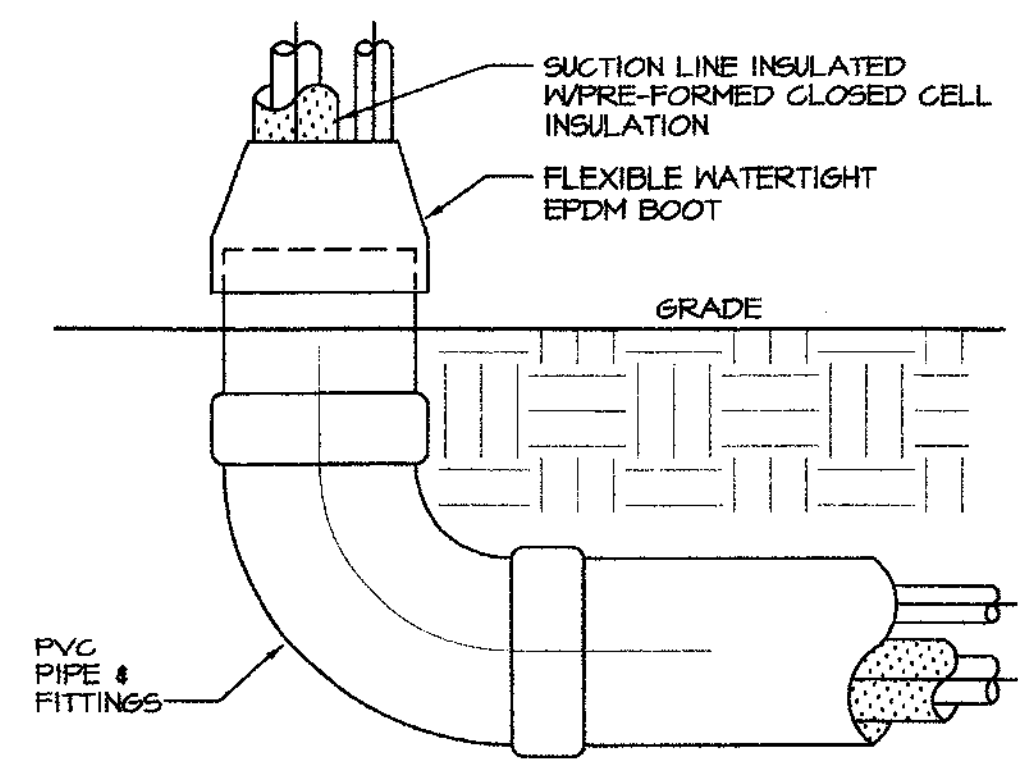
EnergyPro 3.1 By EnergySoft User Number: 1274 Job Number: 160.3 Page:3 of 15

MAD Architecture  
 145 Keller Street  
 Petaluma, CA 94952  
 Tel 707 765 - 9222  
 Fax 707 762 - 4897

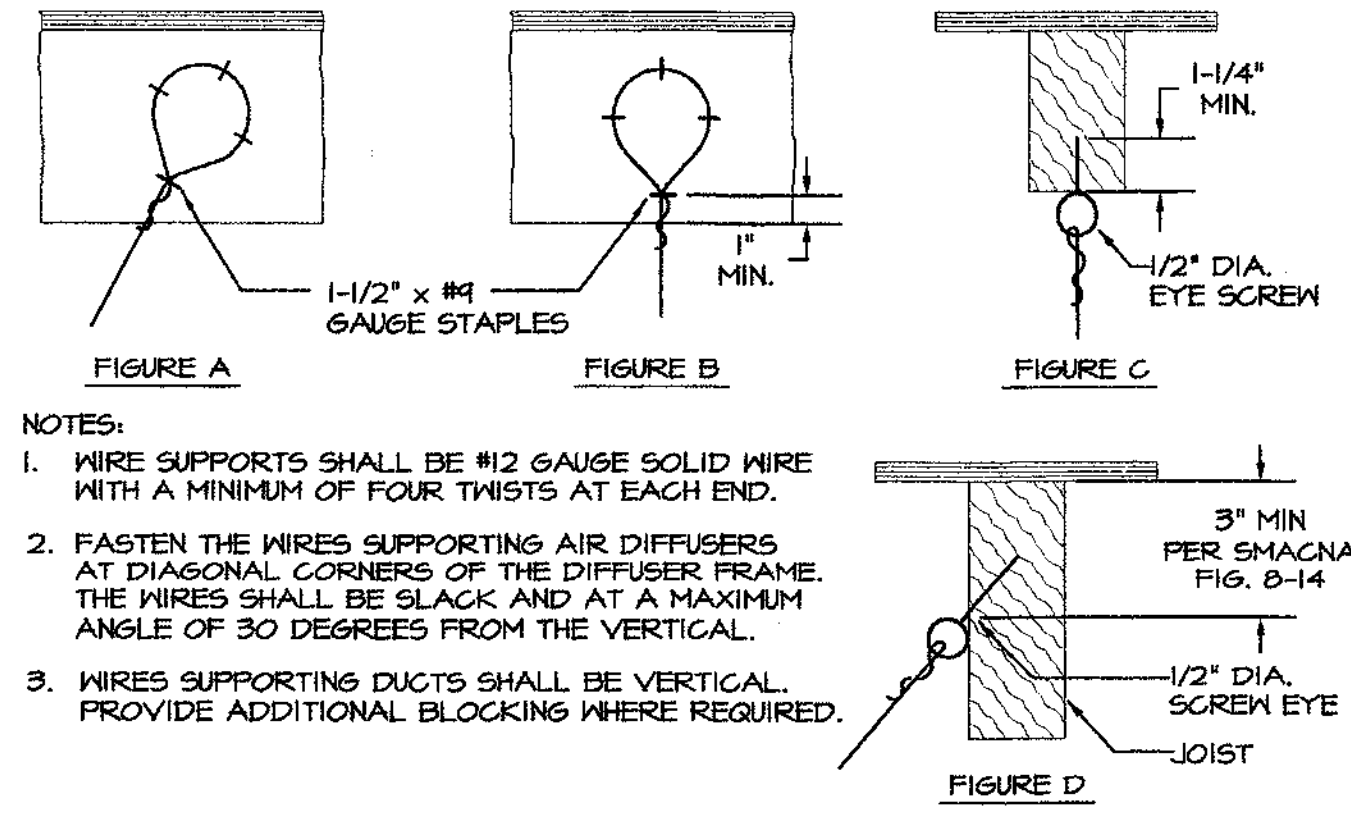
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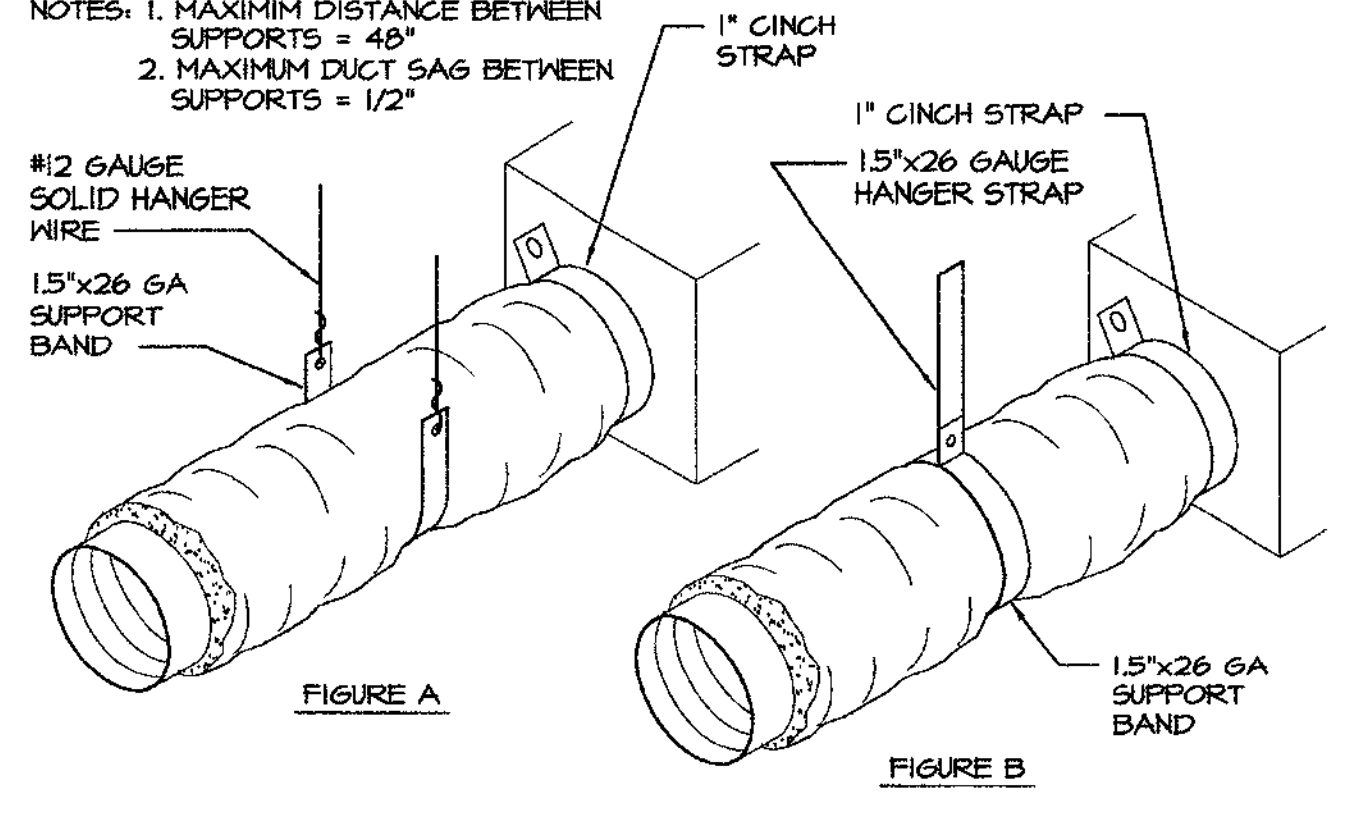




**10 BURIED REFRIGERANT PIPING**  
NOT TO SCALE



**7 HANGER WIRE SUPPORTS**  
NOT TO SCALE



**4 FLEXIBLE DUCT SUPPORTS**  
NOT TO SCALE

**ROUND DUCTS WITH SINGLE POINT SUPPORTS**

MAXIMUM DIAMETER	SUPPORT SPACING	HANGER ROD DIA.	STRAP & BAND	WIRE SIZE	FASTENER DIAMETER
10"	10'	1/4"	1"x22 GA.	#12 GA.	1/4"
20"	10'	1/4"	1"x20 GA.	N/A	1/4"

**RECTANGULAR DUCTS WITH TWO POINT SUPPORTS**

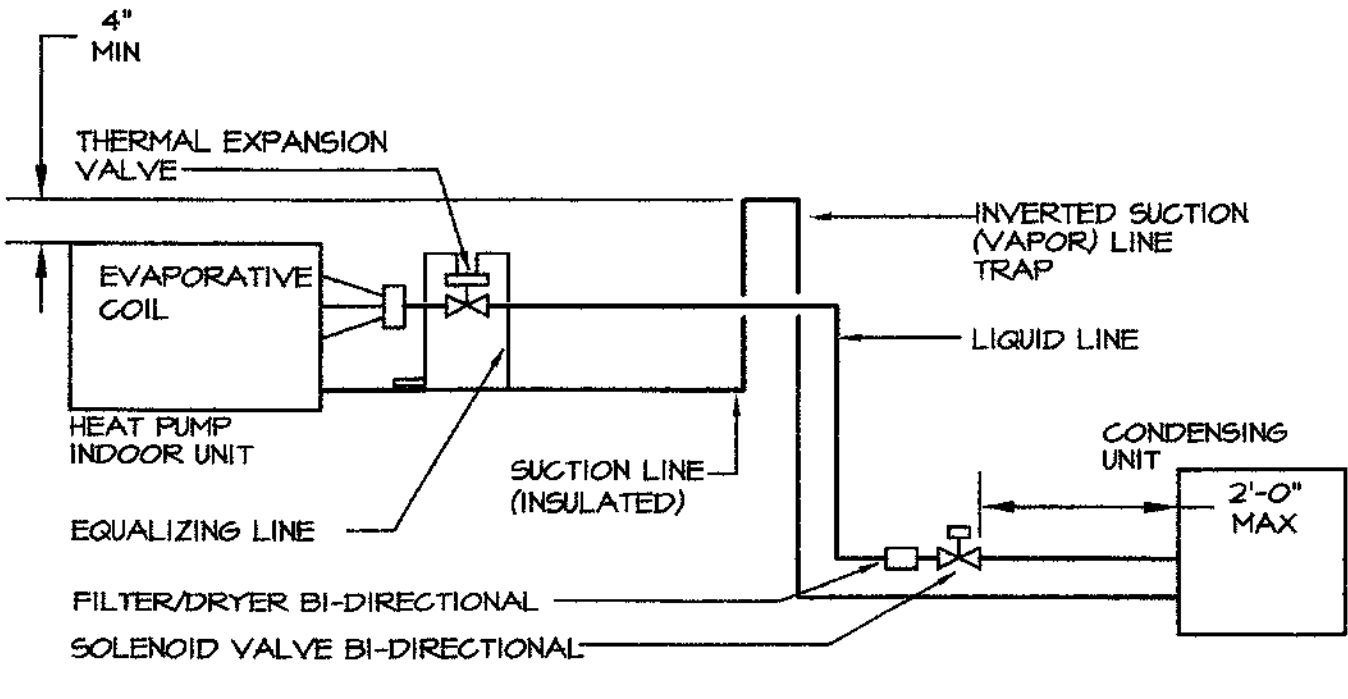
MAXIMUM SIDE DIMENSION	SUPPORT SPACING	HANGER ROD DIAMETER	HANGER STRAP SIZE	HORIZONTAL TRAPEZE ANGLE	HORIZONTAL TRAPEZE STRUT
30"	10'	1/4"	1"x18 GA.	1.5"x1.5"x1/8"	B-LINE B-12

**VERTICAL RECTANGULAR DUCTS**

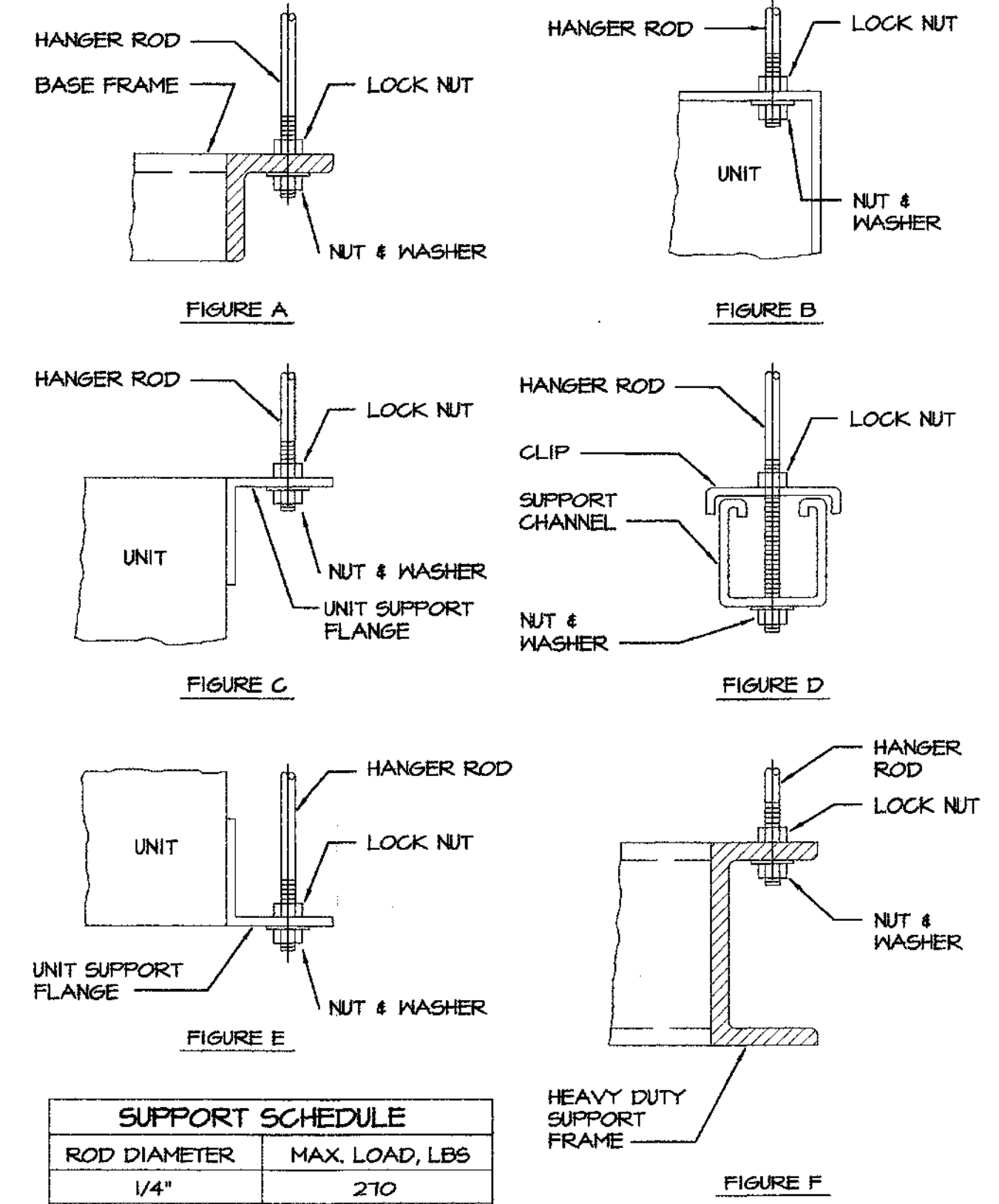
MAXIMUM SIDE DIMENSION	SUPPORT SPACING	STRAP OR ANGLE SIZE	LAG BOLT DIAMETER	EXPANSION ANCHOR DIAMETER
24"	12'	1"x1/8"	1/4"	1/4"

NOTE: CHOOSE ITEMS APPLICABLE TO THE METHOD OF SUPPORT

**1 DUCT HANGER SCHEDULES**  
NOT TO SCALE



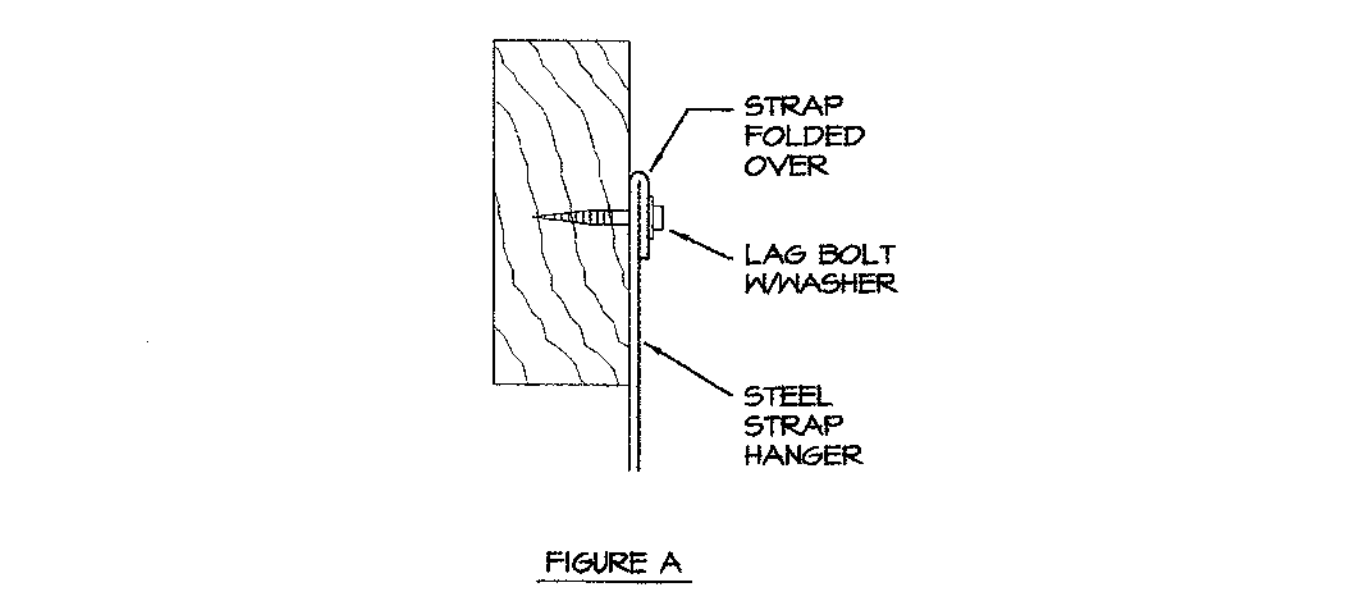
**11 REFRIGERANT PIPING DIAGRAM**  
NOT TO SCALE



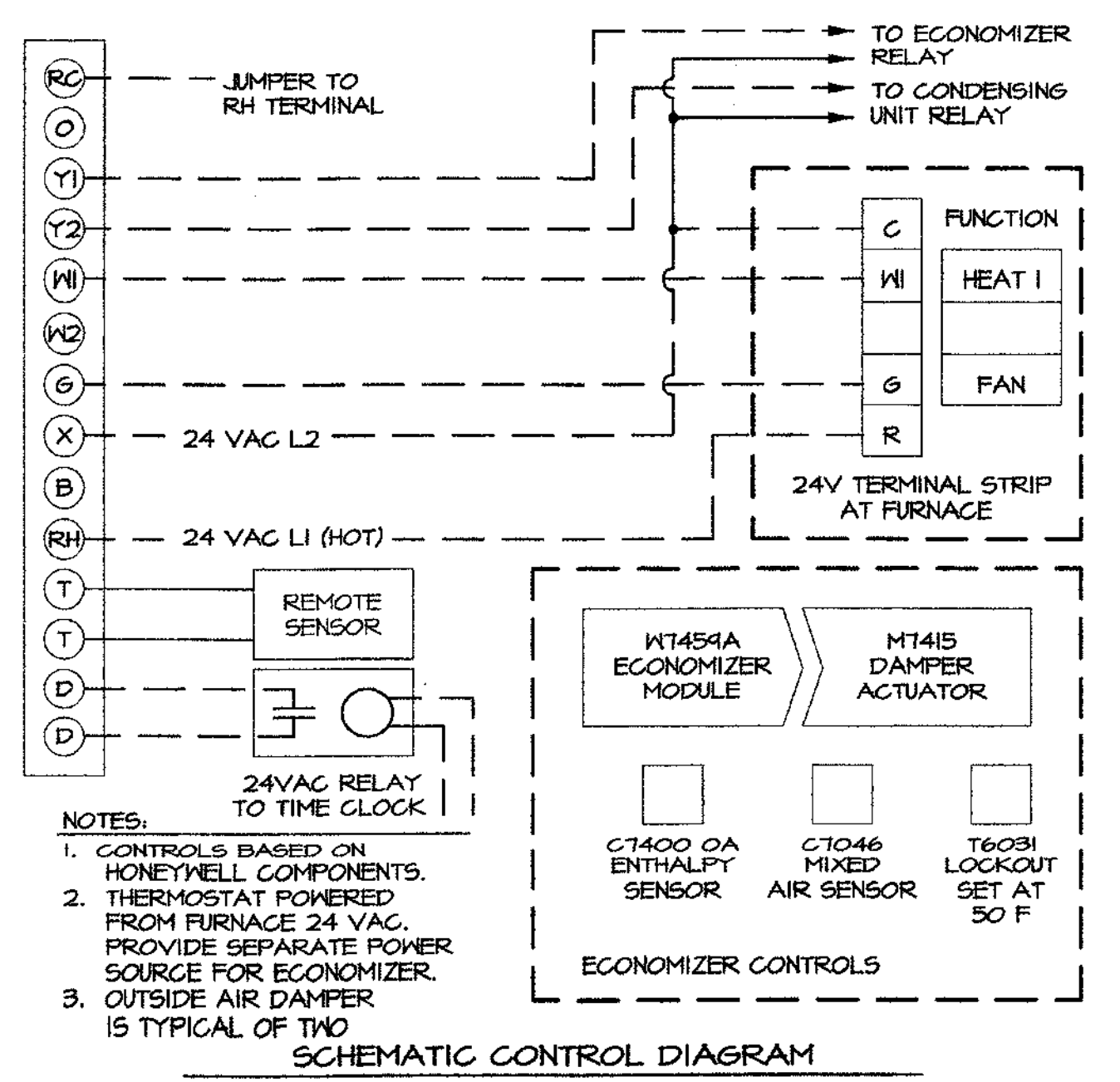
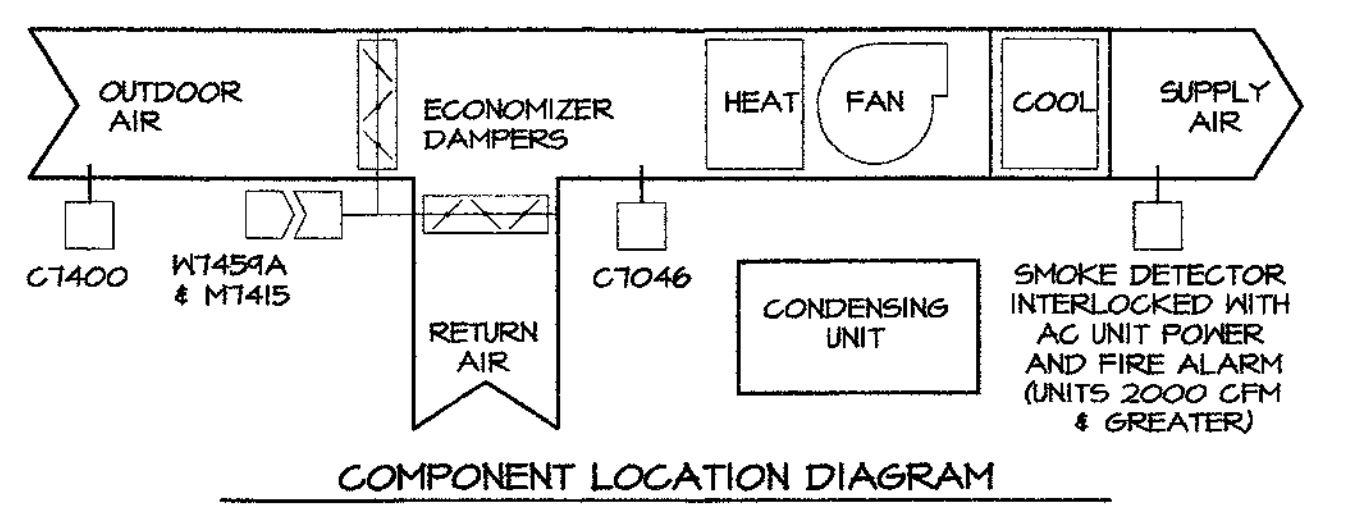
**SUPPORT SCHEDULE**

ROD DIAMETER	MAX. LOAD, LBS
1/4"	210
3/8"	300
1/2"	560

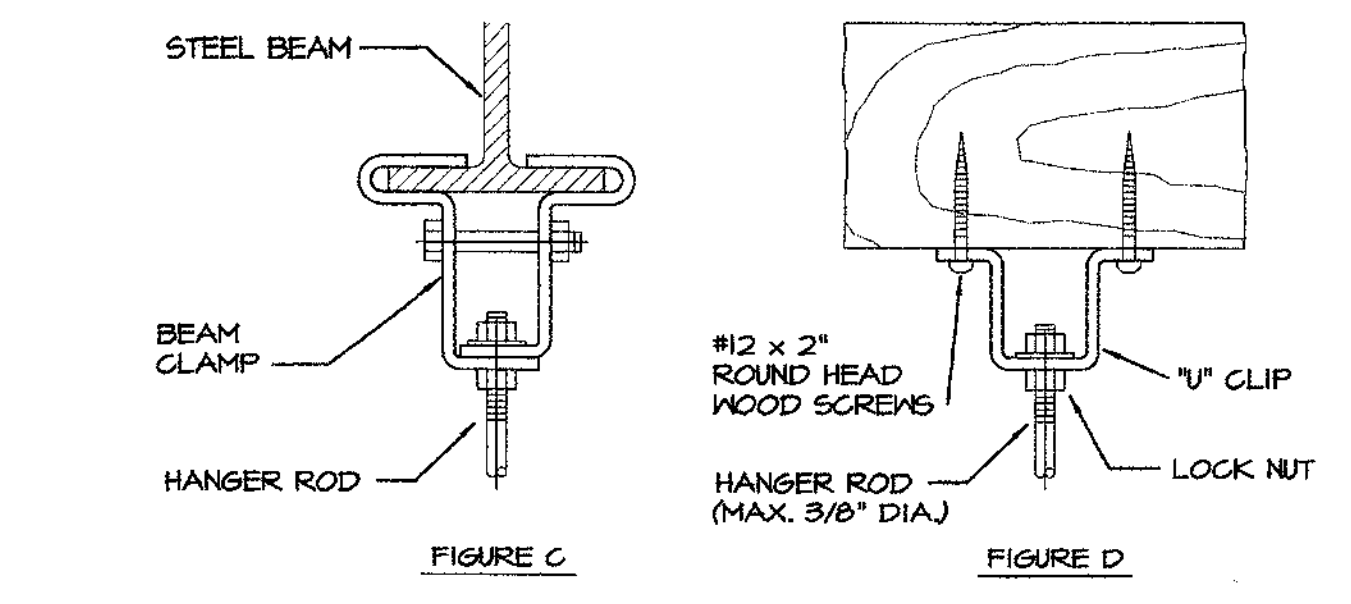
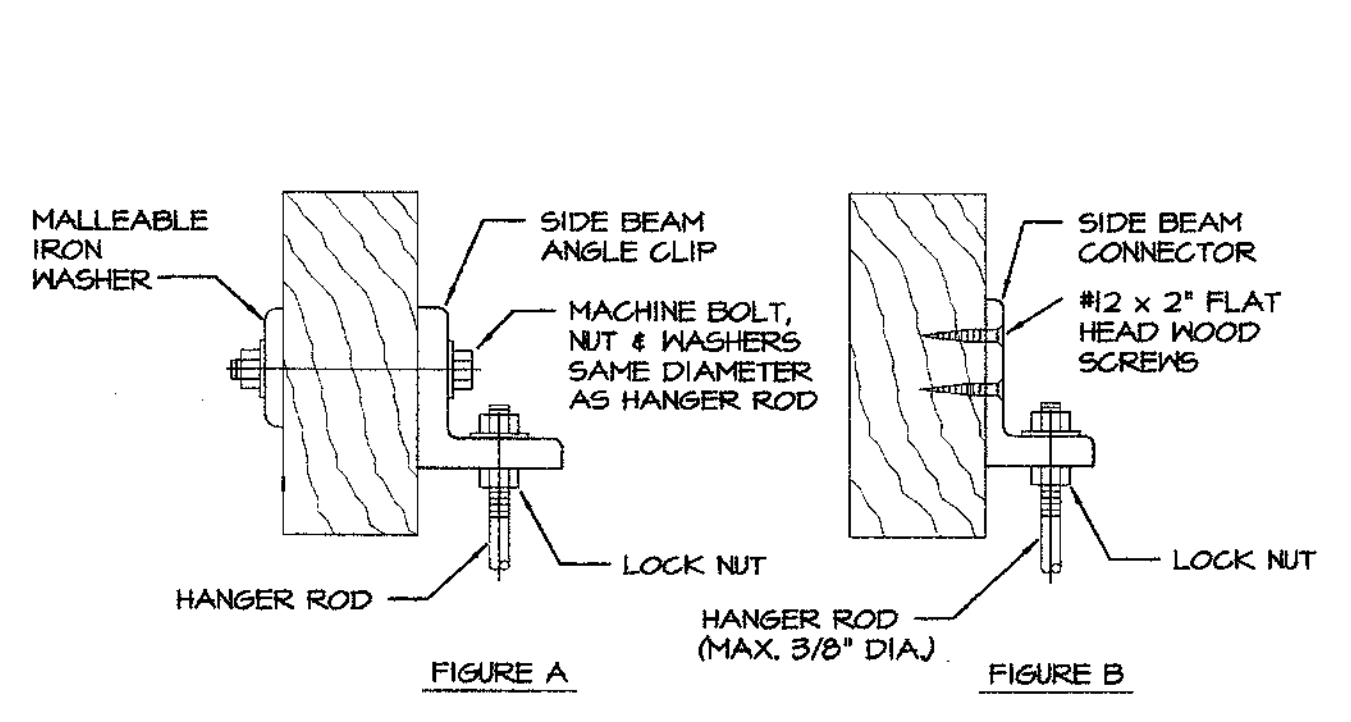
**8 EQUIPMENT HANGER SUPPORTS**  
NOT TO SCALE



**5 HANGER STRAP SUPPORTS**  
NOT TO SCALE



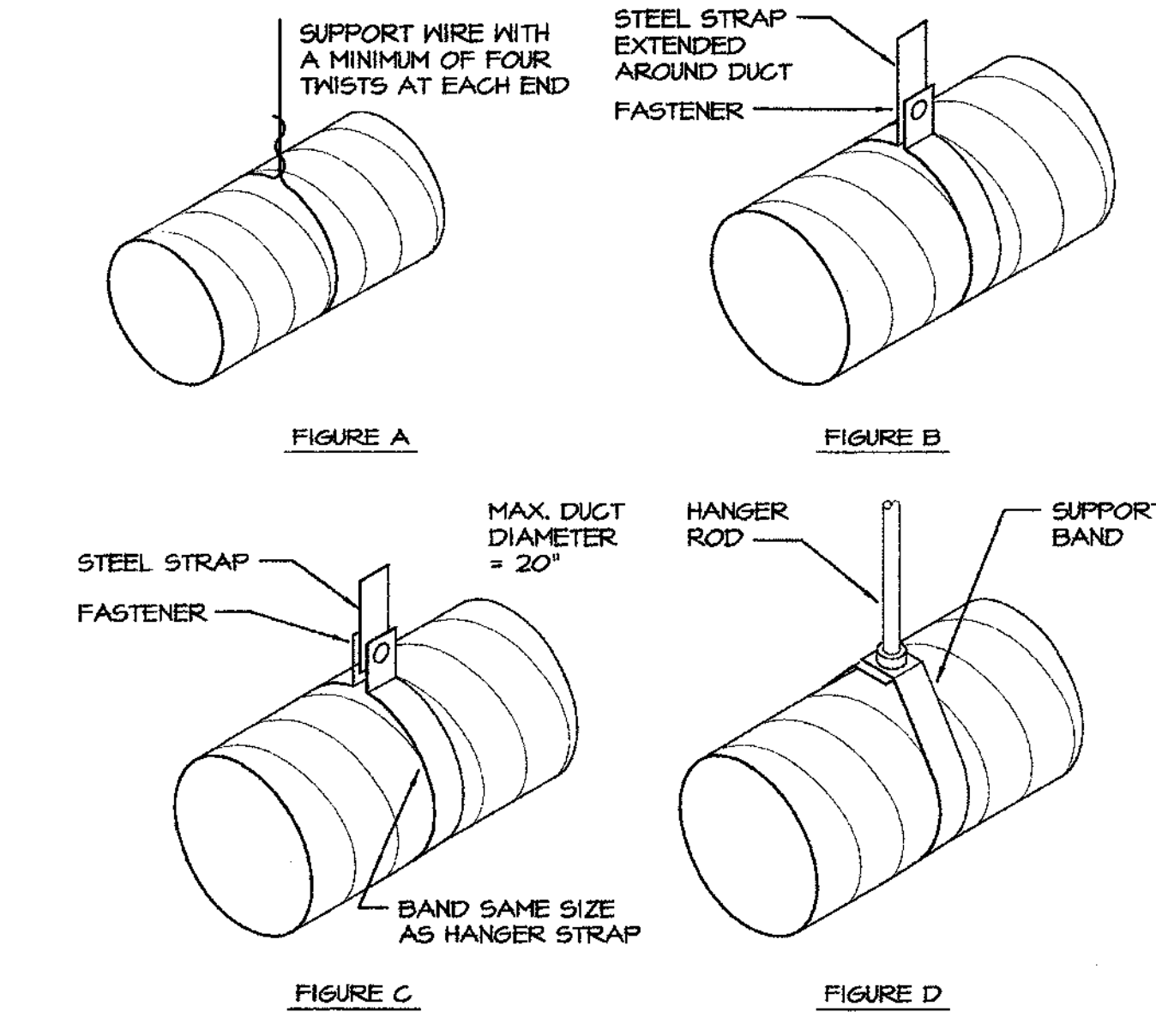
**12 SPLIT SYSTEM FURNACE CONTROL 1-STAGE HEAT 2-STAGE COOL**  
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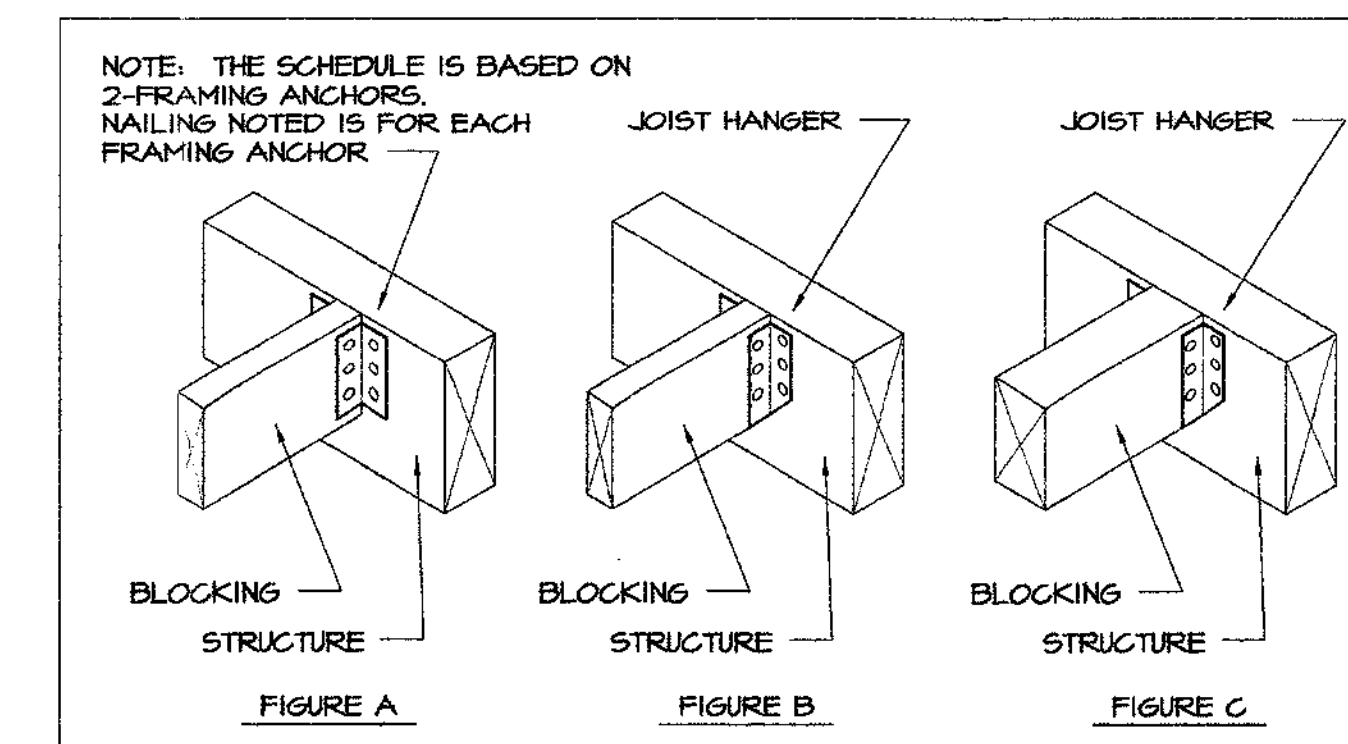
**SUPPORT SCHEDULE**

ROD DIAMETER	MAX. LOAD, LBS
1/4"	210
3/8"	300
1/2"	560

**6 HANGER ROD SUPPORTS**  
NOT TO SCALE



**2 ROUND DUCT SUPPORTS**  
NOT TO SCALE



**BLOCKING & CONNECTORS**

BLOCKING SIZE	MAXIMUM SPAN	SIMPSON MODEL NO.	BLOCKING NAILING	STRUCTURE NAILING	FIG.	MAXIMUM LOAD, LBS.
2x4	4'	A34	4-8d x 1-1/2"	4-8d x 1-1/2"	A	280
2x6	6'	A35	6-8d x 1-1/2"	6-8d x 1-1/2"	A	450
4x4	6'	U44	2-10d	4-16d	C	530
4x6	8'	U46	4-10d	8-16d	C	1065

NOTE: MAXIMUM LOAD RATING SHOWN IS FOR EACH BLOCKING MEMBER

**3 BLOCKING CONNECTOR SCHEDULE**  
NOT TO SCALE

NO.	DATE	REVISION	BY

**HORN**  
engineers  
REGISTERED PROFESSIONAL ENGINEER  
JAMES B. HORN  
EXPIRES 9-30-04  
MECHANICAL  
STATE OF CALIFORNIA

DESIGNED BY: November 24, 2003  
CHECKED BY: Mary Dooley  
SCALE: As Shown  
DRAWN BY: JN  
CAD FILE NO. JN

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
555 McDOWELL BOULEVARD NORTH - PETALUMA, CALIFORNIA - 94952 - 707-776-4203

2003 PETALUMA REGIONAL LIBRARY  
100 FAIRGROUNDS DRIVE  
MEETING ROOM EXPANSION  
PROJECT NO. 9028

MECHANICAL  
DETAILS

M3.1

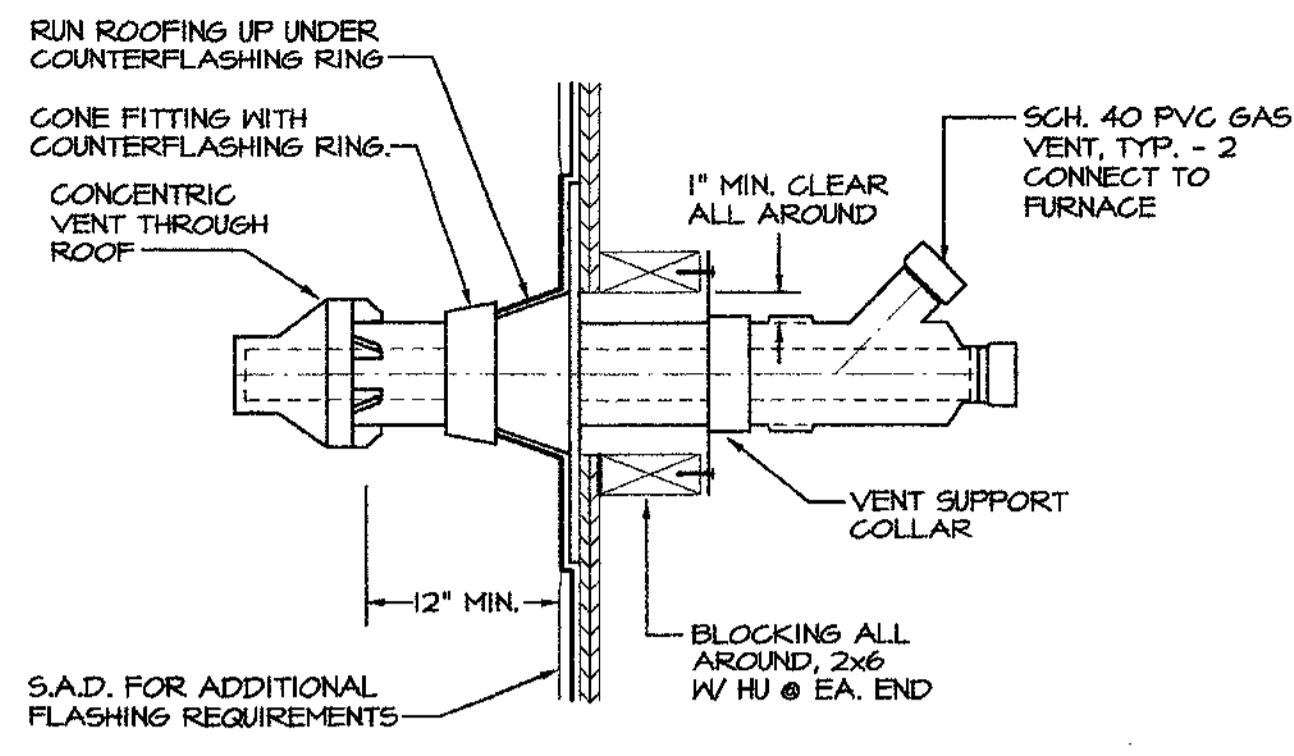
MAD Architecture  
145 Keller Street  
Petaluma, CA 94952  
Tel 707 765-9222  
Fax 707 762-4897

APPROVED BY:  
MIKE HASS  
ENGINEERING MANAGER  
DATE

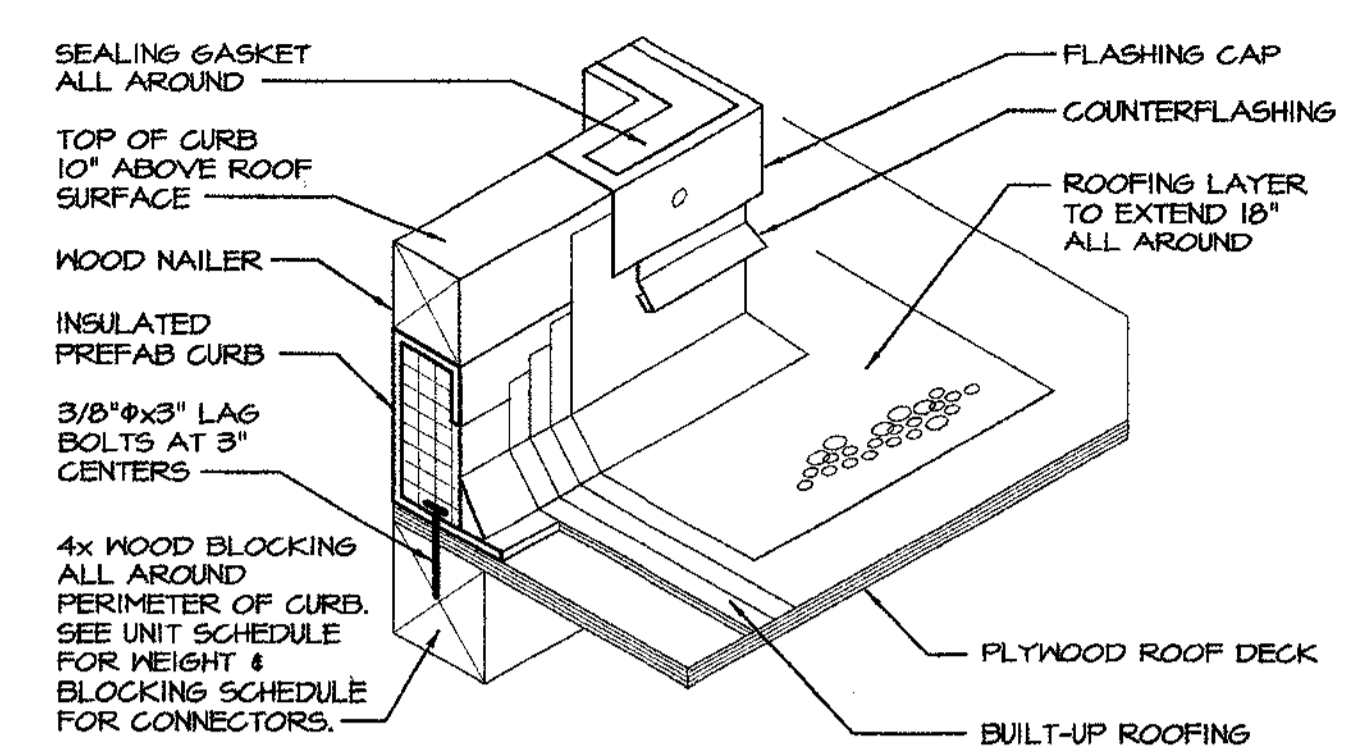
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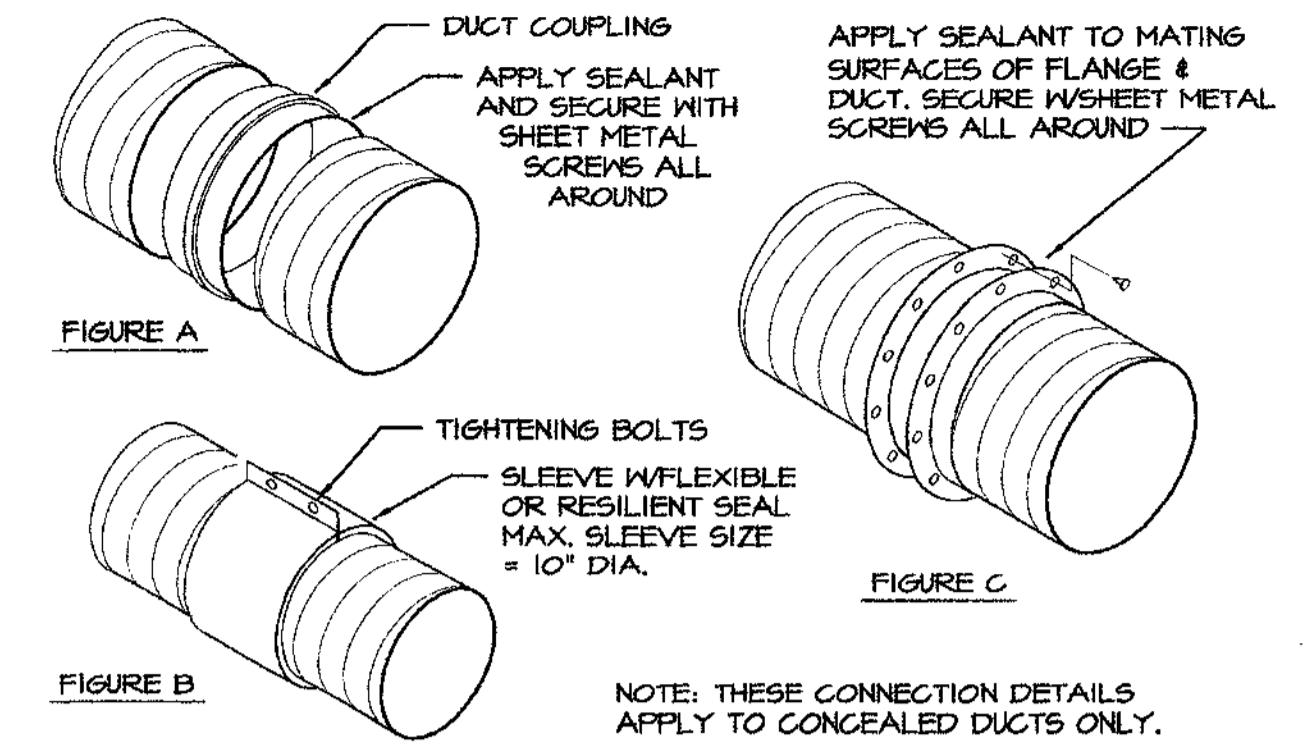
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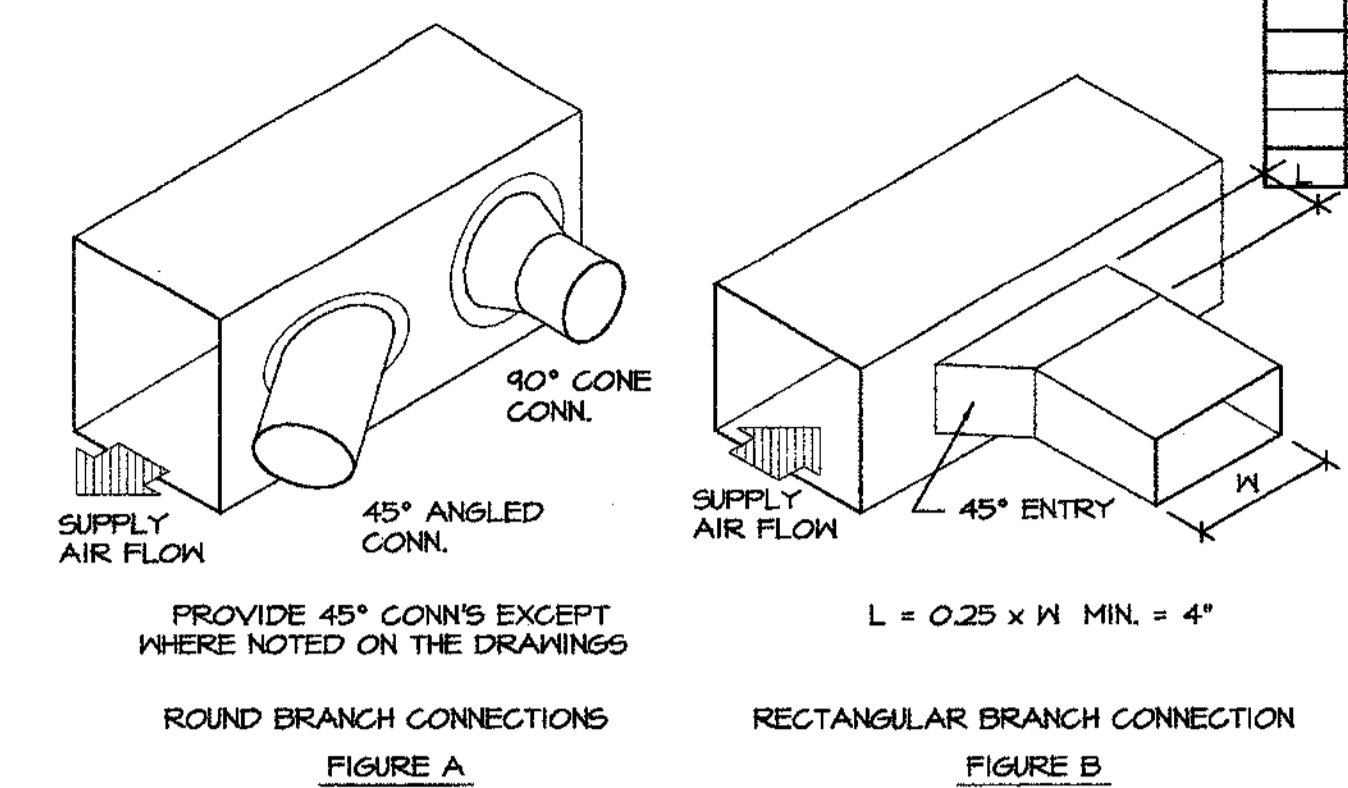
**13 CONCENTRIC GAS VENT THRU ROOF**  
NOT TO SCALE



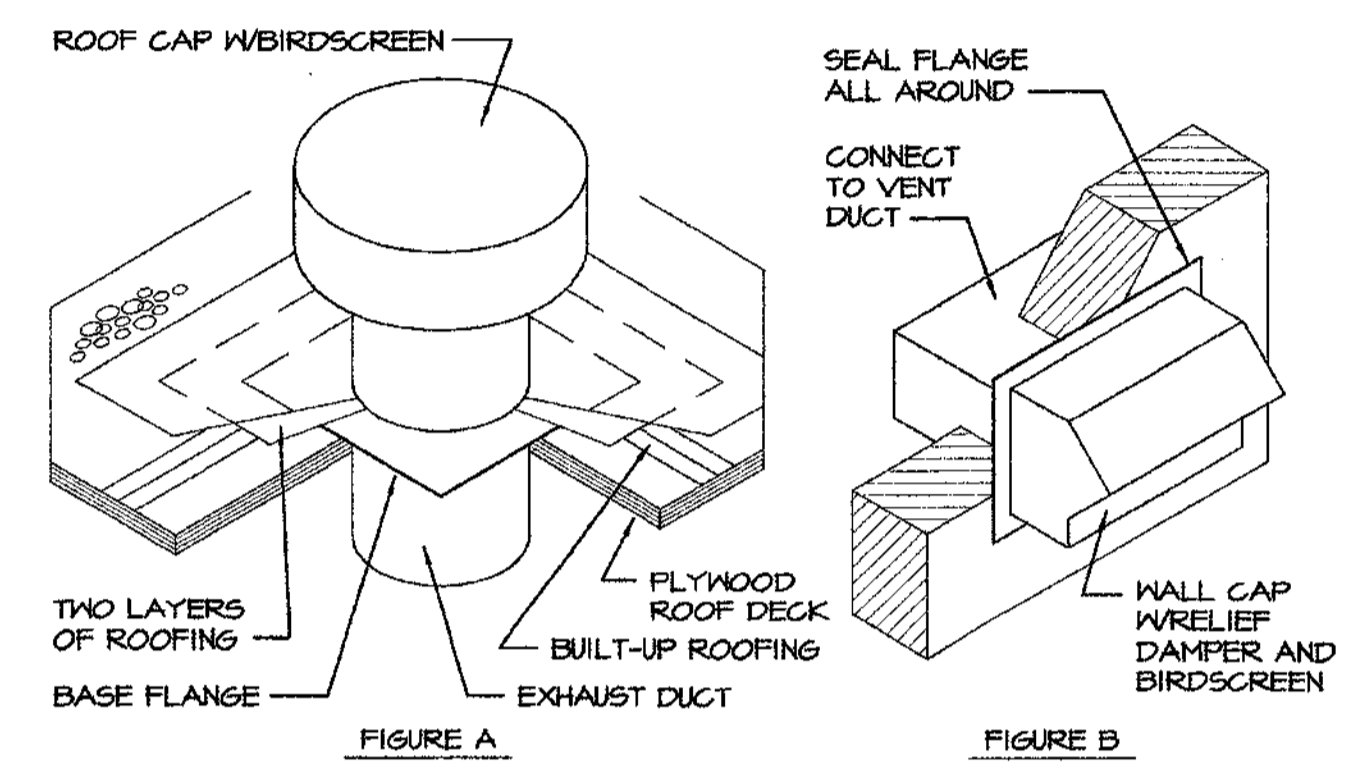
**9 PREFAB ROOF CURB**  
NOT TO SCALE



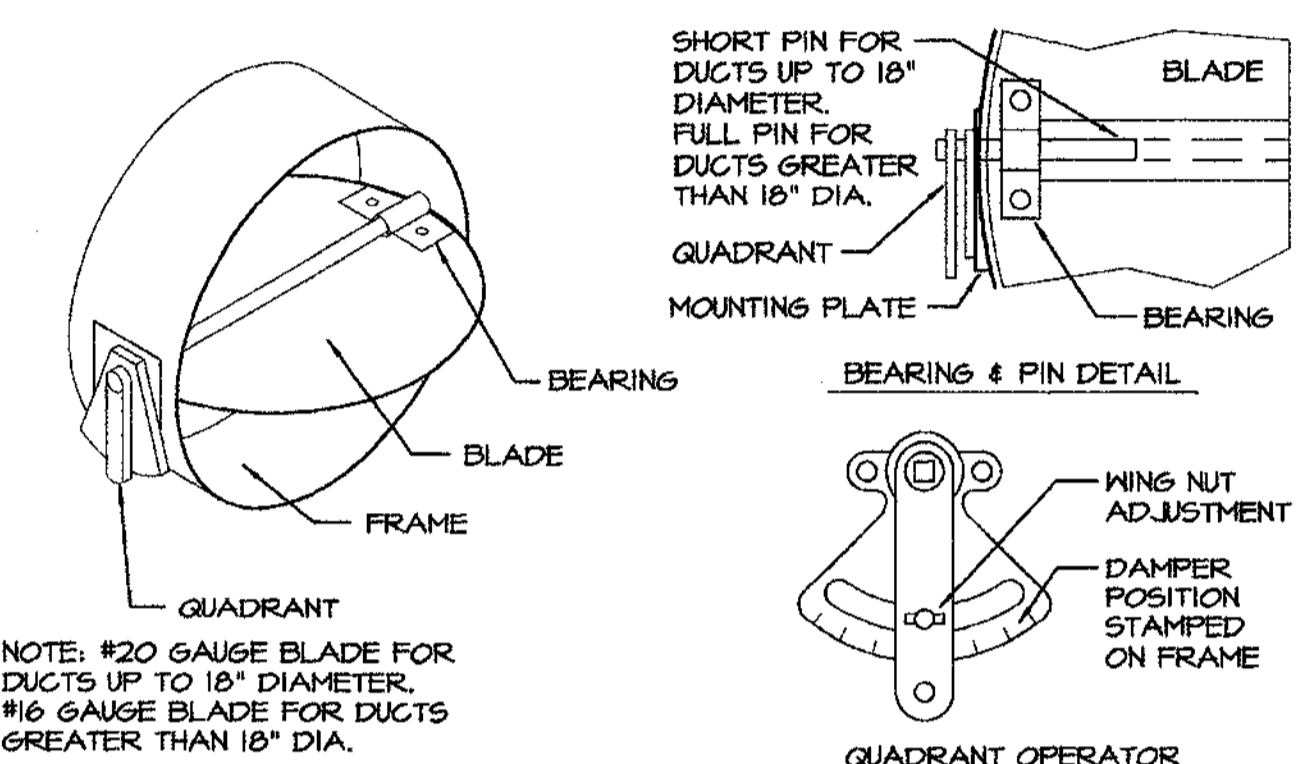
**5 ROUND DUCT CONNECTIONS**  
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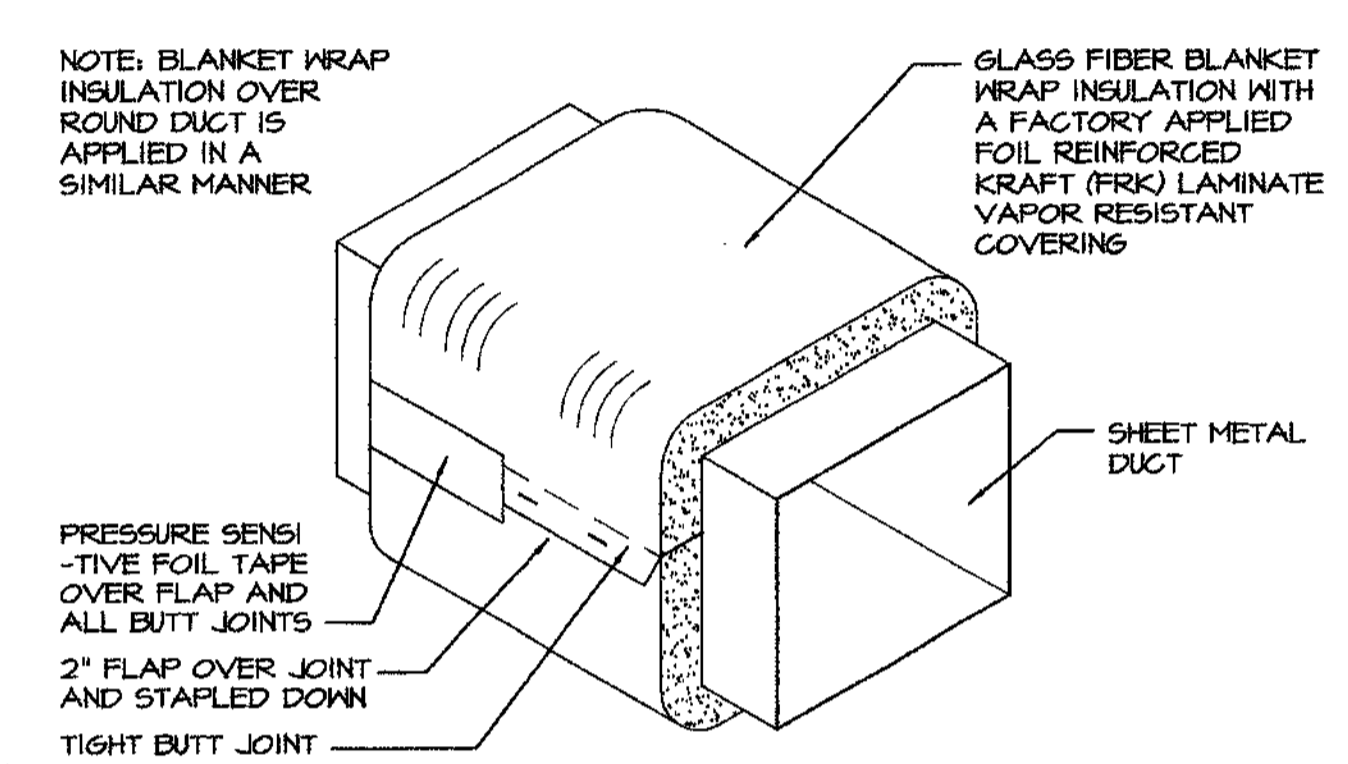
**1 RECTANGULAR DUCT DETAILS**  
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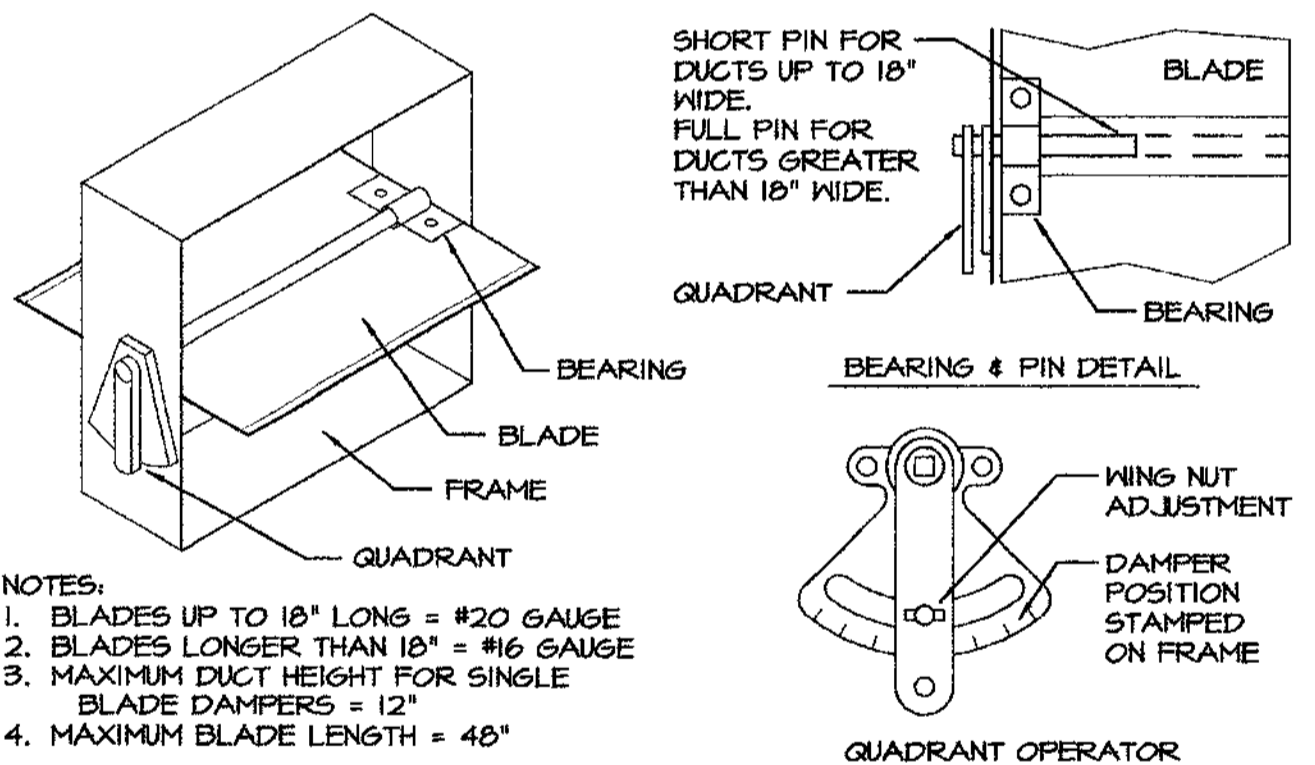
**10 SMALL VENT CAPS**  
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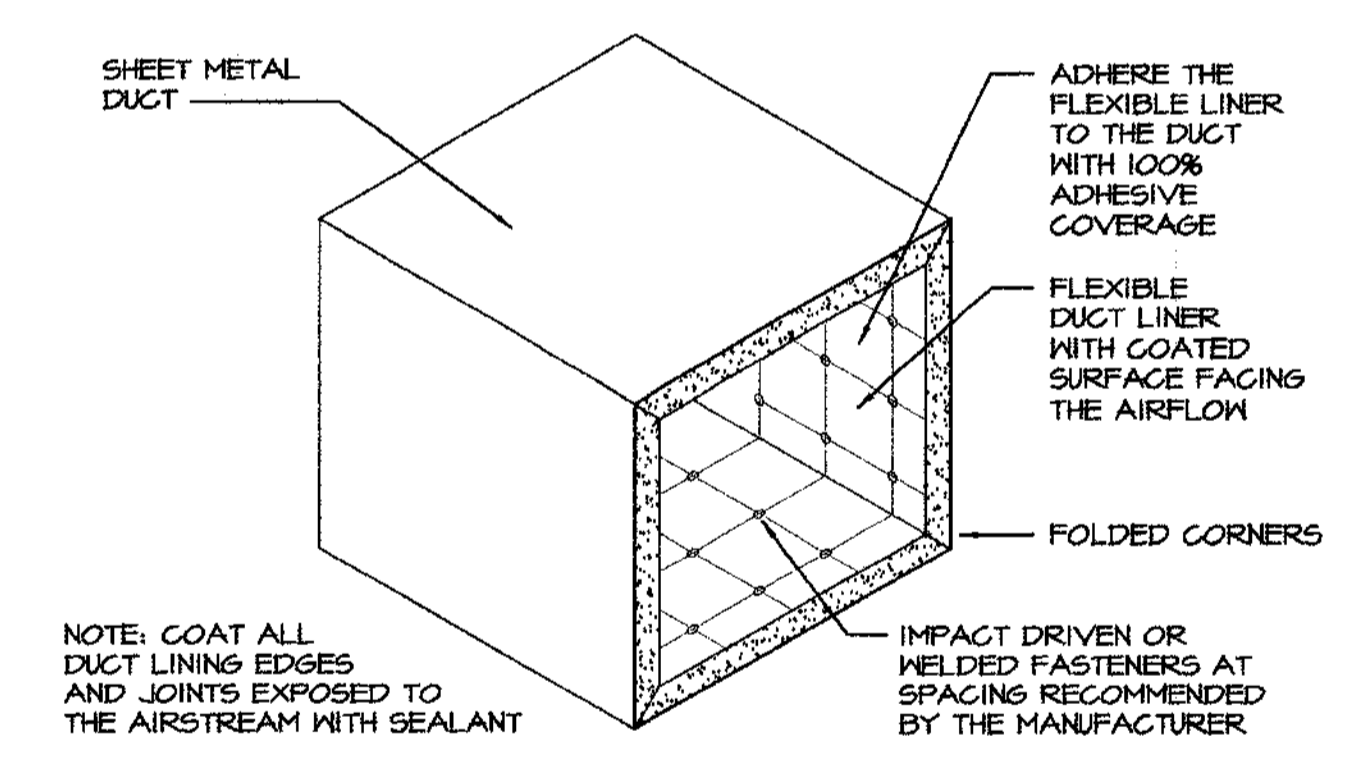
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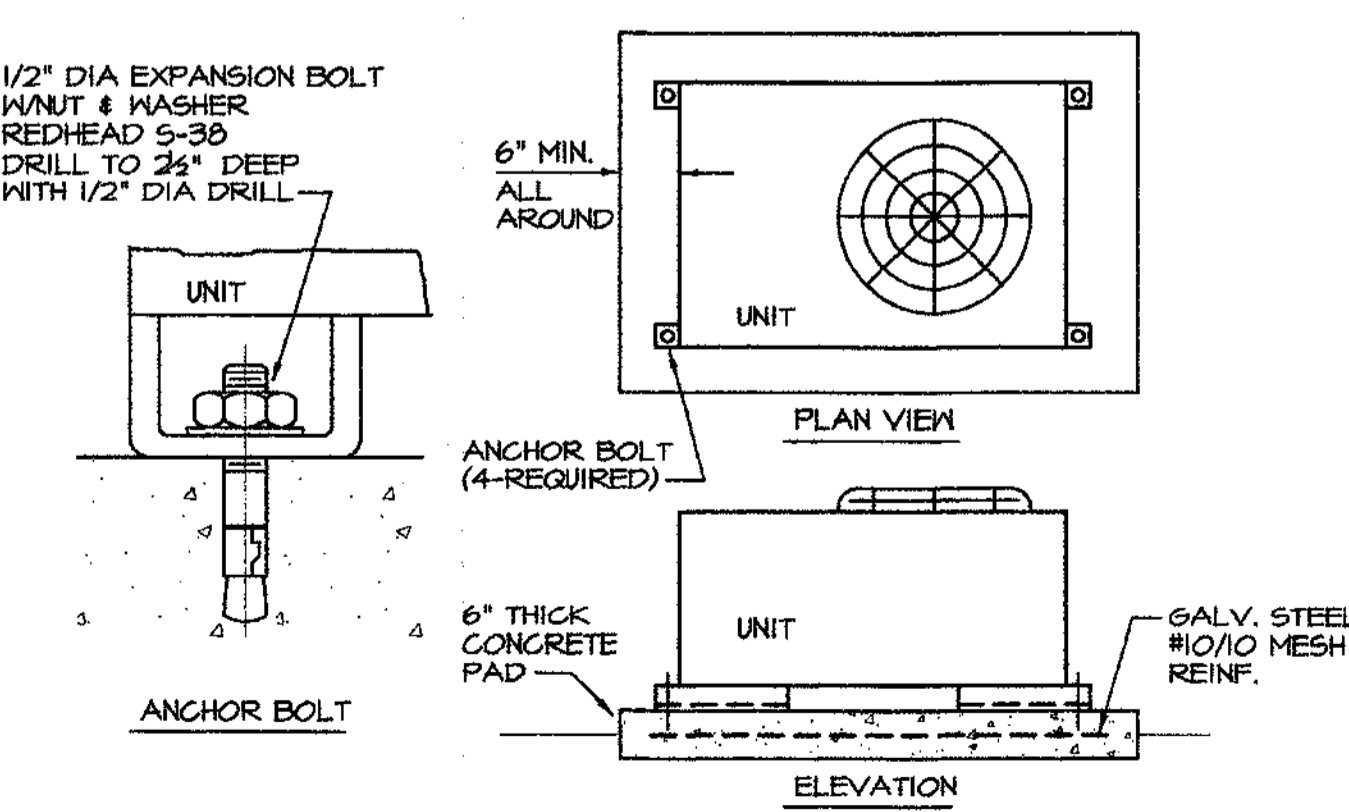
**2 DUCT INSULATION - EXTERNAL**  
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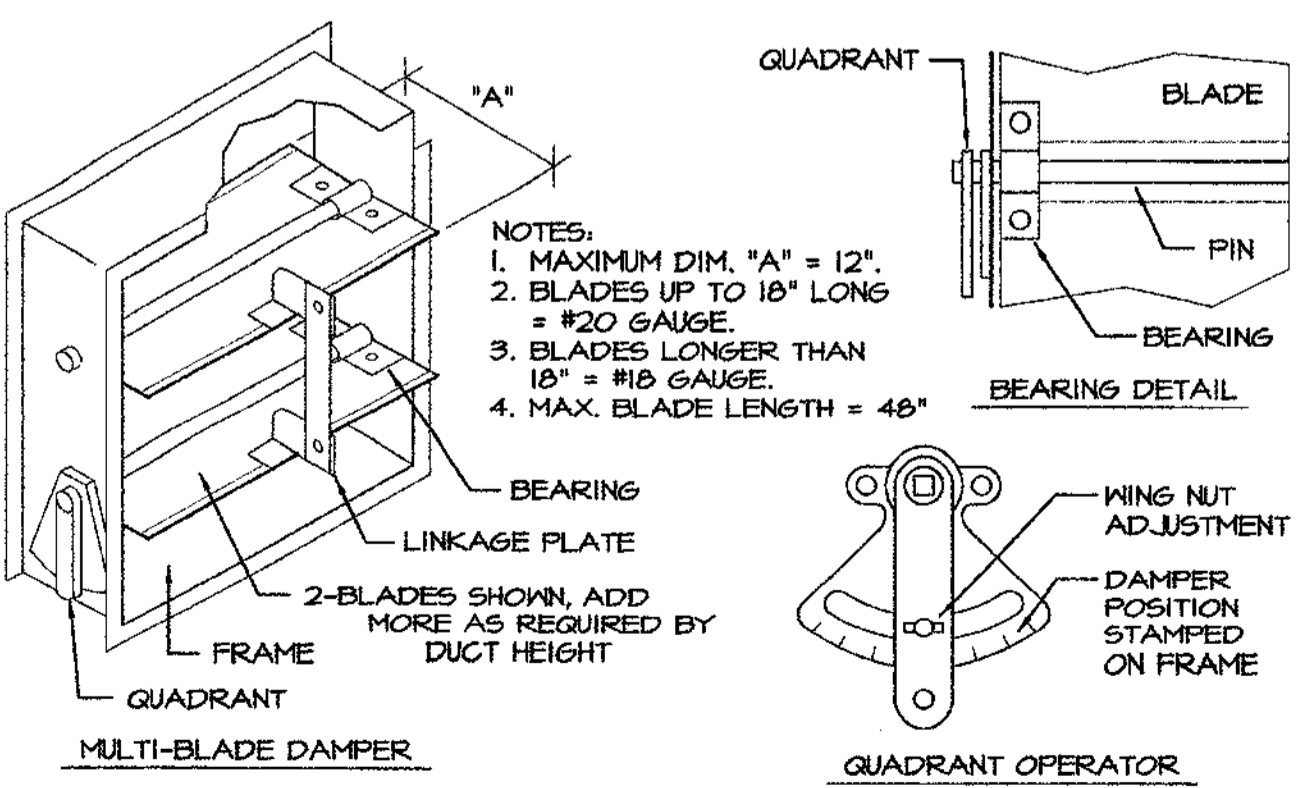
**7 VOLUME DAMPER - RECTANGULAR**  
NOT TO SCALE



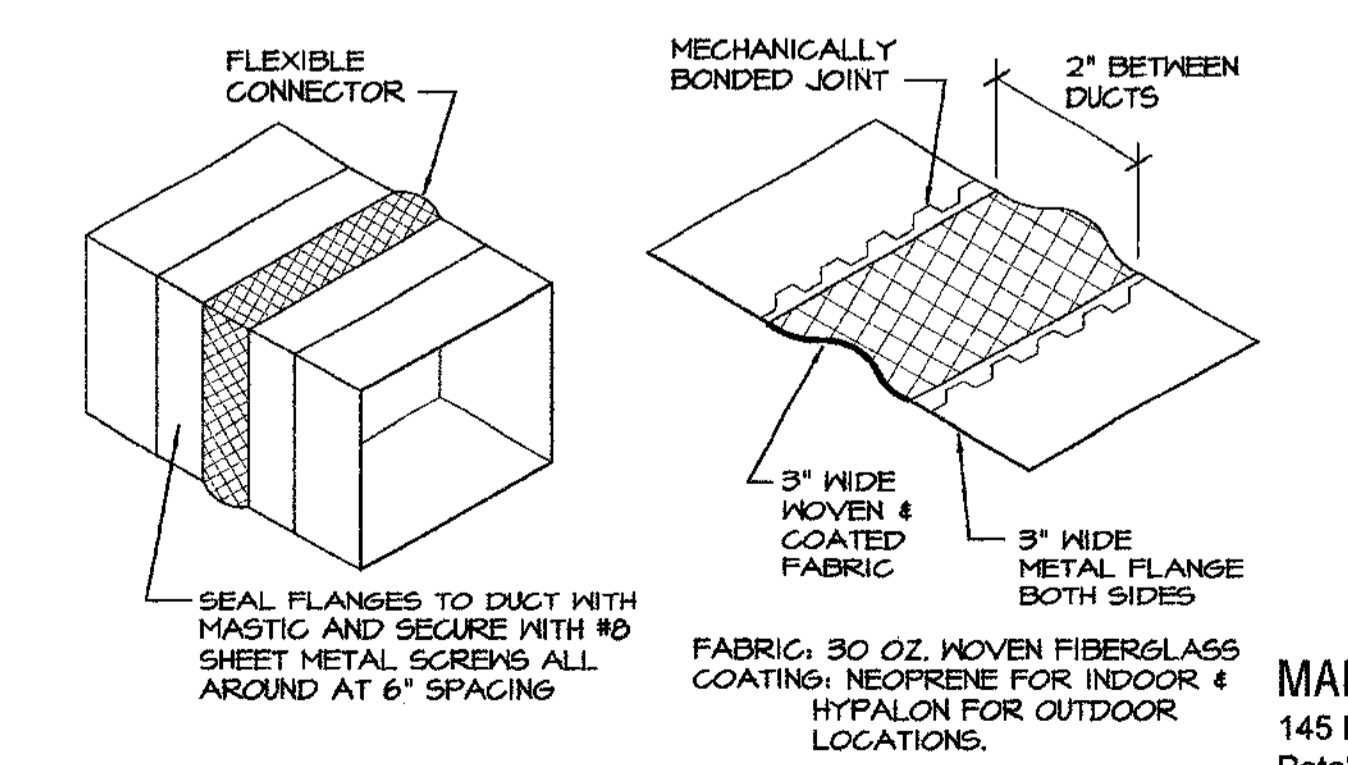
**3 DUCT LINING - FLEXIBLE**  
NOT TO SCALE



**12 CONDENSING UNIT ANCHOR DETAILS**  
NOT TO SCALE



**8 VOLUME DAMPER - MULTIPLE BLADE**  
NOT TO SCALE



**4 FLEXIBLE DUCT CONNECTOR**  
NOT TO SCALE

**HORN**  
ENGINEERS  
528 Mendocino Avenue  
Santa Rosa, CA 95401  
(707) 546-1333  
(fax) 707-546-1333  
www.hornengineers.com



DESIGNED BY: Mary Dooley  
CHECKED BY: JN  
DRAWN BY: JN  
DATE: November 24, 2003  
SCALE: As Shown  
CAD FILE NO.

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
555 McDOWELL BOULEVARD NORTH - PETALUMA, CALIFORNIA - 94952 - 707-778-4303

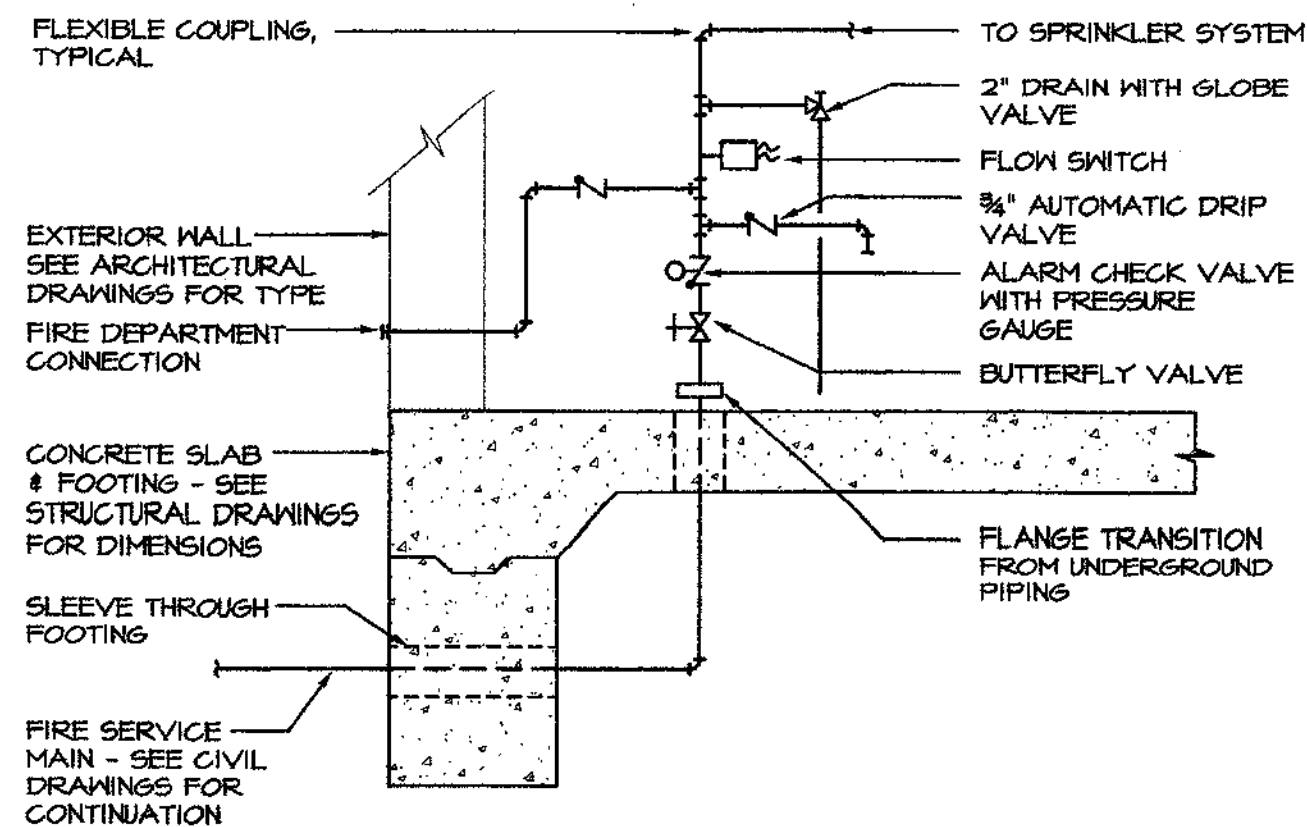
2003 PETALUMA REGIONAL LIBRARY  
100 FAIRGROUNDS DRIVE  
MEETING ROOM EXPANSION  
PROJECT NO. 902B

MECHANICAL  
DETAILS

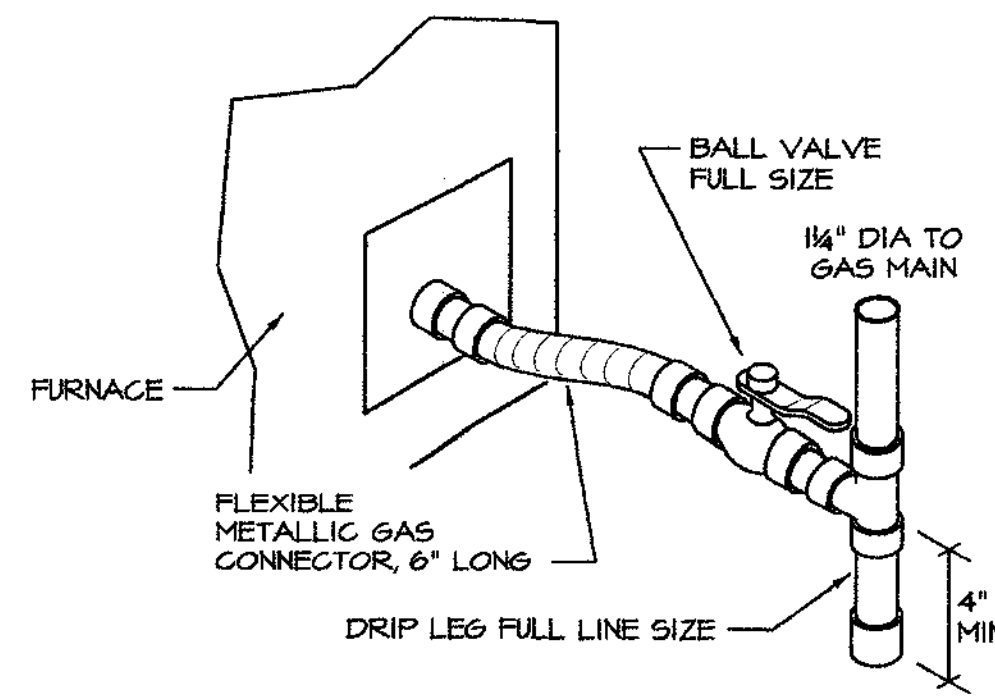
MAD Architecture  
145 Keller Street  
Petaluma, CA 94952  
Tel 707 765-9222  
Fax 707 762-4897

APPROVED BY:  
MIKE HASS  
ENGINEERING MANAGER  
DATE

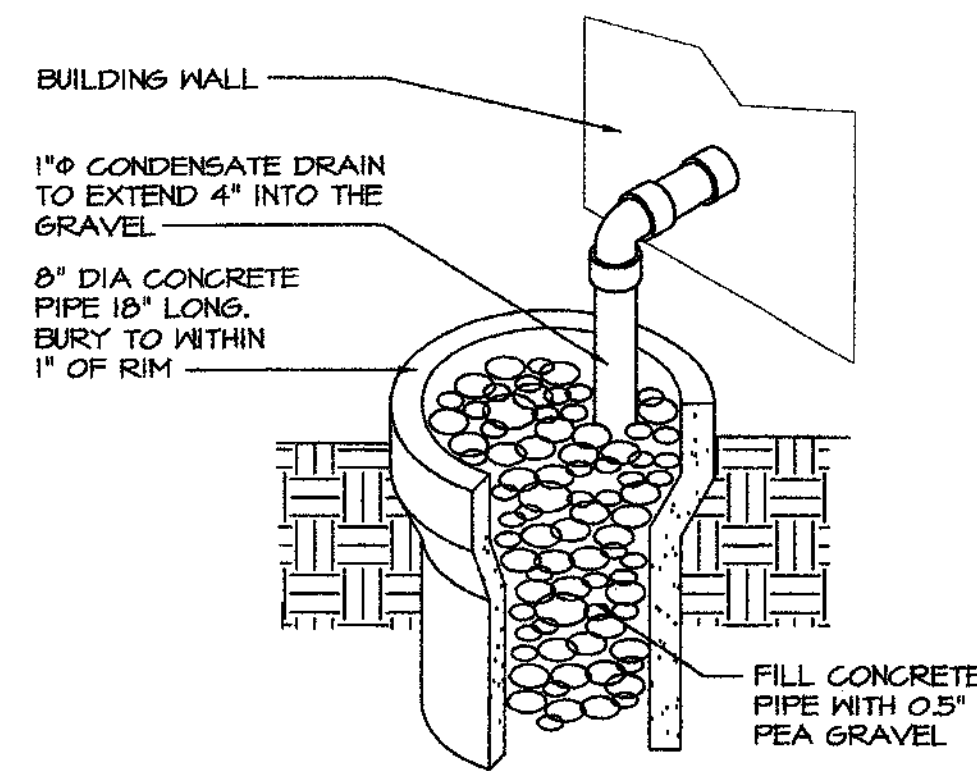
M3.2



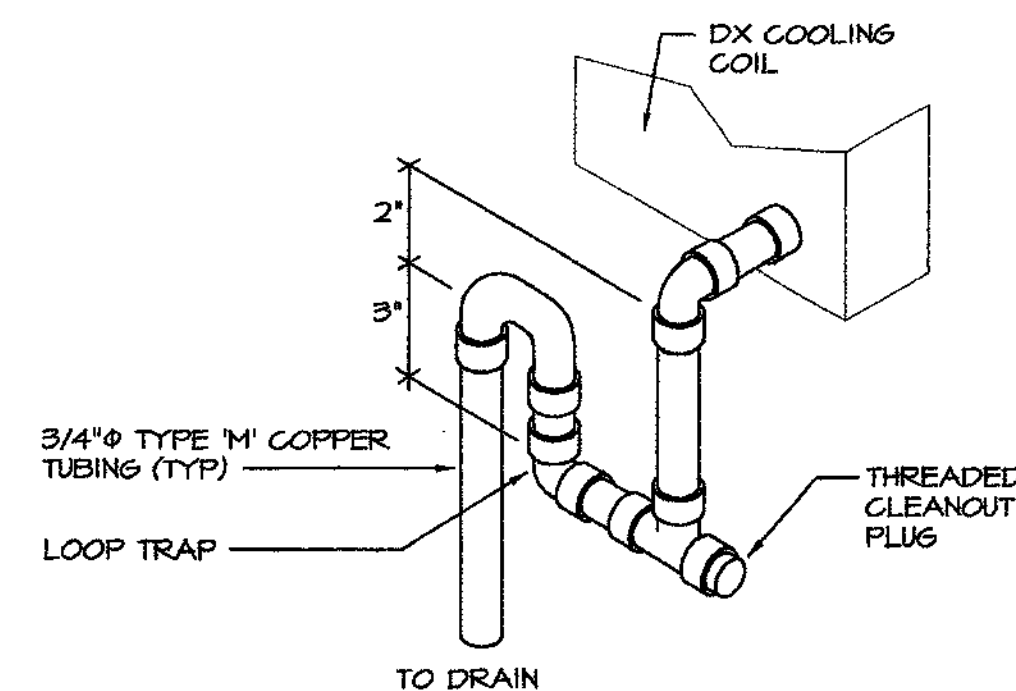
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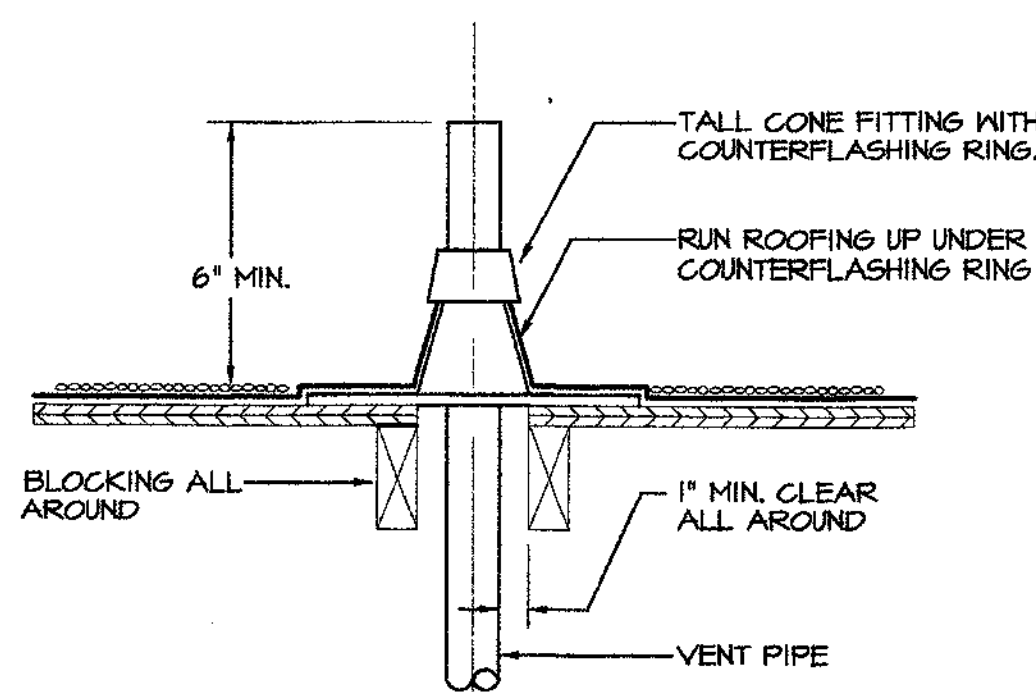
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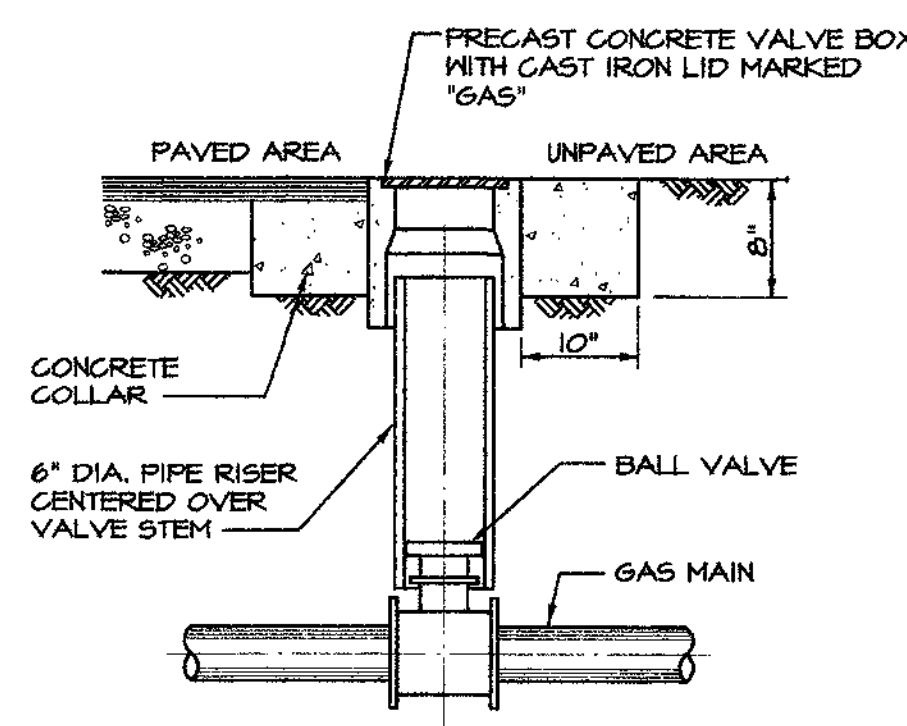
**6 DRY WELL FOR CONDENSATE DRAIN**  
NOT TO SCALE



**2 CONDENSATE DRAIN FROM DX COIL**  
NOT TO SCALE



**3 VENT THRU ROOF**  
NOT TO SCALE



**4 GAS SERVICE VALVE DETAIL**  
NOT TO SCALE

**GENERAL NOTES**

- SEE SPECIFICATION SECTION 15400 FOR MATERIAL AND FIXTURE DESCRIPTIONS.
- ALL PLUMBING WORK SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
- THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED AS A GUIDE FOR THE COMPLETE INSTALLATION. THE PLUMBING CONTRACTOR SHALL INSTALL ALL PIPING TO BEST SUIT FIELD CONDITIONS.
- ALL PIPING SHALL BE RUN TO AVOID ARCHITECTURAL OPENINGS, STRUCTURAL MEMBERS, FIXTURES AND OTHER OBSTRUCTIONS. RUN PIPING CONCEALED WHEREVER POSSIBLE IN PARTITIONS, WALLS, FURRED SPACES, OR BELOW FLOORS UNLESS OTHERWISE NOTED OR INDICATED ON PLANS. PIPING SHALL MAINTAIN A 1" MINIMUM CLEARANCE FROM ALL COMBUSTIBLE CONSTRUCTION.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES AND ASSOCIATED ACCESSORIES.
- INSTALL ALL PIPING WITH AMPLE PROVISION FOR EXPANSION AND CONTRACTION.
- PROVIDE ALL TRIM NECESSARY FOR THE COMPLETE INSTALLATION OF ALL FIXTURES AND EQUIPMENT.
- PROVIDE ACCESS PANELS FOR ALL SHUT-OFF VALVES, TRAP PRIMERS AND WATER HAMMER ARRESTORS LOCATED WITHIN WALLS OR ABOVE FINISHED CEILINGS. COORDINATE EXACT LOCATIONS OF ALL PANELS WITH ARCHITECT.
- ALL VALVES SHALL BE LINE SIZE UNLESS NOTED OTHERWISE.
- SLOPE ALL WASTE LINES A MINIMUM OF 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- STUD PARTITIONS CONTAINING PLUMBING, HEATING, OR OTHER PIPES SHALL BE SO FRAMED AS TO GIVE PROPER CLEARANCE FOR THE PIPING. NOTCHES SHALL NOT BE PLACED IN STUDS UNLESS FULLY DETAILED ON THE APPROVED PLANS TO RESTORE THE STRUCTURAL RESISTANCE OF THE MEMBER. ALL SPLICES IN STUDS OR PLATES WHICH ARE REQUIRED TO RESIST LOADS SHALL BE DESIGNED AND FULLY DETAILED ON THE APPROVED DRAWINGS. (S, S, D, J). ANY CUTTING AND NOTCHING SHALL BE DETAILED ON THE APPROVED PLANS.
- HOLES EXCEEDING ONE THIRD OF THE WIDTH OF THE MEMBER BEING PENETRATED SHALL NOT BE PLACED IN STUDS UNLESS FULLY DETAILED ON THE APPROVED PLANS. HOLES NOT EXCEEDING ONE THIRD OF THE STUD WIDTH SHALL BE NEATLY BORED AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER BEING PENETRATED.
- REMOVE ALL ACCESSIBLE ABANDONED PIPING IN AREAS OF RENOVATION.
- TEST ALL EXISTING TO REMAIN HOSE BIBBS, WATER SUPPLY AND GAS SUPPLY SHUT OFF VALVES AND NOTIFY OWNER'S REPRESENTATIVE IN WRITING OF ANY SUCH DEVICES REQUIRING REPLACEMENT OR REPAIR.
- ALL EXISTING UTILITIES SERVING ADJOINING AREAS SHALL BE KEPT FULLY OPERATIONAL DURING CONSTRUCTION.
- GAS FIXTURE VENTS WHEREVER POSSIBLE IN ORDER TO MINIMIZE NUMBER OF ROOF PENETRATIONS. ALL VENTS THROUGH ROOF SHALL TERMINATE NOT LESS THAN 10 FEET FROM OUTDOOR INTAKES AT MECHANICAL UNITS.
- FIELD VERIFY ALL EXISTING PLUMBING VENTS TO BE REUSED PRIOR TO COMMENCING WORK. NOTIFY THE ARCHITECT IN WRITING OF ANY EXISTING CONDITIONS WHICH WOULD PRECLUDE THE USE OF ANY EXISTING VENT DESIGNATED FOR REUSE ON THE DRAWINGS.
- CONTRACTOR SHALL VISIT SITE AND FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING EQUIPMENT OR FABRICATING ANY PIPING AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND WORK SHOWN ON THE DRAWINGS.
- ACCESSIBLE PLUMBING FIXTURES SHALL COMPLY WITH ALL THE REQUIREMENTS OF CBC SECTION 1108. HEIGHTS AND LOCATION OF ALL FIXTURES SHALL BE ACCORDING TO CBC TABLE 1108-1. FIXTURE CONTROLS SHALL COMPLY WITH CBC SECTION 1108.

**HAZARDOUS MATERIALS NOTE**

IF DURING THE COURSE OF THIS WORK THE CONTRACTOR OBSERVES THE EXISTENCE OF HAZARDOUS MATERIALS, THE CONTRACTOR SHALL IMMEDIATELY TERMINATE FURTHER WORK IN THAT AREA AND NOTIFY THE OWNER OF THE CONDITION. THE OWNER WILL, AFTER CONSULTATION WITH THE ARCHITECT OR ENGINEER DETERMINE FURTHER COURSE OF ACTION.

**SEISMIC RESTRAINT NOTES**

**GENERAL**

ALL MECHANICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE (2001), SECTION 1632A - "LATERAL FORCE ON ELEMENTS OF STRUCTURES, NON-STRUCTURAL COMPONENTS AND EQUIPMENT SUPPORTED BY STRUCTURES."

ALL MECHANICAL COMPONENTS SHALL RESIST THE EFFECTS OF SEISMIC FORCES FOR ZONE 4 AND AS MODIFIED BY THE NEAR SOURCE FACTOR.

**HVAC DUCTWORK AND PIPING SYSTEMS**

ALL PIPES AND DUCTS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN CBC SECTION 1630A.2 AND SECTION 1632A.6.

DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PROVISIONS CONTAINED IN PART 4, TITLE 24, CALIFORNIA MECHANICAL CODE.

PIPING CONSTRUCTED OF NON-DUCTILE MATERIALS SHALL HAVE THE BRACE SPACING REDUCED TO ONE-HALF OF THE SPACING ALLOWED FOR DUCTILE MATERIALS, IN ACCORDANCE WITH CBC SECTION 1630A.5.

**EXCEPTIONS:**

- FUEL PIPING LESS THAN 1 INCH INSIDE DIAMETER.
- NON-MEDICAL GAS PIPING LESS THAN 2.5 INCHES INSIDE DIAMETER, OR PIPING SUSPENDED BY INDIVIDUAL HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE STRUCTURAL SUPPORT FOR THE HANGER.
- RECTANGULAR AIR-HANDLING DUCTS LESS THAN 6 SQUARE FOOT IN CROSS-SECTIONAL AREA, OR ROUND AIR-HANDLING DUCTS LESS THAN 20 INCHES IN DIAMETER, OR DUCTS SUSPENDED BY HANGERS 12 INCHES OR LESS IN LENGTH FROM THE TOP OF THE DUCT TO THE BOTTOM OF THE STRUCTURAL SUPPORT FOR THE HANGER.

**PLUMBING FIXTURE CONNECTION SCHEDULE**

TAG	DESCRIPTION	COLD WATER	HOT WATER	DRAIN/WASTE	VENT	NOTES
(SK-1)	KITCHEN SINK	1/2"	1/2"	2"	1-1/2"	

- NOTES:
- SEE PLUMBING LIST IN SPECIFICATION SECTION 15400
  - SEE ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
  - HANDICAP ACCESSIBLE FIXTURE

**PLUMBING LEGEND**

SYMBOL	ABBREVIATION & DESCRIPTION
CD	CONDENSATE DRAIN PIPING
G	GAS PIPING (LOW PRESSURE)
RWL	RAIN WATER LEADER PIPING
SD	STORM DRAIN PIPING
CFF	PIPING CAP (CAPPED FOR FUTURE)
DN	PIPE DOWN
UP	PIPE UP
U	UNION
POC	POINT OF CONNECTION
CO	CLEAN OUT
BV	BALL VALVE
GC	GAS COCK
RD	ROOF DRAIN

**MISCELLANEOUS SYMBOLS**

- (WC-1) PLUMBING FIXTURE TAG
- AC 4 UNIT TYPE
- 4 UNIT NUMBER
- 3A 12.2 DETAIL NUMBER (WITH OPTIONAL FIGURE LETTER)
- 12.2 DRAWING REFERENCE NUMBER
- 6 SHEET NOTE - NEW WORK
- 4 SHEET NOTE - DEMOLITION

**GENERAL PLUMBING ABBREVIATIONS**

ALL OF THESE ABBREVIATIONS MAY NOT APPEAR ON THE DRAWINGS.

- A.F.C. ABOVE FINISHED CEILING
- A.F.F. ABOVE FINISHED FLOOR
- A.F.G. ABOVE FINISHED GRADE
- AP ACCESS PANEL
- CC BALANCING VALVE
- CD CONDENSATE DRAIN PIPING
- C.F.F. PIPING CAP (CAPPED FOR FUTURE)
- CFH CUBIC FEET PER HOUR
- CFM CUBIC FEET PER MINUTE
- CKV CHECK VALVE
- C.T.E. CONNECT TO EXISTING
- CW DOMESTIC COLD WATER PIPE
- φ DIAMETER IN INCHES
- DN DOWN
- (E) EXISTING
- FC FLEXIBLE CONNECTION
- G GAS PIPING (LOW PRESSURE)
- GC GAS COCK
- MBH THOUSANDS OF BTU/HOUR
- MFR. MANUFACTURER
- MIN. MINIMUM
- (N) NEW
- N/A NOT APPLICABLE
- N.I.C. NOT IN CONTRACT
- P.O.C. POINT OF CONNECTION
- RD ROOF DRAIN
- RPBP REDUCED PRESSURE
- S.M.D. SEE MECHANICAL DRAWINGS
- SOV SHUT OFF VALVE
- T/PRV TEMPERATURE/PRESSURE RELIEF VALVE
- TYP. TYPICAL
- W WITH
- W/O WITHOUT
- WC WATER COLUMN

NO.	DATE:	REVISION:	BY:

**HORN**  
ENGINEERS  
521 Mendocino Avenue  
Santa Rosa, CA 95401  
(707) 546-1333  
(fax) 707-546-1333  
www.hornengineers.com



DATE: November 24, 2003  
SCALE: As Shown  
DRAWN BY: JIN  
CHECKED BY: JIN  
DESIGNED BY: Mary Dooley  
DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
555 McDOWELL BOULEVARD NORTH - PETALUMA, CALIFORNIA - 94952 - 707-776-6005  
PROJECT NO. 9028  
PLUMBING NOTES, LEGEND & SCHEDULES  
P0.1

MAD Architecture  
145 Keller Street  
Petaluma, CA 94952  
Tel 707 765-9222  
Fax 707 762-4897

APPROVED BY:

MIKE HASS  
ENGINEERING MANAGER DATE

P0.1



NO.	DATE	REVISION	BY:

**HORN**  
**engineers**  
 523 Mendocino Avenue  
 Santa Rosa, CA 95401  
 (707) 546-3733  
 www.hornengineers.com



DATE: November 24, 2003  
 SCALE: As Shown  
 DESIGNED BY: Mary Dooley  
 CHECKED BY: JIN  
 DRAWN BY: JIN

DEPARTMENT OF PUBLIC FACILITIES AND SERVICES  
**CITY OF PETALUMA**  
 555 MIDWELL BOULEVARD NORTH, PETALUMA, CALIFORNIA - 94952 - 707-778-4000

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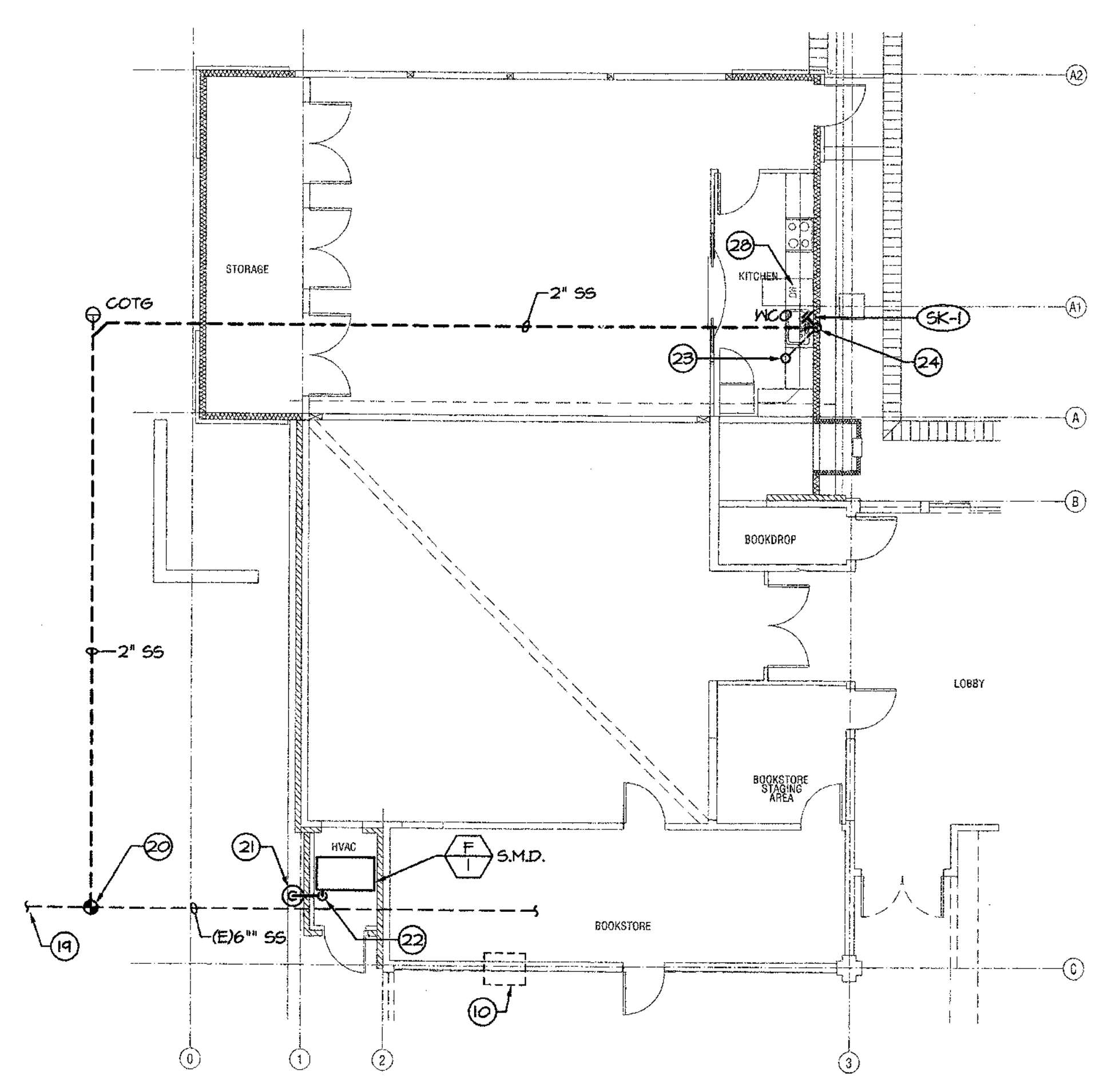
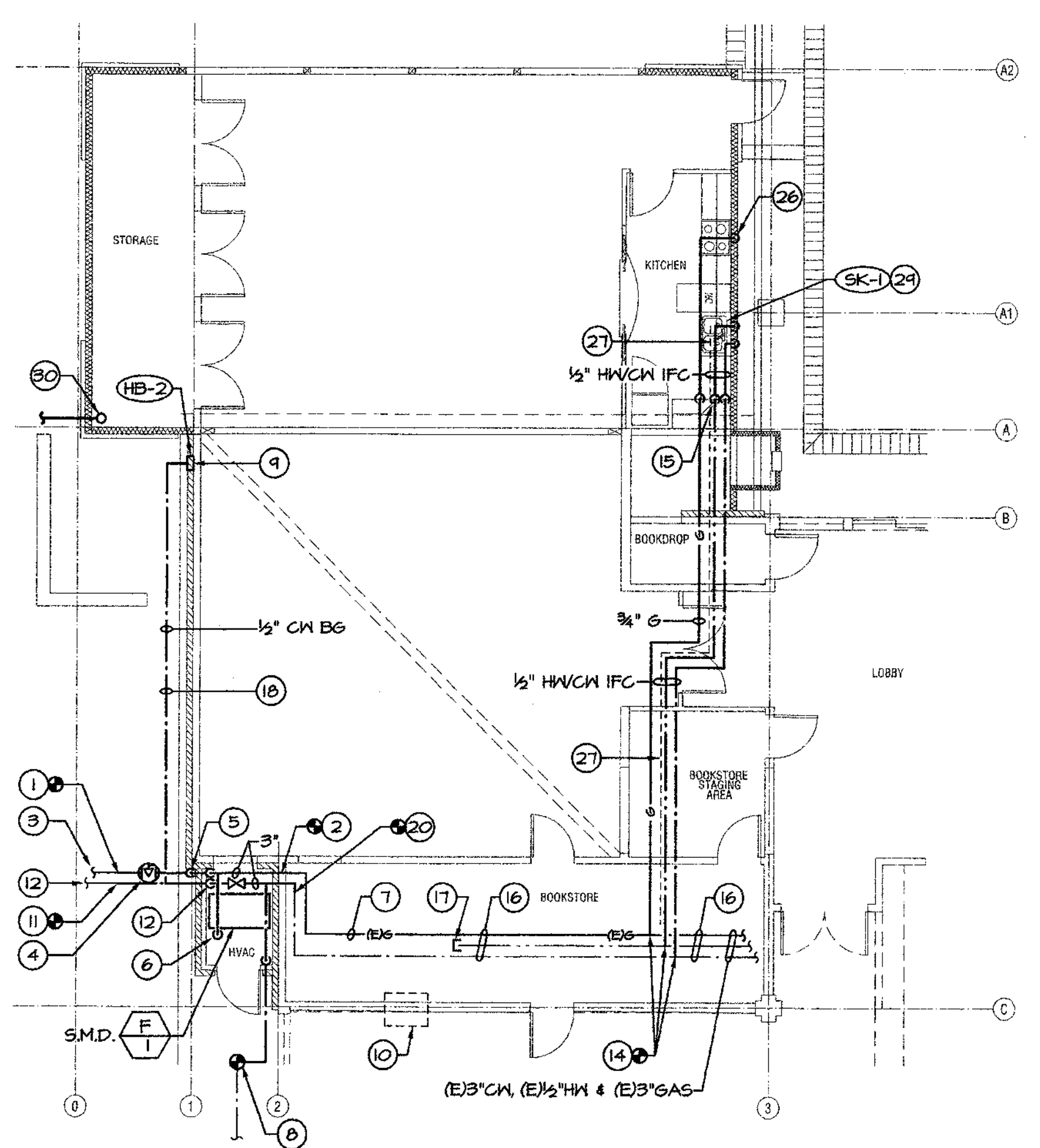
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**SHEET NOTES**

- 1 CONNECT TO EXISTING 3" NATURAL GAS BELOW GRADE. PROVIDE COUPLING FROM EXISTING PIPING TO NEW POLYPROPYLENE PIPING AS REQUIRED. VERIFY LOCATION IN FIELD PRIOR TO EXCAVATION.
- 2 CONNECT (N) 3" NATURAL GAS TO EXISTING RISER LOCATION INSIDE BUILDING. CONNECTION TO BE MADE ABOVE CEILING.
- 3 EXISTING NATURAL GAS BELOW GRADE. VERIFY LOCATION IN FIELD.
- 4 PROVIDE NEW SHUTOFF VALVE IN CONCRETE VALVE BOX BELOW GRADE. BOX TO BE MARKED "GAS".
- 5 ROUTE NATURAL GAS UP FROM BELOW GRADE WITH TRANSITION RISER. ENTER BUILDING 6" ABOVE FINISHED FLOOR AND ROUTE AS HIGH AS POSSIBLE.
- 6 1" NATURAL GAS DOWN TO FURNACE CONNECTION.
- 7 EXISTING PIPING IN CEILING SPACE.
- 8 CONNECT TO EXISTING COLD WATER BELOW GRADE. VERIFY IN FIELD PRIOR TO CONSTRUCTION.
- 9 HOSE BIBB IN EXTERIOR WALL.
- 10 DEMOLISHED SINK LOCATION. CAP AND CONCEAL. ALL UTILITIES INCLUDE SANITARY SEWER AND VENT PIPING.
- 11 CONNECT TO EXISTING 3" COLD WATER BELOW GRADE.
- 12 EXISTING 3" COLD WATER BELOW GRADE.
- 13 ROUTE NEW 3" COLD WATER MAIN UP INSIDE FURNACE CLOSET AND ROUTE AS HIGH AS POSSIBLE.
- 14 CONNECT (N) 1/2" COLD AND HOT WATER LINES TO EXISTING LINES IN CEILING SPACE. CONNECT (N) 3/4" GAS TO (E).
- 15 ROUTE PIPING DOWN BELOW BEAM AND INSIDE FURRED CEILING ABOVE KITCHEN.
- 16 EXISTING PIPING IN CEILING.
- 17 CAP EXISTING HOT WATER PIPING IN CEILING.
- 18 PROVIDE NEW 1/2" COLD WATER BELOW GRADE TO NEW HOSE BIBB.
- 19 EXISTING SANITARY SEWER BELOW GRADE. VERIFY LOCATION PRIOR TO CONSTRUCTION. CONTRACTOR SHALL LOCATE AND SCOPE INVERT ELEVATIONS AND LOCATIONS FROM NEAREST CLEANOUT TO FIND ADEQUATELY SIZED SANITARY SEWER LOCATION.
- 20 CONNECT NEW 2" SANITARY SEWER TO EXISTING 6". ANGLE OF APPROACH TO NOT EXCEED 45 DEGREES.
- 21 DISCHARGE CONDENSATE THROUGH WALL AT 6" ABOVE FINISHED GRADE AND DISCHARGE TO DRY WELL. DRY WELL TO BE 30"x8" PVC PIPE FILLED WITH PEA GRAVEL.
- 22 CONDENSATE DRAIN CONNECTION FROM EQUIPMENT.
- 23 1-1/2" VENT THROUGH ROOF.
- 24 1-1/2" VENT UP IN WALL.
- 25 3/4" GAS DOWN TO RANGE WITH S.O.V.
- 26 CONNECT (N) CW MAIN TO (E).
- 27 HOT WATER LINE WITH HEAT TRACE PER SPECIFICATION.
- 28 ROUTE DRAIN TO SINK FROM DISHWASHER.
- 29 PROVIDE 3/8" SOFT DRAWN COPPER & S.O.V. FROM SINK TO DISHWASHER.
- 30 FIRE SPRINKLER RISER.

MAD Architecture  
 145 Keller Street  
 Petaluma, CA 94952  
 Tel 707 765 - 9222  
 Fax 707 762 - 4897

APPROVED BY:  
 MIKE HASS  
 ENGINEERING MANAGER  
 DATE



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