ALPENGLOW AT BIG SKY

SHEET INDEX

CODE INFORMATION

GENERAL

IBC 2000
TYPE 5B CONSTRUCTION
R-2 OCCUPANCY
FULLY SPRINKLED
ALLOWABLE FLOORS (2+1 SPRINKLERS)=3

- ONE-HOUR OCCUPANCY SEPARATION BETWEEN UNITS IS REQUIRED.
- ONE-HOUR SEPARATION IS REQUIRED BETWEEN THE GARAGE AND THE LIVING UNIT AT THE WALL AND IF LIVING SPACE IS ABOVE AT THE CEILING.
- EGRESS WINDOWS ARE REQUIRED FOR SLEEPING ROOMS.

UPHILL UNIT

ALLOWABLE AREA CALCULATION:
BASE ALLOWABLE AREA– 7000 SF
SPRINKLER INCREASE– +14,000 SF = 21,000 SF
MULTIPLE FLOORS (3)– 21,000 SF X 3 = 62,000 SF
TOTAL ALLOWABLE AREA– 62,000 SF

UPHILL UNIT AREA CALCULATION

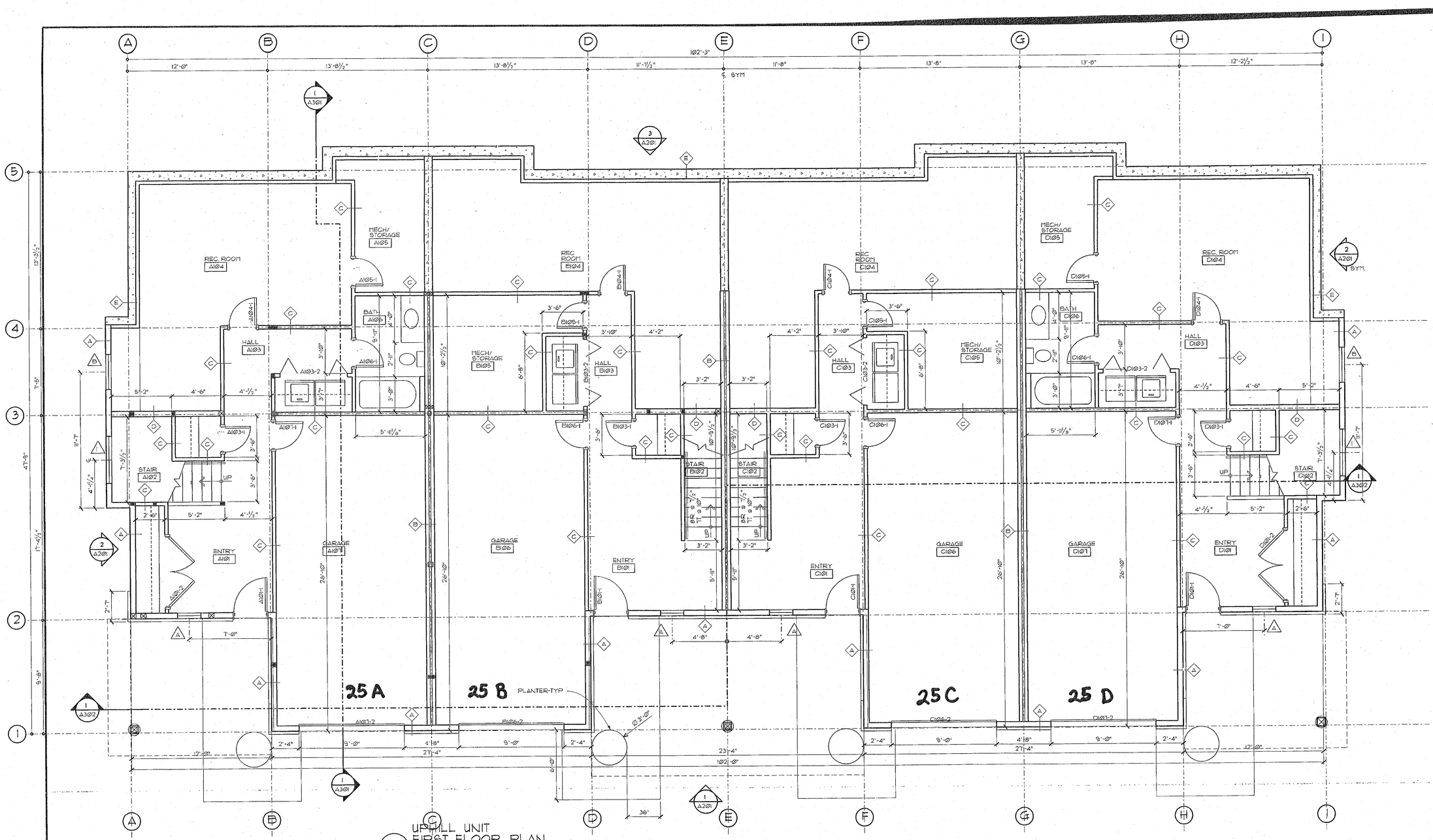
MAIN	4572
SECOND	4572
THIRD	2428
TOTAL	11572 OK

25 ABCD

UPHILL UNIT

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE • JACKSON
BOZEMAN
10180 COTTONWOOD RD
BOZEMAN, MONTANA 59718
PHONE (406) 556-7100
FAX (406) 556-3031

PROJECT NO. MAUS
APRIL 7, 2003



UPHILL UNIT
FIRST FLOOR PLAN

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

ALL SLABS WILL HAVE RADON VENTING THROUGH ROOF.

THIS BUILDING IS FULLY SPRINKLED.

REVISIONS:
1 STAIR REVISION 5/20/03

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

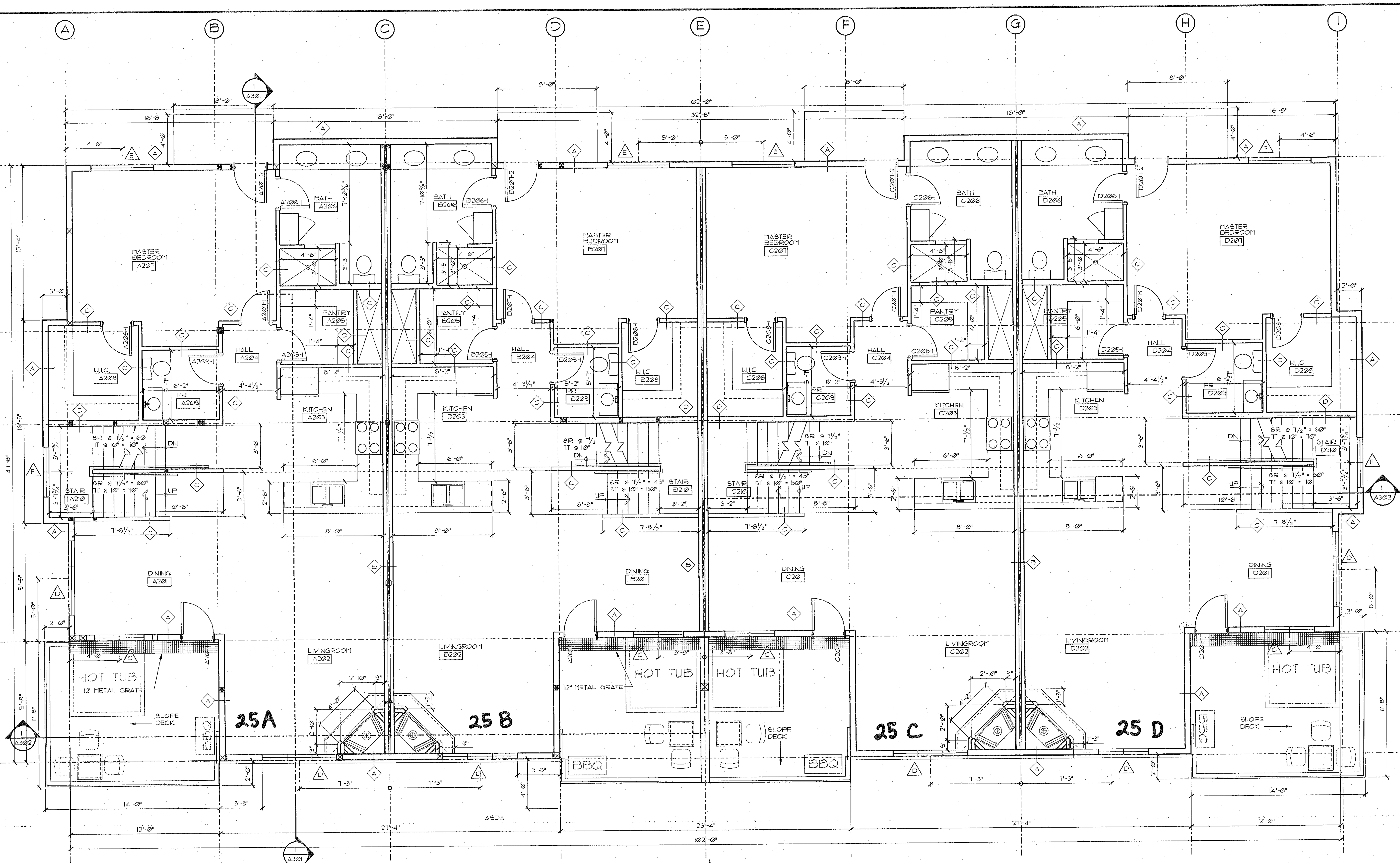
AS-BUILTS

DRAWN BY: ECR
CHECKED BY: SB
DATE: 1-20-05
CTA #: MAUS
CADD FILE: UPA101-AB
DIR: K:\MAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 1ST FLOOR

SHEET
A101 OF



UPHILL UNIT
SECOND FLOOR PLAN

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

3876
528
36
36
32
32

4862
36
36
528

~~5462~~ □' Per floor
~~5462~~

Per floor 4540 □'
~~4776~~ □'

Total 12,186 □'
~~14,080~~
- garage 1467

$ 26.80 per □'

10719 total □' finished

REVISIONS:
STAIR REVISION 5/20/03

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

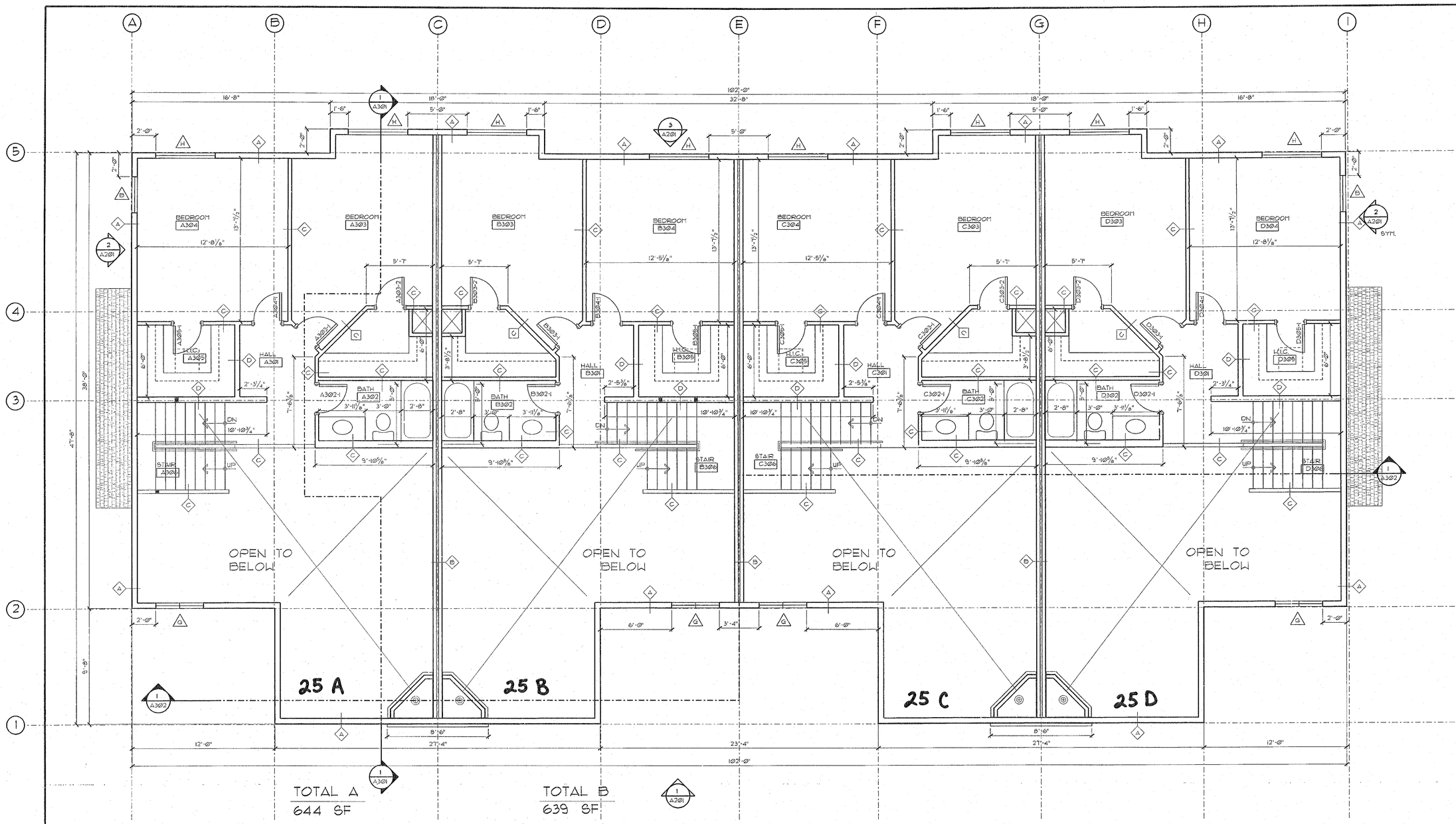
AS-BUILTS

DRAWN BY:	ECR
CHECKED BY:	SB
DATE:	9-1-04
CTA #:	MAUS
CADD FILE:	UPA102-AB
DIR:	KAMAUS

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA BOISE • GREAT FALLS HELENA • KALISPELL SPOKANE

UPHILL UNIT 2ND FLOOR

SHEET
A102 OF



UPHILL UNIT
THIRD FLOOR PLAN

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

3034
36
36
3106

3876
528
72
2469
72

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

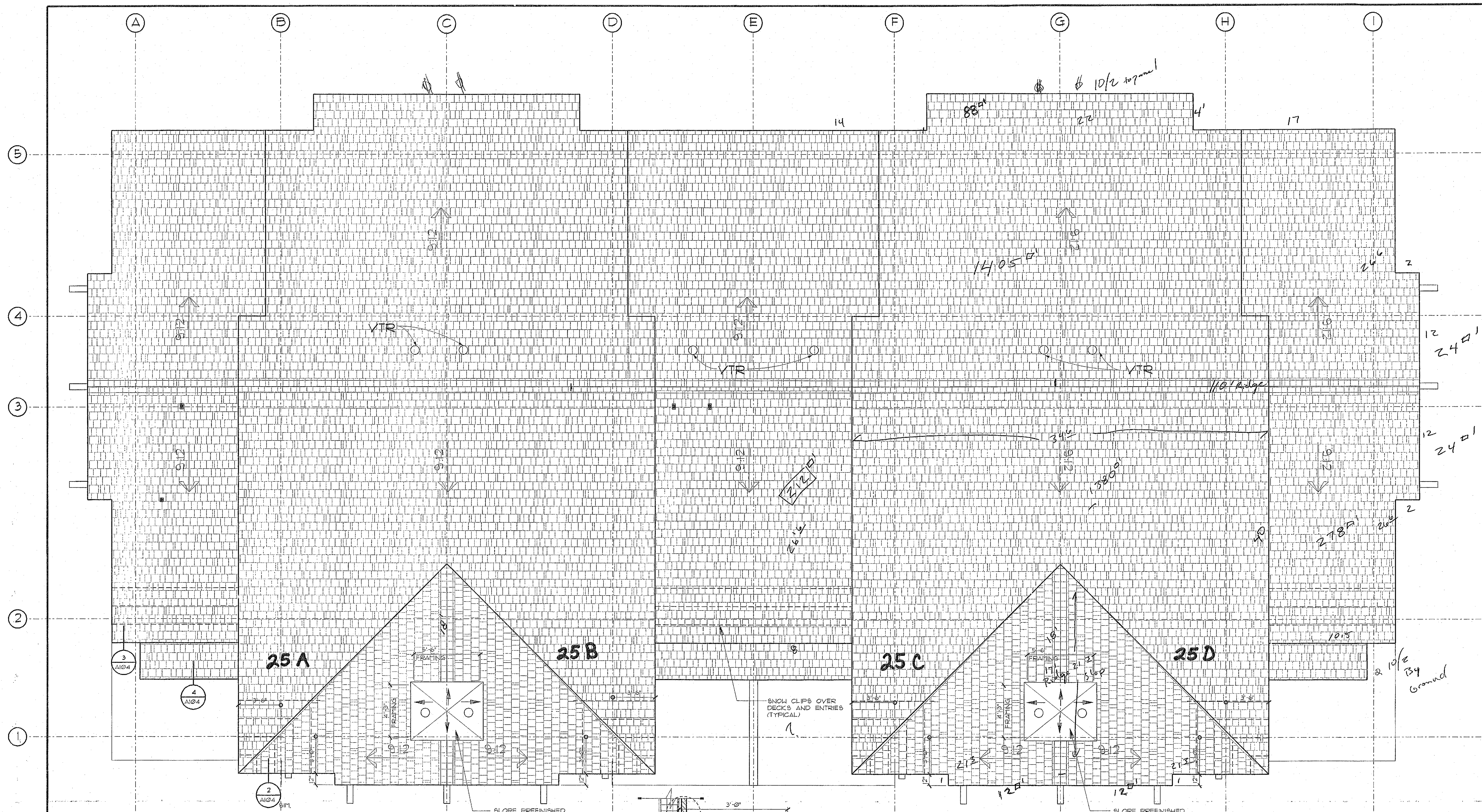
AS-BUILTS

DRAWN BY: ECR
CHECKED BY: SB
DATE: 9-1-04
CTA # MAU6
CADD FILE: UPAI03-AB
DIR: KAMAU6\

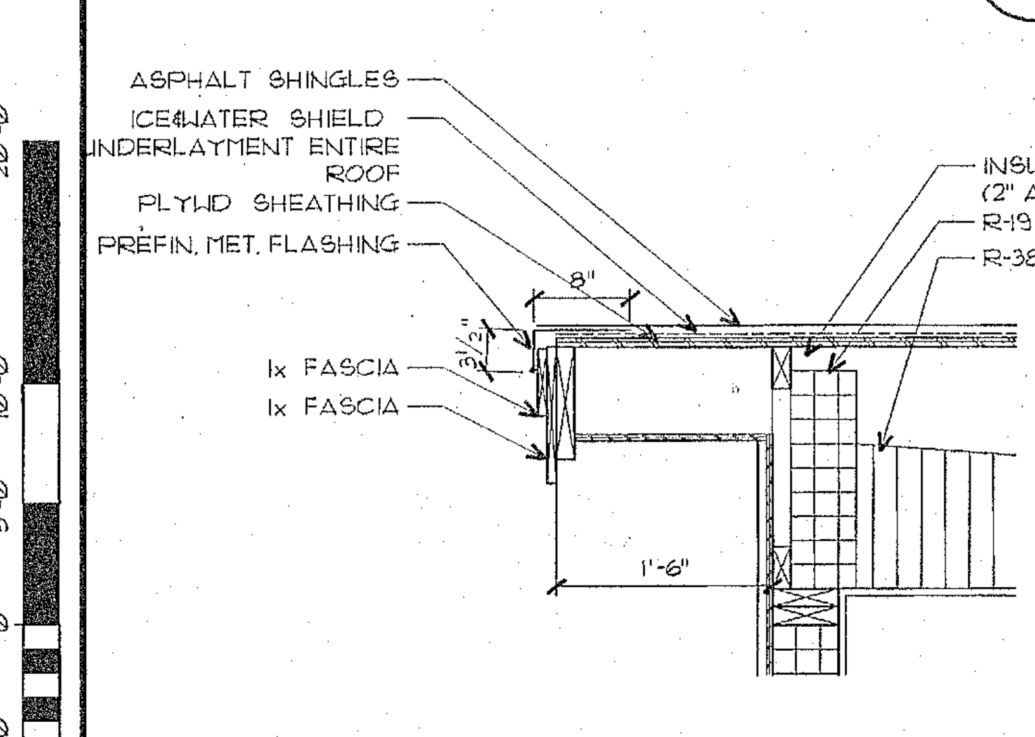
CTA
ARCHITECTS
ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 3RD FLOOR

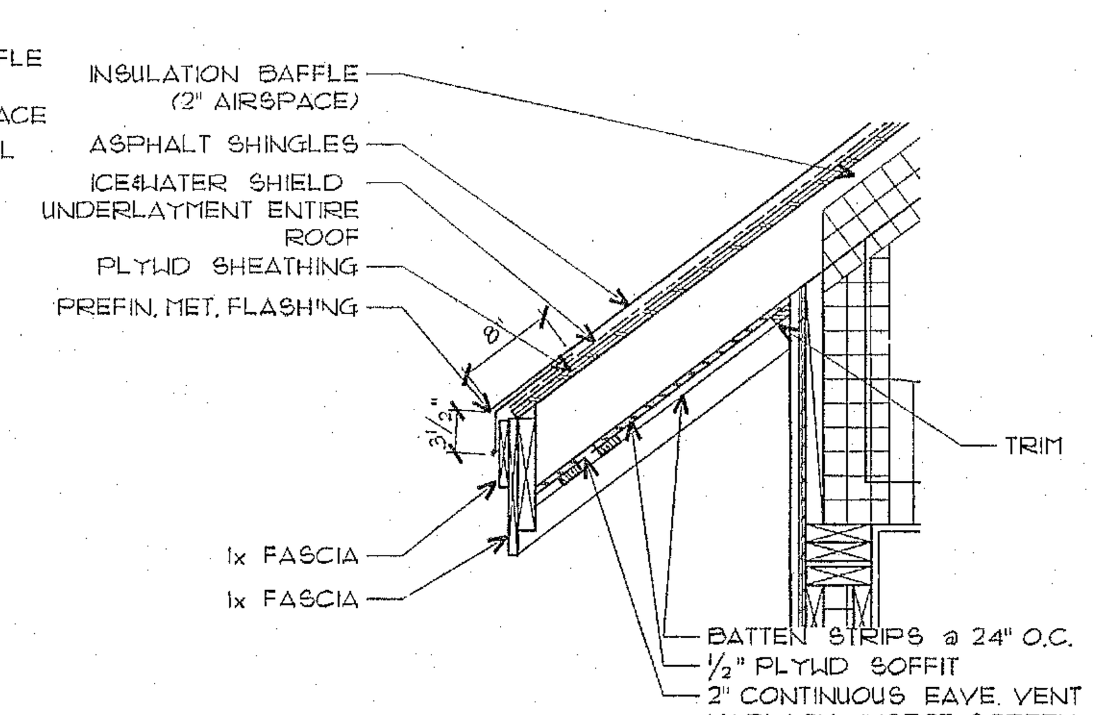
SHEET
A103 OF



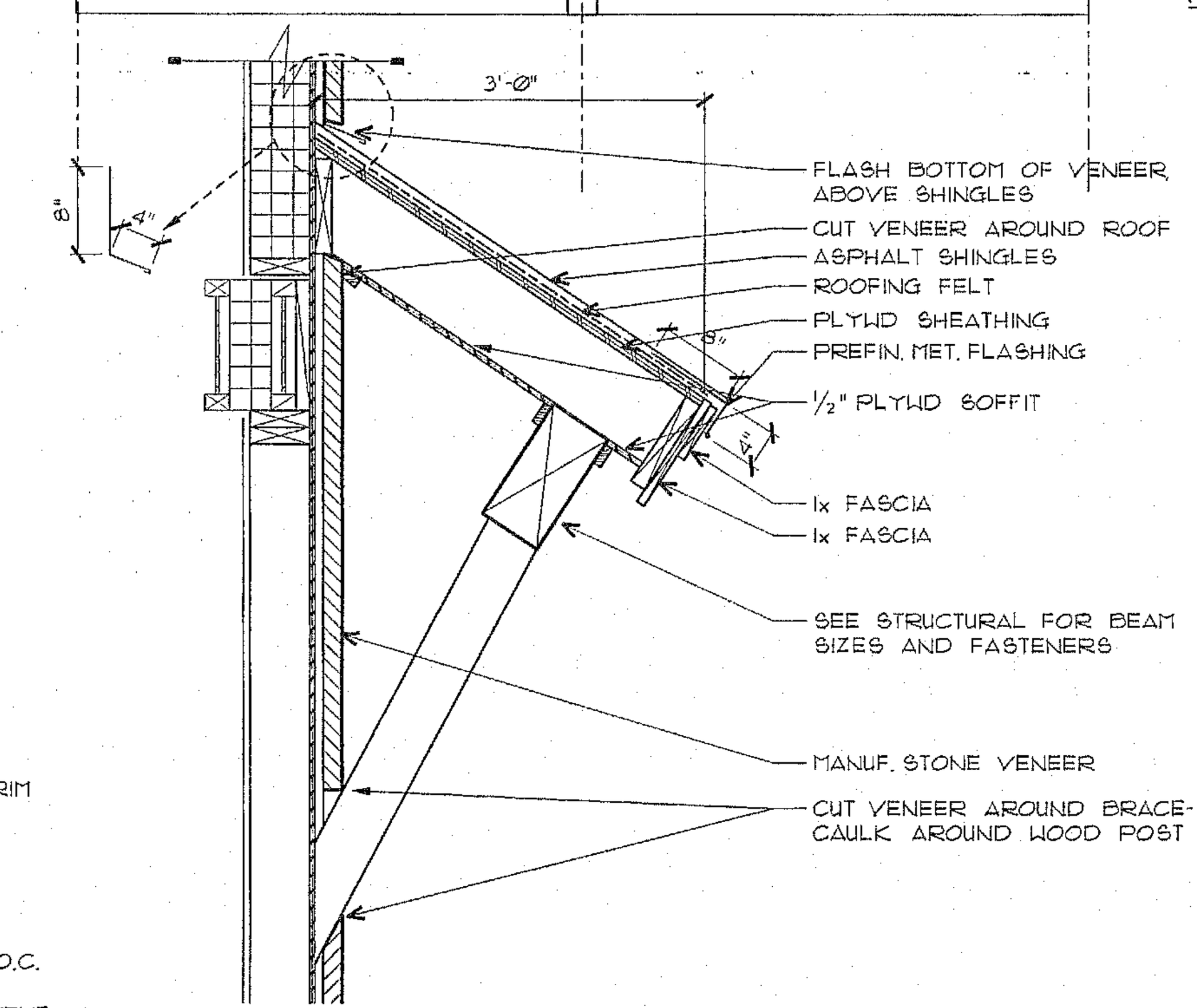
UPHILL UNIT ROOF PLAN
SCALE: 1/4" = 1'-0"



TYPICAL RAKE DETAIL
SCALE: 3/4" = 1'-0"



TYPICAL EAVE DETAIL
SCALE: 3/4" = 1'-0"



GARAGE CANOPY SECTION (OTHER CANOPIES SIMILAR)
SCALE: 3/4" = 1'-0"

INSTALL RIDGE VENTS AT ALL RIDGES

INSTALL 2" CONT. VENTS AT ALL EAVES

182
264
3435
3435
7316
X 146 Ridge
7462 83

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

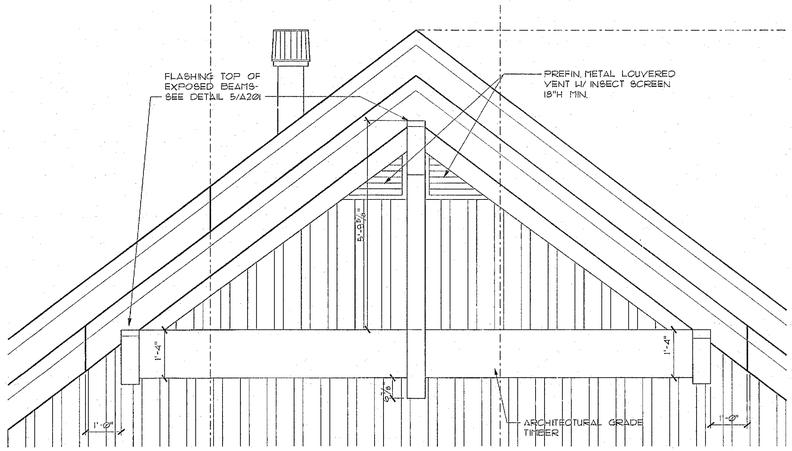
AS-BUILTS

DRAWN BY: LCR
CHECKED BY: SB
DATE: 9-1-04
CTA #: MAUS
CADD FILE: UPA104-AB
DIR: KAMAUS

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

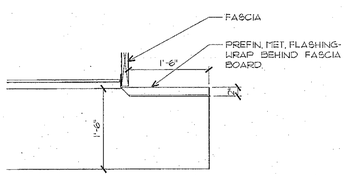
UPHILL UNIT ROOF PLAN

SHEET
A104 OF



4 A201 UPHILL UNIT BEAM & LOUVER DETAIL

SCALE: 1/2" = 1'-0"

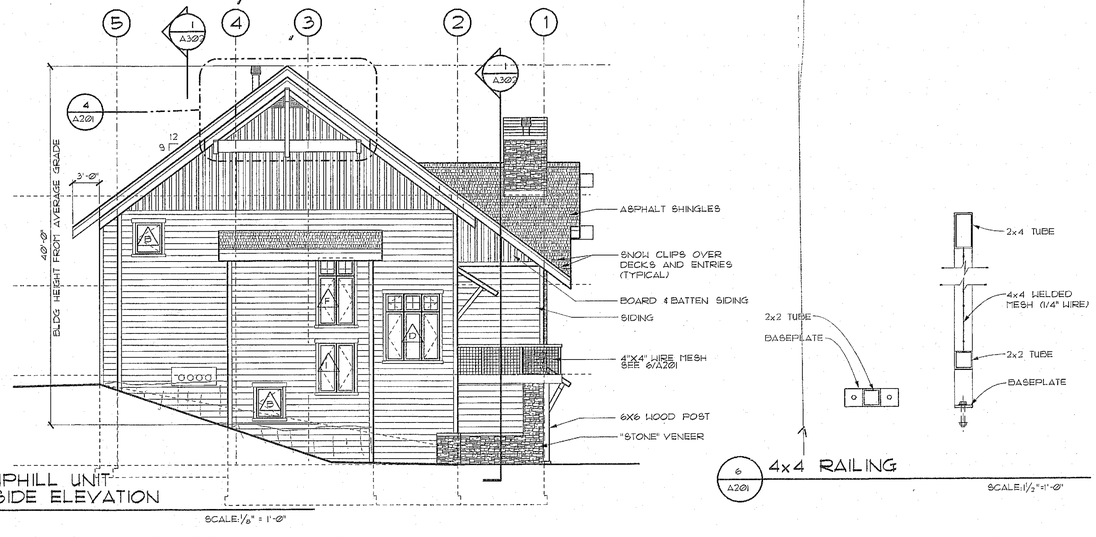


5 A201 TYPICAL BEAM CUT & FLASHING

SCALE: 3/4" = 1'-0"

1 A201 UPHILL UNIT FRONT ELEVATION

SCALE: 1/8" = 1'-0"

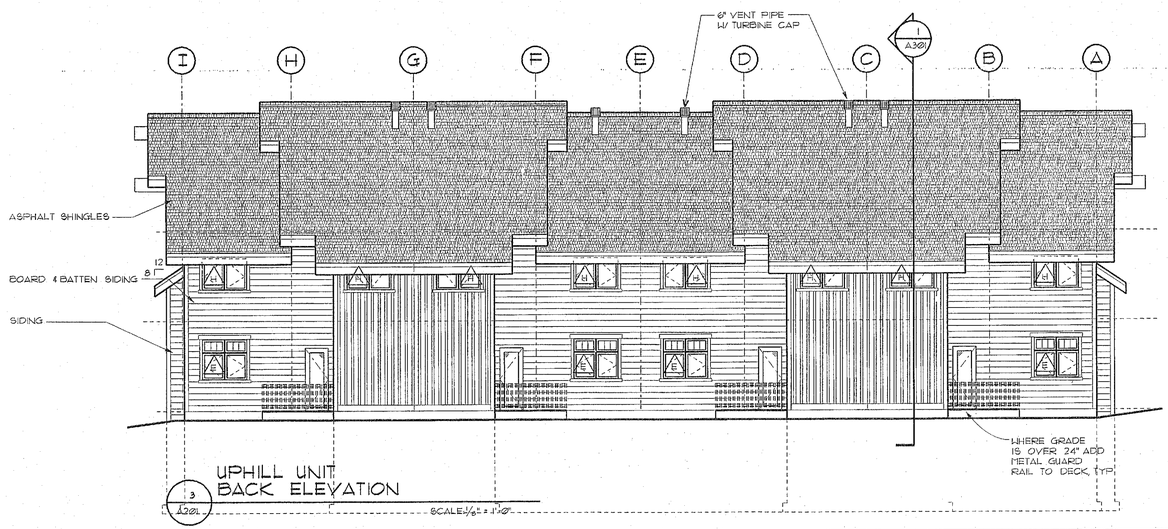


2 A201 UPHILL UNIT SIDE ELEVATION

SCALE: 1/8" = 1'-0"

6 A201 4x4 RAILING

SCALE: 1 1/2" = 1'-0"



3 A201 UPHILL UNIT BACK ELEVATION

SCALE: 1/8" = 1'-0"

MATERIALS LEGEND

SIDING - WEATHER-TITE HANED-EDGE PINE LAP SIDING
STAIN - MEISNERS ALASKAN LOG FINISH NATURAL CEDAR
ROOFING - TAMKO MOUNTAIN SLATE
WINDOWS - NORCO BRONZE
STONE - CORONADO STONES IDAHO DRYSTACK ASPEN

0 5'-0" 10'-0" 20'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

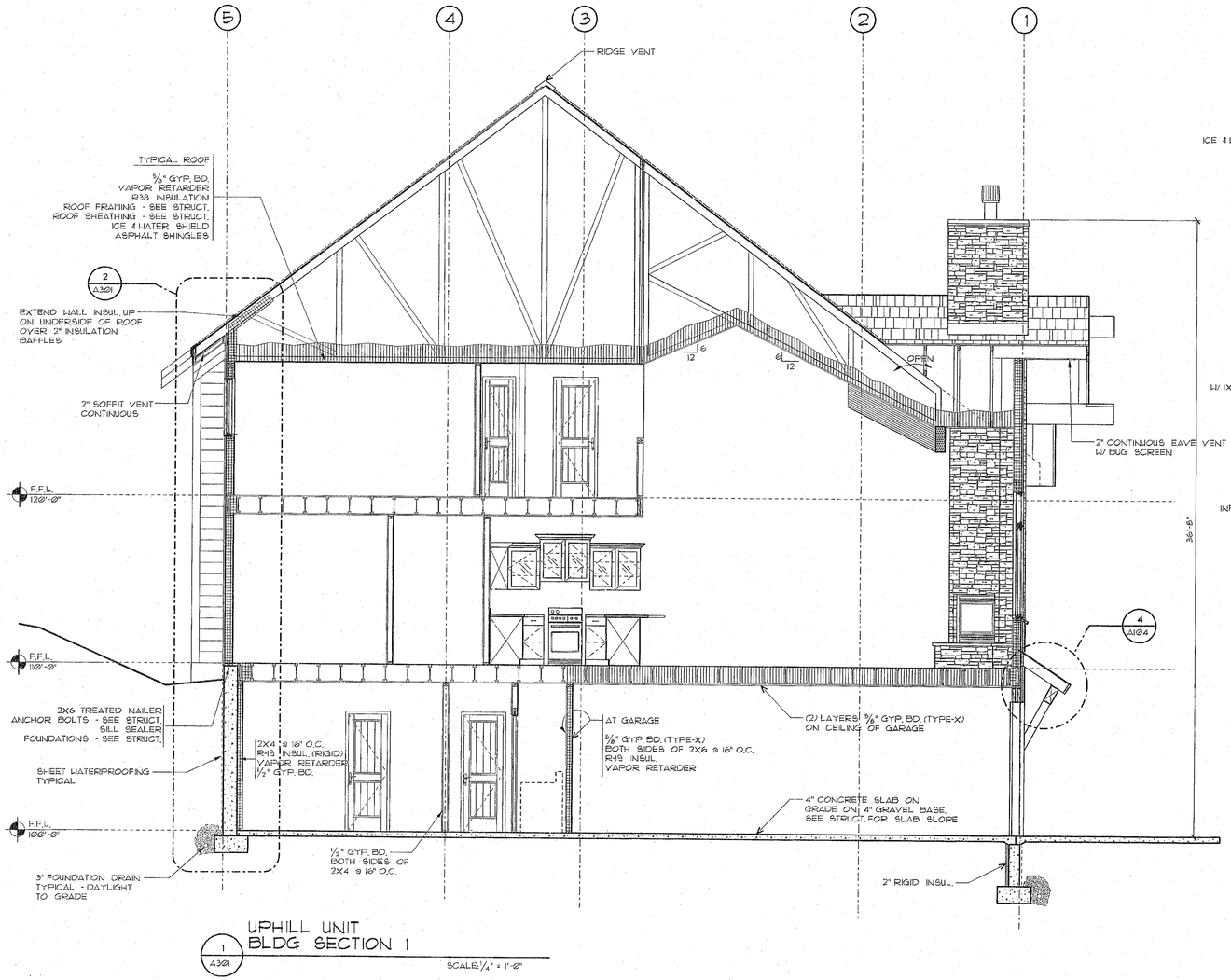
AS-BUILTS

DRAWN BY: ECR
CHECKED BY: SB
DATE: 1-20-03
CTA #: MAUS
CADD FILE: UPA201-AB
DIR: K:\MAUS\

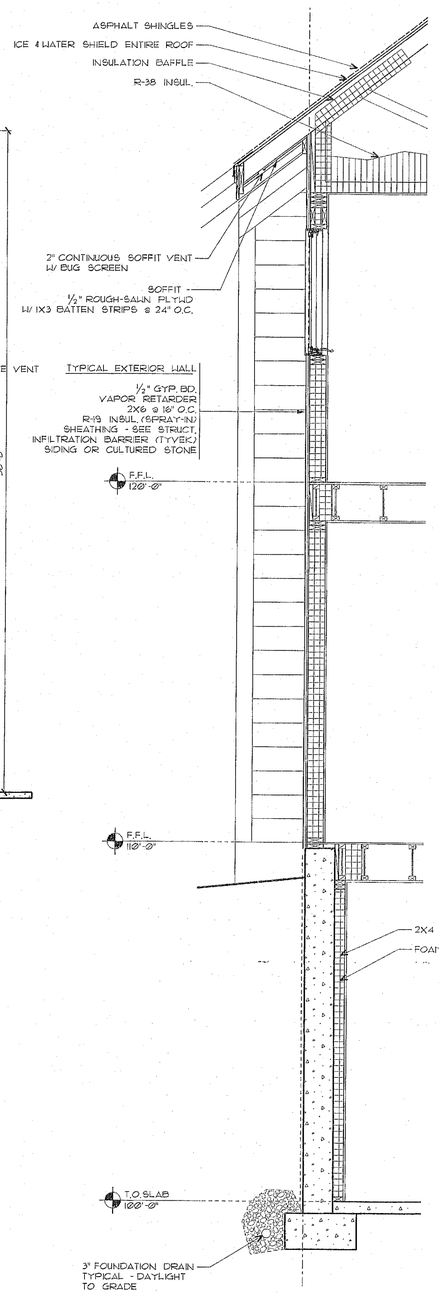
CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT ELEVATIONS

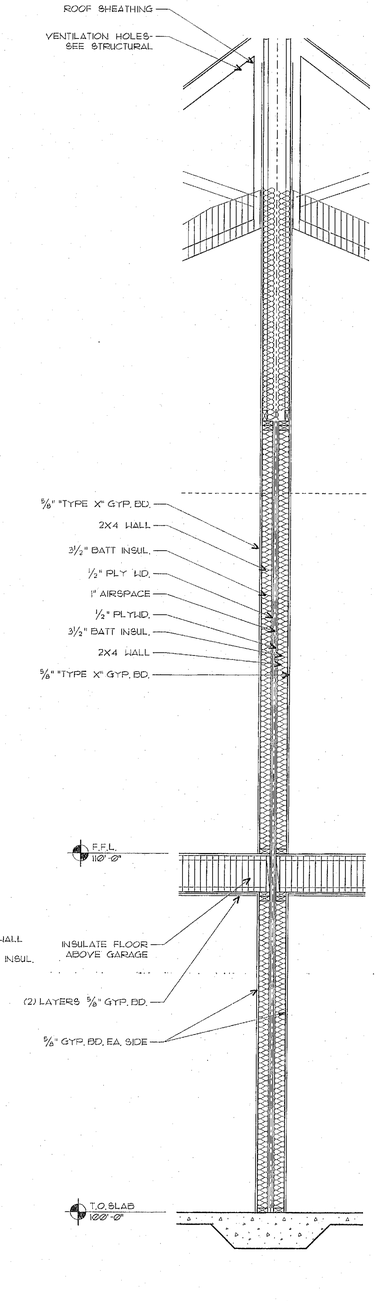
SHEET
A201 OF



UPHILL UNIT
BLDG SECTION 1
1 / A301
SCALE: ¼" = 1'-0"



UPHILL UNIT
WALL SECTION 1
2 / A301
SCALE: ½" = 1'-0"



UPHILL UNIT
WALL SECTION 2
3 / A301
SCALE: ½" = 1'-0"

20'-0" 10'-0" 5'-0" 0 5'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

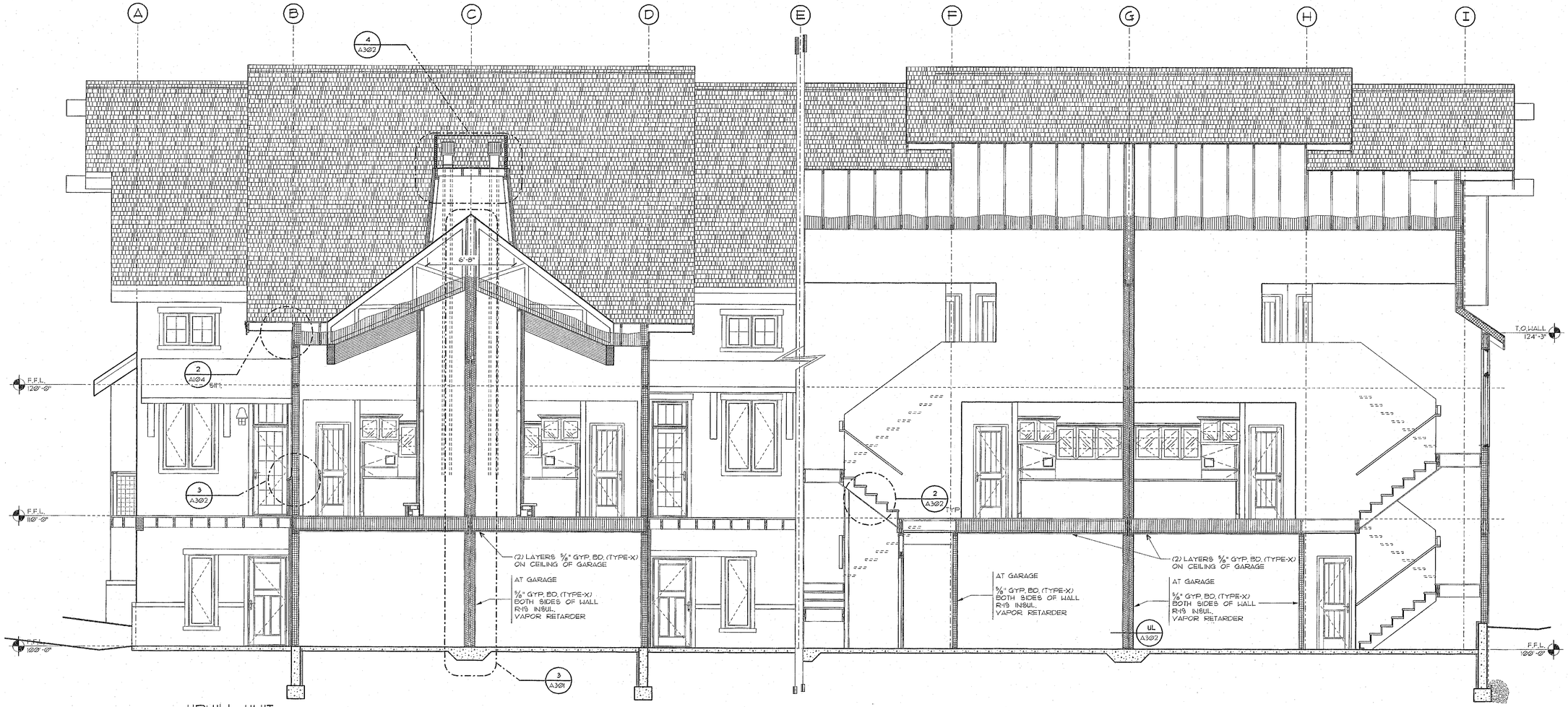
AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SB
DATE: 9-1-04
CTA # MAUS
CADD FILE: UPA301
DIR: K:\MAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS ● MISSOULA
BOISE ● GREAT FALLS
HELENA ● KALISPELL
SPOKANE

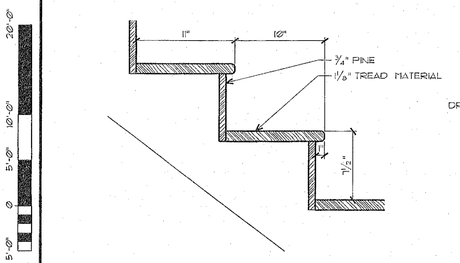
UPHILL UNIT SECTION

SHEET
A301 OF _____



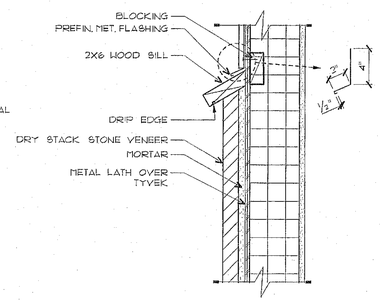
1 A302 **UPHILL UNIT BLDG SECTION 2**

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



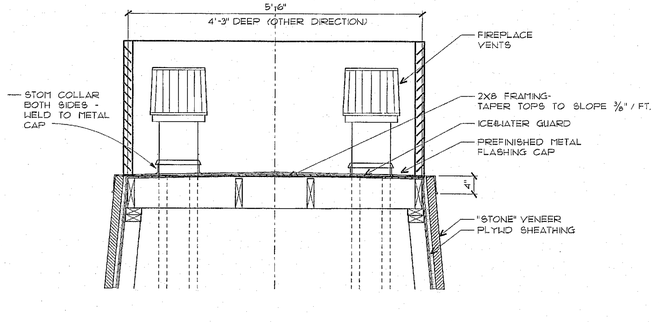
2 A302 **TYPICAL STAIR SECTION**

SCALE: 1 1/2" = 1'-0"



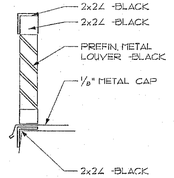
3 A302 **TYPICAL WOOD SILL @ DRY STACK VENEER**

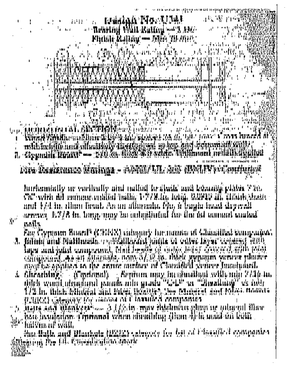
SCALE: 1 1/2" = 1'-0"



4 A302 **SECTION THRU VENT STACK**

SCALE: 3/4" = 1'-0"





UL A302 **UL 1-HOUR ASSEMBLY**

SCALE: N/A

REVISIONS:
1 STAIR REVISION 5/20/03

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

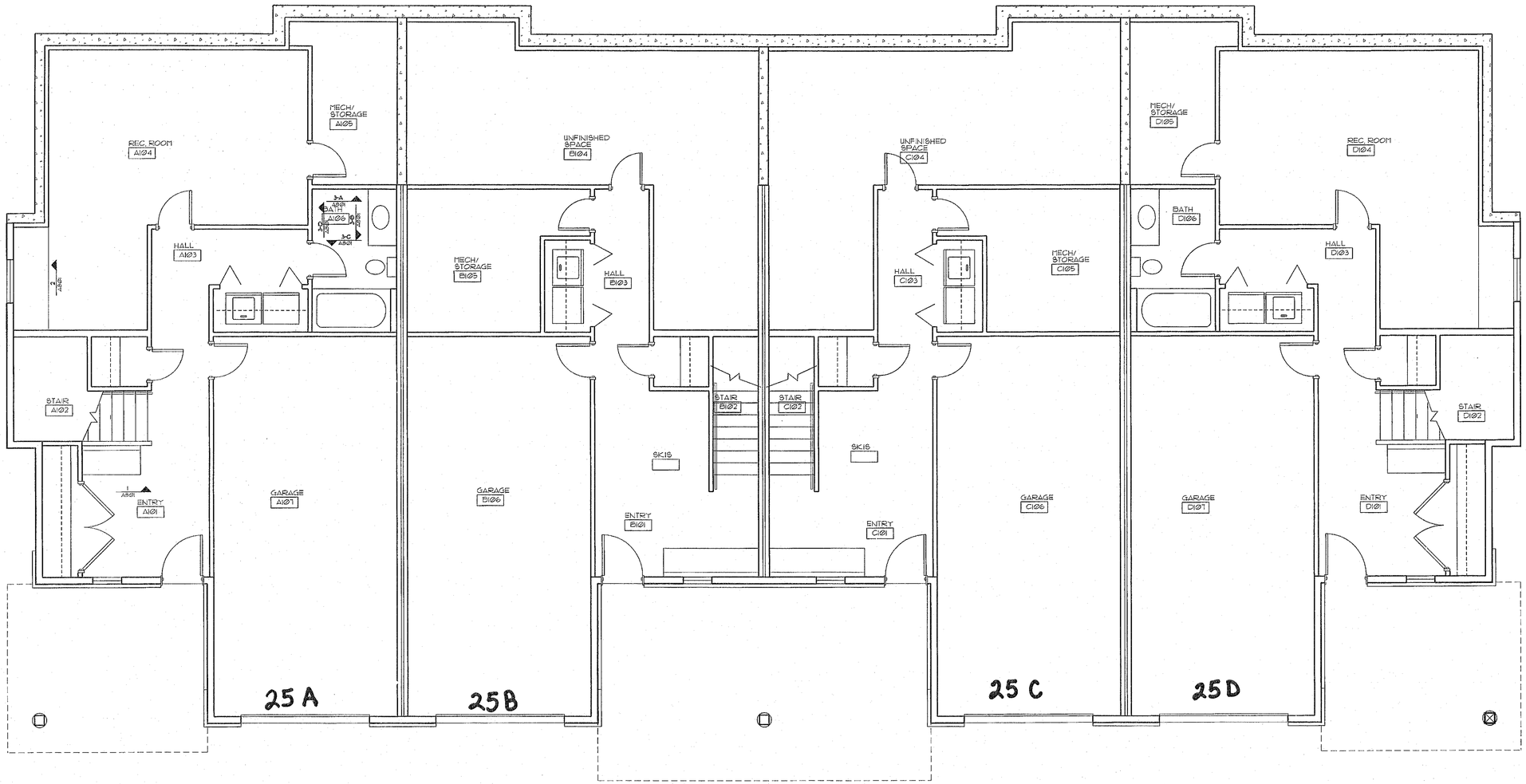
AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SD
DATE: 9-1-04
CTA #: MAUS
CADD FILE: UPA302
DIR: K:\MAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT SECTION

SHEET
A302 OF



1 A501 UPHILL UNIT
FIRST FLOOR FINISH PLAN

SCALE: 1/8" = 1'-0"

1/8" = 1'-0"
2'-0" 0 5'-0" 10'-0" 20'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

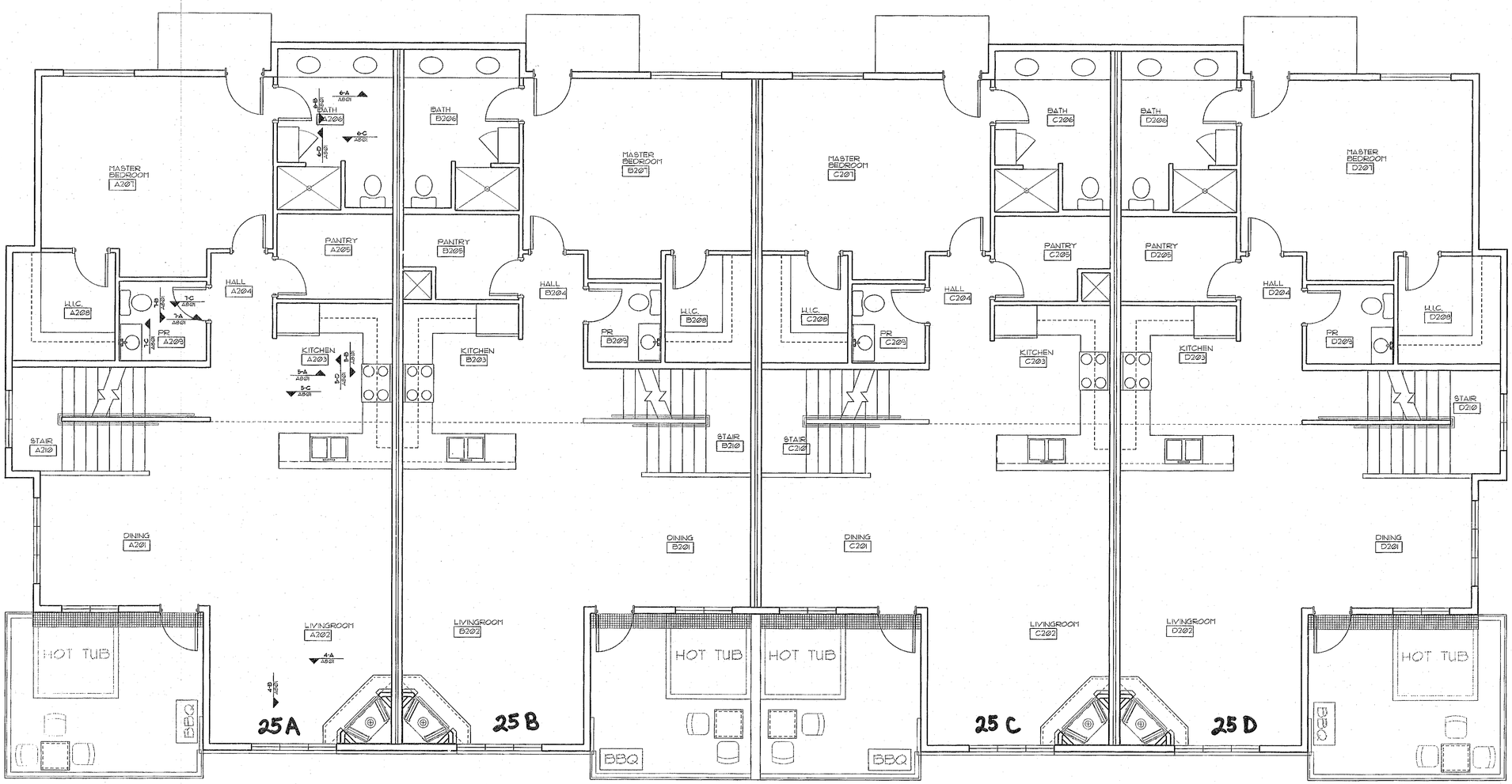
AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SB
DATE: 3-1-04
CTA #: MAUS
CADD FILE: UPA501
DIR: KAMAUS\

CTA
ARCHITECTS
ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 1ST FLOOR FINISH PLAN

SHEET
A501 OF



1 / A502 UPHILL UNIT
SECOND FLOOR FINISH PLAN
SCALE: 1/8" = 1'-0"

5'-0" 0 5'-0" 10'-0" 20'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

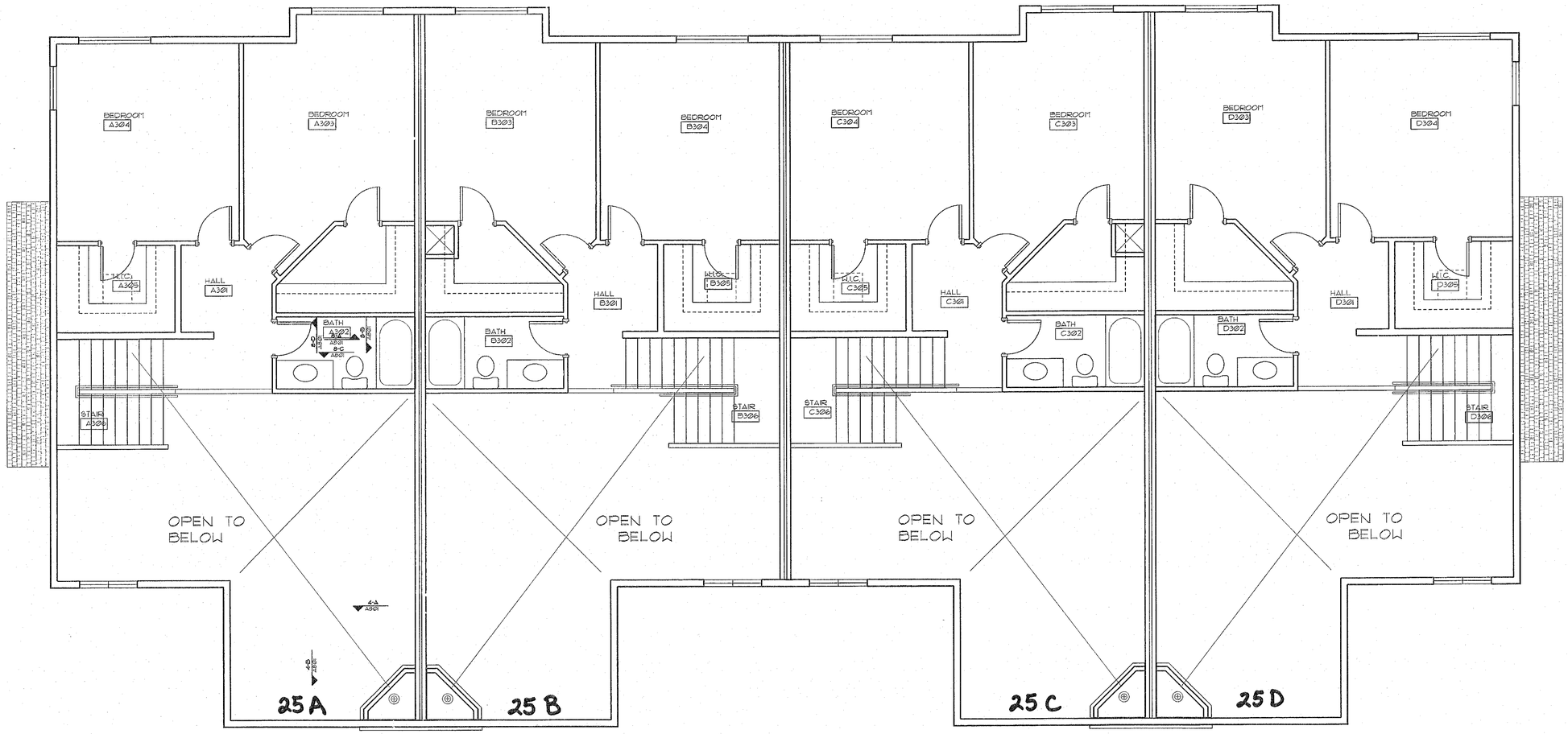
AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SB
DATE: 9-1-04
CTA #: MAUS
CADD FILE: UPA502
DIR: K:\MAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 2ND FLOOR FINISH PLAN

SHEET
A502 OF



1 A503 UPHILL UNIT
THIRD FLOOR FINISH PLAN

SCALE: 1/8" = 1'-0"

20'-0" 10'-0" 0 5'-0" 5'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SD
DATE: 9-1-04
CTA #: MA16
CADD FILE: UPA503
DIR: KAMAUSA

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 3rd FLOOR FINISH PLAN

SHEET
A503 OF

DOOR, FRAME, HARDWARE SCHEDULE

DOOR NUMBER	DOOR NUMBER	DOOR NUMBER	DOOR NUMBER	ROOM NAME	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MTL	DOOR TYPE	DOOR GLASS	DOOR NOTES	FRAME MTL	FRAME TYPE	FRAME GLASS	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FRAME NOTES	FIRE RATING	HARDWARE THRES	HARDWARE HINGE	HARDWARE LOCK	HARDWARE CYLND	HARDWARE PUSH PULL	HARDWARE CLOSE	HARDWARE STOP HOLD	HARDWARE MISC	HARDWARE WTHR	HARDWARE NOTES	HARDWARE KEY
A101-1	B101-1	C101-1	D101-1	ENTRY	3'-0"	6'-8"	1¾"								/	/	/													
A101-2			D101-2	ENTRY	6'-0"	6'-8"	1¾"								/	/	/													
A103-1	B103-1	C103-1	D103-1	HALL	2'-6"	6'-8"	1¾"								/	/	/													
A103-2	B103-2	C103-2	D103-2	HALL	5'-8"	6'-8"	1¾"								/	/	/													
A104-1	B104-1	C104-1	D104-1	REC/UNFINISH	2'-6"	6'-8"	1¾"								/	/	/													
A105-1	B105-1	C105-1	D105-1	MECH/STORAGE	2'-6"	6'-8"	1¾"								/	/	/													
A106-1			D106-1	BATHROOM	2'-6"	6'-8"	1¾"								/	/	/													
A107-1	B106-1	C106-1	D107-1	GARAGE	3'-0"	6'-8"	1¾"				1				/	/	/	1	60M						X			X		
A107-2	B106-2	C106-2	D107-2	GARAGE	9'-0"	6'-0"	1¾"								/	/	/													
A201-1	B201-1	C201-1	D201-1	DINING	2'-8"	6'-8"	1¾"								/	/	/													
A205-1	B205-1	C205-1	C205-1	PANTRY	2'-6"	6'-8"	1¾"								/	/	/													
A206-1	B206-1	C206-1	D206-1	BATHROOM	2'-6"	6'-8"	1¾"								/	/	/													
A207-1	B207-1	C207-1	D207-1	MASTER BED	2'-6"	6'-8"	1¾"								/	/	/													
A207-2	B207-2	C207-2	D207-2	MASTER BED	3'-0"	6'-8"	1¾"								/	/	/													
A208-1	B208-1	C208-1	C208-1	WALK-IN	2'-6"	6'-8"	1¾"								/	/	/													
A209-1	B209-1	C209-1	D209-1	POWDER ROOM	2'-6"	6'-8"	1¾"								/	/	/													
							"								/	/	/													
A302-1	B302-1	C302-1	D302-1	BATHROOM	2'-6"	6'-8"	1¾"								/	/	/													
A303-1	B303-1	C302-1	D302-1	BEDROOM	2'-6"	6'-8"	1¾"								/	/	/													
A303-2	B303-2	C303-2	D303-1	BEDROOM	2'-6"	6'-8"	1¾"								/	/	/													
A304-1	B304-1	C304-1	D304-1	BEDROOM	2'-6"	6'-8"	1¾"								/	/	/													
A305-1	B305-1	C305-1	D305-1	WALK-IN	2'-6"	6'-8"	1¾"								/	/	/													
							1¾"								/	/	/													

DOOR SCHEDULE NOTES:

1. 1-HOUR RATED W/ SMOKE SEALS & SPRING HINGES

WINDOW SCHEDULE

WINDOW NUMBER	CATALOG NUMBER	WINDOW TYPE	# OF EACH	ROUGH OPENING WIDTH	ROUGH OPENING HEIGHT	ROUGH OPENING/ HEAD HT. A.F.F.	DETAIL NUMBER HEAD	DETAIL NUMBER JAMB	DETAIL NUMBER SILL	HARDWARE	REMARKS
A.	2466-1	NORCO	4.	2'-0¾"	5'-6½"	7'-0½"	/	/	/		
B.	3642-1	NORCO	4.	3'-0¾"	3'-6½"	7'-0½" *	/	/	/		* 1ST FLOOR WINDOWS' HEAD HEIGHT TO BE 8'-8½" AT ROOMS 104.
C.	2466-2	NORCO	4.	4'-0¾"	5'-6½"	9'-0½"	/	/	/		
D.	2424-3 2466-3	NORCO	6.	6'-0¾"	7'-6½"	9'-0½" *	/	/	/		* HEAD HEIGHT TO BE 10'-6" AT LIVING ROOMS.
E.	3018T-2 3036-2	NORCO	4.	5'-0¾"	4'-6½"	8'-0½"	/	/	/		
F.	2424-2 2466-2	NORCO	2.	4'-0¾"	7'-6½"	*	/	/	/		* HEAD HEIGHT TO BE 8'-6" ABOVE STAIR LANDING.
G.	2430-2	NORCO	4.	4'-0¾"	2'-6½"	15'-6½"	/	/	/		
H.	3042-2	NORCO	8.	5'-0¾"	3'-6½"	7'-0½"	/	/	/		

ALL WINDOWS TO BE NORCO SITELINE CLAD CASEMENT WINDOW, HIGH ALTITUDE, LOW E, SDL W/ 5/8" JAMB & NAILING FIN. COLOR TO BE SELECTED BY OWNER.

5'-0" 0 5'-0" 10'-0" 20'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

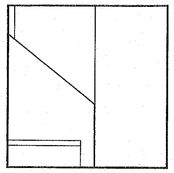
AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SB
DATE: 9-1-04
CTA # MAUS
CADD FILE: UPA601
DIR: K:\MAUS\

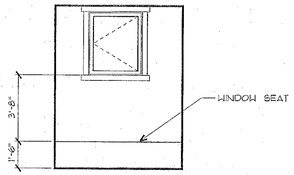
CTA ARCHITECTS ENGINEERS
BILLINGS ◆ MISSOULA
BOISE ◆ GREAT FALLS
HELENA ◆ KALISPELL
SPOKANE

UPHILL UNIT WINDOW & DOOR TYPES

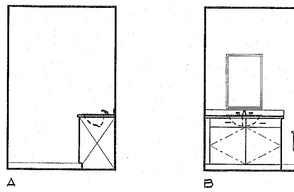
SHEET
A601 OF _____



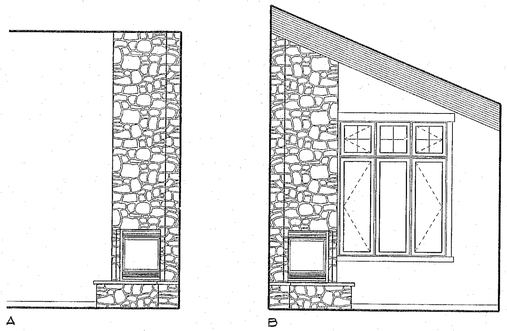
1 ENTRY
A801 A101 SCALE: 1/4" = 1'-0"



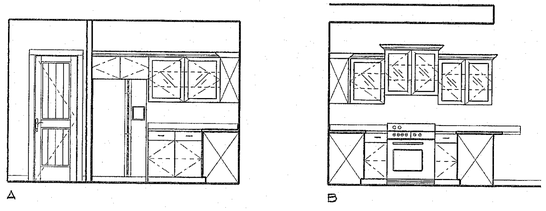
2 REC ROOM
A801 A106 SCALE: 1/4" = 1'-0"



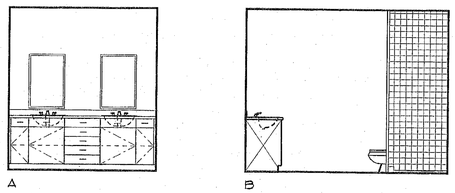
3 BATHROOM
A801 A106 SCALE: 1/4" = 1'-0"



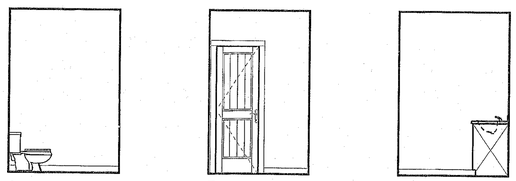
4 LIVING
A801 A202 SCALE: 1/4" = 1'-0"



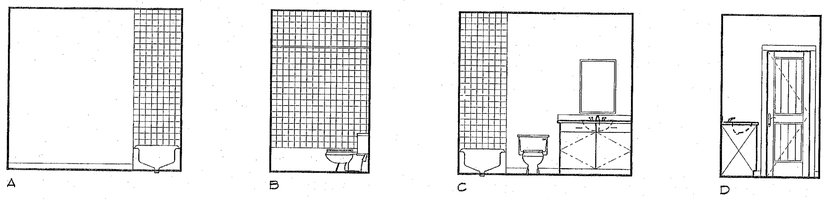
5 KITCHEN
A801 A203 SCALE: 1/4" = 1'-0"



6 BATHROOM
A801 A206 SCALE: 1/4" = 1'-0"



7 BATHROOM
A801 A209 SCALE: 1/4" = 1'-0"



8 BATHROOM
A801 A302 SCALE: 1/4" = 1'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

AS-BUILTS

DRAWN BY: JPP
CHECKED BY: SD
DATE: 9-1-04
CTA #: MAU8
CADD FILE: UPA801
DIR: K:\MAU8\

CTA
ARCHITECTS
ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT INTERIOR ELEVATIONS

SHEET
A801 OF

A. GOVERNING CODES

1) INTERNATIONAL BUILDING CODE (IBC), 2000 EDITION
2) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-02
3) LRFD DESIGN SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, AISC 1999 EDITION
4) NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, NDS 1997 EDITION.

B. DESIGN LOADS AND CRITERIA

1) GRAVITY LOADS (PSF):

	DEAD LOAD	SNOW LOAD
ROOF	15	155 + DRIFT

SNOW CRITERIA: GROUND SNOW LOAD = 151 PSF, IS = 1.00
EXPOSURE FACTOR CE = .7, CT = 1.00

	DEAD LOAD	LIVE LOAD
FLOOR	10	40
DECK	5*	155 + DRIFT

* INCLUDE HOT TUB WEIGHT SEPERATELY

@@@ IBC.....

2) WIND CRITERIA: 3 SEC GUST WIND SPEED = 100 MPH
FASTEST MILE WIND SPEED = 80 MPH
BUILDING CATEGORY: ENCLOSED
IW = 1.00 / EXPOSURE C
INTERNAL PRESSURE COEFFICIENT: 0.18 +-
26 PSF MINIMUM FOR EXTERNAL WALL COMPONENTS & CLADDING
10 PSF MINIMUM NET UPLIFT FOR STEEL ROOF JOIST

3) SEISMIC CRITERIA: SITE CLASS D
SDS = 0.811 / SD1 = 0.3683
IE = 1.00 / USE GROUP I
DESIGN CATEGORY D
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
DESIGN BASE SHEAR UPHILL UNIT: V = 76 KIPS
DESIGN BASE SHEAR DOWNHILL UNIT: V =54 KIPS
LATERAL FORCE RESISTING SYSTEM:
WOOD SHEAR WALLS

4) FOOTING BEARING PRESSURE: 2000 PSF ON APPROVED SUBGRADE, SEE SECTION D.2
5) SOIL FRICTION COEFFICIENT: 0.35
6) LATERAL SOIL PRESSURE: 45 PCF ACTIVE EQUIVALENT FLUID PRESSURE
60 PCF AT-REST EQUIVALENT FLUID PRESSURE
250 PCF PASSIVE EQUIVALENT FLUID PRESSURE
7) FROST DEPTH: 42 INCHES

C. MATERIALS

1) CLASS A CONCRETE: (USE UNLESS NOTED OTHERWISE) PORTLAND CEMENT ASTM C150 TYPE I/ II
FLY ASH ASTM C618, 10% - 25% BY WEIGHT
WATER / CEMENT + FLY ASH = 0.45 MAXIMUM
28 DAY F'C = 4000 PSI
AIR CONTENT 4.5% - 7.0%
3/4" MAX NORMAL WEIGHT AGGREGATE

CLASS B CONCRETE: (FOOTINGS & SLABS ON GRADE) PORTLAND CEMENT ASTM C150 TYPE I/ II
FLY ASH ASTM C618, 10% - 25% BY WEIGHT
WATER / CEMENT + FLY ASH = 0.50 MAXIMUM
28 DAY F'C = 3000 PSI
AIR CONTENT 4.5% - 7.0% EXCEPT 3.0% MAX INTERIOR SLABS
3/4" MAX NORMAL WEIGHT AGGREGATE

2) REINFORCING BARS: ASTM A615, GRADE 60
3) DEFORMED BARS: ASTM A706, GRADE 60 (WHERE INDICATED TO BE WELDED)
4) MECHANICAL SPLICES: LENTON TAPERED, THREADED COUPLERS AS MFG BY ERICO
5) WELDED WIRE FABRIC: ASTM A185, FLAT SHEET MATERIAL - SMOOTH OR DEFORMED WIRE
6) ANCHOR RODS: ASTM F1554 GRADE 36 OR 55 W/ ASTM A563 HEAVY HEX NUTS
7) GROUT: ASTM C1107, NON-METALLIC NON-SHRINK, 3 DAY F'C = 4000 PSI
8) STRUCTURAL STEEL:
W & WT SHAPES ASTM A992, FY = 50 KSI
OTHER ROLLED SHAPES ASTM A36, FY = 36 KSI
PLATES ASTM A36, FY = 36 KSI
HSS- SQUARE OR RECT ASTM A500 GRADE B, FY = 46 KSI
HSS- ROUND ASTM A500 GRADE B, FY = 42 KSI
9) HIGH STRENGTH BOLTS: ASTM A325 TYPE 1 UNCOATED; STEEL TO STEEL CONNECTIONS
10) BOLTS: ASTM A307; WOOD, WOOD TO STEEL CONNECTIONS OR ERECTION ONLY
11) EXPANSION ANCHORS: ASTM A36 SHANK W/ EXPANSION CONE SUCH AS HILTI KWIK BOLT II OR AS APPROVED
12) ADHESIVE ANCHORS: ASTM A36 ALL THREAD ROD W/ CHISEL POINT & INJECTABLE ADHESIVE SUCH AS HILTI HIT HY-150 FOR CONCRETE & SOLID MASONRY OR HIT HY-20 W/ SCREEN TUBES FOR HOLLOW MASONRY OR AS APPROVED
13) GLUE LAMINATED TIMBER: ANSI/AITC A190.1, COMBINATION SYMBOL 24F-V4-DF/DF
14) TIMBERSTRAND LSL: NES REPORT NO. NER-481
FB = 2250 PSI, FV = 400 PSI
FC = 1350 PSI, E = 1.5E6 PSI
15) PARALLAM PSL: NES REPORT NO. NER-481
FB = 2900 PSI, FV = 290 PSI
FC = 2900 PSI, E = 2.0E6 PSI
16) FABRICATED WOOD JOISTS: NES REPORT NO. NER-200
17) FABRICATED WOOD TRUSSES: ANSI/TPI 1-1995
18) DIMENSION LUMBER: GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) OR WEST COAST LUMBER INSPECTION BUREAU (WCLIB).
HEM-FIR #1 UNLESS NOTED OTHERWISE
HEM-FIR #2 STUD FRAMING, PLATES & BLOCKING
19) WOOD SHEATHING / PANELS: AMERICAN PLYWOOD ASSOCIATION (APA) RATED "STRUCTURAL I" OR "SHEATHING" SUITED FOR SPAN & USE

D. FOUNDATIONS

1) FOUNDATIONS HAVE BEEN DESIGNED BASED ON INFORMATION PRESENTED IN THE "GEOTECHNICAL INVESTIGATION REPORT" BY XX NO. XX DATED XX 2001. BORING LOGS AND LABORATORY TEST RESULTS ARE INCLUDED FOR REFERENCE IN THE PROJECT MANUAL.
2) PLACE FOOTINGS ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL PLACED OVER UNDISTURBED NATURAL SOILS. ENGINEERED FILL MATERIAL SHALL BE MINUS 3" GRADED GRANULAR, APPROVED BY THE GEOTECHNICAL ENGINEER. PLACE ENGINEERED FILL IN UNIFORM LIFTS AND COMPACT TO 98% STANDARD PROCTOR ACCORDING TO ASTM D698. PLAN LIMITS OF ENGINEERED FILL MUST EXTEND AT LEAST 2'-0" BEYOND ALL FOOTING EDGES. IF ENCOUNTERED, EXISTING FILL SHALL BE REMOVED TO AN APPROVED DEPTH AND REPLACED WITH ENGINEERED FILL AS DESCRIBED ABOVE. PLACED AND COMPACTED AS DESCRIBED ABOVE.
3) PLACE INTERIOR SLABS ON GRADE ON CRUSHED, MINUS 3/4" DRAINAGE COURSE, GRADED FOR COMPACTION WITH LESS THAN 5% PASSING THE #200 SIEVE. PLACE DRAINAGE COURSE ON A VAPOR RETARDER, WHERE INDICATED ON PLAN. ON NATURAL SOILS OR ENGINEERED FILL PLACED OVER UNDISTURBED NATURAL SOILS. COMPACT SOILS UNDER SLABS (ABOVE FOOTINGS) TO 95% STANDARD PROCTOR ACCORDING TO ASTM D698.
4) DO NOT BACKFILL WALLS WITH UNBALANCED SOIL LEVELS UNLESS ADEQUATELY SHORED OR PERMANENT FLOOR PLATES ARE INSTALLED AND CONNECTIONS ARE COMPLETE - THIS DOES NOT INCLUDE RETAINING WALLS. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SHORING DESIGN AND INSTALLATION.
5) BACKFILL AND COMPACT BURIED WALLS OR GRADE BEAMS EVENLY ON EACH SIDE TO AVOID UNBALANCED LOADS. COMPACT LAYERS TO 95% STANDARD PROCTOR ACCORDING TO ASTM D698 EXCEPT 92% UNDER NON-PAVED AREAS.
6) ALWAYS PROVIDE POSITIVE SURFACE WATER DRAINAGE AWAY FROM THE STRUCTURE.

E. CONCRETE

1) PERFORM CONCRETE WORK IN ACCORDANCE WITH ACI 301-99 "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
2) MINIMUM REINFORCING BAR COVER FOR CAST-IN-PLACE CONCRETE:
3" AT UNFORMED SURFACES CAST AGAINST AND EXPOSED TO EARTH
2" AT FORMED SURFACES EXPOSED TO EARTH OR WEATHER FOR #6 AND LARGER
1 1/2" AT FORMED SURFACES; EXPOSED TO EARTH OR WEATHER FOR #3-#5 AND, NOT EXPOSED TO EARTH OR WEATHER FOR REINFORCEMENT OF BEAMS OR COLUMNS
1" AT SLABS OR WALLS NOT EXPOSED TO EARTH OR WEATHER
3) SPLICE REINFORCING BARS BY LAPPING ACCORDING TO THE SCHEDULE INDICATED. SPLICE WWF SHEETS BY LAPPING AT LEAST ONE PANEL WIDTH (TWO LONGITUDINAL BARS IN CONTACT) OR 10 INCHES MINIMUM. PLACE MECHANICAL CONNECTORS WHERE SHOWN.
4) ADD #5X6'-0" DIAGONAL EACH FACE AT ALL OPENING CORNERS AND #5X6'-0" DIAGONAL MID-DEPTH AT ALL RE-ENTRANT SLAB CORNERS UNLESS SHOWN OTHERWISE.
5) SECURE ALL REINFORCING, INCLUDING WWF, IN POSITION WITH CHAIRS BEFORE CONCRETE PLACEMENT. CONCRETE DOBIES MAY BE USED TO POSITION SLAB ON GRADE REINFORCEMENT.
6) TIE DOWELS IN PLACE BEFORE PLACING CONCRETE. DO NOT STAB OR "WET-SET" DOWELS.
7) INSTALL AND SECURE EMBEDMENTS SUCH AS ANCHOR RODS AND EMBEDMENT PLATES WITHIN SPECIFIED TOLERANCES BEFORE CONCRETE PLACEMENT.
8) ROUND ISOLATION JOINTS SHOWN AT COLUMN LOCATIONS MAY BE SIMILAR SIZE DIAMOND SHAPED JOINTS AT THE CONTRACTOR'S DISCRETION.
9) WHERE TOP SURFACES OF CONCRETE SLABS ARE SHOWN TO BE RECESSED MORE THAN 1/2", THICKEN SLAB TO MAINTAIN INDICATED SLAB THICKNESS.
10) MECHANICALLY VIBRATE ALL CONCRETE PLACEMENTS EXCEPT SLABS LESS THAN 5" THICK.
11) WHERE SLAB CONTRACTION JOINTS ARE SHOWN ON THE DRAWINGS, CONSTRUCTION JOINTS MAY BE SUBSTITUTED TO ACCOMMODATE THE CONTRACTOR'S PLACEMENT STRATEGY.
12) FREE WATER ON THE SLAB SURFACE DURING FINISHING OPERATIONS IS PROHIBITED. SOFT CUT CONTRACTION JOINTS AS SOON AS POSSIBLE - GENERALLY WITHIN 6 HOURS AFTER FINISHING.
13) PROTECT AND CURE ALL CONCRETE SURFACES. BEGIN CURING WALLS IMMEDIATELY AFTER STRIPPING FORMS AND FLATWORK IMMEDIATELY AFTER FINISHING.
14) CONCRETE SURFACES TO RECEIVE GROUT UNDER COLUMN BASEPLATES MUST BE PREPARED BY LIGHT BUSH HAMMERING (1/4" AMPLITUDE) THE GROUTED AREA AND PRE-SOAKING.

F. STRUCTURAL STEEL

1) DETAIL, FABRICATE AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH THE 3RD EDITION LRFD "MANUAL OF STEEL CONSTRUCTION" AND 2000 "CODE OF STANDARD PRACTICE" BY AISC.
2) ALL STEEL-TO-STEEL BOLTED CONNECTIONS SHALL CONFORM WITH THE 2000 RCSC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS" AS ENDORSED BY AISC.
3) PERFORM SHOP AND FIELD WELDING IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE. SHOP OR FIELD WELDS AT NON-BOLTED CONNECTIONS THAT ARE NOT SPECIFICALLY DETAILED SHALL BE 3/16" CONTINUOUS FILLETS AT EACH CONTACT EDGE OR SURFACE.
4) ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TEST FOR THE TYPE OF WORK BEING PERFORMED.
5) NON-DESTRUCTIVE WELD TESTS MAY BE PERFORMED. DEFICIENT WELDS WILL BE CORRECTED BY THE CONTRACTOR AND RE-TESTED AT THEIR EXPENSE.
6) THE ERECTOR SHALL NOT EMPLOY FIT-UP MEANS BEYOND THE USE OF DRIFT PINS OR MINOR HOLE REAMING. CORRECTION OF FIT-UP ERRORS OR MODIFICATIONS, INCLUDING ANCHOR RODS, OF ANY DEGREE SHALL BE DISCUSSED WITH THE FABRICATOR AND ENGINEER AND METHODS APPROVED BY THEM BEFORE ACTIONS ARE TAKEN.
7) GROUT UNDER COLUMN BASEPLATES AFTER THE STRUCTURE IS ERECT AND PLUMB BUT BEFORE PLACEMENT OF ELEVATED SLABS OR ROOFING.

G. WOOD FRAMING

1) PREFABRICATED WOOD TRUSSES SHALL CONFORM TO THE TRUSS PLATE INSTITUTE DESIGN SPECIFICATION FOR METAL-PLATE CONNECTED WOOD TRUSSES (ANSI/TPI 1-1995). TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT ALL SUPERIMPOSED LOADS INDICATED IN SECTION "B" AND LOADS TRANSFERRED BY FRAMING MEMBERS (IE. OVERFRAMING, STRUCTURAL FASCIA, ...) INDICATED ON ROOF FRAMING PLAN(S) AND ANY ADDITIONAL LOADS REQUIRED.
2) ENGINEERED WOOD PRODUCTS (WOOD I-JOISTS & PARALLEL STRAND LUMBER) SHOWN ON THE DRAWINGS ARE THE PRODUCTS OF TRUS JOIST MACMILLAN AND ARE DESIGNATED BY THE MANUFACTURER'S STANDARD PRODUCT NUMBERS. THE INTENT OF THE DESIGN IS FOR THESE ITEMS TO BE ATTACHED TO EACH OTHER AND TO THE SURROUNDING STRUCTURE TO BEHAVE AS A SYSTEM, WHETHER SHOWN OR NOT. PROVIDE ACCESSORY ITEMS (BLOCKS, CLIPS, STIFFENERS, STRAPS, ETC.) DESIGNED BY THE MANUFACTURER, FOR A COMPLETE SYSTEM. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND USE.
3) FRAMING CONNECTORS, ANCHORS, AND HANGERS SHOWN ON THE DRAWINGS ARE THE PRODUCTS OF SIMPSON STRONG-TIE COMPANY, SAN LEANDRO, CALIFORNIA AND ARE DESIGNATED BY MANUFACTURER'S STANDARD PRODUCT NUMBERS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND USE. PRODUCTS WITH EQUIVALENT CAPACITY AND QUALITY MAY BE SUBSTITUTED AFTER A SUBSTITUTION SUBMITTAL HAS BEEN PROVIDED BY THE GENERAL CONTRACTOR AND FINAL APPROVAL BY STRUCTURAL ENGINEER.
NOTE: "USP" LUMBER CONNECTORS ARE PRIOR APPROVED FOR DIRECT SUBSTITUTION OF SIMPSON PRODUCTS USING THE "USP" REFERENCE NUMBER INDEX. WHERE A DIRECT SUBSTITUTION IS NOT AVAILABLE IN THE INDEX, PROVIDE A SUBSTITUTION SUBMITTAL FOR PROPOSED PRODUCT SUBSTITUTION.
4) FLOOR AND ROOF SHEATHING:
LAY PLYWOOD PANELS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. STAGGER ALL END JOINTS AND PLACE AS INDICATED IN "CASE 1" OF 2000 IBC TABLE 2306.3.1.

LOCATION	MATERIAL	NAILING
FLOOR	3/4" CDX T&G, 40/20 MIN. SPAN RATING	0.131"Φ AT 6" O.C. AT ALL SUPPORTED PANEL EDGES 0.131"Φ AT 12" O.C. AT INTERMEDIATE SUPPORTS
ROOF	3/4" CDX, 48/24 MIN. SPAN RATING	0.131"Φ AT 6" O.C. AT ALL SUPPORTED PANEL EDGES 0.131"Φ AT 12" O.C. AT INTERMEDIATE SUPPORTS

5) ALL LAG BOLTS SHALL HAVE LEAD HOLES DRILLED THE SAME DIAMETER FOR THE SHANK AND 50% OF THE SHANK DIAMETER FOR THE THREADED PORTION. LUBRICATE THREADS BEFORE INSTALLATION.
6) PROVIDE HEADERS FOR ALL OPENINGS AS SCHEDULED. WHERE NOT INDICATED, INSTALL 2-2X6 WITH PLATES TOP AND BOTTOM MATCHING STUD WIDTH. INSULATE ALL BOX HEADERS.
7) DOUBLE TOP PLATES SHALL HAVE A MINIMUM LAP LENGTH OF 8 FEET. FASTEN WITH 2 ROWS OF 16D NAILS @ 6" UNLESS INDICATED OTHERWISE.
8) INSTALL WOOD SHEATHING PANELS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. STAGGER ALL END JOINTS 32" MINIMUM. FASTEN PANELS TO SUPPORTING FRAMING AND BLOCKING AS INDICATED. (SEE SHEAR WALL SCHEDULE AND FRAMING PLAN(S) FOR CRITICAL NAILING.)
9) NO PANELS LESS THAN 12 INCHES WIDE SHALL BE USED.
10) FASTENERS ALONG SHEAR PANEL EDGES SHALL NOT BE LESS THAN 3/8" FROM PANEL EDGE.
11) NAIL HEADS SHALL NOT PENETRATE BEYOND A FLUSH CONDITION WITH FACE OF SHEATHING.
12) NAILING REQUIREMENTS NOT SPECIFIED ON THE CONSTRUCTION DOCUMENTS SHALL BE IN ACCORDANCE WITH THE FASTENING SCHEDULE, TABLE 2304.9.1 IN THE 2000 IBC.

H. PRE-INSTALLATION CONFERENCES

1) SCHEDULING AND CONDUCTING PRE-INSTALLATION CONFERENCES ARE THE CONTRACTORS RESPONSIBILITY. MEETING ATTENDEES AND FORMAT ARE OUTLINED IN THE SPECIFICATIONS. COORDINATE TIME AND AGENDA ITEMS WITH THE ENGINEER. CONDUCT PRE-INSTALLATION CONFERENCES FOR THE FOLLOWING ACTIVITIES RELATED TO STRUCTURAL SYSTEMS.

CAST-IN-PLACE CONCRETE
ROUGH CARPENTRY (WOOD FRAMING)

I. SPECIAL INSPECTIONS

1) SPECIAL INSPECTIONS DESCRIBED BELOW WILL BE PERFORMED UNDER SEPARATE CONTRACT BY AGENCIES RETAINED BY THE PROJECT OWNER. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ENGINEER APPRISED OF WORK PROGRESS AS IT PERTAINS TO SPECIAL INSPECTIONS AND ENSURING THAT NO WORK REQUIRING SPECIAL INSPECTIONS IS CONCEALED BEFORE SPECIAL INSPECTIONS OCCUR. SEE PROJECT SPECIFICATIONS FOR OTHER INSPECTIONS AND MATERIALS TESTING REQUIREMENTS.

REINFORCING STEEL:	INSPECT BEFORE CONCRETE OR GROUT PLACEMENT. (INCLUDES SLABS-ON-GRADE AND ELEVATED SLABS)
REINFORCED CONCRETE:	CONTINUOUS INSPECTION DURING CONCRETE PLACEMENT EXCEPT PERIODIC INSPECTION FOR SLABS-ON-GRADE AND ELEVATED SLABS. (INCLUDES VERIFICATION OF PROPER MIX DESIGN AND CURING METHODS)
ANCHOR RODS:	INSPECT ALL BEFORE CONCRETE PLACEMENT.
ADHEBIVE ANCHORS:	PERIODIC INSPECTION DURING INSTALLATION.
STRUCTURAL STEEL:	PERIODIC INSPECTION DURING OR AFTER INSTALLATION.
WELDING:	PERIODIC INSPECTION OF ALL WELDS. (INCLUDES STRUCTURAL STEEL, STEEL JOIST AND DECK, HEADED ANCHOR STUDS, STAIRS & RAILING)

J. ABBREVIATIONS LIST - (SOME OF THE LISTED ABBREVIATIONS MAY NOT APPEAR ON THE DRAWINGS)

ANC	ANCHOR
ALT	ALTERNATE
BLDG	BUILDING
BRG	BEARING
BTWN	BETWEEN
CSJT	CONSTRUCTION JOINT
CNJT	CONTRACTION JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONN	CONNECTION / CONNECTOR
CONT	CONTINUE / CONTINUOUS
DBA	DEFORMED BAR ANCHOR
EXP	EXPANSION
HAS	HEADED ANCHOR STUD / SHEAR STUDS
HORZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION (TUBE STEEL)
ISJT	ISOLATION JOINT
LONG	LONGITUDINAL
LF	LINEAL FOOT
REINF	REINFORCEMENT / REINFORCING
PROJ	PROJECTION
REQ	REQUIRED
SPA	SPACE / SPACES
SIM	SIMILAR
STR	STIRRUP
STIFF	STIFFENER
THK	THICK / THICKNESS
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL

K. DEFERRED SUBMITTALS

DOCUMENTATION, SUCH AS DETAIL DRAWINGS AND CALCULATIONS, FOR DEFERRED ITEMS WILL BE REVIEWED BY THE ENGINEER WHEN AVAILABLE AND FORWARDED TO THE BUILDING OFFICAL.

1) PRE-ENGINEERED WOOD TRUSSES

L. MISCELLANEOUS

1) REFERENCE CIVIL DRAWINGS FOR BUILDING LOCATION AND ORIENTATION ON THE SITE. DRAWING ELEVATION REFERENCE 100'-0" = 777' CIVIL DATUM.
2) DETAIL MARKS ANNOTATED ON PLANS ARE INTENDED TO INDICATE SPECIFIC CONFIGURATION(S) AND INFORMATION - FOR PLAN CLARITY, EVERY LOCATION WHERE A SPECIFIC DETAIL MAY APPLY IS NOT ANNOTATED. CONTACT THE ENGINEER IF CLARIFICATION IS NEEDED.
3) COORDINATE OPENINGS AND EMBEDDED ITEMS IN CONCRETE AND MASONRY WORK WITH ALL TRADES.
4) NOTIFY THE ENGINEER OF ANY DISCREPANCIES DISCOVERED WITH OTHER TRADES.
5) CONSTRUCTION LOADS SHALL NOT BE GREATER THAN THE DESIGN LOADS INDICATED IN SECTION B.1 UNLESS REVIEWED AND APPROVED BY THE ENGINEER.
6) EQUIPMENT OPENINGS AND PENETRATIONS INDICATED ARE FOR REFERENCE ONLY. COORDINATE EXACT LOCATIONS, DIMENSIONS AND DETAILS WITH EQUIPMENT MANUFACTURERS AND TRADES.
7) TEMPORARILY BRACE THE STRUCTURE TO RESIST ALL LOADS OR COMBINATIONS OF LOADS UNTIL ALL PERMANENT ELEMENTS ARE IN PLACE AND ALL CONNECTIONS ARE COMPLETE AS SHOWN.

REVISIONS.

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit
AS-BUILTS

DRAWN BY: BML
CHECKED BY: SMB
DATE: 9-1-04
CTA #: MAUS
CADD FILE: MAUS8001
DIR: K:\MAUS\

CTA
ARCHITECTS
ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

STRUCTURAL GENERAL NOTES

SHEET
S001 OF 12

SHEAR WALL SCHEDULE

WALL TYPE	SHEATHING TYPE & THICKNESS	LOCATION	BLOCKED (ALL JOINTS)	MIN. BLOCKING SIZE	MIN. STUD SIZE	NAILING		HOLD-DOWN (EACH END)	ANCHOR AT PLATES (WHERE NOT SPECIFICALLY DETAILED OTHERWISE) (7" MIN EMBEDMENT FOR FOR ANCHOR BOLTS)	POSTS REQ'D AT SHEAR WALL ENDS	REMARKS
						PANEL EDGES	INTERMEDIATE				
S1-A	PLYWOOD/OSB ½"	1-SIDE	NO		2X	8d @ 6"	8d @ 12"	SEE NOTE #5 BELOW	½"Φ ANC BOLT @ 32" (16d @ 4" AT FLOORS)	SEE PLAN	
S1-B	PLYWOOD/OSB ½"	1-SIDE	NO		2X	8d @ 4"	8d @ 12"	SEE NOTE #5 BELOW	½"Φ ANC BOLT @ 32" (16d @ 4" AT FLOORS)	SEE PLAN	--
S1-C	PLYWOOD/OSB ½"	1-SIDE	YES		2X	8d @ 4"	8d @ 12"	SEE NOTE #5 BELOW	½"Φ ANC BOLT @ 16" (2 ROWS-16d @ 4" AT FLOOR)	4X MIN	--
S1-D	PLYWOOD/OSB ½"	2-SIDE	YES		2X	8d @ 4"	8d @ 12"	NOTE #6 APPLIES	½"Φ ANC BOLT @ 12" (2 ROWS-16d @ 3" STAGGERED AT FLOOR)	4X MIN	--
S1-E	PLYWOOD/OSB ½"	2-SIDE	YES		2X	8d @ 3"	8d @ 10"	NOTE #6 APPLIES	⅝"Φ ANC BOLT @ 12" (2 ROWS-16d @ 2" STAGGERED AT FLOOR)	SEE PLAN	--
S1-F	PLYWOOD/OSB ½"	2-SIDE	YES		2X	10d @ 2"	10d @ 10"	NOTE #6 APPLIES	⅝"Φ ANC BOLT @ 9"	SEE PLAN	OFFSET JOINTS IN PLYWOOD AT BOTH FACES OF WALL.

NOTES:

1) ALL EXTERIOR WALLS SHALL BE SHEATHED W/ ½" SHEATHING ONE SIDE, BLOCKED AT JOINTS, 8d @ 6" AT ALL PANEL EDGES & 12" AT INTERMEDIATE SUPPORTS, UNLESS INDICATED OTHERWISE. SEE DETAILS FOR BASE PLATE ANCHORAGE.

2) ALL HORIZONTAL & VERTICAL PANEL JOINTS, MUST BE OFFSET FROM OPPOSITE SIDE FOR ALL SHEAR WALLS RECEIVING SHEATHING ON BOTH SIDES.

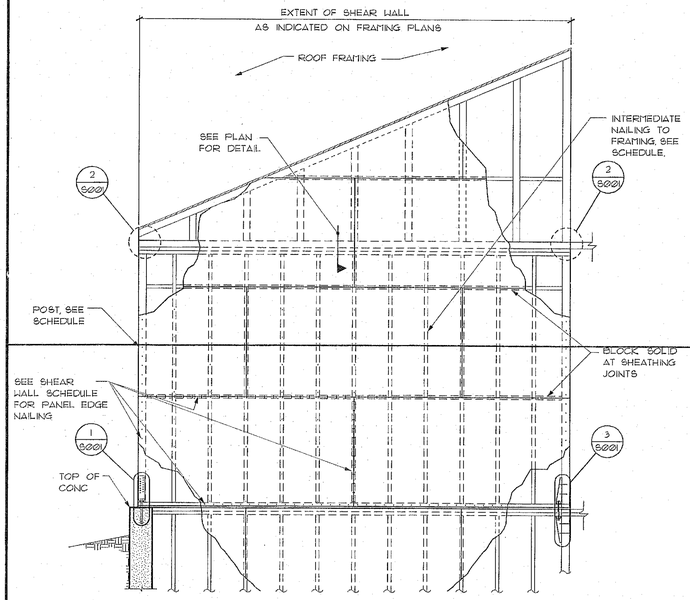
3) EXPANSION ANCHORS ARE NOT ACCEPTABLE FOR USE AT HOLD-DOWNS AT CONCRETE INTERFACE. HOLD-DOWN ANCHORS SHALL BE POST-INSTALLED ADHESIVE ANCHORS (HILTI HIT-RE 500 OR EQUIVALENT) OR CAST IN PLACE ANC. BOLTS. IF POST-INSTALLED ANCHORS ARE USED, CONFIRM THAT REINFORCING STEEL WILL NOT CONFLICT W/ DRILLING FOR PROPER HOLD-DOWN ANCHOR BOLT PLACEMENT.

4) NAIL HEADS SHALL NOT PENETRATE BEYOND A FLUSH CONDITION WITH FACE OF SHEATHING.

5) SEE HOLD-DOWN ANCHOR SCHEDULE, BELOW, AND SHEET S1.01 & S1.02 FOR POSITION, TYPE AND NUMBER REQUIRED AT EACH SHEAR WALL END LOCATION.

6) FOR WALL INDICATED, USE 4X MEMBERS AT ALL PANEL EDGE LOCATIONS.

7) AT CONTRACTORS OPTION, REPLACE 4X MEMBERS AT PANEL EDGES WITH 2-2X'S GLUED AND NAILED TOGETHER WITH (2) 12d @ 6" ALONG LENGTH.



HOLD-DOWN ANCHOR SCHEDULE

MARK	TYPE
A	HD5A
B	HD8A
C	HD10A
D	HD20A

MINIMUM FASTENERS REQUIREMENTS

UNLESS SHOWN OTHERWISE ON PLANS OR DETAILS

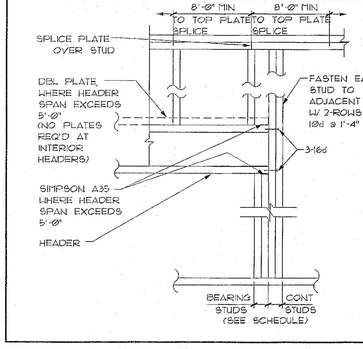
CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3-8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2-8d
3. 1"X6" (25MMX152MM) SUBFLOOR TO EACH JOIST, FACE NAIL	2-8d
4. WIDER THAN 1"X6" (25MMX152MM) SUBFLOOR TO EACH JOIST, FACE NAIL	3-8d
5. 2" (51MM) SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d @ 16" (406MM) OC
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3-16d PER 16" (406MM)
7. TOP PLATE TO STUD, END NAIL	2-16d
8. STUD TO SOLE PLATE	4-8d, TOENAIL OR 3-16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d @ 24" (610MM) OC
10. DOUBLE TOP PLATES, TYPICAL FACE NAIL	16d @ 16" (406MM) OC
DOUBLE TOP PLATES, LAP SPLICE	30-16d
11. BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOENAIL	10d @ 4" I SIDE OR 2-10d @ 8" BOTH SIDES
12. RIM JOIST TO TOP PLATE, TOENAIL	10d @ 4" (152MM) OC
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
14. CONTINUOUS HEADER, TWO PIECES	16d @ 16" (406MM) OC ALONG EA EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	4-8d
16. CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
19. TRUSS TO PLATE, TOENAIL	4-10d
20. 1" (25MMX203MM) BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
21. 1X8" (25MMX203MM) SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2-8d
22. WIDER THAN 1"X8" (25MMX203MM) SHEATHING TO EACH BEARING, FACE NAIL	3-8d
23. BUILT-UP CORNER STUDS	16d @ 24" (610MM) OC
24. BUILT-UP GIRDER AND BEAMS	20d @ 32" (813MM) OC AT TOP AND BOTTOM AND STAGGERED, AT ENDS AND AT EA SPLICE
25. 2" (51MM) PLANKS	2-16d AT EACH BEARING
26. WOOD STRUCTURAL PANELS AND PARTICLEBOARD. [2]	
SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING) (1-INCH = 25.4 MM)	
½" AND LESS	8d[3]
17/32" - ¾"	10d[3]
⅞" - 1"	10d[3]
1⅛" - 1¼"	10d[4] OR 8d[5]
COMBINATION SUBFLOOR-UNDERLAYMENT (TO FRAMING) (1-INCH = 25.4 MM)	
¾" AND LESS	6d[5]
⅞" - 1"	8d[5]
1⅛" - 1¼"	10d[4] OR 8d[5]
27. PANEL SIDING (TO FRAMING):	
½" (13 MM) OR LESS	6d[6]
⅝" (16 MM)	8d[6]
28. FIBERBOARD SHEATHING: [7]	
½" (13 MM)	NO.11GA[8]
	6d[9]
	NO.16GA[8]
25/32" (20 MM)	NO.11GA[8]
	8d[9]
	NO.16GA[8]
29. INTERIOR PANELING	
¼"	4d[10]
⅜"	6d[11]

1. COMMON OR BOX NAILS MAY BE USED EXCEPT WHEREVER OTHERWISE STATED.
2. NAILS SPACED AT 6 INCHES (152MM) ON CENTER AT EDGES, 12 INCHES (305MM) AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES (152MM) AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES (1219MM) OR MORE, FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2315.3 AND 2235.4. NAILS FOR WALL SHEATHING MAY BE COMMON, BOX OR CASING.
3. COMMON OR DEFORMED SHANK.
4. COMMON.
5. DEFORMED SHANK.
6. CORROSION-RESISTANT SIDING OR CASING NAILS CONFORMING TO THE REQUIREMENTS OF SECTION 2304.3.
7. FASTENERS SPACED 3 INCHES (76MM) ON CENTER AT EXTERIOR EDGES AND 6 INCHES (152 MM) ON CENTER AT INTERMEDIATE SUPPORTS.
8. CORROSION-RESISTANT ROOFING NAILS WITH ⅜ INCH DIAMETER (11MM) HEAD AND 1½ INCH (38MM) LENGTH FOR ½ INCH (13MM) SHEATHING AND 1¾ INCH (44MM) LENGTH FOR 25/32 INCH (20MM) SHEATHING CONFORMING TOT HE REQUIREMENTS OF SECTION 2304.3
9. CORROSION-RESISTANT STAPLES WITH NOMINAL ⅞ INCH (11MM) CROWN AND 1½ INCH (29MM) LENGTH FOR ½ INCH (13MM) SHEATHING AND 1½ INCH (38MM) LENGTH FOR 25/32 INCH (20MM) SHEATHING CONFORMING TO THE REQUIREMENTS OF SECTION 2304.3.
10. PANEL SUPPORTS AT 16 INCHES (406MM) 20 INCHES (508MM) IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED). CASING OR FINISH NAILS SPACED 6 INCHES (152M) ON PANEL EDGES, 12 INCHES (305MM) AT INTERMEDIATE SUPPORTS.
11. PANEL SUPPORTS AT 24 INCHES (610MM), CASING OR FINISH NAILS SPACED 6 INCHES (152MM) ON PANEL EDGES, 12 INCHES (305MM) AT INTERMEDIATE SUPPORTS.

HEADER SCHEDULE

MARK	HEADER	# OF BEARING STUDS (UNLESS INDICATED OTHERWISE) ON PLAN	# OF CONT STUDS REQ'D (FDN PLATE TO DBL TOP PLATE) (UNLESS INDICATED OTHERWISE ON PLAN.)
H1	3-2X8	1	1
H2	3-2X8	2	1- INT WALLS 2- EXT WALLS
H3	3-2X12	2	1- INT WALLS 3- EXT WALLS
H4	2-1.VL1 3/4X9½	2	1- INT WALLS 2- EXT WALLS
H5	2-1.VL1 3/4X9½	2	3
H6	3-1.VL1 3/4X9½	2	2
H7	3-1.VL1 3/4X9½	2	4
H7	3-1.VL1 3/4X9½	4	1

NOTES:
1) BLOCKING SHALL OCCUR AT 4'-0", MAX FOR ALL BEARING STUDS.



WALL SCHEDULE

MARK	STUD TYPE	STUD SIZE	STUD SPACING	REMARKS
W1	DOUGLAS FIR	2X4	1'-4"	UNLESS LARGER REQ'D BY ARCHITECTURAL
W2	DOUGLAS FIR	2X6	1'-4"	-
W3	DOUGLAS FIR	2X4	8"	STAGGER STUDS
W4	DOUGLAS FIR	2X6	1'-0"	-
	-	-	-	-
	-	-	-	-

REINFORCING BAR LAP SCHEDULE

REBAR SIZE	CONCRETE		MASONRY
	VERT & HORZ	TOP BAR	
#3		1'-7"	
#4		2'-1"	
#5		2'-7"	
#6		3'-1"	
#7		4'-6"	
#8		5'-2"	
#9		5'-10"	
#10		6'-7"	

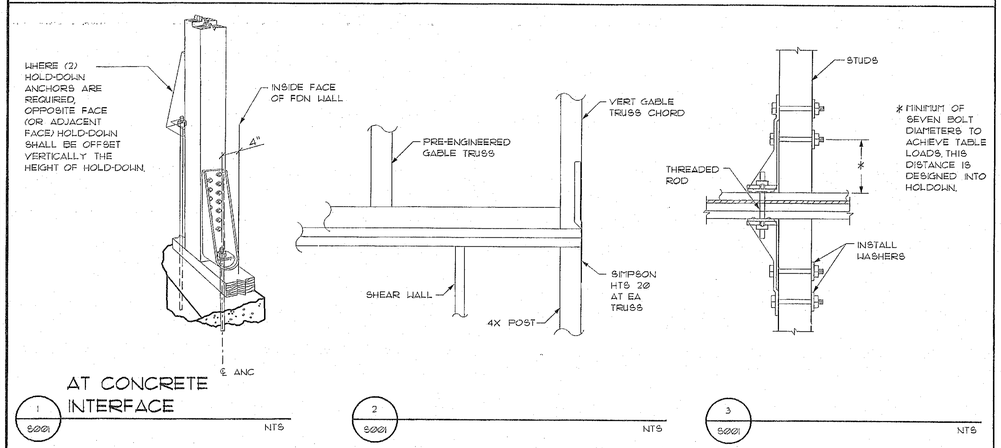
REINFORCING NOTES:

1) CONCRETE LAP LENGTHS ARE CLASS 'B' BASED ON F'C=4000 PSI WITH COVER REQUIREMENTS INDICATED AND BAR SPACING AT LEAST THREE BAR DIAMETERS.

2) TOP BAR LAPS ARE HORIZONTAL LAPS WHERE MORE THAN 12" OF FRESH CONCRETE IS PLACED BELOW THE BARS.

3) TOP BAR LAP LENGTHS MAY BE USED AT ALL LOCATIONS IN CONCRETE AT THE CONTRACTORS DISCRETION.

4) MASONRY LAP LENGTHS ARE BASED ON F'M=1500 PSI WITH COVER REQUIREMENTS AND SPACING INDICATED.



REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

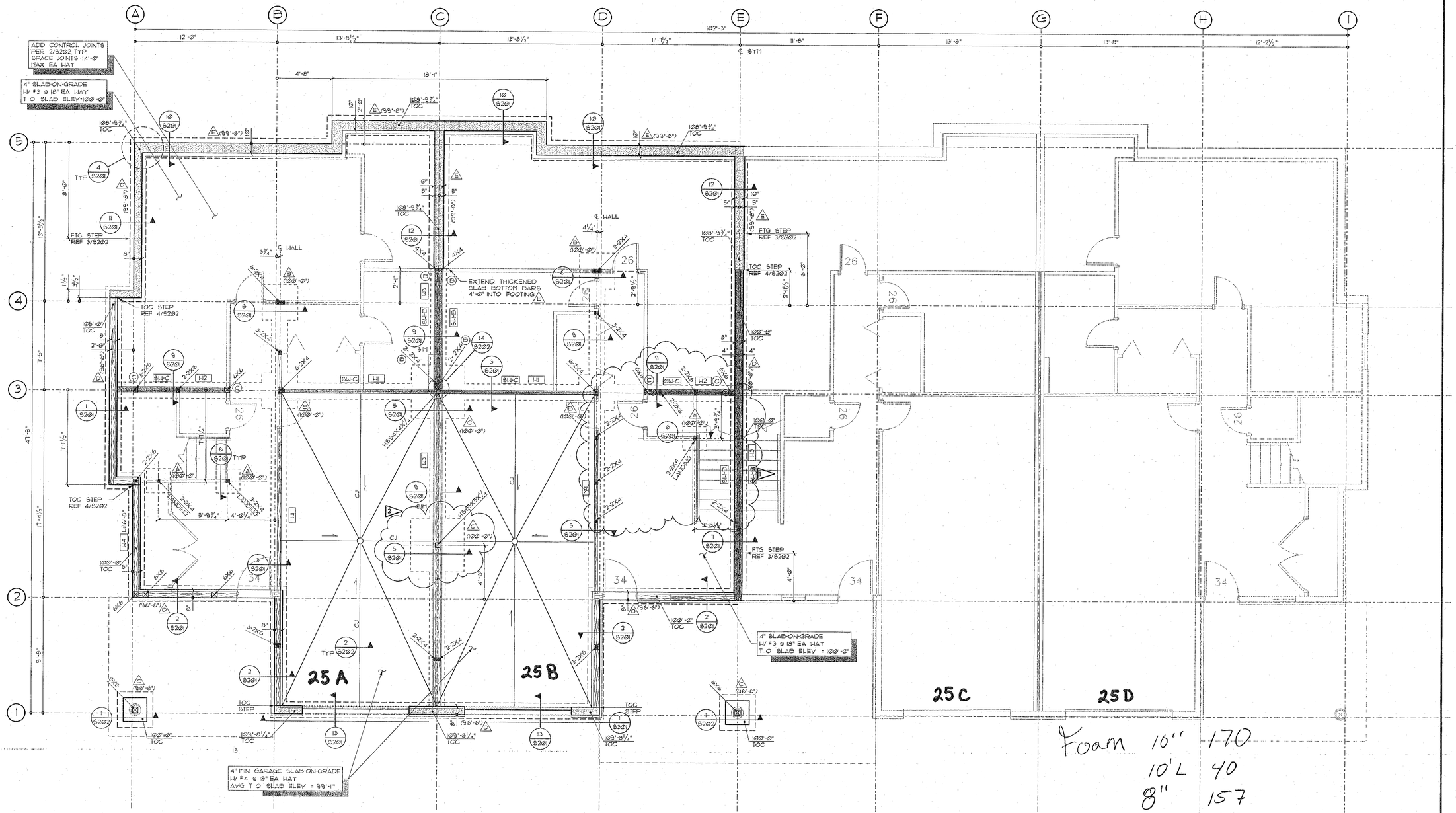
AS-BUILTS

DRAWN BY: BML
CHECKED BY: SMB
DATE: 9-1-04
CTA #: MAUS
CADD FILE: MAUS8002
DIR: K:\MAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

SCHEDULES

SHEET
S002 OF **12**



FOOTING SCHEDULE

MARK	SIZE(W X L X THK)	REINFORCING	REMARKS
A	2'-0"X2'-0"X1'-0"	2- #5 EA WAY	-
B	3'-0"X3'-0"X1'-0"	3- #5 EA WAY	-
C	4'-6"X4'-6"X1'-0"	4- #5 EA WAY	-
D	1'-4"XCONTX1'-0"	3- #5 CONT	STRIP FOOTING
E	1'-8"XCONTX1'-0"	3- #5 CONT	STRIP FOOTING
F	3'-0"XCONTX1'-0"	3- #5 CONT LONG #5 @ 24" TRANS	STRIP FOOTING

1/S101 UPHILL UNIT FOUNDATION PLAN

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

STRUCTURAL LEGEND

- XXX'-X" / TOC — INDICATES TOP OF CONCRETE WALL ELEVATION.
- HX — INDICATES WALL TYPE, SEE SCHEDULE.
- X — INDICATES FOOTING, SEE SCHEDULE.
- (XXX'-X") — INDICATES TOP OF FOOTING ELEVATION.
- HSSXXXX1/4 — INDICATES HOLLOW STRUCTURAL STEEL COLUMN.
- INDICATES LOAD BEARING WALL.
- SH-X — INDICATES SHEAR WALL, SEE SCHEDULE SHEET S002.
  X = INDICATES WALL TYPE.
  ⊙ = INDICATES HOLD-DOWN LOCATION.
  (A) = INDICATES HOLD-DOWN TYPE, SCHEDULE SHEET S002.

STRUCTURAL PLAN NOTES

1. ALL EXTERIOR WALLS TO BE TYPE W2, TYP.UNO.
2. REFER TO DETAIL 4/S02 FOR STEP IN TOP OF CONCRETE FOUNDATION WALL.
3. REFER TO DETAIL 3/S202 FOR STEP IN TOP OF FOOTING
4. BUILDING IS SYMETRICAL ABOUT GRID (E).
5. NOTE TO CONTRACTOR:
   ALL FOOTINGS AND SLABS-ON-GRADE;
   A 1'-0" OVER DIG AND IMPORTED STRUCTURAL FILL MIGHT BE REQUIRED.
   REFERENCE DETAIL 5/S202 FOR EXCAVATION REQUIREMENTS.

Foam 10" 170
10'L 40
8" 157
8"L 38

REVISIONS:
1 STAIR REVISION 5.28.04
2 FRAMING REVISION 9.1.04

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

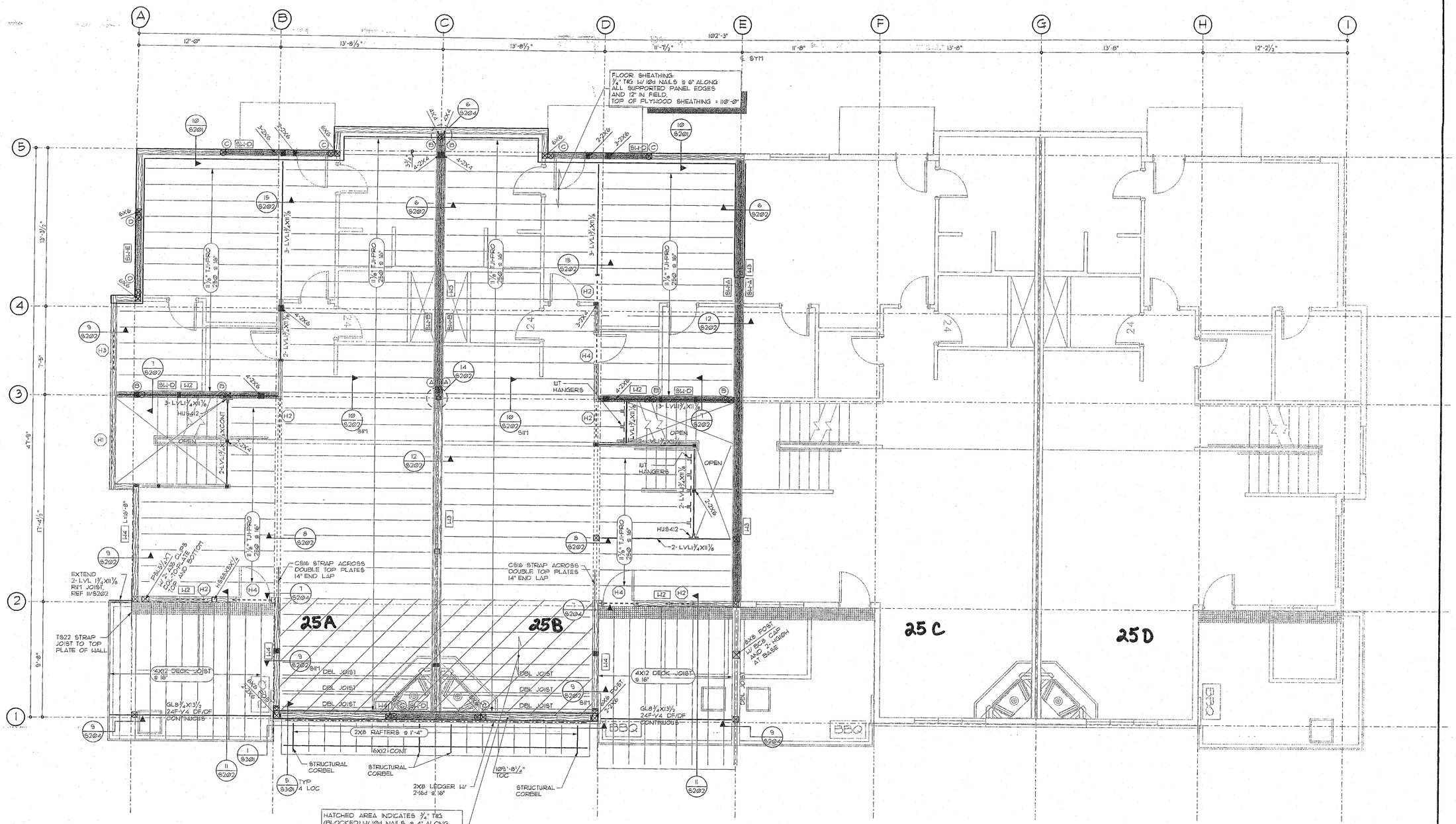
AS-BUILTS

DRAWN BY: SHD
CHECKED BY: SMB
DATE: 9-1-04
CTA # MAUS
CADD FILE: MAUPS101
DIR: KAMAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS ● MISSOULA
BOISE ● GREAT FALLS
HELENA ● KALISPELL
SPOKANE

UPHILL UNIT FOUNDATION PLAN

SHEET
S101 OF



UPHILL UNIT 2ND FLOOR FRAMING PLAN

1 / S102 — SCALE: ¼"=1'-0"

STRUCTURAL LEGEND

- [W2] INDICATES WALL TYPE, SEE SCHEDULE.
- HSS8X8X¼ INDICATES HOLLOW STRUCTURAL STEEL COLUMN.
- INDICATES LOAD BEARING WALL.
- [SW-X] INDICATES SHEAR WALL SEE SCHEDULE SHEET S002. X = INDICATES WALL TYPE. ⊗ = INDICATES HOLD-DOWN LOCATION. (A) = INDICATES HOLD-DOWN TYPE, SCHEDULE SHEET S002.
- INDICATES SIMPSON HANGER (OR EQUIV).

STRUCTURAL PLAN NOTES

1. ALL EXTERIOR WALLS ARE TYPE [W2], TYP-UNO.
2. BEARING WALLS SHOWN INDICATE WALLS ABOVE FRAMING.
3. HEADERS SHOWN CORRELATE TO WINDOWS AND DOOR OPENINGS BELOW FRAMING.
4. ALL HEADERS ARE (H1) TYP-UNO.
5. BLOCK SOLID WEBS OF DOUBLE JOISTS AT HANGERS, TYP.
6. PROVIDE 1¼"X11⅞" TIMBERSTRAND RIM AT ALL EXTERIOR WALLS, TYP-UNO.
7. ALL JOIST HANGERS TO BE SIMPSON LUS1 (OR EQUIV), TYP-UNO.
8. BUILDING IS SYMETRICAL ABOUT GRID (E).

REVISIONS:
1. 4-24-03
2. STAIR REVISION 5/20/03
3. 9-1-04

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

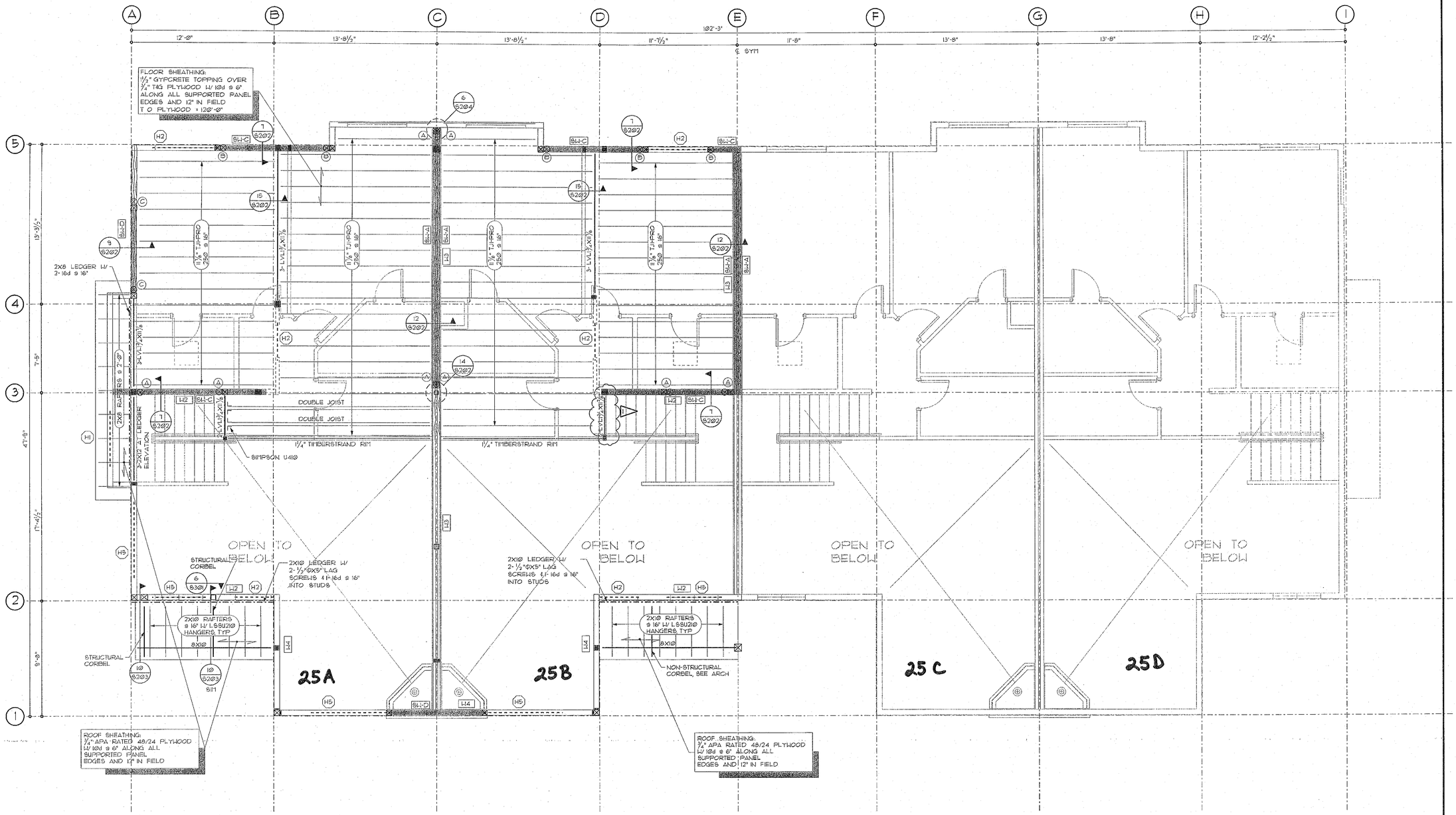
AS-BUILTS

DRAWN BY: SHD
CHECKED BY: BMB
DATE: 1-20-05
CTA #: MAUS
CADD FILE: MAUPS102
DIR: K:\MAUS\

CTA ARCHITECTS ENGINEERS
BILLINGS ● MISSOULA
BOISE ● GREAT FALLS
HELENA ● KALISPELL
SPOKANE

UPHILL UNIT 2ND FLOOR FRAMING PLAN

SHEET S102 OF



UPHILL UNIT 3RD FLOOR/ LOWER ROOF FRAMING PLAN

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

STRUCTURAL LEGEND

- [WX] INDICATES WALL TYPE, SEE SCHEDULE.
- HSSXXXX INDICATES HOLLOW STRUCTURAL STEEL COLUMN.
- INDICATES LOAD BEARING WALL.
- INDICATES SHEAR WALL.
- SW-X INDICATES SHEAR WALL, SEE SCHEDULE SHEET S002.
  X = INDICATES WALL TYPE.
  ⊗ = INDICATES HOLD-DOWN LOCATION.
  (A) = INDICATES HOLD-DOWN TYPE, SCHEDULE SHEET S002.
- INDICATES LEDGER.
- INDICATES SIMPSON HANGER (OR EQUIV).

STRUCTURAL PLAN NOTES

1. ALL EXTERIOR WALLS ARE TYPE [W2], TYP-UNO.
2. PROVIDE 1¼"X11⅞" TIMBERSTRAND RIM AT ALL FLOOR EDGES, TYPICAL - UNO.
3. ALL STAIR LANDING BEAMS TO BE 2-2X12 (NOT SHOWN ON PLANS)
4. ALL JOIST HANGERS TO BE SIMPSON IUTI (OR EQUIV), TYP-UNO.
5. BUILDING IS SYMETRICAL ABOUT GRID (E).

REVISIONS:
1 STAIR REVISION 5/20/03

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

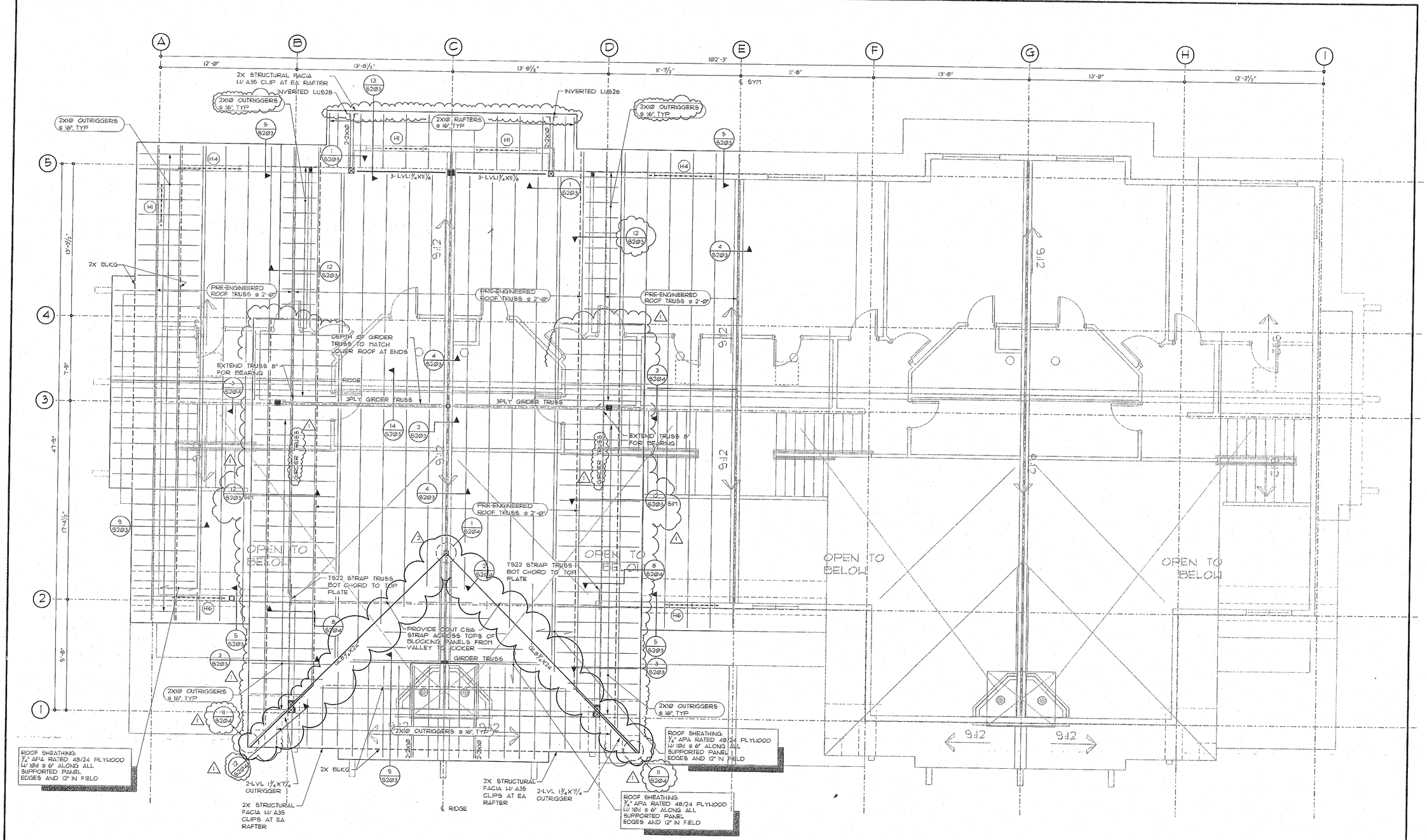
AS-BUILTS

DRAWN BY: SHD
CHECKED BY: SMB
DATE: 9-1-04
CTA #: MAU6
CADD FILE: MAUPS103
DIR: K:\MAU6\

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 3RD FLOOR/ LOWER ROOF FRAMING PLAN

SHEET
S103 OF _____



1 UPHILL UNIT
S104 UPPER ROOF FRAMING PLAN

SCALE: ¼"=1'-0"

STRUCTURAL LEGEND

- (HX) INDICATES HEADER, SEE SCHEDULE.
- INDICATES DECK SPAN DIRECTION.
- INDICATES LOAD BEARING WALL.
- INDICATES SHEAR WALL.
- INDICATES 2-2X10 BLOCKING

STRUCTURAL PLAN NOTES

1. BUILDING IS SYMETRICAL ABOUT GRID E.

REVISIONS:
1 4-24-03
2 9-13-04

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

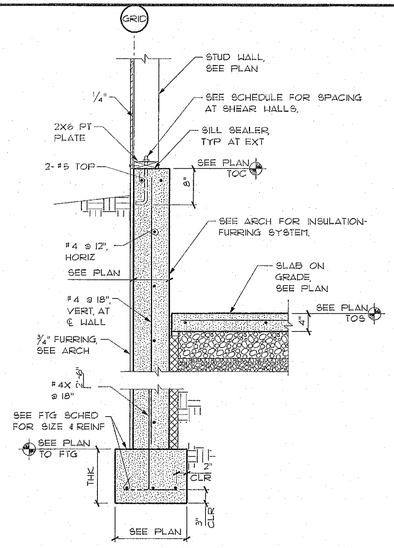
AS-BUILTS

DRAWN BY: SHD
CHECKED BY: SMB
DATE: 9-1-04
CTA # MAUS
CADD FILE: MAUPS104
DIR: KAMAUS\

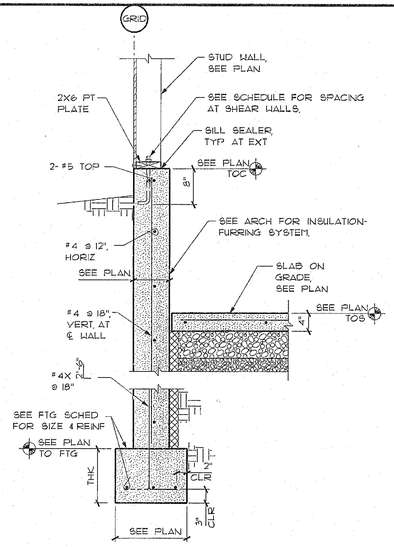
CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT
UPPER ROOF
FRAMING
PLAN

SHEET
S104 OF



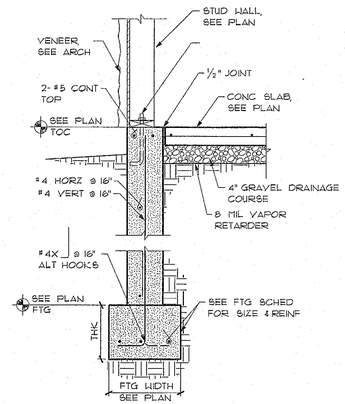
TYP @ WOOD SIDING



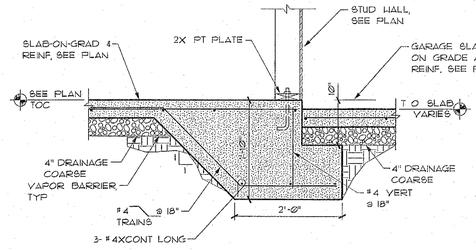
TYP @ STONE

1 / S201 — SIDE - GARDEN LEVEL

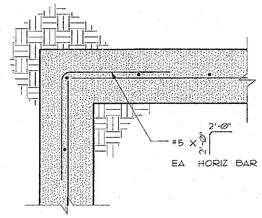
REF SI01 — 3/4"=1'-0"



2 / S201 — REF SI01 — 3/4"=1'-0"



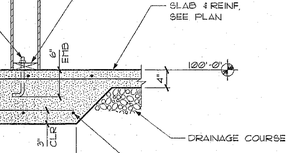
3 / S201 — REF SI01 — 3/4"=1'-0"



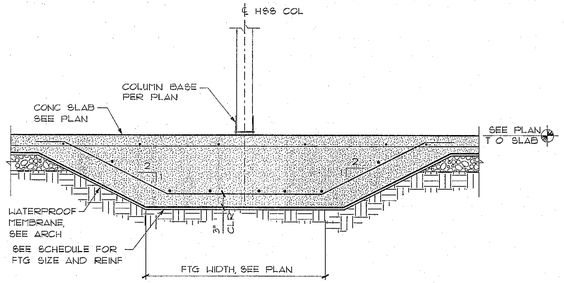
PLAN VIEW

4 / S201 — TYP CORNER REINF SINGLE MAT

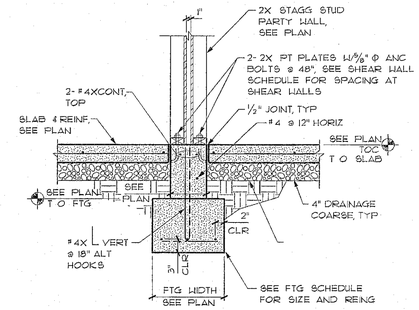
REF SI01 — 3/4"=1'-0"



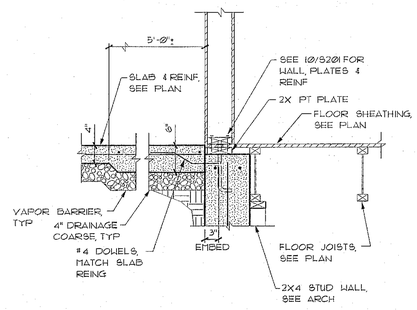
5 / S201 — REF SI01 — 3/4"=1'-0"



6 / S201 — REF SI01 — 3/4"=1'-0"

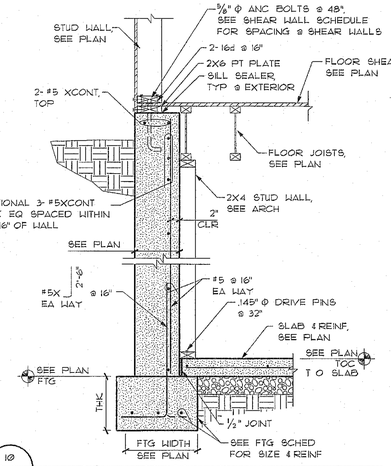


7 / S201 — REF SI01 — 3/4"=1'-0"

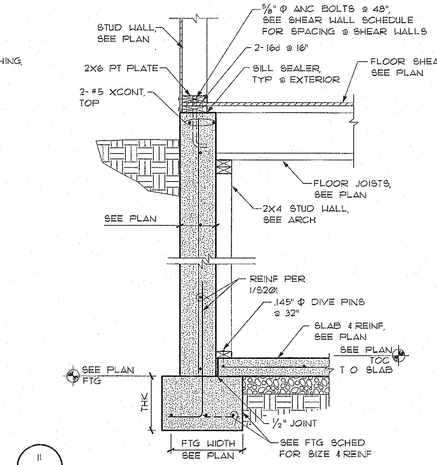


8 / S201 — REF SI01 — 3/4"=1'-0"

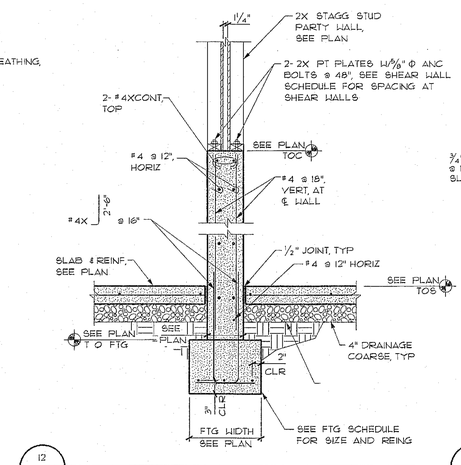
9 / S201 — REF SI01 — 3/4"=1'-0"



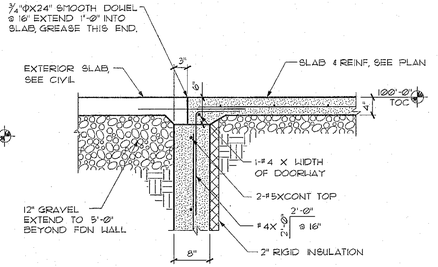
10 / S201 — REF SI01 — 3/4"=1'-0"



11 / S201 — REF SI01 — 3/4"=1'-0"



12 / S201 — REF SI01 — 3/4"=1'-0"



13 / S201 — REF SI01 — 3/4"=1'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

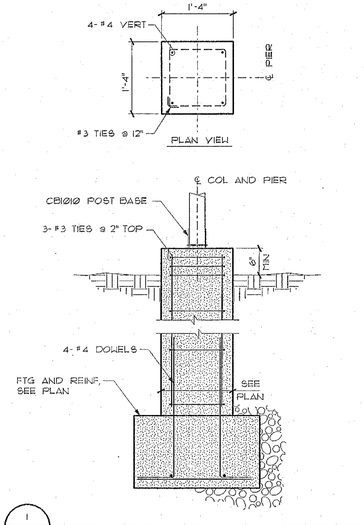
AS-BUILTS

DRAWN BY: BML
CHECKED BY: SMB
DATE: 9-1-04
CTA #: MAU8
CADD FILE: MAU8S201
DIR: K:\MAU8\

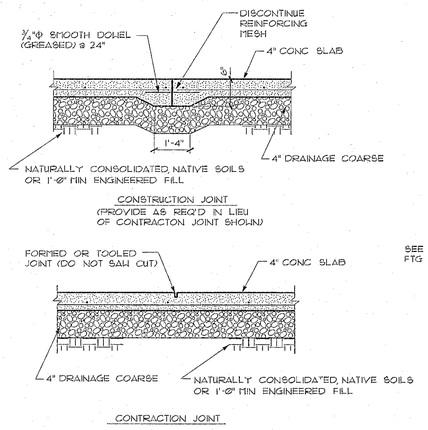
CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

STRUCTURAL DETAILS

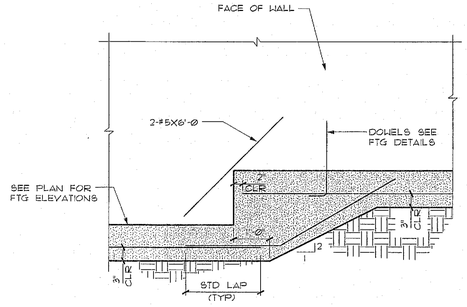
SHEET
S201 OF 12



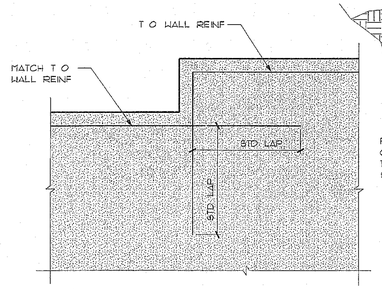
1 / S202 — REF S1Ø1 — 3/4"=1'-Ø"



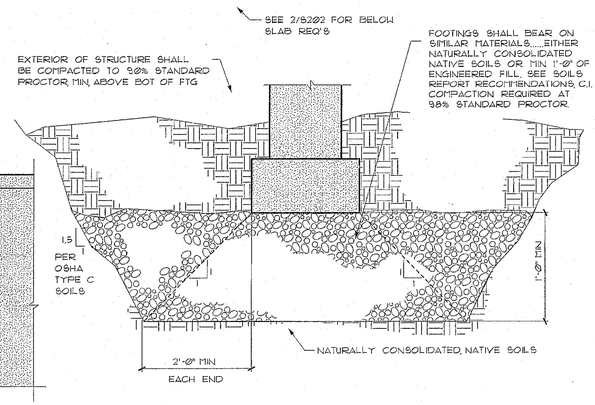
2 / S202 — JOINT DETAILS — REF S1Ø1 — 3/4"=1'-Ø"



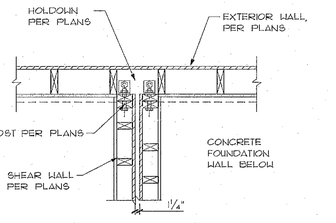
3 / S202 — FOOTING STEP DETAIL — REF S1Ø1 — 3/4"=1'-Ø"



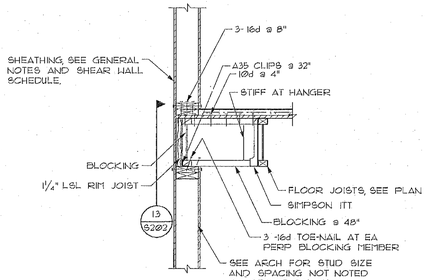
4 / S202 — TOP OF WALL STEP DETAIL — REF S1Ø1 — 3/4"=1'-Ø"



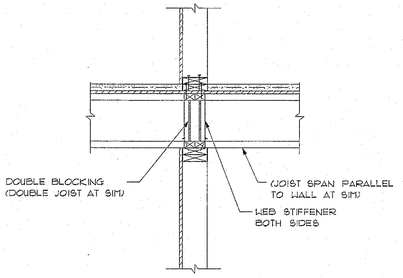
5 / S202 — ENGINEERED SUB-GRADE SECTION REQUIRED BELOW ALL FOOTINGS — REF S1Ø1 — NTS



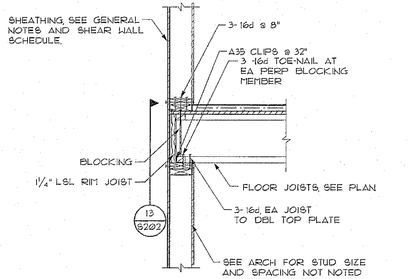
6 / S202 — REF S1Ø1 & S1Ø2 — 3/4"=1'-Ø"



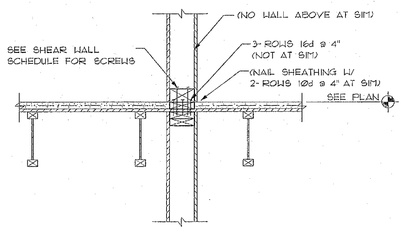
7 / S202 — REF S1Ø2 — 3/4"=1'-Ø"



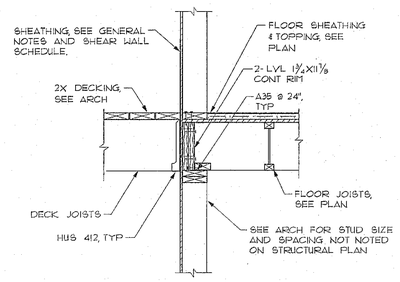
8 / S202 — REF S1.1 — 3/4"=1'-Ø"



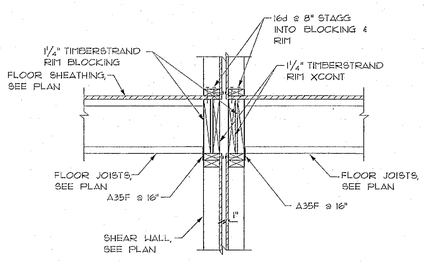
9 / S202 — REF S1.1 — 3/4"=1'-Ø"



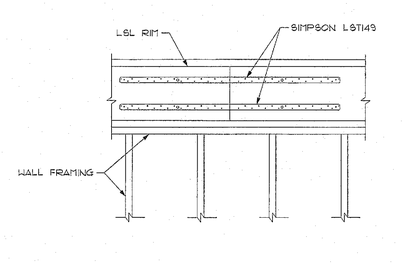
10 / S202 — REF S1.1 — 3/4"=1'-Ø"



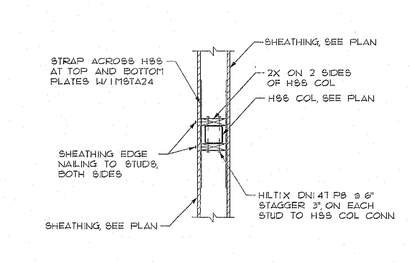
11 / S202 — REF S1.1 — 3/4"=1'-Ø"



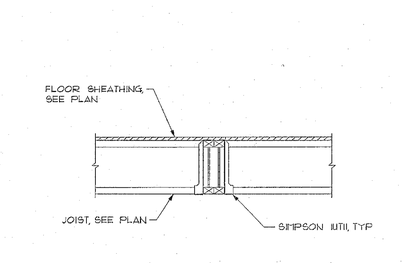
12 / S202 — REF S1Ø2 & S1Ø3 — 3/4"=1'-Ø"



13 / S202 — TYPICAL RIM BOARD SPLICE — REF S1Ø2 — 3/4"=1'-Ø"



14 / S202 — REF S1Ø2 — 3/4"=1'-Ø"



15 / S202 — REF S1Ø2 — 3/4"=1'-Ø"

20'-Ø" 10'-Ø" 5'-Ø" Ø 5'-Ø"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

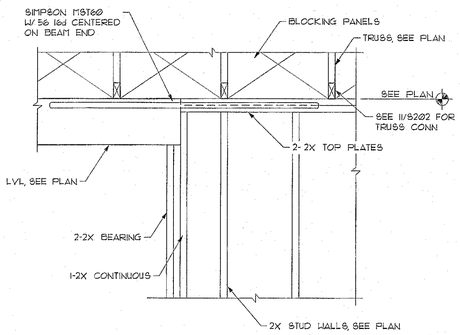
AS-BUILTS

DRAWN BY: BML
CHECKED BY: SHB
DATE: 9-1-04
CTA # MAUS
CADD FILE: MAUS\S202
DIR: K:\MAUS\

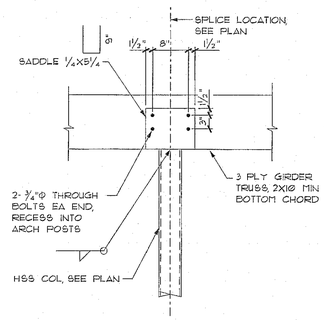
CTA ARCHITECTS ENGINEERS
BILLINGS ● MISSOULA
BOISE ● GREAT FALLS
HELENA ● KALISPELL
SPOKANE

STRUCTURAL DETAILS

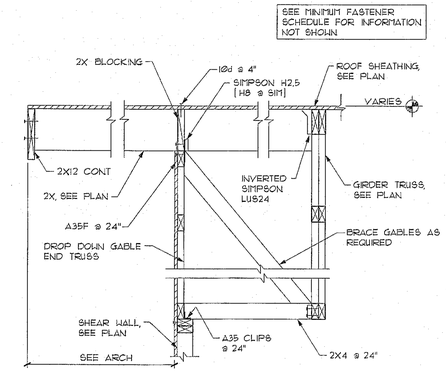
SHEET
S202 OF 12



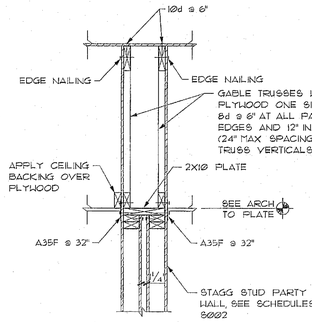
1 / S203 — REF S103 — 3/4"=1'-0"



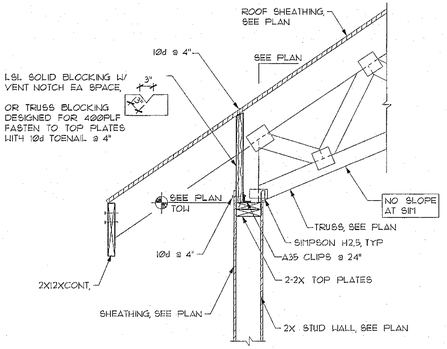
2 / S203 — REF S103 — 3/4"=1'-0"



3 / S203 — REF S103 — 3/4"=1'-0"



4 / S203 — REF S103 — 3/4"=1'-0"



5 / S203 — REF S103 — 3/4"=1'-0"

6 / S203 — REF S103 — 3/4"=1'-0"

7 / S203 — REF S103 — 3/4"=1'-0"

8 / S203 — REF S103 — 3/4"=1'-0"

9 / S203

10 / S203 — REF S103 — 3/4"=1'-0"

11 / S203 DIAPHRAGM RIDGE VENT

REF S103 — 1 1/2"=1'-0"

12 / S203 — REF S103 — 3/4"=1'-0"

13 / S203 — REF S103 — 3/4"=1'-0"

14 / S203 — REF S103 — 3/4"=1'-0"

14 / S203 — REF S103 — 3/4"=1'-0"

20'-0" 10'-0" 5'-0" 0 5'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

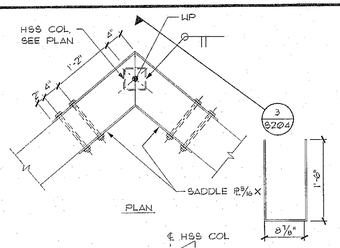
AS-BUILTS

DRAWN BY: EML
CHECKED BY: SMB
DATE: 9-1-04
CTA #: MAUS
CADD FILE: MAUS\S203
DIR: K:\MAUS\

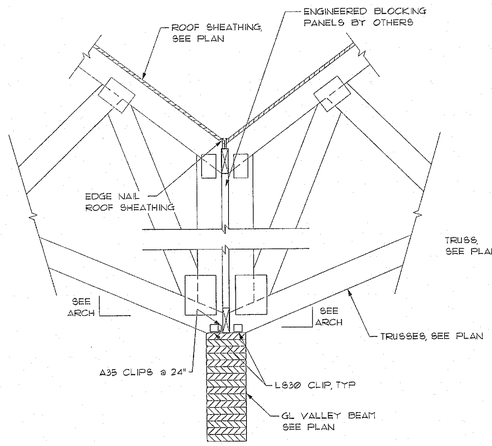
CTA ARCHITECTS ENGINEERS
BILLINGS ◆ MISSOULA
BOISE ◆ GREAT FALLS
HELENA ◆ KALISPELL
SPOKANE

STRUCTURAL DETAILS

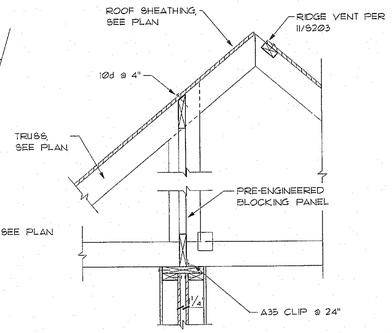
SHEET
S203 OF 12



1 / S204 REF S103 — 3/4"=1'-0"



2 / S204 REF S103 — 3/4"=1'-0"



3 / S204 REF S103 — 3/4"=1'-0"

4 / S204 REF S103 — 3/4"=1'-0"

5 / S204 REF S103 — 3/4"=1'-0"

6 / S204 REF S103 — 3/4"=1'-0"

7 / S204 REF S103 — 3/4"=1'-0"

8 / S204 REF S103 — 3/4"=1'-0"

11 / S204 — 1 1/2"=1'-0"

10 / S204 REF S103 — 3/4"=1'-0"

11 / S204 REF S103 — 3/4"=1'-0"

12 / S204 REF S103 — 3/4"=1'-0"

13 / S204 REF S103 — 3/4"=1'-0"

14 / S204 REF S103 — 3/4"=1'-0"

14 / S204 REF S103 — 3/4"=1'-0"

5'-0" 0 5'-0" 10'-0" 20'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

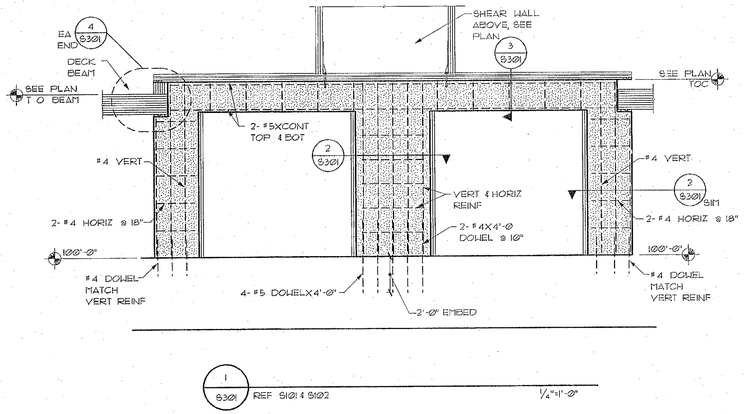
AS-BUILTS

DRAWN BY: BHL
CHECKED BY: BMB
DATE: 9-1-04
CTA # MAU6
CADD FILE: MAU6S204
DIR: KAMAU9\

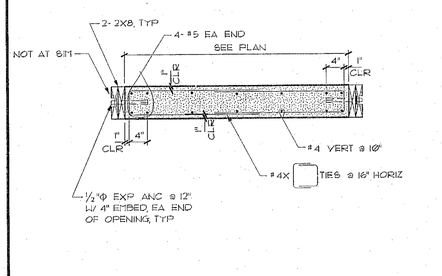
CTA
ARCHITECTS
ENGINEERS
BILLINGS ● MISSOULA
BOISE ● GREAT FALLS
HELENA ● KALISPELL
SPOKANE

STRUCTURAL DETAILS

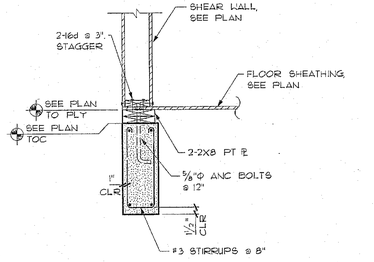
SHEET
S204 OF **12**



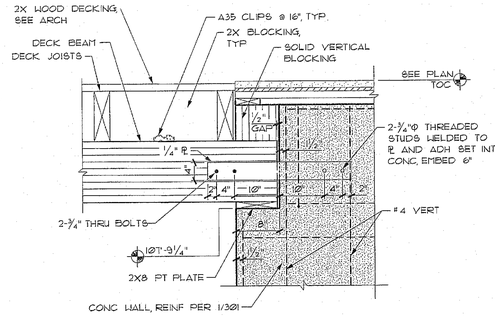
1 / S301 REF S101 & S102 1/4"=1'-0"



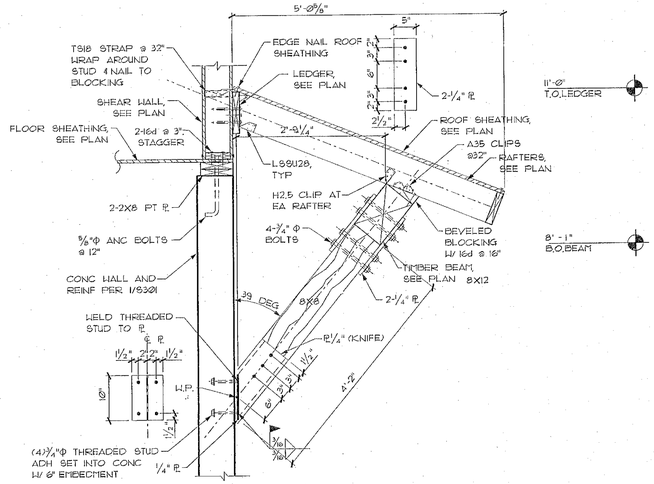
2 / S301 REF S301 3/4"=1'-0"



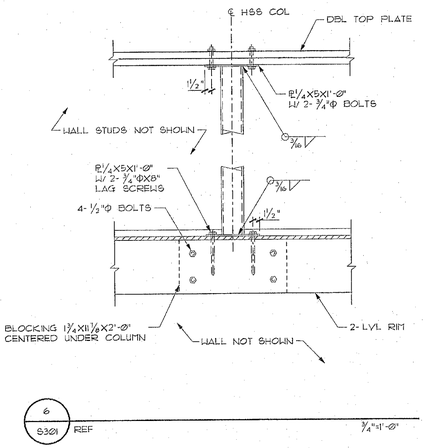
3 / S301 REF S301 3/4"=1'-0"



4 / S301 REF S301 3/4"=1'-0"



5 / S301 REF S103 3/4"=1'-0"



6 / S301 REF 3/4"=1'-0"

20'-0"
10'-0"
5'-0"
0
5'-0"

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

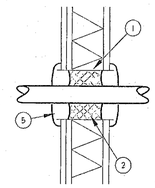
AS-BUILTS

DRAWN BY: BHL
CHECKED BY: SHB
DATE: 9-1-04
CTA #: MAWS
CADD FILE: MAUPS301
DIR: KAMAWS\

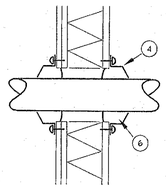
CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

ELEVATION & DETAILS

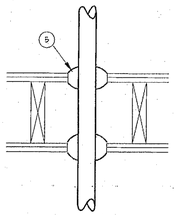
SHEET
S301 OF **11**



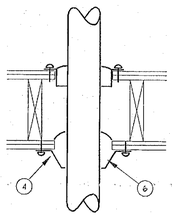
FRAME WALL
METAL PIPE OR CONDUIT



FRAME WALL
PVC PIPE



FRAMED FLOOR
METAL PIPE OR CONDUIT



FRAMED FLOOR
PVC PIPE

KEY

(1) WIRE MESH OR SHEET METAL SLEEVE THRU OPENING.

(2) MINERAL WOOL BACKING MATERIAL.

(3) NOT USED

(4) METAL-TABBED RETAINING COLLAR AROUND OPENING AND FOLDED IN AFTER CAULKING IS APPLIED.

(5) GUN OR TROWEL SPECIFIED FIRE STOPPING COMPOUND ALL AROUND OPENING ON BOTH SIDE (METACAULK 950).

(6) GUN OR TROWEL SPECIFIED FIRE STOPPING COMPOUND (INTUMESCENT FOR PVC PIPING) ALL AROUND OPENING ON BOTH SIDES.

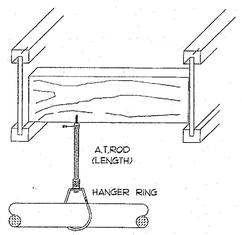
NOTE:

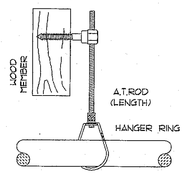
FIRESTOPPING MATERIALS AND SYSTEM SHALL BE "METACAULK" PRODUCTS AS MANUFACTURED BY RECTOR SEAL CORP., P.O. BOX 14689, HOUSTON, TX. 77221, PHONE 800-231-3345, (713) 928-6423.

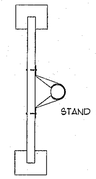
1 / FI01 FIRE STOPPING PIPE PENETRATION DETAILS

NO SCALE

MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET											
NOM. SIZE	THRU 3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	
STEEL	N.A.	12	12	12	12	15	15	15	15	15	
CPVC	N.A.	5	6	7	8	9	10	-	-	-	







2 / FI01 HANGER DETAILS

NO SCALE

FIRE SPRINKLER NOTES

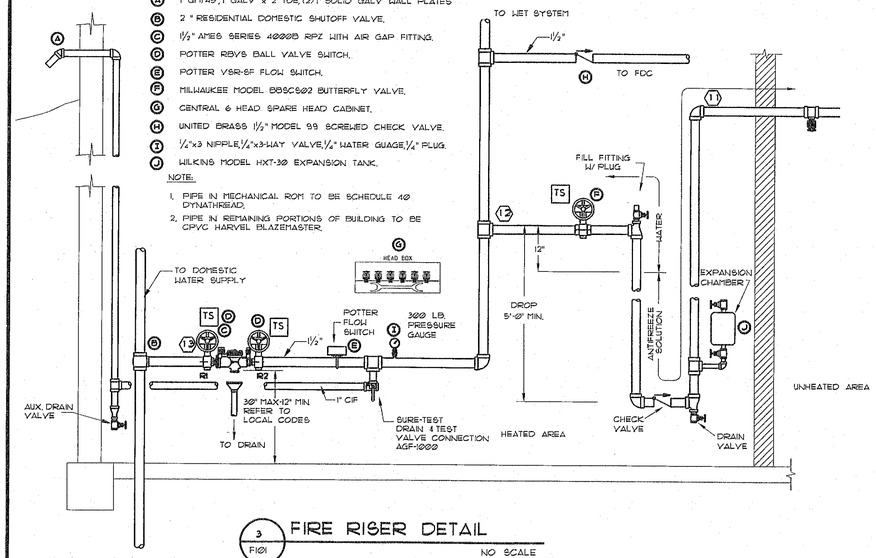
1. FIRE PROTECTION SYSTEM TO COMPLY WITH N.F.P.A. 13R 1999, AND ALL APPLICABLE STATE AND LOCAL CODES.
2. ADHERE TO AND OBTAIN ALL PERMITS, LICENSES AND GOVERNMENT REQUIREMENTS.
3. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE DEPARTMENT.
4. CUTTING OF STRUCTURAL AND/OR ARCHITECTURAL MEMBERS TO BE DONE ONLY WITH THE WRITTEN APPROVAL OF THE APPROVING ENGINEER.
5. WATER SUPPLY FOR THIS STRUCTURE IS A MUNICIPAL WATER SOURCE. NO FLOW TESTS HAVE BEEN TAKEN AT THIS POINT.
6. PIPE ROUTING SHOWN SHALL BE USED AND ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION, COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED. VERIFY EXISTING STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS AND AVOID ANY/ALL OBSTRUCTIONS OR INTERFERENCES WITH FIRE PROTECTION PIPE ROUTING.
7. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, FLOORS PER I/FS01.
8. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS.
9. PROVIDE STOCK OF EXTRA SPRINKLERS IN ACCORDANCE WITH N.F.P.A. 13 3-16.1.
10. METHODS OF HANGING PIPES, HEADS AND BRANCHES SHALL BE IN ACCORDANCE WITH N.F.P.A. 13D AND 2/FS01.
11. AUTOMATIC SPRINKLER TEMPERATURE RATINGS OF FUSIBLE ELEMENTS TO BE IN ACCORDANCE WITH N.F.P.A. 13D.
12. ALL VALVES FOR FIRE SERVICE SHALL BE LISTED BY THE UNDERWRITERS LABORATORIES, INC. AND THE FACTORY MUTUAL LABORATORIES. VALVES SHALL BE FACTORY MARKED "UL" AND "FM", 175 WORKING PRESSURE.
13. ALL VALVES ON THE FIRE PROTECTION SYSTEM TO BE ELECTRICALLY SUPERVISED. TYPE AND EXACT LOCATION OF FLOW, PRESSURE AND SUPERVISORY SWITCHES SHALL BE ACCOMPLISHED BETWEEN THE DIFFERENT RESPONSIBLE TRADES.
14. ALL WIRING SHALL BE ACCOMPLISHED UNDER THE ELECTRICAL CONTRACT. COORDINATE AL ELECTRICAL ITEMS WITH ELECTRICAL CONTRACTOR AND INSURE PROPER COORDINATION.
15. PROVIDE A PERMANENTLY ATTACHED NAME TAG STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
16. ALL SPRINKLER HEADS MOUNTED IN CEILING SHALL BE LOCATED A MAXIMUM OF 4" AWAY FROM ANY WALL, CEILING HEIGHT CHANGES OR ANY OTHER VERTICAL INTERSECTING SURFACE.

RISER LEGEND

- (A) 1" GPM 45°, 1" GALV x 2 TOE, (2) 1" SOLID GALV WALL PLATES.
- (B) 2 " RESIDENTIAL DOMESTIC SHUTOFF VALVE.
- (C) 1½" AMES SERIES 4000B RPZ WITH AIR GAP FITTING.
- (D) POTTER RBVS BALL VALVE SWITCH.
- (E) POTTER VSR-SF FLOW SWITCH.
- (F) MILWAUKEE MODEL BBSC602 BUTTERFLY VALVE.
- (G) CENTRAL 6 HEAD SPARE HEAD CABINET.
- (H) UNITED BRASS 1½" MODEL 99 SCREWED CHECK VALVE.
- (I) ¼"x3 NIPPLE, ¼"x3-WAY VALVE, ¼" WATER GUAGE, ¼" PLUG.
- (J) WILKINS MODEL HXT-30 EXPANSION TANK.

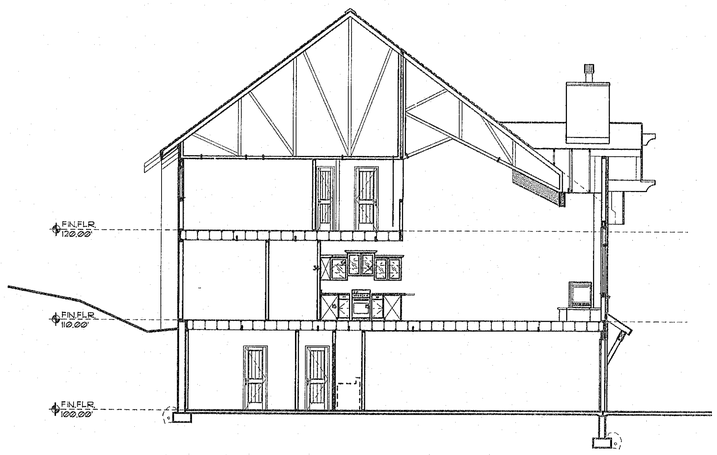
NOTE:

1. PIPE IN MECHANICAL ROM TO BE SCHEDULE 40 DYNATHREAD.
2. PIPE IN REMAINING PORTIONS OF BUILDING TO BE CPVC HARVEL BLAZEMASTER.



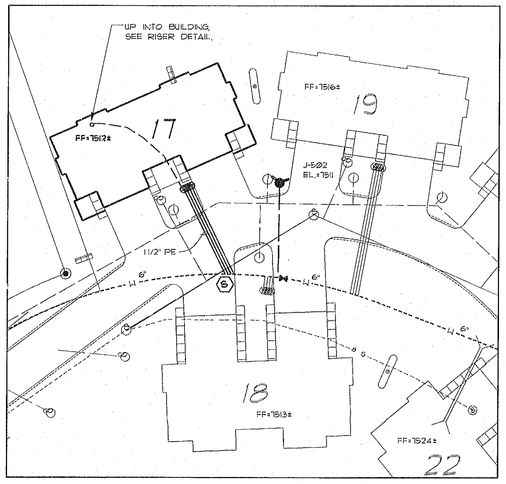
3 / FI01 FIRE RISER DETAIL

NO SCALE



4 / FI01 BUILDING SECTION

SCALE: 1/8" = 1'-0"



5 / FI01 SITE PLAN

NO SCALE

Security
FIRE PROTECTION, INC
1101 Chestnut St.
Helena, MT 59601
PHN (406) 443-3531
FAX (406) 443-3578
DESIGN • INSTALLATIONS • INSPECTIONS • COMMERCIAL • RESIDENTIAL
ACTIVE LICENSE #72FPC CONTRACTOR'S REG. #10024

REVISIONS.

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

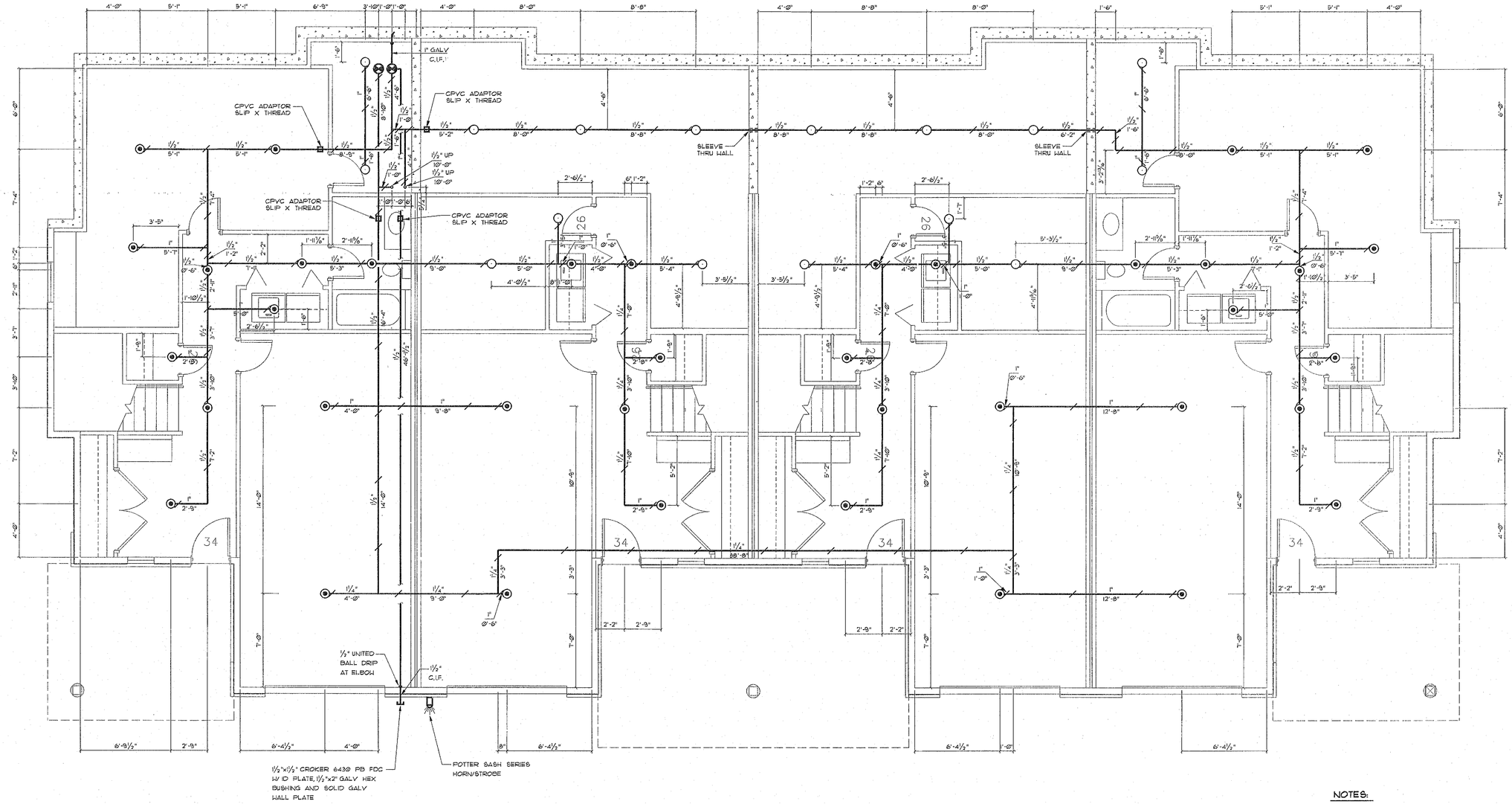
CONSTRUCTION DOCUMENTS

DRAWN BY: H.S.
CHECKED BY: D.K.
DATE: 3-16-04
CTA # SECURITY
CADD FILE: AGUPFS01
DIR: YAGLOW-UP

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

DETAILS

SHEET F101 OF 4



1ST FLOOR FIRE SPRINKLER PLAN

1 / F301

SCALE: 1/8" = 1'-0"

NOTES:

1. ALL DROPS SHALL BE 1' UNLESS OTHERWISE NOTED.
2. ALL PIPING SHALL BE 9'-6" ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED.
3. OWNER TO SUPPLY KNOX BOX AND ACCESS KEYS.

HYDRAULIC DESIGN DATA

HAZARD CLASSIFICATION:	13R	SYSTEM AREA:	11572 SQ. FT.
HYDRAULIC DESIGN DATA:	4 SPRINKLERS	196	SQ. FT./HD MAX
AREA OF APPLICATION:	426 SQ. FT.	HOSE ALLOWANCE:	Ø GPM

TOTAL SYSTEM REQUIREMENTS

59 GPM AT 83 PSI CONNECTION AT MAIN

WATER SUPPLY INFORMATION

STATIC PRESSURE:	91 PSI		
RESIDUAL PRESSURE:	72 PSI WITH	300	GPM FLOWING
HYDRANT LOCATION/NUMBER:	J-502	BY: SIMULATION	DATE: 3/06/04

SPRINKLER HEADS

SYMBOL	TYPE	MANUFACTURER	MODEL	TYPE	FINISH	CANOPY	K-FACTOR	TEMP.	QUANTITY
◉	RESIDENTIAL CONCEALED PENDENT	CENTRAL	LFII	SSP	BRASS	WHT CNCLD	4.2	155°	38
○	STORAGE UPRIGHT INTERMEDIATE	CENTRAL	TY-FRB	SSU	BRASS	–	5.6	155°	16
◎	RESIDENTIAL RECESSED PENDENT	CENTRAL	LFII	SSP	BRASS	–	4.9	155°	0

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ACTIVE LICENSE #72FPC CONTRACTOR'S REG. #10024

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

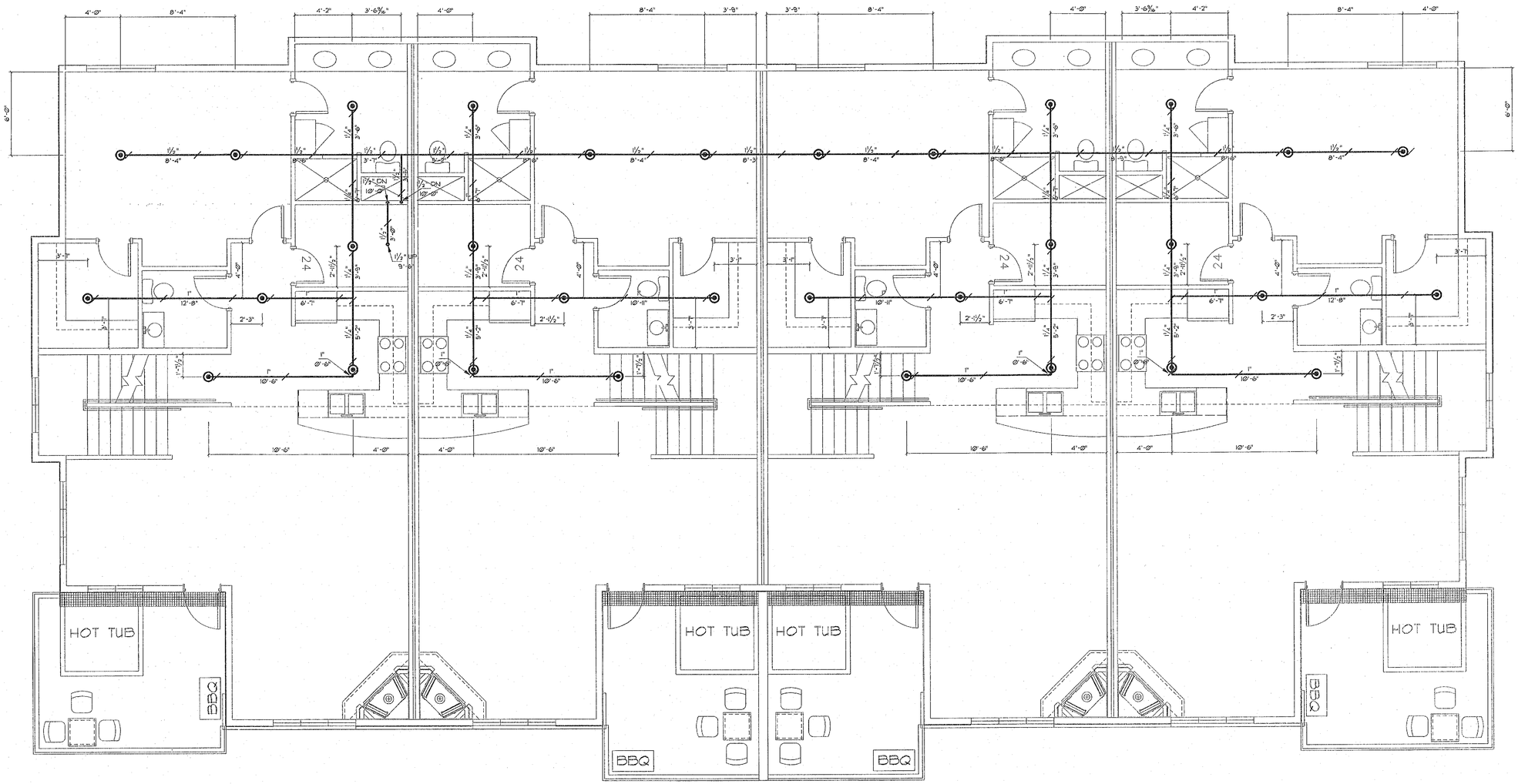
CONSTRUCTION DOCUMENTS

DRAWN BY: W.B.
CHECKED BY: D.K.
DATE: 3-16-04
CTA #: SECURITY
CADD FILE: AGUPF301
DIR: V:\AGLOW\UP

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT 1ST FLOOR

SHEET F301 OF 4



1 / F301 — 2ND FLOOR FIRE SPRINKLER PLAN

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

NOTES:

1. ALL DROPS SHALL BE 1" UNLESS OTHERWISE NOTED.
2. ALL PIPING SHALL BE 9'-6" ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED.

SPRINKLER HEADS

SYMBOL	TYPE	MANUFACTURER	MODEL	TYPE	FINISH	CANOPY	K-FACTOR	TEMP.	QUANTITY
◉	RESIDENTIAL CONCEALED PENDENT	CENTRAL	LFII	SSP	BRASS	WHT CNCLD	4.2	155°	32
○	STORAGE UPRIGHT INTERMEDIATE	CENTRAL	TY-FRB	SSU	BRASS	–	5.6	155°	0
◎	RESIDENTIAL RECESSED PENDENT	CENTRAL	LFII	SSP	BRASS	–	4.9	155°	0

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ACTIVE LICENSE #72FPC CONTRACTOR'S REG. #10024

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

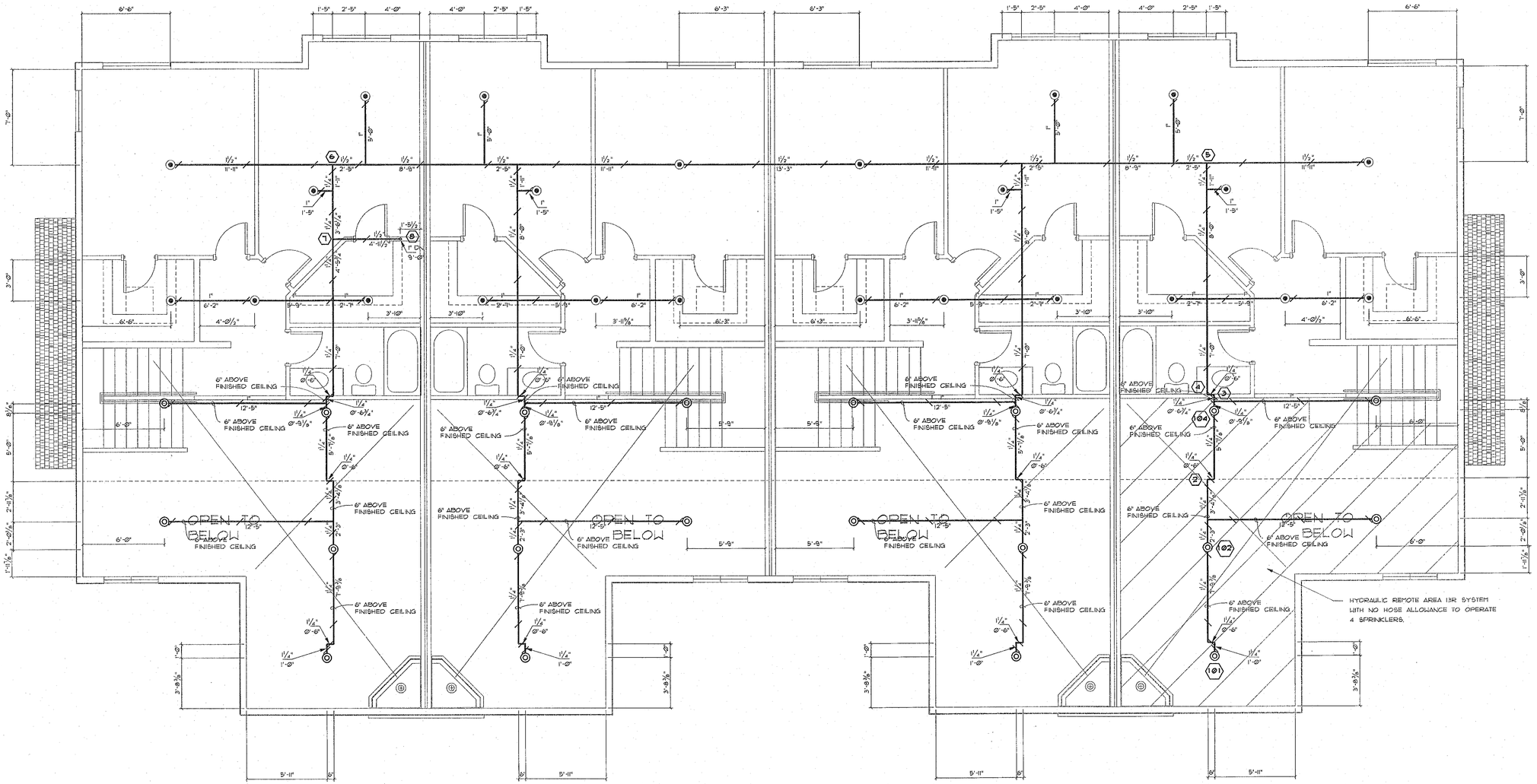
CONSTRUCTION DOCUMENTS

DRAWN BY: W.S.
CHECKED BY: D.K.
DATE: 3-18-04
CTA #: SECURITY
CADD FILE: AGUPF302
DIR: V:\AGL.OH\UP

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT
2ND FLOOR

SHEET F302 OF 4



3RD FLOOR
FIRE SPRINKLER PLAN

1 / F301

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

NOTES:

1. ALL DROPS SHALL BE 1' UNLESS OTHERWISE NOTED.
2. ALL PIPING SHALL BE 8'-6" ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED.

SPRINKLER HEADS

SYMBOL	TYPE	MANUFACTURER	MODEL	TYPE	FINISH	CANOPY	K-FACTOR	TEMP.	QUANTITY
◉	RESIDENTIAL CONCEALED PENDENT	CENTRAL	LFII	SSP	BRASS	WHT CNCLD	4.2	155°	24
○	STORAGE UPRIGHT INTERMEDIATE	CENTRAL	TY-FRB	SSU	BRASS	--	5.6	155°	0
◎	RESIDENTIAL RECESSED PENDENT	CENTRAL	LFII	SSP	BRASS	--	4.9	155°	20

Security FIRE PROTECTION, INC
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ACTIVE LICENSE #72FPC CONTRACTOR'S REG. #10024

REVISIONS:

ALPENGLOW at Big Sky
BIG SKY, MT
Uphill Unit

CONSTRUCTION DOCUMENTS

DRAWN BY: W.B.
CHECKED BY: D.K.
DATE: 3-16-04
CTA # SECURITY
CADD FILE: AGUPF303
DIR: V:\AGLOW-UP

CTA ARCHITECTS ENGINEERS
BILLINGS • MISSOULA
BOISE • GREAT FALLS
HELENA • KALISPELL
SPOKANE

UPHILL UNIT
3RD FLOOR

SHEET
F303 OF 4

Alpenglow FSS

FIRE SPRINKLER NOTES

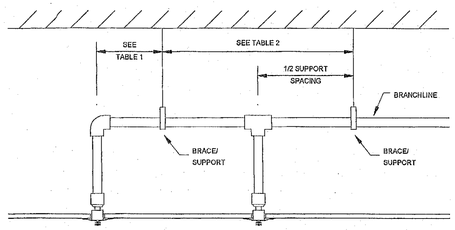
1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA 13R 1999, AND ALL APPLICABLE STATE AND LOCAL CODES.
2. NO INSTALLATION OF ANY PART OF THE SYSTEM DEPICTED IN THESE DRAWINGS SHALL OCCUR PRIOR TO ADHERING TO AND OBTAINING ALL PERMITS, LICENSES, GOVERNMENT REQUIREMENTS AND OWNER'S REPRESENTATIVE APPROVAL.
3. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE DEPARTMENT, AND OWNERS INSURANCE UNDERWITER.
4. CUTTING OF STRUCTURAL AND/OR ARCHITECTURAL MEMBERS TO BE DONE ONLY WITH THE WRITTEN APPROVAL OF THE APPROVING ENGINEER.
5. A COMPUTER SIMULATED FLOW TEST INDICATES 91 P.S.I. STATIC PRESSURE WITH A RESIDUAL PRESSURE OF 72 P.S.I. @ 300 G.P.M. ON 03/06/2004, BY CTA ARCHITECTS.
6. PIPE ROUTING SHOWN SHALL BE USED AND ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION, COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED. VERIFY EXISTING STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS AND AVOID ANY/ALL OBSTRUCTIONS OR INTERFERENCES WITH FIRE PROTECTION PIPE ROUTING.
7. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, FLOORS, ROOFS, ETC. PER 3/FP1.
8. ACCESS PANELS TO ALL VALVES ABOVE NON-ACCESSIBLE CEILINGS AND CHASES ARE BY THE GENERAL CONTRACTOR.
9. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL EXISTING/NEW DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS.
10. PROVIDE STOCK OF EXTRA SPRINKLERS IN ACCORDANCE WITH N.F.P.A. 13 3-16.7.
11. METHODS OF HANGING PIPES, HEADERS AND BRANCHES SHALL BE IN ACCORDANCE WITH N.F.P.A. 13, AND HANGER CHART 4/FP1.
12. AUTOMATIC SPRINKLER TEMPERATURE RATINGS OF FUSIBLE ELEMENTS TO BE IN ACCORDANCE WITH N.F.P.A. 13.
13. ALL VALVES ON THE FIRE PROTECTION SYSTEM TO BE ELECTRICALLY SUPERVISED. TYPE AND EXACT LOCATION OF FLOW, PRESSURE AND SUPERVISORY SWITCHES SHALL BE ACCOMPLISHED BETWEEN THE DIFFERENT RESPONSIBLE TRADES.
14. ALL WIRING SHALL BE ACCOMPLISHED UNDER THE ELECTRICAL CONTRACT. COORDINATE ALL ELECTRICAL ITEMS WITH ELECTRICAL CONTRACTOR AND INSURE PROPER COORDINATION.
15. PROVIDE A PERMANENTLY ATTACHED NAME TAG STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
16. SPRINKLERS SHALL COVER THE ENTIRE AREA OF THE ROOM INCLUDING ALCOVES. SPRAY SHALL NOT BE BLOCKED BY WALLS OR PARTITIONS.
17. ALL SPRINKLER HEADS MOUNTED IN CEILING SHALL BE LOCATED A MINIMUM OF 4" AWAY FROM ANY WALLS, CEILING HEIGHT CHANGES OR ANY OTHER VERTICAL INTERSECTING SURFACE.
18. IT IS THE INTENT OF THESE SHOP DRAWINGS TO PROVIDE AN ACCURATE CONCEPT FOR INSTALLATION PURPOSES. IT IS THE RESPONSIBILITY OF THIS FIRE SPRINKLER SUB-CONTRACTOR TO FIELD SURVEY THE SYSTEM SHOWN AND PROVIDE REVISIONS NECESSARY FOR A SMOOTH INSTALLATION. ADDITIONALLY, IT IS THE RESPONSIBILITY OF THE AWARDED FIRE SPRINKLER SUB-CONTRACTOR TO INSURE THE CODE COMPLIANCY OF THIS SYSTEM INSTALLATION. THIS DESIGNER WILL NOT BE HELD RESPONSIBLE FOR ANY FORSEEN, OR UNFORSEEN CONFLICTS. THESE CONFLICTS INCLUDE, BUT ARE NOT LIMITED TO, ACCURACY OF PIPE CUTS, OFFSETS, FITTINGS, VALVES, EQUIPMENT INSTALLED BY OTHERS, OR ANY OTHER ADDITION TO THIS SYSTEM REQUIRED BY CODE, OR LOCAL JURISDICTIONS.

TABLE 1
MAXIMUM SUPPORT SPACING DISTANCE
END LINE SPRINKLER HEAD DROP ELBOW

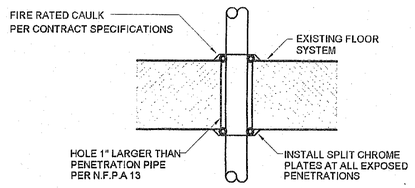
PIPE SIZE inches	SYSTEM PRESSURE < 100 psi	SYSTEM PRESSURE > 100 psi
3/4"	9'	6'
1"	12'	9'
1-1/4"	16'	12'
1-1/2"-3"	24'	12'

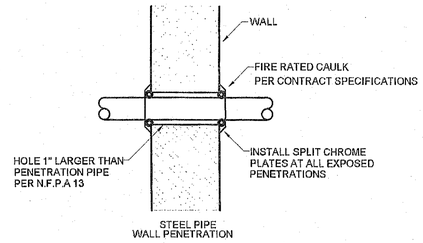
TABLE 2
MAXIMUM SUPPORT SPACING DISTANCE
INLINE SPRINKLER HEAD DROP TEE

PIPE SIZE inches	SYSTEM PRESSURE < 100 psi	SYSTEM PRESSURE > 100 psi
3/4"	4'	3'
1"	5'	4'
1-1/4"	6'	5'
1-1/2"-3"	7'	7'



4 FP1 **HANGER SPACING CHART**
NO SCALE



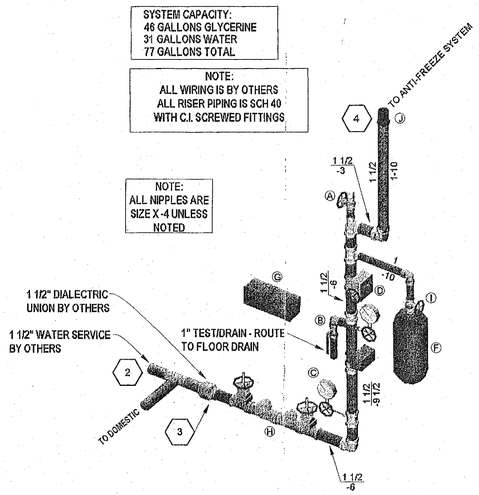


3 FP1 **FIRE STOP DETAIL**
NO SCALE

SYSTEM CAPACITY:
46 GALLONS GLYCERINE
31 GALLONS WATER
77 GALLONS TOTAL

NOTE:
ALL WIRING IS BY OTHERS
ALL RISER PIPING IS SCH 40
WITH C.I. SCREWED FITTINGS

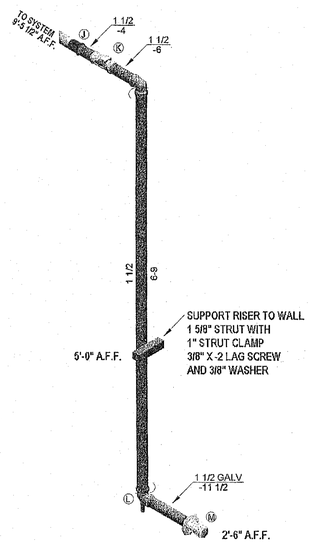
NOTE:
ALL NIPPLES ARE SIZE X-4 UNLESS NOTED



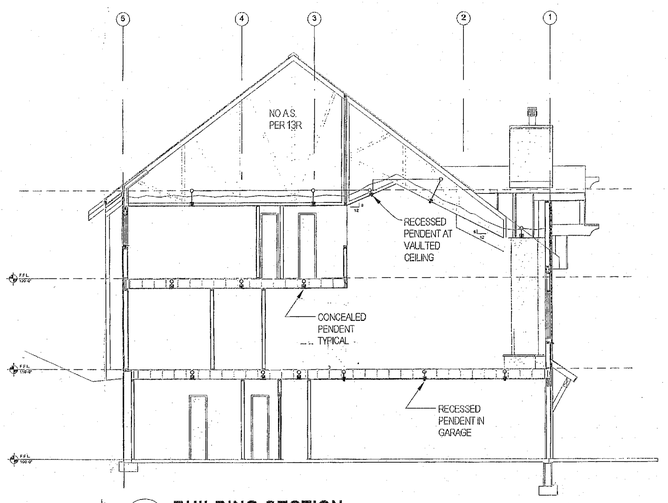
1 FP1 **RISER DETAIL**
1"=1'-0"

RISER / FDC LEGEND

- Ⓐ 1" BRONZE GLOBE VALVE WITH PLUG
- Ⓑ 1 1/2" RISER MANIFOLD WITH TEST TRIM
- Ⓒ 1/2" X 1/4" GALV. HEX BUSHING, 1/4" X -3 NIPPLE, 1/4" 3-WAY VALVE, 1/4" WATER GUAGE, 1/4" PLUG
- Ⓓ 1 1/2" SCREWED BUTTERFLY VALVE W/ TAMPER MILWAKEE BBSCS
- Ⓔ HORN/STROBE - POTTER SASH SERIES (SEE A/FP2 FOR LOCATION)
- Ⓕ 2.5 GALLON EXPANSION CHAMBER AND 1" GLOBE VALVE
- Ⓖ 3 SPARE HEAD CABINET
- Ⓗ 1 1/2" REDUCED PRESSURE BACKFLOW PREVENTER - AMES 4000B WITH LOCKING HANDLES
- Ⓘ 1" GLOBE VALVE
- Ⓙ 1 1/2" CPVC SLIP X THREAD ADAPTER
- Ⓚ 1 1/2" SCREWED CHECK VALVE
- Ⓛ 1 1/2 X 1/2 X 1 1/2 TEE, 1/2 X -4 NIPPLE, 1/2" STREET ELBOW AND 1/2" BALL DRIP VALVE
- Ⓜ 2 1/2 X 1 1/2 GALV HEX BUSHING, 2 1/2 X 2 1/2 FIRE DEPT. CONNECTION WITH I.D. PLATE "AUTO-SPKR" WITH ROUGHED BRASS FINISH - CROKER 6620 AND (1) 1 1/2" SOLID GALV WALL PLATE AT INTERIOR.



5 FP1 **F.D.C. DETAIL**
1"=1'-0"



2 FP1 **BUILDING SECTION**
1/8" =1'-0"

NOTICE	ENGINEER	APPROVALS & COORDINATION		
IT IS THE OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEAT TO PREVENT FREEZING THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES FOR DRY PIPE AND OTHER TYPES OF VALVES CONTROLING WATER SUPPLIES TO SPRINKLER SYSTEMS.	NICET CERTIFIED BRYAN J. KENDRICK Certification Number 088444 - LEVEL IV	ORGANIZATION	CONTACT	PHONE
		BIG SKY FIRE DEPARTMENT	J. REVISKY	(406)995-2100
		SYSTEM TYPE		
		WET X		
		DRY		

HYDRAULIC DESIGN DATA			
HAZARD CLASSIFICATION:	SYSTEM AREA:	SQ. FT.	
HYDRAULIC DESIGN DATA:	GPM/SQ. FT.	SQ. FT./HD.MAX	
AREA OF APPLICATION:	SQ. FT.	HOSE ALLOW:	GPM
TOTAL SYSTEM REQUIREMENTS:			
GPM AT PSI AT PUMP HOUSE			
WATER SUPPLY INFORMATION			
STATIC PRESSURE:	PSI		
RESIDUAL PRESSURE:	PSI WITH	GPM FLOWING	
TEST TAKEN AT:	BY:	DATE:	

SPRINKLER HEADS										
MANUFACTURER	MODEL	SIN #	TYPE	FINISH	ORIFICE	DROP	CANOPY	TEMP	SYMBOL	QTY.
									TOTAL	

Fire Sprinkler Specialties, Inc.
Service, Installation and Design
PMB 2017
#1 Jackson Creek Road
Montana City, MT 59634
Phone: 406-227-6050
Fax: 406-227-7936

REVISIONS		
NO.	DATE	DESCRIPTION

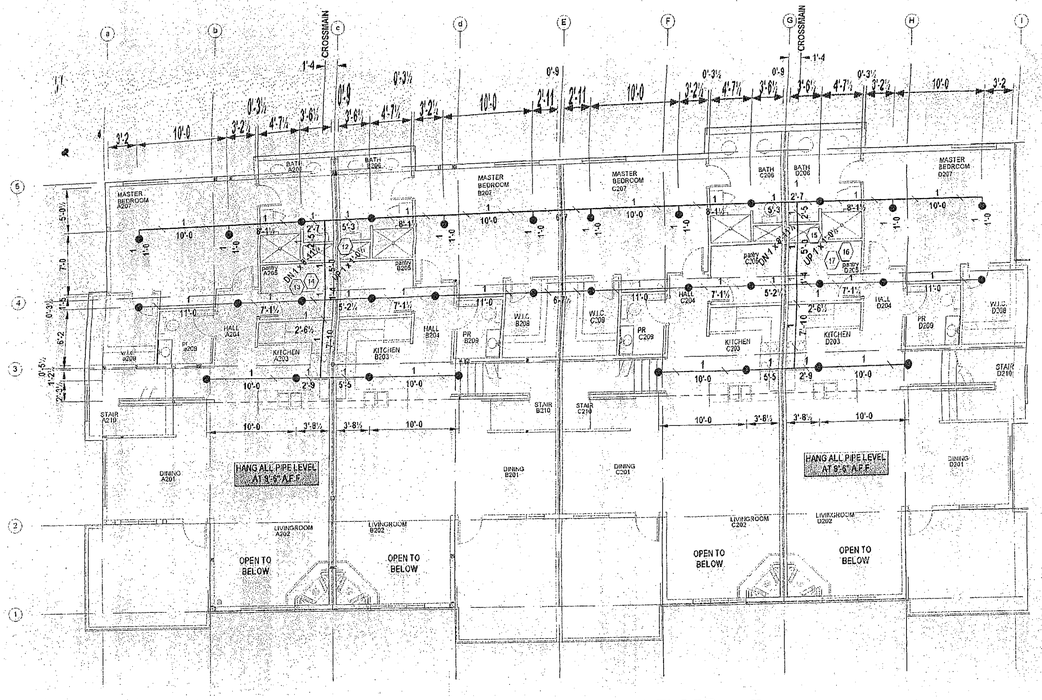
CONTRACT NAME:
ALPENGLOW - UPHILL UNIT
BIG SKY, MONTANA 59716

CONTRACT WITH:
MAUS CONSTRUCTION, INC.
200 E. WILLIAMS ROAD
GALLATIN GATEWAY, MT 59730

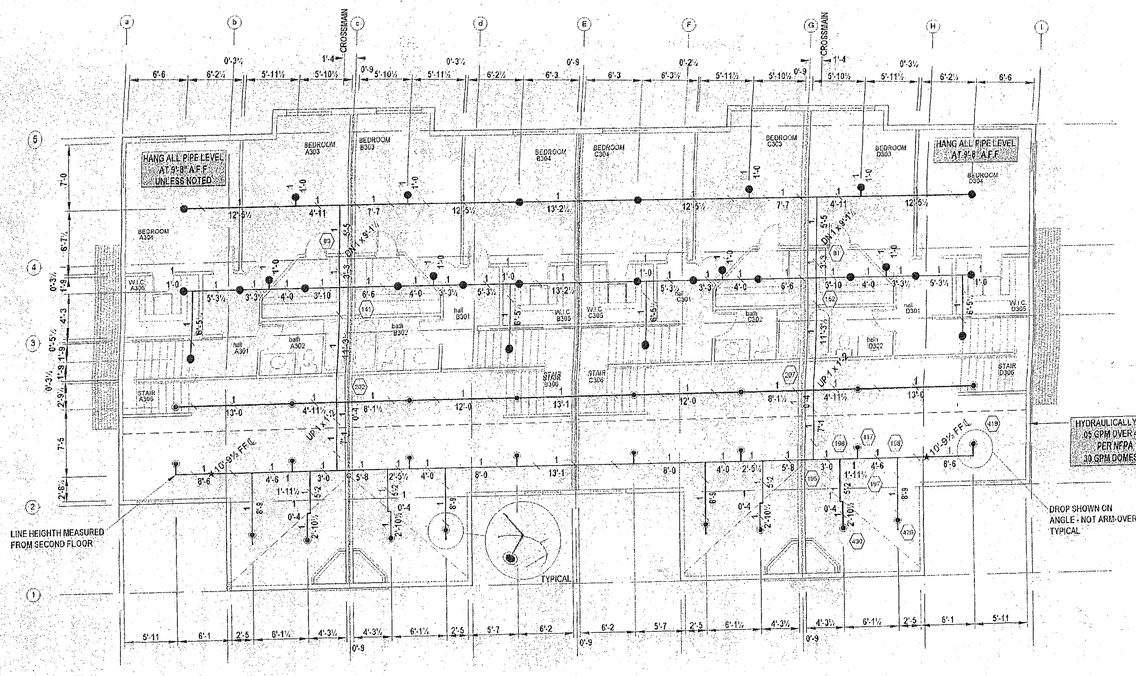
SITE PLAN, DETAILS AND NOTES

SCALE: 1/8"=1'-0"
DRAWN BY: B. KENDRICK
CHECKED BY: J. STEAB
DATE: 02/12/05
CONTRACT NO.:
NWSD NO.: 0504
SHEET NO.:

FP1 OF 2

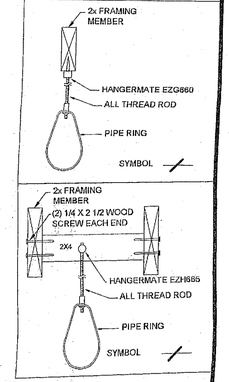


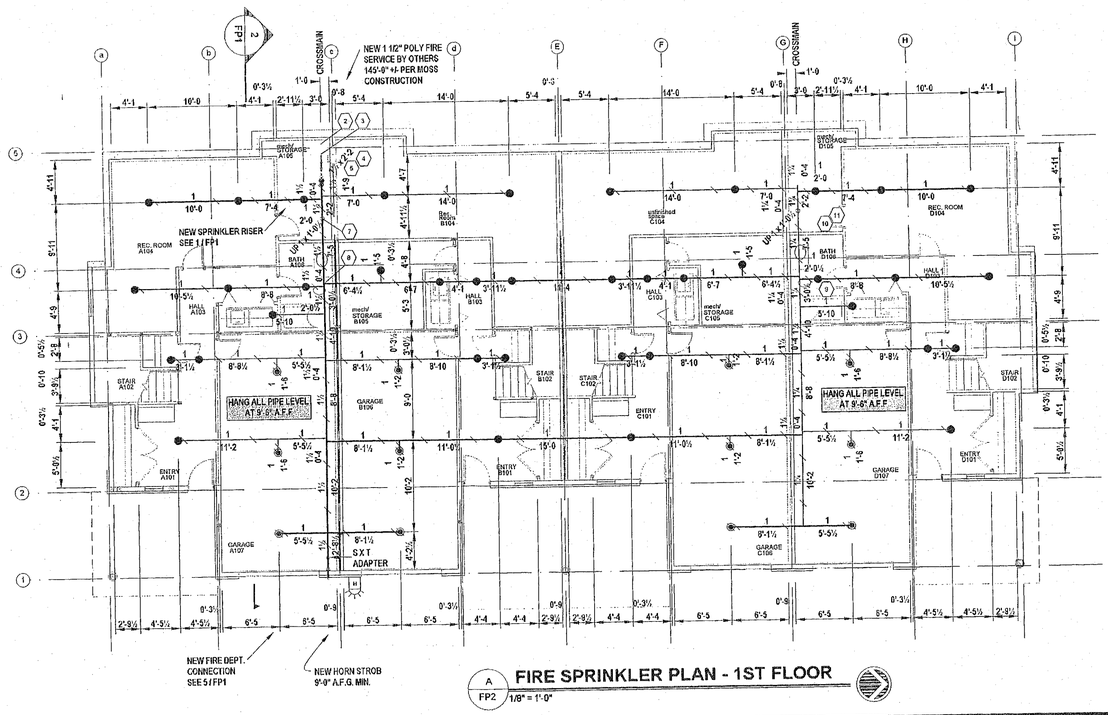
A FP2 **FIRE SPRINKLER PLAN - 2ND FLOOR**
1/8" = 1'-0"



A FP2 **FIRE SPRINKLER PLAN - 3RD FLOOR**
1/8" = 1'-0"

HANGERS





A FP2 **FIRE SPRINKLER PLAN - 1ST FLOOR**
1/8" = 1'-0"

HANGER NOTES

1) HANG PIPE AT ELEVATION NOTED WITH HANGER NOTED, 3/8 X CIF ATR AND RING - PER DETAILS THIS SHEET

GENERAL NOTES

1) ALL CEILINGS ARE 8-11 1/2 A.F.F. UNLESS NOTED THUS: (X-X)
2) INSTALL BRANCHLINES AT UPPER LEVEL 4" ABOVE ANY NEW CEILING.
3) ★0'-0 FF ℄ DENOTES CENTER OF PIPE ELEVATION TO FINISH FLOOR
4) INSTALL APPROVED FIRE CAULK AT ALL FULL HEIGHT WALL PENETRATIONS PER 3/FP1
5) ALL PIPING TO BE CPVC WITH CPVC FITTINGS (UNLESS OTHERWISE NOTED).
6) **MAXIMUM PENDENT HEAD SPACING SHALL NOT BE GREATER THAN 16 X 16 FEET, OR 256 SQ.FT.**
7) ALL DROPS TO PENDENT SPRINKLERS TO BE 1"X 0-4" CPVC WITH 1"X1/2" SPRINKLER ADAPTER
8) ALL PIPE CUT LENGTHS ARE CENTER TO CENTER.

NOTICE

IT IS THE OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEAT TO PREVENT FREEZING THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES FOR DRY PIPE AND OTHER TYPES OF VALVES CONTROLING WATER SUPPLIES TO SPRINKLER SYSTEMS.

ENGINEER

NICET CERTIFIED
BRYAN J. KENDRICK
Certification Number
088444 - LEVEL IV

APPROVALS & COORDINATION

ORGANIZATION	CONTACT	PHONE
BIG SKY FIRE DEPARTMENT	J. REVISKY	(406)995-2100

SYSTEM TYPE

WET	X
DRY	

HYDRAULIC DESIGN DATA

HAZARD CLASSIFICATION: RESIDENTIAL SYSTEM AREA: 4,345 SQ. FT.
HYDRAULIC DESIGN DATA: .05 GPM/SQ. FT. 256 SQ. FT./HD MAX
AREA OF APPLICATION: 4 HEADS SQ. FT. HOSE ALLOW: 27 GPM

TOTAL SYSTEM REQUIREMENTS:

55.1 GPM AT 73 PSI AT CITY CONNECTION

WATER SUPPLY INFORMATION

STATIC PRESSURE: 91 PSI
RESIDUAL PRESSURE: 71 PSI WITH 300 GPM FLOWING
TEST TAKEN AT: J-502 BY: CTA DATE: 3-6-2004

SPRINKLER HEADS

MANUFACTURER	MODEL	SIN #	TYPE	FINISH	ORIFICE	DROP	CANOPY	TEMP	SYMBOL	QTY.
CENTRAL	LFII	TY2599	SSP	BRASS	7/16K=4.2	98	WHT CNCLD	160°	●	98
CENTRAL	LFII	TY2234	SSP	WHITE	7/16K=4.9	24	WHT RECD	155°	◉	24
CENTRAL	TY-FRB	TY3231	SSP	WHITE	1/2" K=5.6	12	WHT RECD	155°	◉	12
						TOTAL	134		TOTAL	134

Fire Sprinkler Specialties, Inc.
Service, Installation and Design
PMB 2017
#1 Jackson Creek Road
Montana City, MT 59634
Phone: 406-227-6050
Fax: 406-227-7936

REVISIONS

NO.	DATE	DESCRIPTION

CONTRACT NAME:
ALPENGLOW - UPHILL UNIT
BIG SKY, MONTANA 59716

CONTRACT WITH:
MAUS CONSTRUCTION, INC.
200 E. WILLIAMS ROAD
GALLATIN GATEWAY, MT 59730

FIRE SPRINKLER PLAN

SCALE: 1/8"=1'-0"
DRAWN BY: B. KENDRICK
CHECKED BY: J. STEAB
DATE: 02/12/05
CONTRACT NO.:
NWSD NO.: 0504
SHEET NO.:

FP2 OF 2