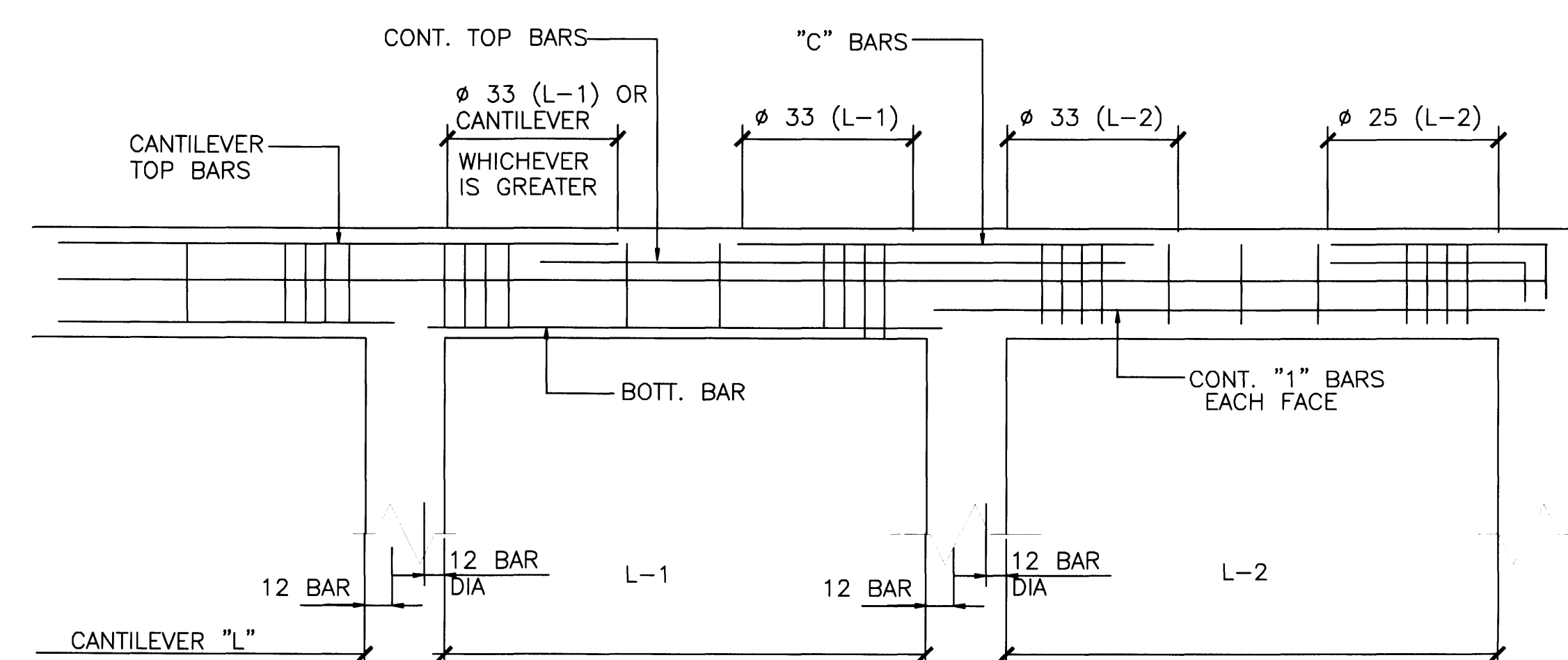


F CRICKET DETAIL
SCALE: 3/4" = 1'-0"



NOTES:

- WHERE NECESSARY CONT. TOP BARS SHALL BE LAPPED 24 BAR DIA. IN MIDDLE 1/3 OF SPAN.
- WHICHEVER IS GREATER
- BEAMS @ THE PERIMETER OF THE STRUCTURE SHALL HAVE AT LEAST 1/6 OF THE TENSION REINF. REQUIRED FOR NEGATIVE MOMENT AT THE SUPPORT AND 1/4 OF THE POSITIVE MOMENT REINF. REQUIRED AT MID-SPAN MADE CONTINUOUS AROUND THE PERIMETER AND TIED WITH CLOSED STIRRUPS.

CONNECTOR SCHEDULE					
UNIT	TYPE	DESIGN UPLFT	ALLOWABLE UPLIFT	NOA *	NAILING
1	USP-TA-24	629#	1270#	01-0912.05	11-10D INT TRUSS
2	2-USP-TA-24	1482#	2540#	01-0912.05	18-16D TO TRUSS
4	USP-RT-24	704#	1020#	01-0102.03	18-16D TO RAFTER, 3-1/4" TAPCON INTO EXISTING TIE BEAM
5	2-USP-RT-24	1250#	2040#	01-0102.03	18-16D TO RAFTER, 3-1/4" TAPCON INTO EXISTING TIE BEAM (EACH STRAP)
6	USP-TAPL-16	1318#	1350#	02-0102.03	11-16D NAILS TO TRUSS

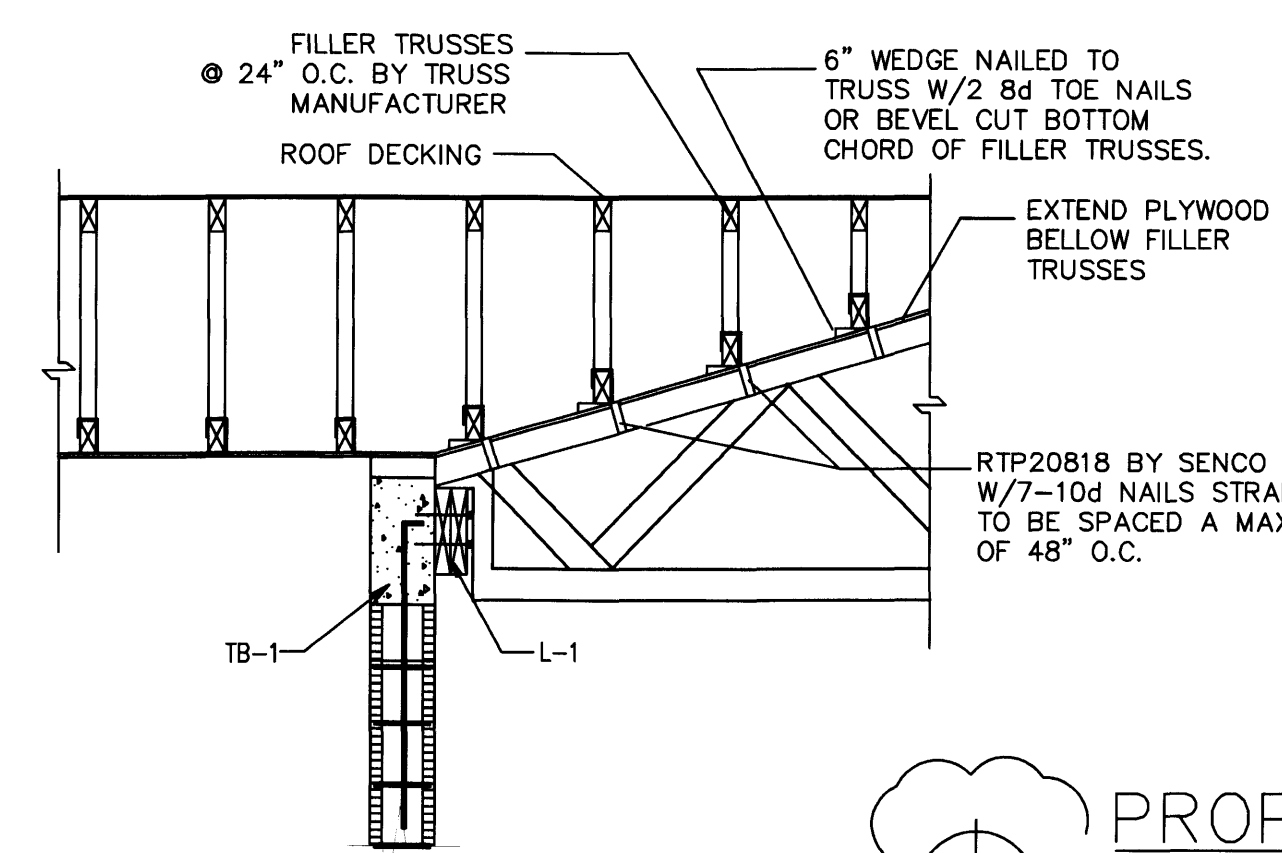
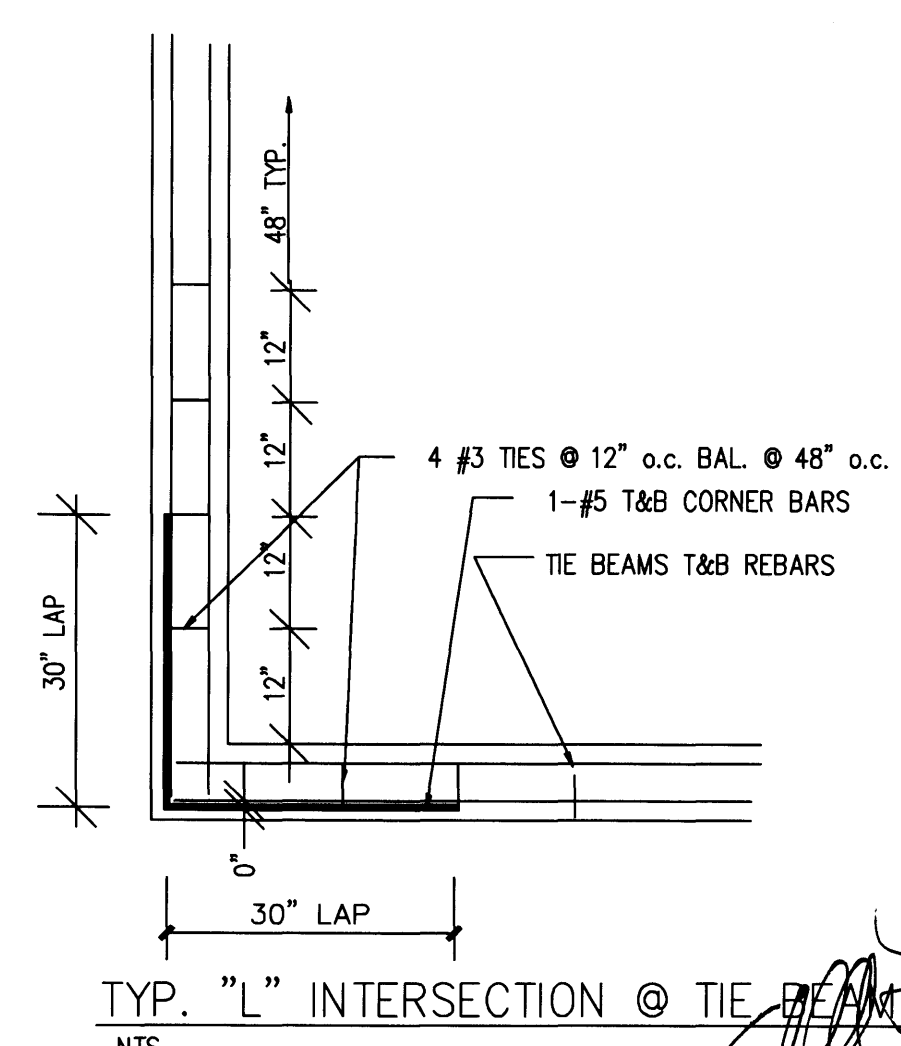
WIND PRESSURE ZONES FOR ROOF			
ZONE	1	2	3
GROSS UPLIFT	-53.2	-83.8	-83.8
GRAVITY	+10.0	+10.0	+10.0
NET UPLIFT	-43.2	-73.8	-73.8

ROOF TRUSS DESIGN LOAD

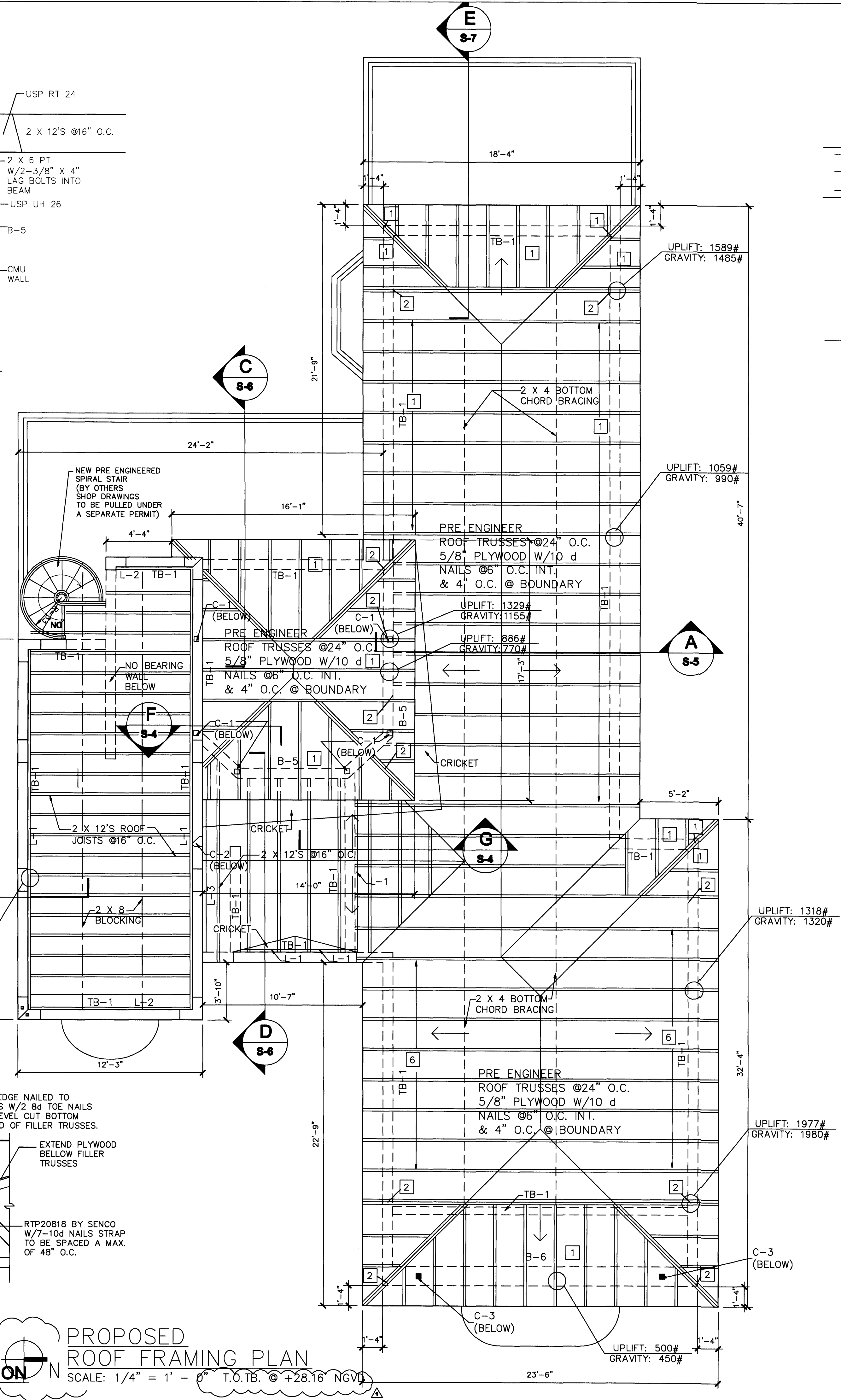
LIVE =30 PSF
DEAD =25 PSF
TOTAL =55 PSF

NET WIND UPLIFT = SEE SCHEDULE

SHEATING: 5/8" PLYWOOD SHEATING
NAILING: 10D NAILS @ 4" O.C. EDGES & 6" O.C. INTERIOR U.O.N.



G PIGGY-VACK TRUSS SECTION
SCALE: 1/2" = 1'-0"



PERMIT SET

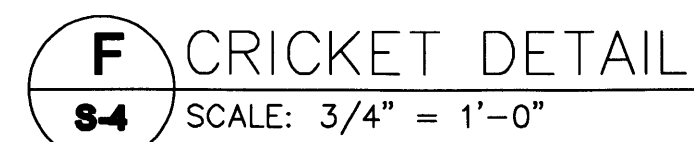
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APPROVED BY	DATE
CORRECTION 1	04/17/08

NEW TO:
RESIDENCE NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

S-4
SHEET NUMBER

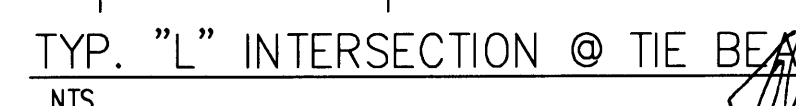


3 BEAMS @ THE PERIMETER OF THE STRUCTURE SHALL HAVE
AT LEAST 1/6 OF THE TENSION REINF. REQUIRED FOR NEGATIVE MOMENT AT THE SUPPORT
AND 1/4 OF THE POSITIVE MOMENT REINF. REQUIRED AT MID-SPAN MADE
CONTINUOUS AROUND THE PERIMETER AND TIED WITH CLOSED STIRRUPS.

UNIT	TYPE	DESIGN UPLFT	ALLOWABLE UPLIFT	NOA *	NAILING
1	USP-TA-24	629#	1270#	01-0912.05	11-10D INT TRUSS
2	2-USP-TA-24	1482#	2540#	01-0912.05	18-16D TO TRUSS
4	USP-RT-24	704#	1020#	01-0102.03	18-16D TO RAFTER, 3-1/4" TAPCON INTO EXISTING TIE BEAM
5	2-USP-RT-24	1250#	2040#	01-0102.03	18-16D TO RAFTER, 3-1/4" TAPCON INTO EXISTING TIE BEAM (EACH STRAP)
6	USP-TAPL-16	1318#	1350#	02-0102.03	11-16D NAILS TO TRUSS

WIND PRESSURE ZONES FOR ROOF			
ZONE	1	2	3
GROSS UPLIFT	-53.2	-83.8	-83.8
GRAVITY	+10.0	+10.0	+10.0
NET UPLIFT	-43.2	-73.8	-73.8

SHEATING: 5/8" PLYWOOD SHEATING
NAILING: 10D NAILS @ 4" O.C. EDGES
& 6" O.C. INTERIOR U.O.N.



PROPOSED
ROOF FRAMING PLAN
SCALE: 1/4" = 1' - 0"

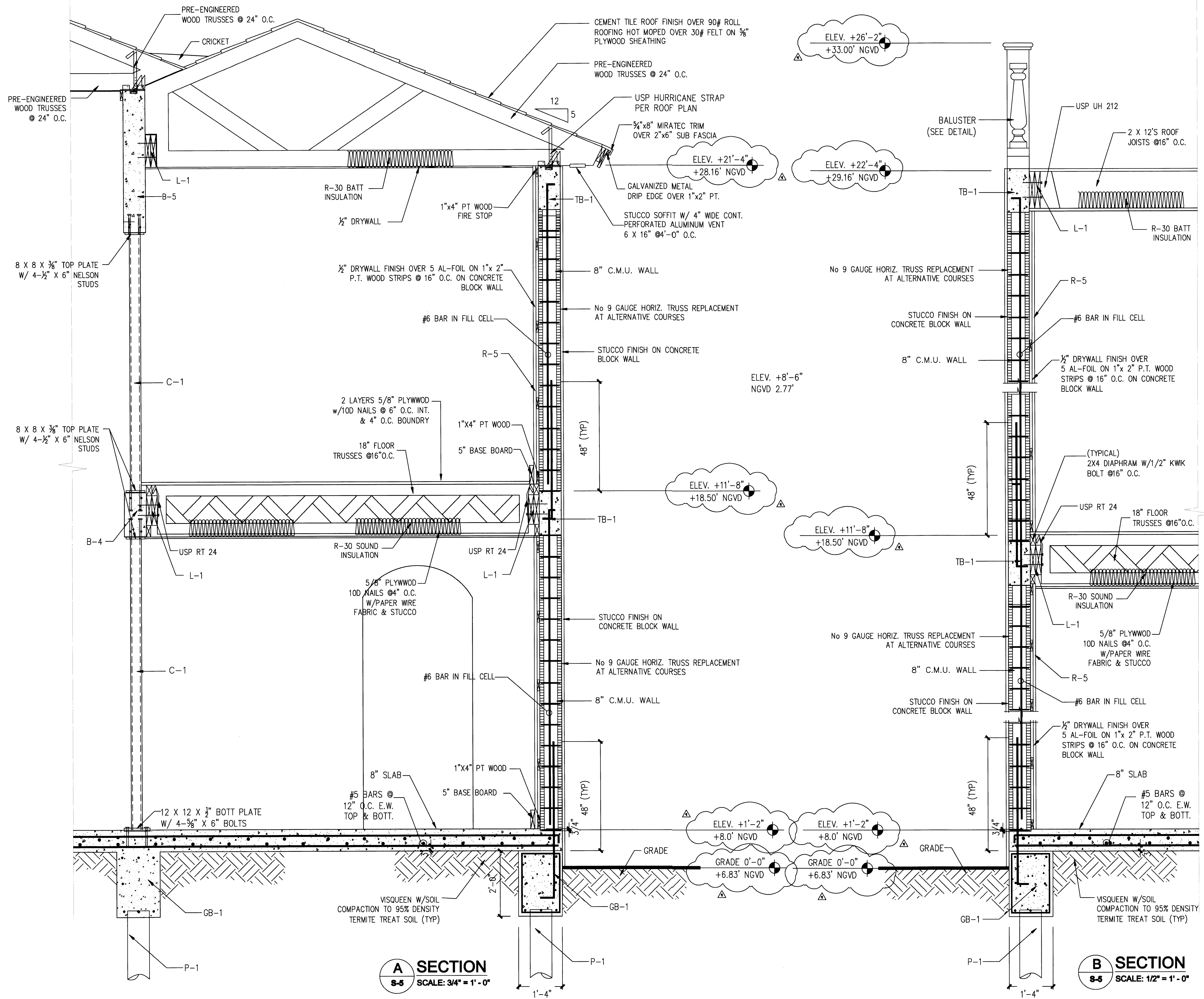
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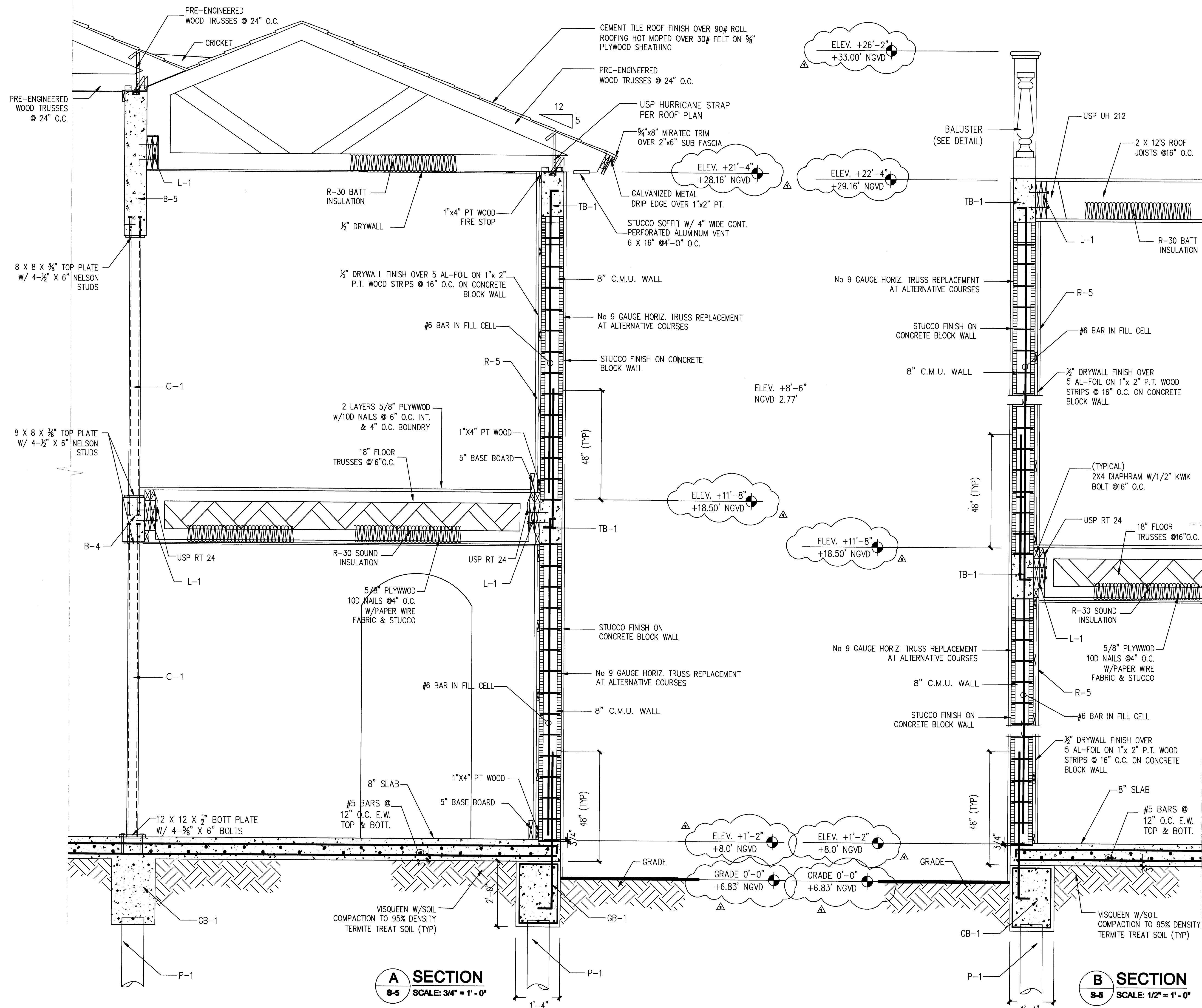
APPROVED BY	DATE
4 CORRECTION 1	04/17/08

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

S-5
RV
03-24-5

SHEET NUMBER





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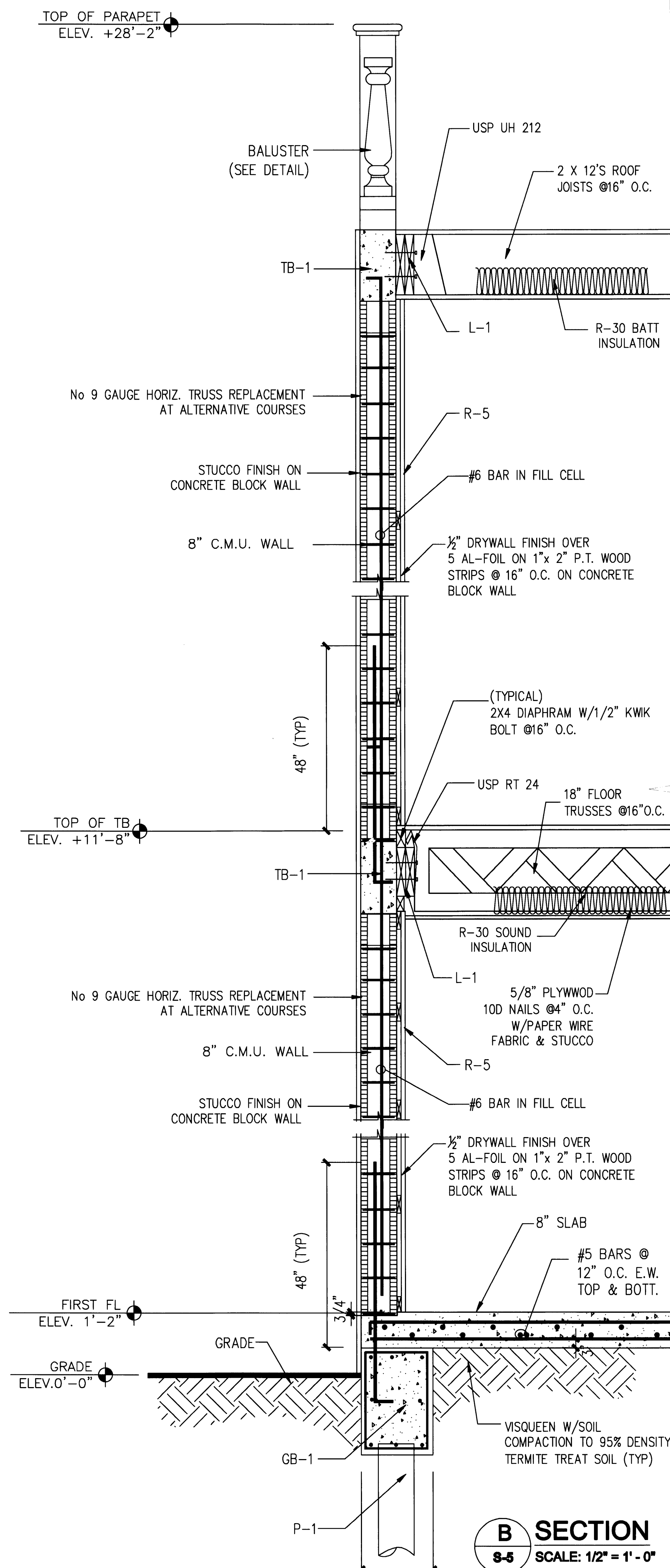
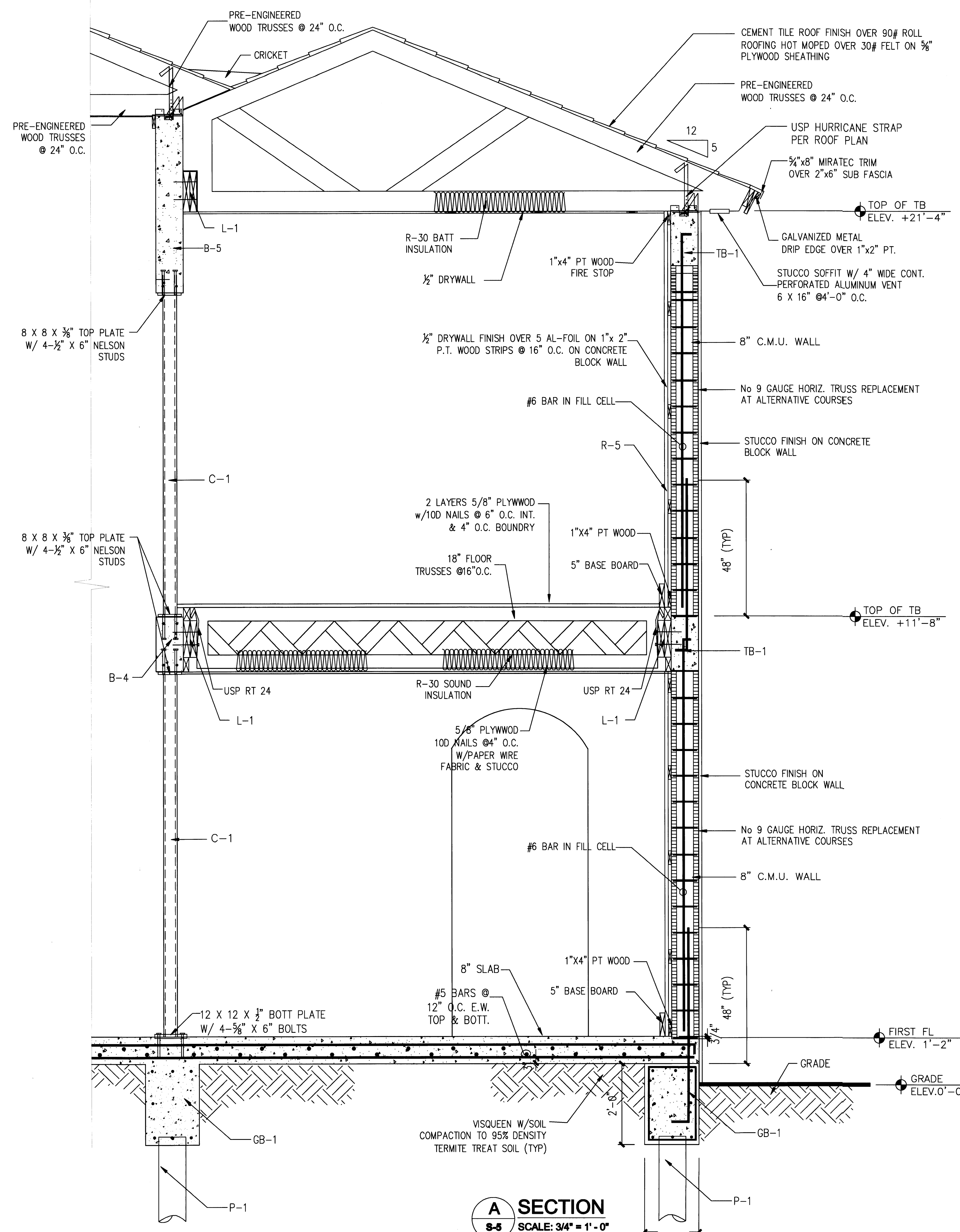
APPROVED BY: DATE:

△ CORRECTION 1 04/17/08

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RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

S-5

SHEET NUMBER



Edward A. LANDERS, P.E.

CONSULTING ENGINEERS

2000 NW 140TH STREET, SUITE 200, MIAMI LAKES, FL 33016

TEL. (305) 823-3938

FAX (305) 823-9355

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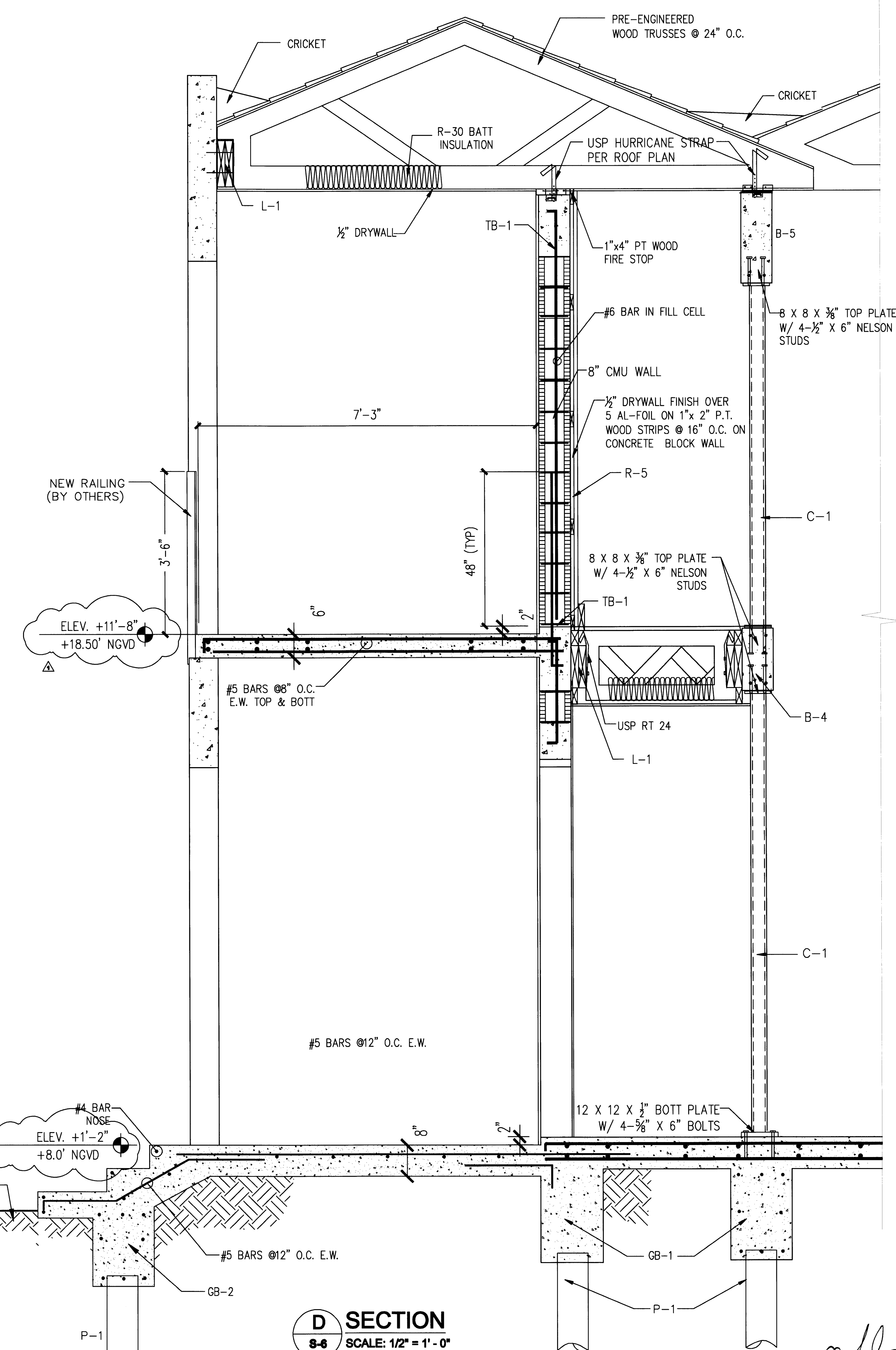
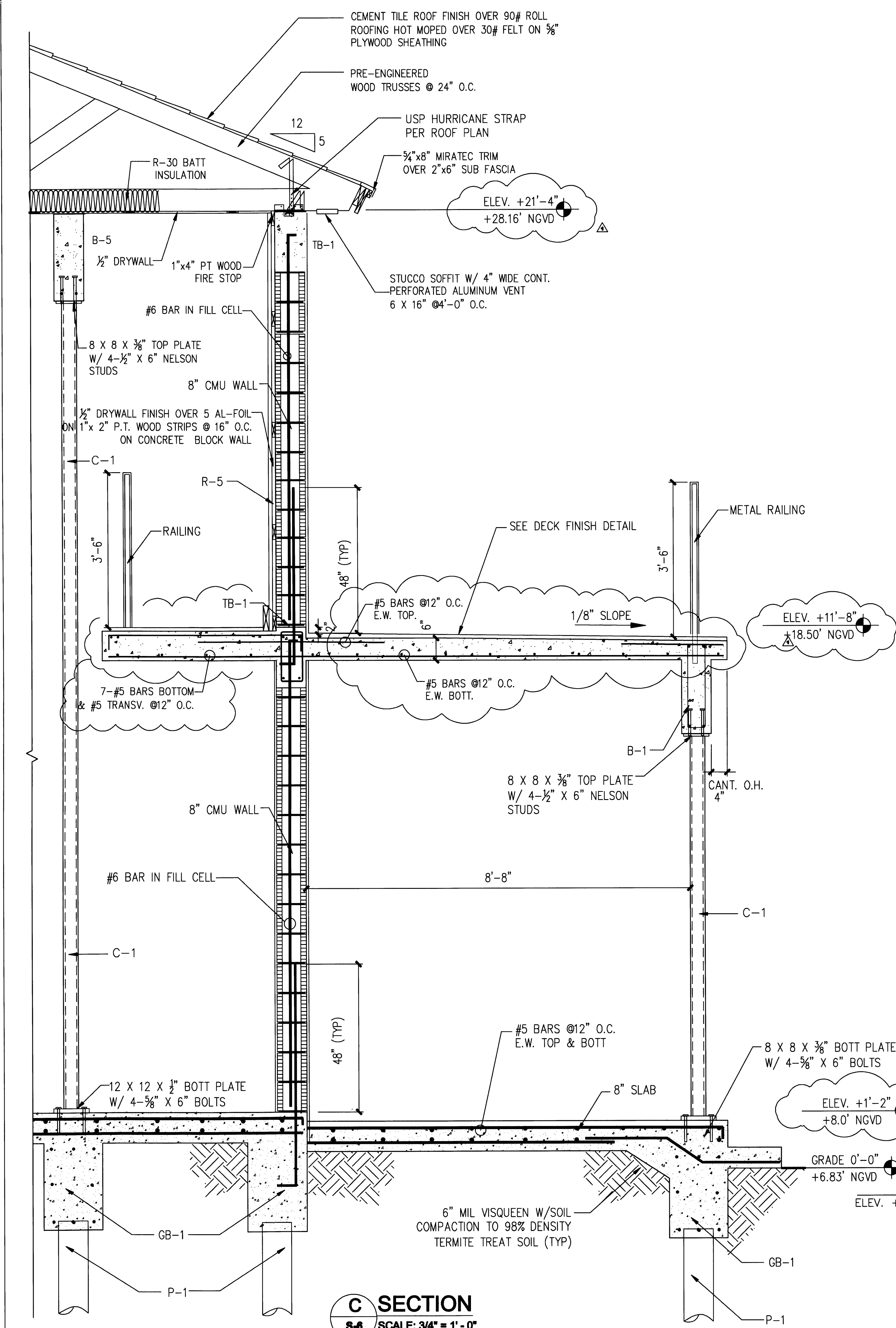
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2334 ALTON RD MIAMI BEACH, FLORIDA 33140

S-5

SHEET NUMBER



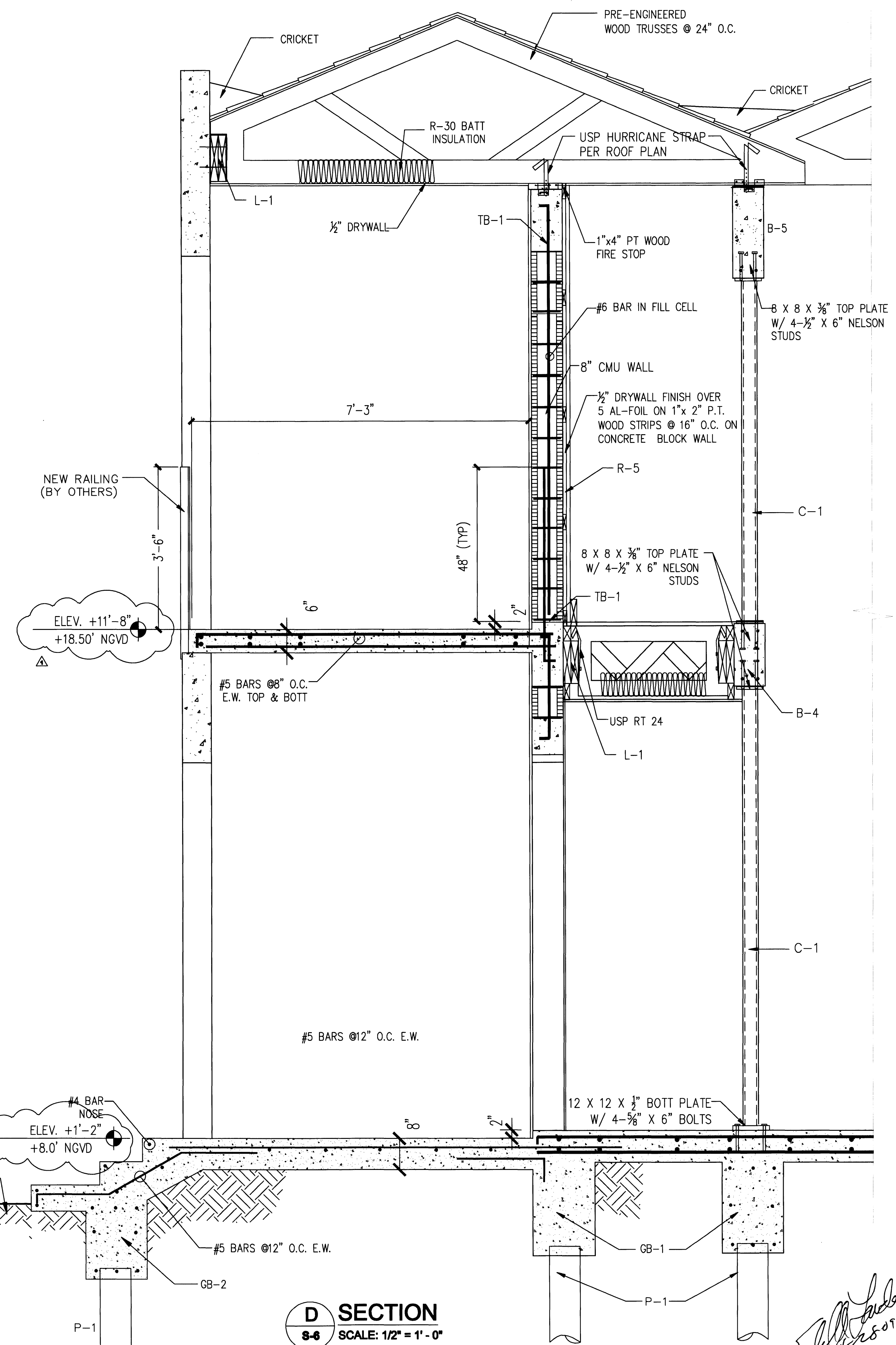
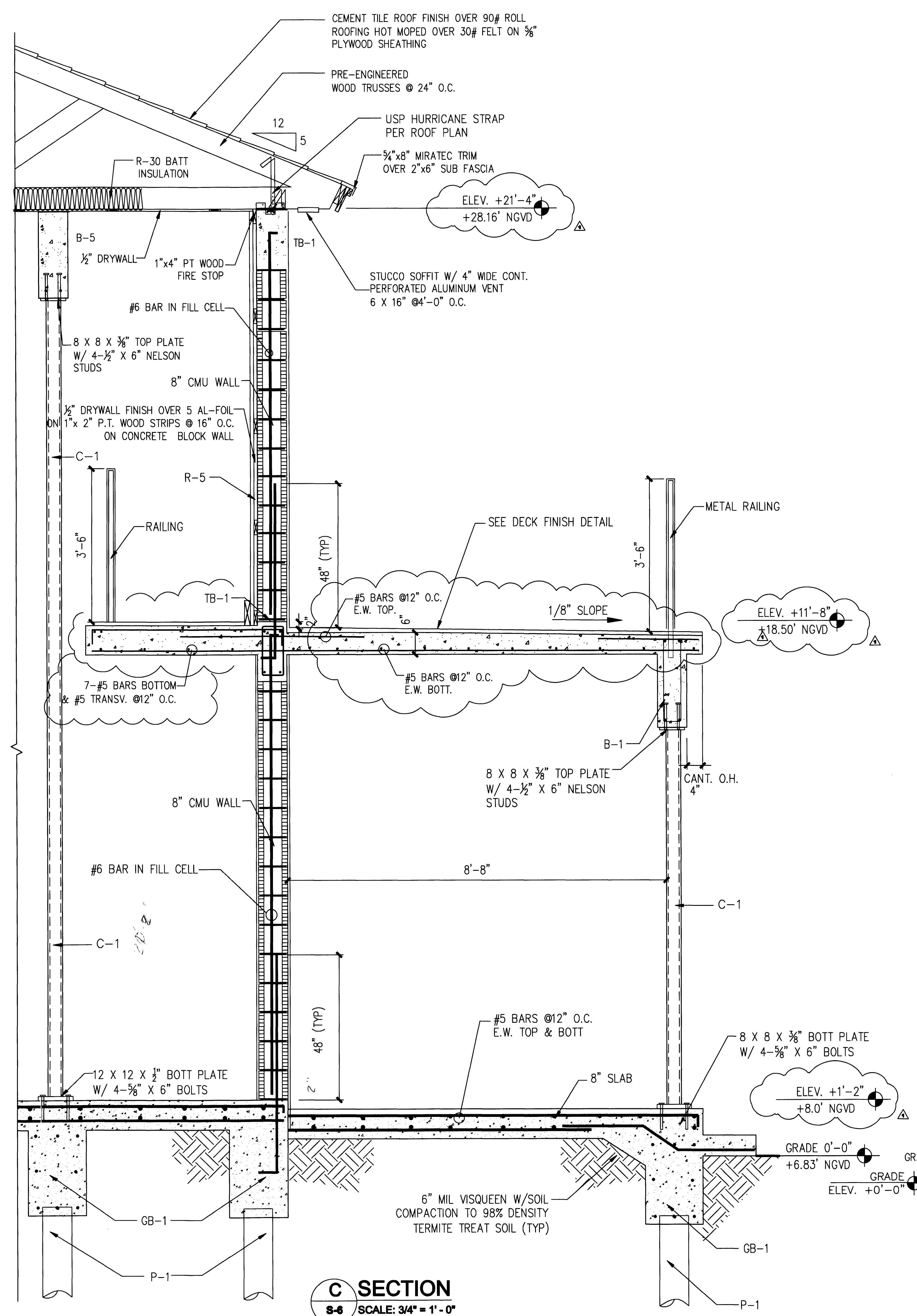
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APPROVED BY:	DATE:
A. CORRECTION 1	04/17/08

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

S-6
SHEET NUMBER

Handwritten signature and date: 5/27/08



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APPROVED BY	DATE
Δ CORRECTION 1	04/17/09

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

S-6
SHEET NUMBER

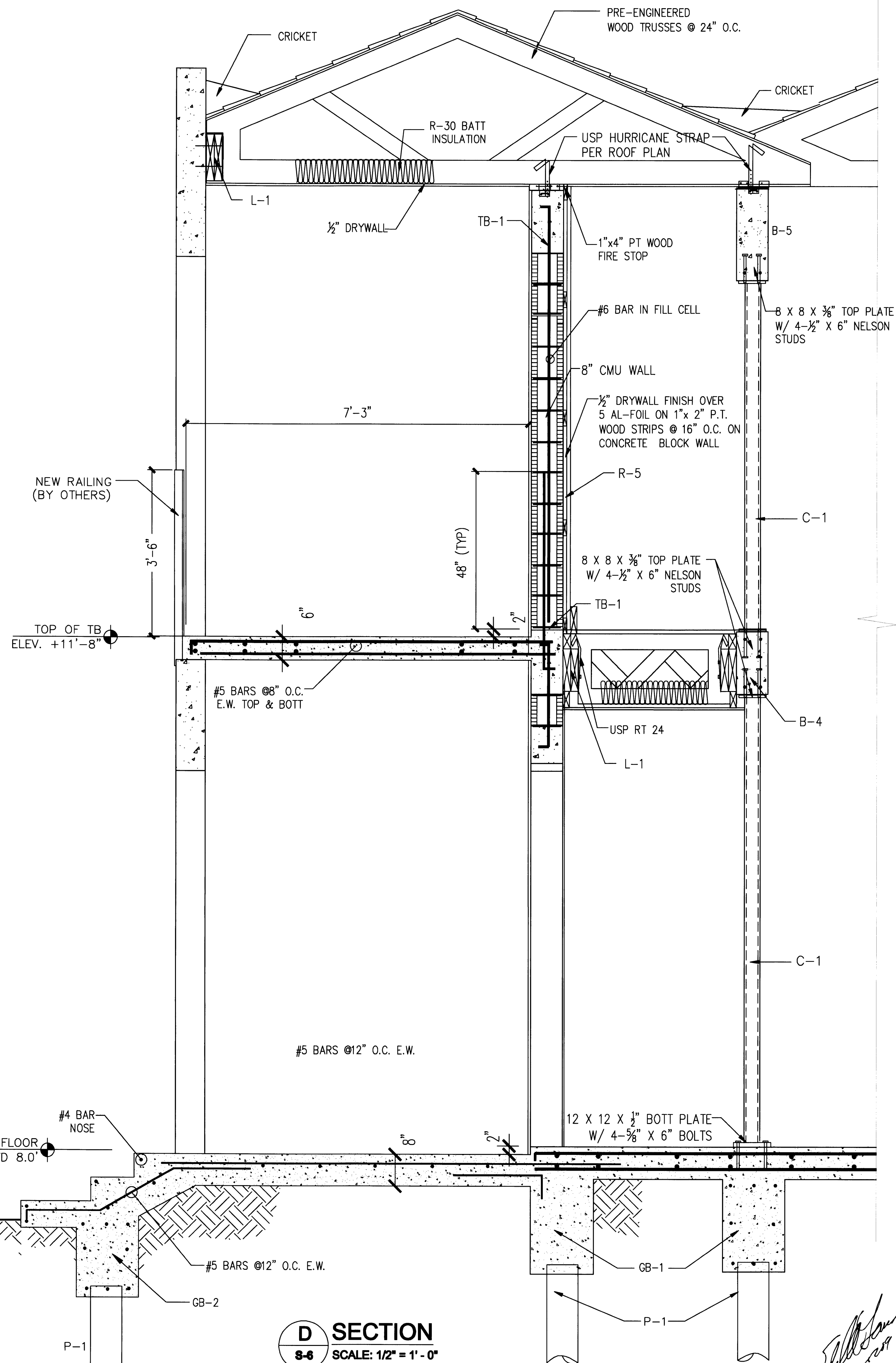
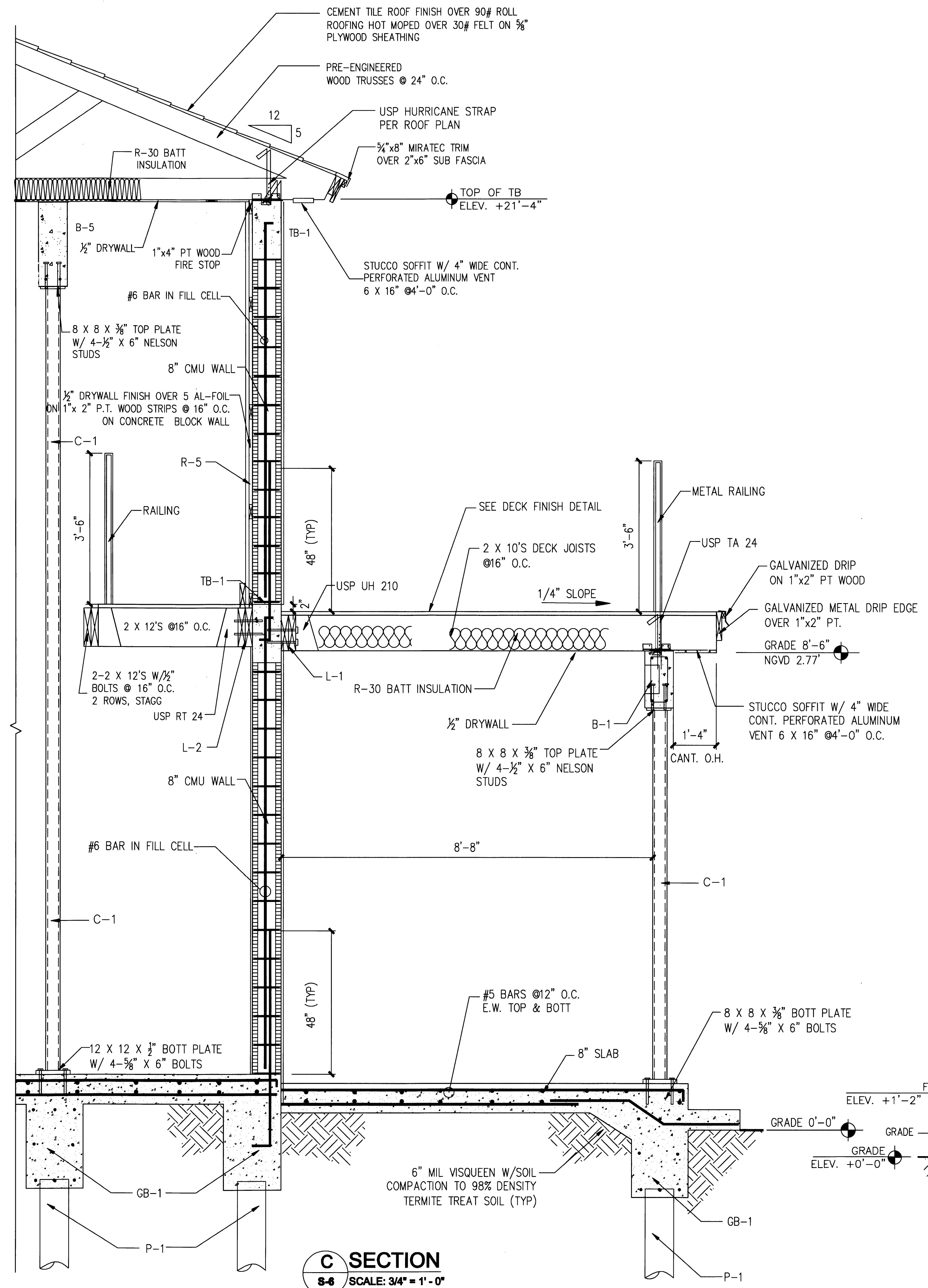
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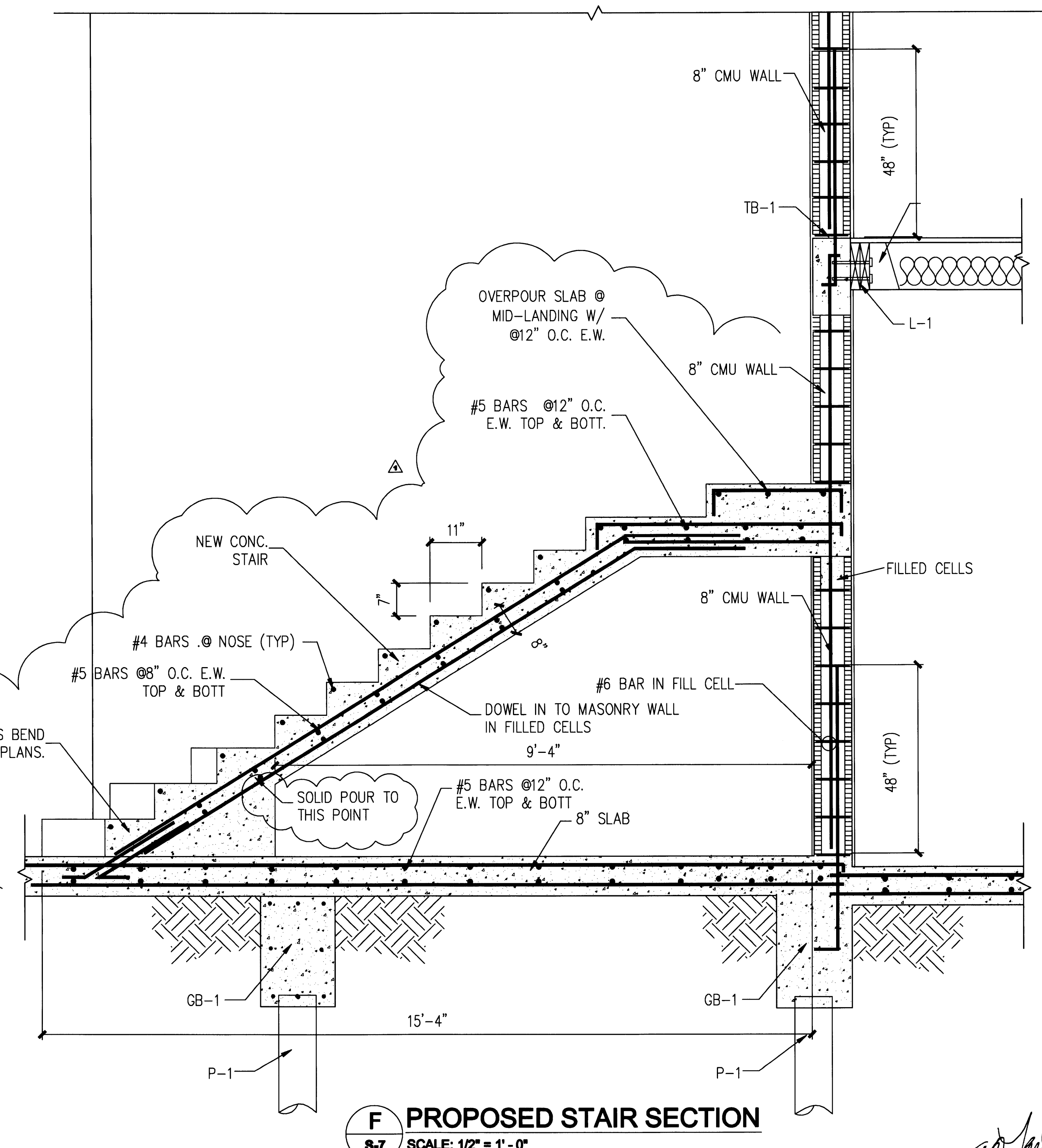
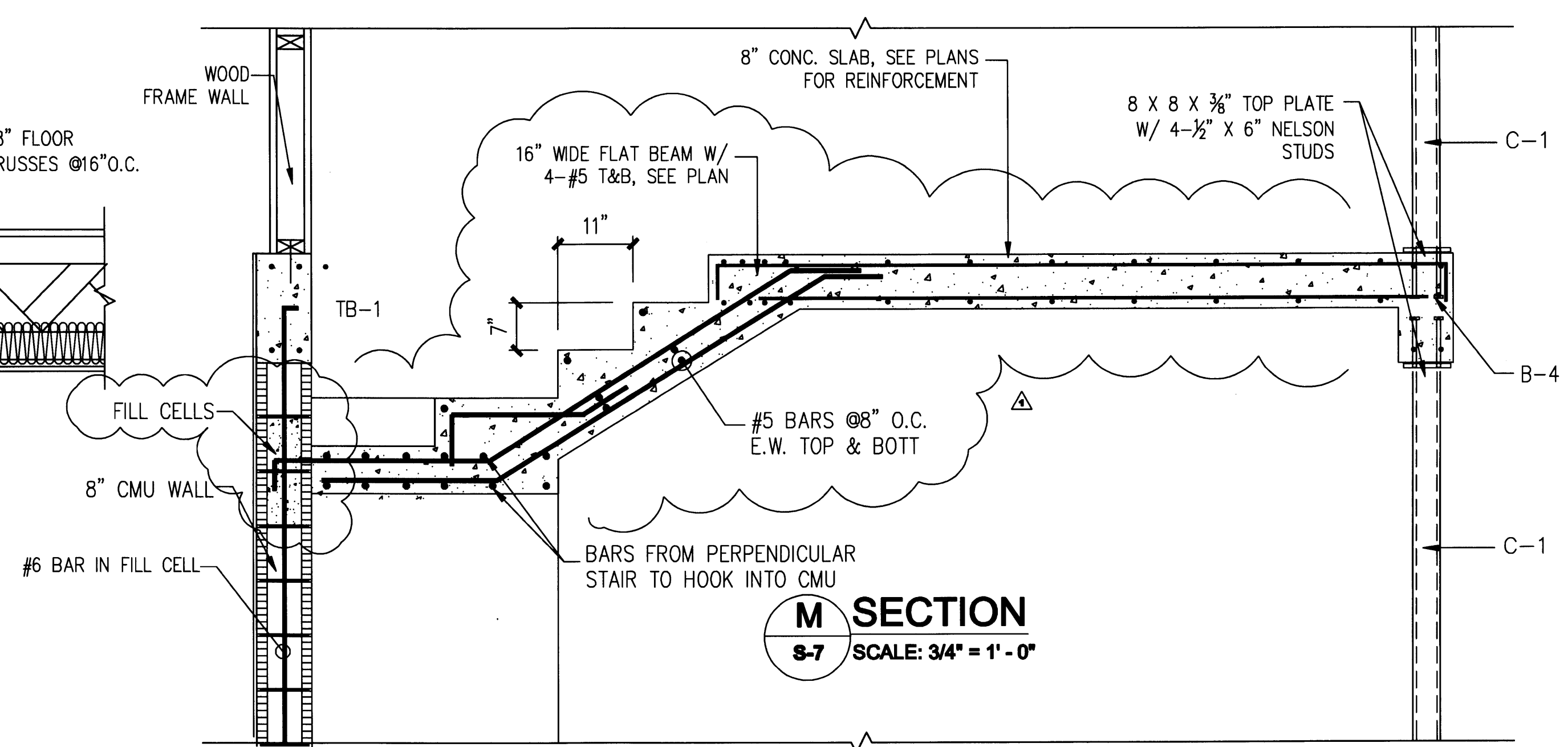
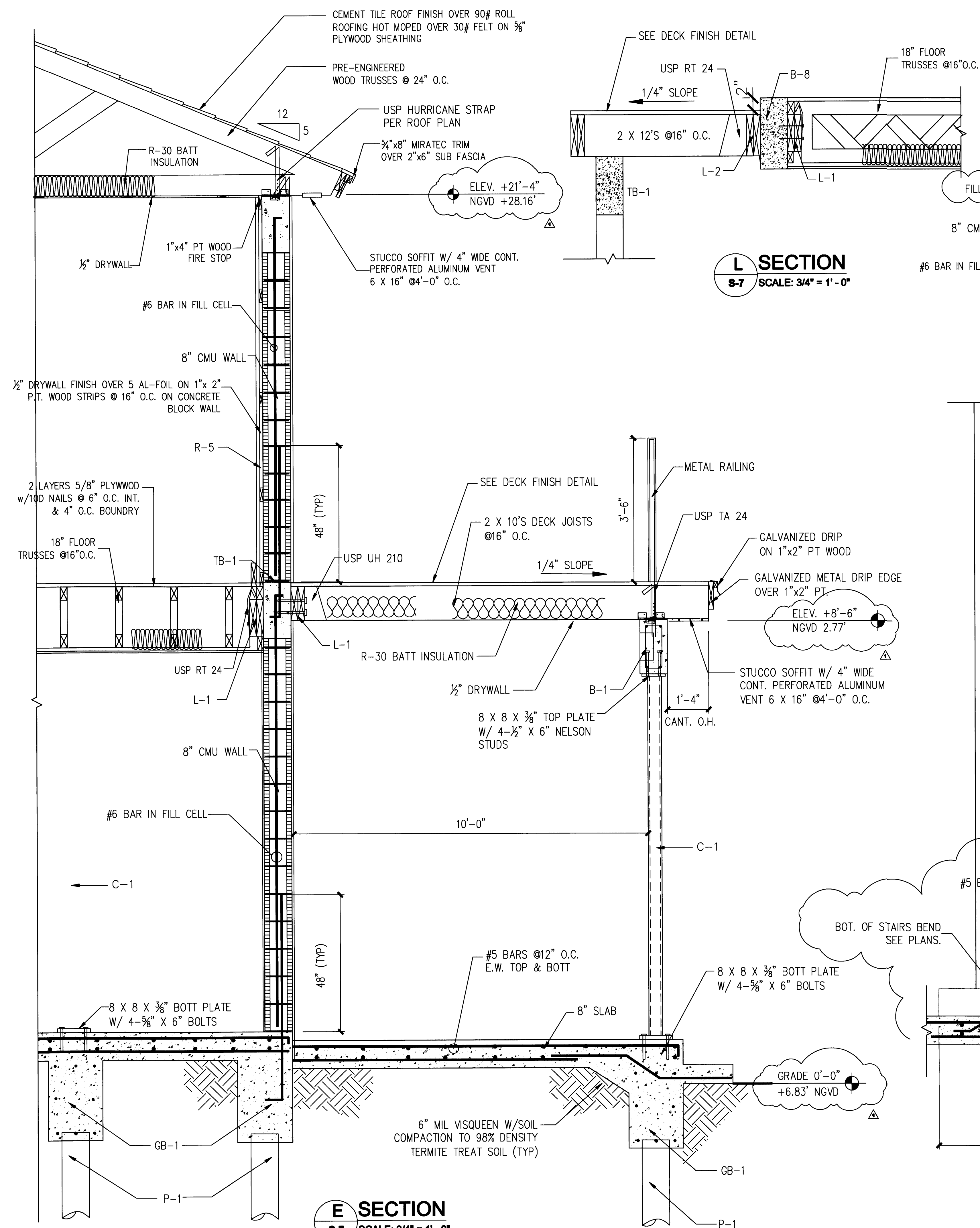
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EDWARD A. LANDERS, P.E., INC. ANY
VIOLATION OF THESE CONDITIONS SHALL
BE CONSIDERED A VIOLATION OF THE
ENGINEER'S PROFESSIONAL ETHICS AND
LAW.

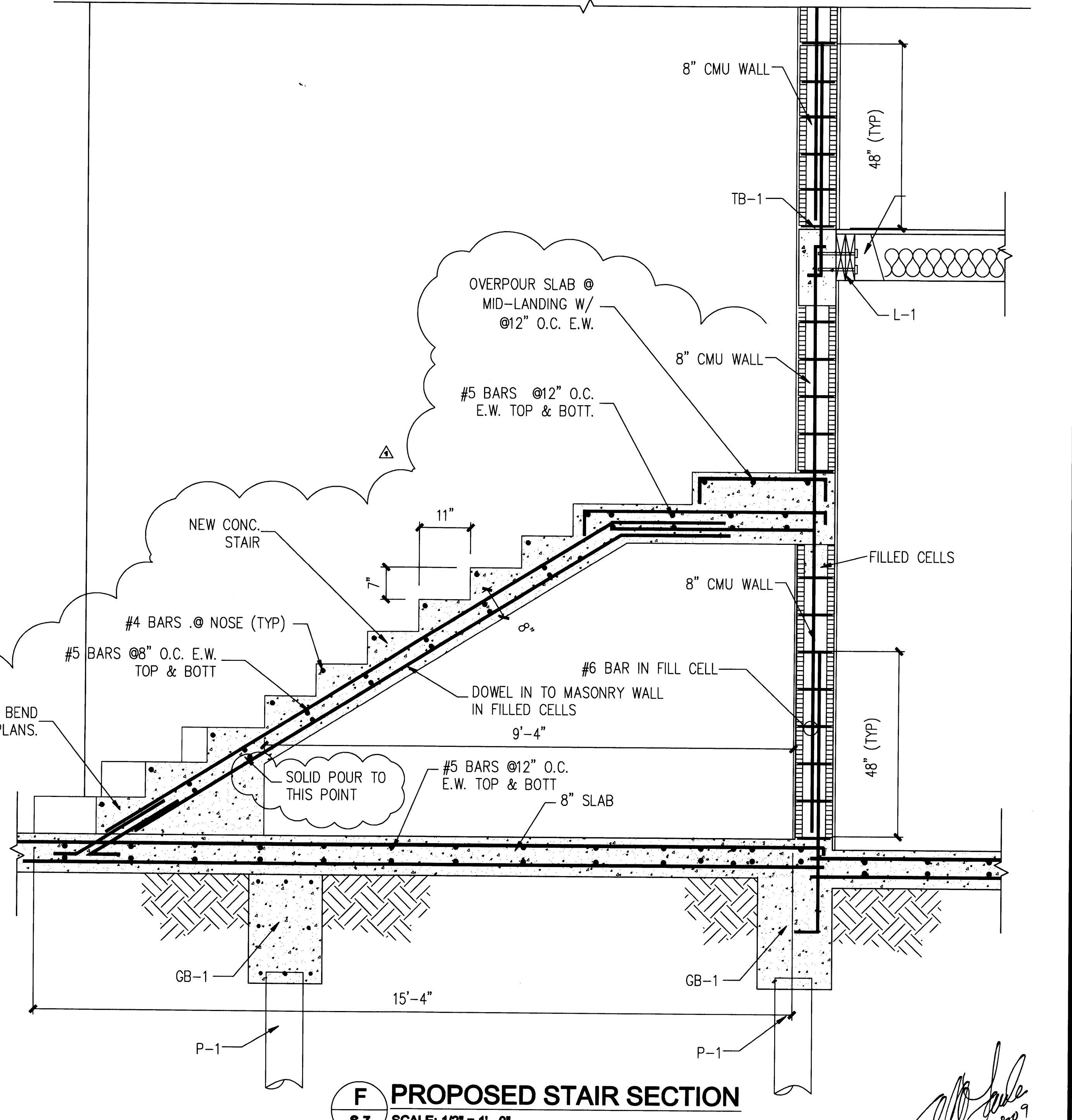
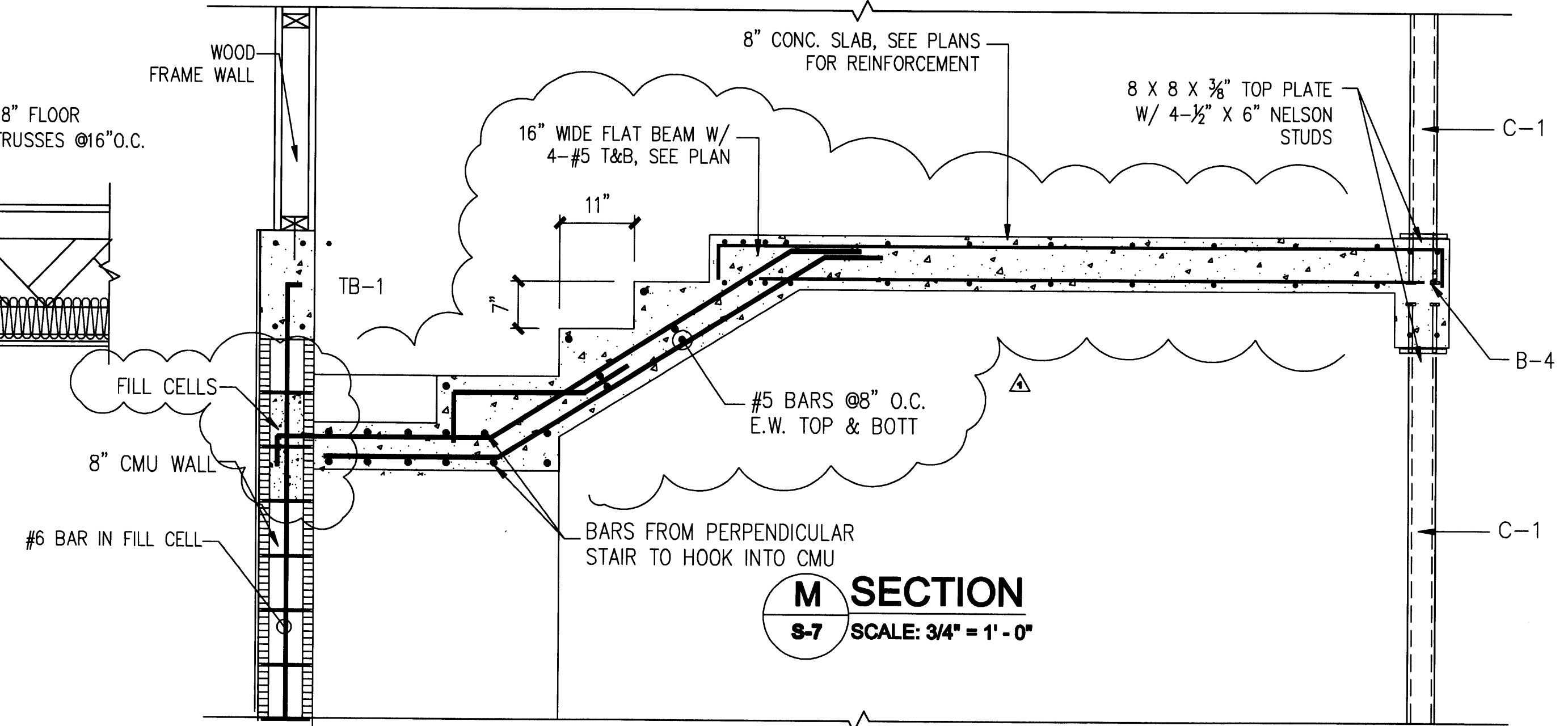
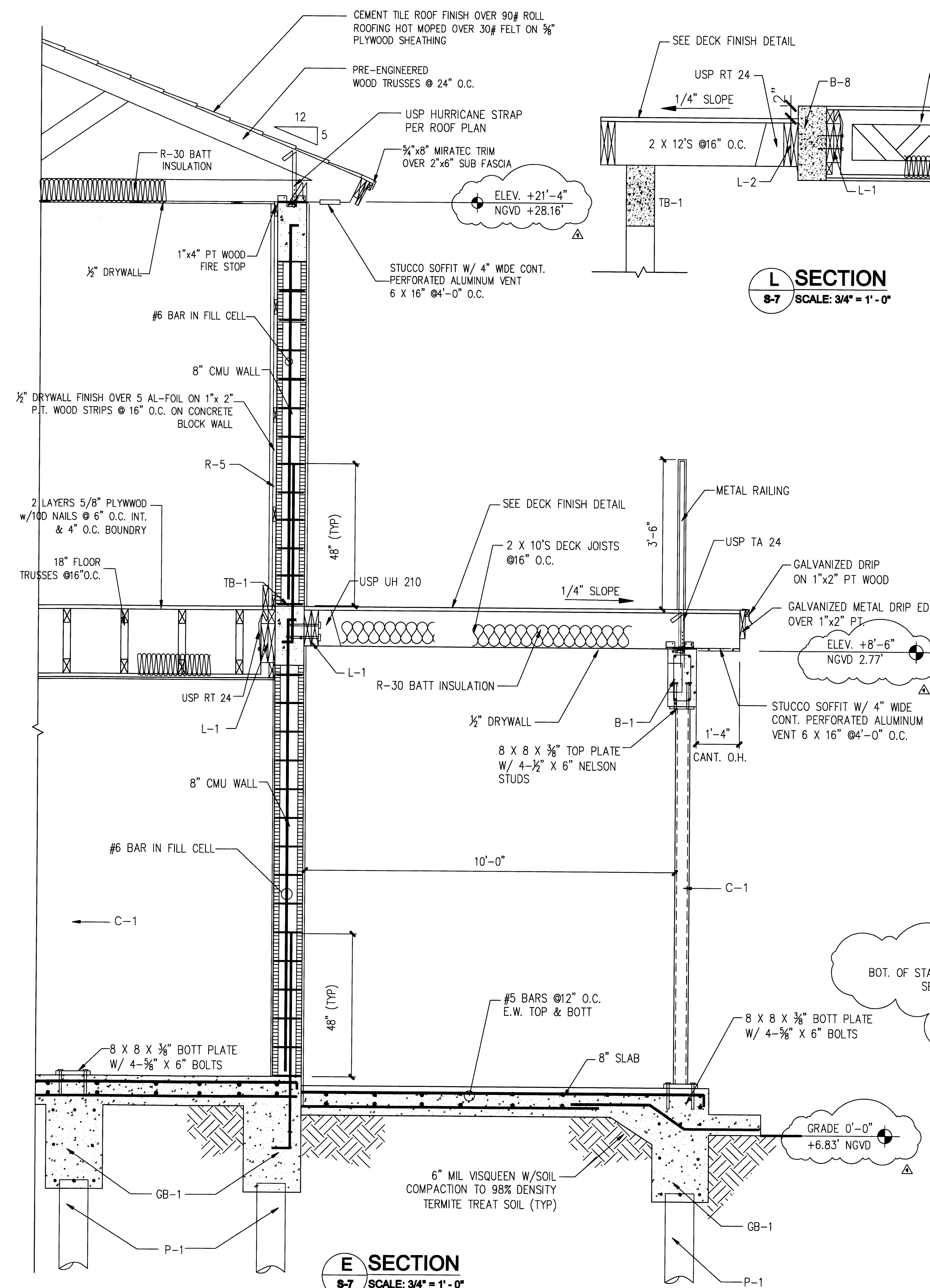
APPROVED BY	DATE

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

S-6
SHEET NUMBER





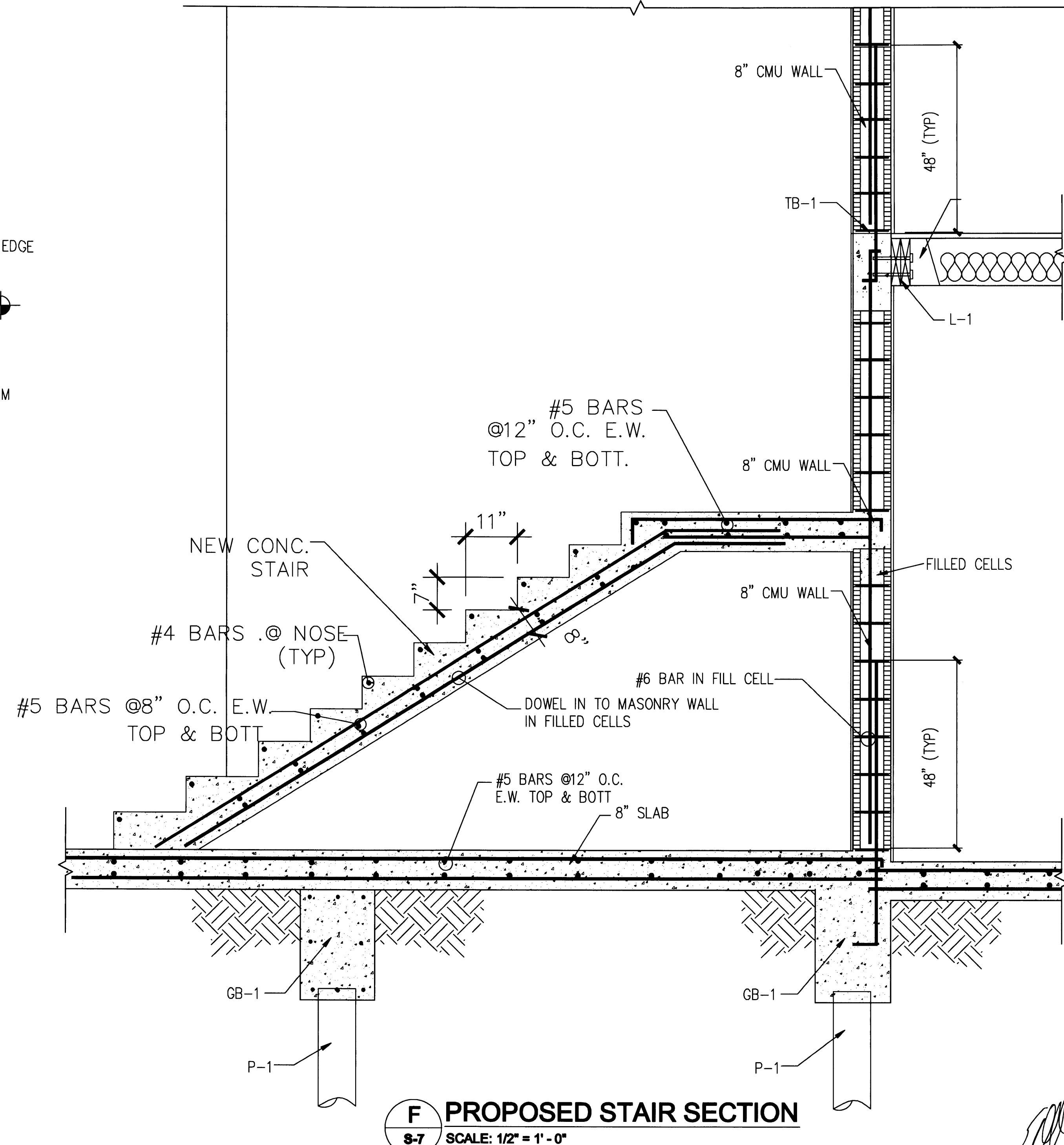
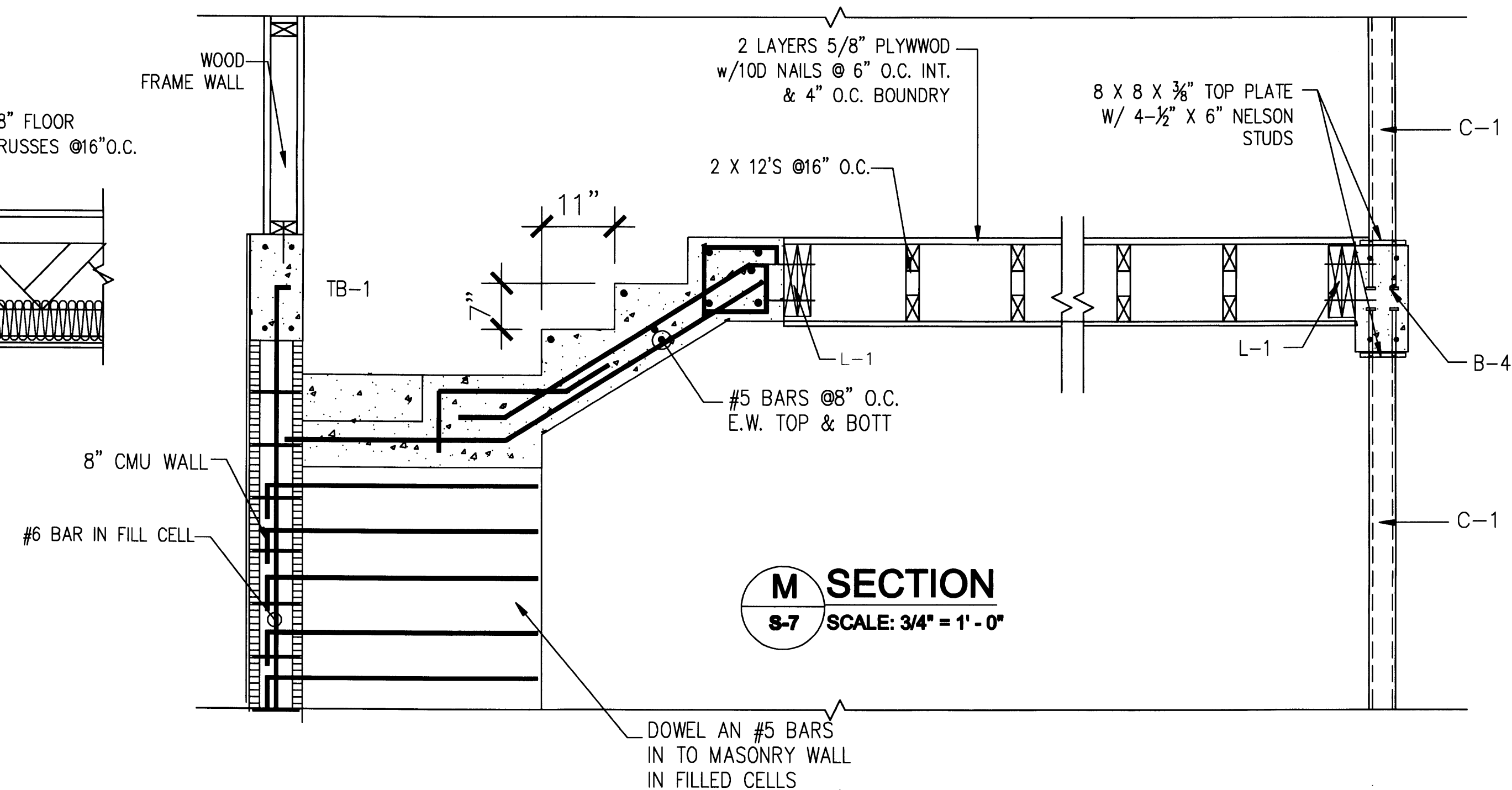
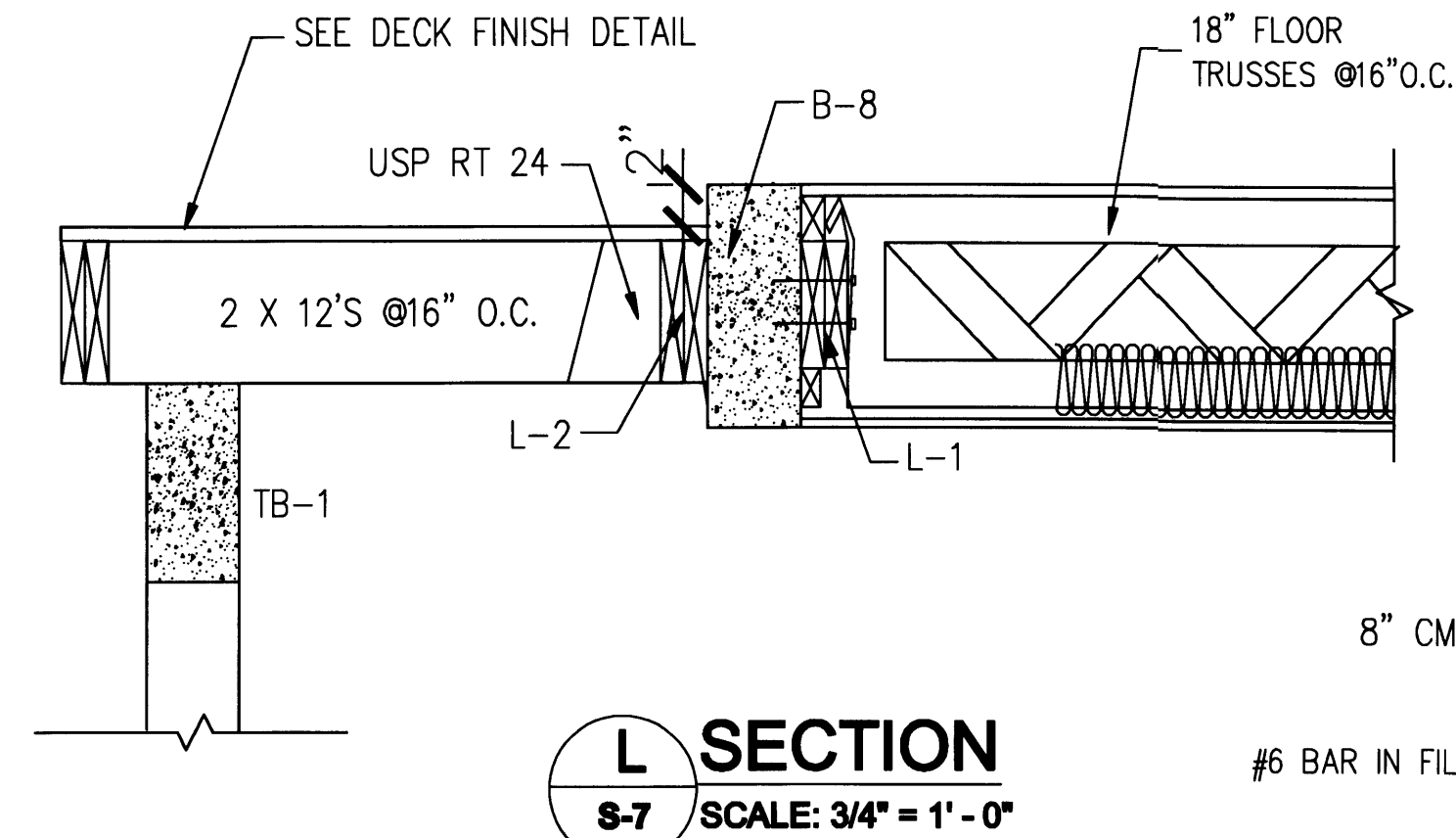
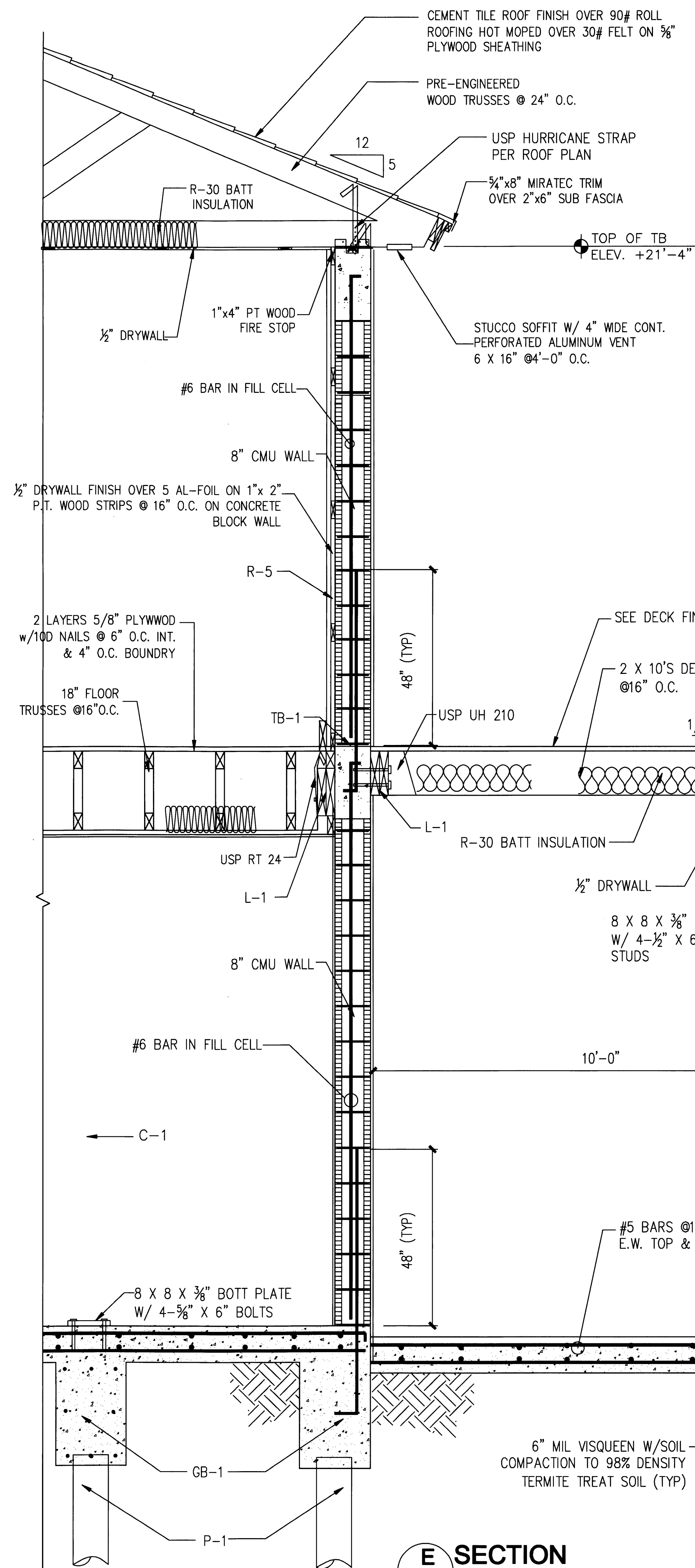


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APPROVED BY	DATE
CONNECTION 1	04/17/08



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APPROVED BY	DATE

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

S-7
SHEET NUMBER

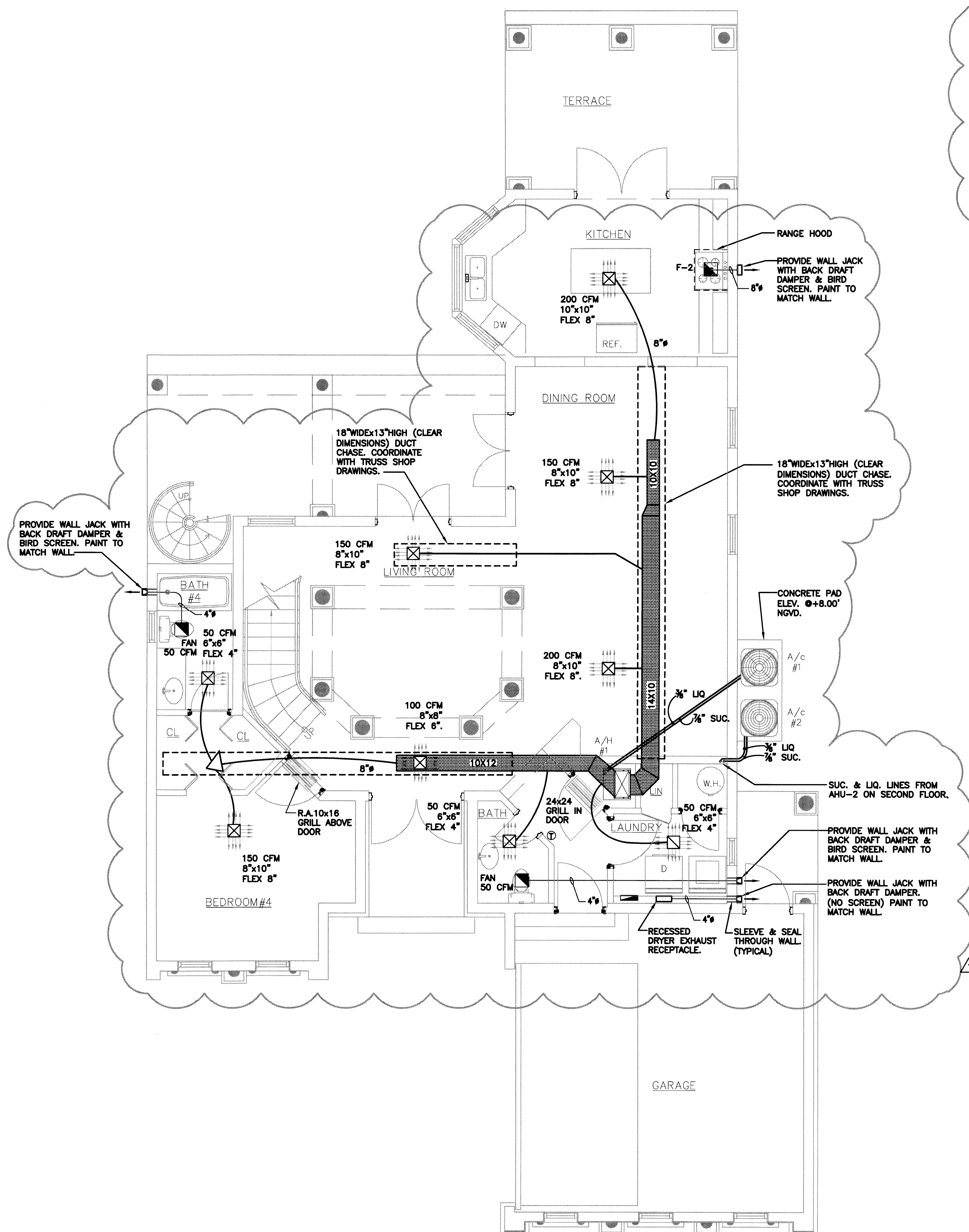
BALANCED RETURN AIR

(APPLIES TO THE ADDITION ONLY)

PER SECTION M1602.4 OF FLORIDA BUILDING CODE - RESIDENTIAL
RETURN / TRANSFER AIR DUCTWORK AND GRILLES ARE DESIGNED TO
LIMIT PRESSURE DIFFERENTIAL ACROSS CLOSED DOORS TO 0.01 INCHES
OF WATER COLUMN OR LESS.

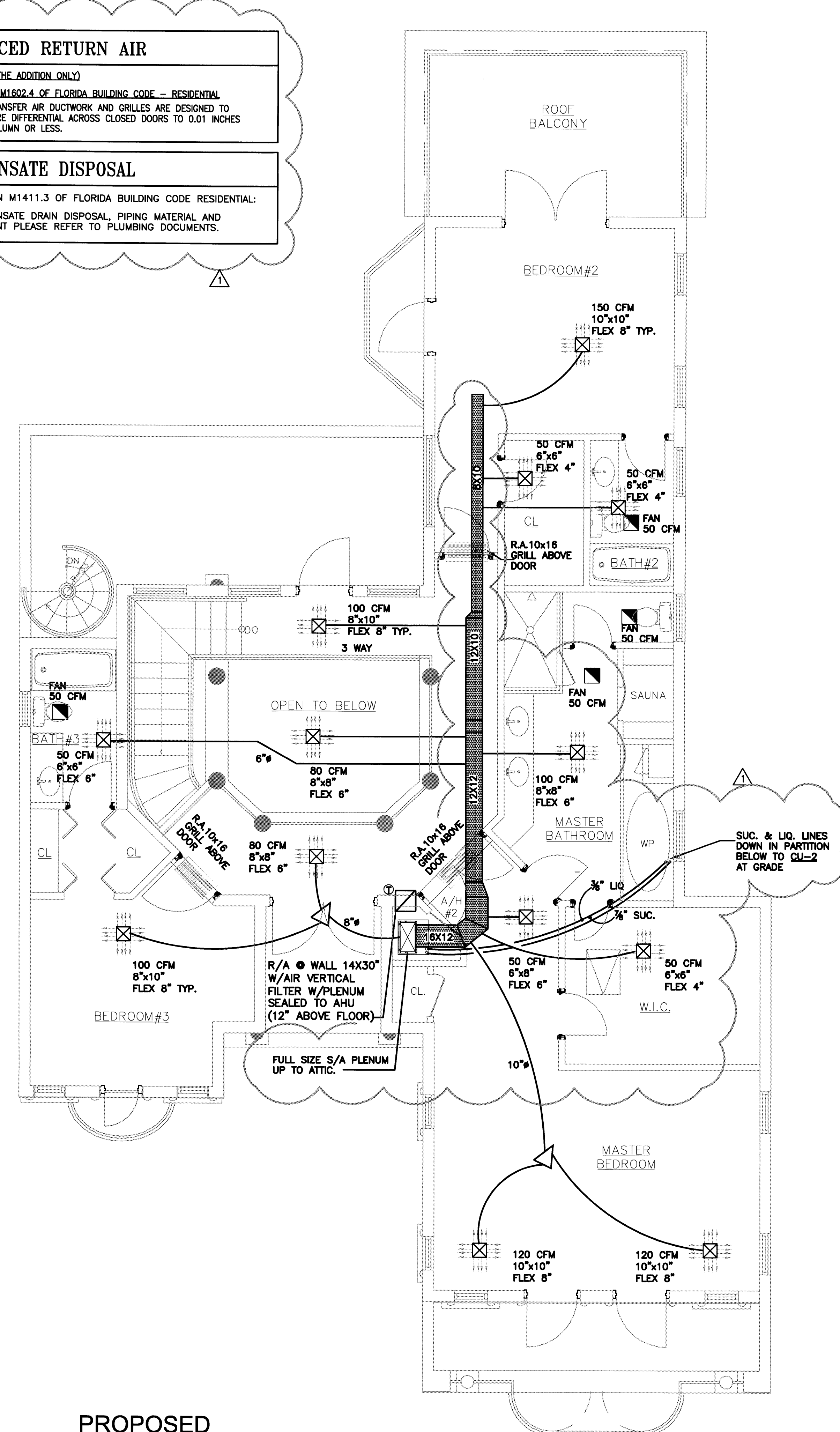
CONDENSATE DISPOSAL

PER SECTION M1411.3 OF FLORIDA BUILDING CODE RESIDENTIAL:
FOR CONDENSATE DRAIN DISPOSAL, PIPING MATERIAL AND
ARRANGEMENT PLEASE REFER TO PLUMBING DOCUMENTS.



PROPOSED
FIRST FLOOR MECHANICAL PLAN

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



PROPOSED
SECOND FLOOR MECHANICAL PLAN

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

PERMIT
SET

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APPROVED BY	DATE
△ CORRECTION-1	04/17/09

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

M-1

SHEET NUMBER

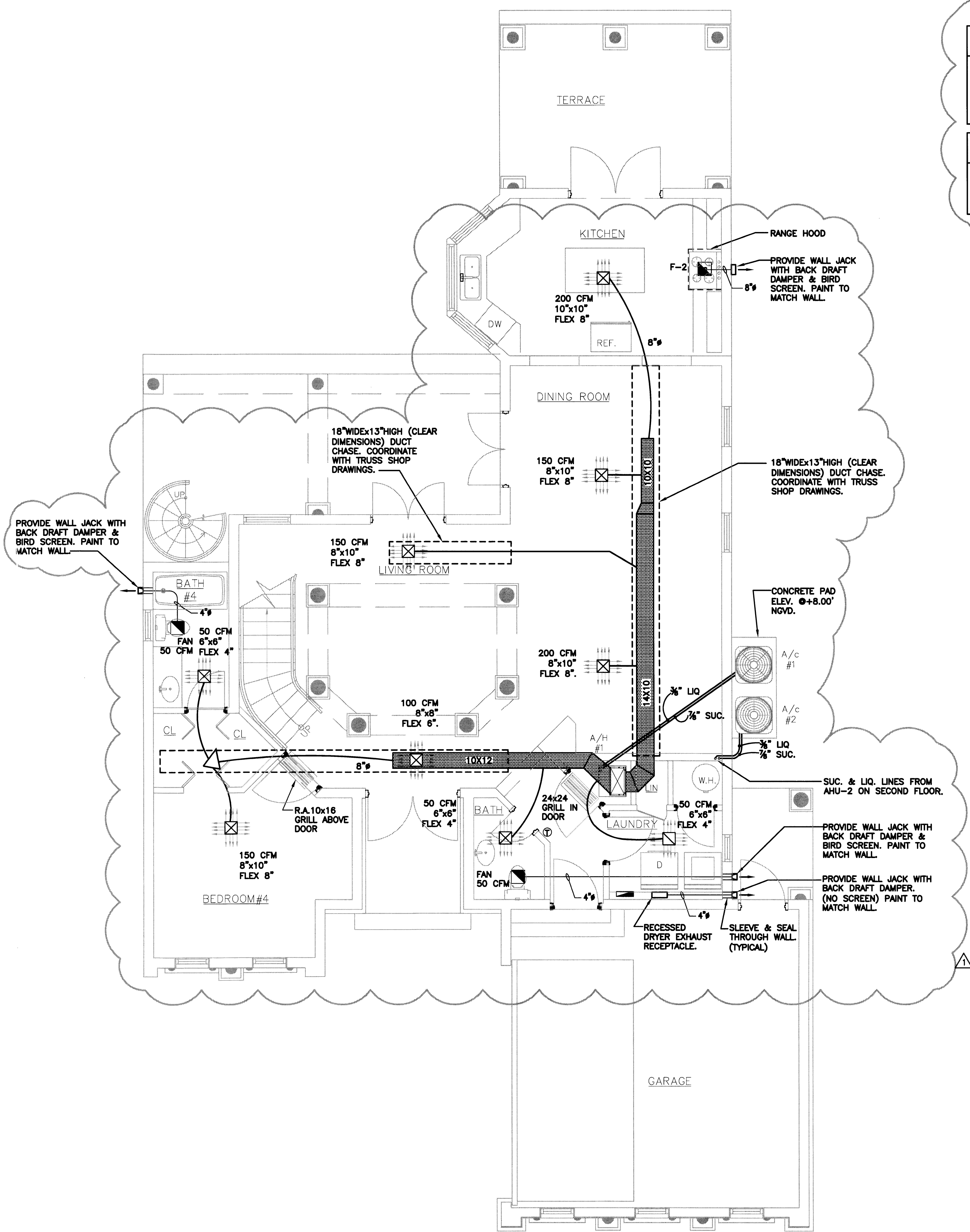
Handwritten signature and date: 5-27-09

BALANCED RETURN AIR

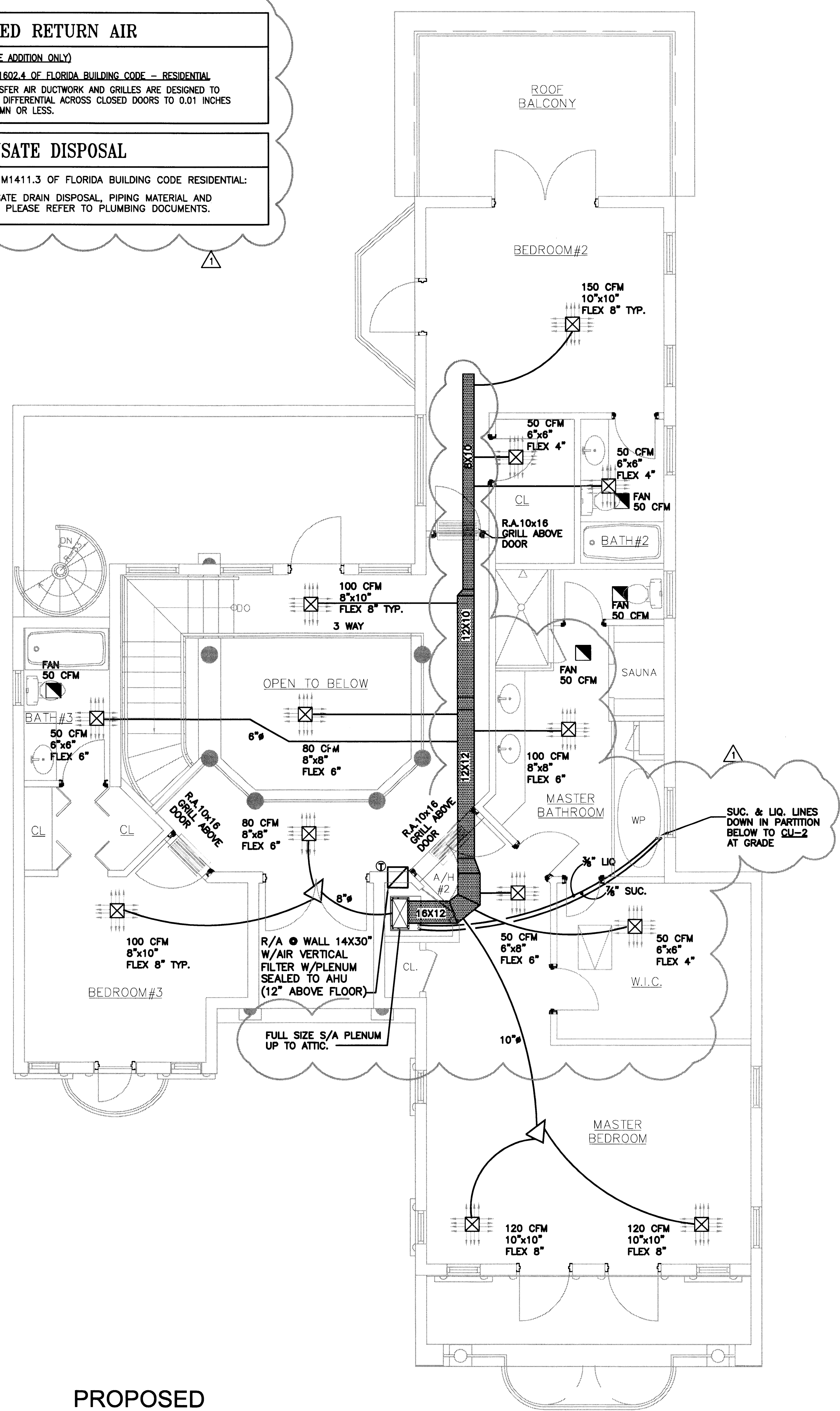
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PROPOSED
FIRST FLOOR MECHANICAL PLAN
SCALE: 1/4" = 1' - 0"



PROPOSED
SECOND FLOOR MECHANICAL PLAN
SCALE: 1/4" = 1' - 0"

PERMIT SET

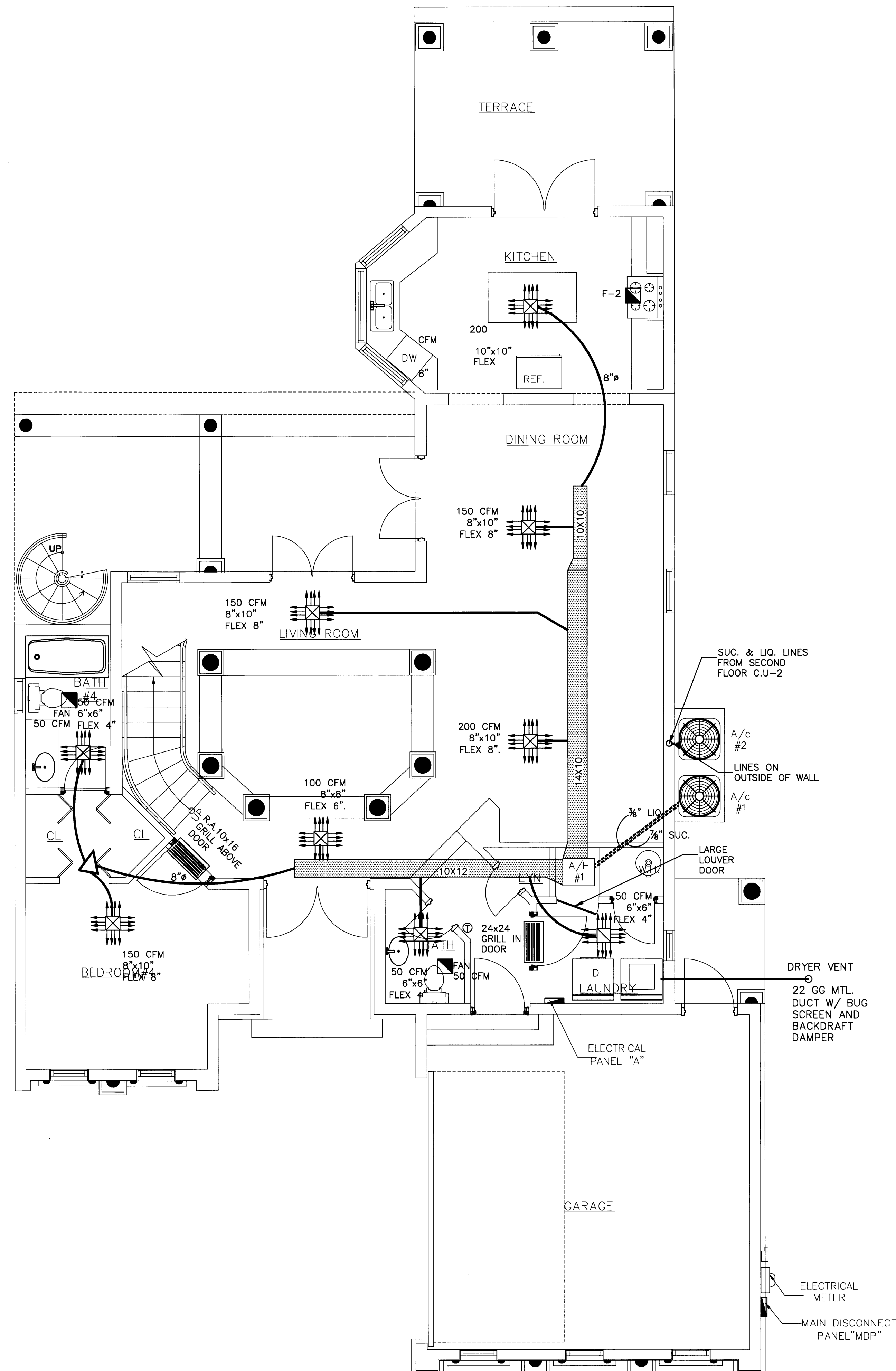
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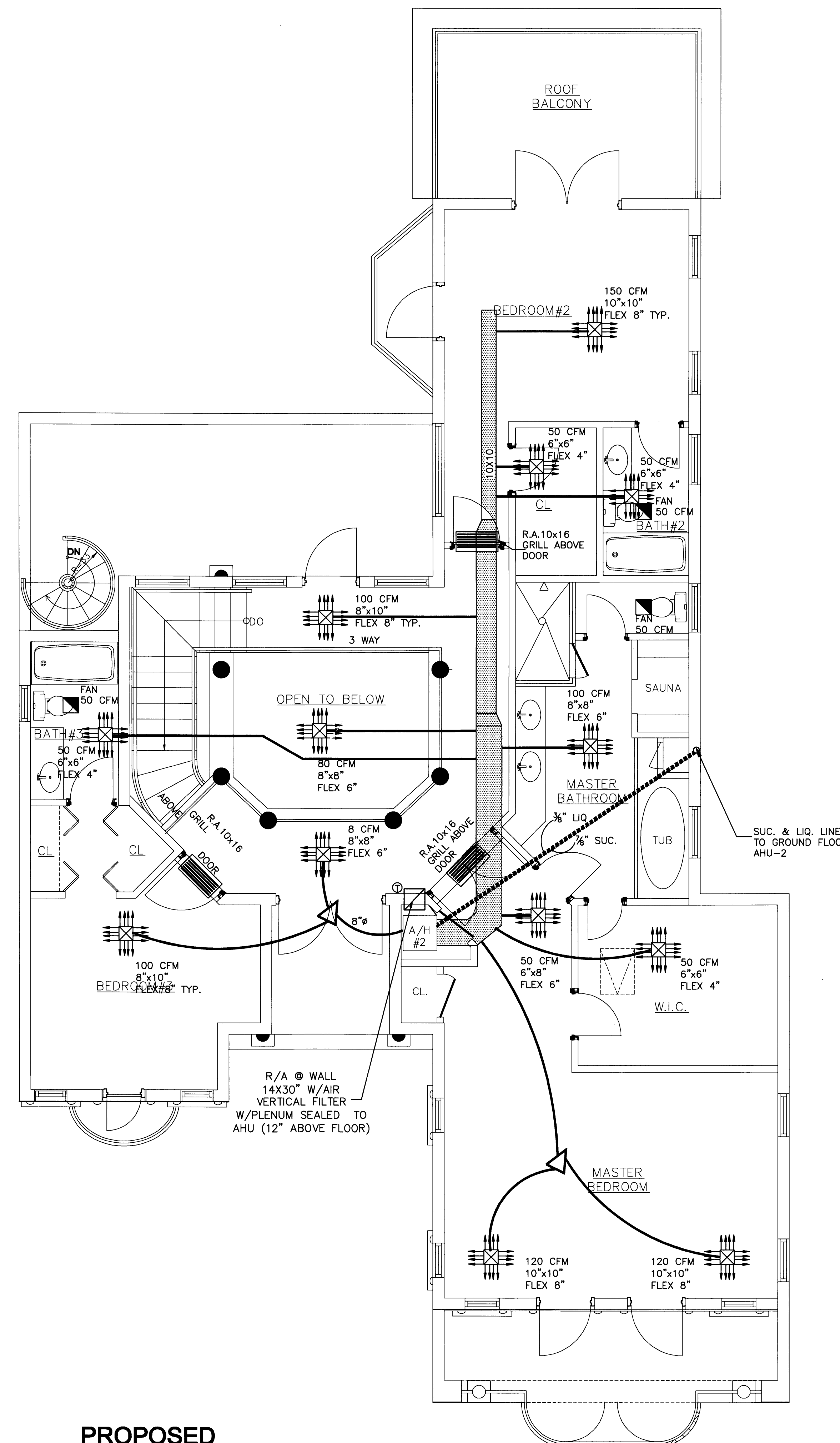
APPROVED BY	DATE
EDWARD A. LANDERS P.E.	04/17/09
CORRECTION-1	

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

M-1
SHEET NUMBER



**PROPOSED
FIRST FLOOR MECHANICAL PLAN**
SCALE: 1/4" = 1' - 0"



**PROPOSED
SECOND FLOOR MECHANICAL PLAN**
SCALE: 1/4" = 1' - 0"

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SET**

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**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

M-1

SHEET NUMBER

Handwritten signature and date: 2/2/09

H.V.A.C. NOTES

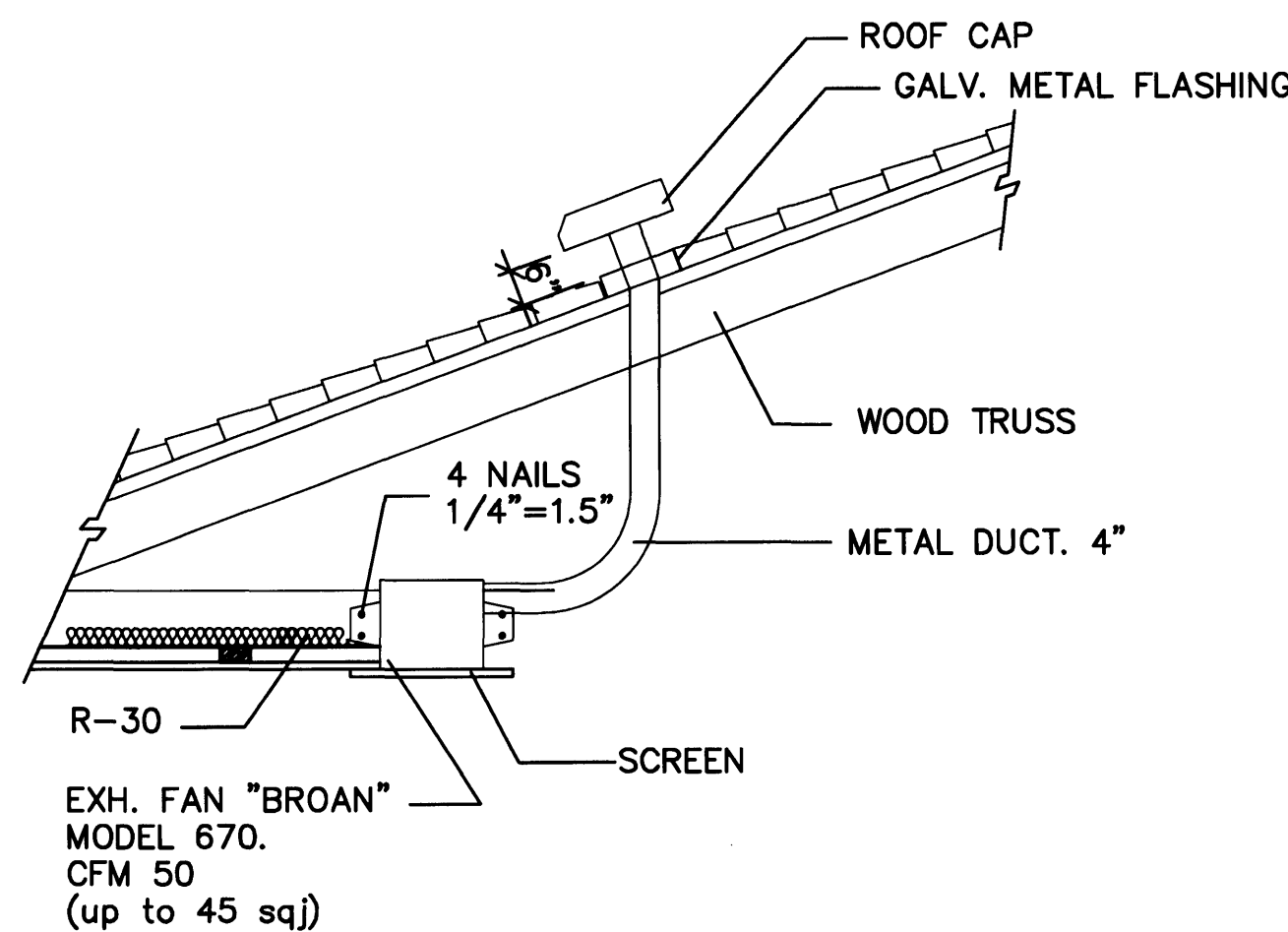
- ALL WORK REFLECTED ON THESE DOCUMENTS ARE IN COMPLIANCE WITH THE 2007 EDITION OF THE "FLORIDA BUILDING CODE-RESIDENTIAL", INCLUDING 2009 SUPPLEMENT.
- CONTRACTOR SHALL WARRANT ALL WORK TO BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE PROJECT.
- BALANCE ALL SYSTEMS TO PROVIDE AIR QUANTITIES AND CAPACITIES AS INDICATED WITH ALL OTHER TRADES.
- ALL WORK SHALL BE FIELD CHECKED BEFORE INSTALLATION AND COORDINATED WITH ALL OTHER TRADES.
- DUCTWORK SHALL CLASS 1 GLASS FIBER DUCTBOARD IN ACCORDANCE WITH S.M.A.S.N.A.'S FIBROUS DUCT CONSTRUCTION STANDARDS.
- PROVIDE VOLUME DAMPERS, TURNING VANES, ETC. IN DUCTWORK PROPER AIR FLOW AND BALANCE. PROVIDE MULTIPLE VANE EXTRACTORS WITH CONTROL RODS AT ALL OUTLETS CONNECTED CLOSER THAN TWO DUCT DIAMETERS TO MAIN SUPPLY DUCT AND WHERE SHOWN ON DRAWINGS.
- FLEXIBLE DUCTS IF USED SHALL BE THE INSULATED TYPE SUPPORTED AND INSTALLED TO AVOID SAGS AND LINKS. ALL FLEXIBLE DUCTS SHALL BE SIMILAR IN LENGTH TO AVOID DISSIMILAR PRESSURE DROPS (MAXIMUM LENGTH 14 FEET).
- REFRIGERANT PIPING SHALL BE SEAMLESS COPPER TYPE "L" HARD OR SOFT DRAWN OR ACR COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT FITTINGS. SOLDER SHALL BE 95/5 APPLIED WITH SUITABLE FLUX.
- INSULATE REFRIGERANT SUCTION PIPING WITH 3/4" ARMAFLEX PREMOULDED PIPE INSULATION (COAT WITH LATEX PAINT WHEN EXPOSED TO WEATHER).
- PROVIDE AIR CONDITIONING UNITS WITH MATCHING HEAT-COOL THERMOSTATS WITH ON-OFF AUTO SUB-BASE SWITCH, FURNISHED BY EQUIPMENT MANUFACTURER.
- PROVIDE ALL NECESSARY INSTRUCTIONS TO THE OWNER FOR OPERATION OF THE SYSTEM INCLUDING OPERATIONS MANUALS.
- PROVIDE ALL NECESSARY SLEEVES BEFORE CONCRETE IS POURED AND COORDINATE LOCATION OF DUCTWORK WITH OTHER TRADES ESPECIALLY TRUSS MANUFACTURER.
- SHOULD A PROBLEM ARISE NOTIFY ARCHITECT.
- ALL SUPPLY GRILLES SHALL BE "AIR GUIDE" OR EQUAL, CURVED BLADE. SEE PERFORMANCE DATA SELECTION PROCEDURE AS RECOMMENDED BY "AIR GUIDE" CORP. (305) 888-1631.
SET 60% OF FINS @ 3/8" SETTING
SET 15% OF FINS @ 5/16" SETTING
SET 25% OF FINS @ 1/2" SETTING

① KITCHEN HOOD VENTED, 7" ROUND DUCT, EQUAL TO G.E. JV322S. ARTISTIC HOOD TO BE DETERMINED BY OWNER 150 CFM MIN. OUTPUT

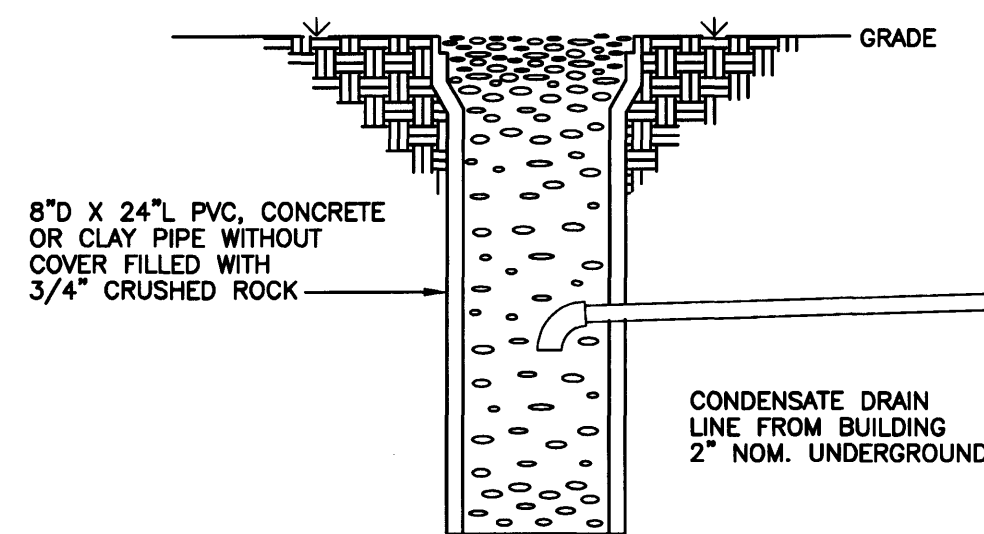
- F-1 "NUTONE" MODEL No. QT80 80 CFM BATHFAN, 6" DUCT THRU ROOF
- F-2 KITCHEN HOOD VENTED, 8" ROUND DUCT, THRU ROOF, EQUAL TO WOLF ARTISTIC HOOD MIN 400 CFM

HVAC DESIGN REQUIRES:	YES	NO
DUCT SMOKE DETECTOR		✓
FIRE DAMPER(S)		✓
SMOKE DAMPER(S)		✓
FIRE RATED ENCLOSURE		✓
FIRE RATED ROOF ASSEMBLY		✓
FIRE STOPPING		✓
SMOKE CONTROL		✓

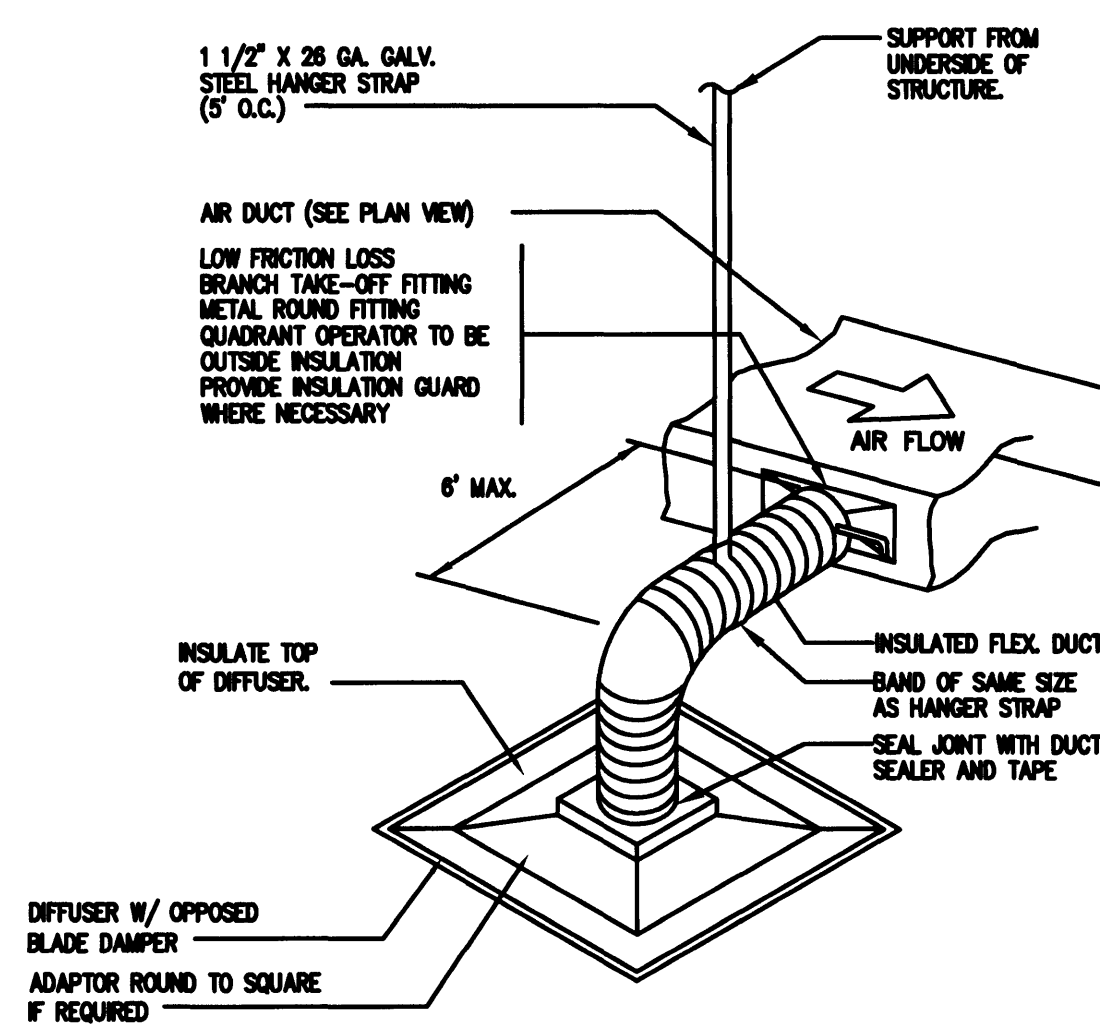
FAN SCHEDULE												
FAN NO.	MANUFACTURER	MODEL #	FAN TYPE	C.F.M.	S.P.	H.P.	R.P.M.	VOLTS	DRIVE	SONES	LOCATION	SERVICE
EF-1	broan	4C377	CEILING	60	--	--	--	120-1-60	DIRECT	3.5	CEILING	TOILETS
ACCESSORIES: A DACK DRAFT DAMPER OR APPROVAL EQUAL												



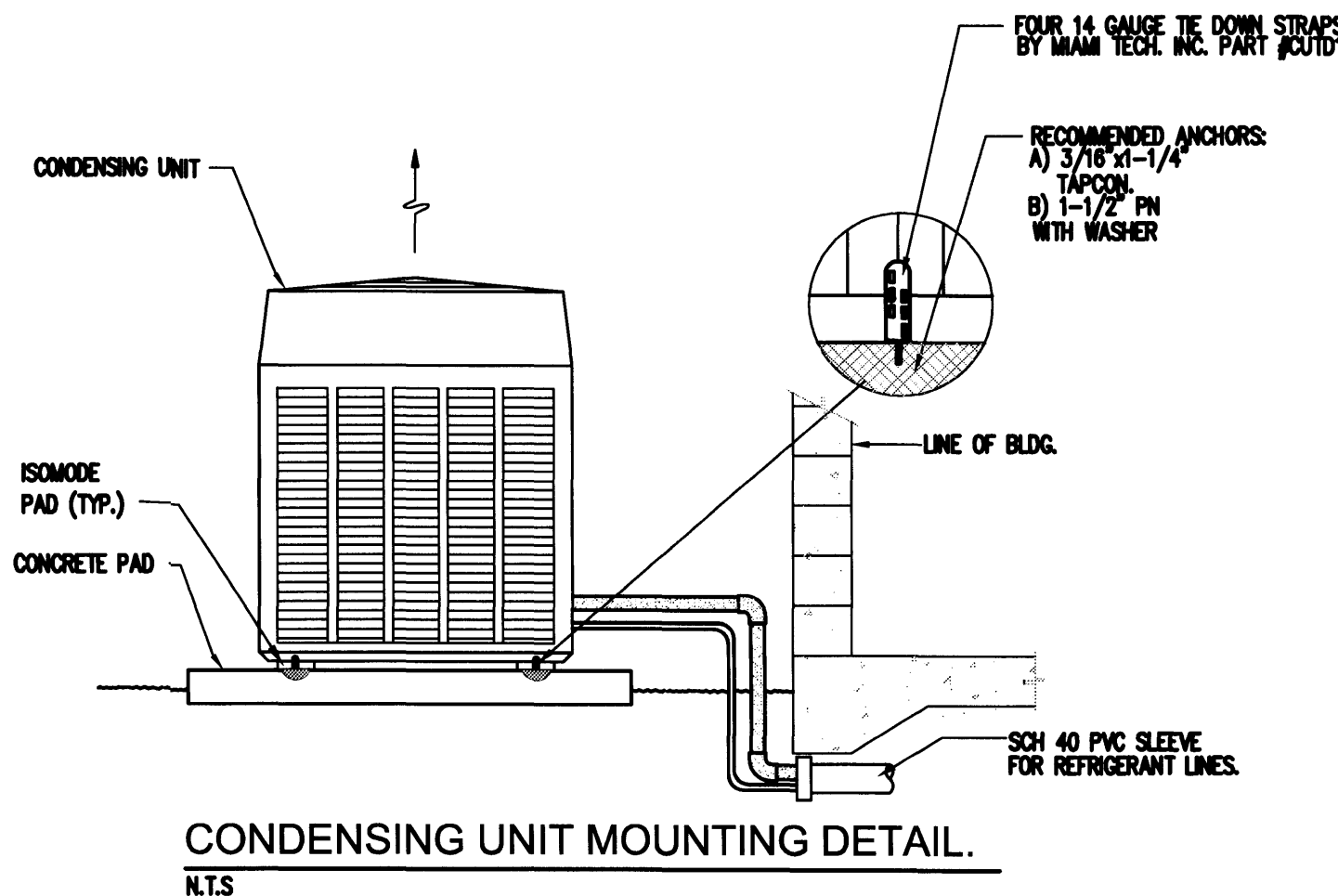
EXH. FAN ROOF INSTALLATION



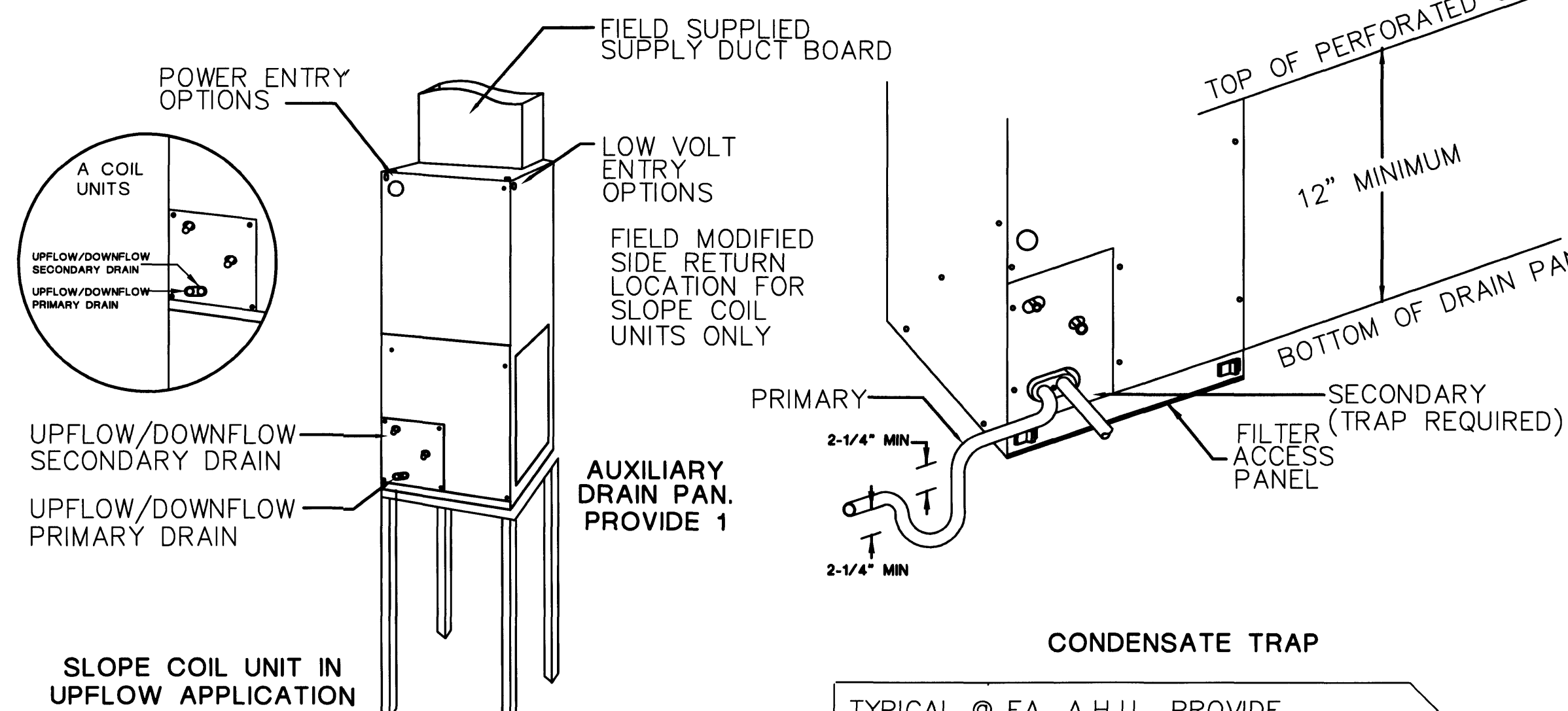
A/C CONDENSATE DRYWELL DETAIL



FLEXIBLE DUCT CONNECTION DETAIL



CONDENSING UNIT MOUNTING DETAIL.



SLOPE COIL UNIT IN UPFLOW APPLICATION

TYP. A.C. STAND
TYP. A.H.U. DETAIL

A.H.U. PROVIDE PLENUM BOX BELOW FOR R/A

MIN. CLEARANCE OF 4" IS REQ. BETWEEN UNIT AND WALL AS PER FBC CHAP.13, SEC. 610.1.ABC.3.0.3 AND FMC SEC. 603.1.3

- F-1 "NUTONE" MODEL No. QT80 80 CFM BATHFAN, METAL DUCT TO EXTERIOR.
- F-2 KITCHEN HOOD VENTED, 8" ROUND METAL DUCT, EQUAL TO WOLF ARTISTIC HOOD MIN 400 CFM

SPLIT AIRCONDITIONING SYSTEMS SCHEDULE			
UNIT DESIGNATION	AHU #1	AHU #2	
TYPE HORZ./VERT.	UP FLOOR VERT.	UP FLOOR VERT.	
AREA SERVED	FIRST FLOOR	SECOND FLOOR	
SUPPLY AIR CFM	1,100	1,100	
OUTSIDE AIR CFM	--	--	
E.S.P. IN W.G.	.40	.40	
H.P. OR K.W.	1/2 HP	1/2 HP	
ELECT. CHARACTERISTICS V/PH/Hz	208/230/1/60	208/230/1/60	
KW =	5.0	5.0	
HEAT TRIP	RXBH-24A10J	RXBH-24A10J	
ENT. AIR TEMP. °F DB/WB	80/67	80/67	
NOMINAL TONS.	3.0	3.0	
DIMENSIONS - WXLXH - INCHES	31-5/8X31-5/8X35-3/8	31-5/8X31-5/8X35-3/8	
OPERATING WEIGHT LBS.	245	245	
UNIT MODEL NO.	14AJL6004	14AJL6004	
UNIT DESIGNATION	CU #1	CU #2	
REFRIGERANT	22	22	
AMBIENT TEMP. °F DB/WB	95/80	95/80	
LATENT	11,150	11,150	
SENSIBLE	24,850	24,850	
TOTAL FLA. (FULL LOAD AMPS)	37.8	37.8	
ELECT. CHARACTERISTICS V/PH/Hz	208/230/1/60	208/230/1/60	
MIN. CIRC. AMPS	47.0	47.0	
DIMENSIONS - WXLXH - INCHES	50x31x36	50x31x36	
OPERATING WEIGHT LBS	92	92	
MODEL NO.	A-410A	A-410A	
DRAINING PAN **	MIN. 53"x37"x1.5"	MIN. 53"x37"x1.5"	
SYSTEM SEER (SEER)	13.5	13.5	
MANUFACTURER	"RHEEM"	"RHEEM"	

LEGEND

	SHEET METAL DUCT SEE NOTES
	FLEXIBLE DUCT, CLASS 1, R=6
	CEILING GRILLE W/ THROW PATTERN AS SHOWN ON DRAWING
	RETURN AIR GRILLE
	SINGLE STAGE HEAT/COOL THERMOSTAT
	HUMIDISTAT
	REFRIGERANT PIPING - SEE SPLIT SYSTEM SCHEDULE FOR SIZES
	AIR HANDLING UNIT
	CUBIC FEET PER MINUTE
	CEILING GRILLE
	CONDENSING UNIT
	RETURN AIR GRILLE
	SIDEWALL REGISTER

Edward A. LANDERS, P.E.
CONSULTING ENGINEERS
7900 NW 14TH STREET, SUITE 200 MIAMI LAKES FL 33181
Tel. (305) 823-3938
Fax (305) 823-9355

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APPROVED BY	DATE
Δ CORRECTION-2	05/19/09

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

M-2

SHEET NUMBER

H.V.A.C. NOTES

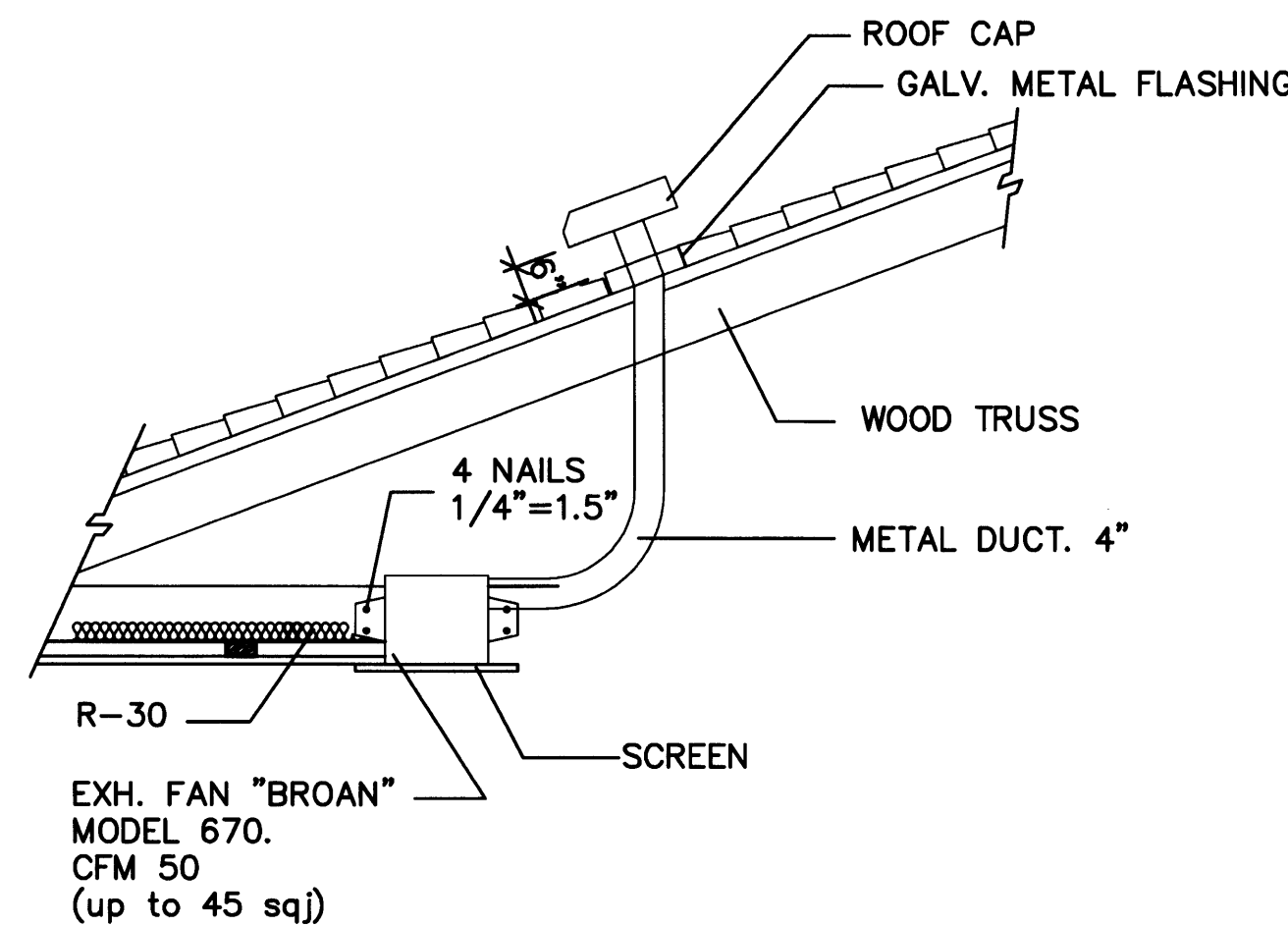
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- PROVIDE VOLUME DAMPERS, TURNING VANES, ETC. IN DUCTWORK PROPER SIR FLOW AND BALANCE. PROVIDE MULTIPLE VANE EXTRACTORS WITH CONTROL RODS AT ALL OUTLETS CONNECTED CLOSER THAN TWO DUCT DIAMETERS TO MAIN SUPPLY DUCT AND WHERE SHOWN ON DRAWINGS.
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- REFRIGERANT PIPING SHALL BE SEAMLESS COPPER TYPE "L" HARD OR SOFT DRAWN OR ACR COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT FITTINGS. SOLDER SHALL BE 95/5 APPLIED WITH SUITABLE FLUX.
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- ALL SUPPLY GRILLES SHALL BE "AIR GUIDE" OR EQUAL, CURVED BLADE, SEE PERFORMANCE DATA SELECTION PROCEDURE AS RECOMMENDED BY "AIR GUIDE" CORP. (305) 888-1631.
SET 60% OF FINS @ 3/8" SETTING
SET 15% OF FINS @ 5/16" SETTING
SET 25% OF FINS @ 1/2" SETTING

☐ KITCHEN HOOD VENTED, 7" ROUND DUCT, EQUAL TO G.E. JY322S. ARTISTIC HOOD TO BE DETERMINED BY OWNER 150 CFM MIN. OUTPUT

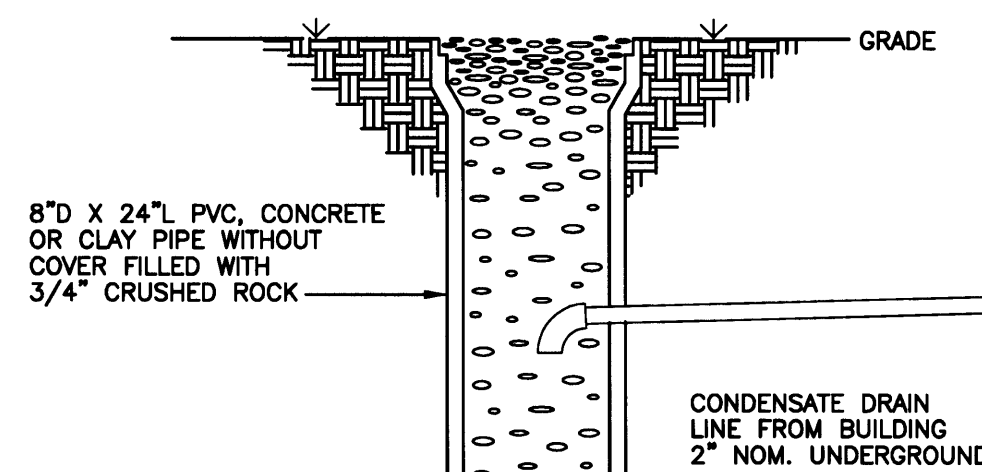
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HVAC DESIGN REQUIRES:	YES	NO
DUCT SMOKE DETECTOR		✓
FIRE DAMPER(S)		✓
SMOKE DAMPER(S)		✓
FIRE RATED ENCLOSURE		✓
FIRE RATED ROOF ASSEMBLY		✓
FIRE STOPPING		✓
SMOKE CONTROL		✓

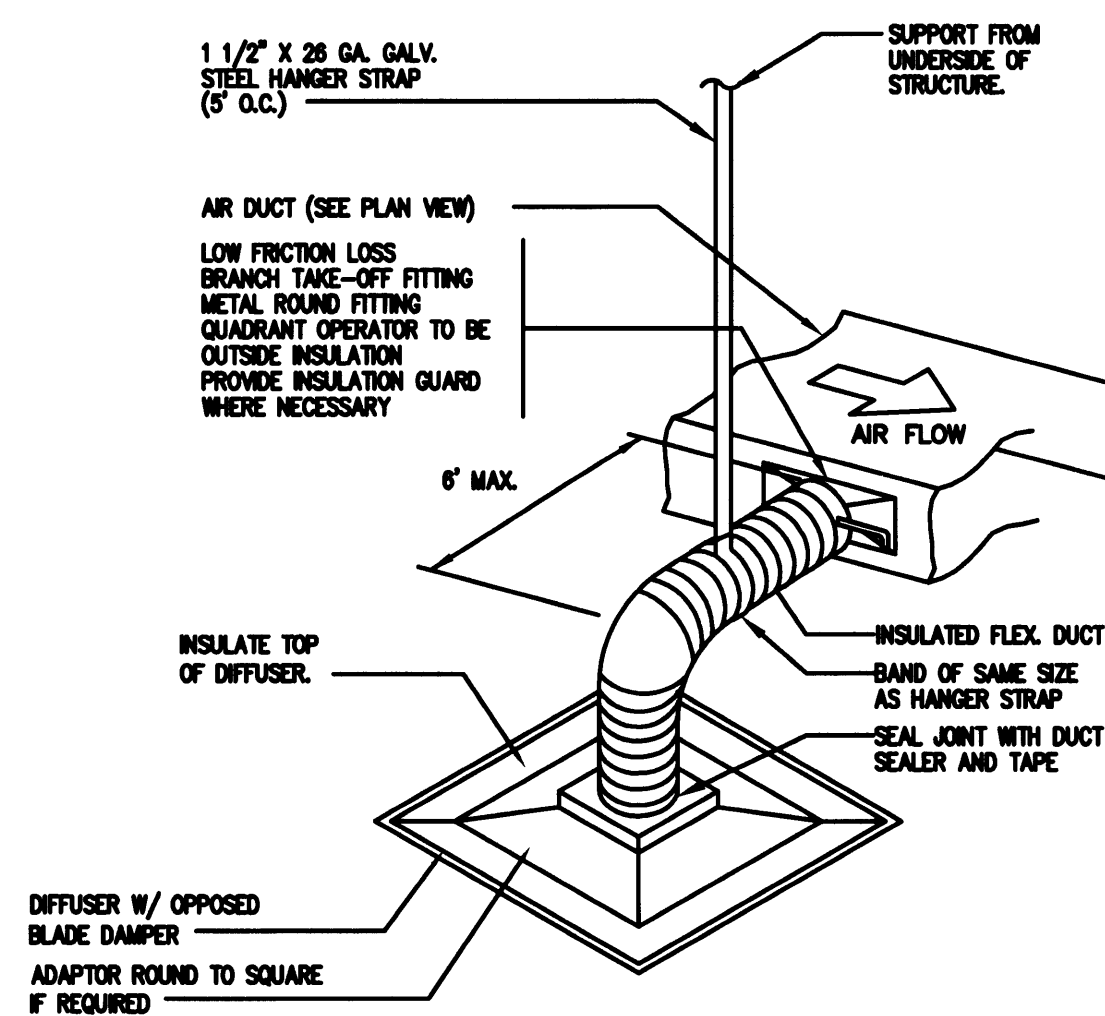
FAN SCHEDULE											
FAN NO.	MANUFACTURER	MODEL #	FAN TYPE	C.F.M.	S.P.	H.P.	R.P.M.	VOLTS	DRIVE	SONES	LOCATION
EF-1	broan	4C377	CEILING	80	---	---	---	120-1-60	DIRECT	3.5	CEILING
ACCESSORIES:											
A DACK DRAFT DAMPER OR APPROVAL EQUAL											



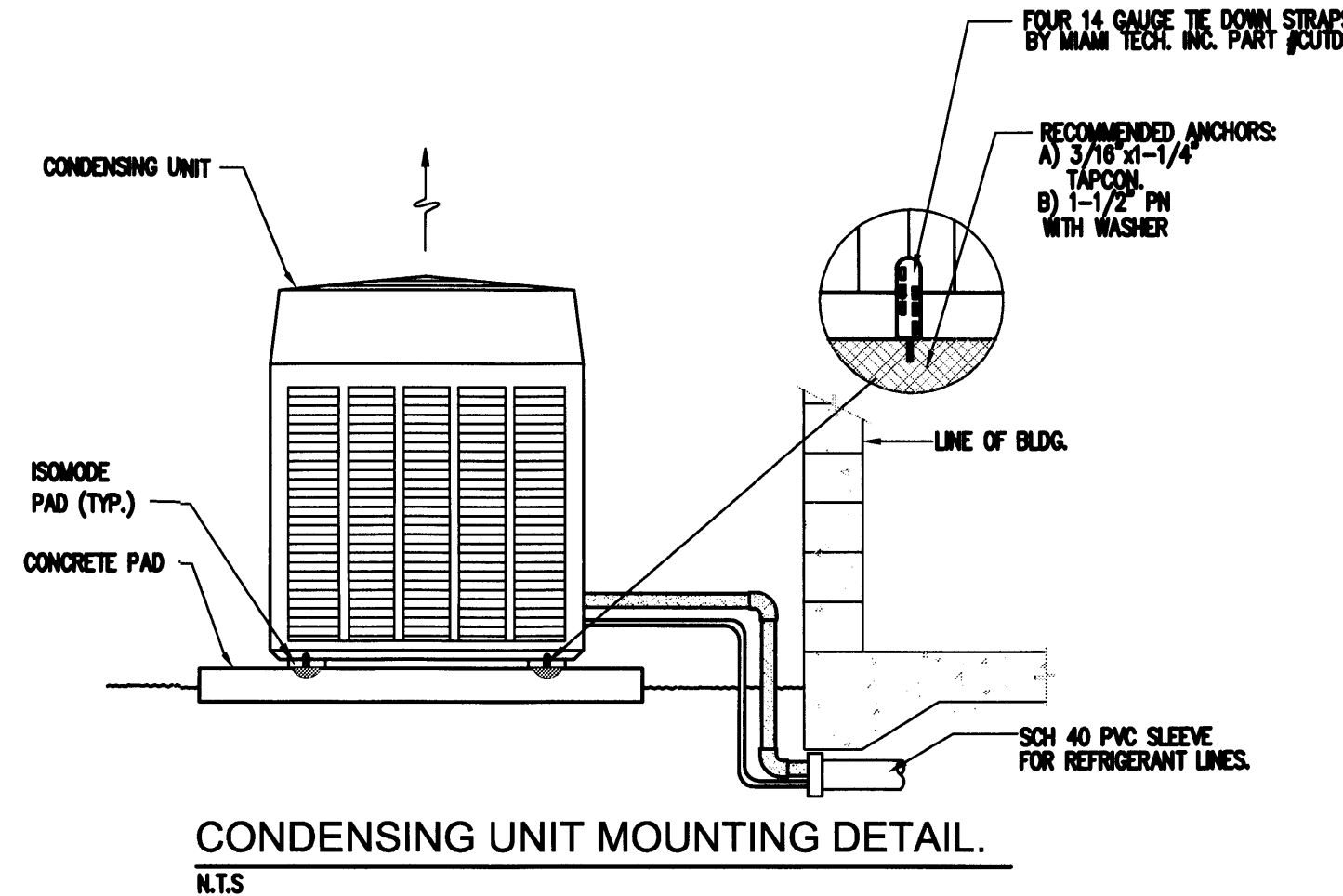
EXH. FAN ROOF INSTALLATION



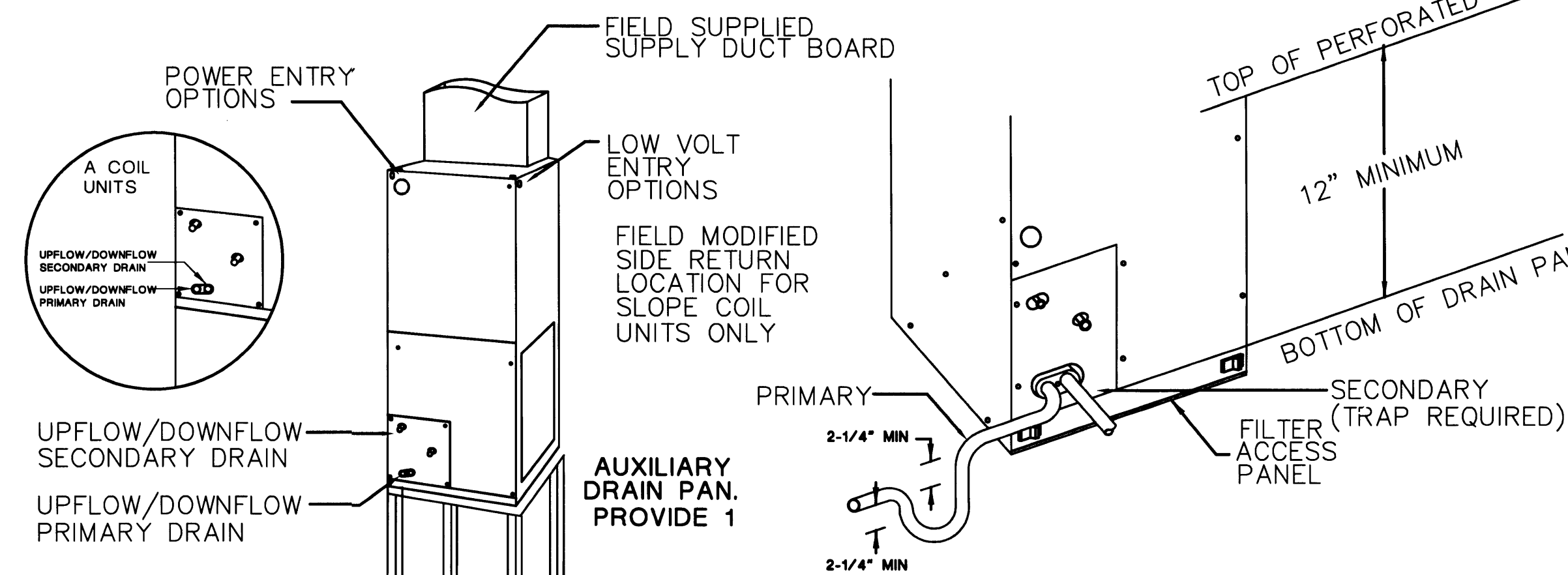
A/C CONDENSATE DRYWELL DETAIL



FLEXIBLE DUCT CONNECTION DETAIL



CONDENSING UNIT MOUNTING DETAIL.



SLOPE COIL UNIT IN UPFLOW APPLICATION

TYP. A.C. STAND
TYP. A.H.U. DETAIL

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SPLIT AIRCONDITIONING SYSTEMS SCHEDULE		
UNIT DESIGNATION	AHU #1	AHU #2
TYPE HORZ./VERT.	UP FLOOR VERT.	UP FLOOR VERT.
AREA SERVED	FIRST FLOOR	SECOND FLOOR
SUPPLY AIR CFM	1,100	1,100
OUTSIDE AIR CFM	---	---
E.S.P. IN W.G.	.40	.40
H.P. OR K.W.	1/2 HP	1/2 HP
ELECT. CHARACTERISTICS V/PH/Hz	208/230/1/60	208/230/1/60
KW =	5.0	5.0
HEAT TRIP	RXBH-24A10J	RXBH-24A10J
ENT. AIR TEMP. °F DB/WB	80/67	80/67
NOMINAL TONS.	3.0	3.0
DIMENSIONS - WXLXH - INCHES	31-5/8X31-5/8X35-3/8	31-5/8X31-5/8X35-3/8
OPERATING WEIGHT LBS.	245	245
UNIT MODEL NO.	14AJL6004	14AJL6004
AIR HANDLING UNIT		
UNIT DESIGNATION	CU #1	CU #2
REFRIGERANT	22	22
AMBIENT TEMP. °F DB/WB	95/80	95/80
LATENT	11,150	11,150
SENSIBLE	24,850	24,850
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MIN. CIRC. AMPS	47.0	47.0
DIMENSIONS - WXLXH - INCHES	50x31x36	50x31x36
OPERATING WEIGHT LBS	92	92
MODEL NO.	A-410A	A-410A
DRAINING PAN **	MIN. 53"x37"x1.5"	MIN. 53"x37"x1.5"
SYSTEM SEER (SEER)	13.5	13.5
MANUFACTURER	"RHEEM"	"RHEEM"
CONDENSING UNIT		

LEGEND

	SHEET METAL DUCT SEE NOTES
	FLEXIBLE DUCT, CLASS 1, R=6
	CEILING GRILLE W/ THROW PATTERN AS SHOWN ON DRAWING
	RETURN AIR GRILLE
	SINGLE STAGE HEAT/COOL THERMOSTAT
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	REFRIGERANT PIPING - SEE SPLIT SYSTEM SCHEDULE FOR SIZES
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	CUBIC FEET PER MINUTE
	CEILING GRILLE
	CONDENSING UNIT
	RETURN AIR GRILLE
	SIDEWALL REGISTER

AHU
CFM
CG
CU
RAG
SR

TYPICAL @ EA. A.H.U., PROVIDE "SAFE-T-SWITCH" CONDENSATION CONTROL SYSTEM INSIDE THE PRIMARY DRAIN THAT SHUTS OFF THE SYSTEM TO DETECT AND PREVENT CLOGGING.

12" MINIMUM FROM TOP OF PERFORATED CAP TO BOTTOM OF DRAIN PAN.

AHU-W/H/O 17 1/2 /42 1/2 /21 3/4 WEIGHT 92 LBS POSITION VERTICAL-UP FROM HEATER-4.7 KW RXBH 17A05J MAX CIR BRKR - 30 A

PERMIT SET

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APPROVED BY	DATE

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

M-2

SHEET NUMBER

Edward A. Landers
4-28-09

H.V.A.C. NOTES

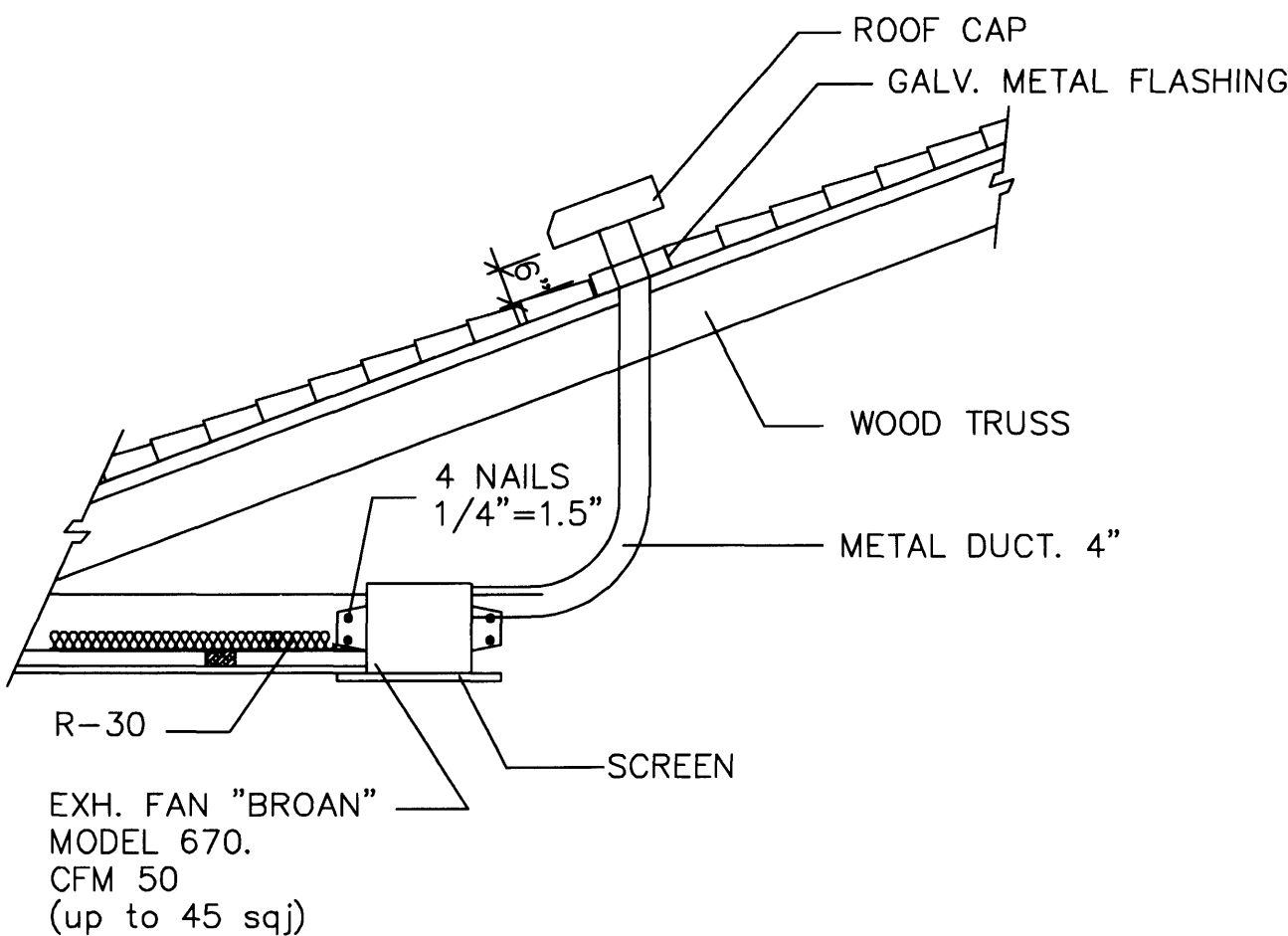
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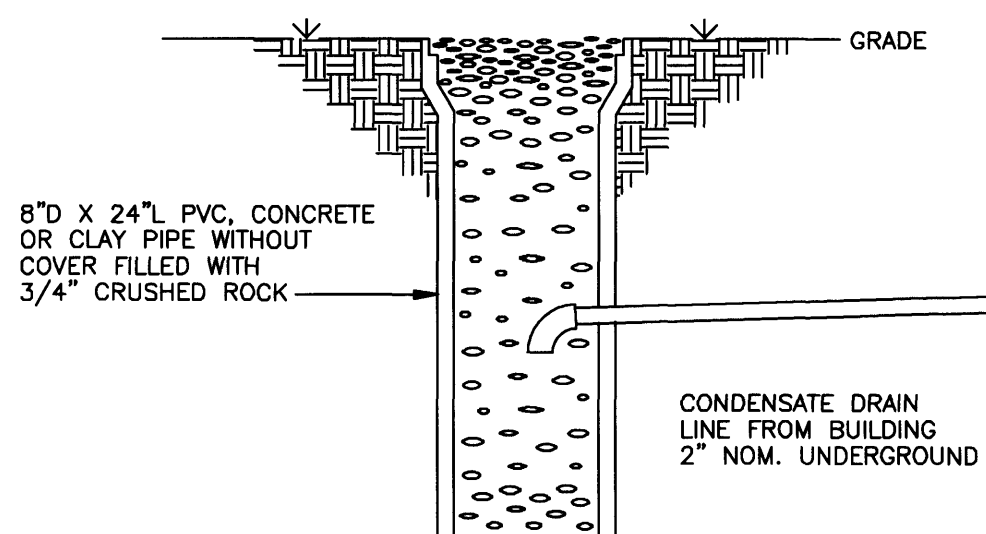
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HVAC DESIGN REQUIRES:	YES	NO
DUCT SMOKE DETECTOR		✓
FIRE DAMPER(S)		✓
SMOKE DAMPER(S)		✓
FIRE RATED ENCLOSURE		✓
FIRE RATED ROOF ASSEMBLY		✓
FIRE STOPPING		✓
SMOKE CONTROL		✓

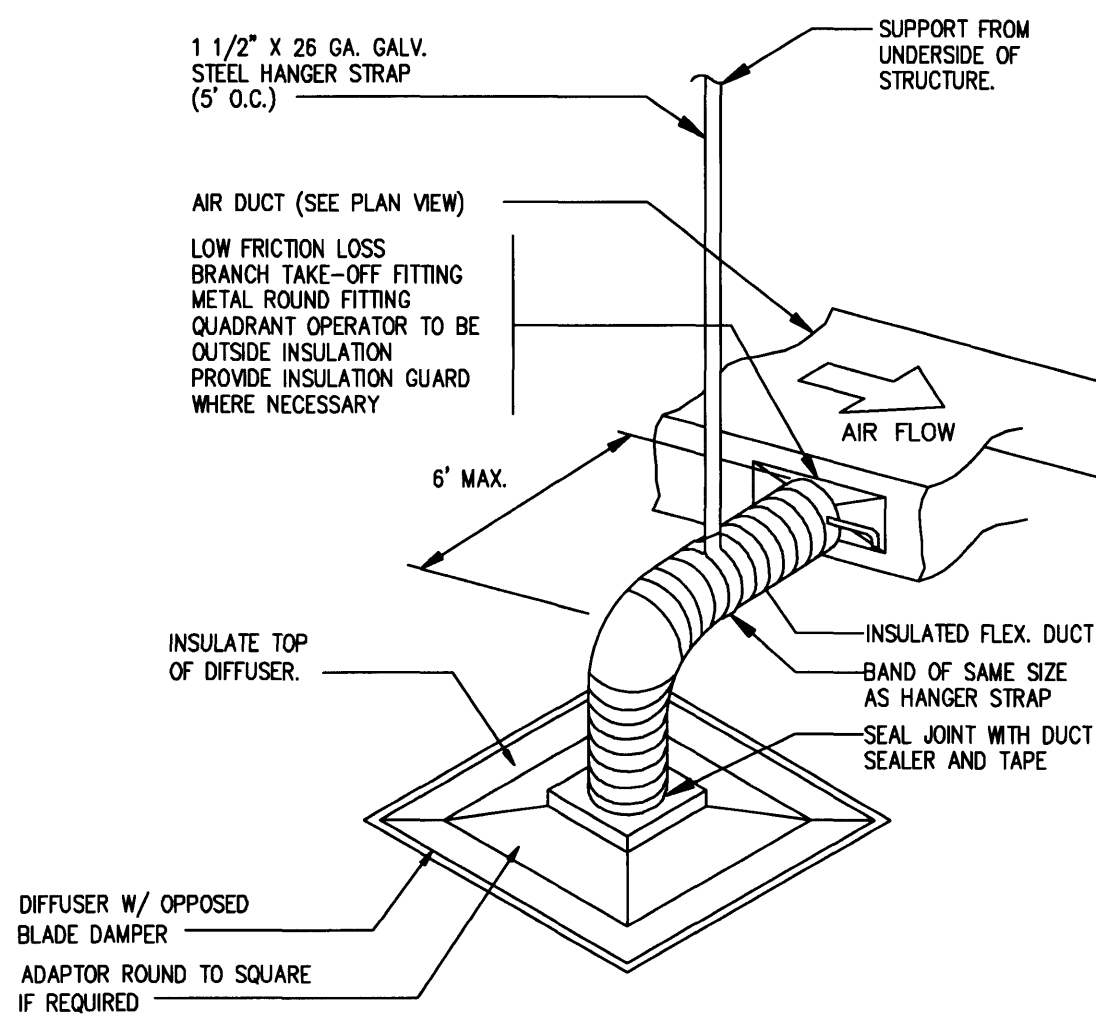
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ACCESSORIES:											
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A DACK DRAFT DAMPER											



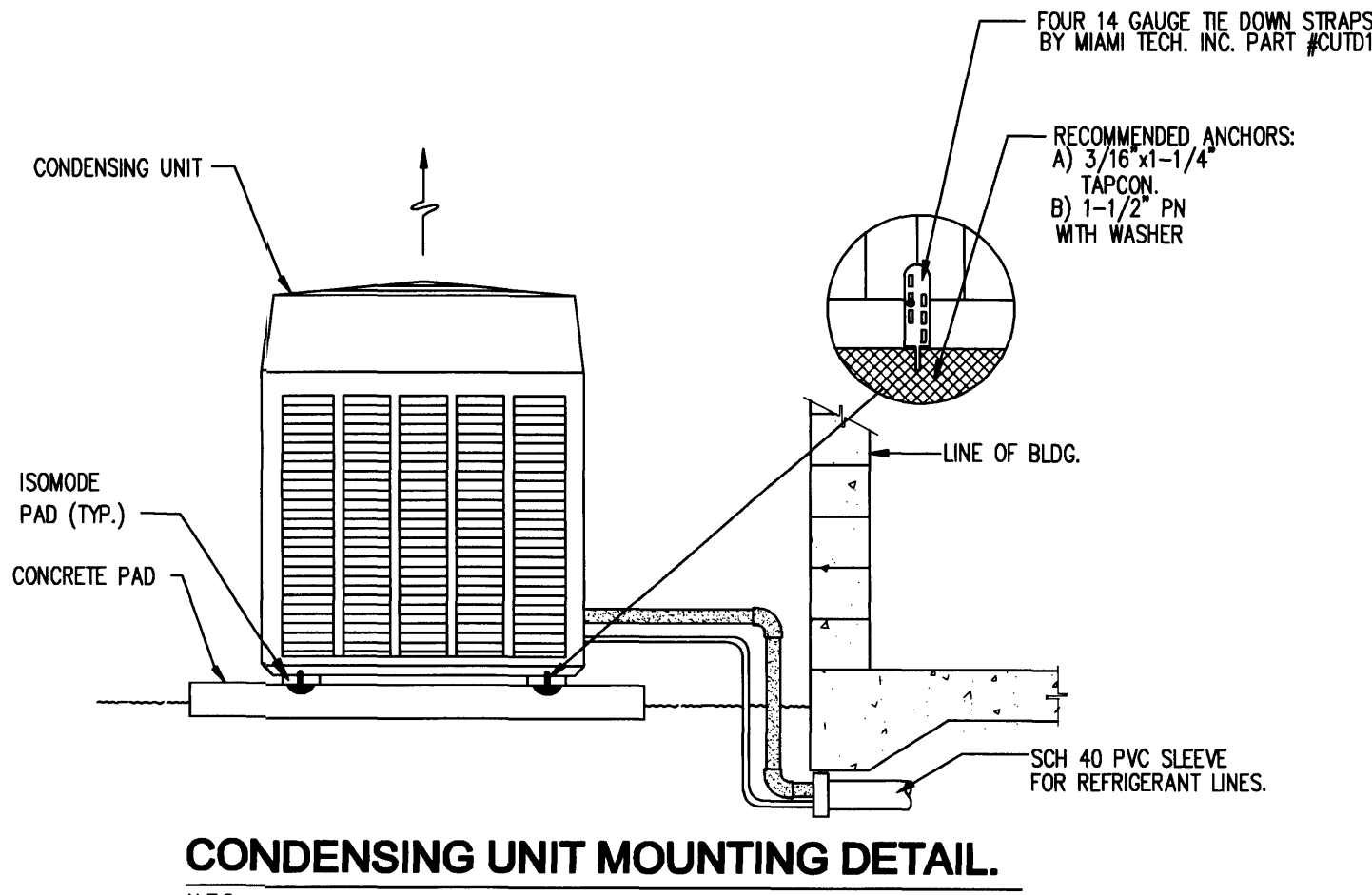
EXH. FAN ROOF INSTALLATION



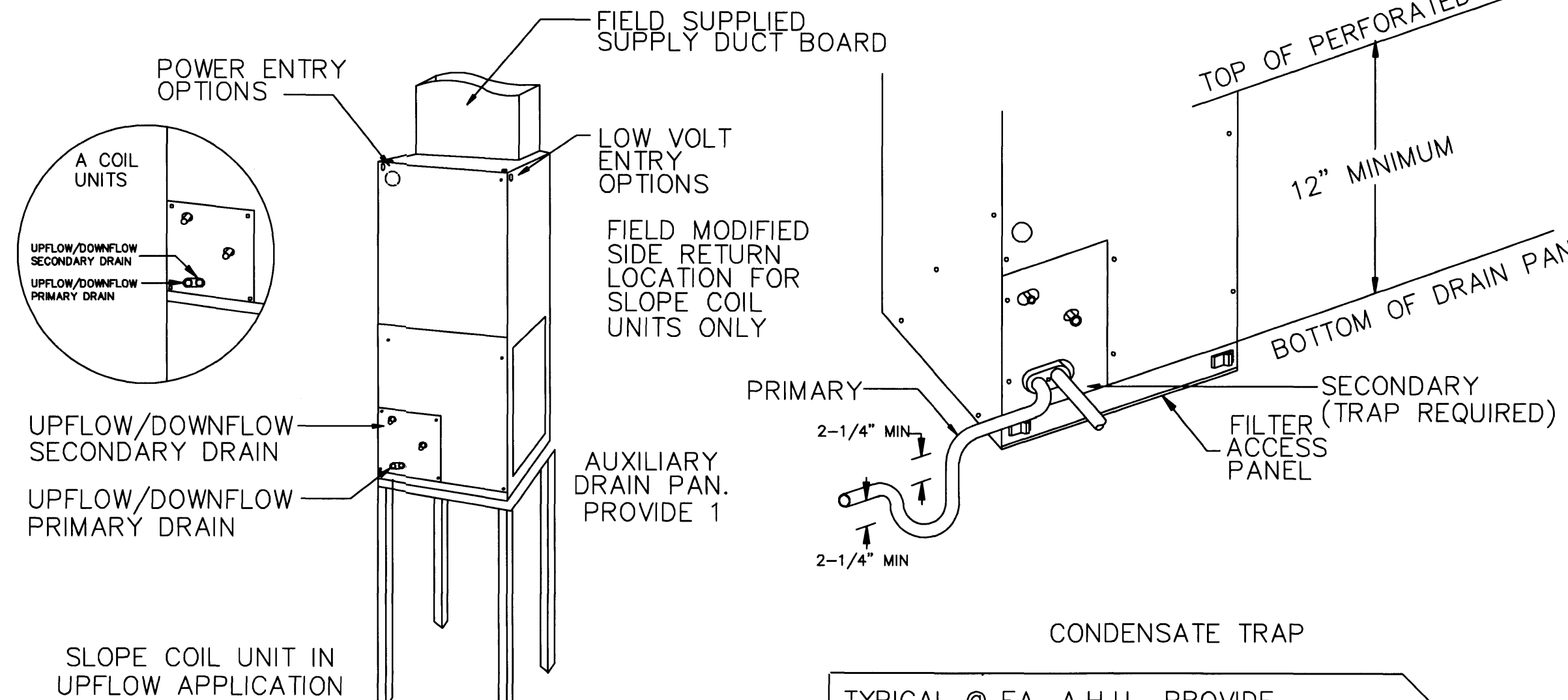
A/C CONDENSATE DRYWELL DETAIL



FLEXIBLE DUCT CONNECTION DETAIL



CONDENSING UNIT MOUNTING DETAIL.



TYP. A.H.U. DETAIL

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UNIT DESIGNATION	AHU #1	AHU #2
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OUTSIDE AIR CFM	150	150
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H.P. OR K.W.	1/2 HP	1/2 HP
ELECT. CHARACTERISTICS V/PH/HZ	208/230/1/60	208/230/1/60
KW =	10.0	10.0
HEAT TRIP	RXBH-24A10J	RXBH-24A10J
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NOMINAL TONS.	3.0	3.0
DIMENSIONS - WXLXH - INCHES	31-5/8X31-5/8X35-3/8	31-5/8X31-5/8X35-3/8
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UNIT MODEL NO.	14AJL6004	14AJL6004
UNIT DESIGNATION	CU #1	CU #2
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OPERATING WEIGHT LBS	92	92
MODEL NO.	A-410A	A-410A
DRAINING PAN **	MIN. 53"x37"x1.5"	MIN. 53"x37"x1.5"
SYSTEM SEER (SEER)	13.5	13.5
MANUFACTURER	"RHEEM"	"RHEEM"

LEGEND

- SHEET METAL DUCT
— SEE NOTES
— FLEXIBLE DUCT, CLASS 1, R=6
— CEILING GRILLE W/ THROW PATTERN AS SHOWN ON DRAWING
— RETURN AIR GRILLE
— SINGLE STAGE HEAT/COOL THERMOSTAT
— HUMIDISTAT
— REFRIGERANT PIPING - SEE SPLIT SYSTEM SCHEDULE FOR SIZES
— AIR HANDLING UNIT
— CUBIC FEET PER MINUTE
— CEILING GRILLE
— CONDENSING UNIT
— RETURN AIR GRILLE
— SIDEWALL REGISTER

PERMIT SET

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APPROVED BY	DATE

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

M-2

SHEET NUMBER

GENERAL NOTES

- 1- FOR EXACT LOCATION / ARRANGEMENT AND MOUNTING HEIGHT OF ALL FIXTURES AND WIRING DEVICES COORDINATE WITH OWNER, ARCHITECT AND MILLWORK SHOP DRAWINGS.
 - 2- CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MATERIAL NECESSARY FOR A COMPLETE AND OPERATIONAL INSTALLATION.
 - 3- CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL ELECTRICAL APPURTENANCES, EQUIPMENT, ETC... PRIOR TO INSTALLATION.
 - 4- CONTRACTOR SHALL VERIFY ALL ELECTRICAL REQUIREMENTS FOR ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION.
 - 5- ALL LIGHT FIXTURES ARE TO BE SELECTED BY OWNER / ARCHITECT.
 - 6- ALL EXTERIOR ELECTRICAL OUTLETS SHALL BE WEATHER PROOF (NEMA 3R) J-BOX & COVER. INSTALL 18" ABOVE GRADE OR PLANTER.
 - 7- COORDINATE EXACT LOCATION OF ALL EQUIPMENT, DATA & POWER DEVICES WITH OWNER, ARCHITECT AND EQUIPMENT SUPPLIER, PRIOR TO ROUGH-IN OF ALL RELATED APPURTENANCES.
 - 8- ALL LIGHT FIXTURES, APPLIANCES, OUTLETS AND WIRING DEVICES LOCATION AS DETERMINED BY OWNER / ARCHITECT.
 - 9- ALL LIGHT SWITCHES ARE DIMMER TYPE UNLESS NOTED OTHERWISE. LOCATION AND STYLE AS DETERMINED BY OWNER / ARCHITECT.
 - 10- ALL INTERIOR AND EXTERIOR STAIRWAYS AS DESIGNED MEET OR EXCEED ILLUMINATION LEVEL OF 1 FOOT-CANDLE AS REQUIRED BY FBC RESIDENTIAL R303.6.
- (*) FUSE TO BE PROVIDED AS PER MANUFACTURER'S RECOMMENDATIONS.

CONSTRUCTION NOTES

- 1- ALL LIGHTING FIXTURES SHALL BE APPROVED BY TESTING AGENCY AND LISTED FOR THEIR USE.
- 2- ALL JUNCTION BOXES SHALL BE RATED FOR THEIR USE.
- 3- ALL RECEPTACLES IN TOILETS, OUTDOORS, AND GARAGE SHALL BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKERS. CONTRACTOR MAY HAVE THE OPTION TO INSTALL GFCI TYPE OUTLETS AT SUCH LOCATIONS.
- 4- ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.
- 5- CONNECT SMOKE / CARBON MONOXIDE DETECTORS TO AFCI CIRCUIT SERVING BEDROOM AREAS. ALL DETECTORS THROUGHOUT THE DWELLING SHALL BE INTERLOCKED SO ACTIVATION OF ANY SMOKE / CARBON MONOXIDE DETECTOR CAUSE CORRESPONDING ALARM TO SOUND IN ALL DETECTORS.
- 6- RUN 1/2" EMPTY C. WITH PULL STRINGS FOR CONTROL WIRING FROM AHU-1 TO CU-1 & AHU-2 TO CU-2. CONTROL WIRING BY MECHANICAL CONTRACTOR.

PROVIDE AND INSTALL "UL" LISTED COMBINATION SMOKE / CARBON MONOXIDE DETECTORS WITH DISTINCT AUDIBLE ALARM AT LOCATIONS AS INDICATED ON PLANS AND TO SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. CONNECT SMOKE / CARBON MONOXIDE DETECTORS AHEAD OF SWITCH OF THE AFCI PROTECTED CIRCUIT SERVING BEDROOMS. ALL DETECTORS THROUGHOUT THE DWELLING SHALL BE INTERLOCKED SO ACTIVATION OF ANY SMOKE / CARBON MONOXIDE DETECTOR CAUSE CORRESPONDING ALARM TO SOUND IN ALL DETECTORS. DEVICES SHALL BE "NIGHTHAWK" MODEL 900-0114 / KN-COSM-IB AS MANUFACTURED BY "KIDDE" OR APPROVED EQUAL WITH BATTERY BACKUP, FLASHING LED LIGHTS, BEEP(S), AND VERBAL WARNING MESSAGE.

PROPOSED FIRST FLOOR ELECTRICAL PLAN

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

PROPOSED SECOND FLOOR ELECTRICAL PLAN

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

PERMIT SET

DWG INFO:

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APPROVED BY	DATE
1 CORRECTION-1	04/17/09

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH, FLORIDA 33140

E-1

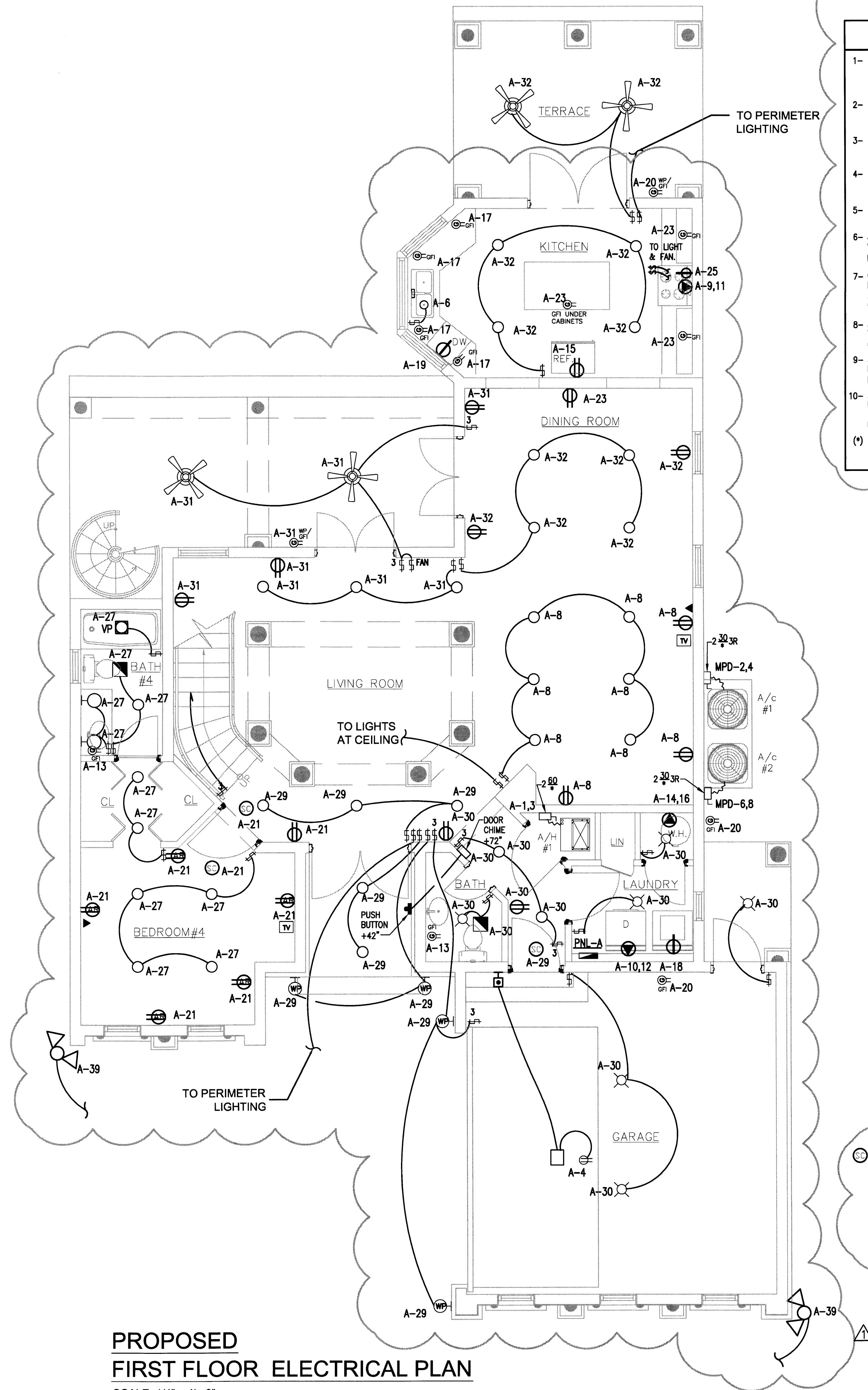
SHEET NUMBER

GENERAL NOTES

- 1- FOR EXACT LOCATION / ARRANGEMENT AND MOUNTING HEIGHT OF ALL FIXTURES AND WIRING DEVICES COORDINATE WITH OWNER, ARCHITECT AND MILLWORK SHOP DRAWINGS.
 - 2- CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND MATERIAL NECESSARY FOR A COMPLETE AND OPERATIONAL INSTALLATION.
 - 3- CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL ELECTRICAL APPLIANCES, EQUIPMENT, ETC., PRIOR TO INSTALLATION.
 - 4- CONTRACTOR SHALL VERIFY ALL ELECTRICAL REQUIREMENTS FOR ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION.
 - 5- ALL LIGHT FIXTURES ARE TO BE SELECTED BY OWNER / ARCHITECT.
 - 6- ALL EXTERIOR ELECTRICAL OUTLETS SHALL BE WEATHER PROOF (NEMA 3R) J-BOX & COVER. INSTALL 18" ABOVE GRADE OR PLANTER.
 - 7- COORDINATE EXACT LOCATION OF ALL EQUIPMENT, DATA & POWER DEVICES WITH OWNER, ARCHITECT AND EQUIPMENT SUPPLIER, PRIOR TO ROUGH-IN OF ALL RELATED APPLIANCES.
 - 8- ALL LIGHT FIXTURES, APPLIANCES, OUTLETS AND WIRING DEVICES LOCATION AS DETERMINED BY OWNER / ARCHITECT.
 - 9- ALL LIGHT SWITCHES ARE DIMMER TYPE UNLESS NOTED OTHERWISE. LOCATION AND STYLE AS DETERMINED BY OWNER / ARCHITECT.
 - 10- ALL INTERIOR AND EXTERIOR STAIRWAYS AS DESIGNED MEET OR EXCEED ILLUMINATION LEVEL OF 1 FOOT-CANDLE AS REQUIRED BY FBC RESIDENTIAL R303.6.
- (*) FUSE TO BE PROVIDED AS PER MANUFACTURER'S RECOMMENDATIONS.

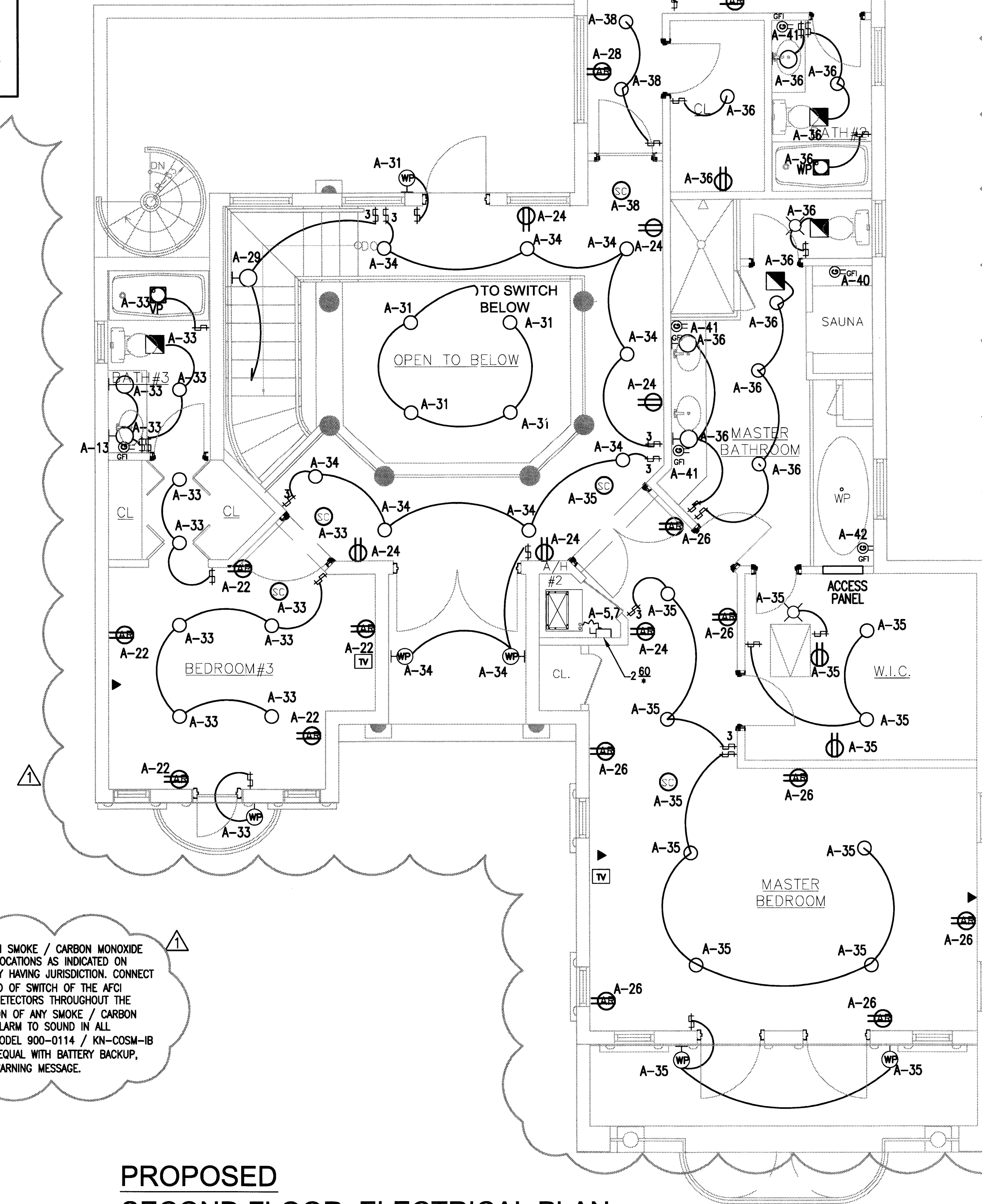
CONSTRUCTION NOTES

- 1- ALL LIGHTING FIXTURES SHALL BE APPROVED BY TESTING AGENCY AND LISTED FOR THEIR USE.
- 2- ALL JUNCTION BOXES SHALL BE RATED FOR THEIR USE.
- 3- ALL RECEPTACLES IN TOILETS, OUTDOORS, AND GARAGE SHALL BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKERS. CONTRACTOR MAY HAVE THE OPTION TO INSTALL GFCI TYPE OUTLETS AT SUCH LOCATIONS.
- 4- ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.
- 5- CONNECT SMOKE / CARBON MONOXIDE DETECTORS TO AFCI CIRCUIT SERVING BEDROOM AREAS. ALL DETECTORS THROUGHOUT THE DWELLING SHALL BE INTERLOCKED SO ACTIVATION OF ANY SMOKE / CARBON MONOXIDE DETECTOR CAUSE CORRESPONDING ALARM TO SOUND IN ALL DETECTORS.
- 6- RUN 1/2" EMPTY C. WITH PULL STRINGS FOR CONTROL WIRING FROM AHU-1 TO CU-1 & AHU-2 TO CU-2. CONTROL WIRING BY MECHANICAL CONTRACTOR.



PROPOSED
FIRST FLOOR ELECTRICAL PLAN

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



PROPOSED
SECOND FLOOR ELECTRICAL PLAN

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

PERMIT
SET

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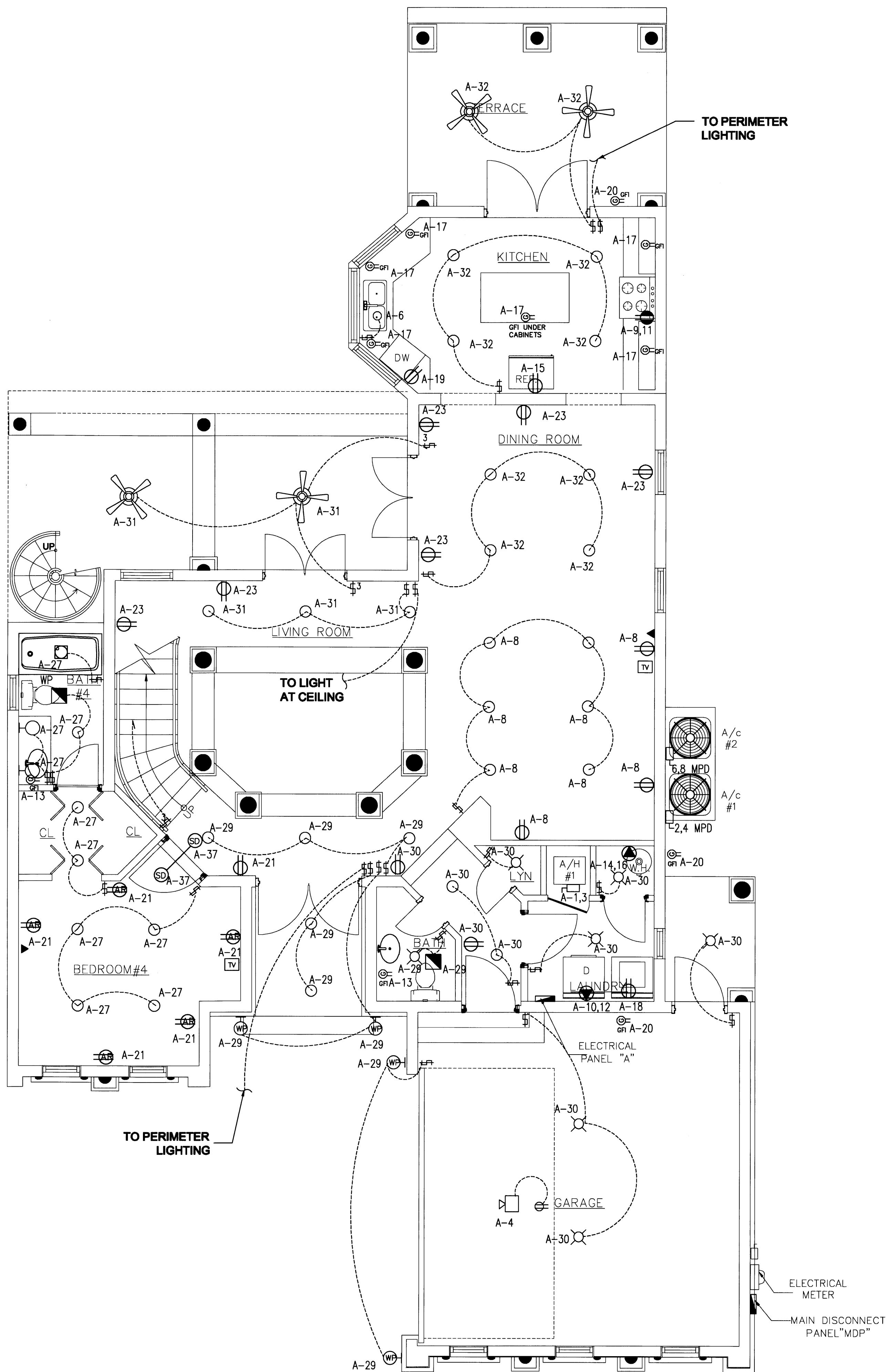
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APPROVED BY	DATE
CORRECTION-1	04/17/09

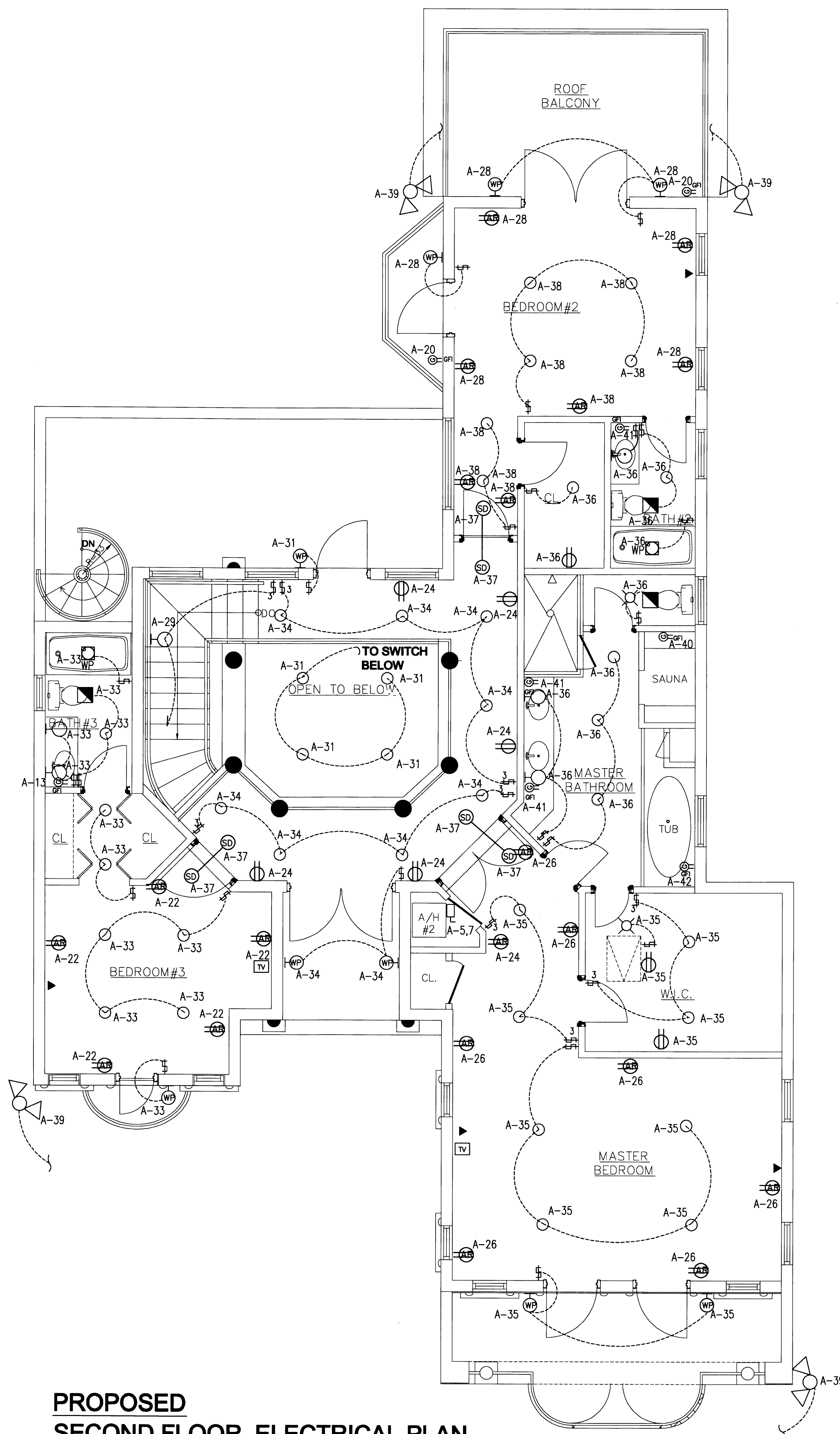
NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

E-1

SHEET NUMBER



**PROPOSED
FIRST FLOOR ELECTRICAL PLAN**
SCALE: 1/4" = 1' - 0"



**PROPOSED
SECOND FLOOR ELECTRICAL PLAN**
SCALE: 1/4" = 1' - 0"

PERMIT
SET

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TO BE USED FOR THE PROJECT STATED
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VERIFY ALL DIMENSIONS AND SHALL NOT
RELY ON SCALED DIMENSIONS. NOTIFY THE
ENGINEER OF ANY DISCREPANCIES PRIOR TO
COMMENCING WORK.

APPROVED BY	DATE

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

E-1

SHEET NUMBER

ELECTRICAL NOTES:

- ALL WORK REFLECTED ON THESE DOCUMENTS ARE IN COMPLIANCE WITH THE 2007 EDITION OF THE "FLORIDA BUILDING CODE-RESIDENTIAL", INCLUDING 2009 SUPPLEMENT AND NEC 2005.
- THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING FIELD CONDITIONS BY VISITING THE SITE PRIOR TO COMMENCING/ BIDDING WORK
- THE CONTRACTOR SHALL SATISFACTORILY REPAIR/REPLACE EQUIPMENT STRUCTURE DAMAGED OR PART OF AS A RESULT OF HIS WORK. SURFACES AND FINISHED AREAS SHALL BE RESTORED TO MATCH ADJACENT AREAS.
- APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CUTTING OR DRILLING ANY STRUCTURAL SUPPORT MEMBER.
- ALL DEVICE BOXES SHALL BE INSTALLED FLUSH AND CONDUITS RUN CONCEALED IN FINISHED AREAS EXCEPT AS SPECIFICALLY SHOWN
- INSTALL POWER AND CONTROL WIRING & REQUIRED CONTROL COMPONENTS FOR AIR CONDITIONING SYSTEMS AS SHOWN/ NOTED ON THESE DRAWINGS AND PER OTHER APPLICABLE DRAWINGS/ INSTRUCTIONS. SEE AIR CONDITIONING DRAWINGS.
- ALL MATERIALS REMOVED SHALL BE DISPOSED OF AS DIRECTED BY OWNER.
- MINIMUM WIRE SIZE SHALL BE #14 THHN/THWN UNLESS OTHERWISE NOTED ON PLANS. CONDUCTORS #6 AND LARGER SHALL BE THW OR THWN.
- ALL CONDUCTORS SHALL BE COPPER.
- ALL CONDUCTOR SHALL BE RUN IN CONDUIT (METALLIC TYPE). NON-METALLIC SHEATHED CABLE "ROMEX" IS WILL ALSO ALLOWED
- ALL MATERIALS SHALL BE U.L. APPROVED.
- N/A
- ALL EMPTY CONDUITS TO BE PROVIDED WITH NYLON PULL STRINGS.
- FUSES SHALL BE DUAL ELEMENT TIME DELAY TYPE, UNLESS OTHERWISE NOTED.

- A/C EQUIPMENT WIRING, BREAKER WITH FUSE SIZES ARE BASED ON A/C EQUIPMENT SPECIFIED ON CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING, BREAKER AND FUSES SIZES IN ACCORDANCE WITH A/C EQUIPMENT NAMEPLATE REQUIREMENTS IF DIFFERENT FROM THAT SPECIFIED ON DRAWINGS, AS WELL AS ANY FEEDER CHANGES BEING AFFECTED BY THIS CHANGE. CONTRACTOR SHALL MAKE ABOVE MENTIONED CHANGES AT NO EXTRA COST.
- CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER TRADES IN ORDER TO FURNISH AND INSTALL ALL CONTROL WIRING AND RACEWAYS AS SHOWN ON THE AIR CONDITIONING DRAWINGS OR SPECIFICATIONS. IF AIR CONDITIONING DRAWINGS REFER TO MANUFACTURER'S WIRING DIAGRAMS, THE CONTRACTOR SHALL VERIFY WITH SAID MANUFACTURER ALL REQUIREMENTS AND INCLUDE ALL RELATED WORK IN HIS CONTRACT.
- ALL LUMINARIES SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH THE CEILING SYSTEM MANUFACTURER RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS.
- RISERS ARE DIAGRAMATIC ONLY. THEY DO NOT SHOW EVERY BEND REQUIRED FOR THE INSTALLATION.
- THIS DRAWING IS A GUIDE FOR THE INSTALLATION OF ELECTRICAL SYSTEMS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A FUNCTIONING SYSTEM.
- ALL CABLES SHALL BE RUN WITHOUT SPLICES EXCEPT OTHERWISE INDICATED.
- ALL PULL AND JUCTION BOXES SHALL BE ACCESSIBLE AT ALL TIMES.
- EXACT POINT AND METHOD OF CONNECTIONS SHALL BE DETERMINED IN FIELD.
- ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.
- UNLESS NOTED OTHERWISE, ALL LIGHT FIXTURES AS SELECTED BY OWNER. INSTALLED BY THIS CONTRACTOR.
- PROVIDE TELEPHONE SYSTEM AS PER OWNER REQUIREMENTS.
- PROVIDE SECURITY SYSTEM AS PER OWNER REQUIREMENTS.
- PROVIDE T.V. SYSTEM AS PER OWNER REQUIREMENTS.
- JUNCTION BOXES IN DINING, LIVING AREAS AND BEDROOMS SHALL BE PROVIDED WITH BRACING SUPPORTS FOR CEILING FAN.

ELECTRICAL LEGEND

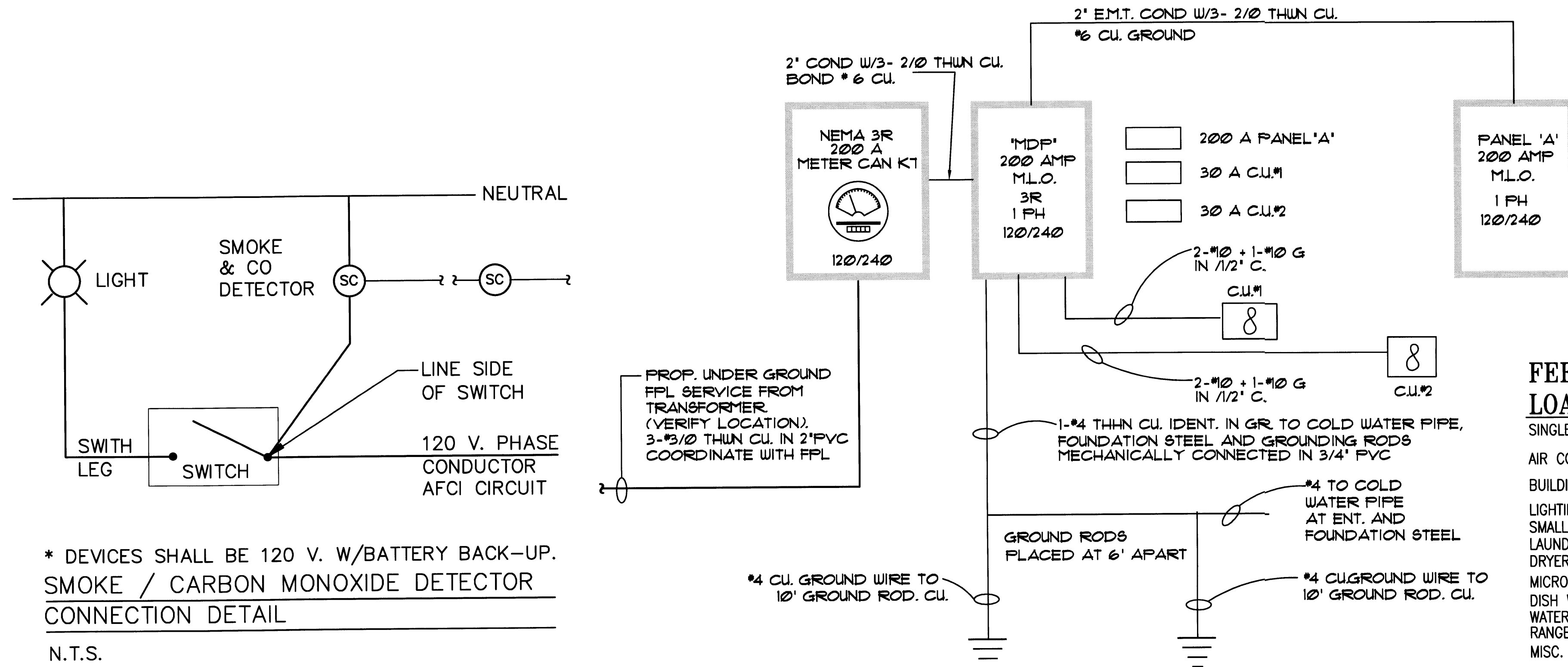
- 15A, 120V, DUPLEX RECEPTACLE
- 15A, 120V, GROUND FAULT, DUPLEX RECEPTACLE
- 20A, 120V, GROUND FAULT, ABOVE COUNTER, DUPLEX RECEPTACLE
- 240, 2 POLE OUTLET 30-50 AMP
- LIGHT SWITCH, SILENT TYPE
- 3-WAY LIGHT SWITCH, SILENT TYPE
- EXHAUST FAN
- TELEPHONE OUTLET
- TV OUTLET
- ELECTRICAL PANEL
- ELECTRICAL METER
- DISCONNECT SWITCH SIDE HANDLE TYPE
- SURFACE MOUNTED CEILING LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE.
- LIGHT FIXTURE.
- 120V SMOKE DETECTOR WITH BATTERY BACK-UP. NOTE: ALL SMOKE DETECTORS SHALL BE INTERCONNECTED FOR SIMULTANEOUS OPERATION.
- SPECIAL PURPOSE OUTLET
- FLOOD LIGHT UNDER OVERHANG.
- CEILING MOUNTED PADDLE FAN WITH LIGHT. (PROVIDE JB APPROVED FOR FAN INSTALLATION)
- ARC FAULT INTERRUPTOR
- VAPOR LIGHT
- JUNCTION BOX FAN RATED

TYPE: SEIMEN'S OR EQUIV. 10,000 A.I.C.				NEMA 1 LOCATION: AS SHOWN						
200 AMP M.L.P. 42 CRT.				FEED: MAIN DIS. "MDP"						
PANEL "A"										
DESCRIPTION	WIRE CONDUIT	LOAD (KVA)	POLE TRIP	CIR #	A B	CIR #	POLE TRIP	LOAD (KVA)	WIRE CONDUIT	DESCRIPTION
A.H.U. 1	#8-3/4"	6.2	2	1	2	20				SPARE
			40	3	4	20	1.5	#12-1/2"		GAR. DOOR OPNR.
A.H.U. 2	#8-3/4"	6.2	2	5	6	20	1.5	#12-1/2"		DISPOSAL
			40	7	8	20	1.5	#12-1/2"		LIGTH. DINING
RANGE	#6-3/4"	12.0	2	9	10	2	5.5	#10-1/2"		DRYER
			60	11	12	30				
BATH GFCI	#12-1/2"	1.5	20	13	14	2	6.0	#10-1/2"		WATER HEATER
REFRIGERATOR	#12-1/2"	1.5	20	15	16	30				
GFCI KIT	#12-1/2"	1.5	20	17	18	20	1.5	#12-1/2"		WASHER
DISH WASHER	#12-1/2"	1.5	20	19	20	20	1.5	#12-1/2"		EXTERIOR GFCI/GARAGE
AFCI BED.#4 RECP.	#12-1/2"	1.5	20	21	22	20	1.5	#12-1/2"		RECP BED#3
SM AP. RECP.	#12-1/2"	1.5	20	23	24	20	1.5	#12-1/2"		RECP LOFT
SPARE			20	25	26	20	1.5	#12-1/2"		MA.BED RECP
BA.#4 BED.#4	#12-1/2"	1.5	20	27	28	20	1.5	#12-1/2"		GEN LIG. BED#2
ENTR/FOYER LING.	#12-1/2"	1.5	20	29	30	20				SPARE
LIVING LIGHTING	#12-1/2"	1.5	20	31	32	20	1.5	#12-1/2"		LIG.,DINING/KIT/TERR.
AFCI BED.#3 LIG.	#12-1/2"	1.5	20	33	34	20	1.5	#12-1/2"		LIGHTING LOFT
MA. BED LIGHTING	#12-1/2"	1.5	20	35	36	20	1.5	#12-1/2"		GEN. LIG. BATH 2/MA.BA
SPARE			20	37	38	20	1.5	#12-1/2"		GEN. LIG.BED#2
PERIMETER L-TING	#12-1/2"	1.0	20	39	40	20	1.5	#12-1/2"		SAUNA GFCI
BATH GFCI	#12-1/2"	1.5	20	41	42	20	1.5	#12-1/2"		JACCUZI GFCI

SEE LOAD CALCULATIONS BELOW:
39,375 VA @ 240/1/60 = 164 AMPS

ALL CIRCUIT BREAKERS WHICH SERVE LIGHTS, RECEPTACLES AND ANY OTHER OUTLET IN BEDROOM AREAS, INCLUDING HALLWAY LEADING TO BEDROOMS SHALL BE ARC FAULT CIRCUIT INTERRUPTER (AFCI) TYPE CIRCUIT BREAKERS.

EQUIPMENT GROUNDING PER NEC TABLE 250-122 PROVIDE A TYPE WRITTEN DIRECTORY.



ELECTRICAL RISER DIAGRAM
N.T.S.

FEEDER AND SERVICE LOAD CALCULATIONS (MDP)

SINGLE FAMILY DWELLING (SECTION 220-30)

AIR CONDITIONING/HEATING LOAD @ 100%	= 15,500 VA
BUILDING AREA: UNDER A/C = 3,594 S.F.	
LIGHTING & RECEPT. 3,594 S.F. @ 3 VA.	= 10,782VA
SMALL APPLIANCE CIRCUITS 3@1500 VA.	= 4,500 VA
LAUNDRY CIRCUITS 1@1500 VA.	= 1,500 VA
DRYER CIRCUITS 1@ 5,000 VA.	= 5,000 VA
MICROWAVE	= 1,500 VA
DISH WASHERS 1@1,200 VA.	= 1,200 VA
WATER HEATER EWH-1 @ 6,000 VA.	= 6,000 VA
RANGE @12,000 VA.	= 12,000 VA
MISC. LOAD	= 8,000 VA
	50,482 VA

1ST 10,000 VA @ 100%	= 15,500 VA
A/C LOAD - @ 100 %	= 10,782 VA
REMAINDER 40,482 @ 40%	= 16,193 VA
	42,475 VA
42,475 VA @ 240/1/60	= 177 AMPS

LOAD CALCULATIONS (PANEL-A)

SINGLE FAMILY DWELLING (SECTION 220-30)

AIR CONDITIONING/AHU-1 & AHU-2 @ 100%	= 12,400 VA
BUILDING AREA: UNDER A/C = 3,594 S.F.	
LIGHTING & RECEPT. 3,594 S.F. @ 3 VA.	= 10,782VA
SMALL APPLIANCE CIRCUITS 3@1500 VA.	= 4,500 VA
LAUNDRY CIRCUITS 1@1500 VA.	= 1,500 VA
DRYER CIRCUITS 1@ 5,000 VA.	= 5,000 VA
MICROWAVE	= 1,500 VA
DISH WASHERS 1@1,200 VA.	= 1,200 VA
WATER HEATER EWH-1 @ 6,000 VA.	= 6,000 VA
RANGE @12,000 VA.	= 12,000 VA
MISC. LOAD	= 8,000 VA
	50,482 VA

1ST 10,000 VA @ 100%	= 12,400 VA
A/C LOAD - @ 100 %	= 10,782 VA
REMAINDER 40,482 @ 40%	= 16,193 VA
	39,375 VA
39,375 VA @ 240/1/60	= 164 AMPS

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APPROVED BY	DATE
△ CORRECTION-1	04/23/08
△ CORRECTION-2	05/19/08

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

E-2

SHEET NUMBER

ELECTRICAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES AND STANDARDS.
2. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING FIELD CONDITIONS BY VISITING THE SITE PRIOR TO COMMENCING/ BIDDING WORK
3. THE CONTRACTOR SHALL SATISFACTORILY REPAIR/REPLACE EQUIPMENT STRUCTURE DAMAGED OR PART OF AS A RESULT OF HIS WORK. SURFACES AND FINISHED AREAS SHALL BE RESTORED TO MATCH ADJACENT AREAS.
4. APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CUTTING OR DRILLING ANY STRUCTURAL SUPPORT MEMBER.
5. ALL DEVICE BOXES SHALL BE INSTALLED FLUSH AND CONDUITS RUN CONCEALED IN FINISHED AREAS EXCEPT AS SPECIFICALLY SHOWN
6. INSTALL POWER AND CONTROL WIRING & REQUIRED CONTROL COMPONENTS FOR AIR CONDITIONING SYSTEMS AS SHOWN/ NOTED ON THESE DRAWINGS AND PER OTHER APPLICABLE DRAWINGS/ INSTRUCTIONS. SEE AIR CONDITIONING DRAWINGS.
7. ALL MATERIALS REMOVED SHALL BE DISPOSED OF AS DIRECTED BY OWNER.
8. MINIMUM WIRE SIZE SHALL BE #14 THHN/THWN UNLESS OTHERWISE NOTED ON PLANS. CONDUCTORS #6 AND LARGER SHALL BE THW OR THWN.
9. ALL CONDUCTORS SHALL BE COPPER.
10. ALL CONDUCTOR SHALL BE RUN IN CONDUIT (METALIC TYPE). NON-METALLIC SHEATHED CABLE "ROMEX" IS WILL ALSO ALLOWED
11. ALL MATERIALS SHALL BE U.L. APPROVED.
12. ALL BRANCH CIRCUITS SHALL BE PROPERLY PHASE BALANCED.
13. N/A
14. ALL EMPTY CONDUITS TO BE PROVIDED WITH NYLON PULL STRINGS.
15. FUSES SHALL BE DUAL ELEMENT TIME DELAY TYPE, UNLESS OTHERWISE NOTED.

16. A/C EQUIPMENT WIRING, BREAKER WITH FUSE SIZES ARE BASED ON A/C EQUIPMENT SPECIFIED ON CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING, BREAKER AND FUSES SIZES IN ACCORDANCE WITH A/C EQUIPMENT NAMEPLATE REQUIREMENTS IF DIFFERENT FROM THAT SPECIFIED ON DRAWINGS, AS WELL AS ANY FEEDER CHANGES BEING AFFECTED BY THIS CHANGE. CONTRACTOR SHALL MAKE ABOVE MENTIONED CHANGES AT NO EXTRA COST.
17. CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER TRADES IN ORDER TO FURNISH AND INSTALL ALL CONTROL WIRING AND RACEWAYS AS SHOWN ON THE AIR CONDITIONING DRAWINGS OR SPECIFICATIONS. IF AIR CONDITIONING DRAWINGS REFER TO MANUFACTURER'S WIRING DIAGRAMS, THE CONTRACTOR SHALL VERIFY WITH SAID MANUFACTURER ALL REQUIREMENTS AND INCLUDE ALL RELATED WORK IN HIS CONTRACT.
18. ALL LUMINARIES SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH THE CEILING SYSTEM MANUFACTURER RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS.
19. RISERS ARE DIAGRAMATIC ONLY. THEY DO NOT SHOW EVERY BEND REQUIRED FOR THE INSTALLATION.
20. THIS DRAWING IS A GUIDE FOR THE INSTALLATION OF ELECTRICAL SYSTEMS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A FUNCTIONING SYSTEM.
21. ALL CABLES SHALL BE RUN WITHOUT SPLICES EXCEPT OTHERWISE INDICATED.
22. ALL PULL AND JUCTION BOXES SHALL BE ACCESSIBLE AT ALL TIMES.
23. EXACT POINT AND METHOD OF CONNECTIONS SHALL BE DETERMINED IN FIELD.
24. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.
25. UNLESS NOTED OTHERWISE, ALL LIGHT FIXTURES AS SELECTED BY OWNER. INSTALLED BY THIS CONTRACTOR.
26. PROVIDE TELEPHONE SYSTEM AS PER OWNER REQUIREMENTS.
27. PROVIDE SECURITY SYSTEM AS PER OWNER REQUIREMENTS.
28. PROVIDE T.V. SYSTEM AS PER OWNER REQUIREMENTS.
29. JUNCTION BOXES IN DINING, LIVING AREAS AND BEDROOMS SHALL BE PROVIDED WITH BRACING SUPPORTS FOR CEILING FAN.

ELECTRICAL LEGEND

- 15A, 120V, DUPLEX RECEPTACLE
- 15A, 120V, GROUND FAULT, DUPLEX RECEPTACLE
- 20A, 120V, GROUND FAULT, ABOVE COUNTER, DUPLEX RECEPTACLE
- 240, 2 POLE OUTLET 30-50 AMP
- LIGHT SWITCH. SILENT TYPE
- 3-WAY LIGHT SWITCH. SILENT TYPE
- EXHAUST FAN
- TELEPHONE OUTLET
- TV OUTLET
- ELECTRICAL PANEL
- ELECTRICAL METER
- DISCONNECT SWITCH SIDE HANDLE TYPE
- SURFACE MOUNTED CEILING LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE.
- LIGHT FIXTURE.
- 120V SMOKE DETECTOR WITH BATTERY BACK-UP. NOTE: ALL SMOKE DETECTORS SHALL BE INTERCONNECTED FOR SIMULTANEOUS OPERATION.
- SPECIAL PURPOSE OUTLET
- FLOOD LIGHT UNDER OVERHANG.
- CEILING MOUNTED PADDLE FAN WITH LIGHT. (PROVIDE JB APPROVED FOR FAN INSTALLATION)
- ARC FAULT INTERRUPTOR
- VAPOR LIGHT
- JUNCTION BOX FAN RATED

TYPE: SEIMEN'S OR EQUIV. 10,000 A.I.C. NEMA 1 LOCATION: AS SHOWN 200 AMP M.L.P. PANEL "A" FEED: MAIN DIS. "MDP" 42 CRT.

DESCRIPTION	WIRE CONDUIT	LOAD (KVA)	POLE TRIP	CIR #	A	B	CIR #	POLE TRIP	LOAD (KVA)	WIRE CONDUIT	DESCRIPTION
A.H.U. 1	#8-3/4"	6.2	2	1	2	20	3	4	1.5	#12-1/2"	SPARE
A.H.U. 2	#8-3/4"	6.2	2	5	6	20	7	8	1.5	#12-1/2"	GAR. DOOR OPNR.
RANGE	#6-3/4"	12.0	2	9	10	2	11	12	5.5	#10-1/2"	DISPOSAL
BATH GFCI	#12-1/2"	1.5	20	13	14	2	15	16	6.0	#10-1/2"	LIGTH. DINING
REFRIGERATOR	#12-1/2"	1.5	20	17	18	2	19	20	1.5	#10-1/2"	DRYER
GFCI KIT	#12-1/2"	1.5	20	21	22	2	23	24	1.5	#10-1/2"	WATER HEATER
DISH WASHER	#12-1/2"	1.5	20	25	26	2	27	28	1.5	#12-1/2"	WASHER
AFCI BED.#4 RECP.	#12-1/2"	1.5	20	29	30	2	31	32	1.5	#12-1/2"	EXTERIOR GFCI/GARAGE
SM AP. RECP.	#12-1/2"	1.5	20	33	34	2	35	36	1.5	#12-1/2"	RECP BED#3
BA.#4 BED.#4	#12-1/2"	1.5	20	37	38	2	39	40	1.5	#12-1/2"	RECP LOFT
ENTR./FOYER LING.	#12-1/2"	1.5	20	41	42	2			1.5	#12-1/2"	MA.BED RECP
LIVING LIGHTING	#12-1/2"	1.5	20			2			1.5	#12-1/2"	GEN LIG. BED#2
AFCI BED.#3 LIG.	#12-1/2"	1.5	20			2			1.5	#12-1/2"	SPARE
MA. BED LIGHTING	#12-1/2"	1.5	20			2			1.5	#12-1/2"	LIG.,DINING/KIT/TERR.
SPARE			20			2			1.5	#12-1/2"	LIGHTING LOFT
PERIMETER L-TING	#12-1/2"	1.0	20			2			1.5	#12-1/2"	GEN. LIG. BATH 2/MA.BA
BATH GFCI	#12-1/2"	1.5	20			2			1.5	#12-1/2"	GEN. LIG.BED#2

SEE LOAD CALCULATIONS BELOW:
39,375 VA @ 240/1/60 = 164 AMPS

ALL CIRCUIT BREAKERS WHICH SERVE LIGHTS, RECEPTACLES AND ANY OTHER OUTLET IN BEDROOM AREAS, INCLUDING HALLWAY LEADING TO BEDROOMS SHALL BE ARC FAULT CIRCUIT INTERRUPTER (AFCI) TYPE CIRCUIT BREAKERS.

EQUIPMENT GROUNDING PER NEC TABLE 250-122 PROVIDE A TYPE WRITTEN DIRECTORY.

TYPE: SEIMEN'S OR EQUIV. 22,000 A.I.C. NEMA 3R LOCATION: AS SHOWN 200 AMP M.L.O. PANEL "MDP" FEED: MAIN METER 12 CRT.

DESCRIPTION	WIRE CONDUIT	LOAD (KVA)	POLE TRIP	CIR #	A	B	CIR #	POLE TRIP	LOAD (KVA)	WIRE CONDUIT	DESCRIPTION
PANEL "A"	2/0-2"	37.0	2	1	2	2	3	4	9.2	#6-3/4"	C.U. #1
			2	5	6	2	7	8	9.2	#6-3/4"	C.U.#2
			2	9	10		11	12			

TOTAL SERVICE LOAD :
42,475 VA @ 240/1/60 = %U177 AMPS --- 200 AMP SERVICE

FEEDER AND SERVICE LOAD CALCULATIONS (MDP)

SINGLE FAMILY DWELLING (SECTION 220-30)

AIR CONDITIONING/HEATING LOAD @ 100%	= 15,500 VA
BUILDING AREA: UNDER A/C = 3,594 S.F.	
LIGHTING & RECEPT. 3,594 S.F. @ 3 VA.	= 10,782VA
SMALL APPLIANCE CIRCUITS 3@1500 VA.	= 4,500 VA
LAUNDRY CIRCUITS 1@1500 VA.	= 1,500 VA
DRYER CIRCUITS 1@ 5,000 VA.	= 5,000 VA
MICROWAVE	= 1,500 VA
DISH WASHERS 1@1,200 VA.	= 1,200 VA
WATER HEATER EWH-1 @ 6,000 VA.	= 6,000 VA
RANGE @12,000 VA.	= 12,000 VA
MISC. LOAD	= 8,000 VA
	50,482 VA

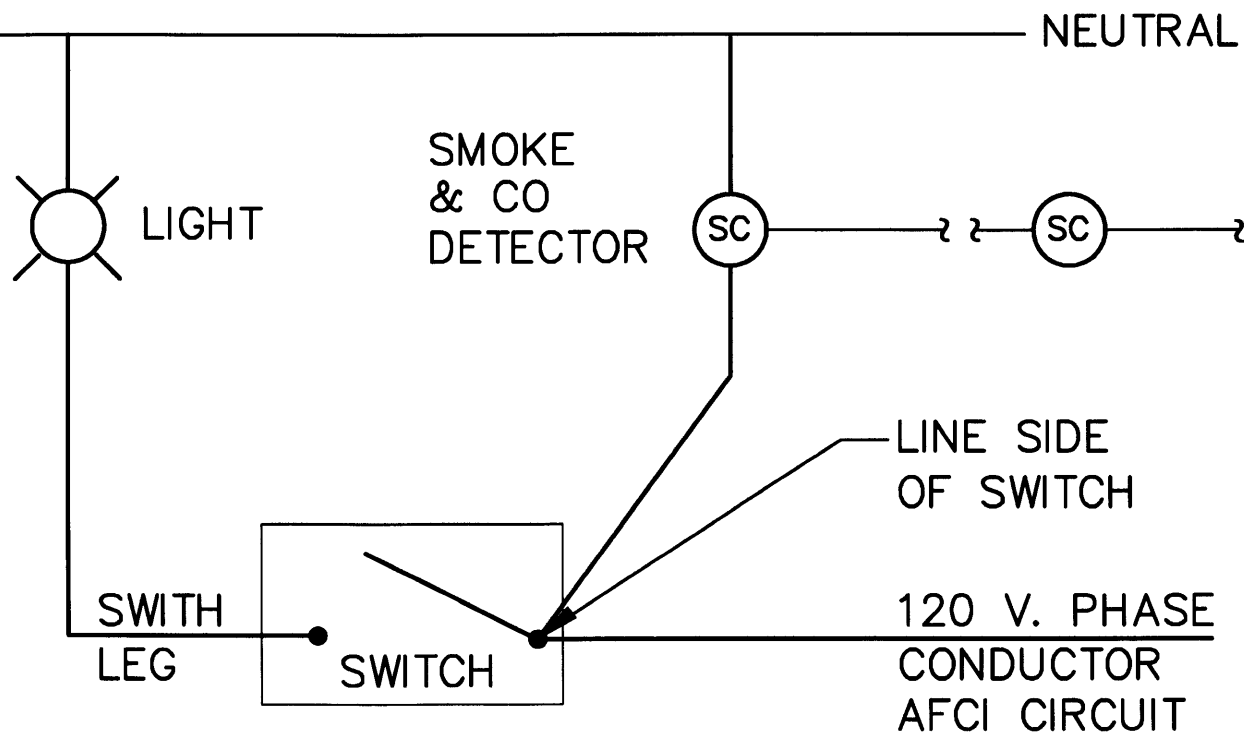
1ST 10,000 VA @ 100% - - - - - 15,500 VA
A/C LOAD - @ 100 % - - - - - 10,782 VA
REMAINDER 40,482 @ 40% - - - - - 16,193 VA
42,475 VA @ 240/1/60 = 177 AMPS

LOAD CALCULATIONS (PANEL-A)

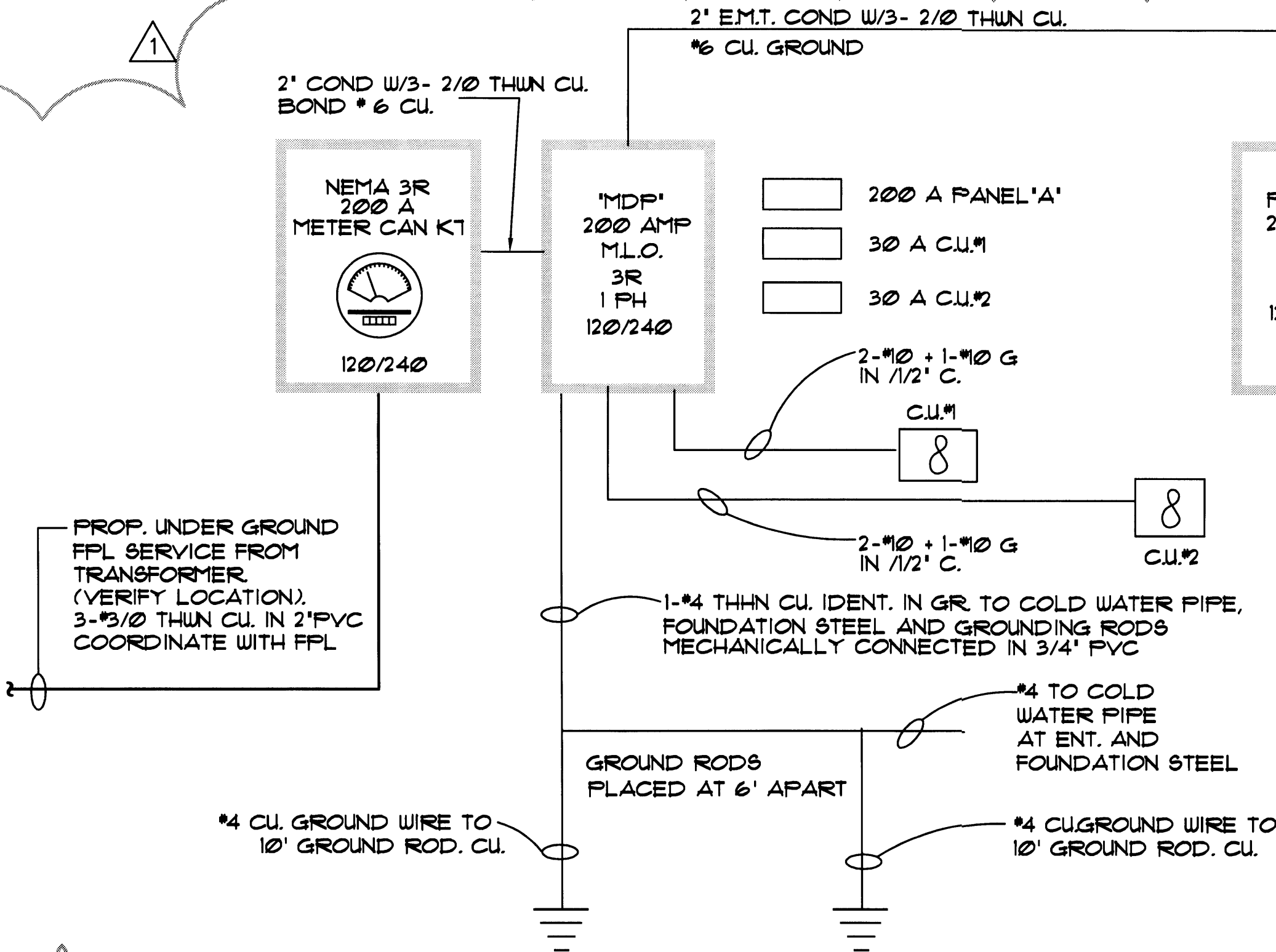
SINGLE FAMILY DWELLING (SECTION 220-30)

AIR CONDITIONING AHU-1 & AHU-2 @ 100%	= 12,400 VA
BUILDING AREA: UNDER A/C = 3,594 S.F.	
LIGHTING & RECEPT. 3,594 S.F. @ 3 VA.	= 10,782VA
SMALL APPLIANCE CIRCUITS 3@1500 VA.	= 4,500 VA
LAUNDRY CIRCUITS 1@1500 VA.	= 1,500 VA
DRYER CIRCUITS 1@ 5,000 VA.	= 5,000 VA
MICROWAVE	= 1,500 VA
DISH WASHERS 1@1,200 VA.	= 1,200 VA
WATER HEATER EWH-1 @ 6,000 VA.	= 6,000 VA
RANGE @12,000 VA.	= 12,000 VA
MISC. LOAD	= 8,000 VA
	50,482 VA

1ST 10,000 VA @ 100% - - - - - 12,400 VA
A/C LOAD - @ 100 % - - - - - 10,782 VA
REMAINDER 40,482 @ 40% - - - - - 16,193 VA
39,375 VA @ 240/1/60 = 164 AMPS



* DEVICES SHALL BE 120 V. W/BATTERY BACK-UP.
SMOKE / CARBON MONOXIDE DETECTOR
CONNECTION DETAIL
N.T.S.



ELECTRICAL RISER DIAGRAM

N.T.S.

Edward A. LANDERS, P.E.
CONSULTING ENGINEERS
7800 NW 140TH STREET, SUITE 202 MIAMI LAKES FL 33114
Tel. (305) 823-3938
Fax (305) 823-9355

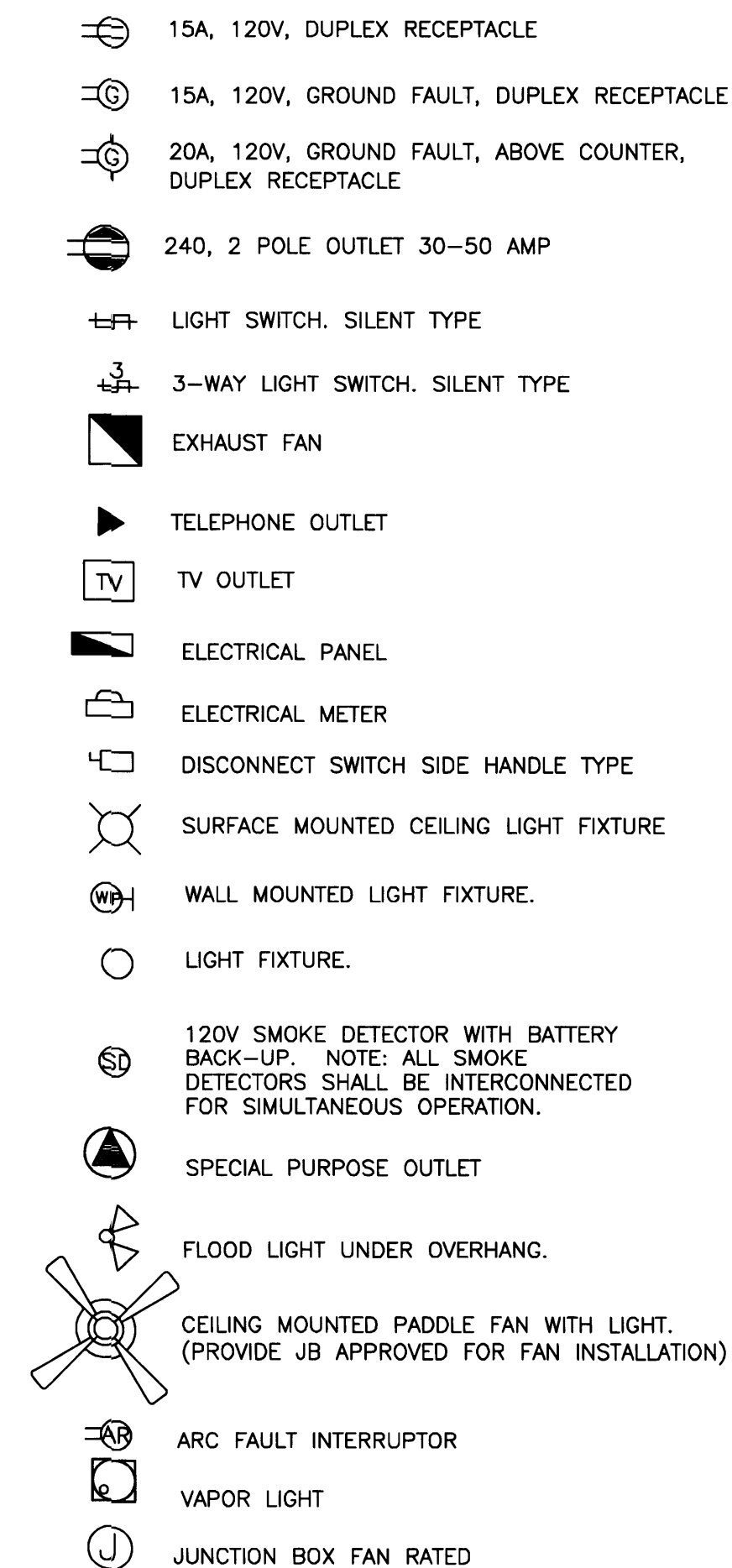
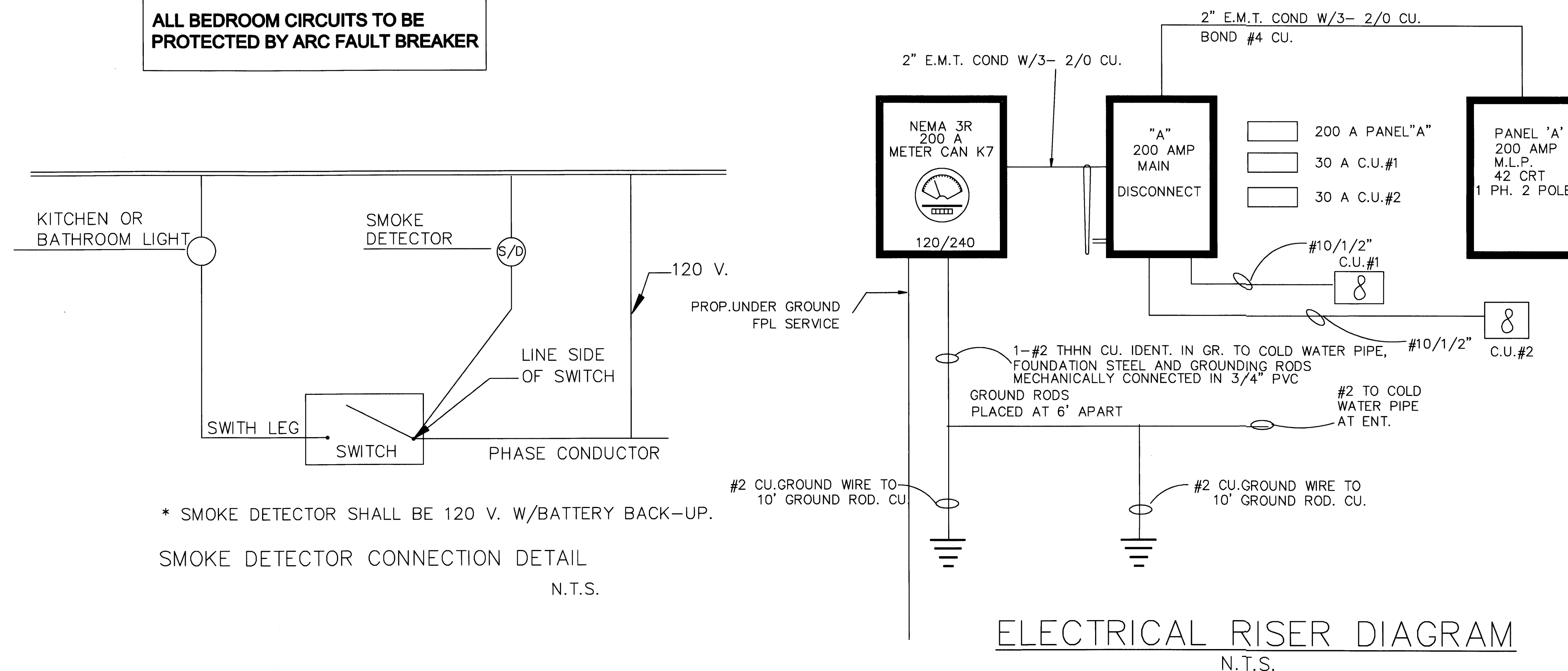
PERMIT SET

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APPROVED BY	DATE
△ CORRECTION-1	04/17/09

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

E-2
SHEET NUMBER

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES AND STANDARDS.
2. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING FIELD CONDITIONS BY VISITING THE SITE PRIOR TO COMMENCING/ BIDDING WORK
3. THE CONTRACTOR SHALL SATISFACTORILY REPAIR/REPLACE EQUIPMENT, STRUCTURE DAMAGED OR PART OF AS A RESULT OF HIS WORK. SURFACES AND FINISHED AREAS SHALL BE RESTORED TO MATCH ADJACENT AREAS.
4. APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CUTTING OR DRILLING ANY STRUCTURAL SUPPORT MEMBER.
5. ALL DEVICE BOXES SHALL BE INSTALLED FLUSH AND CONDUITS RUN CONCEALED IN FINISHED AREAS EXCEPT AS SPECIFICALLY SHOWN
6. INSTALL POWER AND CONTROL WIRING & REQUIRED CONTROL COMPONENTS FOR AIR CONDITIONING SYSTEMS AS SHOWN/ NOTED ON THESE DRAWINGS AND PER OTHER APPLICABLE DRAWINGS/ INSTRUCTIONS. SEE AIR CONDITIONING DRAWINGS.
7. ALL MATERIALS REMOVED SHALL BE DISPOSED OF AS DIRECTED BY OWNER.
8. MINIMUM WIRE SIZE SHALL BE #14 THHN/THWN UNLESS OTHERWISE NOTED ON PLANS. CONDUCTORS #6 AND LARGER SHALL BE THW OR THWN.
9. ALL CONDUCTORS SHALL BE COPPER.
10. ALL CONDUCTOR SHALL BE RUN IN CONDUIT (METALIC TYPE). NON-METALLIC SHEATHED CABLE "ROMEX" IS WILL ALSO ALLOWED
11. ALL MATERIALS SHALL BE U.L. APPROVED.
12. ALL BRANCH CIRCUITS SHALL BE PROPERLY PHASE BALANCED.
13. N/A
14. ALL EMPTY CONDUITS TO BE PROVIDED WITH NYLON PULL STRINGS.
15. FUSES SHALL BE DUAL ELEMENT TIME DELAY TYPE, UNLESS OTHERWISE NOTED.
16. A/C EQUIPMENT WIRING, BREAKER WITH FUSE SIZES ARE BASED ON A/C EQUIPMENT SPECIFIED ON CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING, BREAKER AND FUSES SIZES IN ACCORDANCE WITH A/C EQUIPMENT NAMEPLATE REQUIREMENTS IF DIFFERENT FROM THAT SPECIFIED ON DRAWINGS, AS WELL AS ANY FEEDER CHANGES BEING AFFECTED BY THIS CHANGE. CONTRACTOR SHALL MAKE ABOVE MENTIONED CHANGES AT NO EXTRA COST.
17. CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER TRADES IN ORDER TO FURNISH AND INSTALL ALL CONTROL WIRING AND RACEWAYS AS SHOWN ON THE AIR CONDITIONING DRAWINGS OR SPECIFICATIONS. IF AIR CONDITIONING DRAWINGS REFER TO MANUFACTURER'S WIRING DIAGRAMS, THE CONTRACTOR SHALL VERIFY WITH SAID MANUFACTURER ALL REQUIREMENTS AND INCLUDE ALL RELATED WORK IN HIS CONTRACT.
18. ALL LUMINARIES SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH THE CEILING SYSTEM MANUFACTURER RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS.
19. RISERS ARE DIAGRAMATIC ONLY. THEY DO NOT SHOW EVERY BEND REQUIRED FOR THE INSTALLATION.
20. THIS DRAWING IS A GUIDE FOR THE INSTALLATION OF ELECTRICAL SYSTEMS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A FUNCTIONING SYSTEM.
21. ALL CABLES SHALL BE RUN WITHOUT SPLICES EXCEPT OTHERWISE INDICATED.
22. ALL PULL AND JUCTION BOXES SHALL BE ACCESSIBLE AT ALL TIMES.
23. EXACT POINT AND METHOD OF CONNECTIONS SHALL BE DETERMINED IN FIELD.
24. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.
25. UNLESS NOTED OTHERWISE, ALL LIGHT FIXTURES AS SELECTED BY OWNER. INSTALLED BY THIS CONTRACTOR.
26. PROVIDE TELEPHONE SYSTEM AS PER OWNER REQUIREMENTS.
27. PROVIDE SECURITY SYSTEM AS PER OWNER REQUIREMENTS.
28. PROVIDE T.V. SYSTEM AS PER OWNER REQUIREMENTS.
29. JUNCTION BOXES IN DINING, LIVING AREAS AND BEDROOMS SHALL BE PROVIDED WITH BRACING SUPPORTS FOR CEILING FAN.

[illegible]

TYPE: SEIMEN'S OR EQUIV.

200 AMP M.L.P.

12 CRT.

MAIN DISCONNECT PANEL "MDP"

NEMA 1

LOCATION: AS SHOWN

FEED: MAIN METER

DESCRIPTION	WIRE CONDUIT	LOAD (KVA)	POLE TRIP	CIR #	A	B	CIR #	POLE TRIP	LOAD (KVA)	WIRE CONDUIT	DESCRIPTION
PANEL "A"	2/0	33.3	2 200	1	○		2	2	2.7	#8	C.U. #1
				3	○		4	30			
				5	○		6	2	3.2	#8	C.U.#2
				7	○		8	30			
				9	○		10				
				11	○		12				

TOTAL SERVICE LOAD

PANEL (MDP) A – 33.3 KW

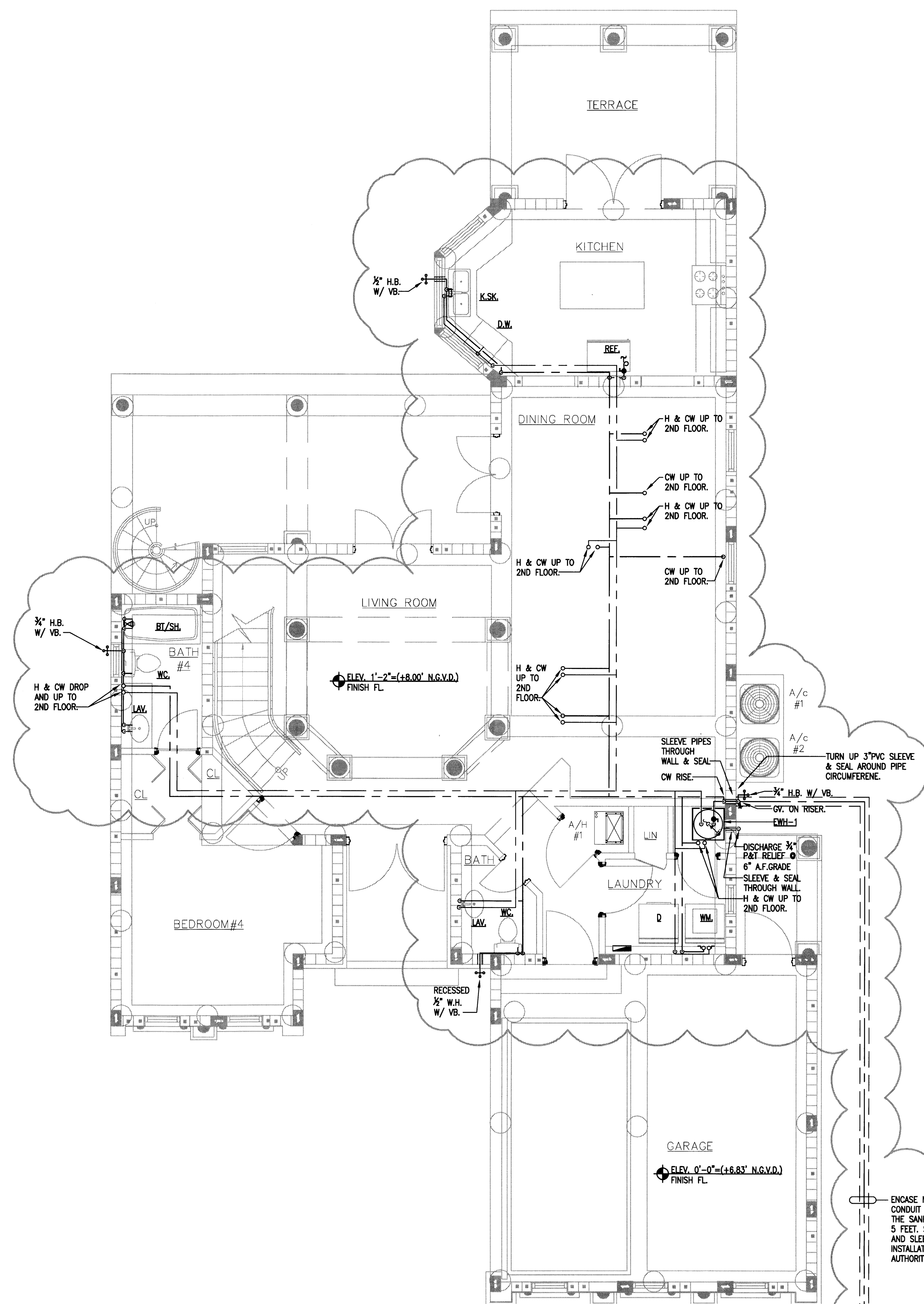
A/C C.U. #1 – 2.7

A/C C.U. #21 – 3.2

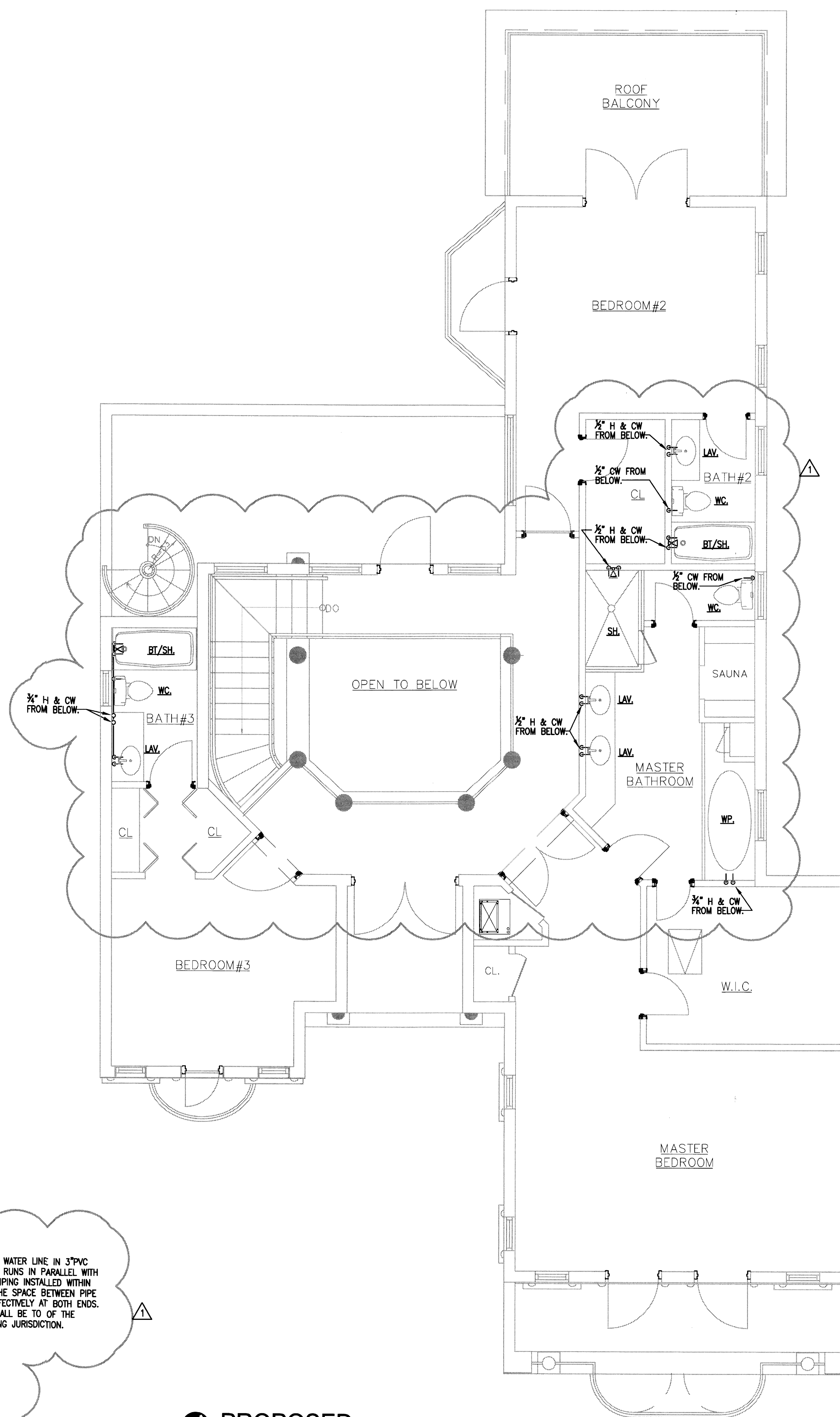
39.2 KW

39.200 KW W/240 = 163.4 AMP --- 200 AMP

SHEET NUMBER



 **PROPOSED**
WATER FIRST FLOOR PLAN
SCALE: 1/4" = 1' - 0"



 **PROPOSED**
WATER SECOND FLOOR PLAN
SCALE: 1/4" = 1' - 0"

PERMIT SET

DWG INFO:

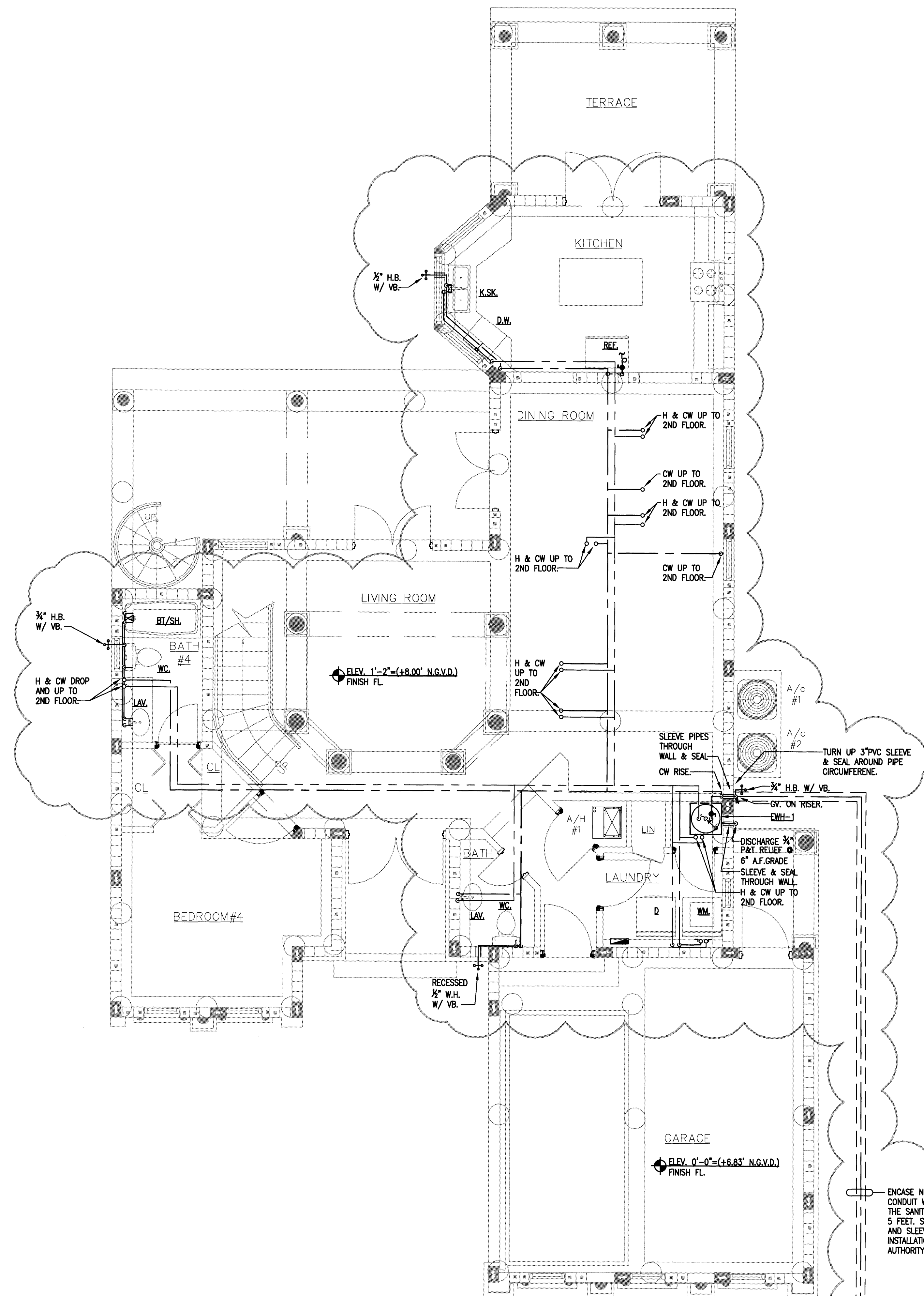
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RELY ON SCALED DIMENSIONS. NOTIFY THE
ENGINEER OF ANY DISCREPANCIES PRIOR TO
COMMENCING WORK.

[illegible]

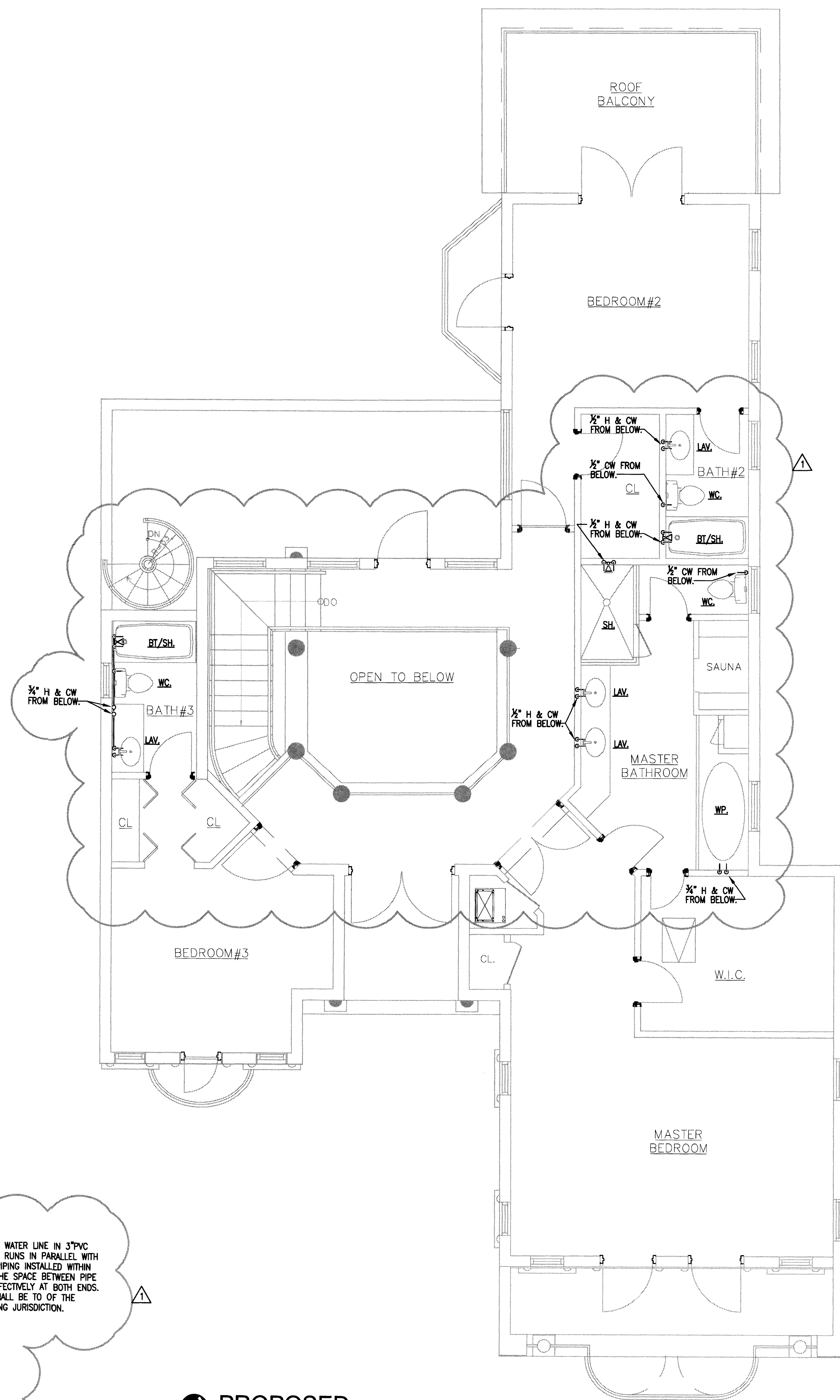
NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
22334 ALTON RD
MIAMI BEACH FLORIDA 33140

P-1

SHEET NUMBER



 **PROPOSED**
WATER FIRST FLOOR PLAN
SCALE: 1/4" = 1' - 0"




 **PROPOSED**
WATER SECOND FLOOR PLAN
SCALE: 1/4" = 1' - 0"

PERMIT SET

DWG INFO:

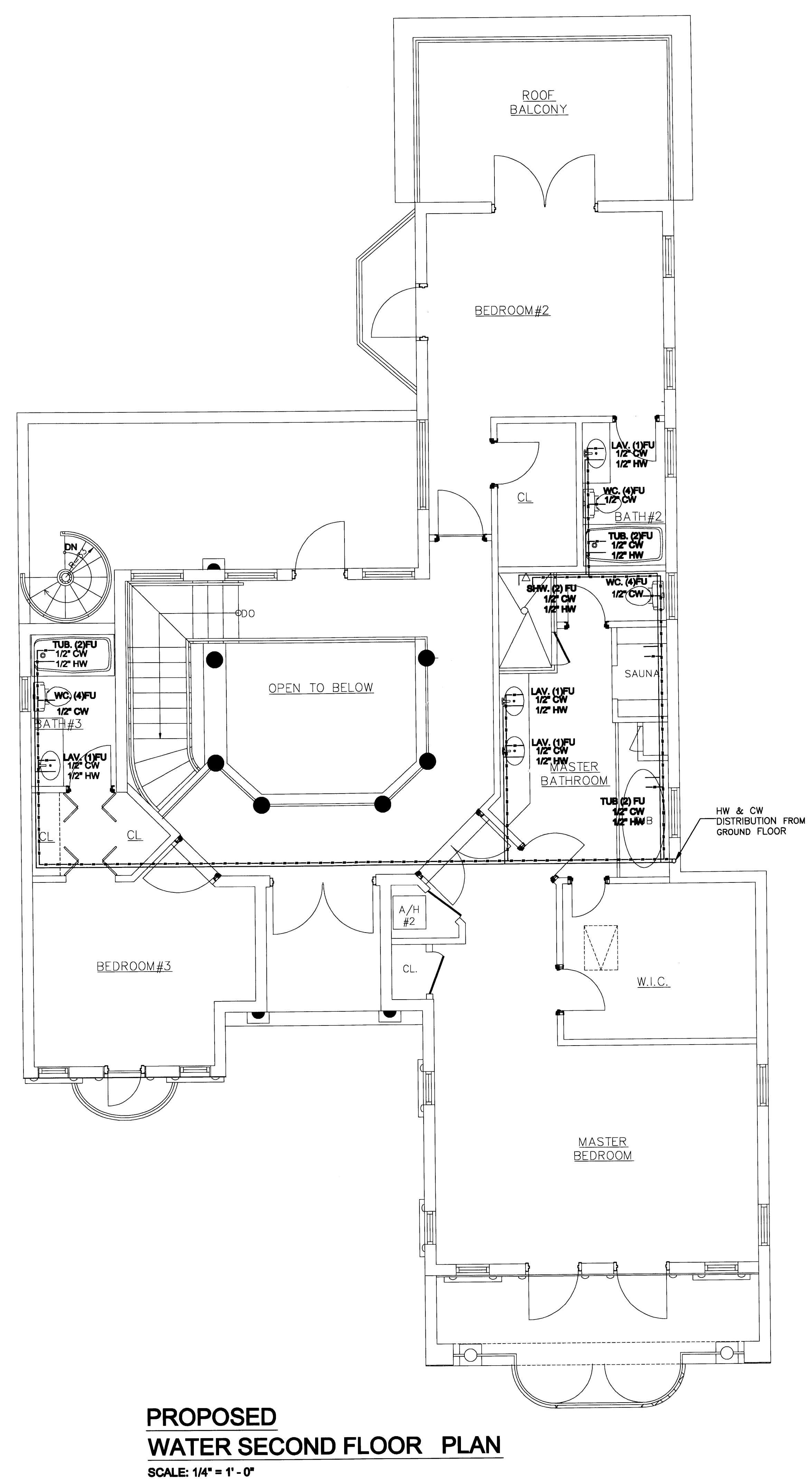
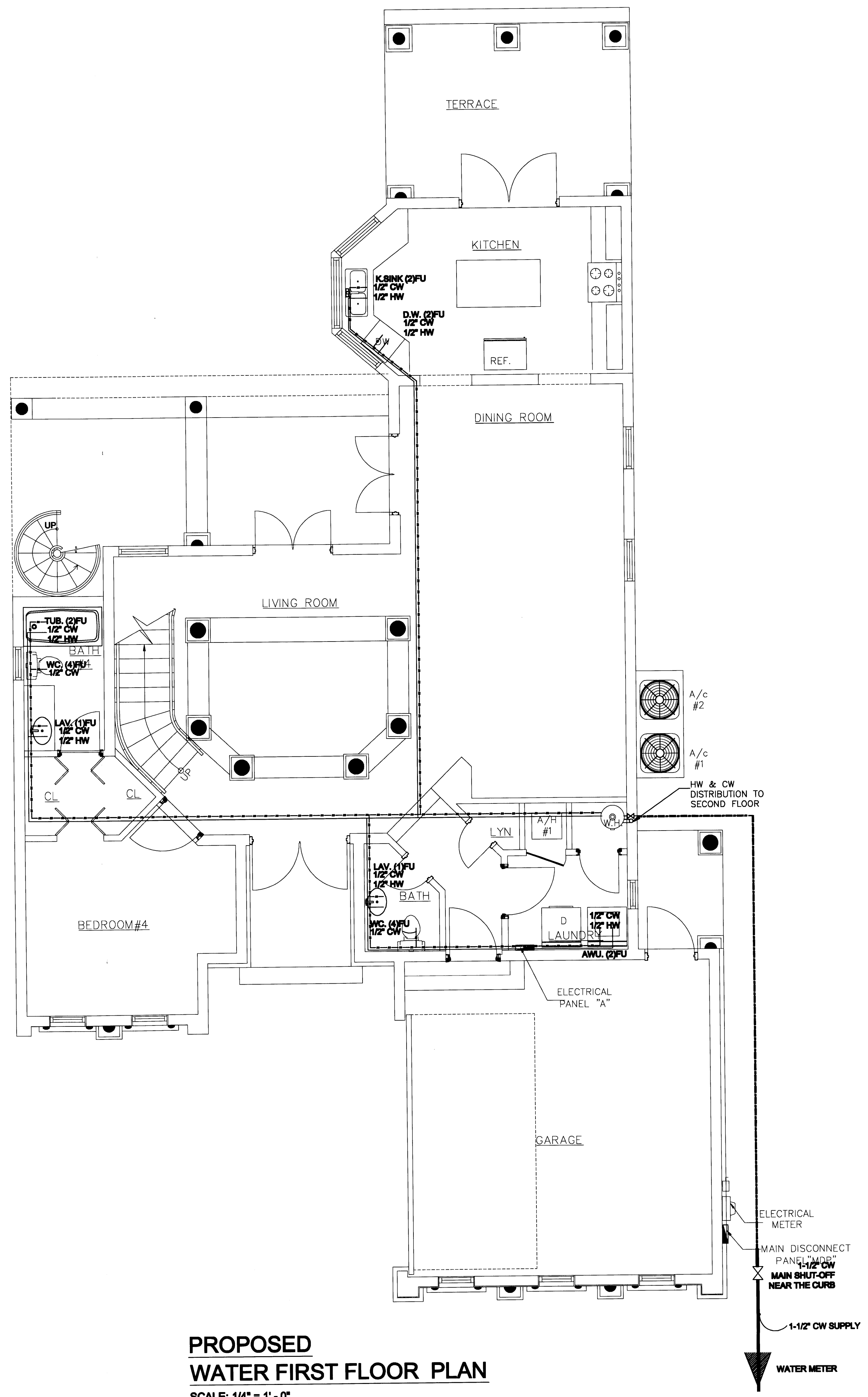
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COMMENCING WORK.

APPROVED BY	DATE
 CORRECTION-1	04/17/09

NEW TO:
**RESIDENCE
NEW CONSTRUCTION**
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

P-1

SHEET NUMBER



PERMIT SET

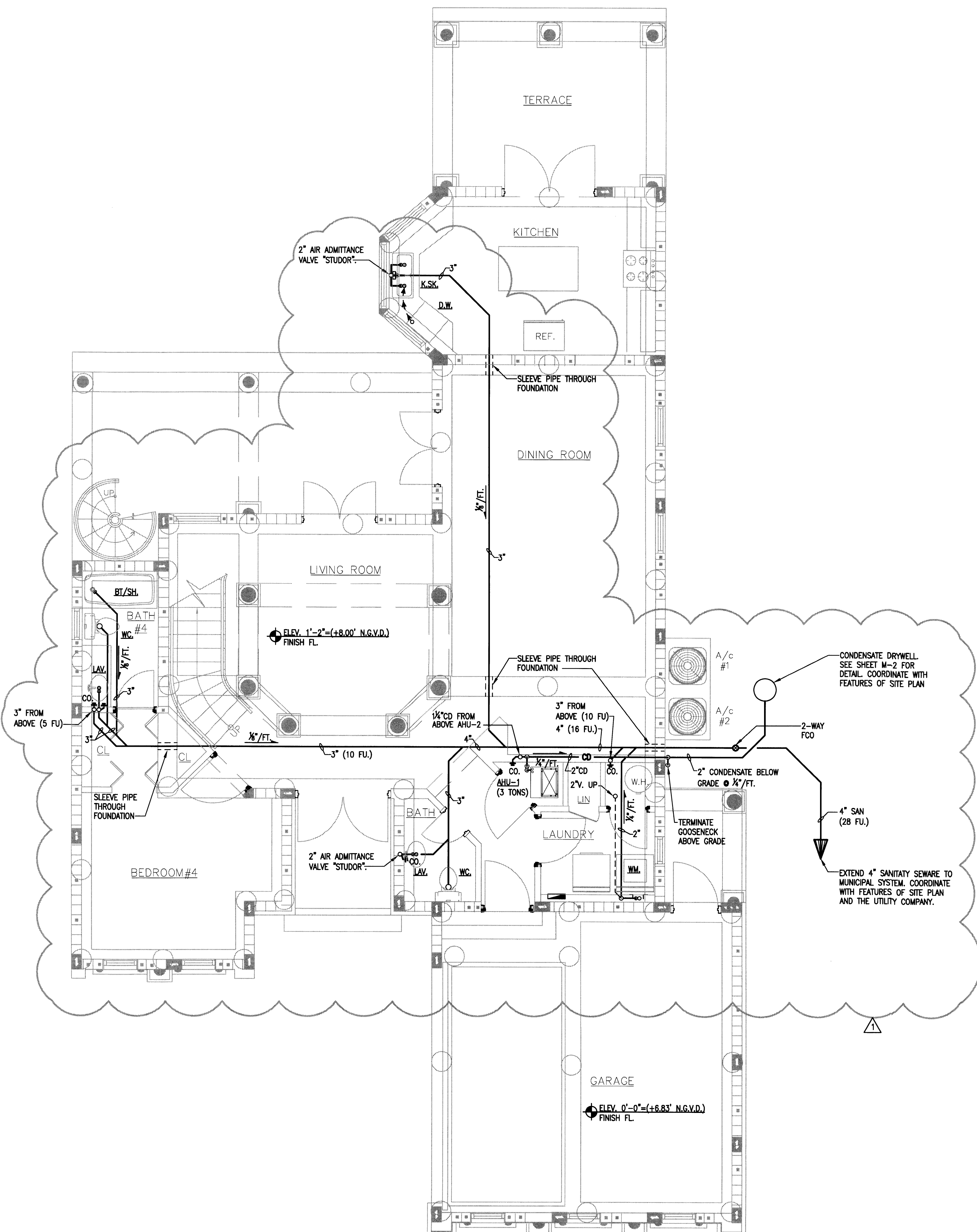
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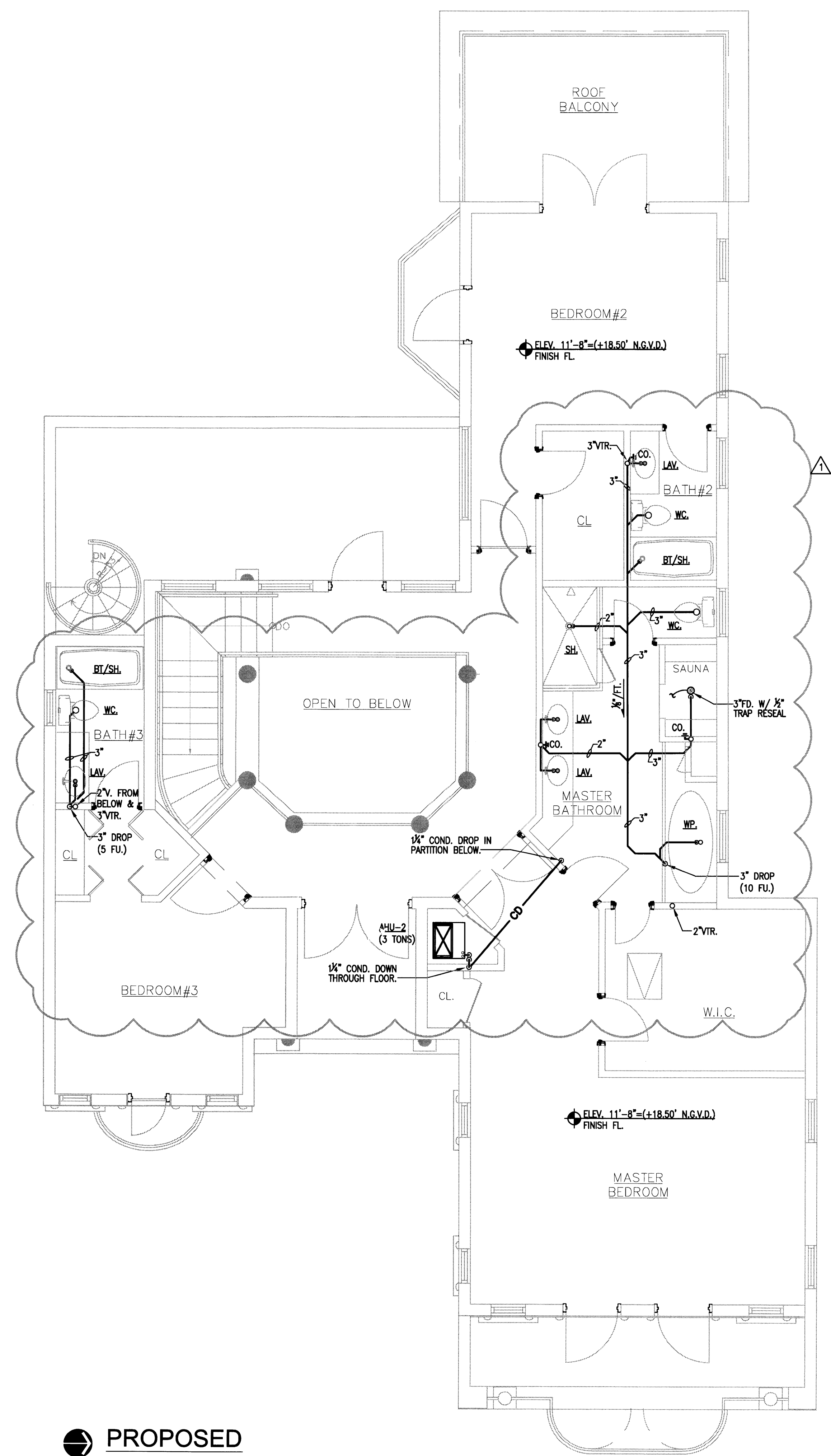
APPROVED BY	DATE

Edward A. Landers, P.E.
2/2009





PROPOSED
SANITARY FIRST FLOOR PLAN
SCALE: 1/4" = 1' - 0"



PROPOSED
SANITARY SECOND FLOOR PLAN
SCALE: 1/4" = 1' - 0"

PERMIT SET

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ENGINEER. CONTRACTORS SHALL
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ENGINEER OF ANY DISCREPANCIES PRIOR TO
COMMENCING WORK.

APPROVED BY	DATE
△ CORRECTION-1	04/17/09

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

P-2

SHEET NUMBER

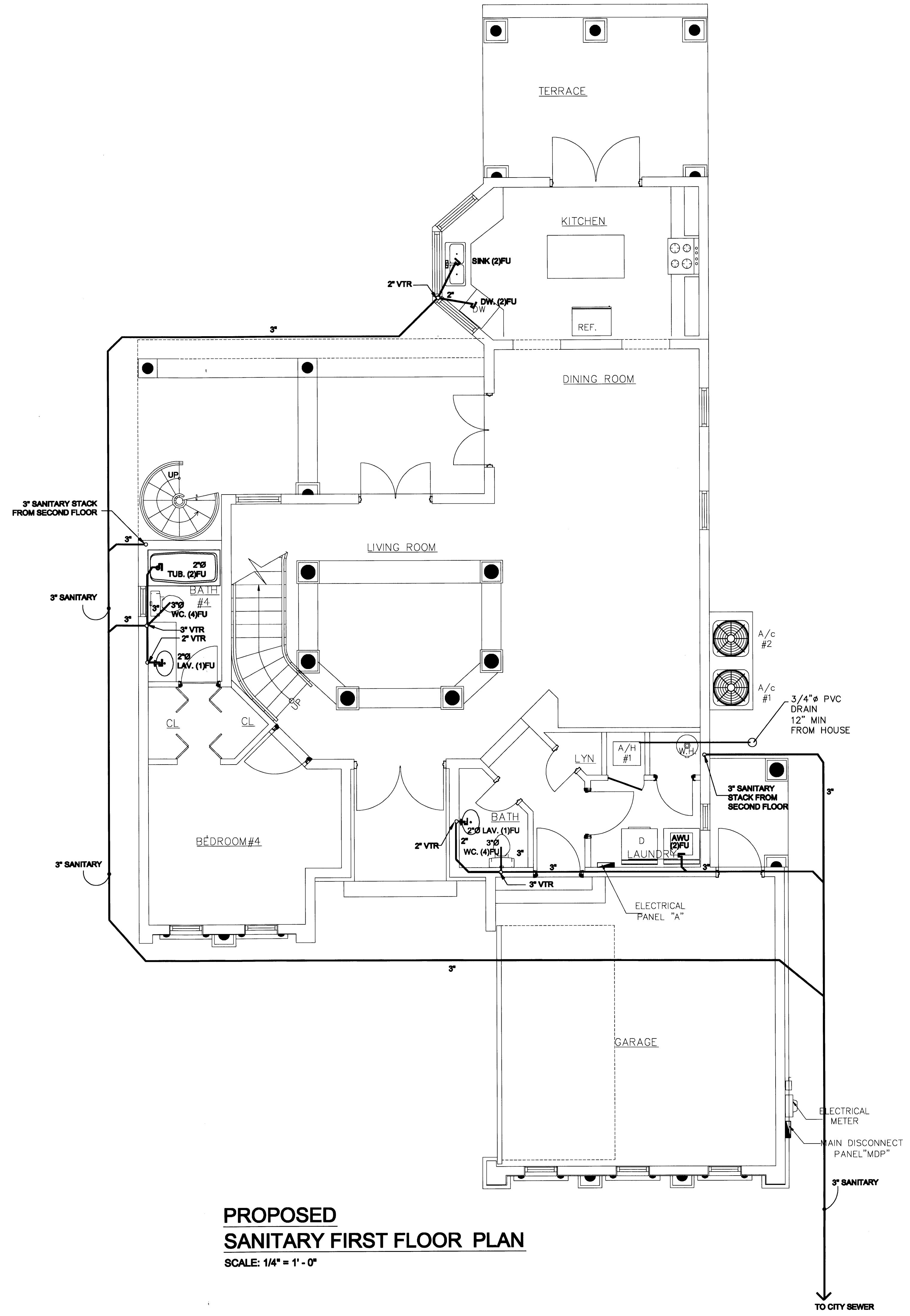
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PERMIT SET

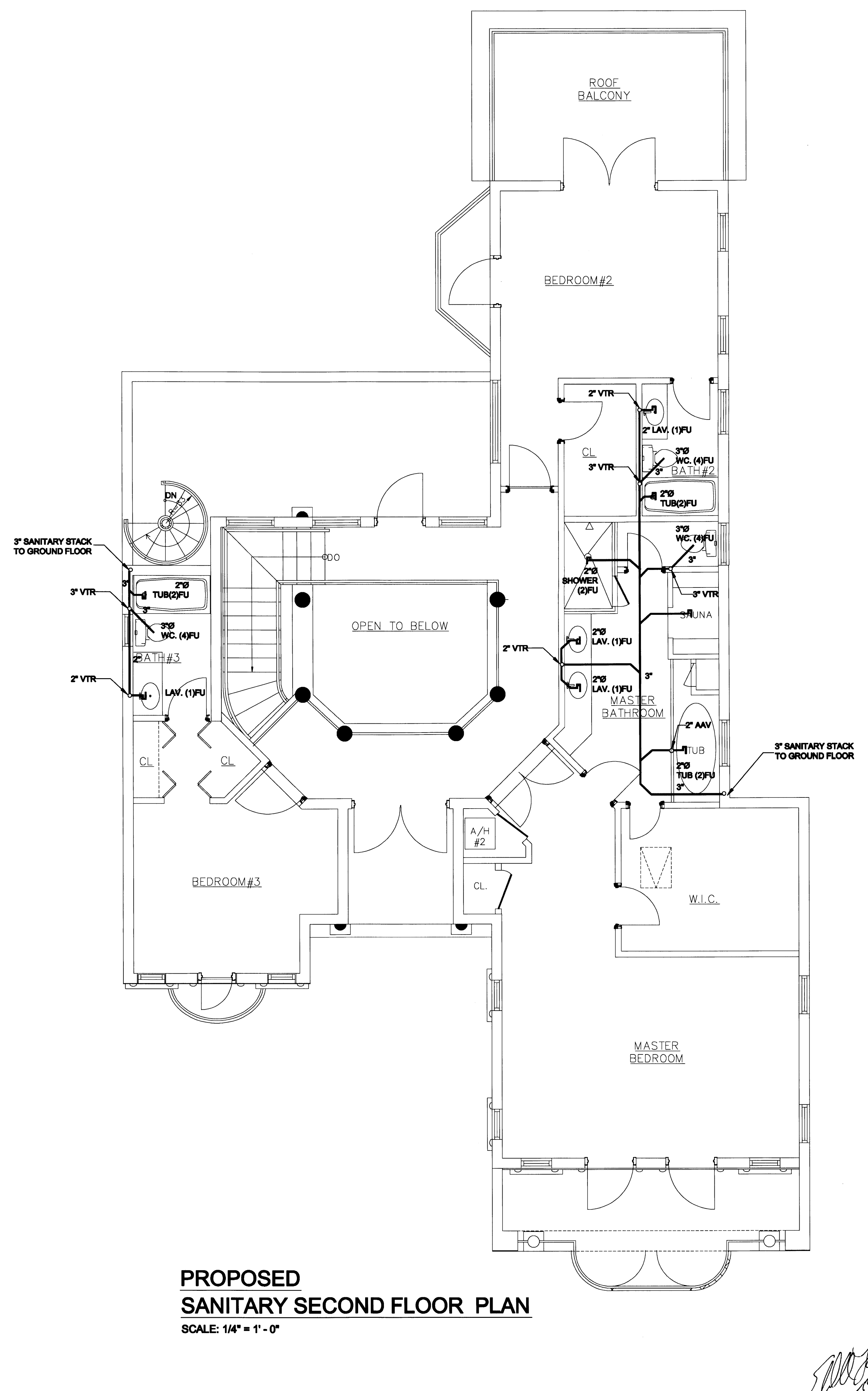
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APPROVED BY	DATE

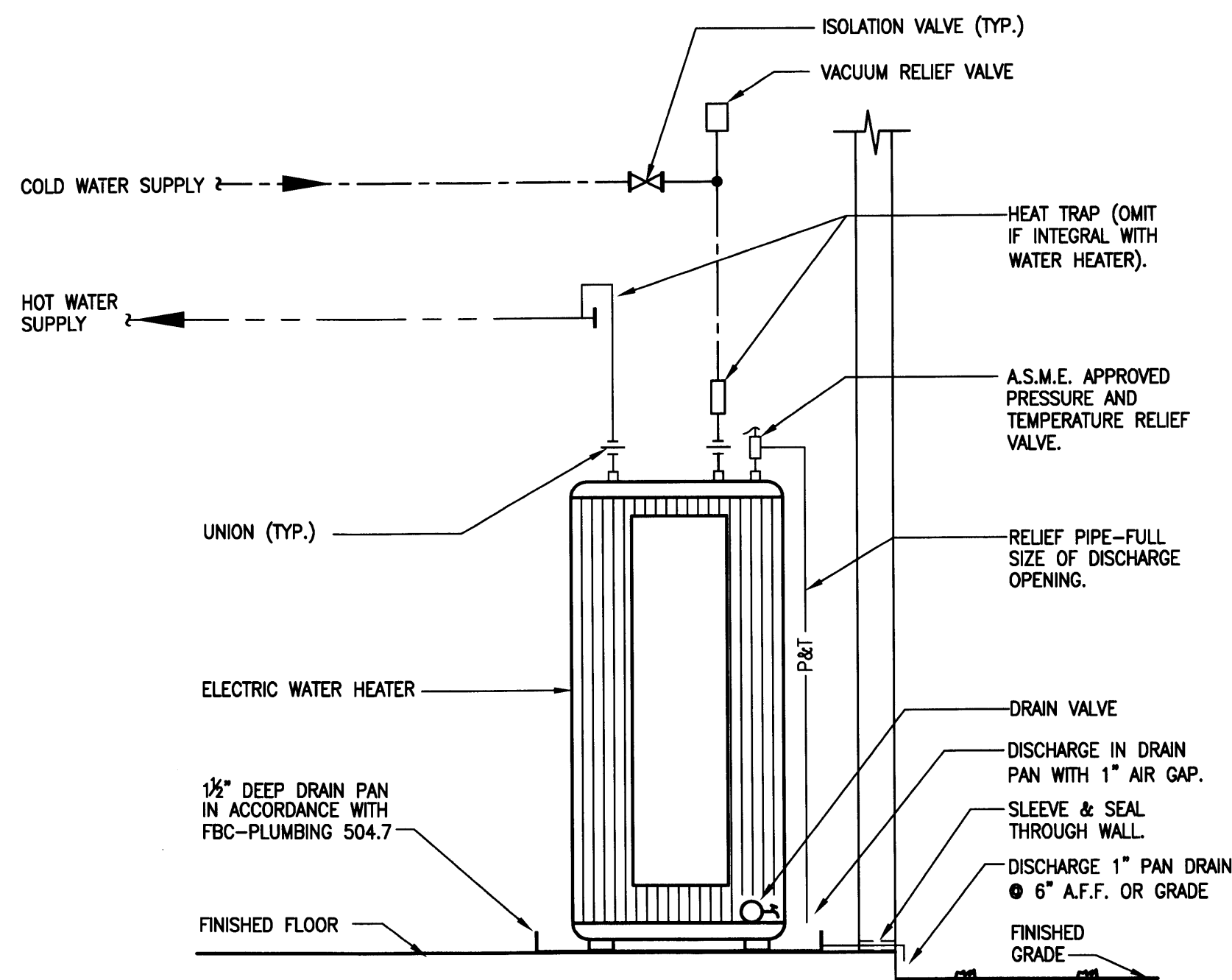
NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 33140



PROPOSED
SANITARY FIRST FLOOR PLAN
SCALE: 1/4" = 1' - 0"



PROPOSED
SANITARY SECOND FLOOR PLAN
SCALE: 1/4" = 1' - 0"



ELECTRIC WATER HEATER DETAIL - EWH-1
N.T.S.

ELECTRIC WATER HEATER EWH-1 (4 BR, 4.5 BATH)

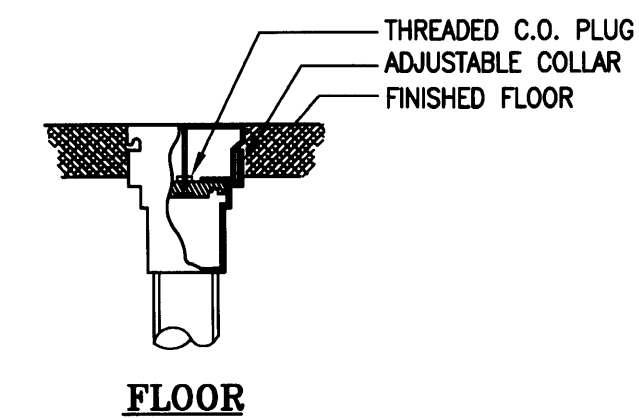
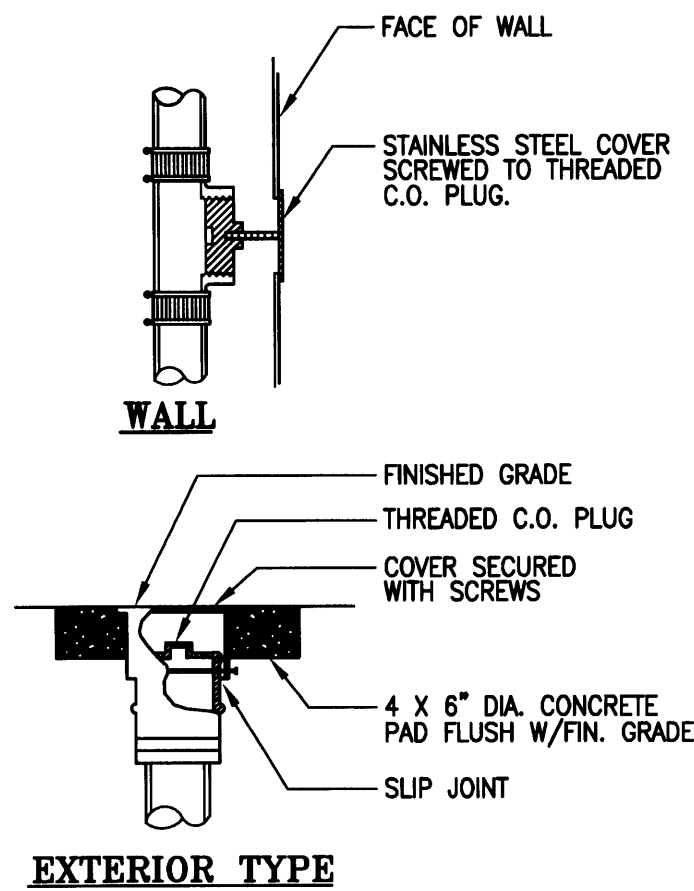
65 GALLON STORAGE TANK WATER HEATER WITH 6.0 KW ELECTRIC ELEMENTS IS REQUIRED. WATER HEATER SHALL BE 65 GALLON GLASS LINED STORAGE TANK WATER HEATER WITH (2) - 6.0 KW ELECTRIC ELEMENTS WIRED FOR NON-CONCURRENT INDEPENDENT OPERATION AT 240 VOLTS, SINGLE PHASE INCOMING POWER. 5 YEAR LIMITED WARRANTY ON STORAGE TANK AGAINST TANK FAILURE. WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE STANDARD 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION, ALONG WITH TABLE 13-612.1.ABC.3.2 OF "FLORIDA ENERGY EFFICIENCY FOR BUILDING CONSTRUCTION" (0.88 EF MINIMUM). - SET TEMPERATURE AT 110°F.

SET TEMPERATURE AT 110°F.

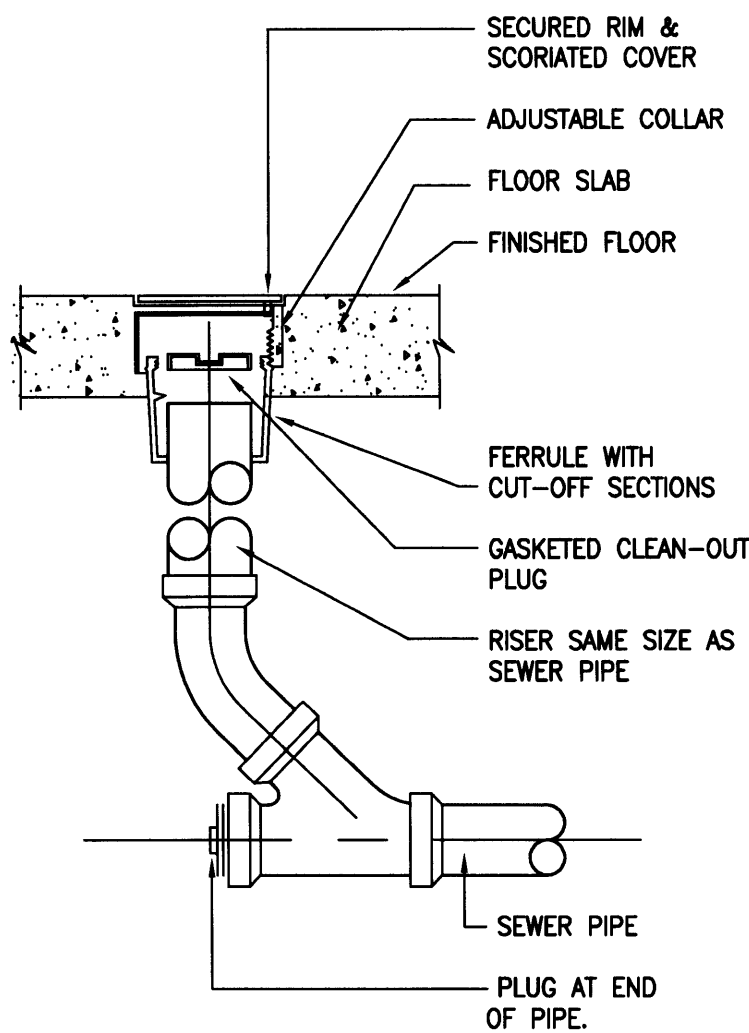
PROVIDE EXPANSION TANK, SIZE PER MANUFACTURER'S RECOMMENDATIONS.

RECIRCULATING PUMP SHALL BE ALL BRONZE, "BELL & GOSSETT" MODEL SLC-30B, 1/20 HP, 120 VOLT, SINGLE PHASE.

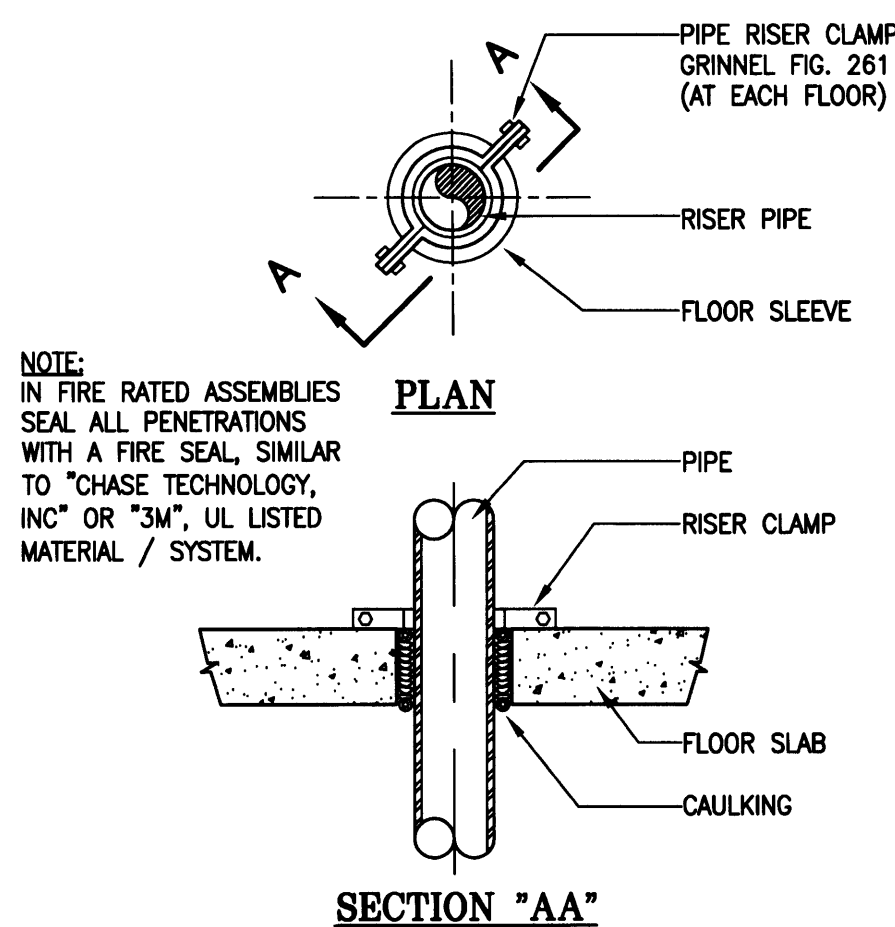
PLUMBING LEGEND	
SYMBOL	DESCRIPTION
---	NEW COLD WATER LINE (CW)
---CD---	NEW CONDENSATE DRAIN LINE
---	NEW HOT WATER LINE (HW)
---	HOT WATER RECIRCULATING LINE (HWR)
G	GAS LINE
P&T	PRESSURE & TEMPERATURE RELIEF LINE
∇	CHECK VALVE
●	BALL VALVE
⌵	GAS COCK
---	INDIRECT SAFE WASTE (IW)
---	NEW SANITARY WASTE LINE (SAN)
---	SANITARY VENT LINE (V)
-----	EXISTING TO BE REMOVED.
WHA	WATER HAMMER ARRESTOR (WHA).
FD	3" FLOOR DRAIN W/ 1/2" TRAP RESEAL UNLESS OTHERWISE INDICATED.
FCO	FLOOR CLEAN OUT
WCO	WALL CLEAN OUT
GV	GATE VALVE
HB	HOSE BIBB WITH GV & VB
VV	VALVE IN BOX
VV	GATE VALVE IN VERTICAL (RISER)
TP	"P" TRAP
UNION	UNION
CEIL., CLG.	CEILING
FU	FIXTURE UNIT
DW.	DISH WASHER
(UG)	UNDERGROUND
V.T.R.	VENT THROUGH ROOF
EWH	ELECTRIC WATER HEATER
GWH	GAS WATER HEATER
VB	VACUUM BREAKER



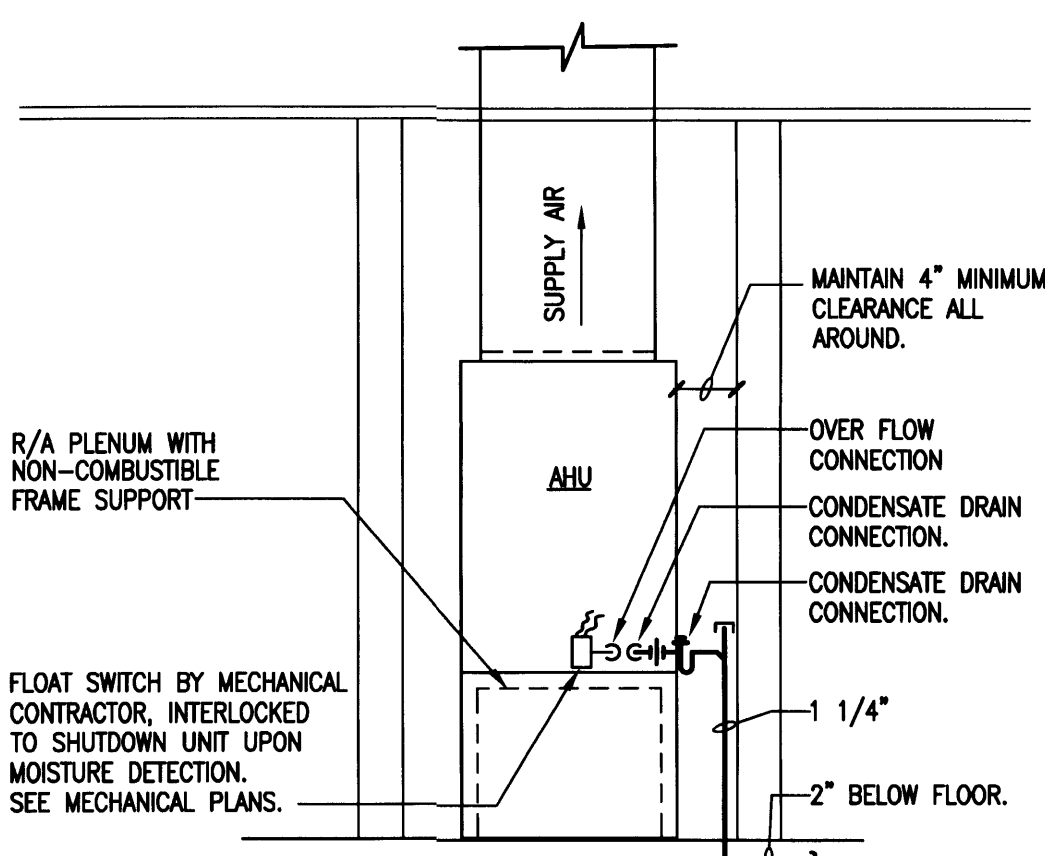
TYPICAL CLEANOUT DETAIL
N.T.S.



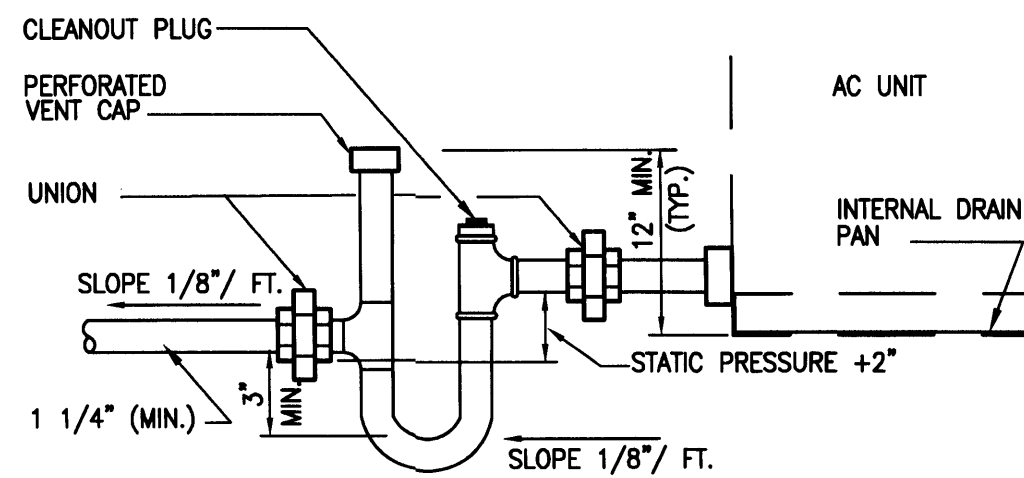
CLEANOUT DETAIL
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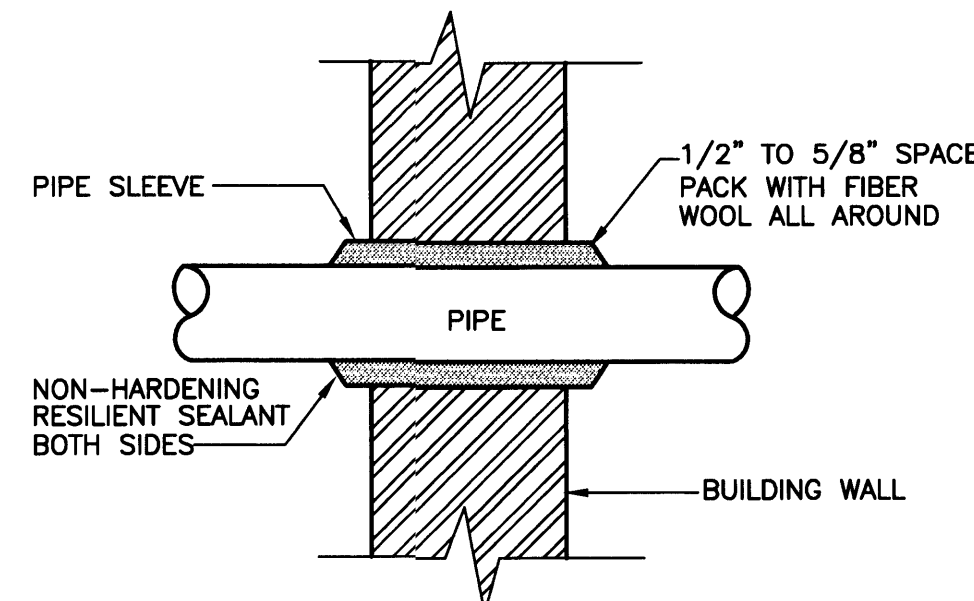
PIPE RISER CLAMP DETAIL
N.T.S.



AHU INSTALLATION DETAIL
N.T.S.



CONDENSATE TRAP DETAIL
N.T.S.



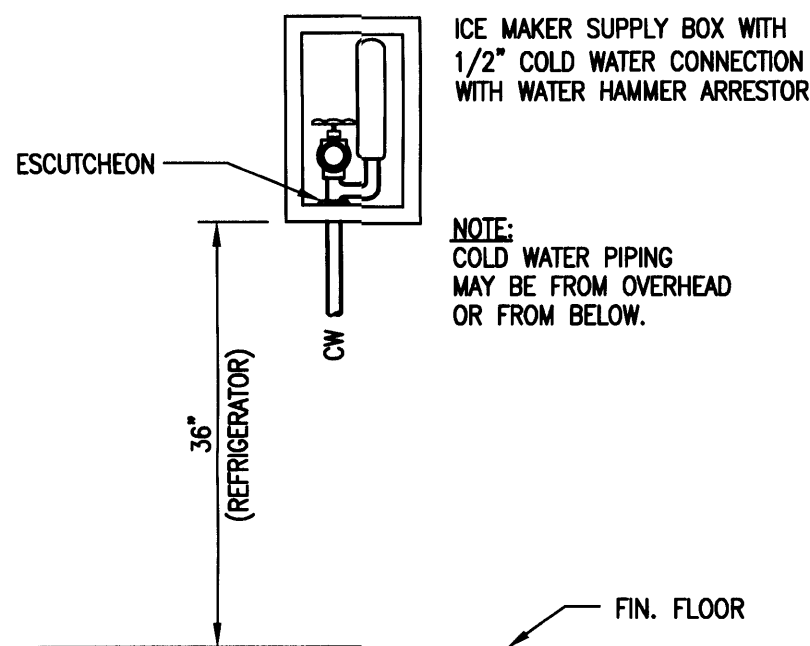
NOTE:
IN FIRE RATED ASSEMBLIES SEAL ALL PENETRATIONS WITH A FIRE SEAL, SIMILAR TO "CHASE TECHNOLOGY, INC" OR "3M", UL LISTED MATERIAL / SYSTEM.

PIPING WALL PENETRATION DETAIL
N.T.S.

WATER HAMMER ARRESTOR SIZING & SELECTION TABLE

SIZE	FIXTURE UNITS	PDI RATING
1/2"	1-11	A
3/4"	12-32	B

PROVIDE WATER HAMMER ARRESTOR AT ALL PLUMBING FIXTURES.



REFRIGERATOR / ICE MAKER CONNECTION DETAIL
N.T.S.

PLUMBING NOTES

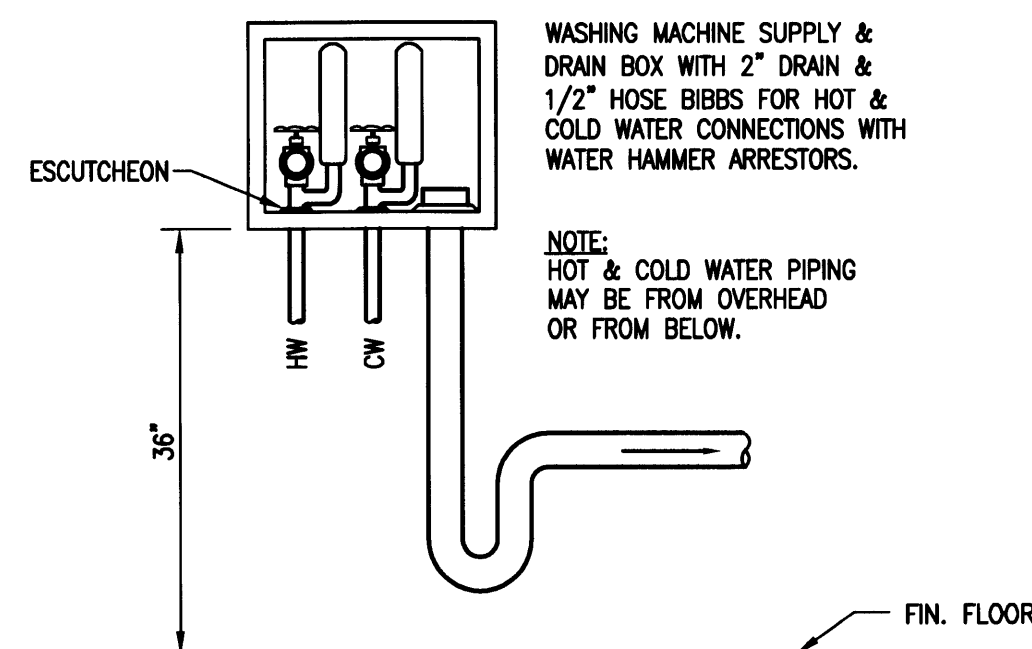
- ALL WORK REFLECTED ON THESE DOCUMENTS ARE IN COMPLIANCE WITH THE 2004 EDITION OF THE "FLORIDA BUILDING CODE-RESIDENTIAL", INCLUDING 2006 SUPPLEMENT.
- CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH AND VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ ENGINEER PRIOR COMMENCING WORK.
- THE CONTRACTOR SHALL COORDINATE THE WORK OF THIS TRADE WITH ALL OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ ENGINEER.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THIS CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF WORK.
- ALL PERMITS, FEES, INSPECTIONS AND TESTS SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL PLANS.
- ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS, INDELIBLY MARKED WITH NAME OF MANUFACTURER, WEIGHT AND/ OR CLASS.
- ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE.
- ALL EXCAVATION, BACKFILL AND PATCHING OF THE SLAB SHALL BE PART OF THIS CONTRACT.
- VERIFY LOCATION, SIZE AND ELEVATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ADVISE ARCHITECT/ ENGINEER OF ANY DISCREPANCIES.
- DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE DRAWINGS FOR THE EXACT LOCATION OF FIXTURES AND PIPING.
- READILY ACCESSIBLE STOPS SHALL BE PROVIDED AT ALL PLUMBING FIXTURES.
- PROVIDE AIR CHAMBER 18" HIGH, NEXT SIZE LARGER THAN PIPE SERVING ALL PLUMBING FIXTURES (UNLESS OTHERWISE INDICATED). PROVIDE WATER-HAMMER ARRESTOR ON MAIN LINES, RISERS AND WHERE QUICK CLOSING VALVES ARE UTILIZED & WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION. WATER-HAMMER ARRESTORS SHALL BE OF MAINTENANCE FREE TYPE AS MANUFACTURED BY "PRECISION PLUMBING PRODUCTS (PPP)" OR APPROVED EQUAL. WATER-HAMMER ARRESTORS SHALL CONFORM TO ASSE 1010. PROVIDE ACCESS PANEL WHERE RECOMMENDED BY THE MANUFACTURER.
- PROVIDE DIELECTRIC UNIONS WHERE DISSIMILAR METALS ARE JOINED.
- ESCUTCHEONS SHALL BE CHROME PLATED BRASS WITH LOCKING SCREWS WHERE PIPES PASS THROUGH FINISHED WALLS.
- A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH SOIL AND WASTE STACK.
- ALL HORIZONTAL BRANCHES, SEWER AND DRAIN LINES 2 1/2 INCHES IN DIAMETER AND SMALLER SHALL BE SLOPED A MINIMUM OF 1/4 INCH PER FOOT. 3 INCHES AND LARGER TO BE SLOPED AT 1/8 INCH PER FOOT UNLESS OTHERWISE INDICATED ON PLANS.
- EVERY FIXTURE CONNECTED TO THE DRAINAGE SYSTEM SHALL BE EQUIPPED WITH A WATER SEAL TRAP.
- EACH HOSE BIBB SHALL BE FURNISHED WITH A VACUUM BREAKER AND SHUT OFF VALVE.
- ALL EXPOSED PIPING WITHIN TOILET ROOMS SHALL BE CHROME PLATED.
- CONTRACTOR SHALL INSTALL A COMPLETE WATER DISTRIBUTION SYSTEM IN STRICT ACCORDANCE WITH CHAPTER 29 OF THE FLORIDA PLUMBING CODE - RESIDENTIAL.
- PLUMBING FIXTURES SHALL COMPLY WITH WATER CONSERVATION REQUIREMENTS OF ORDINANCE 91-15 AND TABLE P2903.2a OF THE FLORIDA BUILDING CODE - RESIDENTIAL.
- CONTRACTOR SHALL CONNECT WATER AND WASTE TO EQUIPMENT FURNISHED BY OTHERS AS REQUIRED FOR COMPLETE OPERATION.

- THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) ONE YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- ALL A/C CONDENSATE DRAIN LINES ABOVE GRADE SHALL BE INSULATED WITH 1/2" ARMAFLEX PIPE INSULATION. SEAL ALL SEAMS WITH INSULATION MANUFACTURER'S SOLVENT. NO TAPES ARE ALLOWED.
- WHERE SINKS OR LAVATORIES HAVE OPEN KNEE SPACE BELOW, HOT WATER AND DRAIN PIPES EXPOSED UNDER THESE SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED SO AS TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS. USE "HANDI LAV-GUARD" INSULATION KIT OR APPROVED EQUAL. COLOR TO BE WHITE OR AS SELECTED BY ARCHITECT/OWNER.
- INSULATE ALL HOT WATER SUPPLY AND RETURN PIPING WITH 1" THICK MOLDED FIBERGLASS INSULATION WITH ALL SERVICE JACKET. K = 0.26 @ 180°F (ASTM C 335). RUNOUTS TO INDIVIDUAL TERMINAL UNITS NOT EXCEEDING 12' MAY BE .5" THICK.
- PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND ALL WATER HAMMER ARRESTORS WHERE THEY REQUIRE MAINTENANCE. FIXTURES WITH CONCEALED SLIP-JOINT CONNECTION SHALL BE PROVIDED WITH 12"x12" ACCESS PANEL. ACCESS PANELS IN RATED WALLS MUST MAINTAIN THE SAME RATING AND MUST MATCH THE FINISH OF THE WALL.
- ISOLATE COPPER PIPE FROM HANGER SUPPORTS WITH ISOLATOR PAD (HAIR FELT LINING) SUPER STRUT MODEL C 715/16. FILL ALL VOIDS BETWEEN PIPE AND WALL/ FLOOR SLEEVES WITH FIRE RATED FOAM. CHASE TECHNOLOGY CORPORATION -CTC PR-855 OR EQUAL.
- PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG FOR ALL WALL CLEAN OUTS. JOSAM 58890 OR EQUAL.
- PIPING MATERIALS:
 - SANITARY, WASTE AND VENT:
 - BELOW GRADE:
 - PVC SCHEDULE 40 PIPE WITH DWV PATTERN FITTINGS, CONFORMING TO ASTM D-2865 & D-3311.
 - ABOVE GROUND:
 - PVC SCH.40. FIXTURE DRAINAGE ARMS 2" AND SMALLER MAY BE PVC DWV CONFORMING TO ASTM D-2865.
 - DWV SEAMLESS HARD DRAWN COPPER ASTM B306 PIPE WITH CAST BRASS OR WROUGHT COPPER SOLDER JOINT DRAINAGE FITTINGS.
 - DOMESTIC WATER SUPPLY PIPING:
 - ABOVE GROUND: COPPER TUBING TYPE "L" WITH BRONZE OR WROUGHT COPPER SOLDER JOINT FITTINGS.
 - BELOW GROUND: COPPER TUBING TYPE "K" WITH BRONZE OR WROUGHT COPPER SOLDER JOINT FITTINGS.
 - CONDENSATE DRAIN PIPING:
 - PVC SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
 - TYPE DWV: SEAMLESS HARD DRAWN, ASTM B306.
- COMPLETE WATER PIPING SYSTEM SHALL BE STERILIZED AND PRESSURE TESTED BY CAPPING OR PLUGGING OPENINGS, FILLING SYSTEM WITH WATER AND APPLYING HYDROSTATIC PRESSURE OF 125 PSI FOR PERIOD OF NOT LESS THAN 2 HOURS.
- SOIL, WASTE AND VENT PIPING SHALL BE TESTED BY CAPPING THE ENDS OF THE SYSTEM AND ALL LINES FILLED WITH WATER TO HIGHEST POINT, OR A MINIMUM OF 5 FEET AND ALLOW TO STAND UNTIL INSPECTION IS MADE AND WATER LEVEL REMAINS CONSTANT.

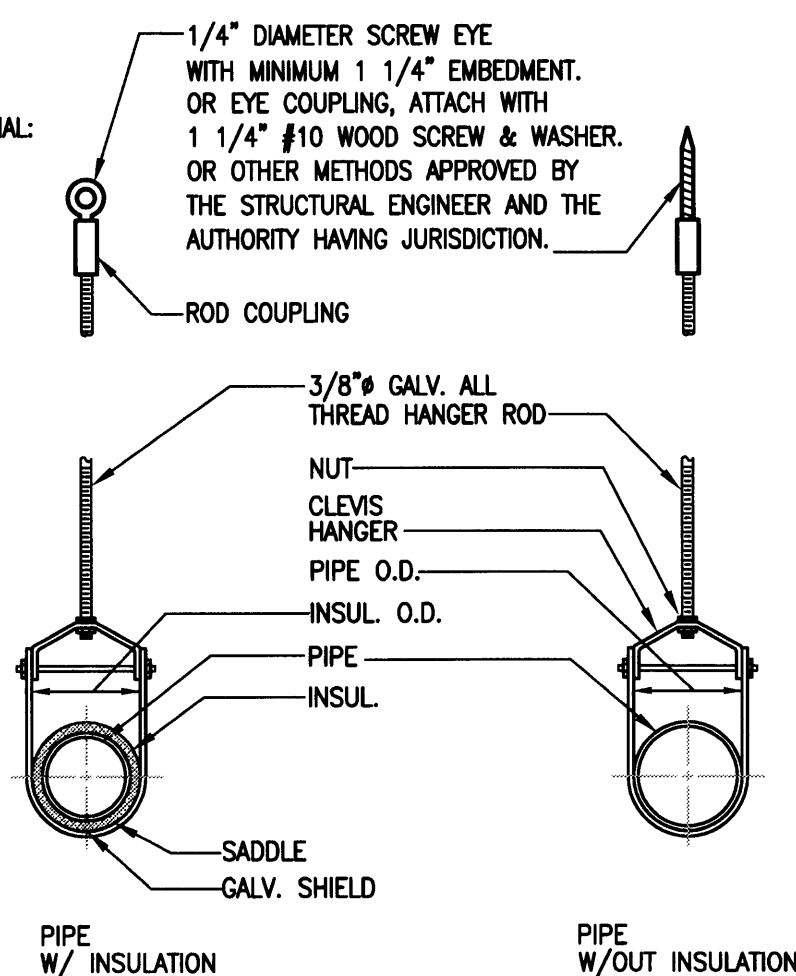
PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	WASTE	CW	HW	REMARKS
WC.	WATER CLOSET	4"x3" STUB-UP	1/2"	-	FLOOR MOUNTED, TANK TYPE, ELONGATED.
LAV.	LAVATORY	1 1/4"	1/2"	1/2"	COUNTER OR PEDESTAL MOUNTED.
SH.	SHOWER	2"	1/2"	1/2"	PRESSURE BALANCED MIXING VALVE PER F.B.C. P2708.3. SET AT MAXIMUM OF 110°F.
BT/SH	BATH TUB W/ SHOWER	1 1/2" (2" BELOW GRADE)	1/2"	1/2"	PRESSURE BALANCED MIXING VALVE PER F.B.C. 424.4. SET AT MAXIMUM OF 120°F.
W.P.	WHIRLPOOL TUB	1 1/2" (2" BELOW GRADE)	3/4"	3/4"	QUICK FILL FAUCET.
K.SK.	KITCHEN SINK	1 1/2"	1/2"	1/2"	DOUBLE COMPARTMENT SINK - 3/4 HP FOOD GRINDER.
DW.	DISH WASHER	SAFE WASTE	-	1/2"	RECESSED SUPPLY BOX WITH WATER HAMMER ARRESTOR.
WM.	CLOTHES WASHING MACHINE	2"	1/2"	1/2"	RECESSED SUPPLY / DRAIN BOX WITH WATER HAMMER ARRESTORS ON WATER CONNECTIONS.
REF.	ICE MAKER CONNECTION BOX	-	1/2"	-	RECESSED SUPPLY BOX WITH WATER HAMMER ARRESTOR AND INLINE FILTER.

- NOTES:
- ALL COLOR & STYLE OF FIXTURES AS SELECTED BY ARCHITECT/OWNER.
 - ALL FIXTURES SHALL COMPLY WITH CHAPTER 27 FLORIDA BUILDING CODE - RESIDENTIAL.
 - ALL FIXTURES SHALL BE WATER SAVER TYPE (TABLE P2903.2a FLORIDA BUILDING CODE - RESIDENTIAL: 1.6 GPF WATER CLOSET, 2.2 GPM LAV, 2.2 GPM SINK FAUCET, 2.5 GPM SHOWER HEAD).



WASHING MACHINE CONNECTION DETAIL
N.T.S.



PIPE HANGERS-CLEVIS TYPE
N.T.S.

PERMIT SET

DWG INFO:

APPROVED BY: DATE: 09/17/09

CORRECTION-1

RESIDENCE NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 33140

PLUMBING NOTES:

- ALL PLUMBING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE SOUTH FLORIDA BUILDING CODE, CHAPTER 46; LOCAL ORDINANCES, AND IN COMPLIANCE WITH THE FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION.
- CONTRACTOR TO VERIFY AT SITE LOCATION THE ELEVATION AND SIZE OF EXISTING SEWER AND WATER MAINS FOR CONNECTION OF NEW SERVICES BEFORE INSTALLATION OF ANY PIPING.
- UNDERGROUND METAL PIPING SHALL BE PROTECTED WITH COAT OF BITUMINOUS COMPOUND ("BITUMASTIC" OR EQUAL) BEFORE COVERING.
- PROVIDE SHUT-OFF AND VACUUM BREAKER TO ALL HOSE BIBS AND FAUCETS WITH HOSE-END CONNECTIONS.
- ALL FIXTURES SHALL BE PROTECTED AGAINST WATER HAMMER WITH AIR CHAMBERS OR SHOCK ABSORBERS.
- PLUMBING FIXTURES SHALL BE AS PER EQUIPMENT SCHEDULE, OR APPROVED EQUAL. ALL FIXTURE TRIM SHALL BE CHROME PLATED. FIXTURES SHALL BE PROVIDED WITH SUPPORTS, HANGERS, ETC.
- WASTE LINES SHALL SLOPE 1/8" PER FOOT, UNLESS OTHERWISE NOTED.
- PROVIDE FULLY ACCESSIBLE CLEANOUTS ON SANITARY AND ANY WASTE PIPING AT EVERY CHANGE OF DIRECTION AND AT BOTTOM OF STACKS. CLEANOUT LOCATIONS AND SIZES ON HORIZONTAL LINES SHALL BE ACCORDING TO CODE.
- VENT LINES SHALL EXTEND 6" MINIMUM ABOVE ROOF AND FLASHED WITH LEAD OR CONNECTED TO EXISTING VENT LINES.
- ALL FLOOR DRAINS SHALL HAVE TRAP PRIMERS TO PROTECT THE SEAL OF THE TRAP.
- PROVIDE CONTROL VALVES TO ALL MAINS ENTERING THE BUILDING, RISERS, BRANCHES, GROUPS OF FIXTURES AND TO EACH PIECE OF EQUIPMENT.
- CONTRACTOR SHALL VISIT SITE AND VERIFY ALL EXISTING CONDITIONS, MODIFICATIONS TO EXISTING CONDITIONS, LOCATIONS, AND DIMENSIONS AFFECTING HIS WORK, AS SHOWN AND/OR NOTED ON THE DRAWINGS.
- ALL WORK SHALL CONFORM TO THE SOUTH FLORIDA BUILDING CODE, NFPA, AND U.L. REQUIREMENTS.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. CONTRACTOR SHALL REPLACE ALL DEFECTIVE MATERIALS AND INFERIOR WORKMANSHIP FOR THE GUARANTEE PERIOD AT NO COST TO THE OWNER INCLUDING ALL LABOR REQUIRED TO CORRECT THE DEFECTIVE WORK.
- CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED TO PROCESS THE WORK.

DOMESTIC WATER PIPING:

- UNDERGROUND, GALVANIZED STEEL PIPE, SCHEDULE 40 SCREWED (ASTM A-120-78) WITH MALLEABLE IRON FITTINGS GALVANIZED TO MATCH PIPE. ANSI B 16.3-71, ASTM A-197-47, OR CAST IRON FLANGED FITTINGS (ANSI B 16.1). PIPE SHALL BE PROTECTED WITH COAT OF BITUMINOUS COMPOUND. COPPER TUBING TYPE K (ASTM B-88-75), ACCEPTABLE ALTERNATE.
- ABOVE GROUND: GALVANIZED STEEL PIPE, SCHEDULE 40 SCREWED (ASTM A-120-78) WITH MALLEABLE IRON FITTINGS GALVANIZED TO MATCH PIPE. ANSI B 16.3-71, ASTM A-197-47, OR CAST IRON FLANGED FITTINGS (ANSI B 16.1). COPPER WATER TUBING, TYPE L, ASTM B-88-75 WITH WROUGHT COPPER FITTINGS, ANSI B 16.22-73.
- INSULATION: ALL HOT WATER PIPE, SUPPLY AND RETURN SHALL BE INSULATED WITH FIBERGLASS MOLDED INSULATION WITH PRE-SIZED FACTORY APPLIED FRJ JACKET OF GLASS CLOTH WITH LONGITUDINAL LAP AND BUTT JOINT STRIPS WITH SELF SEALING ADHESIVE. INSULATION SHALL BE "OWENS-CORNING" ASJ/SSL-11, OR APPROVED EQUAL. MAXIMUM FLAME SPREAD 25 RATED BY U.L.
- THICKNESS PIPE SIZE:
1-1/4" TO 2" AND UNDER - 1" TH INSULATION
1" AND UNDER - 1" TH INSULATION
RUNS OUT TO FIXTURES - 1/2" INSULATION
- PIPE HANGERS AND SUPPORTS:
PROVIDE ADJUSTABLE HANGERS, INSERTS, BRACKETS, ROLLS, CLAMPS AND SUPPLEMENTARY STEEL AS REQUIRED FOR PROPER SUPPORT OF PIPE LINES. HANGERS SHALL ALLOW FOR EXPANSION AND CONTRACTION OF PIPE LINES AND COVERING TO RUN CONTINUOUSLY THROUGH HANGERS.
- SPACING AND SIZES:
A. HORIZONTAL CARBON STEEL PIPE:
PIPE SIZE ROD DIAMETER MAXIMUM SPACING
UP TO 1-1/4" 3/8" 8'
1-1/2" AND 2" 3/8" 10'
B. HORIZONTAL COPPER PIPING:
PIPE SIZE ROD DIAMETER MAXIMUM SPACING
UP TO 1" 3/8" 6'
1-1/4" AND 1-1/2" 3/8" 8'

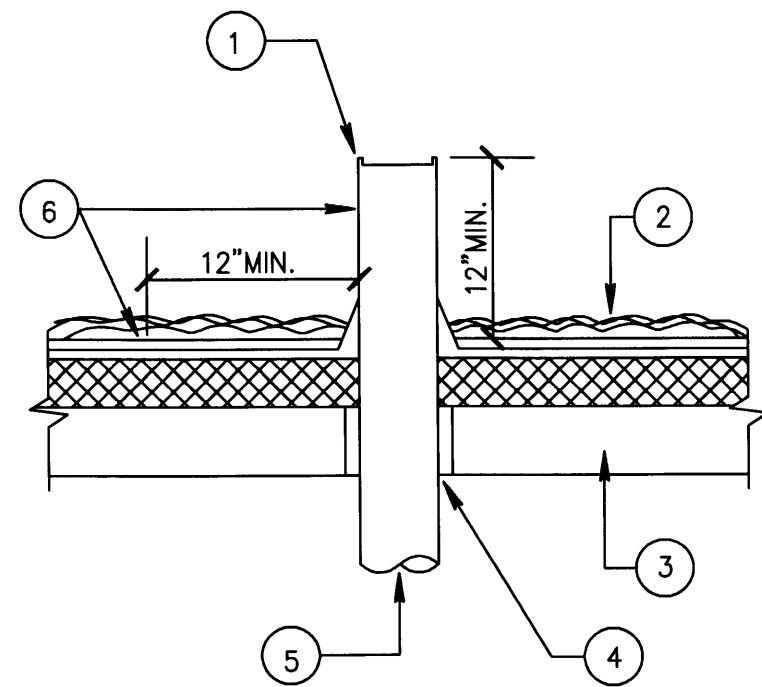
THE PLUMBING CONTRACTOR SHALL COORDINATE THE LOCAL UTILITY COMPANIES TO OBTAIN THE EXACT LOCATION OF THE POINT OF WATER, SEWER, AND ANY OTHER UNDERGROUND UTILITIES FOR THE SITE. THE PLUMBING CONTRACTOR SHALL VERIFY THE INFORMATION PRIOR TO BID. ALTHOUGH THE ENGINEER HAS OBTAINED THESE LOCATIONS FROM THE AGENCIES HAVING JURISDICTION AND BELIEVES THE INFORMATION AS SHOWN ON THE PLANS TO BE CORRECT, THIS DOES NOT RELIEVE THE PLUMBING CONTRACTOR OF THE RESPONSIBILITY TO DETERMINE THE LOCATIONS FOR HIMSELF. THE PLUMBING CONTRACTOR SHALL OBTAIN A DRAWING FROM THE UTILITY COMPANIES SHOWING THE EXACT LOCATION OF THE POINT OF CONNECTION PRIOR TO CONSTRUCTION.

WATER HEATER NOTES:

- A HEAT TRAP IS A DEVICE CONSISTING OF A DOWNWARD BEND LOCATED AS CLOSE AS POSSIBLE TO THE WATER HEATER OUTLET, DESIGNED TO PREVENT THE CONVECTION OF HEAT FROM A HOT WATER TANK THROUGH THE HOT WATER DISTRIBUTION LINE IN A NON-RECIRCULATING SYSTEM.
- IF SPACE PERMITS, H=6", IF NOT, PROVIDE 3 1/2" MINIMUM.
- IN LIEU OF THE HEAT TRAP DESCRIBED IN NOTE NO. 1, THE PLUMBER MAY SUBSTITUTE AN INTEGRAL BALL CHECK VALVE ON THE HOT WATER OUTLET AND COLD WATER INLET AS MANUFACTURED BY A.O. SMITH.
- PROVIDE PRESSURE AND TEMPERATURE RELIEF VALVE.
- PROVIDE VACUUM RELIEF VALVE.
- PRESSURE AND TEMPERATURE RELIEF LINE SHALL BE 3/4" O.D. COPPER TO DISCHARGE OUTSIDE 6" ABOVE GROUND.
- ALL DOMESTIC HOT WATER PIPING SHALL BE COPPER.
- PROVIDE BRASS UNIONS AS SHOWN ON WATER HEATER ISOMETRIC, AND WHERE NECESSARY.

PIPING MATERIALS:

- SANITARY WASTE, VENT, AND STORM DRAIN:
BELOW GROUND: "CAST IRON", SERVICE WEIGHT, PIPE AND FITTINGS ACCORDING TO ASTM A-74 HUB AND SPIGOT, OR:
ABOVE GROUND: "CAST IRON", SOIL PIPE, "HUBLESS", ACCORDING TO CSPI-301-78, ASTM A-74, WITH STAINLESS STEEL SHIELD AND CLAMPS OVER NEOPRENE SEALING SLEEVE.
ALTERNATE: THE PLUMBING CONTRACTOR MAY ELECT, IF APPROVED BY OWNER, TO USE THE FOLLOWING MATERIAL SPECIFICATION FOR WASTE, VENT AND STORM DRAIN SYSTEM: POLY VINYL CHLORIDE (PVC) PIPE AND FITTING (SCHEDULE 40). MATERIALS SHALL COMPLY WITH ASTM D-1784, TYPE 1, GRADE L COMPOUND. PIPE SHALL COMPLY WITH ASTM D-1785.
SANITARY WASTE FROM HOUSE TO SEPTIC TANK SHALL BE P.V.C., SDR-30 ACCORDING TO ASTM-30 33/4.
- FITTING SHALL COMPLY WITH ASTM D-2467 SOCKET TYPE. SOLVENT CEMENT SHALL COMPLY WITH ASTM D-2564.
- CONDENSATE DRAINS FROM AIR CONDITIONING UNITS: "PVC" SCHEDULE 40 PIPE AND FITTINGS.
- DOMESTIC WATER
ABOVE GROUND: TYPE M COPPER PIPE WITH WROUGHT COPPER SOLDERED JOINT FITTINGS.
BELOW GROUND: TYPE L COPPER PIPE ACCORDING TO ASTM B-42. TUBE ACCORDING TO ASTM B-88.
ALTERNATE FOR UNDERGROUND PIPE: "CAST IRON" WATER PIPE ACCORDING TO ANSI A-21.6. STEEL PIPE (SCHEDULE 40, GALVANIZED) ACCORDING TO ASTM A-120-68.
ALL CONTROL VALVES FOR DOMESTIC WATER SHALL BE CAST BRASS OR B-88 BRONZE GATE VALVES.
PROVIDE DIELECTRIC FITTINGS FOR JOINING DISSIMILAR METALS.



NOTES:

- TURN LEAD FLASHING DOWN INTO STACK
- ROOFING
- ROOF CONSTRUCTION
- SLEEVE ROOF CONSTRUCTION AS REQUIRED
- VENT STACK
- 4LB. SHEET LEAD FLASHING FILL IN WITH ROOFING MATERIAL
- ANY VENT PIPE WITHIN 10' OF ANY DOOR WINDOW OR FRESH AIR INTAKE, EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3' ABOVE SUCH

VENT THRU ROOF DETAIL

N.T.S.

FIXTURE CONNECTION SCHEDULE							
ITEM	WASTE & SOIL SIZE SLOPE	WATER		MAX FLOW RATE/QTY	FIXTURE UNITS		
		COLD	HOT		QTY	FU	TOTAL
WATER CLOSET	3" @ 1/8" /FT.	1/2"		1.6G/FLUSHING	5	4	20
LAVATORY	2" @ 1/4" /FT.	1/2"	1/2"	2.2 GPM	6	1	6
BATH TUB.	2" @ 1/4" /FT.	1/2"	1/2"	2.5 GPM	4	2	6
SHOWER	2" @ 1/4" /FT.	1/2"	1/2"	2.5 GPM	1	2	2
SINK	2" @ 1/4" /FT.	1/2"	1/2"	2.2 GPM	1	1	1
A.WASHER	2" @ 1/4" /FT.	1/2"	1/2"	2.5 GPM	1	2	2
DISHWASHER	2" @ 1/4" /FT.	1/2"	1/2"	2.5 GPM	1	2	2
NOTE EXISTING 1" DOMESTIC WATER SERVICE FROM METER MINIMUM SLOPE PER FOOT @ 1/8" AS PER F.B.C. PLUMB CHP 7					PROPOSED ADD. 41		

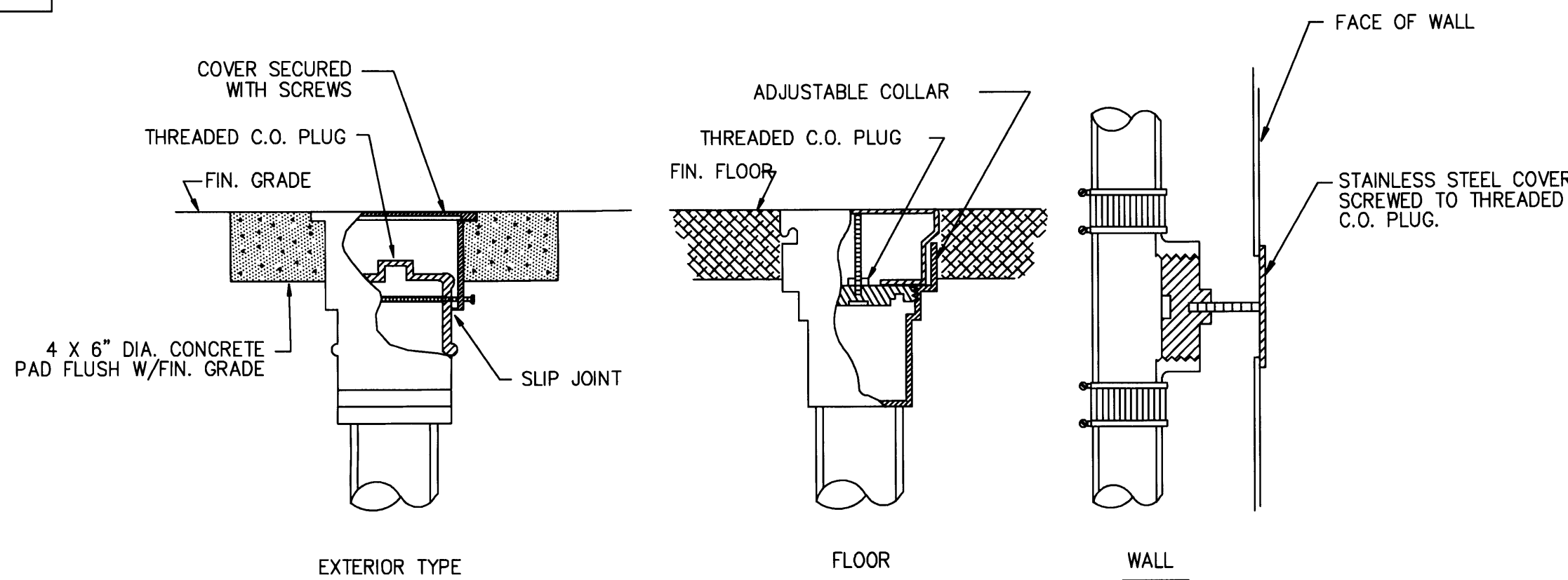
ALL LINES 3" OR GREATER SHALL SLOPE A MIN. OF 1/8" PER FT.
LINES 2" OR SMALLER SHALL SLOPE MIN. A MIN. OF 1/4" PER FT.

PLUMBING FIXTURE LIST:

ALL FIXTURES AND TRIM SHALL BE PROVIDED BY OWNER/BUILDER, P.C. SHALL PROVIDE THE NECESSARY LABOR AND MATERIALS FOR INSTALLATION.

NOTE:

PLUMBING FIXTURES SHALL COMPLY WITH REFERENCE STANDARDS AS PER FBC 2004 SEC. P2701



TYPICAL CLEANOUT DETAIL

N.T.S.

PERMIT SET

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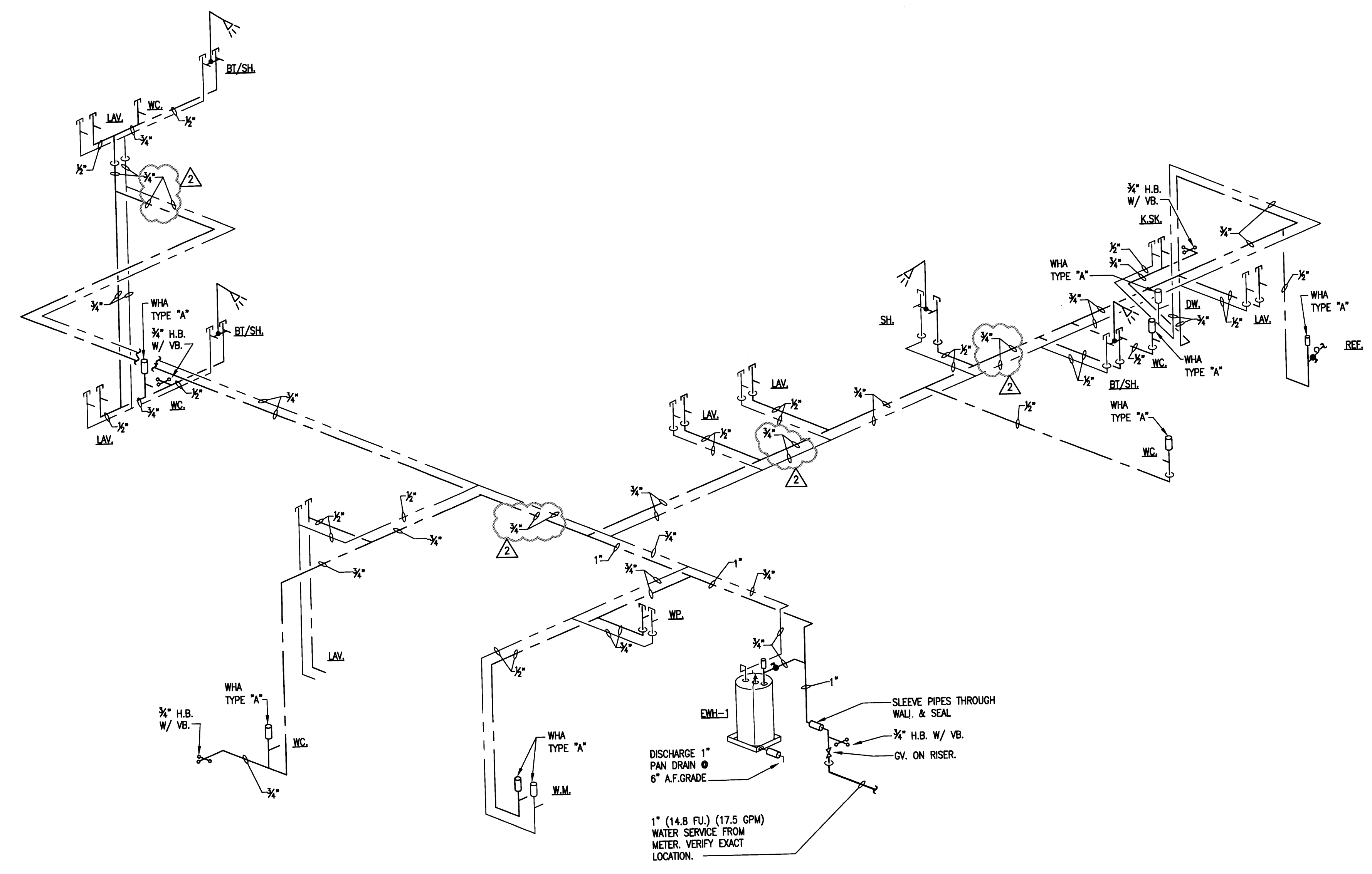
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P-3

SHEET NUMBER



WATER PIPING DIAGRAM

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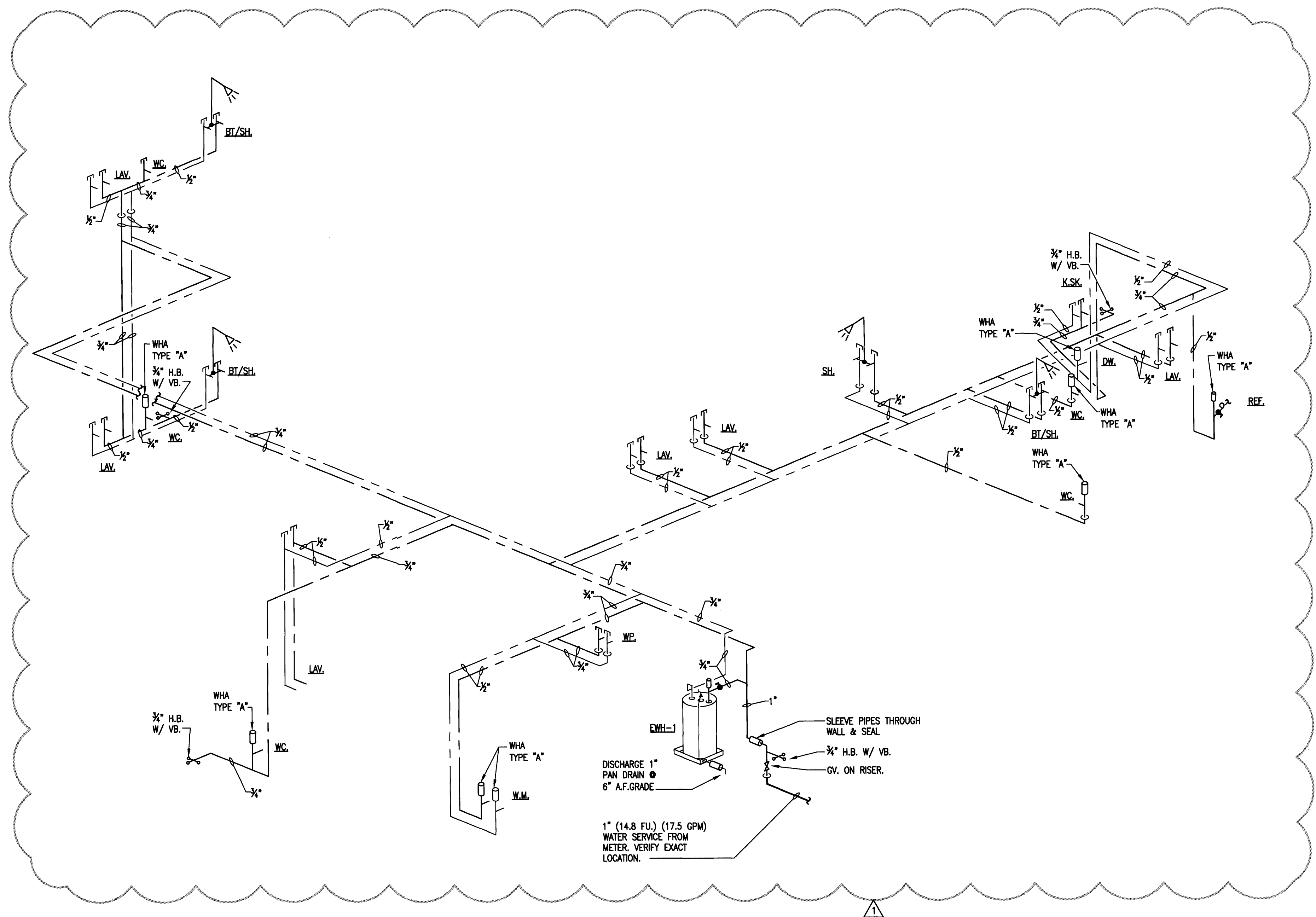
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△ CORRECTION-2	05/19/09

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NEW CONSTRUCTION**
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P-4

SHEET NUMBER

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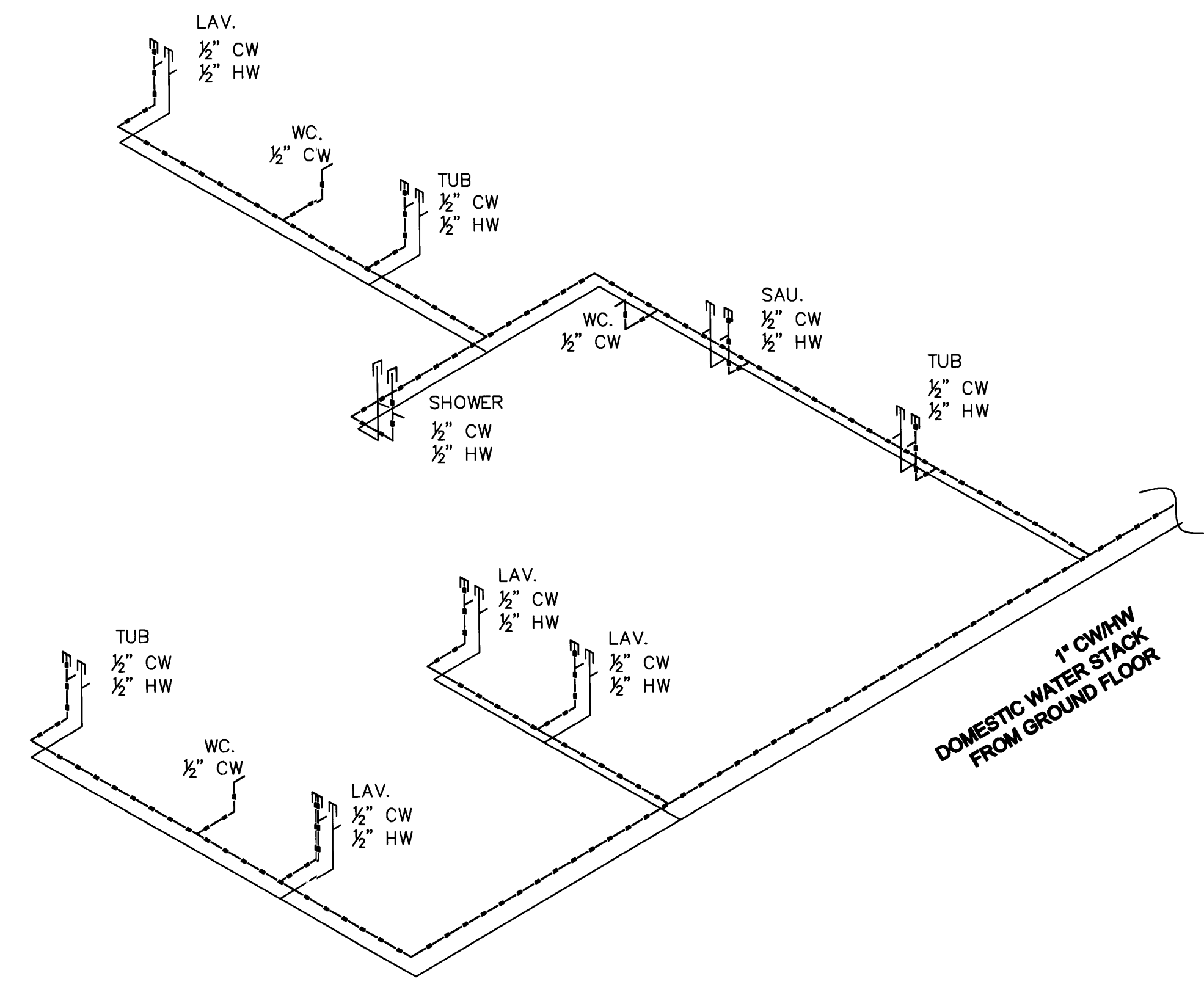
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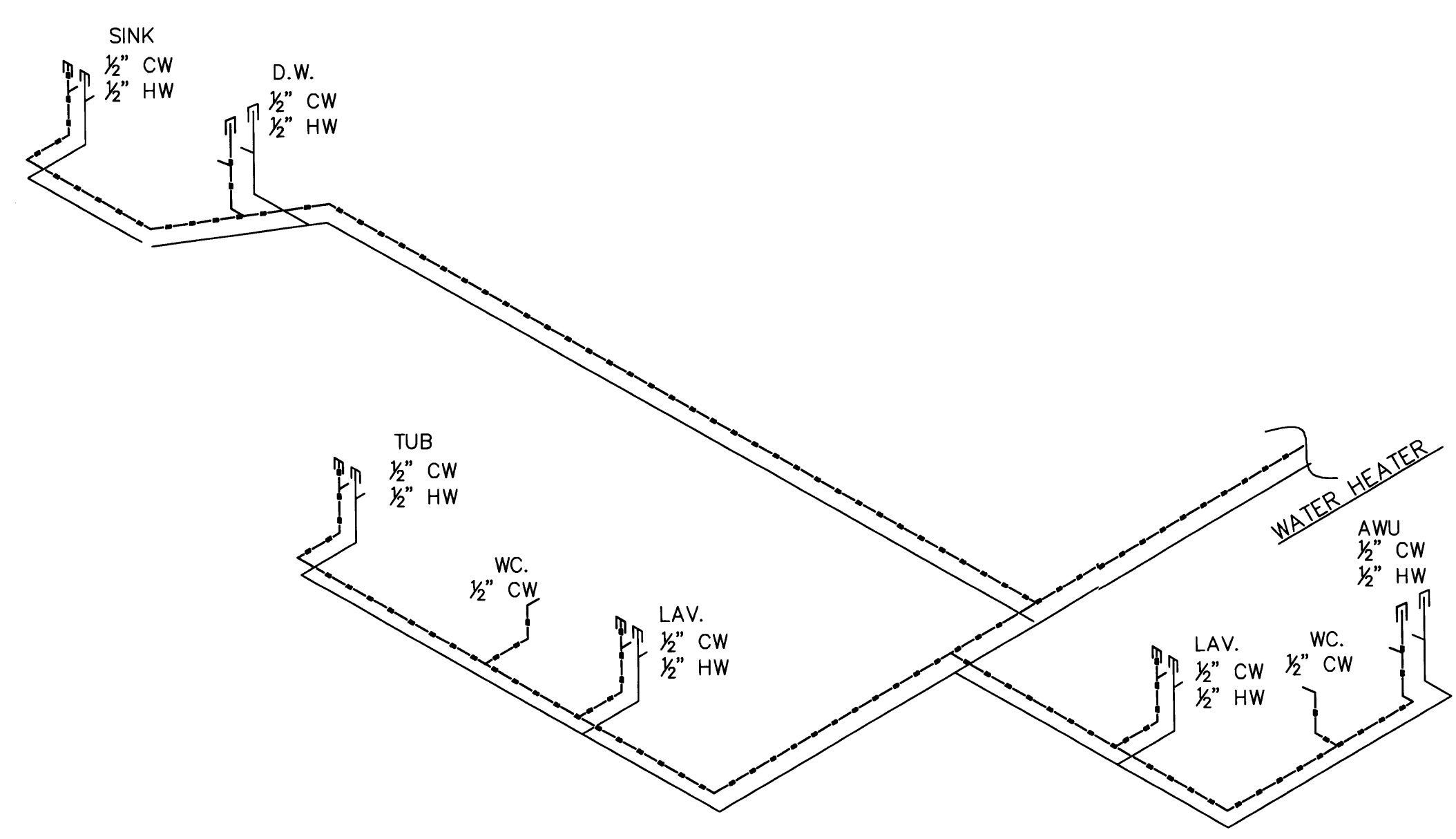
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DOMESTIC WATER RISER DIAGRAM
SECOND FLOOR PLAN
SCALE: N.T.S.



DOMESTIC WATER RISER DIAGRAM
FIRST FLOOR PLAN
SCALE: N.T.S.

PERMIT
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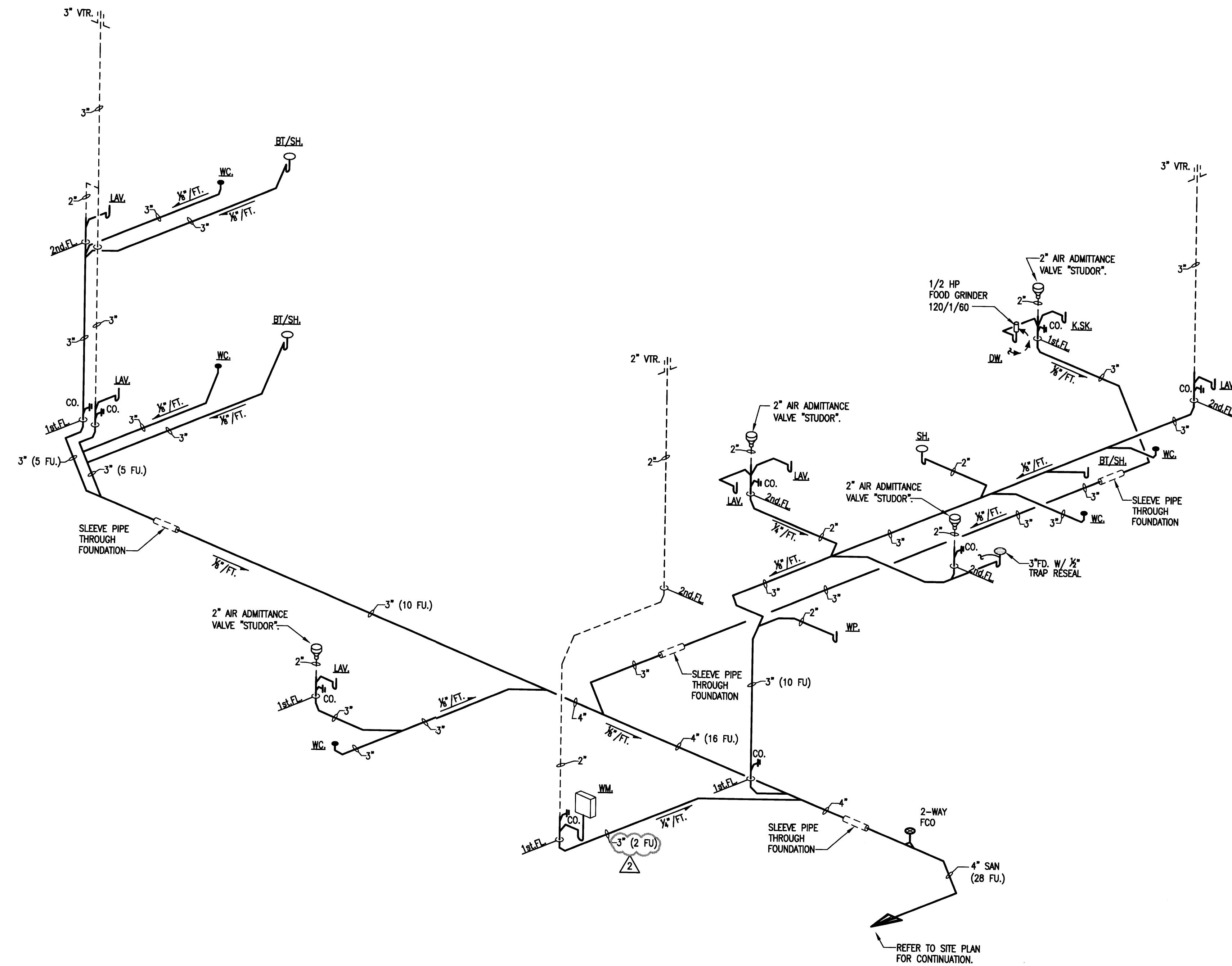
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SANITARY PIPING DIAGRAM
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△ CORRECTION-2	05/19/09

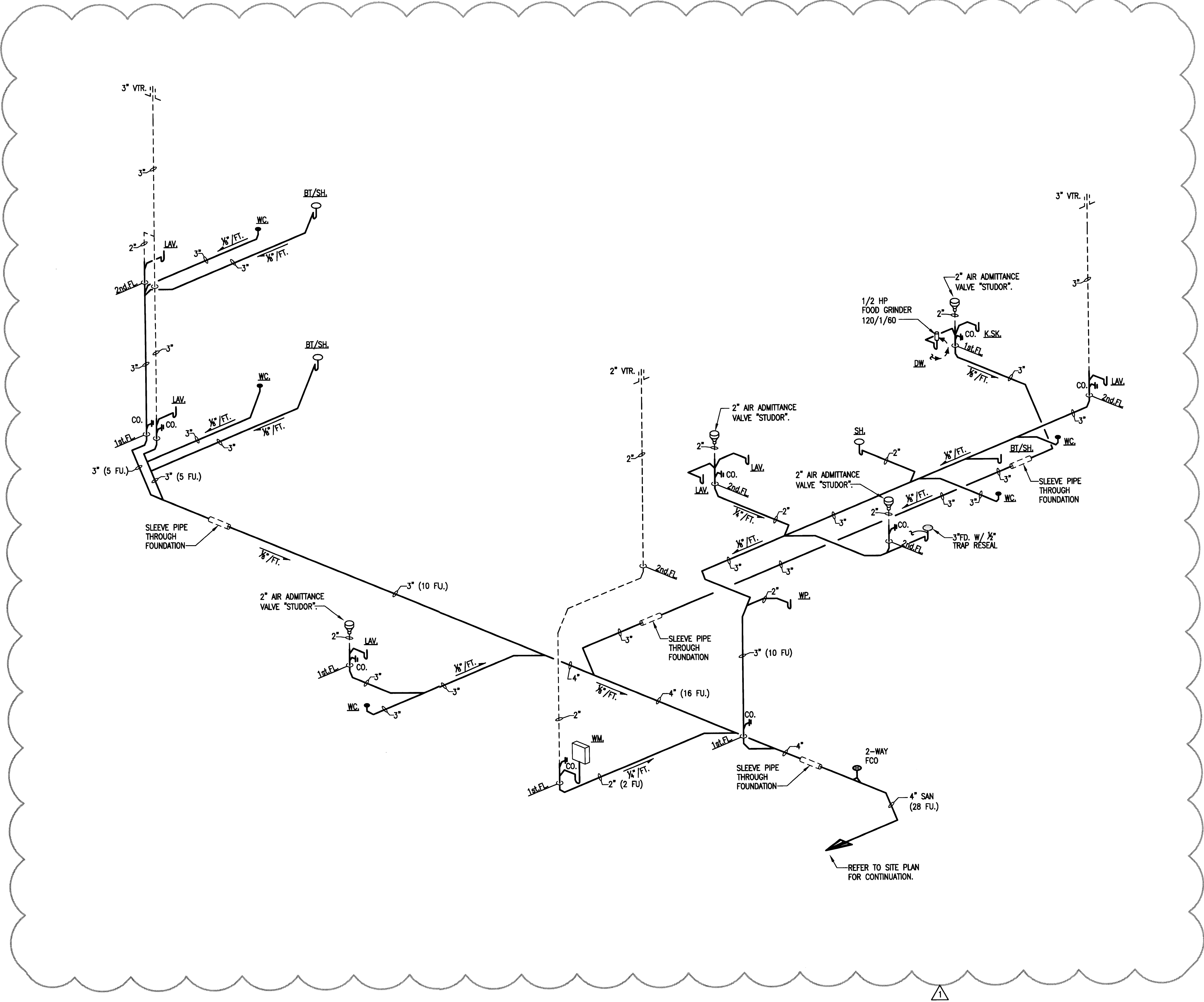
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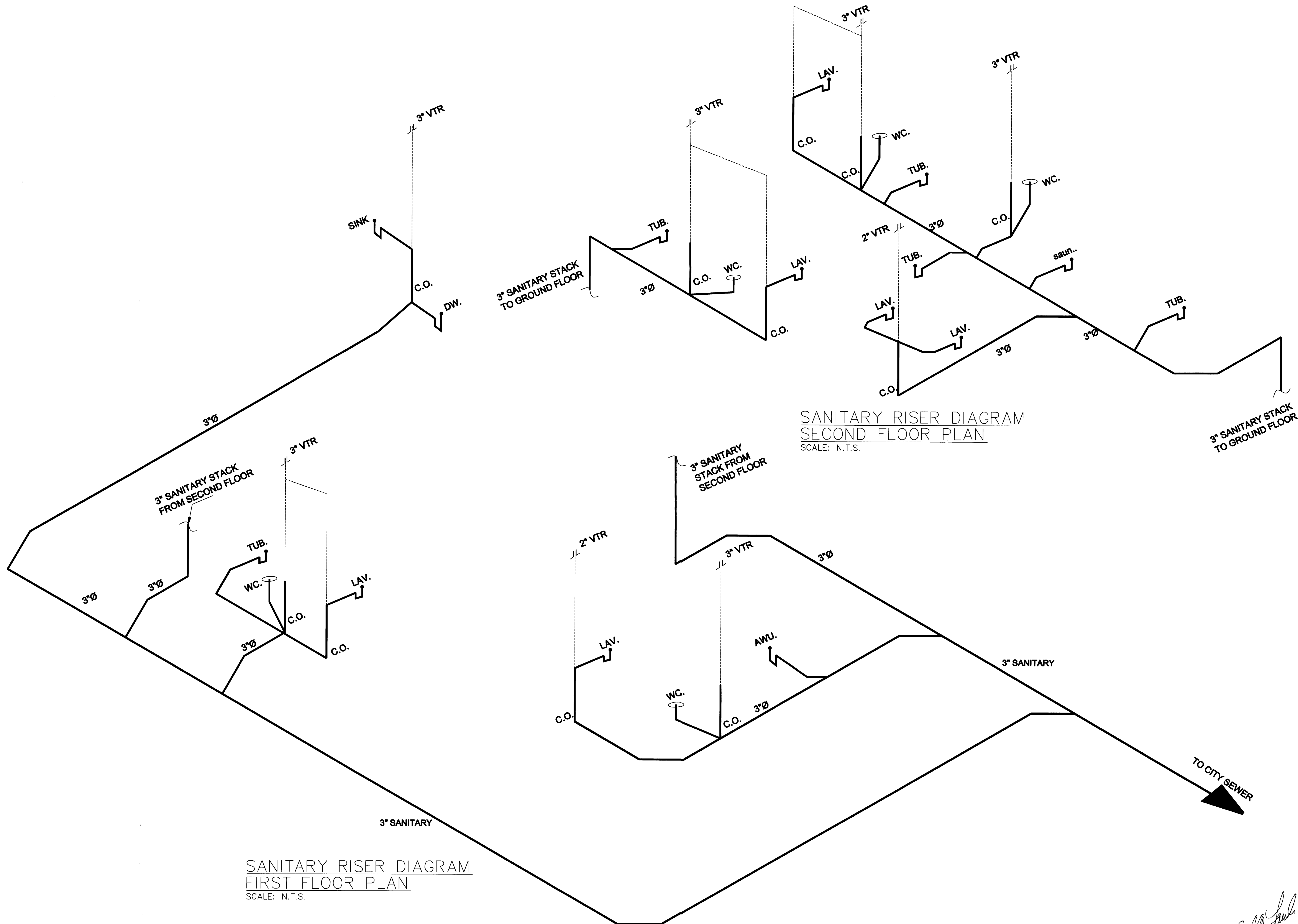
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ONLY AND SHALL NOT BE USED OR
REPRODUCED FOR ANY OTHER PURPOSE
WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
WHATEVER WITHOUT THE EXPRESSED
WRITTEN CONSENT OF THE ENGINEER.
VERIFY ALL DIMENSIONS AND SHALL NOT
RELY ON SCALED DIMENSIONS. NOTIFY THE
ENGINEER OF ANY DISCREPANCIES PRIOR TO
COMMENCING WORK.

APPROVED BY	DATE

NEW TO:
RESIDENCE
NEW CONSTRUCTION
2334 ALTON RD
MIAMI BEACH FLORIDA 3314C

P-5

SHEET NUMBER

Edward A. Landers
2/2/08

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H
G
B
Q

21 May

