

RIB ROOF
METAL BUILDING SPECIFICATIONS
GENERAL

SCOPE
THIS SPECIFICATIONS CONCERNS THE MANUFACTURE OF AND THE CONSTRUCTION DETAILS FOR METAL BUILDINGS DESIGNED AND CONSTRUCTED TO BE WEATHER TIGHT AND EASILY ERECTED. THE BUILDING SHALL INCLUDE THE STRUCTURAL FRAMING, ROOF AND WALL COVERING, TRIM AND CLOSURES, AND ACCESSORIES HEREIN DESCRIBED.

BUILDING DESCRIPTION
THE BUILDING SHALL BE THE DESIGN OF A MANUFACTURERS REGULARLY ENGAGED IN THE FABRICATION OF PRE ENGINEERED STRUCTURES CONFORMING TO THE RECOMMENDATIONS OF THE 1994 MANUAL.

THE MANUFACTURER SHALL HAVE BEEN IN THE SYSTEMS BUILDING BUSINESS FOR FIFTEEN YEARS, AND SHALL BE A MEMBER OF THE METAL BUILDING MANUFACTURERS ASSOCIATION (MBA).

THE FOLLOWING METAL BUILDING MANUFACTURERS ARE ACCEPTABLE:
-AAS BUILDING SYSTEMS, INC.
-AMERICAN BUILDINGS COMPANY
-BUTLER MANUFACTURING COMPANY
-CISCO BUILDING SYSTEMS
-DEAN STEEL BUILDINGS, INC.
-GULF STATES MANUFACTURING, INC.
-KIRBY BUILDING SYSTEMS
-METALLIC BUILDINGS
-VARCO-PRUDEN BUILDINGS, INC.
-WILKIND BUILDING SYSTEMS

OTHER METAL BUILDING MANUFACTURERS MAY BE CONSIDERED, PROVIDED THAT THEY MEET ALL SECTIONS OF THIS SPECIFICATION AND THEY ARE APPROVED IN WRITING BY THE ARCHITECT.

BUILDING NOMENCLATURE
THE BUILDING WIDTH AND LENGTH SHALL BE MEASURED FROM INSIDE TO INSIDE FACE OF THE WALL COVERING.

THE BUILDING "EAVE HEIGHT" SHALL BE MEASURED FROM THE BOTTOM OF THE BASE PLATE OF THE RIGID FRAMING COLUMNS TO THE INTERSECTION OF LINES REPRESENTING THE INSIDE OF THE WALL COVERING AND THE INSIDE OF THE ROOF COVERING.

THE ROOF SLOPE SHALL BE THE ANGLE THAT THE ROOF SURFACE MAKES WITH THE HORIZONTAL EXPRESSED IN THE UNITS OF THE VERTICAL RISE TO 12 UNITS OF HORIZONTAL RUN.

SHOP DRAWINGS AND CERTIFICATIONS
THE BUILDING MANUFACTURER SHALL FURNISH COMPLETE CONSTRUCTION DETAILS SHOWING ANCHOR BOLT SIZES AND SETTINGS, BIDDING SCHEDULES OF END WALLS AND ROOF FRAMING, TRANSVERSE CROSS-SECTIONS, COVERING AND FLASHING DETAILS TO CLEARLY INDICATE THE PROPER ASSEMBLY OF ALL BUILDING PARTS. THESE DRAWINGS SHALL BE PRODUCED UNDER DIRECT SUPERVISION OF A FLORIDA REGISTERED STRUCTURAL ENGINEER WHO SHALL SEAL EACH SHEET OF FOUR (4) SHEETS WHICH SHALL BE SUPPLIED TO THE GENERAL CONTRACTOR FOR REVIEW AND APPROVAL.

DESIGN
GENERAL
ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STEEL FOR BUILDINGS.

ALL COLD-FORMED STRUCTURAL STEEL MEMBERS AND EXTERIOR COVERING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION AISC SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.

DESIGN LOADS
THE FOLLOWING CRITERIA FOR LIVE LOADS AND WIND LOADS SHALL BE FOLLOWED IN THE DESIGN OF STANDARD BUILDING COMPONENTS IN ACCORDANCE WITH FLORIDA BUILDING CODE, 2001 EDITION, AND VELOCITY OF 140 MPH AND ROOF LIVE LOAD AS PER SECTION 610.6.

LOAD
LIVE LOAD (PSF) TO PURLINS 12
WIND LOAD BUILDINGS CODE DESIGNATION TO FRAME 20
APPLICABLE SEC WORK: IBC 2001

THE BUILDING SHALL BE DESIGNED TO THE LOAD COMBINATION SPECIFIED IN THE MEMA LOW RISE BUILDING SYSTEM MANUAL, 1996 EDITION.

ROOF LIVE LOADS SHALL BE APPLIED TO THE HORIZONTAL ROOF PROJECTION UNITS LOADS SHALL BE ASSUMED TO ACT HORIZONTALLY AND SHALL BE APPLIED AS PRESSURE AND SUCTION IN ACCORDANCE WITH SECTION 1608 OF THE 2001 FLORIDA BUILDING CODE OR THE MEMA LOW RISE BUILDING SYSTEMS MANUAL, 1996 EDITION.

DESIGNS SHALL INCLUDE THE BUILDING DEAD LOAD, THE ROOF LIVE LOAD, WIND AND SEISMIC LOAD IN ACCORDANCE TO FLORIDA BUILDING CODE INTERPRETATION OF THE BUILDING CODE SPECIFIC, ADDITIONAL COLLATERAL AND AUXILIARY LOADS SHALL BE INCLUDED WHEN SPECIFIED BY THE BUYER OR AS INDICATED BY DRAWING.

STRUCTURAL FRAMING
GENERAL
ALL FRAMING MEMBERS SHALL BE SHOP FABRICATED FOR BOLTED FIELD ASSEMBLY.

PRIMARY STRUCTURAL FRAMING SHALL INCLUDE THE TRANSVERSE RIGID FRAMING UNIT RAFTER BEAMS AND COLUMNS, BEARING AND FRAMES, END WALL COLUMNS AND WIND BRACING.

SECONDARY STRUCTURAL FRAMING SHALL INCLUDE THE PURLINS, GIRTS, EAVE STRIPS, FLANGE BRACING, RILL SUPPORT, CLIPS AND OTHER MISCELLANEOUS STRUCTURAL PARTS.

ALL HOT ROLLED STEEL SHEET, PLATE AND STRIP FOR BUILT-UP SECTIONS SHALL HAVE A MINIMUM YIELD POINT OF 50,000 PSI. HOT ROLLED STRUCTURAL SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-36. ALL COLD-FORMED SECTIONS 'C', 'Z' SHALL HAVE MINIMUM YIELD POINT OF 50,000 PSI. GALVANIZED SHEET AND STRIP FOR STRUCTURAL FRAMING MEMBERS SHALL CONFORM TO ASTM SPECIFICATIONS A-446, GRADE 'A'.

PIPE FOR COLUMNS AND OTHER STRUCTURAL USES SHALL BE 42,000 PSI YIELD.

UNLESS OTHERWISE SPECIFIED THE MINIMUM THICKNESS OF FRAMING MEMBERS SHALL BE AS FOLLOWS:
COLD-FORMED PRIMARY FRAMING MEMBERS... 14 GAUGE
COLD-FORMED SECONDARY FRAMING MEMBERS... 17 GAUGE
USERS OF WELDED BUILT-UP MEMBERS... 3/8" GAUGE
FLANGES OF WELDED BUILT-UP MEMBERS... 3/8"
BRACINGS (CABLE STAYS)... 1/4" DIA

COLD-FORMED SECTIONS SHALL BE MANUFACTURED BY THE PRECISION ROLL OR BREAK FORMING ALL DIMENSIONS SHALL BE TRUE.

ALL SHOP CONNECTIONS SHALL BE BY WELDING IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC STRUCTURAL WELDING CODE. LATEST EDITION WELDING SHALL BE BUTTERED AND OR GAS SHIELDED ARC PROCESS.

ALL FIELD CONNECTIONS SHALL BE FIELD BOLTED WITH ASTM SPECIFICATIONS A-307 OR A-315 BOLTS AS SHOWN ON DRAWINGS. A-315 BOLTS HAVE BEEN TIGHTENED BY THE TURN OF THE NUT METHOD. CONNECTIONS IN SECONDARY FRAMING SHALL BE MADE WITH SPECIAL 1/2" TRUSS, HEAD, FN, NECK BOLTS AND HEX NUTS WHEN REQUIRED.

ALL FRAMING MEMBERS SHALL CARRY AN EASILY VISIBLE IDENTIFYING MARK.

EXPANSION JOINTS
LONGITUDE OR TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED TO ALLOW FOR THE EFFECTS OF TEMPERATURE INDUCED CONTRACTION OR EXPANSION ON ALL ROOF AND WALL ASSEMBLAGES. THE JOINT SHALL BE FLASHED AND COUNTER-FLASHED TO INSURE WEATHER TIGHTNESS.

RIGID FRAMES USING UNIT FRAMES AND CANGRY BEAMS ALL MEMBERS SHALL BE SEALED, BUILT-UP, 1" SHAPES, EITHER CONSTANT DEPTH OR TAPERED.

BEARING END FRAMES
BEARING END FRAMES SHALL BE MILL ROLLED SECTIONS AND CONSIST OF COLUMNS AT THE BUILDING CORNERS AND A CONTINUOUS RAFTER BEAM SUPPORTED BY THE ENDWALL COLUMNS. AN OPTIONAL BEARING FRAME SYSTEM WILL CONSIST OF COLD-FORMED 'C' OR 'Z' SECTIONS, AS REQUIRED BY DESIGN.

ENDWALL COLUMNS
ENDWALL COLUMNS SHALL BE MILL ROLLED SECTIONS OR WELDED BUILT-UP 1" SHAPES. OPTIONAL ENDWALL COLUMNS WILL CONSIST OF COLD-FORMED 'C' SECTIONS.

PURLINS AND GIRTS
PURLINS AND GIRTS SHALL BE COLD-FORMED 'Z' SECTIONS WITH STIFFENED FLANGES. THEY SHALL BE SIMPLE OR CONTINUOUS SPAN AS REQUIRED BY DESIGN.

EAVE STRIPS
EAVE STRIPS SHALL BE COLD FORMED C-SECTION SUFFICIENT TO PROVIDE ADEQUATE BACKUP FOR BOTH ROOF AND WALL PANELS AT THE BUILDING EAVE.

WIND BRACING
INSET GIRT BUILDINGS - WIND BRACING IN THE ROOF AND/OR SIDE WALL IS NOT REQUIRED WHERE THE DIAPHRAGM STRENGTH OF THE ROOF AND/OR WALL COVERING IS ADEQUATE TO RESIST THE LONGITUDINAL WIND FORCES. WHEN REQUIRED, WIND BRACING SHALL BE PROVIDED BY FIXED BASE CORNER COLUMNS OR OTHER SUITABLY DESIGNED BRACING.

BYPASS GIRT BUILDINGS - WIND BRACING SHALL CONSIST OF DIAGONAL BRACING AND SHALL BE PROVIDED IN BOTH ROOF AND SIDE WALL, AS INDICATED ON THE METAL BUILDING MANUFACTURERS DRAWINGS. DESIGN SHALL INCLUDE REINFORCEMENT OR PURLIN AND EAVE STRIPS AS REQUIRED.

SPECIAL BRACING
WHEN DIAGONAL BRACING IS NOT PERMITTED IN THE SIDE WALL A RIGID FRAME TYPE PORTAL, OR FIXED BASE COLUMNS MUST BE USED. WIND BRACING IN THE ROOF AND/OR WALL IS NOT TO BE FURNISHED WHERE IT CAN BE SHOWN THAT THE DIAPHRAGM STRENGTH OF THE ROOF AND/OR WALL COVERING IS ADEQUATE TO RESIST THE APPLIED WIND LOADS.

FLANGE BRACING
THE INSIDE FLANGES OF ALL RIGID FRAMES SHALL BE BRACED LATERALLY BY ANGLER CONNECTED TO THE FLANGE AND WEB TO THE FRAME AND TO THE WEB OF THE PURLIN OR GIRT SO THAT THE ALLOWABLE COMPRESSIVE STRESS IS ADEQUATE FOR ANY COMBINATION OF LOADING.

BASE SUPPORT
A CONTINUOUS MEMBER SHALL BE PROVIDED TO WHICH THE BASE OF THE WALL COVERING MAY BE ATTACHED. THIS MEMBER SHALL BE A-4 GAUGE GALVANIZED PAINTED BRONZE BASE TRIM SECURED TO THE CONCRETE FLOOR WITH PROVEN DRIVEN FASTENERS OR EQUIVALENT ANCHORS.

FRAMED OPENINGS
STRUCTURAL FRAMING MEMBERS OF ALL OPENINGS SHALL BE ADEQUATE FOR THE SPECIFIED DESIGN WIND LOADS.

LONGITUDE OR TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED TO ALLOW FOR THE EFFECTS OF TEMPERATURE INDUCED CONTRACTION OR EXPANSION ALL ROOF AND WALL ASSEMBLAGES. THE JOINT SHALL BE FLASHED AND COUNTER-FLASHED TO INSURE WEATHER TIGHTNESS.

PAINTING
ALL STRUCTURAL FRAMING MEMBERS WHICH ARE NOT GALVANIZED SHALL BE CLEANED TO REMOVE ALL DIRT, GREASE, OIL AND LOOSE MILL SCALE AND GIVEN ONE COAT OF IRON OXIDE PRIMER FORMULATED TO MEET OR EXCEED THE PERFORMANCE REQUIREMENTS OF FEDERAL SPECIFICATIONS TT-P-456.

ROOF AND WALLS
STANDARD PANELS
STANDARD ROOF WALL LINER AND PARTITION PANELS SHALL BE 26 GAUGE (90,000 PSI YIELD) OR COLOR COATED GALVANIZED STEEL (50,000 PSI YIELD) CONFORMING TO ASTM SPECIFICATION A-446-GRADE B.

MATERIAL FOR 26 GAUGE PANELS SHALL BE GALVALUME (TM) STEEL (50,000 PSI YIELD) OR COLOR COATED GALVANIZED STEEL (50,000 PSI YIELD) CONFORMING TO ASTM SPECIFICATION A-446-GRADE B.

STANDARD PANEL PROFILES
WALL AND ROOF PANELS 1 1/4" DEEP RIBS 12" ON CENTER WITH TWO 1/4" DEEP INTERMEDIATE STIFFENERS, 36" NET COVERAGE.

SOFFIT PANELS: 1 1/4" DEEP RIBS 12" ON CENTER WITH TWO 1/4" DEEP INTERMEDIATE STIFFENERS, 36" NET COVERAGE.

FASTENERS
ALL SELF-TAPPING FASTENERS SHALL CONFORM TO UNAS309.4 AND SHALL HAVE TYPE A OR TYPE AB THREADS. ALL SELF-DRILLING FASTENERS SHALL CONFORM TO #10. WHERE REQUIRED FOR WEATHER TIGHTNESS, FASTENERS SHALL BE ASSEMBLED WITH 5/8" CO METAL AND NEOPRENE SEALING WASHERS.

PLATING
A. ALL FASTENERS SHALL BE PLATED TO MINIMUM THICKNESS OF .0025. ALL WASHERS SHALL BE PLATED TO MINIMUM EQUAL TO G-90 GALVANIZED STEEL.
B. EXTENDED CORROSION RESISTANT FASTENERS SHALL BE ZAC (TM) (ZINC-ALUMINUM CAST HEAD) WITH ALUMINUM AND NEOPRENE SEALING WASHERS.

COLOR COATING
AFTER PLATING ALL FASTENERS AND SEALING WASHERS SHALL RECEIVE A SHOP APPLICATION OF A BAKED-ON VINYL CO-POLYMER FINISH COATING. THE COLOR OF THE FINISH SHALL MATCH THE WALL, TRIM, AND/OR ROOF PANELS.

SEALER
SEALER FOR SIDELAPS, ENDLAPS, AND FLASHING SHALL BE POLYMER RESIN IN EXTRUDED TAPE FORM. THE SEALER SHALL BE NON-BURNING, NON-DRYING, AND NON-TOXIC AND SHALL HAVE SUPERIOR ADHESION TO METALS, PLASTICS AND PAINTED SURFACES. SERVICE RANGE TEMPERATURES FROM -30 DEGREES TO +50 DEGREES. TYPE II, CLASS B AND T1-C-196A. INSTALLATION OF ROOF AND WALL PANELS.

ROOF PANELS SHALL BE CONTINUOUS FROM RIDGE TO EAVE FOR BUILDINGS 40' WIDE OR LESS. WHERE ENDLAPS ARE REQUIRED THEY SHALL BE A MINIMUM OF 6" LONG AND SHALL OCCUR AT A ROOF PURLIN.

SIDE WALL AND ENDWALL PANELS SHALL BE CONTINUOUS FROM BILL TO ROOF LINE EXCEPT WHERE LENGTH EXCEEDS PROHIBITIVE FOR HANDLING PURPOSES. ENDWALL PANELS FOR BUILDINGS WITH A 4:12 ROOF SLOPE SHALL HAVE A SPLICE AT THE EAVE LINE.

ENDWALL PANELS SHALL BE SQUARE CUT FOR BUILDINGS 1/2 ROOF SLOPE AND BEVEL CUT FOR BUILDINGS WITH A 4:12 ROOF SLOPE.

BEFORE SECURING ALL LAPS OF ROOF PANELS SHALL BE SEALED WITH A CONTINUOUS RIBBON OF TAPE SEALER.

STANDARD ROOF PANELS
A. ROOF PANELS SHALL BE SECURED TO PURLINS WITH #4 SHEET METAL SCREWS AT A MAXIMUM SPACING OF 12".
B. AT THE ENDLAPS OF RIB SHEETS THE MAXIMUM SPACING SHALL BE ON EACH SIDE OF THE MAJOR RIB FOR RIB D PANELS.
C. SIDELAPS TO THE ROOF PANELS SHALL BE STITCHED THROUGH THE HIGH FLAT OF THE RIB WITH #4 SHEET METAL SCREWS AT A MAXIMUM SPACING OF 12".

STANDARD WALL PANELS
A. WALL PANELS SHALL BE SECURED TO GIRTS WITH #4 SHEET METAL SCREWS AT A MAXIMUM SPACING OF 12".
B. AT THE ENDLAPS OF RIB SHEETS THE MAXIMUM SPACING SHALL BE ON EACH SIDE OF THE MAJOR RIB FOR PANELS.
C. AT THE SIDELAPS OF SHEETS #4 SHEET METAL SCREWS SHALL BE PLACED AT A MAXIMUM OF 18" ON CENTER.

FLASHING, CLOSURES, AND TRIM
FLASHING AND/OR TRIM SHALL BE FURNISHED AT THE RAKE, CORNERS, AND EAVES AT FRAMED OPENINGS AND UNLESS NECESSARY TO PROVIDE WEATHER TIGHTNESS AND A FINISHED APPEARANCE.

SCULPTURED RAKE TRIM SHALL BE ROLL FORMED 24 GAUGE MATERIAL 20' LONG TO MINIMIZE JOINTS. OTHER TRIM SHALL BE 26 GAUGE.

FLASHING AND TRIM MATERIAL SHALL BE GALVALUME (TM) STEEL (50,000 PSI YIELD) OR COLOR COATED GALVANIZED STEEL CONFORMING TO ASTM SPECIFICATION A-446 GRADE D (50,000 PSI YIELD).

A FORNED PANEL MATCHING THE SLOPE AND PROFILE OR ADJOINING PANELS SHALL BE PROVIDED ALONG THE BUILDING RIDGE FOR PANELS A RIDGE FLASHING AND CLOSURE SHALL BE USED WITH TRIMMER BEAM AND SUPPORT BEAM PANELS. A PRE-FORMED METAL OUTSIDE CLOSURE AND RIDGE FLASHING SHALL BE USED WITH PRO BEAM PANELS.

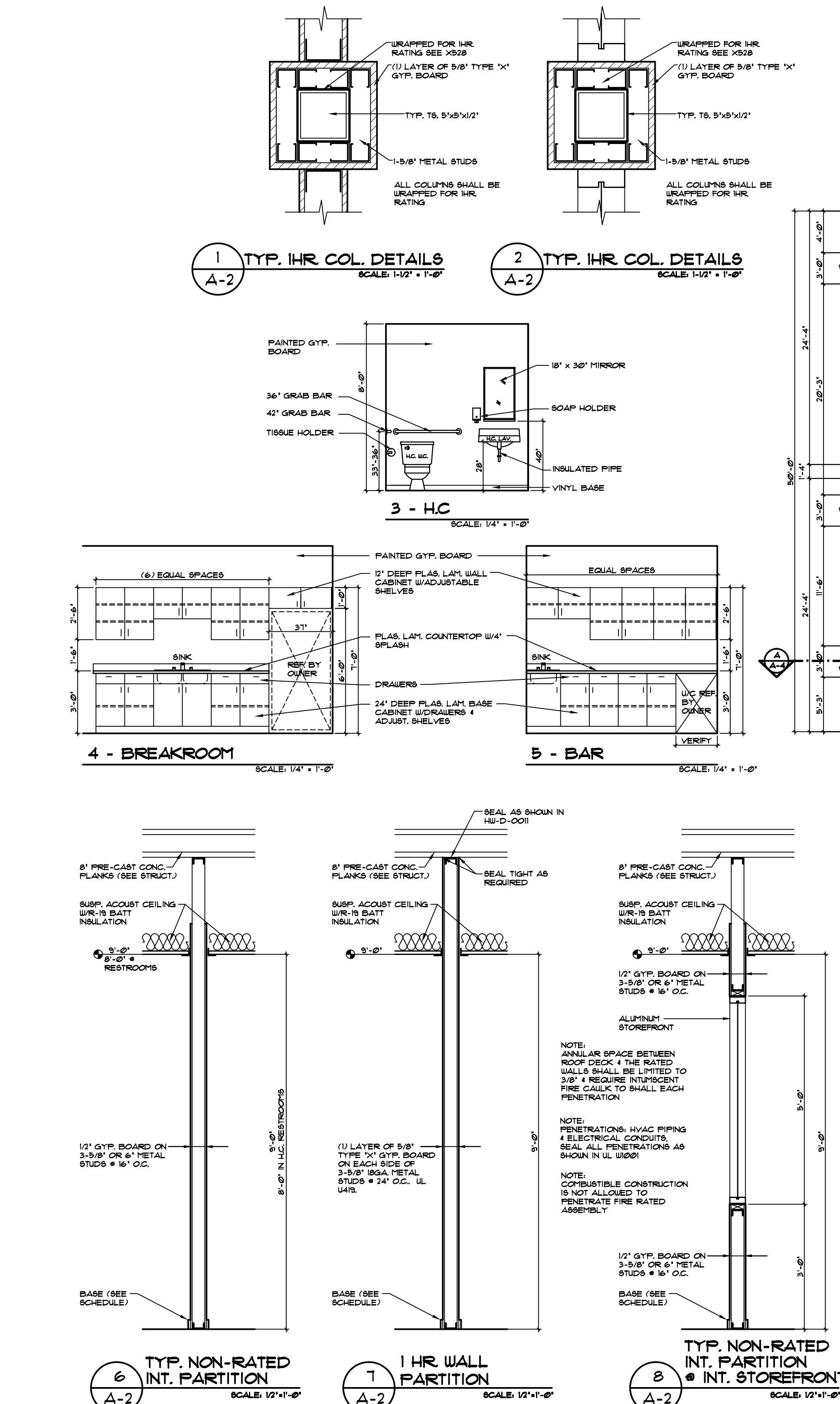
CLOSURE STRIPS MATCHING THE PROFILE OF THE PANEL SHALL BE INSTALLED ALONG THE RAKE AND/OR EAVE WHERE REQUIRED FOR WEATHER TIGHTNESS. CLOSURE STRIPS SHALL BE CLOSED CELL, SEMI-RIGID, CROSS LINKED POLYETHYLENE FOAM LAMINATED FOR STRENGTH AND UNIFORM COMPRESSIBILITY. METAL OUTSIDE CLOSURE STRIPS SHALL BE USED AT THE EAVE FOR PRO BEAM PANELS.

COLOR FINISH
EXTERIOR STEEL SURFACES SHALL BE GALVALUME (TM) OR COLOR COATED GALVANIZED STEEL.

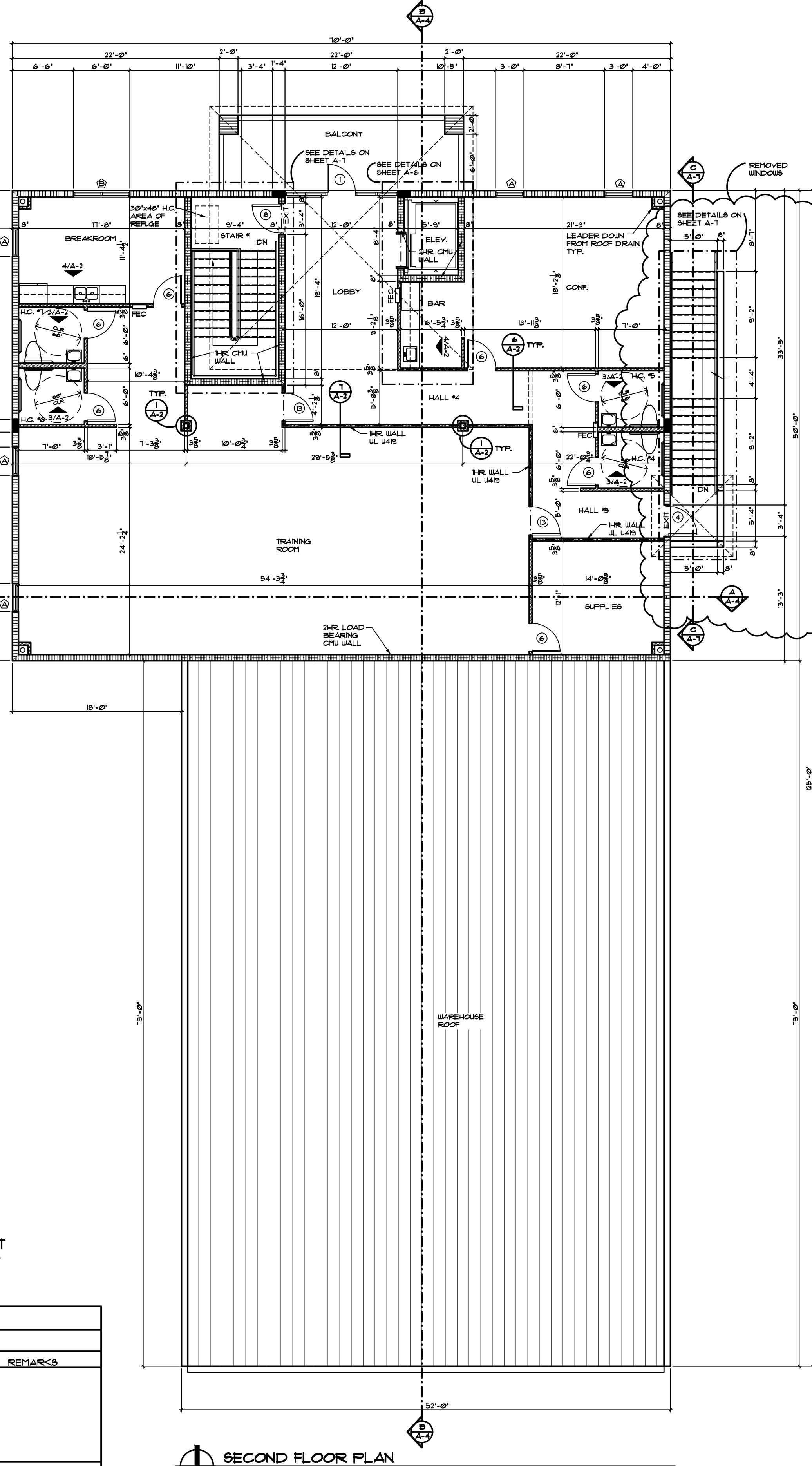
A. COLOR OF ROOF PANELS, WALL PANELS, AND CORNER TRIM SHALL BE SELECTED FROM THE STANDARD MANUFACTURERS COLORS.
B. THE ROOF VENTILATORS, DOORS, POULTS, EAVE TRIM AND DOOR FLASHING SHALL BE SELECTED FROM THE STANDARD MANUFACTURERS COLORS.

THE STANDARD WALL AND SOFFIT PANEL, COLOR SURFACE SHALL BE A SILICONE POLYESTER CO-POLYMER RESIN TYPE TO GIVE SUPERIOR ADHESION AND DURABILITY. THE FINISH COAT SHALL BE 10 MIL THICK. THE REVERSE COAT SHALL BE OFF WHITE POLYESTER NORMAL .93 THICKNESS.

ERECTION
ERECTION SHALL BE IN ACCORDANCE WITH LOW RISE MEMA, 1996 EDITION.



ROOM TITLE	FLOOR	BASE	WALLS						CEILING	CLG. HT.	REMARKS
			NORTH	SOUTH	EAST	WEST	CEILING	CLG. HT.			
LOBBY											
STAIR #											
ELEV.											
TRAINING ROOM											
CONF.											
BAR											
SUPPLIES											
BREAKROOM											
H.C. 4											
H.C. 5											
H.C. 6											
H.C. 7											
H.C. 11											
HALL 4											
BALCONY											



PROJ. NO.
DRAWN B.D.J.
DATE 5/24/02
CHECKED J.P.T.
REVISIONS
DATE BY

A NEW BUILDING FOR
JEFF WALLS INDUSTRIAL PARK
BUILDING #2
LEHIGH ACRES, FLORIDA

JASON P. TRAMONTE
ARCHITECT

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REVISED 7/9/02
SHEET
A-2
OF 1 SHEETS

THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE LEE COUNTY LAND DEVELOPMENT CODE, CHAPTER 6, ARTICLE IV SECTION 6-444.
THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2001 SECTION 1608 FOR 120 MPH WIND SPEED AND THE FLORIDA FIRE PREVENTION CODE 2001.

JASON P. TRAMONTE L.C. NO. AR001488