# GENERAL STRUCTURAL NOTES:

# DESIGN CRITERIA

(REFER ONLY TO NOTES APPLICABLE TO THE PROJECT

BUILDING CODES USED FOR DESIGN:

### FLOOR LIVE & DEAD LOADS:

40 PSF LIVE LOAD 15 PSF DEAD LOAD FOR WOOD, LINOLEUM & CARPET FLOORING

25 PSF DEAD LOAD FOR THIN SET CERAMIC FLOORING 35 PSF DEAD LOAD FOR MARBLE / GRANITE FLOORING

MINIMAL DEFLECTION CRITERIA

L/240 LIVE LOAD & L/180 TOTAL FOR ROOF COMPONENTS L/100 LIVE LOAD & L/360 TOTAL FOR FLOOR COMPONENTS WITH RIGID FLOORING (i.e. TILE) L/480 LIVE LOAD \$ L/360 TOTAL FOR FLOOR COMPONENTS WITH FLEXIBLE FLOORING (i.e. CARPET)

### ROOF LIVE & SNOW LOADS:

FLAT-ROOF SNOW LOAD FLAT-ROOF DEAD LOAD

# WIND LOADS:

BASIC WIND SPEED WIND IMPORTANCE FACTOR BUILDING CATEGORY WIND EXPOSURE

### DESIGN STRENGTHS:

	SIRENGIH AI	
CLASS	28 DAYS (PSI)	LOCATION
A	3,000	INTERIOR SLABS & WALLS
В	3,000	FOOTINGS & FOUNDATION WALLS
C	3,000	AIR-ENTRAINED EXTERIOR SLABS & WALLS
CONCRETE REINFORCEMENT: ATSM A615/A615M-OIB (F		-OIB (Fy = 60 KSI)

WELDED WIRE FABRIC: ATSM A185-01

STRUCTURAL STEEL: ANCHOR RODS:

ATSM 307-02 ALTERNATIVELY - F1554-99 GR36 MAY BE USED

MASONRY: NORMAL WEIGHT f'm = 1500 PSI

FOUNDATIONS & EARTHWORK

-WATER SHALL NOT BE PERMITTED TO ACCUMULATE IN FOOTING EXCAYATIONS -PROVIDE A MINIMUM OF 6 INCHES OF GRANULAR FILL BELOW ALL INTERIOR SLABS ON GRADE -PROVIDE GRANULAR BACKFILL FOR BASEMENT WALLS, ALL BACKFILL SHALL BE WELL DRAINED -THE FOUNDATION DESIGN IS BASED ON A SOIL BEARING PRESSURE OF 2,500 PSF, OTHERS SHALL DETERMINE THE ACTUAL BEARING VALUE OF SOIL.

-ALL FOOTING EXCAYATIONS SHALL BE INSPECTED PRIOR TO CONCRETE PLACEMENT -WHERE COMPACTION OF FILL IS SPECIFIED, COMPACTION OF FILL MATERIAL SHALL BE A MIN-IMUM 95% OF MAXIMUM DRY DENSITY

-BOTTOM OF EXTERIOR BUILDING FOOTINGS ARE TO BE AT LEAST 42 INCHES (3'-6") BELOW FINAL OUTSIDE GRADE REGARDLESS OF ELEVATION SHOWN ON PLAN -ALL CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS AND ALL PIERS AND SPREAD FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR PIERS UNLESS OTHERWISE NOTED

-NO SLABS OR FOUNDATIONS SHALL BE PLACED INTO OR ADJACENT TO SUBGRADE CONTAINING -WHERE FOUNDATION WALLS ARE TO HAVE SOIL PLACED ON BOTH SIDES, PLACE SOIL SIMUL-

# TANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL,

#### CONCRETE:

-THE REINFORCING STEEL CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT UNLESS SHOWN OTHERWISE ON THE PLANS AND/OR

-REINFORCING STEEL SHALL BE ATSM A615 (GRADE 60). -WELDED WIRE FABRIC SHALL CONFORM TO ATSM A185,

FOOTINGS

-CONCRETE REINFORCEMENT SHALL BE PLACED ACCORDING TO THE CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS". -CONCRETE COVERAGE FOR REINFORCEMENT:

> SLAB ON GRADE CENTER OF SLAB WALLS EXPOSED TO EARTH

COLUMN TIES -COMPRRESSION LAP SPLICES FOR GRADE 60 BARS SHALL BE 30 BAR DIAMETER MINIMUM. -TENSION LAP SPLICES SHALL BE AS DETAILED, USE CLASS "B" SPLICES UNLESS NOTED

OTHERWISE, -BAR LENGHTS SHOWN DO NOT INCLUDE HOOKS OR BENDS.

-CONCRETE AT THE TIME OF PLACEMENT SHALL HAVE A SLUMP OF 4" (+,-) 1" UNLESS A SUPER-

PLASTICIZING AGENT IS USED. -ALL OPENINGS IN CONCRETE WALLS SHAL HAVE (2) \*5  $\times$  4'-0" LONG BARS DIAGONALLY AT EACH CORNER,

# MASONRY:

-GROUT FOR YERTICALLY REINFORCED MASONRY WALLS AND BOND BEAMS SHALL CONSIST OF: (1) PART CEMENT, (2-1/2) PARTS FINE AGGREGATE, (2) PARTS PEA GRAYEL, F'C = 3,000 PSI AT 28 DAYS, GROUT SLUMP 9" TO 10". GROUT SOLID ALL CELLS CONTAINING REINFORCING. -MASONRY WALLS SHALL HAVE HORIZONTAL REINFORCING CONSISTING OF GALVANIZED REIN-

FORCING. -MASONRY WALLS SHALL HAVE HORIZONTAL REINFORCING CONSISTING OF GALVANIZED STAN-DARD WEIGHT 9 GAUGE DUR-O-WALL D/A 310 TRUSS TYPE OR EQUAL, REINFORCING LOCATED AT EVERY OTHER COURSE UNLESS NOTED OTHERWISE. -LAP ALL VERTICAL REINFORCING SPLICES 48 BAR DIAMETERS: 24" FOR \*4 BARS, 30" FOR \*5

BARS AND 36" FOR \*6 BARS. -ANCHOR BEAMS AND LINTELS TO WALL -MASONRY WALLS SHALL BE LAIDUP AND GROUTED IN 4-FOOT LIFTS (LOW LIFT GROUTING PRO-CEDURE PER ACI 530.1. IF CLEANOUTS ARE PROVIDE AT EACH GROUTED CORE, WALLS MAY BE

GROUTED IN 8-FOOT LIFTS FOLLOWING THE HIGHLIFT GROUTING PROCEDURE PER ACI 530.1. -THE PROCEDURE OF ACI 540.1 FOR COLD WEATHER CONSTRUCTION SHALL BE ADHERED TO WHENEVER THE AIR OUTSIDE TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT.

# STRUCTURAL STEEL:

FOR WIDE FLANGE SHAPES: ATSM A992 WITH YIELD STRESS OF 50,000 PSI.

FOR 'S' SHAPES, CHANNELS, ANGLES, BARS, PLATES AND RODS: ATSM A436 WITH YIELD STRESS OF 36,000 PSI.

FOR RECTANGULAR AND SQUARE TUBULAR SHAPES: ATSM A500 WITH YIELD

FOR WOOD TO WOOD CONNECTIONS AND STEEL LINTEL TO WOOD CONNECTIONS.

STRESS OF 46,000 PSI. -BOLTS: USE CARBON OR ALLOY STEEL ATSM A325, 3/4" DIAMETER OR LARGER IF REQUIRED BY CONNECTION DESIGN, ANCHOR BOLTS SHALL BE WEDGE STYLE ANCHOR, HILTI KWIK BOLT 3. NUTS: CARBON STEEL MEETING ATSM A563. WASHERS: HARDENED STEEL WASHERS MEETING ATSM F436, ATSM A301 BOLTS MAY BE USED

# MISCELLANEOUS:

-ANCHOR RODS: ATSM F1554, GRADE 36.

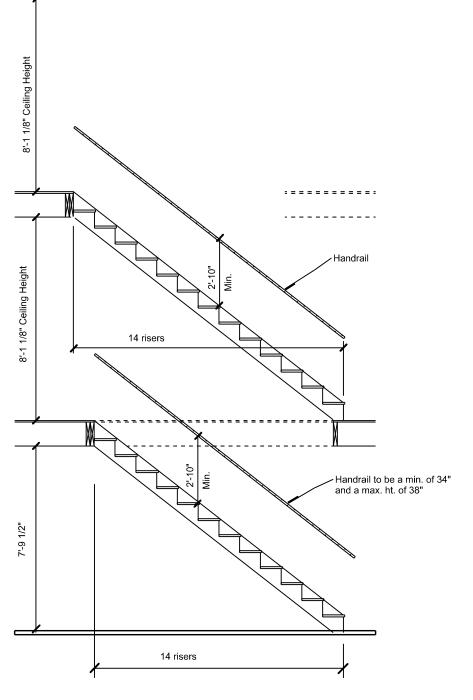
-PREFABRICATED I-JOISTS SHALL BE DESIGNED TO SUPPORT THEIR OWN WEIGHT PLUS THE SUPERIMPOSED DEAD AND LIVE LOADS STATED IN THE GENERAL NOTES AND 2015 MRC. I-JOIST SERIES, MANUFACTURER, SPACING, BRIDGING, BLOCKING AND DETAILING SHALL BE DESIGNED BY THE FLOOR SYSTEM PROVIDER, SUCH THAT IT MEETS THE DESIGN CRITERIA HERIN, AS A MINIMUM. THE CONTRACTOR SHALL SUBMIT, TO THE DESIGNER FOR REVIEW, THE THE DESIGN LAYOUT AND COMPONENT CALCULATIONS BY A PROFESSIONAL ENGINEER REG-ISTERED IN THE STATE OF MICHIGAN, PRIOR TO USE IN THE STRUCTURE.

-MIN LVL PROPERTIES SHALL BE: E =  $2.0 \times 10E6$  PSI, Fb = 2,950 PSI, Fv = 285 PSI. -MIN PSL COLUMN PROPERTIES SHALL BE: 1.8 x 10E6 PSI, Fb = 2,400 PSI TRUS JOIST PARALLAM

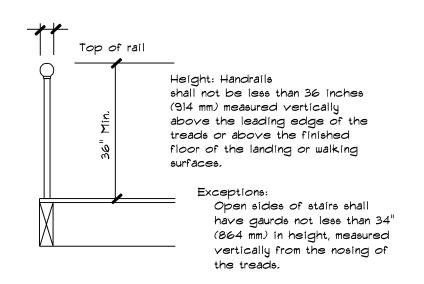
-WALLS SHALL BE BRACED ACCORDING TO R602.10 OF THE 2009 MRC. -TRUSSES SHALL BE BRACCED IN ACCORDANCE WITH BSCI'S OCTOBER 2006 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF THE METAL PLATE CON-

NECTED WOOD TRUSSES". -ALL POINT LOADS SHALL BE CONTINUOUSLY BLOCKED THROUGHOUT THE THE STRUCTURE TO THE FOUNDATION OR SUPPORT BEAM.

-THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. -THE STRUCTURAL DESIGN IS BASED ON THE BUILDING IN ITS COMPLETED STATE, CONTRACTORS AND THEIR SUBCONTRACTORS SHALL TAKE WHATEVER PRECAUTIONS MADE NECESSARY TO WITHSTAND ALL HORIZONTAL AND VERTICAL LOADINGS THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION PRIOR TO THE COMPLETION OF THE BUILDING. -DO NOT SCALE DRAWINGS



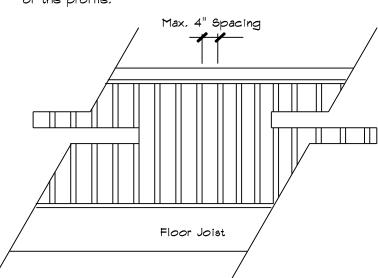
#### Diagramattic Stair Detail



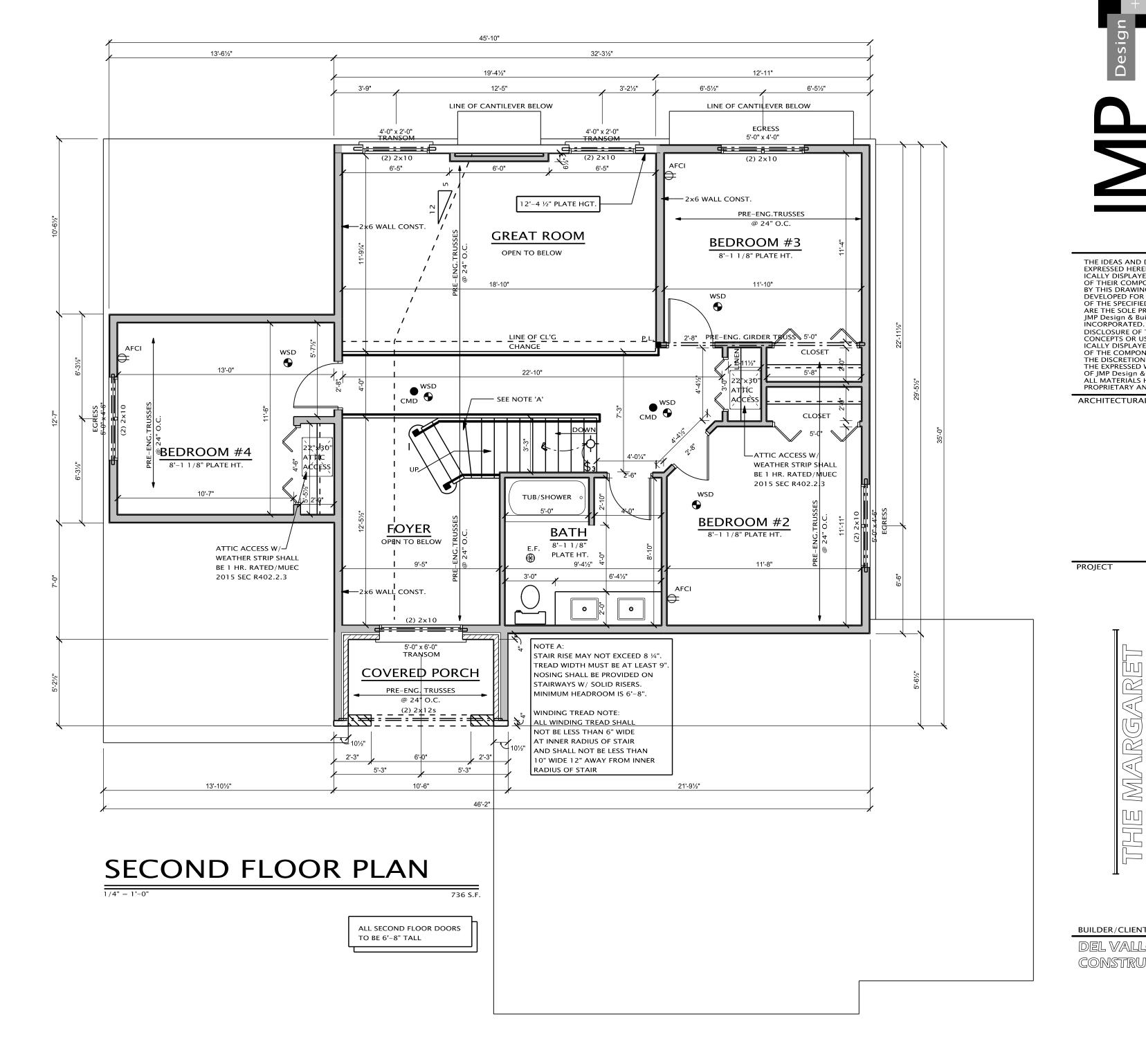
All Stair shall have a circular cross section with an outside diameter of 1-1/4" (32 mm) and not greater than 2" (51 mm).

Any other shape with a perimeter of at least 4 inches (100 mm) but not greater than 6-1/4 inches (158 mm) with the largest cross-sectional dimension not exceeding 2-1/4 inches (57 mm).

Hand rails with a perimeter greater than 6-1/4" (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4" (19 mm) measured vertically from the tallest portion of the profile, and achieve a depth of at least 5/16" (8 mm) within 7/8" (22 mm) below the widest portion of the profile.



Typical Railing Detail



# GENERAL NOTES

ALL WORK TO COMPLY WITH ALL NATIONAL, STATE AND LOCAL CODES, ORDINANCES, LAWS AND REGULATIONS THAT

ARE APPLICABLE. THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND

CALL FOR REQUIRED INSPECTIONS, THE CONTRACTOR SHALL FIELD VERIFY THE SIZES, LOCATIONS, ELEVATIONS AND DETAILS OF THE EXISTING CONDITIONS THAT AFFECT THE WORK AND SHALL INFORM THE ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS, SIZES, LOCATIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK, THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, AND UNDERPINNING AND ALL MEANS REQUIRED TO PROTECT AND

MAINTAIN THE SAFETY, INTEGRITY AND STABILITY OF ALL NEW

CONSTRUCTION, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE EXISTING CONDITIONS OF THE BUILDING INCLUDING UTILITIES, SERVICES, ETC. AND SHALL BE FULLY RESPONSIBLE FOR ANY UNAUTHORIZED DISRUPTION TO THE OWNER'S NORMAL USE OF UTILITIES, SERVICES, AND THE SURROUNDING FACILITIES. THE CONTRACTOR/OWNER SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE CONSTRUCTION DOCUMENTS, SIZES AND LOCATIONS OF ANY DISCREPANCIES IN DIMENSIONS, SIZES AND LOCATIONS BEFORE PROCEEDING WITH THE WORK.

THE CONTRACTOR/OWNER SHALL INDEMNIFY THE ARCHITECT FROM ERRORS AND OMISSIONS WHICH CAN OR MAY OCCUR DURING THE PREPERATION OF THESE DOCUMENTS.

NOTE TO TRUSS COMPANY: ALL TRUSS BEARING TO BE TRANSFERD TO EXTERIOR WALLS W/ GIRDER TRUSSES NO INTERIOR WALL BEARING

ALL EXTERIOR WALLS TO BE 2X6 WALL CONST. ALL INTERIOR DIMENSIONS TAKEN FROM DRYWALL

PROVIDE ALL ATTIC ACCESS W/ WEATHER STRIPPING

ALL HEADERS TO BE (2) 2x10 UNLESS NOTED OTHERWISE

ALL BEARING WALLS SHALL HAVE FLOOR JOIST

UNDER EACH BEARING STUD. TYP. ALL BEARING WALLS PROVIDE 2x4 BLOCKING @ 16" O.C. BELOW ALL NON-BEARING WALLS THAT RUN PARALLEL TO

ALL WALLS OVER 10'-0" IN HEIGHT HAVE BEEN ANALYISED FOR LATERAL WIND LOADS AND SHEAR. THE WALLS ARE STRUCTURAL DESIGNED WITH 7/16" O.S.B. AND USE 8D NAILS OR EQUIVALENT STAPLES @ 8" O.C. ON ALL STUDS AND BLOCKING.

FLR. IST AND ANY WALLS OVER 8'-0" IN HGT.

# SMOKE DETECTORS & CARBON MONOXIDE DETECTOR

SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

-OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY

ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS BUT NOT INCLUDING CRAWL SPACES OR UNINHABITABLE

ALL SMOKE DETECTORS SHALL BE INTERCONNECTED AN HAVE A BATTERY BACKUP.

CARBON MONOXIDE DETECTORS SHALL BE LOCATED IN THE NEAR HARD WIRED AND BATTERY BACK-UP. BACK UP

MRC 2015 SEC R 315

EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY ESCAPE OR RESUE. EACH EGRESS WINDOW SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SOUARE FEET. THE NET CLEAR OPENING SHALL BE AT LEAST 24 INCHES IN HEIGHT AND AT LEAST 20 INCHES IN WIDTH. THE BOTTOM OF THE CLEAR OPENING SHALL NOT BE MORE THAN 44 INCHES ABOVE THE FLOOR. (EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR

-IN EACH SLEEPING ROOM

OF THE BEDROOMS

VICINITY OF EACH BEDROOM AND IN BASEMENT 15'-0" FROM FUEL FIRED OR HEATED UNIT.

# **NOTE: EGRESS WINDOWS**

GRADE FLOOR WINDOWS SHALL BE 5 SQUARE FEET.)

# NOTE: PROVIDE TEMPERED GLASS

1. WHEN GLASS IS 18" OR LOWER A.F.F.

2. ANY DOOR THAT HAS GLASS CONSTRUCTION 3. WITHIN 36" OF A DOOR OR SWING

4. WITHIN THE NEAR VACINITY OF TUB OR SHOWER AND LESS THAN 60" FROM FLOOR OR PLATFORM SURFACE.

5. WINDOWS IN STAIR LANDINGS 60" OR LESS A.F.F.

# ARCH FAULT CIRCUIT INTERRUPTER

ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT SINGLE PHASE 15 & 20 AMP. OUTLETS INSTALLED IN DWELLING UNIT BEDRM. SHALL BE PROTECTED BY ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION IN THE ENTIRE CIRCUIT E3802.11.

**OPERABLE WINDOW NOTE** 

ALL WINDOWS THAT ARE OPERABLE AND THE BOTTOM OF THE WINDOW IS 72" OR MORE ABOVE GRADE, SHALL BE 24" ABOVE FINISH FLOOR TO THE BOTTOM

OF THE WINDOW.

DRAWN BY:

CHECKED BY

JOB NUMBER:

23 – 119

SHEET NUMBER:

J.M.P.

J.V.C.

THE IDEAS AND DESIGN CONCEPTS

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02-24-2023

03-01-2023

03-13-2023

CONSTRUCTION

SECOND FLOOR PLAN

CONSTRUCTIO

OF THEIR COMPONENTS REPRESENTED BY THIS DRAWING HAVE BEEN