

PART 1.0 – GENERAL

1.01 GENERAL DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL BE IN COMPLIANCE WITH THE FLORIDA BUILDING CODE 2020 EDITION WITH ALL REVISIONS AND ERRATA'S APPLICABLE TO THE JURISDICTION OF WHICH IT IS BEING CONSTRUCTED IN.

1.02 THE GENERAL CONTRACTOR AS MENTIONED HEREIN, IS DEFINED AS THE ENTITY TO WHICH HAS THE CONTRACTUAL AGREEMENT WITH THE OWNER FOR THE FULL CONSTRUCTION OF THE PROJECT AND WHICH INCLUDES ANY AND ALL OTHER PARTIES CONTRACTUALLY OBLIGATED TO THE GENERAL CONTRACTOR TO COMPLETE THIS PROJECT.

1.03 THE CONTRACT DOCUMENTS ARE DESIGNED IN ACCORDANCE WITH ALL GOVERNING CODES, REGULATIONS, CITIES, MUNICIPALITIES AND BUILDING OFFICIALS HAVING JURISDICTION. THE GENERAL CONTRACTOR SHALL CONSTRUCT AND BE RESPONSIBLE FOR THE BUILDING AND ALL RELATED SITE WORK. THE CONTRACTOR SHALL COORDINATE WORK WITH EACH APPROPRIATE TRADE DISCIPLINE TO ASSURE NO CONFLICT OR OMISSION OF ANY REQUIRED OR SPECIFIED COMPONENT FOR A COMPLETE AND FUNCTIONAL PROJECT.

1.04 BEFORE COMMENCEMENT OF ANY WORK ON THE SITE, THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE FAMILIAR WITH ALL THE CONDITIONS OF THIS PROJECT; THE CONTRACTORS AND SUBCONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE VARIOUS DRAWINGS AND OTHER CONTRACT DOCUMENTS RELATIVE TO THE PORTION OF THE WORK, AS WELL AS ANY INFORMATION FURNISHED BY THE OWNER. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL TAKE FIELD MEASUREMENTS OF ANY EXISTING CONDITIONS RELATED TO THAT PORTION OF THE WORK AND SHALL OBSERVE ANY CONDITION AT THE SITE AFFECTING IT. THESE OBLIGATIONS ARE FOR THE PURPOSE OF FACILITATING CONSTRUCTION BY THE CONTRACTORS AND ARE NOT FOR THE PURPOSE OF DISCOVERING ERRORS, OMISSIONS, AND INCONSISTENCIES IN THE CONTRACT DOCUMENTS; HOWEVER ANY ERRORS, INCONSISTENCIES OR OMISSIONS FURNISHED BY THE GENERAL CONTRACTOR OR SUBCONTRACTORS SHALL BE REPORTED PROMPTLY TO THE ARCHITECT, WHERE THE CONTRACTOR OR SUBCONTRACTORS ELECT NOT TO VERIFY DIMENSIONS PRIOR TO THE COMMENCEMENT OF ANY WORK OR NOTIFY THE ARCHITECT OF RECORD OR THE OWNER OF ANY DISCREPANCIES. THE GENERAL CONTRACTOR OR SUBCONTRACTOR WILL ASSUME ANY AND ALL LIABILITIES FOR ANY AND ALL CORRECTIONS, REPLACEMENTS AND LABOR TO MAKE WORK IN ACCORDANCE TO CONTRACT DOCUMENTS.

1.05 GENERAL CONTRACTOR AND SUBCONTRACTORS TO PROVIDE ALL REQUIRED OR NECESSARY MATERIALS, EQUIPMENT OR COMPONENTS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL INSTALLATION, INCLUDING ALL OBVIOUSLY NECESSARY ITEMS EVEN THOUGH SUCH ITEMS ARE NOT INDICATED WITHIN THE CONSTRUCTION DOCUMENTS. ALL CONSTRUCTION METHODS, MATERIALS, ETC. SHALL MEET OR EXCEED ANY AND ALL APPLICABLE BUILDING CODES, STANDARDS AND OR ORDINANCES.

1.06 IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SUBCONTRACTOR, TO BID AND BUILD FROM THE MOST UP-TO-DATE AND COMPLETE SET OF CONSTRUCTION DOCUMENTS. THE RELEASE AND USE OF PARTIAL SETS OF CONSTRUCTION DOCUMENTS DURING BIDDING AND/OR CONSTRUCTION SHALL NOT RELIEVE THE GENERAL CONTRACTOR AND SUBCONTRACTOR OF THEIR RESPONSIBILITY FOR THEIR WORK OR THE COORDINATION OF IT WITH WORK BY ALL TRADES.

1.07 WRITTEN DIMENSIONS GOVERN. DO NOT SCALE DRAWINGS. IF REQUIRED DIMENSIONS ARE NOT INDICATED OR DIMENSIONS CONFLICT OR SEEM TO BE IN ERROR, PROMPTLY NOTIFY THE ARCHITECT FOR RESOLUTION.

1.08 IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, SUBCONTRACTOR AND ALL THEIR FORCES TO BE AWARE OF ALL COMMENTS MADE BY THE JURISDICTIONAL BUILDING DEPARTMENT UPON THE OFFICIAL SIGNED AND SEALED CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR SHALL MAINTAIN A PROJECT FIELD SET AND SHALL INCORPORATE ALL APPROVED CHANGES WITHIN THE SCOPE OF WORK. IT SHALL ALSO BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SUBCONTRACTORS TO NOTIFY THE ARCHITECT OF ANY AND ALL FIELD CHANGES ORDERED BY THE JURISDICTIONAL INSPECTORS. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL COORDINATE WORK REQUIRED BY THESE DOCUMENTS WITH ALL TRADES INCLUDING AND NOT LIMITED TO STRUCTURAL, MECHANICAL, PLUMBING ELECTRICAL AND CIVIL DISCIPLINES.

1.09 STANDARDS CITED HEREIN, THE CODES, SPECIFICATIONS AND OTHER STANDARDS NOTED AND CITED IN THESE CONTRACT DOCUMENT AS PRODUCED BY THE ARCHITECT AND HIS CONSULTANTS ARE HEREIN INCORPORATED AS IF FULLY SET FORTH IN DOCUMENT. THESE NOTES PROVIDE SUPPLEMENTAL INFORMATION NECESSARY FOR THE APPLICATION OF THESE CODES, SPECIFICATIONS AND OTHER STANDARDS BY THE GENERAL CONTRACTOR AND SUBCONTRACTOR AND EMPHASIZE CERTAIN REQUIREMENTS OF THESE CODES, SPECIFICATIONS AND STANDARDS. THESE NOTES SHALL NOT BE CONSTRUED BY ANYONE TO BE ALL-INCLUSIVE OF, OR TO REPLACE OR ALLEViate, IN WHOLE OR PART, ANY OF THE CODES, SPECIFICATIONS AND STANDARDS CITED HEREIN. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE KNOWLEDGEABLE OF, AND SHALL AVAIL THEMSELVES TO THESE CODES SPECIFICATIONS AND OTHER STANDARDS AND APPLY THEM TO THE WORK.

1.10 SUBSTITUTIONS RECEIVED AFTER BIDDING WILL BE REVIEWED AT THE DISCRETION OF THE ARCHITECT. ALL SUBSTITUTIONS MUST BE EQUAL OR BETTER THAN ITEM SPECIFIED DEMONSTRATING COMPATIBILITY OF PERFORMANCE, OPERATION AND AESTHETIC QUALITY TO THAT OF THE SPECIFIED ITEM.

SUBSTITUTIONS MUST BE SUBMITTED TO THE ARCHITECT IN THE FORM OF AN "ALTERNATE TO CONSTRUCTION DOCUMENTS SPECIFICATION" LETTER STARTING EACH ITEM TO BE SUBSTITUTED, ALONG WITH CUT SHEETS FOR BOTH THE SPECIFIED PRODUCT AND ALTERNATE. ALLOW TEN (10) DAYS REVIEW PERIOD FROM ARCHITECT'S RECEIPT OF SUBSTITUTION SUBMITTAL. ARCHITECT WILL DETERMINE ACCEPTABILITY OF ANY AND ALL SUBSTITUTIONS. **ALL APPROVALS FOR SUBSTITUTIONS MUST BE OBTAINED PRIOR TO SUBMITTAL FOR SHOP DRAWING REVIEW.** THE CONTRACTOR AND SUBCONTRACTORS BEAR ALL ADDITIONAL COSTS OF UNACCEPTABLE SUBSTITUTION IF USED IN ORIGINAL BID BEARS ALL ADDITIONAL COST FOR REMEDY IF UNAPPROVED SUBSTITUTION IS UTILIZED, DISCOVERED AND UNACCEPTABLE. SUBSTITUTIONS WILL NOT BE CONSIDERED DUE TO SUB-CORRECTIONS GAF OF PROPER AND TIMELY ORDERING, SCHEDULING AND/OR PLANNING.

1.11 SUBMIT FIVE (2) COPIES OF ALL SHOP DRAWINGS AND SIX (2) COPIES OF ALL PRODUCT SUBMITTALS REQUESTED BY THE ARCHITECT AND/OR THE JURISDICTIONAL AUTHORITY AND/OR GENERAL CONTRACTOR, REQUIRED FOR ALL CUSTOM FABRICATED WORK OR AS REQUESTED HEREIN. A MINIMUM OF TEN (10) WORKING DAYS SHOULD BE ESTIMATED FOR PROPER REVIEW OF SHOP DRAWINGS AND SUBMITTALS.

1.12 THE FOLLOWING SHOP DRAWINGS WILL BE REQUIRED FOR THE RELATED WORK (THE PRODUCTION OF THE REQUIRED SHOP DRAWING SHALL NOT BE CONSIDERED ANY EXTRA) (THE GENERAL CONTRACTOR SHALL BE REQUIRED FOR THE RELATED WORK ELECTRICAL, SWITCHGEAR, LIGHTING, FIRE ALARM, HVAC EQUIPMENT, ROOF MEMBRANE, INSULATION AND FLASHINGS, CONCRETE, DOOR AND HARDWARE, RESTROOM ACCESSORIES AND FINISHES, STRUCTURAL STEEL, REINFORCED STEEL, MISCELLANEOUS STEEL, GLAZING SYSTEMS, CONCRETE, PLUMBING, WATERPROOFING SYSTEMS, MILLWORK, FIRE SPRINKLER, FOUNTAINS / FOUNTAIN COMPONENTS AND EXTERIOR FINISH.

1.13 THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL ACQUIRE ALL NECESSARY PRODUCT APPROVALS USED AND INSTALLED ON THIS PROJECT AS WELL AS ANY ADDITIONAL COUNTY AND LOCAL JURISDICTION REQUIRING ADDITIONAL DATA, CALCULATIONS SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER TO CERTIFY APPLICATION OF SAID PRODUCT IN ACCORDANCE TO THE CODE HAVING JURISDICTION.

1.14 IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SUBCONTRACTORS TO REVIEW ALL SHOP DRAWINGS AND SUBMITTALS PRIOR TO SUBMITTING SAME TO THE ARCHITECT. THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE FOR FIELD VERIFYING ACTUAL EXISTING CONDITIONS RELATED TO SHOP DRAWINGS AND/OR SUBMITTALS.

1.15 WORK SHALL NOT COMMENCE WITHOUT RELATED SHOP DRAWINGS AND/OR SUBMITTALS BEING APPROVED. THE GENERAL CONTRACTOR AND SUBCONTRACTORS BEAR RESPONSIBILITY OF ALL COSTS IF CHANGES ARE REQUIRED OF WORK THAT HAS BEEN PERFORMED WITHOUT PRIOR REVIEW AND APPROVAL OF SHOP DRAWINGS AND/OR SUBMITTALS.

1.16 ALL MATERIALS SHALL BE NEW, FREE OF ALL DEFECTS AND SUITABLE FOR THE INTENDED USE AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND INDUSTRY STANDARDS.

1.17 THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PREPARE AND MAINTAIN THROUGH-OUT THE LENGTH OF CONSTRUCTION A FULL AND CURRENT SET OF ACCURATE "AS-BUILT" DRAWINGS. UPON COMPLETION OF THIS PROJECT SUCH DRAWINGS WILL BE PRESENTED TO THE OWNER FOR HIS PERMANENT RECORDS AND INFORMATION.

PART - 2.0 – SITE WORK

2.01 REFER TO THE CONSTRUCTION DOCUMENTS FOR ALL REQUIREMENTS AND STANDARDS.

2.02 THE SOIL PAD UNDER ALL NEW INTERIOR FLOOR SLABS AND ALL FOUNDATION WALLS SHALL RECEIVE AN APPLIED SOIL POISONING TREATMENT TO PREVENT THE INFESTATION OF SUBTERRANEAN TERMITES. PROVIDE MATERIAL AND CHEMICALS APPROVED BY APA FOR THIS TYPE OF APPLICATION.

PART 3.0 – CONCRETE

3.01 REFER TO THE CONSTRUCTION DOCUMENTS / STRUCTURAL DRAWINGS FOR ALL REQUIREMENTS AND STANDARDS RELATING TO CONCRETE.

3.02 INTERIOR CONCRETE FLOOR SLABS SHALL HAVE A SMOOTH STEEL TROWELED FINISH, HARDWARE AND SEALERS AS PER PLANS.

3.03 EXTERIOR CONCRETE SLABS SHALL RECEIVE LIGHT BROOM FINISH.

3.04 CONCRETE CONSTRUCTION JOINTS SHALL BE KEYS, AND EXPANSION JOINT FILLER INSTALLED IN A MANNER AS PER ACI AND ACI STANDARDS.

PART 4.0 – CONCRETE MASONRY UNITS

4.01 PROVIDE AND INSTALL ALL CONCRETE MASONRY UNITS, MORTAR REINFORCEMENTS AND RELATED MATERIALS REQUIRED FOR THIS WORK AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS / STRUCTURAL DRAWINGS.

PART 5.0 – METALS

5.01 PROVIDE ALL STRUCTURAL STEEL, MISCELLANEOUS METALS, METAL DECKING, PLATES, BOLTS, ETC., REQUIRED FOR THIS WORK AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS / STRUCTURAL DRAWINGS OR REQUIRED FOR A COMPLETE AND OPERATIONAL FACILITY.

5.02 ALL MATERIALS SHALL BE NEW, SUITABLE FOR THE INTENDED USE AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND APPROVED SHOP DRAWINGS.

5.03 ALL STRUCTURAL STEEL STUDS SHALL BE GALVANIZED, SIZES AND GAUGE AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

5.04 ALL EXPOSED STEEL USED AS STRUCTURAL, DECORATIVE OR ARCHITECTURAL FEATURES SHALL BE MIN. 9-GO GALVANIZED. FASTENERS USED IN EXPOSED CONDITION SHALL BE GALVANIZED UNLESS OTHERWISE INDICATE TO BE STAINLESS STEEL.

PART 6.0 – WOOD

6.01 PROVIDE ALL REQUIRED, NAILS, BOLTS, SCREWS, FRAMING ANCHORS, AND THE LIKE ITEMS NEEDED FOR ROUGH AND FINISHED CARPENTRY IN THIS WORK AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS OR REQUIRED FOR A COMPLETE AND OPERABLE FACILITY.

6.03 ALL WOOD USED IN CONNECTION WITH ROOFING, FLASHING, WATERPROOFING, ALL MEMBERS IN CONTACT WITH MASONRY, AND ALL MEMBERS LESS THAN 24" ABOVE THE GROUND SHALL BE PRESSURE TREATED.

6.04 SECURELY ATTACH CARPENTRY WORK TO SUBSTRATES BY ANCHORING AND FASTENING AS INDICATED AND AS REQUIRED BY RECOGNIZED STANDARDS.

6.05 PROVIDE FIRE TREATED WOOD STUD EACH SIDE OF ALL RECESSED EQUIPMENT AND ACCESSORIES, DOOR JAMBS, ETC.

6.06 PROVIDE WOOD GROUNDS, NAILERS AND SLEEPERS WHEN INDICATED ON DRAWINGS AND AS REQUIRED. PROVIDE ALL WORKMANSHIP IN ACCORDANCE WITH (AWI) AMERICAN WOODWORKING INSTITUTE AND (WCI) WOOD INSTITUTE OF CALIFORNIA, QUALITY STANDARDS.

6.07 WHERE WOOD IS REQUIRED AND IS CONCEALED SAID WOOD MUST BE FIRE RETARDANT TREATED WOOD.

PART 7.0 - THERMAL & MOISTURE PROTECTION

7.01 ALL NEW SLAB ON GRADE FLOORS TO BE UNDERLAYERD WITH A VAPOR BARRIER. VAPOR BARRIER SHALL BE MIN. 6 MIL. (VISQUEUEN) POLYETHYLENE AND LOCATED BELOW ALL INTERIOR FLOOR SLABS, WITH OVERLAPPIING OF MATERIAL NOT LESS THAN SIX INCHES (6") AND TAPPED SEALED.

7.02 PROVIDE ALL INSULATION WITH AN (AGED) R-VALUE, AS SPECIFIED WITHOUT GAPS OR VOIDS USING NEW AND UNDAMAGED MATERIALS.

FI-FLOI COMPANY, PO BOX 800, AUBURNDALE, FLORIDA 33823 TOLL FREE (800) 448-3401. PHONE (863) 965-1846. FAX (863) 967-0137. WEB SITE WWW.FI-FLOI.COM. E-MAIL CUSTSERV@FI-FLOI.COM.

REFLECTIVE INSULATION: FI-FLOI VR PLUS SHIELD. SUBMIT MANUFACTURERS' PRODUCT DATA, INCLUDING INSTALLATION INSTRUCTIONS. INDICATE COMPLIANCE WITH MATERIAL REQUIREMENTS.

7.05 GAF EVERGUARD TPO ROOFING SPECIFICATIONS

PART 1 GENERAL

1.01 SUMMARY

A. SECTION INCLUDES

1. THERMOPLASTIC POLYOLEFIN SINGLE-PLY ROOFING MEMBRANE

2. THERMOPLASTIC POLYOLEFIN FLASHINGS

3. THERMOPLASTIC POLYOLEFIN ACCESSORIES

4. INSULATION

B. RELATED SECTIONS

1. SECTION 06100- ROUGH CARPENTRY

2. SECTION 07620- SHEET METAL FLASHING AND TRIM

3. SECTION 15430- PLUMBING SPECIALTIES

1.02 REFERENCES

A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) - ANNUAL BOOK OF ASTM STANDARDS

1. ASTM D-151 - STANDARD TEST METHODS FOR COATED FABRICS

2. ASTM D-2137 - STANDARD TEST METHODS FOR RUBBER PROPERTY-BRITTLENESS POINT OF FLEXIBLE POLYMERS AND COATED FABRICS

3. ASTM E-96 - STANDARD TEST METHODS FOR WATER VAPOR TRANSMISSION OF MATERIALS

4. ASTM D1204 - STANDARD TEST METHOD FOR LINEAR DIMENSIONAL CHANGES OF NONRIGID THERMOPLASTIC SHEETING OR FILM AT ELEVATED TEMPERATURE

5. ASTM 471 - STANDARD TEST METHOD FOR RUBBER PROPERTY-EFFECT OF LIQUIDS

6. ASTM E1449 - STANDARD TEST METHODS FOR RUBBER DETERIORATION-CRACKING IN AN OZONE CONTROLLED ENVIRONMENT

7. ASTM C-1549 - STANDARD TEST METHOD FOR DETERMINATION OF SOLAR REFLECTANCE NEAR AMBIENT TEMPERATURE USING A PORTABLE SOLAR REFLECTOMETER

8. ASTM C-1371 - STANDARD TEST METHOD FOR DETERMINATION OF EMITTANCE OF MATERIALS NEAR ROOM TEMPERATURE USING PORTABLE EMISSOMETERS

9. ASTM E 903 - STANDARD TEST METHOD FOR SOLAR ABSORBANCE, REFLECTANCE, AND TRANSMISSION OF MATERIALS USING INTEGRATING SPHERES

10. ASTM D1515 - STANDARD PRACTICE FOR OPERATING XENON ARC LIGHT APPARATUS FOR EXPOSURE OF NON-METALLIC MATERIALS

11. ASTM D573 - STANDARD TEST METHOD FOR OPERATING XENON ARC LIGHT APPARATUS FOR EXPOSURE OF NON-METALLIC MATERIALS

A. SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA) - ARCHITECTURAL SHEET METAL MANUAL

C. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)

D. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

E. U.S. GREEN BUILDING COUNCIL (USGB)

F. LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

G. FACTORY MUTUAL (FM GLOBAL) - APPROVAL GUIDE

H. UNDERWRITERS LABORATORIES (UL) - ROOFING SYSTEMS AND MATERIALS GUIDE (TGFU R1306)

I. CALIFORNIA TITLE 24 ENERGY EFFICIENT STANDARDS

J. ENERGY STAR

K. COOL ROOFING RATING COUNCIL (CRRC)

L. MIAMI-DADE COUNTY

1.03 DEFINITIONS

A. ROOFING TERMINOLOGY: REFER TO ASTM D1079 AND THE GLOSSARY OF THE NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) ROOFING AND WATERPROOFING MANUAL FOR DEFINITIONS OF ROOFING TERMS RELATED TO THIS SECTION.

1.04 SUBMITTALS

A. PRODUCT DATA: PROVIDE PRODUCT DATA SHEETS FOR EACH TYPE OF PRODUCT INDICATED IN THIS SECTION.

B. SHOP DRAWINGS: PROVIDE MANUFACTURERS STANDARD DETAILS AND APPROVED SHOP DRAWINGS FOR THE ROOF SYSTEM SPECIFIED.

C. SAMPLES: PROVIDE SAMPLES OF INSULATIONS, FASTENERS, MEMBRANE MATERIALS AND ACCESSORIES FOR VERIFICATION OF QUALITY.

D. CERTIFICATES: INSTALLER SHALL PROVIDE WRITTEN DOCUMENTATION FROM THE MANUFACTURER OF THEIR AUTHORIZATION TO INSTALL THE ROOF SYSTEM, AND ELIGIBILITY TO OBTAIN THE WARRANTY SPECIFIED IN THIS SECTION.

1.05 QUALITY ASSURANCE

A. MANUFACTURERS' QUALIFICATIONS: GAF SHALL PROVIDE A ROOFING SYSTEM THAT MEETS OR EXCEEDS ALL CRITERIA LISTED IN THIS SECTION.

B. INSTALLERS QUALIFICATIONS:

1. INSTALLER SHALL BE CLASSIFIED AS A **MASTER OR MASTER SELECT** CONTRACTOR AS DEFINED AND CERTIFIED BY GAF.

C. SOURCE LIMITATIONS: ALL COMPONENTS LISTED IN THIS SECTION SHALL BE PROVIDED BY A SINGLE MANUFACTURER OR APPROVED BY THE PRIMARY ROOFING MANUFACTURER.

D. FINAL INSPECTION

MANUFACTURERS REPRESENTATIVE SHALL PROVIDE A COMPREHENSIVE FINAL INSPECTION AFTER COMPLETION OF THE ROOF SYSTEM. ALL APPLICATION ERRORS MUST BE ADDRESSED AND FINAL PUNCH LIST COMPLETED.

1.06 PRE-INSTALLATION CONFERENCE

A. PRIOR TO SCHEDULED COMMENCEMENT OF THE ROOFING INSTALLATION AND ASSOCIATED WORK, CONDUCT A MEETING AT THE PROJECT SITE WITH THE INSTALLER, ARCHITECT, OWNER, GAF REPRESENTATIVE AND ANY OTHER PERSONS DIRECTLY INVOLVED WITH THE PERFORMANCE OF THE WORK. THE INSTALLER SHALL RECORD CONFERENCE DISCUSSIONS TO INCLUDE DECISIONS AND AGREEMENTS REACHED (OR DISAGREEMENTS), AND FURNISH COPIES OF RECORDED DISCUSSIONS TO EACH ATTENDING PARTY. THE MAIN PURPOSE OF THIS MEETING IS TO REVIEW FORESEEABLE METHODS AND PROCEDURES RELATED TO ROOFING WORK.

1.07 PERFORMANCE REQUIREMENTS

A. PROVIDE AN INSTALLED ROOFING MEMBRANE AND BASE FLASHING SYSTEM THAT DOES NOT PERMIT THE PASSAGE OF WATER, AND WILL WITHSTAND THE DESIGN PRESSURES CALCULATED IN ACCORDANCE WITH MOST CURRENT REVISION OF ASCE 7.

B. GAF SHALL PROVIDE ALL PRIMARY ROOFING MATERIALS THAT ARE PHYSICALLY AND CHEMICALLY COMPATIBLE WHEN INSTALLED IN ACCORDANCE WITH MANUFACTURERS CURRENT APPLICATION REQUIREMENTS.

1.08 REGULATORY REQUIREMENTS

A. ALL WORK SHALL BE PERFORMED IN A SAFE, PROFESSIONAL MANNER, CONFORMING TO ALL FEDERAL, STATE AND LOCAL CODES.

1.09 DELIVERY, STORAGE AND HANDLING

A. DELIVER ALL ROOFING MATERIALS TO THE SITE IN ORIGINAL CONTAINERS, WITH FACTORY SEALS INTACT. ALL PRODUCTS ARE TO CARRY A GAF® LABEL.

B. STORE ALL PAI. GOODS IN THEIR ORIGINAL UNDAMAGED CONTAINERS IN A CLEAN, DRY LOCATION WITHIN THEIR SPECIFIED TEMPERATURE RANGE.

C. DO NOT EXPOSE MATERIALS TO MOISTURE IN ANY FORM BEFORE, DURING, OR AFTER DELIVERY TO THE SITE. REJECT DELIVERY OF MATERIALS THAT SHOW EVIDENCE OF CONTACT WITH MOISTURE.

D. REMOVE MANUFACTURER SUPPLIED PLASTIC COVERS FROM MATERIALS PROVIDED WITH SUCH: USE "BREATHABLE" TYPE COVERS SUCH AS CANVAS TARPULAINS TO ALLOW VENTING AND PROTECTION FROM WEATHER AND MOISTURE. COVER AND PROTECT MATERIALS AT THE END OF EACH WORK DAY. DO NOT REMOVE ANY PROTECTIVE TARPULAINS UNTIL IMMEDIATELY BEFORE THE MATERIAL WILL BE INSTALLED.

E. MATERIALS SHALL BE STORED ABOVE 55°F (12.6°C) A MINIMUM OF 24 HOURS PRIOR TO APPLICATION.

1.10 PROJECT CONDITIONS

A. WEATHER

1. PROCEED WITH ROOFING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT.

2. AMBIENT TEMPERATURES MUST BE ABOVE 45°F (7.2°C) WHEN APPLYING HOT ASPHALT OR WATER BASED ADHESIVES.

WARRANTY ***CHOOSE ONE WARRANTY***

B. PROVIDE MANUFACTURERS STANDARD EVERGUARD® DIAMOND PLEDGE GUARANTEE WITH SINGLE SOURCE COVERAGE AND NO MONETARY LIMITATION WHERE THE MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS IN THE ROOFING SYSTEM, WHICH CAUSE A LEAK DUE TO A FAILURE IN MATERIALS OR WORKMANSHIP.

1. DURATION: UP TO TWENTY (20) ***CHOOSE ONE*** YEARS FROM THE DATE OF COMPLETION.

"MATERIALS AND WORKMANSHIP OF LISTED PRODUCTS WITHIN THIS SECTION WHEN INSTALLED IN ACCORDANCE WITH CURRENT GAF APPLICATION AND SPECIFICATION REQUIREMENTS. CONTACT GAF CONTRACTOR SERVICES FOR THE FULL TERMS AND CONDITIONS OF THE GUARANTEE."

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

A. GAF® - 1 CAMPUS DRIVE, PARISHPPANY, NJ 07054

2.02 INSULATION

A. RIGID POLYISOCYANURATE BOARD, WITH A GLASS-REINFORCED CELLULOSIC FELT FACER. CONFORMS TO OR EXCEEDS THE REQUIREMENTS OF ASTM C 1289 TYPE II, CLASS 1, GRADE 2. ENERGYGUARD™ POLYISO INSULATION, WITH THE FOLLOWING CHARACTERISTICS

1. BOARD THICKNESS: INSERT THICKNESS

2. THERMAL RESISTANCE (LTTR VALUE) OF: PLEASE REFER TO THE ENERGYGUARD™ POLYISO INSULATION DATA SHEET

3. COMPRESSIVE STRENGTH: 20 PSI

B. RIGID POLYISOCYANURATE BOARD, WITH A GLASS-REINFORCED CELLULOSIC FELT FACER. CONFORMS TO OR EXCEEDS THE REQUIREMENTS OF ASTM C 1289 TYPE II, CLASS 1, GRADE 2. ENERGYGUARD™ POLYISO INSULATION, WITH THE FOLLOWING CHARACTERISTICS:

1. BOARD THICKNESS: INSERT THICKNESS

2. THERMAL RESISTANCE (LTTR VALUE) OF: PLEASE REFER TO THE ENERGYGUARD™ POLYISO INSULATION DATA SHEET

3. COMPRESSIVE STRENGTH: 20 PSI

2.03 MEMBRANE MATERIALS ***CHOOSE APPROPRIATE PRODUCTS***

A. A SMOOTH TYPE, POLYESTER SCRM REINFORCED THERMOPLASTIC POLYOLEFIN MEMBRANE WITH A NOMINAL 0.060 INCH (60 MIL) THICKNESS, FOR USE AS A SINGLE PLY ROOFING MEMBRANE. MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM

D-6878. UL LISTED, FM APPROVED, DADE COUNTY PRODUCT APPROVAL, FLORIDA BUILDING CODE APPROVED. WHITE MEMBRANE IS ENERGY STAR LISTED, CRRC LISTED AND TITLE 24 COMPLIANT. EVERGUARD® TPO 60 MIL THERMOPLASTIC SINGLE-PLY ROOFING MEMBRANE BY GAF.

1.10 X 100; EACH ROLL CONTAINS 1000 SQ. FT. OF ROOFING MATERIAL WEIGHING 322 LBS. EACH HALF-SHEET ROLL CONTAINS APPROXIMATELY 500 SQ. FT. OF ROOFING MATERIALS. 5' X 100, WEIGHING 162 LBS. HALF-SHEET ROLL REQUIRED FOR ROOF PERIMETER USE IN MECHANICALLY ATTACHED SYSTEMS.

a) AVAILABLE STOCK COLORS: WHITE

2.04 FLASHING MATERIALS ***CHOOSE APPROPRIATE PRODUCTS***

A. A SMOOTH TYPE, POLYESTER SCRM REINFORCED THERMOPLASTIC POLYOLEFIN MEMBRANE WITH A NOMINAL 0.060 INCH (60 MIL) THICKNESS, FOR USE AS A SINGLE PLY ROOFING MEMBRANE. MEETS OR EXCEEDS THE MINIMUM REQUIREMENTS OF ASTM D-6878. UL LISTED, FM APPROVED, DADE COUNTY PRODUCT APPROVAL, FLORIDA BUILDING CODE APPROVED. WHITE MEMBRANE IS ENERGY STAR LISTED, CRRC LISTED AND TITLE 24 COMPLIANT. EVERGUARD® TPO 60 MIL THERMOPLASTIC SINGLE-PLY ROOFING MEMBRANE BY GAF.

2.05 ADHESIVES, SEALANTS AND PRIMERS

A. SOLVENT-BASED BONDING ADHESIVE: SOLVENT-BASED RUBBERIZED ADHESIVE FOR USE WITH EVERGUARD TPO MEMBRANES, EVERGUARD® 1121 BONDING ADHESIVE, BY GAF.

2.06 ACCESSORIES

A. MECHANICAL FASTENERS

1. DRILLITE™ STANDARD SCREWS: STANDARD UTILITY ALLOY STEEL INSULATION FASTENER WITH CR-10 COATING WITH A .220" DIAMETER THREAD, FACTORY MUTUAL STANDARD 4470 APPROVED, #3 PHILLIPS HEAD FOR USE ON STEEL AND WOOD DECKS.

2. DRILLITE™ HD SCREWS: HEAVY GAUGE ALLOY STEEL FASTENER WITH CR-10 COATING WITH A .245" (6.2 MM) DIAMETER THREAD. MIAMI DECK AND FACTORY MUTUAL STANDARD 4470 APPROVED, #3 PHILLIPS TRUSS HEAD FOR USE ON WOOD, CONCRETE AND STEEL DECKS.

3. DRILLITE™ XHD SCREWS: HEAVY GAUGE ALLOY STEEL FASTENER WITH CR-10 COATING WITH A .275" (6.9 MM) DIAMETER THREAD, FACTORY MUTUAL STANDARD 4470 APPROVED, #3 PHILLIPS TRUSS HEAD FOR USE ON HEAVY STEEL DECKS, 0.5 B OR ALUMINUM ROOF DECKS.

4. DRILLITE™ INSULATION PLATES: GALVALUME, 3" (76 MM) DIAMETER, SUITABLE FOR USE WITH DRILLITE™ STANDARD AND HD SCREWS, AND DRILLITE™ SPIKES. SPECIAL DESIGN AVAILABLE FOR USE WITH DRILLITE™ POLYMER SCREWS.

5. DRILLITE™ XHD PLATES: GALVALUME, 2 3/8" (60 MM) DIAMETER, WITH A BARBED UNDERSIDE. SUITABLE FOR USE WITH DRILLITE™ STANDARD, HD, AND XHD SCREWS, PURLIN FLASHINGS AND DRILLITE™ SPIKES.

B. FLASHING ACCESSORIES

1. A SMOOTH TYPE, UNREINFORCED THERMOPLASTIC POLYOLEFIN BASED MEMBRANE FOR USE AS AN ALTERNATIVE FLASHING/REINFORCING MATERIAL FOR PENETRATIONS AND CORNERS. REQUIRED WHENEVER PREFORMED VENT BOOTS CANNOT BE USED, AVAILABLE IN WHITE, TAN, GRAY, REGAL RED, REGAL BLUE, AND HARTFORD GREEN. 0.055 INCHES (55 MILS) NOMINAL THICKNESS AND SHEET SIZE: 24IN X 30FT. EVERGUARD TPO DETAILING MEMBRANE, BY GAF.

2. AN 8 INCH (20 CM) WIDE SMOOTH TYPE, POLYESTER SCRM REINFORCED THERMOPLASTIC POLYOLEFIN MEMBRANE STRIP FOR USE AS A COVER STRIP OVER COATED METAL AND STRIPPING-IN COATED METAL FLANGES AND GENERAL REPAIRS: 0.045 INCHES (45 MILS) NOMINAL THICKNESS WITH 100 FOOT LENGTH, AVAILABLE IN WHITE, TAN, GRAY, REGAL RED, REGAL BLUE, AND HARTFORD GREEN EVERGUARD TPO FLASHING MEMBRANE, BY GAF.

3. EXTRUDED ALUMINUM TERMINATION BAR WITH ANGLED LIP CAULK RECEIVER AND LOWER LEG BULB STIFFENER. PRE-PUNCTURED SLOTTED HOLES AT 6" ON CENTER OR 8" ON CENTER. 1/4" X 10" WITH 0.090" CROSS SECTION, DRILL-TEC™ TERMINATION BAR, BY GAF.

4. A 6 INCH (14 CM) WIDE, SMOOTH TYPE, HEAT-WELDABLE POLYESTER SCRM REINFORCED THERMOPLASTIC POLYOLEFIN MEMBRANE STRIP. DESIGNED FOR USE AS A COVER STRIP OVER NON-COATED METAL EDGES AND FLANGES. EACH FULL ROLL CONTAINS APPROXIMATELY 100 LINEAL FT. OF MATERIAL. 6" X 100. EVERGUARD TPO HEAT-WELD COVER TAP, BY GAF.

5. .045" REINFORCED TPO MEMBRANE WITH PRESSURE SENSITIVE ADHESIVE, TO BE INSTALLED ON HORIZONTAL SURFACES USING PLATES AND FASTENERS AS A BASE ATTACHMENT IN FULLY ADHERED SYSTEMS. SIZE 6" X 100. EVERGUARD® RTA (ROOF TRANSITION ANCHOR) STRIP™, BY GAF.

6. .24 GAUGE STEEL WITH 0.025" TPO TPO BASED FILM AS REQUIRED FOR FABRICATION INTO METAL GRAVEL STOP AND DRIP EDGE PROFILES: METAL BASE AND CURB FLASHINGS, SEALANT PANS, AND SCUPPER SLEEVES. STANDARD SHEET SIZE 4' X 10', SHEET WEIGHT 47 LBS. CUSTOM SIZES AVAILABLE. EVERGUARD® TPO COATED METAL, BY GAF.

a) AVAILABLE STOCK COLORS: WHITE

C. PENETRATION ACCESSORIES

1. 0.075" THICK MOLDED TPO MEMBRANE SIZED TO ACCOMMODATE MOST COMMON PIPE AND CONDUITS, (1" TO 6" DIAMETER PIPES), INCLUDING SQUARE TUBE. HOT-AIR WELDED DIRECTLY TO EVERGUARD TPO MEMBRANE, SUPPLIED WITH STAINLESS STEEL CLAMPING RINGS. EVERGUARD® TPO PREFORMED VENT BOOT BY GAF.

2. 0.045" THICK MOLDED TPO MEMBRANE PREFORMED BOOTS ARE SPLIT TO ACCOMMODATE MOST COMMON PIPES AND CONDUITS AND AVAILABLE IN THREE STANDARD SIZES. EVERGUARD® TPO SPLIT PIPE BOOTS, BY GAF.

3. 0.045" THICK MOLDED TPO MEMBRANE PREFORMED SQUARE BOOTS ARE SPLIT TO ACCOMMODATE MOST COMMON SQUARE PENETRATIONS AND CONDUITS AND AVAILABLE IN THREE STANDARD SIZES. EVERGUARD® TPO SQUARE TUBE WRAPS, BY GAF.

4. .070 THICK MOLDED PENETRATION POKET TO PROVIDE STRUCTURE AND FOUNDATION FOR THE APPLICATION OF A POURABLE SEALANT FOR A VARIETY OF ROOF PENETRATIONS, WELDABLE AND 9' X 6' X 4" (L X W X H). EVERGUARD® TPO POURABLE SEALER POKET

5. CONSTRUCTED FROM AN ALUMINUM DRAIN UNIT AND RIGID TERMINATOR BASE PLATE AND EXTERIOR DECORATIVE FASCIA COVER AVAILABLE IN 10 FOOT LENGTHS IN STANDARD OR CUSTOM COLORS FOR USE WITH 45 MIL AND 60 MIL POLYMER EVERGUARD® E2 FASCIA BY GAF®.

4. TWO PIECE FASCIA SYSTEM WITH RIGID EXTRUDED TERMINATOR BASE PLATE AND EXTERIOR DECORATIVE SNAP-ON FASCIA COVER AVAILABLE IN 10 FOOT LENGTHS IN STANDARD OR CUSTOM COLORS. EVERGUARD® E2 FASCIA EX BY GAF®.

E. FIELD OF ROOF ACCESSORIES

1. PRE-MANUFACTURED EXPANSION JOINT COVERS USED TO BRIDGE EXPANSION JOINT OPENINGS IN A ROOF STRUCTURE. FABRICATED TO ACCOMMODATE ALL RAMP AND ROOF APPLICATIONS. MADE OF .060" REINFORCED TPO MEMBRANE. AVAILABLE IN 5 STANDARD SIZES FOR EXPANSION JOINT OPENINGS UP TO 8" WIDE. EVERGUARD® TPO EXPANSION JOINT COVERS, BY GAF.

2. .055" THICK SMOOTH TYPE, UNREINFORCED THERMOPLASTIC POLYOLEFIN MEMBRANE DESIGNED FOR USE AS A CONFORMING MEMBRANE SEAL OVER T-JOINTS IN 60 AND 80 MIL MEMBRANE APPLICATIONS. EVERGUARD T-JOINT PATCHES, BY GAF.

3. 1/8" THICK EXTRUDED AND EMBOSSED TPO ROLL 34" X 50'. HEAT WELDS DIRECTLY TO ROOFING MEMBRANE. UNIQUE HERINGBONE TRACTION SURFACE. AVAILABLE IN GRAY OR YELLOW. EVERGUARD® TPO WALKWAY ROLLS, GAF.

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY THAT THE SURFACES AND SITE CONDITIONS ARE READY TO RECEIVE WORK.

B. VERIFY THAT THE DECK IS SUPPORTED AND SECURED.

C. VERIFY THAT THE DECK IS CLEAN AND SMOOTH. FREE OF DEPRESSIONS, WAVES, OR PROJECTIONS, PROPERLY SLOPED TO DRAINS, VALLEYS, EAVES, SCUPPERS OR GUTTERS.

D. VERIFY THAT THE DECK SURFACES ARE DRY AND FREE OF ICE OR SNOW.

E. VERIFY THAT ALL ROOF OPENINGS OR PENETRATIONS THROUGH THE ROOF ARE SOLIDLY SET, AND THAT ALL FLASHINGS ARE TAPERED.

3.02 SUBSTRATE PREPARATION

A. PLYWOOD DECK

1. PLYWOOD SHEATHING MUST BE EXTERIOR GRADE, MINIMUM 4 PLY, AND NOT LESS THAN 15/32" THICK.

2. PRESERVATIVE OR FIRE RETARDANT TREATMENT IS REQUIRED FOR ALL PLYWOOD USED WITH ROOFING MATERIALS.

3. THE DECK MUST BE INSTALLED OVER JOISTS THAT ARE SPACED 24" (61 CM) O.C. OR LESS.

4. THE DECK MUST BE INSTALLED SO THAT ALL FOUR SIDES OF EACH PANEL BEAR ON AND ARE SECURED TO JOIST AND CROSS BLOCKING. "H" CLIPS ARE NOT ACCEPTABLE.

5. PANELS MUST BE INSTALLED WITH A 1/8" TO 1/4" (3MM - 6MM) GAP BETWEEN PANELS AND MUST MATCH VERTICALLY AT JOINTS TO WITHIN 1/8" (3MM).

6. DECKING SHOULD BE KEPT DRY AND ROOFED PROMPTLY AFTER INSTALLATION.

7. DO NOT INSTALL DAMAGED OR WARPED INSULATION BOARDS.

3.03 INSTALLATION - GENERAL

A. INSTALL GAPS EVERGUARD® TPO ROOFING SYSTEM ACCORDING TO ALL CURRENT APPLICATION REQUIREMENTS IN ADDITION TO THOSE LISTED IN THIS SECTION.

B. GAF EVERGUARD® TPO SPECIFICATION # TMAN60

C. START THE APPLICATION OF MEMBRANE PLIES AT THE LOW POINT OF THE ROOF OR AT THE DRAINS, SO THAT THE FLOW OF WATER IS OVER OR PARALLEL TO, BUT NEVER AGAINST THE JOISTS.

D. INSULATION - GENERAL

OMIT IF NOT SPECIFIED

A. DO NOT APPLY ROOF INSULATION OR ROOFING UNTIL ALL OTHER WORK TRADES HAVE COMPLETED JOBS THAT REQUIRE THEM TO TRAVERSE THE DECK ON FOOT OR WITH EQUIPMENT. A VAPOR RETARDER COATED LIGHTLY WITH ASPHALT MAY BE APPLIED TO PROTECT THE INSIDE OF THE STRUCTURE PRIOR TO THE INSULATION AND FINAL ROOFING INSTALLATION. BEFORE THE APPLICATION OF THE INSULATION, ANY DAMAGE OR DETEIORATION TO THE VAPOR RETARDER MUST BE REPAIRED.

B. DO NOT INSTALL INSULATION BOARDS WITH STAGGERED BOARD JOINTS IN ONE DIRECTION (UNLESS TAPPING JOINT).

C. INSTALL INSULATION BOARDS SNUG. GAPS BETWEEN BOARD JOINTS MUST NOT EXCEED 1/4" (6 MM). ALL GAPS IN EXCESS OF 1/4" (6 MM) MUST BE FILLED WITH LIK INSULATION MATERIAL.

E. WOOD NAILERS MUST BE 3-1/2" (8.9 CM) MINIMUM WIDTH OR 1" (25 MM) WIDER THAN METAL FLANGE. THEY SHALL BE OF EQUAL THICKNESS AS THE INSULATION, AND BE TREATED FOR ROT RESISTANCE. ALL NAILERS MUST BE SECURELY FASTENED TO THE DECK.

F. DO NOT KICK INSULATION BOARDS INTO PLACE.

G. MITER AND FILL THE EDGES OF THE INSULATION BOARDS AT RIDGES, VALLEYS AND OTHER CHANGES IN PLANE TO PREVENT OPEN JOINTS OR IRREGULAR SURFACES. AVOID BREAKING OR CRUSHING OF THE INSULATION AT THE CORNERS.

H. INSULATION SHOULD NOT BE INSTALLED OVER NEW LIGHTWEIGHT INSULATING CONCRETE.

I. DO NOT INSTALL ANY MORE INSULATION THAN WILL BE COMPLETELY WATERPROOFED EACH DAY.

3.05 INSULATION - BASE LAYER

A. LOOSE APPLY THE BASE LAYER OF INSULATION FOR SUBSEQUENT LAYERS TO BE SIMULTANEOUSLY ATTACHED. MINIMAL FASTENING SHOULD BE PERFORMED TO AVOID MOVEMENT OF THE BOARDS.

3.06 INSULATION - SUBSEQUENT LAYERS

MECHANICALLY FASTENED

A. THE INSULATION MUST BE SECURELY ATTACHED TO THE ROOF DECK. A MINIMUM FMRC 1-60 ATTACHMENT IS RECOMMENDED. REFER TO FMRC APPROVAL GUIDE FOR FM FASTENING PATTERNS.

B. USE ONLY FASTENERS WITH A MINIMUM 3 INCH (7.6 CM) STRESS PLATE WHEN MECHANICALLY ATTACHING INSULATION. DO NOT ATTACH INSULATION WITH NAILS.

C. DO NOT INSTALL ANY MORE INSULATION THAN WILL BE COMPLETELY WATERPROOFED EACH DAY.

3.07 MEMBRANE APPLICATION

A. MECHANICALLY ATTACHED:

1. PLACE MEMBRANE SO THAT WRINKLES AND BUCKLES ARE NOT FORMED. ANY WRINKLES OR BUCKLES MUST BE REMOVED

FROM THE SHEET PRIOR TO PERMANENT ATTACHMENT. ROOF MEMBRANE SHALL BE MECHANICALLY FASTENED IMMEDIATELY AFTER IT IS ROLLED OUT, FOLLOWED BY WELDING TO ADJACENT SHEETS.

2. OVERLAP ROOF MEMBRANE A MINIMUM OF 6" FOR SIDE LAPS AND 3" FOR END LAPS.

3. INSTALL MEMBRANE SO THAT THE SIDE LAPS RUN ACROSS THE ROOF SLOPE LAPPED TOWARDS DRAINAGE POINTS.

4. ALL EXPOSED SHEET CORNERS SHALL BE ROLLED A MINIMUM OF 1" OVER THE EDGE OF THE ROOF.

5. USE FULL WIDTH ROLLS IN THE FIELD OF ROOF AND HALF WIDTH ROLLS IN THE PERIMETER AND CORNER REGION OF THE ROOF AND MECHANICALLY FASTENED IN THE SIDE LAP AREA TO THE ROOF DECK.

6. MEMBRANE LAPS SHALL BE HEAT-WELDED TOGETHER. ALL WELDS SHALL BE CONTINUOUS, WITHOUT VOIDS OR PARTIAL WELDS. WELDS SHALL BE FREE OF BURNS AND SCORCH MARKS.

7. WELD SHALL BE A MINIMUM OF 1-1/2" IN WIDTH FOR AUTOMATIC MACHINE WELDING AND A MINIMUM 2" IN WIDTH FOR HAND WELDING.

8. ALL CUT EDGES OF REINFORCED MEMBRANE MUST BE SEALED WITH EVERGUARD TPO CUT EDGE SEALANT.

9. THE MEMBRANE SHALL BE MECHANICALLY FASTENED IN THE SIDE LAP AREA TO THE ROOF DECK WITH APPROPRIATE DRILL-TEC FASTENERS AND PLATES AS REQUIRED BY ROOF SYSTEM SPECIFICATION AND/OR FACTORY MUTUAL CLASSIFICATION REQUIREMENTS.

10. THE METAL PLATES MUST BE PLACED WITHIN 1/4" TO 1/6" OF THE MEMBRANE EDGE. PLATES SHALL NOT BE PLACED LESS THAN 1/4" FROM THE MEMBRANE EDGE.

11. IN THE CORNER REGIONS, ADDITIONAL FASTENERS SHALL BE INSTALLED THROUGH THE PERIMETER MEMBRANE TO FORM A GRID PATTERN, WITH AN 8" (40.5 CM) WIDE EVERGUARD TPO REINFORCED MEMBRANE FLASHING STRIP WELDED OVER THE ADDITIONAL FASTENERS. CORNERS INCLUDE BOTH OUTSIDE AND INSIDE CORNERS THAT MEASURE 75° - 105° ANGLE DEGREES.

12. MEMBRANE ATTACHMENT TO THE ROOF DECK IS REQUIRED AT LOCATIONS OF DECK ANGLE CHANGES IN EXCESS OF FIVE (5) ANGLE DEGREES (1° IN 12").

13. SUPPLEMENTAL MEMBRANE ATTACHMENT IS REQUIRED AT THE BASE OF ALL WALLS AND CURBS, AND WHERE THE ANGLE OF THE SUBSTRATE CHANGES BY MORE THAN TEN (10) DEGREES (1° IN 12"). ROOFING MEMBRANE SHALL BE SECURED TO THE STRUCTURAL DECK WITH SCREWS AND PLATES OF THE SAME TYPE AND SPACING USED FOR IN-LAP ATTACHMENT. THE SCREWS AND PLATES MUST BE INSTALLED NO LESS THAN 1/2" FROM THE MEMBRANE EDGE. ALTERNATIVELY, THE ROOFING MEMBRANE MAY BE TURNED UP THE VERTICAL PLANE A MINIMUM OF 3" AND SECURED WITH SCREWS AND TERMINATION BAR. FASTENER SPACING IS THE SAME AS IS USED FOR IN-LAP ATTACHMENT. THE TERMINATION BAR MUST BE INSTALLED WITHIN 1-1/2" TO 2" OF THE PLANE OF THE ROOF MEMBRANE, WITH A MINIMUM OF 1" OF MEMBRANE EXTENDING ABOVE THE TERMINATION BAR.

14. SUPPLEMENTAL MEMBRANE ATTACHMENT TO THE STRUCTURAL DECK IS REQUIRED AT ALL PENETRATIONS. ROOFING MEMBRANE SHALL BE SECURED TO THE DECK WITH APPROPRIATE DRILL-TEC SCREWS AND PLATES.

15. FASTENERS MUST BE INSTALLED TO ACHIEVE THE PROPER EMBEDMENT DEPTH. INSTALL FASTENERS WITHOUT LEAN OR TILT.

16. INSTALLED FASTENERS SO THAT THE PLATE OR TERMINATION BAR IS DRAWN DOWN TIGHTLY TO THE MEMBRANE SURFACE. PROPERLY INSTALLED FASTENERS WILL NOT ALLOW THE PLATE OR TERMINATION BAR TO MOVE (UNDERDRIVING), BUT WILL NOT CAUSE WRINKLING OF THE MEMBRANE (OVERDRIVING).

3.08 FLASHINGS

A. GENERAL:

1. ALL PENETRATIONS MUST BE AT LEAST 24" (61 CM) FROM CURBS, WALLS, AND EDGES TO PROVIDE ADEQUATE SPACE FOR PROPER FLASHING.

2. FLASH ALL PERIMETER, CURB, AND PENETRATION CONDITIONS WITH FLASHING MATERIAL, MEMBRANE FLASHING, AND FLASHING ACCESSORIES AS APPROPRIATE TO THE SITE CONDITION.

3. COATED METAL AND MEMBRANE FLASHING CORNERS SHALL BE REINFORCED WITH PREFORMED CORNERS OR NON-REINFORCED MEMBRANE.

4. HOT-AIR WELD ALL FLASHING MEMBRANES, ACCESSORIES, AND COATED METAL. A MINIMUM 2" WIDE (HAND WELDER) WELD OR MINIMUM 1 - 1/2" AUTOMATIC MACHINE WELD IS REQUIRED.

5. ALL CUT EDGES OF REINFORCED MEMBRANE MUST BE SEALED WITH EVERGUARD TPO CUT EDGE SEALANT.

6. CONSULT THE EVERGUARD® APPLICATION AND SPECIFICATIONS MANUAL OR GAF CONTRACTOR SERVICES FOR MORE INFORMATION ON SPECIFIC CONSTRUCTION DETAILS, OR THOSE NOT ADDRESSED IN THIS SECTION.

B. COATED METAL FLASHINGS:

1. COATED METAL FLASHINGS SHALL BE FORMED IN ACCORDANCE WITH CURRENT EVERGUARD CONSTRUCTION DETAILS AND GAF SNAK GUIDELINES.

2. COATED METAL SECTIONS USED FOR ROOF EDGING, BASE FLASHING AND COPING SHALL BE BUTTED TOGETHER WITH A 1/4" GAP TO ALLOW FOR EXPANSION AND CONTRACTION. HOT-AIR WELD A 6" WIDE REINFORCED MEMBRANE FLASHING STRIP TO BOTH SIDES OF THE JOINT, WITH APPROXIMATELY 1" ON EITHER SIDE OF THE JOINT LEFT UN-WELDED TO ALLOW FOR EXPANSION AND CONTRACTION. 2" WIDE ALUMINUM TAPE CAN BE INSTALLED OVER THE JOINT AS A BOND-BREAKER, TO PREVENT WELDING IN THIS AREA.

3. COATED METAL USED FOR SEALANT PANS, SCUPPER INSERTS, CORNERS OF ROOF EDGING, BASE FLASHING AND COPING SHALL BE OVERLAPPED OR PROVIDED WITH SEPARATE METAL PIECES TO CREATE A CONTINUOUS FLANGE CONDITION, AND ROOF-PIPED SECURELY. HOT-AIR WELD A 6" WIDE REINFORCED MEMBRANE FLASHING STRIP OVER ALL SEAMS THAT WILL NOT BE SEALED DURING SUBSEQUENT FLASHING INSTALLATION.

4. PROVIDE A 1/2" HEM FOR ALL EXPOSED METAL EDGES TO PROVIDE CORROSION PROTECTION AND EDGE REINFORCEMENT FOR IMPROVED DURABILITY.

5. PROVIDE A 1/4" HEM FOR ALL METAL FLANGE EDGES WHENEVER POSSIBLE TO PREVENT WEARING OF THE ROOFING AND FLASHING MEMBRANES AT THE FLANGE EDGE.

6. COATED METAL FLASHINGS SHALL BE NAILED TO TREATED WOOD NAILERS OR OTHERWISE MECHANICALLY ATTACHED TO THE ROOF DECK, WALL OR CURB SUBSTRATES, IN ACCORDANCE WITH CONSTRUCTION DETAIL REQUIREMENTS.

C. REINFORCED MEMBRANE FLASHINGS:

1. THE THICKNESS OF THE FLASHING MEMBRANE SHALL BE THE SAME AS THE THICKNESS OF THE ROOFING MEMBRANE.

2. MEMBRANE FLASHING MAY EITHER BE INSTALLED LOOSE OR FULLY ADHERED TO THE SUBSTRATE SURFACE IN ACCORDANCE WITH "CONSTRUCTION DETAIL REQUIREMENTS".

WHERE FLASHINGS ARE TO BE FULLY ADHERED, APPLY BONDING ADHESIVE AT A RATE RESULTING IN 60 SQUARE FEET/GALLON OF FINISHED ROOFING MATERIAL FOR SOLVENT-BASED BONDING ADHESIVES, AND AT A RATE OF 125 SQUARE FEET/GALLON OF FINISHED ROOFING MATERIAL FOR WATER-BORNE BONDING ADHESIVE. APPLY BONDING ADHESIVE TO BOTH THE UNDERSIDE OF THE MEMBRANE AND THE SUBSTRATE SURFACE AT 120 SQUARE FEET PER GALLON (SOLVENT BASED) AND 250 SQUARE FEET PER GALLON (WATER BASED). A GREATER QUANTITY OF BONDING ADHESIVE MAY BE REQUIRED BASED UPON THE SUBSTRATE SURFACE CONDITION. THE BONDING ADHESIVE MUST BE ALLOWED TO DRY UNTIL TACKY TO THE TOUCH BEFORE FLASHING MEMBRANE APPLICATION.

4. APPLY THE ADHESIVE ONLY WHEN OUTSIDE TEMPERATURE IS ABOVE 40°. RECOMMENDED MINIMUM APPLICATION TEMPERATURE IS 50° F TO ALLOW FOR EASIER ADHESIVE APPLICATION.

5. THE MEMBRANE FLASHING SHALL BE CAREFULLY POSITIONED PRIOR TO APPLICATION TO AVOID WRINKLES AND BUCKLES.

D. UN-REINFORCED MEMBRANE FLASHINGS:

1. UN-REINFORCED MEMBRANE IS USED TO FIELD-FABRICATE PENETRATION OR REINFORCEMENT FLASHINGS IN LOCATIONS WHERE PREFORMED CORNERS AND PIPE BOOTS CANNOT BE PROPERLY INSTALLED.

2. PENETRATION FLASHINGS CONSTRUCTED OF UN-REINFORCED MEMBRANE ARE TYPICALLY INSTALLED IN TWO SECTIONS, A HORIZONTAL PIECE THAT EXTENDS ABOVE THE ROOF MEMBRANE AND A VERTICAL PIECE THAT EXTENDS UP THE PENETRATION. THE TWO PIECES ARE OVERLAPPED AND HOT-AIR WELDED TOGETHER.

3. THE UN-REINFORCED MEMBRANE FLASHING SHALL BE ADHERED TO THE PENETRATION SURFACE. APPLY BONDING ADHESIVE AT A RATE RESULTING IN 60 SQUARE FE