

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1) AND DRY WELLS (M-5)

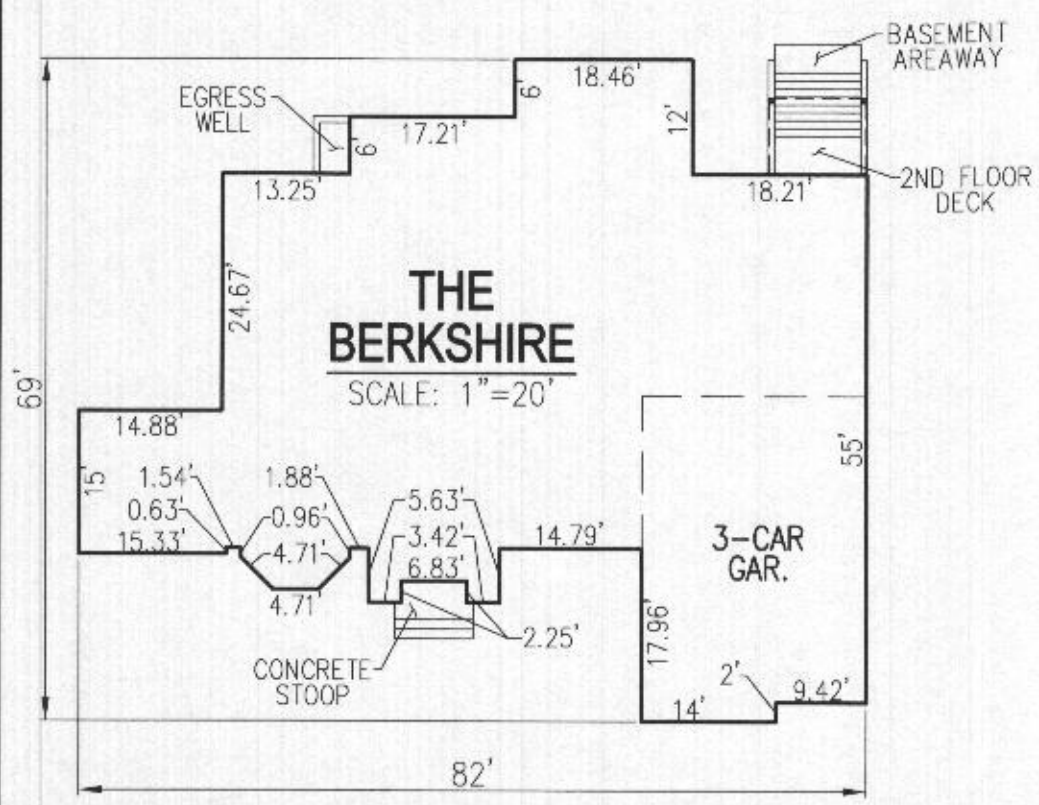
1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS, AND AFTER EVERY LARGE STORM EVENT.
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
3. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
4. WHEN THE FACILITY BECOMES CLOGGED, SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS, UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

DRYWELL SIZE CHART

DW#	LOT	DRAINAGE AREA	VOLUME REQUIRED	PROPOSED DIMENSIONS	VOLUME PROVIDED
20A	BPP A	949 SF	210 CF	6.5'x6.5'x5'	211 CF
20B	BPP A	934 SF	208 CF	6.4'x6.4'x5'	205 CF

DRYWELL #20A
 $ESD_v = (0.95)(1.0)(949)/12 = 75 \text{ CF (PROVIDE 84 CF)}$
 $84/0.4 = 210 \text{ CF (REQ.)}$
 $6.5'x6.5'x5' = 211 \text{ CF (PROV.)}$

DRYWELL #20B
 $ESD_v = (0.95)(1.0)(934)/12 = 74 \text{ CF (PROVIDE 83 CF)}$
 $83/0.4 = 208 \text{ CF (REQ.)}$
 $6.4'x6.4'x5' = 205 \text{ CF (PROV.)}$



OWNER
 ESTATES AT RIVER HILL, LLC
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DEVELOPER
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PLOT PLAN
THE ESTATES AT RIVER HILL
BUILDABLE PRESERVATION PARCEL 'A'
 13616 OLIVIA WAY
 HIGHLAND, MD 20777

SCALE AS SHOWN
 DRAWN BY JMR
 CHECKED BY RHV
 DATE AUGUST 19, 2020
 W. O. # 15-39
 SHEET# 2 OF 3

5TH ELECTION DISTRICT
 TAX MAP: 34 PARCEL: 389
 DPZ REF'S: ECP-16-064, WP-17-034,
 WP-17-128, SP-17-007, F-18-064

BLOCK: 23
 ZONED: RR-DEO
 HOWARD COUNTY, MARYLAND

N-1. DISCONNECTION OF ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH PLANNED ROOFTOP DISCONNECTIONS:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF
- SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:

A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAVE BEEN MET AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

N-2. DISCONNECTION OF NON-ROOFTOP RUNOFF

CONSTRUCTION CRITERIA:

THE FOLLOWING SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH NON-ROOFTOP DISCONNECTIONS:

- EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN AREAS DESIGNATED FOR NON-ROOFTOP DISCONNECTIONS.
- SITE DISTURBANCE: TO MINIMIZE DISTURBANCE AND COMPACTION, CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:

A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT ADEQUATE TREATMENT AREAS AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1) AND DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

1. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SHEETFLOW TO CONSERVATION AREA (N-3)

1. CONSERVATION AREAS SHALL REMAIN UNDISTURBED AND UNMANAGED OTHER THAN ROUTINE DEBRIS REMOVAL AND REPAIRING AREAS OF CONCENTRATED FLOW. INVASIVE AND NOXIOUS PLANT REMOVAL AND BI-ANNUAL MOWING FOR MEADOW AREAS MAY BE NEEDED. SIGNS DELINEATING THE LIMITS OF THE CONSERVATION AREA SHOULD BE MAINTAINED AND SUPPLEMENTAL PLANTINGS PERFORMED AS NEEDED.

OWNER

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**PLOT PLAN
THE ESTATES AT RIVER HILL
BUILDABLE PRESERVATION PARCEL 'A'**

13616 OLIVIA WAY
HIGHLAND, MD 20777

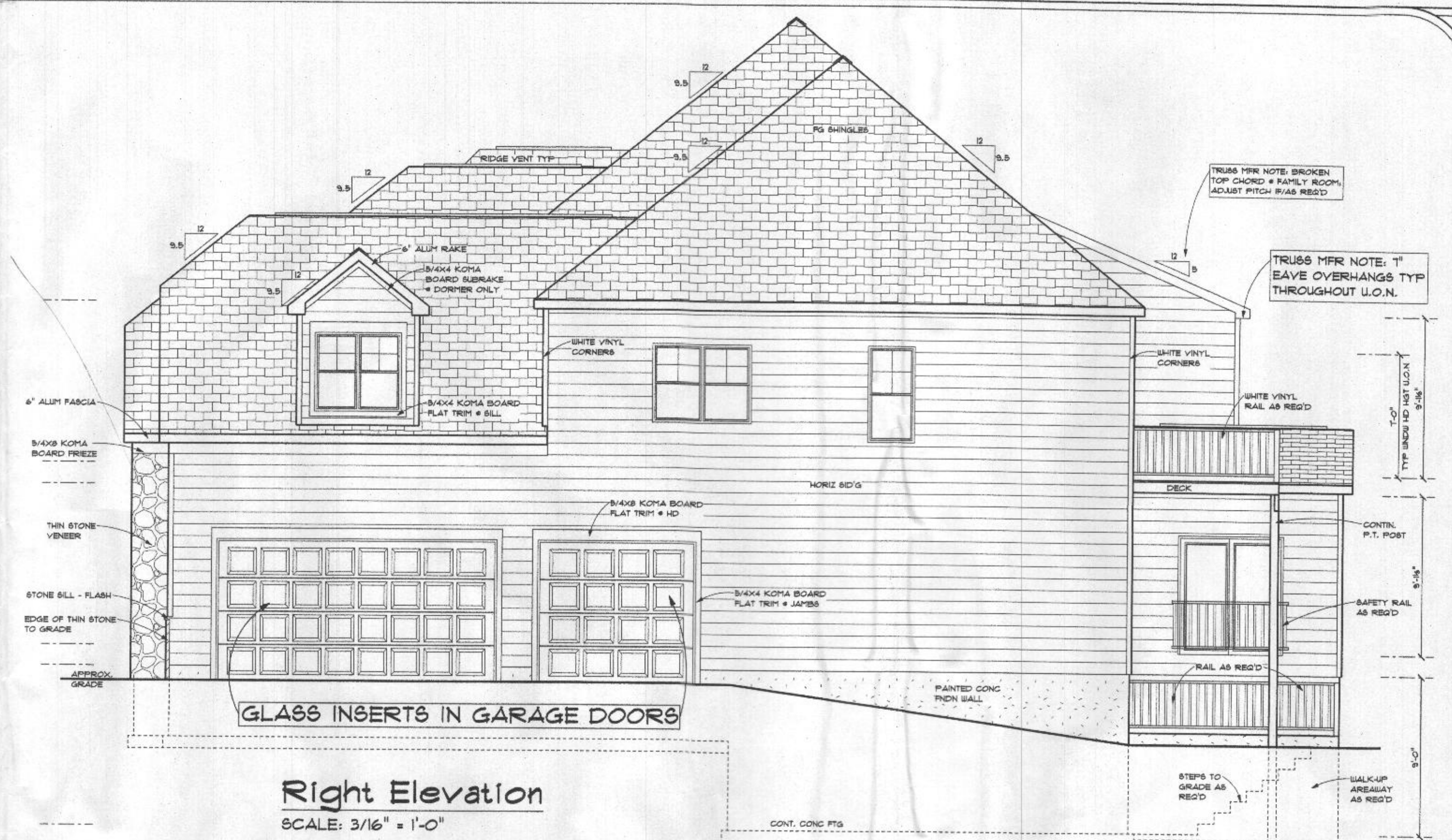
BLOCK: 23
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SCALE	AS SHOWN
DRAWN BY	JMR
CHECKED BY	RHV
DATE	AUGUST 19, 2020
W. O. #	15-39
SHEET#	3 OF 3

5TH ELECTION DISTRICT
TAX MAP: 34 PARCEL: 389
DPZ REF'S: ECP:16-064, WP-17-034,
WP-17-128, SP-17-007, F-18-064



Left Elevation
 SCALE: 3/16" = 1'-0"



Right Elevation
 SCALE: 3/16" = 1'-0"



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

*ROOF: SELECTION!
 THIN STONE!*

VINYL Siding!

*EIFS FIELD COLOR!
 ACCENT TRIM COLOR!
 TEXTURE!*

NOTE: FRONT, SIDES & REAR.
 WHITE ALUM. SOFFIT & FASCIA.

NOTE: INSULATOR
 ANTI-AIR INFILTRATION SYSTEM:
 CAULKING AT EXTERIOR JOINTS,
 SEAMS, AND OPENINGS AROUND
 DOOR AND WINDOW JAMBS, FOAM
 SEALER AT OPENINGS ON
 EXTERIOR WALLS.

NOTE: CARPENTER
 TYVEK HOUSE WRAP ALL 4 SIDES

UNITED DOUBLE-HUNG WINDOWS
 5500 DOUBLE HUNG, LOW-E (U-VALUE
 OF 0.34) W/ GRILLES, SCREENS, WOOD
 CASINGS & SIDE JAMBS.

NOTE: USE WINDOW DEVICES WHERE
 REQUIRED PER IRC 2018 R312.2

NOTE: HERITAGE 30 YEAR LAYERED
 ARCHITECTURAL SHINGLE BY TAMKO

INTERIOR SPRINKLER
 STANDARD HEADS EXPOSED

NOTE: EIFS TO BE DRAINAGE
 SYSTEM, FLASHED & INSTALLED
 PER MFR'S SPECS.

*PHASE I: STRUCTURAL
 PLANS ONLY*

PHASE II: SELECTIONS

*Approved Septic System Plan
 by Deane County Health Department
 for Future Pool
 8/14/2020
 2018*

PRESERVATION PARCEL "A" ESTATES AT RIVER HILL

2018 CODE

The Berkshire

REVISIONS	
DATE	08-13-2020
SHEET NO.	A-1
	© 2020

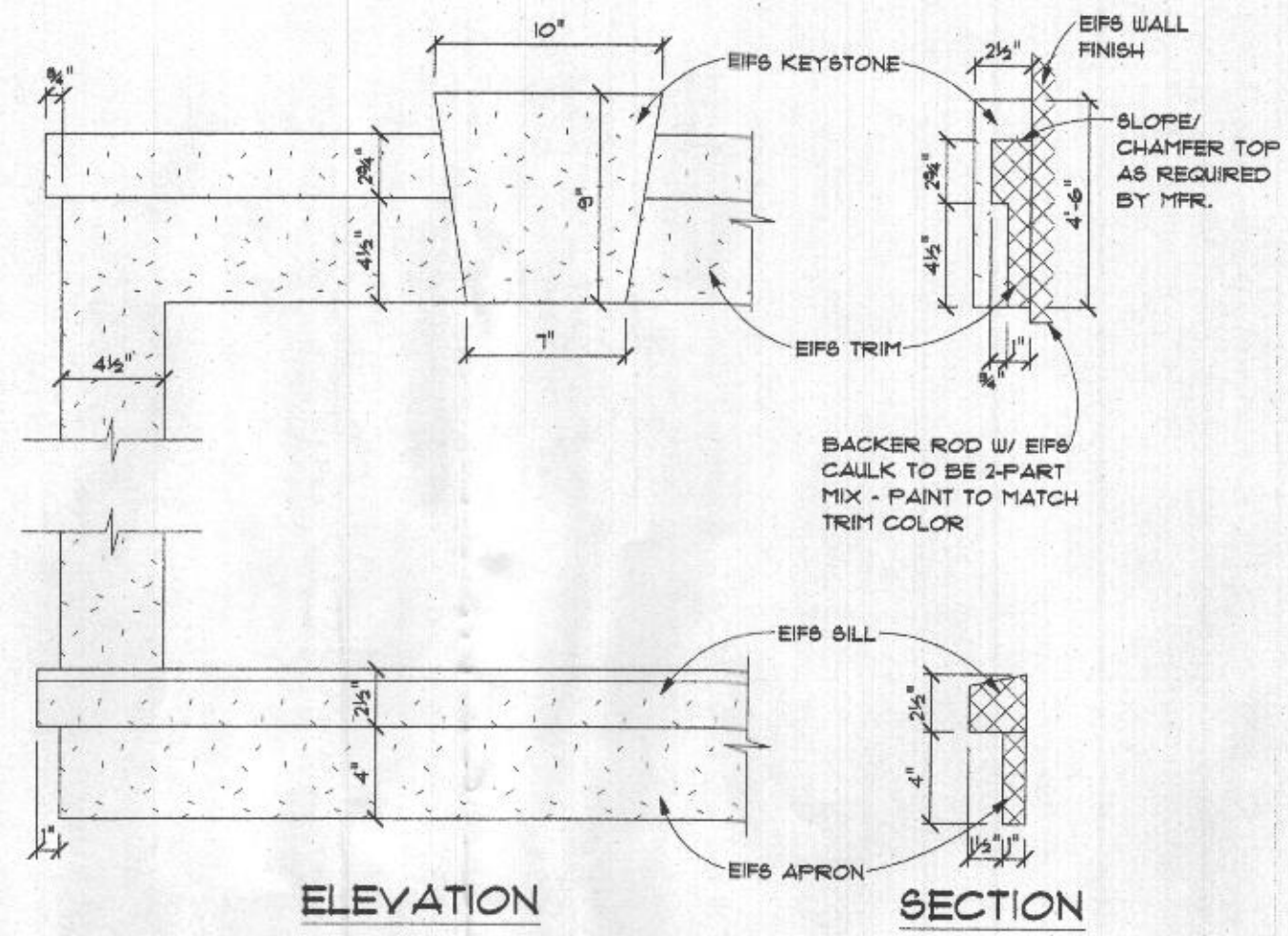
NOTE: EIFS TO BE DRAINAGE SYSTEM, FLASHED & INSTALLED PER MFR'S SPECS.

EIFS BAND DETAIL

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

EIFS Trim Details

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



TRUSS MFR NOTE: 1" EAVE OVERHANGS TYP THROUGHOUT U.O.N.



Rear Elevation

SCALE: 3/16" = 1'-0"

2018 IECC ENERGY CODE COMPLIANCE REQUIREMENTS

THE BUILDING SHALL CONFORM TO THE FOLLOWING MANDATORY REQUIREMENTS PER THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE:

COMPLIANCE CERTIFICATE	A PERMANENT CERTIFICATE APPROVED BY THE LOCAL JURISDICTION DESCRIBING THE R-VALUES, U-FACTORS, AND SHGC OF THE BUILDING COMPONENTS AND BUILDING AIR LEAKAGE TEST RESULTS SHALL BE AFFIXED TO THE ELECTRICAL DISTRIBUTION PANEL OR ANOTHER LOCATION APPROVED BY THE LOCAL JURISDICTION, PER IECC R401.3 (IRC N1101.14).
MAXIMUM FENESTRATION U-FACTOR AND SHGC	THE MAXIMUM U-FACTOR ALLOWED USING EITHER THE TOTAL UA ALTERNATIVE METHOD PER IECC R402.1.5 (IRC N1102.1.5) OR THE SIMULATED PERFORMANCE ALTERNATIVE PER IECC R405 (IRC N1105) SHALL BE 0.48 FOR VERTICAL FENESTRATION AND 0.75 FOR SKYLIGHTS PER IECC R402.5 (IRC N1102.5).
HVAC CONTROLS	EACH HEATING AND COOLING SYSTEM SHALL HAVE AT LEAST ONE THERMOSTAT PER IECC R403.1 (IRC N1103.1). THE THERMOSTAT CONTROLLING THE PRIMARY HEATING AND COOLING SYSTEM SHALL BE A PROGRAMMABLE THERMOSTAT PER IECC R403.1.1 (IRC N1103.1.1).
HEAT PUMP SUPPLEMENTARY HEAT	HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEAT SHALL HAVE CONTROLS THAT, EXCEPT DURING DEFROST, PREVENT SUPPLEMENTAL HEAT FROM OPERATING WHEN THE HEAT PUMP COMPRESSOR CAN MEET THE HEATING LOAD PER IECC R403.1.2 (IRC N1103.1.2).
DUCT SEALING	WHEN NEW FORCED AIR SYSTEMS ARE PROVIDED, ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED PER IECC M1601.4.1. DUCT TIGHTNESS SHALL BE VERIFIED BY EITHER A ROUGH-IN OR POSTCONSTRUCTION TEST PER IECC R403.3.3 (IRC N1103.3.3) UNLESS DUCTS AND AIR HANDLERS ARE LOCATED ENTIRELY WITHIN THE BUILDING THERMAL ENVELOPE.
BUILDING CAVITIES AS DUCTS OR PLENUMS	BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS PER IECC R403.3.5 (IRC N1103.3.5).
MECHANICAL SYSTEM PIPING INSULATION	MECHANICAL SYSTEM PIPING CAPABLE OF CARRYING FLUIDS ABOVE 105°F OR BELOW 55°F SHALL BE INSULATED TO R-3 MINIMUM PER IECC R403.4 (IRC N1103.4). PIPING INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED FROM DEGRADATION AND DECAY PER IECC R403.4.1 (IRC N1103.4.1).
CIRCULATING HOT WATER SYSTEMS	CIRCULATING HOT WATER SYSTEMS SHALL BE PROVIDED WITH AN AUTOMATIC OR READILY ACCESSIBLE MANUAL SWITCH TO TURN OFF THE CIRCULATING PUMP WHEN THE SYSTEM IS NOT IN USE PER IECC R403.5.1 (IRC N1103.5.1).
MECHANICAL VENTILATION	THE BUILDING SHALL BE PROVIDED WITH VENTILATION PER IECC M1505 OR OTHER APPROVED MEANS OF VENTILATION PER IECC R403.6 (IRC N1103.6). WHOLE-HOUSE VENTILATION FANS SHALL MEET EFFICIENCY STANDARDS PER IECC TABLE R403.6.1 (IRC TABLE N1103.6.1).
EQUIPMENT SIZING	HEATING AND COOLING EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL 1 OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES PER IECC R403.7 (IRC N1103.7).
SYSTEMS SERVING MULTIPLE DWELLING UNITS	SYSTEMS SERVING MULTIPLE DWELLING UNITS SHALL CONFORM TO IECC SECTIONS C403 AND C404.
SNOW MELT SYSTEMS CONTROLS	SNOW AND ICE MELT SYSTEMS SUPPLIED THROUGH ENERGY SERVICE TO THE BUILDING SHALL INCLUDE AUTOMATIC CONTROLS CAPABLE OF SHUTTING OFF THE SYSTEM WHEN THE PAVEMENT TEMPERATURE IS ABOVE 50°F AND NO PRECIPITATION IS FALLING, AND AUTOMATIC OR MANUAL CONTROLS CAPABLE OF SHUTTING OFF THE SYSTEM WHEN THE OUTDOOR TEMPERATURE IS ABOVE 40°F PER IECC R403.9 (IRC N1103.9).
POOLS AND INGROUND PERMANENTLY INSTALLED SPAS	POOLS AND INGROUND SPA HEATERS SHALL HAVE AN ACCESSIBLE ON-OFF SWITCH MOUNTED ON THE OUTSIDE OF THE HEATER THAT ALLOWS SHUT-OFF WITHOUT AFFECTING THE THERMOSTAT SETTING PER IECC R403.10.1 (IRC N1103.10.1); GAS-FIRED HEATERS SHALL NOT HAVE CONSTANT BURNING PILOT LIGHTS. HEATERS SHALL HAVE TIME SWITCHES OR OTHER CONTROL METHODS TO AUTOMATICALLY TURN ON AND OFF PER A COVER PER IECC R403.10.2 (IRC N1103.10.2). HEATED POOLS AND INGROUND SPAS SHALL BE PROVIDED WITH A VAPOR-RETARDANT PER IECC R403.10.3 (IRC N1103.10.3).
LIGHTING EQUIPMENT	A MINIMUM OF 90% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS PER IECC R404.1 (IRC N1104.1).
FUEL GAS LIGHTING EQUIPMENT	FUEL GAS SYSTEMS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHT SYSTEMS PER IECC R404.1.1 (IRC N1104.1.1).

THE BUILDING SHALL ALSO CONFORM TO THE FOLLOWING PRESCRIPTIVE REQUIREMENTS:

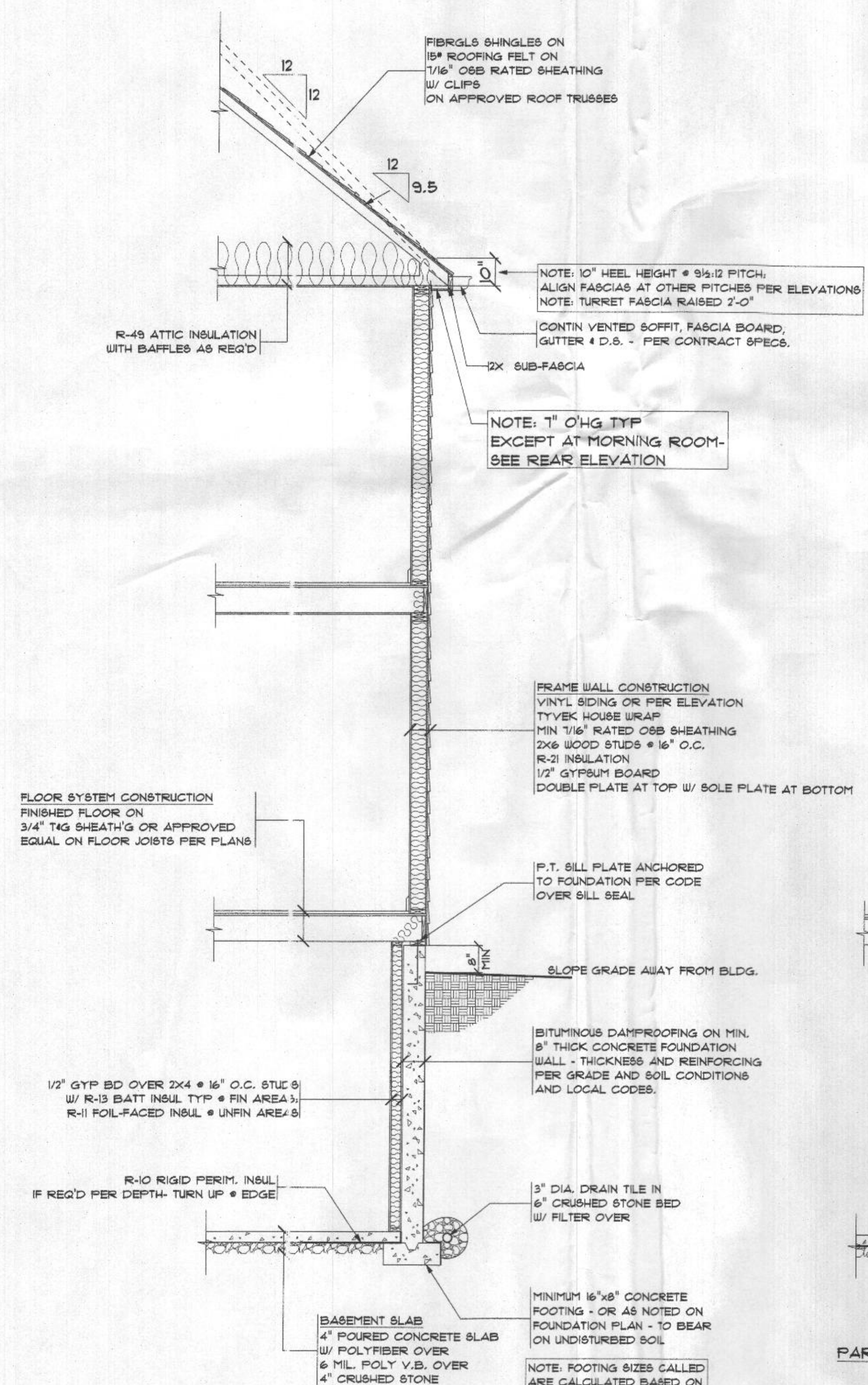
THE BUILDING CONFORMS TO THE PRESCRIPTIVE REQUIREMENTS DETAILED IN THE CHART BELOW PER IECC R402.1.2 & R402.1.3 (IRC N1102.1.2 & N1102.1.3). EQUIVALENT U-FACTORS MAY BE SUBSTITUTED FOR REQUIRED R-VALUES PER IECC R402.1.4 (IRC N1102.1.4). THE BUILDING SHALL ALSO CONFORM TO THE DETAILED REQUIREMENTS OF IECC R402.2 (IRC N1102.2).

COMPONENT	REQUIRED VALUE
CEILING/ROOF	R-49 (COMPRESSED OVER WALL TOP PLATE AT EAVES) OR R-38 (UNCOMPRESSED OVER WALL TOP PLATE AT EAVES)
WALLS	R-20 CAVITY OR R-13 CAVITY PLUS R-5 CONTINUOUS
BASEMENT WALLS	R-10 CONTINUOUS OR R-13 CAVITY
SLAB	R-10, 2" DEPTH
CRAWL SPACE WALLS	R-10 CONTINUOUS OR R-13 CAVITY
FLOORS OVER UNCONDITIONED SPACE	R-19
DUCTS OUTSIDE CONDITIONED SPACE	R-8 FOR SUPPLY DUCTS IN ATTICS R-6 FOR ALL OTHER DUCTS
HOT WATER PIPES	R-3 UNLESS OTHERWISE ALLOWED BY IECC R403.5.3 (IRC N1103.5.3)
FENESTRATION	U-FACTOR = 0.32 MAX; SHGC = 0.40 MAX
SKYLIGHTS	U-FACTOR = 0.55 MAX; SHGC = 0.40 MAX

PRESCRIPTIVE R-VALUE COMPLIANCE PATH

2018 CODE

PROVIDE APPROVED CORROSION-RESISTIVE FLASHING AT THE INTERSECTION OF MASONRY AND WOOD FRAME CONSTRUCTION. OVER PROJECTING TRIM: WHERE DECKS, PORCHES, AND THE LIKE ARE ATTACHED TO WOOD FRAME CONSTRUCTION; AT ROOF TO WALL AND ROOF TO CHIMNEY INTERSECTIONS; IN ROOF VALLEYS; AT ALL ROOF PENETRATIONS; AT ALL WALL OPENINGS; AT ALL CAVITY INTERRUPTIONS AT MASONRY VENEER; AND ALL OTHER LOCATIONS REQUIRED TO PREVENT WATER PENETRATION OF THE STRUCTURE.



Frame Wall Section

SCALE: 3/8" = 1'-0"

