City of Fayetteville
Building Safety
125 W. Mountain Street, Fayetteville, AR 72701

Application for Residential Building Permit

Phone 479-575-8233 | Fax 479-575-8202 | Inspection Request:479-575-8233
Request Inspections on Line http://ar-fayetteville.civicplus.com/296/applications Ask for your PIN #

A/P Number: _____ **Subdivision Name:** _____ **Lot #:** _____
(Please Print)

Site Address: _____

Primary Contact: (Please Print) _____ **Email:** _____ **Phone:** _____
Mailing Address: _____

Property Owner: (Please Print) _____ **Email:** _____ **Phone:** _____

Contractor Company: (Please Print) _____ **Mailing Address:** _____ **Phone:** _____

Contractor Representative: (Please Print) _____ **Email:** _____ **Phone:** _____

Contractor's License #: _____ **Expires:** _____ **Home Energy Rater Company:** _____ **Phone:** _____

For: Single Family ☐ Two-family: ☐ Footing Only ☐ **Type of Work:** New: ☐ Addition: ☐

Submittals Required: Site Plan: ☐ Erosion Control Plan: ☐ Grading Plan: ☐ Floor Plan: ☐ Framing Plan ☐
(A copy of the plans must be on site at all times)

Method of Delivery: Digital (PDF format on CD or via email) ☐ Paper (1 hardcopy 11x17 or smaller) ☐
All plans should be drawn to a standard engineer's or architect's scale with a graphic scale bar on the plans.

VALUATION OF WORK

Building: $ _____
Electrical: $ _____
Plumbing: $ _____
Gas: $ _____
Mechanical: $ _____
Misc: $ _____
Total: $ _____

Sprinklered Y/N: _____

Description of Work: _____

Structure: Wood ☐ Metal: ☐ Masonry: ☐ Foam Form ☐
Wall insulation: Batt: ☐ Blown ☐ **Floor:** Slab ☐ Crawl Space ☐

Retaining wall >4 ft Y/N? ____ **Ground Slope > than 15% Y/N?** ____
HHOD Y/N? ____ If yes to any question, requires a separate review.

Flood Plain on Lot Y/N? ____ If yes, the following submittals are required:
Flood Plain Development Application: ☐ Footing/Foundation Permit: ☐
Streamside Protection Zones (SPZ) on lot Y/N? ____ If yes, SPZ must be shown on site plan.

BUILDING INFORMATION

of Stories: ____ Height: _____ Length: _____ Width: _____ Total footprint area: _____

Area: Heat/Cooled: _____ Unheated: _____ Add/Alt: _____ Unfinished Basement: _____

****THE APPLICATION IS NOT CONSIDERED COMPLETED OR PROCESSED UNTIL ALL REQUIRED PLANS & PAPERWORK HAVE BEEN SUBMITTED****

Separate plumbing, electrical, mechanical, gas and/or grading permits must be obtained, when required.
This permit becomes null and void if work/construction authorized is not commenced within 6 months from date of issuance or if work is suspended or abandoned for a period of 6 months.

The Building Official shall have the right, after notice is given to the occupant and/or owner, to disconnect utilities to a building or part of a building, if occupied before a Certificate of Occupancy is issued or if all laws, ordinances and code violations are not remedied and inspected as approved.

Revised: 02/06/2015

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

Certificate of Owner/Contractor/Authorized Agent

The undersigned certifies to be the owner of the real property or an Authorized Contractor/Agent of the property owner for which a building permit application has been submitted to the City of Fayetteville, Arkansas. I certify that the structure to be built on said property will be located as reflected on the submitted site plan and will comply with all applicable zoning and development requirements of the Unified Development Code of the City of Fayetteville. I understand that all inspections by City Inspectors will be made only to determine compliance with construction codes and ordinances and not to assist the owner in properly locating the structure. I acknowledge my responsibility to insure by survey, if necessary, that the location of the structure will conform to the site plan that is attached to the Building Permit Application and will meet all setback requirements of the Unified Development Code, and will not encroach on any public utility easement. I also certify that the submitted information on the Building Permit Application and all associated forms, site and grading plans are true and accurate to the best of my knowledge.

Signature: _____ Date:_____

Name (printed):_____

Owner: ☐

OR

Authorized Contractor/Agent: ☐

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

RESIDENTAL FLOOR PLAN REQUIREMENTS

Floor Plan Basics:
Please submit one (1) copy of a Floor Plan. Locate and identify the following items on the Floor Plan and fill in the form below:

Address: _____

Overall Building Area: _____Square feet Rough Building Envelope: _____ft x _____ ft

Electric Meter and Main Disconnect Location: _____

Electric Panel Location: _____

Furnace Location: _____

AC Unit Location: _____

Water Heater Location: _____

Fireplaces: ☐ Gas ☐ Wood ☐ N/A (No shutoffs in Firebox)

Stair Locations and Width: # of Treads_____ Riser Height _____

Entry Steps: # of Treads_____ Riser Height _____

Handrails Height: _____ inches Guardrails Height: _____inches

Egress Windows and Doors Size and Location: _____

Attic Access Location and Size: _____

Garage Door Header Size: _____

Finish Grade: _____ Finish Floor: _____

Identify the names of all rooms and rough dimensions on the Floor Plan.

Include any decks, porches or patios, where proposed_____

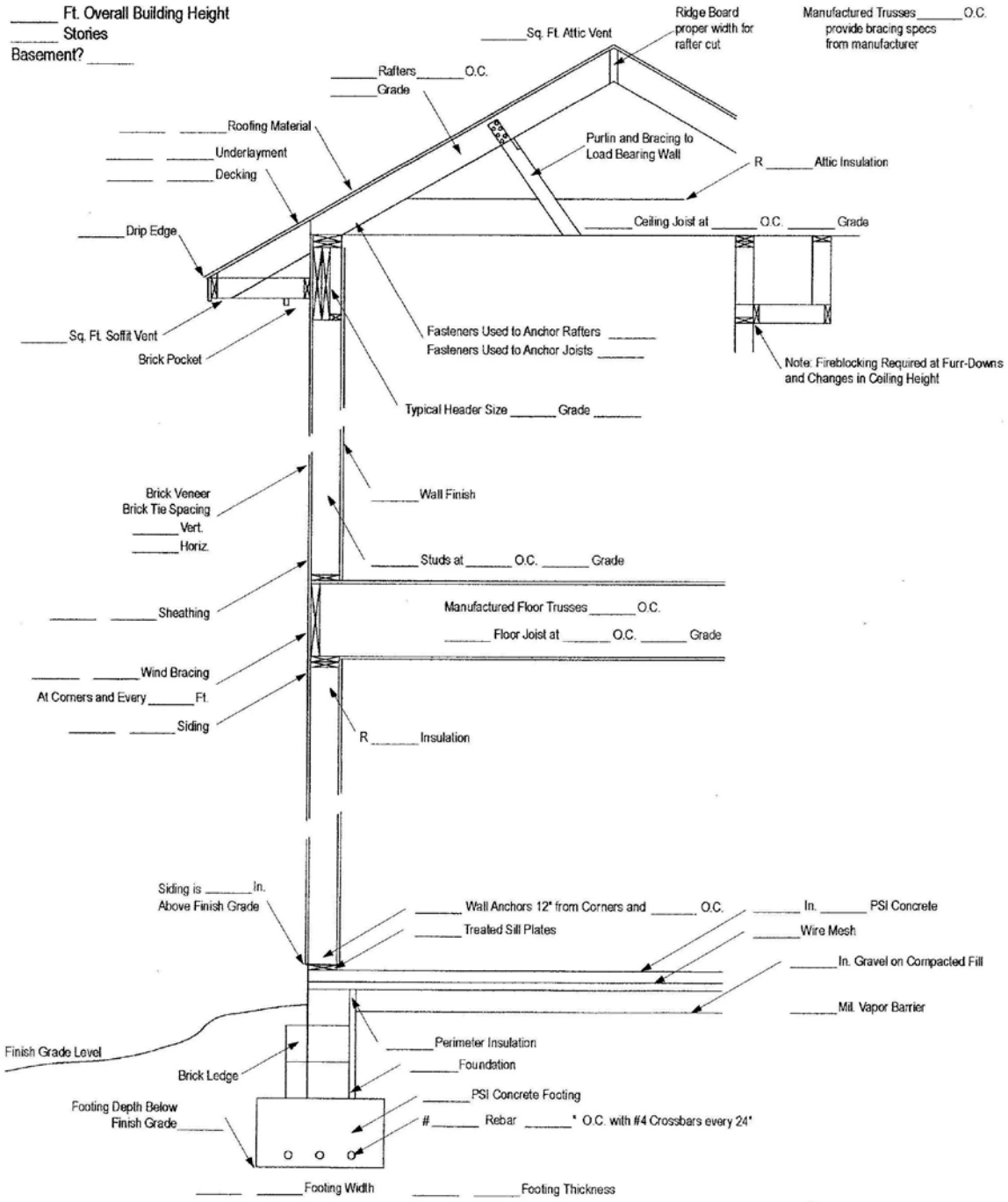
Separate plumbing, electrical, mechanical, gas and/or grading permits must be obtained, when required.

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

WALL SECTION AND CRAWL SPACE REQUIREMENTS

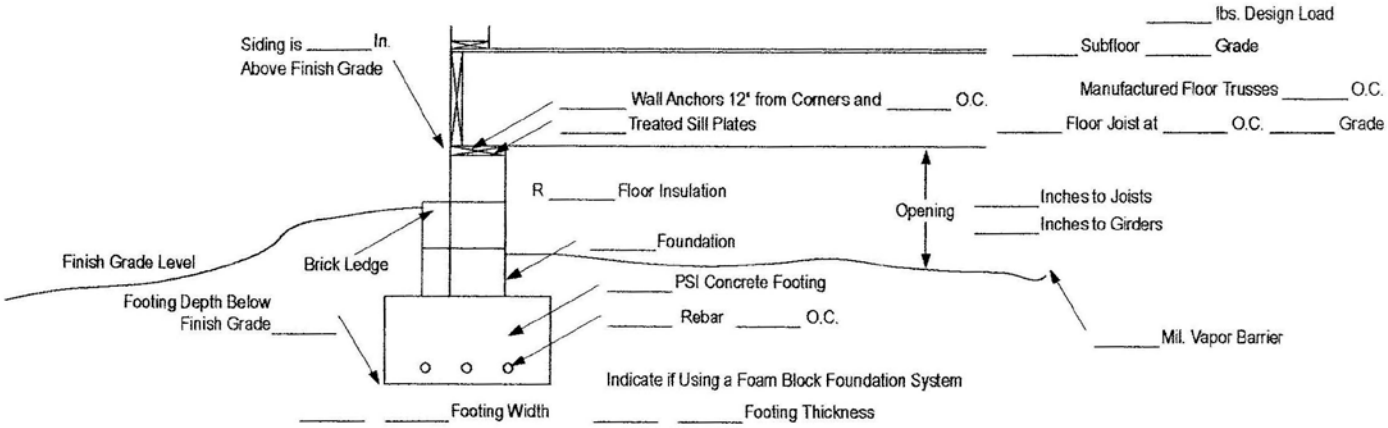
Wall Section Basics:

Submit an exterior wall section of the proposed structure. The following drawing is intended to be used as a guide. Actual construction should follow what is submitted for permit review. Additional information may be required to complete the plan review. Refer to the Building Code for specifics.



With Slab Floor

With Crawl Space



City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

RESIDENTAL SITE PLAN REQUIREMENTS

A residential building permit application must contain sufficient information to allow the Development Services Department to determine whether the lot development complies with the requirements of the Zoning and Development chapters of the Unified Development Code (UDC). We must be able to clearly determine and measure the locations of property lines and any existing or proposed structures. **Anything over 30" in height must meet the building setback requirements.**

Site plans must be drawn to one of the following conventional scales:

Standard engineer's scale (1"=10', 1"=20', etc.)

Standard architect's scale (1/8"=1', ¼"=1', etc.)

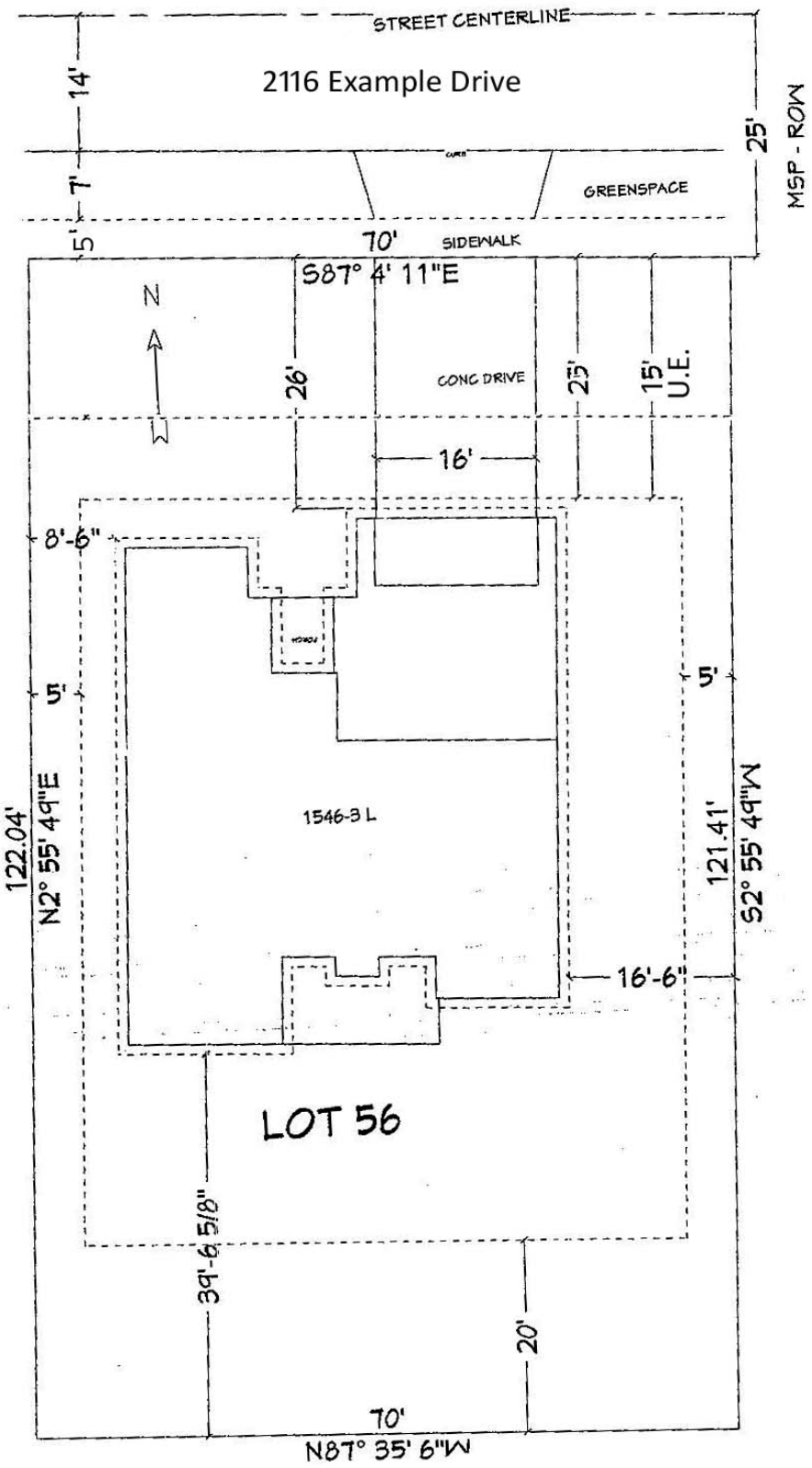
Site plans which are not legible or do not scale properly when reviewed may not be accepted and will result in a delay in the review of the building permit.

<u>Site plans must show all of the following:</u>

- ☐ Street Address
- ☐ Subdivision Name and Lot Number
- ☐ Lot boundaries with Dimensions
- ☐ Centerline of Street
- ☐ Street Rights-of-way
  - -Measured from centerline
  - -Include Master Street Plan right of way
- ☐ Zoning Setbacks
- ☐ Proposed Setbacks
  - -Measured from street right-of-way line to roof overhangs
- ☐ Utility Easements
- ☐ Location of Overhead Electrical Lines
- ☐ Surface & underground drainage as required by Grading and Drainage ordinance
- ☐ Drainage Easements
- ☐ Tree Preservation Easements
- ☐ Access Easements
- ☐ Access Drives
- ☐ Sidewalks
- ☐ Driveways
- ☐ Curb Cuts
- ☐ Accessibility Details
  - -Include ADA ramps
- ☐ Floodplain Limits
- ☐ Streamside Protection Zones

Individuals needing assistance preparing an accurate site plan or gathering any of the above information are encouraged to contact the Planning Division (479-575-8267). **Staff will not create site plans for permitting**; however, we are able to help with layout information such as lot dimensions, easements and required setbacks. Scales are available for use in the Planning Office and staff will help applicants in using them.

TYPICAL SITE PLAN EXAMPLE



2116 Example Drive
Nice Place Subdivision
Lot 56

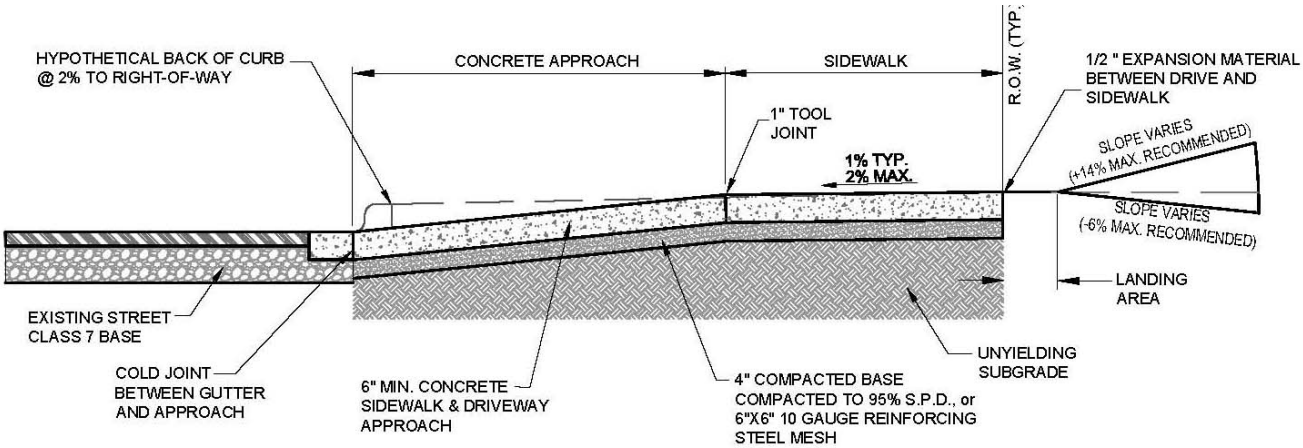
Scale 1"= 20'

North

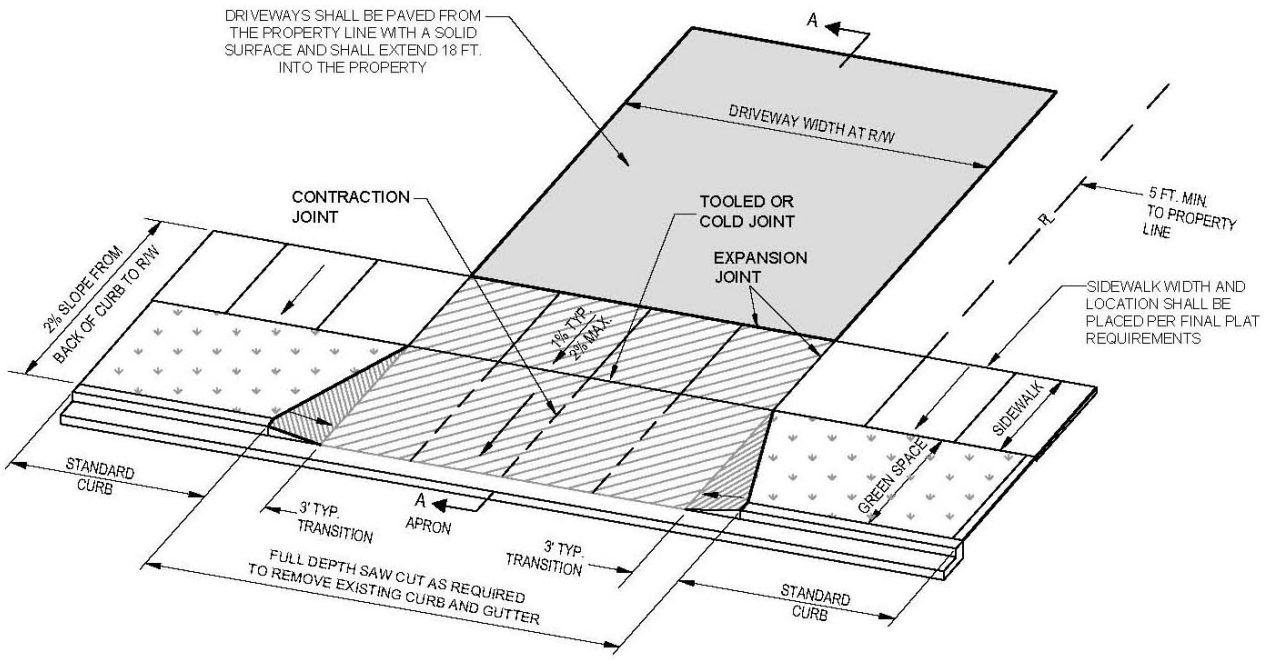
Zoning Setbacks:
Front Setback 25'
Side Setback 5'
Rear Setback 20'

Proposed Setbacks:
Front Setback 26'
Side Setback 8'-6"
Side Setback 16'-6"
Rear Setback 39'-6 5/8"

TYPICAL DRIVEWAY DETAILS



LOT WIDTH MAXIMUM	DRIVEWAY WIDTH
70 FEET OR MORE	24 FEET
50 FEET TO 69 FEET	20 FEET
LESS THAN 50 FEET	18 FEET



PLAN VIEW

N.T.S.

NOTES:

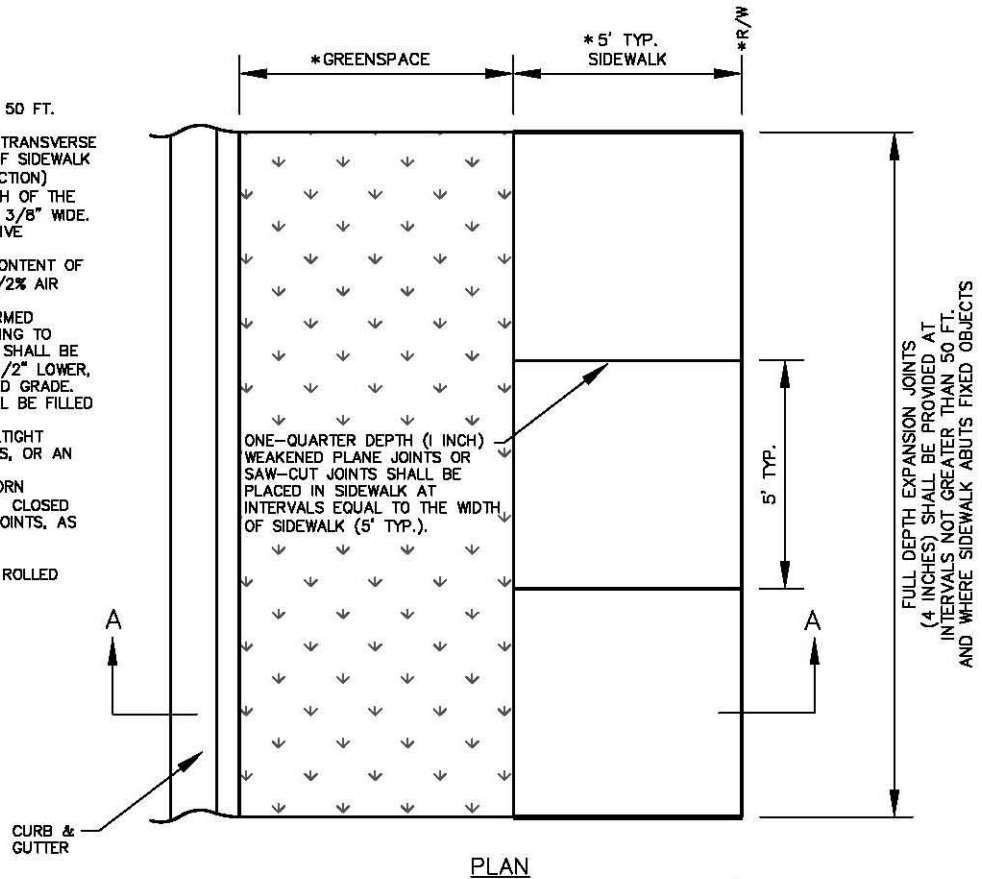
1. FULL DEPTH EXPANSION JOINTS (SIX INCHES) SHALL BE PROVIDED AT THE EDGE OF THE SIDEWALK OPPOSITE THE STREET AND AT THE EDGE OF DRIVEWAY AS SHOWN ABOVE. EXPANSION MATERIAL SHALL BE ASPHALT IMPREGNATED FIBERBOARD OR APPROVED EQUAL. (NO WOOD)
2. CONCRETE TO BE SAW CUT OR PLACE A TOOL JOINT AT THE CENTER OF DRIVE AND SEALED. IF POSSIBLE CONTRACTOR SHALL TRY TO ALIGN THE JOINT AT THE CENTER OF THE DRIVE WITH THE A JOINT IN THE ADJACENT SIDEWALK.
3. ALL CONCRETE DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED OF A PORTLAND CEMENT CONCRETE MIXTURE WHICH WILL PRODUCE A CONCRETE OF A COMPRESSIVE STRENGTH OF 3500 P.S.I. AFTER 28 DAYS SET UNDER STANDARD LABORATORY METHODS.
4. ALL SIDEWALKS REQUIRE A CONCRETE CURING COMPOUND, SUCH AS SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL
5. ALL SIDEWALKS AND DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH A BROOM FINISH. TEXTURED, STAMPED, OR EXPOSED AGGREGATE CONCRETE IS **NOT** ALLOWED WITHIN STREET RIGHT OF WAY.
6. **ALL SIDEWALKS AND CURB CUTS FOR DRIVEWAY APPROACHES REQUIRE AN INSPECTION PRIOR TO AND AFTER CONCRETE PLACEMENT.**
7. IF THE EXISTING GUTTER PAN IS DAMAGED OR DAMAGED DURING CURB REMOVAL, REFER TO DETAIL DW1A AND REMOVE FROM JOINT TO JOINT WITHIN THE LIMITS OF SAW CUT.

TYPICAL SIDEWALK DETAILS

SIDEWALK CONSTRUCTION NOTES:

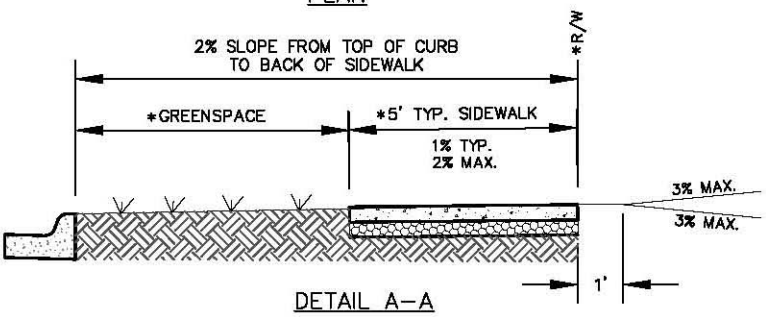
1. EXPANSION MATERIAL SHALL BE REQUIRED AT 50 FT. MAXIMUM SPACING.
2. SIDEWALK SHALL HAVE TOOLED OR SAW-CUT TRANSVERSE JOINTS AT INTERVALS EQUAL TO THE WIDTH OF SIDEWALK (5' TYP.). THESE WEAKENED PLANE (CONTRACTION) JOINTS SHALL BE CONSTRUCTED TO 1/4 DEPTH OF THE SIDEWALK THICKNESS AND SHALL BE 1/8" TO 3/8" WIDE.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 p.s.i.
4. CONCRETE SHALL HAVE A MINIMUM CEMENT CONTENT OF 5 1/2 BAGS per Cu. Yd. WITH 5 1/2% ± 1 1/2% AIR ENTRAINMENT.
5. EXPANSION JOINT MATERIAL SHALL BE PREFORMED ASPHALT IMPREGNATED FIBERBOARD CONFORMING TO AASHTO M-213. EXPANSION JOINT MATERIAL SHALL BE LEFT 1/2" LOWER THAN GRADE OR TRIMMED 1/2" LOWER, AND FILLED WITH SILICONE SEALER TO FINISHED GRADE.
6. ALL COLD JOINTS AND SAW-CUT JOINTS SHALL BE FILLED TO FINISHED GRADE WITH JOINT SEALANT.
7. CONCRETE CURING COMPOUND SHALL BE SEALTIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL.
8. CONCRETE JOINT SEALANT SHALL BE SONNEBORN "SONOLASTIC SL1" OR AND APPROVED EQUAL. CLOSED CELL BACKER ROD SHALL BE USED IN DEEP JOINTS, AS NEEDED, ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
9. ALL SIDEWALKS SHALL HAVE ONE-HALF INCH ROLLED EDGES AND A BROOMED FINISH.

*** CONFIRM ALL DIMENSIONS FOR GREENSPACE, SIDEWALK, AND RIGHT-OF-WAY, WITH THE APPROVED PLAT.**

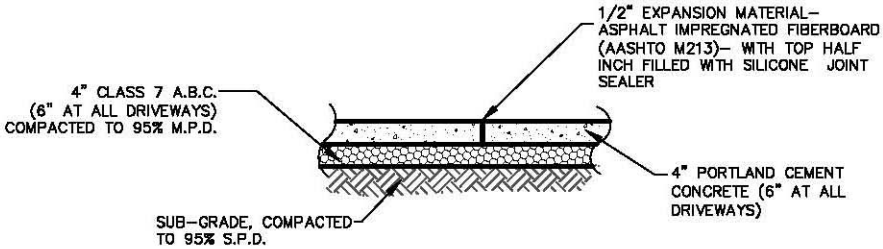


PLAN

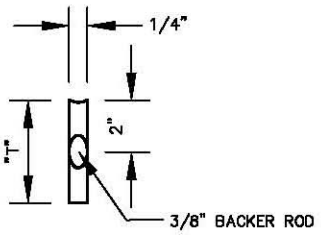
ALL SIDEWALKS REQUIRE INSPECTION BEFORE AND AFTER CONCRETE PLACEMENT. CONTACT CHUCK RUTHERFORD AT 575-8291 TO SCHEDULE AN INSPECTION. SIDEWALK WILL BE CHECKED FOR ADA REQUIREMENTS & WORKMANSHIP.



DETAIL A-A



ELEVATION

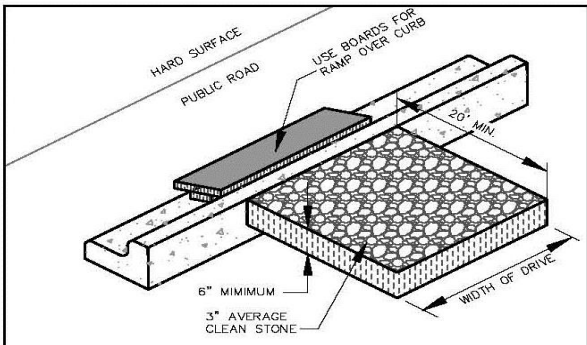


"T"=1/4 SLAB THICKNESS + 1/2"

JOINT SEALANT DETAIL

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

TYPICAL EROSION CONTROL DETAILS



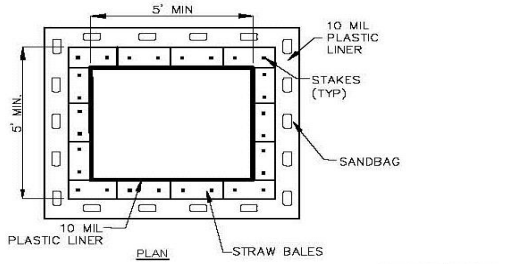
CONSTRUCTION EXIT
N.T.S.

CONSTRUCTION EXIT NOTES

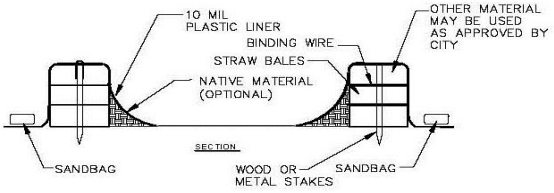
1. REPLACE CONTAMINATED STONE AS REQUIRED TO PREVENT TRACKING OF SEDIMENT OR MUD ON PUBLIC STREETS.
2. CLEAN STREETS DAILY WITH BROOM AND SHOVEL. THE USE OF WATER IS PROHIBITED.
3. ALL VEHICLES MUST USE CONSTRUCTION EXIT.

WASHOUT NOTES

1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
4. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES WILL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL.
6. PLASTIC LINING MATERIAL WILL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
7. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF OFFSITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.

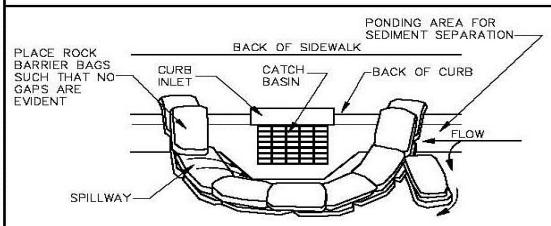


PLAN



SECTION

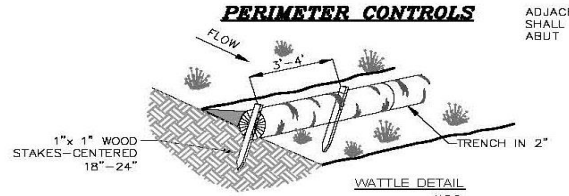
CONCRETE WASHOUT
N.T.S.



NOTES:
1. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
2. LEAVE ONE SANDBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY

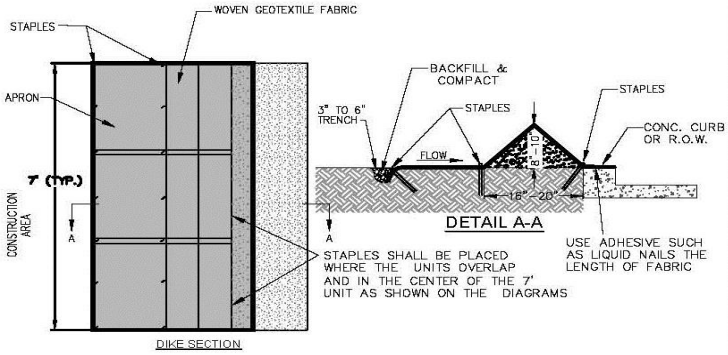
CURB INLET PROTECTION SETUP
N.T.S.

PERIMETER CONTROLS



WATTLE DETAIL
N.T.S.

INSTALLATION NOTES:
1. WATTLES SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
2. NOT FOR USE IN CONCENTRATED FLOW AREAS.
3. THE WATTLES SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF TWO (2) INCHES.
4. WATTLES SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
5. ON SLOPES, WATTLES SHOULD BE INSTALLED ON CONTOUR WITH A SLIGHT UPWARD CURVE AT THE END OF THE ROW IN ORDER TO CREATE PONDING.
6. RUNNING LENGTHS OF WATTLES SHOULD BE ABUTTED FIRMLY TO ENSURE NO LEAKAGE AT THE ABUTMENTS.
7. WHEN INSTALLING RUNNING LENGTHS OF WATTLES, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST, DO NOT OVERLAP THE ENDS. STAKE THE WATTLES AT EACH END AND FOUR FOOT ON CENTER.
8. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE. LEAVING 2 – 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE. WHEN INSTALLING WATTLES ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE.
9. DRIVE THE FIRST END STAKE OF THE SECOND WATTLE AT AN ANGLE TOWARD THE FIRST WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER.
10. STAKING: THE CITY RECOMMENDS USING WOOD STAKES TO SECURE THE WATTLES. 1/2" TO 5/8" REBAR IS ALSO ACCEPTABLE WITH A SAFETY CAP.. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE.
11. THE CONTRACTOR SHALL INSPECT WATTLES EVERY TWO WEEKS AND AFTER ANY SIGNIFICANT STORM EVENT AND MAKE REPAIRS OR REMOVE SEDIMENT ACCUMULATED BEHIND WATTLE AS NECESSARY.
12. SEDIMENT ACCUMULATED BEHIND WATTLE SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DIAMETER OF THE WATTLE.
13. WATTLES SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND IS ACCEPTED BY THE CITY.



DIKE SECTION

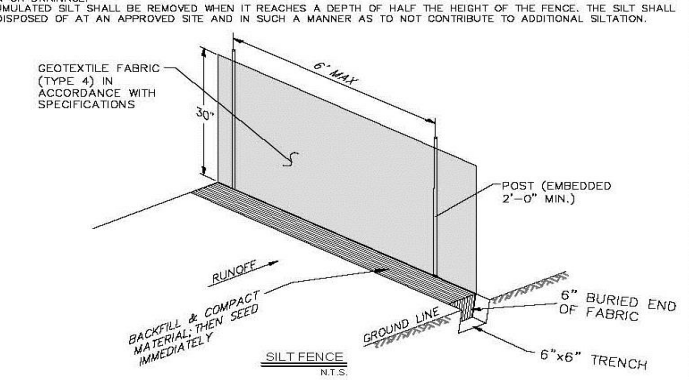
INSTALLATION NOTES

1.. SILT DIKES SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
2. STAPLES SHALL BE No. 11 WIRE, 6" TO 8" IN LENGTH.
3. RUNNING LENGTHS OF SILT DIKES SHOULD BE OVERLAPPED TO ENSURE NO LEAKAGE AT THE ABUTMENTS.
4. THE CONTRACTOR SHALL INSPECT SILT DIKES EVERY TWO WEEKS AND AFTER ANY SIGNIFICANT STORM EVENT AND MAKE REPAIRS OR REMOVE SEDIMENT ACCUMULATED BEHIND SILT DIKES AS NECESSARY.
5. SEDIMENT ACCUMULATED BEHIND SILT DIKES SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DIAMETER OF THE WATTLE.
6. SILT DIKES SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND IS ACCEPTED BY THE CITY.

SILT DIKE

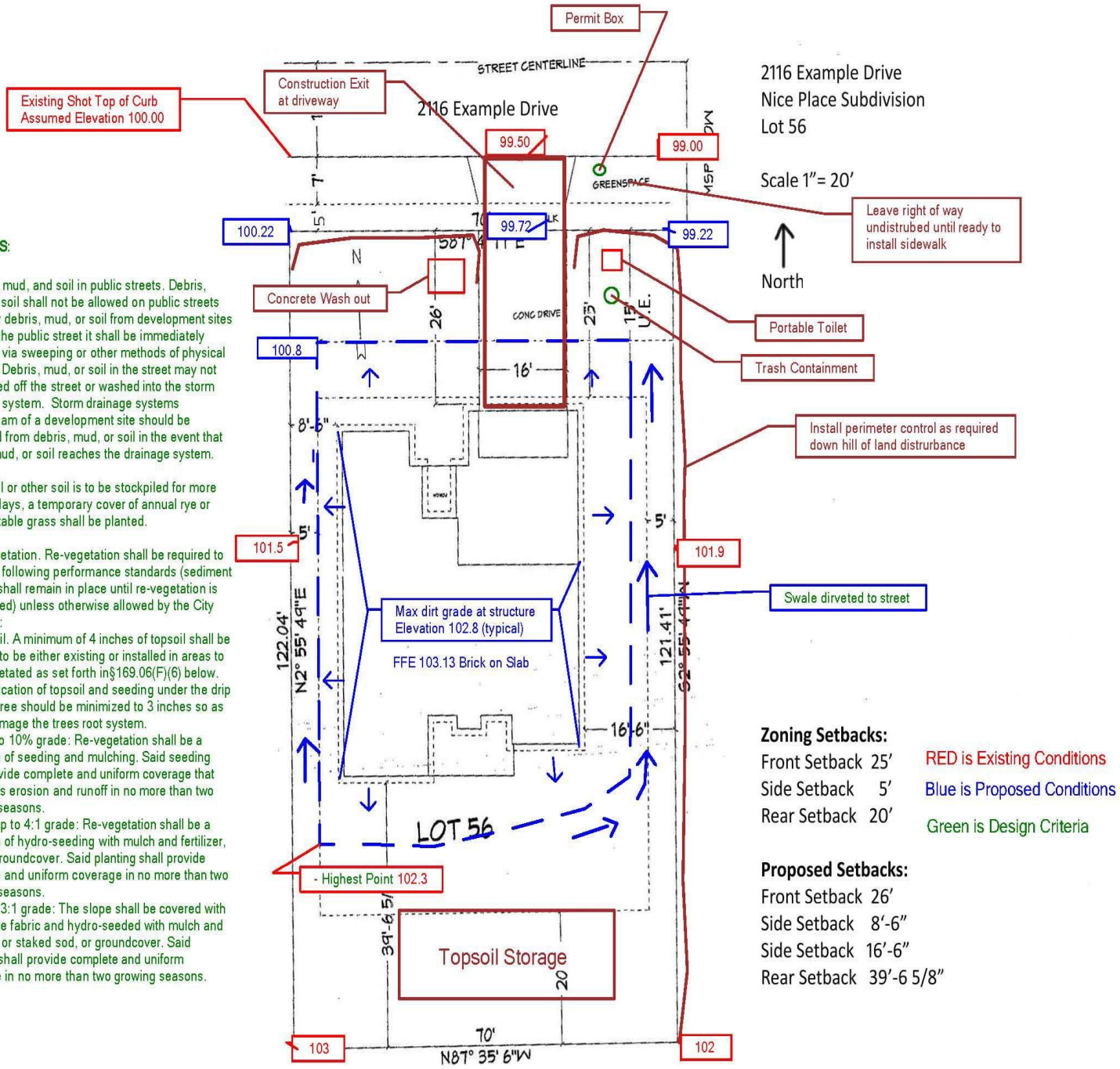
SILT FENCE NOTES:

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. HERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.



SILT FENCE
N.T.S.

EROSION CONTROL PLAN EXAMPLE



NOTES:

o Debris, mud, and soil in public streets. Debris, mud and soil shall not be allowed on public streets but if any debris, mud, or soil from development sites reaches the public street it shall be immediately removed via sweeping or other methods of physical removal. Debris, mud, or soil in the street may not be washed off the street or washed into the storm drainage system. Storm drainage systems downstream of a development site should be protected from debris, mud, or soil in the event that debris, mud, or soil reaches the drainage system.

o Top soil or other soil is to be stockpiled for more than 30 days, a temporary cover of annual rye or other suitable grass shall be planted.

o Re-vegetation. Re-vegetation shall be required to meet the following performance standards (sediment controls shall remain in place until re-vegetation is established) unless otherwise allowed by the City Engineer:

Topsoil. A minimum of 4 inches of topsoil shall be required to be either existing or installed in areas to be revegetated as set forth in§169.06(F)(6) below. Any application of topsoil and seeding under the drip line of a tree should be minimized to 3 inches so as not to damage the trees root system.

Zero to 10% grade: Re-vegetation shall be a minimum of seeding and mulching. Said seeding shall provide complete and uniform coverage that minimizes erosion and runoff in no more than two growing seasons.

10:1 up to 4:1 grade: Re-vegetation shall be a minimum of hydro-seeding with mulch and fertilizer, sod, or groundcover. Said planting shall provide complete and uniform coverage in no more than two growing seasons.

4:1 to 3:1 grade: The slope shall be covered with landscape fabric and hydro-seeded with mulch and fertilizer, or staked sod, or groundcover. Said planting shall provide complete and uniform coverage in no more than two growing seasons.

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

RESIDENTAL EROSION CONTROL PLAN REQUIREMENTS

A residential building permit application must contain sufficient information to allow the Development Services Department to determine whether the lot development complies with the requirements of the Grading and Stormwater chapter of the Unified Development Code (UDC).

Single and Two Family Residential Sites. All residential lots must maintain properly installed erosion and sediment control measures from the beginning of construction until slope stabilization and/or vegetation is established in order to prevent silt and sediment from going offsite or into the street. **Prior to the issuance of the Certificate of Occupancy (C of O), vegetation must be established to adequately prevent erosion and sediment from leaving the site.**

Erosion and Sediment Control Plan:
The Grading and Erosion & Sediment Control Plan can be combined as long as all key features are identified and legible in the opinion of the reviewer. Submittal information and plans for erosion control shall include, but not be limited to the following:

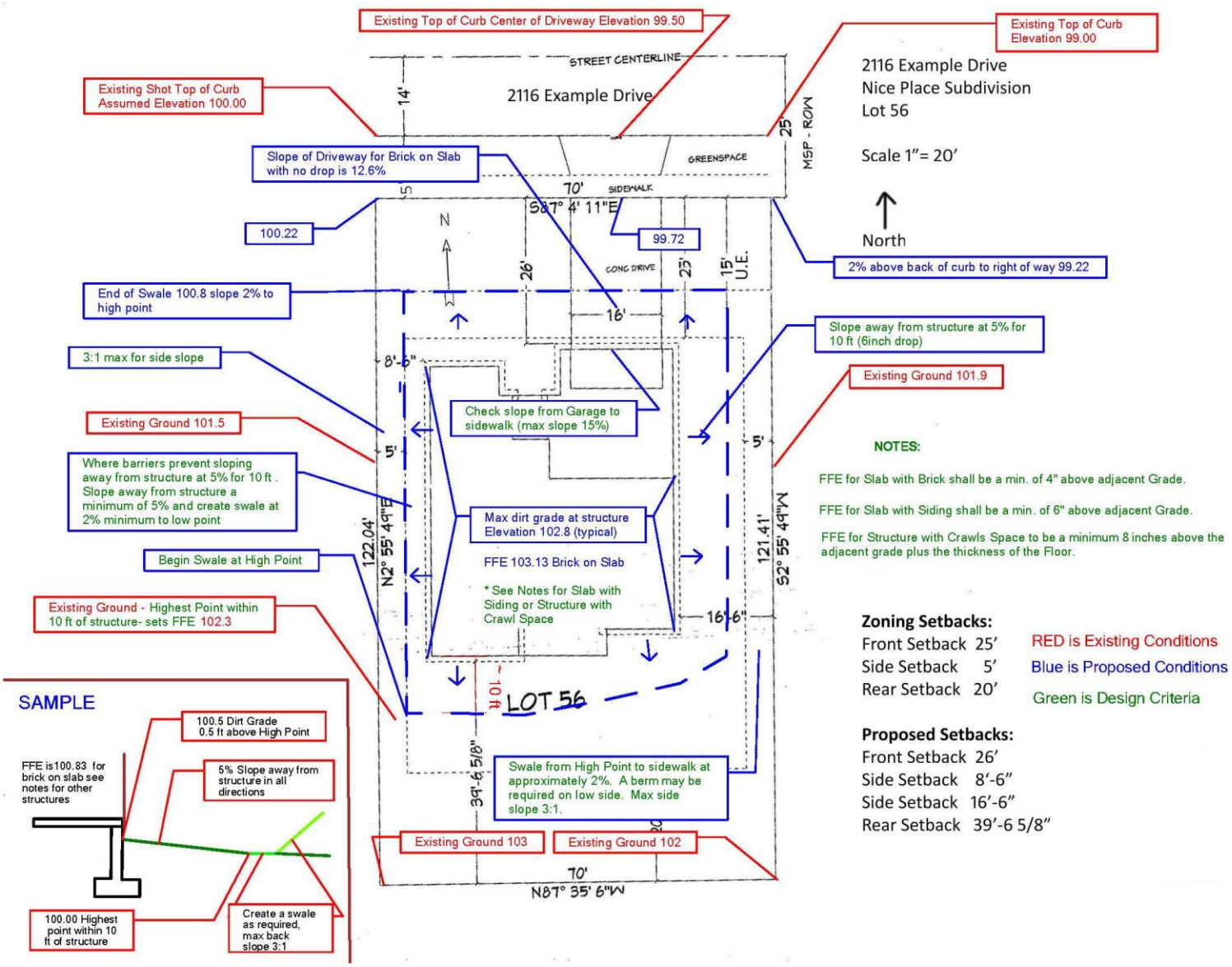
1. The Erosion and Sediment Control Plan shall be drawn to a legible conventional Engineer scale (1" = 20') using the site plan as the base map.
    a. Show location of permit box, construction entrance/exit, concrete truck wash area, portable toilet, and trash containment.
    b. Indicate areas to be left undisturbed including soil and grading disturbance.
    c. Show location of wattles, dikes, socks, stone check dams (for concentrated flow) and/or other sediment barriers. Silt fence is acceptable, but discouraged on small flat sites where excessive silt storage is not necessary.
    d. Indicate how nearby stormwater systems such as curb inlets will be protected from any mud, sediment, or debris that reaches them.
    e. Indicate the method of re-vegetation proposed. Below are minimum standards acceptable to the City for re-vegetation***:*** **(Note: Established vegetation required for C of O.)**
        i. Minimum of 4 inches of topsoil shall be required, either existing or installed, in areas to be re-vegetated.
        ii. *Slopes Zero to 10% grade*: Re-vegetation shall be a minimum of seeding and mulching.
        iii. *Slopes 10:1 up to 4:1 grade*: Re-vegetation shall be a minimum of hydro-seeding with mulch and fertilizer, sod, or groundcover.
        iv. *Slopes 4:1 to 3:1 grade*: The slope shall be covered with landscape fabric and hydro-seeded with mulch and fertilizer, or staked sod, or groundcover.
        v. *Slopes more than 3:1 grade*: Any finish grade over *3:1* must be approved by the City Engineer. Options available include Retaining walls; Terracing with groundcover; Staked Sod (up to 2:1 slope).
    f. Provide details of proposed erosion control features not included in city standard details. (Standard details can be provided by city staff).

2. A Temporary Certificate of Occupancy may be considered by the Building Official when vegetation has not been established to adequately prevent erosion and sediment from leaving the site due to unfavorable weather conditions, and erosion control matting along with perimeter erosion controls have been adequately established to temporarily prevent soil loss along with a performance bond to install sod in the remaining areas at the appropriate time.

<u>Disturbed sites over one acre may be subject to additional ADEQ rules and guidelines not specified herein.</u>

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

GRADING PLAN EXAMPLE



City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

RESIDENTAL GRADING PLAN REQUIREMENTS

A residential building permit application must contain sufficient information to allow the Development Services Department to determine whether the lot development complies with the requirements of the Grading and Stormwater chapters of the Unified Development Code (UDC).

Low Impact Development. Use of Low Impact Development (LID) design strategies, as described in Chapter 179 of the UDC, to attenuate lesser storms and more closely mimic predevelopment hydrology is encouraged. LID features appropriate for residential sites include: rain gardens, dry wells, filter strips, grassed swales, infiltration trenches, enhanced retention ponds, rain barrels, cisterns, permeable pavement or pavers, green roofs, etc.

Grading Plan:

If the proposed structure is located in a subdivision that includes an approved master drainage plan, the approved plan shall be included in the building permit application and the individual lot drainage plan shall follow the master drainage plan. (Subdivisions platted after December 2010 will include a master drainage plan.)

Lots that are not included in an approved Master Drainage Plan are required to have a specific drainage plan for each lot. The grading plan must establish a minimum Finish Floor Elevation (FFE) of the structure(s) and properly drain the parcel without detrimental affects to adjacent or downstream property owners.

Submittal information and plans include, but shall not be limited to, the following:

1. The grading plan shall be drawn to a legible conventional Engineer scale (1” = 20’) using the site plan as a base map.
2. *The Grading plan shall include, a minimum, the following features*:
    a. Provide a lot drainage plan with the Finish Floor Elevation (FFE) of the building**,** along with flow arrows and spot elevations. In general, drainage should be routed along the shortest practicable flow path to the street or drainage easement. (Existing flow conditions will be considered for site specific applications.)
    b. Identify existing drainage features on the lot, adjacent lots, and at the street; including inlets, storm drain pipes, culverts, swales, springs, water impoundments, etc. and existing structures on adjacent lots (within 20 feet of the property line).
    c. Label and identify height of retaining walls, if applicable.
    d. Identify the 100-year floodplain and/or floodway and base flood elevations, if applicable.
3. The Grading Plan must establish positive drainage and not re-direct existing runoff to an adjacent property unless an existing drainage easement or property owner agreement is provided, or the approved master drainage plan requires runoff to be directed across adjacent properties.
4. Non structural grassed swales for rear lot drainage concentration are discouraged and shall not be installed in combination with a utility easement.

Grading Design Guidelines Information:

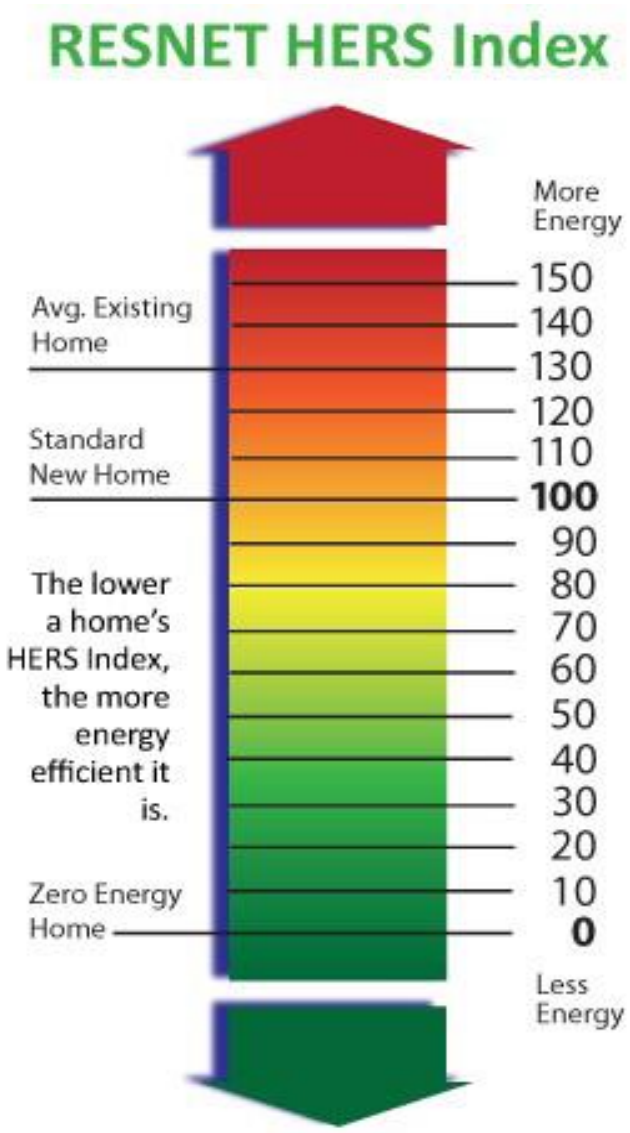
1. *Account for slope away from structure.*
    a. The minimum slope of the flow path for a swale or sheet flow to the top of curb, top bank of ditch, or approved drainage inlet from the high point of the final graded lot shall be a minimum of 2% for grassed surfaces.
    b. Final grade adjacent to structures shall slope away from the structure at a minimum rate of 5% (1:20) for a minimum of 10 ft, where possible. Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, the slope away from the structure shall be a minimum of 5% until a parallel swale is provided and slopes away from the structure at a minimum slope of 2% to the discharge point.
    c. Grading Plan must establish positive drainage to a collection point.
    d. Provide swales, as needed, to drain property to the right of way or dedicated drainage easement.
    e. No standing water shall remain, unless planned low areas such as bio-retention swales, rain gardens, etc, are planned for and properly designed, including underdrains as necessary.

2. *Account for driveway/sidewalk slope.*
    a. Show actual or relative final elevations at the gutter, back of sidewalk, at the property corners, driveway, the proposed FFE, swales, and identify Temporary Bench Mark, if used.
        i. If no sidewalk is required and the street has a curb, grade the driveway approach and the adjacent ground to maintain a minimum of six inches elevation above the gutter at or near the right of way. This will prevent gutter flow from the street from entering the site.
        ii. If a sidewalk is required, establish the back of sidewalk elevation above existing curb by adding the width of greenspace (6ft typ), sidewalk (5ft), and 1 ft beyond at 2%, then slope site to drain. (max 3:1)
        iii. For either situation above, if the lot is lower than the roadway, grade driveway to divert runoff away from garage. Minimum slope away from garage should be 4% for at least 8 ft, which results in a 4 inch drop, then divert to either side and away from house.

3. *Establish the minimum FFE (finished floor elevation).*
    a. The minimum FFE shall be at least 12 inches above the highest elevation of the bottom of swales, within 10 ft of structure.
    b. The minimum FFE shall be at least 6 inches above the adjacent final grade.
    c. Generally the FFE shall extend at least 18 inches above the elevation of the street gutter (when draining to the street), inlet on site, an approved drainage structure, or point at which the drainage leaves the site.
    d. Alternate elevations are permitted subject to the approval of the building official, provided it can be demonstrated that the required drainage to the point of discharge and away from the structure is provided at locations on site, and standard methods are not feasible.

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

Home Energy Rating System (HERS) Requirements for New Construction



Because more efficient buildings reduce stress on our electricity grid and natural gas supplies while saving money and resources for our citizens, the City of Fayetteville adopted the 2009 International Energy Conservation Code (IECC) for residential structures on July 17, 2012.

The 2009 IECC scope includes residential single-family housing and multifamily housing three stories or less above grade.

Compliance with the code for new residential construction, additions, and substantial remodels will be required as of September 3, 2012.

All new residential construction shall have a home energy rating completed by an independent RESNET certified home energy rater, or equivalent, prior to the issuance of a Certificate of Occupancy.

Additions, alterations, and renovations to existing residential structures shall comply with the standards of the 2009 IECC, but will not be required to provide a Home Energy Rating or post a decal.

The Residential Energy Services Network (RESNET) is a not-for-profit, membership corporation and a recognized national standards-making body for building energy efficiency rating and certification systems in the United States.

HOME ENERGY RATING SYSTEM (HERS)

The HERS, or Home Energy Rating System, developed by RESNET, is the nationally recognized system for inspecting and calculating a home's energy performance and determining what improvements can make the home more efficient. It does not make the energy-related requirements of the code more stringent; rather, it measures the performance of what is constructed to ensure it meets the adopted 2009 IECC.

The HERS Index is a numerical scale, with 100 as the relative value of a home built to the 2006 IECC Energy Code. A HERS Index of 65, for example, means that the home uses about 35% less energy than a code-built, or reference home with an index of 100. An inefficient home may have a HERS Index well above 100.

The HERS rater will require

- Scale drawings of the floor plan, including window and door locations, ceiling heights, and mechanical equipment locations.
- Exterior wall sections
- Slab insulation details
- Foundation wall sections
- Insulation type and R-values for walls, ceilings and floors
- Heating and air equipment
  - Type, capacity, & efficiency
  - Ductwork location and R-value
- Window and door schedule
  - U-factors
  - SHGC values
- Water heater
  - Type, capacity, & efficiency
- Other energy feature information, such as solar hot water heaters, photovoltaic panels, passive solar design, etc.

Projected Rating

It is strongly recommended that a rater perform energy modeling and obtain a projected rating BEFORE framing begins. The HERS rater performs a pre-construction plan review and energy modeling to determine whether the project as proposed will meet performance requirements of the 2009 IECC. The rater analyzes energy feature options and helps the builder select the most cost-effective mix of options to achieve 2009 IECC compliance plus whatever additional level of energy performance may be desired.

Pre-Drywall Inspections

- **Thermal Bypass Inspection:** Identifies areas that may cause building air infiltration failure at final test-out
- **Insulation Inspection:** Verifies and grades wall and floor insulation
- **Window/Door Inspection:** Verifies installation and specifications
- **HVAC Duct Testing At Rough-in:** Avoids duct leakage failure at final inspection

Final Inspection and Testing

- **Duct Leakage Test:** A special fan unit is attached to a return air plenum, the supply registers are taped off, and the duct system is then pressurized to a standard level. This test gives the Total Duct Leakage. Duct leakage to outside is potentially a very large loss of energy when supply ducts leak. Leaking return ducts are a source of indoor air pollution, pulling unconditioned, contaminated air into the home. Duct leakage tests can also be performed at rough-in, prior to a framing inspection, which will allow for easy access to correct any deficiencies. However, if modifications are made to the HVAC system, damage occurs, or visual inspection indicates lack of proper sealing at the final inspection, a second test may be required at the final inspection.

- **Blower Door Test:** This test measures the leakiness of the building envelope. The house is depressurized to a standard amount using a powerful calibrated fan in an exterior door opening. A digital pressure gauge measures the volume of air being moved at that pressure. A target level of air tightness for a home is no more than 0.35 Natural Air Changes per Hour (NACH).

- **Mechanical Equipment Verification**
- **Ceiling Insulation Inspection**
- **Major Appliance Inspection**

Generate Confirmed Rating

Test results and as-built data are entered into the modeling software and the final HERS index score is generated along with confirmation that requirements of the 2009 IECC have been met.

Documents and Certificates

The HERS rater will issue a Certificate of Compliance to the City and the Owner/Builder in order for certain inspections, such as framing and a final, to be scheduled.

Performance Testing & Labeling

Residential developments that utilize the exact same floor plan multiple times shall have a Home Energy Rating completed on a minimum of 20% of the residential units. Sampling protocol must conform to RESNET standards.

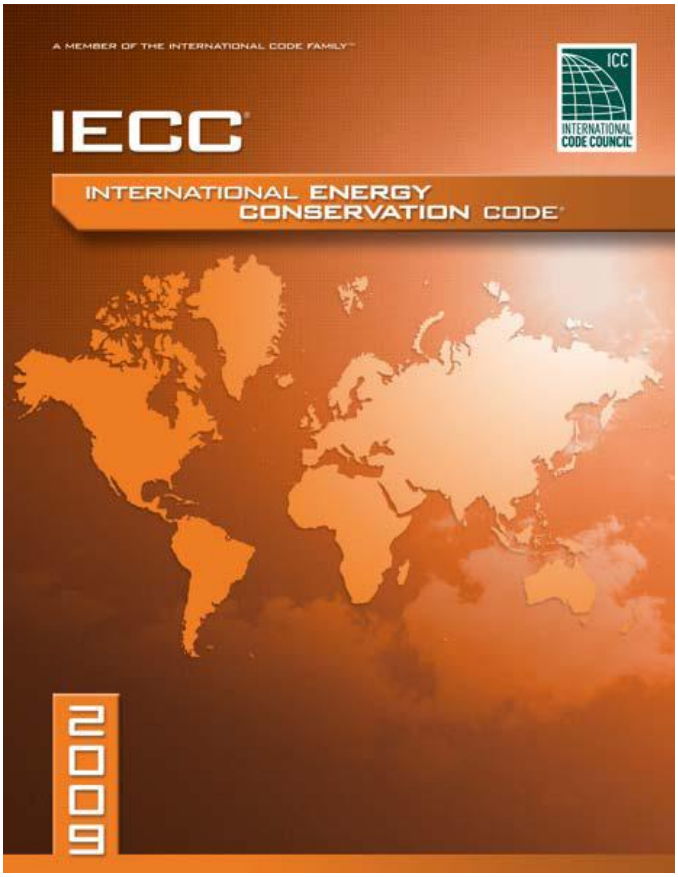
This brochure presents an overview of the Home Energy Rating System. For more details, visit **www.resnet.us**

The City of Fayetteville will offer information covering the new requirements related to the 2009 IECC in August 2012.

If you have any questions, please contact Vel Moses at 479-575-8233 or **vmoses@ci.fayetteville.ar.us**

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

2009 International Energy Conservation Code (IECC)
General Information



Because more efficient buildings reduce stress on our electricity grid and natural gas supplies while saving money and resources for our citizens, the City of Fayetteville adopted the 2009 International Energy Conservation Code (IECC) for residential structures on July 17, 2012.

The 2009 IECC scope includes residential single-family housing and multifamily housing three stories or less above grade.

Compliance with the code for new residential construction, additions, and substantial remodels will be required as of September 3, 2012.

New Construction projects will require testing by a RESNET Certified Home Energy Rater. See the HERS informational brochure. **It is strongly recommended that a rater perform energy modeling and obtain a projected rating BEFORE framing begins.**

<u>The 2009 IECC is designed to save the consumer in utility costs.</u>
An analysis comparing the same 1,824 sq. ft. structure constructed under both the 2003 IECC and the 2009 IECC estimated an annual energy cost savings of $267 for the gas home and $344 for the electric home with the new code.

The additional cost for building to the higher efficiency standards was $2,049 or, amortized over a 30 year loan, $132 annually. **This represents a net average annual energy savings for the home built to 2009 IECC standards of $135 for the gas heated home and $209 for the electric heated home.**

SIGNIFICANT CHANGES FROM 2003 IECC

1. Thermal Envelope Updates

	2003 IECC	2009 IECC
Ceiling	R-38	R-38
Skylight U-factor	N/A	0.60
Fenestration U-factor	0.41	0.34
Fenestration SHGC	N/A	N/A
Wood Frame Wall	R-13	R-13
Mass Wall	R-8.1	R-5/10*
Floor	R-19	R-19
Basement Wall	R-10/13**	R-10/13**
Slab	R-4	R-10, 2 ft depth
Crawlspace Wall	R-10/1388	R-10/13**

* The second R value applies when more than half the insulation is on the interior of the mass wall
** The first R value applies to exterior continuous insulation, the second to interior framing cavity insulation; either insulation meets the requirement

2. Sealing Requirements

Building Envelope

- Sealed with caulking materials or closed with gasketing systems
- Joints and seams sealed or taped or covered with a moisture vapor-permeable wrapping material
- Seal all floor and ceiling penetrations

Recessed Lighting Fixtures

All recessed luminaires shall be IC rated *and labeled* as meeting ASTM E 283 when tested at 1.57 psf (75 Pa) pressure differential with no more than 2.0 cfm of air movement from the conditioned space to the ceiling cavity **and** sealed with a gasket or caulk between the housing and interior wall or ceiling covering.

3. Ductwork Requirements

- All ducts outside thermal envelope shall be verified as sealed by a tightness test. Testing is not required if all ducts and air handler are inside the thermal envelope.
- Supply ducts in attics must be insulated to R-8.
- All other ducts outside thermal envelope must be insulated to R-6.

4. Lighting

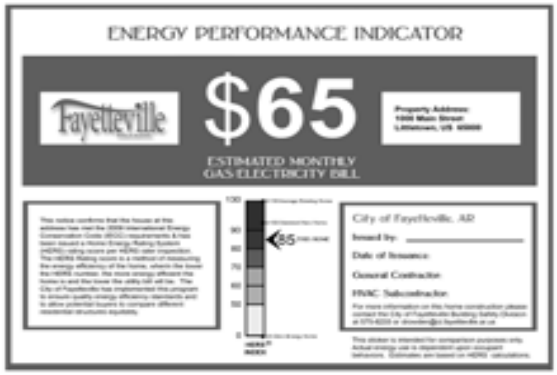
A minimum of 50 percent of the permanently installed lighting fixtures shall use high-efficacy lamps (light bulbs).

5. Trade-off Credits

Trade-off credit for high-efficiency HVAC will no longer be allowed.

6. Performance Testing & Labeling

All new residential construction shall have a Home Energy Rating completed by an independent RESNET certified home energy rater, or equivalent, prior to the issuance of a Certificate of Occupancy. See **www.resnet.us**



<u>Until the home is occupied, a decal shall be posted</u> in a very prominent location near the front entry showing the estimated monthly utility cost.

<u>A permanent decal shall be posted</u> on or in the electrical distribution panel that lists the R-values of the insulation in the ceiling/roof, walls, foundation and ducts, outside the conditioned space. Also, the decal shall list U-factors for windows, the types and efficiencies of heating, cooling, and water heating equipment.

Additions, alterations, and renovations to existing residential structures shall comply with the standards of the 2009 IECC, but will not be required to provide a Home Energy Rating or post a decal.

<u>COMPLIANCE PATHS</u>

Prescriptive Path: (Only for additions and remodels) The IECC has a single table of requirements for insulation R-values and window and door U-factors.

Total Building Envelope Path: UA (U factor multiplied by area using RESc*heck* software) Based on the prescriptive U-factor table, this path allows trade-offs whereby some energy efficiency measures can fall below code requirements if balanced by other measures that exceed code requirements.

Simulated Performance Path: This path allows compliance if the home has a calculated annual energy consumption (or energy cost) equal to or less than that of a standard reference design that just meets the code's prescriptive requirements. This path allows for crediting energy efficiency measures

not accounted for in the other paths, such as renewable energy measures. **This path is the most flexible for the builder.**

This brochure presents an overview of the main changes in the 2009 IECC. For more details on all of the 2009 IECC requirements, visit **www.energycodes.gov**

The City of Fayetteville will begin offering information covering the new requirements in August 2012.

If you have any questions related to the 2009 IECC, please contact Vel Moses at 479-575-8233 or **vmoses@ci.fayetteville.ar.us**

City of Fayetteville
Building Safety
125 W Mountian St.
Fayetteville, AR 72701

RESIDENTAL FRAMING PLAN REQUIREMENTS

Framing Plan Basics:

Submit a framing plan of the proposed structure with the following information included. Additional information may be required to complete the plan review. Refer to the Building Code for specifics.

- *Drawings/plans of*
  - ☐ *Headers*
  - ☐ *Beams*
  - ☐ *Trusses*
  - ☐ *Floor systems*

- *Plans showing*
  - ☐ *Girder size*
  - ☐ *Point loads*
  - ☐ *Support requirements*

- *Roof framing*
  - ☐ *Layout*
  - ☐ *Bracing*
  - ☐ *Point loads*
  - ☐ *Ventilation*

- *Indicate*
  - ☐ *Truss location*
  - ☐ *Bearing lines*
  - ☐ *Point loads*

- *Windows and doorways with U-factors*
  - ☐ *Size*
  - ☐ *Height*
  - ☐ *Location*

- *Rooms*
  - ☐ *Size*
  - ☐ *Name*
  - ☐ *Type*

- *Flashing*
  - ☐ *Type*
  - ☐ *Location*

☐ *Attic access locations*

☐ *Type of exterior sheathing*

- *Elevations*
  - ☐ *Front*
  - ☐ *Side*
  - ☐ *Rear*

☐ *Foundation plan and detail*

☐ *Floor plans for each story*

☐ *Floor framing plans (joists, I-beams, ledgers and anchoring)*

- *Anchor bolts and/or straps*
  - ☐ *Type*
  - ☐ *Location*

- *Stair cross-section showing*
  - ☐ *Riser height*
  - ☐ *Tread depth*
  - ☐ *Handrails*
  - ☐ *Guardrails*

☐ *Decks (free-standing and attached)*

- *Joists, rafters, and studs*
  - ☐ *Size*
  - ☐ *Span*
  - ☐ *Species*
  - ☐ *Spacing*

☐ *Specify type of fireplace (cross-section of masonry type)*

☐ *Insulation as required for floor, wall, and ceiling with R values*

☐ *Specify wall covering (i.e. brick veneer, vinyl, etc.)*

☐ *Final grade elevation noted on plan*

- *Clearances from earth:*
  - ☐ *Girders*
  - ☐ *Floor joists*
  - ☐ *Sills*
  - ☐ *Siding*

☐ *Wall framing and detail*

Residential Data Collection Checklist

2009 International Energy Conservation Code
Climate Zone __

Date:_____ Name of Evaluator(s): _____

Building Name & Address:_____ Conditioned Floor Area:_____ ft^2

Building Contact: Name:_____ Phone:_____ Email:_____

Compliance Approach: ☐ Prescriptive (402.1.2 or 402.1.3) ☐ UA Trade-Off (402.1.4) ☐ Building Performance (405)

State:_____ Jurisdiction: _____

Building Type: 1- and 2-Family, Detached: ☐ Single Family ☐ Modular ☐ Townhouse

Multifamily: ☐ Apartment ☐ Condominium

Project Type: ☐ New Construction ☐ Addition to existing building ☐ Existing building renovation

COMPONENT	CRITERIA	PLAN REVIEW			SITE INSPECTION		
		Y	N	N/A	Y	N	N/A
Air barrier and thermal barrier	Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier.	☐	☐	☐	☐	☐	☐
	Breaks or joints in the air barrier are filled or repaired.	☐	☐	☐	☐	☐	☐
	Air-permeable insulation is not used as a sealing material.	☐	☐	☐	☐	☐	☐
	Air-permeable insulation is inside of an air barrier.	☐	☐	☐	☐	☐	☐
Ceiling/attic	Air barrier in any dropped ceiling/soffit is substantially aligned with insulation and any gaps are sealed.	☐	☐	☐	☐	☐	☐
	Attic access (except in unvented attic), knee wall door, or drop down stair is sealed.	☐	☐	☐	☐	☐	☐
Walls	Corners and headers are insulated.	☐	☐	☐	☐	☐	☐
	Junction of foundation and sill plate is sealed.	☐	☐	☐	☐	☐	☐
Rim joists	Space between window/door jambs and framing is sealed.	☐	☐	☐	☐	☐	☐
Floors (including above garage and cantilevered floors)	Rim joints are insulated and include an air barrier.	☐	☐	☐	☐	☐	☐
Crawl space walls	Insulation is permanently attached to walls.	☐	☐	☐	☐	☐	☐
	Exposed earth in unvented crawl spaces is covered with Class I vapor retarder with overlapping joints taped.	☐	☐	☐	☐	☐	☐
Shafts, penetrations	Duct shafts, utility penetrations, knee walls and flue shafts opening to exterior or unconditioned space are sealed.	☐	☐	☐	☐	☐	☐
Narrow cavities	Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.	☐	☐	☐	☐	☐	☐
Garage separation	Air sealing is provided between the garage and conditioned spaces.	☐	☐	☐	☐	☐	☐
Recessed lighting	Recessed light fixtures are air tight, IC rated, and sealed to drywall. Exception - fixtures in conditioned space.	☐	☐	☐	☐	☐	☐
Plumbing and wiring	Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.	☐	☐	☐	☐	☐	☐
Shower/tub on exterior wall	Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.	☐	☐	☐	☐	☐	☐
Electrical/phone box on exterior walls	Air barrier extends behind boxes or air sealed-type boxes are installed.	☐	☐	☐	☐	☐	☐
Common wall	Air barrier is installed in common wall between dwelling units.	☐	☐	☐	☐	☐	☐
HVAC register boots	HVAC register boots that penetrate building envelope are sealed to subfloor or drywall.	☐	☐	☐	☐	☐	☐
Fireplace	Fireplace walls include an air barrier.	☐	☐	☐	☐	☐	☐

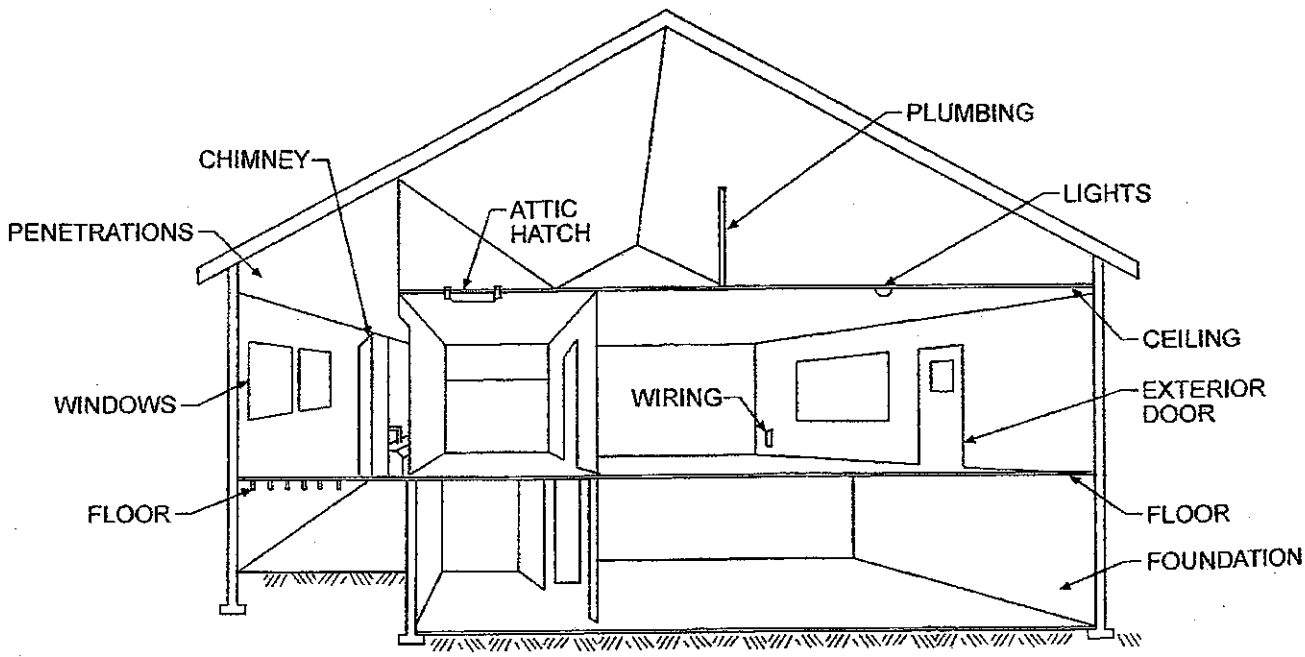


Figure N1102.4
TYPICAL SOURCES OF AIR LEAKAGE IN THE HOME

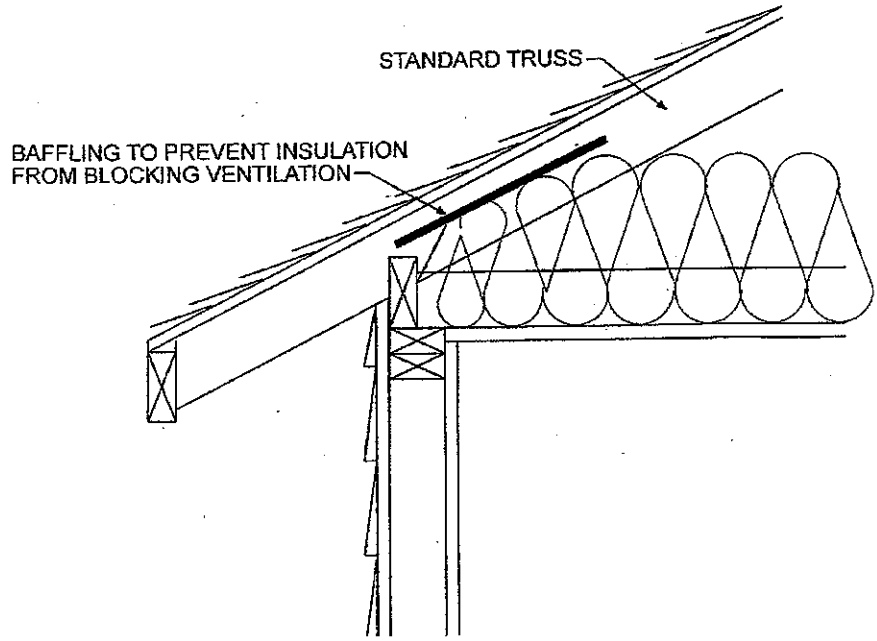


Figure N1102.2.1(1)
TYPICAL ROOF ASSEMBLY

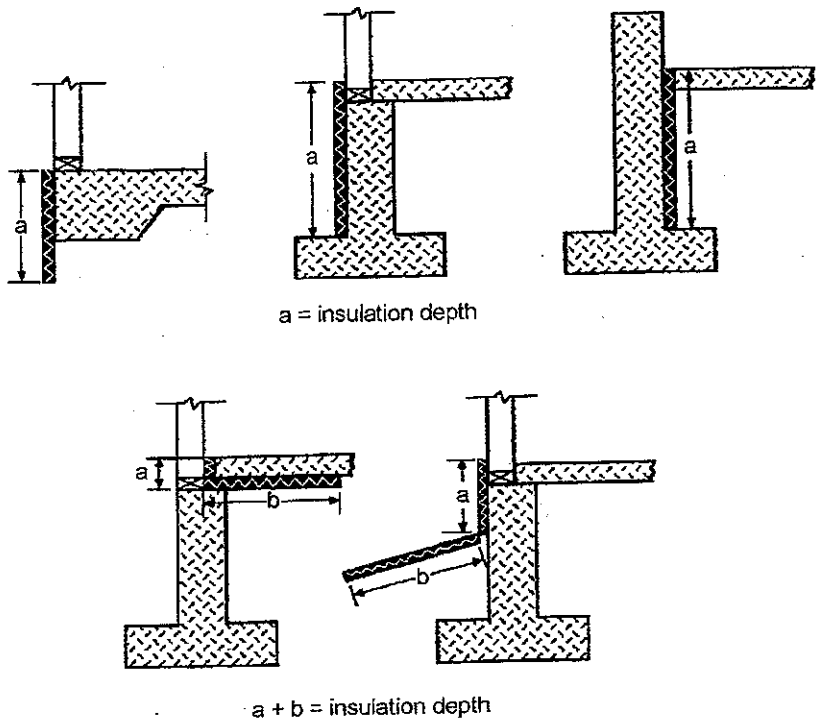
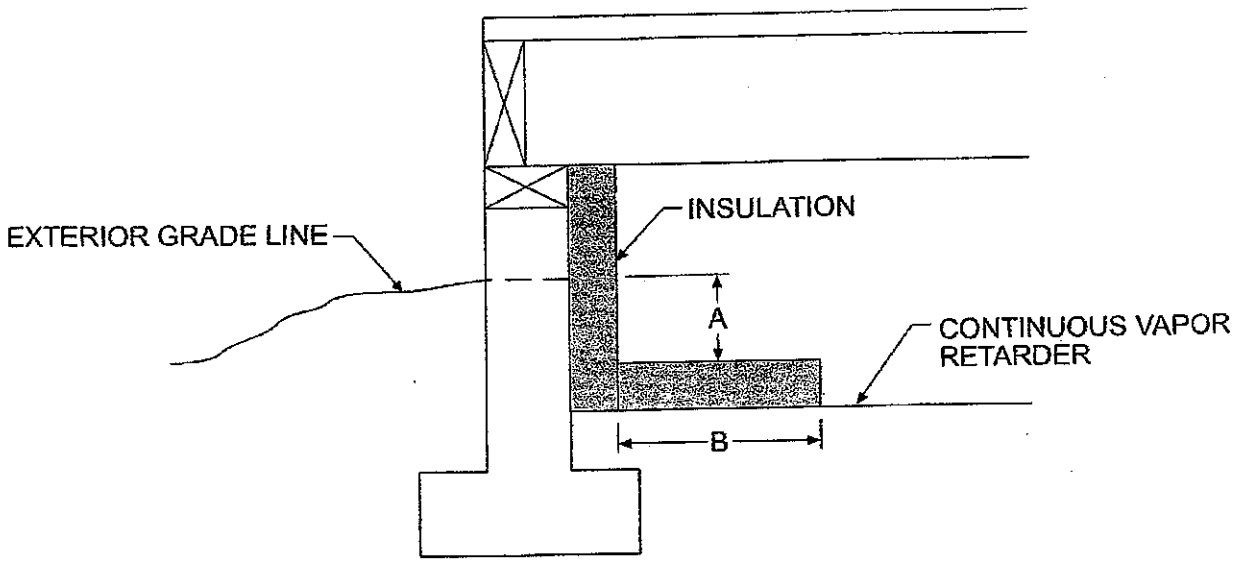
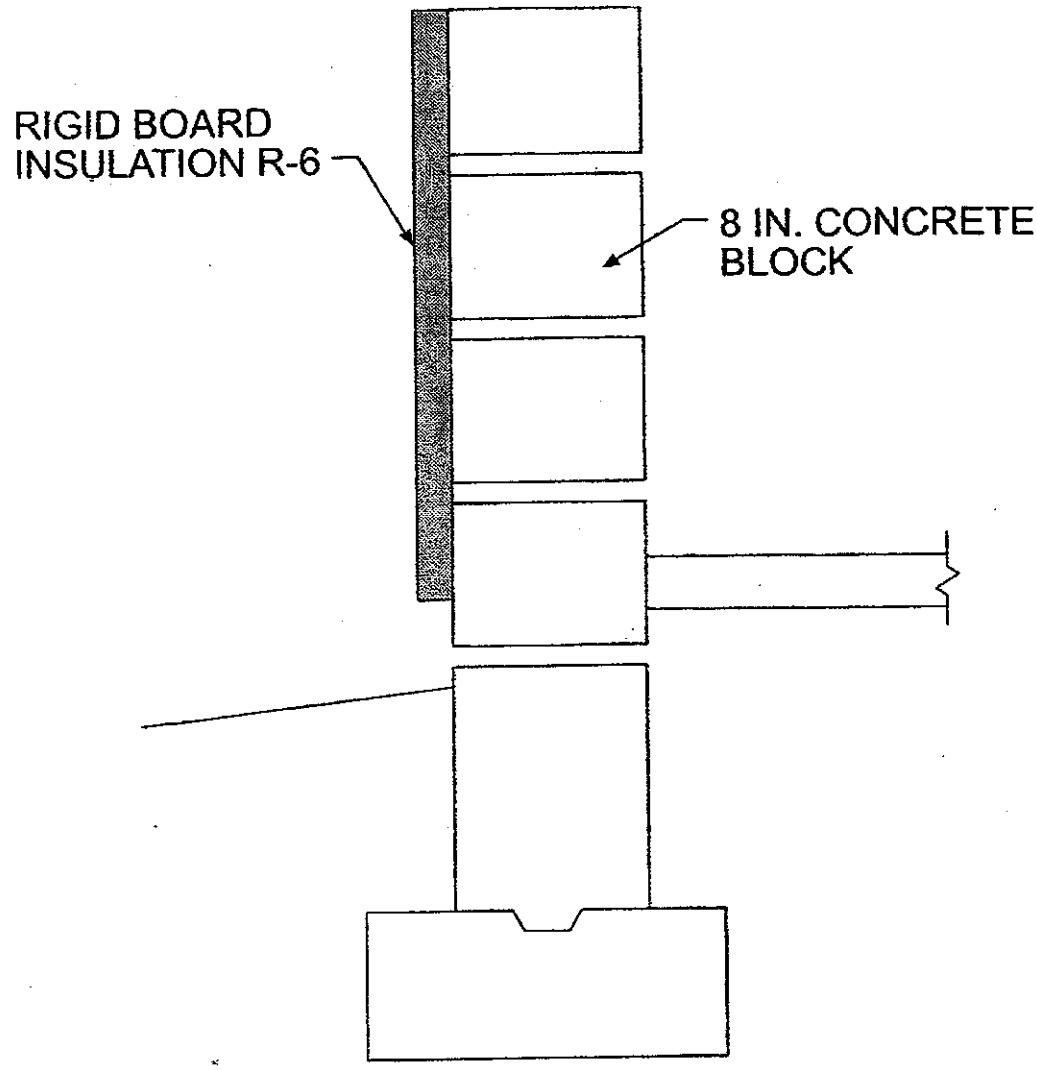


Figure N1102.2.7
SLAB EDGE INSULATION METHODS



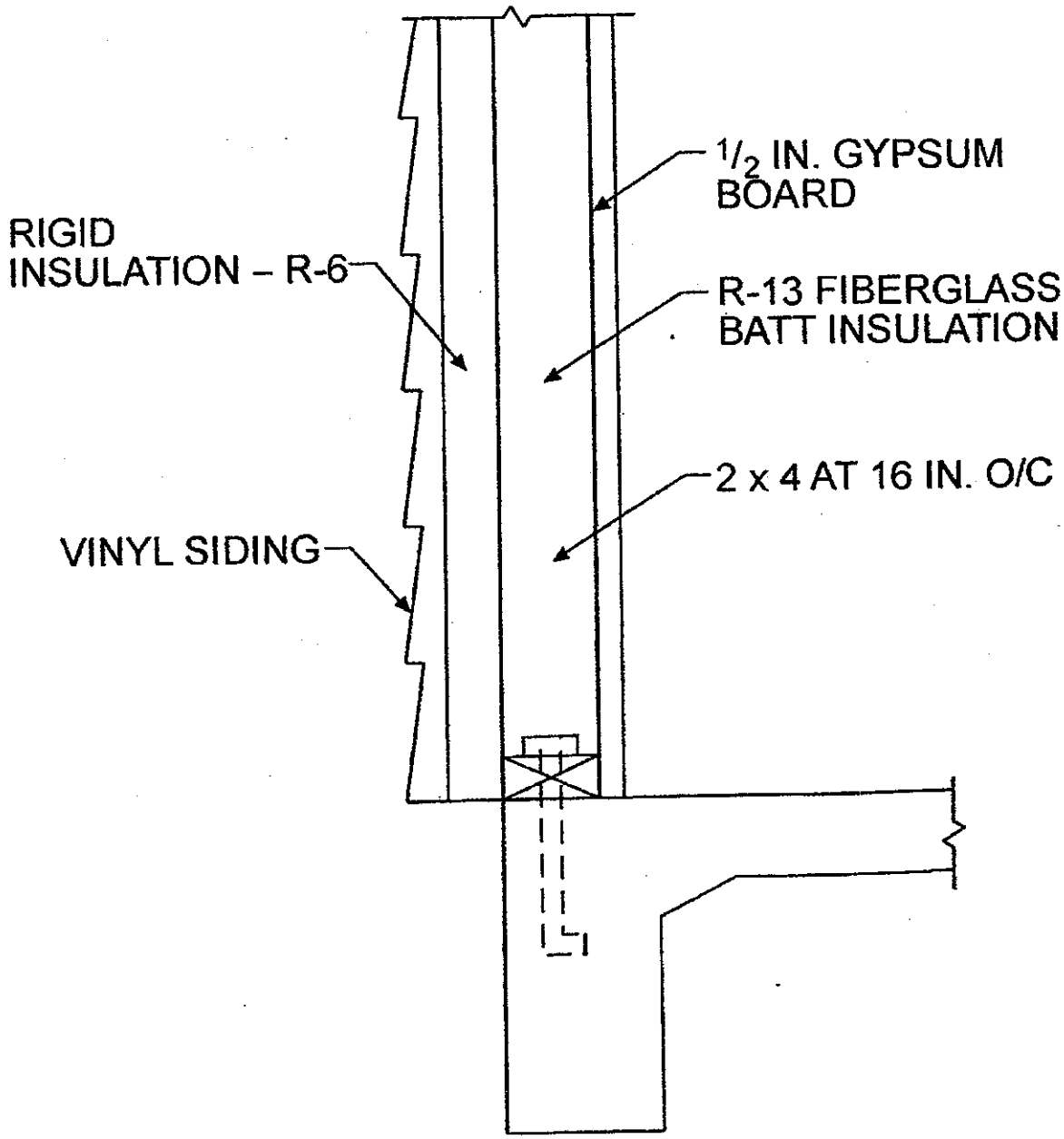
$A + B \geq 24$ IN.

Figure N1102.2.8
CRAWLSPACE WALL INSULATION



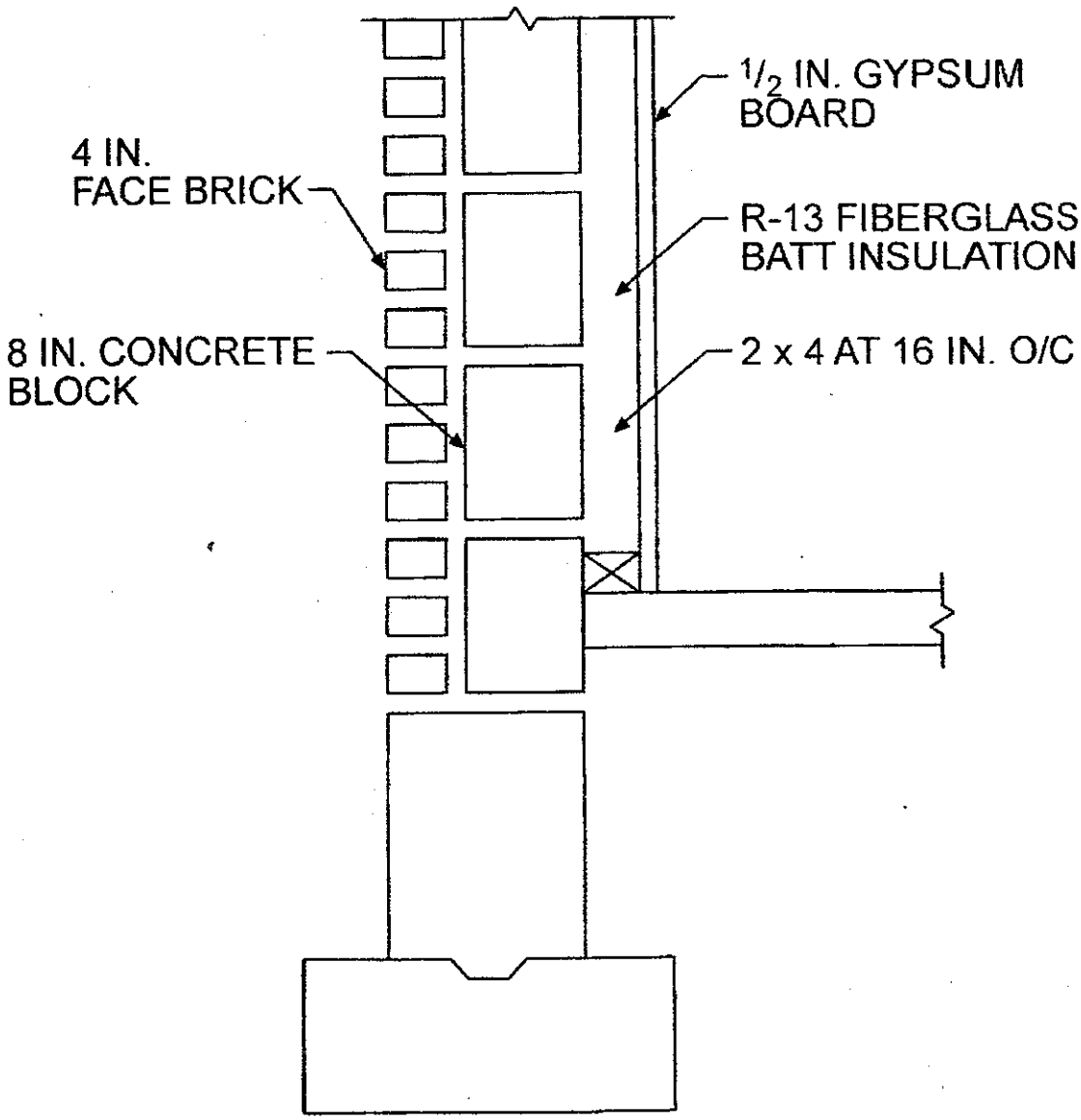
For SI: 1 inch = 25.4 mm.

Figure 1102.2.3(1)
EXTERIOR INSULATION



For SI: 1 inch = 25.4 mm.

Figure N1102.1.1
EXTERIOR R-VALUES



For SI: 1 inch = 25.4 mm.

Figure 1102.2.3(2)
INTERIOR INSULATION