

REQUEST FOR BOARD ACTION

Henderson County Board of Commissioners

Meeting Date: March 19, 2008

Subject: Water Line Extension – Etowah Land Development Co., Benjamin Smith minor subdivision.

Attachments:

1. Vicinity Map:
2. Engineer's Report
3. Project Summary
4. Project Map
5. County Review Sheet

Summary of Request:

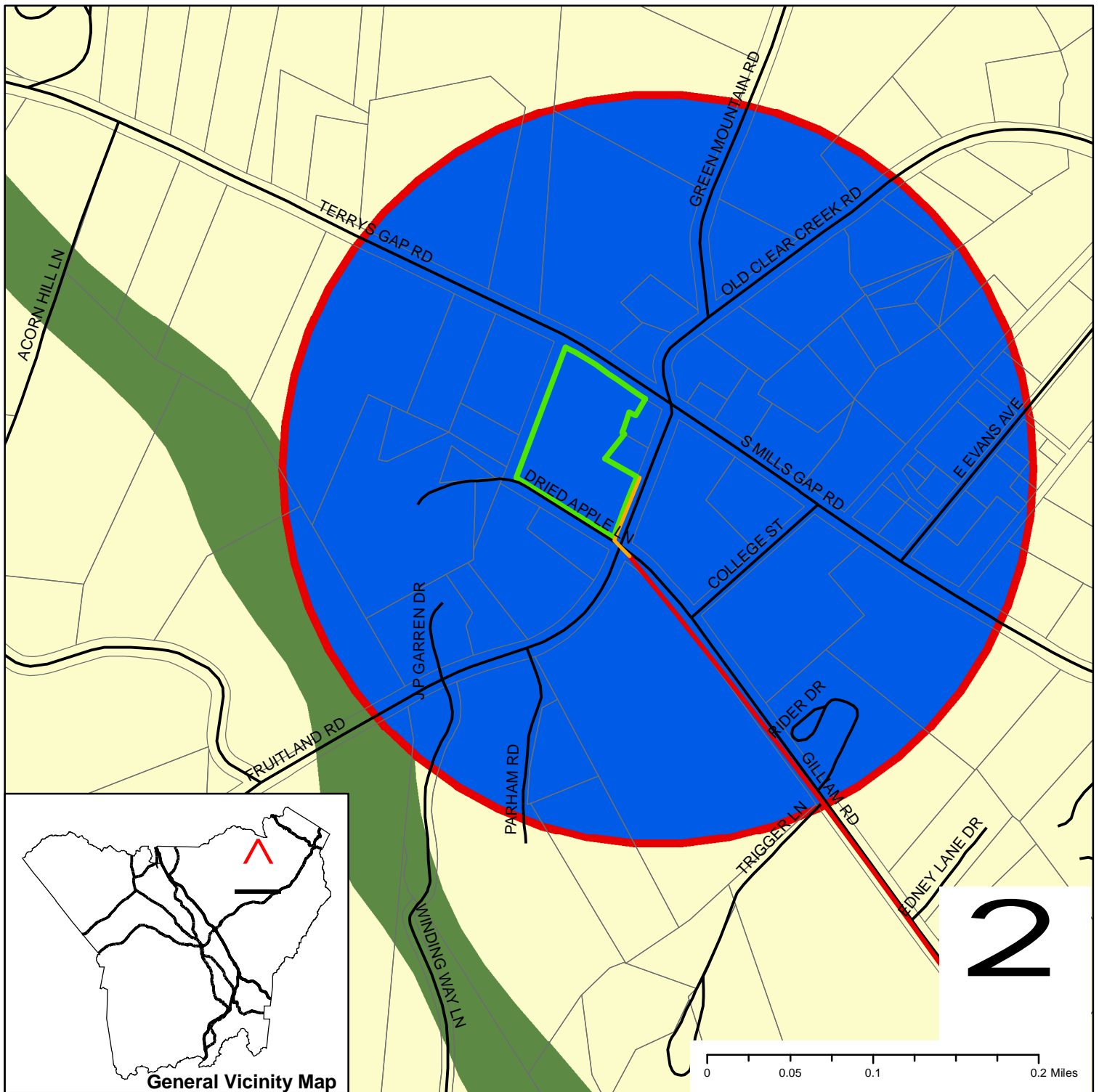
The City of Hendersonville has requested that the County comment on the proposed waterline extension for the Etowah Land Development Co., Benjamin Smith minor subdivision. The project is within a Community Service Center and the Rural/Urban Transition Area determined by the County Comprehensive Plan. This project requires approximately 350 linear feet of waterline. A City of Hendersonville Project Summary Sheet, with supporting documents and County Review Sheet with Staff comments, are attached for Board review and action.

Board Action Request:

Action by the Board of Commissioners is needed to either grant or deny this request. If the Board decides to approve the requested extension the following motion has been provided.

Suggested Motion:

I move that the Board approve the Etowah Land Development Co. waterline extension and direct Staff to convey the County's comments to the City of Hendersonville.



Etowah Land Development

OWNER/DEVELOPER: Benjamin Smith

ZONING: R-2MH

SEWER SYSTEM: Individual

Legend

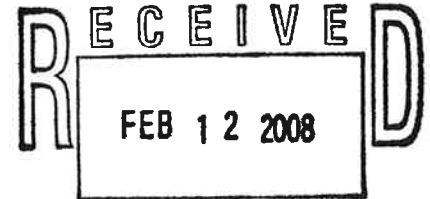
- Proposed Water Line
- Existing and Approved Waterlines
- Etowah Land Development
- Community Service Centers
- Conservation
- Rural/Urban Transition Area

WILSON
ENGINEERING
CIVIL ENGINEERING/SITE DESIGN

7 WOODCREST RD.
ASHEVILLE, NC 28804
(828) 252-5100
(828) 606-0034

January 22, 2008

City of Hendersonville Engineering Dept.
305 Williams Street
Hendersonville NC 28793



Re: Water Line Extension for Etowah Land Development Co
Fruitland Road – Henderson County

The Developer proposes to extend an 8" water main across Fruitland Road and then north from the end of the existing 8" line serving Fruitland Baptist Bible College to serve a property that is subdivided for development as single-family homes. The line will tie in to an existing stub for this project on the east side of Fruitland Road and will cross Fruitland Road and run in the public Right of Way for Fruitland Road approximately 280 linear feet to a dead man stub out.

The developer for the project is:
Ben Smith, ~~President~~.
Etowah Land Development Co

DOB 1646
Etowah 28729.

Tel- 828-606-4309

The Engineer for the project is:
Thomas R Wilson, PE
7 Woodcrest Road
Asheville, NC 28804
Tel- 828-252-5100

We are requesting a 5/8" Meters to serve each of the lots in the proposed subdivision. All meters will be located in the public right of way with 3/4" lines extended to serve each lot.

Please review this request and call if you have any questions.

Sincerely

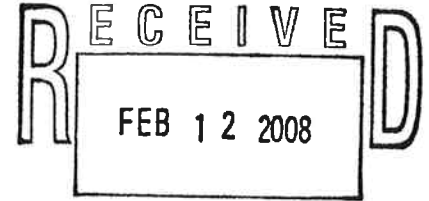

Thomas R Wilson, PE

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Fruitland Road – Henderson County

Engineering Report

Materials – 270 lf 12" DIP Class 350 and 80 lf 8" DIP Class 350

Valves- One 8" and two 12" resilient seat Gate Valves w/ non-rising stems, 2"
operating nut installed in roadway boxes

Fire Hydrants- None (existing)

Demand- Estimated @ 2500 GPD

Maximum Instantaneous demand- 50 GPM domestic,

Head Loss- Static @ -18'=-7psi

Dynamic @ 0'=0psi

Existing - Static - 60 psi

Residual – 48 psi @ 1150 gpm (taken at Fruitland Baptist Bible College)

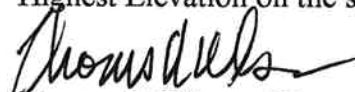
Estimated pressure at last service point @ 50 GPM demand = 60psi

Connections to the system- 10 connection @ 3/4" taps w/ 5/8" meters

Pumps- None

ARV- None

Highest Elevation on the system- 2187 +/- MSL


Thomas R Wilson, PE



**PROJECT SUMMARY
WATER UTILITY EXTENSION
Etowah Land Development**

February 12, 2008

To: Honorable Mayor and Members of City of Council

From: Water & Sewer Department Staff

RE: STAFF RECOMMENDATION FOR ACCEPTANCE OF
WATER UTILITY EXTENSION AGREEMENT (WUEA)

This is a project to extend lines to provide water service to a proposed subdivision consisting of property that is subdivided for development as single-family homes. This project is located **along Fruitland Road**. This project is under the reviewing jurisdiction of **Henderson County** and is located within the **USA – Urban Services Area**. This project **will not** involve an IBT (Interbasin Transfer) from the French Broad River Basin. The entire cost of the proposed water line extension is to be paid for by **Etowah Land Development Company of Etowah NC**.

This project requires approximately **350** linear feet of water line sized as following:

Approximate Length:	Description:
270 lf	12" DIP CL 350
80 lf	8" DIP CL 350

Fire Protection will be provided by the installation of **0**-fire hydrant(s).

The Reviewing Jurisdiction, listed below, has completed their review of this utility extension request in regard to their adopted land use plan or in terms of its future impact on existing land uses for that local government.

Reviewing Jurisdiction: **Henderson County**

☐ Approved ☐ Disapproved (See attached letter provided to the City by the Reviewing Jurisdiction)

Narrative Comments Provided: ☐ Yes ☐ No

Signing Official: _____
(Print)

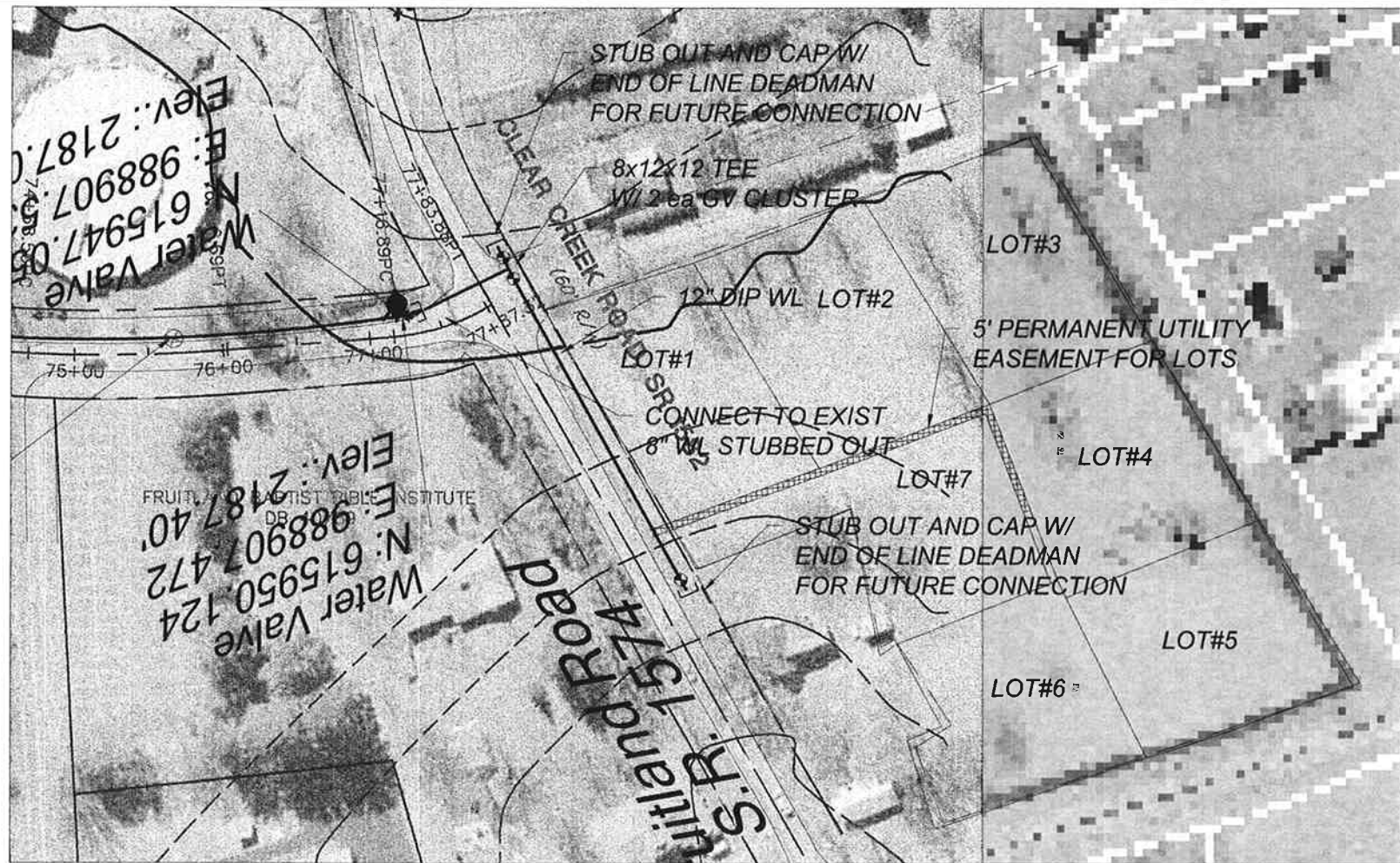
Date: _____

Based on the above information, the Water & Sewer Department has the capacity to support this additional infrastructure and associated connections and hereby recommends approval of said project contingent upon final approval of construction plans and specifications by the Water & Sewer Department.

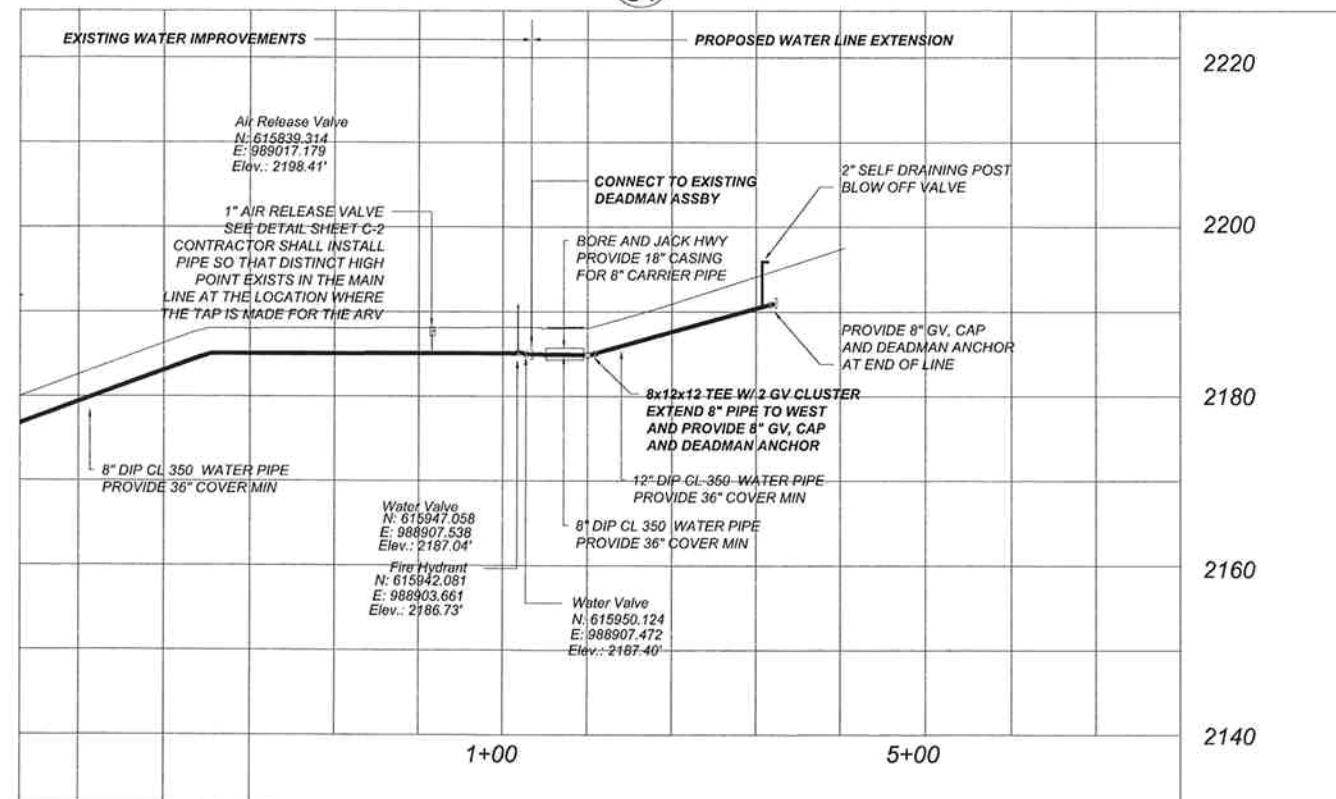
A motion is needed to approve and accept this project. Suggested wording for motion is as follows:

"I move to accept this Water Utility Extension Project and to authorize the City Manager to execute the associated Water Utility Extension Agreement on behalf of the City."

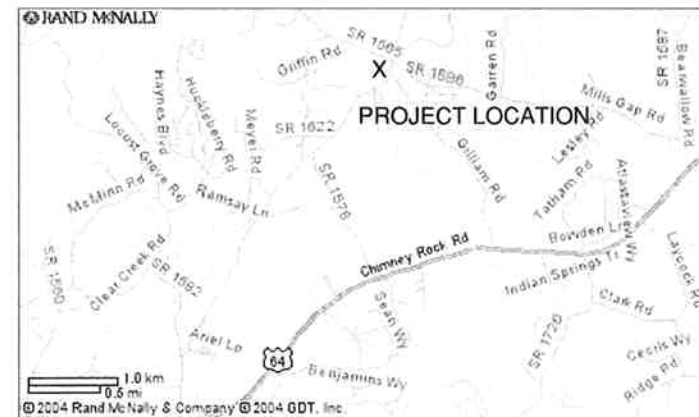
Water and Sewer Department:	<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	Date: _____
Henderson Co. Commissioners:	<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	Date: _____
Hendersonville City Council:	<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	Date: _____



2 PLAN
SCALE - 1"=50' HORIZ



1 PROFILE
SCALE - 1"=50' HORIZ
SCALE - 1"=10' VERT



1. ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH
HENDERSONVILLE CITY WATER DEPT. CURRENT STANDARDS. ALL
CONSTRUCTION WILL BE INSPECTED BY THE HENDERSONVILLE CITY
WATER DEPT STAFF FOR COMPLIANCE.

2. ALL CONSTRUCTION WILL BE PERFORMED BY A CONTRACTOR
LICENSED BY THE STATE OF NORTH CAROLINA AS A PUBLIC UTILITY
CONTRACTOR OR AS UNCLASSIFIED WITH THE APPROPRIATE LIMITS.

3. ALL FITTINGS SHALL BE DUCTILE IRON COMPACT BODY FITTINGS UNLESS NOTED OTHERWISE.

4. TAPPING SLEEVE SHALL BE MUELLER #H-615 OR APPROVED EQUAL. TAPPING VALVE SHALL BE A NON-RISING STEM DESIGN WITH A RESILLIENT SEAT AND A 2-IN OPERATING NUT.

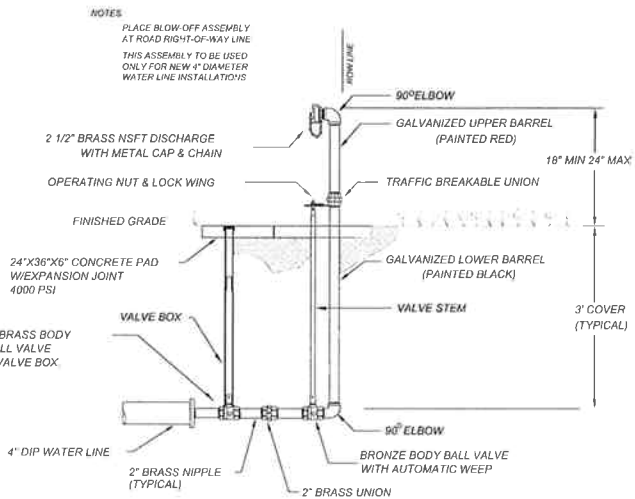
5. CONTRACTOR MUST PROVIDE THRUST RESTRAINT WITH MEGA-LUGS OR WEDGE ACTION RETAINING GLANDS UNLESS NOTED OTHERWISE. FIELD LOK GASKETS MUST BE USED IN STRAIGHT RUNS OF PIPE.

6. DISINFECT LINE AND PRESSURE TEST IN ACCORDANCE
HENDERSONVILLE CITY WATER DEPT. REQUIREMENTS.

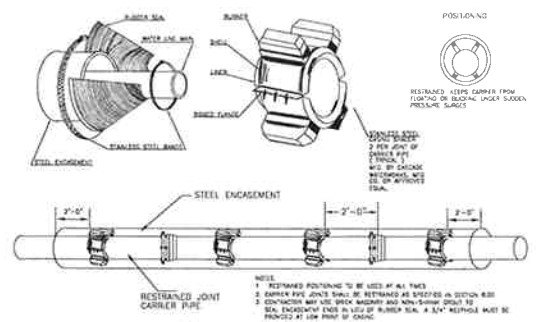
7. COMPACT EARTH IN THE TRENCH TO 95% MDD - ASTM D 695

8. BACKFLOW PREVENTER SHALL BE IN ACCORDANCE WITH HENDERSONVILLE CITY WATER DEPARTMENT STANDARDS FOR DOUBLE CHECK VALVES. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO CITY FOR APPROVAL.

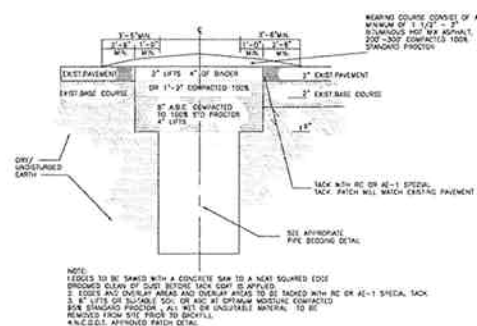
10. ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 36 INCHES BELOW FINISHED GRADE. WHERE WATER LINES CROSS SEWER LINES, THE MINIMUM SEPERATION SHALL BE 18 INCHES VERTICALLY. WHERE WATER LINES CROSS ALL OTHER UTILITIES, THE MINIMUM SEPERATION SHALL BE 12 INCHES VERTICALLY. WHERE MINIMUM CLEARANCE BETWEEN WATER AND SEWER CANNOT BE MAINTAINED OR IF THE WATER LINE PASSES UNDER THE SEWER, THE SEWER SHALL BE REBUILT WITH DUCTILE IRON PIPE A MINIMUM OF TEN FEET ON BOTH SIDES OF THE WATER LINE AND THE WATER LINE SHALL BE CONSTRUCTED OF DIP FOR TEN FEET ON EITHER SIDE OF THE SEWER LINE.



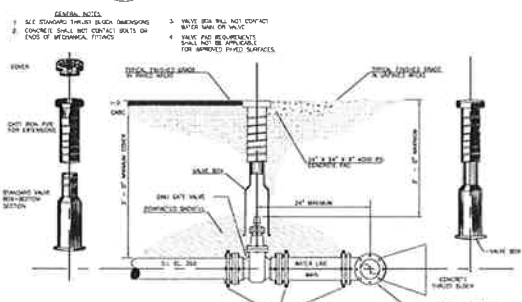
10 STANDARD BLOW OFF POST VALVE
C2 NO SCALE



11 CARRIER PIPE IN STEEL ENCASEMENT
C2 NO SCALE



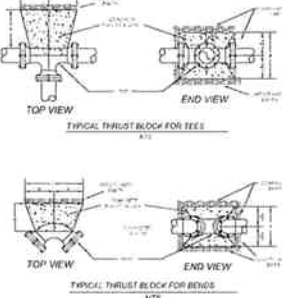
5
C2



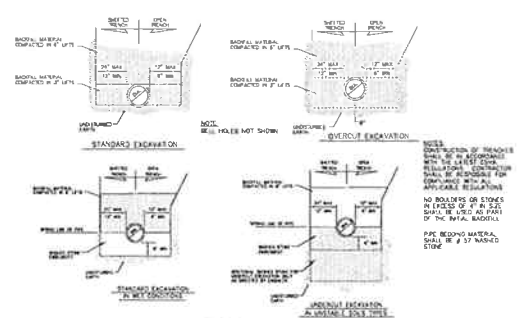
6
C2 TYPICAL VALVE & VALVE BOX INSTALLATION
NO SCALE

BCND	40	45	50 1/2	55 1/2	60
8	5.8	5.5	5.5	5.5	5.5
10	5.8	5.5	5.5	5.5	5.5
12	5.8	5.5	5.5	5.5	5.5
14	5.8	5.5	5.5	5.5	5.5
16	5.8	5.5	5.5	5.5	5.5
18	5.8	5.5	5.5	5.5	5.5

1. ALL FITTINGS MUST BE INSTALLED AS SHOWN IN SECTION 8.05 OF THE STANDARD SPECIFICATIONS AND DETAILS MANUAL.
2. DOWELBARS SHALL BE A SLIGHT OVER ENGINEER SHALL BE RESPONSIBLE TO CALCULATE THINSET BOLT DOWELBARS BASED ON DESIGN AND OPERATING PRESSURE CONDITIONS.
3. FITTING JOINTS SHALL BE KEPT FREE OF CONCRETE. A LAYER OF POLYETHYLENE PLACING SHALL BE PLACED BETWEEN THE FITTING AND THE CONCRETE.
4. PRE-CAST TUNNEL BLOCS MUST BE ACCESSIBLE.
5. CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH.

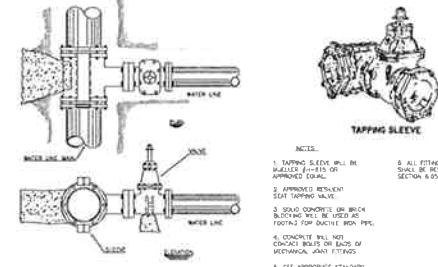


7 THRUST BLOCKS FOR FITTINGS
C2 NO SCALE

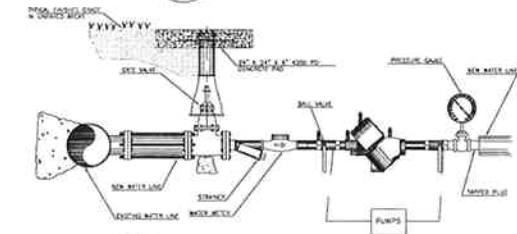


1
C2 TYPICAL TRENCH DETAIL
NO SCALE

SEE PLAN FOR SIZE OF MAIN LINE AND BRANCH LINE



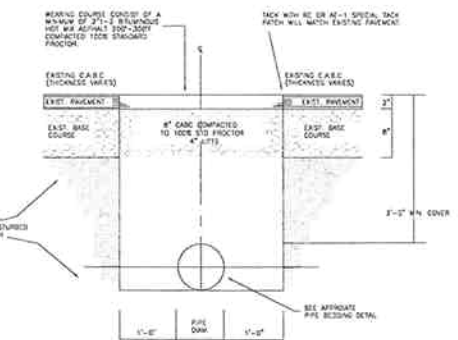
2 TAPPING SLEEVE AND VALVE ASSEMBLY
C2 NO SCALE



NOTES

- 1) PRIOR TO CONNECTING TO THE EXISTING WATERLINE, THE NEW WATER LINE WILL BE PRESSURE TESTED, DISINFECTED AND A CLEAR WATER SAMPLE OBTAINED.
- 2) ALL WATER FOR FILLING AND FLOWING OF NEW WATER LINE WILL BE DRAWN THROUGH THE REDUCED PRESSURE ZONE ASSEMBLY.
- 3) THE COSTS FOR PROVIDING REDUCED PRESSURE ZONE ASSEMBLY AND SLEEVE NECESSARY FOR FIRM CONNECTION WILL BE INCURRED TO THE WATER LINE INSTALLATION.
- 4) CONTRACTOR WILL BE REQUIRED TO HAVE WATER LINE TESTED TO MEET CURRENT STANDARDS OF AWWA C900 BY THE CITY OF AS-CVILLE WATER MAINTENANCE DIVISION ANNUALLY. WATER MUST BEAR A CERTIFICATION TAG AT ALL TIMES.

3
C2 NEW WATER LINE PRESSURE TEST
BACKFLOW PREVENTION ASSEMBLY
NO SCALE



4
C2 ASPHALT DRIVE REPLACEMENT
NO SCALE

[illegible]

WATER LINE EXTENSION
ETOWAH DEVELOPMENT CO.
HENDERSON COUNTY, NC
BEN SMITH

DRAWN BY:	
DATE:	JANUARY 2008
SCALE:	AS NOTED
DESIGNED BY:	THOMAS WILSON
JOB #	
DRAWN:	

DETAILS

C-2

WILSON ENGINEERING
7 WOODCREST RD.
ASHEVILLE, NC 28804
828-252-5100

**HENDERSON COUNTY
REVIEW OF CITY WATER LINE EXTENSIONS**

Project Name: Smith, Ben; Etowah Land Development
Size of Water Line (Main & Distribution Pipe Size): 270 LF, 12" CL 350; 80 LF, 8" DIP CL 350
County Staff Reviewing Extension: Rocky Hyder, Fire Marshall; Parker Sloan, Planner; Autumn Radcliff, Senior Planner

Has the project been reviewed under the **County Subdivision Regulations of the Land Development Code?** ☒ Yes ☐ No ☐ N/A
Date reviewed: September 6, 2007
Action: _____
Conditions: Approved as minor subdivision
Comments: _____

Has the project been reviewed under the **County Manufactured Park Regulations of the Land Development Code?** ☐ Yes ☐ No ☒ N/A
Date reviewed: _____
Action: _____
Conditions: _____
Comments: _____

Has the project been reviewed under the **County Zoning Regulations (i.e. Special-Use or Conditional-Use Permit) of the Land Development Code?** ☐ Yes ☒ No ☐ N/A
Date reviewed: _____
Action: _____
Conditions: _____
Comments: _____

Is the project subject to **any other County Land Use Regulations?** ☐ Yes ☒ No ☐ N/A
If yes, explain: _____

Does the project conform with the **2020 Henderson County Comprehensive Plan (CCP)?** ☒ Yes ☐ No ☐ N/A

Does the project have **adequate hydrant location and spacing?** ☒ Yes ☐ No ☐ N/A

Description of **hydrant type and thread**: _____

Does the estimated flow rate (gpm) meet **fire protection standards?** Meets standard for structure spacing of more than 30 feet. ☒ Yes ☐ No ☐ N/A

BOARD OF COMMISSIONERS APPROVAL

- ☐ Approved
☐ Not Approved
☐ Conditional Approval (See Comments)

Date of Board Review: _____
Comments: _____