

**STATEMENT OF JUSTIFICATION: FRLP REQUESTED SPECIAL
EXCEPTION TO CH. 148 FOR TOWN REZONING# RZ09-02-64**

Pursuant to section 148-211.A(2)(c) of Ch. 148 FRLP hereby requests a special exception that would allow it to use alternative street design standards to the Town’s existing standards found in Ch. 148 (SLDO).

In support of this request, and in addition to this Statement of Justification, please find the following documents attached:

	<u>Appendix Page #</u>
1. Depictions of 29’, 30’, and 36’ street sections.....	1
2. Better Site Design, A Handbook for Changing Development Rules in your Community, Principle #1 Street Widths (p.29-36), Center for Watershed Protection, August 1998.....	5
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Purpose & Justification:

Ch. 148 requires that streets be built to VDOT standards already. FRLP is proposing that VDOT standards be used instead of the significantly more onerous Town standards. FRLP believes these additional Town requirements are actually contrary to the stated purpose of Ch. 148 and to the protection and/or promotion of the “public health, safety, and welfare”. Moreover, FRLP believes that the Town’s existing street standards should be changed for the following reasons:

1. Safety: Narrower streets are safer streets.
2. Town Comprehensive Planning: Narrower streets are consistent with the Town’s Comprehensive Planning for growth and the environment for the past 20+ years.
3. Town Fiscal Considerations: Less pavement = less long-term maintainance costs to the Town for both streets and stormwater management facilities.
4. Environmental Benefits: Narrower streets, and minimizing impervious surfaces, are better for the environment.
5. Walkability and Livability: Narrower streets are more walkable and create a greater sense of ‘community’. Better designed, and more livable neighborhoods

command higher property values, and therefore taxes. Higher home values enable FRLP to actually make the improvements and cash contributions to the Town in its proffers.

6. Neighborhood Design Diversity: Narrower streets will provide a varying neighborhood and housing stock within the Town. Every neighborhood in the last 30 years has been built around large streets – FRLP is proposing that the Town consider offering a diversity of neighborhoods to future residents.

FRLP believes that the Town’s additional standards (above and beyond what is required by V-DOT) are significantly worse for the environment, more expensive for the Town to maintain over the long term, and contrary to the protection and promotion of the “public health, safety and general welfare” of the Town’s citizens. We remain committed to working with the Town to improve upon its existing standards, consistent with what has been recommended by the Town’s own consultants, citizens, and Comprehensive Plans through the years.

This special exception alone is a small step in the direction toward better, more livable community design that FRLP believes is in the best interests of the Town. In addition, FRLP hopes to submit a significant number of additional special exception requests to Ch. 148 in the future. At this time FRLP believes that it makes more sense to deal with those additional requests at the time of site plan approval as most of those could be added/subtracted from site plans relatively easily without completely changing the plans. The issues herein, however, will significantly affect the design and can’t be easily changed once engineered.

V-DOT Maintenance Funds:

In addition, should the Town be uncomfortable that the proposed street design standards will indeed meet VDOT standards (and thus qualify for State maintenance funds) than FRLP is willing to add that requirement to it’s proffer statement as a part of its current proffer amendment if the Town so desires. In other words, FRLP is willing to proffer to construct its roads to V-DOT standards to ensure that they qualify for State maintenance funding.

Proposed Changes:

At this time, FRLP is specifically proposing that it be allowed to use VDOT standards found in the then most recent VDOT Appendix B(1) Subdivision and Street Design Manual and/or the Virginia Department of Transportation Road Design Manual in lieu of the following sections of the Town’s Ch. 148 (i.e. FRLP is requesting hereby that the Town eliminate the below standards and replace them with the applicable VDOT standards for the FRLP project):

Section 148-820 STREET DESIGN.
Section 148-820.A. General Standards.

Section 148-820.B. Partial and half streets.
Section 148-820.C. Street hierarchy and widths.
Section 148-820.D. Construction of streets and alleys.
Section 148-820.E. Restriction of access.
Section 148-820.F. Approach angle and alignment.
Section 148-820.G. Street grades.
Section 148-820.H. Cul-de-sac and dead-end streets.
Section 148-820.I. Street signs and names.
Section 148-820.J. Alleys.
Section 148-820.K. Driveways.
Section 148-820.L. Railroad crossings.
Section 148-820.M. Subdivision and development entrances.
Section 148-820.N. Private streets and common driveways.

FRLP proposes an exception to the applicable VDOT standards above limiting FRLP and this proposed special exception requiring that all streets shall have a curb and all streets that require parking shall have parking on both sides (we might ask for an exception to this at a later date). As such, we are proposing 29 foot street sections for streets with ADT < 2,000 and 36 feet for streets with ADT > 2,000 as depicted in attachment #1. All streets shall be dedicated to the Town of Front Royal for public use and shall qualify for V-DOT Maintenance Funds pursuant to Virginia State Code.

History & Overview: Watershed Protection & Town Codes

FRLP has been discussing these issues with the P.C. since 2009. In addition, and in 2011 after numerous work sessions with FRLP, the P.C. decided and advised FRLP that the best way to address these issues would be to do so after the ch. 148 “cleanup” changes had been adopted. The Town adopted its new Ch. 148 in June/July of this year.

In 2006 American Rivers named the Shenandoah River one of the most endangered Rivers. The Center for Watershed Protection (<http://www.cwp.org>) (CWP) works with communities to provide the solutions for clean water and healthy natural resources. The CWP’s ‘*Community Codes and Ordinances Worksheet*’, rates a local communities development rules in relation to their impact on the local watershed (the Shenandoah River). We thought it would be interesting to use this worksheet and rate Front Royal:

Front Royal’s development rules scored 18 out of 100 – with 100 being the most environmentally friendly. What does that mean? According to the rating system:

- Scores less than 60 is the lowest rating they give-it means that your ‘Development rules definitely are not environmentally friendly. Serious reform of the development rules is needed’. Front Royal codes scored an 18:
 - *On principles 1-10 (parking, roadways, and driveways) Front Royal scored a 4 out of 40.*
 - On principals 11-16 (lots, density, overall design and appearance of

neighborhoods) Front Royal scored a **7 out of 36**.

- Principles 17-22 addressed the codes or ordinances that promote (or impede) protection of existing natural areas and open space. Front Royal scored **5 out of 24 points**.

These are the standards that are currently in place, and unless changed the ones we would have to use in our development. There are environmentally friendlier ways to develop - and they are being used across the country – but most are ‘illegal’ in Front Royal.

Town Codes

Since 2007 (and significantly more since 2010), and as a part of the community’s and our vision for environmentally sensitive neighborhoods in the Happy Creek area FRLP has encouraged the Town to adopt more Earth Friendly land development techniques and standards. For example, FRLP has estimated that incorporating V-DOT road widths and right-of-way standards into existing Town land development ordinances would pave 2.74-4 less acres than if we were to develop under existing ordinances (the equivalent of 2-3 football fields of pavement). Some of the Town development regulations that are in need of improvements (and that FRLP has specifically requested changes to in Ch. 148 and Ch. 175) include:

- **Street Widths**. Design residential streets for the minimum required pavement width. These widths should be based on traffic volumes.
- **Street Length**. Reduce the total length of residential streets by examining alternative street layouts to determine the best option for increasing the number of homes per unit length.
- **Minimize Right-of-Ways**. Wherever possible, residential street right-of-way widths should reflect the minimum required to accommodate the travel-way, the sidewalk, and vegetated open channels.
- **Cul-de-Sacs**. The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles. Alternative turnarounds should be considered.
- **Vegetated Open Channels**. Where density, topography, soils, and slope permit, vegetated open channels should be used in the street right-of-way to convey and treat stormwater runoff.
- **Parking Lot Runoff**. Wherever possible, provide stormwater treatment for parking lot runoff using bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.
- **Open Space Design**. Advocate open space development that incorporates smaller lot sizes to minimize total impervious area, conserve natural areas, provide community recreational space, and promote watershed protection.
- **Setbacks and Frontages**. Relax side yard setbacks and allow narrower frontages to reduce total road length in the community and overall site imperviousness. Relax front setback requirements to minimize driveway lengths and reduce overall lot imperviousness.

- **Sidewalks.** Promote more flexible design standards for residential subdivision sidewalks. Where practical, consider locating sidewalks on only one side of the street and providing common walkways linking pedestrian areas.
- **Driveways.** Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.

Background & Process: Ch. 148 Design Standards & FRLP Development:

- September, 2007. FRLP public comments to the P.C. ‘The Town needs an open space ordinance, and it needed it yesterday’, and ‘none of the environmental goals in the numerous Comprehensive Plans are attainable based on existing Town codes (Ch. 148/175)’.
- September-December, 2008. FRLP presents 3 alternative development options for its property to Council and the P.C. in several work sessions – including an open space option – and once again pushes the Town to adopt a viable open space ordinance that landowners could actually use. FRLP files a rezoning in February of 2009.
- September, 2009. FRLP presentation to the Planning Commission - **Design Concepts and the Environment - Green Infrastructure** – the P.C. seems positive/receptive.
- July, 2010. At the request of the P.C. FRLP provides comments: **LID Site Design Standards and fixing Town Codes.**
- August-December 2010. FRLP has numerous meetings with Town staff to find middle ground on many of the proposed design standards. At a work session in December the P.C. requests draft language from FRLP on Earth Friendly Design standards.
- February, 2011. FRLP submits proposed Earth Friendly Design ordinances to the P.C. at a work session that reflected what we believed staff was comfortable with in our meetings between September and December of 2010. One member of the P.C. reflects that we don’t want middle ground/ compromise solutions we want progressive Environmentally Friendly and LID Development standards. Subsequently, we are told that they cannot use language provided by a landowner.
- March 2011. The P.C. decides/agrees to move forward with updates to the Subdivision and Land Development Ordinance (SLDO) without any changes to the Ch. 148 Design Standards section (148-800) – we all seem to agree that we will revisit the design standards section after this first “clean-up” to the other sections is adopted.

- June 2011. P.C. holds a public hearing on the SLDO. Over 30 changes had been made to the Town's Design Standards section – without consulting the P.C.
- June 2011. FRLP public hearing comments to P.C. on draft SLDO.
- July 2011. FRLP presentation - **Earth Friendly Site Design** – to the P.C. at their monthly meeting.
- August/September 2012. At this point, the Town decides to change course and delay moving forward with Ch. 148 until the Town can make changes to Ch. 175 at the same time.
- P.C. works on Town changes to 175 as well as a new tree ordinance and in March 2014 holds its second public hearing on Ch. 148 as well as Ch. 175 and the new tree ordinance. At this point, FRLP comments we would like to move on to Council with these issues.
- February/March 2015. Town Council public hearing and work sessions. Ch. 148 is adopted in June/July of this year.

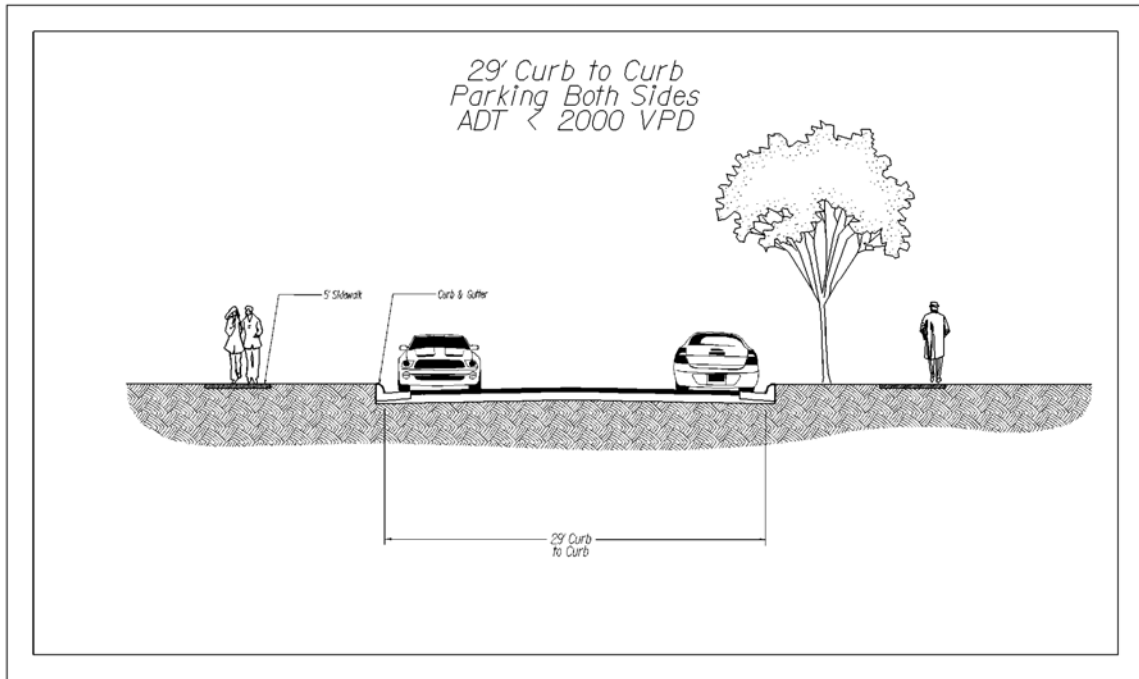
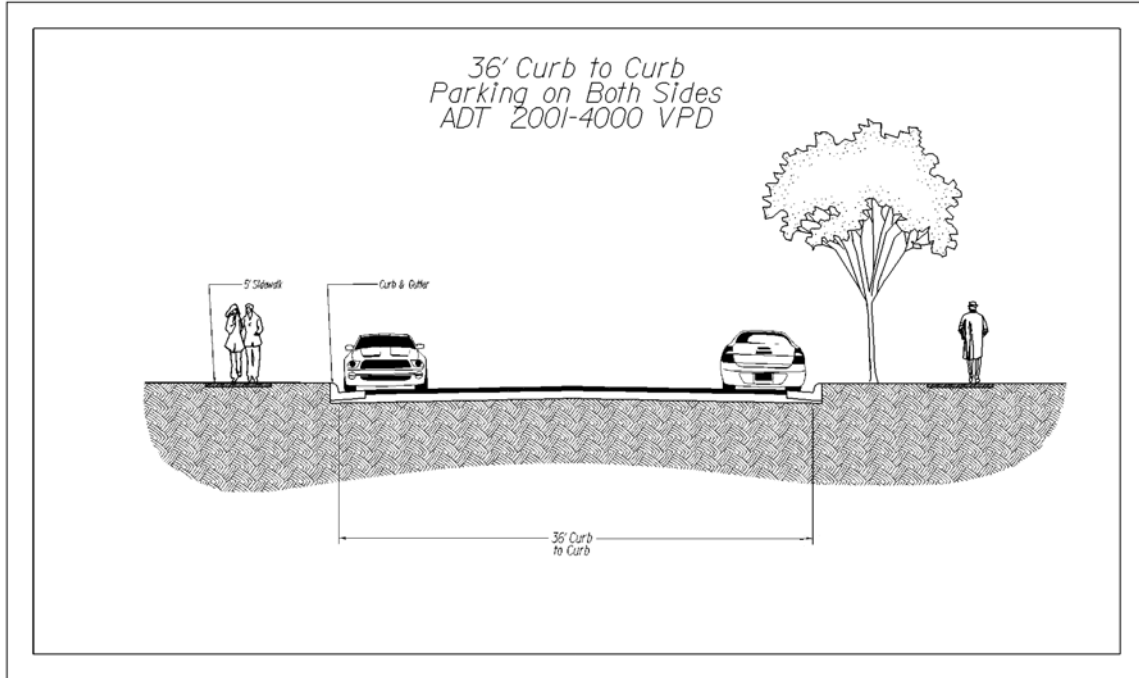
FRLP looks forward to our continued efforts to work with the Town on these matters and to having the opportunity to expand upon these arguments as we move forward.

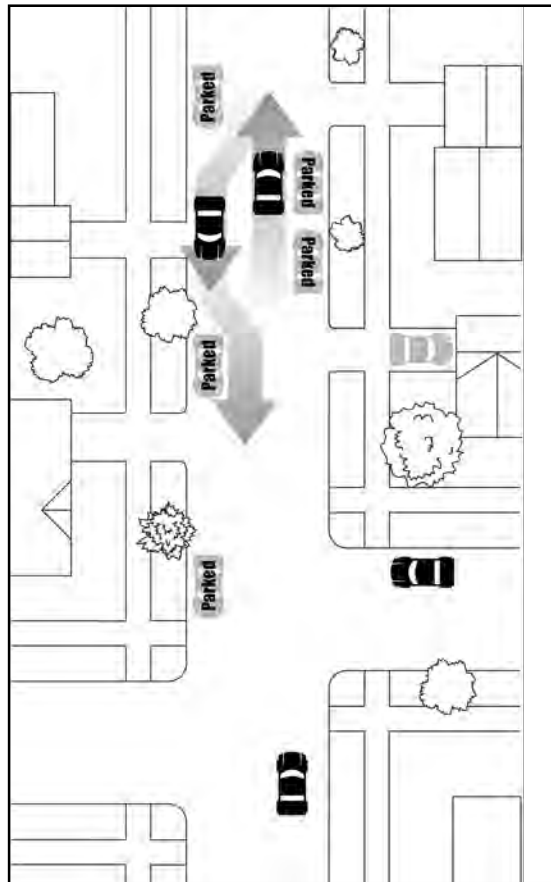
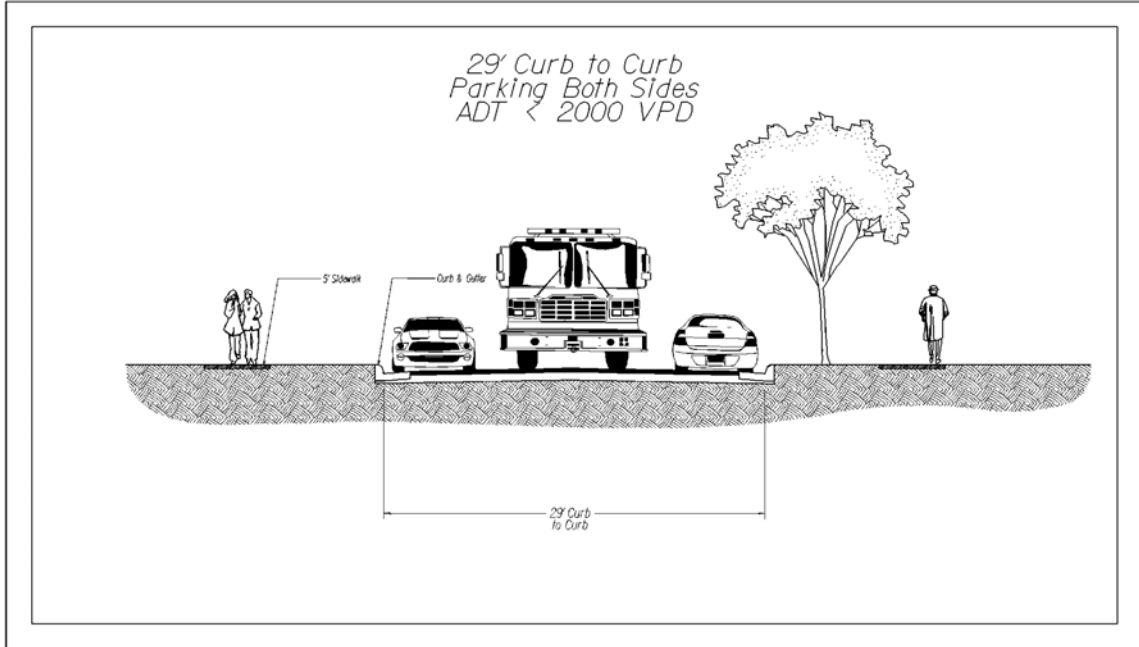
Respectfully Submitted,

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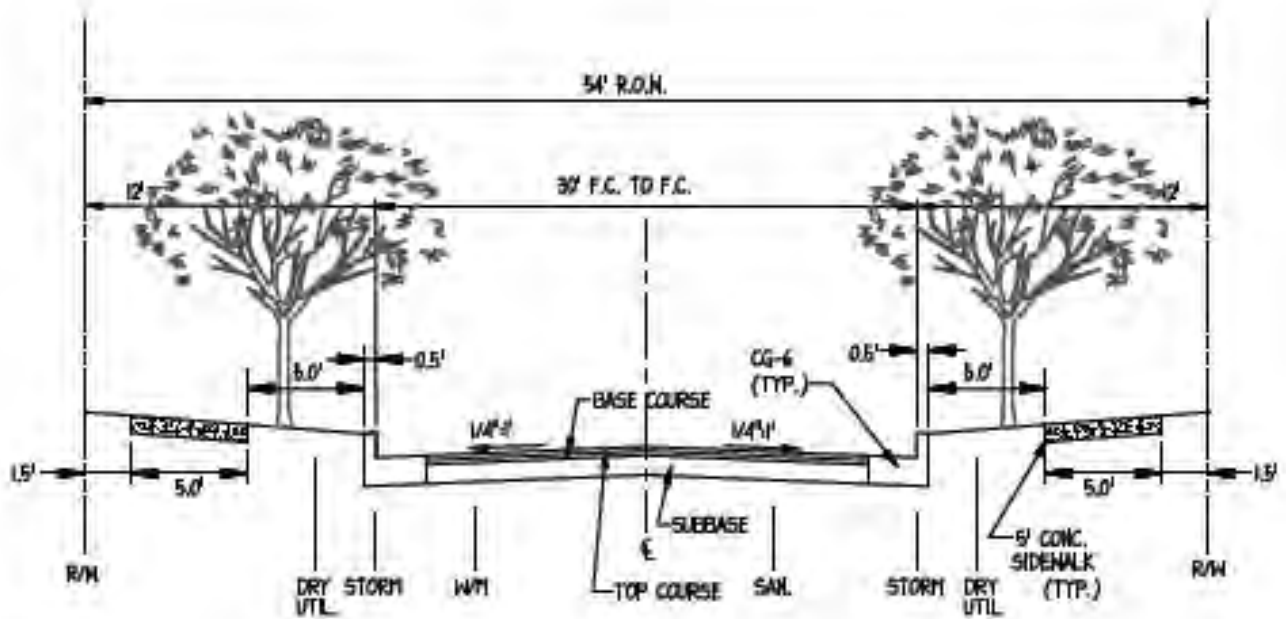
GEOMETRIC DESIGN STANDARDS FOR RESIDENTIAL AND MIXED USE SUBDIVISION STREETS (GS- SSAR)
TABLE 1- CURB AND GUTTER SECTION

PROJECTED TRAFFIC VOLUME (ADT)	MINIMUM DESIGN SPEED (MPH) (NOT POSTED SPEED)	HORIZONTAL AND VERTICAL CONTROLS					CURB AND GUTTER ROADWAYS (Minimum Widths Measured Face of Curb to Face of Curb)		
		CURVE DATA		MAXIMUM % GRADE	MINIMUM SIGHT DISTANCE		NO PARKING (6)	PARKING 1 SIDE (2)	PARKING BOTH SIDES (2)
		MINIMUM CENTERLINE RADIUS (5)	SUPER-ELEV. (5)		STOPPING (3)	INTERSECTIONS (4)			
UP TO 2000	25	200'	NONE	NOTE (7)	155'	280'	24' (1)	24' (1)	29' (1)
2001 TO 4000	30	335'	NONE	NOTE (8)	200'	335'	26' (9)	31' (9)	36' (9)
<p>Notes:</p> <p>For streets with volumes over 4000 or serving heavy commercial or industrial traffic, use the appropriate geometric design standard. (see VDOT's Road Design Manual).</p> <p>The roadway with the highest volume will govern the sight distance.</p> <p>Right of Way requirements can be found in Section B-4.1 Right Of Way.</p> <p>For volumes 2001 – 4000 vpd, design criteria for the Collector functional class was utilized to determine minimum design values.</p> <p>Lower design speeds (and street widths) may be utilized provided they are designed in accordance with the AASHTO Green Book or AASHTO's Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400). The designer should coordinate with VDOT in advance of design (e.g. sketch plan stage) if this alternative criteria is being utilized.</p> <p>If 20 mph minimum design speed is utilized, a 20 mph advisory speed limit sign shall be posted along with any other horizontal or vertical curve warning signs as warranted.</p> <p>An engineering speed study sealed and signed by a licensed professional engineer, using VDOT's standard speed study report, must be provided by the developer and approved by VDOT for any roads posted at other than the statutory speed limit and planned for acceptance into the state system.</p>				<ol style="list-style-type: none"> 1. If the Local Street has 1 point of access and ADT>400 vpd, then the roadway width must meet design values (2001 to 4000 vpd). 2. With parking lanes, the horizontal clearance (measured from face of curb) is 1.5' (Min). 2011 AASHTO Green Book Chapter 5 (Page 5-20). However, VDOT has established a 3' minimum setback requirement behind the curb (This Manual, Section B-5, Figure 10). 3. 2011 AASHTO Green Book Chapter 3 (Page 3-4, Table 3-1) 4. 2011 AASHTO Green Book Chapter 9 (Page 9-38, Table 9-6). For grades greater than 3%, the time gap must be adjusted and required sight distance recalculated. 5. 2011 AASHTO Green Book Chapter 3 (Page 3-55, Table 3-13b) 6. <u>Lateral offset</u> (measured from face of curb) is 1.5' (Min) 2011 AASHTO Green Book Chapter 5 (Page 5-20). <u>Gutter pan is not a portion of the travelway, but is a portion of the parking lane.</u> 7. 2011 AASHTO Green Book Chapter 5 (Page 5-12). 8. 2011 AASHTO Green Book Chapter 6 (Page 6-12). 9. Lane widths may vary between 10'-12' feet for collectors with 2001-4000 ADT. Widths shown may be decreased by 2 feet (26 feet to 24 feet), (31 feet to 29 feet) and (36 feet to 34 feet) based upon engineering judgment subject to VDOT approval. 					



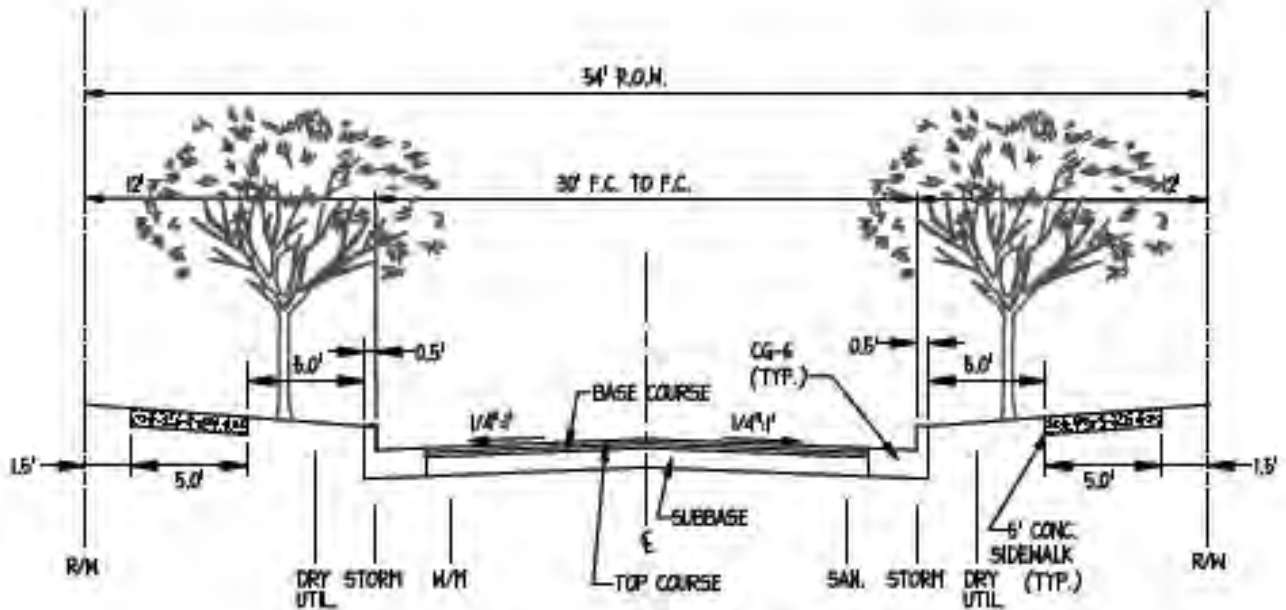


EXAMPLE OF 30' CURB TO CURB STREET SECTION



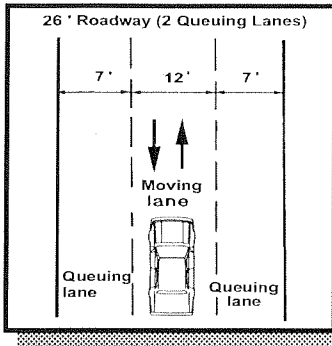
STREETS WITH 400 VPD AND LESS
PARKING BOTH SIDES

(NOT TO SCALE)



STREETS WITH 401-2000 VPD
PARKING BOTH SIDES

(NOT TO SCALE)



PRINCIPLE NO. 1

Design residential streets for the minimum required pavement width needed to support travel lanes; on-street parking; and emergency, maintenance, and service vehicle access. These widths should be based on traffic volume.

CURRENT PRACTICE

Many communities require that residential streets be 36 feet wide or more, even when they serve developments that produce small volumes of traffic. These wide streets result from blanket application of high volume and high speed highway design criteria, as well as a perceived need to supply both on-street parking and unobstructed access for fire trucks. However, residential streets are often unnecessarily wide and the excessive widths contribute to making them the largest single component of impervious cover in a subdivision. Narrowing residential street widths can help reduce the amount of impervious cover created by excessive street widths requirements.

RECOMMENDED PRACTICE

Several national engineering organizations have recommended that residential streets can be as narrow as 22 feet in width (AASHTO, 1994; ASCE, 1990) if they serve neighborhoods that produce low traffic volumes (less than 500 daily trips, or 50 homes) In addition, several communities such as Buck's County, Pennsylvania and Boulder, Colorado have implemented narrower streets with success (see Table 1.1).

Table 1.1: Examples of Narrow Residential Street Widths

Organization, Source	Residential Street Pavement Width	Maximum Average Daily Traffic (trips/day)
State of New Jersey	20' (no parking)	0-3,500
	28' (parking on one side)	0-3,500
Boulder, Colorado	20'	150
	20' (no parking)	350-1,000
	22' (one side)	350
	26' (both sides)	350
	26'(one side)	500-1,000
Bucks County, PA	12' (alley)	--
	16-18' (no parking)	200
	20'-22'(none)	200-1,000
	26' (one side)	200
	28' (one side)	200-1,000

Note: Street options are influenced by housing density and the need for on-street parking

Streets do need to be wider when they serve higher density developments. It is still possible, however, to design a relatively narrow street even when housing densities begin to require more on-street parking. A common solution is the use of queuing streets. In the queuing street design, only one traffic lane is used and parking lanes serve as queuing lanes where oncoming vehicles pull over to allow another vehicle to pass by (Bray and Rhodes, 1997; ASCE, 1990; and Figure 1.2 for an illustration).

Communities have a significant opportunity to reduce impervious cover by revising their street standards, so that streets are the minimum width to carry traffic and meet residential parking demand.

PERCEPTIONS AND REALITIES ABOUT STREET WIDTH

Any effort to narrow residential streets will need to satisfy community concerns about parking, safety, fire truck access, congestion and other factors. Much of the available research profiled in Table 1.2, however, suggests that careful design of narrow streets can address these concerns.

On-Street Parking Demand

The need for on-street parking is often used to justify wider residential streets. Most communities require that 2 or 2.5 parking spaces be provided for each home. Depending on its dimensions, 2 spaces can usually be provided by the driveway which leaves at most one space that must be provided on the street. These on-street parking spaces need to be about 20 feet long and seven feet wide. Providing a continuous parking lane on both sides of the street, however, is a very inefficient and expensive way to satisfy this relatively minor parking need. Each on-street parking lane increases a street's impervious cover by 25% (Sykes, 1989) while creating unutilized parking capacity. If one or both of the on-street parking lanes also serve as a traffic lane (i.e., a queuing street), both traffic movement and parking needs can be met by a narrower street.

Street Width and Safety

The potential for increased vehicle-pedestrian accidents is often cited for not allowing narrower streets. Many studies, however, indicate that narrow residential streets may be safer than wider streets. The Federal Highway Administration (1997) noted that narrow street widths tend to reduce the speed at which drivers travel. This finding has also been noted by the ITE (1997) and ULI (1992). Slower vehicle speeds provide drivers with more time to react and prevent potential accidents. Slower speeds also reduce the severity of injuries sustained in accidents.

Fire Safety

Another common impediment is the perception that narrow streets do not provide adequate access for emergency vehicles, particularly fire vehicles. The conventional wisdom is that very wide streets are needed to ensure access. However, a number of local fire codes permit roadway widths as narrow as eighteen feet (Table 1.3).

Table 1.2: Perceived Impediments to Narrow Streets

Perception	Facts, Case Studies, and Challenges
1. Narrow streets interfere with the ability to clear and stockpile snow.	<p>FACT: "Narrow" snowplows are available. Snowplows with 8' width, mounted on a pick-up truck are common. Some companies manufacture alternative plows on small "Bobcat" type machines (Frink America, 1997).</p> <p>FACT: Snow stockpiles on narrow streets can be accommodated if parking is restricted to one side of the street (ITE, 1997).</p>
2. Narrow streets will cause traffic congestion.	<p>FACT: Narrow streets are generally appropriate only in residential areas that experience less than 500 trips per day. Street width is largely a function of traffic volume. Design criteria based on volume generally provide safe and efficient access in residential areas (ITE, 1993).</p>
3. Narrow streets do not provide enough room for on-street parking.	<p>FACT: Parking can be accommodated through the use of "queuing streets" with only one travel lane (Bray and Rhodes, 1997; ASCE, 1990).</p> <p>FACT: Most communities require some off-street parking accommodation in residential subdivisions. Olympia, Washington requires two parking spaces per dwelling unit. On-street parking is used for visitor parking or parkable vehicles, such as boats (Wells, 1995).</p>
4. Narrow streets can cause pedestrian/vehicle accidents.	<p>FACT: In a study of over five thousand pedestrian and bicycle crashes, a narrow roadway was a factor in only two cases (FHA, 1996). Unsafe driving speed, on the other hand, contributed to 225 accidents.</p> <p>FACT: Narrower street widths reduce the speed at which vehicles can drive (FHA, 1996).</p>
5. Narrow streets do not provide access for maintenance and service vehicles.	<p>FACT: Trash trucks require only a 10.5' travel lane (Waste Management, 1997), with a standard truck width of approximately 9' (BFI, 1997). In residential neighborhoods, trash collection often occurs simultaneously on both sides of the street; cars must wait for trash trucks to pass regardless of street width.</p> <p>FACT: Half ton mail trucks, smaller than many privately owned vehicles, are generally used in residential neighborhoods. Hand delivery of mail is also an option (US Post Office, 1997).</p> <p>CASE STUDY: School buses are typically eight feet wide (nine feet from mirror to mirror). Both Prince Georges County and Montgomery County, Maryland require only a 12' driving lane for bus access. Furthermore, school buses usually do not drive down every street, but instead meet children at bus stops on larger roads.</p>

Table 1.3: Street Width Requirements for Fire Vehicles

Width	Source
18'-20' ¹	US Fire Administration (Cochran, 1997)
24' (on-street parking) 16' (no on-street parking)	Baltimore County Fire Department
18' minimum	Virginia State Fire Marshal
24' (no parking) 30' (parking on one side) 36' (parking on both sides) 20' (for fire truck access)	Prince Georges County Department of Environmental Resources
18' (parking on one side) ² 26' (parking on both sides)	Portland Office of Transportation

¹Represents typical "fire lane" width, which is the width necessary to accommodate a fire vehicle.

²Applicable to grid pattern streets or short cul-de-sacs.

ECONOMIC BENEFITS

Significant construction cost savings can be achieved by building narrower streets. Construction costs for paving are approximately \$15 per square yard. For example, a local jurisdiction currently requires all residential streets with one parking lane to be a minimum of 28 feet wide. The jurisdiction adopts a new standard: 18 feet wide queuing streets. This new standard would reduce the overall imperviousness associated with a 300 foot road by 35% and construction costs by \$5,000. Additional economic benefits include reduced clearing and grading, infrastructure, and stormwater management costs. Long-term pavement maintenance costs would also be reduced.

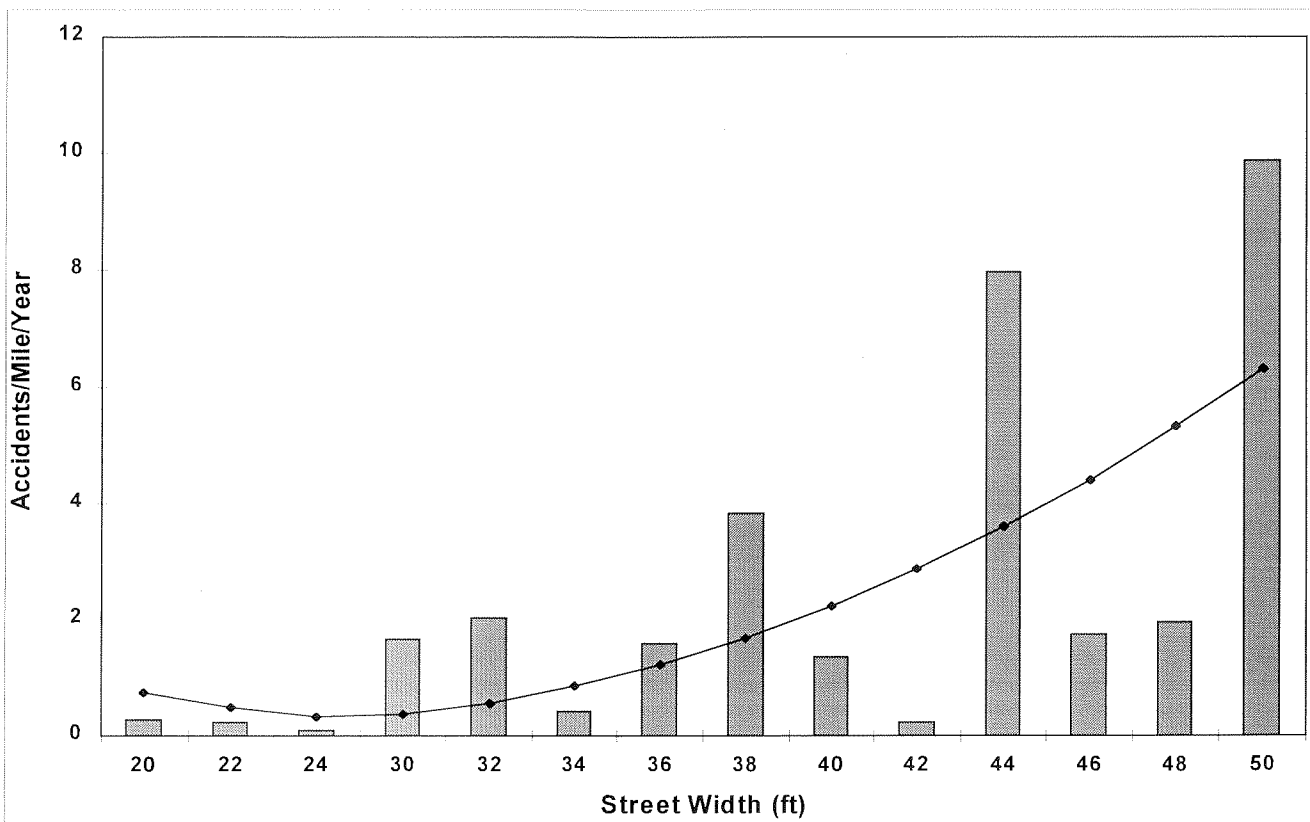
CASE STUDY: LONGMONT, COLORADO

(Source: Swift, et al, 1998)

The City of Longmont, Colorado is experiencing rapid growth. The quality and type of new development has become an important issue as more development and non-conventional site designs are proposed. Part of this discussion is acceptable residential street design.

Over 20,000 police reports were examined to determine the relationship between street design and safety. The study focused specifically on residential streets with maximum ADTs of 2,500. Accidents attributable to poor road conditions or substance abuse were excluded from the study. As shown in Figure 1.1, the study results suggested that narrow residential streets are safer than wide streets. Specifically, streets between 22 to 30 feet in width were found to be the safest. The study further indicated that curvilinear streets were safer than straight streets. In general, the Longmont study suggests that narrow, curved streets can safely be used in residential developments.

Figure 1.1: Relationship Between Street Width and Accidents in Longmont, Colorado based on Swift, et al., (1998)



The curve illustrates the increase in the number of accidents as street width increases.

CASE STUDY: PORTLAND, OREGON

(Source: Portland Office of Transportation, 1994)

The City of Portland investigated the use of queuing streets as described by ASCE (1990) to reduce street widths. The ASCE design assumes that cars will wait between parked cars, or "queue", while the approaching traffic passes (see Figure 1.2). The new design reduces existing street widths by up to eight feet. Prior to implementing the revised standard, the Portland Department of Transportation studied existing narrow streets to determine if reduced street widths would endanger pedestrians and residents. The findings of this study were:

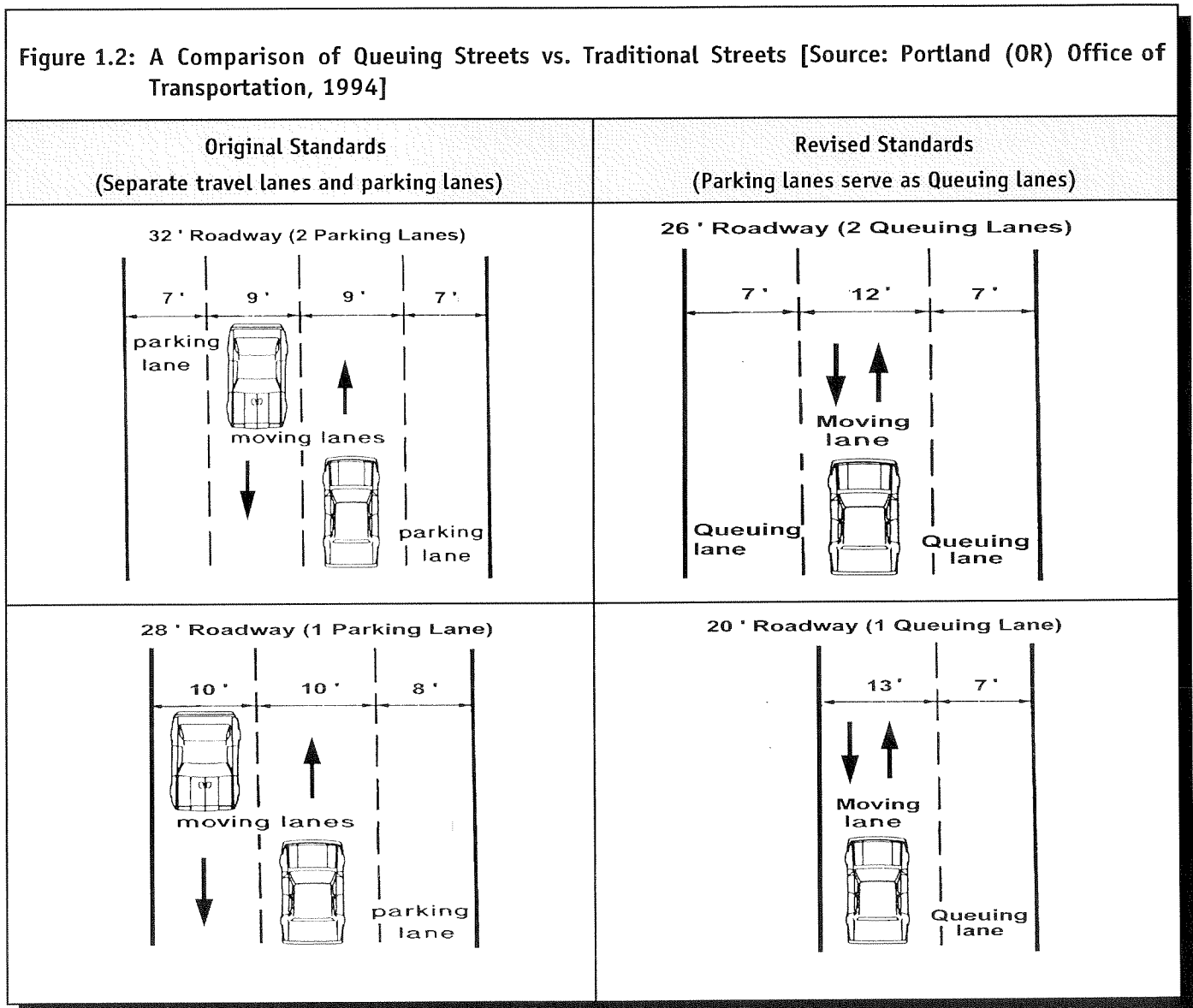
- A bicycle and a car can fit down a 24 foot wide street with parking on both sides.
- A dump truck can fit down a 24 foot wide street with parking on both sides.
- Fire trucks can easily drive down 26 foot wide streets with parking on both sides.
- A fire truck can make the turn from an 18 foot wide to a 20 foot wide road at slow speeds.
- Traffic engineers could point to no accident history relating to narrow street widths.

- The Portland fire chief was amenable to streets as narrow as 18 feet with parking on one side in grid pattern streets or on short cul-de-sacs.
- No citizen has charged that fire rescue time was impeded by skinny streets since the inception of this program in 1991 (Bray, 1997)

One exception was noted with respect to long roads leading to cul-de-sacs (e.g., 1500 feet); these streets require two travel lanes for adequate fire vehicle access. The fire bureau therefore retained the right to veto narrow streets on long cul-de-sacs.

In the City of Portland, the cost savings realized from narrow streets allowed the city to improve less-developed portions of the roadway which, in turn, encouraged infill development. Infill development refers to development or enhancement within existing urban areas as an alternative to developing surrounding rural areas.

Figure 1.2: A Comparison of Queuing Streets vs. Traditional Streets [Source: Portland (OR) Office of Transportation, 1994]



WHERE TO GET STARTED

Suggested Resources

A Policy on Geometric Design of Highways and Streets (1994) by American Association of State Highway and Transportation Officials (AASHTO)
Provides guidance on highway design including shared use of transportation corridors and cost-effective highway design that reflects the needs of non-users and the environment.

Report on New Standards for Residential Streets in Portland, Oregon (1994) by Portland Office of Transportation
Summarizes new residential street standards that encourage less costly street improvement with minimal impact on water quality and urban forests.

Performance Streets: A Concept and Model Standards for Residential Streets (1980) by Bucks County Planning Commission.
Presents model standards focusing on pedestrian as well as vehicular traffic and reducing oversized street networks.

Residential Streets (2nd Edition)
Includes discussion of design considerations for pedestrian walks and paths.

How to Get a Copy

AASHTO Publications
444 North Capitol Street, NW
Washington, DC 20001
888-227-4860

City of Portland
Office of Transportation
1120 S.W. Fifth Avenue
Room 802
Portland, OR 97204-1971
503-823-7004

Bucks County Planning Commission
Route 611 and Almshouse Road
Neshaminy Manor Center
Doylestown, PA 18901
215-345-3400

Urban Land Institute
1025 Thomas Jefferson Street, NW
Washington, DC 20007
800-321-5011
Also available from the American Society of Civil Engineers and the National Association of Home Builders

FRLP Supplemental Comments on the proposed SLDO

March 4, 2015
The Honorable Timothy W. Darr and Town Council
Town of Front Royal, Virginia

Dear Mayor Darr and members of Town Council,

I would like to thank Council for the opportunity to submit additional comments on the proposed Subdivision and Land Development Ordinance (SLDO). FRLP has been encouraging the Town to adopt more Earth Friendly design standards for many years. Similar discussions have occurred in communities throughout the nation for decades.

FRLP has limited its comments here as much of what we have proposed in the past would require an almost complete re-write (and perspective) on the part of the Town and we recognize that would be impractical at this point. I am working on many of those now (and on ch. 175) and we hope to discuss these as well with Council moving forward.

Proposed SLDO: General Comments.

I would like to emphasize that in no way would any of these proposed changes prohibit the type of development standards contemplated by the proposed ordinance – our argument is that the proposed ordinance fails to incorporate many accepted design, engineering, and environmentally sound land use and development standards.

In affect, the Town is going against environmentally friendly development techniques accepted by the State and Federal government. Low impact development should be the standard – not the exception. Further, failing to incorporate or allow such things “by-right” in the SLDO will hurt economic investment in the Town. For example, the Federal Energy Independence and Security Act of 2007 states that:

“The sponsor of any development or redevelopment project involving a federal facility... shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property...”

Federal law requires this (Low Impact Development Strategies) for all Federal facilities. The State of Maryland requires LID standards as the first option. The state of Virginia agreed to implement LID by 2005 in the 2000 Chesapeake Bay agreement but it was an “unfunded mandate”. Locally, the 1997 and 2007 Comprehensive plan is filled with innumerable recommendations (many of them found on page 25, 26) that direct the Town to reduce developments impact on our natural environment and these ideas were completely left out of the proposed “complete rewrite/update”. The Town’s Comprehensive planning efforts are meaningless without an attempt by the Town to codify those recommendations – that’s how, and why, this “update” began in 2007.

Proposed SLDO Design Standards and the Environment: General Comments.

The Center for Watershed Protection (www.cwp.org) has an ordinance checklist that grades the impact of a locality's development regulations on the local watershed and provides a good overall assessment on the environmental friendliness of local codes and ordinances. Scores between 90-100 mean the Community has "above average provisions that promote the protection of streams, lakes and estuaries." The proposed ordinance scored below 20 points. Scores less than 60 (the lowest rating category) mean that the "Development rules definitely are not environmentally friendly. Serious reform of the development rules is needed." Resources:

- a. CWP, "Better Site Design" Handbook and "Local Codes and Ordinances Worksheet" (www.cwp.org).
- b. "Model development Principles for the Central Rappahannock", A working group from Stafford County, Spotsylvania County, and the City of Fredericksburg (www.riverfriends.org) - http://www.riverfriends.org/Portals/0/LID_principles.pdf.

Consider using VDOT Standards for Street Width/ R.O.W./ and Entrances.

Adding 7 feet of pavement width to VDOT design standards places an undue disadvantage on development in Town versus in the County or elsewhere in the Commonwealth. The proposed ordinance already references (and requires) VDOT standards 7 times in sections 820.C, 820.D, and 820.M – FRLP believes the design standards in these three sections should be removed and the VDOT standards should be used instead. Specifically, and per VDOT;

- a. 820.C – VDOT - Minimum R.O.W. of 40', or the minimum required to accommodate all necessary elements, as opposed to 50', 55' and 65' as proposed (increased R.O.W. requirements increases a developments "footprint"),
- b. 820.D – VDOT - Neighborhood streets of 29' (parking on both sides) and 24' (parking on one side) instead of only 36' or 40' as proposed, (The Virginia Fire Marshall requires a 15' travel way – i.e. a 29' street has a 7' parking strip on each side and a 15' travelway – and thus meets State Fire safety requirements)
- c. 820.M(2) – The last 2 sentences - this language appears to only apply to the FRLP development. VDOT and the Town will by law require that any proposed new streets, and in this case a development entrance road, will be of sufficient size to meet the proposed traffic volumes – this language requires additional road/traffic capacity beyond that – which is illegal – and unnecessary.

VDOT design standards have been thoroughly reviewed for safety by teams of engineers and design professionals - resources and time that the Town does not have. Further, if a particular road needs to be larger the Town Council can require a larger road during the

plan review and approval process – you have this ability per 148-820.C (3) - which should give Council peace of mind that these standards can be increased when warranted. Again, VDOT standards are minimums – nothing prevents someone from building a larger street if that is what the market wants. We are asking that Council consider VDOT standards to be reasonable. They should be the standard – not the exception. Resources:

- a. Safety should be our #1 priority when designing streets – not speed - See “Confessions of a Recovering Engineer” ([Strong Towns.org](http://www.strongtowns.org)), <http://www.strongtowns.org/journal/2010/11/22/confessions-of-a-recovering-engineer.html>
- b. “Narrow Streets are the Safest”, Better Cities and Towns, www.bettercities.net, (0.32 automotive injury accidents can be anticipated per year per mile on a 24-foot-wide street, compared to 1.21 on a 36-foot-wide street).
- c. “Bad call: Wide streets in the name of fire safety”, Better Cities and Towns, <http://bettercities.net/news-opinion/blogs/robert-steuteville/21128/bad-call-wide-streets-name-fire-safety>
- d. SmartCode Municipality (v. 9.2, table 3B) lists the proposed 36’ wide streets as being appropriate for 15,000 VPD.
- e. Change takes time – and that’s o.k.
 - a. Concern: not enough parking! – The newer subdivisions in Town have 10 times more parking than is needed. Why not let the market/ a homebuyer decide.
 - b. Concern: you have to slow down to pass another car or a school bus on a narrow street! That is the point – to slow traffic down. (i.e. The Traffic circle at Riverton – at first it was confusing to drivers – but now drivers know how to navigate it (and it is efficient))... It’s traffic calming... it is good neighborhood design – neighborhoods designed for people - not cars.

Stormwater Management (840.D):

SWM is heavily regulated at the State and Federal level. The proposed ordinance adds another layer of government where it is not needed. This only makes the process more confusing, more expensive, and less efficient and effective. FRLP believes this section should be removed or simply limited to requiring that a sub-divider meet all applicable State and Federal regulations governing SWM.

In addition, this new oversight from State and Federal government will mean that simply keeping the same design standards will add tremendous costs. The ordinance as proposed essentially maximizes the overall “footprint” of development and the impervious cover of that development. The sub-divider will have to mitigate these impacts – placing another undue cost on a project in the Town versus in the County or the Commonwealth.

Bonding Requirements and Costs:

I believe less Government is generally better government. Regulatory and permitting costs have been increasing significantly over the past 10-15 years. This update is no different. Adding costs at this time is certainly not helpful – Front Royal has seen single digit building permits for five years. Building a home that median household incomes can afford (or building any new home) becomes even less viable with every additional cost. Virginia has the second highest regulatory, permitting, and impact fees in the nation. In my opinion, these are taxes. There is a point at which taxes and fees are so high that it makes no sense to invest in a project in Town – and no one will.

The new bonding requirements should be required only at the time of construction (890.A). Bonding costs are significant and can make or break a project. A sub-divider should not be forced to pay bonding costs until construction begins or at final plat approval – whichever is later.

As per the schedule of “Fees”, I would respectfully request that the Town consider waiving any fees above the initial amount (\$250) for a variance to these standards – or perhaps state that if a sub-divider submits 20 design changes on one project they are only subject to one \$250 fee. In 2012, Council added these “processing fees” – which added \$40,000 in fees for the Town to process plans for the FRLP 150 acre project alone.

In addition to increased costs, development regulations continue to push the limits of the law when it comes to what can legally be required of a sub-divider. There are a handful of regulations (820.A(4)(5), 820.M) which are not unequivocally illegal as written but could easily be applied to force exactions that are illegal. At best, they are misleading.

Conclusion:

There are better ways to develop – and to minimize future Town maintenance costs - they have been contemplated and recommended in the Town Comprehensive Plans for the past 20 years they have just never been incorporated into law – so they are “illegal”.

I hope that Council will keep an open mind to these things as we move forward. There is a big difference between allowing a sub-divider to build 36-foot streets and requiring them to do so. If there are reasonable arguments for using a different standard or design methodology the Town should not be adding unnecessary hoops, expense, and oversight in order to use those standards – and, at a minimum, we believe these standards as approved by the State should pass this test and be allowed “by-right” in the SLDO.

Sincerely,
David Vazzana
202.215.0038

CC: Town staff
Town P.C.



FRLP TOWN COUNCIL HANDOUT, MARCH 16, 2015

Driving Principles: Reduce the impact of development on our natural environment by:

1. Reducing the overall “footprint” of new development,
2. Reducing the amount of impervious surfaces required, and
3. Improving the decades long approach of “gray infrastructure” instead of “green infrastructure” to better manage and protect our water resources.

CHAPTER 148: STREET DESIGN STANDARDS

A Case Study:

- Enough Parking?
- Emergency Vehicle Access?
- Did VDOT Engineers ignore safety issues – or could safety issues actually be one of the driving forces of VDOT standards?

Goodview Drive (40')



Wakeland Court (40') and Stuart Drive (40')



Shenandoah Avenue (40'- left) and Salem Avenue (32'- right)



Virginia Avenue (36'- left) and W. 4th Street (right)



Kerfoot Avenue (36')



W. Stonewall Drive (left) and Lee Street (31' - right)



Lee Street looks to use about 50-60% of its available parking spaces – and these lots look to be around 5,000 square feet or so with limited off street parking. Every other street looked to have between 5-20 (sometimes more) open parking spaces for each parked



W. Main Street (34'6") – Local Connector (Avtex)



Local (and neighborhood) roads should be designed to force drivers to...
Slow. Down.



1st Street (20' 6")
(parking both sides)
(at Virginia Avenue)

- Town Comprehensive Plan and Proposed Town SLDO Street standards vs. VDOT standards
- Background information (more info www.frontroyalplan.com / water resources / FRLP Earth Friendly design presentations to P.C.)
- VDOT Curb & Gutter neighborhood street design standards (attached)
- Additional Engineering Resources (AASHTO etc.- attached) ("Google" Healthy/ livable Neighborhood Streets... or anything close to it)



TOWN COMPREHENSIVE PLAN (1997)...

“Allow greater flexibility in the subdivision and land development ordinance for streets and parking to reduce unnecessary amounts of impervious surfaces.”

“Adopt stormwater management techniques, such as grassy swales, that are both effective on-site control measures and aesthetically pleasing.”

“Among the rolling pastureland between Happy Creek Road and Interstate 66, hilltops tend to be covered with groves of vegetation... the scenic integrity could be maintained by preserving these groves and by designing structures and street plans that complement and emphasize the topography.”

STREETS:

TOWN STANDARDS VS. V-DOT - 150 ACRES, 394 LOTS

SLDO - Proposed Per Public Hearing				
ADT's	Length	Width	Road Surface	Acres (43,560)
4,000+ ADT's	5245	40	209800	4.82
2,000+ ADT	8388	40	335520	7.70
Up to 2,000 ADT	9247	36	332892	7.64
	22880		878212	<u>20.16</u>

Proposed Per "Plate 3" of Staff Handout (Per P.C.)				
ADT's	Length	Width	Road Surface	Acres (43,560)
4,000+ ADT's	5245	40	209800	4.82
2,000-4,000 ADT's	8388	36	301968	6.93
Up to 2,000 ADT	9247	32	295904	6.79
	22880		807672	<u>18.54</u>
Town "Plate 3" calculated 19.24 acres vs. 18.54 here(?)				

V-DOT (Curb and Gutter Design Standards)				
ADT's	Length	Width	Road Surface	Acres (43,560)
2,000+ ADT's	5245	36	188820	4.33
2,000+ ADT's	8388	36	301968	6.93
Up to 2,000 ADT	9247	29	268163	6.16
	22880		758951	<u>17.42</u>
Parking 1 side		Width Reduction		
On 1/2 of streets	11440	5	57200	1.31
			701751	<u>16.11</u>

V-DOT Standards would reduce impervious cover by 2.74 acres, or **2 football fields of pavement.** V-DOT Standards with parking on one side of half the streets = 4.05 acres = **3 football fields of pavement.**

Background: FRLP presented & requested these design principles (and more) as a part of its rezoning (2009)...

Chapter 148 (SLDO)

1. Using VDOT Street Design Standards
2. Using VDOT R.O.W. Standards
 - If R.O.W. requirements are 5' more than needed on 22,880 feet of roads – you are increasing the footprint of development by 2.6 acres – in FRLP's development that is 2.6 acres less open space
3. Keeping an open mind to alternative SWM
 - Green Infrastructure vs. Gray Infrastructure- TBC (I hope)

Chapter 175 (Zoning)

No variances allowed...

1. Lot sizes, widths, and setbacks
2. Parking Requirements
 - Parallel =7' in width (VDOT)
 - Consider
3. Maximum building coverage

The reason repeatedly given for increasing sidewalk widths is because that is what VDOT now requires – It is the same reason that FRLP is requesting the Town allow (by-right) VDOT curb and gutter street standards

Town Council Work Session of March 16, 2015

March 20, 2015

The Honorable Timothy W. Darr and Town Council
Town of Front Royal, Virginia

Dear Mayor Darr and members of Town Council,

I wanted to clarify our position on several issues that were raised at Council's work session Monday that I believe are important and that seemed a bit confusing (at least to me). These issues are already complicated – and I believe that they can become that much more complicated if Council discussions (or decisions) might be based on an incomplete picture or mistaken information.

“Applicant’s can request changes to road standards as a part of a rezoning to PND”

I was surprised to hear this argument being made to Council at the public hearing and once again on Monday night. I believe this argument is both mistaken and inconsistent with previous Town positions on the matter.

There is no language in Chapter 175 that might support the notion that the Town could approve modifications to its street standards as a part of a PND application. Our interpretation of the PND ordinance is that it empowers Council to grant 5 specific “design modifications”. Specifically, section 175-37.11 of the code empowers Council to approve design modifications to the following, 1.) Lot Area, 2.) Lot Width, 3.) Setbacks and Yard Area, 4.) Building Height (except same as R-3), and 5.) Building Separation (except minimum of 15 feet). Moreover, we believe the specificity of the language in the PND ordinance actually prohibits Council from considering, much less approving any design standard modifications beyond those specified.

In addition, the argument is contrary to previous Town arguments and staff positions on the matter. In a letter dated June 3, 2009 to FRLP, The Town Director of Planning stated:

“The Town Engineer does not recommend approval of any rezoning containing modifications to the existing road standards as a means of achieving construction compliance.”

The point was further clarified in an additional Memo from the Town Engineer, PE, Director of Environmental Services, dated August 13, 2009, which stated:

“Staff does not recommend approval of any rezoning containing modifications to the existing road standards as a means of achieving construction compliance.”

Our understanding has always been that you can't change design standards that are in Ch. 148 as a part of a rezoning which is subject to Ch. 175 – they are two entirely different

sets of design standards. The purpose of the PND ordinance is to grant flexibility within the Ch. 175 set of design standards.

VDOT Criteria for Road Maintenance Funds – Va. Code § 33.2-319

The State Code states that there are two criteria to the Town receiving State maintenance dollars, 1.) Roads must be built to VDOT width standards, and 2.) Roads must include VDOT R.O.W. standards. The relevant portions of the Va. Code:

“No payments shall be made to any such city or town unless the portion of the highway for which such payment is made either... (vii) is a street functionally classified as a local street that was constructed on or after January 1, 1996, and that at the time of approval by the city or town met the criteria for pavement width and right-of-way of the then-current design standards for subdivision streets as set forth in regulations adopted by the Board;...”

“However, the Commissioner of Highways may waive the requirements as to hard-surface pavement or right-of-way width for highways where the width modification is at the request of the governing body of the locality and is to protect the quality of the affected locality's drinking water supply...”

Note #1 – Sidewalks and State Maintenance Funds: There is no mention of sidewalks as a consideration or requirement to the Town receiving State maintenance funds in the enabling legislation. Our understanding of the Code is that the Town may do whatever it wants in regards to sidewalk widths, and sidewalk requirements in their totality, without affecting state maintenance dollars.

In addition, sidewalks are not specifically required by VDOT and many VDOT streets are built without sidewalks – however – VDOT does require that all sidewalks in new construction that are to be operated, dedicated, and maintained by VDOT must be built to VDOT standards.

Ultimately, I believe that sidewalk requirements and widths are a matter of personal preference and opinion; however, sidewalk requirements, and their total surface area, will increase/decrease the overall impervious area (and SWM requirements) of a site and the Town’s long-term costs to maintain these facilities.

Note #2 – Town Road Widths, Parking, and Corresponding State Maintenance Funds: The Town’s long-term costs to maintain these roads will increase with the width of the roads but State maintenance funds will not change. Va. Code (same section):

“For the purpose of calculating allocations and making payments under this section, the Department shall divide affected highways into two categories, which shall be distinct from but based on functional classifications established by the Federal Highway Administration: (1) principal and minor arterial roads and (2) collector roads and local streets. Payments made to affected localities shall be

based on the number of moving-lane-miles of highways or portions thereof available to peak-hour traffic in that locality.”

Our understanding of the Code is that State maintenance funds are based entirely on moving-lane-mileage regardless of parking requirements. In other words, the Town will receive the same amount of money per mile for a 24’ neighborhood street with parking on one side as it would for a 40’ neighborhood street with parking on both sides. That is 30% more pavement that the Town will need to maintain for the same amount of VDOT money.

Concluding Thoughts:

Good neighborhood design begins with good streets. Moreover, we can only design better neighborhoods with standards that allow designers more creativity and flexibility – “by-right”. I believe requiring 36’ and 40’ streets is fiscally and environmentally shortsighted – and inconsistent with sound land-planning principles.

I hope to follow up and meet with Mr. Camp next week to discuss additional thoughts/items but I wanted to share our position with Council on these issues as they were presented on Monday night. We remain enormously grateful for your and Council’s time and consideration of our input on these matters.

Sincerely,

David Vazzana
(v) 202.215.0038
dvazzana@gmail.com

CC: Jeremy Camp, Town Director of Planning

FRLP Comments to P.C. 6.15.2011

Dear Member of the P.C.,

First, I want to commend the Commission under Chairmen Gushee for its continued openness and willingness to listen, discuss, and consider new ideas. I appreciate it and I thank you all for the opportunity tonight.

I spent a few days reviewing several sections of the proposed ordinance and I have 3 general points to make tonight and a few concluding thoughts.

1. It's a sprawl world we live in. Lets pave paradise. The FRLP project...

- a. ***Internal Roads.*** Approximately 3.5 miles (or 18,480 feet) of internal roads will be in the FRLP subdivision. Per the proposed ordinance (41 feet) that will equal 757,680 square feet of impervious pavement. Using V-DOT standards (28 feet - which I would consider conservative and not progressive) FRLP would have 517,440 square feet of impervious pavement. Using these proposed standards instead of V-DOT street width standards will mean an additional 240,240 square feet of impervious pavement, or 5.515 acres.
- b. ***Future East-West Connector.*** As you all know FRLP has proffered to build approximately 2.5 miles of a future east-west connector road. Section 148- clearly wants FRLP to build a 4 lane road when one is not needed. Even if it was, FRLP believes that should be the P.C.'s choice and no one else's. Building a 24' roadway versus a 48' roadway would mean 7.27 acres of land would be open space instead of impervious pavement.
- c. ***Sidewalks.*** Going from 4 foot to 6 foot sidewalks will increase the impervious sidewalk cover in the FRLP subdivision by approximately 1.7 acres.
- d. ***Ever Larger R.O.W.'s.*** Increasing the R.O.W's by 5' will mean an applicant needs to build more roads to get the same number of lots (you need to be reducing these widths, like V-DOT et. al.). In the FRLP subdivision this would result in approximately 2.29 more acres of R.O.W. and 2.29 acres less open space.
- e. ***And it all adds up to...*** In one ordinance the Town is forcing the FRLP development to lose 16.77 acres of open space and pave 14.5 of those acres. If we take the E-W connector out the Town is still requiring FRLP to lose 9.5 acres of open space and to pave 7.21 of those acres. This is unbelievable for an effort being billed as 'clarifying and re-organizing'.
- f. ***I am at a total loss.*** The Town is entitled to its own opinion when it comes to things like R.O.W or road widths but it is not entitled to its own facts. And the Town is wrong on these issues. Given what we know today about developments impacts on the environment - This is INSANE.

2. There are over 20 NEW regulatory requirements in Article 8 alone that, combined with the additional submission requirements throughout will add

staggering new costs to the applicant and the industry at the worst possible time.

- a. The Town has opined that “Another Goal of the Draft Ordinance was to require the applicant to provide the necessary information required for staff, the Planning commission and Town Council to properly review a proposed development and to ensure the site development was properly completed.” This argument has been made since the beginning of zoning. These arguments are responsible for the environmentally unsustainable growth trajectory of the last 50 years. This ordinance continues in the wrong direction.
- b. When you punish the housing sector (you are increasing costs and increasing regulation) it has ripple effects across the entire economy. Each new home constructed generates over \$90,000 in local and federal taxes and creates 3 jobs for a year. If you think you are not hurting the local economy and main street business’ by relentlessly attacking developers you are wrong.
 - i. As of this week the housing market has fallen 33% from its peak, officially surpassing the 31% fall in prices experienced during the Great Depression. It hasn’t been this bad in over a century and every economic recovery since WWII has been driven by the housing sector – except our current ‘recovery’ – if you can even call it that.
- c. The Town should be streamlining these process’ and making it easier and less costly. Instead, the Town is adding crippling new and/or additional costs to the applicant throughout the review and construction process. Talk about punching somebody when they are down.

3. “The Draft Ordinance was prepared for the purpose of clarifying and reorganizing the existing subdivision ordinance.”

- a. ***Work Sessions and Transparency?*** Every work session I attended none of the actual changes were ever discussed. Were there any work sessions that highlighted the changes to this document? In addition, every work session that I attended it was repeatedly pointed out that this was not being released to the public. The document was finally released a few weeks ago. I did not ask for it earlier because it was espoused that ‘we are only clarifying it or improving the process’. I offered input and invested money in this process in an effort to help.
- b. ***There is no redline.*** Fine if you can’t do it for one section or if one section is entirely new than just say that. The P.C., Town Council, and the Public deserve at least a redline document or a spreadsheet that shows what has come from the old ordinance and what is new. If someone sent me a 3 page legal document in the private sector without a redline than I would send it back in disgust. This is a 110 page legal document. Unless you are trying to pull a fast one on everybody there is no legitimate excuse for this. This is insane.
- c. ***Has the Town Attorney reviewed this document?*** This is a 110 page legal document that seems to be written by engineers/ surveyor. By not

involving the Town attorney you are inviting lawsuits in the future that will add costs to Town Taxpayers and Applicants. If a section of this is illegal per Va. Law, it will make the Director and P.C.'s job that much more difficult by forcing everyone to interpret Va. Law. In addition, the definitions section should be re-examined and expanded in the context of this 'update'. That does not appear to have been the case (i.e... when a defined term is used it should be in capitals, and many important terms are not only not capitalized they are not even defined - Sub. Dev. Plan vs. Site Dev. Plan, Town Engineer and Director of Environmental Services...).

- d. ***Big Brother – or just Bigger Government?*** Article 8 of this ordinance on its own increases the oversight power and authority of the Director of Environmental Services/ Town Engineer 8 or 9 times and reduces the authority and oversight responsibilities of the PC and the Director of Planning. This is to your own detriment as a governing body and to the detriment of Town taxpayers, both current and future. In addition, it adds new requirements to be regulated by the Director of Environmental Services. Another amazing feat for an effort being billed as 'clarifying and re-organizing'. Who is regulating the regulators?

4. **Concluding Thoughts.**

- a. ***Low Hanging Fruit?*** Why not get the low hanging fruit now when this is in front of you? This is a good start but every change in here needs to be identified and discussed openly in work sessions. The crazy thing to me is that changing a few of these things is not rocket science (I submitted such changes for you guys at your request, and my expense, and not only were they ignored, but they seem to have been used against me).
- b. ***I have tried.*** In 2007 I tried and was told 'we will do this right away when we are finished the Comp. Plan Amendment (Something that you guys spent several years on and is absolutely obsolete already). I pushed for these changes during our rezoning in 2009. FRLP presented a body of scientific evidence to you and the Town again, at your request and my expense, in the summer and fall of 2010. This winter, I presented draft language to you guys to review (with a redline) and you ignored it. At this point there is no other way to view my efforts to educate you guys on these issues than as a total failure and waste of money. The next time someone start to bash developers I hope you will stand up and explain that local governments are responsible for sprawl and its ill effects, Developers simply build what they are 'allowed' to build on 'their' property.
- c. ***'Clarifying and re-organizing'?*** There are over 30 design changes, 9 expansions of power, and 20 new and additional costs in Article 8 alone. This certainly appears to be more of a bait and switch than a 'clarifying and re-organizing' effort. In the spirit of 'transparency' lets call a spade a spade. Unfortunately, we should be working together to improve developments adverse fiscal and environmental impacts on the Community. However, when I look at this all I can think is - Wow they smile all the time and pretend like they care and behind closed doors they are really kicking the FRLP project, the economy, and the environment in the teeth. I am at a complete and total loss.



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LID, Earth Friendly Design Standards and Model Development Principles (CWP)

Town of Front Royal, Va. P.C. Presentation,
July 2011



What is LID? “Low Impact Development (LID) specifically aims to preserve open space and minimize land disturbance while protecting natural systems and processes. LID techniques attempt to incorporate natural elements into site design and manage storm water at its source with the ultimate goal of preserving pre-development hydrology and water quality” (Environmental Protection, ‘A More Natural Approach’ www.eponline.com).

National Policy: The shift³⁶ toward LID

- **Navy Directive**
 - “Conventional storm water collection and conveyance systems and SW treatment options do not and can not replicate natural systems, thus increasing the volume and flow of SW...”
 - LID ‘must be’ implemented.
 - Assistant secretary of the Navy Penn memorandum (November 16, 2007).
- **Energy Independence and Security Act 2007**
 - “Sec. 438. Storm Water Runoff Requirements for Federal Development Projects. The sponsor of any development or redevelopment project involving a federal facility... shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property...”
- **Many Communities are creating monetary incentives**
 - Incentives can speed adoption
 - Some states and cities are providing tax credits or fee reductions for implementation of practices (e.g. rain gardens) or for the reduction in effective impervious area. Portland, Philadelphia, Minneapolis...
 - EPA, ‘Evolving National Stormwater Policy - The Shift to LID’
 - CSO’ s - Green Infrastructure

National Policy³⁷: The shift toward LID

- Chesapeake Bay Act 2000
 - Va. Agreed to assist municipalities in revising local ordinances to facilitate LID by 2005. Oops.
- Maryland Stormwater Act of 2007
 - Environmental Site Design (a comprehensive approach that *includes* LID) is the preferred stormwater control method in the State and must be used as the first control option for new development projects.
- Va. SWM Act of 2009. These regulations are done and will be implemented starting in October of this year.
- House Bill 1953, passed by the 2003 session of the Virginia General Assembly, the Department of Environmental Quality has appointed, and facilitated discussions for, the Low Impact Development Assessment Task Force. This report is available from the Department of Environmental Quality (DEQ) website at: <http://www.deq.state.va.us/regulations/reports.html>.

National Policy: The shift toward LID³⁸ and Earth Friendly design standards

- “First and foremost LID attempts to reduce the overall ‘footprint’ of a developed site” (ibid, www.eponline.com)
- LID site design and LID SWM techniques are ***a part of*** a larger, national movement toward more Earth Friendly and environmentally sensitive development principles that:
 - Reduce the amount of ‘disturbed’ area of the site. Minimize clearing and grading.
 - Reduce the amount of impervious surfaces.
- Earth Friendly design principles such as minimizing impervious surfaces, or a developments ‘footprint’, are environmentally beneficial whether you are using LID SWM techniques or not.

National Policy: The shift toward LID *and* Earth Friendly design standards

- The Center for Watershed Protection (‘Better Models for Development’);
- The EPA’ s ‘Green’ Infrastructure Program (CSO’ s); and,
- LID development standards...

...all promote the same design and environmentally sensitive development principles...

Earth Friendly design standards are not just better for the environment:

- They create better communities;
- They nurture ‘civic culture’ and promote civic mindedness; and,
- They reduce long-term maintenance and operation costs for the Town and property owners.

Earth Friendly design standards are good planning, good environmental stewardship, fiscally prudent, and consistent with the environmental principles of the Comprehensive Plan (Minimize impervious surfaces etc. etc. pg. 26)

Opportunities for more Earth Friendly site design in Front Royal

- Earth Friendly site design? How? **Chapter 175:**
 - Reduce lot sizes and set-backs. Open Space Ordinance.
 - Minimize Utility R.O.W.'s (encourage in streets)
 - Minimize Parking Requirements
- Earth Friendly site design? How? **Chapter 148:**
 - Reduce street widths and R.O.W.'s.
 - Permit sidewalks on one side if ADT < 3500 and permit no sidewalks if ADT < 500.
 - Allow by-right (or enable to P.C. to approve..):
 - Shared driveways; and
 - The use of alternative materials for streets, driveways, and sidewalks.

Impediments to more Earth Friendly site design in Front Royal

- Current codes do not allow sensible or environmentally friendly design principles.
- Market Uncertainty.
- Propensity to over regulate.
- Code/ Regulatory Uncertainty.

✓ Also see: *'Impediments to LID and Environmentally Sensitive Design'*, December, 2002. STAC Publication 02-003. (Sponsored jointly by: Chesapeake Bay Program's Land, Growth and Stewardship Subcommittee, Chesapeake Bay Program's Scientific and Technical Advisory Committee, and Virginia Tech's Institute for Innovative Governance).

Opportunities for more LID SWM techniques in Front Royal⁴³

- Manage (control & filter/clean) SW as close to its source as possible; by EITHER:
 - Write a new SWM ordinance (stafford, Warsaw va etc etc.) OR
 - Keep existin language or make minor changes and add a paragraph that allows the P.C. to approve alternative SWM designs and standards and to approve subdivisions without curb and gutter.

Impediments to⁴⁴ more LID SWM techniques in Front Royal

- Market Uncertainty.
- Propensity to over regulate.
- Code/ Regulatory uncertainty.
- **Specific Issues and Potential Impediments to LID SWM techniques in Front Royal:**
 - **Soils**
 - **Karst Terrain and ‘Hotspots’**
 - **Maintenance? Town/ property owner/ HOA?**

✓ Also see: [Technical Bulletin No. 1](#) Stormwater Guidance for Karst Terrain in the Chesapeake Bay Watershed - ver 2.0 JUNE 2009. Chesapeake Stormwater Network.

This is not a case⁴⁵ of ‘all or nothing’ : Roads Widths.

Case Study: FRLP Property - Roads.

- **Internal Roads.** Approximately 3.5 miles (or 18,480 feet) of internal roads will be in the FRLP subdivision. Per the proposed ordinance (41 feet) that will equal 757,680 square feet of impervious pavement. Using V-DOT standards (28 feet - which I would consider conservative and not progressive) FRLP would have 517,440 square feet of impervious pavement. Using these proposed standards instead of V-DOT street width standards will mean an additional 240,240 square feet of impervious pavement, or 5.515 acres.
- **Future East-West Connector.** As you all know FRLP has proffered to build approximately 2.5 miles of a future east-west connector road. Section 148- clearly wants FRLP to build a 4 lane road when one is not needed. Even if it was, FRLP believes that should be the P.C.’s choice and no one else’s. Building a 24’ roadway versus a 48’ roadway would mean 7.27 acres of land would be open space instead of impervious pavement.

FRLP Position: Road Widths.

- In this economy the Town should be trying to reduce costs for builders not increase them. The trade off is safer roads. FRLP proffered significant amounts of money based on assurances from the Town that a new subdivision ordinance, with smaller streets, would be forthcoming by ‘the end of 2010 at the latest’ . Other developers will be able to proffer more funds if they spend less on roads.

This is not a case⁴⁶ of ‘all or nothing’ : R.O.W.’s

Case Study: FRLP Property - R.O.W.’s.

- Increasing the R.O.W.’s by 5’ (60’ to 65’) will mean an applicant needs to build more roads to get the same number of lots (you need to be reducing these widths, like V-DOT et. al.). In the FRLP subdivision this would result in approximately 2.29 more acres of R.O.W. and 2.29 acres less open space.
- Conversely, decreasing R.O.W.’s to 45’ from the proposed 65’ would add 9.16 acres of open space!

FRLP Position: R.O.W.’s.

- This is over regulation to the environments detriment. It would take 5 minutes to fix this.

This is not a case⁴⁷ of ‘all or nothing’ : Sidewalks.

Case Study: FRLP Property - *Sidewalks*.

- Going from 4’ to 6’ sidewalks will increase the impervious sidewalk cover in the FRLP subdivision by approximately 1.7 acres.
- Increasing sidewalks from 4’ to 6’ but requiring sidewalks on only one side of the road will decrease the impervious sidewalk cover in the FRLP subdivision by approximately 1.7 acres.

FRLP Position: Sidewalks.

- Flexibility is needed. Some people like having a sidewalk in front of their home and others do not. I think 5’ or 6’ sidewalks help foster community but that would add costs at the wrong time. Cul-de-sac streets also do not need sidewalks if the community has some walking trails.

Case Study: Town of Front Royal and the Center for Watershed Protection's (CWP) 'Model Development Principles'

- **Front Royal scored 16 out of 100.** *'Community Codes and Ordinances Worksheet'*, The CWP.
 - Scores less than 60 = 'Development rules definitely are not environmentally friendly. Serious reform of the development rules is needed'.
 - Scores between 60-69 = 'Development rules are inadequate to protect your local aquatic resources'.
 - Scores between 70-79 = 'Significant opportunities exist to improve your development rules'.
- On principles 1-10 (parking, roadways, and driveways) Front Royal scored a 4 out of 40.
- On principals 11-16 (lots, density, overall design and appearance of neighborhoods Front Royal scored a 7 out of 36.
- Principles 17-22 addressed the codes or ordinances that promote (or impede) protection of existing natural areas and open space Front Royal scored 5 out of 24 points.
- ✓ Additional resource: The Virginia DCR also has a 'Checklist for Advisory Review of Local Ordinances' on its website (www.dcr.virginia.gov).

Case Study: Town of Front Royal

- The majority of recommended **Earth Friendly design standards** changes in both Ch. 148 and Ch. 175 would not be that difficult or time consuming to implement now (streets, R.O.W.'s, sidewalks, alternative/ pervious materials for sidewalks and driveways, shared driveways...).
- o Overhauling the **Chapter 148 SWM section** after this is finished makes sense.
 - All future developments will be subjected to new state requirements.
 - Simple language could also be added now that allows by-right any LID SWM techniques permitted by the state; **OR**,
 - A mechanism in ch. 148 could be added now that enables the P.C. to grant a waiver to Town SWM requirements if the applicant has met the requirements of the state.
- o Doing an **overhaul of Chapter 175** (new open space ordinance, revisit parking standards, review/revise lot sizes and set-backs) should be a very high priority after this is finished.

Case Study: Town of Front Royal.

- o **Background:**
 - July 2010 Presentation to P.C. (re: LID Site Design, roads, R.O.W. etc.)
 - September 2009, Presentation to P.C. (re: EPA ‘Green Infrastructure’)
 - September/October 2007 comments to P.C. (re: open space).

- o **Changing anything is difficult.**
 - Just as changing an ordinance will be controversial and have substantive consequences on future neighborhoods - inaction, or a refusal to act, will have substantive consequences on future neighborhoods.

- **FRLP Position.**
 - FRLP would like to submit a preliminary plan based upon reasonably anticipated design changes in the Fall of this year so that when/if Council approves the new Ch. 148 our plan would be ready for preliminary P.C. approval.
 - We would like to have an idea of road widths, ROW’ s, sidewalks, etc will look like.
 - Site design is expensive. Even more so in an uncertain regulatory environment.

- **Concluding Thoughts.** The Community needs to find its own balance and comfort level incorporating Earth Friendly design standards without adding (or at least minimizing) new costs or unnecessary bureaucracy to the private sector AND without over regulating business decisions. THANK YOU FOR LISTENING!

Additional⁵¹ resources

- [Model Development Principles for the Central Rappahannock](#): A Consensus of the Central Rappahannock Roundtable (www.riverfriends.org), a working group of development, conservation, site design, public safety and regulatory professionals from Stafford, Spotsylvania and Fredericksburg, Virginia.
- [Introduction to the Neighborhood Model](#), and [Building in the Neighborhood Model](#) from Albermarle County, Virginia.
- The [Valley Conservation Council's](#) guiding principles include [Maintain a Clear Edge \(Reduce Sprawl\)](#) and [Build Livable Communities](#). Additional presentations from the Valley Conservation Council include:▪Local Roads and Smart Growth Workshop Proceedings; and,▪▪Better Models for Development in the Shenandoah Valley.

“A wise and frugal government, which shall leave men free to regulate their own pursuits of industry and improvement... - this is the sum of good government.” - **Thomas Jefferson** (Albermarle County, 3rd President of the U.S, Second President of the U.S., out of 8 total, from Virginia.

FRLP Comments to P.C. 3.19.2014

Members of the Planning Commission:

The first time I addressed this commission, in 2007, I did my very best to encourage you all to adopt an open space ordinance. At that meeting, then Planning Director Ms. Solimon, noted that adding an open space ordinance was next on the Commission's "to do" list.

In 2009, we presented a myriad of earth friendly design standards as a part of our rezoning request. We were told to remove such changes from our rezoning application because it would be more appropriate to incorporate them into the update of the subdivision ordinance.

FRLP gave presentations on Earth Friendly design to the Planning Commission in September of 2009, July of 2010, and July of 2012 – in addition, we have had numerous work session discussions and countless meetings with staff. We provided many – many - comments at your first public hearing on this in June of 2012. And to state the obvious, our critique of these ordinances, and what we believe is in the best interest of both existing and future residents, and the environment, has not changed.

I am not going to bore you with the environmental and quality of life issues we have with these regulations as you have all heard our arguments before and are well aware of what we believe and the science behind those beliefs. And, although I am sure you all already know this, I would like to note for the public that all of these presentations along with links to 15 or so supporting organizations are on our website, www.FrontRoyalPlan.com. In addition, there are links that outline how to fix local ordinances and make them more environmentally conscious. All of this information, and at times much more, has been on our website since July of 2010.

For those of you not on the P.C. back in 2007, at that time we were talking about the "Comprehensive Plan Amendment", and numerous speakers over two public hearings noted that the development regulations did not allow all or any of the rosy environmental goals in that amendment or in the Comprehensive Plan.

In conclusion – we don't want to hold you guys up anymore on this.

And, as always, thank you for listening.