



STAFF REPORT
INFORMATION AND ACTION ITEM

SUBJECT: Review of Town Ordinance Compliance for Route 7/690 Interchange

DATE OF MEETING: February 16, 2023

STAFF CONTACTS: Dale Lehnig, PE, CFM, Director of Engineering, Planning and Development

SUMMARY and RECOMMENDATIONS:

At the December 13, 2023 Town Council meeting, the Town Council made a motion to have the Planning Commission evaluate the 7/690 interchange. The motion states “The Town must evaluate easements and associated land development activities to occur (interchange construction) as a part of the easement change request process, to ensure compliance with the Town of Purcellville municipality ordinances governing such items as open space, floodplain, steep slope, stream and creek buffer requirements as examples.”

Some background information regarding the genesis and progression of the project is also included in this report. This report will provide a brief history of the legislative approvals of the Interchange, the public input opportunities that have been advertised, and the issue of the effective floodplain mapping boundaries that may change due to the combination of changed flows, changed topography, and changed physical features.

The review of the Construction Plans followed the normal Town process. Because the interchange improvement is recommended in the 2030 Comprehensive Plan (Map 25, Recommended Roadway Improvements, pg. 98), and because the concept was approved by the Town Council in 2013, the construction plans for 7/690 has followed the administrative process for approval. Roadway plans, in general, are not reviewed by the Planning Commission if the Comprehensive Plan shows the roadway or improvement.

The following is a summary of the Town’s Ordinances and compliance:

Compliance with Town of Purcellville Ordinances

1. Open Space Requirements. Zoning Ordinance, Article 7. – Landscaping, Buffering, and Open Space Regulations.

Conclusion: The requested right-of-way will decrease Parcel A to less than the current open space requirements for a similar sized subdivision based on today's requirements. However, since there were no open space requirements when Catoctin Meadows was platted, this is not a violation of the Town's open space requirements.

2. Stream and Creek Buffer, Zoning Ordinance, Article 14.

Conclusion: The project construction encroaches into the streamside buffer in certain locations, but does not violate the permitted uses within the buffer. Possible mitigation – Stream side forested buffer should be re-established if necessary.

Article 14. Section 2. - Stream and Creek Buffer established, #4, wetlands

Conclusion: Effects on wetlands will be mitigated, through stormwater management, purchase of wetland credits, or other means, prior to the initiation of construction activities. Possible mitigation – request USACE final jurisdictional determination prior to construction.

3. Steep Slope. Zoning Ordinance, Article 13.

Conclusion: The 7/690 Project has been reviewed and approved by the Loudoun County Building and Development Department as is required by the Town's Ordinance. It appears that the requirements for steep slope have been met.

4. Floodplain Overlay District

Conclusion: The 7/690 Interchange Project is not causing an increase in the Base Flood Elevation ("no rise"), as proven by the hydrologic and hydraulic analysis provided to the Town by the County and reviewed by the Town's consultant. The Project has conformed with the requirements of the Town's Floodplain Ordinance. Possible mitigation – increase size of 21st Street stream culverts; stream modeling performed by Loudoun County would decrease Town costs for modeling to update the FEMA floodplain maps.

5. Historic Overlay District. Zoning Ordinance, Article 14A.

Conclusion: Staff has reviewed the Historic Overlay District rules to determine if the potential demolition of the house at 601 N. 21st Street (lot 74) is prohibited by the zoning ordinance Article 14A. The house at 601 N. 21st Street was built in 1999, and is not a historically significant structure. A review by the Board of Architectural review is not required.

6. ESMT 20-06 Three party easement between Loudoun County, Town of Purcellville and Catoctin Meadows HOA.

Conclusion: Of the easements noted above, permanent drainage easements for sub-areas 2B, 2C and 2D (a total of 1,677 SF or 0.038 acres) are proposed to be dedicated to the Town. The remainder are dedicated to Loudoun County Board of Supervisors. The Town has reviewed the proposed dedications to the Town; legal review is still needed. The dedications from Catoctin Meadows HOA to Loudoun County are to be negotiated privately.

BACKGROUND:

It is important to understand the context of this project with the history of Legislative actions taken by the Town. The 7/690 Interchange is a Loudoun County Project that has been planned by Loudoun County and supported by the Purcellville Town Council for many years. The Route 7 and Route 690 Interchange is an adopted transportation improvement project identified in our 2030 Comprehensive Plan (Map 25, page 98) and has been supported publicly by numerous Town Councils.

Town of Purcellville Legislative Actions

The Town's support of the project has been memorialized in the following resolutions & plans:

March 1, 2005. Town Council Resolution 05-03-04: Requesting the Board of Supervisors include Route 690/Bypass 7 interchange project as part of the County Transportation Bond Issue. States "Whereas, said project is the number one transportation priority of the Town of Purcellville". Adopted March 1, 2005.

November 26, 2013 Town Council meeting, motion: "I move that the Town Council endorse a new interchange located at Route 7 and the existing Route 690 (conceptually represented as Alternative 1 in the Route 7/690 (Hillsboro Road) Interchange Alternative Analysis Technical Memorandum Submission by Dewberry Consultants, LLC dated October 9, 2013." Motion passed 6-1.

June 30, 2020. Adopted Town Comprehensive Plan shows the 7/690 Interchange as a recommended improvement .

April 13, 2021. Town Council Resolution 21-04-03: Supporting a submission to Congresswoman Wexton's office for consideration under the Transportation and Infrastructure bill, a joint request with Loudoun County for Multi-use Trail improvements, connecting pedestrian improvements associated with the Rt. 690 Interchange with amenities and trails located within the Town of

Purcellville, and authorize the Town Manager to apply for and execute such agreements relating to the project. States “ Whereas, Loudoun County is working toward a comprehensive transportation Project to provide an interchange between Rt. 690 (21st Street/Hillsboro Rd. and the Harry Byrd Hwy. to mitigate traffic congestion within the Town of Purcellville; and Whereas, the town and county are desirous of connecting Fields Farm Athletic Complex, Park and Commuter Parking, Sue Kane Trail, W&OD Trail and historic downtown;”

Loudoun County Project Administration – Public Notice

July 24, 2013. Loudoun County is the Local Administrator for the 7/690 Interchange Project, and as such is responsible for the required public notices, design, right-of-way and construction of the project. In 2013, as noted above, two alternative locations were under consideration. A public information meeting was held by Loudoun County on July 24, 2013 in order to obtain public input.

November 15, 2013. After deliberations, the Town Council made a motion “that Council endorse a new interchange located at Route 7 and the existing Route 690 (Hillsboro Road) conceptually represented as Alternative 1 in the Rout 7/690 (Hillsboro Road) Interchange Alternative Analysis Technical Memorandum Submission by Dewberry Consultants, LLC dated October 9, 2013”.

April 16, 2018. A Location and Design Public Hearing was hosted by Loudoun County at Woodgrove High School on April 16, 2018.

January 24, 2020. Public Notice regarding the revised Environmental Assessment approved by FHWA.

January 7, 2021. A Notice of Willingness for Public Comments associated with the Proposed Limited Access Control Changes was advertised in by Loudoun County. This Notice regarding the changes invited the public to comment on the Project.

January 26, 2021. Loudoun County Staff presents updates regarding all Loudoun County projects in Purcellville to the Town Council in their public meeting.

Compliance with Town of Purcellville Ordinances

1. Open Space Requirements. Zoning Ordinance, Article 7. – Landscaping, Buffering, and Open Space Regulations.

Notably, when Catoctin Meadows Section 2 was developed in the late 1990’s, there was no requirement for open space. Current requirements are:

Zoning Ordinance, Article 7, 1.9. Required landscaping, buffering and open space areas.

Nothing in this article shall prohibit an owner/applicant from providing more than the required minimum landscaping, buffering and open space areas set forth below.

- a. Parcels of two acres or less: The total of all landscaping, buffering and open space areas shall be a minimum of 15 percent of the subject parcel.*
- b. Parcels greater than two acres and less than six acres: The total of all landscaping, buffering and open space areas shall be a minimum of 20 percent of the subject parcel.*
- c. Parcels of six acres or greater: The total of all landscaping, buffering and open space areas shall be a minimum of 25 percent of the subject parcel.*

Open Space is further noted in the LDSCO:

3.2 Subdivision Design, #3.

The following areas shall be preserved as undeveloped open space to the extent consistent with the reasonable use of the land and in accordance with applicable State and Town regulations:

- a. Wetlands, as defined in Section 404, Federal Water Pollution Control Act Amendments of 1972 and field verification by on-site inspection;*
- b. Floodplain as defined by the Federal Emergency Management Agency of the Floodplain Map of Loudoun County for the Town of Purcellville;*
- c. Slopes in excess of twenty-five (25) percent as measured over a ten (10) foot interval unless appropriate measures are taken concerning slope stability and erosion.*

Catoctin Meadows, Phases 1 – 3, is 52.996130 acres. When Section 2 was platted, this area was shown as floodplain based on existing Loudoun County mapping, and so was preserved as open space (Parcel A). Under the current open space requirements, the subdivision would need to provide 13.249 acres of open space. The Catoctin Meadows HOA green space, Parcel A, is 14.22 Acres.

The plat (ESMT 20-06) shows that the total right-of-way dedication that is being requested from Loudoun County is 1.1798 acres. The remaining tract with this reduction would be 13.04 acres, slightly less than open space requirements with the current open space requirements. In addition, the total of permanent drainage easements, permanent slope easement and permanent VRRM easement that are requested is 0.320180 acres; of this 750 SF is an overlap of easements, so the total acreage of permanent easements is 0.302962 acres. Temporary construction easements total 0.397544 acres. Therefore, the total amount of right-of-way, and permanent easements being

requested from Parcel A is 1.482762 acres; the total of all right-of-way, permanent and temporary easements is 1.880306 acres.

Conclusion: The requested right-of-way will decrease Parcel A to less than the current open space requirements for a similar sized subdivision based on today's requirements. However, since there were no open space requirements when Catoctin Meadows was platted, this is not a violation of the Town's open space requirements.

2. Stream and Creek Buffer, Zoning Ordinance, Article 14.

The Stream and Creek Buffer is established in Article 14 of the Zoning Ordinance. The Stream and Creek Buffer is established to govern the construction of buildings, structures, parking and other impervious surfaces in areas adjacent to major stream areas. For a major stream (watershed greater than 640 acres), the stream buffer is 100 feet on each side of the creek measured from the channel scar line of each creek or stream. Within the 100 foot buffer, a streamside forested area of at least 25 feet on each side shall be provided.

Article 14. Section 2. - Stream and Creek Buffer established.

The following setbacks are established along major and minor streams and creeks in areas where the 100-year floodplain is less than the setbacks provided below:

1. Major stream buffer. For streams with major floodplains (streams where the watershed is greater than 640 acres): A minimum of 100 feet on each side of the creek measured from the channel scar line of each creek or stream.

2. Within the 100 foot buffer, a streamside forested area of at least 25 feet on each side of the creek or stream shall be provided. The streamside forested area shall consist of mature trees where they exist prior to the development of a property and shall be supplemented with new tree plantings if required by the town. When no mature trees exist, the streamside forested area shall be created with new tree plantings. All new tree plantings shall comply with the minimum size requirements for plantings found in [article 7](#) of this ordinance. New tree plantings shall be of a species compatible with the stream, creek, and/or wetlands. Unless otherwise exempted by this ordinance, land uses permitted within the streamside forested area shall be limited to pedestrian footpaths (preferably constructed of a porous material); well designed watercourse crossings, designed in accordance with accepted Best Management Practices; passive recreation areas such as gazebos or benches; and other such uses, as determined by the zoning administrator, which do not negatively impact the adjoining stream, creek, or wetlands.

Conclusion: The project construction encroaches into the streamside buffer in certain locations, but does not violate the permitted uses within the buffer. Generally, the streamside buffer does not prohibit the development of the property, but provides for establishment of new trees if trees are removed within the streamside forested buffer. The 7/690

interchange project appears to affect the streamside buffer for stretches along S. Catoctin Creek as a result of the construction of the eastbound off ramp, as well as at the culvert crossing along N. 21st Street. A portion of the impacted area directly adjacent to the stream in that area does not appear to be wooded, since there are overhead power lines traversing the area. Field measurements should be taken to confirm that the streamside forested buffer, if there are mature trees, is re-established.





Article 14. Section 2. - Stream and Creek Buffer established, #4, wetlands

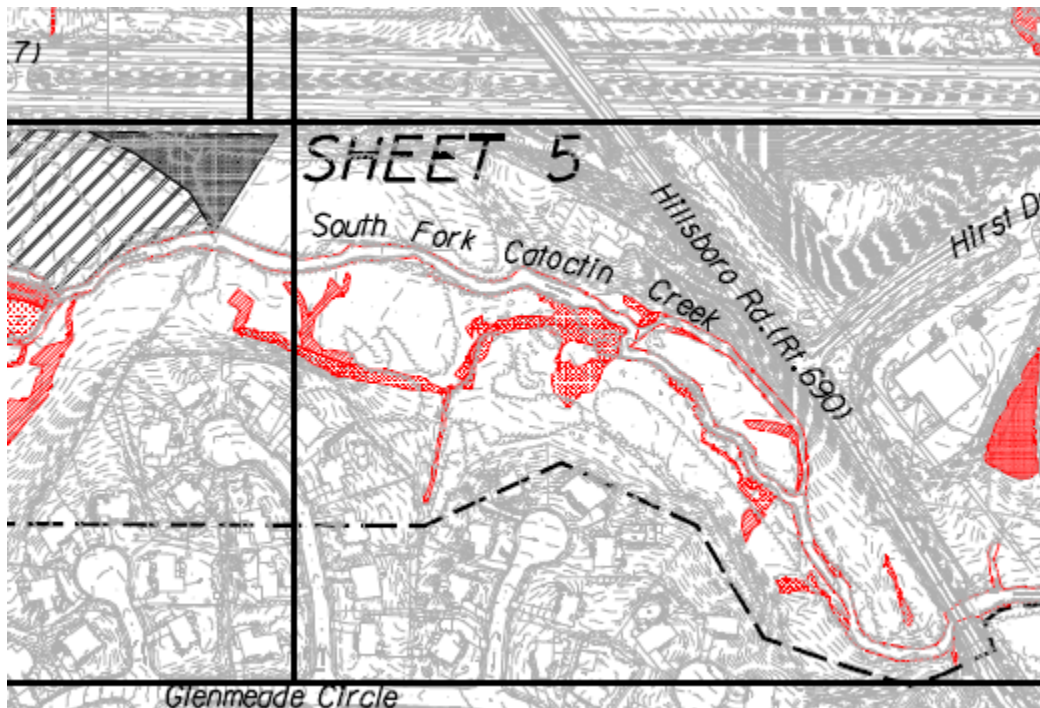
Where wetlands exist adjacent to a major or minor stream buffer, a setback of at least 35 feet shall be maintained from all wetlands for all structures and impervious surfaces. When any

part of this ordinance requires a setback of more than 35 feet, the larger setbacks shall be provided.

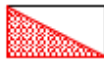
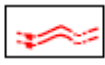
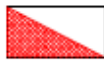

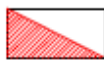
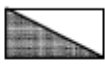
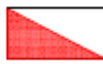
A wetland is defined by the following conditions: hydrology, hydric soils and hydrophytic vegetation. Although the Loudoun County Weblogis mapping shows predicted wetlands, a wetlands study is typically performed to delineate wetland areas. The U.S. Army Corp of Engineers (USACE) definition of a wetland is:

"Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Based on the wetland delineation in the Approved Environmental Assessment, there are wetlands in the proposed construction area. A preliminary jurisdictional determination was provided by the USACE, dated March 27, 2015. We do not have information about the final Jurisdictional Determination, so this is a question that could be asked of the County. Typically, if a wetland is destroyed, the project may choose to create new wetlands or purchase wetlands credits in lieu of creating new wetlands.



LEGEND (ALL SHEETS):

	<i>Palustrine Emergent Wetland (PEM)</i>		<i>Stream Channel (R3,R4,EPH)</i>
	<i>Palustrine Scrub-shrub Wetland (PSS)</i>		<i>VDOT Wetland Mitigation Site</i>
	<i>Palustrine Forested Wetland (PFO)</i>		<i>Questionable Wetland Area</i>
	<i>Palustrine Open Water (POW)</i>		

From the Route 7/690 Environmental Assessment:

3.7.2 Wetlands and Streams

3.7.2.1 Existing Conditions

The study area is located within the Middle Potomac- Catoctin watershed. A wetland and stream delineation was conducted in 2013 on land within the proposed project area, confirmed by the US Army Corps of Engineers in 2015(NAO 2013-0861) and waiting reissuance (**Appendix 4**). Based on the delineation, there are intermittent and perennial streams within the project boundary. These streams include South Fork Catoctin Creek and associated unnamed tributaries to South Fork Catoctin Creek. There are palustrine emergent (PEM) wetlands, palustrine open water (POW) wetlands, palustrine forested (PFO) wetlands, and palustrine scrub-shrub (PSS) wetlands within the project boundary. These wetlands function as sediment traps, provide nutrient reduction, provide habitat for wildlife, act as a groundwater recharge point, and attenuate seasonal flood

3.7.2.2. Future Conditions

Build Alternative #1

Wetlands and streams would be avoided to the maximum extent practicable. The project would result in approximately 0.25 acre of wetland impact and approximately 250 linear feet of stream. Unavoidable impacts wetlands and streams would be mitigated through the purchase of credits or creation of wetland and stream mitigation banks.

Preferred Alternative

Wetlands and streams would be avoided to the maximum extent practicable. The project would result in approximately 0.25 acre of wetland impact and approximately 250 linear feet of stream. Unavoidable impacts wetlands and streams would be mitigated through the purchase of credits or creation of wetland and stream mitigation banks.

The alternative has been modified to widening to the median on east bound Route 7 at the western end of the project to avoid impacting the existing VDOT mitigation site. This modification also eliminates the need for a costly retaining wall along this stretch of roadway to prevent further encroachments into the existing site for appropriate slopes from the proposed roadway.

During construction there would be temporary disturbances to wetlands/Waters of the US. These would be permitted through Section 404/401 Clean Water Act and would be restored to their original contours and seeded with appropriate wetland seed mix to ensure that there would be no long term impacts to wetlands. Mitigation banking credits would be utilized in cases where impacts to streams or wetlands are unavoidable and exceed mitigation thresholds.

The alternative would comply with EO 11990 protection of wetlands.

3.8 Permits and Mitigation

3.8.1 Existing Conditions

Due to the size and location of the project and the requirement to maintain traffic during construction, all of the build alternatives would have wetland and stream impacts, which would

require a Clean Water Act (CWA) Section 404 permit from the Army Corps of Engineers (USACE) and a CWA Section 401 Virginia Water Protection Permit from the Virginia Department of Environmental Quality (VDEQ). Based on the preliminary impact numbers shown in Table 2.1 and discussed in preceding sections, the project may require general permits from the USACE and VDEQ. Consultation with these agencies would continue as the project design progresses. Some of the stream channels located on the project site have drainage areas exceeding five square miles, therefore a Virginia Marine Resource Commission (VMRC) permit would likely be required; VMRC would review any application through the Joint Permit Application (JPA) process and would provide a determination at that time. Because the project would disturb over one acre of land, a Virginia Stormwater Management Program general permit for land disturbance from the Virginia Department of Environmental Quality (DEQ) would also be required.

3.8.1 Future Conditions

Build Alternative #1

All practicable measures would be employed to minimize and avoid impacts to streams and wetlands during the design process. Minimization and avoidance measures available for roadway projects include: minor alignment shifts, temporary impacts, countersinking culverts to develop natural stream bottoms, low-flow channels, use of retaining walls or modified head-walls, conducting work in the dry, stormwater management, and erosion and sediment controls.

During the final stages of design and the permitting process, an avoidance, minimization, and mitigation narrative would be created for all wetland and stream impacts. Approval by the permitting agencies and purchase of any mitigation required would be completed prior to initiation of construction activities.

Conclusion: Effects on wetlands will be mitigated, through stormwater management, purchase of wetland credits, or other means, prior to the initiation of construction activities.

3. Steep Slope. Zoning Ordinance, Article 13.

The Town's Zoning Ordinance, Article 13, states:

4. Required performance standards for sensitive areas. No zoning permit shall be issued for any use, structure or activity on any parcel of land which includes within its boundaries moderately steep slopes unless and until the following standards have been met:

a. The applicant shall obtain a locational clearance from the Loudoun County Department of Environmental Resources. The applicant shall submit a map or plat showing the location and extent of all moderately steep slopes on the property, as well as the location and extent of all land-disturbing activities, including the proposed building sites, paved areas, drainfields, well locations, and other uses.

b. The applicant shall obtain a grading permit in accord with the Purcellville Land Development and Subdivision Control Ordinance and Section 1220 of the Loudoun County Codified Ordinance for all land-disturbing activities on all slopes.

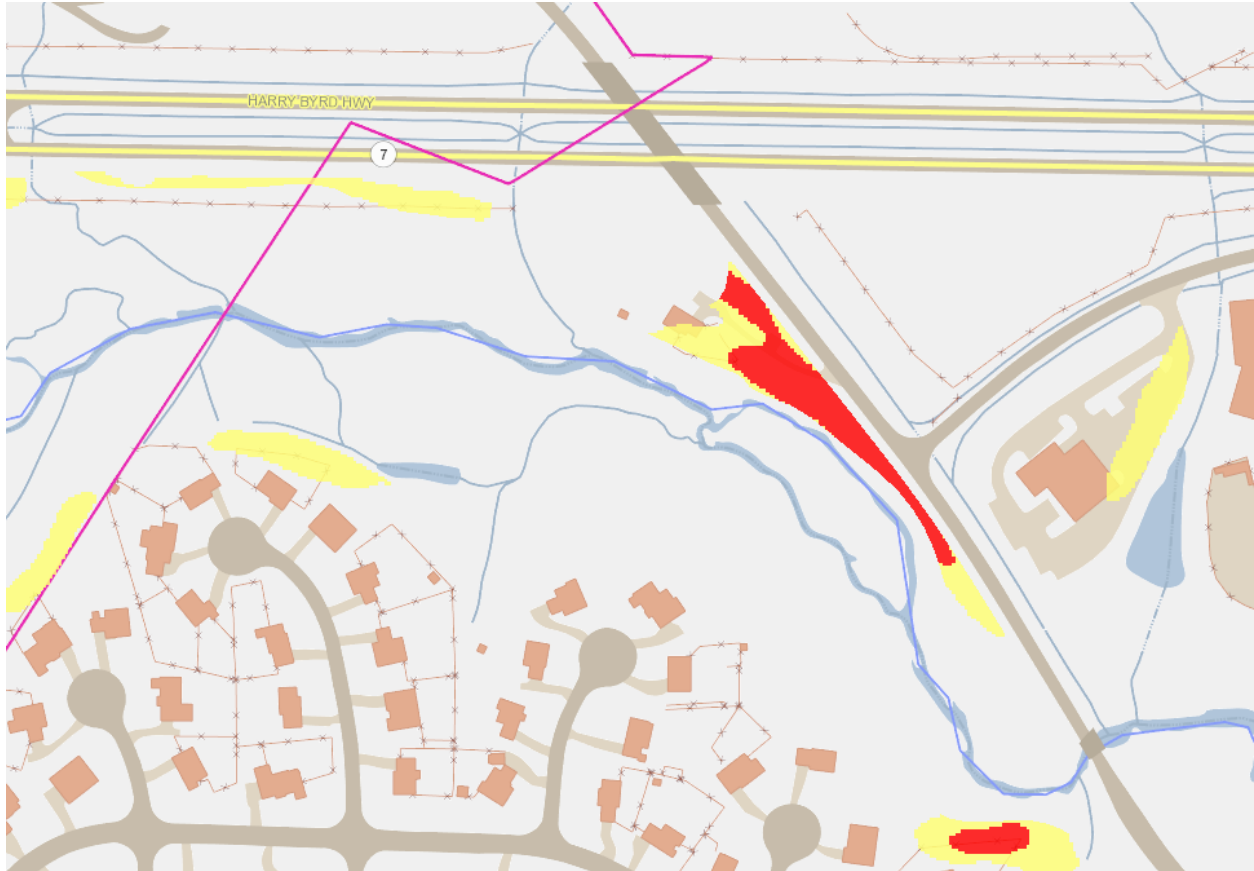
c. The applicant shall incorporate stormwater management best management practices and erosion and sedimentation control practices as defined by the Loudoun County and Town of Purcellville Facilities Standards Manual into the permit application, and such practices shall be approved by the county and town as appropriate.

5. Required performance standards for highly sensitive areas. No zoning permit shall be issued for any use, structure or activity for any parcel of land which includes steep slopes within its boundaries until the following standards have been met:

a. The applicant shall obtain a locational clearance from the Loudoun County Department of Environmental Resources. The applicant shall submit a map or plat showing the location and extent of all steep slopes on the property, as well as the location and extent of all land-

disturbing activities, including the proposed building site, paved areas, drainfields, well locations, and other uses.

There are locations of steep slopes within the Project area. See the map below:



Conclusion: The 7/690 Project has been reviewed and approved by the Loudoun County Building and Development Department as is required by the Town's Ordinance. It appears that the requirements for steep slope have been met.

4. Floodplain Overlay District

The Town's Floodplain Overlay District states:

Article 12.-Floodplain Overlay District

Section 1. - Purpose of article.

This ordinance is adopted pursuant to the authority granted to localities by Va. Code § 15.2-2280.

The purpose of these provisions is to prevent: the loss of life and property, the creation of health and safety hazards, the disruptions of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:

- a. Regulating the uses, activities and development which, acting alone or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities and frequencies.*
- b. Restricting or prohibiting certain uses, activities and development from locating within areas subject to flooding.*
- c. Requiring all those uses, activities and development that do occur in flood-prone areas to be protected and/or flood-proofed against flooding and flood damage.*
- d. Protecting individuals from buying land and structures which are unsuited for intended purposes because of flood hazards.*
- e. Assuring compliance with federal and state laws and regulations that address the need for floodplain management and protection.*
- f. Qualifying residents and property owners in the Town of Purcellville for the insurance and subsidies provided by the National Flood Insurance Program.*

This Staff Report examines the specific impacts on the Catoctin Meadows HOA property (Parcel A) due to the project and due to changes in floodplain modeling parameters, better contour information and changed rainfall intensity (inches/hr).

Complicated issues arise associated with the floodplain boundaries. The Town of Purcellville floodplain maps as shown by the Federal Emergency Management Agency (FEMA) are separate maps from those of Loudoun County. The existing effective floodplain boundaries in this area, and as shown on the Plat for the Catoctin Meadows Subdivision, Phase 2, are based on floodplain boundaries (the effective floodplain) established by FEMA in the 1970's. Contours used to establish the floodplain boundary were 10 ft contours. No remodeling of the floodplain has been done since the 1970's, which was before the Route 7 bypass construction and the Catoctin Meadows Subdivision Construction.

Loudoun County has adopted a revised regression model to predict the floodplain boundaries. With any development near a stream, Loudoun County is required to remodel the stream reach to predict a new 100-year floodplain (the magnitude and duration of a rain event is based on the statistical probability of the one percent annual chance rain storm or the "Base Flood"). Initial submissions by Loudoun County to the Town showed the effect of using the flows in the regression model on the properties within the Town boundaries. The Town has not agreed to a floodplain revised by those flows, nor has it agreed to the drastic change in the floodplain

boundary that would show if the older FEMA flows in the Town are used. To compare: The flows used for the stream in the effective FEMA floodplain mapping is 3617 cfs (cubic feet per second); the FEMA modeling adopted by Loudoun County requires flows of 7447 cfs. The Town has requested our consultant, Kimley-Horn Associates, to provide a review and calculation of the expected flows in the South Fork of Catoctin Creek through Parcel A, the CMHOA property. This evaluation shows an expected flow of 6,180 cfs 100-year peak flow to the point of analysis at the intersection of Route 690 and the South Fork of Catoctin Creek.

Modeling with the Loudoun County regression model flows shows an impact to three (3) structures in Catoctin Meadows Subdivision. That is, the structures are adjacent to or in the new model for the floodplain.

Here are some considerations for the Planning Commission associated with the floodplain mapping:

- As noted previously, the flows used for the stream in the effective FEMA floodplain mapping is 3617 cfs (cubic feet per second); the FEMA modeling adopted by Loudoun County requires flows of 7447 cfs. Root causes of the change in flows include changed land use in the watershed upstream, changes in roadway configurations, more accurate topography, and changes in rainfall intensity (inches/hr).
- Using the increased flow of 7447 cfs, with no development (that is, no 7/690 interchange project), causes a change in the floodplain boundary and affects three (3) structures in Catoctin Meadows.
- The proposed 7/690 interchange eastbound exit ramp from Route 7 is shown to be constructed within the floodplain based on the FEMA effective mapping. The modeling comparing the base flood elevations (BFE) of the stream without the proposed road to the BFE with the road shows that the BFE is not increased by the project. The change in roughness coefficient due to the physical change of the property assists with lowering the BFE in the model.
- The plans for the 7/690 interchange currently show a drastic change in the floodplain from outside the Town boundaries (where the new regression model is used) to within the Town boundaries (using the existing FEMA flows for the Town's mapping). FEMA, however, requires contiguous community mapping. An acceptable watershed-based study may include multiple hydrologic and hydraulic methods and models, but they must agree at the transition points between them. Gaps or inconsistencies should be analyzed and addressed as part of the study, and use the best available data for the most accurate floodplain mapping.
- Flood insurance is required to protect structures that are purchased using mortgages that are federally backed loans. The National Flood Insurance Program aims at reducing the

impact of flooding on both public and private structures. Elevation Certificates show the lowest finished floor elevation in comparison with the BFE; this could help reduce the cost of flood insurance.

- The Town understands that the Catoctin Meadows HOA has expressed its desire for the following: “No change in the current FEMA flood plain map, as it directly impacts CMHOA resident properties, using a harmonized flow rate between the Town, County and FEMA”. Staff has met with Loudoun County, and has engaged our consulting engineer (Kimley-Horn Associates, KHA) to investigate potential remediation/actions to attempt to accomplish this goal. A few of the ideas are:
 - The Loudoun County regression model has a high percentage standard error. The Town’s consultant has performed an analysis showing a lower flow than the Loudoun County model (6,180 cfs compared to 7,447 cfs). This lower flow may not decrease the BFE significantly enough to remove structures from a revised floodplain. Loudoun County consultant does not agree with an updated model using lower flows due to liability concerns. Further study is warranted.
 - There are several items that may be causing hydraulic inefficiencies in the channel and floodplain, such as an old road berm (cut it down to increase floodplain capacity), split stream channels, box culvert alignment which causes a pinch point just upstream of the culvert. Grading and/or stream restoration may mitigate the effects.
 - Implement property protections such as site specific/minor fill to mitigate floodplain change.
 - Increase the size of the culvert at N. 21st Street to remove the backwater effect of the culverts.
- Since the Town has received the (updated) floodplain modeling from Loudoun County, we need to take this information into consideration when considering the floodplain for the South Fork of Catoctin Creek. Neglecting to take reasonable action to ensure the safety of lives and property may subject the community to potential liability when flooding occurs.
- Regardless of whether the 7/690 Project is constructed or not, Town Staff recommends that the Town update the floodplain mapping, using the best available data. Communities should reasonably use this information where BFE’s increase and floodways are revised to ensure that the health, safety and property of their citizens are protected.

Conclusion: The 7/690 Interchange Project is not causing an increase in the Base Flood Elevation (“no rise”), as proven by the hydrologic and hydraulic analysis provided to the Town by the County and reviewed by the Town’s consultant. The Project has conformed with the requirements of the Town’s Floodplain Ordinance. Staff recommends that the Town’s floodplain mapping be updated based on the best available data, to include updated

flows based on upstream development, existing topography and rainfall intensity to revise the BFE's and floodways to ensure that the health, safety and property of the Town's citizens are protected.

5. Historic Overlay District. Zoning Ordinance, Article 14A.

Demolition permit review and approval is addressed in Article 14A, Section 2, 2.7. (see below)

2.7 Demolition permit review and approval.

No historic structure, as defined in this article, within any historic corridor overlay district shall be razed, demolished or moved, in whole or in part, until the razing, demolition or moving thereof is approved by the board of architectural review, or, on appeal, by the town council after consultation with the board of architectural review.

In addition to the right of appeal set forth herein, the owner of a historic structure, the razing or demolition of which is subject to the provisions of this section, shall, as a matter of right, be entitled to raze or demolish such landmark, building or structure provided that: (i) he has applied to the town council for such right, (ii) the owner has for the period of time set forth in the schedule contained in Section 15.2-2306 of the 1950 Code of Virginia (the "Code"), as amended, and at a price reasonably related to its fair market value, made a bona fide offer to sell the landmark, building or structure, and the land pertaining thereto, to the town or to any person, firm, corporation, government or agency thereof, or political subdivision or agency thereof, which gives reasonable assurance that it is willing to preserve and restore the landmark, building or structure and the land pertaining thereto, and (iii) no bona fide contract, binding upon all parties thereto, shall have been executed for the sale of any such landmark, building or structure, and the land pertaining thereto, prior to the expiration of the applicable time period set forth in the time schedule specified in the Code. Any appeal which may be taken to the court from the decision of the town council, whether instituted by the owner or by any other proper party, notwithstanding the provisions heretofore stated relating to a stay of the decision appealed from shall not affect the right of the owner to make the bona fide offer to sell referred to above. No offer to sell shall be made more than one year after a final decision by the town council, but thereafter the owner may renew his request to the town council to approve the razing or demolition of the historic landmark, building or structure.

Historic structure. Any structure that is:

(a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or the Virginia Landmarks Register or preliminarily determined as meeting the requirements of individual listing on the National Register or Virginia Landmarks Register;

(b) Certified or preliminarily determined by the Secretary of the Interior or the Virginia Department of Historic Resources (DHR) as contributing to the historical significance of a

registered historic district or a district preliminarily determined by the Secretary or the DHR to qualify as a registered historic district;

(c) Individually listed on a local inventory of historic structures; or

(d) Designated for protection by the town as a historic structure.

A historic designation for properties not yet surveyed or designated under items (a) through (d) above shall be made by the zoning administrator on a case-by-case basis under the written opinion of an historic preservation professional, such as an architectural historian or historian.

Conclusion: Staff has reviewed the Historic Overlay District rules to determine if the potential demolition of the house at 601 N. 21st Street (lot 74) is prohibited by the zoning ordinance Article 14A. The house at 601 N. 21st Street was built in 1999, and is not a historically significant structure. A review by the Board of Architectural review is not required.

6. ESMT 20-06 Three party easement between Loudoun County, Town of Purcellville and Catoctin Meadows HOA.

The Deed and Plat received is a three-party agreement between Loudoun County, showing the acquisition of property for right-of-way (ROW), drainage easements and temporary construction easements from CMHOA, and then certain easements being dedicated to the Town. The Plat shows the following easements that are being requested of the Catoctin Meadows HOA:

AREA TABULATION

PARCEL A	14.2231 ACRES
RIGHT OF WAY DEDICATION HEREBY DEDICATED (GRANTEE: BOARD OF SUPERVISORS OF LOUDOUN COUNTY, VIRGINIA)	1.1688 ACRES
RIGHT OF WAY DEDICATION HEREBY DEDICATED (GRANTEE: TOWN OF PURCELLVILLE, VIRGINIA)	0.0110 ACRES
PARCEL A RESIDUE	13.0433 ACRES

EASEMENT AREA TABULATION

TEMPORARY CONSTRUCTION EASEMENT	
EASEMENT SUB-AREA 1A	3,105 SQ FT
EASEMENT SUB-AREA 1B	3,202 SQ FT
EASEMENT SUB-AREA 1C	4,641 SQ FT
EASEMENT SUB-AREA 1D	3,510 SQ FT
EASEMENT SUB-AREA 1E	2,158 SQ FT
EASEMENT SUB-AREA 1F	701 SQ FT
PERMANENT DRAINAGE EASEMENT	
EASEMENT SUB-AREA 2A	640 SQ FT
EASEMENT SUB-AREA 2B	717 SQ FT
EASEMENT SUB-AREA 2C	580 SQ FT
EASEMENT SUB-AREA 2D	380 SQ FT
EASEMENT SUB-AREA 2E	327 SQ FT
SLOPE EASEMENT	
EASEMENT SUB-AREA 3A	10,644 SQ FT
WRRM EASEMENT	
EASEMENT SUB-AREA 4A	659 SQ FT
NOTES:	
1) OVERLAP AREA OF SLOPE EASEMENT WITH PERMANENT DRAINAGE EASEMENT:	450 SQ FT

The Deed and Plat also includes the vacation of a portion of a floodplain easement that was dedicated to the Town when Catoctin Meadows, Phase 2, was platted. The vacation of the floodplain easement is required by VDOT to eliminate an encumbrance on the portion of Parcel A in the location of the proposed off ramp. The vacation would need to be accomplished through a public hearing process through the Town Council. It is worth noting that the Deed for Catoctin Meadows Phase 2 acknowledges that floodplains are dynamic and a function of land use, which is subject to change. The deed states specifically “therefore, the boundary of the actual floodplain is subject to change with changing land use, and nothing herein shall be construed to limit the force and effect of the duly adopted flood plain regulations of the Town of Purcellville, Virginia”.

Conclusion: Of the easements noted above, permanent drainage easements for sub-areas 2B, 2C and 2D (a total of 1,677 SF or 0.038 acres) are proposed to be dedicated to the Town. The remainder are dedicated to Loudoun County Board of Supervisors. The Town has reviewed the proposed dedications to the Town; legal review is still needed. The dedications from Catoctin Meadows HOA to Loudoun County are to be negotiated privately.