



# Howard County

*Internal Memorandum*

SUBJECT: Council APFO Questions  
TO: Carl DeLorenzo  
FROM: Mark DeLuca  
DATE: 10-17-17

The following compares our requirements, or tests, for adequate water, sewer, stormwater drainage, and solid waste level of service standards with those of the surrounding jurisdictions.

Our requirements were compared against text provided by you and found as an attachment to this memo. While only a statement is provided here, additional and more specific requirements can be found in the Howard County code sections that are referenced by that service. Please let me know if you have any further questions.

**Water/Sewer:** The code provisions for planning and allocation of these service meets or exceeds the most stringent requirements of surrounding jurisdictions.

Code References:

**Sec. 16.131. - Sewage disposal and water supply.**

**Sec. 18.100A. - Capital Improvement Master Plan (C.I.M.P.) for Water and Sewerage.** To be done every 10 years as well as updated and presented to council annually. Also, based on the County General Plan and adjusted for interim general plan amendments.

**Sec. 18.122B. - Allocation of water and wastewater capacity.**

The Department of Public Works shall tentatively allocate water or wastewater capacity when available to the subdivision, concurrent with the approval of a final subdivision plat for a subdivision to be served by a public water or wastewater system by the Office of Planning and Zoning.

**Stormwater Drainage:** The code provisions for planning and allocation of these service meets or exceeds the most stringent requirements of surrounding jurisdictions.

Code References:

**Sec. 16.133. - Storm drainage.** Extensive requirements to control storm drainage and stormwater management.

**Solid Waste:** The code provisions for planning and allocation of these service meets or exceeds the most stringent requirements of surrounding jurisdictions.

Code References:

**Sec. 18.600A. - Capital Improvement Master Plan (C.I.M.P.) for Solid Waste.** Ten- year plan updated annually. Also, based on the county General Plan and interim report updates on population growth.

## Water

ADEQUATE PUBLIC FACILITIES PROVISIONS Level of Service Standards, 2012	
Jurisdiction	Water
Anne Arundel	A private water supply system shall be considered adequate if the source facilities, storage tanks, pumping stations and distribution system have sufficient available capacity to provide maximum day demand and peak hour demand in addition to fire flow to the proposed development.
Baltimore	For property located within the metropolitan district, residual water pressure at the public fire hydrant nearest the site of the proposed nonindustrial development must meet the standards established by the National Board of Fire Underwriters fire flow test. For property that is not served by a public water system, the minimum water well yield requirement equals a recovery rate of 1 gallon per minute.
Carroll	A water facility is adequate if the maximum day demand is less than 85% of the total system production capacity. A water facility is approaching inadequate if the projected maximum day demand is greater than or equal to 85% but less than 95% of the total system production capacity, and thereby subject to permit restrictions.
Charles	A development requiring a ground water appropriation permit must be issued a permit by the Water Resources Administration of the State Department of Natural Resources.
Frederick	A public or private community water system shall be considered adequate if: (1) the source facilities, storage tanks and local pumping stations have sufficient available capacity to provide maximum day demand to the proposed development and meet peak hour demand in addition to fire flow; and (2) the distribution system is capable of providing normal required pressure as well as minimal residual pressure to the proposed development. Also considered adequate if improvements are scheduled in the first 2 years of the CIP.
Harford	County water system or community water system shall be considered adequate if the existing system has sufficient available capacity to provide maximum and peak hour demand in addition to the minimum required pressures for fire flows to the proposed development.
Montgomery	Applications must be considered adequately served by water and sewerage if the subdivision is located in an area in which water and sewer service is presently available, is under construction, is designated by the County Council for extension of service within the first two years of a current approved Comprehensive Water and Sewerage Plan, or if the applicant provides a community water system or meets Department of Permitting Services requirements for well systems. Also considered adequate if improvements are scheduled in the first 5 years of the WSSC CIP.
Prince George's	The location of the property within the appropriate service area of the Ten Year Water and Sewerage Plan is deemed sufficient evidence of the immediate or planned availability of public water and sewerage for preliminary or final plat approval.
Queen Anne's	Adequate water supply, treatment, and storage capacity must be available to serve the proposed development. A development requiring a ground water appropriation permit must be issued a permit by the Maryland Department of the Environment. Determinations regarding the adequacy of water facilities shall be based on the water consumption demands adopted by the Department of Public Works. For properties not served by central water, adequacy can be found only where the proposed development can meet the standards and requirements of the Department of Environmental Health.
St. Mary's	A water supply shall be considered adequate if it meets the applicable requirements of the Maryland Department of the Environment, the St. Mary's County Health Department, and the St. Mary's County Metropolitan Commission regulations.
Washington	All new development shall be served by an adequate water supply and distribution system that provides sufficient water and service pressure for domestic consumption and fire protection. Adequacy is determined by the Planning Commission after receiving recommendation from the responsible review agency. Adequacy shall be determined according to the agency's adopted guidelines, standards and policies. All parts of the water supply and distribution system affected by the projected water needs of the new development shall be considered.

**Sewer**

<b>ADEQUATE PUBLIC FACILITIES PROVISIONS</b> Level of Service Standards, 2012	
Jurisdiction	Sewer
Anne Arundel	A public community sewerage system shall be considered adequate if the lateral systems, interceptors, pumping stations and force mains, and treatment plants have available capacity to accommodate expected and ultimate peak flows from the proposed subdivision.
Baltimore	The maximum level of non-industrial development per sewage area shall not be greater than that capable of being provided with available sewerage capacity based on sewage yield standards which have been established for various types of residential and commercial uses.
Carroll	A sewer facility is adequate if the projected annual average daily flow is less than 85% of the wastewater treatment facility permitted capacity. A sewer facility is approaching inadequate if the projected annual average daily flow is greater than or equal to 85% but less than 95% of the wastewater treatment facility permitted capacity, and thereby subject to permit restrictions.
Charles	No current requirement, but a section has been reserved in the code for such purpose.
Frederick	A sewerage system shall be considered adequate if the systems designed to serve the proposed development are sufficient to accommodate ultimate peak flows. Also considered adequate if improvements are scheduled in the first 2 years of the CIP.
Harford	The County sewerage system shall be considered adequate if the collector system, interceptors, pumping stations and force mains, and treatment plants have sufficient available capacity to accommodate expected annual average and maximum daily loadings from the proposed development.
Howard	A community sewer system is defined as adequate if the system has unused capacity available for allocation. The required improvements for the approval of lots for sewage disposal vary according to the planned service time frame designation in the county water and sewerage plan.
Montgomery	Applications must be considered adequately served by water and sewerage if the subdivision is located in an area in which water and sewer service is presently available, is under construction, is designated by the County Council for extension of service within the first two years of a current approved Comprehensive Water and Sewerage Plan, or if the applicant provides a community sewerage system or meets Department of Permitting Services requirements for septic systems. Also considered adequate if improvements are scheduled in the first 5 years of the WSSC CIP.
Prince George's	The location of the property within the appropriate service area of the Ten Year Water and Sewerage Plan is deemed sufficient evidence of the immediate or planned availability of public water and sewerage for preliminary or final plat approval.
Queen Anne's	Adequate sewer treatment must be available to serve the proposed development. Determinations regarding the adequacy of sewer facilities shall be based on wastewater generation demands adopted by the Department of Public Works. For properties not served by central sewer adequacy can be found only where the proposed development can meet the standards and requirements of the Department of Environmental Health.
St. Mary's	A water supply shall be considered adequate if it meets the applicable requirements of the Maryland Department of the Environment, the County Health Department, and the County Metropolitan Commission regulations.
Washington	All new subdivisions shall be served by adequate sewage disposal systems. Adequacy of an individual, on-site septic disposal system or a community or multi-use sewage disposal system shall be determined by the Planning Commission after receiving the recommendation and evaluation by the responsible review agency. Adequacy shall be evaluated according to the review agency's adopted guidelines, standards and policies. All parts of the sewage disposal system affected by the projected flow shall be considered in the evaluation.

## Stormwater Drainage

ADEQUATE PUBLIC FACILITIES PROVISIONS Level of Service Standards, 2012	
Jurisdiction	Stormwater
Anne Arundel	A storm drain system shall be considered adequate if: (1) the on-site drainage system and stormwater management system includes environmental site design to the maximum extent practicable, and is capable of conveying through and from the property the design flow of storm water runoff originating in the subdivision to an adequate outfall; and (2) the off-site drainage systems are capable of conveying to an adequate outfall the design flow of storm water originating in the subdivision.
Baltimore	The proposed drainage facilities shall be adequate to accommodate the amount of runoff that would be generated by the proposed development and the entire upstream area if the area were fully developed in accordance with County zoning regulations. Development must not increase the extent of the floodplain on neighboring properties.
Caroline	All subdivisions shall have a drainage outlet adequate in size and grade to efficiently remove stormwater and provide drainage for roads and all lots.
Charles	No current requirement, but a section has been reserved in the code for such purpose.
Prince George's	Proposed subdivisions shall demonstrate adequate control of the increased runoff due to the 10 year storm or other such standards as the State law or the County shall adopt, with stormwater control provided on-site.
St. Mary's	A storm drainage system shall be considered adequate if: (1) the on-site drainage system installed by the developer will be capable of conveying through and from the property the design flow of storm water runoff originating in the development during a 100-year flood; and (2) on-site and off-site drainage systems will be capable of conveying flows from undeveloped land upstream in the natural watershed, flows from existing and approved developments, without resulting in erosion, sedimentation or flooring of the receiving channel and downstream properties.

## Health Care

ADEQUATE PUBLIC FACILITIES PROVISIONS Level of Service Standards, 2012	
Jurisdiction	Health Care
Montgomery	Programmed services must be considered adequate for facilities such as police stations, firehouses, and health clinics unless there is evidence that a local area problem will be generated. Such a problem is one which cannot be overcome within the context of the approved Capital Improvements Program and operating budgets of the relevant agencies.

**Police**

ADEQUATE PUBLIC FACILITIES PROVISIONS Level of Service Standards, 2012	
Jurisdiction	Police
Carroll	Police services are adequate if the projected ratio of sworn law enforcement officers to population is 1.3:1000. Police services are approaching inadequate if the projected ratio of sworn law enforcement officers to population is between 1.2-1.3:1000, and thereby subject to permit restrictions.
Montgomery	Programmed services must be considered adequate for facilities such as police stations, firehouses, and health clinics unless there is evidence that a local area problem will be generated. Such a problem is one which cannot be overcome within the context of the approved Capital Improvements Program and operating budgets of the relevant agencies.
Prince George's	The population and/or employees generated by the proposed subdivision at each stage of the proposed subdivision must not exceed the service capacity of existing police stations as determined by the Planning Board guidelines; or an adequate police facility available to serve the population and/or employees generated by the proposed subdivision has been programmed with 100 percent of construction expenditures within the Capital Improvement Program.

**Solid Waste**

ADEQUATE PUBLIC FACILITIES PROVISIONS Level of Service Standards, 2012	
Jurisdiction	Solid Waste Disposal
Caroline	Solid waste facilities serving the area in which the subdivision is located shall be adequate to handle the additional waste generated by the residents of the subdivision.

Jurisdiction	Transportation	Compared with Howard County
Anne Arundel	Road facilities in the Impact area are considered adequate if they meet a minimum Level of Service (LOS) "D" and have an adequacy rating of not less than 70 as defined by the county road rating program. For Parole Town Center, intersections from site access points must have a peak hour critical lane volume of less than 1,450, or 1,600 in the core at the discretion of the Planning and Zoning Officer.	See MD APFO Road Parameters Spreadsheet
Baltimore	LOS "E" or "F" for arterial and arterial collector intersections. Adequacy standard only applies to nonindustrial development	See MD APFO Road Parameters Spreadsheet
Calvert	County roads must maintain a LOS "C", except Town Centers where a LOS "D" is acceptable; state roads must maintain a LOS "D". Traffic may be waived under extenuating circumstances by County Engineer.	See MD APFO Road Parameters Spreadsheet
Caroline	All subdivisions must have access from a county road or state highway. Any county road paved after March 18, 1980 must be at least 50 ft. in width to provide adequate access.	See MD APFO Road Parameters Spreadsheet
Carroll	LOS "C" is adequate; LOS "D" is "approaching inadequate" and subject to permit restrictions.	See MD APFO Road Parameters Spreadsheet
Charles	Minimum LOS is based on comprehensive plan designation: -Development District: LOS "C" (off-peak), LOS "C" (peak) -Village Centers: LOS "B" (off-peak), LOS "C" (peak) -Rural/Ag Conservation Areas & Others: LOS "A" (off-peak), LOS "B" (peak) -Town Centers & Urban Core: LOS "C" (off-peak), LOS "D" (off-peak)	See MD APFO Road Parameters Spreadsheet
Frederick	Signalized intersections and roundabouts within designated growth boundaries shall be considered adequate if LOS "E" or better is maintained, LOS "D" outside of designated growth boundaries. All other roadway links, unsignalized intersections and corridors shall be considered adequate if LOS "E" or better maintained.	See MD APFO Road Parameters Spreadsheet
Harford	Intersections within planned growth areas must have a minimum LOS "D". Intersections outside of planned growth areas must have a minimum LOS "C".	See MD APFO Road Parameters Spreadsheet
Howard	Minimum LOS "D" for county roads, excluding Downtown Columbia. Minimum LOS "E" for state roads. In Downtown Columbia, the intersection standard is up to 1,600 CLV for all intersections as specified in the Howard County Design Manual	See MD APFO Road Parameters Spreadsheet
Montgomery	<p>(1) Policy Area Transportation Review is based upon a relationship between Relative Arterial Mobility and Relative Transit Mobility:</p> <ul style="list-style-type: none"> <li>-If the forecasted transit LOS is "A", the minimum acceptable arterial LOS is "D"</li> <li>-If the forecasted transit LOS is "B", the minimum acceptable arterial LOS is "D"</li> <li>-If the forecasted transit LOS is "C", the minimum acceptable arterial LOS is "D"</li> <li>-If the forecasted transit LOS is "D", the minimum acceptable arterial LOS is "C"</li> <li>-If the forecasted transit LOS is "E", the minimum acceptable arterial LOS is "B"</li> <li>-If the forecasted transit LOS is "F", the minimum acceptable arterial LOS is "A"</li> </ul> <p>(2) Local Area Transportation Review mandates intersection congestion adequacy by critical lane volume:</p> <ul style="list-style-type: none"> <li>-In rural areas, 1350-1400</li> <li>-In suburban and urbanizing areas, 1425-1600</li> <li>-In urban areas, 1800</li> </ul>	See MD APFO Road Parameters Spreadsheet
Prince George's	The County Planning Board adopts minimum peak-hour service levels for major intersections and major roadways. Minimum LOS is based on comprehensive plan designation: -Developed Tier: LOS "E" -Developing Tier: LOS "D" -Rural Tier: LOS "C" -Metropolitan and Regional Centers: LOS "E"	See MD APFO Road Parameters Spreadsheet

Jurisdiction	Transportation	Compared with Howard County
Queen Anne's	<p>In designated growth areas, intersections are considered adequate with a peak hours minimum LOS "C". Outside designated growth areas, intersections are considered adequate with a peak hours minimum LOS "B".</p>	See MD APFO Road Parameters Spreadsheet
St. Mary's	<p>The established minimum LOS for intersection capacity is based on planning district:</p> <ul style="list-style-type: none"> <li>-Development Districts: LOS "D"</li> <li>-Town Centers and Village Centers: LOS "C"</li> <li>-Rural Preservation Districts: LOS "C"</li> </ul> <p>Roads serving the project must be a minimum of 18 feet wide and are or will be capable of accommodating existing traffic. Access roads are also considered adequate is the County has programmed the necessary improvements in the six year CIP.</p>	See MD APFO Road Parameters Spreadsheet
Washington	<p>The minimum LOS is acceptable for road segments in all areas shall be LOS "D". The minimum LOS acceptable for intersections in Urban and Town Growth Areas is LOS "D", and in all other areas LOS "C". If existing road is a state highway, then the State Highway Access Manual applies, which has a standard LOS "D" for intersections.</p>	See MD APFO Road Parameters Spreadsheet

Jurisdiction	Water	Compared with Howard County
Anne Arundel	A private water supply system shall be considered adequate if the source facilities, storage tanks, pumping stations and distribution system have sufficient available capacity to provide maximum day demand and peak hour demand in addition to fire flow to the proposed development.	Requirement already exists
Baltimore	For property located within the metropolitan district, residual water pressure at the public fire hydrant nearest the site of the proposed nonindustrial development must meet the standards established by the National Board of Fire Underwriters fire flow test. For property that is not served by a public water system, the minimum water well yield requirement equals a recovery rate of 1 gallon per minute.	Requirement already exists
Carroll	A water facility is adequate if the maximum day demand is less than 85% of the total system production capacity. A water facility is approaching inadequate if the projected maximum day demand is greater than or equal to 85% but less than 95% of the total system production capacity, and thereby subject to permit restrictions.	Meets or exceeds
Charles	A development requiring a ground water appropriation permit must be issued a permit by the Water Resources Administration of the State Department of Natural Resources.	Done by Health Department
Frederick	A public or private community water system shall be considered adequate if: (1) the source facilities, storage tanks and local pumping stations have sufficient capacity to provide maximum day demand to the proposed development and meet peak hour demand in addition to fire flow; and (2) the distribution system is capable of providing normal required pressure as well as minimal residual pressure to the proposed development. Also considered adequate if improvements are scheduled in the first 2 years of the CIP.	Meets or exceeds
Harford	County water system or community water system shall be considered adequate if the existing system has sufficient available capacity to provide maximum and peak hour demand in addition to the minimum required pressures for fire flows to the proposed development.	Meets or exceeds
Montgomery	Applications must be considered adequately served by water and sewerage if the subdivision is located in an area in which water and sewer service is presently available, is under construction, is designated by the County Council for extension of service within the first two years of a current approved Comprehensive Water and Sewage Plan, or if the applicant provides a community water system or meets Department of Permitting Services requirements for well systems. Also considered adequate if improvements are scheduled in the first 5 years of the WSSC CIP.	Requirement already exists
Prince George's	The location of the property within the appropriate service area of the Ten Year Water and Sewerage Plan is deemed sufficient evidence of the immediate or planned availability of public water and sewerage for preliminary or final plat approval.	Requirement already exists
Queen Anne's	Adequate water supply, treatment, and storage capacity must be available to serve the proposed development. A development requiring a ground water appropriation permit must be issued a permit by the Maryland Department of the Environment. Determinations regarding the adequacy of water facilities shall be based on the water consumption demands adopted by the Department of Public Works. For properties not served by central water, adequacy can be found only where the proposed development can meet the standards and requirements of the Department of Environmental Health.	Requirement already exists, groundwater done by Health Department



Jurisdiction	Water	Compared with Howard County
St. Mary's	A water supply shall be considered adequate if it meets the applicable requirements of the Maryland Department of the Environment, the St. Mary's County Health Department, and the St. Mary's County Metropolitan Commission regulations.	Done by Health Department
Washington	All new development shall be served by an adequate water supply and distribution system that provides sufficient water service pressure for domestic consumption and fire protection. Adequacy is determined by the Planning Commission after receiving recommendation from the reasonable review agency. Adequacy shall be determined according to the agency's adopted guidelines, standards and policies. All parts of the water supply and distribution system affected by the projected water needs of the new developments shall be considered.	Meets or exceeds

Jurisdiction	Sewer	Compared with Howard County
Anne Arundel	A public community sewerage system shall be considered adequate if the lateral systems, interceptors, pumping stations and force mains, and treatment plants have available capacity to accommodate expected and ultimate peak flows from the proposed subdivision.	Requirement already exists
Baltimore	The maximum level of non-industrial development per sewage area shall not be greater than that capable of being provided with available sewerage capacity based on sewage yield standards which have been established for various types of residential and commercial uses.	Meets or exceeds
Carroll	A sewer facility is adequate if the projected annual average daily flow is less than 85% of the wastewater treatment facility permitted capacity. A sewer facility is approaching inadequate if the projected annual average daily flow is greater than or equal to 85% but less than 95% of the wastewater treatment facility permitted capacity, and thereby subject to permit restrictions.	Meets or exceeds
Charles	No current requirement, but a section has been reserved in the code for such purpose.	Exceeds
Frederick	A sewerage system shall be considered adequate if the systems designed to serve the proposed development are sufficient to accommodate ultimate peak flows. Also considered adequate if improvements are scheduled in the first 2 years of the CIP.	Meets or exceeds
Harford	The County sewerage system shall be considered adequate if the collector system, interceptors, pumping stations and force mains, and treatment plants have sufficient available capacity to accommodate expected annual average and maximum daily loadings from the proposed development.	Requirement already exists
Howard	A community sewer system is defined as adequate if the system has unused capacity available for allocation. The required improvements for the approval of lots for sewage disposal vary according to the planned service time frame designation in the county water and sewerage plan.	
Montgomery	Applications must be considered adequately served by water and sewage if the subdivision is located in an area in which water and sewer service is presently available, is under construction, is designated by the County Council for extension of service within the first two years of a current approved Comprehensive Water and Sewage Plan, or if the applicant provides a community sewerage system or meets Department of Permitting Services requirements for septic systems. Also considered adequate if improvements are scheduled in the first 5 years of the WSSC CIP.	Requirement already exists, approval times differ
Prince George's	The location of the property within the appropriate service area of the Ten Year Water and Sewerage Plan is deemed sufficient evidence of the immediate or planned availability of public water and sewerage for preliminary or final plat approval.	Requirement already exists
Queen Anne's	Adequate sewer treatment must be available to serve the proposed development. Determinations regarding the adequacy of sewer facilities shall be based upon wastewater generation demands adopted by the Department of Public Works. For properties not served by central sewer adequacy can be found only where the proposed development can meet the standards and requirements of the Department of Environmental Health.	Requirement already exists
St. Mary's	A water supply shall be considered adequate if it meets the applicable requirements of the Maryland Department of the Environment, the County Health Department, and the County Metropolitan Commission regulations.	Done by Health Department
Washington	All new subdivisions shall be served by adequate sewage disposal systems. adequacy of an individual, on-site septic disposal system or a community or multi-use sewage disposal system shall be determined by the Planning Commission after receiving the recommendation and evaluation by the responsible review agency. Adequacy shall be evaluated according to the review agency's adopted guidelines, standards and policies. All parts of the sewage disposal system affected by the projected flow shall be considered in the evaluation.	Meets or exceeds, septic done by Health Department

Jurisdiction	Stormwater	Compared with Howard County
Anne Arundel	A storm drain system shall be considered adequate if: (1) the on-site drainage system and stormwater management system includes environmental site design to the maximum extent practicable, and is capable of conveying through and from the property the design flow of storm water runoff originating in the subdivision to an adequate outfall; and (2) the off-site drainage systems are capable of conveying to an adequate outfall the design flow of storm water originating in the subdivision.	Requirement already exists
Baltimore	The proposed drainage facilities shall be adequate to accommodate the amount of runoff that would be generated by the proposed development and the entire upstream area if the area were fully developed in accordance with the County zoning regulations. development must not increase the extent of the floodplain on neighboring properties.	Requirement already exists
Caroline	All subdivisions shall have a drainage outlet adequate in size and grade to efficiently remove stormwater and provide drainage for roads and all lots.	Exceeds
Charles	No current requirement, but a section has been reserved in the code for such purpose.	Exceeds
Prince George's	Proposed subdivisions shall demonstrate adequate control of the increased runoff due to the 10 year storm or other such standards as the State law or County shall adopt, with stormwater control provided on-site.	Outdated standard
St. Mary's	A storm drainage system shall be considered adequate if: (1) the on-site drainage system installed by the developer will be capable of conveying through and from the property the design flow of storm water runoff originating in the development during a 100-year flood; and (2) on-site and off-site drainage systems will be capable of conveying flows from undeveloped land upstream in the natural watershed, flows from existing and approved developments, without resulting in erosion, sedimentation or flooring of the receiving channel and downstream properties.	Exceeds

Jurisdiction	Fire and Emergency Services	Compared with Howard County
Anne Arundel	A development passes the test for adequate fire suppression facilities if in the scheduled completion year of the development the public water supply system, or a private fire protection water supply system approved by the Office of Planning and Zoning after consultation with the reviewing agencies, will be capable of providing adequate fire-flow.	HCDFRS does not complete any similar measurement that is described for Anne Arundel County. Howard County DPW ensures adequate water in the metro area. For the rural areas of Howard County, there is currently no requirement, other than new homes must be sprinklered.
Caroline	Fire protection services and facilities for the area in which the subdivision is located shall be adequate to protect the lives and property of the residents of the subdivision.	The listed statement is very a generic statement and does not identify how any measurements are completed.
Carroll	Fire and emergency medical services are adequate if: (1) the projected total number of late and no responses is less than 15%, and the total number of no responses is less than 4% measures on a quarterly basis; (2) using an average over the previous 24 months, response time is 8 minutes or less from the time of dispatch to on-scene arrival with adequate apparatus and personnel; and (3) all bridges and roads for the most direct route or acceptable secondary route to the project site are adequate to support fire and emergency apparatus.	HCDFRS does not currently measure estimated response times to locations.
Charles	A major subdivision having a W6 water service category must have an existing water source with all-weather access within four round-trip miles driving distance and accessible to the fire department using no more than 20 feet of hard sleeve.	HCDFRS does not have a water source requirement. See note above in Anne Arundel County section.
Montgomery	Programmed services must be considered adequate for facilities such as police stations, firehouses, an health clinics unless there is evidence that a local area problem will be generated. Such a problem is one which cannot be overcome within the context of the approved Capital Improvements Program and operating budgets of the relevant agencies.	HCDFRS does not have a current measure of Fire & Rescue infrastructure built into the plan review/approval process.
Prince George's	The population and/or employees generated by the proposed subdivision at each stage of the proposed subdivision must be within the adequate coverage area of the nearest fire and rescue station(s) as determined by the Planning Board guidelines; or an adequate fire and rescue station(s) available to serve the population and/or employees generated by the proposed subdivision has been programmed with 100 percent of the construction expenditures within the Capital Improvement Program, unless the construction of such improvements has not commenced within 9 years after the project is fully funded.	HCDFRS does not have a current measure of Fire & Rescue infrastructure built into the plan review/approval process.
St. Mary's	The proposed development shall be considered adequately served by fire suppression facilities if: (1) it is served by an approved public (central) water supply system or multi-user water supply system capable of providing fire flow in accordance with the County standards; or (2) proposed development is served by private wells with fire flow and storage capabilities in accordance with the NFPA 1142 standard, and water for fire suppression shall be available within 1,000 feet of all single buildings under 12,000 sq. ft. area and on site for all single buildings over 12,000 sq. ft. area.	In comparison of the two conditions in the St. Mary's County provision: 1) HCDFRS does not have a water supply requirement. See note above in Anne Arundel County section. 2) The new homes constructed in areas supplied by private well are required to be sprinklered; therefore, an adequate well source for that and a holding tank is required by Howard County Building Code.
Washington	The County requires adequate interim fire protection systems in new commercial and industrial developments which are located in designated urban or town growth areas where public water service is not anticipated within two years. This interim fire protection system must be capable of providing the same level of fire protection as if it were connected to a public water system. The adequacy of an interim fire protection system shall be determined by the Planning Commission after receiving recommendations from various County and city departments. Standards established by the Maryland State Fire Marshal shall be used in the review and approval of the interim fire protection system.	Howard County utilizes International Residential Code (IRC) and International Building Code (IBC) regulations through DILP that require adequate fire water supply for automatic sprinklers. Otherwise, HCDFRS has no requirements on the water sources being available in the western (rural) portions of Howard County. See note above in the Anne Arundel County section.

Jurisdiction

Police

Compared with Howard County

Carroll

Police services are adequate if the projected ratio of sworn law enforcement officers to population is 1.3:1000. Police services are approaching inadequate if the projected ratio of sworn law enforcement officers to population is between 1.2-1.3:1000, and thereby subject to permit restrictions.

The International Association of Chiefs of Police, in their "Patrol Staffing and Deployment Study" stated that "Ratios, such as officers-per- thousand population, are totally inappropriate as a basis for staffing decisions." The study explained the myriad of complexities involved to truly meet local development density, topography, climate, etc. Based upon the current Howard County population of 313,414 and the current authorized sworn strength of 473 Officers, the ratio of sworn law enforcement officers to population is 1.5. However, not all of our 473 Officers are assigned to police patrol. The HCPD has over 40 organizational components to address everything from our Training Division to Criminal Investigations. The ratio does not in any way represent the actual patrol response capabilities.

Montgomery

Programmed services must be considered adequate for facilities such as police stations, firehouses, and health clinics unless there is evidence that a local area problem will be generated. Such a problem is one which cannot be overcome within the context of the approved Capital Improvements Program and operating budgets of the relevant agencies.

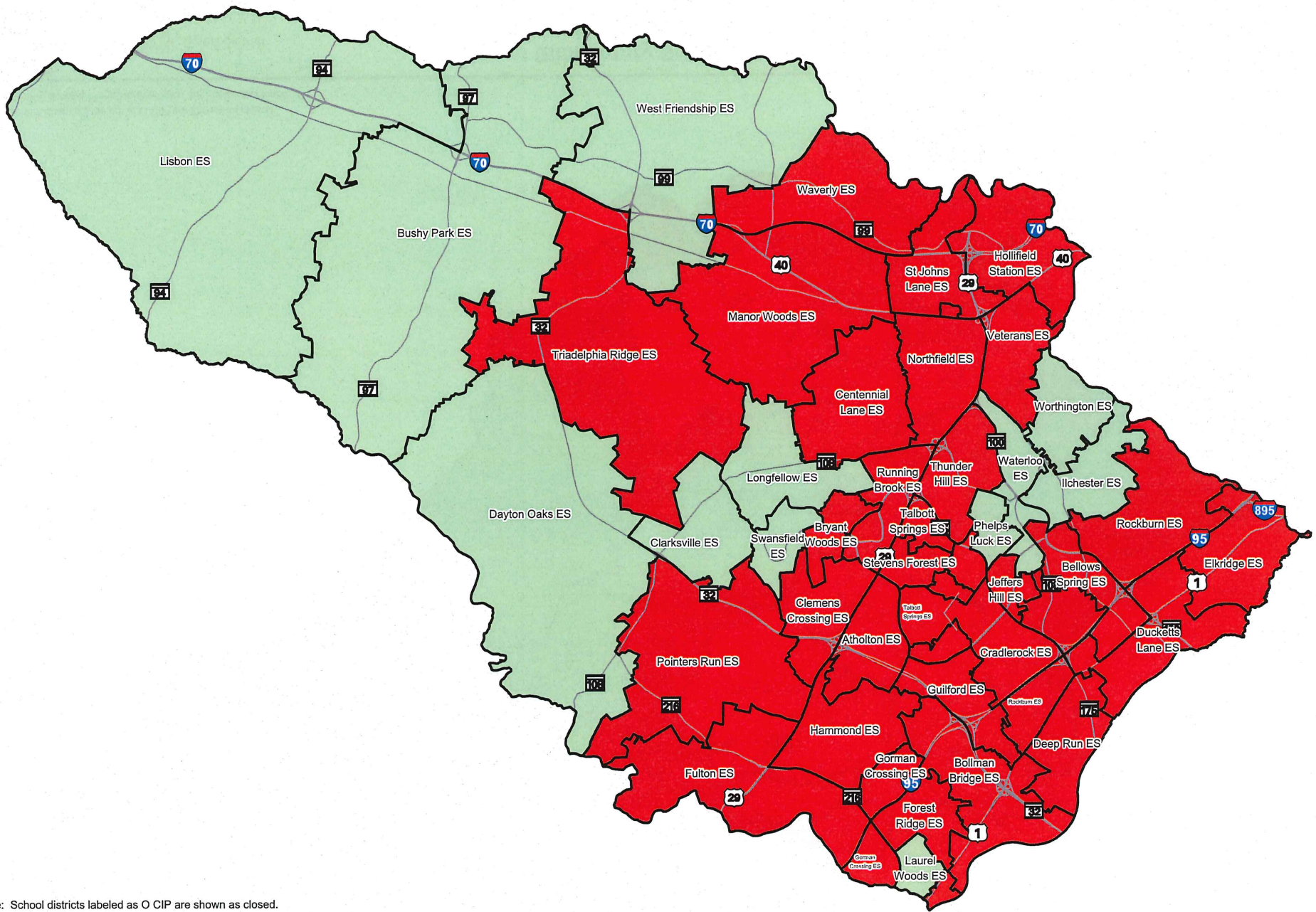
The description listed for Montgomery County does not seem like any type of actual testing criteria. They indicate that services will be considered adequate, "unless there is evidence that a local area problem will be generated. Such a problem is one which cannot be overcome within the context of the approved Capital Improvements Program and operating budgets of the relevant agencies." In conducting research, HCPD did outreach to Ms. Melissa A. Schulze the Planning Manager for the MCPD, Ms. Sandra Batterden, the MCPD Facilities Manager, as well as Mr. Greg Ossont, Deputy Director of General Services. They reported that Park and Planning usually took the lead and their actual involvement only occurred about 2 – 3 times per year and was more of a review with the applicable District Commander. Recently, they faced reviews related to White Flint and Wheaton, along with the Purple Line for Metro. They did not approve or disapprove developments, but identified the likely need for additional staffing. While the fire department has a response time criteria, the police department does not, guidelines simply state that it must be adequate and if a problem is identified and cannot be solved with a CIP project, "it's a problem". The MCPD District Commander, Policy and Planning – Melissa, and Facilities Manager have input at the master plan or sector plan review stage. An individual project cannot be approved unless it is consistent with the overlying area master or sector plan. The PD does send in comments on master plans as well as the potential costs to staff, outfit and house additional MCPD functions.

Prince George's

The population and/or employees generated by the proposed subdivision at each stage of the proposed subdivision must not exceed the service capacity of existing police stations as determined by the Planning Board guidelines; or an adequate police facility available to serve the population and/or employees generated by the proposed subdivision has been programmed with 100 percent of construction expenditures within the Capital Improvement Program.

The PG text implies that the subdivision "must not exceed the service capacity of existing police stations" or the subdivision must include adding an adequate facility with 100% of construction expenditures included the Capital Improvement Program. HCPD's research included outreach to Acting Lieutenant Terrence I. Nelson, the Administrative Commander for the Office of the Chief of Police, Ms. Angela Fair of their Comptroller's Office, and Ms. Kimberly Knight of the Office of Management and Budget who were unable to articulate PGPD's experience applying the published test. The PG model could possibly be considered for use in Howard County, after further research, but we recognize that the deployment of law enforcement officers must continuously adjust to meet temporal and geographic shifts in calls for service, crime, and actual community needs and expectations. The HCPD is also closely monitoring changes within our current communities that experience shifting neighborhood demographics and changes in the types of existing residential and nonresidential buildings. In addition, our aging population is expanding which impacts calls for service county-wide. There is no current "nationwide test" for planning for adequate public safety.

Jurisdiction	Solid Waste Disposal	Compared with Howard County
Caroline	Solid waste facilities serving the area in which the subdivision is located shall be adequate to handle the additional waste generated by the residents of the subdivision.	Exceeds



Note: School districts labeled as O CIP are shown as closed.



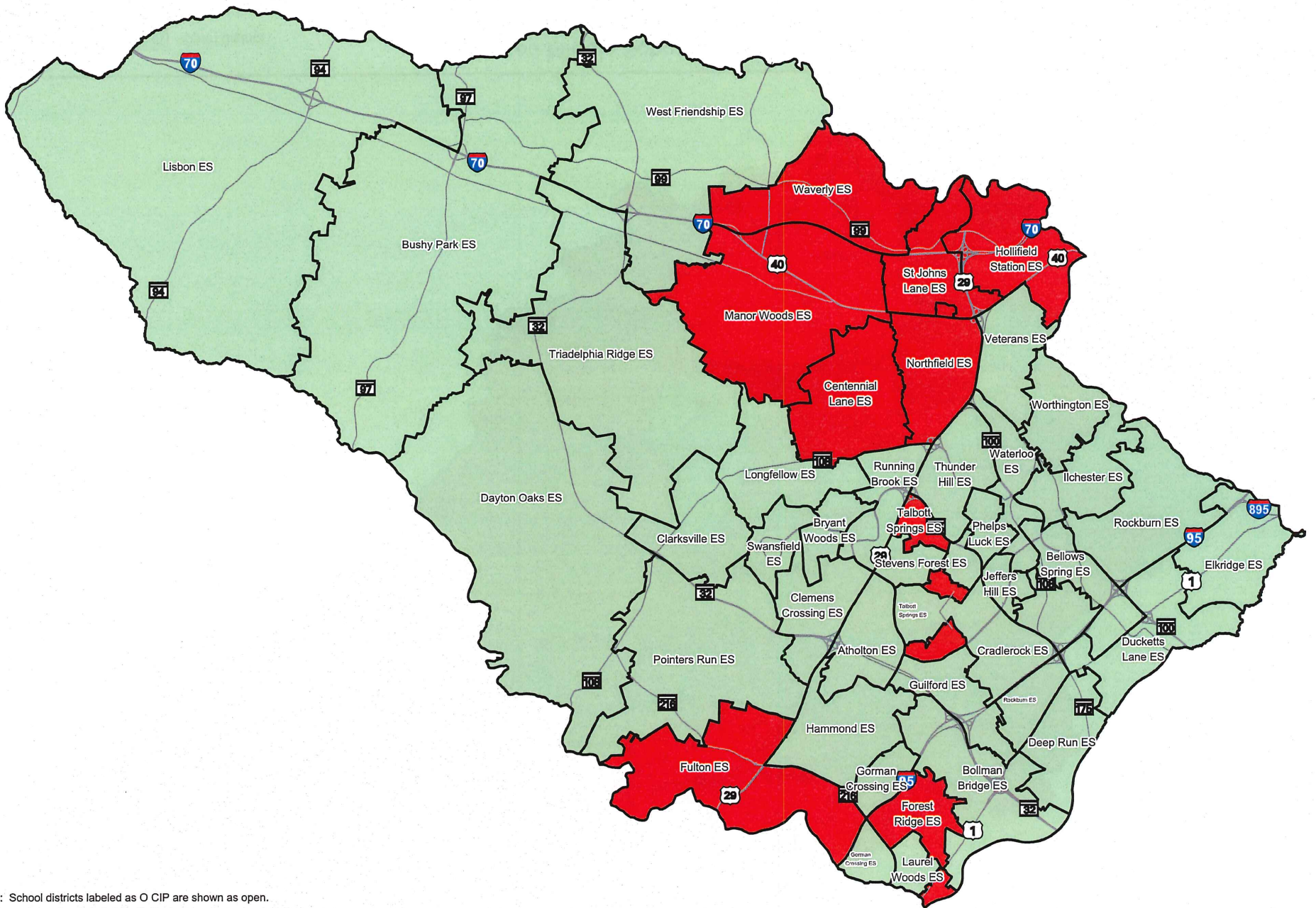
- Open district
- Closed district

### Closed Elementary School Districts (2020) Districts closed at 100% capacity

Department of Planning and Zoning  
Division of Research  
Scale: 1 in = 14,000 ft  
October 17, 2017







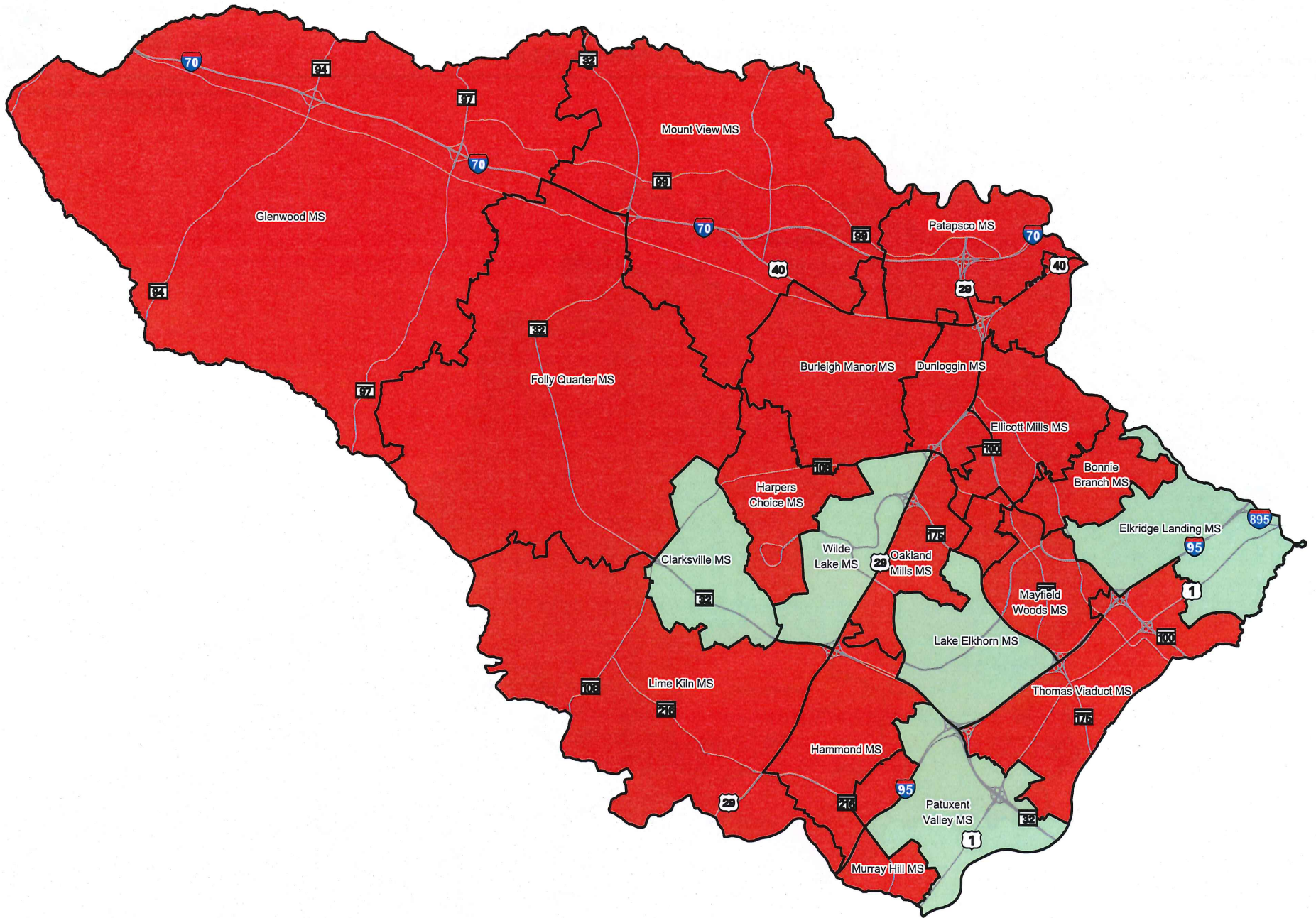
Note: School districts labeled as O CIP are shown as open.  
 All elementary schools in the North Region are shown as closed.



- Open district
- Closed district

### Closed Elementary School Districts (2020) Districts closed at 115% capacity

Department of Planning  
 and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 17, 2017

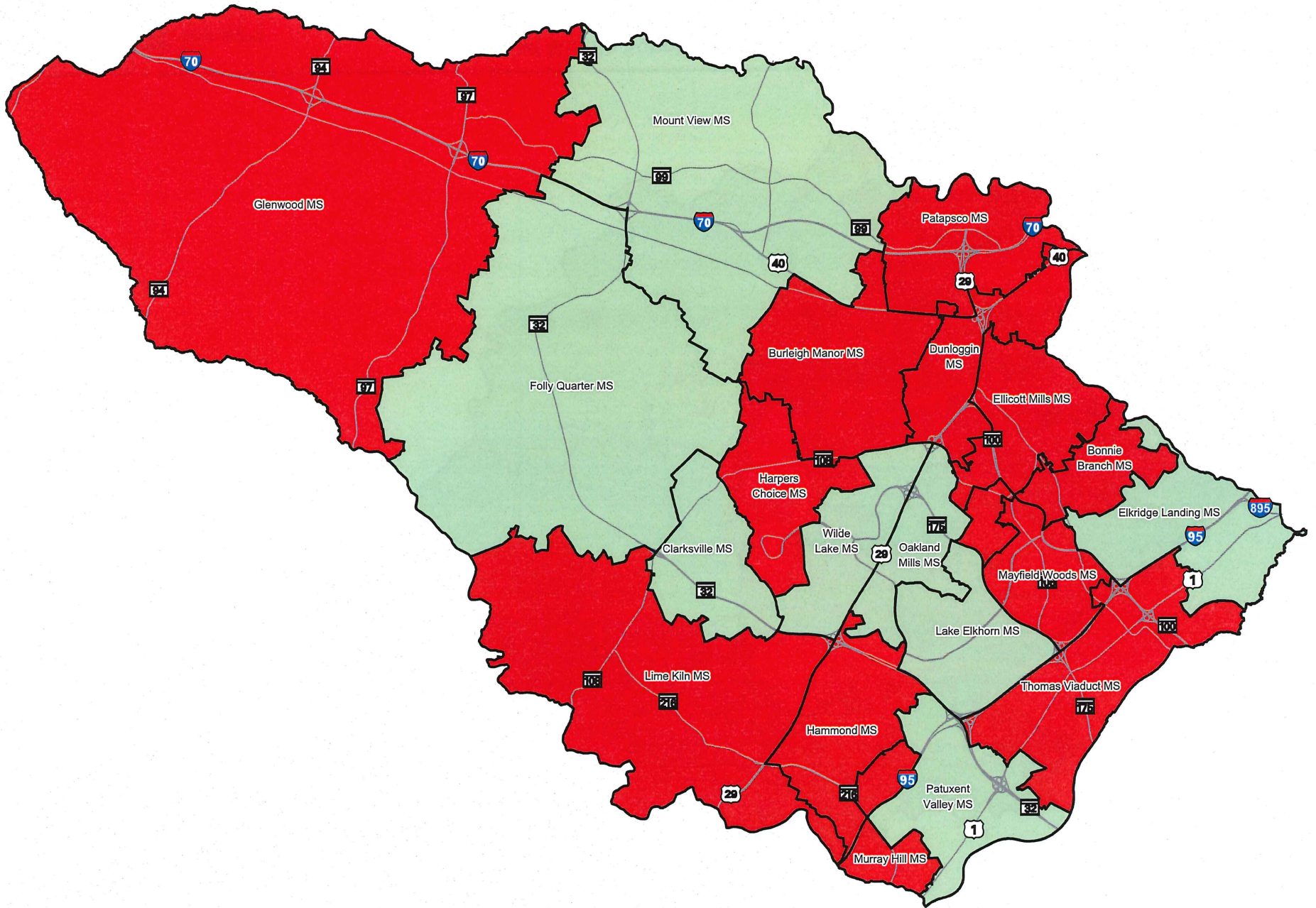


**Closed Middle School Districts (2020)**  
**Districts closed at 100% capacity**

- Open district
- Closed district



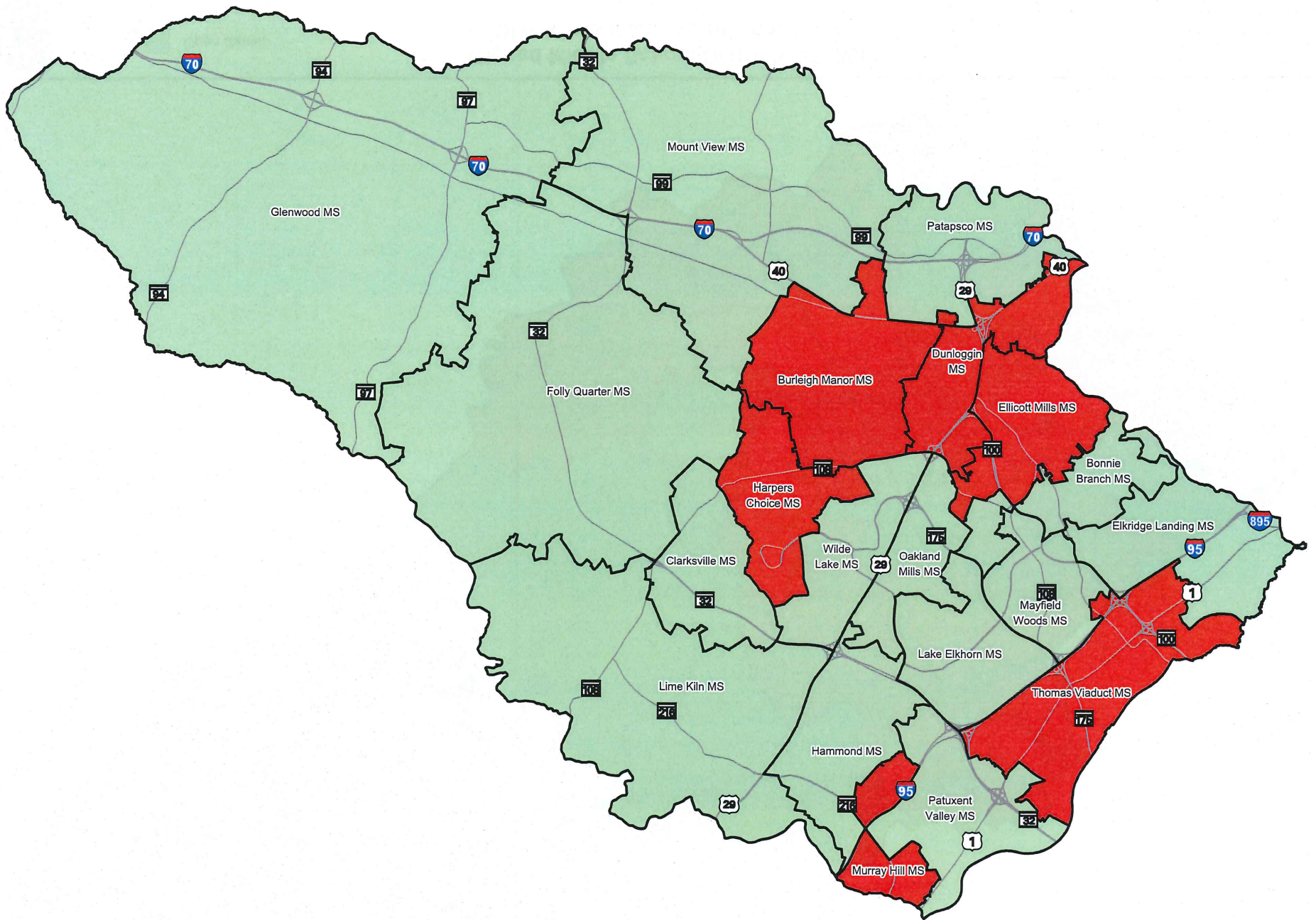
Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 17, 2017



- Open district
- Closed district

**Closed Middle School Districts (2020)**  
**Districts closed at 110% capacity**

Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 17, 2017

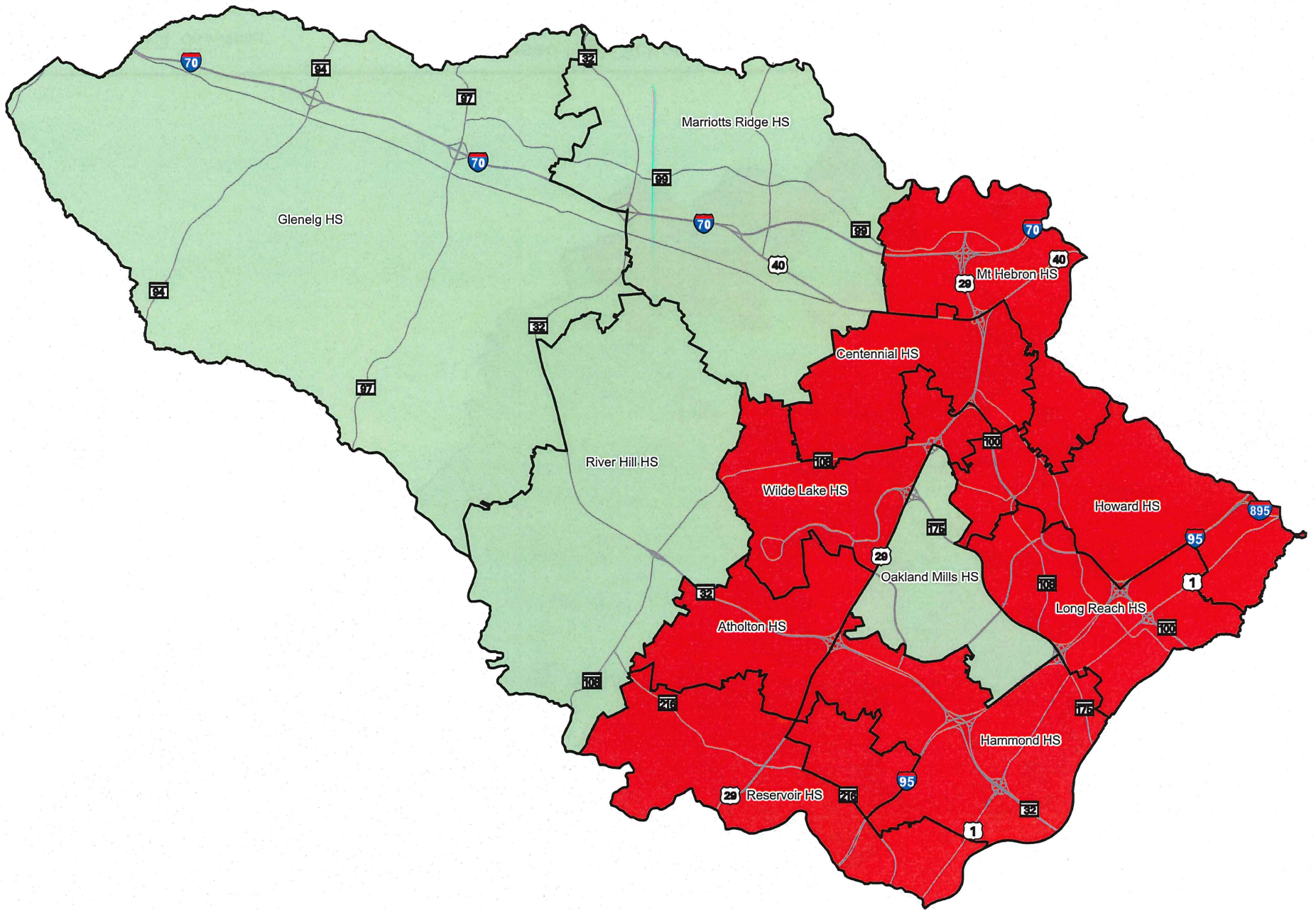


**Closed Middle School Districts (2020)**  
**Districts closed at 115% capacity**

- Open district
- Closed district

Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 17, 2017

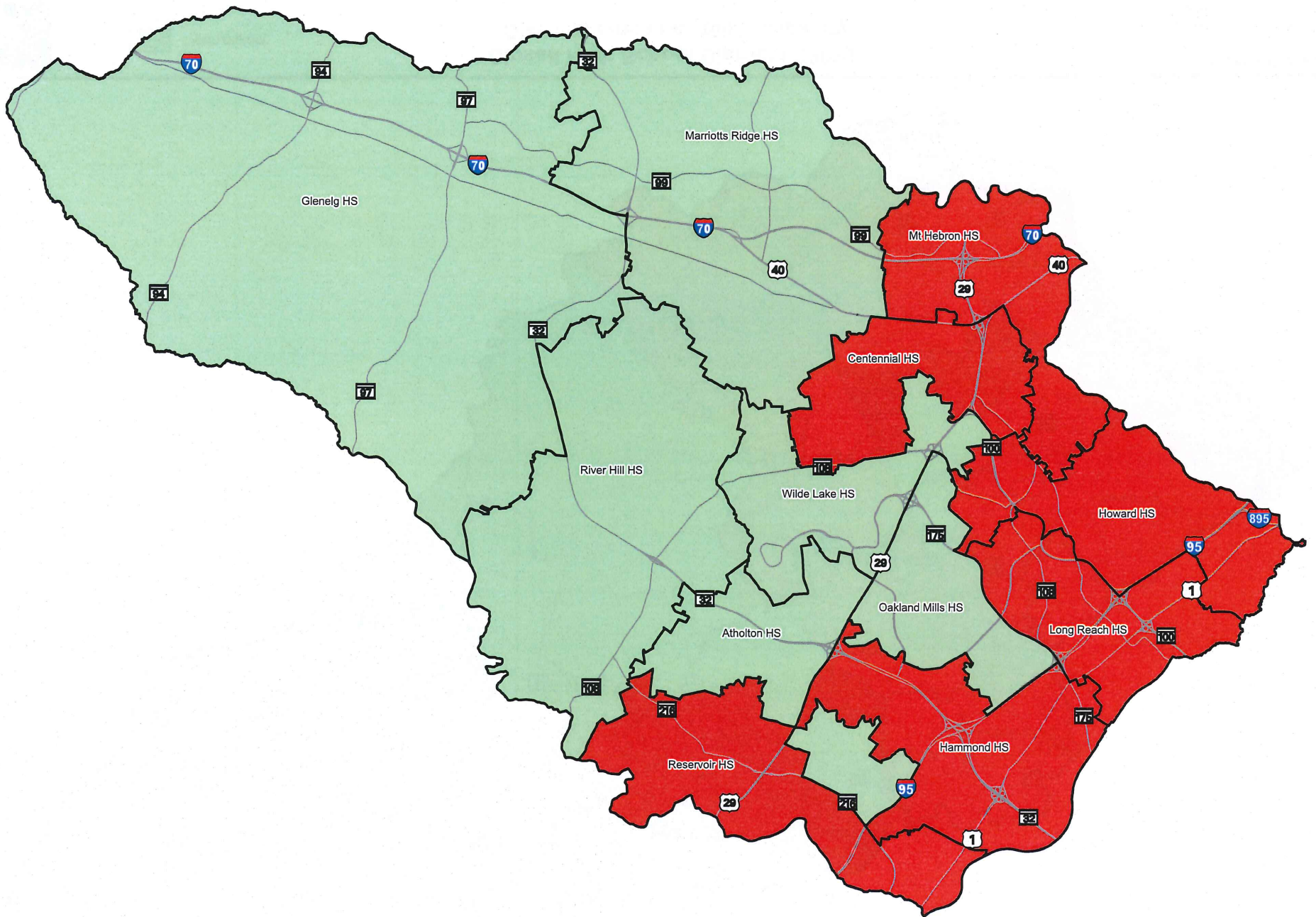




- Open district
- Closed district

**Closed High School Districts (2020)**  
**Districts closed at 100% capacity**

Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 13, 2017

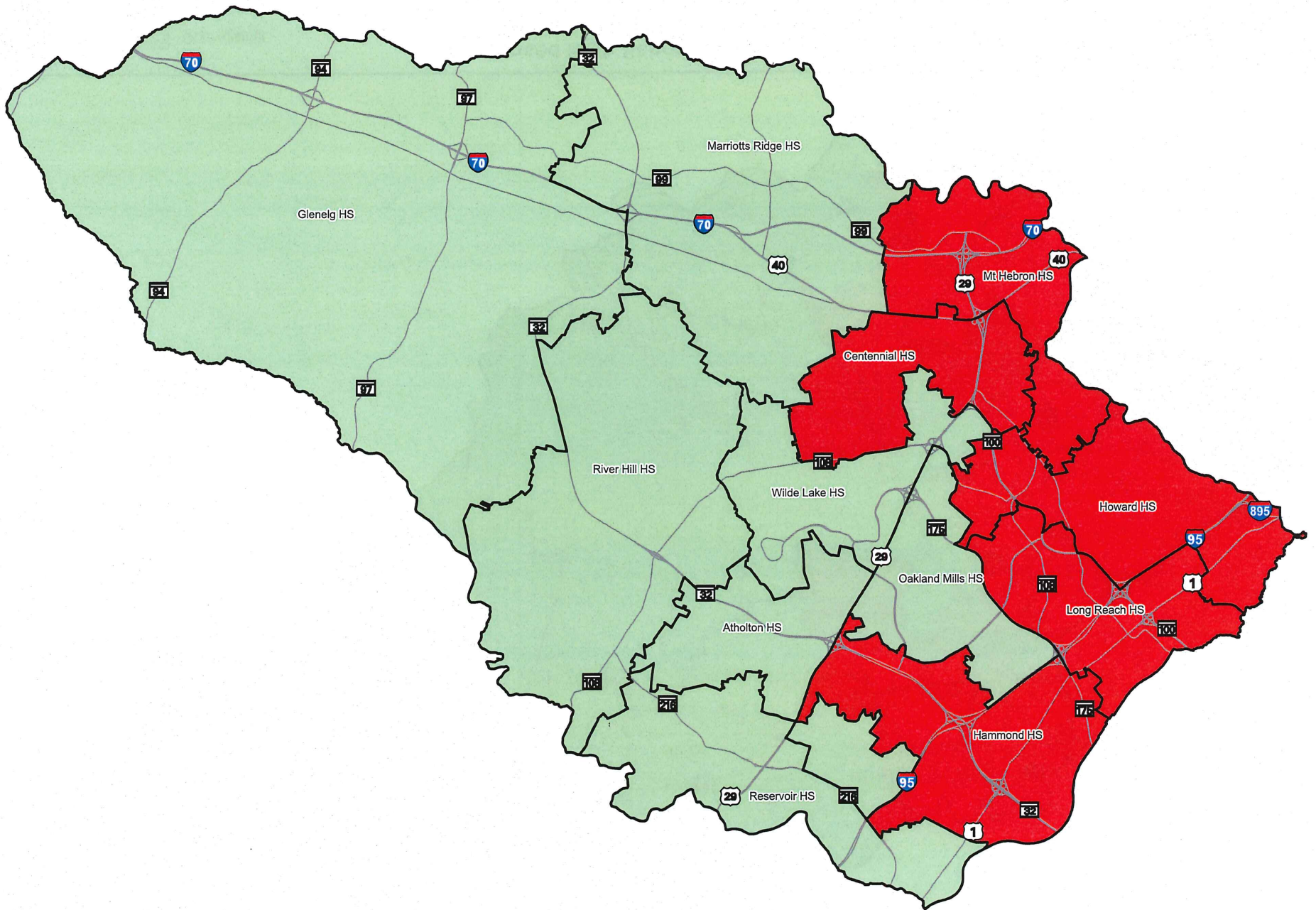


**Closed High School Districts (2020)**  
**Districts closed at 110% capacity**

Open district  
 Closed district

Department of Planning  
 and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 13, 2017

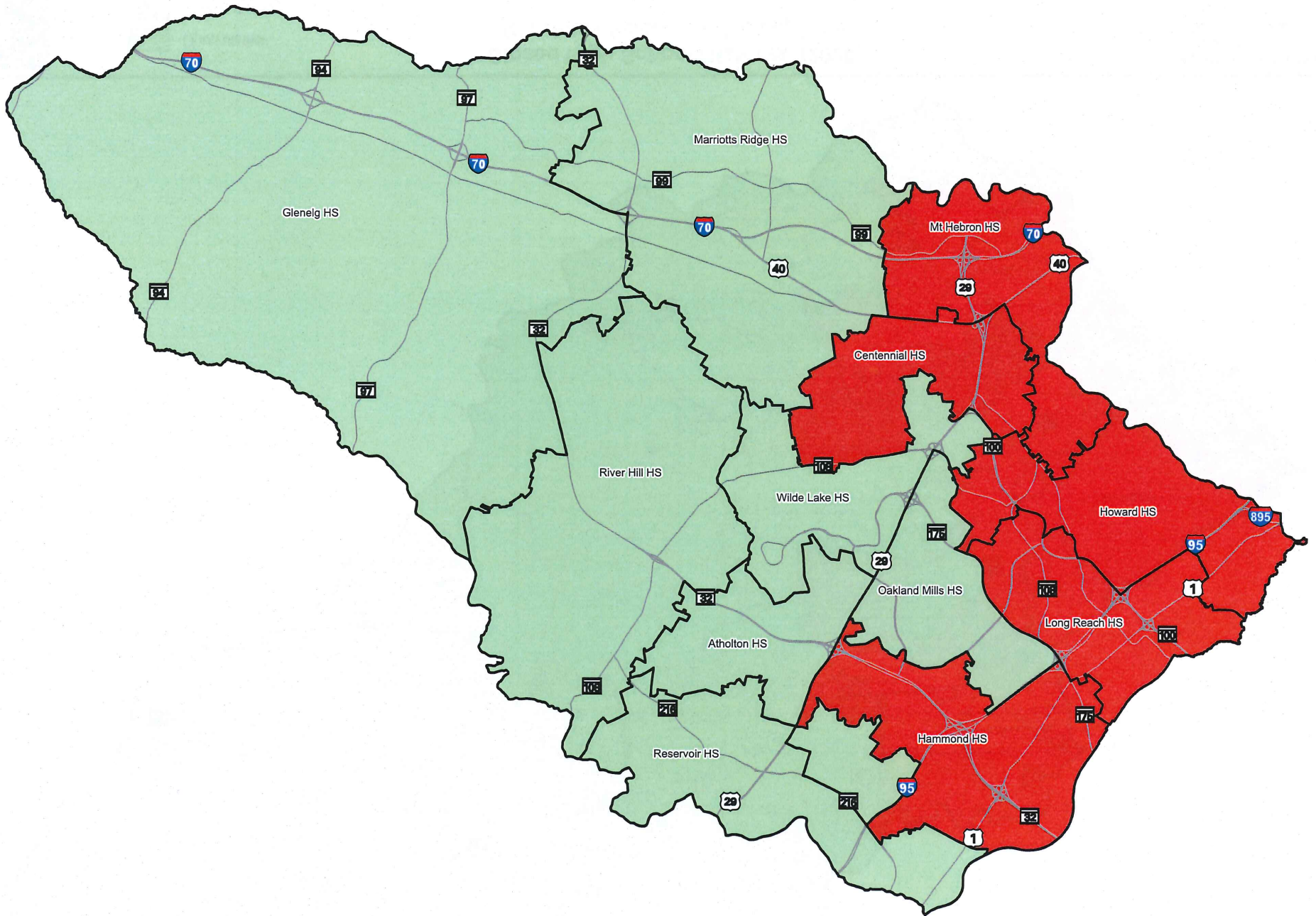




- Open district
- Closed district

**Closed High School Districts (2020)**  
**Districts closed at 115% capacity**

Department of Planning  
 and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 13, 2017



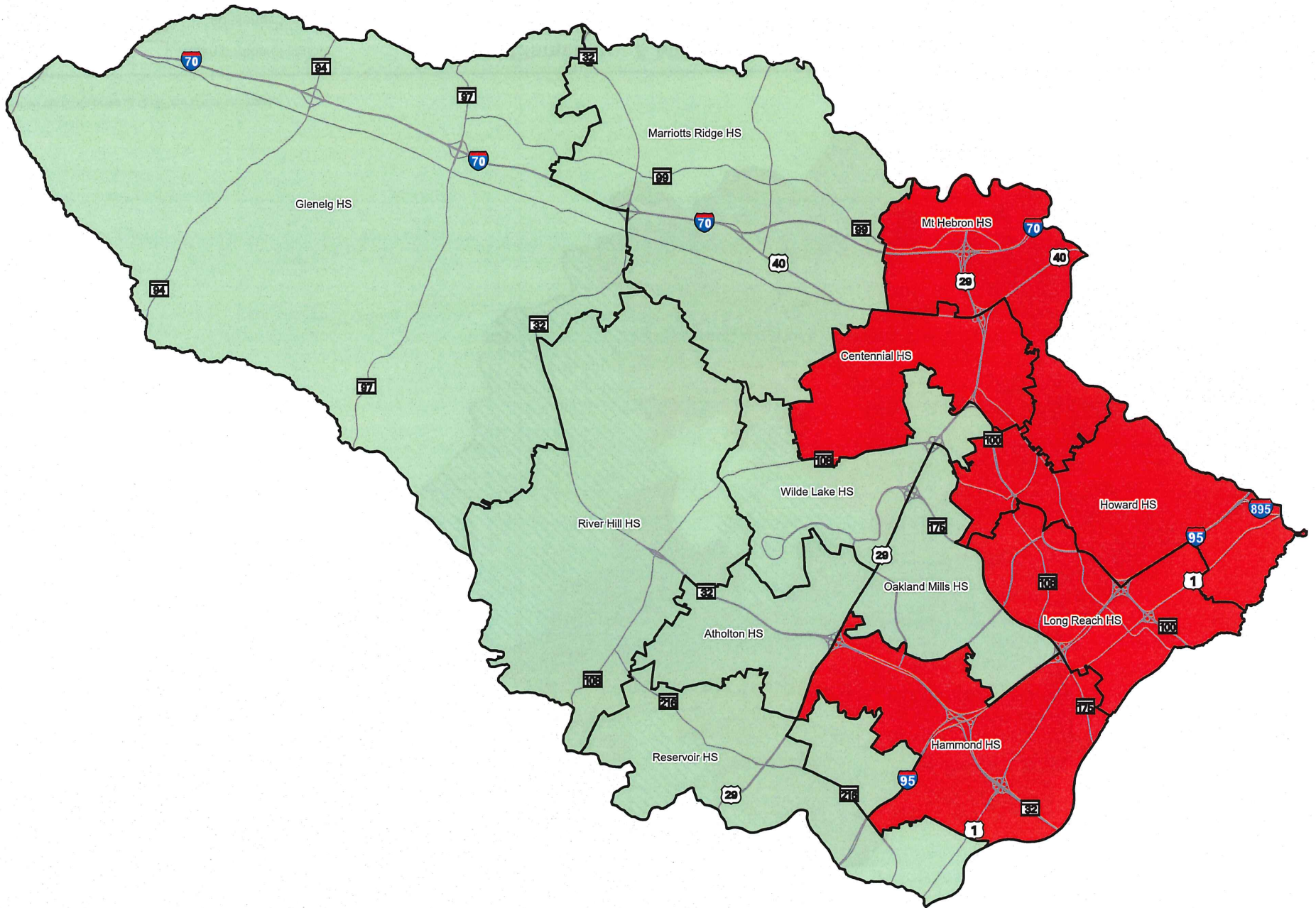
**Closed High School Districts (2020)**  
**Districts closed at 120% capacity**

- Open district
- Closed district



Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 18, 2017

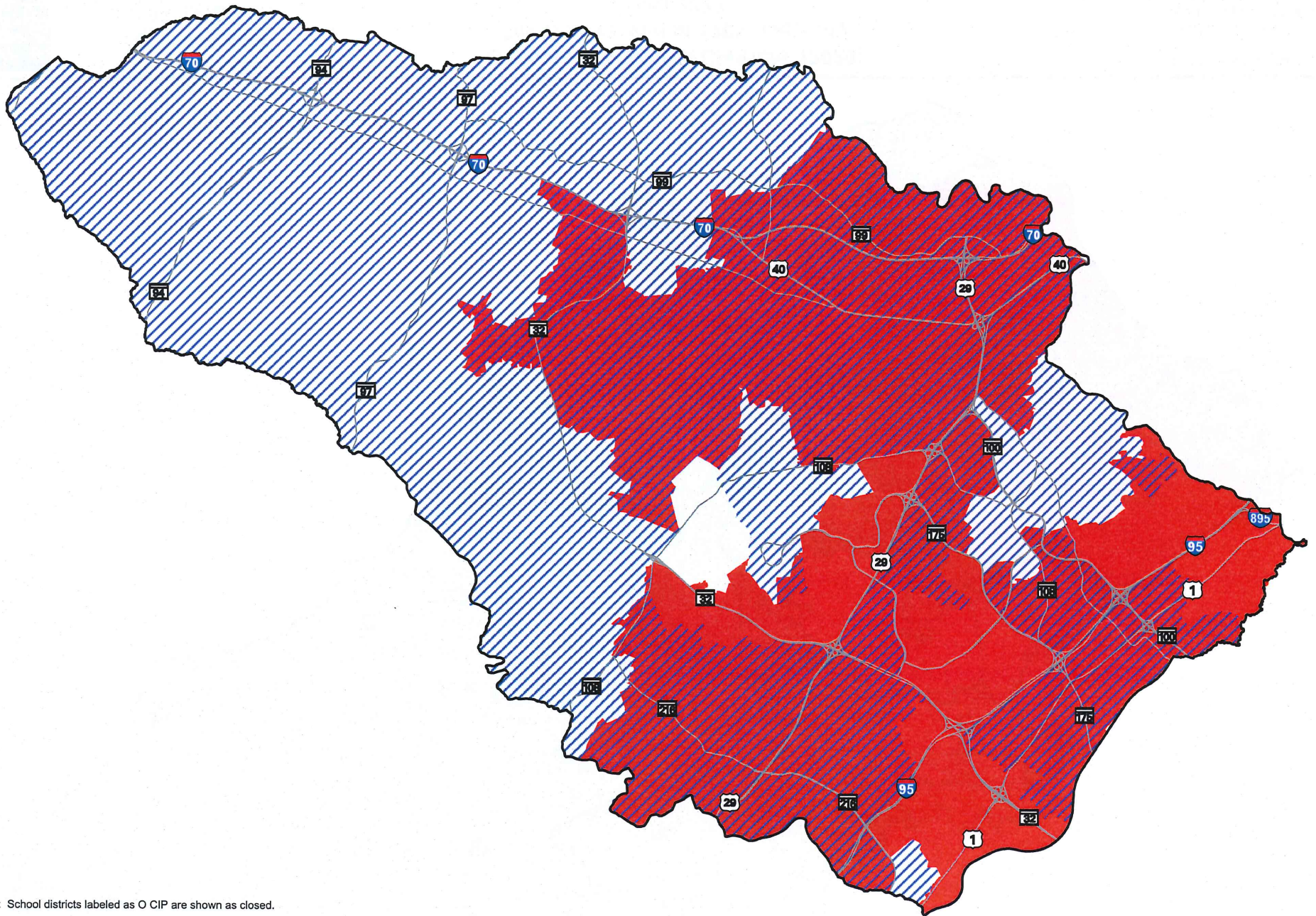




Open district  
 Closed district




**Closed High School Districts (2020)**  
**Districts closed at 120% capacity**  
**thru 2022**

Department of Planning  
 and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 18, 2017



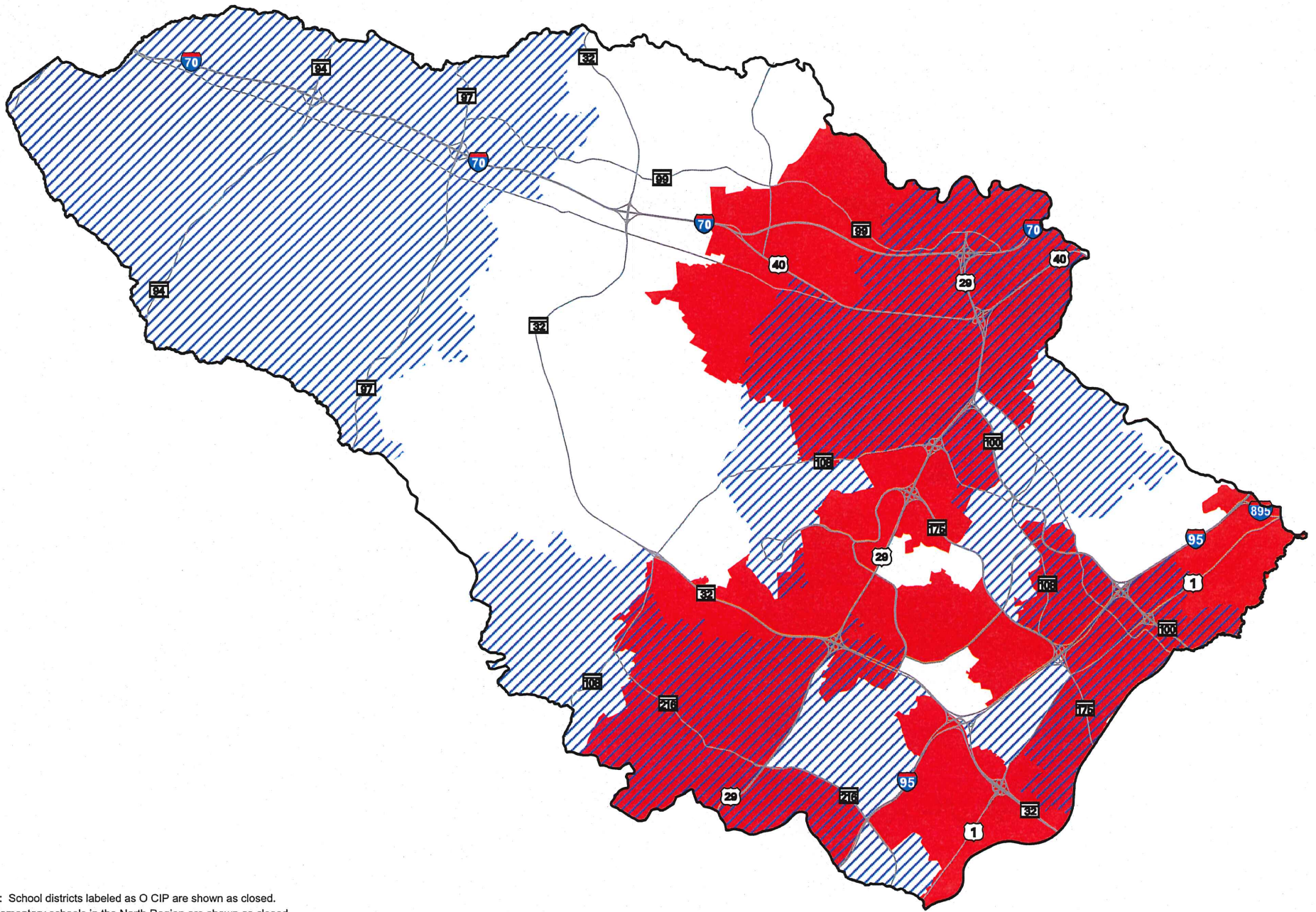
Note: School districts labeled as O CIP are shown as closed.



-  Open portion of county
-  Closed elementary district
-  Closed middle district

**Closed Elementary & Middle School Districts (2020)**  
**Districts closed at 100% capacity**

Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 18, 2017



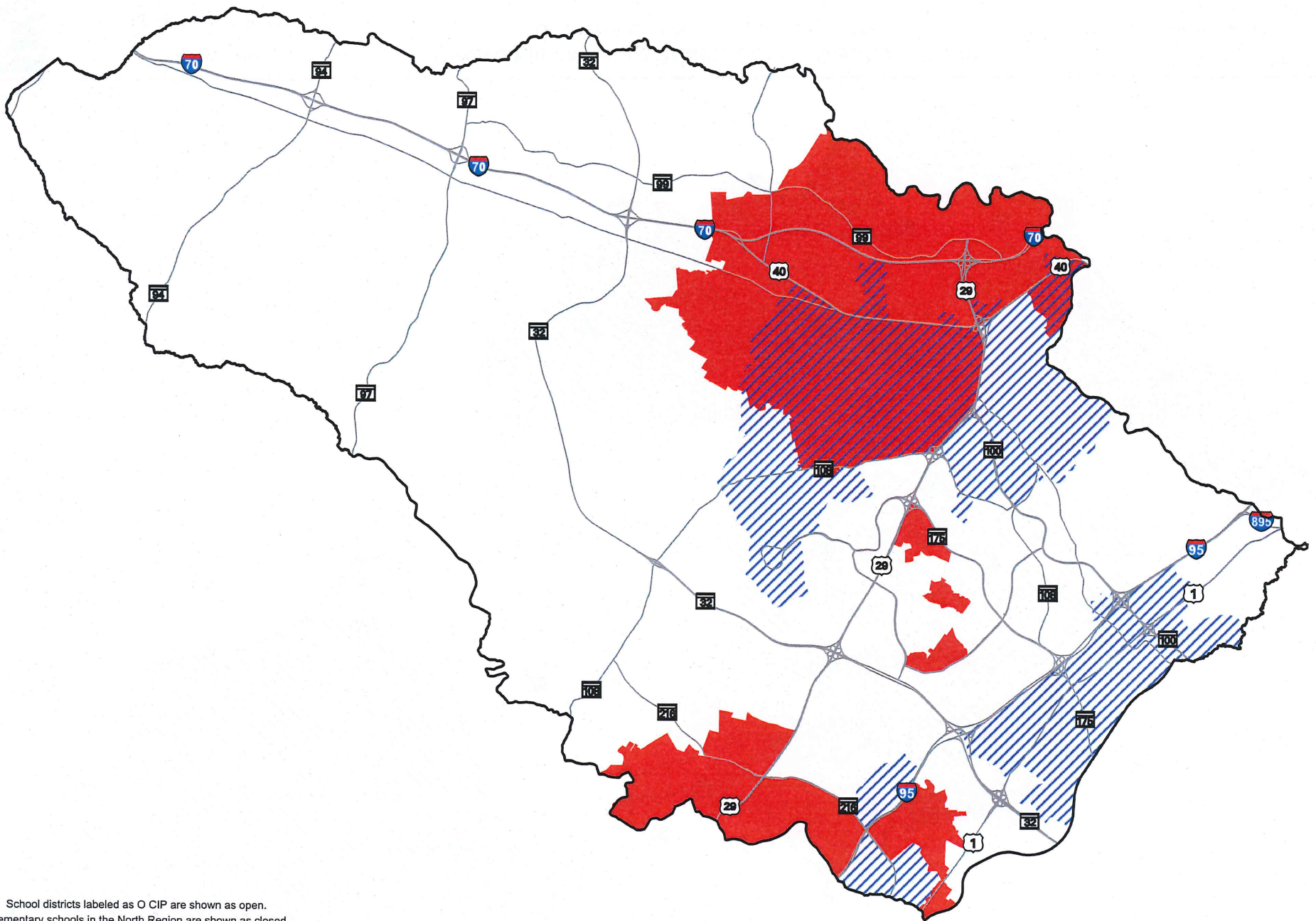
Note: School districts labeled as O CIP are shown as closed.  
 All elementary schools in the North Region are shown as closed.



- Open portion of the county
- Closed elementary district
- Closed middle district

### Closed Elementary & Middle School Districts (2020) Districts closed at 110% capacity

Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 18, 2017



Note: School districts labeled as O CIP are shown as open.  
 All elementary schools in the North Region are shown as closed.



- Open portion of the county
- Closed elementary district
- Closed middle district

**Closed Elementary & Middle School Districts (2020)**  
**Districts closed at 115% capacity**

Department of Planning and Zoning  
 Division of Research  
 Scale: 1 in = 14,000 ft  
 October 18, 2017

## Comparison of County APF Road Parameters

County	Number of Intersections Studied #	Trips required to trigger a study*	Type of intersection studied**	Minimum LOS***
Howard	1, Downtown Columbia up to 5	5 pht, 1 non-resid pht	Minor Collector and higher	D
Anne Arundel	2	If project creates significant impact	Arterial Highways	D
Calvert	Any intersection w/in 1 mile	40 pht	local roads and higher	Inside developed area D Outside the developed area C
Caroline	na	na	na	na
Carroll	Determined by a Prelim study with County	25 pht in planned areas or areas with known LOS of E or F. All other areas if 50 pht. N/A if under 25 pht	Arterial Highways	D
Charles	Determined by a Prelim study with County	5 pht, 1,200 sft Non-resid	Multi-Lane Highways & Signalized/Unsignalized Intersections	Development District & Village Centers (LOS C), Rural/Ag Conservation Area & Others (LOS B), Town Centers and Urban Core (LOD D)
Frederick	Intersections receiving 25% of the trips or more	5 pht, 1,200 sft Non-resid	Collector and higher	E or better if within growth boundaries and D or better outside of growth boundary.
Harford	Collectors w/in 2 miles	25 pht	Major Collector and higher	Inside developed area D Outside the developed area C
Montgomery	Up to 7	30 pht	Signalized intersections	Varies D-F
Prince George's	Agreement Req from County	5 pht, 5,000 sft Non-resid	Collector and higher	Developed (LOS E), Developing (LOS D), Rural (LOS C), In Metropolitan & Regional Centers (LOS E)
Queen Anne	Determined by a Prelim study with County	25 pht	Determined by a Prelim study with County	Determined by a Prelim study with County
St Mary's	1	2 pht, 5,000 sft Non-resid	Collector and higher	Urban areas D, all other areas C
Washington	Determined by a Prelim study with County	2 pht, 5,000 sft Non-resid	Determined by a Prelim study with County	Urban areas D, all other areas C

Parameters shaded grey are more restrictive than Howard County.

# Number of intersections studied in each direction from the development's access point(s).

\* Exemption: Data converted to trips generated by proposed development during the Peak Hour (PHT).

\*\* Road type classifications required to be studied

\*\*\* Minimum Acceptable Level of Service that does not require mitigation (LOS Category Range from A-F)