

## **Non-Interference Compliance**

Regarding Facility id 150415

Channel 286

### **Description of Exhibit 13 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

**Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.**

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Page 4 includes a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 7 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

**Note: The tallest buildings are no more than 20ft (6.1m) in height. This application provides 7.8m (25.6ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

### Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1246785	BMLH20080521AAQ	WRFQ	71.2	70.6
584316	BLH20011012AAX	WCOO	66.1	66.1
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>66.1</b>

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **66.1 dBμ**, this makes the proposed translator's worst-case interfering contour **106.1 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **549.5 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 6 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **7.8 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference.

**Note: The tallest buildings are no more than 20ft (6.1m) in height. This application provides 7.8m (25.6ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

<b>Antenna Manufacturer:</b>	<b>PSI</b>
<b>Antenna Model:</b>	<b>FML-2(.75)</b>
<b>CORAGL:</b>	<b>130 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>106.1 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>549.5 m</b>
<b>Min Ground Clearance:</b>	<b>7.8 m</b>

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.975	237.7	535.8	533.7	83.3
10	.903	203.9	496.2	488.7	43.8
15	.792	156.8	435.2	420.4	17.4
20	.650	105.6	357.2	335.6	7.8
25	.493	60.8	270.9	245.5	15.5
30	.331	27.4	181.9	157.5	39.1
35	.178	7.9	97.8	80.1	73.9
40	.043	0.5	23.6	18.1	114.8
45	.068	1.2	37.4	26.4	103.6
50	.149	5.6	81.9	52.6	67.3
55	.202	10.2	111.0	63.7	39.1
60	.227	12.9	124.7	62.4	22.0
65	.226	12.8	124.2	52.5	17.4
70	.205	10.5	112.6	38.5	24.1
75	.168	7.1	92.3	23.9	40.8
80	.118	3.5	64.8	11.3	66.1
85	.061	0.9	33.5	2.9	96.6
90	.001	0.0	0.5	0.0	129.5
Minimum Clearance above TGL:					<b>7.8 m</b>

**Propagation Systems Inc.**

Elevation Pattern Tabulation

Antenna: PSIFML-2 Special

Bay spacing: 3/4 wave

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.00	0.001	-60.000	-50.00	0.149	-16.513	-10.00	0.903	-0.883
-89.00	0.012	-38.221	-49.00	0.135	-17.364	-9.00	0.921	-0.713
-88.00	0.025	-32.201	-48.00	0.120	-18.405	-8.00	0.937	-0.561
-87.00	0.037	-28.679	-47.00	0.104	-19.677	-7.00	0.952	-0.429
-86.00	0.049	-26.207	-46.00	0.086	-21.289	-6.00	0.964	-0.315
-85.00	0.061	-24.285	-45.00	0.068	-23.404	-5.00	0.975	-0.219
-84.00	0.073	-22.748	-44.00	0.048	-26.425	-4.00	0.984	-0.139
-83.00	0.085	-21.443	-43.00	0.027	-31.481	-3.00	0.991	-0.079
-82.00	0.096	-20.349	-42.00	0.005	-46.848	-2.00	0.996	-0.036
-81.00	0.107	-19.378	-41.00	0.018	-34.664	-1.00	0.999	-0.009
-80.00	0.118	-18.538	-40.00	0.043	-27.417	0.00	1.000	0.000
-79.00	0.129	-17.792	-39.00	0.068	-23.365	1.00	0.999	-0.009
-78.00	0.139	-17.125	-38.00	0.094	-20.529	2.00	0.996	-0.036
-77.00	0.149	-16.522	-37.00	0.121	-18.329	3.00	0.991	-0.079
-76.00	0.159	-15.984	-36.00	0.149	-16.531	4.00	0.984	-0.139
-75.00	0.168	-15.508	-35.00	0.178	-14.998	5.00	0.975	-0.219
-74.00	0.176	-15.072	-34.00	0.207	-13.669	6.00	0.964	-0.315
-73.00	0.184	-14.685	-33.00	0.237	-12.489	7.00	0.952	-0.429
-72.00	0.192	-14.335	-32.00	0.268	-11.431	8.00	0.937	-0.561
-71.00	0.199	-14.026	-31.00	0.299	-10.475	9.00	0.921	-0.713
-70.00	0.205	-13.752	-30.00	0.331	-9.602	10.00	0.903	-0.882
-69.00	0.211	-13.518	-29.00	0.363	-8.801	11.00	0.884	-1.072
-68.00	0.216	-13.315	-28.00	0.395	-8.061	12.00	0.863	-1.279
-67.00	0.220	-13.146	-27.00	0.428	-7.377	13.00	0.841	-1.508
-66.00	0.224	-13.009	-26.00	0.460	-6.742	14.00	0.817	-1.757
-65.00	0.226	-12.904	-25.00	0.493	-6.151	15.00	0.792	-2.029
-64.00	0.228	-12.834	-24.00	0.525	-5.599	16.00	0.765	-2.322
-63.00	0.229	-12.800	-23.00	0.557	-5.083	17.00	0.738	-2.639
-62.00	0.229	-12.794	-22.00	0.589	-4.603	18.00	0.710	-2.979
-61.00	0.228	-12.829	-21.00	0.620	-4.154	19.00	0.680	-3.344
-60.00	0.227	-12.898	-20.00	0.650	-3.736	20.00	0.650	-3.736
-59.00	0.224	-13.009	-19.00	0.680	-3.344	21.00	0.620	-4.154
-58.00	0.220	-13.158	-18.00	0.710	-2.979	22.00	0.589	-4.603
-57.00	0.215	-13.351	-17.00	0.738	-2.639	23.00	0.557	-5.083
-56.00	0.209	-13.600	-16.00	0.765	-2.323	24.00	0.525	-5.599
-55.00	0.202	-13.894	-15.00	0.792	-2.029	25.00	0.493	-6.151
-54.00	0.194	-14.260	-14.00	0.817	-1.759	26.00	0.460	-6.742
-53.00	0.184	-14.685	-13.00	0.840	-1.510	27.00	0.428	-7.377
-52.00	0.174	-15.192	-12.00	0.863	-1.281	28.00	0.395	-8.061
-51.00	0.162	-15.795	-11.00	0.884	-1.072	29.00	0.363	-8.801
						30.00	0.331	-9.602

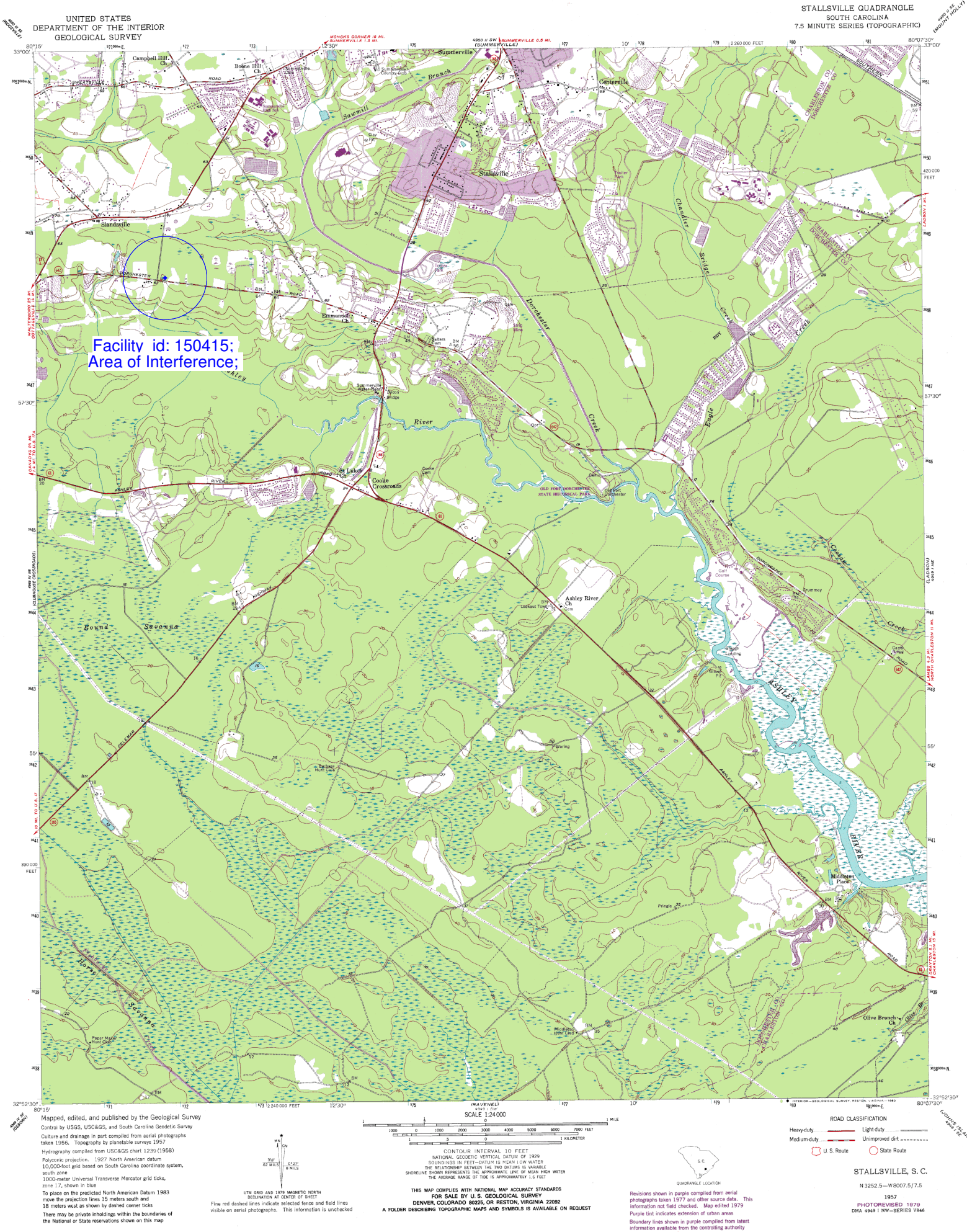
# **Adjacent Channel Study** **For Station W286AY, Facility\_id: 150415**

## **Co-channel through third adjacent:**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
584316	50729	BLH-20011012AAX	WCOO	L.M. COMMUNICATIONS II OF SOUTH CAROLINA	C2	KIAWAH ISLAND	SC	LIC	50	135	288	2	38	1.4918
1246785	38901	BMLH-20080521AAQ	WRFQ	CITICASTERS LICENSES, INC.	C1	MOUNT PLEASANT	SC	LIC	100	202	283	3	40.8	1.4918
1518365	153420	BPFT-20120927AOG	W285DV	EDGEWATER BROADCASTING, INC.	D	CHARLESTON	SC	APP	0.099	202	285	1	40.8	0
1517654	153420	BLFT-20120925AXG	W285DV	EDGEWATER BROADCASTING, INC.	D	CHARLESTON	SC	LIC	0.018	202	285	1	40.8	0
1345471	6485	BLH-20091216ACT	WGFG	MILLER COMMUNICATIONS, INC.	C3	BRANCHVILLE	SC	LIC	12.5	193.6	287	1	74.6	0
200700	40705	BLH-19940705KC	WLHH	LOW COUNTRY RADIO, LLC	C3	RIDGELAND	SC	LIC	16	128	285	1	88	0
1388189	66643	BLH-20100709AHP	WPDT	GLORY COMMUNICATIONS, INC.	C3	COWARD	SC	LIC	18	142	286	0	110.9	0
183148	66974	BLH-19930325KA	WRHQ	THOROUGHbred COMMUNICATIONS, INC.	C3	RICHMOND HILL	GA	LIC	11	150	287	1	132.6	0
696386	19472	BLH-20031030AAR	WNOK	CAPSTAR TX LLC	C1	COLUMBIA	SC	LIC	90	419	284	2	145.3	0
217985	3120	BLH-199601115K	WDAR-FM	QANTUM OF FLORENCE LICENSE COMPANY, LLC	C3	DARLINGTON	SC	LIC	17	166	288	2	152.7	0
1551279	59250	BPH-20130514AAA	WEKL	CAPSTAR TX LLC	C0	AUGUSTA	GA	CP	100	454	289	3	157.6	0
1287646	59250	BMLH-20090107AGS	WEKL	CAPSTAR TX LLC	C0	AUGUSTA	GA	LIC	100	454	289	3	157.6	0

## **Intermediate Frequencies (53 and 54 channels difference):**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
592290	31939	BLH-20020118AAA	WSCC-FM	CLEAR CHANNEL BROADCASTING LICENSES, INC	C3	GOOSE CREEK	SC	LIC	25	105	232	54	40.8	28.8
1007927	54503	BLH-20040818AAI	WSPX	GLORY COMMUNICATIONS, INC.	A	BOWMAN	SC	LIC	3.5	172	233	53	60.4	50.4
1429286	146391	BLFT-20110526AHC	W233AW	PARTNERS BROADCAST GROUP, LLC	D	BEAUFORT	SC	LIC	0.25	108	233	53	79.4	69.4



Facility id: 150415;  
Area of Interference;

Mapped, edited, and published by the Geological Survey  
Control by USGS, USCGS, and South Carolina Geodetic Survey  
Culture and drainage in part compiled from aerial photographs  
taken 1956. Topography by planetable surveys 1957  
Hydrography compiled from USGS chart 1239 (1958)  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on South Carolina coordinate system,  
south zone  
1000-meter Universal Transverse Mercator grid ticks,  
zone 17, shown in blue  
To place on the predicted North American Datum 1983  
move the projection lines 15 meters south and  
18 meters west as shown by dashed corner ticks  
There may be private inholdings within the boundaries  
of the National or State reservations shown on this map

UTM GRID AND 1979 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET  
Fine red dashed lines indicate selected fence and field lines  
visible on aerial photographs. This information is unchecked

SCALE 1:24,000  
CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929  
SOUNDINGS IN FEET-DATUM IS MEAN LOW WATER  
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE  
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER  
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 1.6 FEET  
THIS MAP COMPLETS WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY  
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22082  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled from aerial  
photographs taken 1977 and other source data. This  
information not field checked. Map edited 1979  
Purple tint indicates extension of urban areas  
Boundary lines shown in purple compiled from latest  
information available from the controlling authority

ROAD CLASSIFICATION  
Heavy-duty Light-duty  
Medium-duty Unimproved dirt  
U.S. Route State Route

STALLVILLE, S.C.  
N 3252.5-W 8007.5/7.5  
1957  
PHOTOREVISED 1979  
DMA 4449 1 NW-SERIES Y846



