



## **Accessible Pedestrian Signals**

### **Program Status Report**

December 2018

## **Program Overview**

The New York City Department of Transportation (NYC DOT) installs Accessible Pedestrian Signals (APSS) to assist pedestrians who are blind or have low vision in crossing the street. These devices provide information in non-visual formats, such as audible tones, speech messages, and vibrating surfaces, to alert vision-impaired pedestrians when the “walk” phase is available at a given intersection.

As of December 31, 2018, there were APS units installed at 371 intersections citywide. A list of these locations is included in this report and is available on NYC DOT’s website at [www.nyc.gov/dot](http://www.nyc.gov/dot).

Pursuant to Local Law 21 of 2012 (as codified in NYC Administrative Code Section 19-188), NYC DOT was installing APS units at each corner of 25 intersections each year. Effective January 1, 2016, Local Law 60 of 2014 required NYC DOT to install APS units at 75 intersections each year. Starting in 2019, DOT plans to install APS at 150 locations per year for the next 2 years, doubling APS installations annually. The agency works closely with the Mayor’s Office for People with Disabilities (MOPD) and the visually impaired community, such as the group Pedestrians for Accessible and Safe Streets (PASS), to identify intersections which present a crossing difficulty for persons with visual impairments, such as intersections with Leading Pedestrian Intervals (LPI), delayed turns (split LPI) and Exclusive Pedestrian Phases (EPP) such as Barnes Dance and mid-block locations. NYC DOT also considers all applicable accessibility laws and regulations as well as locations that are recommended by constituents and elected officials.

NYC DOT establishes a ranked priority list of intersections for the installation of APSS based on established criteria, including but not limited to off-peak traffic presence, current traffic-signal patterns and the complexity of the intersection’s geometry, including crossing distance. These criteria are set forth by the National Cooperative Highway Research Program (NCHRP) and the most recent version of the federal Manual on Uniform Traffic Control Devices (MUTCD). Final scores are based on the individual crosswalk and intersection scores for each location, and ultimately determine priority for installation. This report includes the list of the one hundred fifty (150) top-ranked intersections as of December 31, 2018.

## **Cost and Funding Sources**

The cost per intersection averages approximately \$60,930. For the 85 intersections where APS were installed over the past year, the total cost was \$5,178,780.

The baseline estimated cost to furnish and install an APS unit on an existing pole is \$1,010. A standard four-legged intersection would require eight units (2 per corner quadrant), meaning that the minimum estimated cost per intersection is at least \$8,080. In actuality, however, an intersection typically requires additional work that increases the cost of the installation, bringing the average cost to approximately \$60,930 per location. For example, most intersections do not have pedestrian signal poles at the location required for APS installation (i.e., adjacent to a

pedestrian ramp) requiring the construction of new poles at additional cost. Other factors, such as utilities located underneath the intersection, additional conduit runs, fire alarm posts to be relocated, stricter roadway restoration requirements, protected street segments or intersections that have been resurfaced or reconstructed within the last five years, and distinctive sidewalk material may add to the total cost of installation. Overall, the costs for each intersection varies depending on the number of additional poles needed, geometry and complexity of the intersection.

City funding is used to procure contracts for the installation of all APS devices.

### **Recommendations for Improvements and Availability of New Technology**

NYC DOT is continuously researching new technologies and instituting updates to enhance the APS program. The agency in recent years replaced the last remaining older types of APSs, which provided “birdcalls” from overhead speakers mounted on the pedestrian signal to alert visually impaired pedestrians when it is safe to cross. These older devices were louder, emitted a noise with every walk display regardless of pedestrian demand, and used a different bird call for each crossing, which confused the user. In addition, the older devices did not provide crossing information as new types of APS units do.

The new type of APS unit used by NYC DOT was tested and approved for use in New York City in 2011, and features a distinct rapid ticking tone that can be adjusted based on the needs of a specific intersection. They also feature a raised vibrating tactile arrow at the pedestrian pushbutton location, which a user can find by a locator tone. These units are installed in close proximity to each pedestrian crossing ramp so that there is no confusion which APS unit is for which crossing. Upon pushing the button, the arrow will vibrate and there will be a rapid percussive tone or audible message when the “walk” signal is displayed.

NYC DOT is constantly evaluating new technologies for use in the APS program. We currently have a contract with the University Transportation Research Center (UTRC). This multi-year contract provides NYC DOT ongoing research and development programs pertaining to urban Intelligent Transportation Systems (ITS) deployment. One of the tasks under this contract is to research “**Pedestrians and Cyclists Safety Using ITS Technologies in NYC**”. The purpose of this task is to gather knowledge about all new and innovative technologies and methodologies and determine the most useful countermeasures that could be used in NYC to reduce pedestrian/cyclist injuries, conflicts, crashes and fatalities to meet the goals of the Mayor’s “Vision Zero” Action Plan.

Specific attention will be given to the smartphone technologies associated with APS units. Research will be conducted to determine the latest and most innovative technologies currently being implemented nationally and internationally and under what conditions these new technologies are most beneficial for New York City.

The final outcome of this task will be a report providing a method to objectively look at each potential measure and come up with a recommendation to decide under what conditions each

countermeasure should be used. NYC DOT will continue to evaluate the potential uses of new technologies on the market to assist blind and low vision individuals in navigating the city's roadways.

NYCDOT is also working with two companies in an initiative titled "Call to Innovation" to develop technologies that provide mobility guidance for the visually impaired and make it easier and safer for them to navigate the streets of New York City. The objective of the project is to create a solution that will guide blind and low vision pedestrians through an intersection utilizing an intelligent transportation system (ITS) solution. NYCDOT will first test the solution on the intersection of West 23<sup>rd</sup> Street and 7<sup>th</sup> Avenue, in Manhattan. This intersection was chosen due to its diverse street geometrics and proximity to several facilities that work with the blind and low-vision community. The goals of the project are listed below:

- Provide information on street geography, including obstacles, street names, number of lanes, and presence of bus and bicycle lanes.
- Sync in real-time and with 100% accuracy to the signal timing of the pedestrian signal head.
- Operate at sub-meter geographic precision.
- Operate properly in the direction of travel. The technology must operate correctly in the intended direction of travel and must clearly announce the name of the street being crossed.

Some recommendations for enhancing NYC DOT's APS program include, but are not limited to:

- Continued evaluation of the structure of the APS program for possible improvements to staffing and funding levels and sources.
- Further research of new technologies to enhance the APS program.
- Continued dialogue with blind and low vision advocacy groups.
- Participation in any future USDOT Vehicle-to-Infrastructure testing opportunities that will offer positioning and computing capabilities to a traveler and the ability to interact with infrastructure, utilizing systems that communicate with roadside equipment using many tools, including dedicated short range communications (DSRC), 3G, 4G, Wi-Fi and Bluetooth.

## Accessible Pedestrian Signals Locations in New York City

As of December 31, 2018

No.	Location	Borough
1	14th Avenue and 36th Street (New York Industries for the Blind)	Brooklyn
2	3rd Avenue and 33rd Street	
3	4th Avenue and 36th Street	
4	4th Avenue and 39th Street	
5	4th Avenue and 44th Street	
6	4th Avenue and 45th Street	
7	4th Avenue and 54th Street	
8	4th Avenue and 55th Street	
9	4th Avenue and 59th Street	
10	4th Avenue and 60th Street	
11	4th Avenue and 9th Street	
12	4th Avenue and Union Street	
13	5th Avenue and 89th Street	
14	86th Street and Bay 22nd Street	
15	86th Street between 4th Avenue and 5th Avenue	
16	86th Street between West 8th Street and West 9th Street (mid-block)	
17	Adams Street between Fulton Street and Johnson Street (mid-block)	
18	Adams Street/Boerum Place and Fulton Street	
19	Adams Street/Boerum Place and Livingston Street	
20	Atlantic Avenue and 3rd Avenue	
21	Atlantic Avenue and Boerum Place	
22	Atlantic Avenue and Bond Street	
23	Atlantic Avenue and Brooklyn Avenue	
24	Atlantic Avenue and Clermont Avenue	
25	Atlantic Avenue and Hoyt Street	
26	Atlantic Avenue and Nevins Street	
27	Atlantic Avenue and Smith Street	
28	Avenue J and East 27th Street	
29	Avenue K and East 29th Street	
30	Avenue U and Ocean Avenue	
31	Avenue X and Brown Street	
32	Avenue Y and East 29th Street	
33	Avenue Y and East 26th Street	
34	Avenue Z and East 6th Street	
35	Bedford Avenue and Lafayette Avenue	
36	Bedford Avenue between Avenue I and Campus Road (mid-block)	
37	Boerum Place and Schermerhorn Street	

38	Boerum Place and State Street	Brooklyn
39	Brighton Beach Avenue and Coney Island Avenue	
40	Cadman Plaza West and Montague Street	
41	Caton Avenue and East 8th Street	
42	Church Avenue and Dahill Avenue (New York Industries for the Blind)	
43	Church Avenue and McDonald Avenue (New York Industries for the Blind)	
44	Court Street and Atlantic Avenue	
45	Court Street and Livingston Street	
46	Court Street and Schermerhorn Street	
47	Court Street and State Street	
48	Court Street with Remsen and Joralemon Street	
49	Cropsey Avenue and Bay 32nd Street	
50	Cropsey Avenue and Bay 35th / 24th Avenue	
51	Cropsey Avenue and Bay 49th Street	
52	DeKalb Avenue and Hudson Avenue	
53	Dekalb Avenue and S Portland Avenue	
54	Ditmas Avenue and East 5th Street	
55	Driggs Avenue and Union Avenue (mid-block)	
56	East New York Avenue at Dean Street and Sackman Street	
57	Flatbush Avenue and Dekalb Avenue	
58	Flatbush Avenue and Glenwood Road (west leg)	
59	Flatbush Avenue and Lafayette Avenue	
60	Flatbush Avenue and Willoughby Street	
61	Flatbush Avenue at Fulton Street and Nevins Street	
62	Flatbush Avenue between Avenue U and Avenue V (mid-block)	
63	Flatbush Avenue with Brooklyn Avenue and Avenue J	
64	Flatbush Avenue with Glenwood Road and East 29th Street (East Leg)	
65	Flatbush Avenue with Nostrand Avenue and Hillel Place	
66	Flatlands Avenue and East 107th Street	
67	Flushing Avenue and Bogart Street	
68	Flushing Avenue and Skillman Street	
69	Flushing Avenue and Warsoff Place	
70	Franklin Avenue and Lafayette Avenue	
71	Fulton Street and Crescent Street	
72	Fulton Street with Lafayette Avenue and Fort Greene Place	
73	Graham Avenue and Maujer Street (500' South)	
74	Hanson Place and St. Felix Street	
75	Hillel Place and Campus Road (North Side)	
76	Jay Street and Metrotech Roadway (North Leg)	
77	Jay Street and Metrotech Roadway (South Leg)	

78	Jay Street and Willoughby Street	Brooklyn	
79	Jay Street/Smith Street and Fulton Street		
80	Lenox Road and East 42nd Street		
81	Linden Boulevard and Christopher Avenue (mid-block)		
82	Livingston Street and Bond Street		
83	Livingston Street and Hoyt Street		
83	Livingston Street at Nevins Street		
85	McDonald Avenue and Ditmas Avenue		
86	Neptune Avenue and Shore Boulevard		
87	Nevins Street and State Street		
88	New Lots Avenue and Powell Street		
89	New Utrecht Avenue and 62nd Street		
90	Nostrand Avenue and Erasmus Street		
91	Nostrand Avenue and Glenwood Road		
92	Ocean Avenue and Prospect Park North Entrance (mid-block)		
93	Ocean Avenue and Prospect Park South Entrance (mid-block)		
94	Pennsylvania Avenue and Freeport Loop (North Leg)		
95	Rochester Avenue and Dean Street		
96	Rockaway Pkwy at Brookdale Hospital entrance (w of Linden Blvd)		
97	Rutland Road with East 52nd Street and Remsen Avenue		
98	Schermerhorn Street and Nevins Street		
99	Smith Street and Livingston Street		
100	Surf Avenue and West 29th Street		
101	Voorhies Avenue and East 18th Street		
102	10th Avenue and West 55th Street		Manhattan
103	12th Avenue and West 23rd Street		
104	1st Avenue and East 122nd Street		
105	1st Avenue and East 14th Street		
106	1st Avenue and East 15th Street		
107	1st Avenue and East 16th Street		
108	1st Avenue and East 17th Street		
109	1st Avenue and East 18th Street		
110	1st Avenue and East 19th Street		
111	1st Avenue and East 20th Street		
112	1st Avenue and East 21st Street		
113	1st Avenue and East 22nd Street		
114	1st Avenue and East 23rd Street		
115	1st Avenue and East 28th Street		
116	1st Avenue between E 30th Street and E 33rd Street		
117	2nd Avenue and East 23rd Street		
118	2nd Avenue and East 98th Street		

119	2nd Avenue and Pedestrian Crossing (East 107th Street)	Manhattan
120	2nd Avenue and Pedestrian Crossing (East 114th Street)	
121	2nd Avenue and Stuyvesant Square (East 16th Street)	
122	3rd Avenue and East 23rd Street	
123	3rd Avenue and East 59th Street (Lighthouse)	
124	3rd Avenue and East 72nd Street	
125	3rd Avenue and Pedestrian Crossing at East 113th Street	
126	3rd Avenue and Pedestrian Crossing at East 114th Street	
127	5th Avenue and 125th Street	
128	5th Avenue and 58th Street and Grand Army Plaza	
129	5th Avenue and East 23rd Street	
130	5th Avenue at Pedestrian Crossing (West/East 113th Street)	
131	5th Avenue with East 124th and West 124th Streets	
132	6th Avenue / Avenue of The Americas and West 9th Street	
133	7th Avenue and West 23rd Street	
134	7th Avenue and West 32nd Street	
135	7th Avenue and West 47th Street	
136	8th Avenue and West 130th Street	
137	8th Avenue and West 23rd Street	
138	8th Avenue and West 55th Street	
139	8th Avenue between West 31st and West 32nd Streets	
140	9th Avenue and West 23rd Street	
141	9th Avenue and West 27th Street	
142	9th Avenue and West 43rd Street	
143	Amsterdam Avenue and Pedestrian crossing 200' North of West 62nd Street	
144	Amsterdam Avenue and West 113th Street	
145	Amsterdam Avenue and West 114th Street	
146	Amsterdam Avenue at Pedestrian Crossing (West 117th Street)	
147	Amsterdam Avenue pedestrian crossing (btwn West 123rd and La Salle Sts)	
148	Avenue D and East 11th Street	
149	Avenue D and East 3rd Street	
150	Avenue of the Americas and 23rd Street (Selis Manor)	
151	Avenue of the Americas with Dominick Street and Clark Street	
152	Battery Place and Washington Street	
153	Beekman Street and Nassau Street	
154	Beekman Street and Williams Street	
155	Broadway & 5 <sup>th</sup> Avenue between 23 <sup>rd</sup> Street and 24 <sup>th</sup> Street	
156	Broadway & 7th Avenue with West 43rd Street	
157	Broadway & 7th Avenue with West 44th Street	



158	Broadway & 7th Avenue with West 45th Street	Manhattan
159	Broadway & 7th Avenue with West 46th Street	
160	Broadway and Astor Place	
161	Broadway and Bowling Green	
162	Broadway and East 96th Street	
163	Broadway and West 117th Street (mid-block crossing)	
164	Broadway and West 164th Street	
165	Broadway and West 175th Street	
166	Broadway and West 23rd Street	
167	Broadway and West 64th Street	
168	Broadway and West 65th Street	
169	Broadway and West 66th Street	
170	Broadway and West 79th Street	
171	Broadway with Dyckman Street and Riverside Drive	
172	Broadway with West 218th Street and 10th Avenue	
173	Central Park West and Pedestrian Crossing (West 79th Street)	
174	Central Park West and West 65th Street (North/East/West Legs-Phase II)	
175	Central Park West and West 65th Street (South Leg-Phase I)	
176	Central Park West and West 72nd Street	
177	Centre Street and Brooklyn Bridge Exit	
178	Centre Street and Franklin Walk	
179	Cherry Street and Rutgers Street	
180	Clinton Street between East Broadway and Grand Street	
181	Columbus Avenue and West 64th Street	
182	Columbus Avenue and West 65th Street	
183	Columbus Avenue and West 66th Street	
184	Columbus Avenue and West 97th Street	
185	Columbus Avenue and West 98th Street Pedestrian Crossing	
186	Columbus Avenue mid-block crossing between West 100th Street and West 104th Street (West 102nd Street)	
187	Columbus Avenue mid-block crossing between West 100th Street and West 104th Street (West 103rd Street)	
188	Columbus Avenue mid-block crossing between West 97th Street and West 100th Street (West 99th Street)	
189	East 37th Street and FDR Drive	
190	East Broadway between Catherine Street and Market Street	
191	East End Avenue and East 85th Street	
192	East Houston Street and Pitt Street	
193	Edgecombe Avenue and West 164th Street	
194	Fifth Avenue and West 99th Street (pedestrian crossing)	

195	Fifth Avenue pedestrian crossing (btwn East 132nd and East 135th Streets)	Manhattan
196	Frederick Douglass Boulevard (8th Avenue) and West 125th Street	
197	Frederick Douglass Boulevard and West 156th Street	
198	Gold Street and Beekman Street	
199	Gold Street and Fulton Street	
200	Gold Street and Spruce Street	
201	Grand Street and Ridge Street	
202	Greenwich Street and Barclay Street	
203	Lafayette Street and Pedestrian crossing (Pearl Street)	
204	Lexington Avenue and East 113th Street (Pedestrian Crossing)	
205	Lexington Avenue and East 114th Street (Pedestrian Crossing)	
206	Lexington Avenue and East 23rd Street	
207	Lexington Avenue and East 25th Street	
208	Lexington Avenue and East 42nd Street	
209	Lexington Avenue and East 43rd Street	
210	Lexington Avenue and East 52nd Street	
211	Lexington Avenue and East 59th Street (Lighthouse)	
212	Madison Avenue and East 100th Street pedestrian crossing (mid-block)	
213	Madison Avenue and East 113th Street pedestrian crossing (mid-block)	
214	Madison Avenue and East 114th Street pedestrian crossing (mid-block)	
215	Madison Avenue and East 133rd Street	
216	Madison Avenue and East 134th Street	
217	Madison Avenue and East 23rd Street	
218	Madison Street and 300' west of Jackson Street	
219	Madison Street and Jefferson Street	
220	Maiden Lane at Front Street	
221	Malcolm X Boulevard (Lenox Avenue) and West 145th Street	
222	Murray Street and 270' West of West Street	
223	Park Avenue and East 113th Street pedestrian crossing (mid-block)	
224	Park Avenue and East 59th Street (Lighthouse)	
225	Park Avenue South and East 23rd Street	
226	Riverside Drive and 200' North of West 181st Street (mid-block)	
227	Riverside Drive and West 94th Street	
228	Riverside Drive and West 103rd Street	
229	Riverside Drive and West 106th Street	
230	Riverside Drive and West 112th Street (mid-block crossing)	
231	Riverside Drive and West 138th Street	
232	Riverside Drive and West 151st Street	

233	Riverside Drive and West 163rd Street	Manhattan
234	Riverside Drive East and Grants Tomb (North of 122nd St)	
235	Riverside Drive North Triangle (Tiemann Stairs)	
236	St James Place and James Street	
237	St Nicholas Avenue and Pedestrian Crossing between West 130th and West 133rd Streets	
238	St Nicholas Avenue and West 125th Street	
239	St Nicholas Avenue and West 156th Street	
240	Stone Street and Broad Street	
241	Stone Street and Whitehall Street	
242	Vesey Street between North End Avenue and West Street	
243	Washington Square South and Thompson Street	
244	Water Street and Fulton Street	
245	West 125th Street at 400' east of Frederick Douglass Boulevard	
246	West 125th Street at 400' west of Lenox Avenue	
247	West 125th Street at 450' west of 5th Avenue	
248	West 155th Street with Edgecombe Avenue and HRD / St Nicholas Place	
249	West 23rd Street between 5th Avenue and 6th Avenue (Mid-block)	
250	West 34th Street between 7th and 8th Avenues	
251	West 34th Street between 8th Avenue and 9th Avenue (mid-block)	
252	West 34th Street between Broadway, 6th and 7th Avenues	
253	West 42nd Street between 5th Avenue and 6th Avenue	
254	West 42nd Street between 7th Avenue and 8th Avenue	
255	West 42nd Street between 8th Avenue and 9th Avenue	
256	West 53rd Street between 5th and 6th Avenues	
257	West 57th Street between 5th Avenue and 6th Avenue	
258	West 57th Street between 6th Avenue and 7th Avenue (Mid-block)	
259	West 57th Street between 8th Avenue and 9th Avenue (Mid-block)	
260	West End Avenue and Pedestrian Crossing (120' north of West 67th Street)	
261	West End Avenue and Pedestrian Crossing (West 69th Street)	
262	York Avenue and East 62nd Street	Queens
263	110th Avenue and Sutphin Boulevard	
264	137th Avenue and 172nd Street	
265	145th Avenue and Springfield Boulevard	
266	150th Street and 15th Drive	
267	20th Avenue and Whitestone Expressway (Northbound Service Road)	
268	20th Avenue and Whitestone Expressway (Southbound Service Road)	
269	27th Avenue and 8th Street (Goodwill Industries)	
270	36th Avenue and 23rd Street	
271	37th Avenue and 78th Street	

272	47th Avenue and 192nd Street	Queens
273	47th Street and 48th Avenue	
274	Archer Avenue and Parsons Boulevard	
275	Atlantic Avenue and 84th Street	
276	Austin Street with 71st Avenue and Continental Avenue	
277	Beach 102nd Street and Rockaway Beach Blvd West Leg	
278	Clintonville Street and Locke Avenue	
279	Corona Avenue and 94th Street	
280	Eliot Avenue and 72nd Street	
281	Francis Lewis Boulevard and 35th Avenue	
282	Harper Street and Marina Road	
283	Hempstead Avenue and 221st Street	
284	Hillside Avenue and 178th Street/Edgerton Boulevard	
285	Hillside Avenue and 199th Street	
286	Hillside Avenue and 256th Street	
287	Hillside Avenue with Merrick Boulevard and 166th Street	
288	Jamaica Avenue and 196th Street	
289	Jamaica Avenue and Springfield Boulevard	
290	Kissena Boulevard and Elder Avenue	
291	Kissena Boulevard and Sanford Avenue	
292	Little Neck Parkway and 86th Avenue	
293	Main Street and 41st Road	
294	Main Street and Northern Boulevard	
295	Marathon Parkway and 57th Avenue	
296	Merrick Boulevard and 231st Street	
297	Myrtle Avenue and 82nd Street	
298	Northern Boulevard and 112th Street	
299	Northern Boulevard and 33rd Street	
300	Northern Boulevard and 90th Street	
301	Northern Boulevard and Alley Pond Environmental Center (750' East of Cross Island Northbound)	
302	Northern Boulevard at 211th Street	
303	Northern Boulevard with Roosevelt Avenue and 156th Street	
304	Queens Boulevard (eastbound) and Woodhaven Boulevard	
305	Queens Boulevard (westbound) and Woodhaven Boulevard	
306	Queens Boulevard and 58th Street	
307	Queens Boulevard and Queens Borough Hall	
308	Queens Boulevard between 72nd and 73rd Streets	
309	Seneca Avenue and Cornelia Street	
310	Steinway Street and 440' North of 31st Avenue (mid-block crossing)	
311	Steinway Street between 34th Avenue and Broadway (mid-block)	

312	Steinway Street between Broadway and 31st Avenue (mid-block)	Queens
313	Sutphin Boulevard and Archer Avenue	
314	Union Turnpike and Francis Lewis Boulevard	
315	Union Turnpike and Springfield Boulevard	
316	Vernon Boulevard and 40th Avenue	
317	Woodhaven Boulevard (Northbound) and Long Island Expressway Entrance Ramp	
318	Woodhaven Boulevard and 86th Drive (East Leg)	
319	Woodhaven Boulevard and 86th Drive (West Leg)	
320	Woodhaven Boulevard and Forest Park Drive	
321	Woodhaven Boulevard East Service Road and 180' South of Jamaica Avenue	
322	Woodhaven Boulevard West Service Road and 147' South of Jamaica Avenue	
323	Yellowstone Boulevard and Queens Boulevard	
324	Brielle Avenue and Gansevoort Boulevard (Wagner High School)	
325	Castleton Avenue and Bard Avenue	
326	Castleton Avenue and Brighton Avenue (S.I. Center for Independent Living)	
327	Clove Road and Clove Lake Place	
328	Forest Avenue and Bement Avenue	
329	Howard Avenue and Hillside Avenue	
330	New Dorp Lane (mid-block) between Hylan Boulevard and Mill Road	
331	Richmond Terrace and Sharpe Avenue	
332	Targee Street and Naples Street (235' North of Venice Street)	
333	Tompkins Avenue and Hill Street	
334	Victory Boulevard and Eddy Street	Bronx
335	3rd Avenue between East 169th Street and East 170th Street (mid-block)	
336	Astor Avenue and Colden Avenue	
337	Bailey Avenue and West 234th Street and Bailey Place	
338	Bartow Avenue and Co-Op City Boulevard and Bay Plaza Boulevard	
339	Baychester Avenue and 200' South of Donizetti Place (mid-block)	
340	Boston Road and East 212th Street / Pearsall Avenue	
341	Broadway and Van Cortlandt Park (580' South of 251st Street)	
342	Bronxwood Avenue and 221st Street	
343	Bronxwood Avenue and East 213th Street	
344	Bronxwood Avenue and East 219th Street	
345	Bronxwood Avenue and East 220th Street	
346	Burke Avenue and Yates Avenue	
347	Co-Op City Boulevard and Carver Loop East	
348	Co-Op City Boulevard and Rombouts Avenue and Carver Loop West	

349	Crotona Avenue between East 181st and East 182nd Streets	Bronx
350	East 163rd Street and Rogers Place	
351	East 163rd Street between Trinity Avenue and Tinton Avenue (mid-block)	
352	East 233rd Street and Carpenter Avenue	
353	East Gun Hill Rd and Gunther Avenue	
354	East Tremont Avenue and Lehman High School (mid-block)	
355	East Tremont Avenue with Hutchinson River Parkway and Ericson Place	
356	Edward L Grant Highway and West 169th Street	
357	Goulden Avenue and Lehman College High School	
358	Grand Concourse and Fordham Road	
359	Kappock Street and Netherland Avenue	
360	Mace Avenue and Colden Avenue	
361	Morris Park Avenue and Albert Einstein College of Medicine (mid-block)	
362	Pelham Parkway N/S Service Roads and Williams Bridge Road	
363	Pelham Parkway North and Laconia Avenue	
364	River Avenue and East 162nd Street	
365	Story Avenue and Bruckner Plaza Mall Exit/Entrance (between Boynton & Morrison Avenues)	
366	Valentine Avenue and East 178th Street	
367	Valentine Avenue between East Tremont and East 178th Street	
368	Webster Avenue between East Tremont and East 178th Street	
369	Westchester Avenue with Crosby, Buhre and Edison Avenues	
370	White Plains Road and Lydig Avenue	
371	Williamsbridge Road and Astor Avenue	

## One hundred fifty top ranked intersections for new accessible pedestrian signals

As of December 31, 2018

Please note that the list of the one hundred fifty (150) top ranked intersections for new APS units will fluctuate as new locations are added and evaluated based on the prioritization criteria described above.

Rank	Location	Borough
1	Flatbush Avenue and Fulton Street	Brooklyn
2	Church Avenue and Ocean Parkway / Prospect Expressway	Brooklyn
3	Morris Park Avenue and Eastchester Road	Bronx
4	Water Street and Coenties Slip Midblock IFO 55 Water Street	Manhattan
5	188th Street and Mc Laughlin Avenue	Queens
6	East Tremont Avenue and West Farms Road / Boston Road	Bronx
7	Delancey Street North and Essex Street	Manhattan
8	Lenox Avenue and West 145th Street / Malcolm X Boulevard	Manhattan
9	Hollis Court Boulevard and 47th Avenue / 192nd Street	Queens
10	Queens Boulevard and Northern Boulevard / Jackson Avenue	Queens
11	11th Avenue and West 23rd Street	Manhattan
12	9th Avenue and West 20th Street	Manhattan
13	8th Avenue and West 15th Street	Manhattan
14	Grand Avenue and 69th Street / Borden Avenue	Queens
15	Queens Boulevard and 39th Street	Queens
16	Central Park West and West 81st Street / 79th Street Transverse	Manhattan
17	9th Avenue and West 26th Street	Manhattan
18	Columbus Avenue and West 77th Street	Manhattan
19	University Avenue and West Kingsbridge Road	Bronx
20	Ascan Avenue and Queens Boulevard	Queens
21	Northern Boulevard and 111th Street	Queens
22	Church Street and Cortlandt Street	Manhattan
23	9th Avenue and West 30th Street	Manhattan
24	1st Avenue and East 120th Street	Manhattan
25	West 34th Street and 8th Avenue	Manhattan
26	Broadway and West 86th Street	Manhattan
27	East Gun Hill Road and Bainbridge Avenue	Bronx
28	Myrtle Avenue and Forest Avenue / George Street	Queens
29	Park Avenue and East 96th Street	Manhattan
30	Rockaway Boulevard and 110th Street	Queens
31	Water Street and Fulton Street	Manhattan
32	8th Avenue and Flatbush Avenue	Brooklyn
33	Broadway and West 65th Street	Manhattan
34	Grand Concourse East and East 149th Street	Bronx
35	Jamaica Avenue and 209th Street	Queens
36	Atlantic Avenue and Eastern Parkway Exit Eastbound	Brooklyn
37	Rockaway Boulevard and 84th Street	Queens

38	Fort Hamilton Parkway and 86th Street	Brooklyn
39	Broadway and West 106th Street	Manhattan
40	6th Avenue / Avenue of the Americas and West 8th Street / Greenwich Avenue	Manhattan
41	108th Street and Van Doren Street	Queens
42	Nostrand Avenue and Avenue X	Brooklyn
43	East Houston Street and Avenue B / Clinton Street	Manhattan
44	Long Island Expressway Eastbound Exit 18 and Borden Avenue / Grand Avenue	Queens
45	Northern Boulevard and 195th Street	Queens
46	Northern Boulevard and 62nd Street	Queens
47	6th Avenue / Avenue of the Americas and West 16th Street	Manhattan
48	5th Avenue and West 8th Street / East 8th Street	Manhattan
49	Jerome Avenue and West 195th Street	Bronx
50	Flatbush Avenue and Sterling Place	Brooklyn
51	Atlantic Avenue and Classon Avenue	Brooklyn
52	Intervale Avenue and Southern Boulevard	Bronx
53	Broadway and West 173rd Street / Wadsworth Avenue	Manhattan
54	Hylan Boulevard and Wendy Drive	Staten Island
55	Jerome Avenue and West Kingsbridge Road	Bronx
56	Fort Hamilton Parkway and 92nd Street	Brooklyn
57	Lenox Avenue and West 116th Street	Manhattan
58	Long Island Expressway Outer Lane Westbound and Junction Boulevard	Queens
59	Madison Avenue and East 97th Street	Manhattan
60	108th Street and Martense Avenue	Queens
61	Broadway and West 177th Street	Manhattan
62	Lexington Avenue and East 86th Street	Manhattan
63	Jackson Avenue and 21st Street	Queens
64	Atlantic Avenue and Highland Place	Brooklyn
65	Broadway and West 211th Street / Isham Street	Manhattan
66	Coney Island Avenue and Avenue N	Brooklyn
67	Northern Boulevard and 110th Street	Queens
68	West Street and West 12th Street / 300' North to Horatio Street	Manhattan
69	7th Avenue and West 17th Street	Manhattan
70	Queens Midtown Tunnel / I-495 and Borden Avenue / Grand Avenue	Queens
71	Hicks Street and Sackett Street Northbound	Brooklyn
72	Hicks Street and Kane Street Northbound	Brooklyn
73	Springfield Boulevard and Hempstead Avenue	Queens
74	3rd Avenue and East 42nd Street	Manhattan
75	5th Avenue and East 106th Street	Manhattan
76	Riverside Drive and West 95th Street / Henry Hudson Parkway Exit 11 Southbound	Manhattan
77	Central Park West and West 97th Street	Manhattan
78	Amsterdam Avenue and West 66th Street	Manhattan
79	Riverside Drive and Broadway / Dyckman Street	Manhattan



80	Bowery and Bayard Street	Manhattan
81	1st Avenue and East 4th Street	Manhattan
82	21st Street and 31st Road	Queens
83	21st Street and 31st Drive	Queens
84	Jamaica Avenue and 190th Street	Queens
85	Jamaica Avenue and 179th Street	Queens
86	Atlantic Avenue and Kingston Avenue	Brooklyn
87	9th Avenue and West 17th Street	Manhattan
88	Ralph Avenue and Broadway	Brooklyn
89	Broadway and West 70th Street	Manhattan
90	Broadway and West 112th Street	Manhattan
91	Broadway and West 114th Street	Manhattan
92	8th Avenue and West 20th Street	Manhattan
93	Broadway and West 153rd Street	Manhattan
94	Broadway and West 147th Street	Manhattan
95	Broadway and West 146th Street	Manhattan
96	Broadway and West 138th Street	Manhattan
97	Broadway and West 122nd Street	Manhattan
98	8th Avenue and West 25th Street	Manhattan
99	Prospect Avenue and 4th Avenue	Brooklyn
100	Broadway and West 152nd Street	Manhattan
101	Dyer Avenue and West 41st Street	Manhattan
102	Jamaica Avenue and Parsons Boulevard	Queens
103	Hylan Boulevard and Tysens Lane	Staten Island
104	West End Avenue and West 97th Street	Manhattan
105	108th Street and 53rd Avenue	Queens
106	Queens Boulevard and 47th Street	Queens
107	Flatbush Avenue and Church Avenue	Brooklyn
108	Sutton Place and East 57th Street	Manhattan
109	Neptune Avenue and West 5th Street	Brooklyn
110	6th Avenue / Avenue of the Americas and West 17th Street	Manhattan
111	Prince Street and Charlton Street / 6th Avenue	Manhattan
112	Jamaica Avenue and 188th Street / Woodhull Avenue	Queens
113	Jamaica Avenue and 175th Street	Queens
114	Atlantic Avenue and Sheridan Avenue / Nichols Avenue	Brooklyn
115	9th Avenue and West 18th Street	Manhattan
116	Broadway and West 77th Street	Manhattan
117	Broadway and West 88th Street	Manhattan
118	8th Avenue and West 53rd Street	Manhattan
119	8th Avenue and West 52nd Street	Manhattan
120	White Plains Road and East 239th Street	Bronx
121	Boston Road and Bivona Street	Bronx
122	Fulton Street and Kingston Avenue	Brooklyn
123	Jerome Avenue and West 177th Street	Bronx
124	Cropsey Avenue and Bay 8th Street	Brooklyn
125	Atlantic Avenue and Nostrand Avenue	Brooklyn

126	Woodhaven Boulevard and 66th Avenue	Queens
127	West End Avenue and West 72nd Street	Manhattan
128	West End Avenue and West 66th Street	Manhattan
129	Utica Avenue and Avenue M	Brooklyn
130	108th Street and 46th Avenue	Queens
131	6th Avenue / Avenue of the Americas and West 57th Street	Manhattan
132	Bell Boulevard and 73rd Avenue	Queens
133	Northern Boulevard and 103rd Street	Queens
134	Northern Boulevard and 89th Street	Queens
135	Northern Boulevard and Corporal Kennedy Street / Oceania Street	Queens
136	6th Avenue / Avenue of the Americas and West 40th Street	Manhattan
137	1st Avenue and East 9th Street	Manhattan
138	1st Avenue and East 3rd Street	Manhattan
139	21st Street and 41st Avenue	Queens
140	Avenue C and East 16th Street	Manhattan
141	Remsen Avenue and Clarkson Avenue	Brooklyn
142	Jamaica Avenue and 207th Street	Queens
143	Flatbush Avenue and 5th Avenue	Brooklyn
144	East Gun Hill Road and Kings College Place	Bronx
145	7th Avenue and West 57th Street	Manhattan
146	7th Avenue and West 16th Street	Manhattan
147	Queens Boulevard and 32nd Place	Queens
148	Queens Boulevard and 35th Street	Queens
149	Queens Boulevard and 39th Place	Queens
150	Bowery and Canal Street	Manhattan