

Pennsylvania Department of Transportation

Engineering District 6



2013-2014 Winter Maintenance Guide

***PennDOT Engineering District 6
7000 Geerdes Boulevard
King of Prussia, PA 19406***

***Tom Corbett
Governor***

***Barry J. Schoch, P.E.
Secretary of Transportation***

Table of Contents

PennDOT District 6 Contacts	3
Winter Maintenance Facts & Figures	4
Municipal Snow Removal Program	5
Snow Removal Contracts	6
Bucks County Maintenance Information	8
Chester County Maintenance Information	9
Delaware County Maintenance Information	10
Montgomery County Maintenance Information	11
Philadelphia County Maintenance Information	12
District 6 Winter Maintenance Notes	13
PennDOT Winter Equipment	14
Annual Salt Use by County	16
Annual Anti-Skid Use by County	17
Annual Salt Brine Use by County	17
Winter Driving Tips	18
Snow Shoveling Tips	19
Winterizing Your Mailbox	20

On the cover: *PennDOT's 8,000 gallon salt brine tanker truck*

Page 2 – PennDOT 2013-2014 Winter Maintenance Guide

Pennsylvania Department of Transportation

Engineering District 6
7000 Geerdes Boulevard
King of Prussia PA 19406
610.205.6700

Administration

District Executive	Lester C. Toaso
Assistant District Executive for Maintenance	Nicholas Martino
District Maintenance Services Manager	Louis Porrini
District Maintenance Manager	Lorraine Ryan
District Maintenance Manager	James Fogel
District Maintenance Manager	Sharon Goldberg

Public Information Office

Assistant Press Secretary	Gene Blaum 610.205.6800
Community Relations Coordinator	Charles Metzger 610.205.6801
Safety Press Officer	Brad Rudolph 610.205.6798

2013-14 Winter Maintenance Facts and Figures

Winter Maintenance Budget:	\$22,000,000
Bucks County:	\$4,900,000
Chester County:	\$5,200,000
Delaware County:	\$3,300,000
Montgomery County:	\$3,900,000
Philadelphia County:	\$4,500,000

District 6 2012-13 Winter Costs: \$ 18,000,000

State Highway Miles: 3,589	Snow Lane Miles: 11,106
Bucks County 994	Bucks County 2,617
Chester County 1,018	Chester County 2,541
Delaware County 448	Delaware County 1,584
Montgomery County 769	Montgomery County 2,337
Philadelphia County 360	Philadelphia County 2,027

Tons of Salt: 115,029	Tons of Anti-Skid: 4,300
Bucks County 32,925	Bucks County 1,500
Chester County 27,986	Chester County 1,200
Delaware County 16,969	Delaware County 600
Montgomery County 25,670	Montgomery County 1,000
Philadelphia County 11,479	Philadelphia County 0

Gallons of Salt Brine: 191,177

Bucks County	30,400
Chester County	81,717
Delaware County	14,795
Montgomery County	48,865
Philadelphia County	16,200

Plow Trucks: 415	Rental - 233	PennDOT Owned - 182
Bucks County	65	42
Chester County	65	44
Delaware County	47	31
Montgomery County	25	44
Philadelphia County	31	21

Municipal Agreements: 97	State Snow Lane Miles: 2,825
Bucks County 17	Bucks County 215
Chester County 32	Chester County 472
Delaware County 13	Delaware County 120
Montgomery County 34	Montgomery County 878
Philadelphia County 1	Philadelphia County 1,140

Municipal Snow Removal Program

Ninety-seven municipalities in southeastern Pennsylvania will clear snow and ice from state-owned highways within their boundaries this winter under the state's Municipal Snow Removal Agreement Program. The municipal partners have entered into an agreement with PennDOT, whereby the state reimburses the city, township or borough for its services. The monetary reimbursement is based on lane miles covered and roads serviced. Municipal crews will service 25 percent (2,825 of 11,106 snow lane miles) of the state's snow lane miles in southeastern Pennsylvania.

In the City of Philadelphia, crews from the Philadelphia Streets Department salt and plow all state highways, except I-76 (Schuylkill Expressway), I-95, I-676, Route 63 (Woodhaven Road), U.S. 1 Extension (Roosevelt Expressway) and the Platt Bridge (Route 291). These expressways are handled by PennDOT and its contractors.

The participating municipalities are:

Bucks County – 17 Agreements

Doylestown, Morrisville, Newtown, Perkasio, Quakertown, Sellersville, Telford, Tullytown boroughs; Durham, Haycock, Lower Makefield, Newtown, Northampton, Upper Makefield, Upper Southampton, Warminster, Wrightstown townships

Chester County – 32 Agreements

City of Coatesville; Downingtown, Kennett Square, Oxford, Parkesburg, South Coatesville, West Chester boroughs; East Bradford, East Coventry, East Fallowfield, East Marlborough, East Pikeland, East Vincent, Easttown, London Britain, Londonderry, Lower Oxford, North Coventry, Pocopson, Thornbury, Tredyffrin, Upper Oxford, Upper Uwchlan, Uwchlan, Wallace, West Bradford, West Brandywine, West Goshen, West Grove, West Marlborough, West Nantmeal, Willistown townships

Delaware County – 13 Agreements

City of Chester; Aldan, Collingdale, Marcus Hook, Ridley Park, Upland boroughs; Aston, Chester, Haverford, Marple, Newtown, Radnor, Springfield townships

Montgomery County – 34 Agreements

Ambler, Conshohocken, East Greenville, Hatboro, Jenkintown, Lansdale, Norristown, North Wales, Royersford, Schwenksville, Souderton boroughs; Abington, Cheltenham, Douglass, Franconia, Hatfield, Horsham, Limerick, Lower Merion, Lower Moreland, Lower Salford, Marlborough, Perkiomen, Plymouth, Salford, Springfield, Upper Dublin, Upper Frederick, Upper Gwynedd, Upper Hanover, Upper Merion, Upper Moreland, Upper Pottsgrove townships; and Valley Forge National Park

City of Philadelphia – 1 Agreement

Plowing By Private Contractors in 2013-2014

PennDOT will use 13 private contractors to salt and plow major state highways in the region. The following contractors were awarded PennDOT snow plowing contracts:

Bucks County:

Walter H. McKeon, Inc., Warminster, PA

- U.S. 1 from the Philadelphia line to the New Jersey state line
- I-95 from the Philadelphia line to the New Jersey state line

Jeffrey M. Sparks Excavating, New Hope, PA

- U.S. 202 from County Line Road to Route 313

Chester County:

Technivate, Inc., Landenberg, PA

- U.S. 1 from the Delaware County line to the Maryland state line

Rittenbaugh, Inc., Phoenixville, PA

- Route 100 from Business Route 30 to Route 23

B. Blair Corporation, Ivyland, PA

- U.S. 202 from Route 401 to the Montgomery County line

Column Construction Inc., Glenmore, PA

- U.S. 202 from Route 401 to Delaware County line

Delaware Valley Paving Inc., Valley Forge, PA

- U.S. 30 from the Lancaster County line to U.S. 202 in Chester County

Delaware County:

Terrance Froman, Inc. of Plumsteadville, PA

- I-95 from the Delaware state line to the Philadelphia line

A.H. Cornell & Sons, Inc., Jamison, PA

- U.S. 1 from Rolling Road to the Philadelphia County line
- Route 3 from the Philadelphia County line to the Chester County line
- Route 320 from Springfield Road to Darby Road
- Springfield Road from Route 320 (Sproul Road) to Route 3 (West Chester Pike)

D. Sabatelli, Inc., Media, PA

- U.S. 1 (Baltimore Pike) from the U.S. 1/Media Bypass to the Chester County line
- U.S. 202 from the Delaware state line to the Chester County line

R.P Blair, Inc. Ivyland, PA

- I-476 from I-95 to the Montgomery County line

Montgomery County:

James J Anderson, Philadelphia, PA

- I-76 from the Pennsylvania Turnpike to the Philadelphia County line
- I-476 from the Delaware County line to the Pennsylvania Turnpike

Philadelphia:

James D Morrissey Inc., Philadelphia, PA

- U.S. 1/Roosevelt Boulevard Extension from 9th Street to I-76
- 26th Street from I-76 to Penrose Avenue
- Route 63 from I-95 to Evans Street
- I-76 from U.S. 1 (City Avenue) to 26th Street
- I-95 from the Delaware County line to Route 63 (Woodhaven Road)
- Route 291 from 26th Street to I-95
- I-676 from I-76 to I-95

Bucks County Maintenance

Headquarters: 229 North Broad Street
Doylestown, PA 18901

Telephone Number: 215.345.6060

Staff: Cal Morrison, County Maintenance Manager
Scott Bittner, Asst. Maintenance Manager
Jim Brown, Asst. Maintenance Manager
Ed Kunkel, Asst. Maintenance Manager
Ron Martin, Asst. Maintenance Manager
Louis Calvanese, Jr., Roadway Program Coordinator

Personnel: 121

Salt Supplier: International Salt Co.
Clarks Summit, PA

Salt Stockpiles: 8

Stockpile Locations:

Trevose Road near PA State Police, Bensalem Township

U.S. 13 and Tyburn Road, Falls Township

PA 413, 1 mile south of PA 332, Newtown Township

229 North Broad Street, Doylestown Borough

Old Bethlehem Pike at PA 309 Bypass, West Rockhill Township

PA 563, 4 miles west of PA 412, Haycock Township

PA 663, 2 miles south of PA Turnpike, Milford Township

PA 611 at Ferry Road, Plumstead Township

Chester County Maintenance

Headquarters: 711 Ryan Boulevard
Coatesville, PA 19320

Telephone Number: 484.340.3200

Staff: Robert Kennedy, County Maintenance Manager
Steven Austin, Asst. Maintenance Manager
Joe Durning, Asst. Maintenance Manager
Edward Park, Asst. Maintenance Manager
Nick Tuscai, Asst. Maintenance Manager
Mike Burkhart, Roadway Program Coordinator

Personnel: 131

Salt Supplier: Oceanport
Claymont, DE

Salt Stockpiles: 12

Stockpile Locations:

Swedesford Road at PA 29, East Whiteland Township

Delchester Road and PA 3, Willistown Township

PA 3 at U.S. 202, West Goshen Township

PA 100 near Uwchlan Township Building, Uwchlan Township

Pennhurst State Hospital Grounds, East Vincent Township

PA 282 near PA 82, West Nantmeal Township

U.S. 30 Bypass at U.S. 322, Caln Township

U.S. 30 Bypass and Reeceville Road, Caln Township

U.S. 30 Bypass and PA 10, Sadsbury Township

PA 162 at Embreeville State Hospital, West Bradford Township

U.S. 1 Bypass north of Newark Road, New Garden Township

PA 10 at U.S. 1, Lower Oxford Township

Delaware County Maintenance

Headquarters: 426 South Old Middletown Road
PO Box B
Media, PA 19063

Telephone Number: 610.566.0972

Staff: Mike Murphy, County Maintenance Manager
Charlie Dougherty, Asst. Maintenance Manager
Tina Carvin, Roadway Program Coordinator

Personnel: 70

Salt Supplier: International Salt Co.
Clarks Summit, PA

Salt Stockpiles: 4

Stockpile Locations:

Old Middletown Road at Bortondale Road, Middletown Township

U.S. 13 (Chester Pike) under I-95, Ridley Township

PA 261 at U.S. 322, Bethel Township

Lawrence Road and PA 3, Marple Township

Montgomery County Maintenance

Headquarters: Swede Road and Johnson Highway
PO Box 350
Norristown, PA 19404

Telephone Number: 610.275.2368

Staff: Howard Houseknecht, County Maintenance Manager
Mark Armstrong, Asst. Maintenance Manager
Tony Goreski, Asst. Maintenance Manager
Pete Scerati, Asst. Maintenance Manager
Charles Wissler, Asst. Maintenance Manager
Michael Redmond, Roadway Program Coordinator

Personnel: 126

Salt Supplier: International Salt Co.
Clarks Summit, PA

Salt Stockpiles: 8

Stockpile Locations:

Swede Road at Johnson Highway, East Norriton Township

I-76 West at Gladwyne Exit, Lower Merion Township

Black Rock Road near U.S. 422/Oaks Interchange, Upper Providence Township

U.S. 422 at Sanatoga Interchange, Lower Pottsgrove Township

PA 29, Red Hill Borough

PA 73, 1/2 mile west of PA 113, Skippack Township

Germantown Pike at I-476, Plymouth Township

PA 309, 1/2 mile north of Norristown Road, Lower Gwynedd Township

Philadelphia County Maintenance

Headquarters: 1901 Ruffner Street
Philadelphia, PA 19140

Telephone Number: 215.225.1415

Staff: Steve Niknam, County Maintenance Manager
Tony DeRose, Asst. Maintenance Manager
Pete Sisifo, Asst. Maintenance Manager
Rodney Stith, Asst. Maintenance Manager
Peggy Roberts, Roadway Program Coordinator

Personnel: 71

Salt Supplier: International Salt Co.
Clarks Summit, PA

Salt Stockpiles: 4

Stockpile Locations:

Blaine and Ruffner streets (off Hunting Park Avenue)

I-95 North at Betsy Ross Bridge (Northeast Philadelphia)

Oregon Avenue at Front Street under I-95 (South Philadelphia)

Broad Street at the U.S. Naval Yard under I-95 (South Philadelphia)

2013-14 District 6 Winter Maintenance Notes

PennDOT maintains 3,559 linear miles of state highway in Bucks, Chester, Delaware, Montgomery and Philadelphia counties. The actual number of "snow lane miles" serviced in the region during a snowstorm is 11,106. Lane miles are calculated by multiplying the distance or length of a highway by the number of travel lanes. For instance, a two-lane, five-mile road has 10 lane miles.

PennDOT enters this winter with 115,020 tons of salt and 4,300 tons of anti-skid stockpiled in the five-county Philadelphia region.

Statewide, PennDOT owns and maintains over 40,000 miles of state highway, nearly 96,000 lane miles, and 25,000 bridges.

This winter in southeastern Pennsylvania, International Salt Company, LLC of Clarks Summit, Pa. is supplying PennDOT's road salt in Bucks, Delaware, Montgomery and Philadelphia counties. Oceanport of Claymont, Del. is supplying the state's salt in Chester County. PennDOT District 6 paid an average of \$52.24 per ton for salt and \$14.00 per ton for anti-skid.

Past Salt Use in District 6:

Year	Tons of Salt	Year	Tons of Salt
2012-13	65,137 tons	1997-98	14,907 tons (Record Low)
2011-12	37,497 tons	1996-97	54,413 tons
2010-11	134,516 tons	1995-96	101,185 tons
2009-10	142,738 tons (Record High)	1994-95	25,267 tons
2008-09	80,586 tons	1993-94	87,899 tons
2007-08	59,437 tons	1992-93	44,921 tons
2006-07	77,015 tons	1991-92	21,012 tons
2005-06	44,982 tons	1990-91	27,481 tons
2004-05	60,511 tons	1988-89	29,308 tons
2003-04	101,194 tons	1987-88	34,049 tons
2002-03	101,956 tons	1986-87	40,238 tons
2001-02	24,155 tons	1985-86	42,820 tons
2000-01	80,011 tons	1984-85	33,084 tons
1999-00	58,886 tons	1983-84	41,250 tons
1998-99	59,615 tons	1982-83	24,032 tons
		1981-82	40,763 tons

Over the last 31 winter seasons, PennDOT has used an average of 57,770 tons of salt per winter on state highways in the Philadelphia region.

Salt is used to melt snow and ice; however, it requires two factors to work effectively: traffic and temperatures above 20 degrees Fahrenheit.

PennDOT uses salt and anti-skid (a mixture of small stones and sand) to melt snow, improve traction, and reduce slippery conditions during a snowstorm. PennDOT uses 100 percent straight salt on interstate highways, major expressways, and other heavily traveled roads in the region.

PennDOT sprays salt brine on dry road surfaces prior to winter storms. The salt solution lowers the freezing point of water and slows or prevents ice from forming a bond with pavement during the early staging of the storm.

Last winter, PennDOT used 365,269 gallons of salt brine to help keep state roads wet during winter storms in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties.

PennDOT Winter Equipment

Double Wing Plow



PennDOT will use double wing plows to push snow and ice off state highways. This specialized truck is outfitted with wings on both sides of the plow that extends and can clear up to 21 feet of snow at a time.

Snow Blower



PennDOT will use a snow blower that is capable of moving up to 1,200 tons of snow per hour. The snow blower is mounted on a front loader and used in areas where drifting snow is prevalent.

Salt Brine Spray Truck



PennDOT will use an 8,000 gallon salt brine tanker (pictured above) to spray brine on three travel lanes. The truck operates on I-76, I-476 and Route 422 in Montgomery County. When operational, it can spray salt brine on all three expressways without being refilled. When the large tanker is not spraying brine, it is used to fill salt brine tanks at other state stockyards in Montgomery County. PennDOT District 6 has another tanker truck that holds 2,600 gallons of brine.

Snow Plow Trucks



PennDOT has 182 state trucks available to plow snow in southeastern Pennsylvania and 22 of those trucks spray salt brine in advance of winter storms. PennDOT also can use 233 contractor trucks to plow state highways during winter storms.

Past Salt Use

Tons of Salt Used

	<u>Bucks</u>	<u>Chester</u>	<u>Delaware</u>	<u>Montgomery</u>	<u>Phila.</u>
1989-90	8,970	10,276	5,942	9,483	3,602
1990-91	6,095	7,262	4,735	5,891	3,501
1991-92	5,885	5,786	2,107	5,781	1,452
1992-93	10,424	12,104	6,132	11,279	4,982
1993-94	23,622	19,805	15,161	17,247	12,064
1994-95	7,369	7,180	4,616	4,449	1,653
1995-96	28,865	28,101	15,353	19,478	10,388
1996-97	16,044	14,060	9,653	9,688	4,968
1997-98	4,800	4,363	2,022	3,074	648
1998-99	18,969	15,256	9,606	9,864	5,889
1999-00	18,034	12,518	8,998	13,324	6,012
2000-01	25,714	19,228	13,570	14,558	6,940
2001-02	7,375	6,443	4,086	4,773	1,476
2002-03	32,067	26,322	12,274	20,657	10,636
2003-04	27,821	27,017	11,556	19,045	8,400
2004-05	20,821	13,813	9,619	11,353	5,503
2005-06	19,731	10,338	6,110	6,819	1,984
2006-07	19,346	19,712	15,125	16,108	6,724
2007-08	18,565	14,085	9,983	11,781	5,022
2008-09	22,519	21,733	11,410	18,306	6,618
2009-10	41,655	41,770	18,666	28,000	12,677
2010-11	38,839	33,236	22,360	27,601	12,480
2011-12	11,606	11,622	5,456	5,513	3,300
2012-13	17,743	18,474	10,626	13,951	4,343

Past Anti-Skid Use

Tons of Anti-Skid Used

	<u>Bucks</u>	<u>Chester</u>	<u>Delaware</u>	<u>Montgomery</u>	<u>Phila.</u>
1989-90	10,180	10,007	3,330	3,887	0
1990-91	6,894	6,252	2,924	3,587	0
1991-92	5,271	3,695	1,296	2,836	0
1992-93	12,897	7,469	2,499	6,435	0
1993-94	29,771	25,574	6,954	13,542	0
1994-95	5,636	2,715	1,163	2,354	0
1995-96	19,604	11,509	1,004	9,816	0
1996-97	10,951	5,198	1,280	4,971	0
1997-98	2,723	698	236	84	0
1998-99	4,856	5,816	1,068	5,417	0
1999-00	7,071	8,275	405	2,972	0
2000-01	9,822	9,186	84	6,992	0
2001-02	3,112	2,947	548	1,678	0
2002-03	10,912	10,703	1,158	6,372	0
2003-04	3,277	9,142	872	4,776	0
2004-05	7,166	5,731	1,270	3,261	0
2005-06	5,076	3,688	282	1,026	0
2006-07	5,328	3,728	1,645	1,531	0
2007-08	5,120	2,575	20	1,073	0
2008-09	5,365	5,785	280	1,689	0
2009-10	4,893	4,357	360	969	0
2010-11	10,165	9,140	55	534	0
2011-12	1,544	2,412	0	58	0
2012-13	1,480	2,559	0	113	0

Past Salt Brine Use

Gallons of Salt Brine Used

	<u>Bucks</u>	<u>Chester</u>	<u>Delaware</u>	<u>Montgomery</u>	<u>Philadelphia</u>
2012-13	70,150	82,445	50,322	136,752	25,600

Winter Driving Tips

Always wear your seat belt, drive at a reduced speed, and always drive defensively.

Always turn on your headlights during inclement weather.

Give yourself plenty of time to get to where you're going during the winter.

Keep your gas tank full.

Maintain at least twice the normal following distance when driving on snow or ice. Rear-end collisions account for most winter crashes.

Keep your vehicle in proper working condition. Make sure the engine is tuned and the battery, belts, hoses and radiator are checked. Examine your tires to make sure they have adequate tread. Also, remember to keep your tires properly inflated.

Periodically check the level of your windshield washing fluid and only use fluids containing an anti-freeze solvent. Keep an extra container of windshield fluid in the trunk.

Clear snow and ice from your windows, mirrors, hood, headlights, taillights, and trunk before driving.

Keep in your vehicle during the winter: an ice scraper/snow brush, de-icer, small snow shovel, warning devices (flares or triangles), and bag of salt or sand, flashlight, battery cables, tire chains, paper towels, and a blanket.

Maintain a distance of at least six car lengths behind a snow plow.

Do not pass a snow plow because the plow blades are wider than the truck.

Car pool or use mass transit whenever possible during the winter. Fewer cars on the road make travel safer during a snowstorm and expedite snow plowing operations.

Use extra care when driving on a bridge or elevated ramp during the winter because they freeze before roads do.

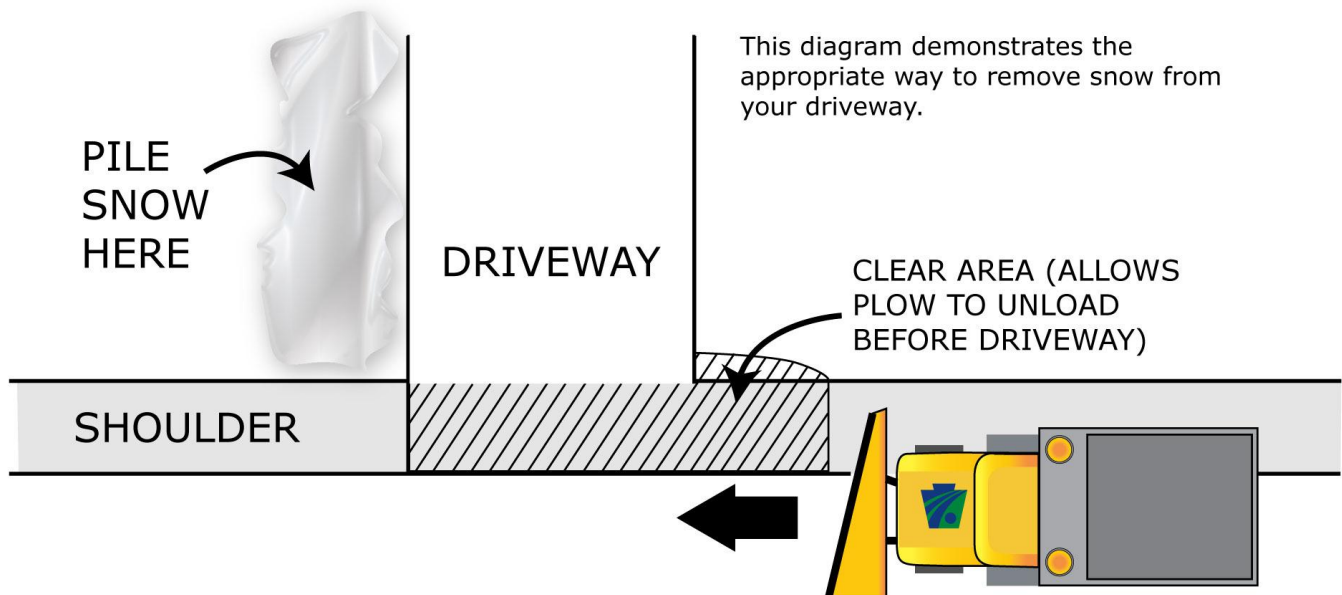
Don't drink and drive. Alcohol and icy roads can be a deadly combination.

Snow Shoveling Tips

PennDOT offers tips on shoveling your driveway to avoid being plowed in.

PennDOT suggests that you clear an area to the right of your driveway (as seen in the diagram below) to give the snow on the blade of the plow a place to empty before it gets to your driveway. This way you won't have to do the same job twice.

PennDOT also reminds you that it is illegal to push snow from a parking lot or driveway onto a state highway.



Winterizing your mailbox

PennDOT and the U.S. Postal Service are both expected to deliver during the winter season... come rain, sleet, snow, or all of the above. The location of your mailbox along the roadway can affect the efficiency of both mail service and snow plowing operations.

Where is your mailbox located? Your letter carrier will make every effort to deliver the mail. However, if the mailbox is not accessible to the carrier due to snow buildup, or if it is not properly located along the road, you may have to pick up your mail at the post office. PennDOT allows property owners to place mailboxes within the state's legal right-of-way, out of respect for the U.S. Postal Service's need to deliver, and mail customers' convenience of delivery; however, mailbox damage is the responsibility of the property owner.

Normally, if a mailbox is placed as far from the shoulder of the road as the carrier can reach from a vehicle and the mailbox rests on a firm support, the mailbox should be able to withstand the force of snow from the plowing operation. Be sure your mailbox has a strong support. You also may wish to use reflective tape or other material to make the mailbox easier to see during storms or during dark hours.

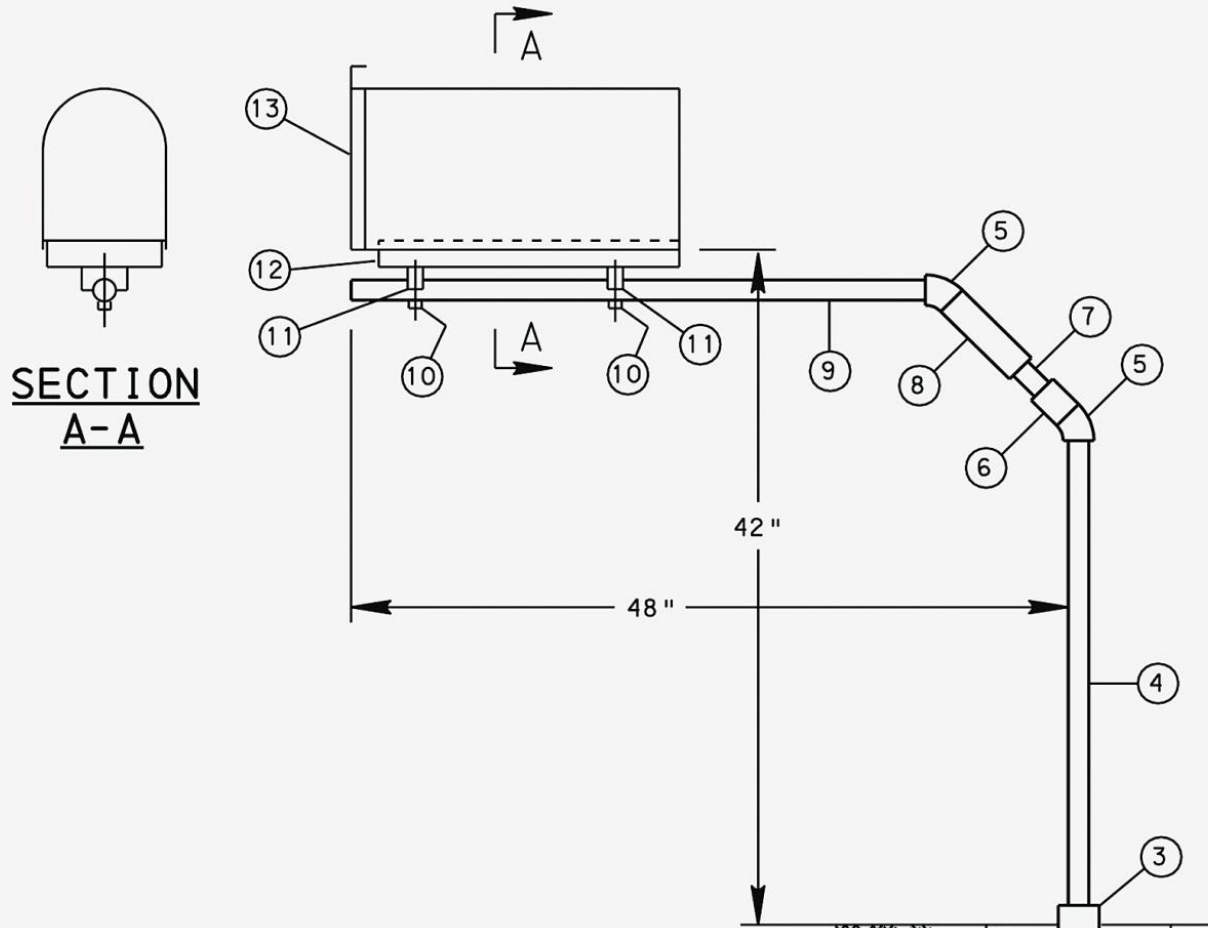
Plowing operations can push snow against or in front of mailboxes, limiting access and perhaps causing damage to supports. If the mailbox support is within the highway right-of-way, it's the owner's responsibility. Check your mailbox and support often, clearing snow from it and depositing the snow properly (never shovel snow onto the road). Homeowners who have followed these tips in the past and have still experienced mailbox damage may wish to consider installing a cantilevered mailbox support that will swing a mailbox out of harm's way. If you have questions as to the proper location of your mailbox along the roadway, contact your local post office.

PennDOT urges your cooperation in winterizing your mailbox for the snow season. Taking steps to ensure the visibility and stability of your mailbox will help PennDOT and letter carriers deliver their best this winter.

Specifications For A Cantilever Mailbox

MAILBOX.DGN

CANTILEVER MAILBOX SUPPORT



**SECTION
A-A**

ITEM	QUANT.	SIZE AND DESCRIPTION
1	2	CU. FT. CONCRETE
2	1	STEEL PIPE 1 1/4 "x 24" , 1 END THREADED
3	1	STEEL PIPE COUPLING 1 1/4 "
4	1	STEEL PIPE 1 1/4 "x 33 1/2" , BOTH ENDS THREADED
5	2	STEEL 45° ELBOW 1 1/4 "
6	1	STEEL PIPE 1 1/4 "x 2 3/4" , 1 END THREADED
7	1	STEEL PIPE 1"x 9"
8	1	STEEL PIPE 1 1/4 "x 5" , 1 END THREADED
9	1	STEEL PIPE 1 1/4 "x 42 1/2" , 1 END THREADED
10	2	LAG BOLTS 1/4 "x 3 1/2" LONG
11	2	1 1/4 " PIPE CLAMPS (TAILPIPE TYPE)
12	1	2"x 8"x 20" WOOD BOARD
13	1	MAILBOX (STANDARD SIZE)

