DRAINAGE ENGINEERS CONFERENCE 1998

ALLOWANCES AND COMPENSATION UNDER THE DRAINAGE ACT

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Introduction

We are not aware of any recent appeals to the Referee or to the Ontario Drainage Tribunal specifically related to the issue of damage allowances and compensation. However, although it may not be the primary issue, questions and comments related to the allowances and compensation arise reasonably frequently before the Ontario Drainage Tribunal. The manner in which allowances are dealt with in some reports has been criticized by the Ontario Drainage Tribunal.

The level of concern within the Ontario Drainage Tribunal is clearly stated in a recent decision in the Township of Adelaide on an appeal related to the Mud Creek and Sutherland Drain. The findings in that decision state ***"The Drainage Act places a high professional duty on engineers. This duty extends to the preparation of the preliminary and final reports. The Tribunal has been concerned that a large number of the reports are deficient in a number of particulars. Over the years, the Tribunal has commented on these deficiencies and had given practice directions. Engineers ignore these directions at their own peril. The attention of the profession is drawn to the following two principles:***

1. ***In the event that the Tribunal is persuaded that the appeal was caused by the deficiencies in the report, the Tribunal would not hesitate to assess part or all of the costs of the appeal against the engineer. This is because the Tribunal regards such an occurrence as a major failing in the Engineer's statutory duty.***

2. ***In the event that the Tribunal is persuaded that the deficiencies in the report, while not the principal cause, contributed to the existence and length of the appeal process, the Tribunal would not hesitate to disallow some of the engineer's costs being assessed to the drain. Since the Tribunal has not previously implemented this policy, the Tribunal will apply this policy to reports filed after the date of this decision".***

The Guideline for Services of the Engineer Acting under The Drainage Act published by PEO does not give this aspect much attention. The Guidelines do state "*the report shall include summaries of . . . the allowances to be made in accordance with each section of the Act*". It is our understanding from the Tribunal that while most Engineers include a value of allowances in their reports, there is often no adequate reference to the section of the Act for which allowances are being provided and no supporting discussion in the report. Worse still, some reports are published which identify a single value or "damage" to be paid to an affected property owner. That single value may include several components of allowances from various sections of the Act. As the report does not specifically break down this value, neither the property owner,

Council, nor the Tribunal can evaluate and consider the appropriateness of the various components that might make up that single value.

Allowances and compensation to property owners affected by drainage works constructed under The Drainage Act have been a legislated requirement since the first Drainage Act of 1894. The 1894 Act required consideration of two types of allowance as follows:

> ***Section 9(4) – "allow in money . . . the value to the drainage works of any private ditch or drain . . . . which may be incorporated in whole or in part".***
>
> ***Section 9(5) – "determine the amount to be paid . . . for damages to lands and crops (if any) occasioned by the disposal of material".***

Over the years, other conditions for allowances have been added to The Drainage Act. The last major revision of the Act in 1975 set out the requirements for allowances and compensation quite distinctly in Sections 29, 30, 31, 32 and 33. We intend to look more closely at each of these sections and give our interpretation of each section. We shall review our currently applied methodology for developing the value of each.

General

General comments which may apply to the application of any allowance under The Drainage Act are summarized as follows:

- Allowances under each section must be dealt with specifically. The drainage report should give a detailed explanation of the types of allowances granted and make reference to the applicable section numbers in The Drainage Act.

- The allowances are paid to the owners of each property and not to the tenants.

- The value of all allowances applied must be realistic. The allowances must be fair to the landowners that receive them, but should not be excessive since this would not be fair to the other ratepayers in the watershed that help pay the cost of the drainage project.

- The Engineer must <u>not</u> buy the support of landowners adjacent to the drain by providing excessive allowances.

- The Engineer must be able to explain the rationale for the development of an allowance value to the property owners and Council and have calculations to support them. The report should describe the manner in which the allowances were determined and give supporting information such as the rate per hectare allowed for land and the rate per hectare allowed for crop damages.

- The Engineer must not consider the allowances provided to a property when developing the assessment to be levied against that property.

- The estimate of cost in the drainage report will include the allowances. The allowances for various branch drains should be shown separately as should the allowances in each municipality if a municipal boundary is crossed.

- The drainage report should contain a breakdown of the various types of allowances made to each owner, possibly in tabular form. (Figure 1). We recommend that each type of damage allowance under the various sections be identified in separate categories such as ornamental trees, lawns, fences, crop damages, which are all part of Section 30.

Now let's look more closely at each applicable section of the Act.

Section 29 – Land, Right Of Way

29. The Engineer in the report shall estimate and allow in money to the owner of any land that it is necessary to use,

a) for the construction or improvement of a drainage works;

b) for the disposal of material removed from drainage works;

c) as a site for a pumping station to be used in connection with a drainage works; or

d) as a means of access to any such pumping station, if, in the opinion of the engineer, such right of way is sufficient for the purposes of the drainage works,

the value of any such land or the damages, if any, thereto, and shall include such sums in the estimates of cost of the construction, improvement, repair or maintenance of the drainage works.

We suspect that all of these clauses are easily understood. However, our interpretation of each is as follows:

29(a) An allowance is provided to those lands which are taken out of production permanently as a result of the construction of a new drainage works. This could be a new open drain, significant widening of an existing open drain, or lands designated as a permanent buffer or grassed waterway.

29(b) Allowances are provided to those lands which are taken out of production permanently as a result of the disposal of material. This could be a situation where it is not possible to restore the lands on which material is disposed of or the lands are identified as a dyke or earth berm.

29(c) An allowance is provided to those lands on which a pump station is constructed.

29(d) An allowance is provided to those lands required for access to a pump station. This assumes that the access will be used on a frequent basis such that the access will not be productive for any other purpose.

Allowances provided under this section are generally provided only once at the time the land is taken for the required purpose. Neither the Municipality nor the drainage scheme acquire title to these lands. Referee Thomas Hodgins in the Decision of Rhodes vs. Township of Raleigh (1898) states "though . . . the ownership in the soil of the lands so used in the channel of the drain are not . . . vested in the Municipality . . . the acquisition of the rights of entry, use and easement are, substantially equal to a taking or an expropriation of the lands for the purposes of the drain, and their value should therefore be estimated, and dealt with on the same basic principal of full compensation as for lands taken and expropriated for public purposes . . . .".

When calculating allowances for land or right-of-way, the Engineer should consider:

a) The policies of the local Road Authorities for purchasing road widenings which usually set out compensation rates for different types of land.

b) The market value of similar lands in the area.

c) In unusual or difficult circumstances, you may wish to have a land appraiser review the situation.

When constructing a new ditch, a land allowance should be made based upon the area of land required. The area can be calculated by sectioning the drain into various lengths and determining the average width of the drain for each length. The Engineer may also allow for an additional width or buffer on one or both sides of the drain for any land that is no longer available to farming operations. The close proximity of the ditch to a fence, the requirement for a designated buffer strip or other factors that arise in conjunction with the construction of a new ditch may justify an allowance for additional lands beyond the land that will be occupied by the ditch itself.

When minor trimming is carried out on the banks of a drain, it is not usual to provide a land allowance. When improvements to an existing ditch will substantially widen it, it may be appropriate to provide a land allowance for the additional land required at that time. Also, when constructing grassed waterways, a width will be specified in the drainage report and each affected property owner should be granted a land allowance accordingly.

When a tile drain is constructed under The Drainage Act, it is not usual practice to provide a land allowance where the drain is constructed on agricultural lands or road properties because the presence of the drain usually does not restrict the use of the property. If a tile drain is constructed on non-agricultural lands and will restrict the future use of the land for building, etc., it may be appropriate to provide a land allowance to compensate for this.

Section 30 - Damages

> ***30. The Engineer shall determine the amount to be paid to persons entitled thereto for damage, if any, to ornamental trees, lawns, fences, lands and crops occasioned by the disposal of material removed from a drainage works and shall include such sums in the estimates of the cost of the construction, improvement, repair or maintenance of the drainage works.***

These allowances may be considered the more common allowances that are provided to property owners for impacts related to drainage construction projects. The allowances for damages to ornamental trees, lawns and fences are self explanatory. The allowances for damages to lands and crops occasioned by the disposal of material in this case is not related to the permanent loss of land but rather the temporary disruption in the productivity or use of the affected lands.

a) Ornamental Trees

Construction of a new open drain or a covered drain may require the removal of some ornamental trees and may damage others. The drainage report must clearly identify which trees are to be removed, as the allowance will be calculated specifically on that basis. The allowance shall be based on the value of the ornamental trees removed. The Engineer will also have to consider an allowance for the damage that may be done to other ornamental trees that are not removed but may be adversely affected by the construction. The value of ornamental trees can be established with the help of local nurseries. Some Conservation Authorities and local offices of the Ministry of Natural Resources have experts who can also advise on the value of ornamental trees. Their resources may also be required to establish the value of wind breaks or tree screens.

Fruit trees in producing orchards, Christmas Trees, or woodlots managed for commercial production should more appropriately be considered crops. Advice on the valuation of these trees can be obtain from M.N.R., OMAFRA, or private woodlot appraisers.

We would recommend that any advice received be documented such that it can be filed as evidence to support your allowances should the matter be appealed.

b) Lawns

Usually, the Engineer provides for restoration of any lawn areas disturbed by the construction. If restoration is not provided for as part of the work, an allowance should be made

to the property owner that is sufficient to permit the owner to have the lawn restored by sodding. This allowance should be shown separately in the report as an allowance for lawn damage. The report should clearly define the dimensions of the area that the allowance is based upon.

c) ***Fences***

If fences are not restored as part of the drainage project, then allowances should be made for the value of existing fences removed during construction. The fence allowance should be based on the type of fence found at the time of the report and not the type of fence that the owner may want to replace it with. The Engineer should research the current rates for constructing a fence similar to the one that will be removed. Fence allowance values should relate to the age and condition of the fence that will be removed. Good fences should receive an allowance sufficient to permit the landowner to reconstruct a fence of similar type. Fences that are in fair or poor condition should receive a depreciated allowance depending on the age, condition and remaining useful life of the fence. Fences that are not standing and are not capable of restraining livestock should receive no allowance. The report should clearly identify the exact location of fences to be removed so that the landowner will know what the allowance applies to.

d) ***Crops***

When determining allowances for damages to crops, the required working areas, access corridors and disposal areas must be detailed in the report. The crop allowances are based upon these areas. There are two factors that should be considered when estimating the rate per hectare that should be allowed for damages to lands and crops. The first factor is the value of the type of crops planted and what the loss of the crop will cost in the first year. The second factor is what type of long-term damage will be caused to the land and what effects will it have on crop production over the next few years. During the first year, the actual loss to the property owner will depend on the time of the year that the construction is carried out. If property owners knew exactly when the work would be carried out they could take efforts to minimize their losses. This is difficult to do since no one can predict exactly when the work will be carried out due to delays caused by weather conditions, and delays that may be caused by appeals. It is best to assume a total loss of crop on the affected area at the time of construction, when calculating the allowances.

The “Agricultural Statistics for Ontario” which is publication 20 of the Ontario Ministry of Agriculture, Food and Rural Affairs, provides useful information on values of each type of crop in each County (Figure 2). This data gives a good indication of the maximum amount of crop loss a property owner may have in the construction year. In addition to this initial loss, the damage allowance should compensate for any long-term effects on the land that would reduce crop production over the next few years. If the work involves spreading of excavated material over the land, we assume that it would take five years for the lands to return to the normal level of fertility. We recommend that allowances be made for loss of crop over the next four years on a declining basis (Figure 3).

The damage allowances calculated for the spreading of excavated material is not only related to areas of land affected but also by the depth of material placed on the lands. We have

developed a rate per acre for allowances based on the assumption that the excavated material is spread to a depth of 0 to 150 mm. We recommend that this value be increased if the material is spread to a depth of 150 mm to 300 mm. It is necessary to clearly define in the specifications the area affected by the spreading and levelling works in addition to the depth to which the material will be placed. A table could be developed to determine the allowance rates per metre length of drain depending upon the end area of the excavated material (Figure 4).

For tile drain installations, the damages to the lands and crops are generally limited to the construction year except for the trench area where there may be some long-term damage. For tile drains installed by a trenching machine the long-term damage at the trench is not significant. In unstable soils or deep cut conditions, where the trench will be wide, some additional allowance for long term damage may be warranted (Figure 5). The report should specify the width of the working corridor and based upon it, an allowance per metre length of drain can be developed.

Section 31 – Existing Drains

> ***31. Where an existing drain that was not constructed on requisition or petition under this Act or any predecessor of this Act is incorporated in whole or in part in a drainage works, the Engineer in the report shall estimate and allow in money to the owner of such drain or part the value to the drainage works of such drain or part and shall include such sum in the estimates of the cost of the construction, improvement, repair or maintenance of the drainage works.***

We believe the allowance for existing drains was originally included in the 1894 legislation to provide a mechanism to incorporate drains which were constructed under other legislation of the day such as the Ditches and Watercourses Act or the Municipal Act. This issue was brought to appeal before Referee Hodgins in 1898 in the case of Township of Euphemia vs. Township of Brooke. Referee Hodgins threw out the report under appeal because it did not include a damage allowance for incorporating an existing drain which had been constructed under the Ditch and Watercourses Act.

This section is less frequently applied today but it is no less important. We use it most often as a mechanism to incorporate private drainage schemes which may become part of municipal drainage schemes petitioned under Section 4.

In the event that an Engineer intends to incorporate a private drain which has very little value into a municipal scheme we would recommend that the report still speak to this issue and include a nominal allowance in order to recognize the application of this section.

The Engineer can provide an allowance for the value of a private ditch or tile incorporated into the drainage works. The challenge is to provide an allowance which is both fair to the owner or owners of the private drain who paid the original capital costs, but also to the other ratepayers in the watershed who will now make use of the works and contribute towards the cost.

The valuation of an open ditch which is to be incorporated into the drain, may require the preparation of two estimates of cost for the drainage works. The first being an estimate of cost if the existing open drain were not present, then a second estimate of cost to carry out the construction with the existing drain in place. If there are any savings caused by incorporating the existing drain, then an allowance in the amount of the difference in cost, can be made to the owners of the private open drain. However, if the existing open drain has grown up with brush and trees or significant improvement to it is required to achieve the required cross-section, the cost of the improvements may offset any savings and the allowance for the private drain may only be a nominal one. On the other hand, if an owner had recently dug a ditch of the required depth and capacity, in a suitable location, then an allowance equal to the actual cost of the ditch construction may be justified.

In the case of a private tile drain, the age and condition of the tile should be considered to determine its depreciated value. If the tile is very old and full of sediment, it should not be incorporated into the drainage works. If the tile is of acceptable age and condition, it may be worth incorporating into the drainage scheme and the property owners that paid for it should be provided allowances. The amount of the allowances will depend on the age and condition of the private drain and what it would cost to provide equivalent capacity in the drainage works by other means. If the private tile had been recently installed and is adequate in all respects, an allowance equal to the construction cost of the tile may be justified.

Section 32 – Insufficient Outlet

> ***32. Where, in the opinion of the Engineer, the cost of continuing a drainage works to a sufficient outlet or the cost of constructing or improving a drainage works with sufficient capacity to carry off the water will exceed the amount of injury likely to be caused to low-lying lands along the course of or below the termination of the drainage works, instead of continuing the works to such an outlet, or making it of such capacity, the Engineer may include in the estimate of cost a sufficient sum to compensate the owners of such low-lying lands for any injuries they may sustain from the drainage works, and in the report the Engineer shall determine the amount to be paid to the owners of such low-lying lands in respect of such injuries.***

You no doubt recall that Section 15 of the Act requires that all drainage works be continued to a sufficient outlet “subject to Section 32”. This section provides a mechanism by which an Engineer can provide an allowance to lower land owners who are injuriously affected by works on a drainage scheme when it is found that it is not cost beneficial to extend the works to a sufficient outlet. These assessments are quite rare in our part of the Country although we have seen them applied in many old reports.

We believe that the lands which are entitled to receive damage allowances due to insufficient outlet receive them only once unless further improvements on the upstream drainage works are undertaken in which case only the incremental increase in potential damages would be

compensated for. The costs associated with allowances provided under this section would be assessed against upstream lands as a "injuring liability" in accordance with Section 23(2).

Compensation paid for insufficient outlet is normally not more than the market value of the land that would be subject to increased flooding. If the land has always flooded naturally, an allowance should be made only for those lands that will be worse off after the drain has been constructed than they would have been in a state of nature. The Engineer will have to do some hydrologic and hydraulic calculations for two scenarios, to determine the area affected by increased flooding. The first scenario is for the existing watershed conditions, while the second scenario is for the conditions that will exist after the upstream drainage improvements are carried out. The frequency and extent of incremental flooding are also important considerations, as well as land use and crop loss values. We would recommend that the rationalization of these allowances be well documented. Determining an allowance for insufficient outlet can be a challenge, but fortunately it is something that most Drainage Engineers do not encounter very often.

Section 33 – Loss of Access

> ***33. Where an Engineer thinks it expedient to make an allowance for loss of access to an owner instead of providing for the construction or the replacement, enlargement or other improvement of a bridge, the Engineer shall in the report provide for payment to the owner of such amount as appears just by way of allowance for loss of access and shall include such sums in the estimates of the cost of the construction, improvement, repair or maintenance of the drainage works.***

Section 18 of the current Act require that the Engineer provide for the construction or replacement, enlargement or other improvement of bridges and culverts. Section 33 provides the Engineer with an opportunity to provide an allowance to a property owner for the loss of access resulting from the construction or improvement to a drainage works instead of replacing, enlarging or improving the bridge or culvert which serves that particular property. Typically, an allowance for loss of access would only be provided once unless further improvements such as deepening and widening occur on the drainage works which is the cause of loss of access to the property and in this case, only the incremental increase to the loss of access would be compensated for.

When determining an allowance for loss of access, the Engineer must first put a value on the cost of constructing a suitable bridge or crossing in the drain. The second value to be considered is either the value of the land cut off from the rest of the property by the new drain or the reduction in the market value of the entire property once the new drain is constructed. The allowance for loss of access should be the lesser of these two values. For example, if the drain prevents access to 2 acres of land worth $5,000 and a bridge would cost $10,000, the allowance should be $5,000. If 10 acres of land worth $25,000 is not accessible then either a $10,000 bridge should be constructed or an allowance of $10,000 should be made.

In the case of an existing open drain, which is to be substantially deepening and widening making the installation of a private crossing more expensive or involved at a later date, then an

allowance for loss of access might be provided for any incremental severance caused by the drainage improvements. Before providing any additional allowance, the allowances provided under previous reports should be reviewed.

Section 68 – Registration of By-Law

> ***68. Where compensation has been paid to the owner of any land under Section 32 or 33, the clerk of the local municipality shall cause to be registered in the proper land registry office a copy of the bylaw adopting the report, exclusive of the plans, profiles and specifications of the drainage works, together with a statement of the amount paid and a description of the land in respect of which the amount was paid in the form prescribed in the regulations.***

This section clearly speaks to the requirement for a clear documentation of allowances provided under Section 32 or 33. The application of Section 68 is not the responsibility of the Engineer. However, it is wise to be aware of this clause and advise the clerk of your municipality accordingly should this need arise.

Conclusion

Virtually every report completed under Section 4 or Section 78 will result in impacts of some description to some property. It is incumbent on the Engineer to use his best skill, knowledge, judgement and ability to thoroughly and fairly address the issues related to Allowances. It must be clearly recognized that the Court of Revision has no authority to adjust the allowances identified in a report. Therefore, changes can only be made on application or appeal to the Ontario Drainage Tribunal or referred back for change by the Engineer. It is wise to give this aspect of the report the attention it is due to avoid appeals or re-considerations.

It is accepted that all property owners will not agree with the allowances or compensation identified in all reports. However, if the Engineer can clearly identify the various components of allowances in the report and produce a credible rationale for the development of each value, many arguments and appeals will be avoided. Further, the property owners, Council and quite possibly, the Ontario Drainage Tribunal will find more comfort in your report if the issue of allowances is properly addressed. We have been given fair warning in the decision of the Tribunal which I quoted at the outset. We practitioners would be wise to heed that warning.

FIGURE 1
Schedule Of Allowances

Roll No.	Con.	Lot or Part	Owner	Land	Fences	Damages
10-024	1	PtE½ 10	Donald & Theresa Young	$1,350	$725	$525
10-025		PtW½ 10	Donald & Theresa Young	1,500	-	525
10-026		Pt 10 & 11	Jim Tennyson	3,025	2,725	1,075
10-028		Pt 12	Toni & Bradley Young	2,725	-	875
TOTALS				$8,600	3,450	$3,000

FIGURE 2

1995 AGRICULTURAL STATISTICS FOR ONTARIO

(Publication 20)
Crop Values

Ontario County	ESSEX COUNTY			CHATHAM - KENT			LAMBTON COUNTY		
	AREA (Ac)	TOTAL FARM VALUE ($'1000)	TOTAL FARM VALUE ($/Ac)	AREA (Ac)	TOTAL FARM VALUE ($'1000)	TOTAL FARM VALUE ($/Ac)	AREA (Ac)	TOTAL FARM VALUE ($'1000)	TOTAL FARM VALUE ($/Ac)
WINTER WHEAT	49,000	18,522	378.00	58,000	24,176	416.83	85,000	34,094	401.11
OATS	600	66	110.00	700	79	112.86	1,800	240	133.33
BARLEY	500	101	202.00	1,400	277	197.86	1,900	450	236.84
MIXED GRAIN	350	47	134.29	150	21	140.00	2,000	348	174.00
HAY	7,000	1,706	243.71	7,000	1,422	203.14	28,000	6,541	233.61
GRAIN CORN	60,000	28,660	477.67	155,000	81,831	527.94	90,000	43,367	481.86
FODDER CORN	2,500	984	393.60	5,000	1,862	372.40	6,500	2,500	384.62
SOYBEANS	189,000	63,821	337.68	259,000	99,883	385.65	249,000	91,116	365.93
DRY WHITE BEANS	0	0	0	0	0	0	0	0	0
FLUE-CURED TOB.	250	1,023	4,092.00	250	1,023	4,092.00	300	891	2,970.00
TOTALS	309,200	114,930		486,500	210,574		464,500	179,547	
AVERAGES			**371.70** ($/Ac)			**432.83** ($/Ac)			**386.54** ($/Ac)

Figure 3

DAMAGE TO LANDS AND CROPS CAUSED BY SPREADING OF EXCAVATED EARTH

Crop Loss					$ / ACRE	$ / HA.
1st Year - ALLOW FULL CROP LOSS DURING CONSTRUCTION =					$400	$988
ALLOW DECLINING LOSS OF CROP OVER NEXT 4 YEARS						
2nd Year	**80%**	OF	**$400**	/Acre =	320	791
3rd Year	**60%**	OF	**$400**	/Acre =	240	593
4th Year	**40%**	OF	**$400**	/Acre =	160	395
5th Year	**20%**	OF	**$400**	/Acre =	80	198
				Totals -	**$1,200**	**$2,965**

FIGURE 4
Crop Damage Allowances Due To Spreading Of Earth

Normal Spread Depth = **150 mm**
Maximum Spread Depth = **300 mm**
Minimum Spread Width = **6 m**
Maximum Spread Width at 150.00 mm Spread Width = **20 m**

Crop Damage Allowance Rate @ 150 mm Spread Depth = **$ 2965 / Ha**

Crop Damage Allowance Rate @ 300 mm Spread Depth = $ 2965 / Ha x 1.50
= **$ 4447 / Ha**

END AREA m²	SPREAD WIDTH m	SPREAD DEPTH mm	$ / Ha.	$ / m
0.00 to 0.90	6.00	0 to 150	2965	1.78
1.00	6.67	150	2965	1.98
1.50	10.00	150	2965	2.96
2.00	13.33	150	2965	3.95
2.50	16.67	150	2965	4.94
3.00	20.00	150	2965	5.93
3.50	20.00	175	3212	6.42
4.00	20.00	200	3459	6.92
4.50	20.00	225	3706	7.41
5.00	20.00	250	3953	7.91
5.50	20.00	275	4200	8.40
6.00	20.00	300	4447	8.90
6.50	21.67	300	4447	9.64
7.00	23.33	300	4447	10.38
7.50	25.00	300	4447	11.12

FIGURE 5

Crop Damage Allowances For Tile Drain Installation

a) **Normal Trench Condition**
Corridor width = **15 m** ∏ 15 m @ $988 / Ha. ⌊ **$ 1.48 / m**

b) **Wide Trench Condition**

Width where land is damaged = **3 m** ∏ 3 m @ $2965 / Ha. ⌊ **$ 0.89 / m**

Width where only crops are damaged = **17 m** ∏ 17 m @ $988 / Ha. ⌊ **$ 1.68 / m**

Total Working Corridor Width = **20 m** **$ 2.57 / m**