

ITEM	18
MANAGER'S REPORT NO.	83
COUNCIL MEETING	1979 12 10

RE: BOUNDARY ROAD WIDENING - BANTING PLACE
DELEGATIONS: MESSRS. T. B. BARNES AND PETER SCHWIZGEBEL
WHO APPEARED BEFORE COUNCIL ON 1979 NOVEMBER 26

Mr. T. B. Barnes and Mr. Peter Schwizgebel appeared before Council on 1979 November 26 to express their views regarding the effect that the widening of Boundary Road will have on Banting Place. The following report from the Municipal Engineer contains replies to the questions that were asked by Council during the discussion that followed.

The matters on which Council wanted information are noted in the attached memo from the Deputy Municipal Clerk dated 1979 November 27.

RECOMMENDATION:

1. THAT the recommendation of the Municipal Engineer be adopted.

* * * * *

TO: MUNICIPAL MANAGER 79 12 05
FROM: MUNICIPAL ENGINEER
SUBJECT: BOUNDARY ROAD WIDENING - BANTING PLACE
DELEGATIONS - COUNCIL MEETING 79 11 26

RECOMMENDATION

1. THAT Mr. T.B. Barnes and Mr. Peter Schwizgebel be sent a copy of this report.

REPORT

Reference the Clerk's memo of 79 11 27.

The information requested of Council will be answered in the order noted in the Clerk's memo.

1. The proposed fence to be placed immediately behind the concrete barricade along the west side of the Boundary Road frontage road between Marine Drive and Banting Place is shown on Sketch #1 of this report. The fence is to be six feet in height and is to be of wood construction. The actual design of the fence is shown on Sketch #1A and is included in the project costs.
2. To meet the minimum signal warrant as suggested by the Institute of Transportation Engineers' handbook, Banting Place should produce a vehicle volume approach to Marine Drive of at least 75 vehicles per hour (V.P.H.) for each of any eight hours of an average day. During the same eight hours Marine Drive should produce a two way flow of at least 750 V.P.H. Should the vehicle volumes on Marine Drive be less than 750 V.P.H. but more than 500 V.P.H. during these eight hours then Banting Place should produce a 150 V.P.H. approach to Marine Drive for each of the eight hours.

(cont'd)

As noted in Item #5 the forecast for the future traffic volume on Marine Drive is to be approximately 20% of today's volume. If this is correct then the highest hourly volume on Marine Drive will be less than 400 V.P.H., a volume that indicates no warrant. However for argument sake we will assume that Marine Drive is able to meet the required 500 V.P.H. for eight hours. This means that Banting Place will be required to produce 150 V.P.H. approach to Marine Drive for each of the eight hours, i.e. 1,200 vehicles. As the highest eight hours is approximately 50% of the 24 hour flow we should expect a 2,400 vehicle approach to Marine Drive every 24 hours, or approximately 270 vehicles per hour. As we have found the average burnaby single family home generates about six outbound trips per day, Banting Place can only generate about 54 trips for 2% of the required warrant and that is only if the volumes on Marine Drive maintain the required 500 V.P.H. for eight hours.

From the above it is obvious that the future intersection of Banting Place with Marine Drive will not come even remotely close to a signal warrant.

3. In response to this question we have attached Sketch #2 which shows the top of a maximum height truck (13' 6") located on the far side of Boundary Road and the sight line from it over the proposed six foot fence to the house at 3704 Banting Place. As exhaust stacks are all lower than 13' 6" maximum height for the truck unit, the attached Sketch #2 gives a benefit of doubt to the stack height. We should also add that for the purpose of estimating traffic noise impact such a straight line analysis has no applicability and in any case, the exhaust stack height of a vehicle is not the most relevant factor in estimating the overall effect of traffic noise. It should be noted that trucks in the most easterly lane are completely out of sight of 3704 Banting Place.

Further to the above we feel that it must be stressed that the Boundary Road improvement and the effect it will have on Banting Place fully accord with the transportation policies adopted by Council. For the residential enclave of Banting Place the proposed improvement to Boundary Road should result in a net environmental gain, because Boundary Road will not only be further away, but also in a cut and thus the new road will be much less environmentally intrusive than the present facility. For example, our calculations suggest a sound reduction due to the displacement of Boundary Road to be about 7 dBA and in addition one may expect a further sound attenuation of up to 12 dBA due to the road being in a cut. Future increases in the traffic level along Boundary Road will not offset the reduction made by the proposed improvement (a doubling of present traffic levels would increase the level of traffic noise by approximately 3 dBA). Although the visual/aesthetic impact is somewhat more difficult to quantify it is not unreasonable to assume that with regard to this parameter, residents of Banting Place will also gain from the reconstruction of Boundary Road.

The relocation of Banting Place access from a primary arterial (Boundary Road) to a major collector (Marine Drive) fully accords with the principles underlying the road hierarchy adopted by Council. While this relocation may result in a marginal increase in journey time for some Banting Place residents it will decrease the accident risk that they currently face in transitioning between the quiet cul-de-sac and the arterial road network.

(cont'd)

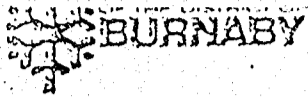
ITEM	18
MANAGER'S REPORT NO.	83
COUNCIL MEETING	1979 12 10

4. We believe that construction of such a road (at an estimated cost of \$50,000) is not a cost effective measure. With the proposed plan (i.e. with access to Marine Drive only) residents of Banting Place who wish to travel northward will have to go out of their way by approximately 150 metres (2 times the distance, from Banting Place to Marine Drive, than they do at present). If we assume that they travel this distance at 30 km per hour, then an increase in journey time of 20 seconds is suggested. However, it should be noted that part of this delay will be offset by the fact that it will be easier for residents to access Marine Drive in the future than it is to access Boundary Road at present. If we were to make a global assessment of the delay then, of course, we would find that the residents of Banting Place presently impose a delay on the Boundary Road traffic stream that is far greater than any delay that will be imposed on them by being required to travel an extra 150 metres on journeys to and from the north. At first glance it would appear that this delay to Banting Place residents might be offset by providing a northward access road. Given that such a road would not be much more substantial than a lane, then Banting Place residents would find that they would have to travel 300 metres at say, 20 km per hour in making their northward journey. If they choose travel down to Marine Drive and then proceeded northward on one of the collector or arterial streets leading from Marine Drive they would find that their journey would be up to 1/2 minute shorter than if they had used the northward access lane. Thus, it would appear that the northward access road would offer no benefit to the rational driver who wishes to minimize his journey time.
5. It is requested that an estimate be made of traffic that might be encountered on Marine Dr. at the Banting Place access road. We have made such an estimate based on the 1978 origin-destination survey, which showed that during the 7 to 9 a.m. peak there was some 1,400 drivers proceeding through Burnaby westbound along Marine Drive. East of Boundary Road, automatic traffic counts indicate that the 7 to 9 a.m. total westbound flow is approximately 2,100 vehicles. If you assume that all of the through Burnaby traffic diverts onto the new Marine Way and that 2/3 of the 700 vehicles that join Marine Drive in Burnaby remain on that facility, even after the new Marine Way is constructed, then the westbound traffic flow along Marine Drive will be reduced from 2,100 vehicles to approximately 500 just over 20% of its present value. If you assume that this sort of diversion applies for the whole day the total average week-day traffic will be reduced from 19,000 to approximately 4,000 on Marine Drive. While we expect traffic to grow along the new Marine Way, it is unlikely that there would be any substantial growth rate along the down-graded Marine Drive because it would function as a major collector serving an area that is largely fully developed.

In conclusion we believe that the proposed Boundary Road design accords with the policies adopted by Council. However the provision of a northward access road, or an unwarranted signal at Marine Drive and the southward extension of Banting Place are items that are contrary to the stated policy on cost-effectiveness. This we feel is doubly important in a time when the Engineering Department is continually striving to practise budgetary restraint.

HB/ch
Atts.
c.c. () Traffic Supervisor


MUNICIPAL ENGINEER



TO: Municipal Engineer

FROM: Municipal Clerk

SUBJECT: Boundary Road Widening - Banting Place
Delegations - Council Meeting 1979 November 26

INTER-OFFICE
DEPARTMENT

ITEM	18
MANAGER'S REPORT NO.	83
COUNCIL MEETING	1979 12 10

DATE: 79/11/27

RECEIVED
1979 NOV 25
OUR FILE # 2026
YOUR FILE #

MUNICIPAL MANAGER'S
OFFICE

180

This is to advise that Mr. T. B. Barnes and Mr. Peter Schwizgebel appeared before Council as Delegations on 1979 November 26 regarding the Boundary Road widening and its effect on Banting Place.

Arising out of Council's discussion of this subject, you are requested to submit a further report confirming that the provision of a wooden fence on the Boundary Road alignment from Marine Drive to Banting Place was included in the overall project plans and would be included in the project costs.

Information was also requested on the following points:

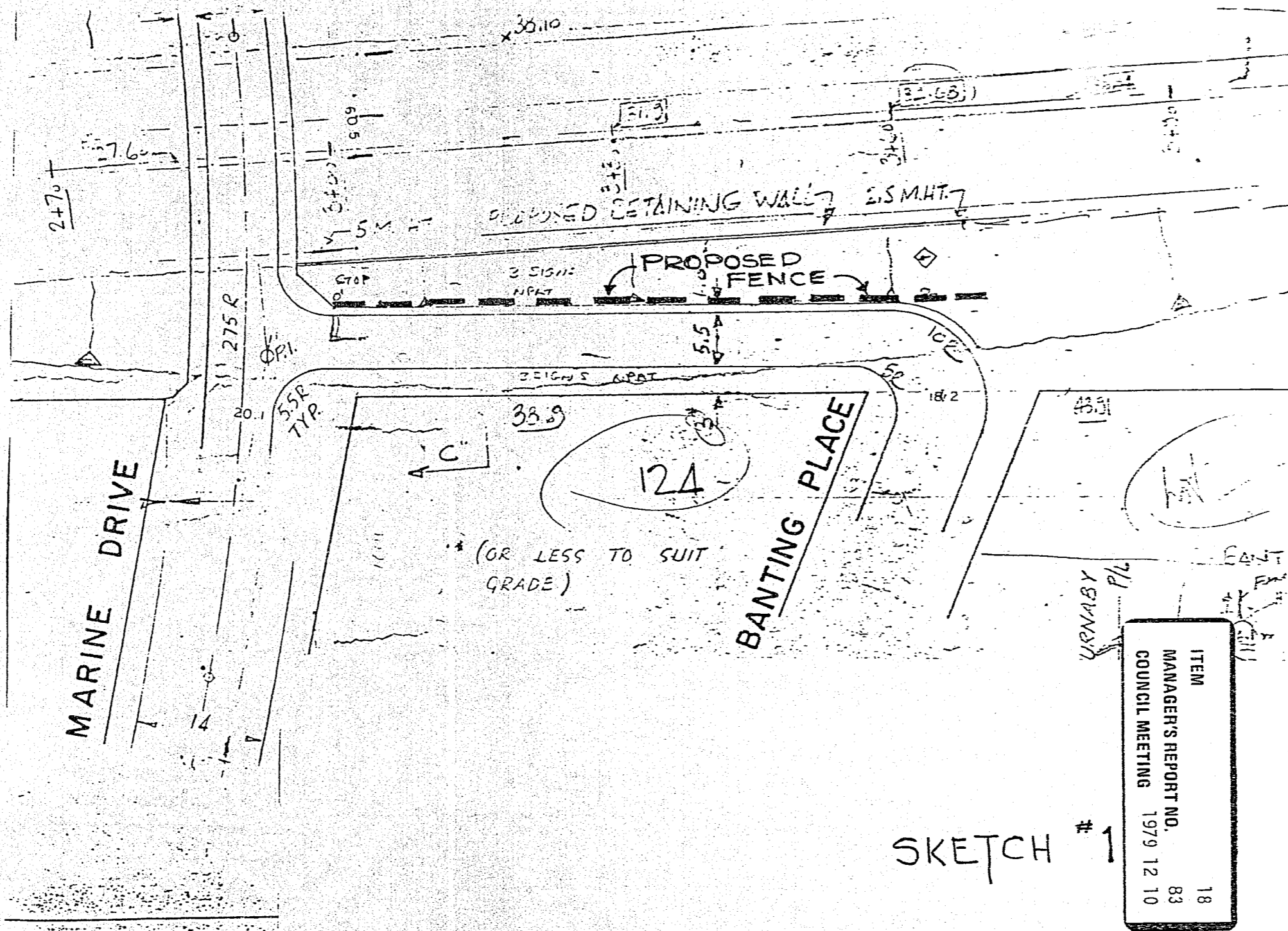
1. The report should include a cross-section of the plans for the Boundary Road widening showing the height of the proposed wooden fence adjacent to Banting Place and the design of the fence.
2. It was requested that the warrants for the proposed traffic signal at Marine Drive and the Banting Place access road be defined.
3. It was also requested that your report contain a line diagram to show the twelve-foot maximum height of the exhaust stacks on diesel vehicles and how they will affect the homes on Banting Place taking into account the height of the fence.
4. An estimate of the cost of providing a one-lane northward access for the residents of Banting Place should be included in the report.
5. It was requested that you endeavor to provide a forecast of traffic volumes on Marine Drive in the future in order that problems which may be encountered at the Banting Place access road intersection may be anticipated.

Would you please submit a report on this matter to the Municipal Manager.

B.D. Leche,
DEPUTY MUNICIPAL CLERK

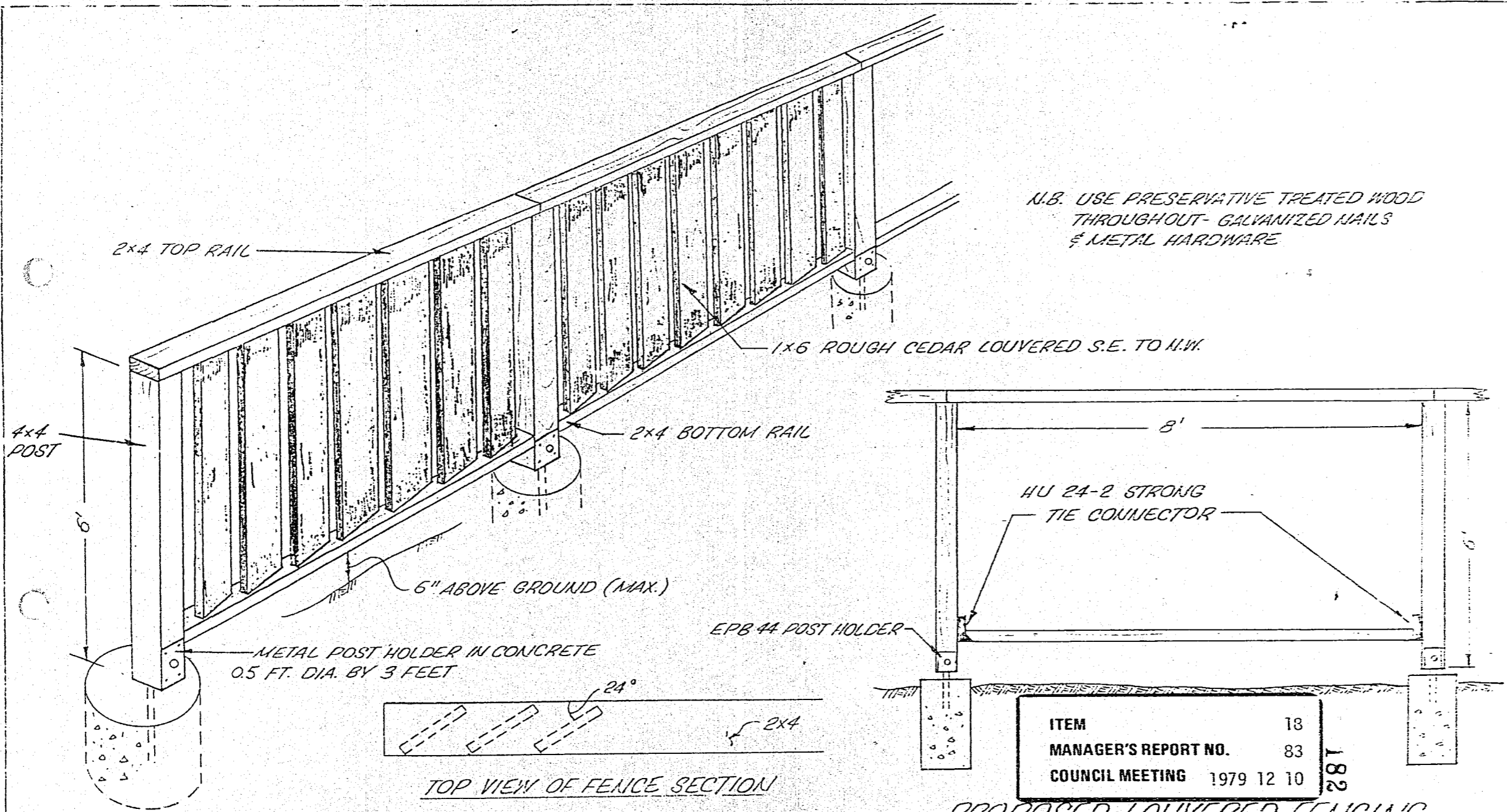
BDL/dlc

cc: Municipal Manager
Director of Planning



SKETCH # 1

ITEM	18
MANAGER'S REPORT NO.	83
COUNCIL MEETING	1979 12 10

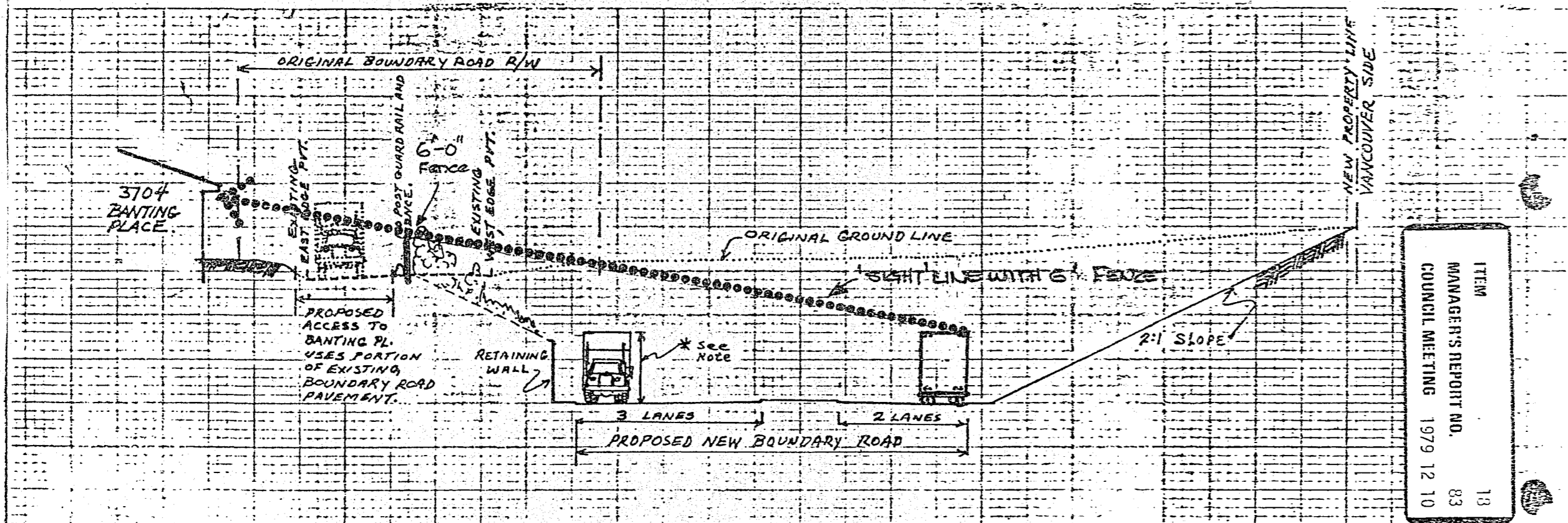


N.B. USE PRESERVATIVE TREATED WOOD
THROUGHOUT- GALVANIZED NAILS
& METAL HARDWARE

SKETCH # 1A

PROPOSED LOUVERED FENCING
FOR BOUNDARY FRONTAGE ROAD
AT BANTING PLACE

H.T.S.



ITEM	18
MANAGER'S REPORT NO.	83
COUNCIL MEETING	1979 12 10

* NOTE: MAX. TRUCK HEIGHT PERMITTED BY BYLAW 4.1m (13ft. 6 inches)

CROSS-SECTION LOOKING SOUTHWARD ALONG BOUNDARY ROAD. SCALE 1:250 1979 09 26

FIGURE 1

183

SKETCH #2