



Rochester Hills

Minutes - Draft

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MR-42E Noise Barrier/Sound Wall Technical Review Committee

Members: Paul Davis, Jennifer Lagerbohm, Charles Lam, Michael McGlynn, Doug Walther
Council Member: Greg Hooper
Youth Representative: Trip Brennan

Monday, November 30, 2009

6:00 PM

1000 Rochester Hills Drive

CALL TO ORDER

Chairperson Mike McGlynn called the meeting to order at 6:04 p.m.

ROLL CALL

Present 6 - Greg Hooper, Paul Davis, Jennifer Lagerbohm, Charles Lam, Michael McGlynn and Doug Walther

Others Present:

Trip Brennan, Rochester Hills Government Youth Council Representative
Rich Diem
Elona Murphy
Olaf Nitsche (entered at 6:20 p.m.)
Noelle O'Neill (entered at 6:40 p.m.)
Dave Simonetti

INTRODUCTIONS

PUBLIC COMMENTS

None.

APPROVAL OF MEETING MINUTES

2009-0534 Approval of Meeting Minutes - November 10, 2009

Attachments: [111009 Minutes.pdf](#)
[Resolution.pdf](#)

A motion was made by Hooper, seconded by Lagerbohm, that the Minutes of the Meeting of November 10, 2009 be Approved as Presented. The motion CARRIED by the following vote:

Aye 6 - Hooper, Davis, Lagerbohm, Lam, McGlynn and Walther

Resolved, that the Minutes of the MR42-E Noise Barrier/Sound Wall Technical Review

Committee meeting held on November 10, 2009 be approved as presented.

DISCUSSION ITEM

2009-0502 Discussion of handling of areas excluded by the MDOT study

Attachments: [Noise Barrier Rating Form - Draft.pdf](#)
[Table 7 with MDOT updates.pdf](#)
[Masiak abstract.pdf](#)
[Decision Matrix Article 111009.pdf](#)
[McGlynn Category Criteria Draft 111009.pdf](#)
[Noise Impact Info 111009.pdf](#)
[Agenda 101309.pdf](#)

Chairperson Mike McGlynn recapped the discussion from the November 10, 2009 meeting, summarizing the criteria considered by the Committee.

Noise level-based criteria

Predicted peak noise levels per the MDOT report:

The Committee indicated that they would keep this criteria.

Largest reduction in sound levels if the sound wall is built:

The Committee will not use this criteria.

Reflection of approved noise barrier on the opposite side of the road:

It was discussed that an opposing noise barrier would not have more than a three decibel impact on sound level.

Number of affected homes within 500 feet:

It was determined that this criteria will be used.

Number of benefitting dwelling units within 500 feet:

It was determined that this criteria will not be used.

Number of adjacent residents within 500 feet of M-59:

It was determined that this criteria will not be used.

Number of homes within 200 feet of nearest M-59 through lane:

It was determined that this criteria will not be used.

Elevation differences between first homes and M-59:

This criteria would be kept for consideration, and was discussed further.

Member Jennifer Lagerbohm stated that elevation should be a consideration in comparison to the roadway as the wall should be ranked higher in those areas where elevation makes the biggest impact.

Member Greg Hooper stated that consideration should be given to the elevation of any property lines or ditches, noting that areas lower than the road might not achieve any perceivable benefit by the construction of a wall.

Member Paul Davis, City Engineer, stated that the City has a Geographic Information System (GIS) that includes aerial photographs supplemented by elevations at two-foot contours and noted that this could allow estimates of ground levels for each home within 500 feet of M-59. He pointed out that a determination could also be made whether a second story of a home might fall within the shadow factor and might benefit. He noted that the Michigan Department of Transportation (MDOT) noise study did not take upper levels into account. He stated that including second story elevation information would take additional work, but noted that concerns have been raised about sleeping areas.

Chairperson McGlynn stated that this criteria could be kept in, if it could be turned into a measureable criteria.

Member Charles Lam questioned whether this measurement would include a calculation of the height of the wall or if one standard height would be used throughout.

Member Hooper commented that there could be multiple scenarios to consider for elevation, noting that if the wall could be constructed right next to the roadway it would be of great benefit to a unit whether it was high, low or at the same elevation. He mentioned the mobile home park, noting that the freeway was much higher than the mobile homes and questioning how they would be ranked using this criteria if a wall could be installed right next to the roadway. He stated that if the wall could shield a unit from the noise it would be of benefit irrespective of elevation.

Typical height of adjacent homes:

Chairperson McGlynn indicated that this was discussed in conjunction with elevation.

Public uses available within 500 feet of the wall:

Chairperson McGlynn indicated that the Committee discussed including this criteria, with some sort of modification in the ranking scale for uses that were purely public, public to the community and not public.

Member Davis questioned how the ranking system should consider a subdivision with multiple items that fit this criteria and questioned whether the number of points assigned for ranking public uses would be capped.

Committee members discussed whether the category should be ranked as a "yes or no", or given a point for each use with a capped possible total. It was decided that once the number of criteria was determined, points could be assigned for criteria deemed more relevant.

Member Hooper clarified that the Committee would include only the first floor of multi-unit stacked condominiums and apartments in the count of affected units.

Financially-based criteria

Taxable value of homes within 500 feet:

SEV of homes within 500 feet:

Taxable value of benefitting homes within 500 feet:

SEV of benefitting homes within 500 feet:

Average assessed value of homes within 500 feet of M-59:

Estimated taxable value reduction for homes within 500 feet (without barrier):

Chairperson McGlynn noted that the first four items were all similar and tied either to Taxable Value or State Equalized Value (SEV) and considered either the total number of homes or only the benefitting homes per the MDOT report.

Member Lagerbohm stated that she would be in favor of including a percent reduction in taxable value without a barrier as a metric, as suggested in an e-mail forwarded to the Committee from Jim Masiak.

Member Doug Walther, Deputy Director of Assessing, commented that this would be difficult to measure, noting that the impact on future value cannot be accurately predicted and pointing out that other communities in Oakland County do not have data that could be used here for comparison. He stated that he has had conversations with a few appraisers that do work for the State of Michigan and it would be difficult to know whether the impact would be any different percentage-wise on a higher-value home versus a lesser-value home.

Member Lagerbohm noted that if the percentage of reduction would be equal across all home values, including this criteria would be meaningless.

Rich Diem noted that Wayne County encountered the same problems in determining value impact after I-275 had been grooved, creating additional noise in the Farmington/Farmington Hills area.

Member Walther noted that the impact on the standard of living and environment should be given greater consideration than property values.

Chairperson McGlynn noted that a small subdivision with a few expensive homes could end up with the same total taxable value rating as a community with a large number of less expensive homes.

Committee members noted that while there would be a way to arrive at a taxable value for each wall segment, it would be difficult to establish a fair way to rank the values.

Member Lagerbohm questioned whether homes in place before M-59 was built or those whose owners pre-date the freeway should be given a higher ranking.

Member Davis stated that age of adjacent homes could be easily determined, however length of ownership would be more difficult.

Member Walther questioned whether including this could put an arbitrary value on homes that have been there the longest.

Chairperson McGlynn noted that including financial data diverts the ranking process away from looking at noise levels and residents' ability to enjoy their community regardless of property values.

Member Hooper requested that Member Walther assemble data for discussion on how many homes included in these areas were built before M-59.

Wall cost-based criteria:

Cost of wall per affected resident:

Cost of wall per benefitting dwelling unit:

Cost per benefitting parcel (MDOT "reasonable" criteria)

Subdivision cost share:

Length of proposed wall construction:

Does the wall location provide suitable maintenance access?

Proposed noise barrier construction type:

Chairperson McGlynn noted that the first three criteria suggested were similar and were tied to MDOT's Table 7 cost criteria of \$38,060 per benefitting unit.

Member Davis noted that this figure is MDOT's and the Federal Highway Administration's (FHA) attempt to establish criteria on how to spend money wisely on wall construction. He noted that it does not make sense to continue spending money to construct sound walls if the walls will not serve a reasonable number of people. He noted MDOT's category for "public use" was narrowly-defined as a feature that was truly open to the public like a community-wide park or a library. He questioned whether the Committee wished to include consideration for the type of residential unit and number of individuals that might live there, noting that there could be a distinction in the number living in a single family residence versus an apartment or manufactured home.

The Committee determined that this ranking criteria should include benefitting potential dwelling units, including buildable lots but excluding public parks, swimming pools and clubhouses in the cost-based category as these public uses would be covered in a different ranking category. Further discussion ensued as to whether to include those units receiving less than a five decibel reduction within the targeted area or strictly follow MDOT's version for a five decibel reduction, and whether to follow a 500 foot distance to determine affected units and arrive at a cost per benefitting unit.

Member Davis further noted that criteria would need to be established for the trailer park as MDOT study information did not exist for that area.

Chairperson McGlynn stated that costs per unit needed to be included in some manner as Council could be deciding on funding a wall that affects few residents versus a wall affecting 1,000 residents, each having the same total cost.

Member Davis noted that a 500 foot distance was MDOT's typical rule of thumb used for estimating benefit without doing an elaborate study and that MDOT's cost per benefitting unit was computed by determining the actual units that would receive the five decibel noise reduction. He pointed out that other factors determined how total wall cost varies including length and height.

Olaf Nitsche stated that those areas with more expensive homes and larger lots would not have the same density and would yield higher costs per unit.

Member Lagerbohm stated that it is not fair to include a weight for the taxable value of the homes.

Member Hooper commented that the Committee needed to arrive at an agreeable definition for benefitting unit and questioned whether the 500-foot distance should include a structure on a property or should merely encompass a portion of the property falling within the 500-foot distance.

Member Davis noted that the MDOT study included a unit if any portion of the property fell within the benefitting shadow. He commented that MDOT has the best information available, and noted that the data was consistent with measurements taken with the same equipment using the same criteria throughout the study area. He noted that engineering assumptions could be made for the areas where the information did not exist.

Additional discussion ensued as to whether to use the MDOT report to determine benefitting units and setbacks, whether to set a straight cost per units within 500 feet, and how to include vacant lots.

Member Davis noted that MDOT included vacant lots for Noise Barrier-10, and commented that this was one of the only areas that had vacant lots for development. He stated that most of the other areas were already built out.

Member Walther concurred, pointing out a few other areas that had vacant lots but noting that most of the vacant lots remaining in the other areas are not buildable.

Member Hooper recapped that a wall cost-based criteria selected for inclusion would be the cost per residential benefitting unit per MDOT's formula.

The Committee discussed whether to include criteria that 50 percent of the lot should be included within benefitting area to be counted.

Member Walther commented that it would be difficult to calculate lot percentage as the program used cannot calculate angles. He suggested that his preference is to either incorporate a unit if the structure fell within the distance or if the lot touched the qualifying area. He commented that the latter is the method MDOT used.

The Committee concurred with using MDOT's maps to determine qualifying units.

Chairperson McGlynn directed the Committee to discuss whether to include ranking criteria for subdivision cost sharing. He commented that this criteria would be difficult for the Committee to evaluate as it would be difficult initially to determine which subdivisions would be willing to contribute to fund a sound wall.

Member Davis commented that a subdivision could step forward after the ranking process and approach Council with a proposal.

Member Lagerbohm questioned whether an informational packet could be compiled to distribute to residents in a threshold area that could spur funding options within subdivision organizations.

Member Davis noted that once rankings are established and released, subdivisions who want to lift their wall over others in the consideration process could come forward with funding proposals.

Member Trip Brennan commented that this should be used if two walls are very close in ranking, and should not be used to lift a low-ranking wall above much higher-ranked walls to a position of being constructed.

Mr. Diem concurred, stating that a "bidding war" should be avoided where the most affluent subdivision automatically moves to the top of the list.

Member Davis commented that grant programs often see communities offer additional cost-sharing to receive priority and noted that this could be a way of making the money go further.

Member Hooper noted that he is personally opposed to Special Assessment Districts (SADs) as it creates a community of haves and have-nots. He commented that Farmington Hills does not have a road maintenance program and relies on assessments and stated that the subdivisions with streets in good conditions are the ones who can afford to pay. He noted that while he felt SADs could split the community, he could not say that SADs would not be an option considered.

Discussion ensued regarding SADs for improvements such as wall construction versus maintenance and who would be included in an SAD for wall construction.

Member Hooper responded that there most likely would be a difference in

perception of an SAD for maintenance. He commented that including only affected properties in the SAD rather than entire subdivisions could lead to owners attempting to opt out of an SAD by pointing out that only a portion of their property touched the affected area or they did not receive enough benefit to be included. It was discussed how to include common areas such as pools that would fall within SADs.

Chairperson McGlynn questioned whether wall length should be used as a criteria.

Member Hooper commented that surface area would be more appropriate and wall heights and lengths were available in the MDOT study.

Member Davis pointed out that MDOT uses both length and height in their cost computations, commenting that MDOT includes \$25.50 per square foot and \$250 per lineal foot to obtain a total cost of a wall.

After discussion, the Committee determined that using wall length or square footage as a cost-based criteria was not necessary as the cost per benefitting unit criteria already took wall cost into account.

Chairperson McGlynn questioned whether the committee wanted to include criteria regarding suitable access for wall maintenance.

Member Davis stated that MDOT does not pay much attention to this criteria in wall ranking as the walls are typically turned over to the communities for maintenance after construction. He commented that there would be some benefit to taking maintenance into consideration as there would be future costs to the City and noting that one wall might be easier to maintain than another. He pointed out that access roads and easements could be reviewed. He commented that he would suggest that this be given consideration, although it would not need to be given a great deal of points in the ranking process.

Member Brennan questioned what maintenance activities would be included.

Member Davis responded that maintenance could include erosion, vehicle damage, falling trees or graffiti removal.

Ms. Noelle O'Neill questioned whether the City's insurance could cover damage.

Member Hooper commented that the City has a high deductible for property damage such as this.

Member Davis indicated that maintenance criteria could have a subjective rating, but could be based on a review of aerials and elevations of proposed wall placement. He noted that the M-59 project is creating some areas of detention that do not currently exist which could limit access to some wall areas.

The Committee agreed to include wall maintenance in the ranking criteria.

Chairperson McGlynn questioned whether the Committee wished to consider alternative wall types in the ranking process.

Member Davis responded that MDOT only considers concrete walls.

Member Lagerbohm stated that she would encourage discussion of the aesthetic value of a wall.

Ms. O'Neill commented that of all the residents she has spoken to in the Nawakwa area, none stated that they would prefer to hear traffic noise rather than look at a wall.

Member Brennan commented that aesthetics could be subjective and difficult to put a ranking to.

The Committee discussed various options other communities used for concrete walls with different construction patterns and colors. Discussion ensued regarding what would happen once the ranking was determined as to which walls would ultimately be constructed with available funds.

Member Davis noted that if a \$3 million wall was ranked highest, but lesser funding was available, Council might opt for a lower-ranked wall that could be constructed with the available funds.

Member Hooper questioned whether there would be any chance that the walls could be done with alternative construction methods, such as berms.

Member Davis responded that there could be some areas where berms could work and noted that a wall area could include sections of concrete or berm. He noted that walls slated for construction in MDOT's right-of-way would most likely be concrete; however, a wall that might be constructed within a subdivision common area could include a berm. He commented that he would review the aeriels and measure out the requirements for space needed for berms, noting that for each foot in height a three or four foot horizontal footprint would be needed to create a berm that could be maintained. He commented that if alternative construction methods were included for ranking, MDOT's cost analysis would have to be adjusted in the ranking process.

Ms. O'Neill suggested that in areas where a section of concrete wall could be cut out and replaced with berm, that cost savings could be deducted from the total cost estimate for that wall.

Member Davis commented that additional factors had to be taken into account for alternative methods, such as the placement of utilities in a wall area.

Member Hooper suggested that this criteria could be labeled as "cost reduction for a wall segment". A wall would receive a higher score if it could be done with an alternative method to a concrete wall.

Discussion ensued regarding the recent vegetation removal by MDOT and the question was raised whether there would be additional clearing.

***Member Davis** noted that although vegetation removal was noted on MDOT's construction plans, the extent of clearing was not. He commented that MDOT does not have progress meetings with the City for this project and his guess was that there would most likely be some additional clearing in other areas.*

***Ms. O'Neill** questioned whether anyone could attend a construction progress meeting.*

***Member Davis** responded that he would request that MDOT provide additional regular updates to the City.*

***Chairperson McGlynn** commented that the Committee would review the ranking categories at the next meeting and suggested that the Committee members begin to formulate a rating system that could be discussed.*

***Member Davis** questioned whether Council could consider extending the Committee's appointment into January, noting that he did not believe that a finalized presentation would be ready for Council before the mid-December deadline.*

***Member Hooper** stated that he would have Council discuss extending the Committee into 2010 and would also consider whether to retain two Council members on the Committee or reduce the Council membership to one and include one additional Citizen appointment.*

***Chairperson McGlynn** stated that the next meeting would focus on reviewing the seven criteria selected and determine a weighting or ranking for these criteria that could then be applied to each wall section.*

***Member Davis** commented that the Committee should also discuss how the ranking system would translate to the trailer park area at the next meeting.*

Discussed.

NEXT MEETING AGENDA

REVIEW TIMELINE

ANY OTHER BUSINESS

NEXT MEETING DATE

Tuesday, December 8, 2009 - 6:00 p.m.

ADJOURNMENT

The meeting was adjourned at 7:58 p.m.

Minutes were approved as presented at the (insert date) MR-42E Noise Barrier/Sound Wall Technical Review Committee Meeting.

MIKE McGLYNN, Chairperson

*Prepared by Mary Jo Whitbey
Administrative Secretary, City Clerk's Office*