

TO: CITY MANAGER 1992 NOVEMBER 05  
FROM: ACTING DIRECTOR PLANNING AND BUILDING OUR FILE: 10.225.2.2  
SUBJECT: BURNABY MOUNTAIN URBAN TRAIL  
PHASE TWO ALIGNMENT  
PURPOSE: To provide Council with an evaluation of alternative alignments  
for Phase Two of the Burnaby Mountain Urban Trail.

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RECOMMENDATION:

1. THAT staff be authorized to pursue a modified version of Alignment "B" as outlined in this report for implementation as Phase Two of the Burnaby Mountain Urban Trail.

REPORT

1.0 SUMMARY

The purpose of this report is to provide Council with an evaluation of alternative alignments for Phase Two of the Burnaby Mountain Urban Trail.

Four alternative alignments have been identified for consideration and these have been analyzed to provide an understanding of the benefits and impacts associated with each. Preliminary cost estimates have also been included to indicate an order of magnitude comparison for each alternative alignment.

As directed by Council, residents in neighbourhoods affected by Phase Two have been consulted to obtain their input on the alignments. An outline of the public consultation process and a summary of the public input is presented in Appendix A attached.

In light of conclusions drawn from the analysis of the alternative alignments and from the public input received it is recommended that Alignment "B" be pursued for implementation of Phase Two.

2.0 BACKGROUND

Phase One of the Burnaby Mountain Urban Trail was approved for implementation by Council on 1991 October 07. Arising out of Council discussion at that time concerning Phase Two of the trail, staff was directed to consult with neighbourhoods affected, and to examine an alternative route for the Phase Two trail. The original route proposed for Phase Two was Alignment "C".

On 1992 May 11, Council approved a public consultation process for Phase Two which included a mailout to all households in neighbourhoods affected by the trail. Council also approved a series of Public Open Houses to be held for the purpose of obtaining public input on alternative alignments. Public Open Houses were held in 1992 June 09, 10 and 11. It should be noted also that Council has received numerous written correspondence items concerning Phase Two. These letters have been included in the analysis of public input for Phase Two.

A total of four alternative alignments were identified for consideration and evaluation to determine an appropriate route for Phase Two.

### 3.0 EVALUATION OF ROUTE OPTIONS

The proposed Burnaby Mountain Urban Trail connects between the Lougheed Town Centre area and the Burrard Inlet Waterfront. The goal for this Urban Trail is to link neighbourhoods on route, provide local access to schools/parks/facilities, and provide access from local neighbourhoods out to Lougheed Town Centre and to the Waterfront.

The trail will serve transportation needs by encouraging walking and cycling, and will also provide an enjoyable recreation amenity as a type of greenway corridor.

Phasing proposed for implementation of the overall route includes: **121**

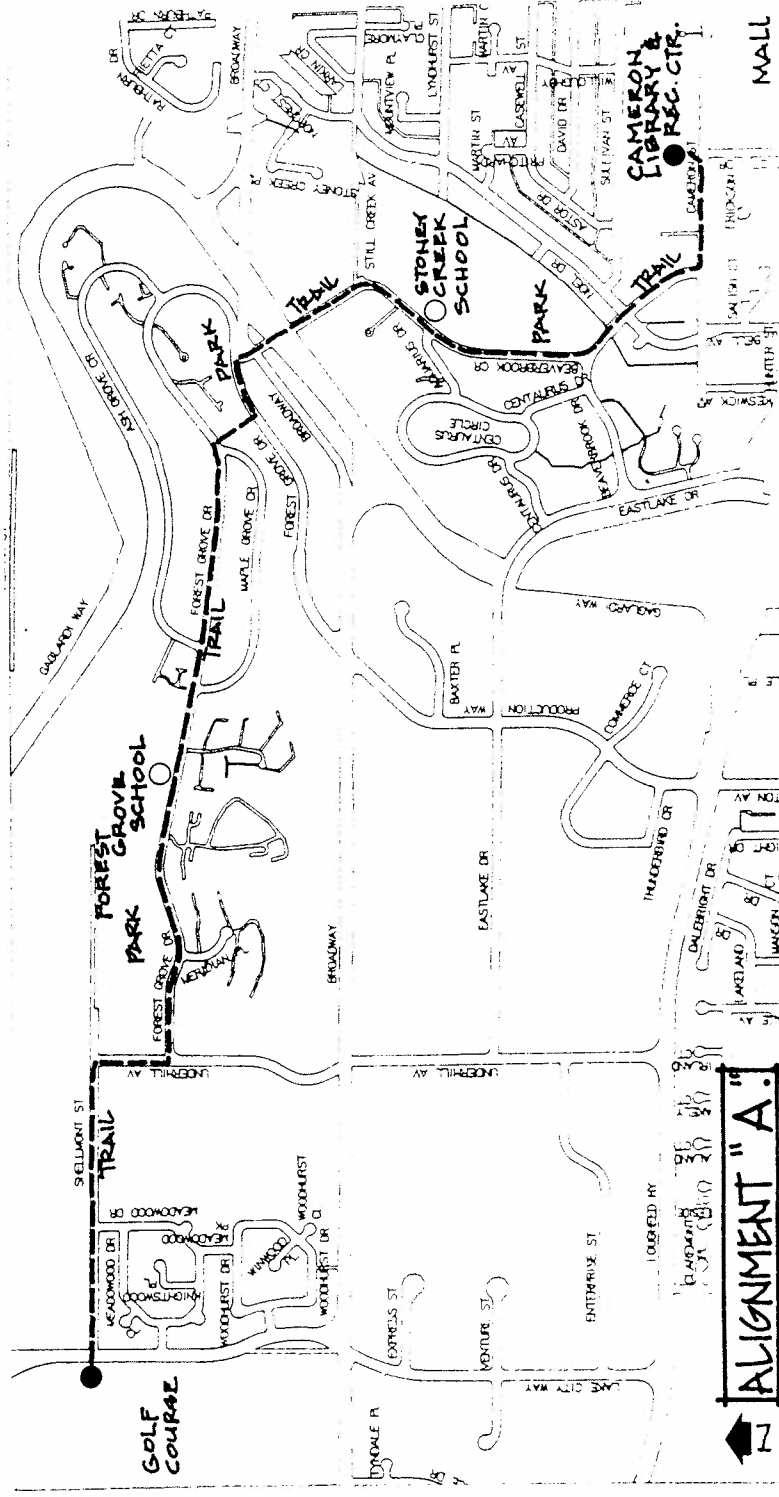
- PHASE ONE:
  - Hastings Street to Squint Lake Park and Burnaby Mountain Golf Course (under construction).
- PHASE TWO:
  - Golf Course to Cameron Recreation Centre and Lougheed Town Centre area.
- PHASE THREE:
  - North to Burrard Inlet waterfront (future extensions)
  - South past the Lougheed Highway

Phase One, under construction with segments now completed and open for use, is already being actively used as envisioned. That is, local residents use it for recreational walking and cycling, as well as for access to local facilities. At present, it appears that use by people from other areas does not occur to any significant extent.

For Phase Two, four alternative alignments ("A", "B", "C" and "D") have been identified for consideration and evaluation as potential routes for linking the end of Phase One to the Cameron Recreation Centre. The four alternatives are discussed and evaluated in this report to present Council with a comparative analysis of each on the basis of trail function and benefits, safety, neighbourhood impacts, environmental impacts, public input and preliminary costs. The public input component is further discussed in Appendix "A".

Phase Three includes possible future extensions within the overall Urban Trail System.

### 3.1 Alignment "A"



### 3.1.1.1 Description of Alignment

From the golf course, Alignment "A" passes along Shellmont Street north of the Forest Hills neighbourhood and follows up the hill to the Forest Grove neighbourhood. Through Forest Grove, "A" follows along Forest Grove Drive, passing in front of district playgrounds and the outdoor recreation facilities at Forest Grove Park, and Forest Grove Elementary School. From the school, "A" continues down Forest Grove Drive to Maple Grove Park, then uses the existing stairs to rejoin with Forest Grove Drive and leaves the neighbourhood by crossing the existing pedestrian bridge over Gaglardi Way. From the overpass, "A" follows the existing public walkway corridor down the hill into the Simon Fraser Hills neighborhood and continues along Beaverbrook Crescent past the front of Stoney Creek School and Stoney Creek Park to Beaverbrook Drive. Using the existing roadway bridge to cross Stoney Creek, "A" continues along Beaverbrook Drive to the public library and recreation facilities on Cameron Street.

### 3.1.2 Transportation Functions

- (a) Alignment "A" is well-oriented to serve the residential neighbourhoods of Forest Hills, Forest Grove, and Simon Fraser Hills providing convenient access between and within these local areas to a number of important community amenities. Improved access directly to the front of the two elementary schools will be of special benefit to local school children.
- (b) Access for pedestrians and cyclists out to larger municipal and district facilities will also be improved from within the three neighbourhoods.
- (c) However, because this route is somewhat circuitous and less direct compared to more utilitarian roadway options currently available, use by commuter cyclists will be limited.

### 3.1.3 Recreational Functions

Alignment "A" offers a safe and exceptionally scenic amenity oriented through one of Burnaby's most attractive regions. "A" is separated from vehicular traffic and for the most part follows beside relatively quiet residential streets which are flanked on at least one side with parks, public open space, or landscaped buffer areas. By connecting this string of parks and green space along the lower slopes of Burnaby Mountain, "A" will formalize and improve existing linkages to serve as a linear greenway corridor that will attract recreational use by both pedestrians and cyclists.

### 3.1.4 Safety

- (a) Alignment "A" provides for dual paths separating pedestrians from cyclists for approximately 50% of the total route. For the other 50%, pedestrians and cyclists will share a single joint-use path which will be developed to a widened standard for safety and will also provide for a parallel walkway (usually across the street) as an additional option for pedestrians.
- (b) Close cooperation with the school authorities will be required to ensure a safe trail design is provided for areas in front of the two schools. Cyclists will be required to dismount in these areas during busy hours.

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- (c) A dismount area is also required at Maple Grove Park where bikes are to be walked down a ramp adjacent the existing stairs and at the Beaverbrook Drive bridge.
  - (d) Trail segments with gradients over 8% will be difficult for some cyclists and will discourage trail use to some degree. Such gradients occur on Shellmont Street, Underhill Avenue, part of Forest Grove Drive, and south of the Gagliardi overpass.
  - (e) The trail is generally located "up-front" in a prominent location alongside existing streets and sidewalks resulting in good visibility from the street and adjacent public facilities. This high level of surveillance will act as a natural deterrent to crime and vandalism.
  - (f) Existing street lighting provides for improved safety at night for most of the trail although not all.

### 3.1.5 Environmental Impacts and Improvements

- (a) Alignment "A" utilizes existing public rights-of-way that are designated for roadway and walkway purposes and follows along the periphery of public parks. It does not require access through private property or conservation areas. Existing nature trails along Shellmont Street, throughout the Forest Grove neighbourhood, and in Stoney Creek Park are not within the trail alignment. Trail construction will follow standard city environmental practices to protect creeks and watercourses. With the exception of a small bridge required for the bike path over an existing culvert outlet south of Stoney Creek School, the trail utilizes existing bridges and crossings to cross watercourses. Signage will identify creek names to raise awareness of these natural features.
- (b) Existing natural vegetation growing within the road right-of-way will be affected by trail construction in several locations. Along Forest Grove Drive natural growth of alders and shrub understorey will be removed back from the roadway curb only as required to construct a safe minimum width of trail 8-10 feet wide. Since in most areas a grass setback exists behind the roadway curb, removal of vegetation will not generally exceed 8 feet in width. The trail alignment will be adjusted to bypass around healthy mature trees and care taken to protect root systems from undue damage.
- (c) The mixed woodland setting found along the walkway corridor south of the Gagliardi overpass is identified as a sensitive area of natural vegetation. The addition of an 8-ft. bike path parallel to the existing sidewalk in this area will require removal of understorey vegetation and smaller alders to a width of 12 feet. Pruning of lower branches and removal of low shrubs will be required for visibility and security purposes between the two paths. However, the width of the corridor (76 feet) provides sufficient flexibility to ensure that mature trees can be retained along with substantial areas of natural vegetation.
- (d) Existing ornamental landscaping affected by the trail will be restored to an equal or better condition as a result of trail improvements. Mature tree specimens will be protected and retained by adjusting the trail alignment and/or width on a site specific basis. Additional planting of street trees will be undertaken to improve the existing environment of the trail corridor where necessary. Existing landscaping on private property will not be affected.

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### 3.1.6 Neighbourhood Impacts

- (a) The highly visible location of the trail 8 to 13 feet wide alongside existing streets results in some visual impact to the affected neighbourhoods.
- (b) Where "A" is adjacent homes in Forest Hills, private rear yards are screened from the trail by a vegetated buffer strip 40 feet wide, in addition to space within the road right-of-way.
- (c) In Forest Grove, much of the trail alignment is on the public side of the street - across the road from private property.
- Also, the cluster housing in this area is generally well-screened and buffered from the road right-of-way where the trail would be located. For example, the eleven units in total which front onto the trail-side of Forest Grove Drive have a minimum setback of 50 feet or more from the property line and are presently screened from the existing public sidewalk by mature vegetation, landscaping and fences on private property.
- (d) In Simon Fraser Hills, townhouses south of the overpass are also well-screened from the trail by vegetation and/or stone walls and fences.
- (e) The trail will cross a total of 4 private driveways. These driveways will not require any changes in gradients or metrics to accommodate the trail. In some cases, ornamental gateway landscaping on the public right-of-way will require relocation or removal.

### 3.1.7 Public Input Summary (refer to Appendix A)

- (a) In the written submissions received from the public, Alignment "A" rated the lowest preference overall (13%). Support was strongest from residents of Forest Hills and Simon Fraser Hills who saw this route as a pleasant trail through an attractive area.
- (b) However, the large majority of Forest Grove residents who submitted input during the public consultation process were strongly opposed of Alignment "A". Their primary concerns were:
- trail would bring outsiders into the neighbourhood and disrupt the natural solitude of the area.
  - trail would contribute to an increase in crimes and vandalism in the area.
  - cyclists pose a hazard to pedestrians - especially to school children.
  - bike paths would not be used and existing walking paths are adequate.
  - steep grades will discourage use.
  - paved trails would destroy natural areas and other green space.
- (c) Forest Grove residents feel very strongly overall that an Urban Trail is not appropriate for their area. The numerous case studies from other cities, all of which report positive neighbourhood benefits as a result of building trails and greenways, have been discussed in detail throughout the public input process. However, residents from Forest Grove have not been convinced that these findings apply to the special context of their neighbourhood.

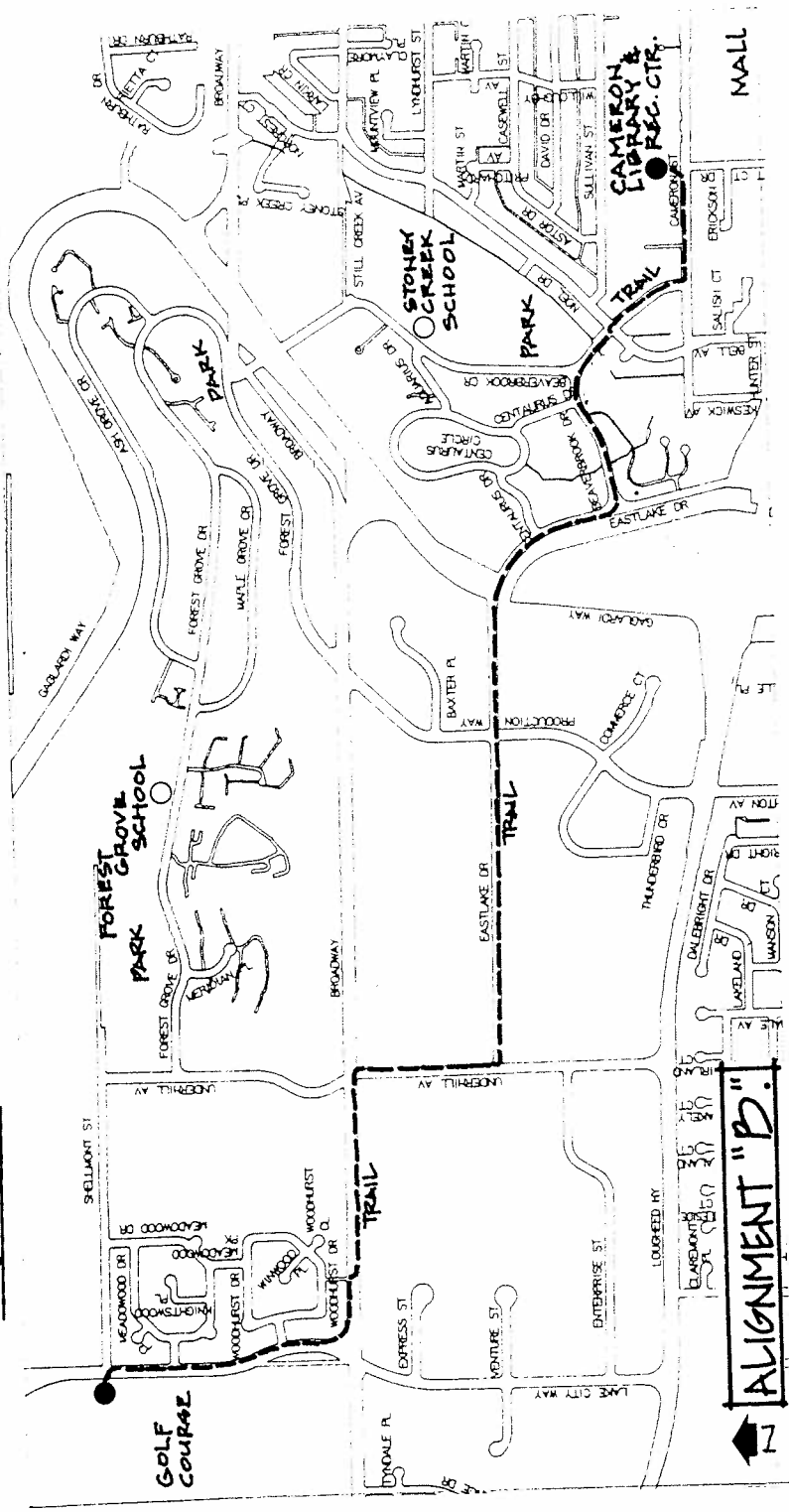
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### 3.1.8 Costs

Alignment "A" is approximately 4.0 kilometres in length and development as an Urban Trail is estimated to cost \$768,000.

This includes trail paving, signage, landscaping and basic accessories including benches and litter baskets. The cost also reflects specialized items which include slope retention where required and landscape improvements in front of the schools.

### 3.2 Alignment "B"



#### 3.2.1 Description of Alignment

Alignment "B" follows Arden Avenue along the west edge of Forest Hills neighbourhood down the hill to Broadway. Along Broadway, "B" follows east along the upper edge of the Lake City Industrial Park to Underhill Avenue then continues south along Underhill Avenue through the industrial area to Eastlake Drive. Along Eastlake Drive "B" follows parallel to the railway and passes under Gagliardi Way into the Simon Fraser Hills neighbourhood, then continues on Beaverbrook Drive crossing Stoney Creek on the existing roadway bridge, and continues to the public library and recreation facilities on Cameron Street.

#### 3.2.2 Transportation Functions

- (a) Alignment "B" is oriented to serve the residential neighbourhoods of Forest Hills and Simon Fraser Hills, and also serves the Lake City Industrial Park. It by-passes the Forest Grove neighbourhood.
- (b) To reduce the steep gradient encountered on Arden Avenue, the original "B" proposal has been modified to cross Broadway east of Arden Avenue.

The use of Underhill Avenue north of Broadway was considered but the steep and constricted boulevards make it less functional. A continued Broadway alignment east of Underhill Avenue was also considered but not pursued due in part to greater isolation, safety concerns, alignment constrictions and access difficulties along Gagliardi Way.

- (c) The major amenities provided access to this route include the Burnaby Mountain Golf Course, Stoney Creek Park, and the Cameron Library and Recreation Centre.
- (d) This route is relatively flat and direct, and will provide convenient access to municipal and district facilities for local residents from the two residential neighbourhoods and also from the industrial area.
- (e) Cyclists could also be attracted to use this convenient route for commuting between the Lougheed Town Centre and the Hastings Street Corridor.

### 3.2.3 Recreational Facilities

- (a) Alignment "B" is relatively pleasant and avoids major hills and steep grades. It will function well as a city-wide connector but is limited in local amenities to attract users to the trail itself.
- (b) Good views and vistas are found along the trail and the quality of adjacent residential and industrial developments is relatively high.
- (c) However, since most of this route is oriented along industrial and residential collector streets, mitigative measures will be required to provide a comfortable ambience and feeling of separation (i.e. from heavy traffic areas) that is preferred by recreational users.

### 3.2.4 Safety

- (a) Approximately 30% of this route offers dual paths which separate cyclists from pedestrians. A joint-use shared trail is provided for the remaining 70%.
- (b) To improve safety and to increase the separation from traffic, the original "B" proposal which required cyclists to ride on the street with vehicular traffic through the Beaverbrook Drive section has been modified. The revised proposal incorporates a bike path on Beaverbrook Drive (between Eastlake Drive and Noel Drive) by removing parking on one side of the street and installing a two way bike path and a curbed planting strip in the space reclaimed from the roadway. The existing 46 feet wide pavement on Beaverbrook Drive can accommodate these modifications without affecting existing traffic patterns. Pedestrians will use the existing sidewalks.
- (c) "B" is oriented alongside streets which will provide for high visibility and natural surveillance of people using the route. Existing street lighting provides additional safety and security for any night use of the trail.

### 3.2.5 Environmental Impacts and Improvements

- (a) Natural vegetation growing adjacent the BNR railway on the East Lake Drive right-of-way will require some clearing and slope stabilization to allow for trail construction to a safe width of 10-12 feet. Natural growth will be retained and, where necessary, restored to maintain a wooded buffer between the railway and the trail.
- (b) It is anticipated that extensive tree planting will be undertaken along "B" to improve the local environment and overall ambience of this route. To this end, it will be desirable to obtain an easement from the BNR corridor adjacent Eastlake Drive. This would allow for provision of a planting strip between the trail and Eastlake Drive.
- (c) Ornamental planting and landscaping will be affected in certain locations along Underhill Avenue and Cameron Street. Restoration of these areas to an equal or better standard can be achieved.

### 3.2.6 Neighbourhood Impacts

- (a) Alignment "B" follows alongside streets on public rights-of-way and will not generally have impact on the privacy of adjacent private property.
- (b) Within the Forest Hills neighbourhood, a well-treed buffer strip 40-feet wide separates the rear of the private properties along Arden Avenue from the trail. Infill planting can be provided where additional screening is desired by residents.
- (c) Through the Simon Fraser Hills neighbourhood on-street parking for approximately 20 cars will be removed from the south side of Beaverbrook Drive to allow for the proposed bike path.

### 3.2.7 Public Input Summary (refer to Appendix A)

- (a) In the written submissions received from the public, Alignment "B" rated the highest preference overall (64%). This strong support was largely from Forest Grove residents who were expressing a preference to have the trail outside their neighbourhood. The flat grades on "B" were identified as a major benefit of this alignment which would encourage use of the overall trail system.
- (b) While some residents of Simon Fraser Hills expressed a preference for this trail as the most convenient and direct route, others were concerned with the negative impact of heavy vehicular traffic adjacent the trail.
- (c) Residents also identified safety concerns with the potential vehicle/cyclist conflicts along Beaverbrook Drive and the intersection with East Lake Drive. The proposed modification to the trail on Beaverbrook Drive will resolve this concern by providing for a bike path separated from traffic through this area.
- (d) Several residents of Forest Hills expressed a concern that the trail would affect the privacy of their homes and rear yards along Arden Avenue. Others were opposed to paving any part of the existing grass boulevard on Arden Avenue.



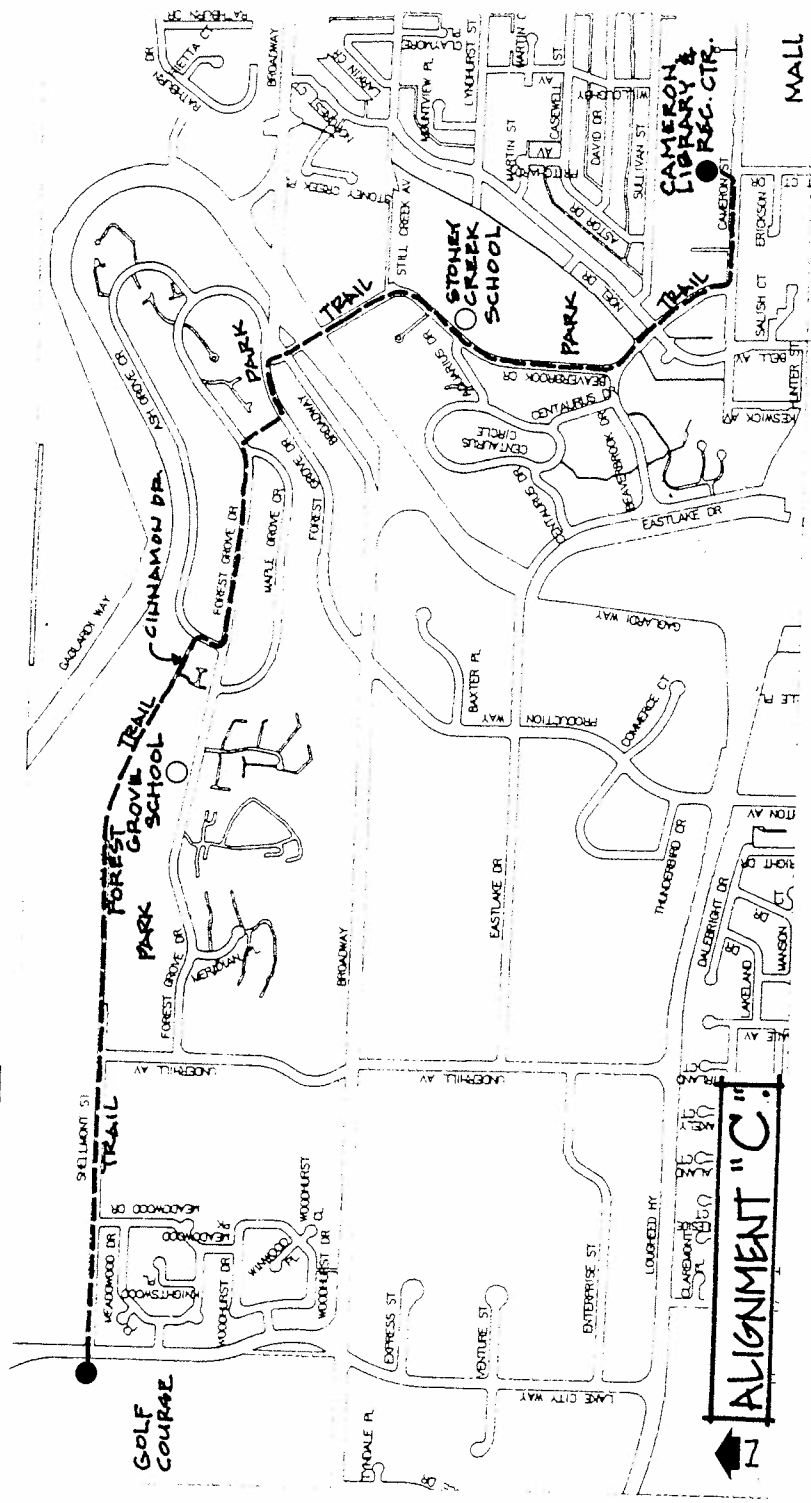
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3.2.8 Costs

Alignment "B" is approximately 4.0 kilometres in length and is estimated to cost \$825,000.

This includes trail paving, signage, landscaping and basic accessories including benches and litter baskets. This cost is the highest of the four alternatives, reflecting the requirement for curbs and additional landscaping to provide additional separation between the trail and adjacent roadways. The cost of modifications to Beaverbrook Drive is also included.

3.3 Alignment "C"



3.3.1 Description of Alignment

Alignment "C" follows a route similar to Alignment "A" as far as the top of the hill on Shellmont Street, where "C" leaves the street and continues east along the unopened Shellmont Street right-of-way and service road to the north of the outdoor playfields in Forest Grove Park. From the service road, "C" continues east on the pipeline corridor through the north portion of Forest Grove Park and to the rear of the Forest Grove Elementary School playfields. From the school, "C" follows the pipeline corridor and continues along Cinnamon Drive past the local convenience store and shops to Ash Grove Drive. "C" then turns south to Forest Grove Drive where it continues along the same route as Alignment "A" through Forest Grove, Simon Fraser Hills, and Stoney Creek neighbourhoods to Cameron Street.

3.3.2 Transportation Functions

- (a) Alignment "C" is park and residentially-oriented functioning similar to "A" in serving the neighbourhoods of Forest Hills, Forest Grove and Simon Fraser Hills. The trail provides access to a number of parks, recreation facilities, the two elementary schools, as well as to the neighbourhood commercial centre at Mountain Village.

(b) Between Underhill Avenue and Cinnamon Drive, the trail follows a park-oriented route along an existing corridor where motorized vehicles are not permitted. This section of the alignment is not as convenient for access directly from local homes, but does offer an attractive and pleasant environment totally separated from automobile traffic.

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(c) The Cinnamon Drive section will be inconvenient for cyclists, requiring them to dismount to follow the 5-foot wide public walkway adjacent the townhouses and neighbourhood shops in Mountain Side Village. The trail will cross five (5) private driveways on this short section which will require special signage to ensure trail safety is given high priority.

(d) This trail functions well as a link between abutting neighbourhoods and to provide local residents with access out of their neighbourhoods, but is not expected to attract through-use by commuter cyclists.

Where following the same route as "A", this alignment has three sections with gradients over 8% which will discourage trail use by cyclists to some extent. Where the trail follows behind Forest Grove Park and School, however, the gradients are relatively comfortable.

### 3.3.3 Recreational Function

Alignment "C" offers a pleasant and attractive route with maximum exposure to a continuous series of parks and public open space. The segment behind Forest Grove Park and Elementary School is especially pleasant and has the character of a country lane as it passes through the rolling landscape alongside wooded areas and open play fields. Of the alternate alignments discussed, "C" rates as the most suitable for strictly recreational purposes.

### 3.3.4 Safety

Alignment "C" will be highly visible from adjacent streets except for the segment behind the Forest Grove Park and School. This section does not provide for natural surveillance from adjacent residential areas or other buildings, and does not have adjacent street lighting. Crime prevention in this area is a concern and use of the trail after dark is not recommended for this section.

The CPTED (Crime Prevention through Environmental Design) unit of Burnaby's R.C.M.P. detachment have been consulted regarding this issue. They indicate that increased public use of the trail will result in a safer environment overall.

### 3.3.5 Neighbourhood Impacts

- (a) The impact of "C" on the Forest Hills and Simon Fraser Hills neighbourhoods is similar to that discussed for "A".
- (b) The existing trail and service road in the area behind the school and park will have an increase in use by pedestrians and cyclists. This alignment is separated and well-buffered from residential developments and will not affect the privacy of homes in the neighbourhood.

- (c) However, along the Cinnamon Drive section, increased use of the existing walkway which passes relatively close to five townhouse units will have some impact on the privacy of these residences.
- (d) Alternatives to the Cinnamon Drive segment were examined but did not prove to be practical. Additional right-of-way access on private property for a separate bike path was not available from adjacent property owners, a bypass route through the school yard will conflict with school activities and existing traffic patterns, and a bypass route through Forest Grove Park would have environmental impacts on existing natural areas.

### 3.3.6 Environmental Impacts and Improvements

The overall environmental impacts of Alignment "C" are similar to those discussed for "A". However, by following on the wide service road and the cleared pipeline right-of-way trail behind the park and school sites, this trail does not require disruption to existing vegetation through that area of Forest Grove. Existing creek crossings will be utilized with only minor modifications required. Signage at creeks will increase public awareness of these natural features.

### 3.3.7 Public Input Summary (refer to Appendix A)

- (a) In the written submissions received from the public, Alignment "C" rated a moderate level of preference (23%). Support was strongest from the Fraser Hills and Simon Fraser Hills neighbourhoods. This trail was supported as the most naturalistic of the alternative routes and was viewed as a pleasant recreationally-oriented amenity.
- (b) A large majority of Forest Grove residents were who submitted input were opposed to this route as having too much impact on their neighbourhood. Intrusion of outsiders, disruption to the quiet neighbourhood, and increased crime potential were the main concerns.
- (c) A special concern was that the area behind Forest Grove School would be subject to increased crime and vandalism.
- (d) Some residents also expressed the view that cyclists and increased use would affect the natural character of the pipeline corridor and service trail north of the school and park site.

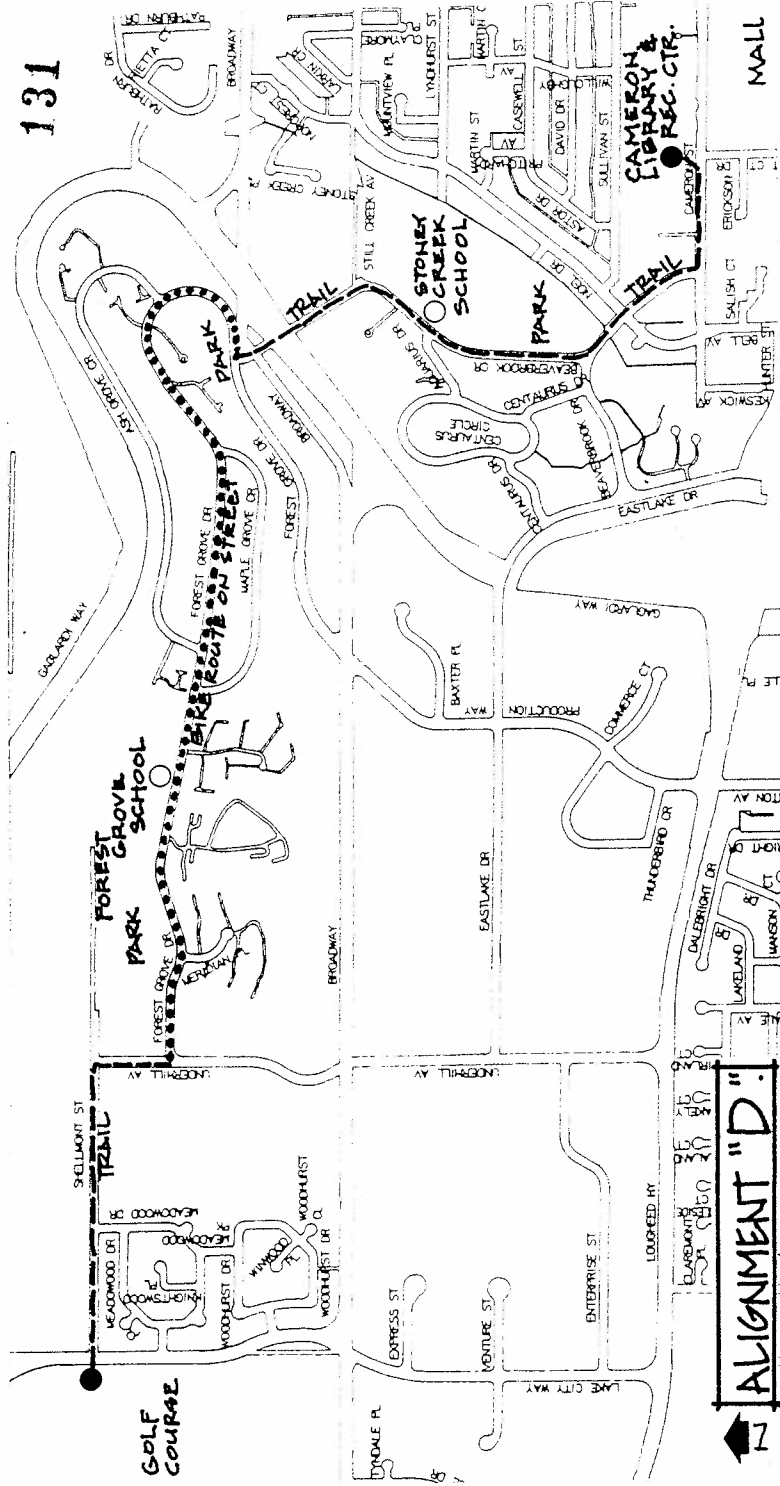
### 3.3.8 Costs

Alignment "C" is approximately 4.0 kilometres in length and is estimated to cost \$725,000.

This cost includes trail paving, signage, landscaping and basic accessories including benches and litter baskets. The lower costs (compared to "A") reflects the savings that would be achieved by utilizing the existing service road and pipeline trail behind the Forest Grove School and Park Site.

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3.4 Alignment "D"



3.4.1 Description of Alignment

Alignment "D" follows the same route as "A", but provides for a bicycle lane on Forest Grove Drive by removing parking and using the existing paved roadway for cyclists through the Forest Grove neighbourhood. Pedestrians would utilize the existing sidewalks through this area.

The option of designating a two-way bicycle-only lane on one side of Forest Grove Drive was examined but found to pose serious safety problems at intersections where cyclists would be required to be integrated with vehicular traffic. Conflicts with bus stops would also pose a problem.

A second option designating a one-way bicycle-only lane on each side of the roadway was examined which would improve the safety for cyclists and also accommodate sharing with buses at bus stops. However, this option requires the removal of all parking from both sides of Forest Grove Drive and is not considered to be acceptable for this neighbourhood.

As outlined above, the provision of designated bicycle-only lanes is not recommended for application on Forest Grove Drive. However, a further option to provide for cyclists to share the existing roadway with vehicles can be considered. This option would remove parking on one side of Forest Grove Drive and reorganize the lane markings to provide widened traffic lanes (14 feet each direction) to accommodate cyclists on the street. Parking on one side of the street would be retained. It is felt that this option would increase the safety and comfort level for cyclists and is the preferred means of integrating cyclists with vehicular traffic on Forest Grove Drive.

### 3.4.2 Functions

Alignment "D" will offer similar benefits to Alignment "A" as both a transportation and recreation route for pedestrians and cyclists. However, "D" will pose safety concerns, especially for children, and will not be attractive to cyclists who are uncomfortable with riding in traffic.

### 3.4.3 Neighbourhood Impacts

- (a) By incorporating bicycles onto Forest Grove Drive as discussed, this option makes efficient use of available roadway space and minimizes impacts within the neighbourhood. Roadway signage would identify Forest Grove Drive as a "Bike Route" that offers enhanced provision for cyclists.
- (b) The removal of parking on the north side (fronting the school) of Forest Grove Drive between Underhill Avenue and the turnoff to the Gagliardi Way overpass will require removal of on-street parking for a total of 207 cars. Of this number, it is estimated that only approximately 100 spaces are currently used on a regular basis by residents, visitors or park and school related users. The remaining spaces are seldom used.

### 3.4.4 Environmental Impacts and Improvements

The overall environmental impacts for "D" will be minimized in the Forest Grove area because the trail is on street. Impacts and improvements for other areas will be the same as for "A".

### 3.4.5 Public Input

Alignment "D" was identified as an alternate subsequent to the public open houses in the neighbourhoods. As such, public input has not generally been received on this alignment option, which is a variation of "A".

However, general comments from Forest Grove residents expressing concerns about neighbourhood impacts of "A" and "C" would also apply to "D".

### 3.4.6 Costs

Alignment "D" is approximately 4.25 kilometres in length and is estimated to cost \$590,000.

This cost includes trail paving, signage, landscaping and basic accessories including benches and litter baskets. The lower costs (as compared to "A") reflects savings from providing for bicycles on the existing street through Forest Grove. A paved bike path is not required for this section.

## 4.0 COMPARATIVE SUMMARY DISCUSSION

A summary of the detailed route evaluations is outlined below to provide a direct comparison of the four alternatives, and to formulate assessments that will assist in selection of a preferred alignment.

Alignment "A" functions well as an Urban Trail route in that it is up-front and visible, provides direct and convenient access to local facilities, and follows an attractive corridor that people will enjoy. A major drawback with "A" is that steep grades which discourage and inconvenience cyclists occur on a number of hills along this route. Also, the public consultation process has identified significant opposition from residents to any trail through Forest Grove. Residents feel strongly overall that an Urban Trail is not appropriate for their area.

Alignment "B" bypasses Forest Grove. "B" is relatively pleasant, although considerably less scenic compared with "A". Also "B" does not access the range of amenities available along "A" in Forest Grove. However, "B" does serve the residential neighbourhoods of Forest Hills and Simon Fraser Hills with a convenient and direct route that avoids major hills and steep grades. "B" also serves the Lake City Industrial area which could, with redevelopment over the long term, generate a sizeable office/industrial employee population that would benefit from the trail.

One drawback of "B" is that it follows along relatively busy major collector streets where maximum separation from vehicular traffic is needed. This increases trail costs, but as a benefit will result in a highly visible, safe and secure trail. Also, the proposed landscaped buffer strip on "B" will be a positive and attractive improvement to the area and will promote walking and cycling along what was previously a difficult route.

Alignment "C" is a variation on "A". However "C" follows a rather remote and isolated route that is exceptionally scenic but is not as accessible nor as open for surveillance as the other routes. Also, the long dismount section through Cinnamon Drive will greatly inconvenience cyclists and pose potential safety and privacy difficulties in respect to the adjacent townhouses. Based on this public input received, Forest Grove residents are opposed to "C".

Alignment "D" is also a variation on "A". Located on-street, "D" makes efficient use of the existing, somewhat under-utilized, roadway paving on Forest Grove Drive. However by putting bicycles on the street, "D" does not provide improvement for cyclists in terms of safety or separation from vehicular traffic. Also, "D" requires the removal of a significant amount of on-street parking which poses a considerable and, in our view, undesirable impact on neighbourhood residents. Based on public input received, Forest Grove residents are unlikely to support "D"

## 5.0 CONCLUSIONS

The analysis and comparisons of the alternative alignments suggests that Alignment "B" is the most suitable route for Phase Two of the Burnaby Mountain Urban Trail.

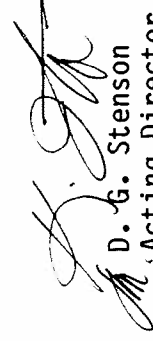
While all four alignments have considerable benefits and are feasible for development, public input received clearly indicates that residents of Forest Grove do not want an Urban Trail through their neighbourhood.

Of the several options considered overall and with the modifications discussed in this report, Alignment "B" can be developed to provide an attractive and functional route for the Urban Trail.

In conclusion, it is recommended that Council approve Alignment "B" for implementation as Phase Two of the Burnaby Mountain Urban Trail.

If approved by Council, the next step will be for staff to prepare an implementation plan for Phase Two, including detailed costs and scheduling, and report back to Council for approval and funding.

KR:lf  
Attachment: Appendix A  
cc: Director Engineering  
Director Recreation & Cultural Services

  
D. G. Stenson  
Acting Director  
Planning & Building

PUBLIC CONSULTATION

BURNABY MOUNTAIN URBAN TRAILS SYSTEM - PHASE TWO

1.0 PUBLIC INPUT RECEIVED AT OPEN HOUSES

As directed by Council, the Municipality hosted three (3) Open Houses on 1992 June 09, 10, and 11 within the neighbourhoods affected by the proposed Phase Two trail. Mail-out notification was sent to all households and property owners in neighbourhoods affected by the trail.

At the Open Houses, information regarding the Urban Trail System and alternative alignments for Phase Two was available to the public in handout packages and in the form of graphic display panels. Staff were on hand to answer questions and a brief verbal presentation of the information was presented to the public by staff.

The public in attendance were given an opportunity to formally speak to the meeting to outline their opinions and suggestions regarding the trail proposals. Staff also encouraged people to submit their views in writing on comment sheets provided for that purpose. Verbal input and discussion at the meetings generally raised comments and concerns similar to those submitted in the written comments.

In total, 139 persons attended the Open Houses. This is tabulated in the attached Figure 2. The neighbourhoods of Forest Grove, Forest Hills and Simon Fraser Hills/Lyndhurst were represented at the Open Houses. The breakdown of attendance figures based on neighbourhoods is outlined in the attached Figure 3.

A total of 49 written comment sheets were received at the Open Houses:

Forest Grove residents	.....	35	comment sheets
Simon Fraser Hills/Lyndhurst residents	.....	7	comment sheets
Forest Hills residents	.....	nil	
Other/unidentified	.....	7	comment sheets

An analysis of the written comment sheets received at the Open Houses is outlined below.

A comment sheet submitted by a Port Moody resident who bicycles to work regularly in the Lake City Industrial Area, and who is a member of the Bicycle Association of B.C., states support for bike trails which are separated from vehicular traffic.

Comment sheets submitted by five (5) Burnaby residents living outside the neighbourhoods affected by Phase Two stated their support for the Urban Trails concept. Comments included:

- love the idea
- would like as many as possible
- keep away from high traffic areas
- most people on bikes will obey the rules

The remaining comment sheet received from a Burnaby resident living outside the Phase II area suggested bicycles be controlled where conflicts occur with pedestrians.

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### 1.1 SIMON FRASER HILLS/LYNDHURST RESIDENTS

A total of 7 comment sheets were received at the Open House from residents of Simon Fraser Hills and Lyndhurst neighbourhoods. Their comments are tabulated into the following issue-related groupings (statements in quotations are taken directly from the submission): **135**

COMMENTS AND CONCERNS	NO. OF SUBMISSIONS RAISING THIS COMMENT
-----------------------	--

- |   |   |
|---|---|
| a) <b>Safety (User Conflicts and Traffic)</b>   | 4 |
| . hazards from auto traffic at specific problem locations requires special traffic control measures |   |
| . signage needed to inform motorists  |   |
| . conflicts between bikes and pedestrians in congested areas in front of schools                    |   |
| . skateboards will conflict with pedestrians  |   |
| b) <b>Support Urban Trail Concept</b>   | 3 |
| . "This is an idea whose time has come!"  |   |
| c) <b>Steep Hills</b>   | 2 |
| . "Flatter is better."  |   |
| d) <b>Privacy</b>   | 2 |
| . protect privacy for backyards   |   |
| e) <b>Environmental Protection</b>  | 2 |
| . "A real effort must be made to cut down as few trees as possible."                                |   |
| f) <b>Crime and Security</b>  | 2 |
| . safety for school kids  |   |
| . safety where trail is in woods  |   |
| g) <b>Other</b>   |   |
| . effect on property values   |   |
| . public areas should be accessible to all Burnaby residents, not only local residents              |   |
| . more input from school kids   |   |
| . routes should be as direct as possible  |   |
| . routes should be quiet and scenic   |   |

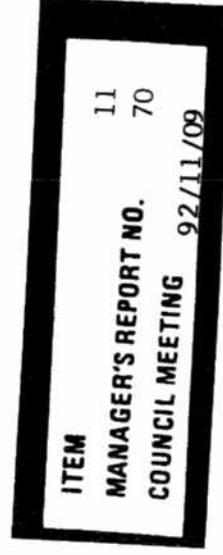
### 1.2 FOREST GROVE RESIDENTS

The largest number of comment sheets (35 total) received at the Open Houses were submitted by residents of the Forest Grove neighbourhood. Their comments and concerns are tabulated into the following issue-related groupings (statements in quotations are drawn directly from the submissions).

COMMENTS AND CONCERNS	NO. OF SUBMISSIONS RAISING THIS COMMENT
-----------------------	--

- |  |    |
|--|----|
| a) <b>Intrusion into Neighbourhood</b> | 15 |
| . intrusion of outsiders               |    |
| . increased exposure to general public |    |
| . increased noise                      |    |
| . more traffic, added congestion       |    |
| . too close to residential area        |    |
| . privacy in homes                     |    |
| . disrupt quiet and solitude of area   |    |





- b) **Crime and Vandalism, Security** 11
- strangers will commit crimes
  - policing difficulties
  - rise in crime rate
  - homes will be exposed
- c) **Trail Safety and User Conflicts** 9
- pedestrian/cyclist conflicts on shared trails
  - children's safety at congested areas
  - cyclists refuse to obey rules of the road
  - bikes should be directed to industrial areas
- d) **Demand/Need Questioned** 9
- too many trails now
  - no need for urban trails
  - existing footpaths are widely used as is
  - no demand for bike trails
  - bikes can use roads
  - kids do not ride their bikes to school
- e) **Steep Grades** 9
- route up hills is too difficult
  - hills discourage use
  - hills limit recreation value
- f) **Protection of Natural Character/Environment** 7
- protect trees and natural areas
  - paved trails not wanted
  - trails destroy natural character of area
  - preserve natural seclusion of area
  - infringement on area green space
- g) **Support for Urban Trail Concept** 6
- concept is excellent
  - support for initiative
  - idea of system where people can walk and cycle recreationally is good
  - trails will have long term benefits to a healthy enjoyable lifestyle
- h) **Cost Concerns** 4
- cost is not justified
- i) **Need for Public Input** 3
- neighbourhood discussion required
  - residents want to ensure their voice is heard
  - residents know what is happening in neighbourhood
- j) **Other**
- do not agree with concept
  - dismount areas inconvenient for cyclists
  - better commuter bike routes needed
  - trail will affect driveways
  - Broadway route as option
  - remove parking to allow bikes on Forest Grove Drive
  - defer Phase Two until Phase One has time to prove itself

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**2.0 PUBLIC INPUT RECEIVED PRIOR TO OPEN HOUSES**

Prior to 1992 June 09, a total of 20 written submissions concerning Phase Two were received by Council and at the Municipal Hall:

Forest Grove residents	.....	17 submissions	137
Simon Fraser Hills/ Lyndhurst residents	.....	0	"
Forest Hills residents	.....	1	"
Other	.....	2	"

A letter from Trans Mountain Pipe Line Company Limited requested that bicycles not be allowed on the walking trail they have developed on their property on Shellmont Street. They indicated that they have no objection to development of a bicycle route within the existing road allowance.

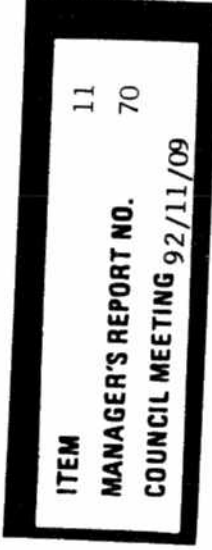
A letter from a Burnaby resident living outside the affected neighbourhoods indicated support for Route C, with some reservations regarding slopes, maintenance, and timing.

A letter from a resident of Forest Hills also supports Route C.

The majority of submissions, including a number of delegations to Council were from residents of Forest Grove. Their comments and concerns are tabulated into the following issue-related groupings. (Statements in quotations are drawn directly from the submissions).

**2.1 FOREST GROVE RESIDENTS**

COMMENTS AND CONCERNS	NO. OF SUBMISSIONS RAISING THIS COMMENT
a) <b>Protection of Natural Character/Environment</b>	12
<ul style="list-style-type: none"> <li>. disruption to natural character of area</li> <li>. damage to natural areas</li> <li>. impact on trees and other vegetation</li> <li>. impact on wildlife</li> <li>. nature replaced/disrupted by asphalt</li> <li>. damage from mountain bikes</li> </ul>	
b) <b>Intrusion into Neighbourhood</b>	10
<ul style="list-style-type: none"> <li>. peace and quiet valued</li> <li>. outsiders not wanted</li> <li>. problems with transients</li> <li>. strangers wandering about</li> </ul>	
c) <b>Crime and Vandalism, Security</b>	8
<ul style="list-style-type: none"> <li>. children's security at schoolyard</li> <li>. isolated areas are dangerous</li> <li>. women and children's safety</li> <li>. youth hangouts created</li> <li>. policing problems</li> <li>. vandalism and B &amp; E's</li> </ul>	
d) <b>Demand/Need Questioned</b>	8
<ul style="list-style-type: none"> <li>. no one needs trails</li> <li>. existing trails and sidewalks serve existing needs for walking</li> <li>. bikes should use roadways</li> <li>. bike trails not needed</li> <li>. does not serve commuters as intended - not a direct route</li> <li>. out of the way</li> </ul>	



- e) **Cost Concerns** 8
  - too costly for need/benefits
  - spending not supported
  - wasteful
  
- f) **Support for Urban Trail Concept** 5
  - the idea is a good one
  - will use trails
  - environmentally sound objective
  
- g) **Steep Grades** 3
  
- h) **Need for Public Input/Discussion** 3
  - residents to give their opinions
  - concerns should be discussed at early stage
  
- i) **Other**
  - pedestrian/cyclist conflicts
  - safety hazards on multi-use trails
  - unauthorized use by motorized vehicles
  
- j) **Alternate Routes Suggested**
  - East Lake Drive 5
  - Broadway 3
  - Bike Lanes on Roads 1

### 3.0 PUBLIC INPUT RECEIVED AFTER OPEN HOUSES

A total of 20 written submissions concerning Phase Two were received at the Municipal Hall in the month following the Open Houses. These written submissions were from residents who had attended one or more of the Open Houses.

Forest Grove residents	.....	12 submissions
Simon Fraser Hills/Lyndhurst residents	.....	4 submissions
Forest Hills residents	.....	2 submissions
Other/unidentified	.....	2 submissions

The two (2) unidentified submissions outlined concerns regarding traffic hazards, steep grades, and trail safety.

The two (2) submissions from Forest Hills residents expressed concern with protecting the privacy in their backyards, and also were concerned with the safety hazards of street crossings along the trail.

The four (4) submissions from residents of Simon Fraser Hills and Lyndhurst expressed concerns regarding control of motorized vehicles, protection for trees, lighting for safe night use, and litter control.

The twelve (12) submissions from Forest Grove residents expressed a number of comments and concerns which are tabulated below:

COMMENTS	NO. OF SUBMISSIONS RAISING THIS COMMENT
1. Steep grades	6
2. Crime and vandalism, security	4
3. Demand/Need Questioned	3
4. Others: <ul style="list-style-type: none"> <li>• intrusion of outsiders into neighbourhood</li> <li>• trail safety and user conflicts</li> <li>• cost concern</li> <li>• support for urban trail concept</li> <li>• maintenance</li> <li>• effect on property values</li> <li>• intersections with private driveways</li> </ul>	

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#### 4.0 ROUTE PREFERENCES

As directed by Council, public input was sought from neighbourhood residents on three alternative alignments for Phase Two:

- Route A - Shellmont Street, Forest Grove Drive,  
Beaverbrook Crescent, Beaverbrook Drive
- Route B - Arden Avenue, Broadway, Underhill Avenue,  
Eastlake Drive, Beaverbrook Drive
- Route C - same as "A" except follows service road and  
pipeline right-of-way behind Forest Grove  
School.

Those written submissions from residents which stated a preference for one or more routes are tabulated in the attached Figure 4.

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FIGURE 1

WRITTEN SUBMISSIONS RECEIVED FROM THE PUBLIC

<u>SUBMISSIONS RECEIVED</u>	<u>NO. OF SUBMISSIONS</u>
Letters received prior to Open Houses (i.e. before 1992 June 09)	20

Comment Sheets received at Open Houses:

- 1992 June 09 Stoney Creek Community School 6
- 1992 June 10 Forest Grove Elementary School 39
- 1992 June 11 Cameron Recreation Centre 4

Letters and comment sheets received subsequent to Open Houses (i.e. after 1992 June 11)

TOTAL WRITTEN SUBMISSIONS	89
---------------------------	----

FIGURE 2

ATTENDANCE AT OPEN HOUSES

BURNABY MOUNTAIN URBAN TRAIL - PHASE TWO

<u>DATE</u>	<u>LOCATION</u>	<u>ATTENDANCE</u>
1992 June 09	Stoney Creek Community School	33 persons
1992 June 10	Forest Grove Elementary School	89 persons
1992 June 11	Cameron Recreation Centre	17 persons
<b>TOTAL</b>	.....	<b>139 PERSONS</b>

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FIGURE 3

PUBLIC INPUT  
 BREAKDOWN BY NEIGHBOURHOOD

ATTENDANCE AT  
 3 OPEN HOUSES

141

WRITTEN SUBMISSIONS  
 INCL. COMMENT SHEETS

FOREST GROVE RESIDENTS	91 (65%)	63 (71%)
SIMON FRASER HILLS/ LYNDHURST RESIDENTS	27 (20%)	10 (11%)
FOREST HILLS RESIDENTS	9 (6%)	3 (3%)
OTHER	12 (9%)	13 (15%)
=====		
<b>TOTALS</b>	<b>139 (100%)</b>	<b>89 (100%)</b>

FIGURE 4

ROUTE PREFERENCES

(BASED ON WRITTEN SUBMISSIONS  
 STATING PREFERENCES FOR A, B OR C)

	ROUTE A	ROUTE B	ROUTE C
FOREST GROVE	2	35	3
FOREST HILLS	2	-	3
SIMON FRASER HILLS AND LYNDHURST	5	4	4
OTHER/UNIDENTIFIED	-	3	5
<b>TOTALS</b> .....	<b>9 (13%)</b>	<b>42 (64%)</b>	<b>15 (23%)</b>
=====			