

TO: CITY MANAGER January 20, 2000

FROM: DIRECTOR PLANNING AND BUILDING OUR FILE: 0.8230.3

SUBJECT: STATUS UPDATE OF SKYTRAIN IN BURNABY

PURPOSE: To provide Council with an update on SkyTrain including new information as it relates to the station area rezonings in progress.

RECOMMENDATIONS:

1. **THAT** the Province and TransLink be requested to enter into a legal agreement with the City to ensure that the Lake City Station will be constructed and operational concurrent with the Phase 2 extension to Coquitlam, or 2005, whichever is earlier.
2. **THAT** in recognition of the loss of the Lake City Station as a Phase 1 element, which was specifically included as a given Municipal Integration Fund item in the Negotiator's Agreement, TransLink and Rapid Transit Project 2000 be requested to designate the remaining unallocated \$4 million in the MIF budget for use in the City of Burnaby to meet the outstanding SkyTrain elements as identified by the City that relate to the stations and the road and servicing requirements caused by the guideway construction.
3. **THAT** the City Clerk be authorized to enter this report into the record of the Public Hearing scheduled for 2000 January 25 for Rezoning References #99-28 (Gilmore Station), #99-30 (Brentwood Station), #99-31 (Holdom Station), and #99-32 (Sperling Station).
4. **THAT** the City of Burnaby not make its lands at 6622 and 6692 Lougheed Highway available to accommodate the SkyTrain guideway and a substation structure until station, road and servicing issues are resolved to Council's satisfaction and outlined in a legal agreement involving the City, RTP 2000 and TransLink.
5. **THAT** a copy of this report be forwarded to the Hon. J. Kwan, Minister Responsible for SkyTrain; Mr. G. Puil, Chair, TransLink; and Burnaby MLA's.

REPORT

1.0 BACKGROUND AND SUMMARY

Council has received a number of status reports on the Lougheed SkyTrain Project as it relates to the City of Burnaby. In a report submitted to its meeting of 1999 September 13,

Council was advised on the progress of the project as it relates to the development of the station concepts and the required elements associated with the reconstruction of the Lougheed Highway and streets abutting the stations.

The project process has focused on identifying and resolving issues associated with the alignment, each of the stations and the operational needs of the Lougheed corridor that includes rapid transit, buses, general traffic, bicycles and pedestrians.

Council, at its meeting of 1999 November 1, adopted a series of recommendations that provided input to the Municipal Integration Fund (MIF) deliberations between the Province and TransLink. In that report, specific items were identified as being appropriate for funding either under MIF or within the scope of the Rapid Transit Project 2000 (RTP 2000) budget as a result of the planning process involving the City, Rapid Transit Project Office (RTPO) and TransLink.. The report also raised strong concern that because the TransLink Board had allocated \$25 million of the \$60 million MIF for the Coquitlam extension, there was the distinct possibility that there may not be sufficient funds to cover those MIF items identified by the City considered to be essential for the proper functioning and integration of the SkyTrain system. In view of this concern, Council requested that the TransLink Board reconsider the removal of \$25 million from the \$60 million MIF from the Phase 1 SkyTrain works until such time as all basic elements have been identified and adequately funded.

The purpose of this report is to bring Council up to date on the status of the MIF and RTP 2000 baseline items, present a recommended position on the Lake City Station and the outstanding station and roadway improvements needed and present further particulars relating to the station rezonings currently underway.

This report concludes that the City is now faced with a series of unilateral, last minute cuts to SkyTrain elements in Burnaby notwithstanding the many meetins and conclusions jointly reached by RTPO, TransLink and the City. Over and above the previous deletions and changes to the project outlined to Council, we are now finding that the final product is being further eroded. Lake City Station has been eliminated and plans for the station areas have been significantly curtailed with items either excluded, reduced in scope or modified in content. These are summarized in **Figures 1 and 2** of this report.

This report outlines the recommended measures considered necessary to address the Lake City Station issue given its intended deletion as a Phase 1 item and the adequate treatment of the station areas and roadways consistent with the standards developed through the joint RTPO, TransLink and City process.

2.0 THE MUNICIPAL INTEGRATION FUND

2.1 The TransLink Position

In the building of a SkyTrain system, there is a range of basic requirements to ensure that the stations and guideway elements are functional and properly integrated with the associated roadways, feeder elements (e.g. bus loops, kiss and ride areas, etc.) and adjacent land uses. Normally, one would expect that the base line budget for the SkyTrain project would address all of these requirements. However, in the current project, there is a division of cost responsibility that is shared between the Province (by way of the assigned RTP 2000 \$1.167 billion budget) and the Municipal Integration Fund which is to be co-funded by the Province and TransLink once a final agreement is reached.

At its meeting of 1999 December 15, the TransLink Board adopted a series of recommendations that related to the resolution of the MIF issue and which were to form the basis for the required legal agreement between the Province and TransLink. The thrust of the recommendations adopted by the Board was that an additional \$25 million (to be cost shared equally between the Province and TransLink) was required to provide the necessary funding for the items identified under MIF. A further recommendation of the Board was that the securing of the \$25 million required to fund the identified items (including the Lake City Station) was a precondition to TransLink's signing the legal agreement with the Province. These deliberations included rejection of the proposal to rescind the decision to allocate \$25 million of the MIF budget for the Phase 2 Coquitlam extension.

The Province has responded to TransLink by indicating that no additional funds will be forthcoming and further that no additional planning or design work will be done on MIF items until an agreement is reached. The Province has requested that a legal agreement with TransLink be signed by the end of January 2000.

2.2 The Lake City Station

To meet the funding shortfall in MIF, the **RTP 2000 has informed the City and TransLink that the Lake City Station has been deleted as a Phase 1 element and that it is to be designated as a future station.** If this were to be accepted by way of a change in the TransLink Board's existing position, the priority MIF items identified in the TransLink report would total approximately \$31 million, leaving about \$4 million unallocated.

The notion of designating the Lake City Station as a "future" is very troubling.

Aside from the loss of the short term land use and access benefits that would result from this station in the proposed redevelopment of the Lake City Business Area, there is a larger fear that without funding commitments the station might never be built.

On 2000 January 17, the Mayor met with the Minister Responsible for SkyTrain to convey the City's deep concern about the erosion of key elements of SkyTrain including the loss of the Bell Avenue Station, the relocation of the Lougheed Station to Austin from its more integrated town centre location, the adoption of a third choice location at Brentwood Station and finally the unilateral deletion of the Lake City Station. Combined with the above is the recent notification of reductions in the treatment of the public areas adjacent to the stations, which is discussed more fully in Section 3.0 of this report.

The Minister confirmed that the Province will not be providing any additional funding for the project and further that the Lake City Station is no longer being considered as a Phase 1 element. It was further indicated that because no MIF formula had been agreed to, construction schedule commitments have reached a stage where even a partial build of the Lake City Station (specifically the station supporting bents) is not possible. This partial build approach was raised by the Mayor and had been discussed with RTPO staff previously when it was learned that the Lake City Station was in jeopardy. Construction of the SkyTrain guideway in the vicinity of the Lake City without the bents is scheduled to start on 2000 January 28.

The Mayor indicated to the Minister (and also in a letter provided to her) that at a minimum, Council would expect a firm commitment to build the station by a specified date that would be incorporated within a legal agreement. Further, it was indicated that if the Lake City Station, (which was specifically identified as a MIF item) were to be deleted as a Phase 1 element (with an associated cost of approximately \$14 million), then the City of Burnaby would expect to be the recipient of the unallocated \$4 million in the TransLink MIF budget for use on SkyTrain related improvements in Burnaby as stipulated by the City. This position has been expressed to senior TransLink staff.

3.0 THE BASELINE BUDGET ELEMENTS

The Project Integration Committee (PIC) and Station Transit Integration Committee (STIC) planning processes, involving staff from RTPO (and their consultants), TransLink and the City were initiated to assist in identifying the full required scope of the proposed SkyTrain project and to help determine cost sharing responsibility. Once the project scope was fully developed, cost responsibilities for the various elements were assigned based on a pre-established set of cost sharing principles prepared by the City and agreed to in principle by

RTPO and TransLink. This assignment distributed the various elements to one of the following areas of cost sharing responsibility:

- RTPO's "baseline" budget;
- RTPO / TransLink Municipal Integration Fund (MIF);
- TransLink;
- Major Road Network (MNR) to be cost shared by City and TransLink;
- City of Burnaby; or
- the Province's proposed Legacy Fund.

Items attributed to RTPO's "baseline" budget in this process fall into the two following broad categories outside of the guideway itself:

- **station areas:** the site immediately surrounding the station house including such on site facilities as flanking road works, sidewalks, boulevards, pedestrian lighting, urban trails through station areas, landscaping and boulevard trees, under grounding of wiring, traffic signals, storm and sanitary sewers, water supply and electrical;
- **road works:** Lougheed Highway modifications required to accommodate the SkyTrain guideway; and relocation or replacement of services which are in conflict with proposed station houses, the guideway itself or road works on Lougheed.

All those items which have been directly attributed to the MIF budget (e.g. bus loops, kiss "n"ride areas, sidewalk connections, signals and road works) have been excluded from the scope of the current detailed design contracts pending resolution of the MIF Agreement between the Province and TransLink.

3.1 Station Areas

Notwithstanding the general agreement on the station components resulting from the lengthy review process, the City has very recently received notification of numerous reductions to the baseline elements being provided at the stations. The project without prior discussion has simply stated that fixed budgets for the stations has forced these reductions. RTPO has acknowledged that the items not agreed to as baseline and currently referenced in the station rezoning reports may not be acceptable as eligible MIF items and as such may end up being "orphaned" items.

The *attached Figure 1* provides a listing of all of the individual system requirements attributed to RTPO's baseline budget through the PIC/STIC processes. This identifies those elements that have either been included, partially included or excluded within the baseline budget by RTPO. Those items on the list which RTPO

has excluded from the “baseline” budget are shown as white text on a black background. Those items which have been either reduced in size or are now sub-standard in content are shown in black text with a grey shade overlay. Those items shown in black text with white background are those which have been included in total within RTPO’s baseline budget.

Although the detail shown in this figure may be somewhat difficult to follow, it shows that there are a significant number of items which RTPO have either excluded, reduced in scope or modified in content.

The *attached Figure 2* places the RTPO station area items in one of four categories to highlight the impact of some of RTPO’s decisions.

Within the first category, on-street bus stops, *Figure 2* notes that two on-street bus stops have been confirmed to be within RTPO’s baseline budget at each of Gilmore, Brentwood and Holdom stations. However, two bus stops at Gilmore Station have been excluded (those on the opposite side of Gilmore and Dawson adjacent to the station).

The second category deals with urban frontages or the areas that connect to the station house to the edge of the street. In all cases the SkyTrain stations are being introduced into a developing urban environment that presently does not have curbs, gutters, sidewalks, street trees or pedestrian lighting - all elements typical of the urban standard now being applied in Burnaby. This approach is similar to that typically applied to private development projects through the rezoning process. As a result early in the process staff had identified the need for urban frontages to run along the full length of each station house. These dimensions are noted for reference on the first line of each section under urban frontages on *Figure 2*. RTPO has responded by significantly reducing the length of the frontage as well as proposing a sub-standard urban frontage of curb, gutter and abutting concrete sidewalk (noted as the “standard committed by RTPO” lines of *Figure 2*). It should also be noted that no provision for urban trail connections through any of the stations sites have been provided.

The third category deals with the extent of the plaza areas to be provided at each of the stations. Reductions in plaza areas are occurring at Gilmore, Holdom, Sperling and University Stations.

The fourth category provides a summary of utility issues at each station site. *Figure 2* shows that basic service connections to the site (water and sewer) have been included within scope of the RTPO’s “baseline” budget as has the limited sections

of undergrounding overhead utilities where they are in direct conflict with the guideway. However, all undergrounding of overhead utilities on the station sites on either side of the guideway itself have been excluded from the scope of RTPO's "baseline" budget. The RTPO has committed to meeting only the basic fire code requirements at the stations.

Figures 1 and 2 incorporate staff's understanding of the extent of RTPO's recently revised baseline budget commitments at the time of writing. However, given the manner in which these changes occurred, there is little confidence that no additional erosion might occur as the cost realities of design details are developed by the RTPO and matched against the station budget allocations that have been assigned within the fixed overall project budget. As an example, just prior to the printing of this report, staff from the RTPO advised staff of escalator and elevator deletions at the Brentwood and Lougheed Stations, to be replaced by stairways.

3.1.1 Station Rezoning (Rezoning #99-29, #99-30, #99-31, #99-32)

Four of the SkyTrain Stations in Burnaby, Gilmore (Rezoning #99-29), Brentwood (Rezoning #99-30), Holdom (Rezoning #99-31), and Sperling (Rezoning #99-32), are being advanced to a Public Hearing on 2000 January 25 in conjunction with their respective station rezonings currently underway. The rezoning report for each of the stations outlines the various services considered needed in order to permit the public to appropriately use and access the SkyTrain Stations and associated on-street or on-site bus provisions. These services include road works, boulevard works, storm and sanitary sewers, water supply, under grounding of above ground wiring, widening dedications, pick-up and drop-off areas, bus stops and shelters, etc. These services are those that the City typically identifies as requirements for any rezoning proposal.

In the case of the SkyTrain Station rezonings, the City is the rezoning applicant with the Rapid Transit 2000 Project Ltd. (RTPO) as the prime developer and TransLink as the developer of bus provisions. Within this context, City staff had embarked on a cooperative process with RTPO and TransLink to assure that the needed identified services as generally described in *Figures 1 and 2* would be provided. However, as previously outlined, RTPO has indicated it is not prepared to fund the major portion of servicing costs previously noted as being RTPO's responsibility through these extensive previous discussions. The result is that some of the needed identified services will not be achieved at the time of the development and construction of the SkyTrain Stations and associated bus provisions. Therefore, some services may need to be pursued at a future date whether by RTPO, TransLink, the City, or private developers of future developments abutting and in the vicinity of the SkyTrain Stations.

Staff of the Planning and Engineering Departments are continuing, albeit with increasing difficulty, to try to ensure that appropriate services are achieved for the SkyTrain Stations. Within the context of the rezonings for the four SkyTrain Stations currently being advanced to a Public Hearing on 2000 January 25, the public, the property owners on which the SkyTrain Stations are to be located, and Council should realize that all of the desired and needed associated servicing will not be provided at this time given the recently stated position of the RTPO.

3.2 Roadworks

To help overcome a disagreement between City and RTPO staff on road safety standards associated with the placement of the guideway columns, an independent ICBC Safety Audit was requested to provide input on this subject. Since the release of the *ICBC Safety Audit, Phase I Report*, RTPO and the City have come to a mutual agreement on a set of road design standards that RTPO has also accepted to be within the scope of their “baseline” budget. These standards closely align with the standards initially requested by the City. As part of the PIC process, a series of functional design drawings were developed jointly by the City and RTPO to highlight the impacts associated with the proposed SkyTrain alignment. These functional design drawings were presented as the basis for technical discussion between the City, RTPO and TransLink. RTPO has recently completed a review of these drawings and have noted that they can only be accommodated within their baseline budget (that was set without the benefit of a pre-design) with the following modifications, exclusions and items still under discussion.

3.2.1 Modifications

- Lougheed / Lake City intersection will not be reconstructed as a signalized “tee” intersection (as would have been required for bus access to Lake City Station and funded under MIF) but will instead only require minor modification of the existing unsignalized entry and exit ramps to accommodate guideway columns.
- Extruded curbing (without barriers) has been indicated instead of cast-in-place high curbing for the proposed median in the Brentwood Town Centre area (Delta to Gilmore). This standard is not considered acceptable for safety reasons. Accordingly, RTPO is being requested to adopt the same median standard as being applied in the section east of Bainbridge (i.e. painted lines with a double barrier system).
- The SAR design build contractor’s consultants have investigated existing and future pavement design requirements on the Lougheed Highway. Generally, it has been acknowledged that a proper treatment requires improvement of

subgrade where necessary, removal of fractured pavement, milling of rutted pavement and a final lift of asphalt that provides a uniform “seamless” running surface. More recently, RTPO has indicated a patchwork quilt approach that would avoid the cost of a final overlay.

3.2.2 Exclusions

- Special bicycle refuge has been eliminated from the intersections of Lougheed / North Road (eastbound) and Lougheed / Willingdon (westbound).
- Property required on the northwest corner of the intersection of Lougheed/Willingdon to allow the City to provide sidewalks along Lougheed in this block as could be provided now without SkyTrain¹.
- Reconstruction of Gilmore from Lougheed to Dawson/Henning.

3.2.3 Resolution Pending

- Widening of the highway will require the replacement of substandard storm drains (ad hoc piping of ditches in the past) and old watermains which would otherwise experience accelerated failure with road widening. Given the RTPO’s refusal to undertake these works, staff have been exploring a cost sharing formula where the City’s contribution to watermain replacement would be based on:
 - the present value of the ultimate replacement of the mains, if the Skytrain project was not a factor, plus
 - the present value of the maintenance cost that the City will save, assuming that new ductile iron mains will have much less maintenance requirements than the existing mains would over the next several years, if the mains were not replaced.

These two components basically make up the remaining life cycle cost of the existing mains and initial estimates are that the City would contribute about half of the replacement cost. This amounts to over \$1.1M and is not included in the City’s provisional 5 year capital budget

- Generally, there is roadway lighting along the stretches of the highway where there are intersections and a raised median. The SkyTrain guideway in a median location precludes lighting on one side of the road way adequately benefiting the other. Accordingly for safety reasons, the RTPO is being

¹ RTPO are currently reviewing the costs involved in securing this right-of-way but have advised that no commitment has been made at this time

requested to provide new lighting and upgraded replacement of existing lighting where existing lighting is impacted by the guideway and in those areas where the guideway will be in the centre median of the highway. This issue has not yet been resolved. Ultimately, the City, involving TransLink Major Road Network funding assistance, will have to budget for filling in the unlit gaps along the highway given that motorists driving the highway will be experiencing alternating light and dark sections and recognizing the difficulty this presents.

RTPO has indicated that it will only be responsible for “restoration of what is there now”, while the City staff has maintained that provision should be made for features that would readily have been accommodated within the Lougheed Highway right-of-way as it presently exists. For example, without SkyTrain, the City could have provided (and was planning to provide) sidewalks and additional curbside laneing on the west leg of Lougheed. This could have been accomplished with the existing right-of-way, but not if the median required by SkyTrain columns is added within the right-of-way.. The RTPO has been reluctant to pursue even the most minimal widening acquisition “because it was never estimated and included in the budget”.

4.0 REQUIRED ACCESS TO CITY LANDS AT 6622 AND 6692 LOUGHEED HIGHWAY

The City has received a request from RTPO for access to City owned lands at 6622 and 6692 Lougheed Highway (at the southwest corner of Lougheed Highway and Sperling Avenue) to accommodate the SkyTrain guideway and a substation structure. Since receipt of the initial request approximately 4 months ago, staff have indicated that the provision of the necessary right-of-way would likely not present any difficulties. However, it was noted that this position assumed that the station locations, general servicing standards and cost responsibility principles underlying our joint deliberations would be adhered to. In view of the current status of the project, staff are recommending that the City not make its lands available to accommodate the guideway until the station, roadway and servicing issues are satisfactorily resolved from Council’s perspective and made the subject of a legal agreement between the City, RTP 2000 and TransLink.

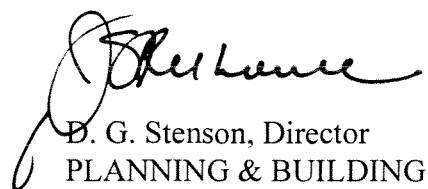
5.0 CONCLUSION

The City of Burnaby has long been a supporter of rapid transit and its land shaping capabilities. In this regard, Burnaby has invested considerable time and energy in working with RTPO and TransLink in defining the right product from a functional and integrative perspective. At the outset of the process, it was very collaborative and focused on defining the appropriate product from a functional and integrative perspective with standards consistent with all other developments in Burnaby. Issues of seniority and ultimate authority of the various levels of government participating in the process were initially put aside in the interests of securing a meaningful process which had been welcomed by the project office.

However, it is readily apparent that the establishment of the SkyTrain budget by the Province **prior** to meaningful design work has now resulted in a series of unilateral, last minute cuts to SkyTrain elements in Burnaby, notwithstanding the many meetings and the conclusions jointly reached by RTPO, TransLink and the City.

We are now finding that the final product is being severely compromised when compared to the plans that evolved from our previously collaborative process. Lake City Station has been eliminated. Bell Avenue Station has been eliminated. Plans for the station area have been significantly curtailed with items either excluded, reduced in scope or modified in content. The City's preferred location for a Lougheed Town Centre Station north of Austin Avenue which had been agreed to and was to provide a catalyst role in the redevelopment of the Lougheed Mall towards a desired Town Centre concept was changed to a much less strategic location at Austin Avenue. The City's first two preferred station locations at Brentwood were put aside because of property acquisition issues. Finally, modifications to Lougheed Highway required to accommodate the SkyTrain guideway are not all satisfactorily resolved.

Notwithstanding that there are major outstanding issues in Burnaby, RTPO is proceeding with its construction schedule. Given the impasse on the settlement of the MIF issue and the decision made to totally eliminate the Lake City Station from Phase 1 as a means of reducing the MIF budget under the \$35 million cap, this report outlines the recommended measures considered necessary to address the Lake City Station issue and the adequate treatment of the station areas and roadways consistent with the standards developed through the joint RTPO, TransLink and City process.


D. G. Stenson, Director
PLANNING & BUILDING

JSB:BLS:dh:sa

Attachments(2)

cc: Director Finance
Director Engineering
Director Parks, Recreation and Cultural Services
City Solicitor

City of Burnaby - RTPO Elements Related to SkyTrain

January 20, 2000

Legend: ACS = abutting concrete sidewalk, C = curb, F = fire hydrants, G = Gutter, GB = grass boulevard, L = Landscaping, PL = pedestrian lighting, PPUDO = passenger pick-up/drop-off, R = reconstruction, S = Storm Sewer, SCFB = stamped concrete front boulevard, SCS = separated concrete sidewalk, STG = street trees with grates, UOU = underground overhead utilities, W = water main

Text = Items RTPO has excluded from baseline budget
Text = Items only partially covered (reduction in scope or may be constructed to a different standard)
Text = Items included in baseline budget

Chainage	Street	Location	From / To	Responsibility	Description
LTC	214500 Loughheed	north	west end of bus loop to Austin	RTPO	underground overhead wiring
	214500 Loughheed	north	west end of bus loop to Austin	RTPO	stairs to connect Loughheed to station and bus loop
	214500 Loughheed	north	west end of bus loop to Austin	RTPO	relocation of street lighting, as required
	214500 Loughheed	north	west end of bus loop to Austin	RTPO	urban frontage (G, SCS, SCFB, STG, PL)
	214400 Loughheed	at	west station house	RTPO	escalators to serve two opening-day platforms
	214400 Loughheed	at	Austin	RTPO	PPUDO - reduction of westbound right turn lane
University	213300 Loughheed	north	east end of the station site to Production	RTPO	C, G, urban trail (ped / bicycle connection), SCFB, STG, PL
	213200 Loughheed	north	east end of station site to Production	RTPO	relocate sanitary sewer, as required
	213200 Loughheed	north	east end of station site to Production	RTPO	maintain access to trunk sanitary sewer
	213200 Production	east	east end of station site to Production	RTPO	remove overhead wiring along Loughheed frontage
	213200 Production	east	east end of station site to Production	RTPO	extend water main and provide fire hydrants
	212900 Loughheed	at	Station	RTPO	plaza and associated landscaping
	212900 Production	at	Loughheed	RTPO	reconfigure intersection and curbs on the north side
	212900 Production	at	Loughheed	RTPO	fire truck access
	212900 Production	east	Loughheed to Thunderbird	RTPO	3.0 m urban trail (ped / bicycle connection), SCFB (2m), STG, PL
	209400 Loughheed	south	east end of the Station site to Sperling	RTPO	C, G, urban trail (ped / bicycle connection), SCFB, STG, PL
Sper	209400 Sperling	east	Loughheed to bus loop driveway	RTPO	urban frontage (SCS, SCFB, STG, UT, PL)
	209400 Loughheed	at	Sperling	RTPO	fire truck access
	209400 Loughheed	south	east end of the Station site to Sperling	RTPO	relocate curb and gutter 1.3 m north including transitions
	209400 Loughheed	at	Station	RTPO	plaza and associated landscaping
	209300 Loughheed	west	Loughheed to Winston	RTPO	underground overhead utilities *
	207950 Holdom	west	Loughheed to bus loop	RTPO	urban frontage (C, G, SCS, SCFB, STG, PL)
Holdom	207950 Holdom	avenue	Loughheed to south edge of bus loop	RTPO	underground overhead wiring *
	207950 Loughheed	at	Holdom	RTPO	extend sanitary sewer or pump across Loughheed to trunk sewer
	207950 Loughheed	at	Holdom	RTPO	eastbound right turn lane
	207950 Loughheed	at	Station	RTPO	fire truck access
	207950 Loughheed	south	Holdom to west edge of station site	RTPO	plaza and associated landscaping
	207950 Loughheed	south	Holdom to west edge of station site	RTPO	urban frontage (CS, SCFB, STG, PL)
	207900 Loughheed	north	Holdom to bus stop west of Holdom	RTPO	urban trail (ped / bicycle connection)
	206500 Loughheed	north	Beta to Alpha	RTPO	sidewalk
	206500 Loughheed	north	Alpha to Willingdon	RTPO	property required for proposed sidewalk
	206400 Loughheed	south	Alpha to Willingdon	RTPO	retaining walls as required
	206400 Loughheed	north	Alpha to Willingdon	RTPO	asphalt, PL and lighting as required under the land bridge
	206400 Loughheed	south	Alpha to Willingdon	RTPO	ACS, CS, SCBB, STG, PL
	206150 Loughheed	avenue	through 4550 Loughheed	RTPO	underground overhead wiring *
Brentwood	206150 Loughheed	avenue	through 4550 Loughheed	RTPO	connect to storm sewer (piped ditch)
	206150 Loughheed	at	south station "pod"	RTPO	extend existing sanitary sewer to service the station
	206150 Loughheed	at	Mail	RTPO	elevator
	206150 Loughheed	north		RTPO	provide right-of-way for storm sewer under Mail site
	206100 Loughheed	n/s	Willingdon to Rosser	RTPO	fire truck access
	205400 Dawson	north	Gilmore to east end of station site	RTPO	property required for proposed sidewalks *
	205300 Dawson	north	near-side of Gilmore	RTPO	urban frontage (C, G, SCS, SCFB, SCBB, STG, PL)
Gilmore	205300 Gilmore	west	Dawson (Henning) to 3 m south of bus stop	RTPO	bus stop, shelter pad, wheelchair pad
	205300 Gilmore	west	far-side of Dawson (Henning)	RTPO	1.8 m SCFB, 1.2 GB, PL, joint use urban trail
	205300 Gilmore	at	Dawson	RTPO	bus stop, shelter pad, wheelchair pad
	205300 Gilmore	at	Station	RTPO	fire truck access
	205300 Gilmore	east	Dawson to Loughheed	RTPO	plaza and associated landscaping
	205300 Gilmore	east	Dawson to PPUDO	RTPO	underground overhead wiring *
	205300 Gilmore	east	Dawson to Dawson	RTPO	urban frontage (SCS, SCFB, SCBB, STG, PL)
	205300 Gilmore	east	far-side of Dawson	RTPO	bus stop, shelter pad, wheelchair pad

* cost attributed to baseline guideway budget

		Gilmore Stn	Brentwood Stn	Holdom Stn	Sperling Stn	University Stn	Lougheed TC Stn
Bus Stops	Adjacent bus stop and shelter pad	✓ 2 ✗ 2	✓ 2	✓ 2	n/a	n/a	n/a
	Urban Frontages	Lougheed	Standard Requested by City: G, C, SCFB, STG, PL 70 m	✗ 180 m _a 180 m _b	✗ 135 m	✗ 90 m	✗ 150 m
Lougheed		Standard Committed by RTPO: G, C, ACS 55 m	✓ 40 m _a 35 m _b	✓ 60 m	✓ 50 m	✓ 30 m	✗ 0 m
Lougheed		Urban Trail within station site	✗	✗	✗	✗	✗
North-South side street		Standard Requested by City: G, C, SCFB, STG, PL 55 m	n/a	✗ 30 m	✗ 35 m	✗ 85 m	n/a
North-South side street		Standard Committed by RTPO: G, C, ACS 45 m	n/a	✓ 20 m	✗	✓ 40 m	n/a
North-South side street		Intersection modifications	✗	✓ guideway	✗	✗	✓
Plazas	Plaza/ hard landscaping implied by RTPO	✗ 1,100 m ²	n/a	✗ 1,800 m ²	✗ 950 m ²	✗ 300 m ²	n/a
	Plaza/hard landscaping confirmed by RTPO	✓ 550 m ²	n/a	✓ 350 m ²	✓ 120 m ²	✓ 150 m ²	n/a
Utility Relocations	UOU - Guideway	✓	✓	✓	✓	✓	✗
	UOU - Station	✗	✗	✗	✗	✗	✗
	Sewer and water connections to station	✓	✓	✓	✓	✓	✓

LEGEND: ✓ = included in RTPO baseline budget ✗ = excluded from RTPO baseline budget

ACS = abutting concrete sidewalk, C = curb, G = gutter, PL = pedestrian lighting, SCFB = stamped concrete front boulevard, STG = street trees with grates, UOU = undergrounding overhead utilities

^a North side of the street

^b South side of street

RTPO Baseline Budget Items - Station Areas

Figure 2

