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YORK RAPID TRANSIT PLAN – YORK REGION TRANSIT QUICK START SERVICE PLAN STATUS REPORT

The Rapid Transit Public/Private Partnership Steering Committee recommends the following:

- 1. The presentation by Dave Roberts, Transportation Planner, York Consortium 2002, be received;**
- 2. The recommendations contained in the following report, October 14, 2004, from the Vice President of the York Region Rapid Transit Corporation and the Commissioner of Transportation and Works, be adopted subject to replacing the word “October” in recommendation 3 with the word “November”;**
- 3. Following this meeting, the Regional Clerk forward this report, together with the York Region Transit Draft Annual Service Plan 2005 report adopted by the Transit Committee, to the local municipalities for review and comment, indicating the recommendations are subject to Council approval; and**
- 4. Staff meet with and report back on discussions to be held with York University staff regarding route changes to accommodate the proposed stadium to be constructed at York University.**

1. RECOMMENDATIONS

It is recommended that:

- 1. Council approve in principle the York Rapid Transit Plan – York Region Transit Quick Start Service Plan.**
- 2. The preliminary list of local route changes and service improvements be subject to Regional budget approvals and the availability of funding program approvals from other levels of government.**
- 3. This report be forwarded to local municipalities for review and comment with a request that comments be received by the Region by the end of October 2004.**
- 4. That the final report be forwarded to Council.**

2. PURPOSE

The purpose of this report is to seek approval in principle of the detailed Service Plan for the September 2005 introduction of the YRTP *Quick Start* phase, and to provide an opportunity for Council, local municipality and stakeholder input.

3. BACKGROUND

The detailed service plan has been developed in close consultation with YRT staff. It includes a detailed service design for the *Quick Start* Rapid Transit (RT) services and a service integration plan for YRT services, with specific service changes for local bus routes that either parallel or feed the RT services. YRT is also developing the YRT 2005 Annual Service Plan, which will include other improvements to address growth and other service needs in addition to the RT-related changes included in the YRTP *Quick Start* Service Plan.

Full municipal review (including TTC, GO Transit and Brampton Transit) and public consultation is planned to take place this fall before the Service Plan is finalized. Also, subject to Committee and Council approval, the service designs for *Quick Start* and the YRT services, as described in this report, are being used to develop the 2005 budget for *Quick Start* and YRT services. Further refinement will take place following the local municipality and stakeholder review, public consultation, Committee and Council input and the initial budget review.

4. ANALYSIS AND OPTIONS

4.1 Service Objectives and Principles

The overall service objective of the *Quick Start* program is to introduce an initial phase of rapid transit in all four corridors of the overall YRTP program, and be the Regional “backbone” transportation corridors to encourage appropriate land use with sufficient densities to support rapid transit.

4.1.1 Service Design Principles – RT Services

The *Quick Start* phase of the YRTP program will be characterized by limited stops (typically 1 km. spacing), but with RT vehicles operating in mixed traffic with traffic signal priority and right-turn-lane “queue jumpers”. Other features will include off-board fare payment and advance-design vehicles with wide doors and aisles, all of which will facilitate quick boardings and alightings to facilitate improved travel times.

The service design will include high frequency services so that passengers have a high comfort level with the service and can arrive at stations without having to consult timetables or risk long waiting times. High service levels are particularly important during peak periods, but will also be in place at other times, including mid-day periods, evenings and weekends.

4.1.2 Service Design Principles – YRT Local Routes on RT Corridors

Since the RT services will be making limited stops, they will be complemented by local YRT services running in parallel on the RT corridors and making all local stops (including the northern part of Yonge, between Bernard and Newmarket). Also, the Service Plan assumes that the GO Transit Yonge “B” route will continue to operate with limited adjustments made to its new semi-express services which commenced in April this year.

The parallel YRT routes are intended to operate during the full 18-20 hour spans of service, but with more modest frequencies similar to other local services because of the RT providing the primary service. The local routes on the RT corridors are proposed to operate at least every 30 minutes (60 minutes late evenings and Sundays), although higher frequencies will likely be needed on the busier, well established corridors, especially the southern part of Yonge.

4.1.3 Service Design Principles – YRT Feeder Routes (including TTC)

The routings of many YRT services, including those operated by TTC under contract to YRT, are proposed to be modified where appropriate to effectively provide a feeder service between the RT stations and the adjacent residential and employment areas, while also meeting other local needs. For the feeder services to be effective, the following service design principles are proposed:

- Ensure all built up urban parts of the Region that can support conventional transit service are within 500 meters of a direct no-transfer connection to a RT stop (note that, in general, most of the built-up areas in the five urban municipalities of York Region are within 4 kilometres of one of the RT corridors).
- Generally orient local bus routings that are intended to connect with RT to be geographically perpendicular to the RT corridors, that is, an east-west orientation along the Yonge corridor and a north-south orientation along the Highway 7 corridor.
- Provide a series of “core” services that generally follow the major arterials, typically, the 2-kilometre arterial street grid, and connect RT with more intensive land uses that are likely to be more oriented to transit (commercial, institutional, higher-density residential and specific transit-oriented streets in newer higher-density developments); such core services would have higher levels of service, consistent with the YRT “core” service standards as adopted by Regional Council as part of the Five-Year Service Plan (2002).
- Complement the core services with “local” routes that would penetrate other, less intensive residential and employment areas, such that all built-up areas that can support transit are within 500 metres of a direct bus connection to a RT stop; such local routes would typically have lower levels of service than core routes and would

follow the YRT “local” service standards, although service levels could increase where warranted by ridership demand.

- For those areas close to a major destination point (e.g. Finch Station, York University), maintain the direct local transit connection in order to avoid forcing a transfer, as long as the service meets the required ridership performance and can support the minimum service standards.

4.2 YRTP Service Design Specifications

4.2.1 Routings

To better serve the high demand areas in the south-central part of the Region, there will be 6 distinct *Quick Start* routes running on the four YRTP corridors during Monday to Friday peak periods. Several of these will overlap with other RT routes on the busier parts of the corridors to provide both a higher level of service frequency and greater routing options with, typically, a direct no-transfer service to two distinct destinations in at least one direction. The areas where this occurs are:

- Yonge corridor between Finch and Bernard.
- Highway 7 corridor between Martin Grove and York University – provides service to both Downsview Station (Vaughan North-South Connector) and the full Highway 7 corridor (Highway 7 route).
- Highway 7 corridor between Cornell and Warden – provides service to both Don Mills Station (Markham North-South Connector) and the full Highway 7 corridor (Highway 7 route).
- Highway 7 corridor between Unionville GO Station and Yonge – provides service in the Highway 7 and 404 employment areas to both Finch Station (Yonge-Markham) and the Highway 7 corridor west of Yonge (Highway 7 route).

In all these cases, schedules would be combined to provide a more frequent service overall (e.g. two 10-minute services combined for an overall 5-minute service). The 6 peak-period routes are shown in *Attachment 1*.

4.2.2 Off-Peak Route Streamlining

Because of the lower demand expected outside of peak periods, the off-peak routings will be adjusted to eliminate the areas where the peak routes overlap. This will result in significant economies by eliminating duplication of routes and better tailoring service to expected demand, while still retaining the minimum 15-minute service level throughout the network. The areas where these route modifications would take place are as follows:

- Truncating the west end of the Highway 7 route at York University.
- Truncating the Markham North-South service at Unionville GO Station.

- Not operating the Yonge-Markham route outside of peak-periods.
- Not operating the Yonge-Bernard short-turn, as all Yonge trips would go to Newmarket.

This off-peak design would result in a full 15-minute service on all routes without overlap, with timed connections at the truncation points (York University and Unionville) as well as at Langstaff. The off-peak network is shown in *Attachment 2*.

4.2.3 Stopping Policy

For *Quick Start*, all routes would stop at all YRTP stops to ensure frequent service at all stops throughout the network. The stop spacing will be that of a “rapid transit” service, typically about 1 km between stops (or more in relatively undeveloped areas). In Toronto, drop-offs only would be made in the southbound direction and pick-ups only in the northbound direction.

4.2.4 Hours (Span) of Service

The span of service for all *Quick Start* services is planned to be about 18 hours, or from about 6:00 a.m. to about 12:00 midnight. The start times on Saturdays and Sundays may be slightly later. This span of service will apply to all services in order to ensure transfer opportunities at all times and to make the service consistent and understandable for passengers.

4.2.5 Vehicle Allocation

Because of the high demand forecast for the Yonge corridor and the two Yonge routes in particular, the Yonge-Newmarket and Yonge-Bernard routes will be operated with 18-metre articulated RT vehicles.

Because of the lower demand on the other routes and the need to provide frequencies high enough to make the service attractive, the other *Quick Start* routes will be operated with 12-metre RT vehicles.

4.2.6 Service Frequencies – Peak Periods

Based on the overall service objectives and principles noted earlier and the 2006 ridership forecasts, the minimum service frequencies proposed for the *Quick Start* program are shown in Table 1, along with the projected peak-point, peak-direction average passenger loads per vehicle. As noted above, these frequencies assume that 18-metre articulated RT vehicles would be used on the Yonge line (both to Bernard and to Newmarket) and 12-metre RT vehicles would be used on the other lines.

Table 1
Proposed RT Peak-Period Frequencies

Route	Routing	Frequency	Peak Load
Yonge-Newmarket	Finch Terminal to Newmarket Terminal	10 minutes	71 (combined)
Yonge-Bernard	Finch Terminal to Bernard Terminal	10 minutes	
Yonge-Markham	Finch Terminal to Unionville GO Station	10 minutes	50
Highway 7	Martin Grove to Markham-Stouffville Hospital	10 minutes	45
Markham N-S	Don Mills Station to Markham-Stouffville Hospital	10 minutes	45
Vaughan N-S	Downsview Station to Highway 7 & Martin Grove	10 minutes	47

In the Yonge Street corridor, the Yonge-Newmarket and Yonge-Bernard schedules will combine to provide a 5-minute peak service between Finch and Bernard. Between Finch and Langstaff, the two Yonge services and the Yonge-Markham route will further combine for an overall frequency of about 3 to 4 minutes. Similarly, the schedules for the Vaughan North-South Link, Markham North-South Link and Yonge-Markham services will coordinate with the Highway 7 service to provide a combined 5-minute peak service on the overlapping portions of these routes.

In all corridors, the *Quick Start* routes will be complemented by local YRT routes. The above service levels also assume the continuation of the GO Yonge “B” route, although the nature of the service and/or its service levels will likely be modified by GO Transit.

4.2.7 Service Frequencies – Off-peak Periods

The off-peak service design is also intended to place a high emphasis on frequency of service, again to operate like true “rapid transit” and maximize passenger confidence of not having to plan trips or risk long waiting times. To achieve this, the off-peak service will be set by policy rather than tied to forecast demand. This means that ridership levels will typically be below capacity but should build as more new riders respond to the high quality of service. The proposed off-peak service levels are shown in Table 2.

Table 2
Proposed RT Off-Peak Frequencies

Route	Routing	Frequency
Yonge-Newmarket	Finch Terminal to Newmarket Terminal	15 minutes
Highway 7	York University to Markham-Stouffville Hospital	15 minutes
Markham North-South	Don Mills Station to Unionville GO Station	15 minutes
Vaughan North-South	Downsview Station to Highway 7 & Martin Grove	15 minutes

As for the peak design, the off-peak services on Yonge will be operated with 18-m articulated RT vehicles, while all other services will be operated with 12-m RT vehicles.

4.3 YRT Service Changes Related to *Quick Start*

With the introduction of rapid transit on the major York Region transit corridors, the YRT local routes will need to play the most important role of effectively feeding the RT services, as well as continuing to meet other local service demands. To achieve this, various changes will need to be made to YRT routes, both to reflect the addition of the *Quick Start* services to the major corridors and to provide effective local feeder service to the RT routes.

4.3.1 YRT Local Routes Paralleling RT Routes

The YRT routes operating in parallel to the *Quick Start* services will be the current YRT Routes 1, 77 and 99. The only major routing change proposed for the YRT local routes on the RT corridors is the extension of Route 99 to Newmarket to provide a continuous, fully integrated local service along the entire Yonge corridor to properly complement the RT service. Minor changes are also proposed for Route 1 on Highway 7 east of Yonge, especially keeping all trips on Highway 7 to Yonge and eliminating the Route 1-Bayview routing, which provides better connections with the strategically important Langstaff focal point.

4.3.2 Service Level Changes

The following are proposed service levels for the YRT routes operating on the *Quick Start* RT corridors:

Table 3
YRT Local Routes on RT Corridors – Proposed Frequencies

Route	Peak Periods		Daytime (Mon-Sat)		Sundays / Late Eve.	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
99 – Newmarket	7-10	30	30	30	60	30
99 – Bernard	3-5	10	15	30	30	30
1 – Hwy 7 East	10-15	30	30	30	60	30
77 - Hwy 7 West	15	15	30	30	60	30

Similar to the RT service, the Yonge local service will operate all the way between Finch and Newmarket. At certain times (peak periods, Sundays and late evenings), the southern portion would be enhanced by additional trips that go only between Finch and Bernard. The service levels to Bernard noted in Table 3 include both the Newmarket and Bernard trips.

The proposed frequencies for the parallel routes generally follow the minimum service standards, but some exceed the standards, especially Route 99 (Yonge) that has a very frequent peak service now (4-5 minutes) and Route 77 that needs higher service in Thornhill and to connect to Brampton.

4.3.3 Other YRT Routes – Routing Changes

In general, the YRT route structure follows a grid pattern, where “core” services are provided on the major arterials of the 2-kilometre street grid. In the built-up areas adjacent to the RT corridors, services are currently provided on most of these arterials,

with east-west routes crossing the Yonge corridor and north-south routes crossing the Highway 7 corridor. Most improvements needed for the core arterial services relate to service levels, which are discussed in the next section. There are some routing issues, however, including the need to provide core services on major transit-oriented streets in new developments. Specific proposals to achieve this are described in the Service Plan.

Services between the major arterials are considered “local” services and penetrate the residential and employment areas within the 2-kilometre sections, typically on collector streets. Their routing alignments vary and often do not provide direct connections to the RT corridors. The routing changes proposed for local services are intended primarily to re-align routings to more directly feed the RT corridors, that is, east-west routings along the Yonge corridor and north-south routings along the Highway 7 corridor. The specific local routing changes proposed for YRT services are fully described in the draft Service Plan.

4.3.4 Other YRT Routes – Service Level Changes

As earlier noted, with the adoption of YRT’s Five Year Service Plan, Regional Council approved minimum service standards for a variety of route types including core and local routes. Service levels on the major arterials generally follow the higher-quality “core” service standards and, thus, are of a good quality, although there are many exceptions. Improvements proposed for the core arterial services are primarily increased frequency where service levels fall short of the core standards, especially off-peak service and, in some cases, on certain days and time periods where no service exists at all, typically on weekends and evenings.

Local (non-core) services follow the less frequent “local” service standards but many still fall short of even the local standards. The proposed service improvements are intended to bring the most notable deficiencies closer to the standards in order to provide adequate feeder service to support the RT corridors (further improvements will be needed in future years as ridership grows). These changes are also fully described in the draft Service Plan.

4.4 Resource Estimates

This section summarizes the key cost components, both for RT and YRT.

4.4.1 Quick Start RT Services

Table 4 provides a summary of the resource estimates for the *Quick Start* RT services.

Table 4
Preliminary RT Resource Estimates

Route	Peak Vehicles	Annual Veh. Hours
Yonge-Newmarket	12.5	65,000
Yonge-Bernard (peak.)	6.5	10,000
Yonge-Markham (peak.)	9	14,000
Highway 7	18	80,000
Vaughan N-S	10	50,000
Markham N-S	11	41,000
TOTAL	67	260,000

4.4.2 YRT Routes Affected by Quick Start

Tables 5a and 5b provide a summary of the operating impacts for the YRT services affected by *Quick Start*. Table 5a includes proposed service reductions on the *Quick Start* RT corridors (YRT Routes 1, 77 and 99). Table 5b adds preliminary route changes and service level improvements to YRT local routes to address the most significant deficiencies compared to the desired service standards and make them more effective feeder services to the RT network. These improvements do not bring all routes fully up to standard, as some routes have very low ridership and cannot justify improvements at this time, but the introduction of Rapid Transit should generate higher local ridership and help justify further improvements in 2006 and beyond.

Table 5a
Preliminary YRT Resource Impacts from *Quick Start*
Local Routes on RT Corridors

	AM Veh.	PM Veh.	Ann.Veh. Hours
Route 99 Yonge	-10	-7	-20,000
Route 1 Highway 7 East	-4	-7	-11,000
Route 77 Highway 7 West	0	0	-6,000
TOTAL YRT CORRIDOR ROUTES	-14	-14	-37,000

Table 5b
Preliminary YRT Resource Impacts from *Quick Start*
Additional Route Changes and Service Level Improvements

	AM Veh.	PM Veh.	Ann.Veh. Hours
TTC contracted – route changes	-1	-1	-4,300
Other Markham – route changes	-1	0	3,000
Other Vaughan – route changes	3	3	11,700
Richmond Hill – route changes	-4	-4	-6,700
Newmarket-Aurora – route changes	0	0	6,100
TTC contracted – service improvements	0	0	8,900
Other Markham – service improvements	2	2	4,200
Other Vaughan – service improvements	-1	0	8,100
Richmond Hill – service improvements	0	0	9,900
Newmarket-Aurora – service improvements	0	0	4,600
SUB-TOTAL – YRT ROUTE CHANGES AND SERVICE IMPROVEMENTS	-2	0	45,500
TOTAL – ALL PROPOSED CHANGES	-16	-14	8,500

As noted above, there will be a peak vehicle saving of 14-16 YRT buses from the implementation of *Quick Start*, but most of these may be used by YRT for other general service expansion and growth subject to budget availability to launch these services. Note that the above improvements do not include other proposed YRT improvements that do not relate to *Quick Start*, as these are addressed in the 2005 YRT Service Plan. Also, the preliminary changes would result in small increases in hours and thus there would be no reductions in driver requirements. It is important to note that these preliminary YRT changes are not committed and decisions will be required in 2005. Adoption of any of the preliminary YRT changes noted above will be conditional on getting budget approval and on funding for local service improvements from other levels of government.

4.5 Next Steps

The proposed service changes will be presented in a series of public consultations, scheduled for Fall 2004 in conjunction with other public consultation activities related to the *Quick Start* program. Input from the public will be used to fine-tune the Service Plan.

5. FINANCIAL IMPLICATIONS

Budget costs and projected revenues will be addressed in more detail in the budgeting process.

6. LOCAL MUNICIPAL IMPACT

Local municipal input will be gained through the public consultation process, including presentations to Councils and local municipality reviews of the draft Service Plan.

7. CONCLUSION

The service design for the *Quick Start* RT services will ensure a high level of service that is necessary to attract significant new ridership and meet the YRTP performance targets. The service design for both the parallel and feeder YRT services will result in a highly-effective, fully-integrated transit network and will ensure that the benefits of rapid transit are extended to all parts of the Region.

(The attachments referred to in this clause were included in the Agenda for the October 14, 2004 Committee meeting.)