

**CYYJ (2007)**

**USER MANUAL**

**A FS9/FS2004 and UT Canada/Alaska Compatible Add-On Covering the Victoria,  
British Columbia, Canada International Airport and Surrounding Area**

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### **1. INTRODUCTION**

CYYJ (2007) is a FS2004/FS9 and Ultimate Terrain Canada/Alaska (UT)-compatible add-on that replaces the default Victoria, British Columbia, Canada international airport (CYYJ) and related scenery, including the nearby Coast Guard station at Pat Bay.

**If you do not have UT Canada/Alaska installed on your system, you may still use CYYJ (2007). However, before doing so, you MUST copy the replacement texture files to the CYYJ Landscape\texture folder as described in the Installation section below.**

### **2. FEATURES**

CYYJ (2007) features:

- an airport definition (AFCAD file) based on high-resolution aerial photos that:
  - accurately places all runways and taxiways,
  - provides realistic taxiway and apron markings,
  - eliminates the rounded FS9-generated taxiway/runway intersection fillets and inserts triangular turning "gussets" where the latter exist at the real CYYJ, and
  - specifies representative taxiway, runway and approach lighting,
- a terminal building that, from only a short distance, could be mistaken for the real thing and about sixty other very detailed buildings - all modeled with GMax and "painted" with hand-drawn textures,
- realistic terrain profiles at both ends of Runway 09/27 and at the approach end of Runway 13 (that were removed by the FS9 default flatten),
- taxiway and apron signage accurate as to both position and content,
- fencing from the fire station in West Camp, past the terminal and around to the east end of Runway 09/27,

- "drive-through" parking for airlines at the terminal and for GA throughout East Camp and West Camp (if your AI includes ACA, JZA, WJA, QXE and/or PCO, the aircraft will take their usual positions around the main terminal), and
- AI airline traffic based on actual schedules.

All this for a FPS "hit" in the order of only about 40% compared to flying over open water - a load even the most anemic of computer systems should be able to handle CYYJ (2007).

### **3. COMPATIBILITY**

CYYJ (2007) is fully compatible with Jon Patch's and Holger Sandmann's Victoria+, the successor to their very popular Victoria scenery add-on vicenh05 and with their payware add-on Vancouver+. While CYYJ (2007) will run in concert with vicenh05, you won't see any roads in the airport area other than those drawn by CYYJ (2007), parks or golf courses, and the jetties at the Pat Bay CCGS/floatplane complex will not display properly. (But why would you not install Victoria+ (*vicenh06.zip*) which is available at no charge?).

In order to represent the recent expansion of the parking facilities at the real CYYJ main terminal, and for other reasons, CYYJ (2007) redraws all the roads in the airport area. As well, to facilitate including the Pat Bay CCGS/floatplane complex in CYYJ (2007), the Pat Bay shoreline had to be modified. The replacement roads and shoreline connect with outlying UT roads and shoreline. If you do not have UT Canada/Alaska, or other add-ons that provide accurate roads and shorelines such as Joel Gill's *british\_columbia\_road\_system.zip* and/or Harvey Janszen's *evi04\_v13.zip* shorelines, you will see discontinuities where the replacement roads and shoreline begin and end.

If you use the original Viva Base at Victoria International by Lars Hoyer, Jesse Wheeler and Ken Peters (*viva\_cyyj.zip*) or other CYYJ add-ons based on the FS9 default AFCAD, its features will appear out of position due to the significant positional errors in that CYYJ airport definition. However, a revised AFCAD is available on the Scenery page of the Viva website <http://vanisleva.com> to permit use of Viva Base with CYYJ (2007). Also, I understand that a new CYYJ (2007)-compatible version of Viva Base is under development. Please check the Viva website for the latest information.

I have tested CYYJ (2007) with FSX. While most features display properly, there are a few anomalies. A FSX-compatible release of CYYJ (2007) is on my "to do" list.

### **4. INSTALLATION**

To install CYYJ (2007), unzip the file *CYYJ\_(2007)\_vnn.zip* to a temporary folder. Four new folders will be created:

- *CYYJ Landscape*,
- *CYYJ Landclass*,
- *AI for TTools*, and
- *Textures for Non-UT Users*.

Create a folder named, for instance, *CYYJ (2007)* in your FS9 *AddOn Scenery* folder (or another folder of your choice) and copy the first two folders, *CYYJ Landclass* and *CYYJ Landscape*, to it. **If you have CYYJ (2006) or an earlier version of CYYJ (2007) installed, either delete the associated CYYJ Landclass and CYYJ Landscape folders before proceeding or use a different master-folder.** The third folder, *AI for TTools*, is not required for the operation of CYYJ (2007) but will be of interest if you wish to have realistic AI at CYYJ. (AI is discussed below in Section 9.)

If Victoria+ is also installed, you should re-run its “configurator” to avoid shoreline problems around Pat Bay.

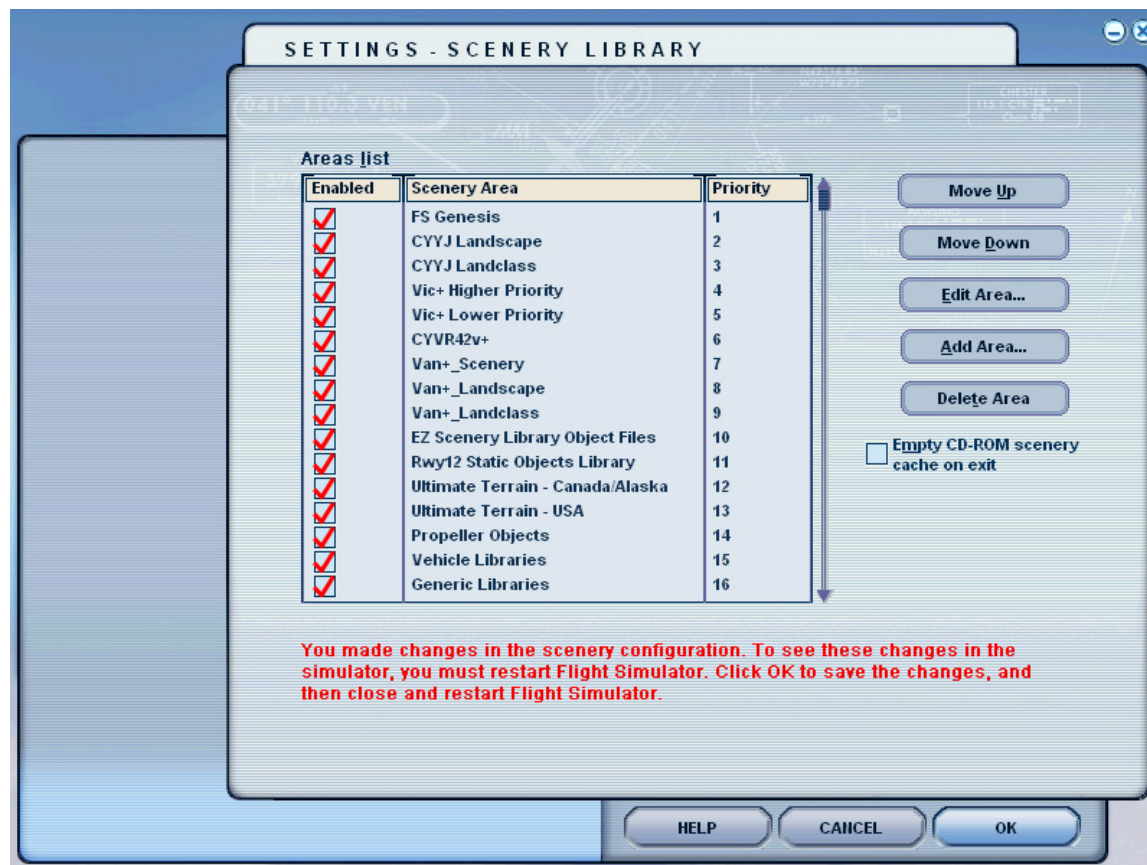
Finally, if UT Canada/Alaska is **not** installed on your system, you **must copy the files from** the folder *Textures for Non-UT Users* (which, as the name suggests, provides a set of default textures to be used in place of UT textures) into the *CYYJ Landscape\texture* folder. Otherwise, FS9 will report an error and CTD during start-up. (UT users should not copy these files since this would cause CYYJ (2007) to display default textures in place of UT textures.) For further information, please refer to Section 7, UT Canada/Alaska Not Installed below

Please note that *CYYJ Landclass* does nothing but replace a few landclass tiles around the airport. If you’re happy with your current landclass in the area, you don’t even need to install CYYJ Landclass. (But, you might want to see what it does before you make that decision.) You can always easily remove it.

Even though CYYJ (2007) overrides other airport definitions (AFCADs), it’s good practice to remove or disable all other AFCADs covering CYYJ that may be “seen” by FS9.

## 5. SCENERY LIBRARY

Add the *CYYJ Landscape* and, if you kept it, the *CYYJ Landclass*, folder(s) to your Scenery Library and enable it (them). The recommended Scenery Library configuration is shown below.



Recommended Scenery Library Configuration

The order of the CYYJ (2007) Scenery Library entries doesn't matter, but you must place them above Victoria+ and Vancouver+ if either of these latter add-ons is installed. You must also place them above Ultimate Terrain - Canada/Alaska and Ultimate Terrain – USA, or any other such scenery (terrain/roads/shorelines). If you have other Victoria- area add-ons not shown, their position in the Scenery Library relative to CYYJ (2007) will depend on what they do. Please refer their documentation. In general, however, unless they affect CYYJ directly (and you want that effect to continue), they probably should be of lower priority than CYYJ (2007).

## **6. MESH/TERRAIN/TMVL SETTING**

I have made significant effort to make the terrain profile on the airport grounds and approaches as realistic as possible. To avoid potential significant continuities where my terrain modifications end, you'll need at least medium resolution (38m.) terrain mesh for the rest of the area and the correct TMVL setting in the FS9 configuration file *FS9.cfg*.

Victoria+ and Vancouver+ include 19m. mesh that covers the CYYJ area. If neither of those add-ons is installed, you may obtain the Vancouver Island portion of FS Genesis' Cordillera Canada 38 m. mesh at no charge from [http://files.fsgenesis.net/freefiles/dem38m\\_can\\_vancouver.zip](http://files.fsgenesis.net/freefiles/dem38m_can_vancouver.zip).

If you use 38m. mesh, you should set the *fs9.cfg* TERRAIN\_MAX\_VERTEX\_LEVEL (TMVL) entry to 20. If either Victoria+ or Vancouver+ is installed or other 19m. mesh is used, set TMVL to 21. (The default setting is 19.) CYYJ (2007) will run irrespective of which TMVL setting you use. However, unless you use the recommended setting, the terrain profiles - especially on the approaches to Runways 09 and 31 and around the CCGS complex - may not be very realistic.

*fs9.cfg* is located in the folder *C:\Documents and Settings\<your user name>\Application Data\Microsoft\FS9*. To change TERRAIN\_MAX\_VERTEX\_LEVEL, close FS9, locate *fs9.cfg* and open it with Notepad or another text editor, find the section named [TERRAIN], change the TERRAIN\_MAX\_VERTEX\_LEVEL setting as appropriate, save the file and restart FS9.

If you do use FS Genesis' or any other medium-resolution mesh, you should include an entry for it at the top of your Scenery Library to ensure it is replaced by any higher-resolution mesh covering that area that might also be loaded (such as Victoria+'s or Vancouver+'s 19m. mesh).

## **7. SCENERY DENSITY**

The FS9 Scenery Density setting causes display of CYYJ (2007) scenery as follows:

- VERY\_SPARSE – airfield facilities only,
- SPARSE – main terminal and main taxiway/apron-side buildings ,
- NORMAL – all buildings and ground polys,
- DENSE – additional CYYJ facilities such as VFC fueling station and main terminal parking lot walkways and “flowers”,
- VERY\_DENSE – fencing, static aircraft and ground-handling equipment, and
- EXTREMELY DENSE – people, parked cars and terminal parking lot and apron lighting.

The FPS impact from VERY SPARSE to EXTREMELY DENSE is about 30%, with the greatest interim impacts being, not unexpectedly, between VERY SPARSE and SPARSE and between SPARSE and NORMAL.

## **8. LIBRARY-BASED SCENERY/STATIC DISPLAYS**

CYYJ (2007) uses library-based scenery for its static aircraft, ground and baggage handling equipment, vehicles and certain airfield facilities. In addition to FS9's generic library, CYYJ (2007)'s static-display objects come from the following libraries:

- *add\_SeevKahn.bgl*, contained in *rwyl2\_lib1\_v1.2.zip*, by Seev Kahn (also available in EZ\_Scenery format under the filename *ga\_planes-01.zip*),
- *206B.bgl* and *500D.bgl*, contained in *rwyl2\_lib1\_v1.2.zip*, by Chris O'Donnell and M. Allen Richards,
- *FinneyGround\_VERT\_GSE.bgl*, contained in *fg\_vert\_gse.zip*, by Robert Finnegan and Gary Mills,
- *gw\_People*, contained in *rwyl2\_lib2\_v1.2.zip*, by Geoff Williams and Martin Strong, and
- *extra\_objects.bgl*, contained in *rwyl2\_lib3\_v1.2.zip*, by Lars Hoyer and Irvin McIntyre.

However, with the permission of their respective authors, all the required models and textures from these libraries are incorporated in CYYJ (2007), so you need not have those libraries installed on your system. (But, no problem if you do.) Many of the associated textures have also been reduced in complexity to improve performance. Thanks to the various library providers for allowing this.

To facilitate those users who wish to display additional or different static scenery or who wish to replace static aircraft with AI, commencing with CYYJ (2007) Version 1.1, the static-display objects are split across five separate files in the *CYYJ Landscape\scenery* folder:

- terminal ground-handling equipment (*obj\_GroundHandling.bgl*),
- static aircraft (*obj\_StaticAircraft.bgl*),
- airport vehicles (*obj\_AirportVehicles.bgl*),
- other vehicles (*obj\_Cars-Trucks.bgl*), and
- people (*obj\_People.bgl*).

You may stop CYYJ (2007) from displaying one or more categories of library-based scenery by disabling (.XXX) or deleting the corresponding .bgl file. You may display different or additional library-based scenery using EZ-Scenery, Rwy 12 Object Placer or other object placement tools – but you will have to have those libraries installed on your system.

Please note that *rwyl2\_lib3\_v1.2.zip* contains files named *ExtraObjects\_demo.bgl*, *ExtraObjects\_demo\_A16N.bgl* and *ExtraObjects\_demo\_FS9.bgl*. As the names imply, these are not libraries but, rather, a demonstration of the library *ExtraObjects.bgl*. They automatically provide a host of cars, trucks, buses and other scenery on an asphalt surface just east of the location of the default CYYJ terminal – including one car spinning on its front bumper. You'll likely find this demonstration - which has nothing to do with CYYJ (2007) – distracting (I do), so you may wish to delete or disable these three files.

## **9. UT CANADA/ALASKA NOT INSTALLED**

As noted above, CYYJ (2007) replaces certain UT road segments and shoreline. To maintain full visual compatibility with UT Canada/Alaska, CYYJ (2007) uses UT textures for the replacement roads and shoreline. If UT Canada/Alaska is not installed on your system, you will need replacements for those textures.

Due to copyright issues, it is not possible to include the corresponding UT files in CYYJ (2007). Therefore, the CYYJ (2007) folder *Textures for Non-UT Users* contains default textures bearing UT filenames. Copying the contents of this folder into your *CYYJ Landscape\texture* folder will cause these replacement textures to be displayed in place of their UT equivalents.

**Failure to have either UT texture files or these replacement textures files on your system installed as described in Section 4 above will result in FS9 reporting an error and CTDing (crashing-to-desktop) during start-up when CYYJ (2007) is enabled in the Scenery Library.**

If you have another road enhancement or shoreline add-on that uses generic textures, such as Joel Gill's *british\_columbia\_road\_system.zip*, the replacement textures provided in the folder *UT Texture Substitutes\texture* should work well. However, if the add-on(s) use non-generic textures, such as Harvey Janszen's *evi04\_v13.zip* shorelines, and you know which of its textures are used for which purposes, you may wish to replace the generic textures in the *CYYJ Textures for Non-UT Users* folder with those from such other packages. To help you assign UT filenames to such other textures, the following summarizes the purpose of each replacement texture:

- *cRoad1nl.bmp* - undivided roads, daytime, all seasons
- *nRoad1rl.bmp* - undivided roads, nighttime, all seasons
- *nRoad2RM.bmp* - two-lane roads, nighttime, all seasons
- *LmUnderR.bmp* - two-lane roads, daytime, all seasons
- *cRoad2ym.bmp* - all roads for which no nighttime lighting is required, all seasons
- *UTSandHw.bmp* - shoreline, hard winter
- *UTSandSu.bmp* - shoreline, other seasons
- *SpUnder.bmp*, *SuUnder.bmp*, *FaUnder.bmp*, *WiUnder.bmp*, *HwUnder.bmp*, *LmUnder.bmp*  
– shoulders and median of divided highway for the indicated seasons

However, you're on you own if you attempt this.

## **10. AI TRAFFIC**

The file *Traffic\_CYYJ.bgl* in the folder *Landscape\_CYYJ\scenery* will provide a realistic level of airline, GA and military AI for CYYJ (2007) – depending, of course, on your “stable” of AI aircraft. To allow you to adjust the AI to suit your own preferences, the underlying files for use with TTools (*Airports\_CYYJ.txt*, *Aircraft\_CYYJ.txt* and *FlightPlans\_CYYJ.txt*) are also included in the folder *AI for TTools*. TTools is available from AVSIM and other places.

The AI aircraft used in CYYJ (2007) are all readily available. They are:

<u>#</u>	<u>Aircraft</u>	<u>Livery</u>	<u>Source</u>
1	Airbus 319V2	Air Canada	ProjectAI
2	Airbus 320V2	Air Canada	“
3	Boeing 737-700	WestJet	“
4	Dash 8-200	QXE-Horizon Air	“
5	Dash 8-300	Air Canada Jazz Red	“
6	“	Air Canada Jazz Green	“
7	“	Air Canada Jazz Orange	“
8	“	Air Canada Jazz Yellow	“
9	CRJ 200	Air Canada Jazz Red	“
10	“	Air Canada Jazz Orange	“
11	“	Air Canada Jazz Green	“
12	Shorts 360	Pacific Coastal	AVSIM
13	Boeing 727-200	Kelowna Flightways (Purolator)	AI-Aardvark
14	Boeing 737-300	Blank paint kit	“
15	Cessna 208B	FedEx	HTAI

<u>#</u>	<u>Aircraft</u>	<u>Livery</u>	<u>Source</u>
16	Beechcraft B1900D	Pacific Coastal	AVSIM
25	CL-604	Factory Demo - N604CC	Premier Aircraft
26	"	Factory demo – N608CC	"
27	Gulfstream 2B	N308HG	Ultimate GA (AVSIM)
28	Gulfstream 3	C-GBBB	"
29	Gulfstream 2-TT	C-GSLK	"
30	Gulfstream 4	N128TS	"
31	Learjet 45 (def)	Limited Edition	Default
35	Cessna Citation 2	Red	Ultimate GA (AVSIM)
36	"	Grey	"
37	"	Blue	"
41	CL-604 Challenger	Canadian Armed Forces	Kovacevic/Broten (AVSIM)
42	Lockheed C130H-30	"	HTAI/King (AVSIM)
43	Lockheed C130E	"	"
44	CC-150 Polaris (VIP)	"	AVSIM
45	CC-150 Polaris (Cargo)	"	"
46	CC-115 DHC5 Buffalo	"	Vern Opperman's CFB Comox
47	CF-18 Hornet	"	AVSIM
49	Sea King Helicopter	"	"
50	Cessna 172SP (def.)	Ontario North Flying Club	"
51	"	Yellow & Blue	"
52	"	Burgundy & Gold	"
53	"	Green	"
54	"	Gatineau Flying Club	"
55	"	Navy & Charcoal	"
56	"	Red	"

Due to redistribution limitations on most of them, it's up to you to obtain the aircraft and to modify their .cfg files as to airline, parking code, etc. Please note that Jazz CRJs are assigned an airline code of "JZAJ", which allows them to utilize the jetways at CYYJ. If they are labeled simply "JZA", they will not use the jetways but will otherwise operate normally. If none of the required aircraft are installed or you otherwise you don't wish to have any AI traffic generated by CYYJ (2007), I recommend you disable or delete the file *Traffic\_CYYJ.bgl* in the CYYJ *Landscape\scenery* folder so as to avoid wasting system resources.

If you wish to use alternate aircraft, simply modify the file *Aircraft\_CYYJ.txt* to refer to the desired alternate aircraft and recompile with TTools. Missing aircraft will not create any problems, but they won't display, of course. Should an aircraft be installed but the requisite texture is not, only the solid-white/grey aircraft model will be seen.

CYYJ (2007)'s airline AI traffic is based on published mid-summer 2006 schedules. It includes the full schedule to/from Victoria of:

- Air Canada/Jazz from/to Vancouver, Calgary and Toronto
- WestJet from/to Calgary, Edmonton and Kelowna
- Pacific Coastal from/to Vancouver, and
- Horizon Air from/to Seattle.

With respect to the AI schedule, please note that arrival/departure times are specified in GMT. During the winter, the difference between the time in the Pacific Time Zone and GMT is 8 hours. However, during the summer when daylight savings time is in effect, the difference is 7 hours. Airline schedules generally refer to local time. Consequently, when daylight savings time is in



effect, AI will operate one hour later than the published schedule – unless you go to the trouble of revising *FlightPlans\_CYYJ.txt*.

The Cessna 172's do touch-and-gos for three one-hour periods each day - one aircraft in each period. Otherwise, they are in static display. Most of the remaining GA and military aircraft are essentially static scenery; the aircraft arrive from Vancouver (GA) or Comox (military) in the morning, stick around for the rest of that day, or perhaps a full day or two, and then depart.

The CYYJ (2007) AI traffic is enabled at 10% traffic setting. To avoid having the default Orbit Airlines 737 and the Airwave Airlines Dash 8 taking up your parking spaces, run your traffic at less than 35%.

Included in the CYYJ (2007) “.zip” is a tutorial named *Drive-Through Tutorial.pdf* which you may find useful should you wish to “play” with the AFCAD.

## **11 IDIOSYNCRACIES / KNOWN ISSUES**

Design/performance considerations dictated the following intentional omissions or operating idiosyncracies in CYYJ (2007):

- No lamp standards for streetlights, the floodlights at the fuel tank farm or for the parking illumination in the main terminal parking lot are modeled. I felt that the FPS impact of these standards would far outweigh the marginal benefit of the extra scenery in the daytime.
- There is a significant discontinuity in ground elevation in the CCGS area in Pat Bay along the eastern edge of the large paved area. This is intentional, being required to minimize flickering/shimmering of the very large ground plane.
- All AI aircraft parking is “drive-through”, implemented using two invisible, overlay taxiway networks - one for arriving traffic, the other for departures. Consequently, even though arriving and departing AI traffic in close proximity may appear to be on the same taxiway and you would expect one or the other to give way, they are not on the same taxiway as far as FS9 is concerned; hence, they may appear to collide. This is the price for drive-through parking in FS9. As well, the wing tips and tail of any wide-bodied jet parking at a jetway may sweep through the jetway as the aircraft turns to depart. I felt this was preferable to leaving the jetways well back all the time.
- The single parking spot to the south-west of the military hangar in West Camp is not connected to the taxiway system. I use this for a Sea King helicopter (eye candy) in essentially static display.

## **12. SUPPORT**

CYYJ (2007) is freeware. Consequently, support will be limited.

I would like to be made aware of any problems you discover in CYYJ (2007) and will make reasonable effort to respond. As well, I welcome your comments suggestions for improvements and, where warranted, your criticisms.

The website <http://members.shaw.ca/cyyj2007> is the primary mechanism for delivering support for CYYJ (2007). Among other things, it documents known problems with the most current release and, where available, provides workarounds. As well, it lists features that are currently planned for the next release. Please check the site before reporting any problems or suggesting new features.

### **13. ACKNOWLEDGEMENTS**

In addition to the library authors, thanks (in no particular order) to Lee Swordy for AFACD 2.21 and TTools, Luis Sa for SBuilder, Jim Keir for LWM Viewer, Tom Hiscox for SceneGenX, Martin Wright for DTXBmp, Arno Gerretsen for MDL Tweaker and for the animated windsocks, Richard Ludowise for TCalc and his excellent LWM Tutorial, and Jon Masterson and Christian Stock for their SBuilder and TMF tutorials – all of which were used or referred to in the development of CYYJ (2007).

Thanks also to British Columbia's Capital Regional District for their CRD Natural Areas Atlas website from which I accessed the high-resolution air photos, to the Victoria Airport Authority who provided me detailed airport information and allowed me airside access for photos, and lastly to Jon Patch, who not only contributed the Pat Bay jetty/breakwater complex and the fire trucks to the project, but who was also a continual source of help, guidance and inspiration.

Enjoy,  
Don Grovestine  
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### **End User License Agreement (EULA)**

You are granted a free, non-exclusive right solely to install and use CYYJ (2007) on your computer system(s).

You may not:

- upload CYYJ (2007) to any file distribution system,
- reverse engineer, disassemble or decompile any part of CYYJ (2007), or
- incorporate CYYJ (2007) in whole or in part into any commercial product or facility, "shareware" or "freeware"

without the express written permission of me, the author.

Your use of CYYJ (2007) is entirely at your own risk. I accept no liability whatsoever for any damages arising from its use no matter how caused.

By downloading and installing this software, you are deemed to have agreed to the foregoing.

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