CYYJ (2017)

for FS9, FSX and Prepar3D

(CYYJ version 7.xx)

USER MANUAL

An Add-On Covering the Victoria, British Columbia, Canada International Airport and Surrounding Area as it Appeared in Early 2017.

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1. INTRODUCTION

CYYJ for Microsoft® Flight Simulators ("MSFS") FS9 and FSX and Lockheed Martin's Prepar3D portrays the Victoria (British Columbia, Canada) International Airport (CYYJ) and surrounding area, including the Coast Guard complex at nearby Pat Bay. CYYJ (2017) is Version 7 of an add-on that was first introduced in 2006 and has been continually updated since then to "keep pace" with changes at the real-life airport.

Features - CYYJ features:

- an airport definition (AFCAD) based on high-resolution aerial photos that:
  - accurately places all runways and taxiways,
  - displays realistic taxiway and apron markings,
  - precisely places all taxiway, runway and approach lights and other airfield facilities,
  - drive-through parking for all AI except those at the main terminal that use the jetways (which now push-back in real-life),
- a main passenger terminal with optional animated gateways and more than seventy other very detailed buildings - including every significant structure on the airfield - all modeled with GMax and "painted" with hand-drawn textures,
- realistic terrain profiles at both ends of Runway 09/27 and on the Runway 13 approach,
- taxiway and apron signage accurate as to both position and content,
- optional low-FPS-impact, multi-LOD, ground-hugging perimeter fencing (8' high chain link with bent top),
- a full custom airfield lighting package, and
- AI and static aircraft and associated flight plans including:
  - representative military and GA traffic,
  - vintage aircraft parked at the BC Aviation Museum
  - the Victoria Flying Club C152s and C172s custom painted in their actual "colors, and

- when the BC Regional AI package (freeware available from Avsim, Flightsim and elsewhere) is installed, airline traffic based on actual schedules which parks at their normal gates.

CYYJ (2017) includes the expanded Main Terminal apron, the new vehicle and baggage inspection facilities, the new VFC fuel station and lots of additional light standards to provide "texture" in large, otherwise empty flat areas. Thanks to the Victoria Airport Administration who provided me actual airport drawings, every light (when custom lighting is used), taxiway sign and significant ground marking is now in its correct position. As well, CYYJ (2017) has been re-developed using the latest version of ADE_GP to provide a common ground illumination scheme across all FlightSim versions.

While CYYJ (2017) has been updated to be compatible with all versions of Prepar3D, please note that Prepar3D v2 does not support certain legacy technologies and does not offer replacement technology. So features that use this legacy technology, in particular, custom approach and airfield lighting, are not available when CYYJ (2017) is used with P3D v2.

Compatibility - CYYJ is fully compatible (once the necessary compatibility files are configured - see below) with:

- ORBX FTX NA Blue USA Canada Pacific Northwest ("ORBX FTX NA"),
- Ultimate Terrain Canada/Alaska for FS9 and Ultimate Terrain X - Canada for FSX (generally referred to as "Ultimate Terrain" or, simply, "UT"),
- Jon Patch's and Holger Sandmann's Victoria+ for FS9 (*vicenh06.zip*) and with their payware add-on Vancouver+ for both FS9 and FSX,
- Joel Gill's BC Roads for FS9 (*british_columbia_road_system.zip*),
- Harvey Janszen's East Vancouver Island and Gulf Island Coastlines and Landclass, or EVI Shorelines, for short, (*evi04_v13.zip*), and
- of course, Victoria+ FSX (all versions).

All these add-ons generate roads, shorelines and/or landclass that may differ in position and textures from one another and from the corresponding features in CYYJ. Without attention, there would be discontinuities at the boundaries of CYYJ where, for example CYYJ's roads meet those generated by whatever add-on is controlling the roads in the surrounding area.

Add-on compatibility may be managed in either of two ways. If compatibility with only a single add-on is required, the compatibility files are combined with the CYYJ scenery. However, if you wish to be able to quickly reconfigure CYYJ to be compatible with more that one add-on, the compatibility files remain in separate folders and a Scenery Library item is used for each set of files. The latter method is referred to as the "Scenery Library method" of compatibility. (For further detail, see Section 4, Reconfiguration and Customization.

Victoria+ for FSX – As mentioned above, CYYJ and Victoria+ FSX Version 8 are fully compatible.

Victoria+ FSX Version 7 included CYYJ scenery from an earlier version of CYYJ. If you are still using Version 7, when you install CYYJ (2017) you will be given the opportunity to delete those CYYJ files from Victoria+ FSX, thereby saving system overhead.

VIVA Base - VIVA (Vancouver Island Virtual Airlines) Base, both the original version by Lars Hoyer, Jesse Wheeler and Ken Peters (*viva_cyyj.zip*) and the more recent version by Peter

Ham and Sidney Schwartz was located in the northeast corner of the airfield. However, several years ago the YYJ airport authority sold the vacant land in that area and it is now largely occupied by large trucking and warehousing operations industrial concerns. So, VIVA Base is no longer available with CYYJ.

Use of CYYJ (2017) on FS9 Systems with Multiple Versions of Flightsim – On FS9 systems on which FSX or P3D is also installed, you may encounter an issue starting FS9 following use of either FSX or P3D whereby FS9 CTDs one or more times. However, if you persevere by repeatedly restarting FS9, it will eventually run without difficulty. (I have had to restart up to 10 times, but once or twice usually is sufficient.) The problem appears to relate to the specific mix of terrain features (all standard) incorporated in CYYJ (2107), but I have never been able to determine the specific cause or to develop a workaround.

2. INSTALLATION AND UPDATES

Automatic Installation - CYYJ includes an installer. This installer is a Microsoft NET.Framework 3.5 application. If NET.Framework 3.5 or a later version is not already installed on your computer, the latest "redistributable" can be downloaded from the Microsoft website at no charge. The installer does not affect the system registry or any other files/folders managed by the operating system. For users who wish to have finer control of the installation or choose not to use the installer, a manual installation procedure is provided below.

Users of Windows 7 and later versions must have, and others may require, administrator privileges when running the installer, particularly if FlightSim is installed on the C: drive. If you need, but do not have, administrator privileges, the installer will "complain" when you attempt to install. To run the installer with administrator privileges, right-click on *Installer.exe*, select "Run As …" and select "administrator".

Windows 7 users who do not run the installer in the XP compatibility mode will receive a "this program may not have installed correctly" message upon closing the installer. Despite the error message, the installation completes normally and the message may be safely ignored.

When updating a previous installation of CYYJ, any AI traffic files (*traffic*.bgl*) in the existing *CYYJ\scenery* folder will be retained. As well, the installer backs-up the previous version of CYYJ before overwriting it. If the installation procedure does not complete normally, the previous installation will be restored.

If you retain an earlier version of CYYJ by installing CYYJ (2017) to a new folder, ensure only one of them is enabled in the Scenery Library at a time.

Installation is performed as follows. (It will take you far longer to read this than to do it! Buttons and other controls are enabled only when they can be used. Hence, they are progressively enabled as you make prerequisite selections.)

(a) Unzip the file *CYYJ_n*nn*.zip* to a temporary older ("folders" option enabled). DO NOT UNZIP TO THE INSTALLATION FOLDER and DO NOT REMOVE ANY FILES FROM THE TEMPORARY FOLDER. (Depending on your operating system, you may be able to omit the "unzip" and run *CYYJ Installer.exe* directly from the *.zip* file.

(b) Run (double-click on) *Installer.exe*. The installation dialog will appear. For P3D versions 3 and 4, the installer must be run in Run as Administrator mode if you want your Scenery

Library updated. Otherwise, you will receive an error message – but the installation will be otherwise completed

(c) Select the target FlightSim version. The installer will only permit selection of versions actually installed on your system. If you plan to use CYYJ (2017) with more than one FlightSim version, perform a separate installation for each.

(d) Select the type of installation: *New Installation* or *Update existing version*. If you select the former, the installer "recommends" *Addon Scenery\CYYJ (2017)* as the Top Level folder. You may install to any folder - **but recognize that any existing contents of the nominated folder will be deleted prior to installation**. If you choose to update an earlier version, the installer scans the *Addon Scenery* folder to locate any previously installed versions. (The scan may take a few seconds, depending on the number of items in your Scenery Library.) If the installer finds more than one previous installation of CYYJ, it will identify each in turn asking if that is the version you wish to update.

(e) Select the add-on(s) with which you want CYYJ to be compatible. If you plan to use CYYJ with:

- only one compatible add-on, check the applicable radio-button, or
- several compatible add-ons (at different times), select Compatibility: Multiple and check the relevant add-ons.

If you do nothing, the installed CYYJ will be compatible with default FlightSim.

If any compatible add-on is active, CYYJ should always be configured for it. Otherwise, roads, lights, terrain and possibly other features may not display properly.

DO NOT CONFIGURE CYYJ FOR ADD-ONS THAT ARE NOT INSTALLED ON YOUR SYSTEM OR THAT WILL NOT BE INSTALLED BEFORE USE OF CYYJ. OTHERWISE, FLIGHTSIM MAY CTD.

(f) Uncheck any optional scenery, static aircraft and AI you do not want. (See Section 4, RECONFIGURATION AND CUSTOMIZATION, Section 5, OTHER THINGS YOU SHOULD KNOW and Section 7, STATIC AIRCAFT and CUSTOM AI for a discussion of the optional components.)

To facilitate selection of the best option scenery configuration on "challenged" systems, it is recommended you check "Save all optional files" on the initial install. Only the checked features will be enabled, but you will be able to create different configurations by simply enabling/disabling scenery files. Otherwise, you'll need to re-install for each desired configuration. Once you've decided on a configuration, re-install with "Save all optional files" unchecked to eliminate all unused features and their related processing overhead.

(g) Unless you uncheck Update Scenery Library, all necessary Scenery Library items will be created for you. If you checked the Compatibility - Multiple radio button, CYYJ will be configured for default operation - since the installer does not know your preference. If that's not your intent, you'll have to uncheck the corresponding Scenery Library entry and check the one of you choice. (Please refer to Section 4, RECONFIGURATION AND CUSTOMIZATION, for further details.) If you wish the Scenery Library entry name to be other than "CYYJ (2017)", edit the Name textbox. If, for some reason you do not wish a backup file of the Scenery Library to be made, uncheck Backup Scenery Library.

When all selections have been made, click the "Install" button. The installer will ask you to confirm the installation folder and compatibility selections, following which it will install and configure CYYJ accordingly. Should you change your mind about an option or wish to change

any aspect of the installation, simply select the desired new parameter(s) and click the “Install” button again.

All textures provided in the downloaded archive are mipmapped. Certain features, most notably, ground polys and lines display much better without mipmaps and static aircraft liveries will remain sharp as you get further away. However, a mix of mipmapped and non-mipmapped textures can sometimes be problematic and result in the “blurries” – especially with FS9. At the completion of the installation, you will be asked if you want to remove mipmaps. If you respond “Yes”, KillMipmaps (see below) will be initiated. It is recommended you delete mipmaps for ground polys and static aircraft when you first install. Should this become problematic, you can always restore the mipmaps or re-install (which is probably faster)

When finished, close the dialog. If you have checked the Delete Temporary files checkbox, all the temporary files except the installer will be permanently deleted. Otherwise, manually delete all the installation files. They serve no other purpose.

If the installer encountered difficulties and was unable to fully restore a previous installation, a folder named *CYYJInstall_bak* will remain in the installation folder. In that folder is a copy of the installation folder as it was prior to the installer being run.

Manual Installation - Users who do not wish to use the automatic install may manually install and configure standalone CYYJ as follows:

(a) For a new installation, create a top-folder called *CYYJ (2017)* or another name of your choice in FlightSim's *Addon Scenery* folder or elsewhere. If upgrading from an earlier version of CYYJ, delete everything from the old CYYJ top-folder except any traffic files you wish to save. The traffic files should be moved elsewhere temporarily.

(b) Create a subfolder named *CYYJ* in the CYYJ top folder. Copy into it the *\scenery* and *\texture* subfolders from the temporary *FS9* or *FSX* folder, as applicable. **Use the *FSX* folder for all versions of Prepar3d**. Disable/delete one or the other of *ADE_CYYJ_*nnn *(Custom Lights)_FSn.bgl* and ADE*_CYYJ_*nnn *(Stock Lights)_FSn.bgl.* If you disable/delete Custom lights, also disable/delete *obj_AFLT_Approaches.bgl* and *obj_AFLT_Thresholds.bgl.*

(c) Copy the *Compatibility Files* folder from the temporary *FS9* or *FSX* folder, as applicable, to the CYYJ (2017) top-folder. If you plan to use CYYJ with only one compatible add-on, also copy the files from the *\scenery* subfolder in the relevant *Compatibility Files* subfolder(s) into the *CYYJ\scenery* folder. If you don't have any of the compatible add-ons, copy the files from the *Compatibility Files\Default\scenery.* (You may find Section 4, RECONFIGURATION AND CUSTOMIZATION helpful.) For FS9 and FSX-based versions, copy the contents of the *Effects* folder, if it exists, to your FlightSim *Effects* folder.

(d) You may find several folders named *Optional Scenery* containing various optional sceneries. The *.bgl* files - whether or not in a *\scenery* sub-folder go into your *CYYJ\scenery* folder and any *.bmp* (FS9) or *.dds* (FSX) files go into the corresponding CYYJ\texture folder. Generally, to install and enable an optional scenery item, copy all the files contained in its Optional Scenery folder. Some optional scenery installations are complex. While it will do no harm, these options cannot be effected simply by copying files (*FS9\Trees* is an example)

(e) If you are installing for P3Dv2 or later:

- delete any files in the CYYJ\scenery folder whose name begins with “ADE_CYYJ_”, and then
- copy the contents of the PV2 or PV3 (for P3Dv3 and later), as applicable, folder to the indicated locations.

(f) For each category of static aircraft, copy from the applicable sub-folder in the temporary *Static Aircraft* folder:

- the .bgl file whose name that starts with "obj_SAMM_" and from the *FS9 or FSX* sub-folder, as applicable, *lib_SAMM_...bgl* into your *CYYJ\scenery* folder, and
- the <u>contents</u> of the \texture subfolder into your *CYYJ\texture* folder.

(g) If you want custom AI, for each desired category copy from the applicable sub-folder in the temporary *AI* folder :

- the applicable (FS9 or FSX) traffic into your *CYYJ\scenery* folder, and
- the contents of the *Aircraft* sub-folder into the FS9 *Aircraft* folder or, for other versions, into a valid SimObjects folder.

<u>You should not enable both the AI and static aircraft in the same category</u>.

(h) If you saved any AI traffic files as noted above, they may now be copied back to the *CYYJ\scenery* folder.

(j) Copy additional files to the destination of your choice (see following sections).

<u>File/Folder Configuration</u> – Following proper automatic installation of CYYJ, the structure of the “installation folder”, i.e., CYYJ (2017) - or whatever you choose to call it - will be as follows:

CYYJ (2017) containing the following folders:

- *CYYJ* – the main folder, containing:
  - *scenery* - containing the scenery .bgls, suffixed with ".xxx" if not activated
  - *texture* - containing .bmp and/or .dds (FSX-only) mipmapped texture files for all features as well as a texture subfolder for each enabled static aircraft
- *Compatibility Files* – containing the files that allow the features of CYYJ to integrate seamlessly with other add-ons that control the "environment" collected into a series of sub-folders entitled *Enable for …* ,
- *config.*dat – essential configuration information
- *KillMipmaps.exe* – see below,
- *halo.bmp* and *fx-2.bmp* - to adjust the size of airfield light "dots" (see Section 4),
- *EULA.txt* - the end user license agreement, and
- a .pdf version of this user manual.

You may move any of these file/folders except *CYBL, Compatibility Files and KillMipmaps* elsewhere. However, *CheckForUpdate.exe* and *config.dat* must remain together.

Scenery\World\scenery may contain elevation adjustment files for CYYJ placed there by other applications. You must delete/disable them (their names will likely include "CYYJ"); otherwise you may find some unsightly cliffs around your airport.

For use with ORBX PNW, the file *CVX_CYYJ_Landclass* in the *CYYJ (2017)\CYYJ\scenery* folder must be manually disabled or deleted.

No Flatten File – You will notice that CYYJ (2017) appears not to have a flatten file. That is because the terrain on the airport has been prepared with Terrain Sculptor, another of the authors freeware applications. The airport flatten is included in the files *Terrain Sculptor_CYYJ _LWM2.bgl* and *Terrain Sculptor_CYYJ _LWM3.bgl* for FS9 and *Terrain Sculptor_CVX.bgl* for other Flightsim versions.

KillMipmaps.exe – As mentioned above, you may wish to remove mipmaps from some textures. KillMipmaps serves this purpose without loss of quality. Execute *Killmipmaps.exe* – either from the Installer or later, from the Addon Scenery folder holding the textures to be addressed. Then, select the texture sets from which mipmaps are to be removed by checking the corresponding checkboxes. If you check Select, you will be presented with a checked listbox showing all textures. Check those from which mipmaps are to be removed. Then click Remove Mipmaps.

So mipmaps can easily be restored when necessary, before mipmaps are removed, the texture is saved to the folder Mipmap Backup, in a subfolder named as the subfolder the originally contained the texture. This folder serves no other purpose.

Uninstalling CYYJ - The installer only installs the files as noted above. It does not write to the Windows Registry or anywhere else. To uninstall CYYJ, delete:

- the CYYJ (2017) folder from the Flight Simulator *Addon Scenery* folder (or wherever else you installed it), and
- the CYYJ entry(ies) from the Scenery Library.

FS9 CTDs – There appears to be an issue on some FS9 systems whereby Flightsim may CTD on startup one or more times before starting successfully. However, eventually, with enough retries (I've seen it take up to 10), it will start. The cause appears to be some sensitivity to the AFLT-based custom lights. Should this occur on your system, using stock lights and disabling the file *AFLT_Lights_FS9.bgl* will rectify the situation.

Car Spinning on Front Bumper - One of the standard Rwy12 libraries contains three demo files named *ExtraObjects_demo.bgl, ExtraObjects_demo_A16N.bgl* and *ExtraObjects_demo_FS9.bgl* which display a large number of vehicles (including one car spinning on its front bumper) and other objects in the area just east of the CYYJ main terminal. This demo serves no useful purpose. CYYJ excludes all objects in this area.

However, certain other add-ons incorporate a library containing these files including, reportedly, VOZ and Southern California Scenery Enhancements v2.0. CYYJ must be of higher priority in the Scenery Library than such add-ons, otherwise this nuisance scenery will not be excluded. Alternately, you should locate and delete these troublesome files from those libraries since they are unlikely to be of any use.

Replacement of AI Aircraft with Static Models - To conserve disk space, you may wish to delete the following aircraft used by previous versions of CYYJ (if you installed them) but no longer required:

- CAF-AI_CH-146 (Static)
- CAF-AI_CH124 SeaKing (Static)
- CYYJ-AI_Douglas A26 Invader (Static)
- CYYJ-AI_Sikorsky s55 (Static)
- CYYJ-AI_Super DC-3 (Static)
- CYYJ-AI_T33 Silver Star (Static)
- CYYJ-AI_Vickers Viscount (Static)

These previously-static AI aircraft have all been replaced with more efficient scenery models (courtesy of SAMM).

3. SCENERY LIBRARY

Add to your Scenery Library the folder *CYYJ (2017)\CYYJ* (if necessary) and, for FS9 only, if desired, *Landclass,* and enable this/these entries. (If you're happy with your current FS9 landclass or you use Victoria+ for FS9, you don't need *CYYJ Landclass*. But, if you keep it, it must remain separate from the rest of the CYYJ scenery in a folder without a *texture* subfolder.)

The recommended Scenery Library configuration for FS9/FS2004 is shown above. The FSX Scenery Library configuration should be similar.

The CYYJ Scenery Library entry(ies) **must** be placed above those for Victoria+ and Vancouver+ if either is installed. You must also place them above any entries for Ultimate Terrain, ORBX FTX NW or any other scenery that includes terrain, roads and/or shorelines. If you have other Victoria-area add-ons, their position in the Scenery Library relative to CYYJ will depend on what they do. Please refer their documentation. In general, unless they are intended to affect CYYJ specifically, they should be of lower priority than, i.e., be below, CYYJ.

4. RECONFIGURATION AND CUSTOMIZATION

Management of add-on compatibility files - Compatibility files may be used in either of two ways:

- If you specified to the installer that you want CYYJ to be compatible with a specific add-on (or with default FlightSim), the installer will have copied the compatibility files from the relevant *CYYJ (2017)\Compatibility Files* folder into the *CYYJ\scenery* and *\texture* folders. Should you wish to make CYYJ (2017) compatible with a different add-on, remove any existing compatibility files as described below from *CYYJ\scenery* (remove only those *\scenery* files as are contained in the Compatibility Files folder for the add-on being removed) and then copy the files from the relevant *CYYJ (2017)\Compatibility Files\...\scenery* and *\texture* (the latter may not exist or it may be empty) into the *CYYJ\scenery* and *\texture* folders respectively.

  However, if you specified Multiple Compatibility to the installer (which gives you the ability to quickly reconfigure compatibility for various add-ons (e.g., sometimes you'll have UTX

- Canada enabled and at other times you'll want to be compatible with Orbx's FTX PNW), the installer will not have copied any compatibility files into *CYYJ\scenery* and *\texture*. To effect compatibility with any specified add-on, you need only enable its Scenery Library compatibility item - in addition to CYYJ (2017), of course. Only one such Scenery Library item should be enabled at any time . These entries must remain at a lower priority in the Scenery Library than CYYJ (2017).

Compatibility files are named:

for FS9: *0_CYYJ_Roads_(...)_VTPX.BGL*
CYYJ_Roads_(...)_VPTL.bgl
CYYJ_Terrain_(...).bgl
LD_1414_(...).bgl

for FSX: *CVX_CYYJ_Roads_(...).BGL*

CVX_CYYJ_LC_(...).BGL
CVX_CYYJ_Skirt_(...).BGL
LC_1414_(...).bgl

where (...) is the abbreviated name of the add-on(s) to which they apply.

Airfield Light Size - The Flightsim stock texture files that control the size of AFLT's lights and the stock lights results in lights that some, including me, think are too big and bright.

The installation archive includes replacement textures that will reduce the size of airfield lights generally. Please note, however, using these file will affect the lights at all airports, not just those where AFLT-generated lights are used. If you want to try them, copy the file:

- for FS9, *halo.bmp* into your *FS9\Texture* folder, or
- for FSX and P3Dv1, *fx_2.bmp* into your *FSX\Effects\Texture* folder,

overwriting the stock files of the same name. Be sure to backup the stock files first in case you don't like what happens with these replacement files.

(I obtained *halo.bmp* from an attachment to a fsDeveloper.com post. Unfortunately, I have been unable to find that post again in order to give proper credit. So, thank you, whoever you are. The *fx-2.bmp* file in the archive is my own work product.)

Fence - The perimeter fence is of the ground-hugging variety, generated by FenceBuilder PRO (a payware application by the author and available from Silver Cloud Publishing, Flight 1 and other fine retailers.) Due to the limited amount of other scenery at CYYJ, the addition of the perimeter fence is unlikely to cause low-FPS issues. However, should you want eliminate the fence, disable/delete the file *FBP_CYYJ_Perimeter.bgl* in the *CYYJ\scenery* folder.

Animated Gates in Fences (FS9 only) - The seven static gates in the base fence and the two in the perimeter fence operate when the "user aircraft" (which may be simulating a road vehicle) comes within about 100m (~325') of the gate. (Enable *obj_Fence-Gates (Operating).bgl*; disable *obj_Fence-Gates.bgl*.)

Animated Jetways (FSX and P3D Only) - The four jetways at the main terminal are animated. The jetway heads will connect to user aircraft following entry of Ctrl-J from the keyboard and automatically to AI whose *aircraft.cfg* file contains a specification of the main door coordinates in the *[exits]* section. (Disable *obj_Jetways_Static.bgl*.)

Fuel Triggers – A fuel trigger is located beside the VFC Fuel station. MSFS does not permit user aircraft doors to remain open in fuel trigger areas. If you want your aircraft automatically refuelled, enable *obj_FuelTrigger.bgl.* If you want to leave the user a/c doors open while parked in these areas, disable *obj_(Opt)_FuelTrigger.bgl* (but keep an eye on your fuel gauge).

Hangar 11 and Nearby Shed - At time of this release, Hangar 11 was still standing. However, reportedly it is to be demolished. Therefore, Hangar 11 has its own placement file, *obj_EastCamp_Hgr11.bgl* - enabling you to demolish ity as well (by deleting that file). In the same area, there is a large pre-fab aluminum shed that may be moved once Hangar 11 is demolished. This shed is placed by the file, *obj_EastCamp_VikingShed.bgl*. If it is moved, you may either remove it by deleting this file from the *CYYJ\scenery* subfolder or, should you feel so inclined, decompile the file, relocate the shed and re-compile the file.

Other Customization - Some users may be tempted to modify the airport definition files (*ADE_CYYJ_700_....bgl*). I strongly recommend against that since, regardless of your skill

level, any changes you make will have to be re-done if they are to be used with any future versions of CYYJ. Instead, unless you must change the runway/taxiway/apron configuration (I can't image why you'd need to other than to add/modify parking) , implement your changes as a separate add-on, placed above CYYJ in the Scenery Library.

5. OTHER THINGS YOU SHOULD KNOW

Airfield Lighting in Low Visibility - CYYJ (2017) gives you a choice of stock airfield lighting or custom lighting. (Custom lighting is not available with P3Dv2 or v3.) FlightSim does not provide a mechanism for scenery models to test visibility, Consequently, the custom airfield lights do not automatically illuminate in daytime low visibility conditions - like the stock lights. If you use the custom lights and want airfield lights during the day, select code 0066 on your transponder.

Collisions While Taxiing - As at the real CYYJ, most aircraft parking is "drive-through", implemented using an invisible, overlay taxiway network 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 to give way, they are not on the same taxiway as far as MSFS is concerned. Hence, they may appear to collide. This is the price for drive-through parking.

Departing AI - It is necessary with drive-through parking to have two hold-short nodes at the ends of each runway - one in the arrivals network, the other in the departures network. To ensure arriving aircraft remain on the arrivals network, it is necessary to place the hold-short node in the (invisible) departure network to the runway side of the one in the (visible) arrivals network. Consequently, departing AI may hold-short on, rather than before, the hold-short line.

Lamp Standards - Lamp standards for streetlights and the vehicle parking illumination in the main terminal parking lot and others are designed to display only at the highest scenery complexity levels. If you feel that the FPS impact of including realistic models for these lamp standards outweighs the benefits of the extra scenery, reduce you Scenery Complexity level a "notch".

Elevation Discontinuity - 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 unavoidable, being required to minimize flickering/shimmering of the very large ground poly in the area.

6. STATIC AIRCRAFT AND CUSTOM AI

CYYJ (2017) contains a selection of static aircraft: in siz categories:

- Vintage aircraft at Museum - aircraft on outdoor display at the BC Aviation,
- Helicopters (433 Sqn & VIH) - Sea Kings and Griffon helicopters on 433 Squadron ramps and a AS350, Bell 205 and Ka32 in VIH livery beside VIH,
- Cessnas at VFC - nine Cessna 152s and 172 in their actual colors on the ramp in front of the Victoria Flying,
- Couriers - currently limited to a Purolator 727,
- Apron III - including a private 737 based at CYYJ and a Beech Baron parked in a hangar,
- other small private aircraft at the Victoria Flying Club and near the Pacific Sky hangars (*obj_StaticAircraft.bgl*), and
- floatplanes stored at CAP5.

All these static aircraft save for the final category have been created by SAMM. (SAMM is a utility to convert flyable aircraft models into static scenery models. It was developed by this author and is available from popular download sites.) While these static models (and their AI counterparts) add a good deal of realism to the airport, some of this "eye candy" is derived from flying models. Hence, they may be "FPS-hogs". If you have an older system, you may have to be selective as to which static/AI aircraft you enable. (The installer offers a full range of options, or you may simply enable/disable appropriate .bgl files. The static aircraft models are contained in files in the main scenery with names beginning with "lib_SAMM_" and placed in the files whose name starts with "obj_SAMM_". The textures are contained in appropriately-named folders in the main texture folder.

The custom AI utilizes stock aircraft, freeware add-ons (all included in the archive and installed by the installer) and in the case of the VFC Cessnas, payware (HTAI single-engine Cessnas, available from http://htai-models.com at a modest cost). A freeware alternative is also provided.

There are 5 collections of custom AI:

- Courier,
- VFC Cessnas (HTAI)
- VFC Cessnas (freeware)
- Military
- GA

For the apron in front of the Victoria Flying Club, you have a choice of either static models or AI. If you choose the static models, please recognize that the parking for AI is still there. So, even though it will be the last to be assigned, if you have a lot of small GA AI active, you may find some of them competing with the static models for parking. Also, there are two versions of VFC Cessnas AI included, one that has the aircraft doing touch n' gos periodically, the other where the aircraft depart (to Bellingham) and simply return some time later. The installer installs the former. If you don't want the touch n' gos, simply disable the traffic files in the CYYJ\scenery folder whose name includes "_tng" and enable the corresponding non-tng traffic files.

If you want to remain with AI and own the HTAI Cessna Single Props package, all twelve of the Victoria Flying Club Cessna 152s and 172s in accurate repaints will be parked on the apron. If you don't have that package, default C172s can be substituted. These aircraft will do touch-and-gos for three one-hour periods each day - one aircraft in each period.

General aviation aircraft include several small-to-medium-size corporate jets parking at the Aerocenter, a couple of Mooneys which park near VFC and the Thompson family jet. The bizjets are always active, the Mooneys show up at an activity level of 30% and the Thompson jet at 60%. The Courier package contains two variations of the Purolator B727s and a Cessna 208 in FedEx colors that visit daily. With the Military package, the apron in front of the 443 Maritime Squadron hangar will, at an activity level of 30%, feature one or more of: C-130E Hercules, CC-150 Polaris, CC-115 Buffalo, a CP-140 Aurora, CC-177 GlobeMaster and a pair of CF-18 Hornets.

Most of the included AI and static aircraft and many of the texture files are proprietary to others (who have given me permission, either expressly or through compliance with their licenses, to redistribute those files). Those other authors are acknowledged, with my thanks, in Appendix "A". A special thanks also to David "Opa" Marshall who spent many hours watching AI land, taxi and take-off to make sure I'd "done it right" and to Rob Nieuwenhoven who customized his SH-3 Sea King model to better represent the Canadian Forces CH-124 Sea King.

For scheduled airline AI, BC Regional AI by the author (available from Avsim and Flightsim) is recommended. As well, custom AI from other of my airports will visit CYYJ.

> **Static aircraft and custom AI collections having the same name should not be enabled at the same time. While no harm will come of this, it will result in duplicate aircraft often with one on top of another.**

The AI traffic files are installed in the *CYYJ (2017)\CYYJ\scenery* folder. These files may be edited with AI Flight Planner (also by the author and available from popular download sites and http://stuff4fs.com.)

As noted above, you must own the HTAI Cessna Single-Props package to have the HTAI Cessnas operate as AI. If you elect this option, you'll have to copy the relevant *\Model* folders and *.air* files from your Cessna Single-Props package *\Aircraft* folder into the folders created by the installer (names starting with "CYYJ_AI_Cessna").

7. LIBRARY-BASED SCENERY / STATIC DISPLAYS

CYYJ uses library-based scenery for ground and baggage handling equipment, vehicles, certain airfield facilities and some of its static aircraft. In addition to Flight Simulator's generic libraries, these static-display objects come from the following third-party libraries:

- *add_SeevKahn.bgl*, contained in *rwy12_lib1_v1.2.zip,* by Seev Kahn (also available in EZ_Scenery format under the filename *ga_planes-01.zip*),
- *206B.bgl* and *500D.bg,* contained in *rwy12_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 *rwy12_lib2_v1.2.zip,* by Geoff Williams and Martin Strong,
- *extra_objects.bgl,* contained in *rwy12_lib3_v1.2.zip,* by Lars Hoyer and Irvin McIntyre, and
- *Agen_XTrees_lib9_2.zip* and *GGv3_XTrees_lib9_0.zip* by GianP, with a single texture file from Gerrish Gray's *trees_v3.zip (FS9 version only)*.

With the permission of their authors or under the terms of the respective license, all the required models and textures from these libraries are incorporated in CYYJ, so you need not have those libraries installed on your system. (But, no problem if you do.) The resolution of many of the associated textures have also been reduced to improve performance. Thanks to the various library providers for allowing this.

open while parked in these areas, disable *obj_(Opt)_FuelTriggers.bgl* (but keep an eye on your fuel gauge).

8. SUPPORT

CYYJ is freeware. Hence, support will be limited. Nonetheless, I would like to be made aware of any problems you discover in CYYJ and will make reasonable effort to respond. As well, I welcome your comments suggestions for improvements and, where warranted, your criticisms.

The website http://stuff4fs is the primary mechanism for delivering support for CYYJ. Among other things, it documents known problems with the most current release and, where available, provides workarounds and patches. Please check the site before reporting any problems or suggesting new features.

9. ACKNOWLEDGEMENTS

In addition to the library authors already mentioned and the aircraft designers, thanks (in no particular order) to Lee Swordy for AFACD 2.21 and TTools, Luis Sa for SBuilder and SBuilderX, Jim Keir for LWM Viewer, Jon Masterson for ADE, Jim Vile for his advice on many aspects of airport design, Tom Hiscox for SceneGenX, Martin Wright for DTXBmp, Arno Gerretsen for MDL Tweaker, CAT and for the animated windsocks, Richard Ludowise for TCalc and TCalcX and his excellent LWM Tutorial, and Jon Masterson and Christian Stock for their SBuilder and TMF tutorials – all of which were used in the development of CYYJ.

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 District of North Saanich who provided me with ground elevation data, to the Victoria Airport Authority who provided me detailed airport information and allowed me airside access for photos, and lastly to Jon Patch and Holger Sandmann. Jon contributed the Pat Bay jetty/breakwater complex to the project, and both were a valuable source of guidance and inspiration.

Enjoy,
Don Grovestine

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Website: http://stuff4fs.com

Other British Columbia, Canada Airports by Don Grovestine

CYCD (2012) - Nanaimo
CYQQ (2010) - Canadian Forces Base Comox
CZBB (2011) - Boundary Bay
CYXX (2011) - Abbotsford
CYBL (2011) - Campbell River

End User License Agreement (EULA)

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- reverse engineer, disassemble or decompile any part of CYYJ (2017) for any purpose other than to implement improvements for your own personal use, or

- incorporate CYYJ (2017) in whole or in part into any commercial product or facility, “shareware” or “freeware”, or any other product or facility for which there is a charge of any kind,

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Your use of CYYJ (2017) is entirely at your own risk. None of the authors whose works are included accept any liability whatsoever for any damage 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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APPENDIX A – CYYJ AI and STATIC AIRCRAFT

The following table identifies the aircraft used in the CYYJ AI and static aircraft scheme. Most of these files are proprietary to others. They are included as CYYJ Custom AI with the permission of their authors and are provided solely as a convenience to users. Under no circumstances are these files to be decompiled or reverse engineered, or uploaded to any file distribution system except as expressly permitted by their authors. Terms of distribution for these files may be found in the "readme.txt" files included in noted archives (*.zip* file).

Aircraft Type	**AI Title** (prefixed by "CYYJ-AI" except where noted "CAF-AI")	**Mod**	**Tex**	**Original Archive File**	**Available From**	**Author(s)**	***.mdl* Radius** (m.)	***aircraft.cfg* Wingspan** (ft.)
AS 350	N/A - SAMM scenery model	x	 x	nd_fs9as350.exe	Nemethdesigns.com	Tamas & Peter Nemeth Don Grovestime	n/a	n/a
Bell 205	N/A - SAMM scenery model	x	 x	Huey_FS2004.exe	hovercontrol,com	Jordan Moore Don Grovestine		
Boeing 727-200	Boeing 727-200 Purolator-*n*	x	 x	aia722p2.zip CYYJ	ai-aardvark.com	David Rawlins Don Grovestine	18* (26)	115* (108)
Boeing 737-500	Boeing 737-500 (C-FPHS)	x	 x	aia735bl.zip CYYJ	ai-aardvark.com	David Rawlins Don Grovestine	17* (20)	100* (94.75)
Bombardier CL-604	Challenger CL-604-1 Challenger CL-604-2 Challenger CL-604-3 Challenger CL-604-4	x	x x x x	corporate_challenger_c-fund.zip corporate_challenger_c-gawh.zip corporate_challenger_c-gdpf.zip corporate_challenger_c-gwll.zip	avsim.com avsim.com avsim.com avsim.com	Gregory Putz Gregory Putz Gregory Putz Gregory Putz	10* (13)	64.4
Canadair T-33	N/A - SAMM scenery model	x	 x	T-33A.zip CYYJ	avsim.com	Tim Conrad Don Grovestine	n/a	n/a
C-130 Hercules	CAF-AI CC-130E Hercules	x	 x	ai_lockheed_c-130e.zip htai_cc130h_cfc_435.zip	htaimodels.com avsim.com	Henry Tomkiewicz Graham King	21	132.6
CC-115 Buffalo	CAF-AI CC-115 Buffalo	x	x	comox042.zip (comment out station_load.2 in .cfg)	avsim.com	Vern Opperman	16	96.0
CC-177 GlobeMaster	CAF-AI CC-117 GlobeMaster	x	 x	sc17.zip eddy27.zip	flightsim.com	Mike Stone Ed DesRoches Brent Robillard	51*	165.0
CC-150 Polaris	CAF-AI CC-150 Polaris	x	 x	ai_airbus_complete_120685.zip canforce_a310.zip	avsim.com avsim.com	FS Painter Al Percy	25* (32)	144.0
Cessna 152	VFC C152 (C-FLDB)	o		htaicsep12.exe	htaimodels.com	Henry Tomkiewicz	7	36.1

Aircraft Type	AI Title (prefixed by "CYYJ-AI" except where noted "CAF-AI")	Mod	Tex	Original Archive File	Available From	Author(s)	*.mdl* Radius (m.)	*aircraft.cfg* Wingspan (ft.)
	VFC C152 (C-GUZR) VFC C152 (C-GZSC) VFC C152 (C-GIMH) VFC C152 (C-GJTM)		x	All textures CYYJ		Don Grovestine		
Cessna 172	VFC C172 (C-GGSN) VFC C172 (C-GTQQ) VFC C172 (C-GPFW) VFC C172 (C-FMEK) VFC C172 (C-GKMY) VFC C172 (C-GZXP) VFC C172 (C-GLJR)	o	 x	htaicsep12.exe All textures CYYJ	htaimodels.com	Henry Tomkiewicz Don Grovestine	7	36.1
FS9 only	VFC C172 (C-GGSN) VFC C172 (C-GTQQ) VFC C172 (C-GPFW) VFC C172 (C-FMEK) VFC C172 (C-GKMY)		x x x x x	c172_blue&yellow.zip c172_burgundy_gold.zip c172_green.zip c172_red.zip c172sp_navy_charcoal_nr.zip	avsim.com avsim.com avsim.com avsim.com avsim.com	Gunes Karatepe Gunes Karatepe Gunes Karatepe Gunes Karatepe Gunes Karatepe		
Cessna 172 Float	N/A - SAMM scenery model	x	 x	C172N Skyhawk II Float	carenado.com	Carenado Don Grovestine	n/a	n/a
Cessna 182 Float	N/A - SAMM scenery model	x	 x	htaicsep12.exe	htaimodels.com	Henry Tomkiewicz Don grovestine	n/a	n/a
Cessna 208B	Cessna 208B-CP Fedex	x	 x	ai_cessna_c208b_grand_caravan.zip aic208fe.zip	htaimodels.com avsim.com	Henry Tomkiewicz Tony Fosler	8	52.1
Cessna Citation II	Cessna Citation-1 Cessna Citation-2 Cessna Citation-3	x	 x	utlimate_citation550_ai.zip aicitii.zip	avsim.com	Dee Waldron Michael Carr	8* (11)	52.2
CH-124_Sea King	N/A - SAMM scenery model	x	 x	AI_SH-3D.zip CYYJ	militaryaiworks.com	Rob Nieuwenhoven Don Grovestine	n/a	n/a
CH-146 Griffon	N/A - SAMM scenery model	x	 x	Hovercontrol_412_PE_v1.exe griffon_146438.zip	hovercontrol.com avsim.com	Jordan Moore Rob Pracic	n/a	n/a
CH-148 Cyclone	N/A - SAMM scenery model	x	x	s92pk1.zip	avsim.com	David Allen	n/a	n/a
CF-18 Hornet	CAF-AI CF-18 Hornet	x	 x	caf_ai.zip	avsim.com	Mikko Maliniemi & Kari Virtanen Brian Burger	10	37.5
CP-140 Aurora	CAF-AI CP-140 Aurora	x	x	comox042.zip	avsim.com	Vern Opperman	16	99.6

Aircraft Type	AI Title (prefixed by "CYYJ-AI" except where noted "CAF-AI")	Mod	Tex	Original Archive File	Available From	Author(s)	*.mdl* Radius (m.)	*aircraft.cfg* Wingspan (ft.)
De Havilland DHC-2 Beaver Floats	N/A - SAMM scenery model	x	x			Ronald Zambrano	n/a	n/a
De Havilland DHC-2 MkIII Turbo Beaver	N/A - SAMM scenery model	x	x	dh2_xgdt.zip	premieraircraft.com	Barry Blaisdale Jean Pierre Brisard Bob May	n/a	n/a
De Havilland DHC-3 Turbo Otter	N/A - SAMM scenery model	x	x	dh3a_shx.zip	premieraircraft.com	Barry Blaisdale Jean Pierre Brisard Bob May	n/a	n/a
Douglas A26 Invader	N/A - SAMM scenery model	x	x	a26-soh.zip a26bms.zip	sim-outhouse.com sim-outhouse.com	Milton Shupe Damian Radice	n/a	n/a
Gulfstream GIIB	Gulfstream G-IIB-1 Gulfstream G-IIB-2 Gulfstream G-IIB-3	x	x	ai_gulfstream_g-iib.zip gii-gen.zip	htaimodels.com avsim.com	Henry Tomkiewicz Ralf Maylin	11	68.8
Gulfstream GIV	Gulfstream G-IV	x	x	ai_gulfstream_g-iv.zip aussiegiv.zip	htaimodels.com avsim.com	Henry Tomkiewicz David Carter	13	77.8
Ka-27	N/A - SAMM scenery model	x	x	ALPHA_Ka-27 Helix_FS9.zip	virtavia.com	Alphasim	n/a	n/a
Sikorsky S55	N/A - SAMM scenery model	x	x	ALPHA_Sikorsky_S-55.zip	virtavia.com	Alphasim	n/a	n/a
Super DC-3 (Static)	N/A - SAMM scenery model	x	x	CYYJ		Rey Lopez & Guenter Kirschstein Don Grovestine	n/a	n/a
Vickers Viscount	N/A - SAMM scenery model	x	x	Visc700.zip fs9v757tcawhite.zip	simviation.com avsim.com	Rick Piper Garry Russell	n/a	n/a

* - adjusted aircraft radius/wingspan for better operation of AI scheme