Q. Please provide the description and schematic of current contact center communications/telephony, including switching equipment, Interactive Voice Response, trunks, ports, call flow/routing, overflow (outsourcer) routing and triggers. Also discuss physical location of telephony equipment.

A. Hydro's contact centre system is comprised of the following components;

- Avaya CS1000M Private Branch Exchange (PBX);
  - Signalling Server;
- Avaya Call Pilot Server;
- Contact Center 7 Server (CC7);
- MPS500 (Media Processing Server) Interactive Voice Response (IVR);
- Open Connect Server;
- Microsoft dB/Admin Application Server; and
- Web Server.

Calls received from customers are presented to the CS1000M PBX via a dedicated Primary Rate Interface (PRI) trunk from Bell-Aliant, providing number identification to the Call Center 7 Server. The Call Center 7 Server contacts the MPS server with this information allowing the customer to be presented with menu choices to direct the call. If the caller wishes to speak to an agent the call is returned to Call Center 7 and enters the queue. If an agent is idle, the call is answered. If there are no agents available, the caller will be placed in queue until an agent becomes available.

If the caller selects an option to retrieve account information, the MPS500 server will pass the request through the Open Connect server to the dB/Admin Applications Server to retrieve the requested information (i.e., billing inquires). If

the caller is inquiring on outages in their area, the MPS 500 server will play a recorded message based on the phone number identified by the system.

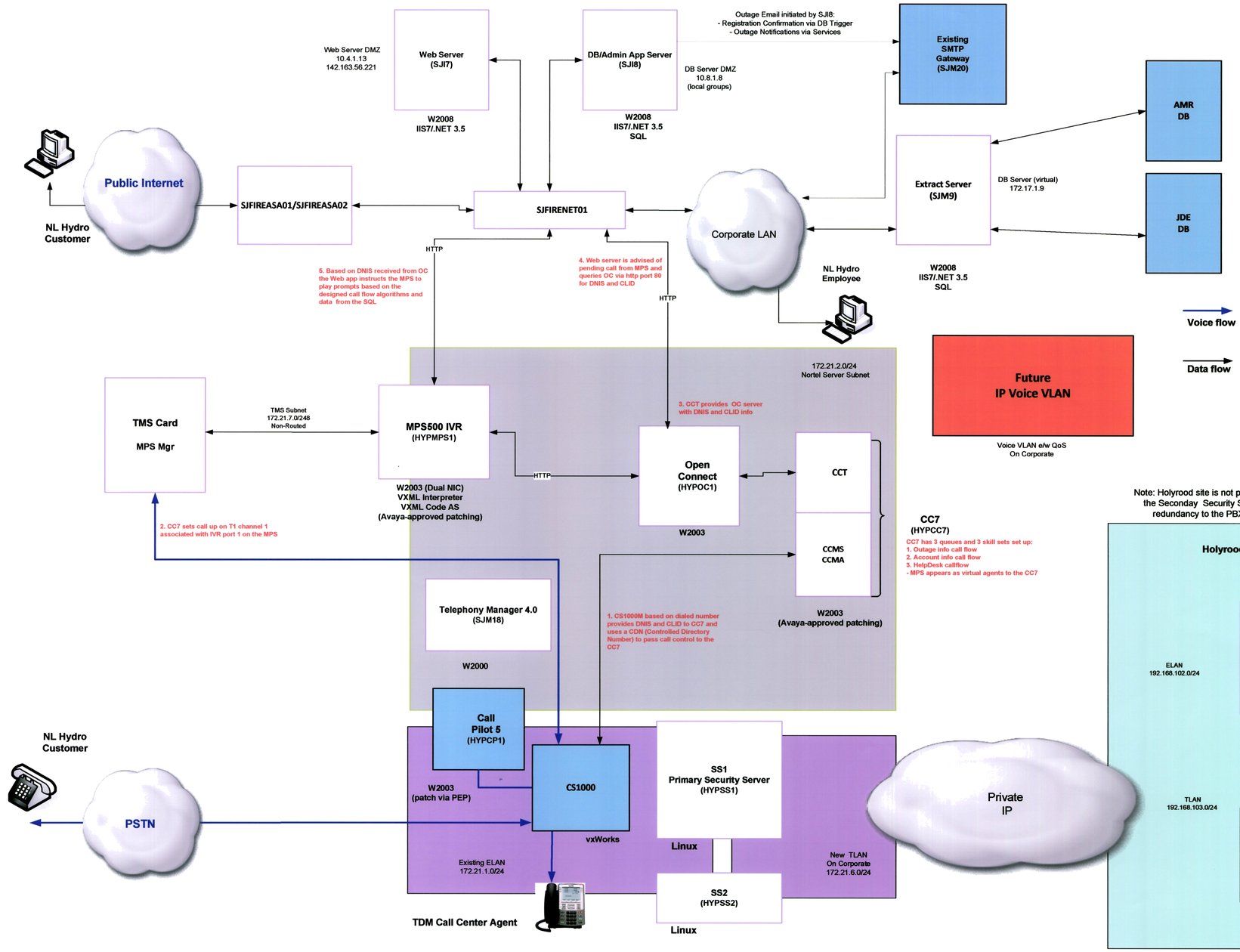
Users who wish to retrieve information regarding outages or billing inquires through the internet, will connect to Hydro Place from the public internet through various firewalls and security devices until they connect with the Web Server. The Web Server will send this request to the dB/Admin server to retrieve the data. All of the telephony equipment is located within Hydro Place.

Please refer to the following attachments for schematics of the call centre system:

- PUB-NLH-141 Attachment 1 for the Customer Care System High Level Design;
- PUB-NLH-141 Attachment 2 for Customer Contact Centre Network Design;
- PUB-NLH-141 Attachment 3 for the Customer Service Call Flow; and
- PUB-NLH-141 Attachment 4 for the Power Outage Call Flow.

NL Hydro - CC / IVR / Web
High Level Design

Original Author: P. Carew & C. Fullerton
Updated: Oct 29, 2010 (L. Kingsley)
Version 1.14



Legend:

AMR - Automated Meter Reader
AS - Application Server
CC - Contact Center
CCMA - Contact Center Management Admin
CCMS - Contact Center Management Server
CCT - Communication Control Toolkit (CTI)
IIS - Internet Information Server
IVR - Interactive Voice Response
JDE - JD Edwards database server
MPS - Media Processing Server (IVR)
PBX - Private Branch Exchange
PSTN - Public Switched Telephone Network
SSO – Single Sign-On
SQL - Microsoft DB server
TMS - Telephony Media Server (IVR)
SMTP - Simplified Mail Transfer Protocol
VXML - Voice Extended Markup Language
WWW - World Wide Web

newfoundland labrador hydro — a nalcor energy company

Newfoundland and Labrador Hydro

DWG. NO.	TITLE
	REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION	DWN.	DESIGN.	CHK.	APP'D
		REVISIONS				

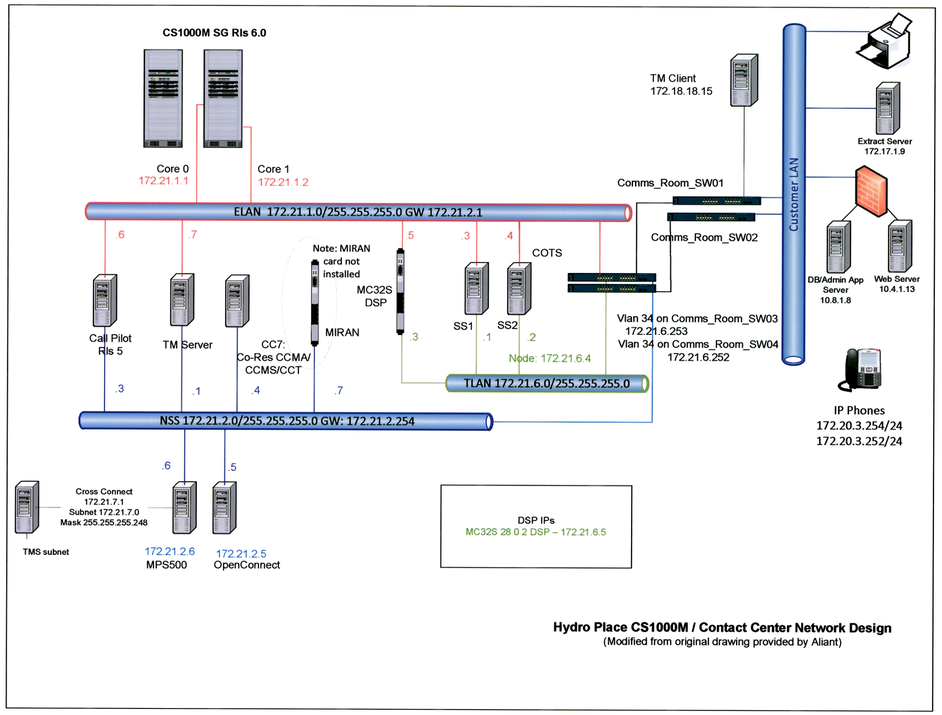
REGISTERED PROFESSIONAL ENGINEER — PEG Newfoundland and Labrador — LISA A. KINGSLEY — SIGNATURE — DATE 2013-01-09 — NEWFOUNDLAND & LABRADOR

ELECT.	SCALE:	N.T.S.
CIVIL	DESIGNED:	L. KINGSLEY
TRANS.	DRAWN:	C. MACKEY
MECH.	DATE:	2011-01-12
P&C	CHECKED:	
TELC.	APPROVED:	

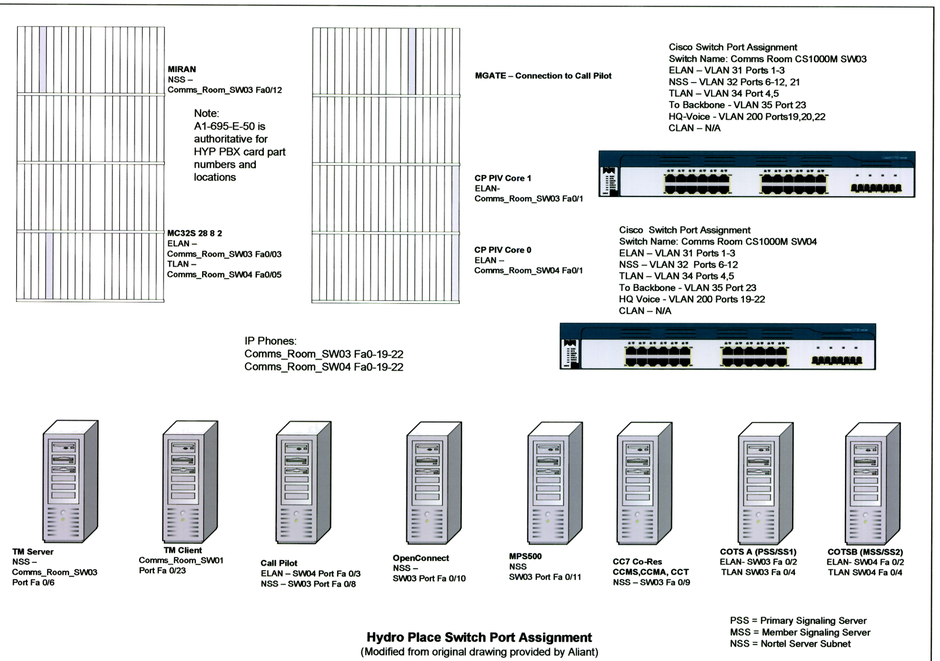
CUSTOMER CARE SYSTEM HIGH LEVEL DESIGN

W.O. NO.	DWG. NO.	REV.
	A1- 600 – E - 299	0

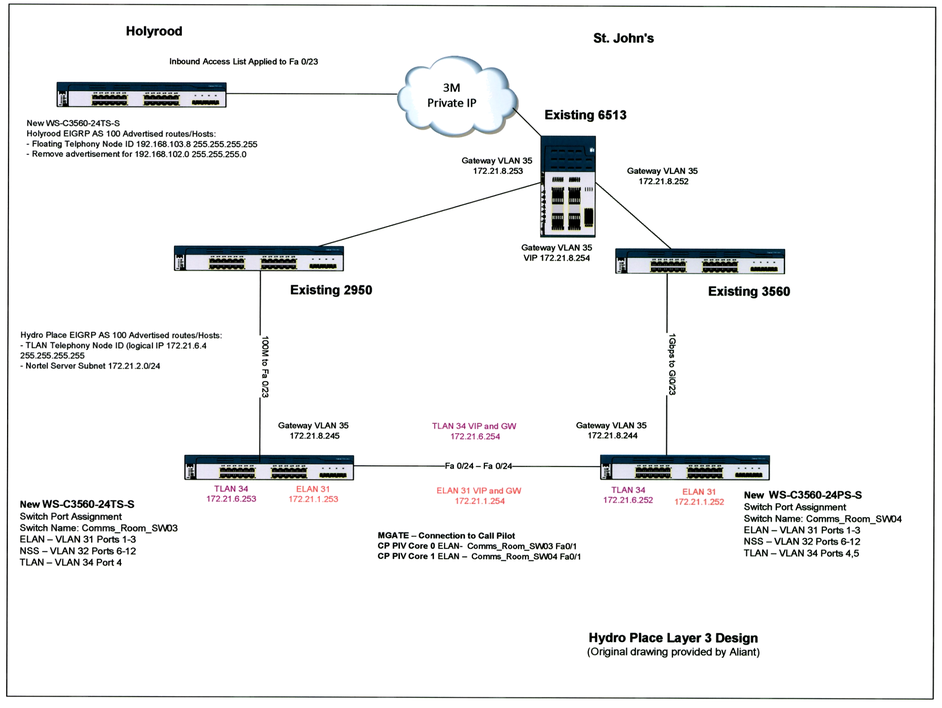
C.A.D./VISIO



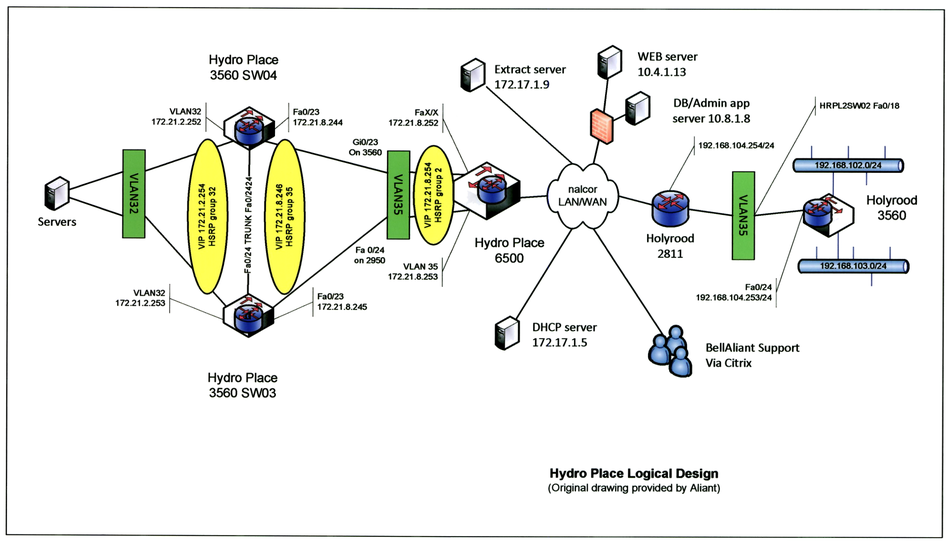
Hydro Place CS1000M / Contact Center Network Design
(Modified from original drawing provided by Aliant)



Hydro Place Switch Port Assignment
(Modified from original drawing provided by Aliant)



Hydro Place Layer 3 Design
(Original drawing provided by Aliant)



Hydro Place Logical Design
(Original drawing provided by Aliant)

Newfoundland and Labrador Hydro

DWG.NO.	TITLE
	REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION	DWN.	DESIGN.	CHK.	APP'D
		REVISIONS				

REGISTERED PROFESSIONAL ENGINEER
PEGNL Newfoundland and Labrador
LISA A. KINGSLEY
SIGNATURE
2013-01-09
DATE
NEWFOUNDLAND & LABRADOR

ELECT.	SCALE:	N.T.S.
CIVIL	DESIGNED:	L. KINGSLEY
TRANS.	DRAWN:	C. MACKEY
MECH.	DATE:	2011-01-10
P&C	CHECKED:	
TELC.	APPROVED:	

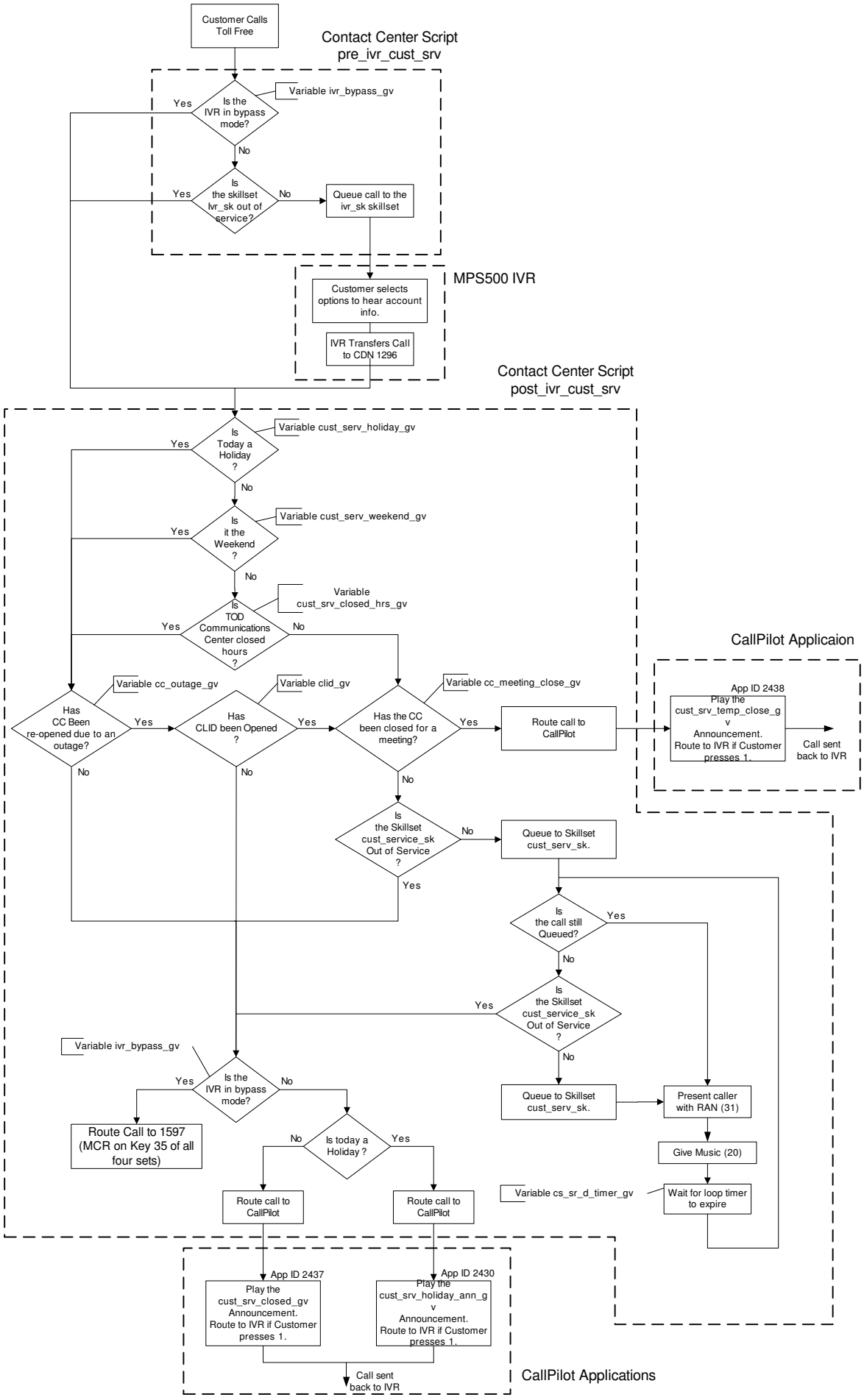
HYDRO PLACE CS1000M AND CUSTOMER CONTACT CENTER NETWORK DESIGN

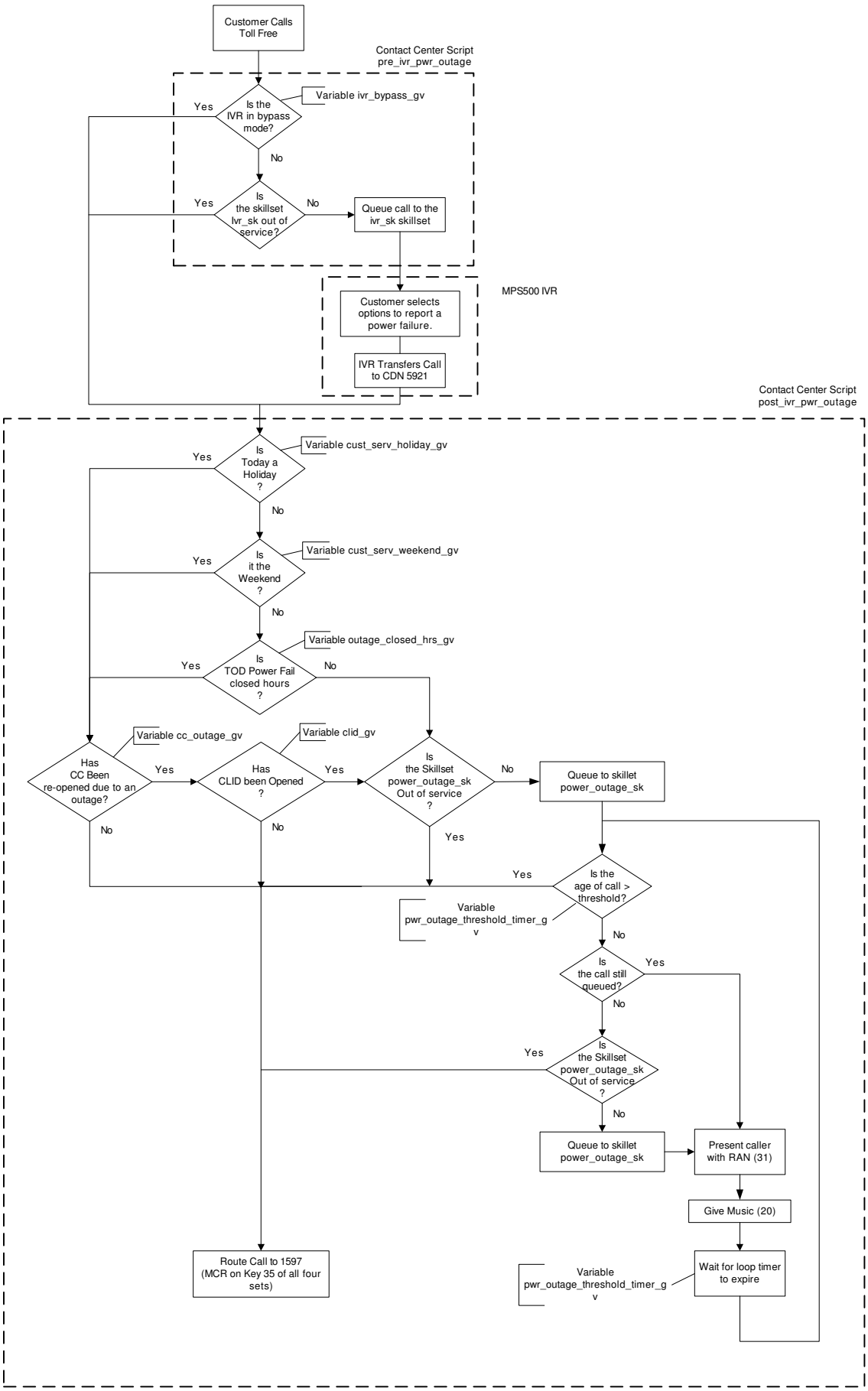
W.O. NO.

DWG. NO. A1- **600 – E - 297**

REV. **0**

C.A.D./VISIO


Customer Calls Toll Free
Contact Center Script pre_ivr_cust_srv
Variable ivr_bypass_gv
Is the IVR in bypass mode?
Yes
No
Is the skillset Ivr_sk out of service?
Yes
No
Queue call to the ivr_sk skillset
MPS500 IVR
Customer selects options to hear account info.
IVR Transfers Call to CDN 1296
Contact Center Script post_ivr_cust_srv
Variable cust_serv_holiday_gv
Is Today a Holiday ?
Yes
No
Variable cust_serv_weekend_gv
Is it the Weekend ?
Yes
No
Variable cust_srv_closed_hrs_gv
Is TOD Communications Center closed hours ?
Yes
No
CallPilot Applicaion
Variable cc_outage_gv
Has CC Been re-opened due to an outage?
Yes
No
Variable clid_gv
Has CLID been Opened ?
Yes
No
Variable cc_meeting_close_gv
Has the CC been closed for a meeting?
Yes
No
Route call to CallPilot
App ID 2438
Play the cust_srv_temp_close_gv Announcement. Route to IVR if Customer presses 1.
Call sent back to IVR
Is the Skillset cust_service_sk Out of Service ?
No
Yes
Queue to Skillset cust_serv_sk.
Is the call still Queued?
Yes
No
Is the Skillset cust_service_sk Out of Service ?
Yes
No
Variable ivr_bypass_gv
Is the IVR in bypass mode?
Yes
No
Route Call to 1597 (MCR on Key 35 of all four sets)
Queue to Skillset cust_serv_sk.
Present caller with RAN (31)
Give Music (20)
Variable cs_sr_d_timer_gv
Wait for loop timer to expire
Is today a Holiday ?
No
Yes
Route call to CallPilot
Route call to CallPilot
App ID 2437
Play the cust_srv_closed_gv Announcement. Route to IVR if Customer presses 1.
App ID 2430
Play the cust_srv_holiday_ann_gv Announcement. Route to IVR if Customer presses 1.
Call sent back to IVR
CallPilot Applications


Customer Calls Toll Free
Contact Center Script pre_ivr_pwr_outage
Variable ivr_bypass_gv
Is the IVR in bypass mode?
Yes
No
Is the skillset Ivr_sk out of service?
Yes
No
Queue call to the ivr_sk skillset
MPS500 IVR
Customer selects options to report a power failure.
IVR Transfers Call to CDN 5921
Contact Center Script post_ivr_pwr_outage
Variable cust_serv_holiday_gv
Is Today a Holiday ?
Variable cust_serv_weekend_gv
Is it the Weekend ?
Variable outage_closed_hrs_gv
Is TOD Power Fail closed hours ?
Variable cc_outage_gv
Has CC Been re-opened due to an outage?
Variable clid_gv
Has CLID been Opened ?
Is the Skillset power_outage_sk Out of service ?
Queue to skillet power_outage_sk
Is the age of call > threshold?
Variable pwr_outage_threshold_timer_gv
Is the call still queued?
Is the Skillset power_outage_sk Out of service ?
Queue to skillet power_outage_sk
Present caller with RAN (31)
Give Music (20)
Wait for loop timer to expire
Variable pwr_outage_threshold_timer_gv
Route Call to 1597 (MCR on Key 35 of all four sets)