EB-2012-0047

IN THE MATTER OF the *Ontario Energy Board Act*, *1998,* S.O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an Application under section 74 of the Act by Horizon Utilities Corporation for a license amendment.

INTERROGATORY RESPONSES OF

HORIZON UTILITIES CORPORATION

TO

HYDRO ONE NETWORKS INC.

JANUARY 21, 2013

Question 1

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

Please provide a breakdown of the specific components included in HUC's Non-contestable costs for HUC Summit Park Phase 7 OTC similar to HONI's breakdown provided in the evidence.

Response:

The Non-contestable costs on the OTC are estimated at $132,020, and are taken directly from Horizon Utilities' Schedule B in the Offer to Connect. The table below is a breakdown as per Hydro One's evidence.

2.1	Non-contestable Subdivision Secondary Costs	
	Material	$14,350.00
	Labour	$114,800.00
	Equipment	$2,870.00
	Other Miscellaneous	$0.00
	Administration & overheads	$0.00
	400A Meterbase Credit	$0.00
	Total Cost Section 2.1	$132,020.00
2.2	Non-contestable Subdivision Primary Costs	
	Material	$0.00
	Labour	$0.00
	Equipment	$0.00
	Other Miscellaneous	$0.00
	Administration & overheads	$0.00
	Costs to connect to an existing Powerline	$0.00
	Forestry costs (if Applicable)	$0.00
	Total Cost Section 2.2	$0.00

Question 2

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

Please provide a detailed breakdown of the materials and other costs included in the estimated capital costs ($127,953) that were included for Transmission Station and Distribution Feeders Upstream Costs.

Response:

Horizon Utilities allocates upstream costs to new customer connections utilizing a pooled approach. A rate per kWh/kW is calculated using actual upstream costs averaged over a rolling five year period. This rate is applied to new loads that connect to the distribution system. There are two components of the upstream charge; one to recover amounts paid to the transmitter to upgrade transformer stations and one to recover amounts invested in the distribution system to supply new customer connections. These costs are considered as inputs to the Economic Evaluation Model to determine the amount of capital contributions required. Since these costs are pooled, it is not possible to provide a detailed breakdown of the material and other costs included in this project.

Question 3

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

Please provide a detailed breakdown of the estimated OM&A costs ($36,095 per year) that were included in HUC's OTC for Summit Park Phase 7. Included in this breakdown, please detail any and all anticipated amounts relating to upstream facilities and/or system reinforcement.

Response:

Consistent with Appendix B of the *Distribution System Code*, the discounted cash flow calculation for individual projects is based on a set of common elements and related assumptions. For expense forecasting, any incremental attributable costs directly associated with the addition of new customers to the distribution system would be included in operating and maintenance expenditures as an offset to revenues. A rate per kWh/kW is calculated using actual operating and maintenance costs averaged over a rolling five year period. This rate is applied to forecasted new loads that connect to the distribution system resulting in the amount referenced above. These amounts are pooled based on actual historical costs. The amount represents an estimate of the incremental attributable costs directly associated with the addition of new customers to the distribution system.

Question 4

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

The detailed DCF sheets indicate that most of the capital costs start in 2011 except for the meter charge, which takes place in 2013. However, revenue does not start until the middle of 2013.

a) Is this spending profile correct? What specifically is the $1,390,703 investment for that is entitled "New Facilities and/or reinforcement investment" that was spent in 2011? Please itemize it.

b) Why are the costs for Transformer Stations and Distribution Feeders included in Year 1 in table 7 but in year 3 in the table entitled Upstream Cost Calculation?

c) Why is revenue not estimated to commence until 1.5 years later?

Response:

a) The spending profile should have started in 2012 and not 2011. The 2011 revision was still valid at the time of the initial DCF model run. The $1,390,703 investment in 2011 represents the total project costs of $1,522,723 less the Service & Metering costs of $132,020. The model assumes all connections are made in year 3 such that the Service & Metering costs are posted during that year, while the $1,390,703 is posted during year 1. The $1,522,723 (which covers electrical infrastructure costs and civil infrastructure costs) is comprised of an estimated $627,646 of Material, $418.431 of Labour, $278,954 of Equipment, $69,738 of Engineering & Administration and $127,953 of Upstream costs.

b) Transformer Station and Distribution Feeder costs are correctly reflected in Table 7 as the capacity for the project is reserved in the first year. While the Upstream Cost table should also reflect these costs in the first year, this does not impact any calculations in the economic evaluation.

c) All costs are expected be incurred in year 1. Construction of houses is estimated to be ongoing throughout years 2 and 3. Revenues are estimated to begin in year 3 with 50% of the homes occupied for the entire year. The model calculates revenues based on 100% of the residences being occupied for every year thereafter.

Question 5

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

HUC has assumed that all customers in Summit Park Phase 7 are of the same size and class. Working with the developer, HONI estimates that there will be 1 commercial customer and that homes to be built are of significantly different sizes. HONI has prepared its estimates taking the resulting connection and energy differences into consideration. Please perform the analysis using the different customer estimates provided in HONI's OTC in Appendix A.

Response:

Horizon Utilities does not track consumption by square footage of houses but instead uses historical averages to estimate revenues. Based on discussions with Multi-Area Developments Inc. (the "Developer"), the commercial lot is a passive park that will have lighting load and potentially an underground sprinkler system control panel, but loads are not expected to be significant. Horizon Utilities used an average of 651 kWhs per month for each of the 287 services to estimate revenues over the 25 year revenue horizon. This represents an average for the residential class over prior years. This totals approximately 50.5 GWhs over the 25 year revenue horizon, assuming all customers are generating revenue by the middle of year 3.

Hydro One uses an average of 674 kWhs per customer per month which totals approximately 58.1 GWhs over 25 years and assumes full revenue generation at the beginning of year one. If Horizon Utilities increased the average kWh consumption to 674 kWhs, this would increase the revenue estimate by approximately $25,257 in total, and on an NPV basis, $11,801. Horizon Utilities is not proposing to change its methodology with respect to revenue estimation, as this is the same methodology used in all proposals.

Horizon Utilities' current total estimated revenue over the next 25 years from this development is $1,836,357, whereas Hydro One's total estimated revenue for the same time period is $2,956,159. As illustrated in the previous paragraph, there is a small difference related to quantities, but Horizon Utilities submits that the most significant contributor to this difference in revenue estimates is rates. Horizon Utilities total revenue estimated per kWh is 3.48 cents, whereas Hydro One's is 5.09 cents. It is important to note that this difference related to rates

will be borne by the end user as it is credited back to the Developer to offset upfront capital costs.

Question 6

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

HUC has not included an allowance for working capital. Please detail the additional capital cost of including such an allowance.

Response:

Horizon Utilities has prepared the OTC in accordance with Appendix B of the *Distribution System Code* and such is based on estimated capital costs. Horizon Utilities does not include any allowance for working capital in its OTCs. No further capital costs are required to be added.

Question 7

Preamble:

Ref: Related to HUC's Offer to Connect (OTC) for Summit Park Phase 7

HUC includes a subdivision connection charge of $50,000 in its OTC for Phase 7. On the sheet entitled "Primary Summary Inputs", this cost is listed as "Subdivision Connection Costs – Uncontestable". However, in Section 2 of the cover letter to the developer, this charge is not included in the section entitled "Uncontestable Work". Please confirm whether this cost is uncontestable or not.

Response:

Horizon Utilities confirms that the Subdivision Connection Costs charge is Uncontestable. This work consists of extending Horizon Utilities' primary distribution from the nearby existing feeder to the new Summit Park 7 development. In the July 27, 2012 OTC, on page 3, the $182,020 includes the $50,000 for "Subdivision Connection Costs – Uncontestable" to service the subdivision.

Since the Horizon Utilities' OTC of July 2012 was prepared, Horizon Utilities entered into an agreement with Multi-Area Development's Inc. for a new 7 home development south of Rymal Road East on the west side of Fletcher Rd. This development required work to be undertaken to install a tie-in with the feeder on the north side of Rymal Road East, all within Horizon Utilities' service territory. Given that this work was recently completed, this cost should no longer be included in Horizon Utilities' OTC. If the SAA application is accepted by the Board, a revised OTC would need to be prepared removing these costs. A copy of the revised Schedule B to the OTC is attached in Horizon Utilities' response to Board Staff IR #7.

Question 8

Preamble:

Ref: Related to HUC's Offer to Connect for Bishop Ryan Secondary School

The New Customer Connection Information form (NCCI) for Bishop Ryan School includes a detailed load forecast from the customer, which estimated an average demand for year 1 at 458.3 kW, increasing over the 5-year period to 1,108.3 kW in Year Five. HUC has estimated Year One demand at 1,100 kW, increasing to 1,300 kW in Year Five. Please provide details concerning the source of the load estimate that HUC has included in its calculation.

Response:

Horizon Utilities' Offer to Connect to the Hamilton-Wentworth Catholic District School Board (the "School Board") was based on the following "Customer Information for Service" form received from the School Board on April 17, 2012. The aforementioned Customer Information Service form provides a load forecast of 1100 kW in 2013 increasing to 1300 kW in 2015. Horizon Utilities used this information in order to perform its calculations.

CUSTOMER INFORMATION FOR SERVICE

Bishop Ryan Secondary School (HWCDSB) – Rymal Rd E/ Dakota Blvd.

Horizon Utilities Corporation Project # 11424

April 06, 2011

In order to calculate a cost to provide service to this property, Horizon Utilities Corporation must perform an economic evaluation based on the customer's five-year load projection to determine the amount of *Capital Contribution* required by the owner.

Once the amount of contribution is determined, Horizon Utilities Corporation will provide written documentation in the form of a *Capital Cost Recovery Agreement*. The property owner will be required to execute the agreement before Horizon Utilities will begin any portion of their work.

Please complete the accompanying information form and return to our office at my attention.

Note that this form consists of three areas:

1. Customer information including the signing officer who has the authority to bind the company.

2. Project contact information for our records and for the direction of correspondence.

3. Load information of the forecasted demand for each metered service.
   Note: Multi-tenant properties must provide forecasted load information for each tenant.

For further information, contact Ketan Patel at:

Phone: (905) 522 – 6611 Ext. 5327

Email: ketan.patel@horizonutilities.com

Bishop Ryan Secondary School (HWCDSB) – Rymal Rd E/ Dakota Blvd.

Complete the following and return to:

Ketan Patel, Engineering Design Technician

Horizon Utilities Customer Connections & Conservation, Fax 905-522-8373

1. Customer Information:

Name of Individual or Company on Title: Hamilton Wentworth Catholic District School Board

Name of Company Signing Officer: David Morrissey, PEng

Title: Controller of Plant

Mailing Address: 57 Stuart Street, Hamilton ON L8L 1B5

Telephone Number: 905 525-2930 x2123

Fax Number: 905 546-5770

For new services, please provide the following mailing address information for the Horizon Utilties utility bill:

Billing Name: HWCDSB (Bishop Ryan Catholic Secondary School)

Street Address: 90 Mulberry Street

City/Town: Hamilton

Postal Code: L8N 3R9

Phone Number: 905 525-2930

2. Project Contact Information:

Engineering Consultant: Steven Swing, PEng office: 905 304-0294

Contact Information: NRG Consultants Inc. fax: 905 304-0275

2 Cabriolet Crescent, Ancaster ON L9K 1K6

Electrical Contractor: Cahill Electric Limited office: 905 648-0515

Contact Information: 355 Golf Links Road, Ancaster ON L9G 4G6

Bishop Ryan Secondary School (HWCDSB) – Rymal Rd E/ Dakota Blvd.

3. Load Information:

Requested Service Energization Date: April 2013

Note: A minimum of 16 weeks lead-time for transformer delivery is required from the date of execution of the Capital Cost Recovery Agreement

Metered Service	New/Upgraded Service Size & Voltage	Forecasted average monthly peak demand (**KW**) for the first five years of service for **each** metered service					For Service Upgrades	
		2011	2012	2013	2014	2015	Existing Service Size	Age of Existing Service
Main	1500A, 347/600V	N/A	N/A	1100kW	1200kW	1300kW	N/A	N/A

Question 9

Preamble:

Ref: Related to HUC's Offer to Connect for Bishop Ryan Secondary School

The Offer to Connect is dated April 23, 2012. It states it is good for only 6 months. Has a new offer been made? If so, please provide it.

Response:

The Offer to Connect dated April 23, 2012 was executed by the Hamilton-Wentworth Catholic District School Board within the six month expiry period on May 2, 2012, provided herewith as Hydro One IR 9, Attachment 1.

horizon UTILITIES Looking beyond...

Customer Connections – Offer to Connect

April 26, 2012

Hamilton Wentworth Catholic District School Board
57 Stuart Street
Hamilton, ON.
L8L 1B5

Attention: David Morrissey

RE: NEW 1600 AMP 347/600V SERVICE
FOR BISHOP RYAN SCHOOL BY RYMAL RD EAST/ DAKOTA BLVD., STONEY CREEK, ON.
HORIZON UTILITIES CORPORATION PROJECT # 11424

Please find enclosed Horizon Utilities Corporation Inc. (**"Horizon Utilities"**) offer, required Capital Contribution and Expansion Deposit to connect the Customer to Horizon Utilities' electrical distribution system (**"Offer to Connect"**). This Offer to Connect is based upon the estimated costs and forecast revenues of connecting the Customer in accordance with the site servicing plan(s) and electrical diagram(s) submitted by the Customer or on the Customer's behalf by its Consultant. If the Customer or Customer's Consultant submits revised plans, Horizon Utilities may provide, at the Customer's expense, a new Offer to Connect based on the revised plans. This is an estimate only.

Once the Customer facilities are energized, Horizon will carry out a final economic evaluation based on the forecasted revenues and actual costs incurred in accordance with the methodology set out by the Ontario Energy Board (**"OEB"**) in the Distribution System Code (**"Code"**). In accordance with the Code the capital contribution that will be charged to the Customer will not exceed the difference between the present value of the projected capital costs and on-going maintenance costs of the facilities and the present value of the projected revenue for distribution services provided by those facilities.

The estimated Capital Contribution and the actual Capital Contribution will be calculated at no expense to the Customer.

Horizon Utilities will provide the preliminary planning, design and engineering specifications for the connection. These costs will be included in the capital cost calculation for the work.

1. INITIAL CAPITAL CONTRIBUTION

The estimated cost of connecting the Customer is:

Material	$	41,188.57
Labour *(incl. design, engineering & construction)*	$	13,916.59
Equipment	$	932.47
External/ Permit Cost *(if applicable)*	$	7,700.00
Upstream Electrical Distribution System Costs	$	115,910.93
Total Project Costs	$	179,648.56

Based upon the enclosed economic evaluation of the estimated costs and forecast revenues, the initial Capital Contribution required from the Customer is **$ 0.00** (including HST).

horizon UTILITIES Looking beyond...

Customer Connections – Offer to Connect

2. EXPANSION DEPOSIT

As an expansion is also required to connect the Customer to the electrical distribution system, an expansion deposit ("Expansion Deposit") will be required from the Customer in the amount of **$ 63,737.63**

In accordance with the Code, Horizon Utilities is permitted to retain and use the Expansion Deposit to cover the forecast risk associated with whether the forecasted revenues from the Customer will materialize as projected and the asset risk associated with ensuring that the project is constructed to the proper design and technical standards and that facilities will operate properly when energized.

Horizon Utilities is also permitted to retain and use the Expansion Deposit to cover Horizon Utilities costs if Horizon Utilities has to complete, repair, or bring up to standard the facilities where the Customer has chosen the alternative bid option set out in section 9 below. Complete, repair, or bring up to standard includes costs Horizon Utilities incurs to ensure that the expansion is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized.

3. TRANSFORMER FOUNDATION

The Customer will be responsible for the supply and installation of a three-piece pre-cast concrete pad-mount foundation and ground grid conforming to Horizon Utilities standard 19U-362 in the location indicated in your ELECTRICAL SITE SERVICE PLAN, DWG. E02.

The pad-mount foundation and ground grid must meet the following requirements:

- The transformer pad must be installed on Customer property, at least 1.5m from the property line to allow for the installation of the ground grid.
- Grounding rods must be copper clad and minimum 19mm x 3000mm.
- Guard posts are required to adequately protect the transformers from vehicular damage if located within 2.0m of a driveway or parking area. Steel guard posts must be bonded to the transformer ground loop as outlined on Horizon Utilities standard 19U-318.
- The transformer must be accessible by Horizon Utilities maintenance vehicles.
- The transformer foundation installation must pass inspection by Horizon Utilities. Inspections can be scheduled with the Manager of Outside Contractors at 905-540-3234, three business days prior to the start of construction.
- All transformer pad installations must meet Ontario Electrical Safety Code regulations.

horizon UTILITIES Looking beyond

Customer Connections – Offer to Connect

4. HORIZON OWNED TRANSFORMATION

The Customer will be responsible for the fuse coordination of the secondary fusing with Horizon's equipment.

The available *fault current* at the Horizon Utilities Corporation transformer secondary bushings for a bolted 3 phase fault is **40290 A rms** symmetrical.

5. PRIMARY CABLE DUCTBANK ON PRIVATE PROPERTY

The Customer will be responsible for the supply and installation of 4 - 100mm type DB2/ES2 ducts in concrete roped with 3/8" nylon rope conforming to Horizon Utilities standards 3U-341 and 3U-343 from the transformer pad foundation to the property line in the location indicated on your ELECTRICAL SITE SERVICE PLAN, DWG. E02.

The duct-bank installation must pass inspection by Horizon Utilities prior to pouring concrete. Inspections can be scheduled with the Manager of Outside Contractors at 905-540-3234, three business days prior to the start of construction.

6. SECONDARY CABLES

The Customer will be responsible for the supply and installation of all secondary underground cable from the transformer pad to the new service entrance equipment including connections onto the secondary terminals of the transformer and the grounding for the pad mount.

The secondary terminal connectors must be 2-hole long barrel compression type only. Spade type transformer secondary terminals are used per CAN/C.S.A. Standard #C2-M91.

7. PROVISION FOR METERING

The Customer will be responsible for obtaining a completed Service Application Form granting approval of the metering location prior to installing any metering equipment. The Customer may obtain a Service Application Form, by calling Customer Connections at (905) 317 - 4746.

The metering equipment must conform to Horizon Utilities standard 27 - 11 and must meet the following requirements:

- A meter enclosure must be provided (15"X24"X9"deep), type HYDEL, cat. #74820585 or HONI, specification #DL27135D09.
- For metered services 800A and larger, a dedicated phone line or a multiplexer fax with an approved call processor by our meter department must be installed within the meter enclosure.
- If a separate metering coil box is used, the metering CT/PT backplate must be delivered to our meter shop at 55 John St. N., Hamilton, for installation of the metering transformers. This should be done at least 2 weeks prior to the anticipated energization date.

horizon UTILITIES Looking beyond

Customer Connections – Offer to Connect

8. SERVICE ENTRANCE EQUIPMENT

If switchgear is going to be used for the service entrance equipment, the Customer will be responsible for forwarding a set of shop drawings to Horizon Utilities Customer Connections Department for review. Horizon Utilities will arrange to have the instrument transformers shipped to the manufacturer for installation.

The switchgear drawings must provide for adequate clearance for the installation of the instrument transformers to be acceptable.

9. CAPITAL COST RECOVERY AGREEMENT

The Customer will be required to enter into a Capital Cost Recovery Agreement with Horizon Utilities. Horizon Utilities will forward the Capital Cost Recovery Agreement upon the Customer's written acceptance of this Offer to Connect. Execution of the Capital Cost Recovery Agreement, including payment of the initial Capital Contribution, Expansion Deposit and any other amount specified therein is required prior to Horizon Utilities commencing with any portion of the work, including procurement of long-lead materials.

The Customer acknowledges that Horizon Utilities has advised them that there is a minimum of 16 weeks lead-time for transformer delivery from the date of execution of the Capital Cost Recovery Agreement.

10. ALTERNATIVE BIDS

Where section 1 above indicates that an initial Capital Contribution is payable by the Customer, the Customer requesting the connection has the option of obtaining alternative bids (**"Alternative Bid Option"**) for any work that either Horizon Utilities or the Customer will perform (**"Contestable Work"**).

Single transformer installations shall NOT be considered contestable work.

If the Customer chooses the Alternative Bid Option, Horizon Utilities will be responsible for the Uncontestable Work (as described below) and the Customer will be responsible for the following:

- Providing notice in writing to Horizon Utilities that the Customer is proceeding with the Alternative Bid Option;
- The construction of all Contestable Work;
- Choosing contractors that have been pre-qualified by Horizon Utilities to perform Contestable Work;
- Purchasing materials required for the Contestable Work from a Horizon Utilities approved supplier;
- Selecting, hiring and paying the contractor;
- Administering any contract with the contractor,
- Acquiring all required permissions, permits and easements and obtaining any **certifications required under Ontario Regulation 22/04**;
- Completing all of the Contestable Work;
- Ensuring that the Contestable Work is done in accordance with Horizon Utilities design and technical standards and specifications;

horizon UTILITIES Looking beyond...

Customer Connections – Offer to Connect

- Providing a warranty for the Contestable Work for a period of two years after completion;
- Paying Horizon Utilities for all costs incurred by Horizon Utilities associated with the expansion, including but not limited to all costs associated with any additional design, engineering or installation of the facilities required to complete the project and any costs of inspection or approval of the work performed by the contractor.

Contestable Work:

- **There is no contestable work for this project.**

Uncontestable Work:

The following Uncontestable Work will be performed by Horizon Utilities:

- **Engineering:** Preliminary planning, design and engineering specifications of the work required for the distribution system expansion and connection.
- **Transformation**: Supply and install a pad-mounted transformer.
- **Primary Cable & Terminations**: Supply and install high voltage cables and terminations from the point of supply to the transformer.
- **Primary Cable Ductbank**: Supply and install the primary cable duct-bank from the point of supply to the property line.
- **Metering:** Supply and install new metering equipment.
- **Connection**: Final connection of the expansion to the distribution system.
- **Removals**: Remove all existing Horizon Utilities Corporation owned equipment, where applicable.

Horizon Utilities estimates that the costs of the Uncontestable Work will be:

Material	$	41,188.57
Labour *(incl. design, engineering & construction)*	$	13,916.59
Equipment	$	932.47
External/ Permit Cost *(if applicable)*	$	7,700.00
Total Project Costs	$	63,737.63

horizon UTILITIES Looking beyond

Customer Connections – Offer to Connect

11. TIMELINE FOR ENERGIZING

Horizon Utilities will require a minimum of 10 business days after the following items have been completed to energize the service:

- The Customer has executed the Capital Cost Recovery Agreement, and payment of the initial Capital Contribution, Expansion Deposit and other amounts specified therein have been received by our Customer Connections Department.
- The Customer has provided Billing Information and any energy deposit (if required) to our Customer Connections Department, (905) 317 - 4575. For further information and details, please contact our Customer Connections Department.
- Electrical Safety Authority Hydro Inspection clearance has been received by our Customer Connections Department.
- Completion of all required Horizon and Customer construction work.

This Offer to Connect is valid for six months from the date hereof. The Customer will be required to enter into the Capital Cost Recovery Agreement within six months of the date hereof failing which this Offer to Connect shall become null and void.

Please acknowledge the acceptance or decline of this Offer to Connect by signing and returning one complete copy of this Offer to Connect via mail or fax (905-522-8373) to our office.

Regards,

Ketan Patel, C.Tech
Engineering Technologist
Horizon Utilities Corporation

horizon UTILITIES Looking beyond...

Customer Connections – Offer to Connect

-7-

I, (Mr./Ms.) DAVID MORRISSEY of HAMILTON acknowledge and accept the terms and conditions of this "Offer to Connect" provided by Horizon Utilities to service BISHOP RYAN SCHOOL BY CONTROLLER OF PLANT HAMILTON WENTWORTH CATHOLIC DISTRICT SCHOOL BOARD RYMAL RD EAST/ DAKOTA BLVD., STONEY CREEK, ON. In accepting this Offer to Connect the Customer requests Horizon Utilities to undertake the Contestable Work and Uncontestable Work as described within. The initial Capital Contribution and Expansion Deposit required by the Customer shall be as noted above.

Signature

MAY 2 2012
Date

-OR-

I, Mr./Ms. _____ of _____ decline Horizon Utilities "Offer to Connect" and will be pursuing the Alternative Bid Option, requesting Horizon Utilities to provide an "Offer to Connect for Alternative Bid" to service BISHOP RYAN SCHOOL BY RYMAL RD EAST/ DAKOTA BLVD., STONEY CREEK, ON.. The initial Capital Contribution and Expansion Deposit required by Horizon Utilities shall be as noted above. The Customer will be required to pay the associated costs as outlined in "Alternate Bids" above in addition to a Capital Contribution and/or Expansion Deposit as required.

Signature

Date

Question 10

Preamble:

Ref: Related to the Burman Report

On page 5 of the Burman Report, in the Summary of Infrastructure Comparative Analysis, it is stated that 27.6/16kV supply to the area is extensive and abundant if sourced from HUC's current infrastructure. However, HUC has requested two new feeder positions from the Nebo TS. The following questions regarding capacity and load in HUC's service territory are required to understand the relationship of those two statements:

a) In section 7.2.1, throughout the SAA and in discussion with HUC, HUC emphasized the feeders M3 and M4 are at capacity, but HUC's new feeders are not planned until 2014. How does HUC plan to supply the SAA area in 2013 and beyond?

b) If supplied from elsewhere other than M3/M4 in 2013, indicate the source of TS and feeder. Provide the loading for the past 12 months at the other source feeder and TS.

c) Show a diagram illustrating how the other alternate source(s) per part b above will transfer load in 2013, and beyond. How much is the load transfer in 2013 from M3/M4 during the summer, and how much beyond 2013?

d) If capacity is available from elsewhere, why isn't it considered as a permanent supply, avoiding the building of new feeders from Nebo TS?

Response:

a) The feeders emanating from Nebo TS M3 and M4 breakers are at capacity because of constraints at Nebo TS' transformers. To be clear, in isolation of Nebo TS transformer capacity issues the feeders emanating from the M3 and M4 breakers are not constrained. HONI Tx will address the transformer capacity issue by October 31, 2013. Horizon Utilities' proposed new feeders are to meet anticipated load growth and to provide appropriate levels of redundancy to support the provision of service under contingency conditions.

In 2013, if Horizon Utilities' load exceeds Nebo TS capacity then Horizon Utilities will temporarily transfer other existing loads from Nebo TS to either Winona TS and/or Lake TS, as required. Such transfer would persist until the Nebo TS expansion is in-service. Beyond 2014, Horizon Utilities expects that the combination of the expansion of the Nebo TS' capacity and the addition of new Horizon Utilities' feeders will be adequate to meet projected loads.

Horizon Utilities has the flexibility to occasionally call upon load from an adjacent TS without significantly impairing its service and reliability. However, given the configuration of the distribution system, such would not be good utility practice because under normal conditions a TS will service load in a particular geographic area; going too far beyond that area can introduce technical issues with protection and control settings, voltage levels, and feeder outages for larger numbers of customers. Flexibility was built into the system to provide reliability in the case of emergencies but such was never intended for anything other than such situations and thus the need to proceed with the Nebo TS upgrades.

b) Horizon Utilities provides HONI IR 10 – Attachment 1 with the loading information for the past 12 months at Lake 121X, Winona W14X and Winona W15X.

c) Horizon Utilities provides HONI IR 10 – Attachment 2 which is a diagram identifying the interconnection points between Nebo, Lake and Winona TS's. Please see Horizon Utilities response to HONI IR 10a) above in which it identifies that a load transfer would only be undertaken under emergency circumstances.

d) Please see Horizon Utilities' response to HONI 10a).

Station/Month	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Lake 121X	268	253	292	159	254	303	354	292	295	188	207	219
Winona W14X	135	127	280	280	204	431	397	320	305	199	215	263
Winona W15X	55	52	50	50	46	97	117	105	101	146	217	208

Question 11

Preamble:

Ref: Related to the Burman Report

In preparing the Burman Report, did Mr. Burman or anyone else acting on behalf of HUC contact the planning group at Hydro One responsible for planning the distribution system in the subject area, or any other Hydro One employees? If so, please name those employees and list what information Mr. Burman requested and what information was provided.

Response:

Mr. Burman did not contact the planning group at Hydro One responsible for planning the distribution system in the subject area, nor did he contact any other Hydro One employees.

Question 12

Preamble:

Ref: Related to the Burman Report

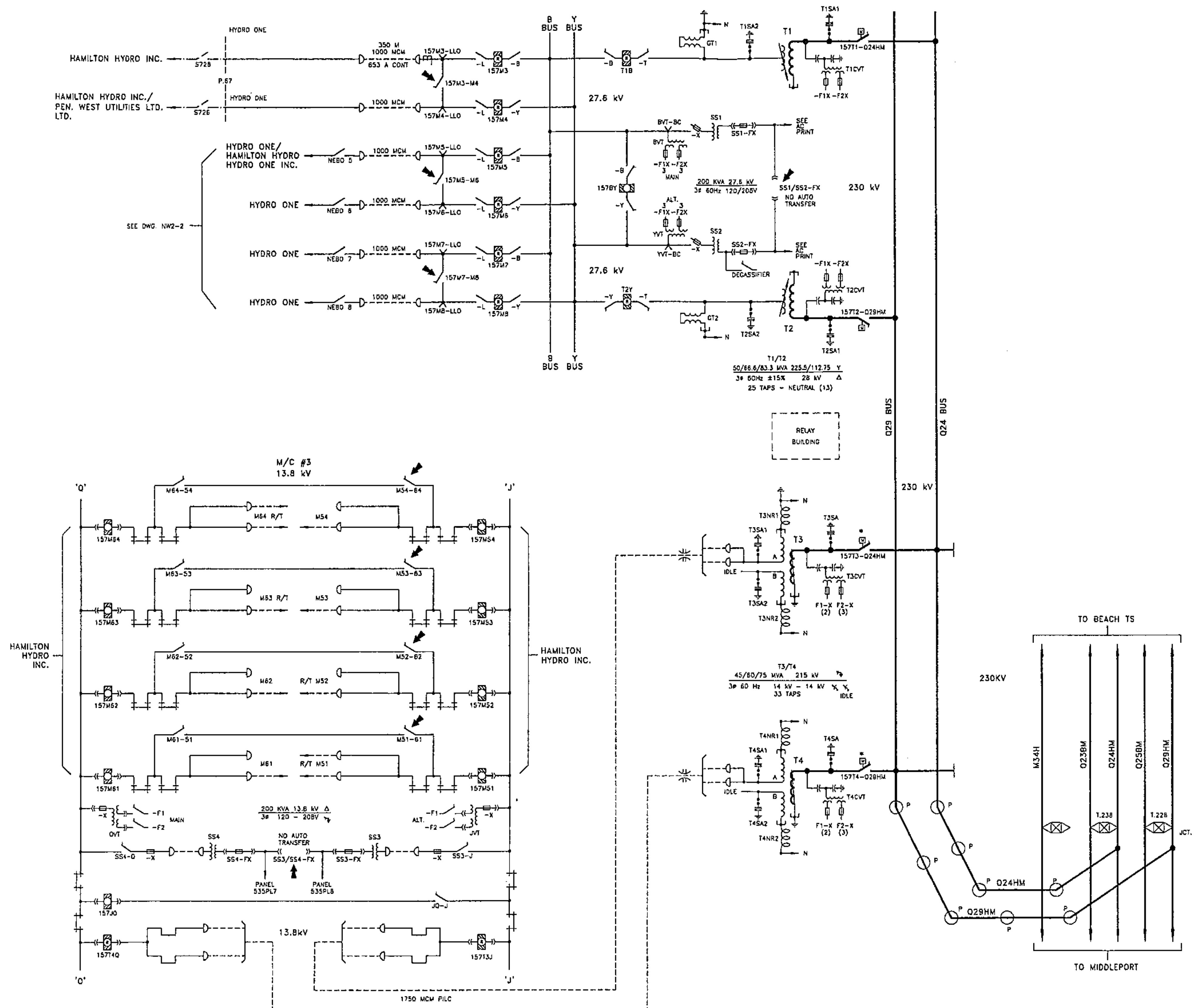
Please provide all reports and plans HUC provided Mr Burman in the preparation of his report.

Response:

In addition to the plans which Horizon Utilities has filed as part of its pre-filed evidence in this proceeding and the various offers to connect generated by the two utilities which are already on the record, Horizon Utilities provided Mr. Burman with the following items to assist him:

- Attachment 1 - Single Line Diagram for Nebo TS;
- Attachment 2 - TS bus loading. Horizon Utilities identifies that these are the forecast documents that it provides to Hydro One;
- Attachment 3 – Horizon Utilities' drawing of Rymal Road East to show the existing primary distribution; and
- Attachment 4 - Nebo TS upgrade plan Project Schedule for Nebo Upgrade project (AR20968 – Nebo T1 T2 R1.pdf). This is a Hydro One slide deck showing the staging for the entire project.

Filed: 2012/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR to Hydro One 12
Attachment 1



TRANSFORMER ISOLATING POINTS

	T1	T2	T3	T4
MAIN GAS RELAY BL. SW.				
U.L.T.C. GAS RELAY BL. SW.				
GAS RELAY ISOLATING				
NORMAL AC SUPPLY	PNL 535PL7 BKR#14	PNL 535PL8 BKR#13	PNL 535PL1 BKR#33	PNL 535PL2 BKR#37
EMERGENCY AC SUPPLY	PNL 535PL8 BKR#14	PNL 535PL7 BKR#13	PNL 535PL2 BKR#31	PNL 535PL1 BKR#37
COOLING ON MANUAL				

P.T./V.T. SELECTIONS			
BUS PAIR	AUTO TRANSFER	MANUAL TRANSFER	PREFERRED SOURCE
J/Q	YES		Q BUS
B/Y	YES		B BUS

* FOR ISOLATION, ABS TO BE PLACED IN HAND/MANUAL POSITION.

MIDDLEPORT TOC

NEBO T.S. NAR157

STATION OPERATING DIAGRAM

Hydro One Networks Inc.
Engineering Services
CADD Operations

Rev. No.	Date	Revision	By	App'd
02	Jun 13 2002	DRAWING STANDARDIZED – NO CIRCUIT REVISED.	E.J.	TM
01	MAY21 2002	T.S. CONNECTIONS REDRAWN, ADDED 157M4 FEEDER, ADDED PT/VT CHART AND GENERAL REVISIONS.	KB	

Drawn: CLS Checked: T.H.
Date: DD/MM/YYYY 04/13/2000
Scale: N.T.S.
Note: THIS DWG SUPERCEDES NAR157 REV. 05 23/12/1994
DWG. NO. NAR157-1 REV. NO. 02

A0 (841 x 1189)

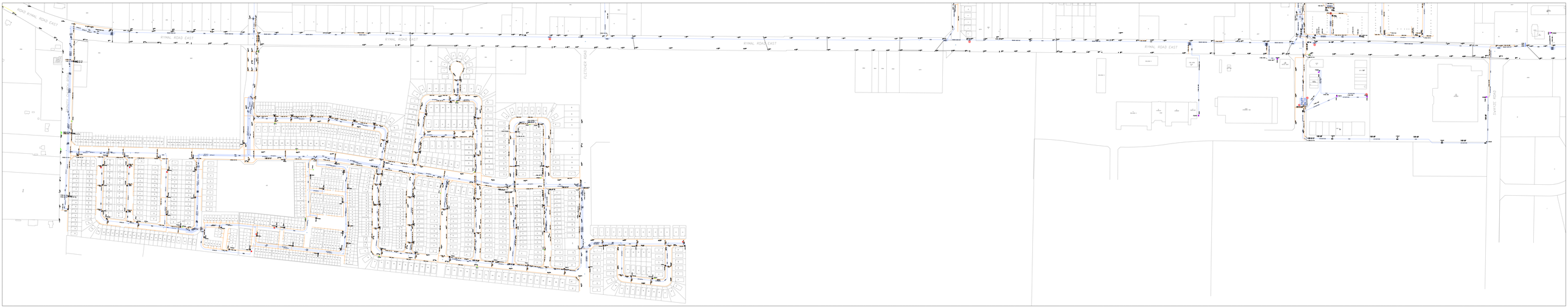
HORIZON UTILITIES 25 YEAR LOAD FORECAST SUMMARY - HAMILTON

LTR = Limited Time Rating, LAR = Load at Risk

Hydro One Supply Bus		Actual										Forecast																							
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Lake BY	MVA	112.4	104.4	68.3	63.4	65.3	64.0	73.2	82.9	70.8	60.1	60.3	60.4	60.6	60.7	61.3	62.0	62.6	63.2	63.8	64.5	65.1	65.8	66.4	67.1	67.8	68.4	69.1	69.8	70.5	71.2	71.9	72.7	73.4	74.1	74.9	
	10 day LTR	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	Back Up for Nebo M3 and M4
	Ratio of 10 day LTR	1.06	0.98	0.64	0.60	0.62	0.60	0.7	0.8	0.7	0.6	0.57	0.57	0.57	0.57	0.58	0.58	0.59	0.60	0.60	0.61	0.61	0.62	0.63	0.63	0.64	0.65	0.65	0.66	0.67	0.67	0.68	0.69	0.69	0.70	0.71	
	MVA LAR	**6.4**																																			
Nebo BY	MVA	27.1	31.8	23.5	28.6	31.1	32.5	28.4	27.0	31.0	35.1	39.1	42.0	44.9	46.9	47.4	47.9	48.4	48.9	49.3	49.8	50.3	50.8	51.3	51.9	52.4	52.9	53.4	54.0	54.5	55.0	55.6	56.2	56.7	57.3	57.9	
	10 day LTR	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	M3/M4 fed from this bus
	Ratio of 10 day LTR	0.80	0.94	0.69	0.84	0.91	0.96	0.8	0.8	0.9	1.0	1.15	1.24	1.32	1.38	1.39	1.41	1.42	1.44	1.45	1.47	1.48	1.50	1.51	1.53	1.54	1.56	1.57	1.59	1.60	1.62	1.64	1.65	1.67	1.68	1.70	
	MVA LAR										**1.1**	**5.1**	**8.0**	**10.9**	**12.9**	**13.4**	**13.9**	**14.4**	**14.9**	**15.3**	**15.8**	**16.3**	**16.8**	**17.3**	**17.9**	**18.4**	**18.9**	**19.4**	**20.0**	**20.5**	**21.0**	**21.6**	**22.2**	**22.7**	**23.3**	**23.9**	
Winona JQ	MVA	0.0	35.7	47.4	47.7	51.9	51.1	49.7	40.6	50.7	52.2	53.3	53.4	53.6	53.7	54.2	54.8	55.3	55.9	56.4	57.0	57.6	58.2	58.7	59.3	59.9	60.5	61.1	61.7	62.3	63.0	63.6	64.2	64.9	65.5	66.2	
	10 day LTR	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	Back Up for Nebo M3 and M4
	Ratio of 10 day LTR	0.00	0.34	0.45	0.45	0.49	0.48	0.5	0.4	0.5	0.5	0.50	0.50	0.51	0.51	0.51	0.52	0.52	0.53	0.53	0.54	0.54	0.55	0.55	0.56	0.57	0.57	0.58	0.58	0.59	0.59	0.60	0.61	0.61	0.62	0.62	
	MVA LAR																																				

LTR = Limited Time Rating
LAR = Load at Risk

Filed: 2013/31/21
Horizon Utilities Corporation
2013 Cost of Service - 1Z
Attachment 3-1
Page 1 of 1



HYDRO ONE NETWORKS

NEBO TS T1 / T2 REPLACEMENT STAGING PLAN

REV: 1 - JUNE 11, 2012

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.06.11
NEBO (TITLE)	JB (SKETCHED)	JG (CHKD.)	12.04.17

NEBO TS T1 / T2 REPLACEMENT

EQUIPMENT AND PROTECTION WORK

Filed: 2013/01/21
EB-2013-0074
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
2 of 27

REMOVALS

- REMOVE TWO (2) POWER TRANSFORMERS, COOLERS AND OIL CONSERVATOR TANKS (3T1 AND 3T2)
- REMOVE SIX (6) 230KV SURGE ARRESTERS (T1SA1 AND T2SA1)
- REMOVE TWO (2) GROUNDING TRANSFORMERS (GT1 AND GT2) AND FOUNDATIONS
- REMOVE SIX (6) 27.6KV SURGE ARRESTERS (T1SA2 AND T2SA2)

RELOCATE/MODIFY

- MODIFY EXISTING AC STATION SERVICE DISTRIBUTION PANELS BY ADDING FOUR (4) THREE PHASE 20A CIRCUIT BREAKERS.
- MODIFY THE EXISTING CABLE TRENCH IN THE 27.6KV YARD TO EXTEND TO THE NEW IT. 210 BAY TO ALL NEW CIRCUIT BREAKERS AND LIGHTS.

ADDITIONS

- INSTALL EIGHT (8) FOUNDATIONS FOR CIRCUIT BREAKERS;
- INSTALL ONE BAY OF ITEM 251 C/W CONCRETE FOUNDATIONS;
- INSTALL TWO (2) NEW 75/125 MVA, 230/27.6-27.6 KV POWER TRANSFORMERS, COOLERS AND OIL CONSERVATOR TANKS.
- INSTALL FOUR (4) NEW GROUNDING REACTORS ON EXISTING FOUNDATIONS.
- INSTALL NEW FULL BAY OF IT. 210.
- INSTALL TWO (2) NEW 27.6 KV, 2000 A TRANSFORMER BREAKERS IN EXISTING IT. 210 BAY
- INSTALL SIX (6) NEW 27.6 KV, 1200 A FEEDER BREAKERS IN NEW IT. 210 BAY
- INSTALL SIX (6) NEW HV SURGE ARRESTORS ON EXISTING SUPPORT STRUCTURE
- INSTALL SIX (6) NEW LV SURGE ARRESTORS ON EXISTING SUPPORT STRUCTURE
- INSTALL SIX (6) NEW LV SURGE ARRESTORS ON NEW SUPPORT STRUCTURE
- INSTALL FOUR (4) NEW 38KV, 2000A TRANSFORMER BREAKER DISCONNECT SWITCHES (MANUAL GANGED).
- INSTALL THIRTY-SIX (36) NEW 38KV, 1200A FEEDER BREAKER DISCONNECT SWITCHES (HOOK STICK).
- INSTALL 4 REVENUE METERING UNITS - ONE ON EACH SECONDARY SIDE OF NEW TRANSFORMERS T1 AND T2
- INSTALL 2 REVENUE METERING UNITS - ONE FOR SS1 AND ONE FOR SS2
- INSTALL THREE (3) NEW 38KV, 1200 A FEEDER TIE DISCONNECT SWITCHES (MANUAL GANGED).
- INSTALL NEW 5” ALUMINUM BUS FOR NEW IT. 210 BAY AND NEW TRANSFORMER CONNECTIONS.
- INSTALL NEW 2” ALUMINUM BUS FOR THE SIX (6) NEW FEEDER BREAKER LOCATIONS.
- INSTALL NEW 34.5 KV, 4000LB POST INSULATORS FOR ALL NEW 27.6KV BUS AND FEEDERS.
- INSTALL SIX (6) NEW 3 PHASE SUPPLIES FROM THE 120/208V AC STATION SERVICE DISTRIBUTION PANELS TO THE NEW 27.6KV CIRCUIT BREAKERS MECH BOXES.
- INSTALL FOUR (4) NEW 400W LIGHTS AT NEW IT. 210 BAY MM#30018715. PROVIDE NEW LIGHTS WITH A 120V AC FROM AN EXISTING 20A 120/208V DISTRIBUTION PANEL BREAKER.
- INSTALL 600M OF 4/0 BARE COPPER TO GROUND NEW IT. 210 BAY AND ALL NEW EQUIPMENT

PROTECTIONS:

- INSTALL 600M OF 4/0 BARE COPPER TO GROUND NEW IT. 210 BAY AND ALL NEW EQUIPMENT
- 6X NEW 230-27.6 KV TRANSFORMER PROTECTION IEDS: NEW ‘A’ AND ‘B’ FOR T1 AND T2; GE T60 & 7UT633, SEL351-7
- 4X NEW 27.6 KV TRANSFORMER BREAKER FAILURE PROTECTION IEDS; T1 TRANSFORMER BREAKER 1, T1 TRANSFORMER BREAKER 2, T2 TRANSFORMER BREAKER 1, T2 TRANSFORMER BREAKER 2; C60
- 6X NEW 27.6 KV FEEDER PROTECTION IEDS; FOR NEW FEEDER 1, NEW FEEDER 2, NEW FEEDER 3, NEW FEEDER 4, NEW FEEDER 5, NEW FEEDER 6; D60
- MODIFY TELEPROTECTION INTERFACE WITH JMUX EQUIPMENT FOR LINES Q24HM AND Q29HM SUCH THAT THE ASSOCIATED TRANSFORMER PROTECTION PROVIDES STANDARD ZATM FUNCTIONALITY. (**OUTAGE?**)

TELECOM TRANSPORT SYSTEMS INFRASTRUCTURE

- DESIGN AND PROVISIONING OF ONE LAN EXT TYPE CIRCUIT CONNECTION FOR SCADA APPLICATION BETWEEN NEBO TS AND BEACH TS.
- PREPARE AND AID PROCESS IN SAP TO PURCHASE REQUIRED EQUIPMENT AS REQUIRED
- NOMS OUTAGE REQUEST & XNG DATABASE UPDATE
- TECHNICAL ASSISTANCE TO P&C DURING WORK PLAN AND OUTAGES, AS REQUIRED
- PREPARE AND ISSUE DRAWINGS, UPDATE DATABASES FOR NEBO TS AND BEACH TS
- PREPARE TAIL CIRCUIT DESIGN AND DRAWING PACKAGE FOR BOTH NEBO TS AND BEACH TS
- PARTICIPATION IN A LIMITED NUMBER (1-2) OF PROJECT AND COORDINATION MEETINGS AT TCT, AS REQUIRED

NEBO TS

TELECOM TRANSPORT SYSTEMS

- ADD ONE SCADA CIRCUIT (LAN EXTENSION TYPE) TO THE EXISTING JMUX SYSTEM IN RING 11. THIS CIRCUIT WILL BE INSTALLED AND PROVISIONED BETWEEN NEBO TS AND BEACH TS.

BEACH TS

TELECOM TRANSPORT SYSTEMS INFRASTRUCTURE

- ADD ONE SCADA CIRCUIT (LAN EXTENSION TYPE) TO THE EXISTING JMUX SYSTEM IN RING 11. THIS CIRCUIT WILL BE INSTALLED AND PROVISIONED BETWEEN NEBO TS AND BEACH TS.

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

TITLE — DRAWN — CHKD. — YY.MM.DD

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REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0064
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
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NEBO RTU REPLACEMENT AND FEEDER PALC REPLACEMENT PROJECTS

NEBO RTU REPLACEMENT PROJECT (SEPARATE PROJECT - BUT CRITICAL TO NEBO T1 / T2 PROJECT)

- RTU DRAWINGS AND MATERIAL AVAILABLE BY OCTOBER 30, 2012
- TELECOM NOMS# WILL BE REQUIRED FOR THE RTU BY OCTOBER 15, 2012
- CONSTRUCTION WILL MOBILIZE ON OCTOBER 30, 2012 AND HAVE NEW RTU RACKS INSTALLED PRIOR TO XMAS SHUTDOWN
- P&C TO TEST AND PRE-COMMISSION RTU PRIOR TO XMAS SHUTDOWN
- BEGINNING OF JANUARY 2013 RTU CUTOVER WILL START (OUTAGES WILL BE REQUIRED FOR CUTOVER OF EXISTING EQUIPMENT)
- NMS DOWNLOAD - TBD

NEBO FEEDER PALC REPLACEMENT PROJECT (SEPARATE PROJECT - BUT COORDINATION MAY BE NEEDED WITH NEBO T1 / T2 PROJECT)

- ENGINEERING PACKAGE REQUIRED BY - TBD
- MATERIAL REQUIRED BY - TBD
- CONSTRUCTION AND P&C MOBILIZES - TBD
- CUTOVER OUTAGES COULD BE COORDINATED WITH NEBO T1 / T2 REPLACEMENT WORK OR CAN BE COMPLETED AFTER NEBO T1 / T2 REPLACEMENT PROJECT COMPLETED

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.17

TITLE	DRAWN	CHKD.	YY.MM.DD
NEBO	JB	JG	12.04.17

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:

1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
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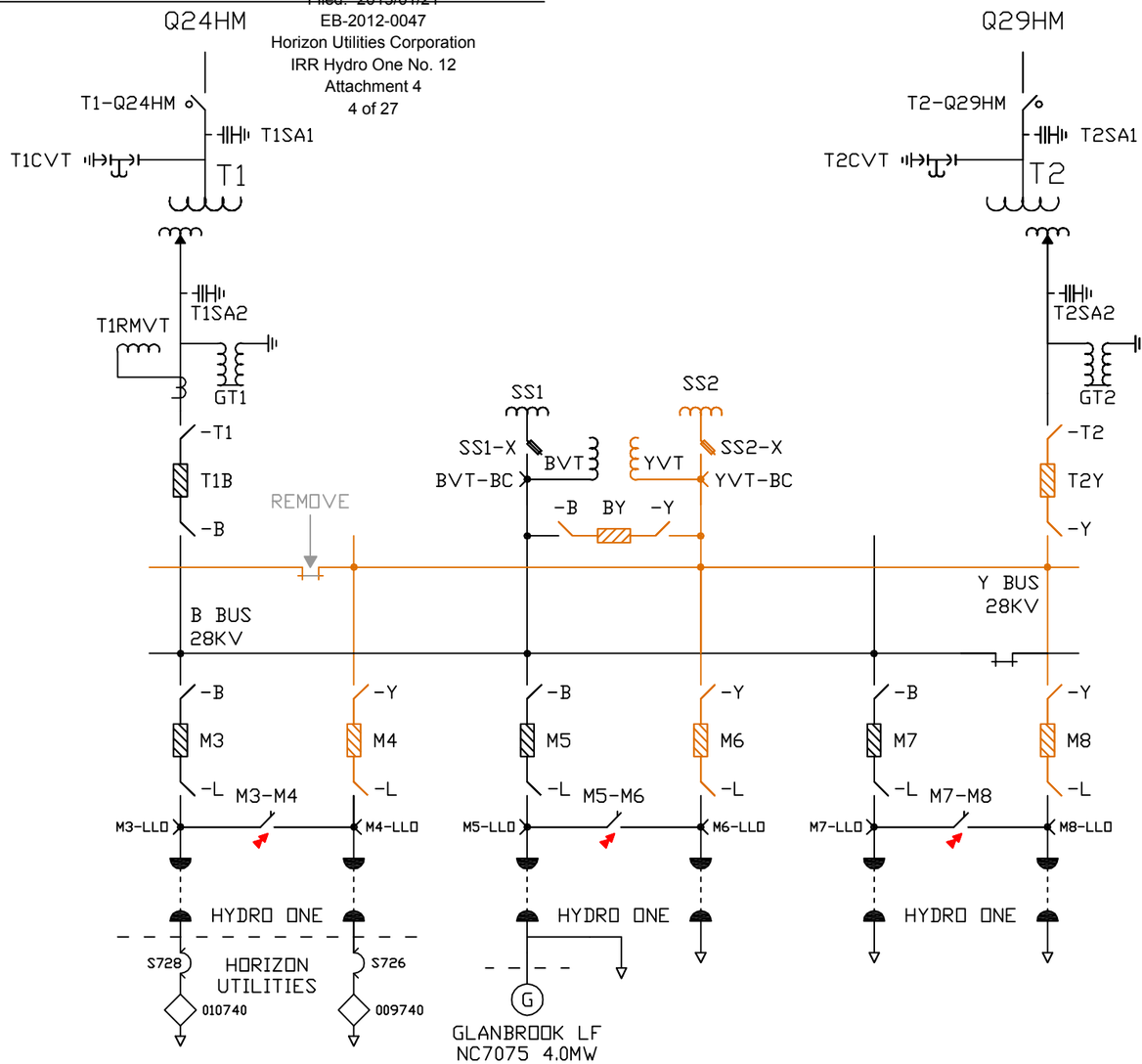

OUTAGE 1

DATES: OCTOBER 09, 2012

EQUIPMENT: Y BUS

DESCRIPTION: REMOVE Y BUS LINKS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY/MM/DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.06.11
NEBO	JB	JG	12.04.17

TITLE — SKETCH — CHKD. — YY/MM/DD

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PAGE #

REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
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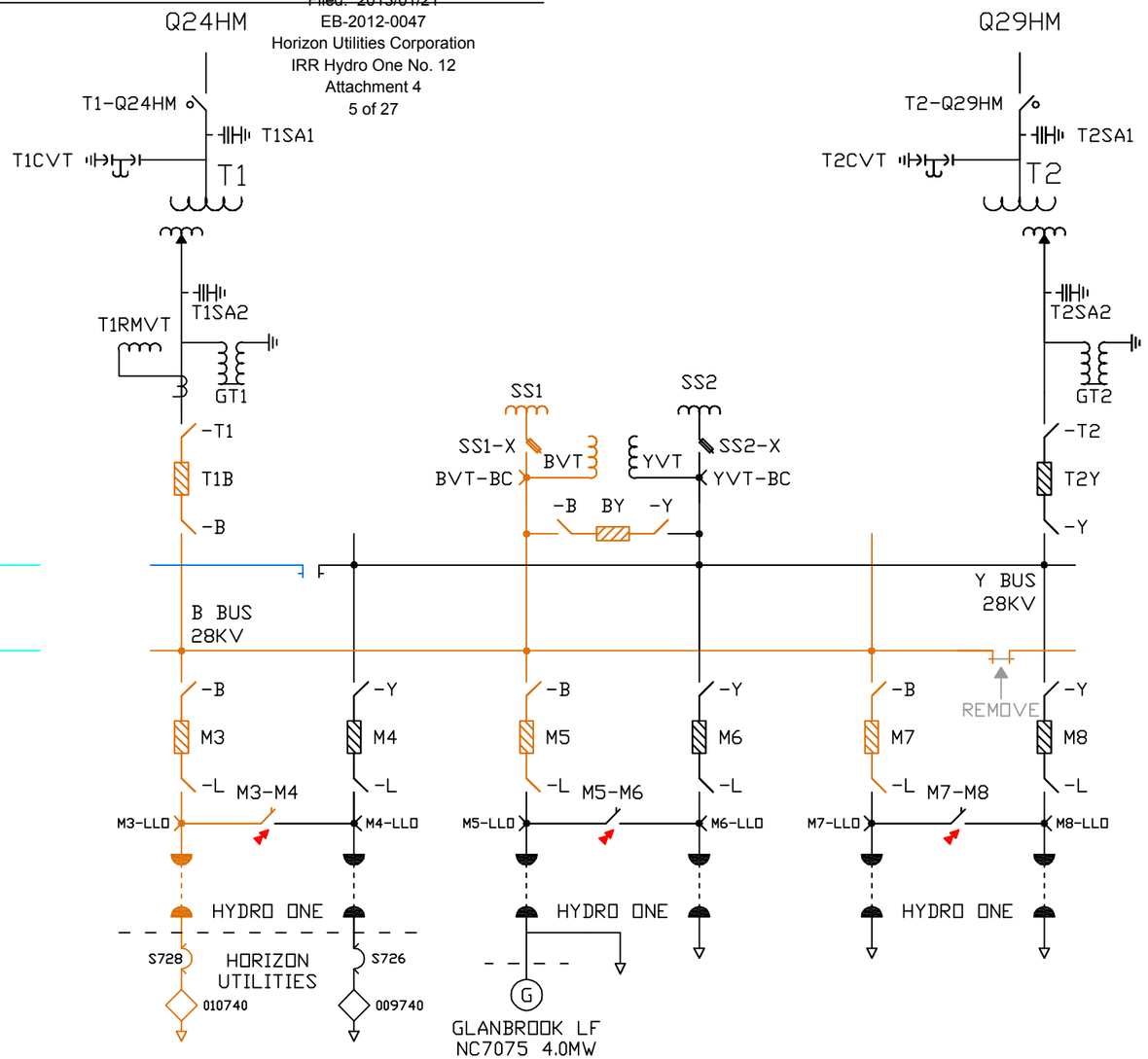

OUTAGE 2

DATES: OCTOBER 10 TO 11, 2012

EQUIPMENT: B BUS, M3 FEEDER

DESCRIPTION: TO INSTALL NEW STEEL AND REMOVE B BUS LINKS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11

TITLE	DRAWN	CHKD.	YY.MM.DD
NEBO	JB	JG	12.04.17

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PAGE #

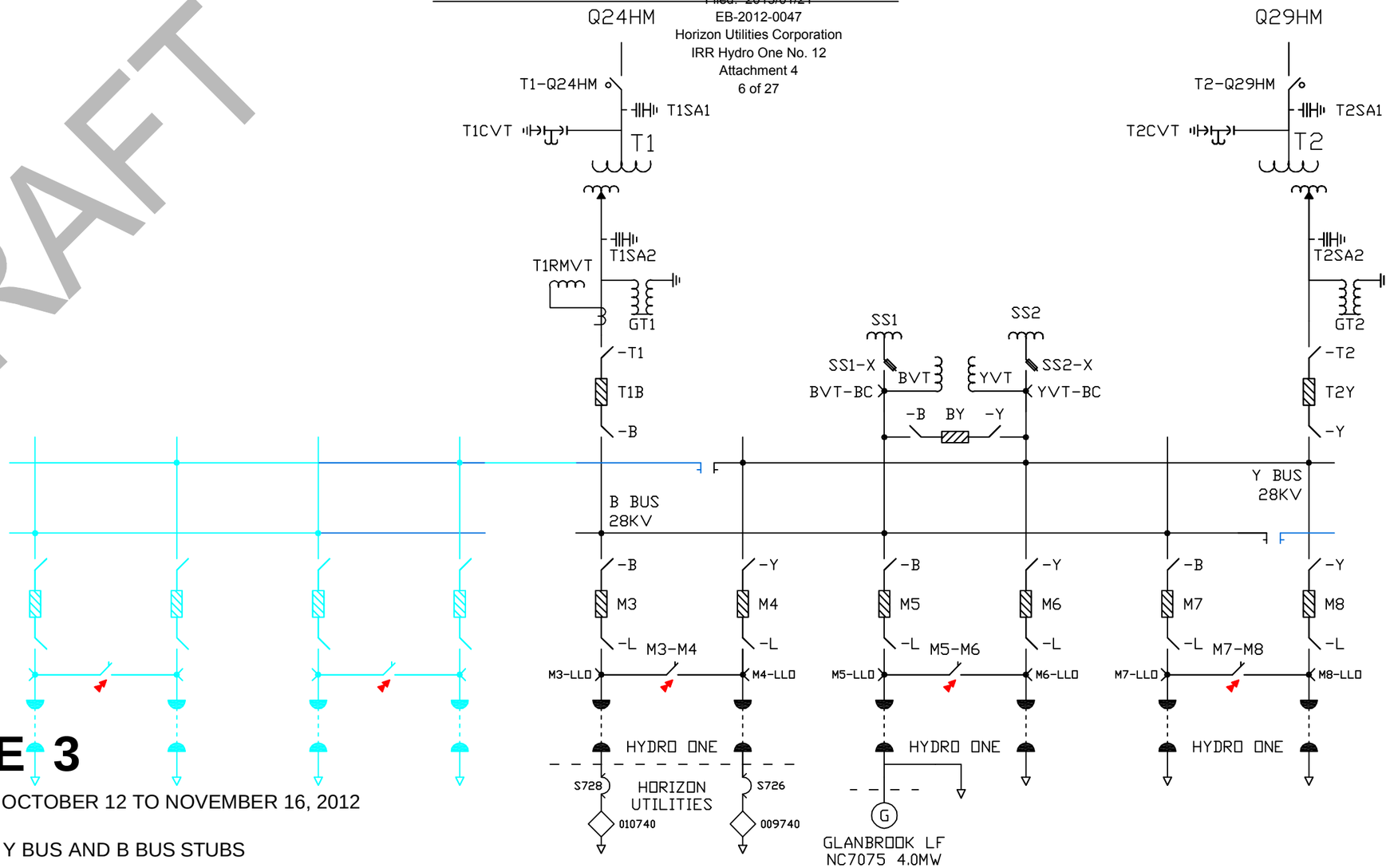
REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
6 of 27



OUTAGE 3

DATES: OCTOBER 12 TO NOVEMBER 16, 2012

EQUIPMENT: Y BUS AND B BUS STUBS

DESCRIPTION: TO ERECT ALL STEEL FOR NEW BREAKERS AND FEEDERS AND INSTALL Y BUS CONNECTION
PULL CABLES TO NEW FEEDER PROTECTION PANELS

UPON COMPLETION (FRIDAY NOVEMBER 16) - TOC OF NEW BUS EXTENSION AND FEEDER POSITIONS AND FEEDER RELAYING

SMS TO HAVE ALL FEEDER HOOK STICK SWITCHES COMMISSIONED BY NOVEMBER 16

AFTER NOVEMBER 16 - SMS TO COMMISSION NEW FEEDER TIE SWITCHES AND BREAKERS

NOTE: **NEW FEEDER BREAKER DISCONNECTS ARE NOT TO BE CLOSED UNTIL BUS PROTECTIONS ARE TIED IN.**

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

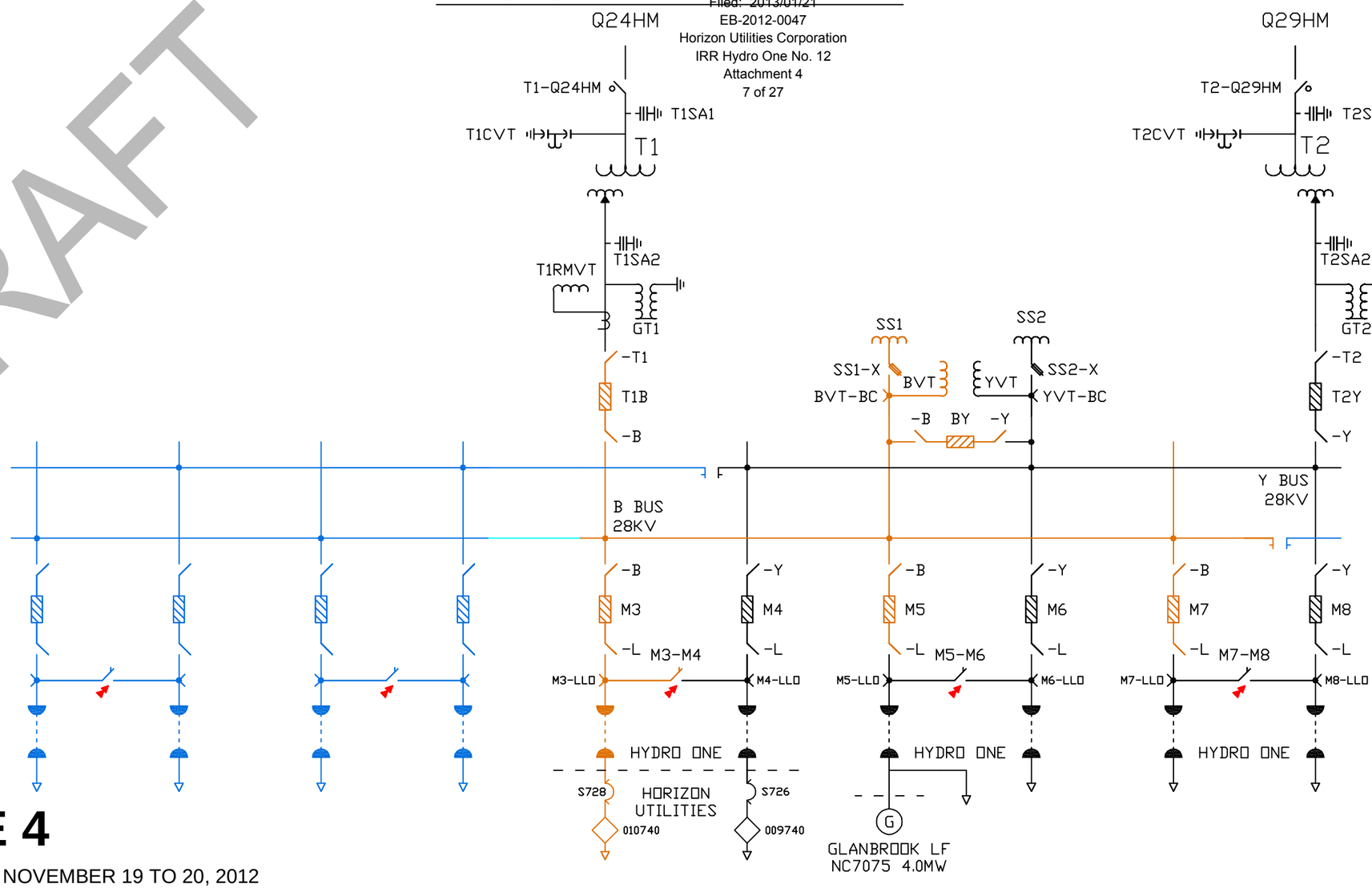
REVISION	BY	APPD.	YY/MM/DD
1 - UPDATED / ADDED NEW FIBS	JB	JG	12.06.11
NEBO	JB	JG	12.04.17

TITLE / SKETCH / CHKD. / YY/MM/DD

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
7 of 27



OUTAGE 4

DATES: NOVEMBER 19 TO 20, 2012

EQUIPMENT: B BUS, M3 FEEDER

DESCRIPTION: TO WELD CONNECTION TO B BUS EXTENSION

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY.MM.DD

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PAGE #

REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
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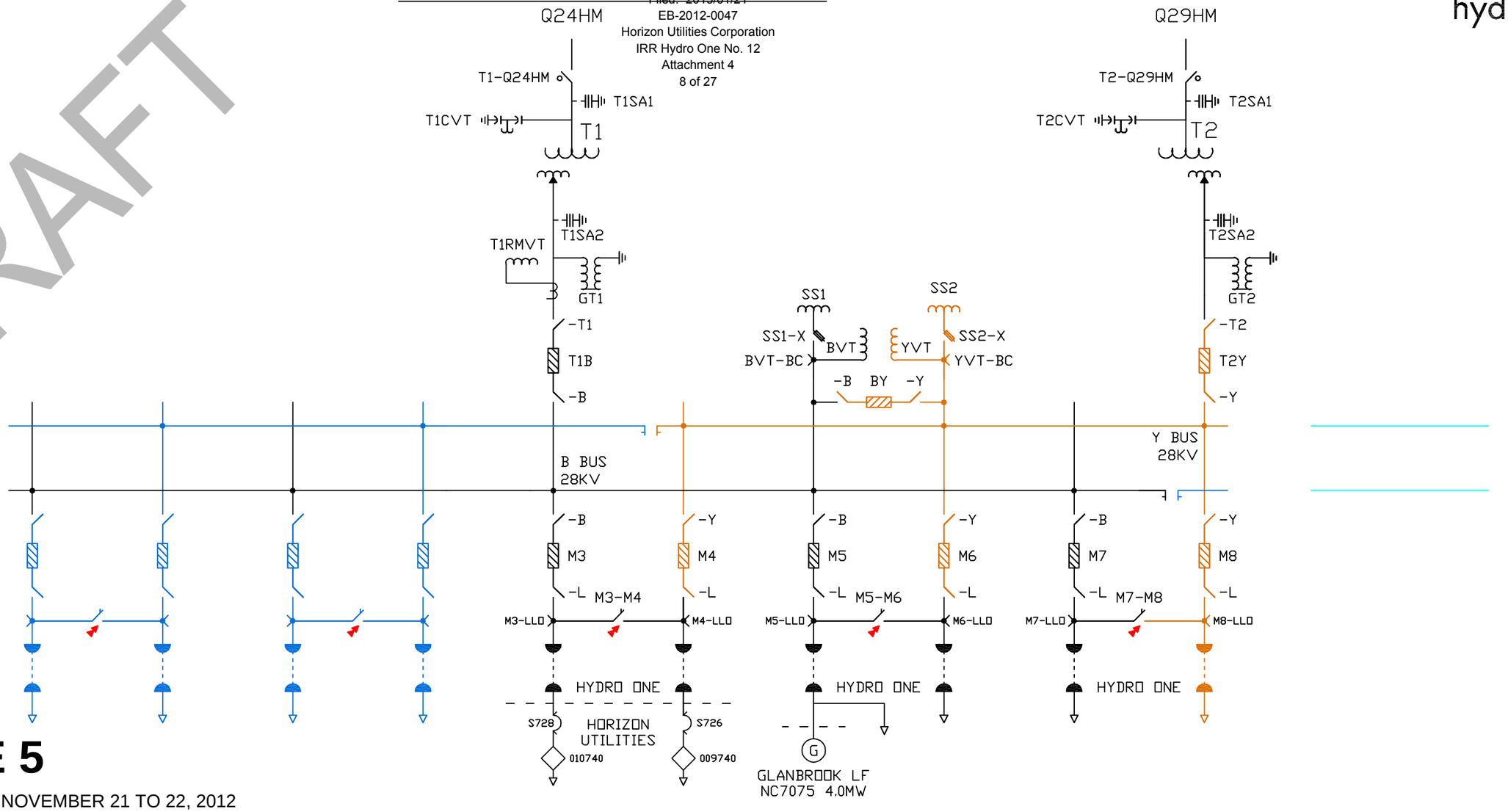


OUTAGE 5

DATES: NOVEMBER 21 TO 22, 2012

EQUIPMENT: Y BUS, M8 FEEDER

DESCRIPTION: TO ERECT STEEL

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

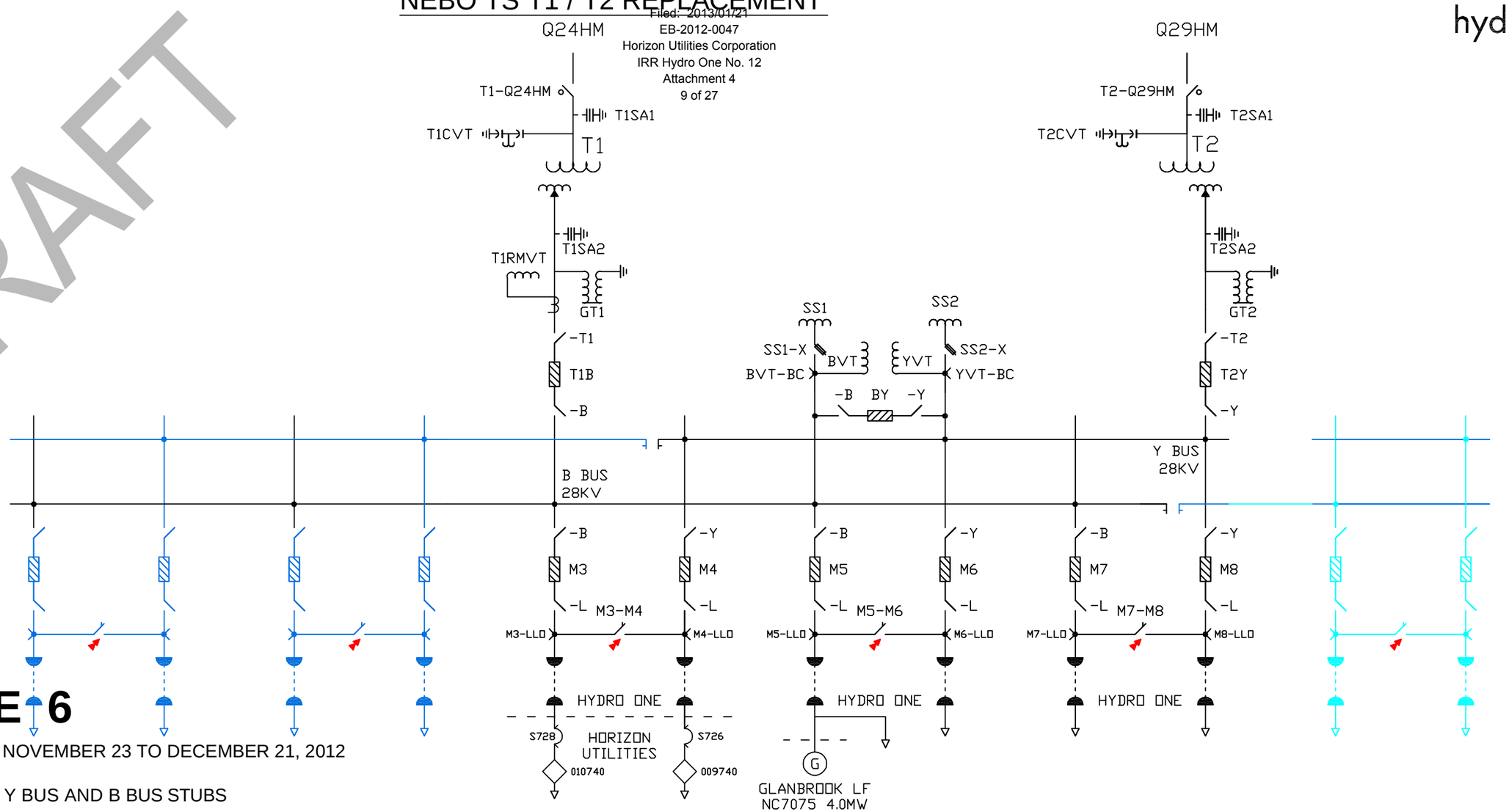
AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY/MM/DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.06.11
NEBO	JB	JG	12.04.17

TITLE — SKETCH. — CHKD. — YY/MM/DD

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT



OUTAGE 6

DATES: NOVEMBER 23 TO DECEMBER 21, 2012

EQUIPMENT: Y BUS AND B BUS STUBS

DESCRIPTION: TO ERECT ALL STEEL FOR NEW BREAKERS AND FEEDERS AND INSTALL B BUS CONNECTION
PULL CABLES TO NEW FEEDER PROTECTION PANELS

UPON COMPLETION (FRIDAY DECEMBER 21) - TOC OF NEW BUS EXTENSION AND FEEDER POSITIONS AND FEEDER RELAYING

SMS TO HAVE ALL FEEDER HOOK STICK SWITCHES COMMISSIONED BY DECEMBER 21

AFTER DECEMBER 21 - SMS TO COMMISSION NEW FEEDER TIE SWITCHES AND BREAKERS

NOTE: **<u>NEW FEEDER BREAKER DISCONNECTS ARE NOT TO BE CLOSED UNTIL BUS PROTECTIONS ARE TIED IN</u>**

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FDRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17
TITLE	SKETCH.	CHKD.	YY.MM.DD

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THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
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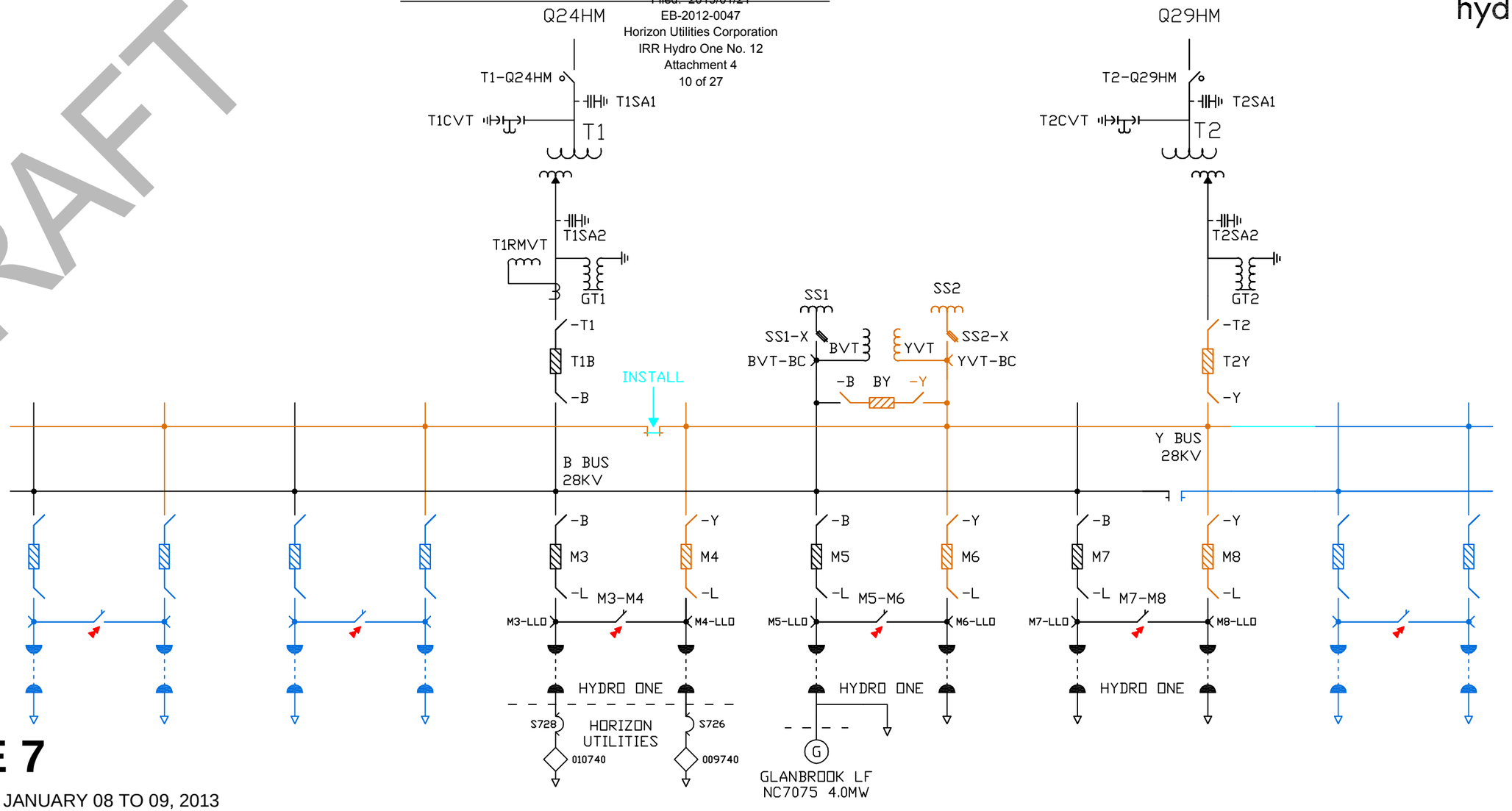

OUTAGE 7

DATES: JANUARY 08 TO 09, 2013

EQUIPMENT: Y BUS

DESCRIPTION: TO WELD CONNECTION TO NEW Y BUS EXTENSION AND INSTALL Y BUS LINKS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY/MM/DD
1 - UPDATED / ADDED NEW FIBS	JB	JG	12.04.11
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TITLE	SKTCHD.	CHKD.	YY/MM/DD

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NOTE:
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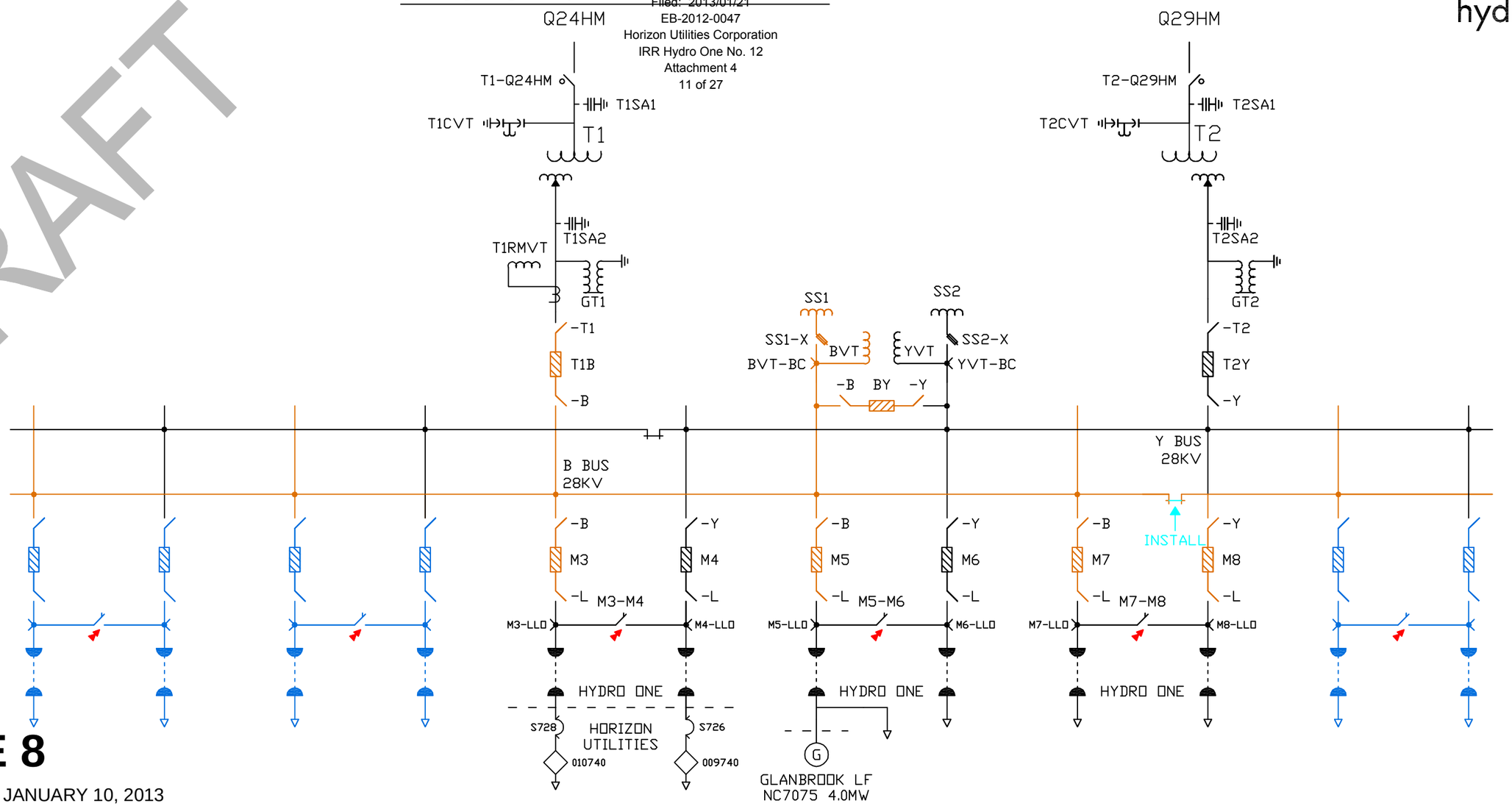
NEBO TS T1 / T2 REPLACEMENT



OUTAGE 8

DATES: JANUARY 10, 2013

EQUIPMENT: B BUS

DESCRIPTION: TO INSTALL B BUS LINKS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
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STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FINS	JB	JG	12.04.11
NEBO (TITLE)	JB (SKETCH)	JG (CHKD.)	12.04.17

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NEBO TS T1 / T2 REPLACEMENT

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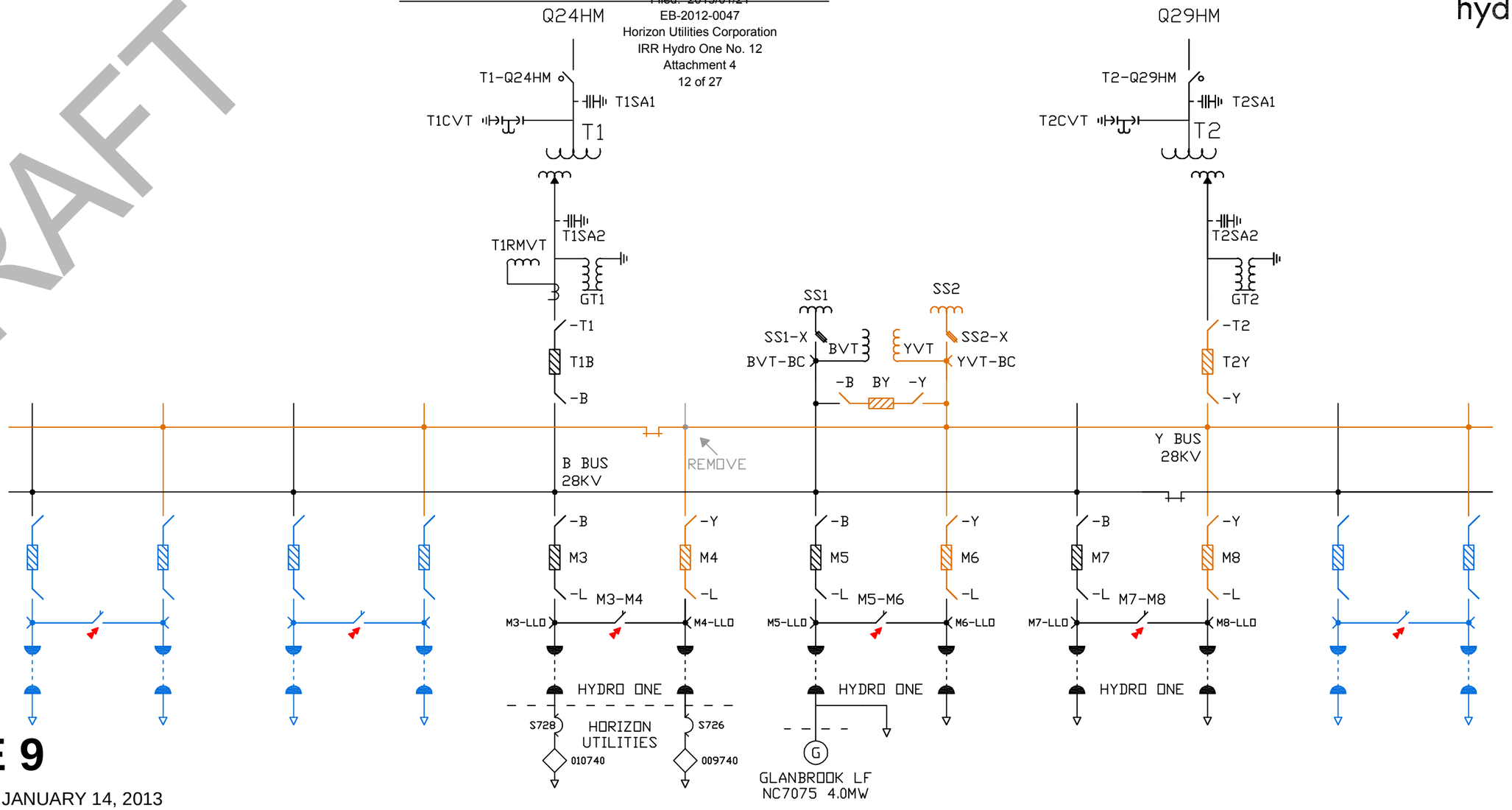

OUTAGE 9

DATES: JANUARY 14, 2013

EQUIPMENT: Y BUS, M4 FEEDER

DESCRIPTION: TO REMOVE CONNECTION BETWEEN UPPER AND LOWER Y BUS - REMOVES CONNECTION BETWEEN M4 FEEDER AND Y BUS

NOTES: **M4 FEEDER WILL REMAIN U/A AFTER THIS OUTAGE FOR DURATION OF T1Y INSTALLATION (ONE WEEK)**

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
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AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPR.	YY/MM/DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.06.11
NEBO	JB	JG	12.04.17
TITLE	SKTCHD.	CHKD.	YY/MM/DD

NOTE:
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NEBO TS T1 / T2 REPLACEMENT

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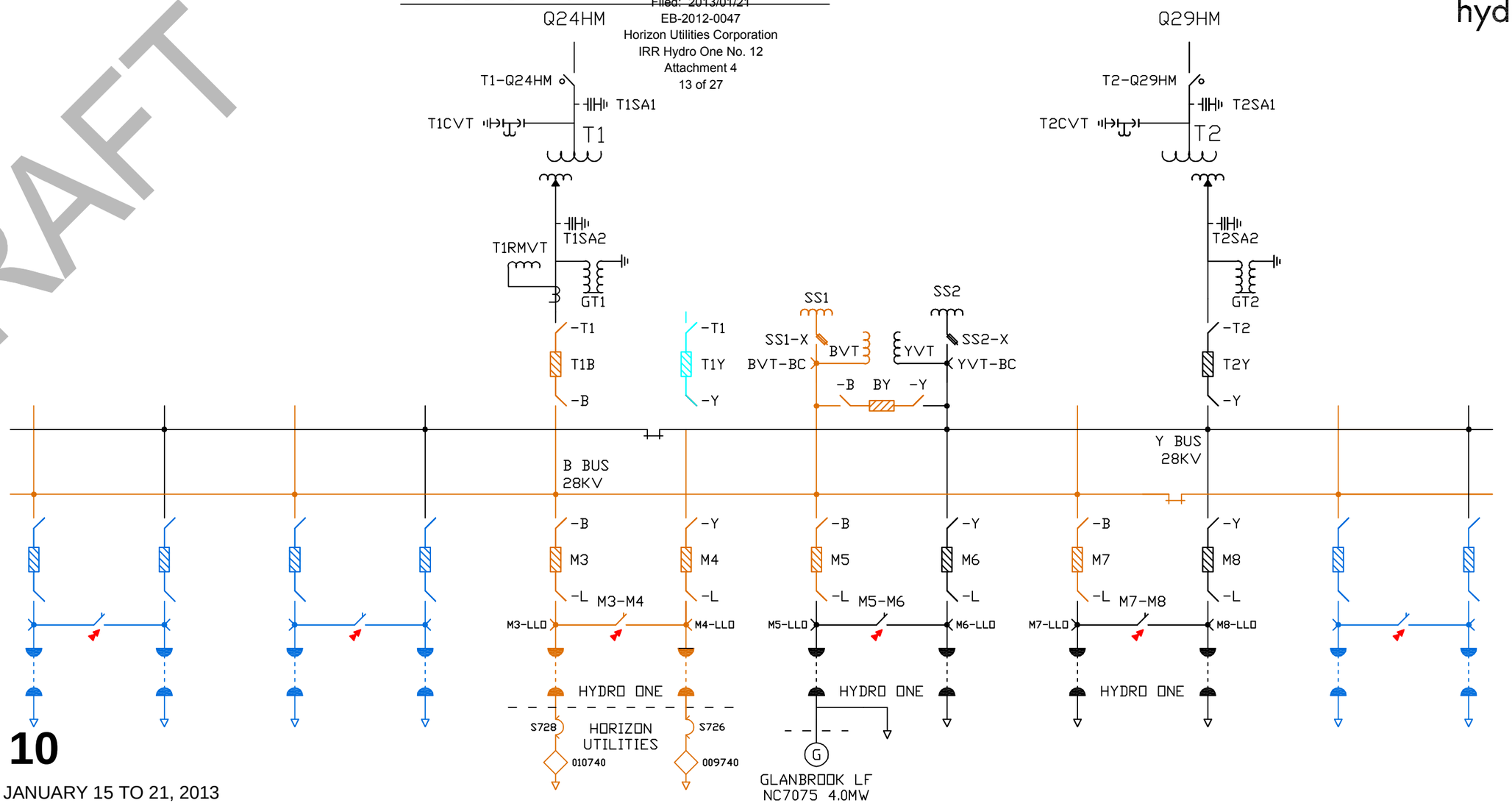

OUTAGE 10

DATES: JANUARY 15 TO 21, 2013

EQUIPMENT: B BUS

DESCRIPTION: TO INSTALL NEW TX BREAKER

UPON COMPLETION OF THE OUTAGE:
- TOC OF NEW T1Y BREAKER
- ALSO T1Y BREAKER CONNECTED INTO THE NEW Y BUS PROTECTION
- TOC OF NEW T1Y B/F

NOTES: **DUE TO M4 FEEDER BEING U/A (DISCONNECTED FROM Y BUS); M3 AND M4 FEEDERS WILL BE O/S FOR DURATION OF THIS OUTAGE**

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
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AR NUMBER: 20968
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REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FDRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

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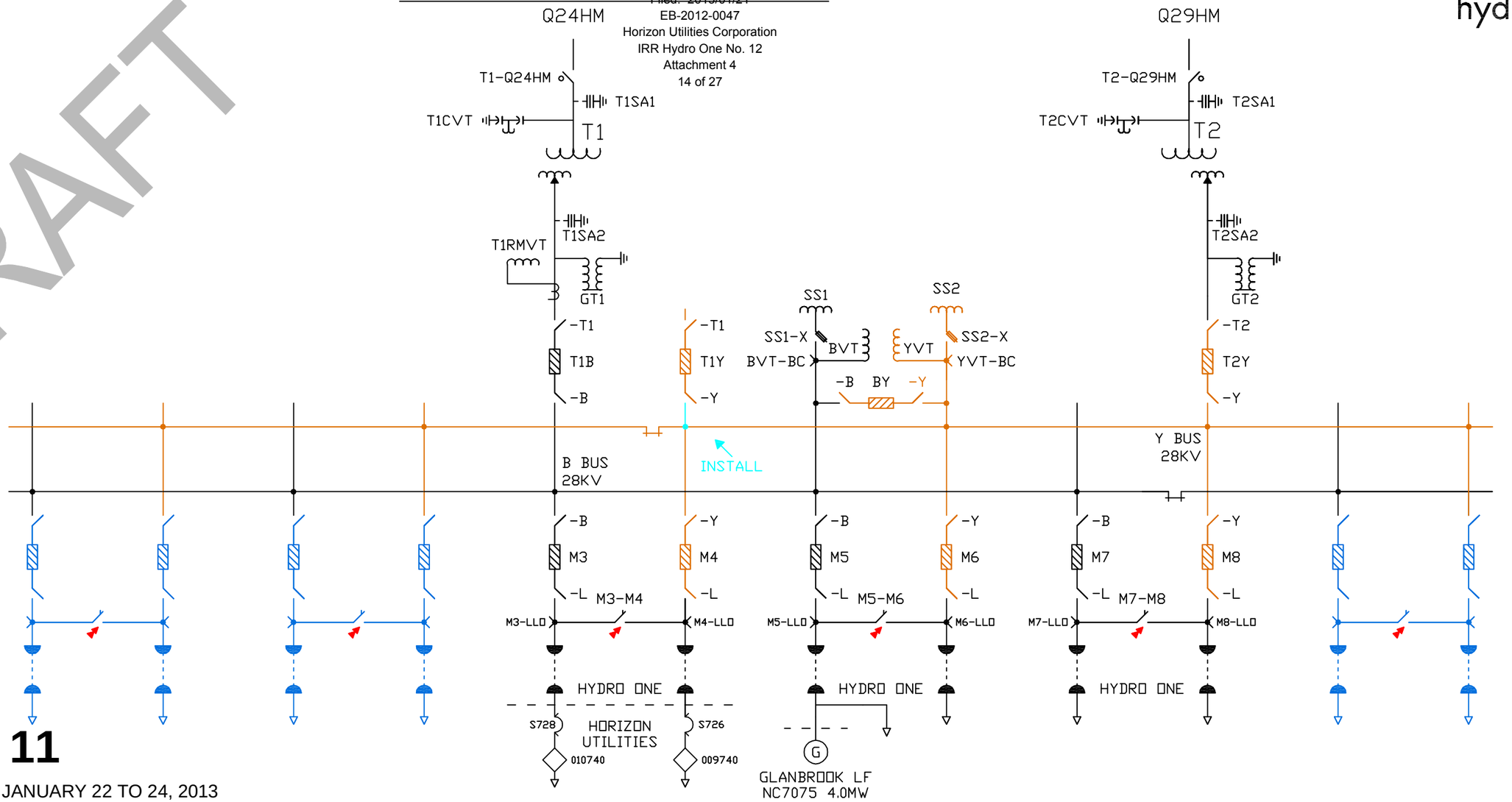

OUTAGE 11

DATES: JANUARY 22 TO 24, 2013

EQUIPMENT: Y BUS

DESCRIPTION: TO RE-INSTALL CONNECTION BETWEEN UPPER AND LOWER Y BUS - CONNECTS T1Y AND M4 FEEDER UP TO Y BUS
ZTT OF NEW T1Y B/F PROTECTION AND MODIFIED Y BUS 'A' & 'B' PROTECTIONS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
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STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPR.	YY/MM/DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.06.11
NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY/MM/DD

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NOTE:
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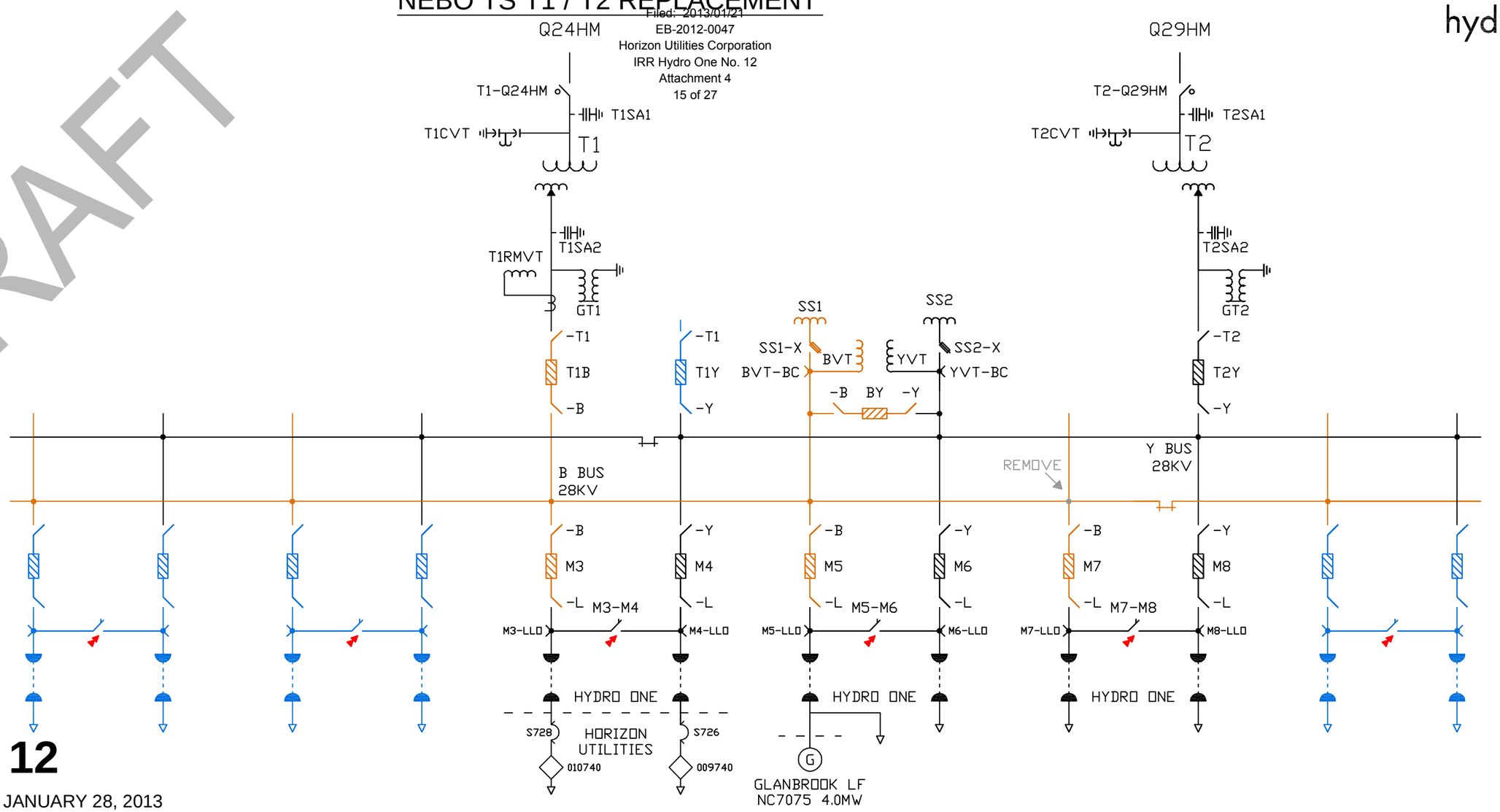
NEBO TS T1 / T2 REPLACEMENT



OUTAGE 12

DATES: JANUARY 28, 2013

EQUIPMENT: B BUS, M7 FEEDER

DESCRIPTION: TO REMOVE CONNECTION BETWEEN UPPER AND LOWER B BUS - REMOVES M7 CONNECTION TO B BUS

NOTES: **M7 FEEDER WILL REMAIN U/A AFTER THIS OUTAGE FOR DURATION OF T2B INSTALLATION (ONE WEEK)**

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

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AR NUMBER: 20968
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REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FINS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY.MM.DD

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REV. 1

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NOTE:
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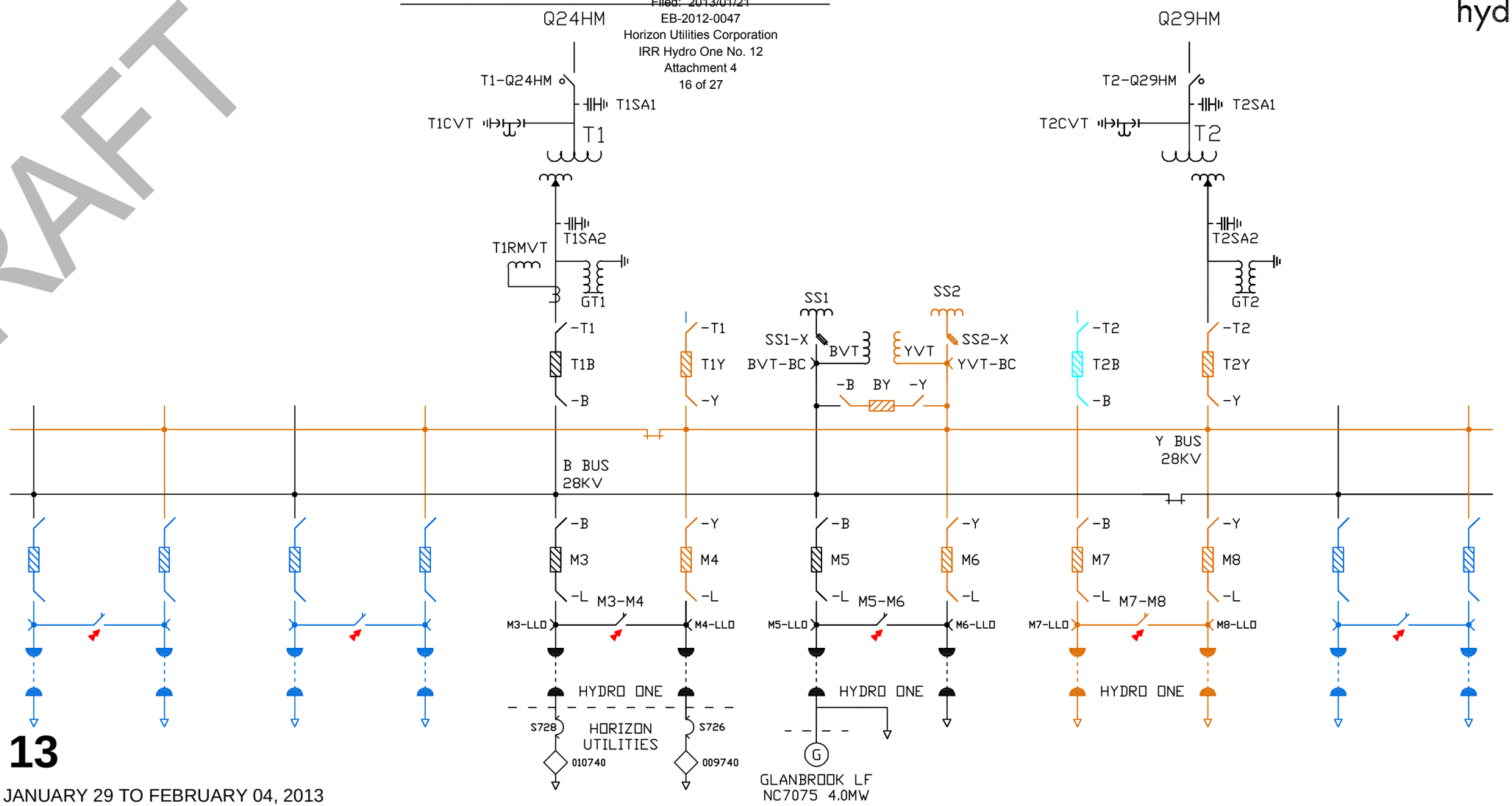
NEBO TS T1 / T2 REPLACEMENT



OUTAGE 13

DATES: JANUARY 29 TO FEBRUARY 04, 2013

EQUIPMENT: Y BUS

DESCRIPTION: TO INSTALL NEW TX BREAKER

UPON COMPLETION OF THE OUTAGE
- TOC OF NEW T2B BREAKER
- ALSO T2B BREAKER CONNECTION INTO NEW B BUS PROTECTION
- TOC OF NEW T2B B/F

NOTES: **DUE TO M7 FEEDER BEING U/A (DISCONNECTED FROM B BUS); M7 AND M8 FEEDERS WILL BE O/S FOR DURATION OF THIS OUTAGE**

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
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AR NUMBER: 20968
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REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FDRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY.MM.DD

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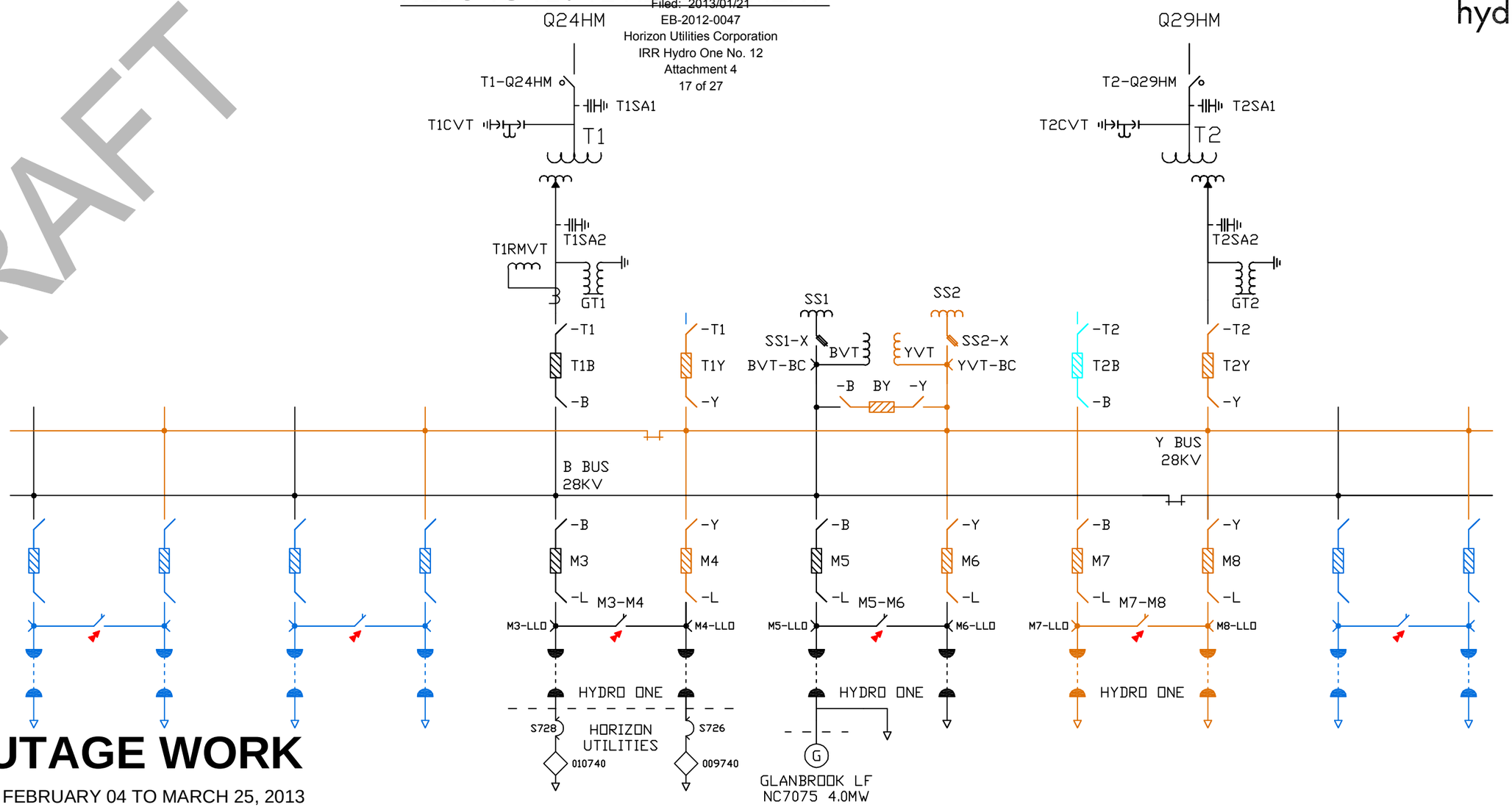
NEBO TS T1 / T2 REPLACEMENT



NON-OUTAGE WORK

DATES: FEBRUARY 04 TO MARCH 25, 2013

EQUIPMENT: FEEDER CABLES (NO OUTAGE REQUIRED)

DESCRIPTION: DUNDAS AREA CREWS TO PULL NEW FEEDER CABLES INTO STATION

NOTES: DUNDAS AREA CABLE DUCTS NEW TO BE READY BY FEBRUARY 04, 2013

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

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REVISION	BY	APPD.	YY.MM.DD
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NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY.MM.DD

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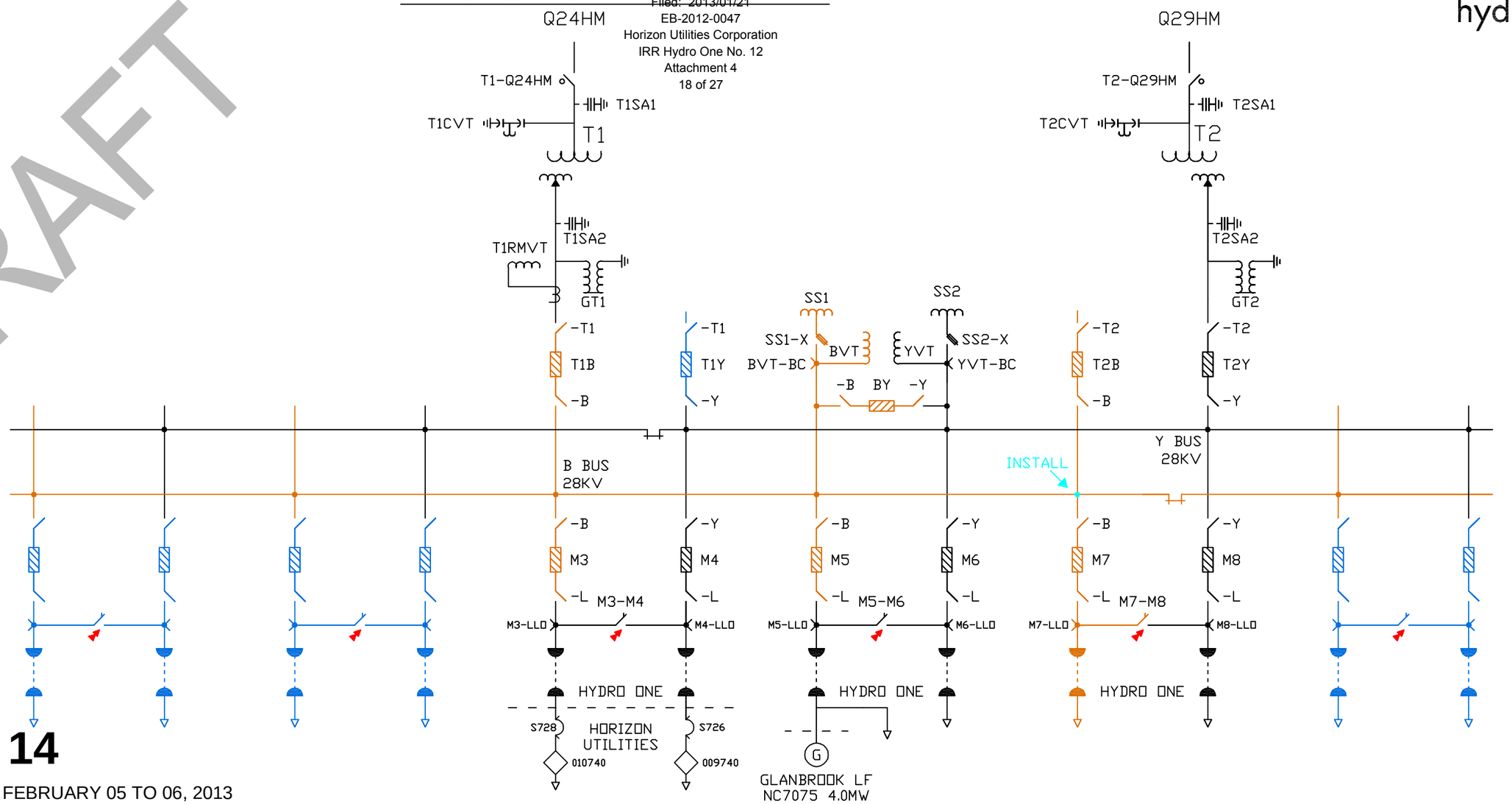

OUTAGE 14

DATES: FEBRUARY 05 TO 06, 2013

EQUIPMENT: B BUS, M7 FEEDER

DESCRIPTION: TO RE-INSTALL CONNECTION BETWEEN UPPER AND LOWER B BUS - CONNECTS T2B AND M7 FEEDER UP TO B BUS
ZTT OF NEW T2B B/F PROTECTION AND MODIFIED B BUS 'A' & 'B' PROTECTIONS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
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AR NUMBER: 20968
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REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY.MM.DD

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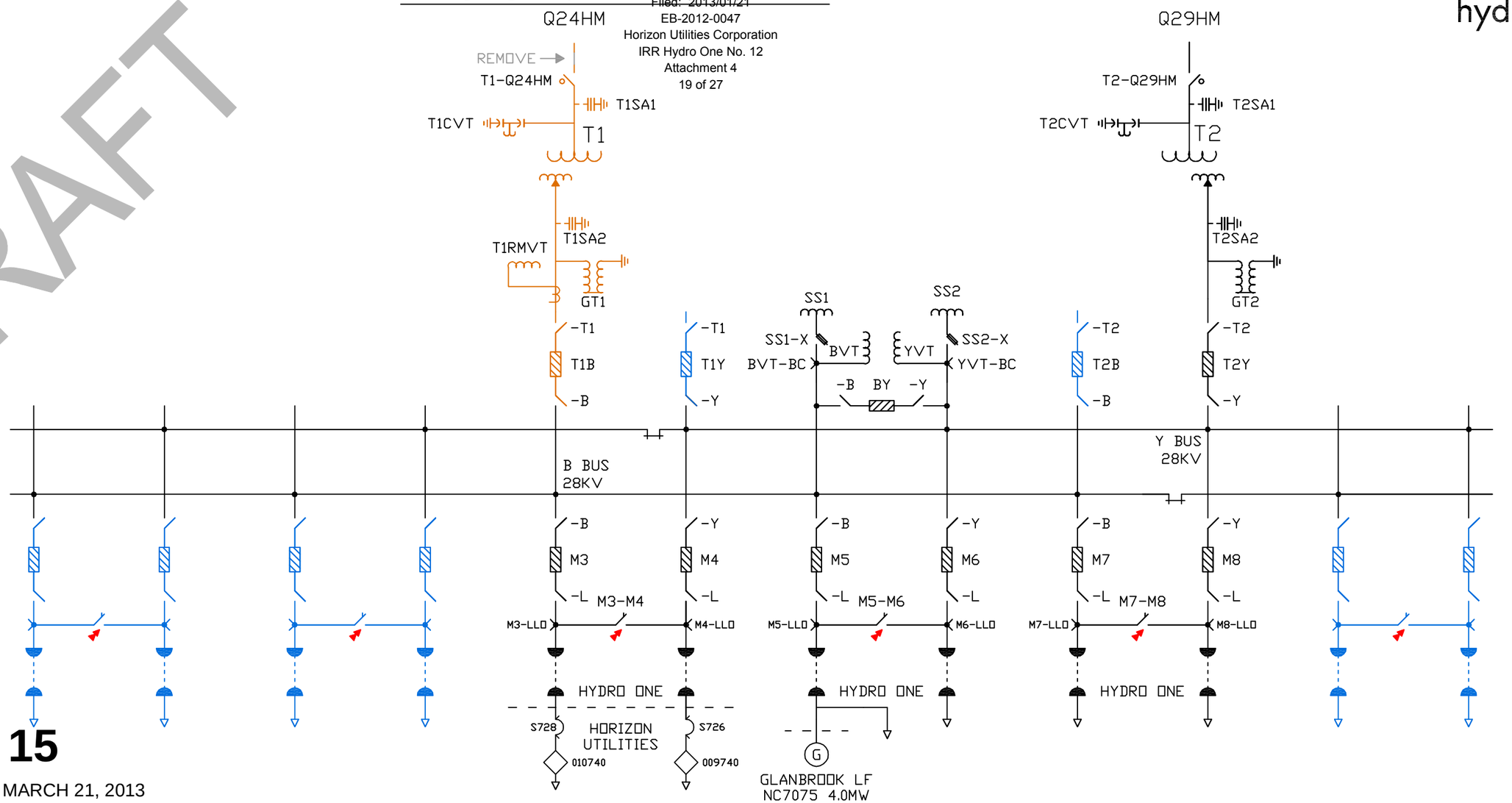

OUTAGE 15

DATES: MARCH 21, 2013

EQUIPMENT: Q24HM CIRCUIT, NEBO T1

DESCRIPTION: REMOVE SECTION OF BUS ON LINE SIDE OF T1-Q24HM

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
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AR NUMBER: 20968
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REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11
NEBO (TITLE)	JB (SKETCH.)	JG (CHKD.)	12.04.17

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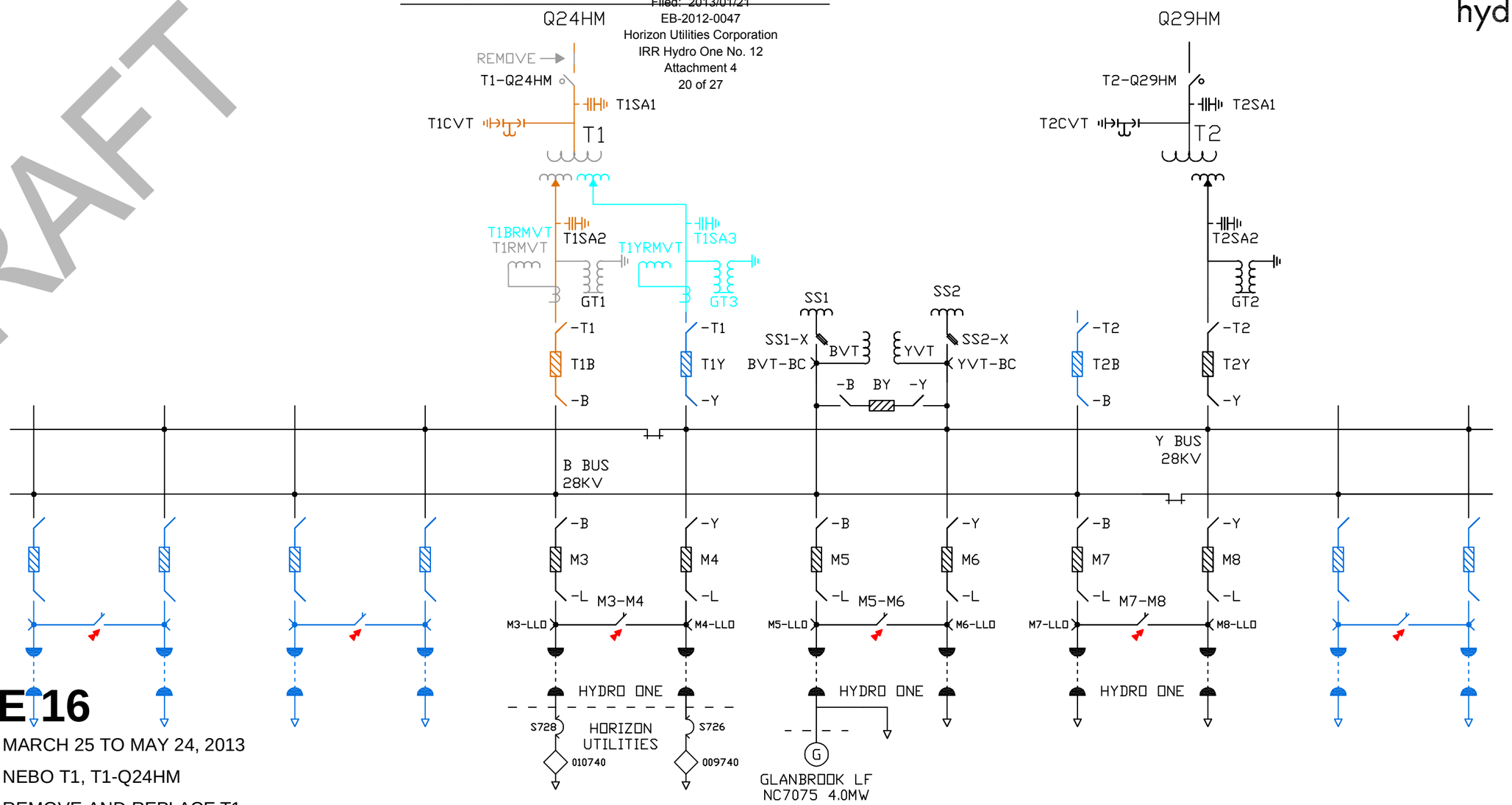

OUTAGE 16

DATES: MARCH 25 TO MAY 24, 2013

EQUIPMENT: NEBO T1, T1-Q24HM

DESCRIPTION: REMOVE AND REPLACE T1
REMOVE AND REPLACE T1-Q24HM
REMOVE AND REPLACE GT1, INSTALL GT3
REMOVE T1RMVT AND INSTALL NEW T1BRMVT, AND NEW T1YMVT
REMOVE AND REPLACE / INSTALL NEW SURGE ARRESTORS

P&C TO CONNECT NEW T1 'A' & 'B' PROTECTIONS
P&C TO REPLACEMENT THE T1B B/F
SMS TO COMMISSION ABOVE EQUIPMENT

TOC OF EQIUPMENT DURING THE OUTAGE - CONSTRUCTION TO DETERMINE DATE

NOTE: CRATING (NEW T1 TX PARTS) TO ARRIVE ONSITE FEBRUARY 21, 2013
NEW T1 TX TO ARRIVE ONSITE ON FEBRUARY 28, 2013

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
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AR NUMBER: 20968
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REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11
NEBO	JB	JG	12.04.17

TITLE — SKETCH'D — CHK'D — YY.MM.DD

NOTE:
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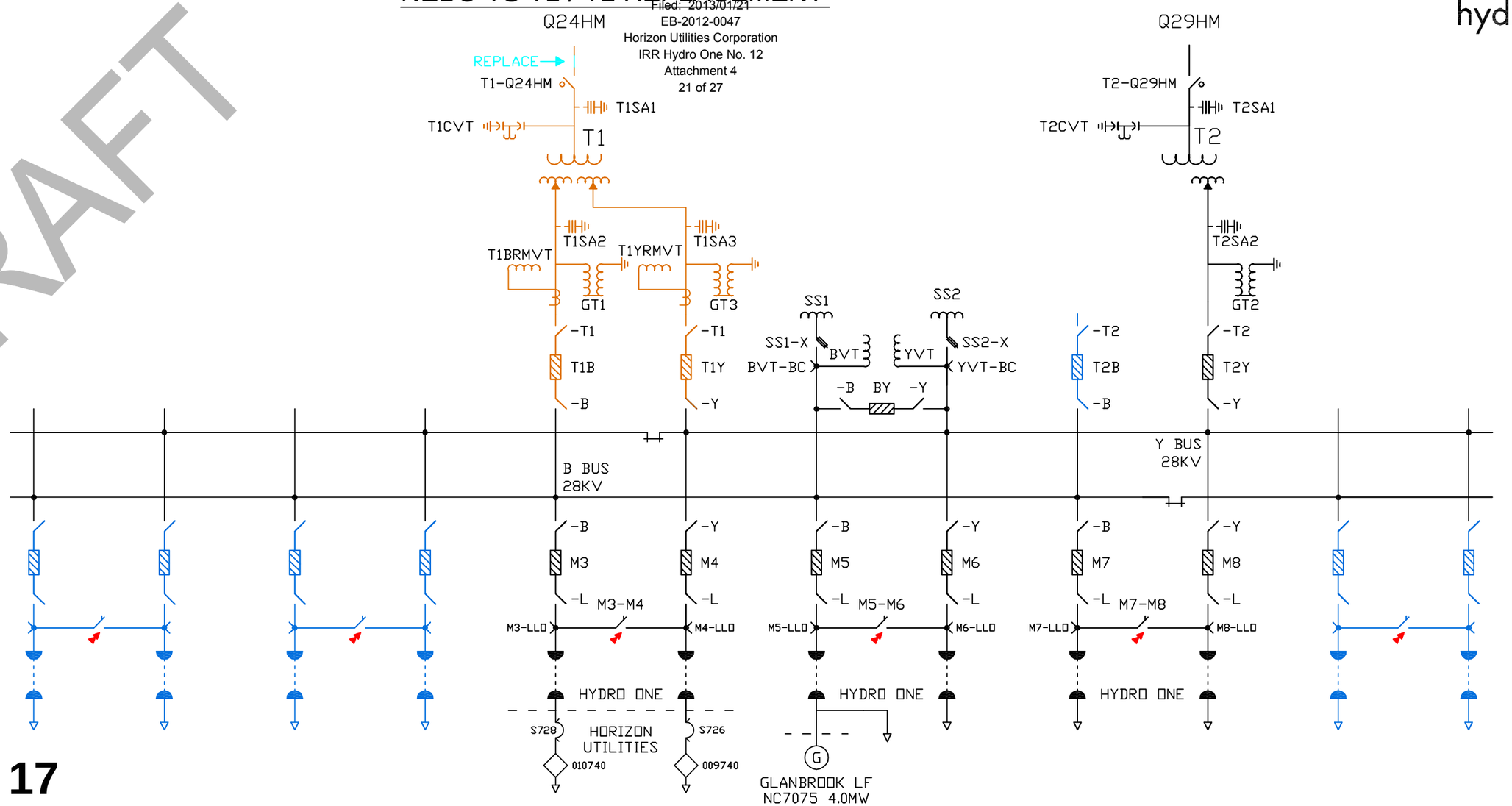

OUTAGE 17

DATES: MAY 27, 2013

EQUIPMENT: Q24HM, NEBO T1

DESCRIPTION: REPLACE SECTION OF BUS ON LINE SIDE OF T1-Q24HM

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
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AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11
NEBO (TITLE)	JB (SKETCH.)	JG (CHKD.)	12.04.17

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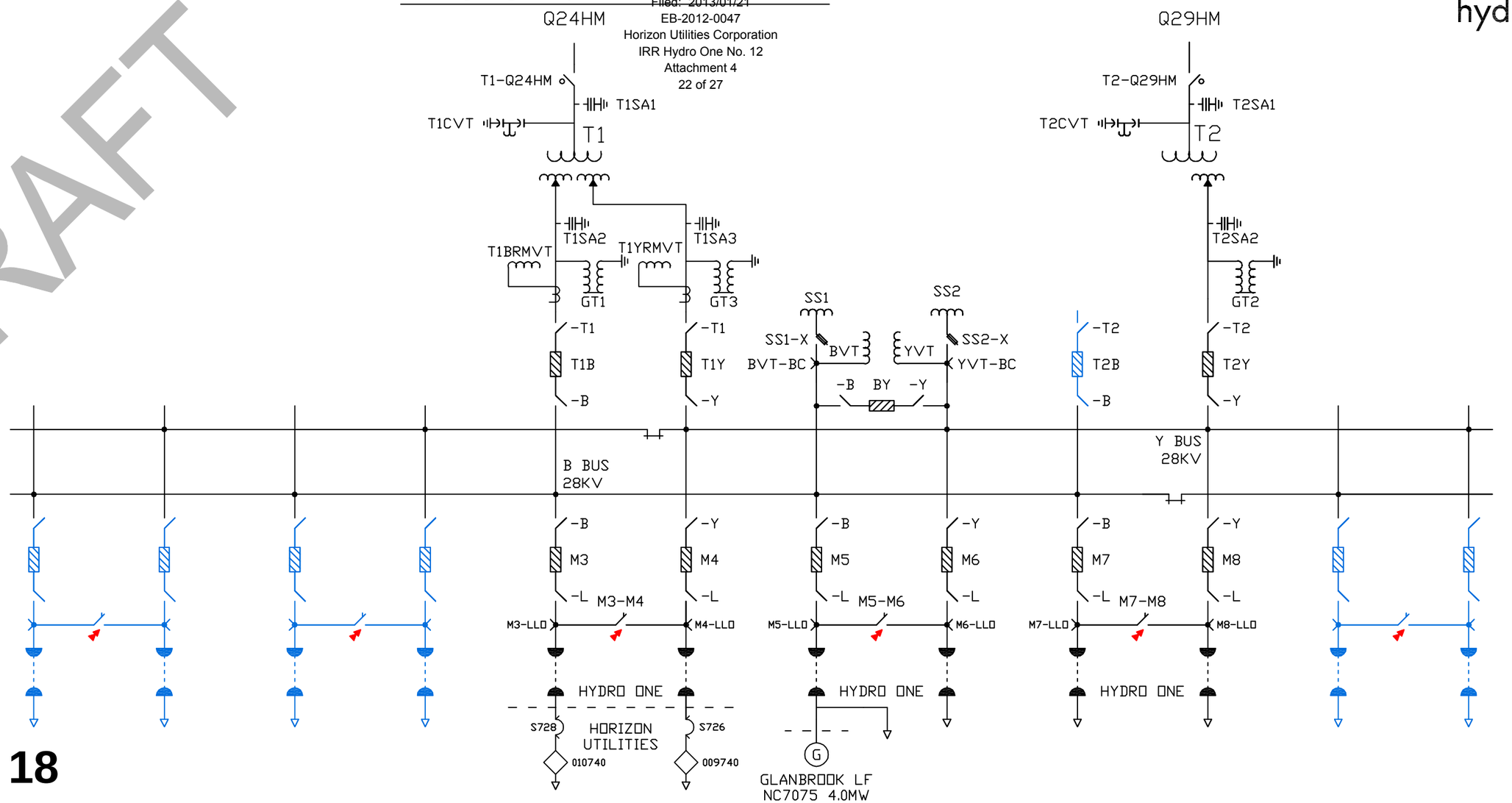

OUTAGE 18

DATES: MAY 28, 2013

EQUIPMENT: NEBO T1

DESCRIPTION: NEBO T1 FIRST ENERGIZATION AND ZTT'S FOLLOWED BY 24HR SOAK (MAY 28 TO 29) THEN ON MAY 29TH PUT ON LOAD AND CROSS READINGS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
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TITLE | SKETCH. | CHKD. | YY.MM.DD

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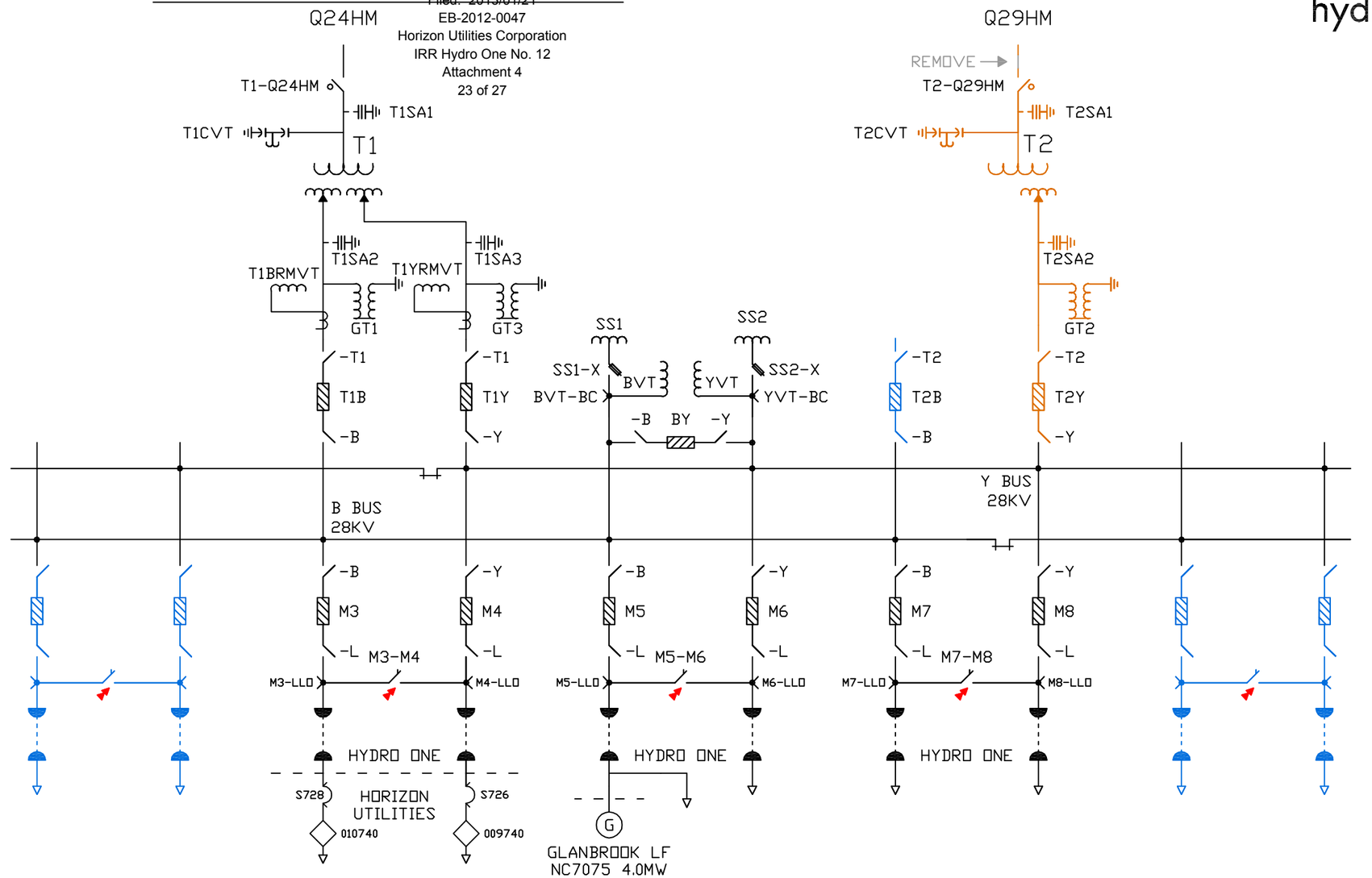

OUTAGE 19

DATES: SEPTEMBER 03, 2013

EQUIPMENT: Q29HM, NEBO T2

DESCRIPTION: REMOVE SECTION OF BUS ON LINE SIDE OF T2-Q29HM

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

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NEBO	JB	JG	12.04.17

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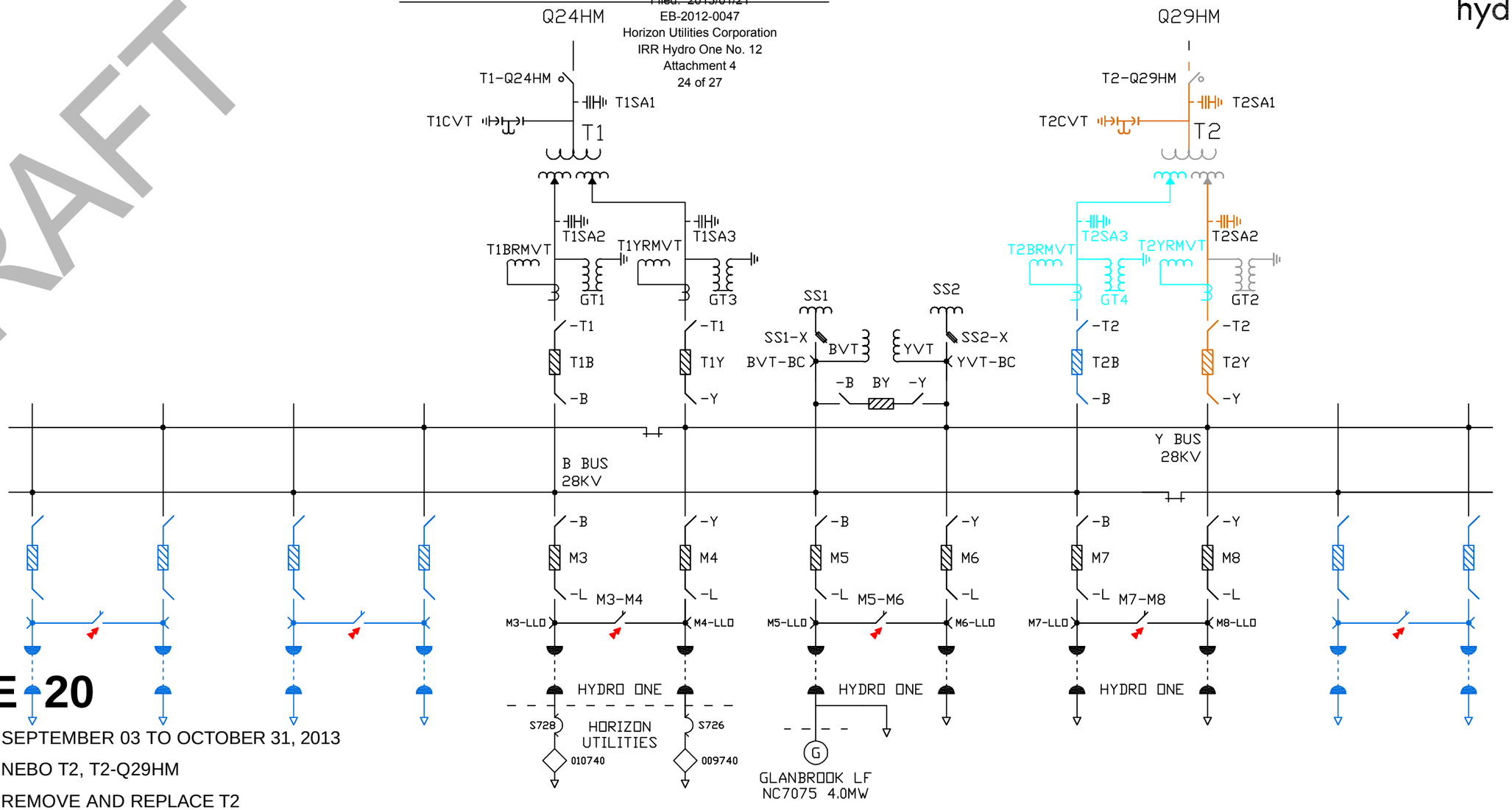

OUTAGE 20

DATES: SEPTEMBER 03 TO OCTOBER 31, 2013

EQUIPMENT: NEBO T2, T2-Q29HM

DESCRIPTION:
REMOVE AND REPLACE T2
REMOVE AND REPLACE T2-Q29HM
REMOVE AND REPLACE GT2, INSTALL GT4
INSTALL NEW T2BRMVT, AND NEW T2YMVT
REMOVE AND REPLACE / INSTALL NEW SURGE ARRESTORS

P&C TO CONNECT NEW T2 'A' & 'B' PROTECTIONS
P&C TO REPLACE THE T2B B/F
SMS TO COMMISSION ABOVE EQUIPMENT

TOC OF EQUIPMENT DURING THE OUTAGE - CONSTRUCTION TO DETERMINE DATE

NOTES: CRATING (NEW T2 TX PARTS) TO ARRIVE ONSITE JULY 24, 2013
NEW T2 TX TO ARRIVE ONSITE ON AUGUST 01, 2013

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

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NEBO	JB	JG	12.04.17

TITLE | SKETCH. | CHKD. | YY.MM.DD

NOTE:
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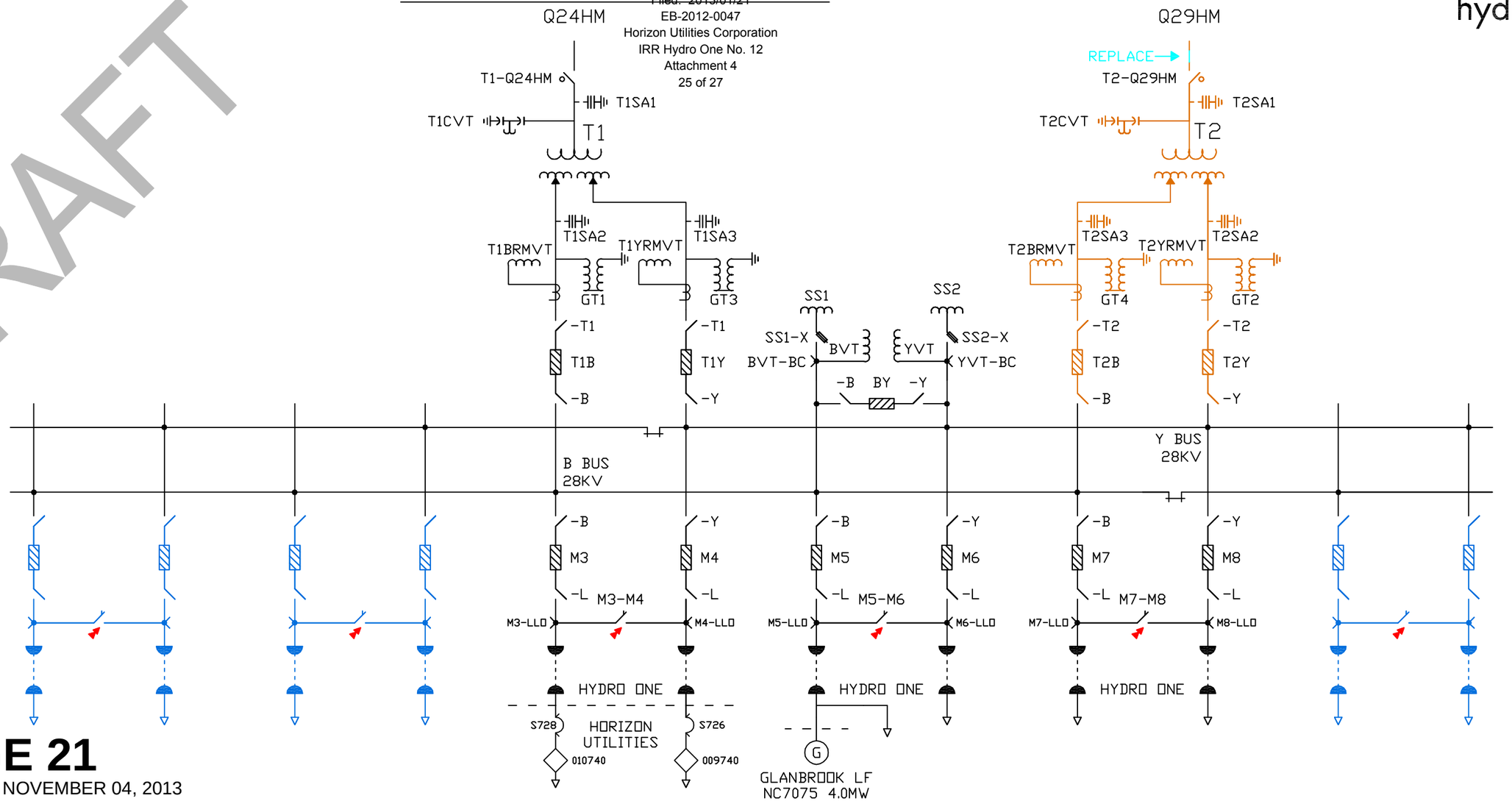

OUTAGE 21

DATES: NOVEMBER 04, 2013

EQUIPMENT: NEBO T2, T2-Q29HM

DESCRIPTION: REPLACE SECTION OF BUS ON LINE SIDE OF T2-Q29HM

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
STAGING PLAN

AR NUMBER: 20968
WBS NUMBER: 700006537

REVISION	BY	APPD.	YY.MM.DD
1 - UPDATED / ADDED NEW FIRS	JB	JG	12.04.11

TITLE	SKETCH.	CHKD.	YY.MM.DD
NEBO	JB	JG	12.04.17

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PAGE #

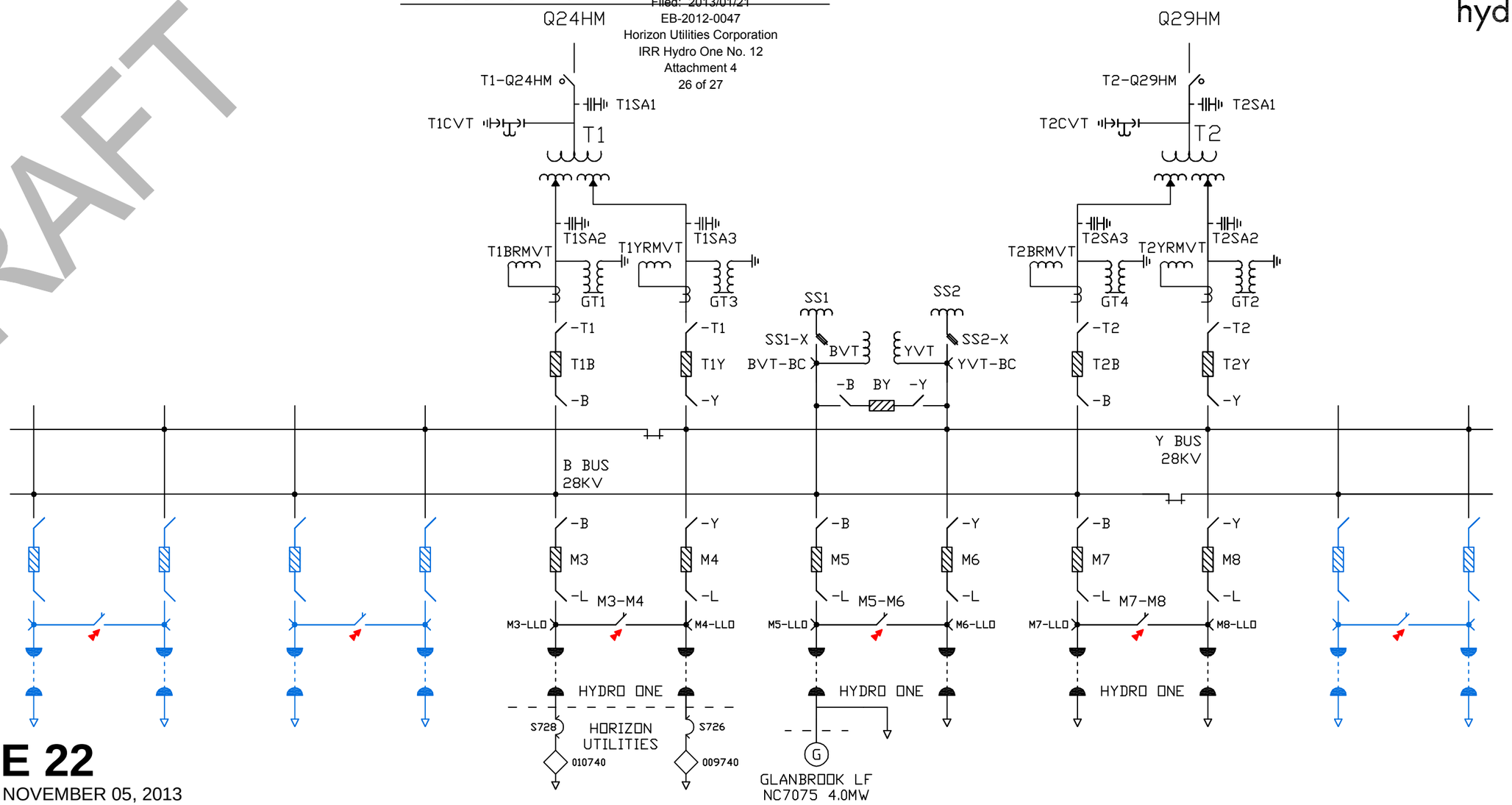
REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT

Filed: 2013/01/21
EB-2012-0047
Horizon Utilities Corporation
IRR Hydro One No. 12
Attachment 4
26 of 27



OUTAGE 22

DATES: NOVEMBER 05, 2013

EQUIPMENT: NEBO T2

DESCRIPTION: NEBO T2 FIRST ENERGIZATION AND ZTT'S FOLLOWED BY 24 HR SOAK (NOVEMBER 05 TO 06) THEN ON NOVEMBER 06 PUT ON LOAD AND CROSS READINGS

RECALL:

NOMS:

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

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AR NUMBER: 20968
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NEBO (TITLE)	JB (SKETCH)	JG (CHKD.)	12.04.17

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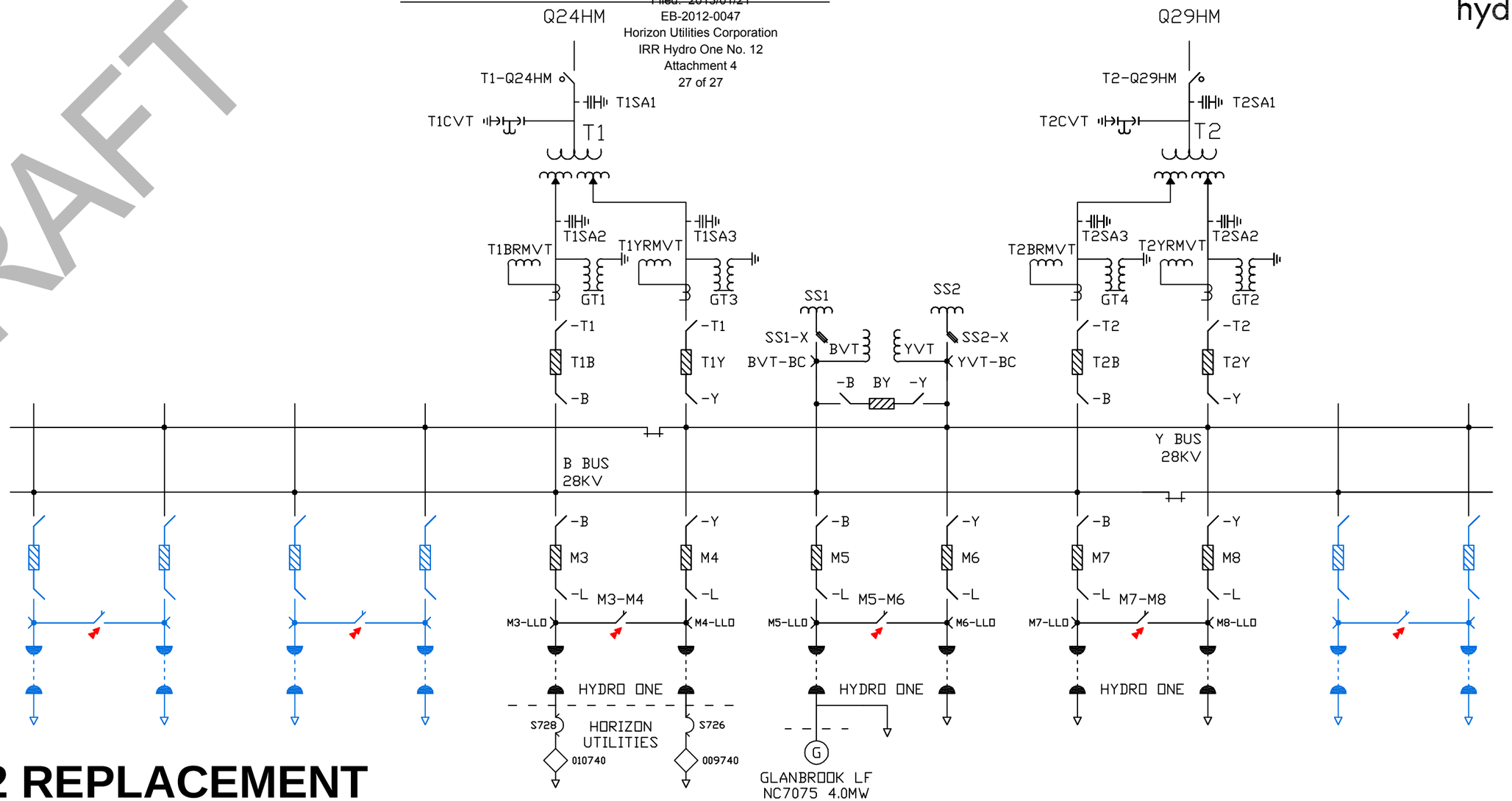
REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

NEBO TS T1 / T2 REPLACEMENT



T1 / T2 REPLACEMENT COMPLETED

DE-ENERGIZED EQUIPMENT
EXISTING EQUIPMENT
NEW ITEMS INSTALLED DURING THIS STAGE
EQUIPMENT TO BE REMOVED DURING THIS STAGE
OUTAGE
TESTING

PROJECT
NEBO TS
T1 / T2 REPLACEMENT
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AR NUMBER: 20968
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NEBO (TITLE)	JB (SKETCH)	JG (CHKD.)	12.04.17

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REV. 1

THE STAGING PLAN IS NOT TO BE USED FOR WORK PROTECTION AND EXECUTION

NOTE:
1. STATION NOMENCLATURE SUBJECT TO CHANGE

Question 13

Preamble:

Ref: Related to the Burman Report

HONI is unable to reconcile the costs listed in the "Comparison of Offers to Connect" on Page 33 with either of the Offers to Connect filed with the Board by HONI or HUC. Please provide a copy of the source information that was used to construct this comparison.

Response:

The source information used to construct this comparison was Horizon Utilities' Offer to Connect Alternative Bid Schedule B contained in the SAA Application, as well as Hydro One's Offer to Connect Alternative Bid information contained in the SAA Application. In addition, Horizon Utilities provided the figure of $562,171 which relates to the contestable costs for the developer to complete the civil work per Schedule B of Hydro One's OTC.

Question 14

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

HUC submitted maps for City of Hamilton urban plans at Schedule E-1. Please provide a copy of these maps showing the existing service areas of HUC and HONI.

Response:

Horizon Utilities understands that the question is referring to the Urban Hamilton Official Plan Schedule E-1 map which is not a document that Horizon Utilities created. Horizon Utilities does not have the technical capability of superimposing the service areas on the planning map; even if such was done, it would be very difficult to read with all of the colours and inserts on the Urban Hamilton Official Plan map.

Question 15

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

Was the anticipated load from the customers within Parts I – V of this SAA included in the HUC long-term load forecast provided to both Hydro One Distribution and Transmission for the Nebo TS upgrade?

Response:

Horizon Utilities confirms that it had included load from Parts I, IV and V in its long-term load forecast provided to both Hydro One Distribution and Transmission. As previously identified, Horizon Utilities has filed 8 prior SAA applications with the Board that were on a consent or uncontested basis. Horizon Utilities therefore reasonably concluded that it would service the Parts I, IV, and V lands.

Question 16

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

In the June 15, 2012, version of the SAA Application, point 7.1.4(f) states that HUC has a 27.6kV feeder with 20MVA of capacity immediately adjacent to the subject area of the application (Summit Park Phase 7). Which feeder is this specifically?

Response:

The 331X feeder, which emanates from the M3 breaker, is adjacent to the Summit Park Phase 7 development. The 20MVA of capacity is an estimate based on feeder capacity alone, not station capacity. Each feeder has 200A or 9.6MVA available. Since the 331X feeder and the 341X feeder (which emanates from the M4 breaker) are interconnected with a switch it is possible to transfer 200A from the 331X to the 341X (and vice versa). This allows for 400A or 19.2MVA (approximately 20MVA) of feeder capacity to be made available on either feeder.

Question 17

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

HUC has requested space on the Bell poles that were recently replaced on Rymal Road near Glover Road so that HUC can string new or additional conductors. Is this for the purpose of providing a loop feed for the Bishop Ryan School? If not, what is the purpose?

Response:

Horizon Utilities did not request space on the Bell poles. Horizon Utilities was an existing tenant on the old poles and simply transferred its line to the new poles following their installation. Since both Horizon Utilities and Hydro One are tenants on the new pole line, Bell had to establish which side would be occupied by Horizon Utilities and which side would be occupied by Hydro One, and establish a vertical line configuration, to maximize the use of the pole for both LDCs for operation and maintenance activities, all of which falls under good utility practice. Horizon Utilities is proposing to feed Bishop Ryan Catholic Secondary School from the existing Nebo M3 27.6 kV feeder which is adjacent to the school property and is already loop fed; Hydro One's feeder is radial fed. The existing Horizon Utilities 13.8 kV feeder, which currently resides on the Bell poles near Glover Road, services existing customers west of Trinity Church Road and will not be utilized for Bishop Ryan Catholic Secondary School.

Question 18

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

Section 7.2.1(a) of Part IV indicates that the feeder adjacent to the property (presumably the school) is complete with interconnection ties with adjacent feeders for security and reliability of the customers. Is this interconnection tie with adjacent feeders using M3 and M4? If not, state which feeders and Transmission Station make up this interconnection.

Response:

The M3 feeder is adjacent to the north boundary of the new Bishop Ryan Catholic Secondary School property and is interconnected to the following feeders:

- Nebo M4;
- Lake TS 121X feeder;
- Winona TS W14X feeder; and
- Winona TS W15X feeder.

Question 19

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

Please provide your estimated growth potential in each of the section outlines in Parts I-V of the Service Area Amendment Application.

Response:

Horizon Utilities estimated growth by Part is summarized below:

- Part I: Horizon Utilities submits that there is some growth potential within Part I. Two potential school properties and a small commercial property are zoned within the Summit Park 7 Development which will be serviced by the distribution system within it. That said, once Summit Park 7 is complete, there is no further potential for growth.

- Part II: Horizon Utilities submits that there will not be further growth in this area because the area is "fully developed and no further development is possible" (Please see Horizon Utilities' SAA Application Part II, pg 15 of 29, dated October 24, 2012).

- Part III: Horizon Utilities submits that "there will not be further growth in this area because the area is "fully developed and no further development is possible" (Please see Horizon Utilities' SAA Application Part III, pg 14 of 29, dated October 24, 2012). Horizon Utilities identifies that some of the lands along Rymal Road East are sizable lots that could be subdivided or converted into commercial properties. However, such would necessitate a change in zoning and therefore this growth potential is speculative at this time.

- Part IV: Horizon Utilities submits that although the lands surrounding the subject lands are fully developed, there is a relatively small parcel of undeveloped land at the immediate southeast corner of Trinity Church and Rymal Road which has limited growth potential. (Please see Horizon Utilities' SAA Application Part IV, pg 4 of 41 dated October 24, 2012).

- Part V: Horizon Utilities submits that the lands to the North and West of the subject lands are substantially developed. The lands are bound to the East by Swayze Road and to the South by the hydro corridor. The lands represent the last undeveloped parcel of the Summit Park Development and are a natural extension of Phases 6 and 7 of the development owned by the same developer, Multi-Area Developments Inc. (Please see Horizon Utilities' SAA Application Part V, pg 13 of 26, dated October 24, 2012).

Question 20

Preamble:

Ref: Related to the Service Area Amendment Application – Various sections

Please detail all expenditures on upstream costs and other reinforcements costs required to service areas in Parts I to V.

Response:

There will be no additional upstream costs or other reinforcement costs required to service areas in Parts I to IV. Further, no additional upstream or reinforcement costs are required for Part V.