# May 4, 2017 Settlement Meeting Presentation Materials

# **Lower Churchill Project**

Contract Between Island Link Limited Partnership and Valard Construction LP Newfoundland and Labrador, Canada







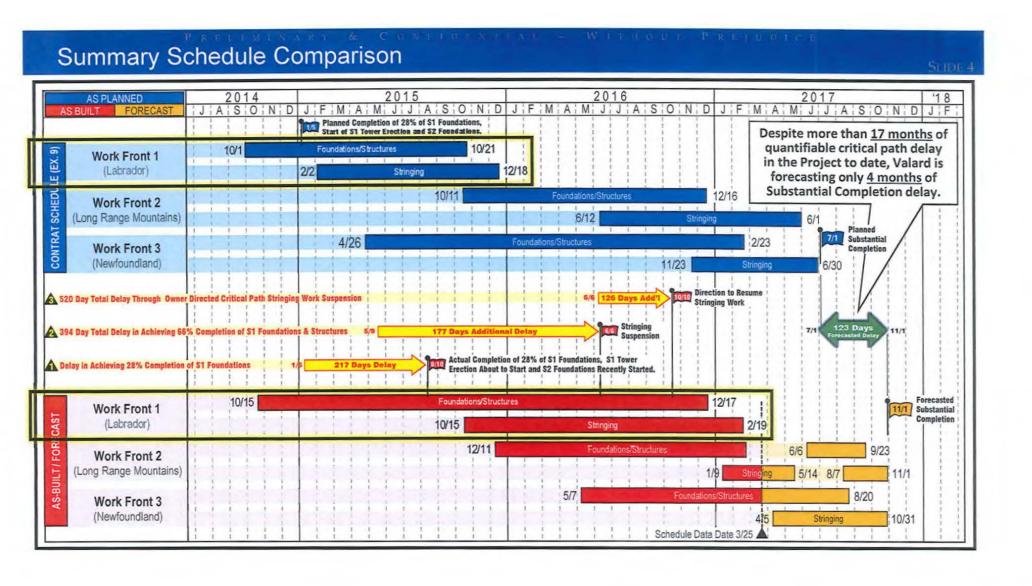
McLean & Armstrong LLP



#### Topics of Discussion

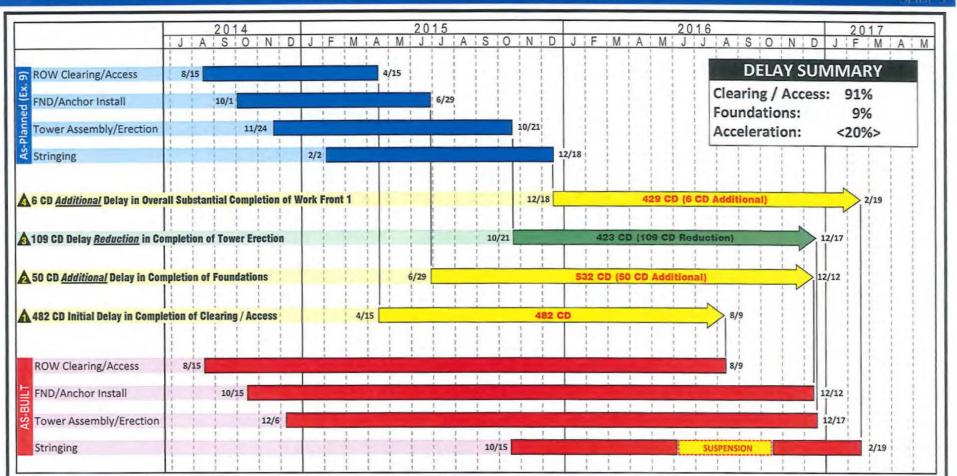
- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - ✓ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - √ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - ✓ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions

#### **Summary Schedule Comparison** 2016 2015 2017 2014 AS PLANNED '18 JASON D F M A M J J A S O N D J F M A M J J A S O N D MAAM JIJASOND JE Planned Completion of 28% of \$1 Foundations, Start of S1 Tower Erection and S2 Foundations. Despite more than 17 months of quantifiable critical path delay 10/21 10/1 Work Front 1 in the Project to date, Valard is (Labrador) 12/18 forecasting only 4 months of Substantial Completion delay. Work Front 2 (Long Range Mountains) CONTRAT Substantial 2/23 4/26 Work Front 3 (Newfoundland) 11/23 6/30 Direction to Resume \$ 520 Day Total Delay Through Owner 123 Days Delay in Achieving 28% Cor Erection About to Start and S2 Foundations Recently Started. 10/15 12/17 Work Front 1 Substantial Completion (Labrador) 10/15 2/19 6/6 9/23 Work Front 2 (Long Range Mountains) 5/14 8/7 11/1 8/20 Work Front 3 (Newfoundland) 10/31 Schedule Data Date 3/25



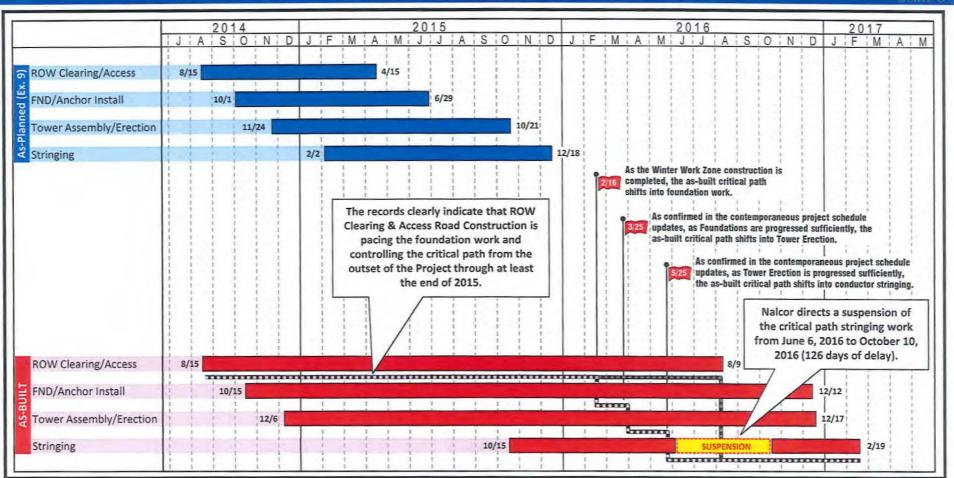
#### Work Front 1 - As-Planned vs. As-Built Schedule Comparison

SLIDE S

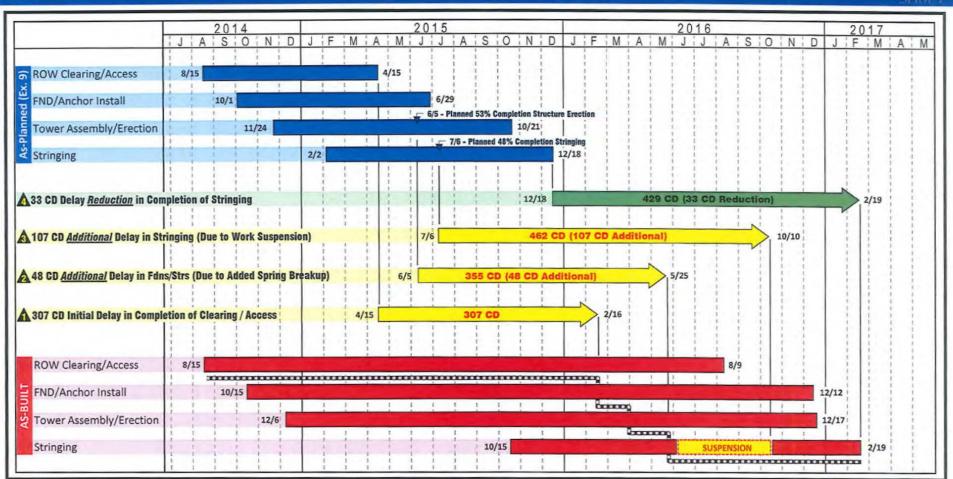


#### Work Front 1 - As-Planned vs. As-Built Schedule Comparison

SLIDE (



#### Work Front 1 - As-Planned vs. As-Built Schedule Comparison



#### Topics of Discussion

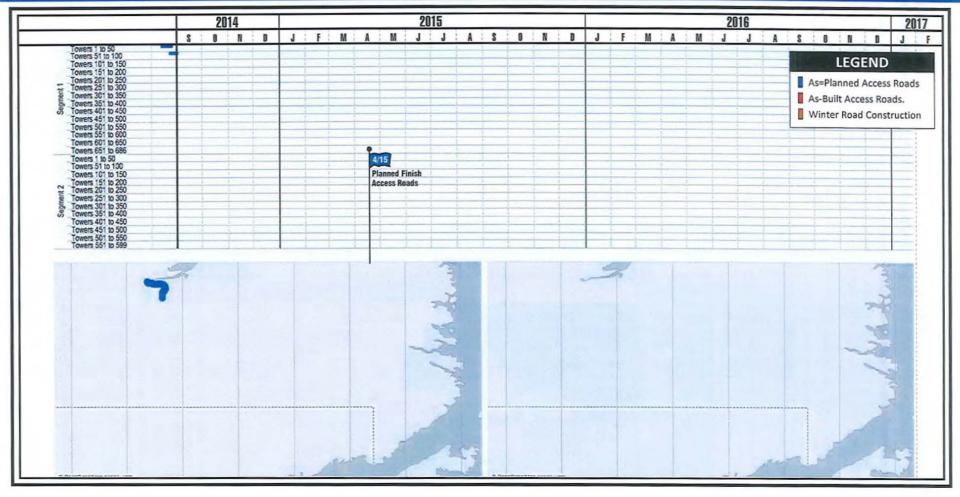
SUMMER &

- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - ✓ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - ✓ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - ✓ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions

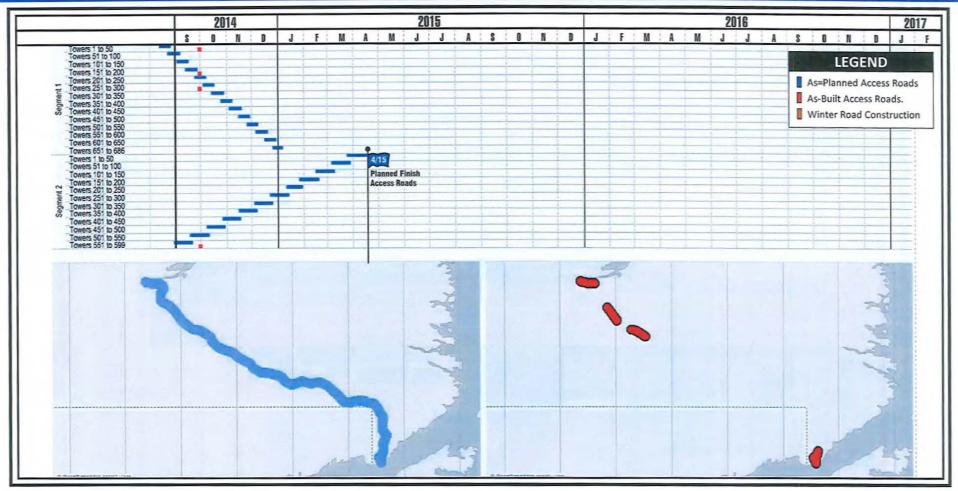
# Work Front 1 – Impacts and Delays Noted in Valard Monthly Reports to Nalcor

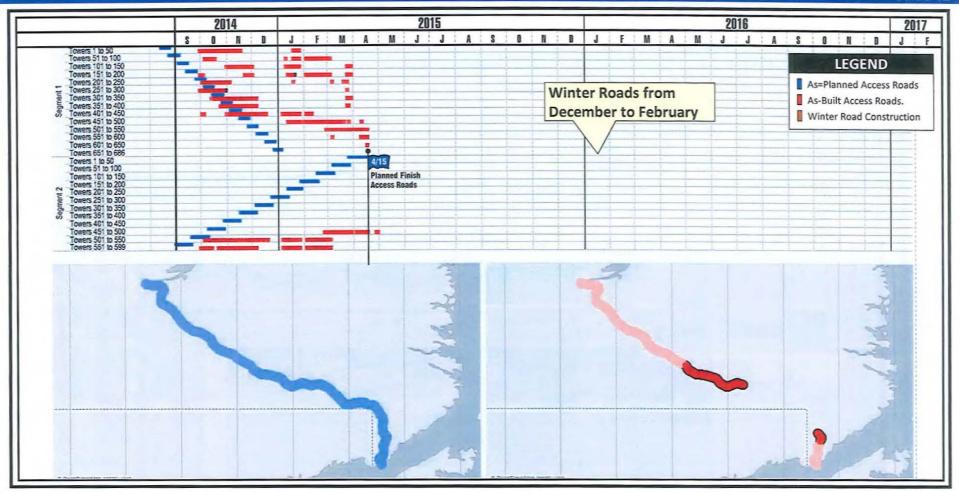
SIDE

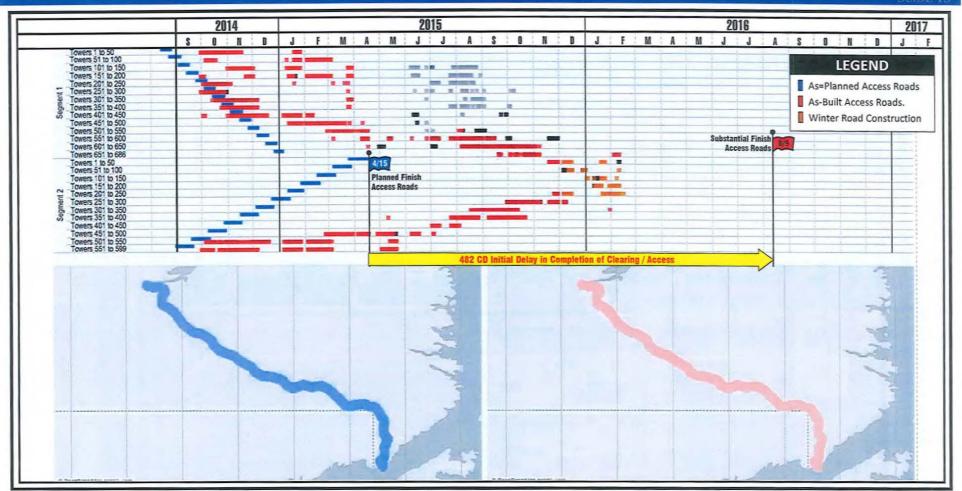
	2	014							20	15											20	16						20	17
	0	N	D	J	F	М	A	M	J	J	Α	S	0	N	D	J	F	M	A	М	J	J	Α	S	0	N	D	J	F
OW/Access Construction Delays (Valard crews catching ROW / Road crews, moves, out-of-sequence work)	X	×	×	×	×	×	×	×	X	×	X	×	X	×	×	×	×	X	×	X	×	×				1 2			
Road Ballasting Delays (Valard crews waiting on completion of road repairs / ballasting work)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	×	X	×	×	×	×	×	×	×	×													1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Camp Accommodation Shortage (delayed ROW & access road construction caused shortages in camps)			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	×	×	×	×	X	×	×	×	X	X	×	×											\$ E	
Foundation Selection Impacts (Impacts from lack of Geo-Program, uncertainty & changes in fdn. types)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	X	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	X	×								
Foundation Settlement Issues (selection of un-suitable foundation types, dispute over modeling method)		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			1 t 7 7 X X X X X X X X X X X X X X X X X		1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1	×	×	X	×	×	×	×	X	X	×	X	×	X	X	×	X	X	X	×	×
Material Availability Impacts (ongoing shortages in material supply for both foundations & structures)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	×	X	X	×	×	×	X	X	X	×	X	X	X	X	X	X	×	×	X	×	X	X	X	×	×	X	×	X
Conductor Issue Impacts (Nalcor directed 4-month suspension of stringing work)		1 1 1 1 1 1 1 1 1				1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	# # # # # # # # # # # # # # # # # # #	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1 1 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 2 4 1 3	1 1 1 1 1		! ! ! ! !	×	×	×	×	×				



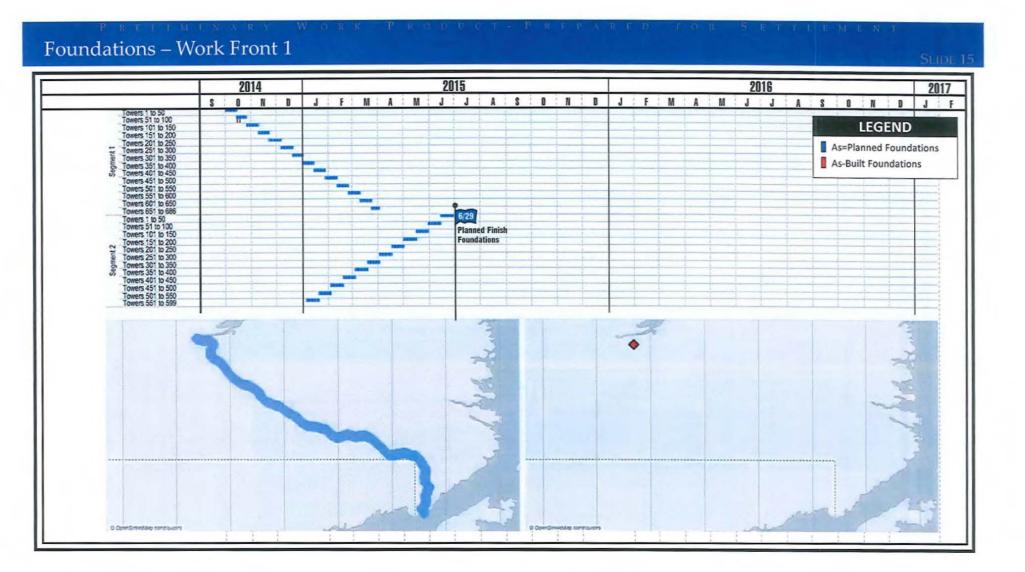
SLIDE II





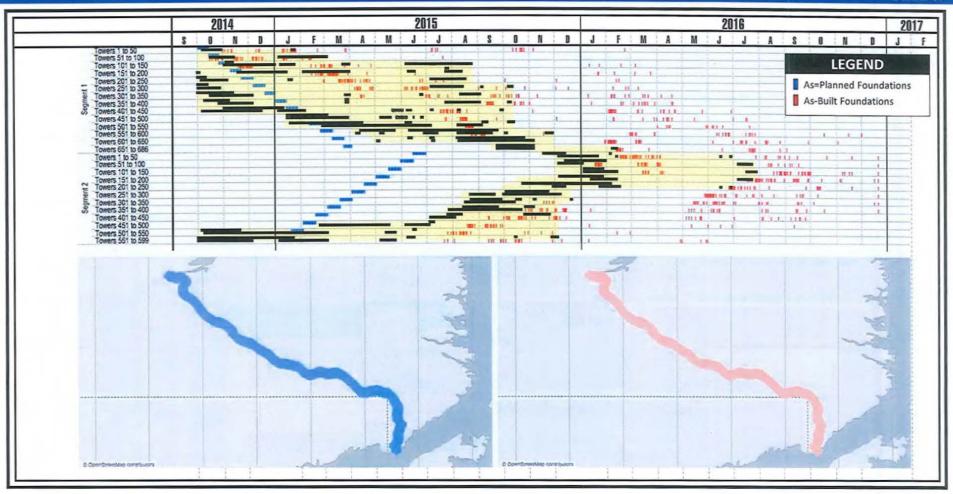


# Foundations – Work Front 1 2014 2015 2016 2017 0 N D M A M J J A S O N Towers 1 to 50 Towers 51 to 100 Towers 51 to 150 Towers 101 to 150 Towers 151 to 200 Towers 251 to 200 Towers 251 to 300 Towers 251 to 300 Towers 351 to 400 Towers 351 to 400 Towers 401 to 450 Towers 401 to 450 Towers 451 to 500 Towers 511 to 500 Towers 551 to 600 Towers 551 to 600 Towers 551 to 100 Towers 51 to 100 Towers 51 to 100 Towers 51 to 100 Towers 51 to 100 Towers 251 to 300 Towers 351 to 100 Towers 351 to 100 Towers 351 to 400 Towers 351 to 400 Towers 351 to 450 Towers 351 to 450 Towers 451 to 500 Towers 451 to 500 Towers 451 to 500 Towers 451 to 500 Towers 551 to 500 Towers 551 to 500 Towers 551 to 500 Towers 551 to 500 LEGEND As=Planned Foundations As-Built Foundations 6/29 Planned Finish Foundations



#### Foundations – Work Front 1 2014 2015 2016 2017 110 t 100 to 100 Towers 1 to 50 Towers 51 to 100 Towers 101 to 150 Towers 101 to 150 Towers 101 to 150 Towers 151 to 250 Towers 251 to 350 Towers 251 to 350 Towers 351 to 450 Towers 351 to 450 Towers 451 to 550 Towers 451 to 550 Towers 501 to 550 Towers 51 to 100 Towers 101 to 150 Towers 351 to 100 Towers 351 to 100 Towers 351 to 350 Towers 351 to 350 Towers 351 to 450 Towers 351 to 450 Towers 451 to 550 Towers 451 to 550 Towers 501 to 450 Towers 501 to 450 Towers 501 to 450 Towers 501 to 550 LEGEND 11 11 11 1 1 1 1.110 TORN 5 1 As=Planned Foundations MININE. As-Built Foundations **Substantial Finish** Foundations 6/29 **Planned Finish** Foundations





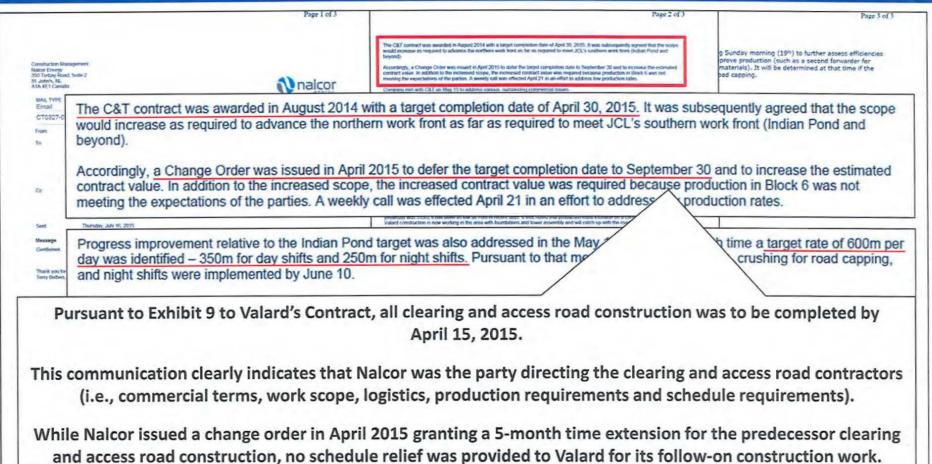
SHOE B

While the original Contract contemplated that Valard would manage ROW clearing and access work (Part B of Contract), it was never afforded the opportunity to do so:

- Valard was not able to manage as Nalcor overrode Valard decisions; did not communicate financial terms of roadbuilding contracts; and directed contractors without Valard involvement.
  - √ Valard did not have any control (no authority under the contracts of roadbuilding subcontractors) and they would not take direction from Valard.
  - Despite making numerous requests, Valard was not provided detailed insight into the costs of the Nalcor roadbuilding subcontractors and could not manage the costs without this knowledge.
  - ✓ Nalcor decided (unilaterally) not to cap the road with crushed stone in many places which did not meet the all season "fit for purpose" standard.
  - ✓ When Valard raised road capping issue, Nalcor management took the position that Valard was in charge of the road, but when the Valard tried to have capping completed, roads widened, further access built and more road maintenance Nalcor refused.
  - ✓ Given the situation, delays in real time decision field making lead to compounding delays.
  - √ Nalcor arbitrarily elected to move resources from Labrador to get started on work fronts 2 and 3, which in turn
    further delayed the completion of access in Labrador.
- Valard's Part B role was terminated early in 2016.

SLIDE IS

	Page 2 of 3 Page	3 01 3
Conditudion Management lactor braining lactor braining State 1 State 2  On Tradep House State 2  On Tradep House State 2  On Table 1 State 2  On Table 1 State 2  On Table 1 State 2  On Table 2 State 2 State 2  On Table 2 State 2 S	The CST contest was sewarded in August 2014 with a target completion date of April 20, 2015. It was subnequently agreed that the range would increase an inspect to advance the northwess work force in far on inspect to executions of the princh.  Accordingly, a Change Order was round in April 2015 to delite the target completion date to September 20 and its encience the entirely contract value. It additions a different to the entirely date of processors, a work of a second effort variety of the expectations of the princh. A weakly call was effected dyst27 in an effort to address the production in Block 6 was not expected entirely. Company west with CAT on May 15 to address various containing commercial mouses.  In the May 15 to reacting, Congany agreed to consider a proposal force (CAT out-mainted such a proposal for a facility of the effect of the discussed offline, costs; deferred; to be discussed offline.  For goods are provided in August 2015 to delite the same force in the May 15 meeting at which there a target rate of 600m per	
From Post Sechalth - Nation Energy	Programs registerinate flatative in the insular register and account of the insular programs are considered in the insular programs and insular programs are considered in the insular programs and insular programs are considered in the insular programs and considered in the insular programs are considered to the insular programs and considered in the insular programs are considered in the insular programs and considered in the insular programs are considered in the insular programs and considered in the insular programs are considered in the insular programs.	
En Bruce Bogolie - CAT Enterprises Ltd  Mr Bruce Monres - CAT Enterprises Ltd  Mr Gazas Yornes - CAT Enterprises Ltd  Dean Spodie - Valded Construction	Sent Thursday, July 16, 2015  Message	
Cc Mr Jason Kasn - Notice Energy Kin Spatien - Notice Energy Michael Ceff - Notice Energy Michael Ceff - Notice Energy	Gentlemen	
Sert Therday, July 16, 2015 Message Certiforeis	Thank you for participating in a phone meeting yesterday afternoon (15th). The following summarizes our discussions. Please forw Terry Belben, Sheldon Spencer, Dave Ofukany, and others as required.	vard to
Thank you for participating in a phone meeting yesterday afformson (15th). The following summarities and disciplination. Place forward to		
Thank you for participating in a phone meeting professing informace (ISDs). The following summarches and disconsissions. Present forward to Terry Belbers, Sheldon Spencier, David Oskany, and others an inspated.	Participants	
Tony Bisban, Sheldon Spencer, Davi Chikany, and others as required.  Participants  Cat Terry Bisban  Binar Buyan  Binar Buyan  Cancar Strain  Company Rose Bestweth  Jacob Rose  Jacob Ros	Participants  C&T Terry Belben Brian Bugden Bruce Moores Gaius Trimm	
Terry (sobset, Shridan Spencer, Direc Chikany, and others as required.  Participents  CST Terry Seibert Binar Bugden Binar Macras Coass Tream Company Ress Bedrach	C&T Terry Belben Brian Bugden Bruce Moores Gaius Trimm  Company Ross Beckwith	
Terry (solver, Shridan Spencer, Direc Childray, and others as required.  Participants  CoS1 Terry Selbers Bream Rugden Black Moons Coses Trem  Company Ress Bedwarth Japon Boons Mont Stankers  Em Stankers  Em Stankers  Em Stankers	C&T Terry Belben Brian Bugden Bruce Moores Gaius Trimm  Company Ross Beckwith Jason Kean Ken Sparkes	
Terry (sobies, Shridan Spencer, Direc Chicany, and others an required.  Participants  Co.1 Terry Siebers Britan Bugden Blace Micross Conso Trans Conso Trans Conso Trans Conso Trans Conso Trans Conso Trans Mark Spanes Mark Spanes Mark Spanes Mark Spanes Mark Spanes Mark Spanes Shridan Spencer  Sarky  It was reclied that the emulsion birecting program was reculting in more efficient rick production and caser heading. It was reclied that mad coping brilliantly personnel transportation.  Background  Background	C&T Terry Belben Brian Bugden Bruce Moores Gaius Trimm  Company Ross Beckwith Jason Kean	
Terry (sobins, Shridan Spencer, Direc Oskariy, and others as required.  Participants  Cot Terry Bribers Briser Buyden Briser Moons Coses Terrin  Company Resis Reduceth Jaison Rosp Ken Spanles Male Tulf  Visited Dean Sjotes Shallon Spancia  Safety  It was noted that the emploon blenting program was recalling in more efficient rick production and career handling. It was rethed that mad capping facilitation of personnel strangistation.  Background	C&T Terry Belben Brian Bugden Bruce Moores Gaius Trimm  Company Ross Beckwith Jason Kean Ken Sparkes Mike Tuff  Valard Dean Sjodin	_

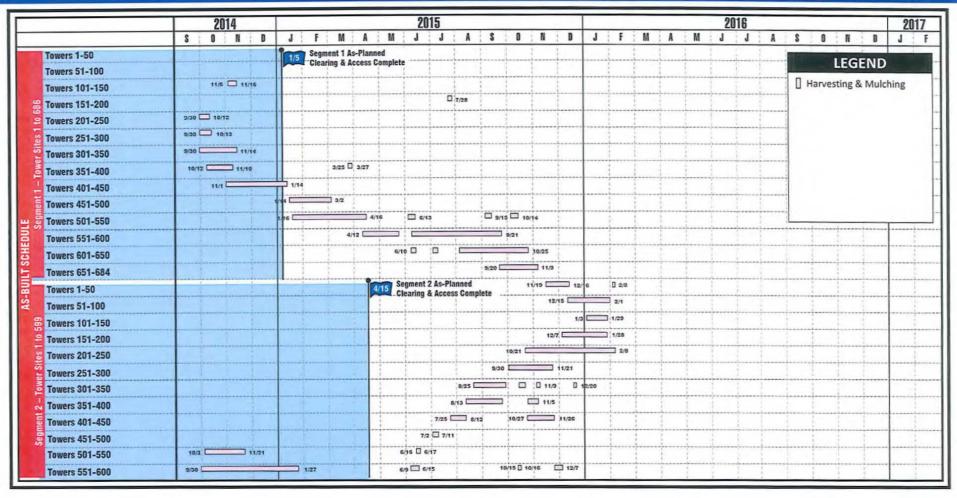


#### Topics of Discussion

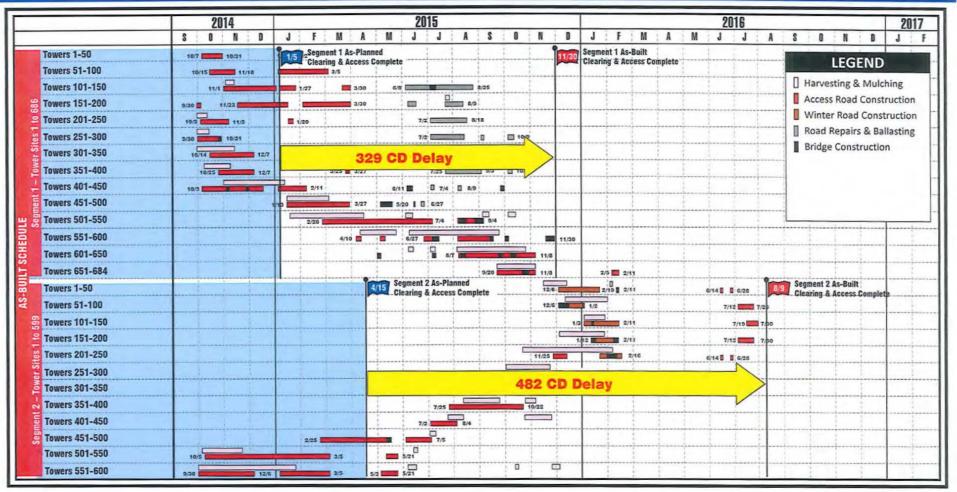
- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - ✓ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - ✓ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - ✓ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions

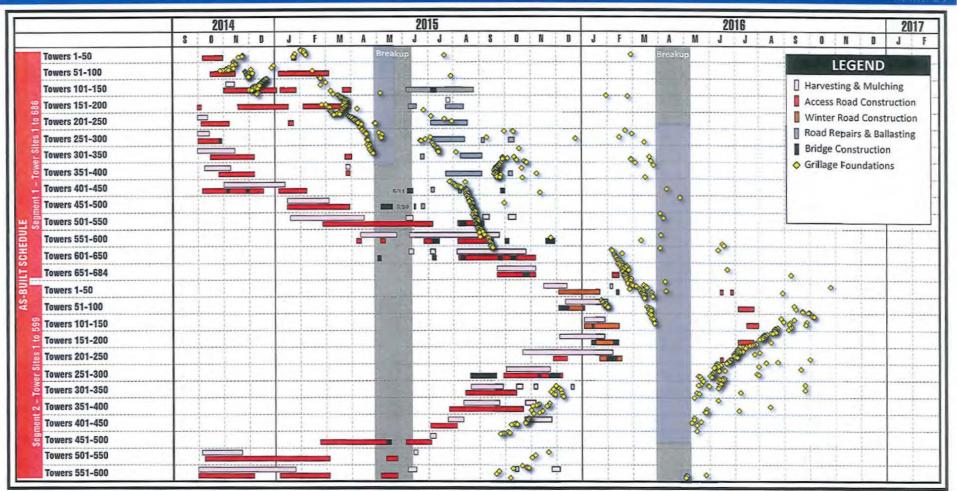
# ROW Harvesting & Mulching - Work Front 1

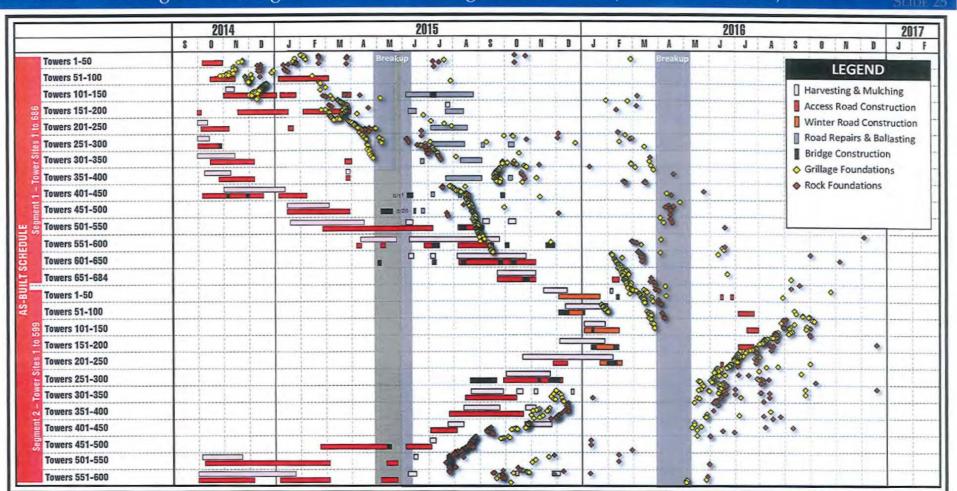
Summ 22

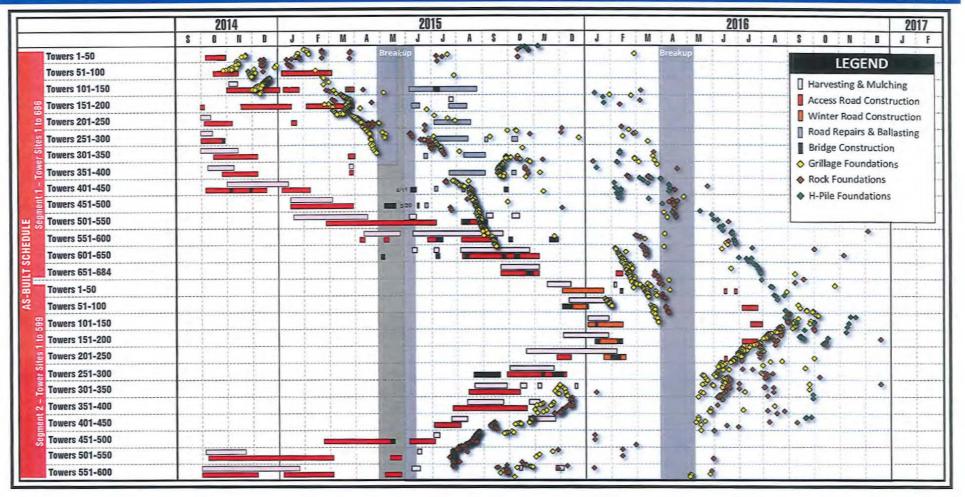




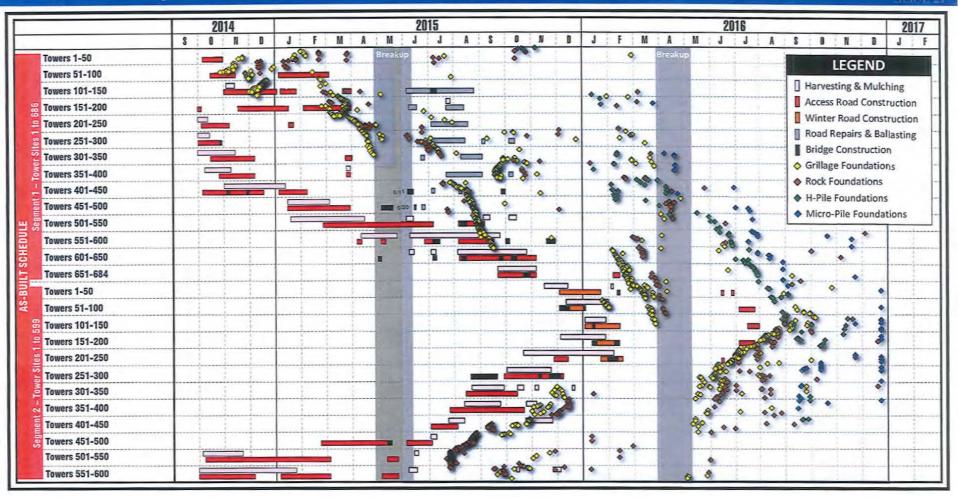


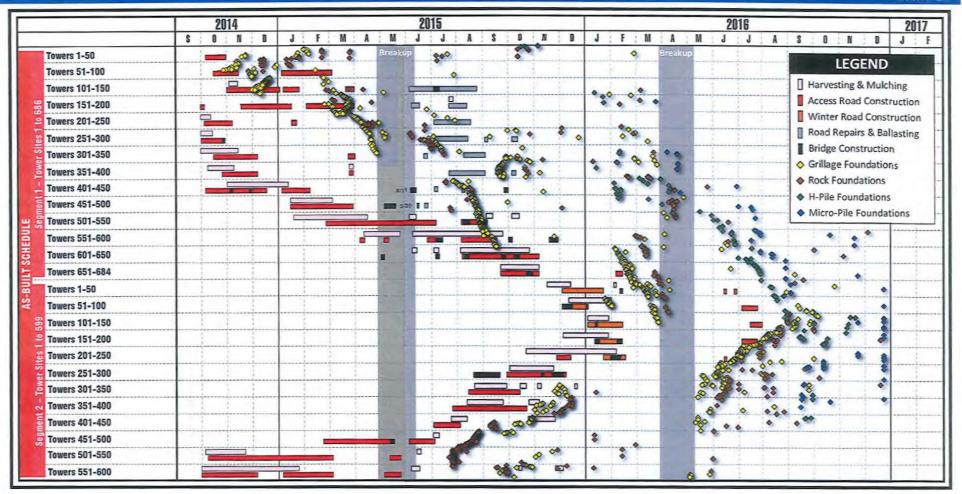




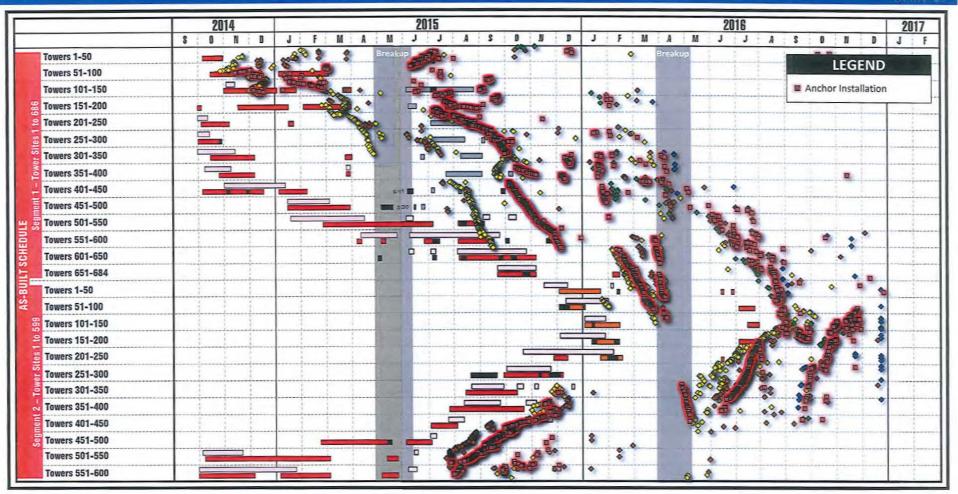


LIDE 27

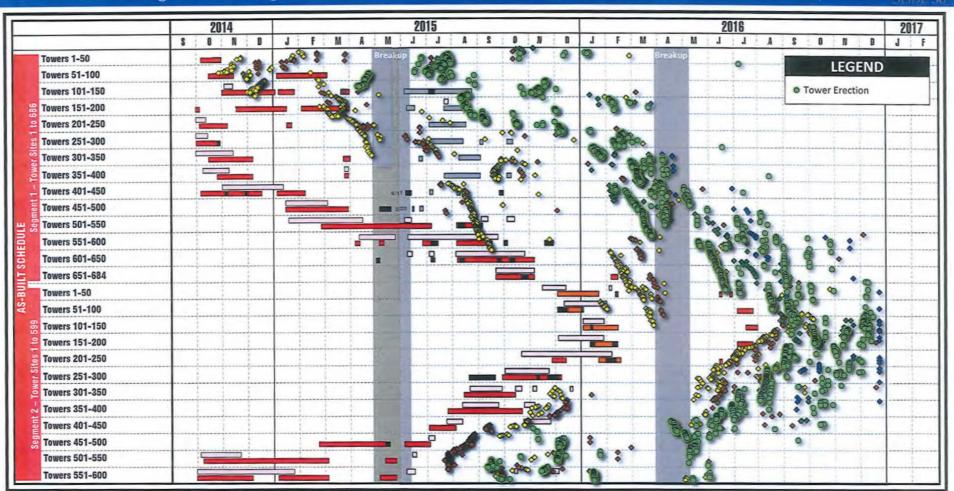


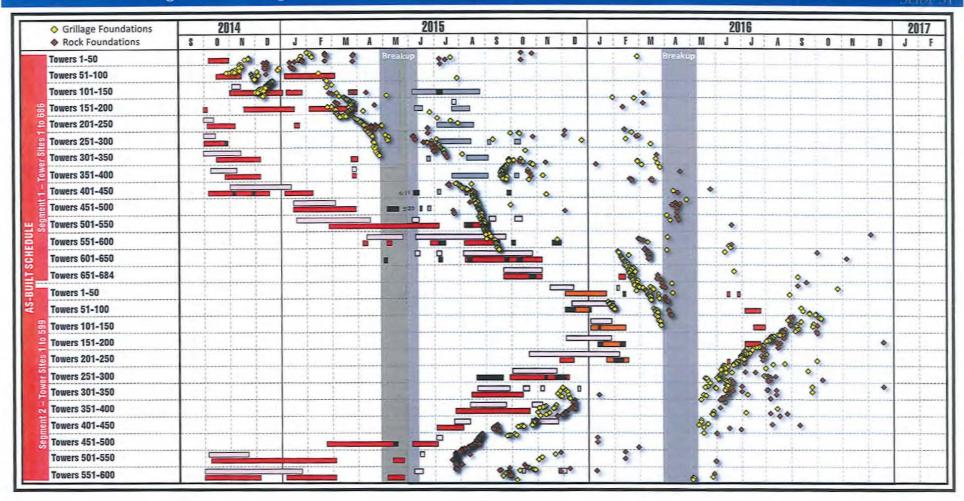


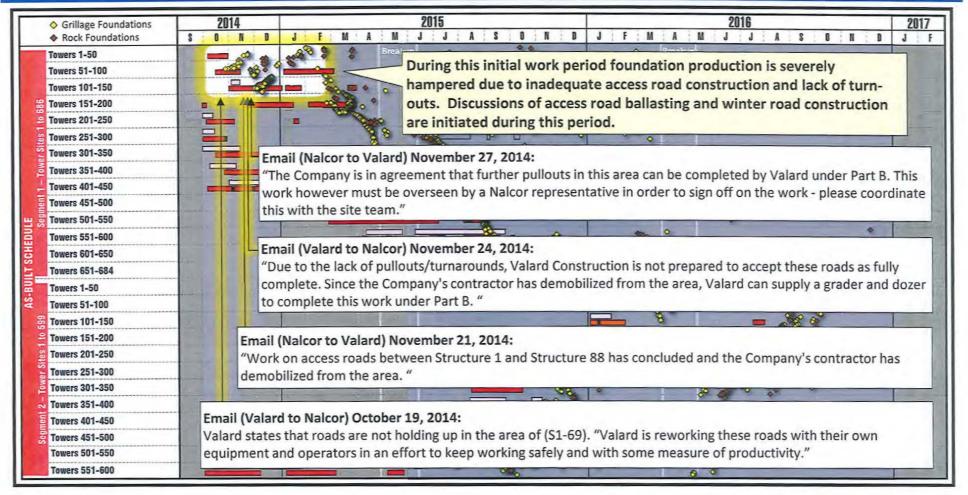
SUIDE 26



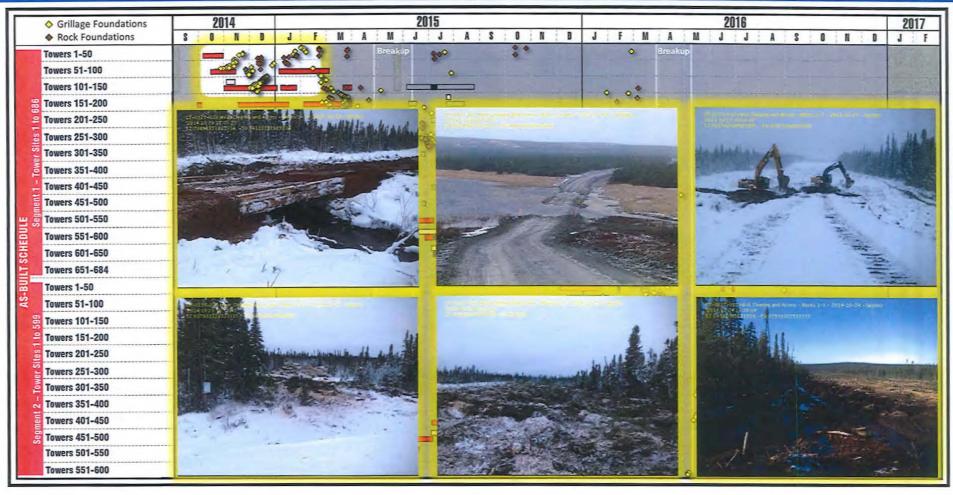
SUIDE 30

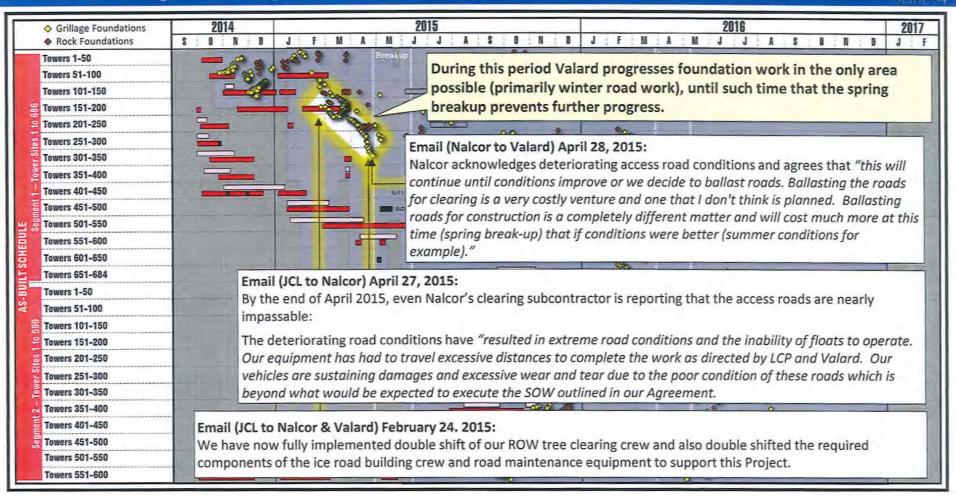


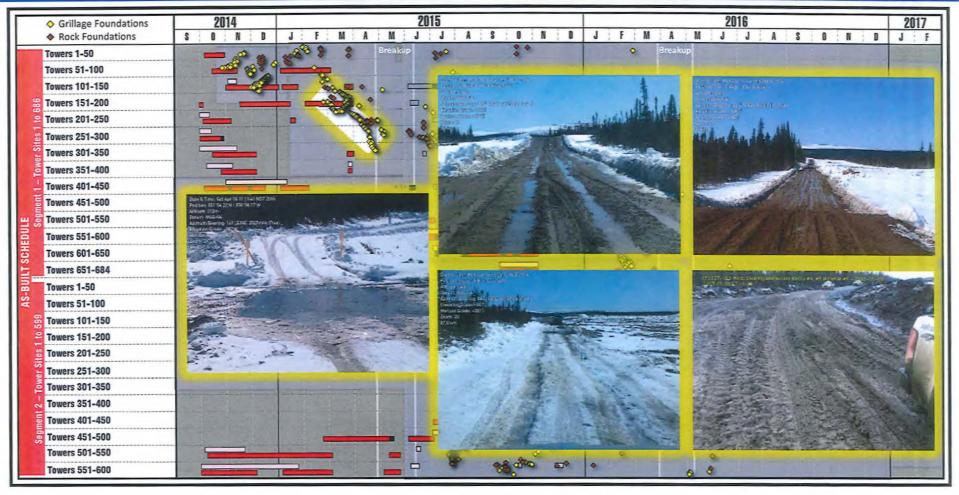


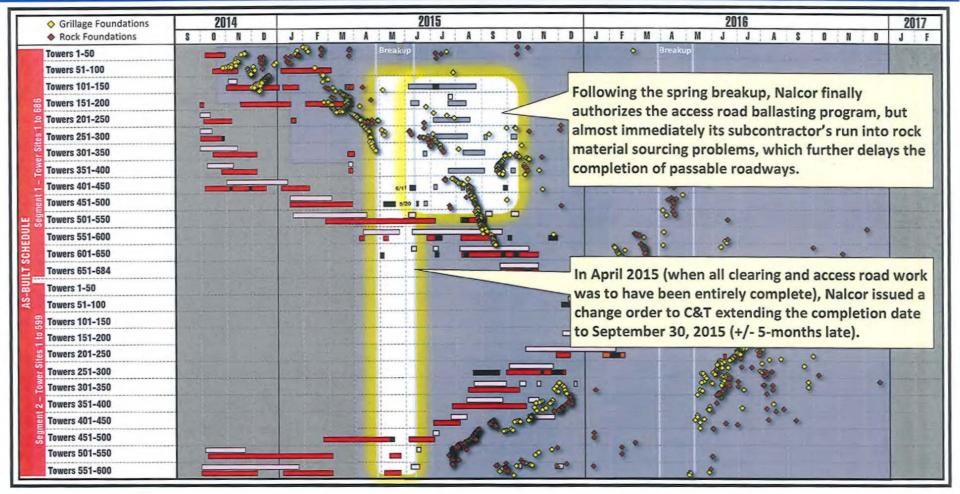


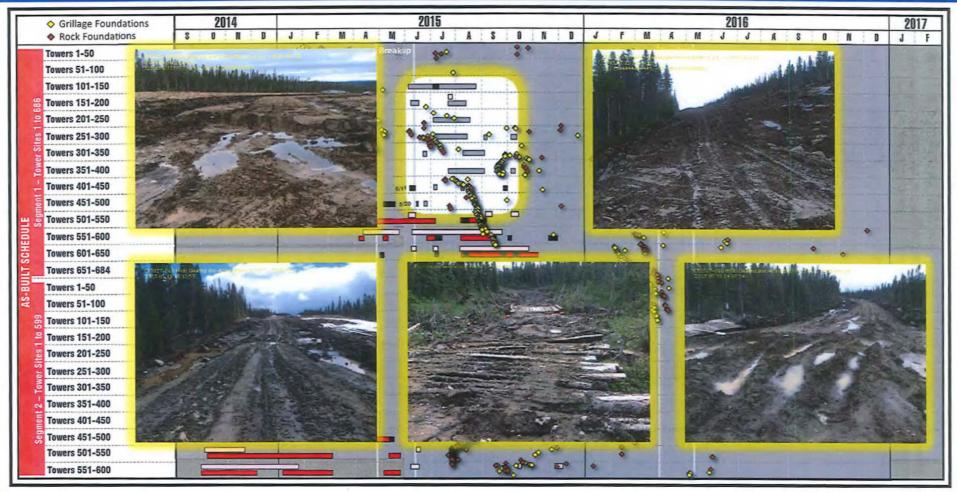
LIDE 39

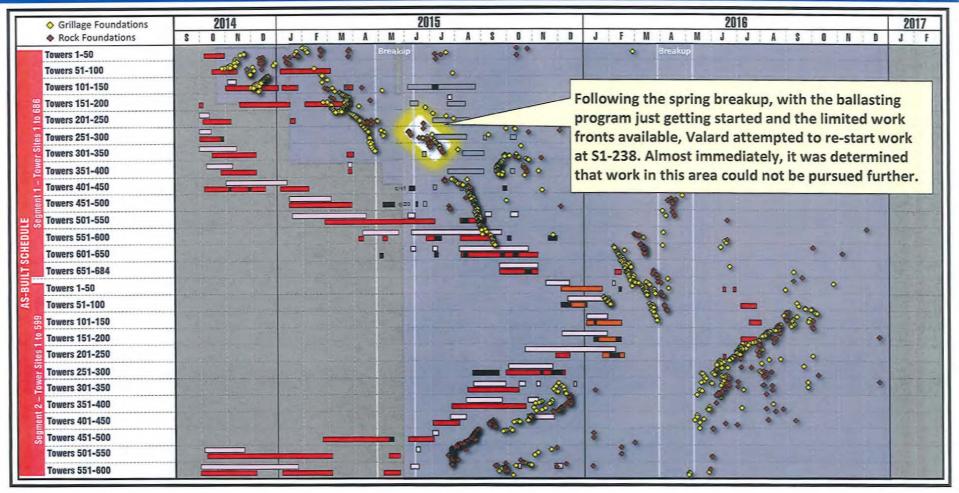


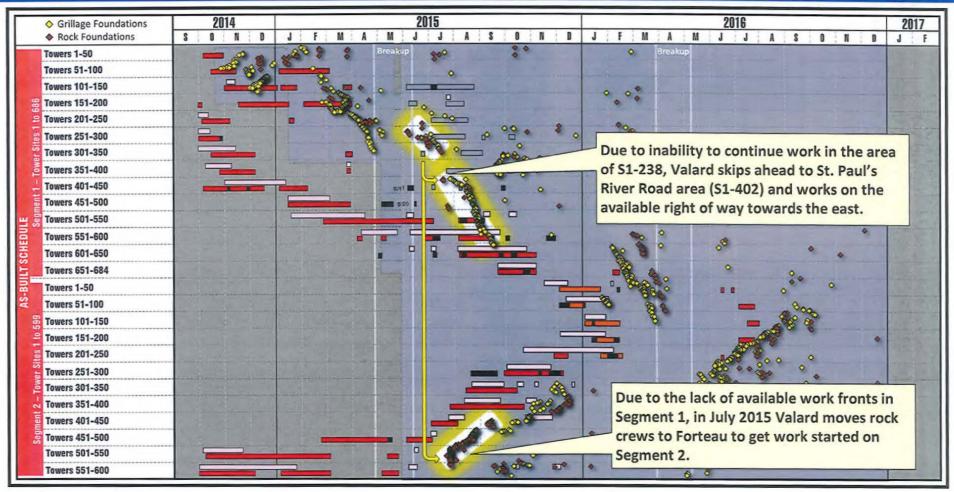


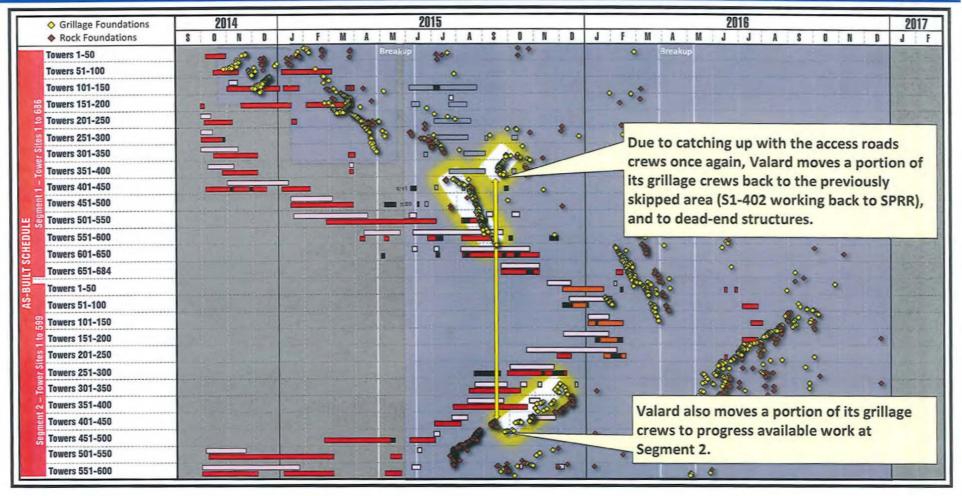




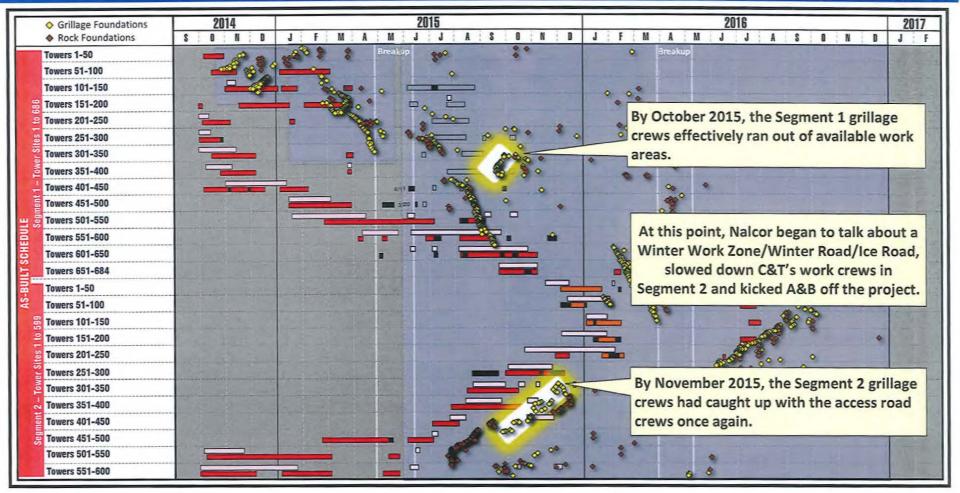






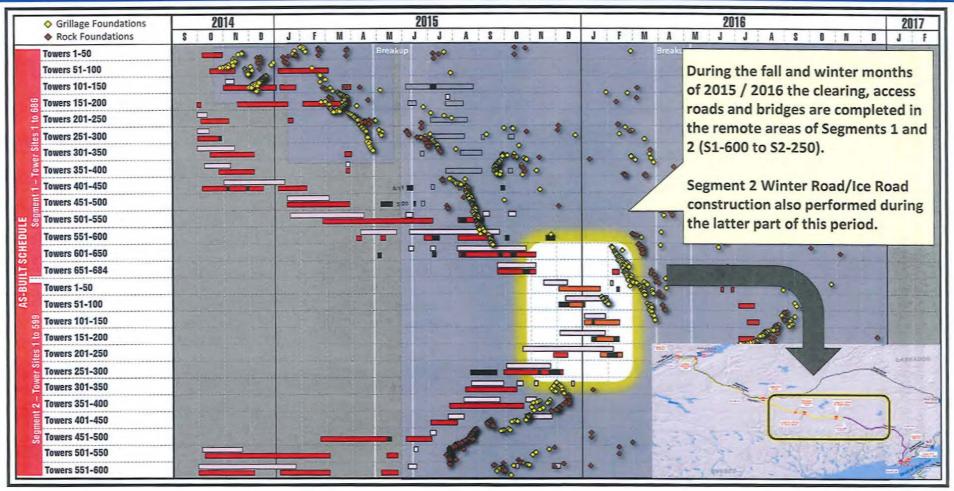


LIDE 4

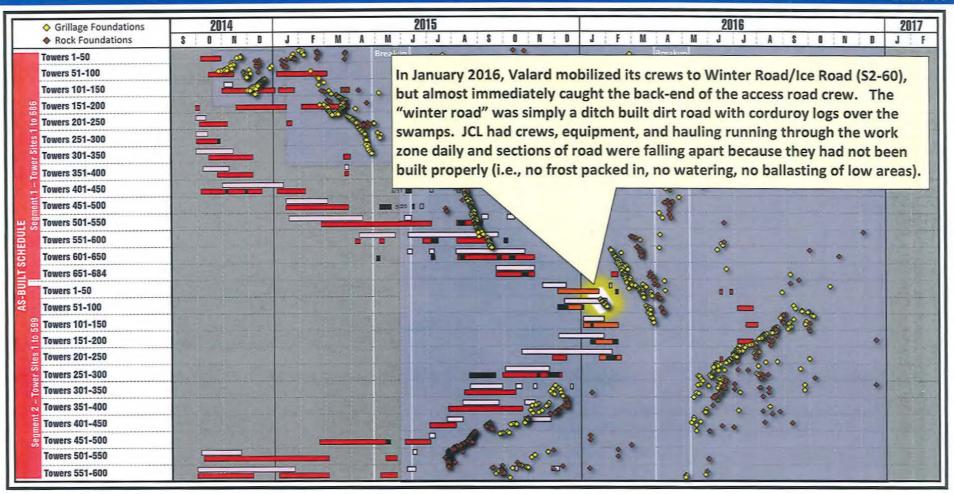


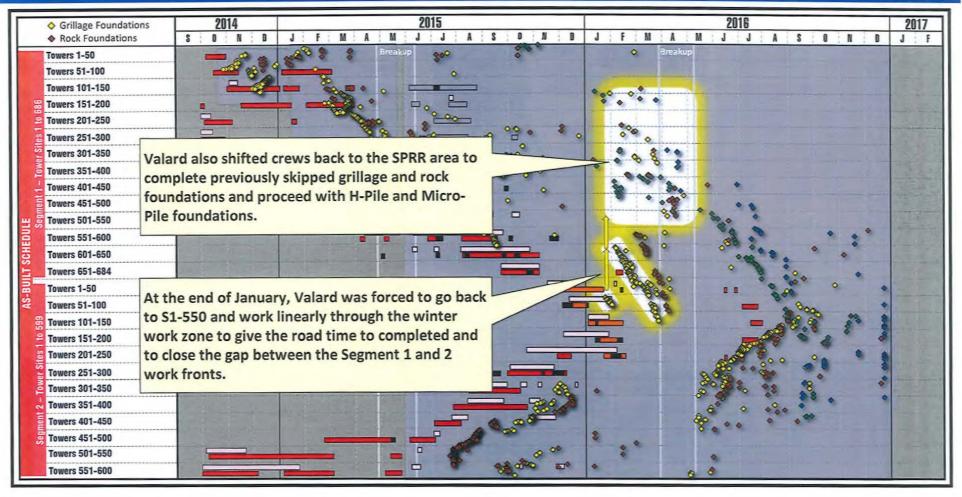
#### Work Front 1 - Winter Work Zone

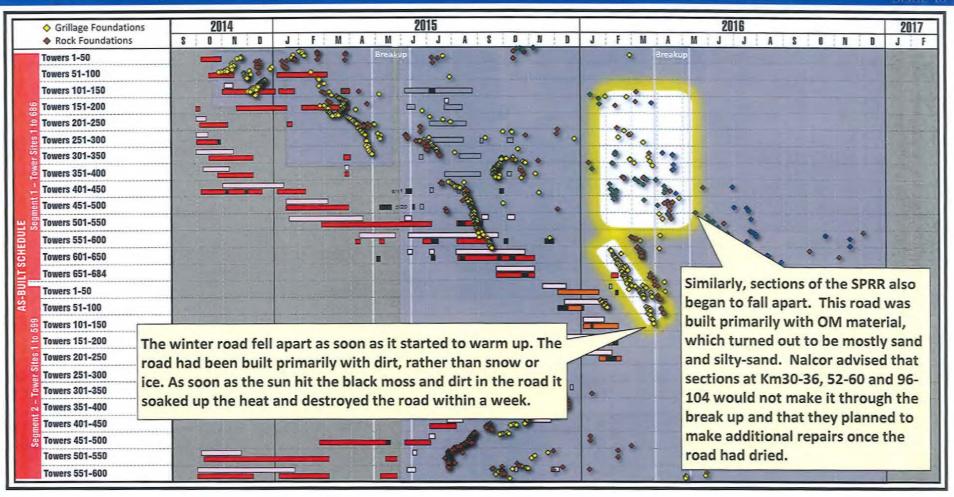
- In December 2015, Valard advised Nalcor that it would <u>NOT</u> be able to complete all of the work in the winter work zone
  prior to the spring breakup.
- To take full advantage of the plan for a winter work zone, Valard advised Nalcor that <u>ALL</u> of the following assumptions would need to be met:
  - ✓ Adequate winter access is completed by no later than January 29, 2016.
  - ✓ A Geo-Program to allow advanced foundation selection is implemented.
  - ✓ There is an adequate supply of class A, B, and 6-inch minus material available.
  - √ There is a full suite of materials available at the Muskrat Falls Laydown Yard to completed each activity.
  - ✓ There is timely delivery of materials from the Muskrat Falls Yard to worksites and laydown yards on the line.
  - ✓ Weather (i.e. wind, snow fall, etc.) is adequate for construction.
  - √ Winter access roads and shoo-fly accesses are maintained to an adequate standard (i.e. graded, sanded, etc.).
- While Nalcor expended significant efforts, none of the assumptions above were fully achieved. In particular, Valard's progress was significantly impacted by:
  - ✓ Winter Road Construction: Valard's progress was impacted almost immediately by the winter road construction
    progress and the overall completion of the winter road work went well into February 2016.
  - ✓ The Geo-Program was inundated with a variety of problems.



india 44

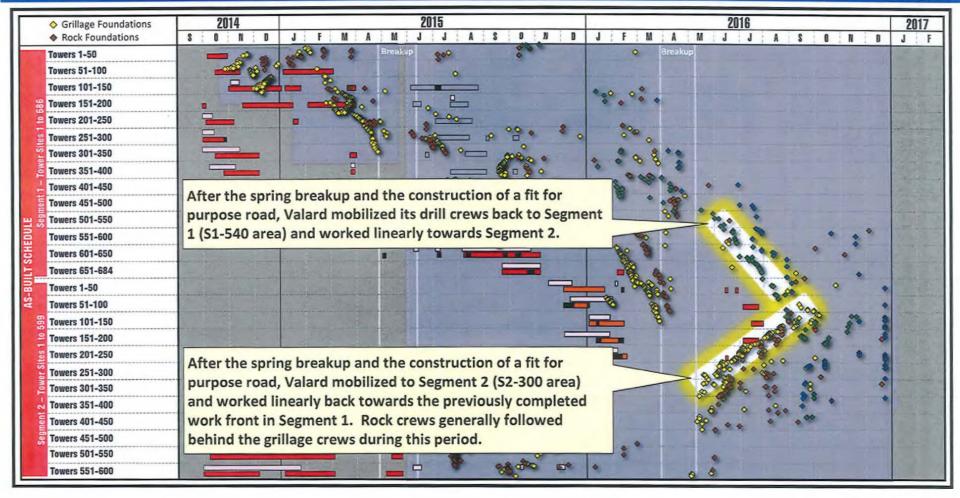




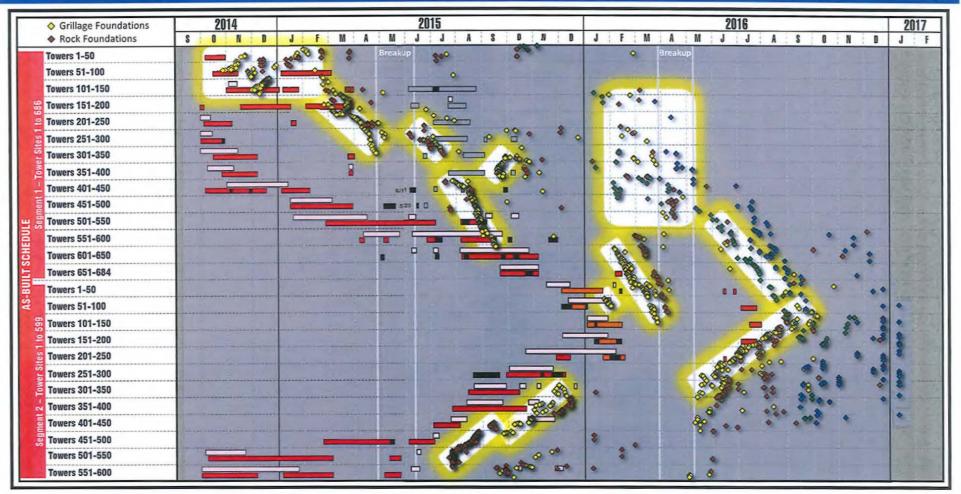


LIDE 47





LIDE 49



#### Topics of Discussion

- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - ✓ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - √ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - ✓ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions

- Not only were the access roads constructed much later than planned, but significant access road deficiencies have persisted throughout construction.
- Access Road Deficiencies:
  - ✓ Inconsistent capping.
  - ✓ Turnarounds not provided or inadequate.
  - ✓ Access not maintained (i.e. graded).
  - ✓ A lack of ditches & culverts (wash outs & access road damage).
  - ✓ Narrow and steep accesses.
- Impacts of the Issue:
  - ✓ Introduced unsafe conditions and adverse environmental impacts to the Project.
  - ✓ Limited (and slowed) safe travel on the ROW (particularly for heavy equipment).
  - ✓ Tractor Trailers unable to be used for hauling equipment and material (Rock trucks used at times).
  - ✓ Reduced productivity (impacted Valard's schedule and Project Milestones).
  - ✓ Increased operational costs (Substantial negative cost implications to Valard).

### Access Expectations - Agreement, Section 2.5 PART B: ROW Clearing and Access Works

SLIDE 52

- At a minimum access was expected to be generally completed to the Class 'C' standard (i.e. normal-use accesses)
  - ✓ Class 'B' access standard was expected for major accesses (i.e. high-use accesses St. Paul's River Road)
  - √ Class 'D' access standard was expected for minor accesses (i.e. low-use accesses)

#### The access parameters are included in the table below

Standard	Class B	Class C	Class D
Cleared Right of Way	25 m	20 m	20 m
Grubbed Right of Way (as required)	23 m	18 m	15 m
Road Width – shoulder to shoulder	7.5 m	5.5 m	5.0 m
Granular Topping Depth – average compacted (subject to Engineer's Approval)	100 mm	100 mm	
Granular Topping Width (subject to Engineer's Approval)	6.5 m	5.0 m	
Maximum degree of horizontal curve	20	30	30
Maximum sustained grade	8%	10%	12%
Maximum short pitch grade	12%	15%	18%
Minimum horizontal site distance	120 m	90 m	50 m
Minimum depth of ditch	0.6 m	0.6 m	0.3 m
Maximum depth of ditch	1.2 m	1.2 m	1.2 m
Cross slope (as directed by Engineer)	12 cm crown	10 cm crown	8 cm crown
Fill Slope:			
Rock or Till	1:1	1:1	1:1
Clay	1.5:1	1.5:1	1.5:1
Silt	2.5:1	1.5:1	1.5:1
Cut Slope:			
Rock	1:4	1:4	1:4
Silt	1.5.1	1.5.1	1.5.1
Other	1:1	1:1	1:1

#### Access Expectations - Agreement, Section 2.5 PART B: ROW Clearing and Access Works

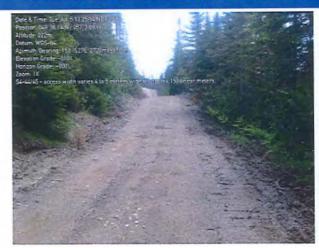
SHIPES

- Accesses shall be constructed to a standard that can be maintained
  - ✓ Maintenance includes: snow clearing, sanding, grading, culvert repair, capping, etc.
  - ✓ Access shall be maintained to a reasonable level as to not generate excessive wear and tear of the Parties light and heavy equipment
- · Accesses shall allow for the safe day to day transport of crews
  - √ Safe travel speeds
- Accesses shall allow for safe and expedient evacuation of work crews (in case of medical emergency)
- Accesses shall allow for the safe and expedient access to address environmental concerns (in case of environmental emergency)
- Access shall contain pullouts every 300-500 meters, and;
  - ✓ Be 20 to 40 meters in length providing for a total width, including road width, of 8 to 10 meters
- · All accesses shall contain a reasonable number of turnarounds suitable for tractor trailer and low-beds
- Unless otherwise agreed between the Parties, linear ROW access shall be provided at all times
  - √ i.e., water crossings, culverts, snow bridges, etc. shall be utilized as to not impede linear construction
    progression

# Inconsistent Capping Care & Time Polymer & Hadding Control Profiles (SIP 2227) (A REPORTED Calls & Time. Here May 8 MARK-S HOT MIN Products SERVE AND A SERVE AND A PARTICLE SINCE Admid/Testing TRY ROSE (Others Street Species Street - CREET

## Turnarounds Not Provided or Inadequate















## Access Not Maintained (i.e. graded)















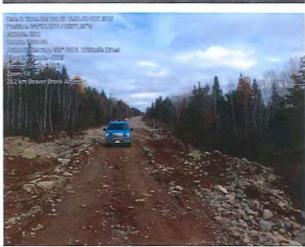
# Lack of Ditches & Culverts (wash outs & access road damage)







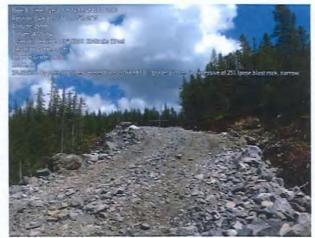






# Narrow and Steep Accesses













SLIDE 5

 Not only were the access roads constructed much later than planned, but significant access road deficiencies have persisted throughout construction.

#### Access Road Deficiencies:

- ✓ Inconsistent capping.
- ✓ Turnarounds not provided or inadequate.
- √ Access not maintained (i.e. graded).
- ✓ A lack of ditches & culverts (wash outs & access road damage).
- ✓ Narrow and steep accesses.

#### Impacts of the Issue:

- ✓ Introduced unsafe conditions and adverse environmental impacts to the Project.
- ✓ Limited (and slowed) safe travel on the ROW (particularly for heavy equipment).
- ✓ Tractor Trailers unable to be used for hauling equipment and material (Rock trucks used at times).
- ✓ Reduced productivity (impacted Valard's schedule and Project Milestones).
- ✓ Increased operational costs (Substantial negative cost implications to Valard).

## Topics of Discussion

SLIDE 60

#### Schedule Summary:

- ✓ Overview of Project Delays
- ✓ Critical Path Through Work Front 1

#### Delay & Impact Causation:

- ✓ Summary of Impacts Identified
- ✓ ROW Clearing and Access Road Construction Delays
- ✓ Access Road Deficiencies
- √ Geo-Program / Foundation Selection Process

#### Cost Impacts:

- ✓ Time Related General Conditions
- ✓ Other Costs:
  - Mechanics
  - Survey
  - Camp Space Impact Costs

#### Conclusions

Geo-Program Sum 6

#### Impacts associated with foundation selection and the failure to implement a full Geo-Program:

- Full geotechnical analysis not performed prior to bid and contract award.
- · Nalcor initially performed only a desktop study for foundation type selection.
- · Nalcor provided foundation quantities by type for Valard bid estimate pricing.
- · We now know that the desktop study directed the wrong foundation type more than 60% of the time.
- As field work progressed at Work Front 1, Nalcor was reluctant to implement a full "Geo-Program."
- As field work progressed, foundation settlement issues arose at tower foundations that were not part
  of the Geo-Program.
- Foundations that were not part of the Geo-Program were extensively modified in the field (i.e., over-excavation, use of blast rock and base materials, change in usage of culverts, etc.).
- The lack of a proactive Geo-Program resulted in significant delays in production and rework on Work Front 1.
- Nalcor has elected to implement a full proactive Geo-Program for all foundations in Newfoundland.

Geo-Program

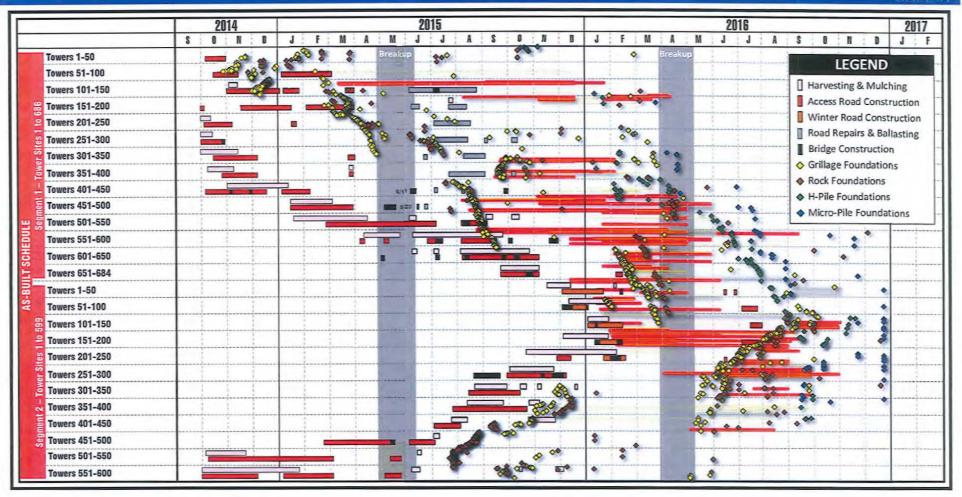
Stunt 6

#### Results of Nalcor's Limited Geo-Program:

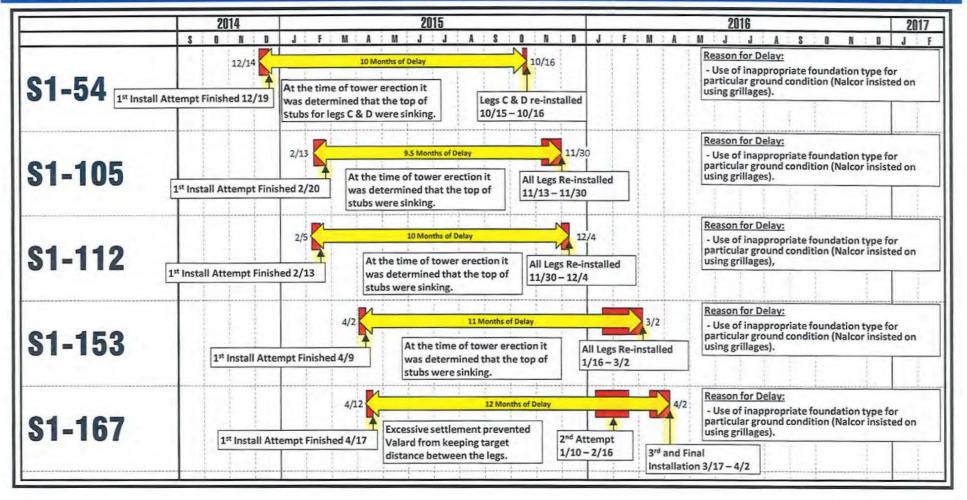
- Nalcor eventually authorized a limited Geo-Program for only 15% of the foundations (191 foundations) on Work Front 1.
- · Foundation selection should have been performed well in advance of foundation field work.
- · The average time required for a full Geo-Program review to select a foundation type was 111 days.
- 126 of the foundation investigations took more than 60 days to complete.
- Because the Geo-Program was being performed concurrently with foundation construction, further delay and disruption occurred in the field.
- The majority of the foundations that went through the Geo-Program were changed to alternate type foundations (H-Pile / Micropile).
- For 40 of the foundations that went through the Geo-Program, Nalcor's initial foundation type selection eventually changed.
- The Geo-Program for these 40 foundations occurred over a 15 month period (August 2015 to October 2016).

#### Geo-Program Changed Foundations J F M A M J J A S 323 324 354 399 420 440 481 483 Changed Foundations process occurs over a 15 month period (August 2015 to October 2015). These foundations on average took 156 days to 582 select the final foundation type. 615 54 55 93 127 247

SUIDE 6



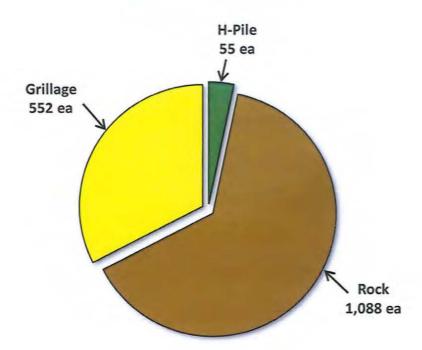
#### Example of Towers where Multiple Foundation Installation Attempts Were Performed



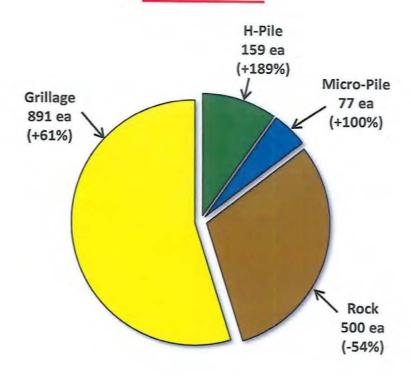
SLIDE 66

The substantial changes in foundation types (estimated vs. actual), coupled with the lack of a proactive Geo-Program prevented any ability to implement long term planning and gain efficiencies through proper resource staging.

## **ESTIMATED**

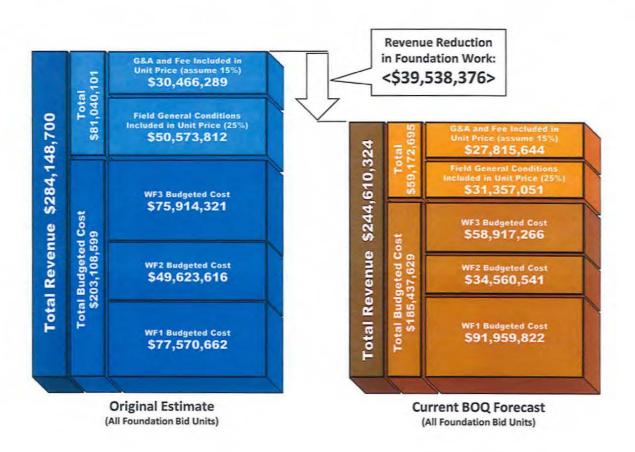


## **ACTUAL**



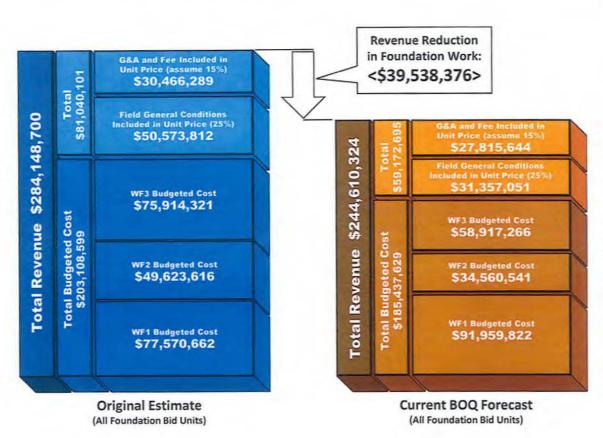
SLIDE 67

The extensive changes in foundation types have resulted in substantial financial losses to Valard:



SLIDE 68

The extensive changes in foundation types have resulted in substantial financial losses to Valard:



Because this is a unit price project, Valard's estimate spread its field general conditions and fee amounts among the various unit price bid items.

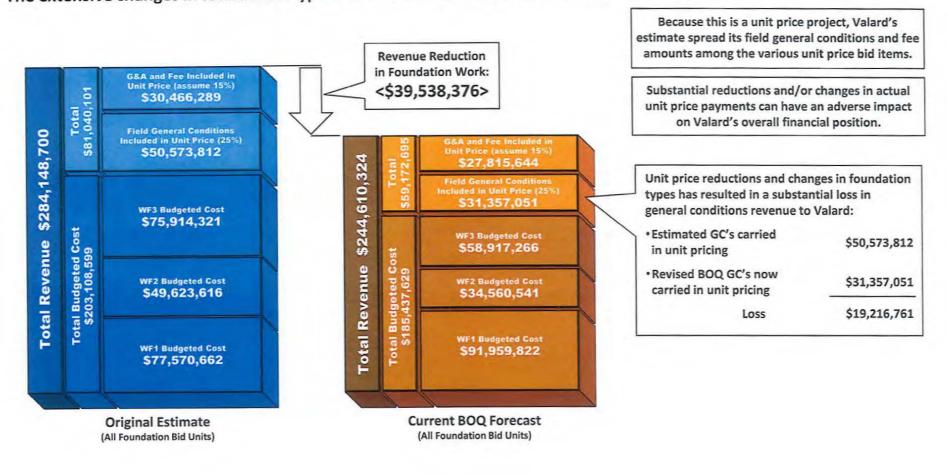
Substantial reductions and/or changes in actual unit price payments can have an adverse impact on Valard's overall financial position.

#### Exhibit 1, Attachment 2:

The Contract Price shall include all items that are not expressly stated in Appendix A - Schedule of Price Breakdown, but that are required for the performance of the Work. These items include, but are not limited to, indirect costs, travel, tools, operating costs, consumables, costs associated with quality assurance, quality control, environmental compliance, environmental ground truthing, permitting, re-sequencing of the Work due to environmental constraints, logistics, material management, health and safety compliance, medical services, management oversight, meetings, reporting, scheduling, monitoring, auditing, Site access, security, surveying, staking, transportation, accommodations, labour relations, commissioning, start-up, insurance, costs associated with all types of summer and winter weather conditions (including severe summer and winter conditions), or anything else required to complete the Work.

SLIDE 69

The extensive changes in foundation types have resulted in substantial financial losses to Valard:



State 70

The extensive changes in foundation types have resulted in substantial financial losses to Valard:

Foundation Quantities (All Work Fronts):

	Estimate	Revised BOQ	Percentage Change
• Rock	2,952	1,260	42%
Grillage	1,474	2,486	169%
• Piles	142	379	267%

Example Using Average	e Units
1,012 Rock Foundations ar to Grillage Foundations:	e changed
GC Incl. in Rock Units	\$11,081
GC Incl. in Grillage Units	-\$5,651
Delta	\$5,430
Units Changed to Grillage	1,012
GC Lost \$5	,495,160

	Contract Revenue (Overall Average per Unit)	Estimated Cost of Work (Overall Average per Unit)	Estimated G&A and Fee (15%) (Overall Average per Unit)	Estimated General Conditions (Overall Average per Unit)
Rock Foundation	\$36,218	\$21,858	\$3,279	\$11,081
Grillage Foundation	\$19,113	\$11,707	\$1,756	\$5,651
H-Pile Foundation	\$186,651	\$154,502	\$23,175	\$8,974

SUDI 71

#### The extensive changes in foundation types have resulted in substantial financial losses to Valard:

Work Front	Revenue Variance	
WF1 Guy Wires	\$4,206,895	
WF2 Guy Wires	(\$3,616,346)	
WF3 Guy Wires	(\$5,804,067)	
Subtotal Guy Wires	(\$5,213,518)	
WF1 Grillage Foundations	\$6,031,529	
WF2 Grillage Foundations	\$1,923,381	
WF3 Grillage Foundations	\$7,263,761	
Subtotal Grillage Foundations	\$15,218,671	
WF1 Rock Foundations	(\$20,333,047)	
WF2 Rock Foundations	(\$7,962,059)	
WF3 Rock Foundations	(\$30,574,988)	
Subtotal Rock Foundations	(\$58,870,094)	
WF1 Pile Foundations	\$30,181,120	
WF2 Pile Foundations	(\$3,493,188)	
WF2 Pile Foundations	\$14,096,507	
Subtotal Pile Foundations	\$40,784,439	
WF1 Earthwork	(\$10,236,956)	
WF2 Earthwork	(\$7,197,877)	
WF3 Earthwork	(\$14,023,041)	
Subtotal - Earthwork	(\$31,457,874)	
Grand Totals	(\$39,538,376)	

SLIDI 75

#### The extensive changes in foundation types have resulted in substantial financial losses to Valard:

Work Front	Revenue Variance	
WF1 Guy Wires	\$4,206,895	
WF2 Guy Wires	(\$3,616,346)	
WF3 Guy Wires	(\$5,804,067)	
Subtotal Guy Wires	(\$5,213,518)	
WF1 Grillage Foundations	\$6,031,529	
WF2 Grillage Foundations	\$1,923,381	
WF3 Grillage Foundations	\$7,263,761	
Subtotal Grillage Foundations	\$15,218,671	
WF1 Rock Foundations	(\$20,333,047)	
WF2 Rock Foundations	(\$7,962,059)	
WF3 Rock Foundations	(\$30,574,988)	
Subtotal Rock Foundations	(\$58,870,094)	
WF1 Pile Foundations	\$30,181,120	
WF2 Pile Foundations	(\$3,493,188)	
WF2 Pile Foundations	\$14,096,507	
Subtotal Pile Foundations	\$40,784,439	
WF1 Earthwork	(\$10,236,956)	
WF2 Earthwork	(\$7,197,877)	
WF3 Earthwork	(\$14,023,041)	
Subtotal - Earthwork	(\$31,457,874)	
Grand Totals	(\$39,538,376)	

-	
	١

	Estimated
L	Direct Cost Variance
	\$3,705,745
	(\$3,161,364
	(\$5,037,737
	(\$4,493,355
	\$3,595,497
	\$1,283,132
	\$4,261,502
	\$9,140,131
Ī	(\$11,972,435
	(\$5,178,192
	(\$18,031,548
	(\$35,182,174
	\$25,233,670
	(\$2,800,713
	\$11,418,796
	\$33,851,753
	(\$6,173,318
	(\$5,205,938
	(\$9,608,068
	(\$20,987,324
15	17,670,970

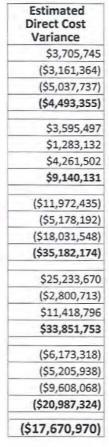
#### All Work Fronts – Foundation Type Changes

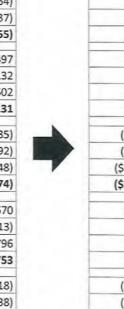
Scion 73

#### The extensive changes in foundation types have resulted in substantial financial losses to Valard:

	Work Front
WF1 G	iuy Wires
WF2 G	iuy Wires
WF3 G	iuy Wires
	Subtotal Guy Wires
WF1 G	irillage Foundations
WF2 G	irillage Foundations
WF3 G	irillage Foundations
	Subtotal Grillage Foundations
WF1 R	lock Foundations
WF2 R	tock Foundations
WF3 R	lock Foundations
	Subtotal Rock Foundations
WF1 P	ile Foundations
WF2 P	ile Foundations
WF2 P	ile Foundations
	Subtotal Pile Foundations
WF1 E	arthwork
WF2 E	arthwork
WF3 E	arthwork
	Subtotal - Earthwork
	Grand Totals

Revenue Variance	
\$4,206,8	95
(\$3,616,34	16)
(\$5,804,06	57)
(\$5,213,51	18)
\$6,031,5	29
\$1,923,3	81
\$7,263,7	61
\$15,218,6	71
(\$20,333,04	17)
(\$7,962,05	59)
(\$30,574,98	38)
(\$58,870,09	94)
\$30,181,1	20
(\$3,493,18	38)
\$14,096,5	07
\$40,784,4	39
(\$10,236,95	56)
(\$7,197,87	77)
(\$14,023,04	11)
(\$31,457,87	741





Indirect Costs & Markups Variance
\$501,149
(\$454,982)
(\$766,330)
(\$720,163)
\$2,436,032
\$640,249
\$3,002,259
\$6,078,540
(\$8,360,612)
(\$2,783,867)
(\$12,543,440)
(\$23,687,920)
\$4,947,449
(\$692,474)
\$2,677,712
\$6,932,686
(\$4,063,638)
(\$1,991,939)
(\$4,414,973)
(\$10,470,550)
(\$21,867,406)

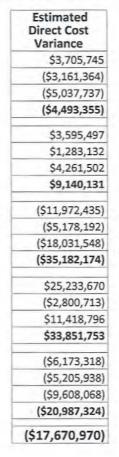
#### All Work Fronts – Foundation Type Changes

St HOF 74

#### The extensive changes in foundation types have resulted in substantial financial losses to Valard:

	Work Front
WF	1 Guy Wires
WF	2 Guy Wires
WF	3 Guy Wires
	Subtotal Guy Wires
WF	1 Grillage Foundations
WF	2 Grillage Foundations
WF	3 Grillage Foundations
	Subtotal Grillage Foundations
WF	1 Rock Foundations
WF	2 Rock Foundations
WF	3 Rock Foundations
	Subtotal Rock Foundations
WF	1 Pile Foundations
WF	2 Pile Foundations
WF	2 Pile Foundations
	Subtotal Pile Foundations
WF	1 Earthwork
WF	2 Earthwork
WF	3 Earthwork
	Subtotal - Earthwork
	Grand Totals

Revenue Variance
\$4,206,895
(\$3,616,346)
(\$5,804,067)
(\$5,213,518)
\$6,031,529
\$1,923,381
\$7,263,761
\$15,218,671
(\$20,333,047)
(\$7,962,059)
(\$30,574,988)
(\$58,870,094
\$30,181,120
(\$3,493,188
\$14,096,507
\$40,784,439
(\$10,236,956
(\$7,197,877
(\$14,023,041
(\$31,457,874

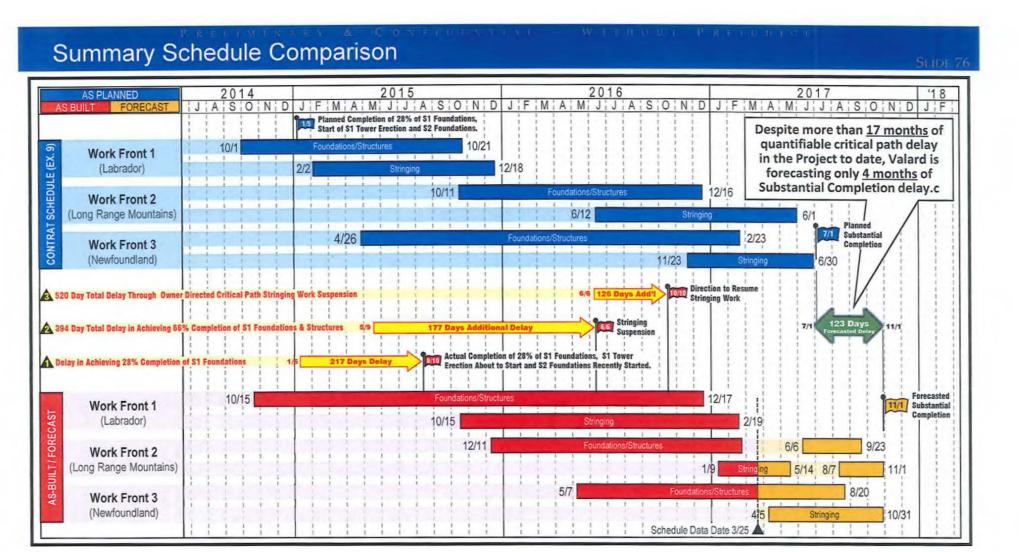


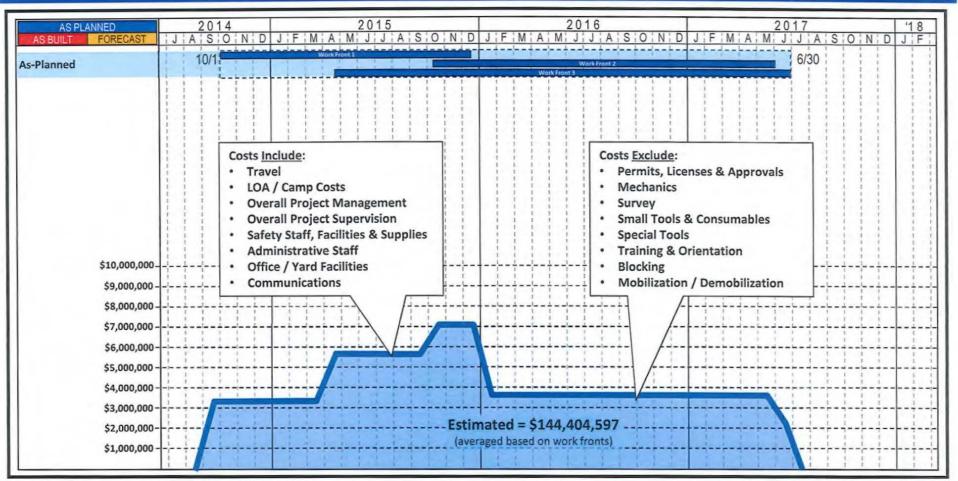


G&A and Fee (15%) Variance	Field General Conditions Variance
\$555,862	(\$54,713)
(\$474,205)	\$19,223
(\$755,660)	(\$10,670)
(\$674,003)	(\$46,159)
\$539,325	\$1,896,708
\$192,470	\$447,779
\$639,225	\$2,363,034
\$1,371,020	\$4,707,520
(\$1,795,865)	(\$6,564,747)
(\$776,729)	(\$2,007,139)
(\$2,704,732)	(\$9,838,708)
(\$5,277,326)	(\$18,410,594)
\$3,785,051	\$1,162,399
(\$420,107)	(\$272,368)
\$1,712,819	\$964,893
\$5,077,763	\$1,854,924
(\$925,998)	(\$3,137,640)
(\$780,891)	(\$1,211,048)
(\$1,441,210)	(\$2,973,763)
(\$3,148,099)	(\$7,322,451)
(\$2,650,645)	(\$19,216,761)

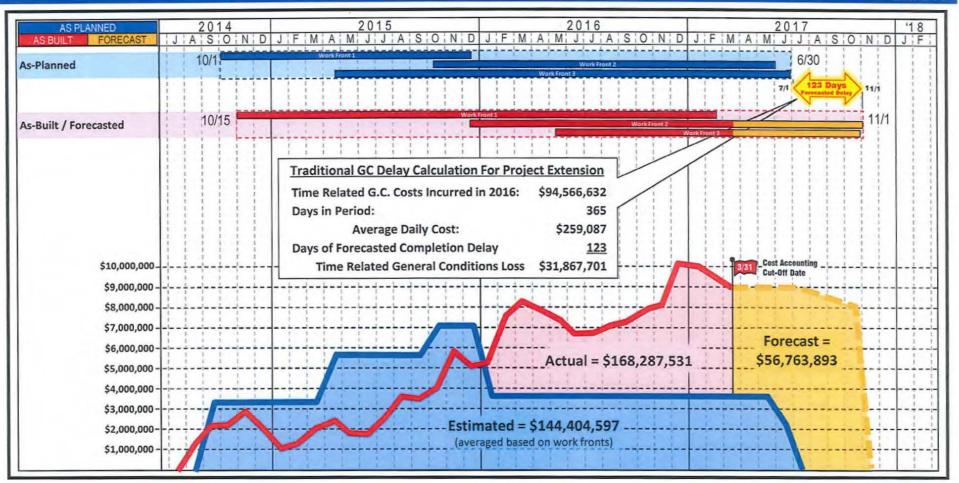
# Topics of Discussion

- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - √ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - √ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - √ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions

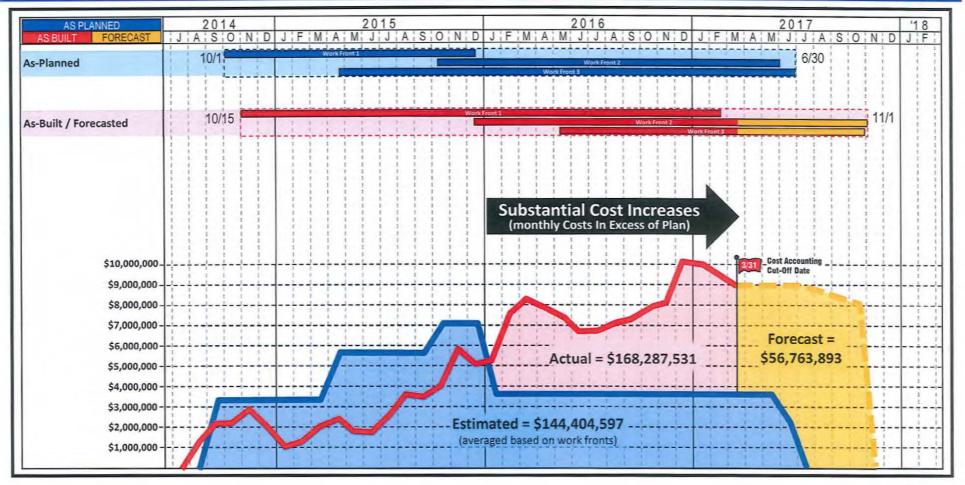




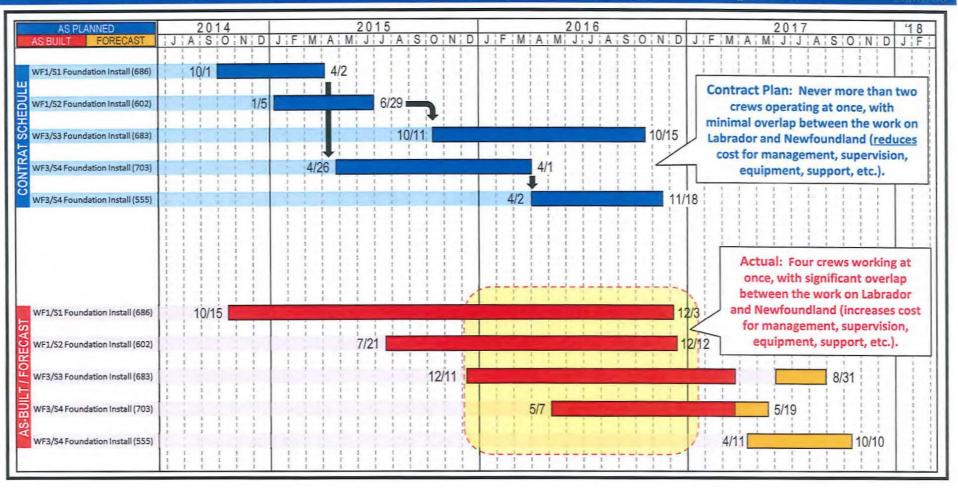
SUDE Z

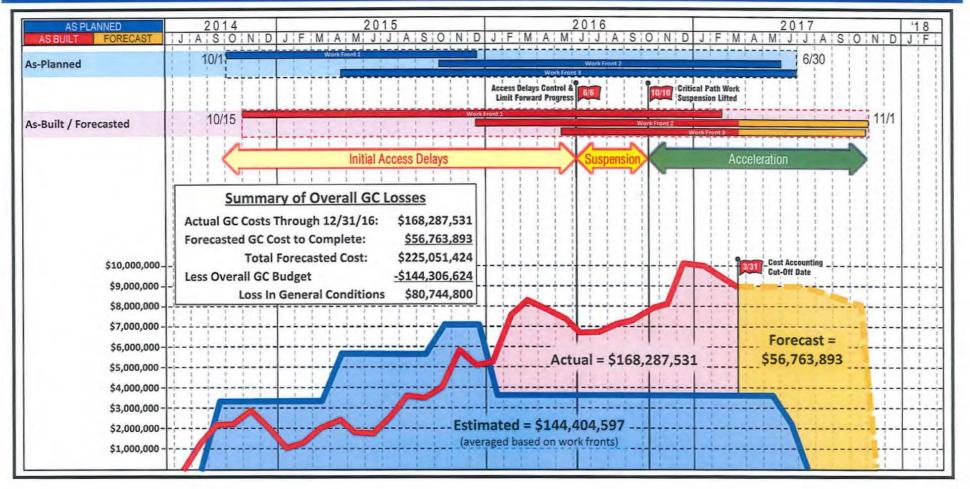




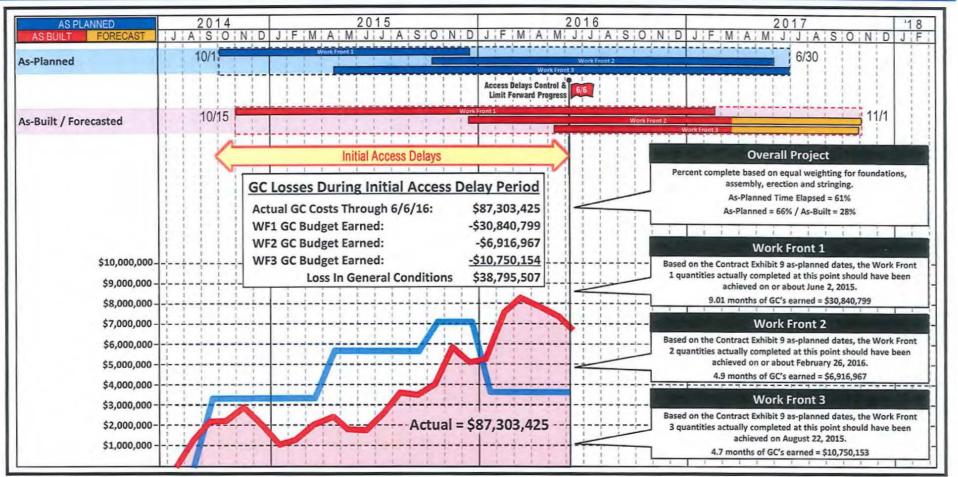


## Time Related Field General Conditions Costs (Crew & Logistical Impacts)



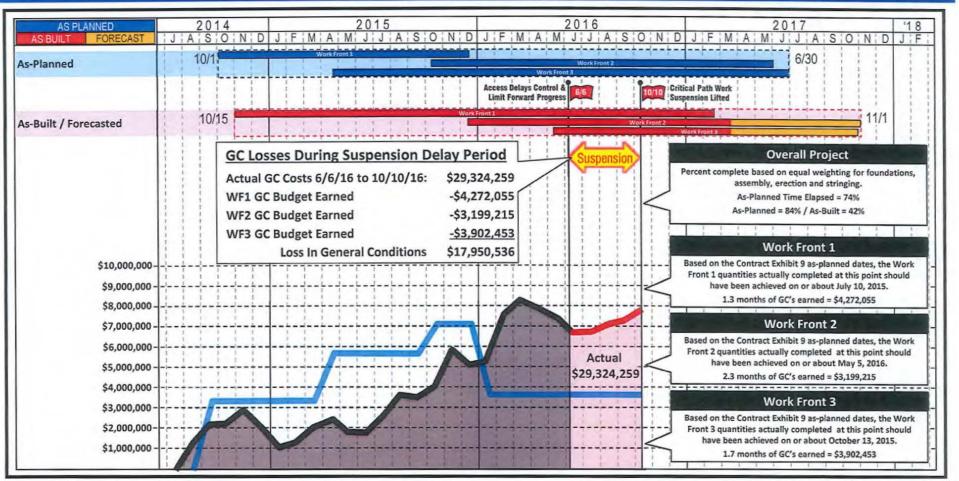


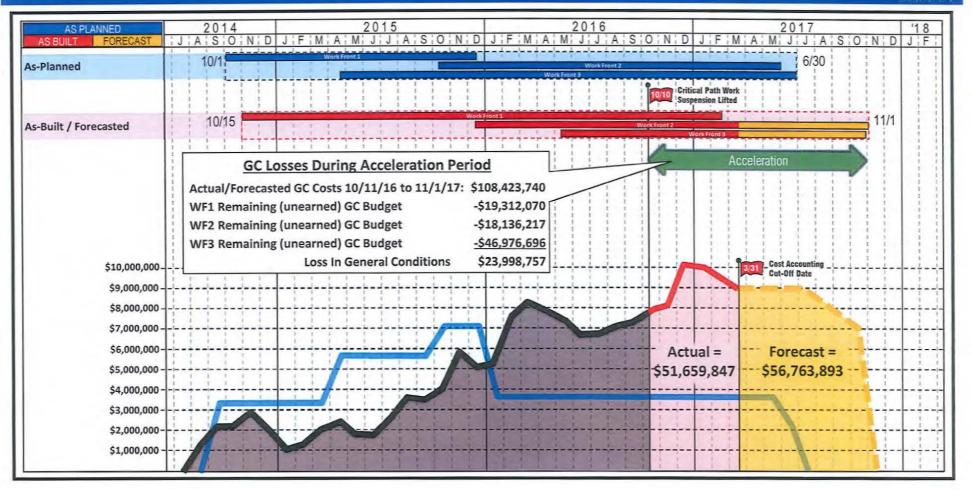










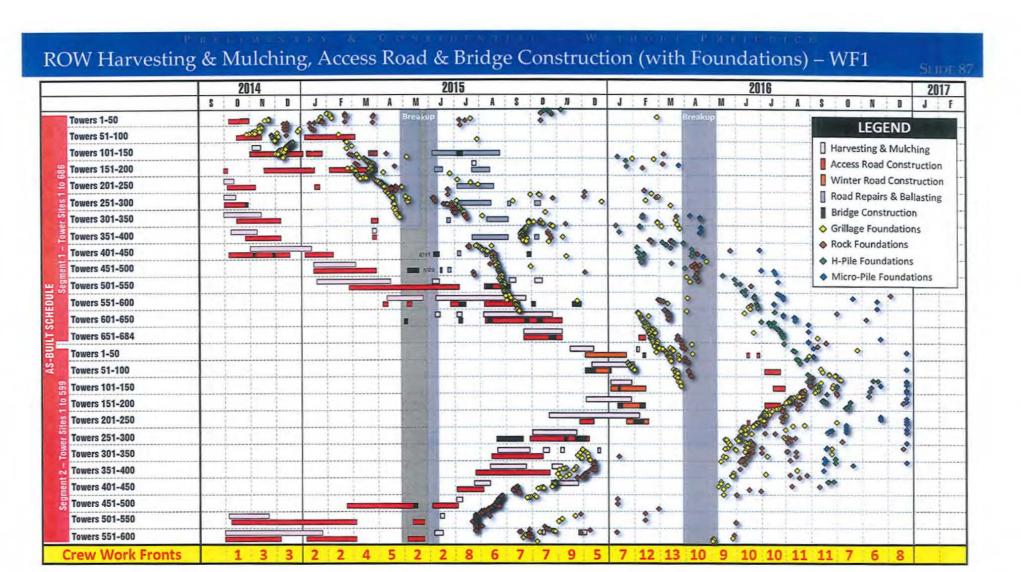


#### Breakdown of Field General Conditions Loss GC losses associated early field production delays (GC's staffed up per plan, but lack of production in field) Access Delay **Period GC Costs** (10/15/14 to 6/6/16) Additional GC losses resulting \$38,795,507 primarily from Stringing work suspension Additional GC losses resulting from prior field production delays and Stringing Suspension **Period GC Costs** subsequent acceleration (6/7/16 to 10/10/16) Total Overrun \$17,950,536 \$113,506,967 (includes time and Acceleration Remaining non-time related GC Period Overrun costs) (10/11/16 to Completion) \$74,711,460 \$23,998,757 Remaining Overrun \$56,760,924 Remaining Overrun (non-time related) \$32,762,167

# Topics of Discussion

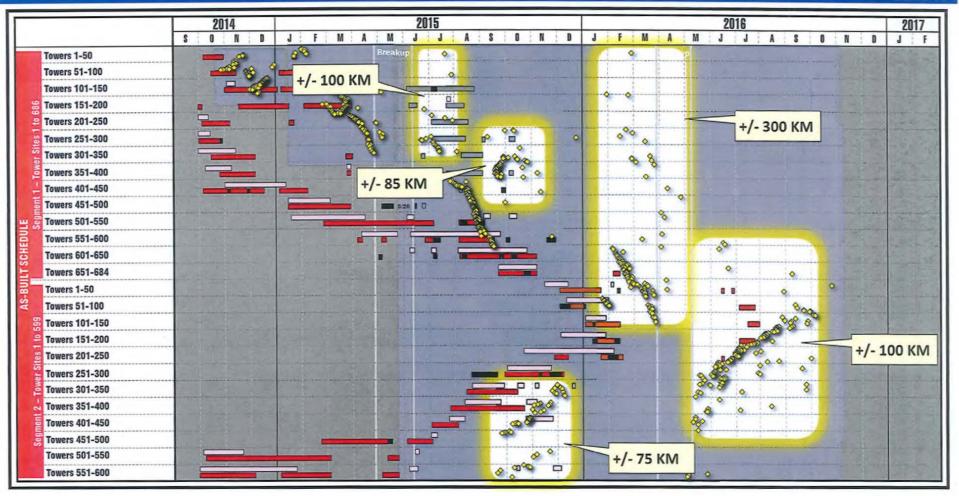
SLIDE SE

- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - ✓ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - ✓ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - √ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions



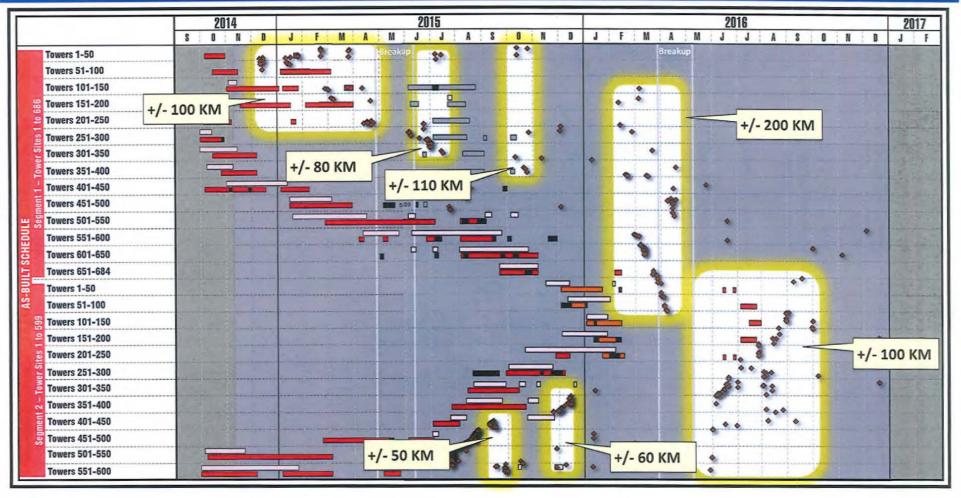
# ROW Harvesting & Mulching, Access Road & Bridge Construction (with Foundations) – WF1

LIDE 88



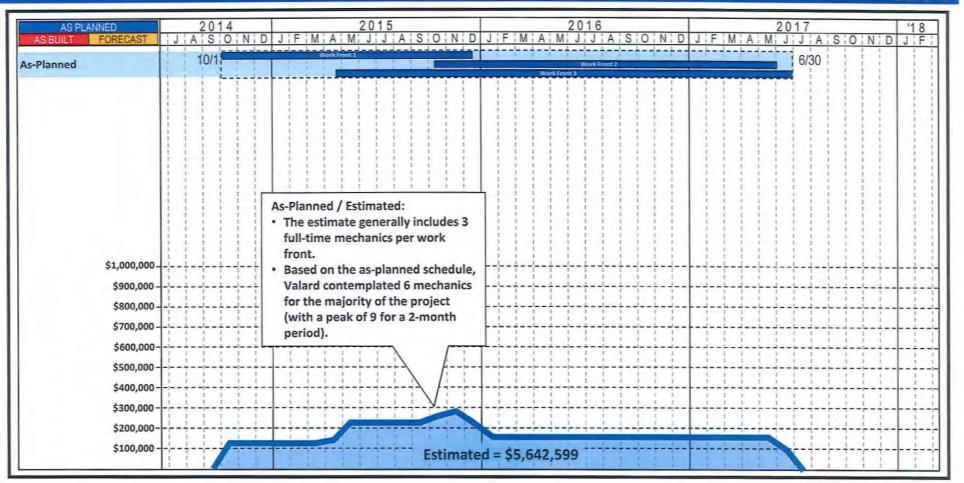
#### ROW Harvesting & Mulching, Access Road & Bridge Construction (with Foundations) - WF1

LIDE 89

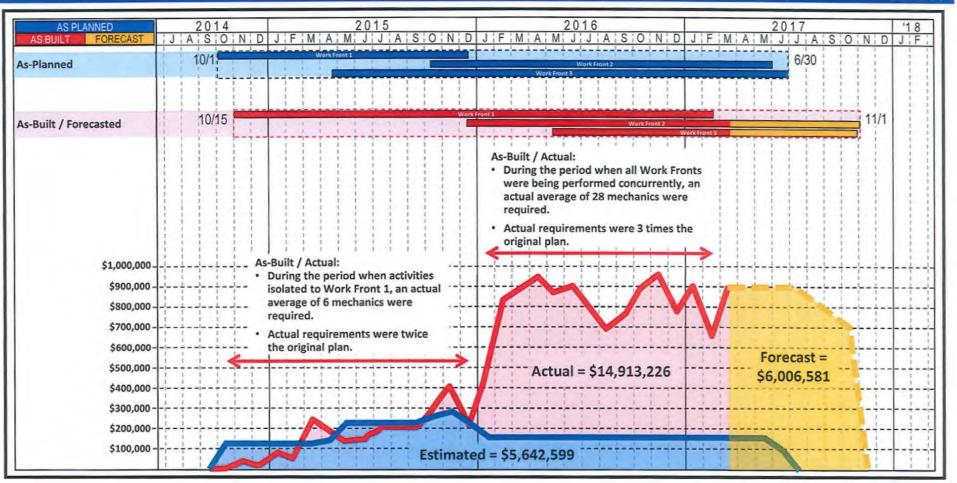


#### Mechanic Costs

LIDE 9



#### Mechanic Costs

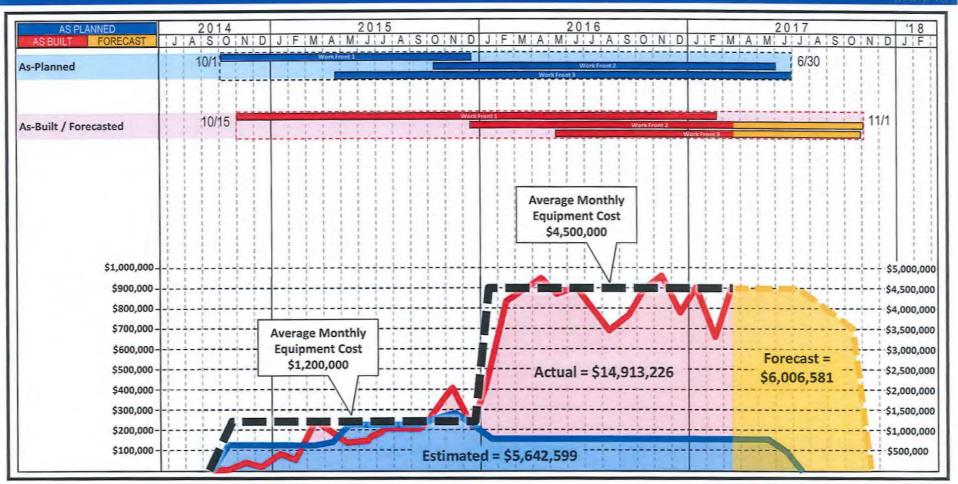


Mechanic Costs	Sum: 92
Work Front 1:	
✓ Delay Costs:	
Actual average daily costs (October 2014 to December 2015)	\$5,828.35
Overall delay days (December 18, 2015 to February 19, 2017)	429
Delay Costs	\$2,500,362
✓ Increased Performance Costs (due to out-of-sequence work):	+-,000,000
Actual Costs Incurred (October 2014 to December 2015)	\$2,546,990
Estimated Costs	-\$1,864,952
Increased Performance Costs	\$682,038
• Work Fronts 2 & 3:	4002,000
✓ Increased Performance Costs (due to acceleration):	
Actual Costs Incurred (actual costs after DEC 2015, less WF1 delay costs above)	\$9,865,873
Forecasted Costs (based on trailing 6-months)	
	+\$6,006,581
Estimated Costs	-\$3,777,647
Increased Performance Costs	\$12,094,807
Increased Performance Costs	\$12,094,807

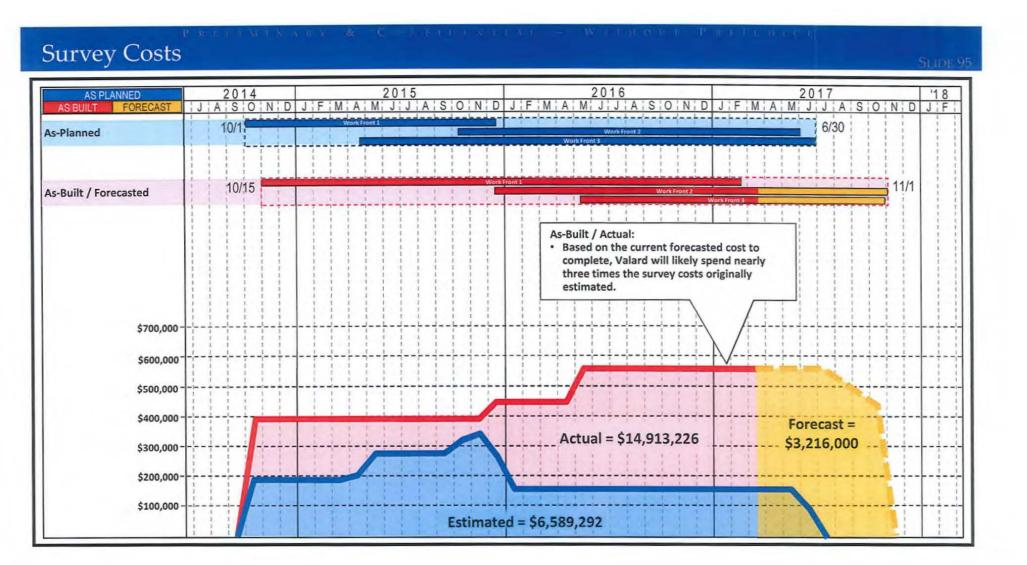
Majority of cost overrun occurs in acceleration period (staffing substantially increased for work in Newfoundland to mitigate prior delays and accelerate completion)

#### Mechanic Costs

St. IDE 95



#### Survey Costs 2015 2016 2014 | J | A | S | O | N | D 2017 18 AS PLANNED MA A M J J A S O N 10/1 6/30 As-Planned As-Planned / Estimated: • \$2,764,154: Work Front 1 (S1 & S2) \$1,000,000 • \$1,294,649: Work Front 2 (S3) \$900,000 \$2,530,489: Work Front 3 (\$4 & \$5) \$800,000 -• \$6,589,292: Total All Work Fronts \$700,000 \$600,000 \$500,000 \$400,000 \$300,000 \$200,000-Estimated = \$6,589,292 \$100,000

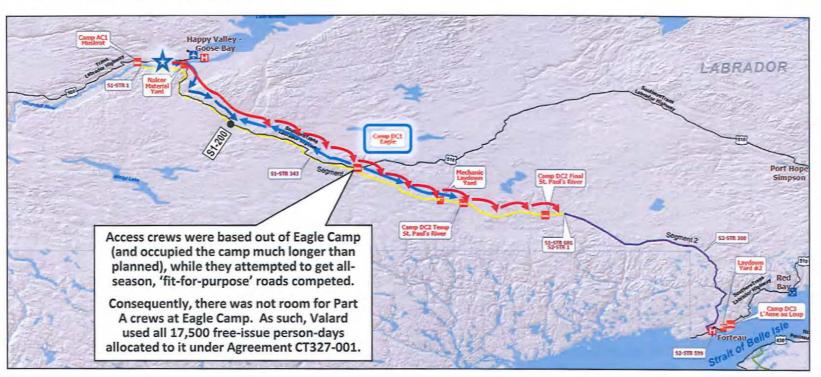


Survey Costs	SLIDE 96
Work Front 1:	
✓ Delay Costs:	
Actual average daily costs (October 2014 to December 2015)	\$13,498
Overall delay days (October 21, 2015 to December 17, 2016)	423
Delay Costs	\$5,709,654
✓ Increased Performance Costs (due to out-of-sequence work):	
Actual Costs Incurred (October 2014 to December 2015)	\$5,898,620
Estimated Costs	-\$2,764,154
Increased Performance Costs	\$3,134,466
Work Fronts 2 & 3:	
✓ Increased Performance Costs (due to acceleration):	
Actual costs incurred (actual costs after DEC 2015, less WF1 delay costs above)	\$2,530,882
Forecasted costs (based on trailing 6-months)	+\$3,216,000
Estimated costs	-\$3,825,137
Increased Performance Costs	\$1,921,745

Majority of cost overrun occurs in delay period (survey work in Labrador much more costly due to access road delays, scattered nature of work & tower location changes).

#### Work Front 1 – Camp Space Impacts

- With the exception of the construction of the first 70 km of transmission line extending from Muskrat Falls heading south,
   Valard was responsible for camp facilities (for Valard's work scope and for Nalcor's other contractors)
- For Part A of the work, Nalcor agreed to free-issue up to 17,500 person-days of accommodations at its Muskrat Falls Complex to enable the Work to be completed.



#### Work Front 1 – Camp Space Impacts

SHIDE 98

#### · LOA Camp Cost Dispute:

- ✓ Due to the delays in ROW and access road construction, Valard requested an additional 5,151 free-issue camp days at Nalcor's Muskrat Falls Camp.
- √ Nalcor rejected this request and now apparently seeks to backcharge Valard for an additional 5,845 free-issue camp
  days at its Muskrat Falls Camp (\$1,461,250).
- √ Valard has an independent claim disputing this backcharge.

#### · Added Direct Costs:

- √ Valard incurred additional direct costs associated with longer travel times from the Muskrat Camp to worksites located south of S1-200.
- ✓ Approximately 93% of the foundations completed after the point in time that Valard exceeded the original free-issue camp day allowance (April 2015) were further south than S1-200 (51% of these foundations were further south than Eagle DC1 camp extending as far south as the end of Segment 1).
- ✓ The added travel time from the Muskrat camp to S1-200 is conservatively estimated to be 1-hour each way.
- ✓ Assuming 93% of the workers staying at the Muskrat camp were working beyond S1-200, Valard estimates these workers incurred added travel time totaling 1-hour each way daily.
- ✓ Based on an average foundation craftsmen rate of \$121.71, the unanticipated costs associated with the added travel time totals \$1,323,195.

#### Topics of Discussion

- Schedule Summary:
  - ✓ Overview of Project Delays
  - ✓ Critical Path Through Work Front 1
- Delay & Impact Causation:
  - ✓ Summary of Impacts Identified
  - ✓ ROW Clearing and Access Road Construction Delays
  - √ Access Road Deficiencies
  - √ Geo-Program / Foundation Selection Process
- Cost Impacts:
  - ✓ Time Related General Conditions
  - ✓ Other Costs:
    - Mechanics
    - Survey
    - Camp Space Impact Costs
- Conclusions

#### Conclusions

State 100

- The vast majority of the delay on the Project to date was incurred in Work Front 1 and is attributable to the delayed predecessor clearing and access road construction:
  - √ 307 days of delay in completion of clearing and access road construction;
  - √ 48 days additional delay in critical path foundation work due to added spring breakup;
  - √ 107 days additional delay due to critical path stringing work suspension;
  - √ 33 day delay reduction in completion of critical path stringing work; and,
  - √ 306 day further delay reduction in completion of Work Fronts 2 and 3.
- Valard was not able to manage the clearing and access road construction as Nalcor overrode Valard decisions; did not
  communicate financial terms of roadbuilding contracts; and directed contractors without Valard involvement.
- Not only were the access roads constructed much later than planned, but significant access road deficiencies have persisted throughout construction.
- The extensive changes in foundation types have resulted in substantial financial losses to Valard.
- The stand-alone costs associated with the forecasted delay in overall project completion totals \$31,867,701.
- Our detailed analysis of the time-related field general conditions losses indicates that \$56,716,043 of the loss is attributable to delay, and \$23,998,757 is attributable to subsequent acceleration efforts.
- Additional losses totaling \$15,277,207 have been identified in costs associated with Mechanics.
- Additional losses totaling \$10,765,865 have been identified in costs associated with Survey.
- Additional losses totaling \$1,323,195 have been identified in costs associated with Camp occupancy impacts.

# May 4, 2017 Settlement Meeting Presentation Materials

# **Lower Churchill Project**

Contract Between Island Link Limited Partnership and Valard Construction LP
Newfoundland and Labrador, Canada







McLean & Armstrong LLP

