
APPENDIX C
Rail Operations Plan (R1)



1.0 Introduction

Constructed in 1978, Fibreco was built as a bulk materials handling facility primarily to receive and export woodchips to offshore markets. In the early 2000’s an upgrade to the facility was performed in order to handle wood pellets from northern and interior of B.C. Fibreco has the ability to receive woodchips by barge and railcar. Wood pellets are received only by railcar. Woodchips are stored on the ground and wood pellets are stored in dry silos and shed.

2.0 Background

The Fibreco Terminal Enhancement Project aims to transform an already successful dry bulk handling facility into a world class multi commodity terminal. The current dumper is a rotary style (for wood chips) with a retractable spout for receiving wood pellets. Wood chip cars are open top box car style with an approximate weight of 50t of product per car. Cars are delivered by CN rail in spots between 20 – 90 cars. Cars are marshalled in the Fibreco railyard and distributed on 10 tracks. Pellet cars are typically 60 foot bottom hopper cars (3 or 4 hopper) with cargo weight of approximately 95t per car. Trains are marshalled and weighed in cuts of 3-6 cars, dumped and then located in the yard for CN to remove.

3.0 Rail Traffic

Historical rail traffic is illustrated below (Table 1). Since 2012 a significant improvement in rail handling productivity has seen a dramatic drop in the number of switches required per tonne handled.

Year	Rail Volume Handled (Chips) (mt)	Rail Volume Handled (Pellets) (mt)	Total Rail Volume (mt)	Chip Switches	Pellet Switches	Total Switches
2012	256,435	1,580,382	1,836,817	205	508	713
2013	264,145	1,539,395	1,803,540	129	405	534
2014	188,544	896,330	1,084,874	93	235	328
2015	202,728	843,966	1,046,694	102	222	324
2016	221,024	1,044,525	1,265,549	83	268	351

Chip cars by volume are half of the weight of wood pellets and agri-products, this will translate in fewer agri and pellet cars per tonne handled. The addition of railtrack re-alignments, improved rail deck and car indexer at the dumper will further improve efficiencies in the order of 30%. Fibreco will be able to land, unload and deliver a 112 car unit train in a 24-hour period. (Table 2) Below illustrates the intended rail traffic upon project completion.

Year	Predicted Volume (Pellets) (mt)	Predicted Volume (Grain) (mt)	Total volume (predicted)	Grain Switches	Pellet Switches	Total Switches
Stub Year	1,000,000	500,000	1,500,000	50	234	284
Year 1	1,000,000	1,000,000	2,000,000	99	234	333
Year 2	1,000,000	1,200,000	2,200,000	119	234	353
Year 3	1,000,000	1,500,000	2,500,000	149	234	383
Year 4	1,000,000	2,000,000	3,000,000	198	234	432

Table 2

4.0 Logistics Plan

Agri products will be assemble at in-land terminals in Alberta, Saskatchewan and Manitoba and primarily delivered to Fibreco in unit trains made up of 100 cars or more. Train movement would originate in the Canadian prairies and route to the North Shore. Trains originating on CP lines will be transferred to CN at Boston Bar. Trains originating on CN track with route through Thornton yard. Based on discussions with CN rail, the capacity to the North Shore is 26-28 trains per day. Currently around 14 trains are being handled with peaks up to 16 trains per day. With the reduction in wood chip cars, Fibreco will offset approximately 2 trains per week based on historical usage. Therefore, a net increase of 2-3 trains per week using the North Shore rail corridor. Fibreco will continue to service a portion of the woodpellet demand from the former BC Rail line via Squamish and Lillooet.

In order to achieve the target of 2 mtpy, Fibreco would receive approximately 4 trains of grain in a 7 - day period. Unit train unloading would require 2 shifts of labour, allowing a 3rd shift for train spotting and pulling. Alternate days we would receive, unload and store woodpellets from existing customers. Wood pellet trains are received as 'manifest' cargo which translates to smaller spots. Unloading pellet train generally require 1 shift at a time, allowing for more opportunity to unload between grain shipments.

5.0 Conclusion

The rail strategy will consist of thorough and frequent communication with the Fibreco, the customers and the railroad. Unit trains will be dispatched from destination and spot on arrival at Fibreco. Woodpellets will continue to be spotted on a manifest basis. Additional track storage is recommended to manage production shortfall or railcar oversupply. A contingency for bad order cars is part of the design plan to avoid excess handling of partial loads of railcars. The terminal design also includes the ability to direct hit and recirculate cargo where necessary.

Attached : Operation Report Review (Mott MacDonald)
Operational Report Review (Appendix A) (Mott MacDonald)

A large blue graphic on the left side of the page, consisting of a triangle at the top and a trapezoid below it, forming a shape that resembles a stylized 'M' or a building facade.

Fibreco Terminal Enhancement Project

Operational Review Report

August 18, 2016

Confidential

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Fibreco Terminal Enhancement Project

Operational Review Report

August 18, 2016

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
A	18 August, 2016	A. Wells	S. Riddick	J. Sutcliffe	Issued for Client Review

Information class: Standard

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1 Introduction

The current Fibreco Export Inc. (FE) rail facility handles both wood pellet and wood fibre railcars through a combined 'bottom' and 'rotary' dumper (single location) with a current offload capacity of approximately 90 cars over two shifts with clean down between commodity changeovers.

Over the next three to five years, Fibreco intends to increase the pellet business to a throughput of approximately 1 Mt/y and replace wood fibre business with agri to a throughput of approximately 2 Mt/y.

1.1 Objectives

The main objectives of the Fibreco Terminal Enhancement Project are as follows:

- Receive, unload, and prepare a unit train for departure within two shifts of 8 hours.
- Minimizing modifications to the yard thereby minimizing costs to the initial phase.
- Allow for additional track storage and handling of bad order cars.

1.2 Assumptions

The proposed design is based on the design criteria detailed in Section 2.1 and the following assumptions:

- 112 grain hopper cars (60 feet long) in each unit train arriving on site.
- Mobile railcar movers (e.g. Nordco Shuttlewagons, Trackmobile, etc.) will be used for train handling within the yard.
- Railcar movers are not allowed to leave the site boundaries.
- Railcar movers will disengage and re-engage with the rail.
- Dumper cycle time of 4.3 minutes including time to index, open gates, unload car and close gates, as provided by CWA Engineers Inc. (CWA).

2 Proposed layout

2.1 Basis of design

Design of all modified tracks shall comply with Canadian National (CN) Railway's Engineering Specification for Industrial Tracks, 2011. These design requirements include the use of CN No. 8 turnouts within the facility and a maximum track curvature of 9°.

2.2 Existing infrastructure

It will be assumed that existing infrastructure, where possible, will be maintained. However, it was discussed with Fibreco that certain items could be relocated during the October 3 2014 site visit. These items include:

- Lighting poles.
- Fire hydrants.
- Minor equipment / electrical rooms.
- Lunch room.
- Conveyor support bents.

2.3 Modifications

The proposed design, shown on layout 346935-RW-100-S0-1001 in Appendix A, includes:

- Existing rotary dumper pit as it currently is.
- Demolishing the existing labour lunchroom, laydown area north of the lunchroom (Figure 1) and rotary dumper electrical room located adjacent to the dumper pit to make way for track extensions.
- Relocate the existing pedestrian overpass.
- Extension of Tracks 7 to 10 to increase loaded car capacity.
- New crossovers on Tracks 1 to 3 to improve access of empties onto these tracks.
- Additional paving of ballasted area within yard.
- Reversing low dog indexer and retarder, by Others.

Figure 1: Existing Laydown to be Demolished, Looking West

A jetty extension was proposed earlier in the project to increase the number of cars that could be fed through the dumper at a time. Through the timing analysis (detailed in Section 3), It was determined that the jetty extension is no longer required to unload a 112-car unit train within two 8-hour shifts.

The two existing derails located near the entrance gate will not be modified considering that yard operations have not been fundamentally changed and no track modifications will be made on sections of track that the derails are installed upon.

2.4 Railcar movers

At least two mobile railcar movers will be required to handle trains up to 112 cars in size with each mover having the capacity to move at least 7 loaded cars at any given time. One mover, located at the tail end of the yard, will be dedicated to continuously build, move, and couple strings of loaded cars onto the string currently being unloaded from south of the dumper. The second mover will be responsible for shunting strings of empties around the rest of the yard. Both units are assumed to have the capability to switch between rail and on-road travel to provide additional flexibility in operations while limiting additional track lengths required for yard locomotive run-arounds.

A railcar mover manufacturer was able to provide the following information and slightly conservative values for the design and timing analysis have been assumed:

Table 2-1 Mobile Railcar Mover Specifications

Parameter	Value, As supplied by manufacturer	Value, As applied
Duration, Disengage from Rail Track	10s	30s
Duration, Re-engage to Rail Track	~60 s	90 s
Turning Radius	34 feet 5 inches	34 feet 5 inches

Typical top speed on-road and rail are 14 km/h and 22 km/h respectively based on a survey of available mobile railcar movers. It is assumed in the analysis that the railcar mover is capable of travelling at an average speed of 1.5 m/s (approximately 6 km/h) on both rail and paved roads.

For the yard to handle 112 cars and do so as efficiently as possible, railcar movers will be required to travel on road near the terminal entrance and tail end of the yard. The movers will be required to travel on-road 18 times for each 112 cars unloading operation with the tail mover disengaging 16 of the 18 times.

The performance of the proposed operation depends heavily on the operation of the railcar movers. If railcar movers used for the operation do not meet the specifications listed within this section, Fibreco may not be able to replicate the timings presented in Section 3.2.

2.5 Bad Order

Drawing 373557-MMD-00-P0-DR-RW-2000 in Appendix A shows a Bad Order Track connecting to Track 8 at the northern end and also connecting into the tail feed track south of the dumper. This provides storage for 4 cars adjacent to the existing dumper and, maximum operational flexibility due to the connections at both ends.

2.6 Additional Car Storage

To utilize the potential vacant space in the South West corner of the facility, we have incorporated a ladder track with a bearing consistent with the frog angle of a No. 8 Turnout while maintaining clearances to the existing track 2 lead and provides storage for 18 cars.

In addition to the storage yard in the South West an extension to Track 10 and two additional storage tracks (11 and 12) on the east side of the yard have been provided to relieve operational congestion within the yard during unplanned conditions and flexibility for potential pellet car storage. This provides an additional storage capacity of 46 cars.

3 Operations

3.1 OPERATIONAL OVERVIEW

As detailed in Train Operating Schematics (346935-RW-100-S0-3010) in Appendix B, the proposed layout enables the terminal to bring in a 112-car unit train by breaking the train down into strings of 10 to 16 loaded cars. Spotting of loaded cars will take eight steps and will be completed using CN power only. CN will spot the first string of 12 cars directly through the dumper and stopping at least one car away from the existing concrete end stop on the jetty to satisfy CN clearance requirements. CN and railcar movers will not be permitted through the dumper building as the structure is only designed for the clearance envelope and mass of a loaded railcar. The remaining cars will be spotted in the order detailed in Table 3-1 and presented on drawing 346935-RW-100-S0-1002 in Appendix C.

Table 3-1 CN Spotting Order of Loaded Cars

Spot Order	1	2	3	4	5	6	7	8	TOTAL CARS:
Track No.	5	4	8	9	10	3	2	1	
String Length	12	15	15	10	15	13	16	16	112

It has been assumed for the purposes of the operational analysis that once CN power leaves the Fibreco yard, the crew can then begin unloading the first 12 car string (this assumption may change through discussions with CN). The indexer will take control of the first string of loaded cars (henceforth known as the unloading string) and index the unloading string into the dumper one car at a time.

The tail railcar mover will primarily be responsible with bring strings of 5 to 7 loaded cars onto the tail feed track (south of Track 5) and couple them onto the unloading string. The head railcar mover will be responsible with spotting strings of empties into yard. Operations will unload the western half of the yard (Tracks 1 to 4) first. If CN is able to remove the empties from the western half of the yard as soon as they have been spotted (as shown on drawing 346935-RW-100-S0-1003), there is an opportunity for Fibreco to bring in a short pellet train as operations finish off the remaining cars on the eastern half (Tracks 8 to 10). The track unloading order is presented in Table 3-2.

Table 3-2 Unloading Order

Unload Order	1	2	3	4	5	6	7	8
Track No.	5	4	3	2	1	8	10	9

3.2 Analysis

Desktop timing analysis was completed using the operational plan and assumptions detailed above to determine if the objectives listed in Section 1.1 can be fulfilled. A copy of the timing analysis is available for review within C and each event is colour coded for ease of review.

Based on the timing analysis, it is determined that the critical path remains in the pure cycle time of the dumper as previously mentioned in the high level review of a parallel dumper operation (document number 346935-RW-230-S0-0005).

Table 3-3 Key Timing intervals

	Specific Activity Duration, in HH:MM format	Cumulative Time, in HH:MM format
CN to deliver and spot 112 full cars	01:16	01:16
Total dumping and train- handling in-yard operations	08:14	09:29
CN to retrieve 112 empty cars	0:2:21	11:56
All time presented in this table is rounded to the next whole minute.		

Based on the intervals extracted from the timing analysis, the modified yard is capable of dumping a 112-car unit train within the two 8-hour shifts but a unbalanced utilization exists between the head railcar mover (spotting empties) and the tail railcar mover (feeding loaded cars).

Conceptually, only two railcar movers are required for Fibreco achieve the aforementioned objective. To sustain the number of railcars going through the dumper, the tail mover will be required for train handling for nearly the entire unloading operation.

4 Design Development

The track work will include approximately 265m (900ft) of new tracks and ten new No. 8 switches. Quantities for new trackwork are based on complete replacement of the existing track, including the rail, ties, ballast, and asphalt pavement. There is approximately 6,700m² of new pavement to make the yard fully accessible by railcar movers. Since no site investigations have been completed, no engineering has been undertaken for revising site drainage or disposal of contaminated soils at this stage. Site preparation and demolition of the existing buildings have

The following items excludes the following:

- New railcar movers, indexers or other rail handling equipment.
- Material handling equipment and infrastructure.
- Site preparation and demolition of existing buildings.
- Ground improvement.
- Environmental assessments and studies.
- Contaminated soil and material removal.
- Geotechnical investigations and survey.
- Systems and communications.
- Power and terminal lighting.
- Permitting.
- CN application and miscellaneous costs.
- Engineering design.
- Procurement support.
- Construction management.
- Other owner costs.

5 Further Considerations

5.1 Future Phases

Proposed operation heavily depends on timely feed onto the unloading string which results in a significantly high level of utilization of the tail railcar mover. With the addition of a new parallel dumper in the future, it is expected that the railcar movers once again will become the critical path for unloading operation. It will be highly likely that operation will require additional railcar movers to continue unloading efficiently.

5.2 Others

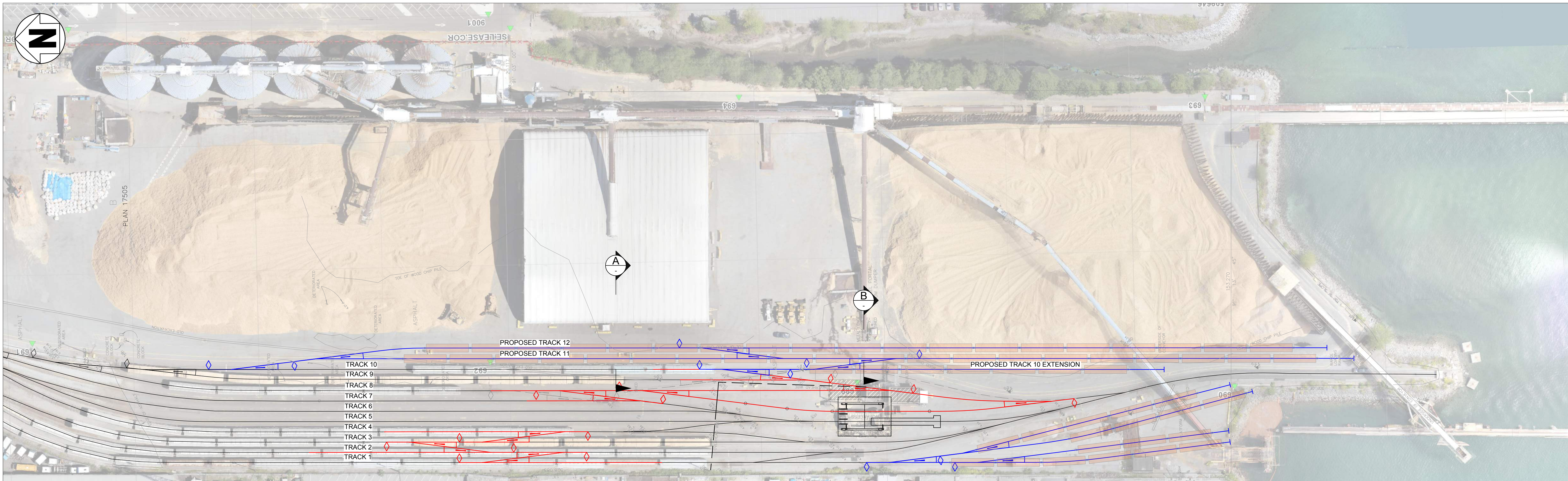
Other considerations that will require additional investigation include:

- Constructability and staging of the work
- Geotechnical Investigation
- Site Drainage
- Lighting
- Utilities and Protection
- Environmental

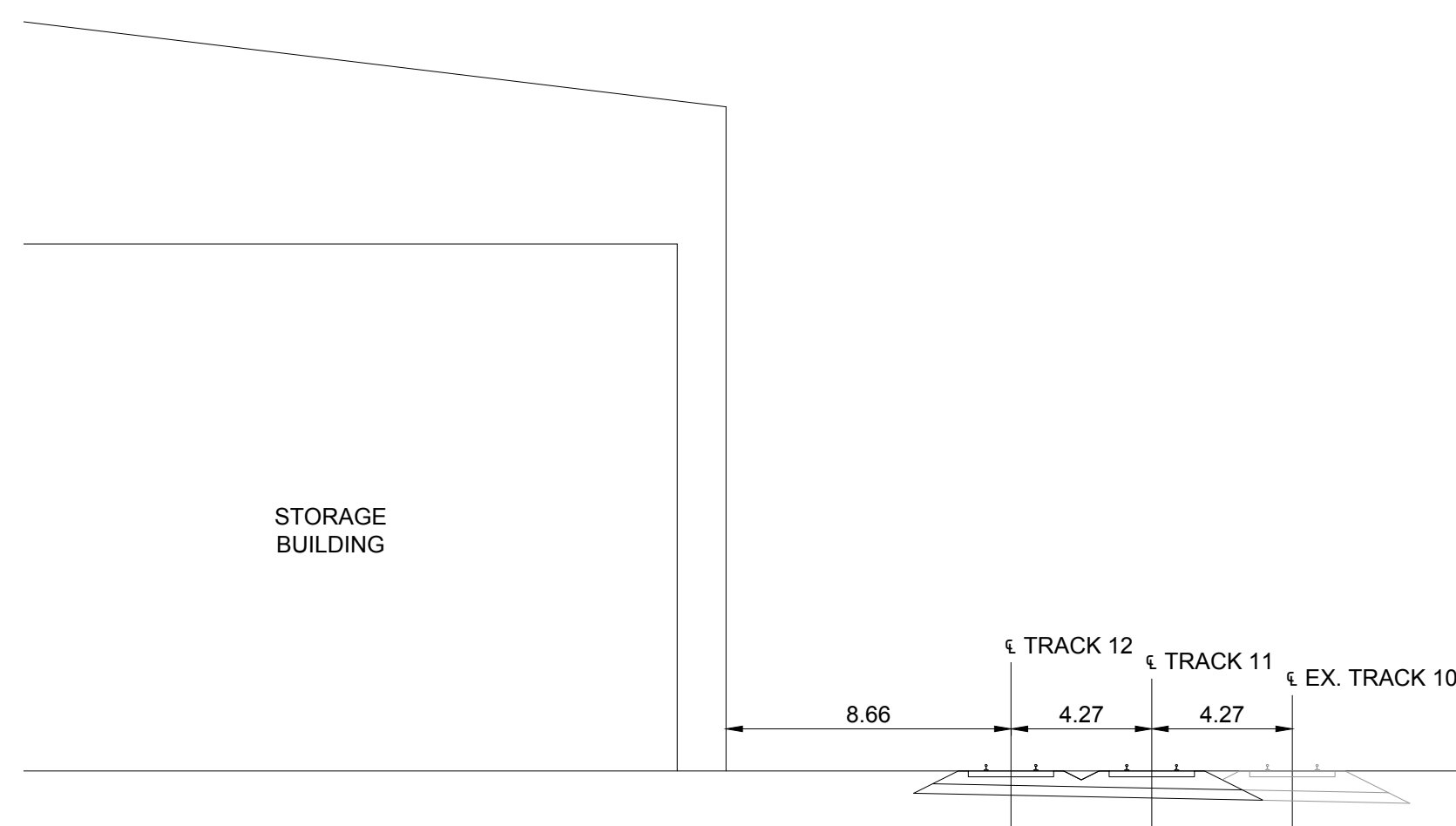
6 Conclusion

Based on the work completed to-date and the work undertaken by CWA on dumper capacity, it is possible for Fibreco to achieve all the objectives listed under Section 1.1. The ability of the railways to support Fibreco by delivering and recovering cars as and when required will be paramount to achieving the stated targets and potentially make further gains once work is completed.

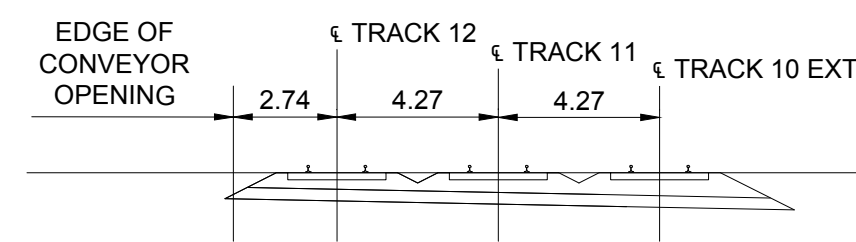
A. Proposed Layout Plan



PLAN
SCALE: 1:750
10 m 0 1,750 40 m



SECTION A
1:200
2 m 0 1,200 10 m



SECTION B
1:200
2 m 0 1,200 10 m

STORAGE TRACKS	CARS
TRACK 1 EXT [3 SWITCHES]	18
TRACK 10 EXT [1 SWITCH]	7
TRACK 11 [3 SWITCHES]	20
TRACK 12 [3 SWITCHES]	19
TOTAL	64

- NOTES:
1. SECTIONS BASED ON MATSON PECK □ TOPLISS SURVEY DATED NOVEMBER 15, 2007.
 2. SEE HATCH DRAWINGS 369623-RW-100-S0-1001-1005 FOR REFERENCE.
 3. COSTS SHOWN IN TABLE ARE INDICATIVE ONLY \$50
 4. COSTS ONLY INCLUDE TRACK MATERIALS AND BASIC TRACK CONSTRUCTION PLUS PAVING COSTS.

CONCEPTUAL - FOR DISCUSSION ONLY
2016/07/15

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Rev	Date	Drawn	Description	Ch k d	App d
A	2016/08/18	RH	ISSUED FOR REVIEW	JS	SR

- LEGEND:
- EXISTING TRACKS
 - PROPOSED ADDITIONAL STORAGE TRACKS
 - PROPOSED TRACKS (TERMINAL EXPANSION)
 - ◇ PROPOSED POINT OF SWITCH
 - 60 FT RAIL CARS
 - φ EXISTING DERAIL

Designed	R. HAY	2016/07/15	Eng check	J. SUTCLIFFE	2016/07/15
Drawn	R. HAY	2016/07/15	Coordination		
Dwg check	J. SUTCLIFFE	2016/07/15	Approved	S. RIDDICK	2016/07/15
Scale at D si e	Status	Rev	Security		
1:750	IFR	A			
Drawing Number 373557-MMD-00-P0-DR-RW-2000					

Title

FIBRECO EXPORT INC.
TERMINAL ENHANCEMENT PROJECT
PHASE 1 EXPANSION
ADDITIONAL CAR STORAGE
CONCEPT OPTION

B. Train Handling Schematics



Fibreco Grain Yard Expansion - 112 Car Train - Single Dumper

Last Edited
2015-10-19

List of Drawings









Sheet	Title	Cars Dumped
1	Fibreco Yard - Track Layout as per drawing 346935-RW-100-S0-0110	-- / --
2	112-car unit train arrives on Fibreco's eastern entrance track with CN power. Head and tail shuttlewagons are positioned clear of spotting of unit train	-- / --
3	First string of 12 loaded cars are spotted into the southern section of Track 5 via Track 4	-- / --
4	15 loaded cars spotted onto Track 4	-- / --
5	16 loaded cars spotted onto Track 8	-- / --
6	10 loaded cars spotted onto Track 9	-- / --
7	15 loaded cars spotted onto Track 10	-- / --
8	13 loaded cars spotted onto Track 3	-- / --
9	16 loaded cars spotted onto Track 2	-- / --
10	15 loaded cars spotted onto Track 1	-- / --
11	CN locomotives no longer within Fibreco yard. Indexer is now in control of the first string of 12 cars and can begin dumping	-- / --
12	Head shuttlewagon coupled onto empties string. Empties are directed towards Track 7	2 / 112
13	Tail shuttlewagon cuts 7-car string from Track 4	10 / 112
14	Tail shuttlewagon couples 7-car string onto Track 5 south to attach onto unloading string. Head shuttlewagon cuts 11 cars from empties string and spots onto Track 7	12 / 112
15	Tail shuttlewagon disengages from Track 5 and travels toward Track 3-5 foulpoint. Head shuttlewagon decouples from empties on Track 7	12 / 112
16	Tail Shuttlewagon pulls 7-car string to Track 3-5 foulpoint and wait for unloading string to clear	17 / 112
17	Tail shuttlewagon couples to last loaded car on Track 4	20 / 112
18	Tail Shuttlewagon pulling 7-car string onto Track 5 south to attach onto unloading string. Head shuttlewagon couples to empties string after spotting 10-cars onto Track 6	23 / 112
19	Tail shuttlewagon couples 7 loaded cars onto unloading string	25 / 112
20	Tail shuttlewagon waits for unloading string to clear Track 3-5 foulpoint. Head shuttlewagon spots 12 empties onto Track 4	45 / 112
21	Tail shuttlewagon couples 7 loaded cars onto unloading string. Head shuttlewagon disengaged from tracks and travelling on-road from Track 4 to Track 3	47 / 112
22	Tail shuttlewagon travel north on-road towards Track 3-5 foulpoint. Head shuttlewagon meets with empties string	51 / 112
23	Tail shuttlewagon pulls last 2 cars from Track 3 and couples to 5 additional cars on Track 1. Head shuttlewagon spots 6 empties onto the south end of Track 3	53 / 112
24	Unloading string clear of Track 3-5 foulpoint. Tail shuttlewagon travelling south to couple 6 loaded cars to unloading string. Head shuttlewagon waits for loaded cars to clear Track 2	59 / 112
25	Tail shuttlewagon travelling towards the last loaded string on the western half. Head shuttlewagon spots 8 empties onto the north end of Track 2	63 / 112

ISSUED FOR CLIENT REVIEW
2015/10/19

No.	DATE	REVISION	BY
A	15/10/20	ISSUED FOR CLIENT REVIEW	SCR
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		HMM PROJECT No. 346935	
DWG. BY:	DATE:	CHK BY:	SCALE:
W. MAK	2015/10/20	ARW	NTS

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- LEGEND:
-  EXISTING TRACK
 -  PROPOSED TRACK
 -  SHUTTLEWAGON TRAVEL PATH
 -  LOADED CAR
 -  UNLOADED CAR
 -  SECTION INVOLVED IN SUBSEQUENT MOVE
 -  LOCOMOTIVE
 -  SHUTTLEWAGON

SHEET 00a

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Fibreco Grain Yard Expansion - 112 Car Train - Single Dumper



Last Edited
2015-10-19

List of Drawings

Sheet	Title	Cars Dumped
26	Tail shuttlewagon couples 5 loaded cars on Track 1. Head shuttlewagon couples to empties string	63 / 112
27	Tail shuttlewagon couples 5 loaded cars to unloading string. Head shuttlewagon cuts 7 empties and travels to south end of Track 1. If required, CN can now arrive to remove empties	66 / 112
28	Tail shuttlewagon travelling north towards Track 9-5 foulpoint. Head shuttlewagon spotting 7 empties onto the south end of Track 1	68 / 112
29	Tail shuttlewagon couples 5 loaded cars to unloading string. Head shuttlewagon pulling 4 empties towards the south end of Track 1	71 / 112
30	Tail shuttlewagon couples to 5 loaded cars on Track 8. Head shuttlewagon spots 7 empties onto the north end of Track 1	79 / 112
31	Tail shuttlewagon couples 5 loaded cars from Track 10 onto unloading string. Head shuttlewagon pushes 8 empties into the south end of Track 2	88 / 112
32	Tail shuttlewagon decouples from unloading string. Head shuttlewagon disengaged from Track 1 and travelling on-road to Track 8	101 / 112
33	Head shuttlewagon pulls last car clear of dumper building. Fibreco contacts CN for empty train retrieval	112 / 112
34	All shuttlewagons cleared from departure tracks. Unit train ready for CN pickup	-- / --
35	CN locomotives arrive on Fibreco yard and couples onto Track 4 empties	-- / --
36	CN continues to rebuild unit train by coupling to empties on Track 5	-- / --
37	CN continues to rebuild unit train by coupling to empties on Track 6	-- / --
38	CN continues to rebuild unit train by coupling to empties on Track 7	-- / --
39	CN continues to rebuild unit train by coupling to empties on Track 8	-- / --
40	CN continues to rebuild unit train by coupling to all empties on Track 1	-- / --
41	CN continues to rebuild unit train by coupling to all empties on Track 3	-- / --
42	CN continues to rebuild unit train by coupling to all empties on Track 2	-- / --
43	Empty unit train clears mainline switch and no longer within Fibreco yard	-- / --









ISSUED FOR CLIENT REVIEW
2015/10/19

No.	DATE	REVISION	BY
A	15/10/20	ISSUED FOR CLIENT REVIEW	SCR

PREPARED FOR: 	PREPARED BY: 	HMM PROJECT No. 346935
DWG. BY: W. MAK	DATE: 2015/10/20	CHK BY: ARW SCALE: NTS

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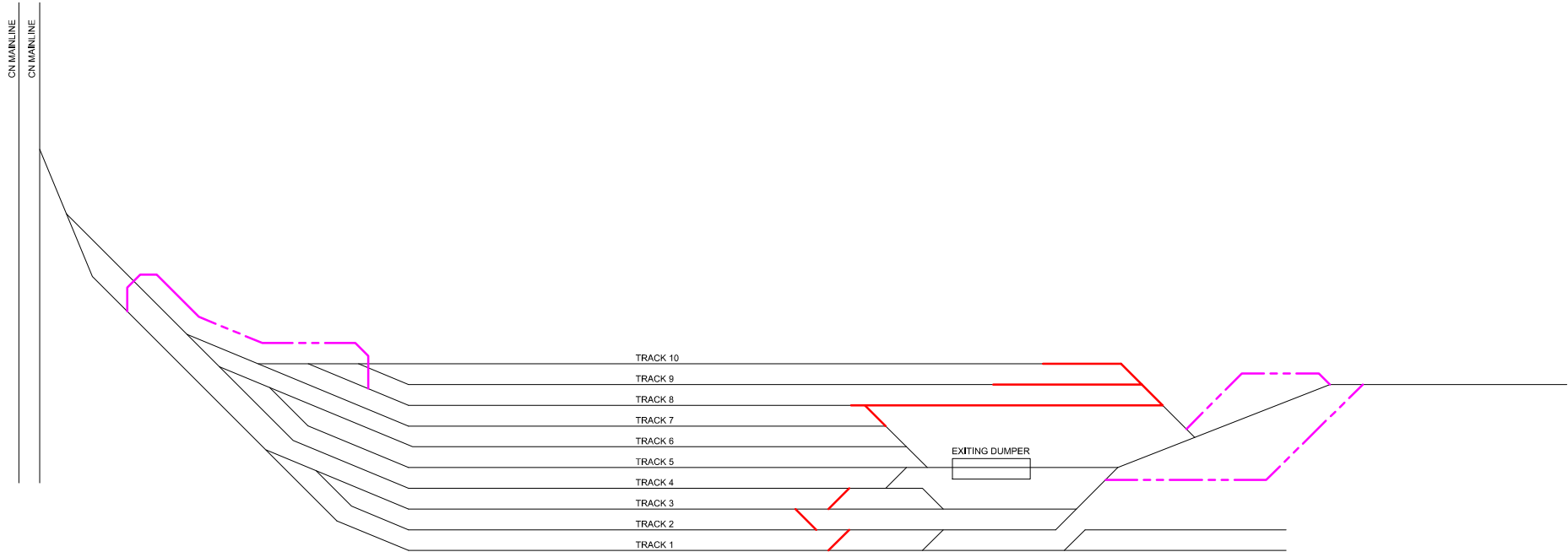
- LEGEND:
-  EXISTING TRACK
 -  PROPOSED TRACK
 -  SHUTTLEWAGON TRAVEL PATH
 -  LOADED CAR
 -  UNLOADED CAR
 -  SECTION INVOLVED IN SUBSEQUENT MOVE
 -  LOCOMOTIVE
 -  SHUTTLEWAGON

SHEET 00b

USER NAME: Mak_Wilson ON: 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\R\W\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Fibreco Yard - Track Layout as per drawing 346935-RW-100-S0-0110



NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

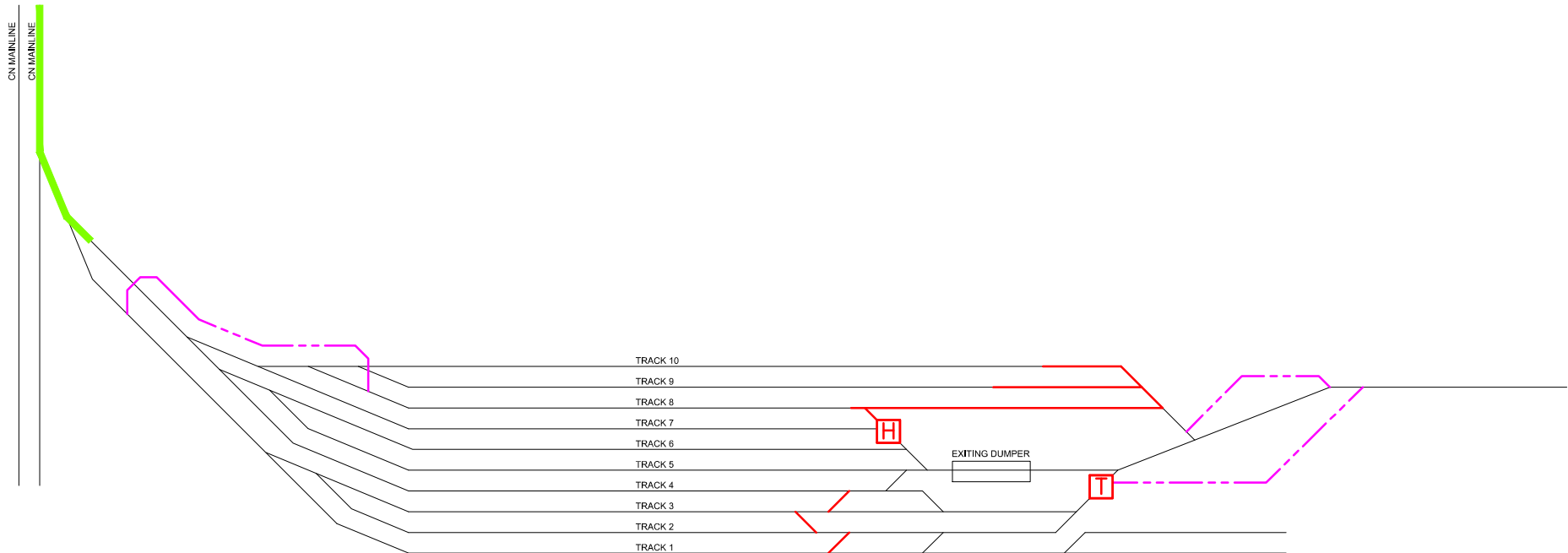
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 01
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

112-car unit train arrives on Fibreco's eastern entrance track with CN power
 Head and tail shuttlewagons are positioned clear of spotting of unit train



00:00

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

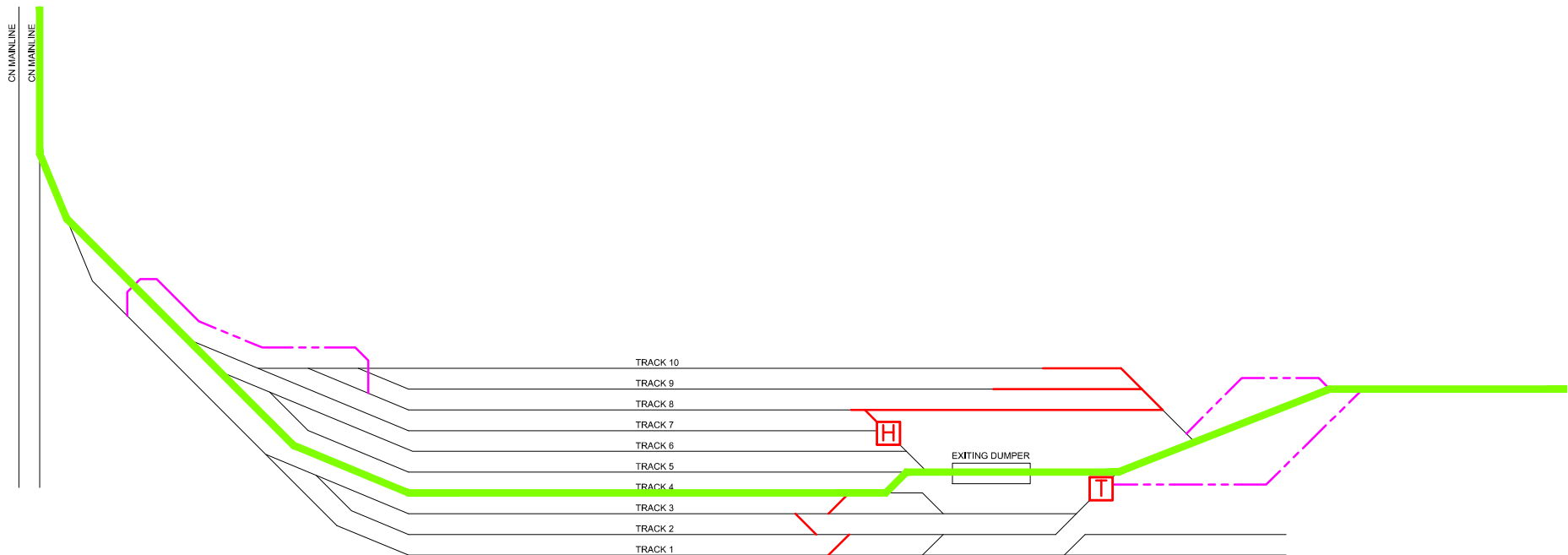
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 02
DRAWN: WM CHECKED: ARW		

USER NAME: Mak, Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\R\W\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

First string of 12 loaded cars are spotted into the southern section of Track 5 via Track 4



00:07

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

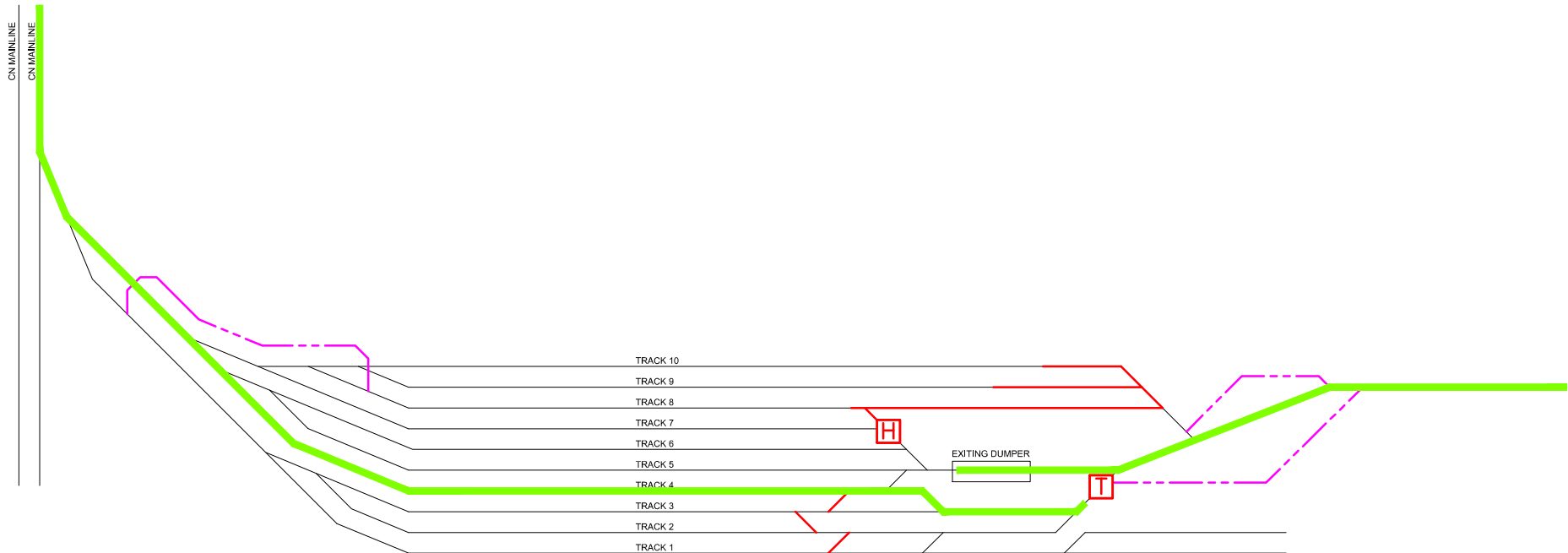
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 03
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

15 loaded cars spotted onto Track 4



00:12

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

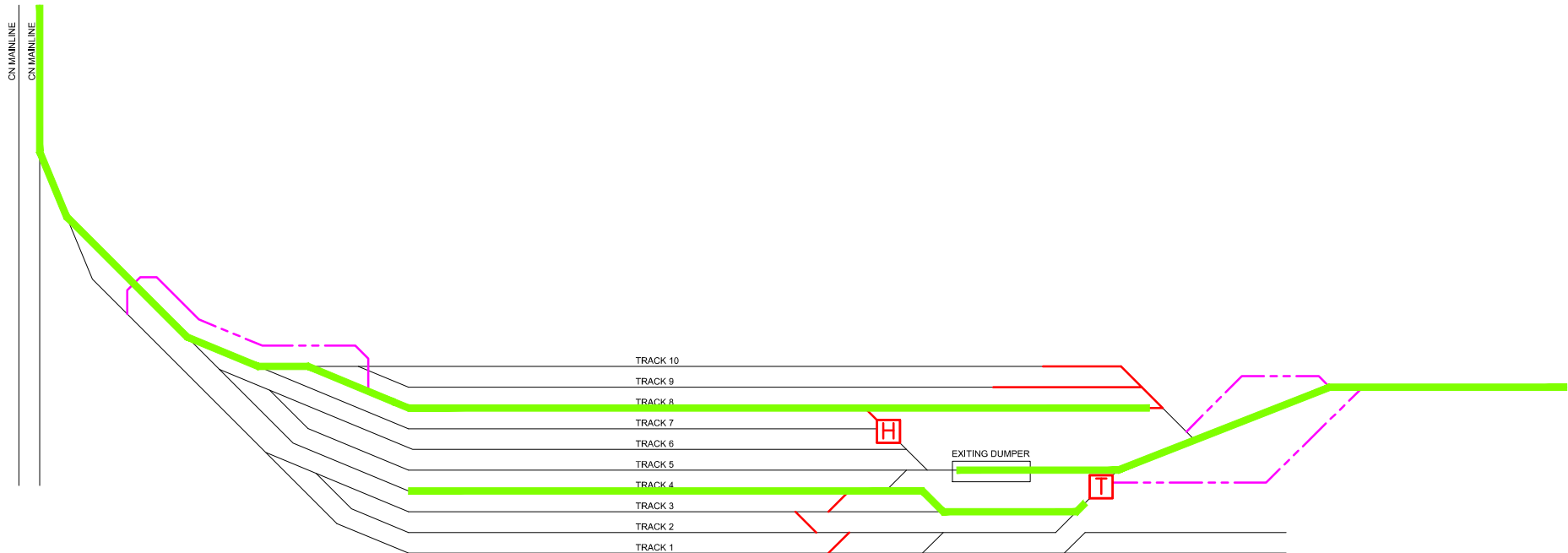
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 04
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

16 loaded cars spotted onto Track 8



00:23

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- - - SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

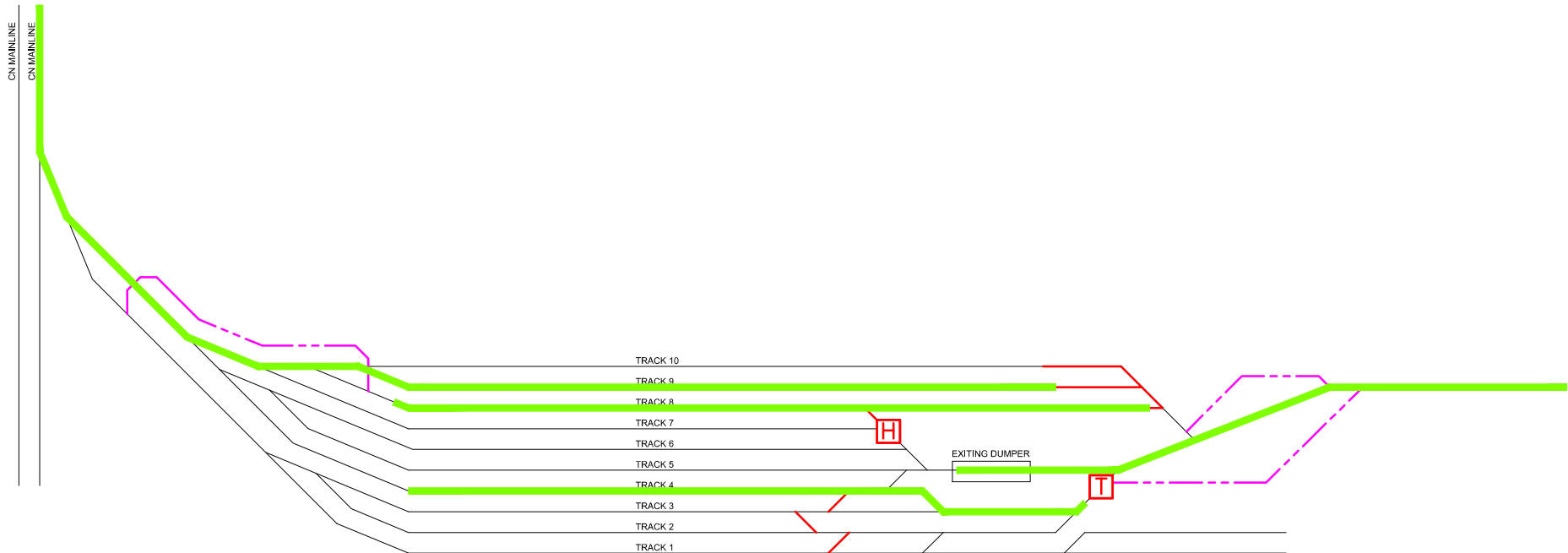
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY:	PREPARED FOR:	SHEET 05
Hatch Mott MacDonald	FIBRECO	

Fibreco Grain Yard Expansion - Phase 1 Operations

10 loaded cars spotted onto Track 9



00:31

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

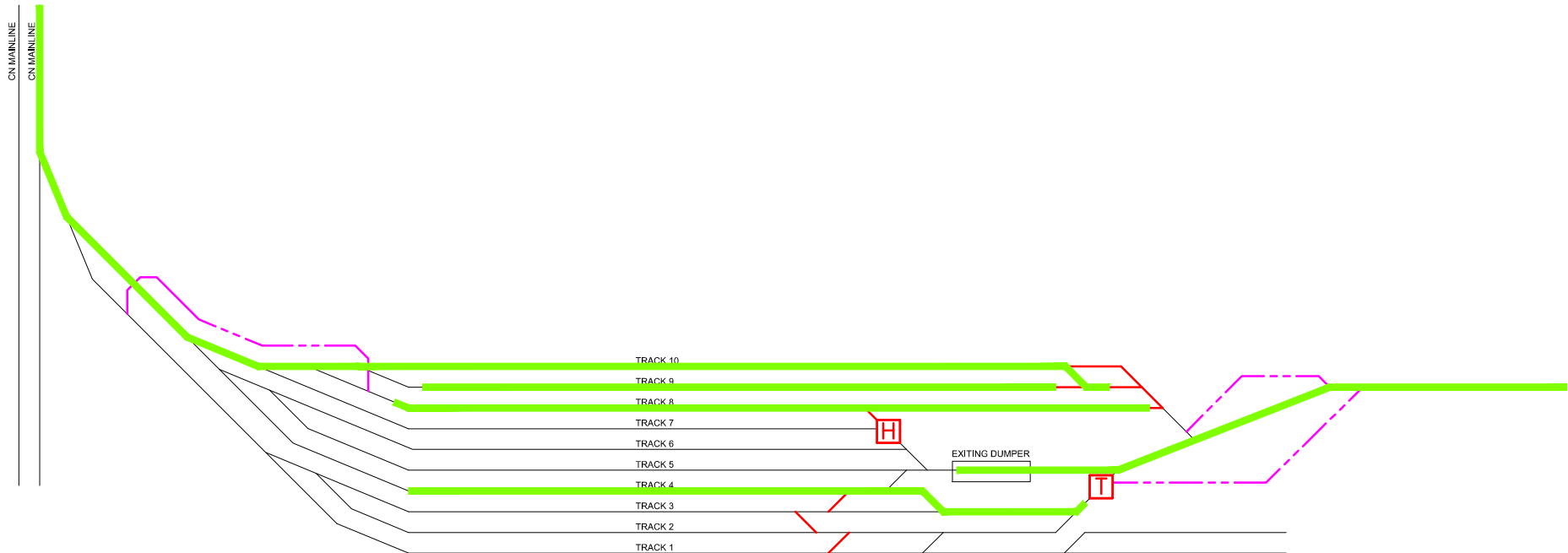
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 06
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

15 loaded cars spotted onto Track 10



00:39

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

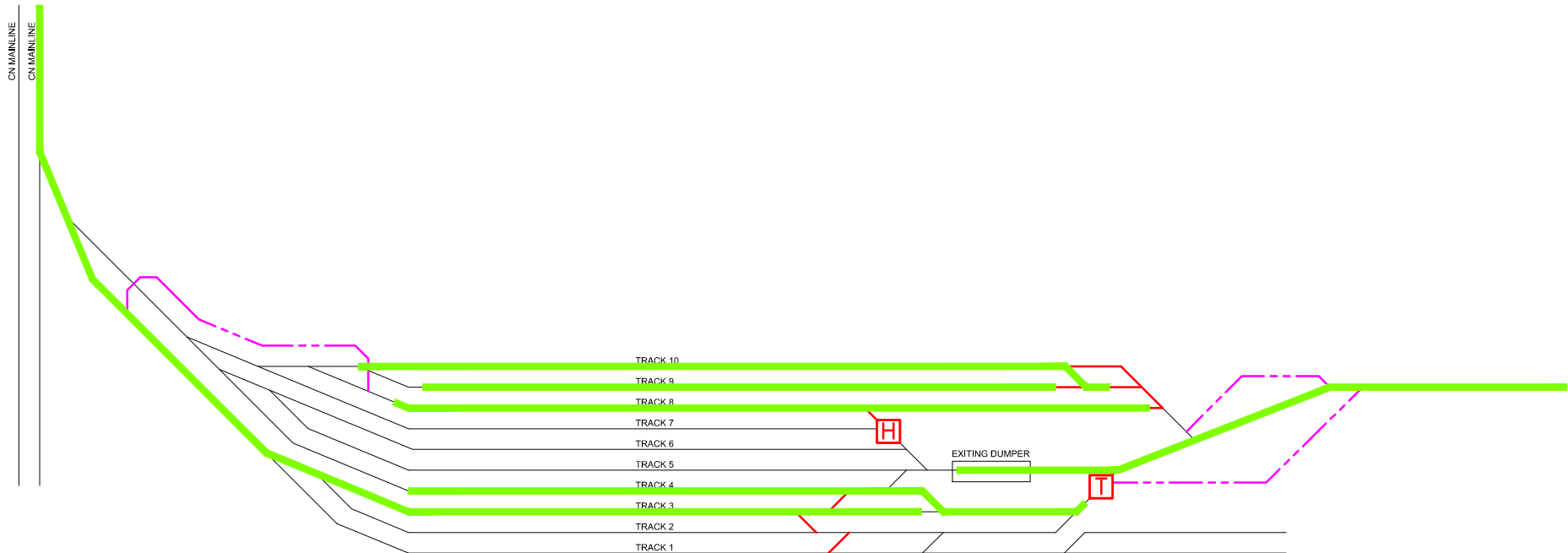
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 07
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

13 loaded cars spotted onto Track 3



00:55

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

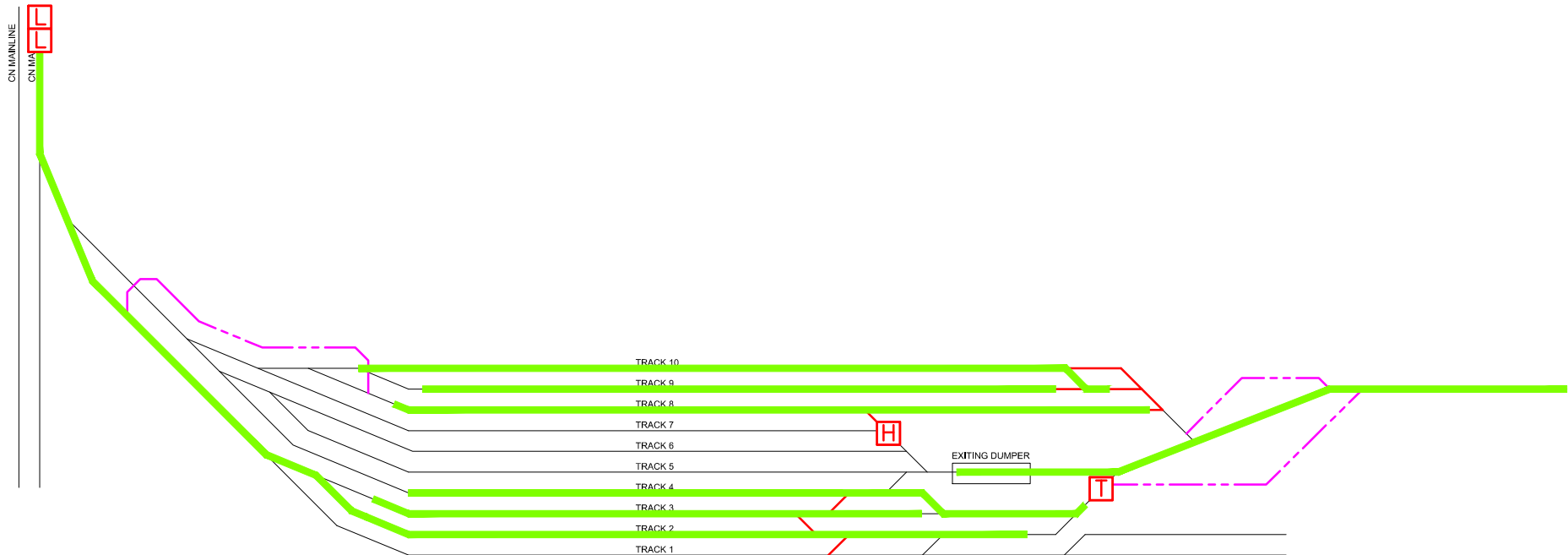
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 08
DRAWN: WM CHECKED: ARW		

USER NAME: Mak, Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

16 loaded cars spotted onto Track 2



00:59

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

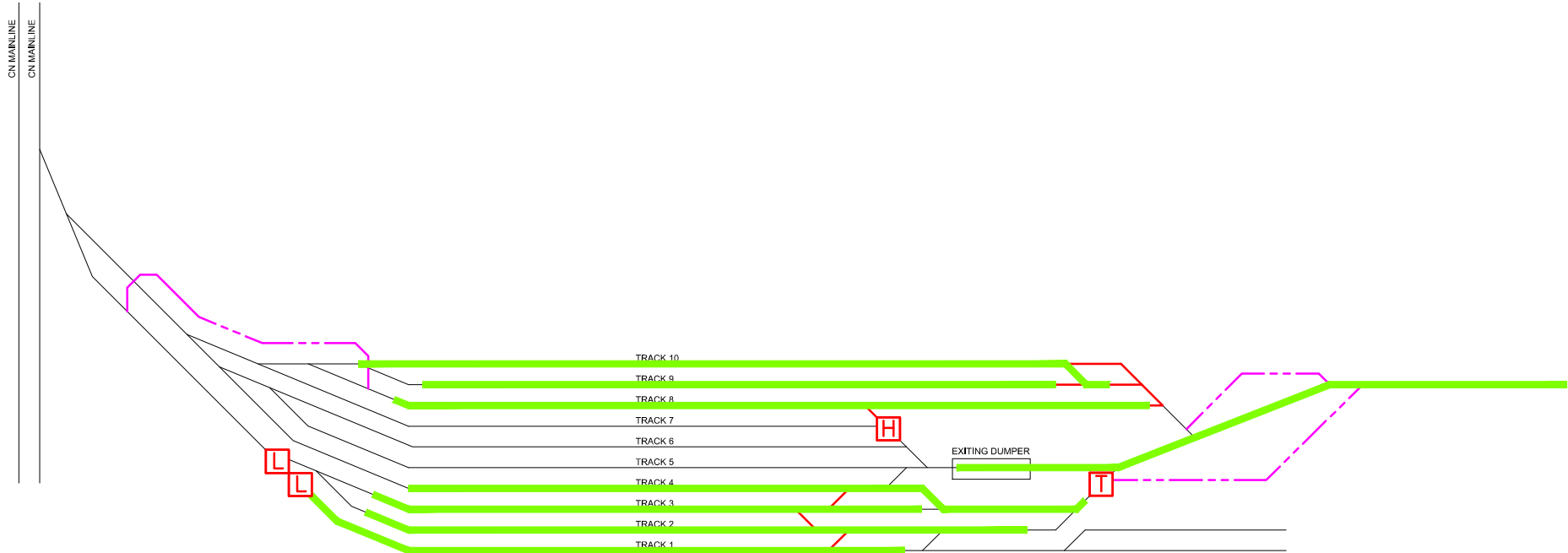
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 09
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

15 loaded cars spotted onto Track 1



01:14

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

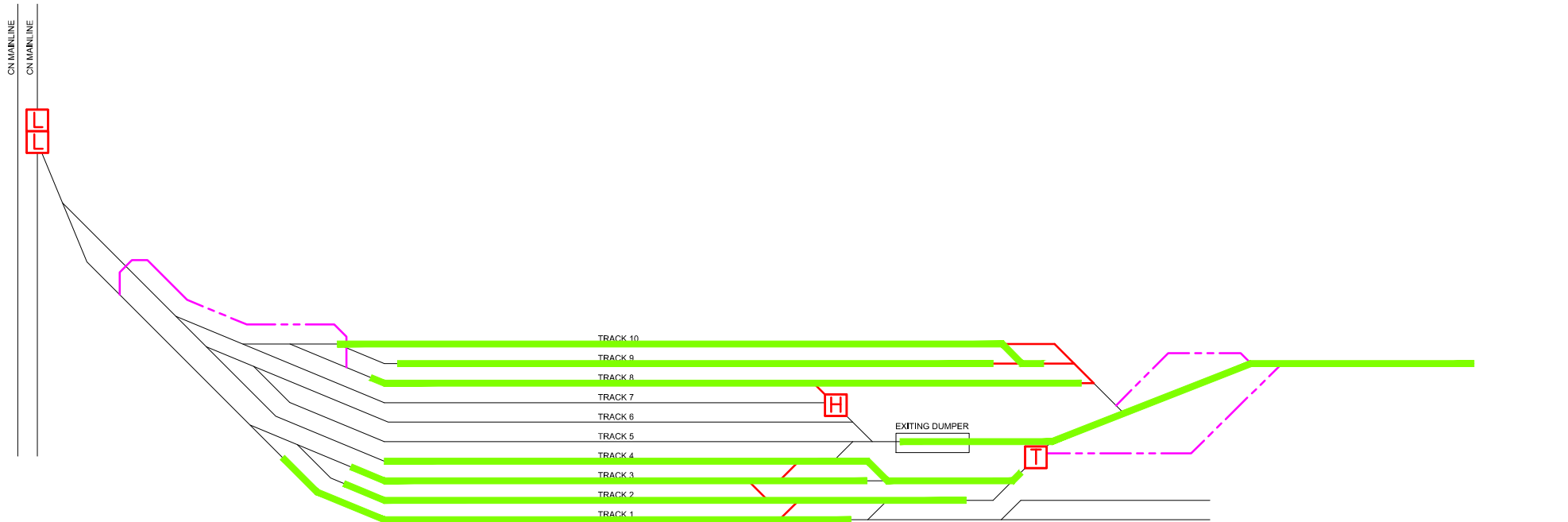
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Fibreco Grain Yard Expansion - Phase 1 Operations

CN locomotives no longer within Fibreco yard

Indexer is now in control of the first string of 12 cars and can begin dumping



01:19

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [L] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

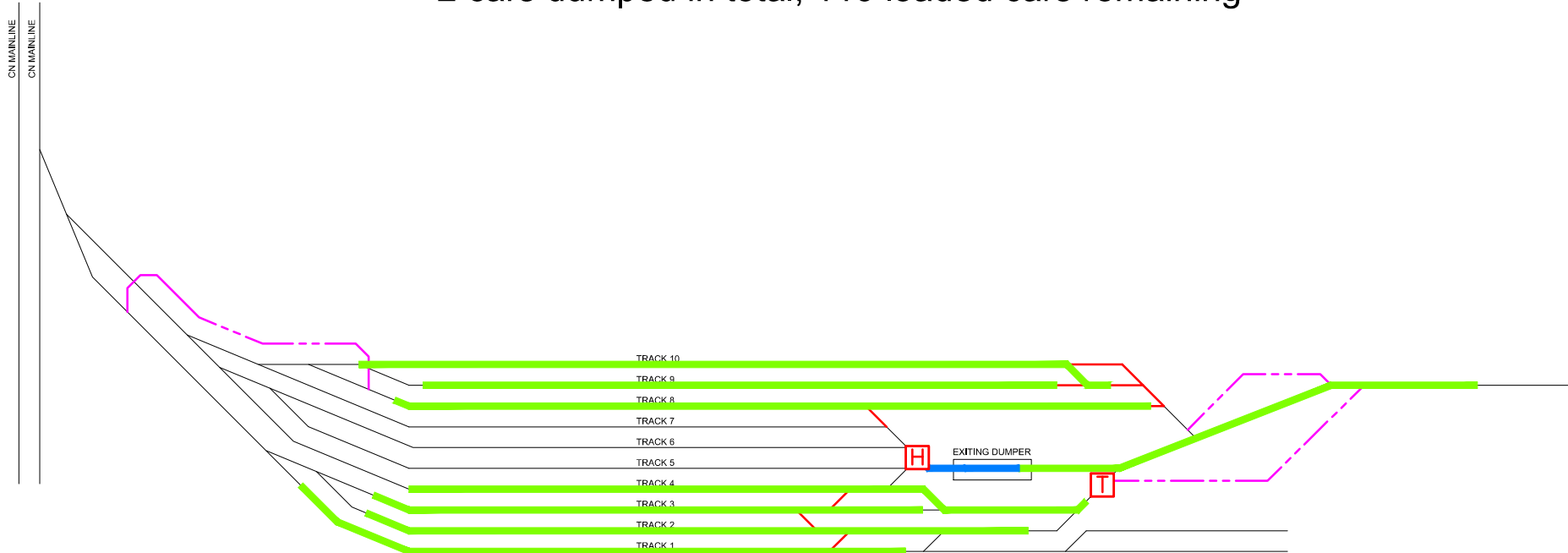
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 11
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Head shuttlewagon coupled onto empties string
 Empties are directed towards Track 7
 2 cars dumped in total, 110 loaded cars remaining



01:24

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

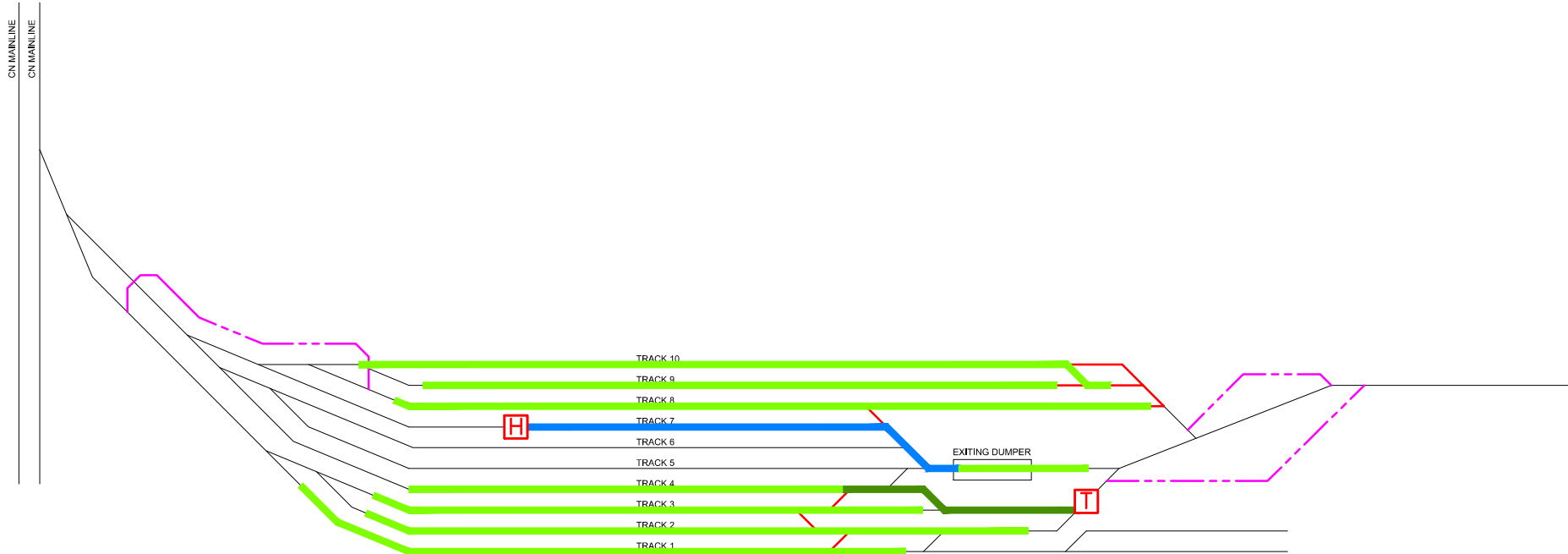
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 12
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon cuts 7-car string from Track 4
 10 cars dumped in total, 102 loaded cars remaining



02:02

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 — SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

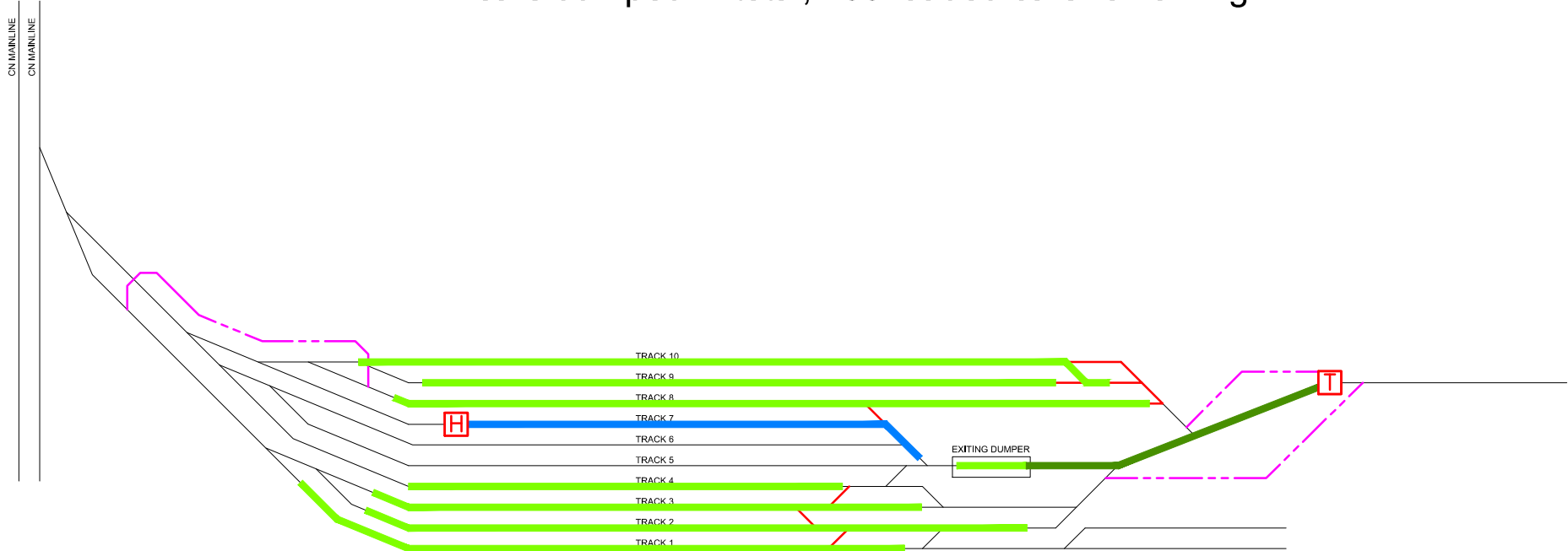
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 13
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples 7-car string onto Track 5 south to attach onto unloading string
 Head shuttlewagon cuts 11 cars from empties string and spots onto Track 7
 12 cars dumped in total, 100 loaded cars remaining



02:10

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - H LOCOMOTIVE
 - T SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 14
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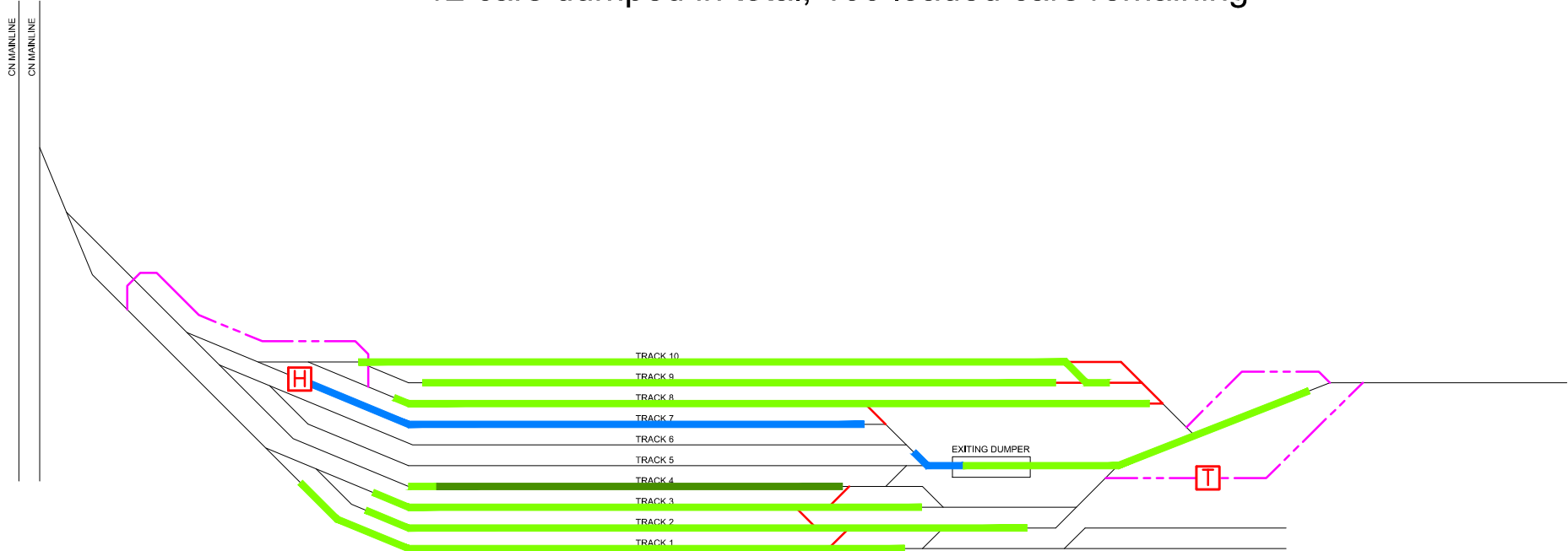
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Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon disengages from Track 5 and travels toward Track 3-5 foulpoint

Head shuttlewagon decouples from empties on Track 7

12 cars dumped in total, 100 loaded cars remaining



02:12

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

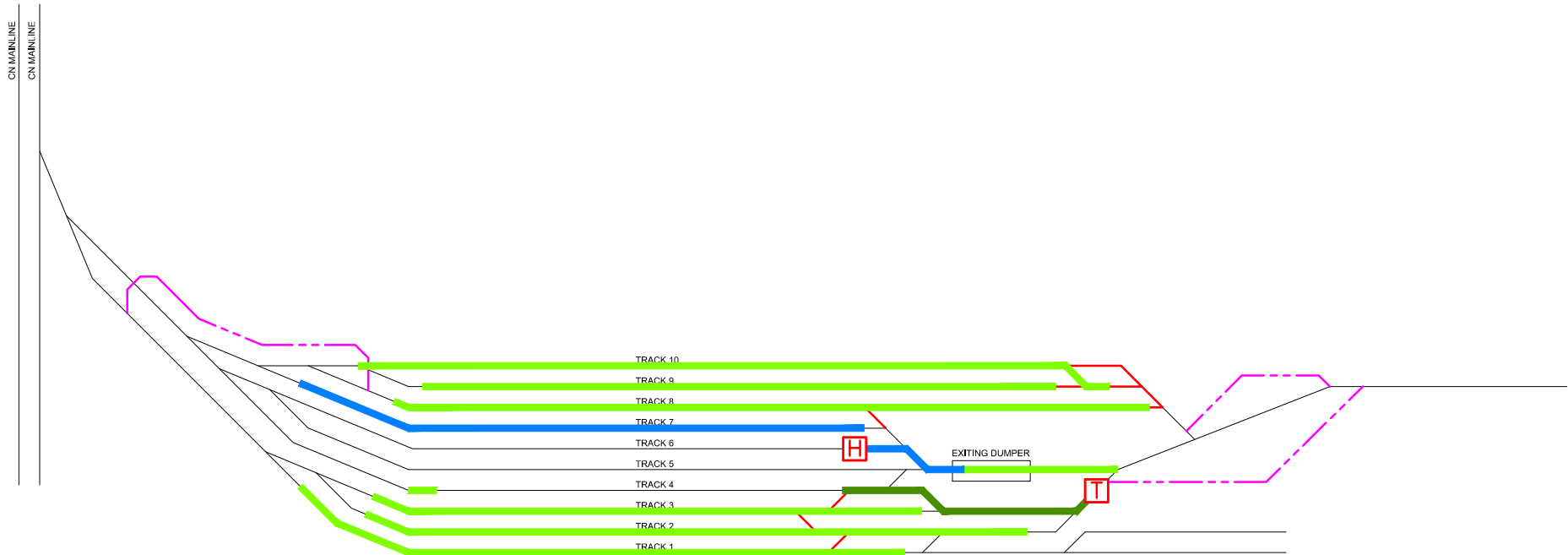
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 15
DRAWN: WM CHECKED: ARW		

USER NAME: Mak, Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail Shuttlewagon pulls 7-car string to Track 3-5 foulpoint and wait for unloading string to clear
17 cars dumped in total, 95 loaded cars remaining



02:31

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 16
DRAWN: WM CHECKED: ARW		

USER NAME: Mak, Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples to last loaded car on Track 4
 20 cars dumped in total, 92 loaded cars remaining



02:48

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 - - - SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [HT] SHUTTLEWAGON

DRAFT FOR DISCUSSION

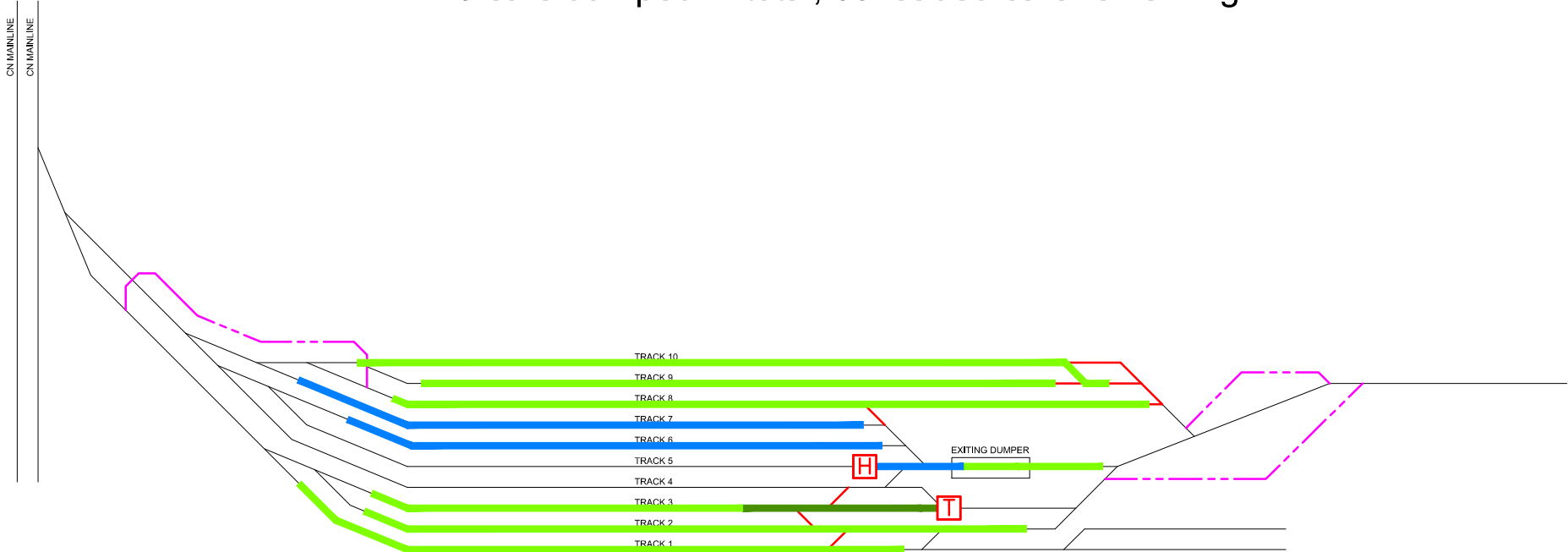
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 17
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon pulling 7-car string onto Track 5 south to attach onto unloading string
 Head shuttlewagon couples to empties string after spotting 10-cars onto Track 6
 23 cars dumped in total, 89 loaded cars remaining



03:01

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

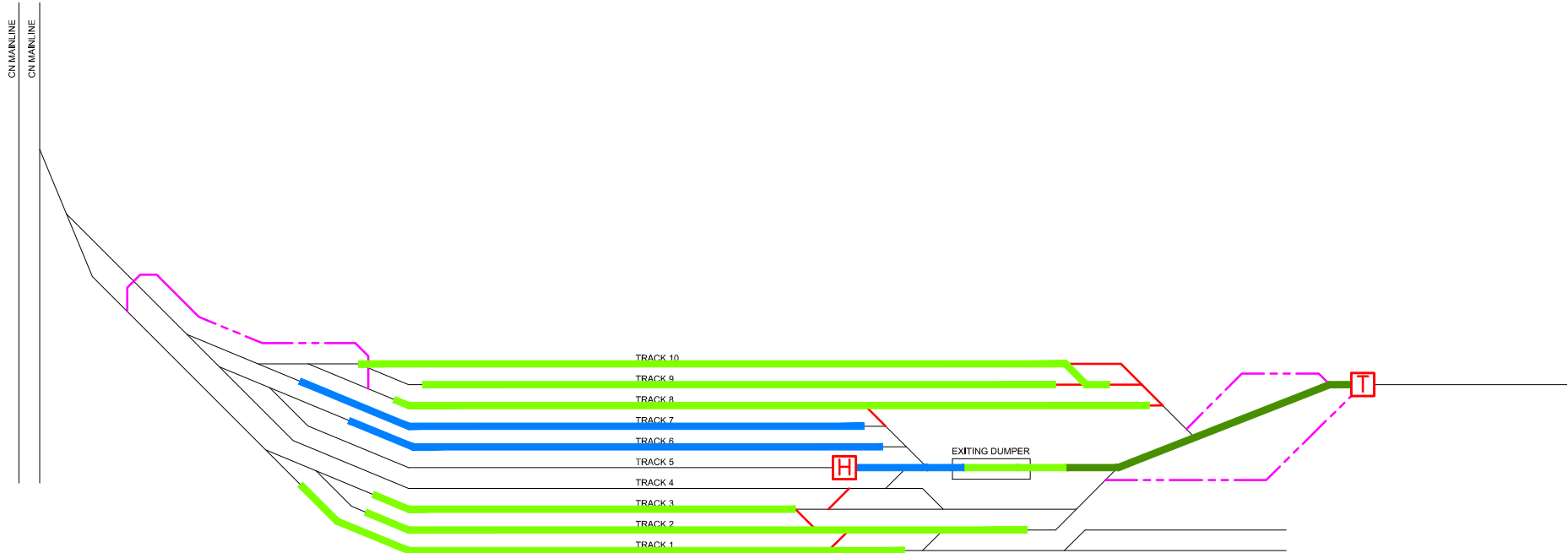
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 18
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Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples 7 loaded cars onto unloading string
 25 cars dumped in total, 97 loaded cars remaining



03:05

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

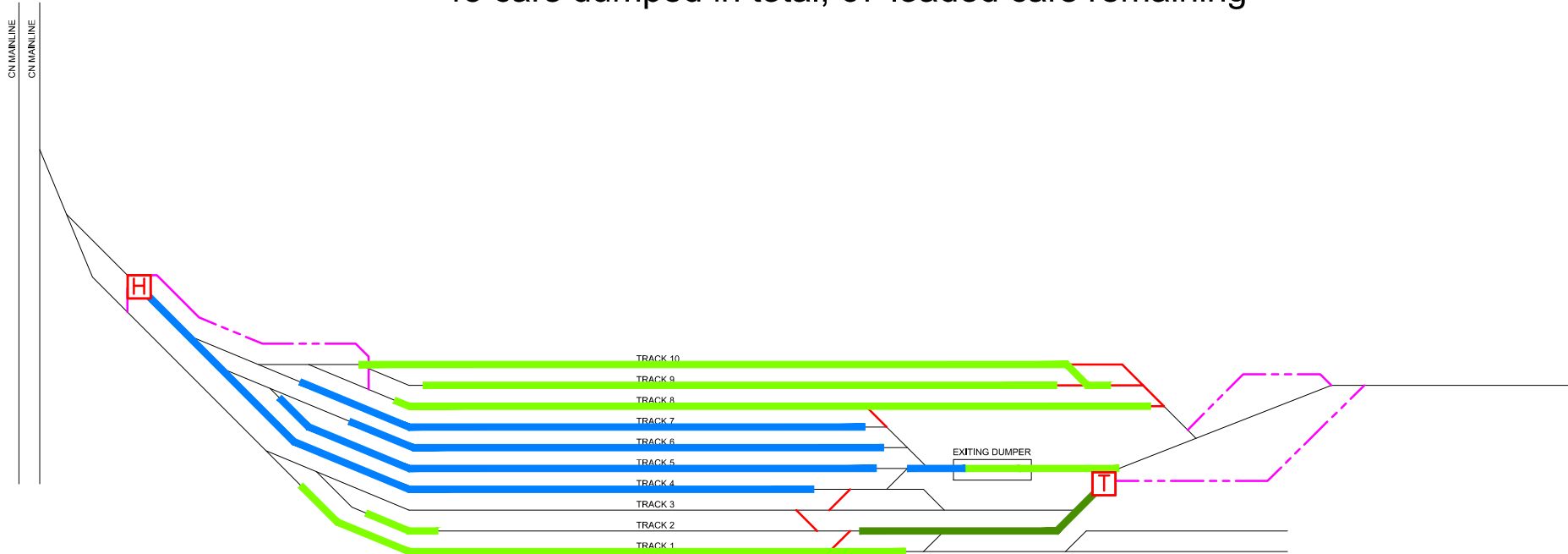
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 19
DRAWN: WM CHECKED: ARW		

USER NAME: Mak, Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon waits for unloading string to clear Track 3-5 foulpoint
 Head shuttlewagon spots 12 empties onto Track 4
 45 cars dumped in total, 67 loaded cars remaining



04:32

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

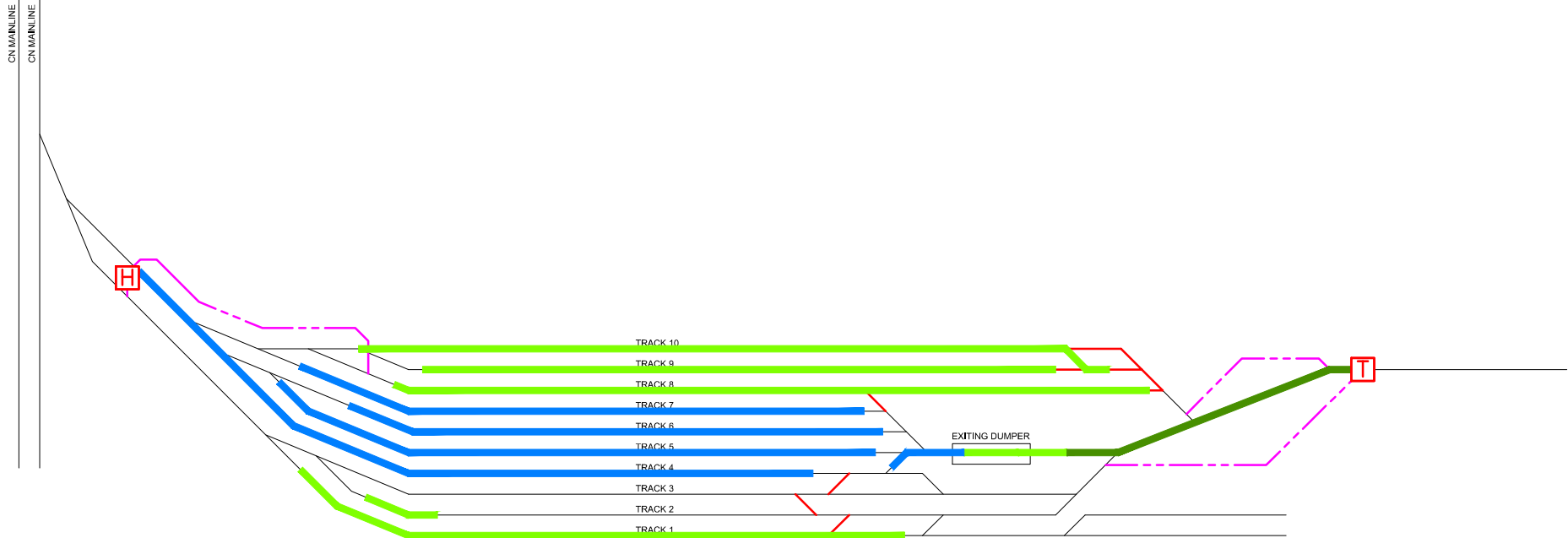
PREPARED BY: 	PREPARED FOR: 	SHEET 20
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples 7 loaded cars onto unloading string

Head shuttlewagon disengaged from tracks and travelling on-road from Track 4 to Track 3

47 cars dumped in total, 65 loaded cars remaining



04:37

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

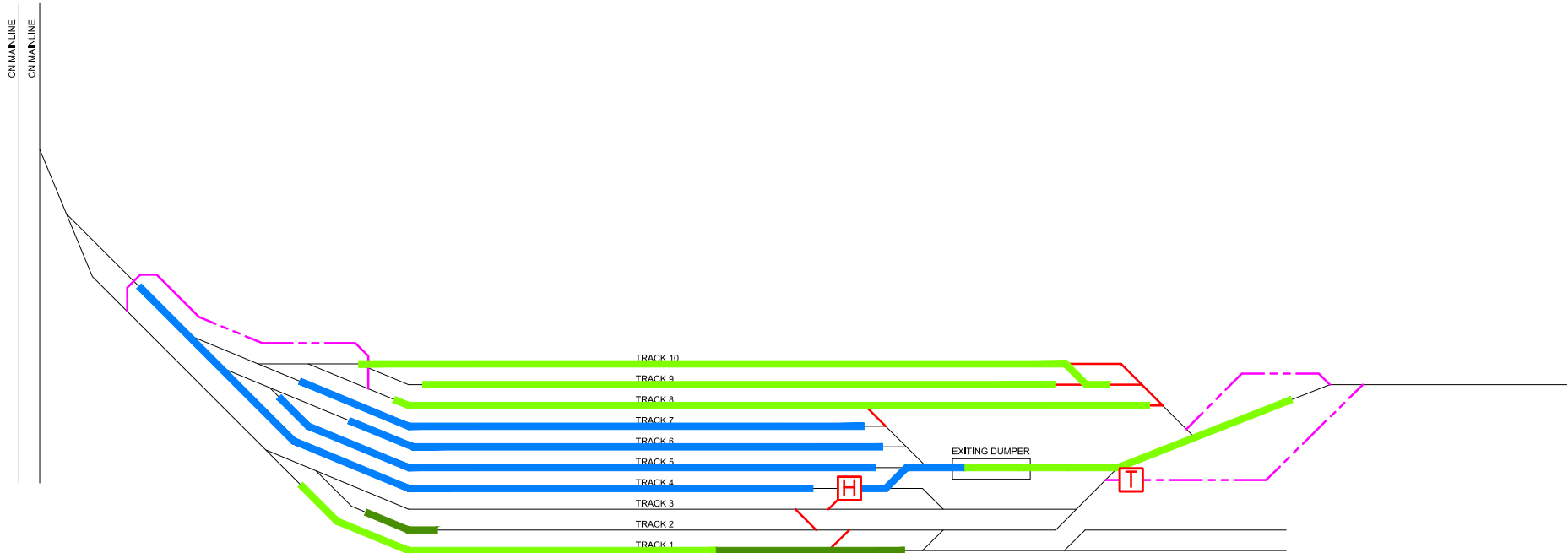
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 21
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Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon travel north on-road towards Track 3-5 foulpoint
 Head shuttlewagon meets with empties string



04:44

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY:

PREPARED FOR:

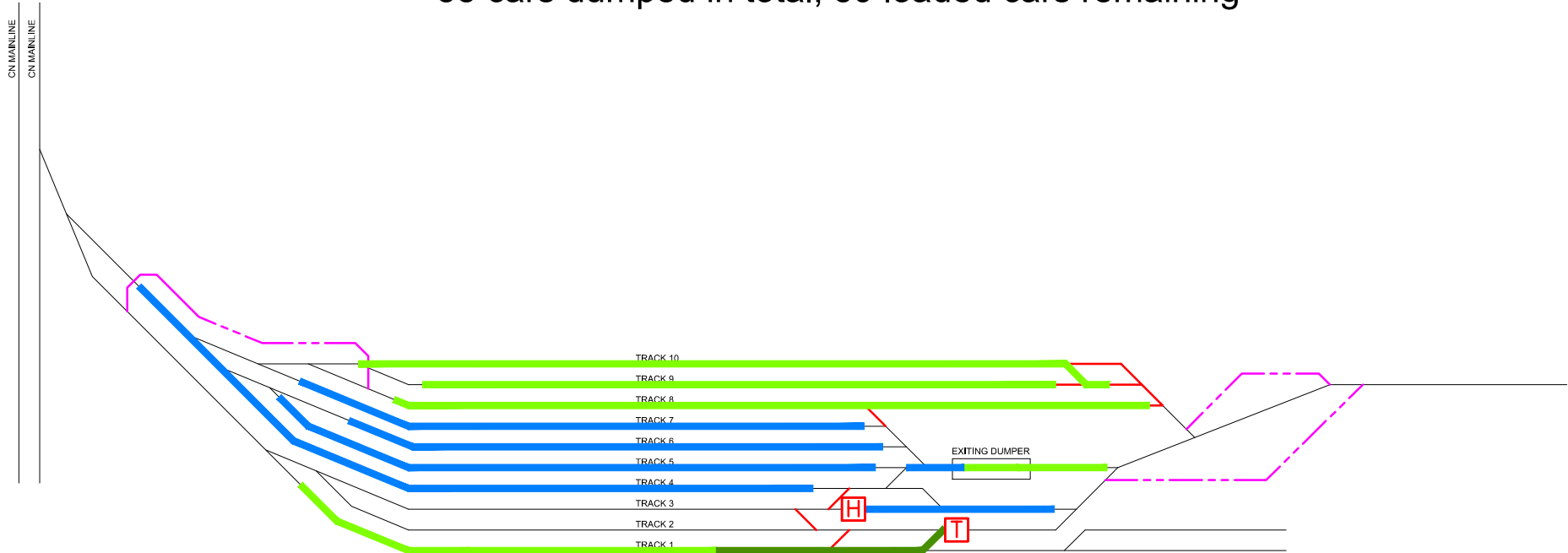
SHEET 22

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Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon pulls last 2 cars from Track 3 and couples to 5 additional cars on Track 1
 Head shuttlewagon spots 6 empties onto the south end of Track 3
 53 cars dumped in total, 59 loaded cars remaining



05:02

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 23
DRAWN: WM CHECKED: ARW		

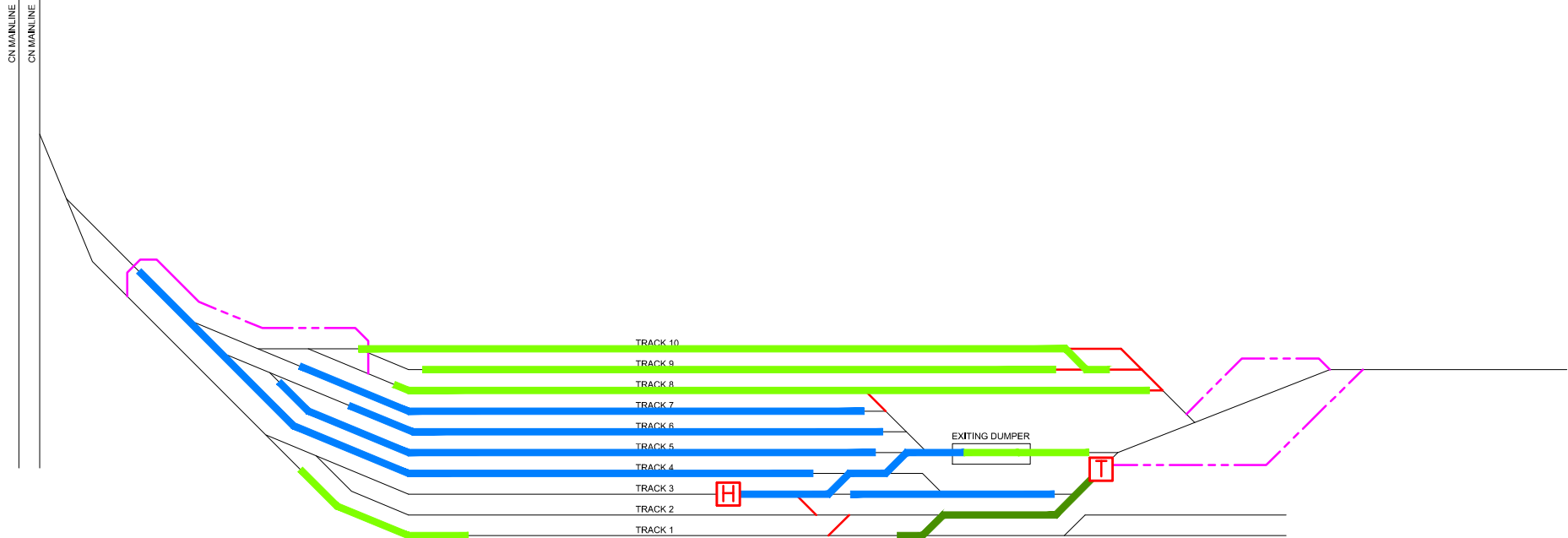
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Fibreco Grain Yard Expansion - Phase 1 Operations

Unloading string clear of Track 3-5 foulpoint

Tail shuttlewagon travelling southbound to couple 6 loaded cars to unloading string

Head shuttlewagon waits for loaded cars to clear Track 2 before spotting 8 empties



05:30

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

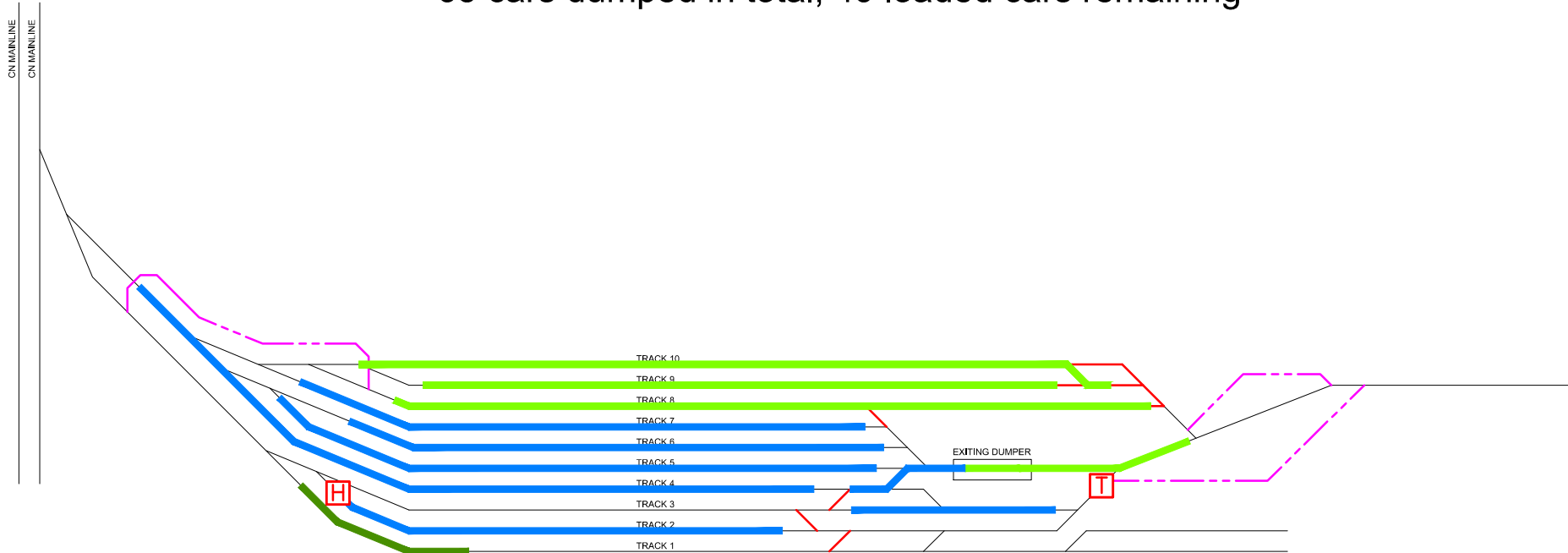
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 24
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon travelling towards the last loaded string on the western half
 Head shuttlewagon spots 8 empties onto the north end of Track 2
 63 cars dumped in total, 49 loaded cars remaining



05:45

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

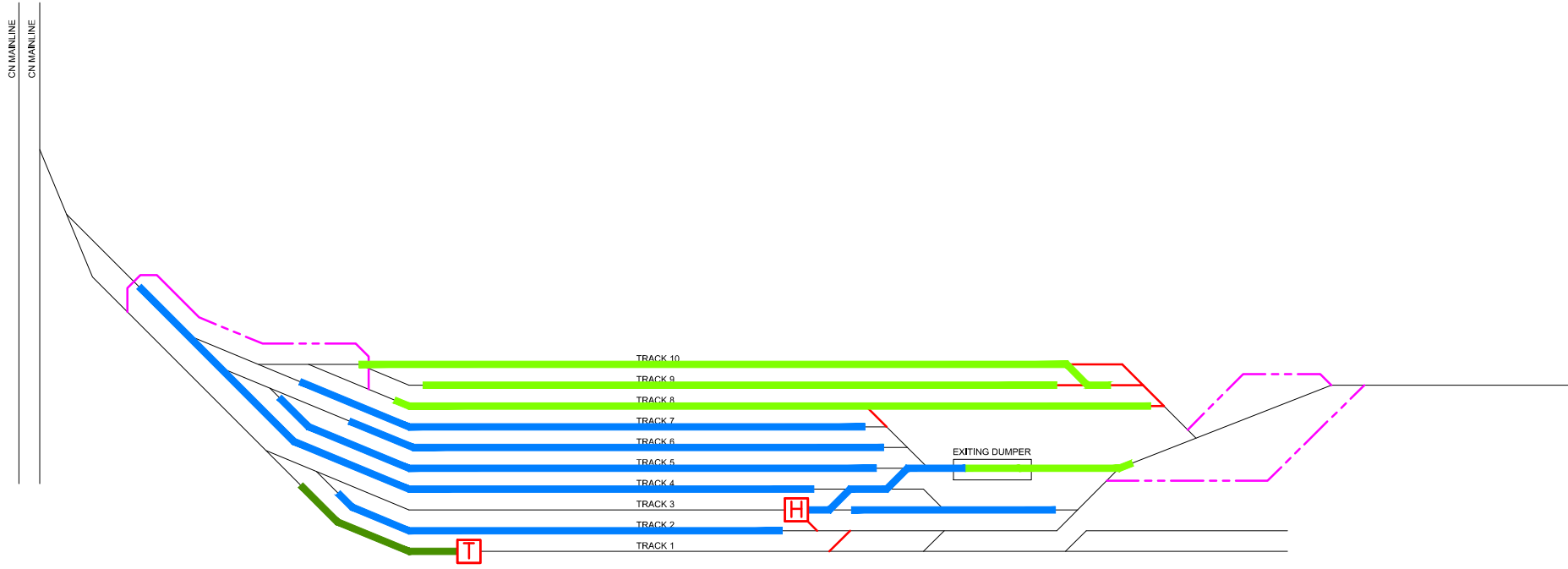
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 25
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples to 5 loaded cars
 Head shuttlewagon couples to empties string



05:52

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

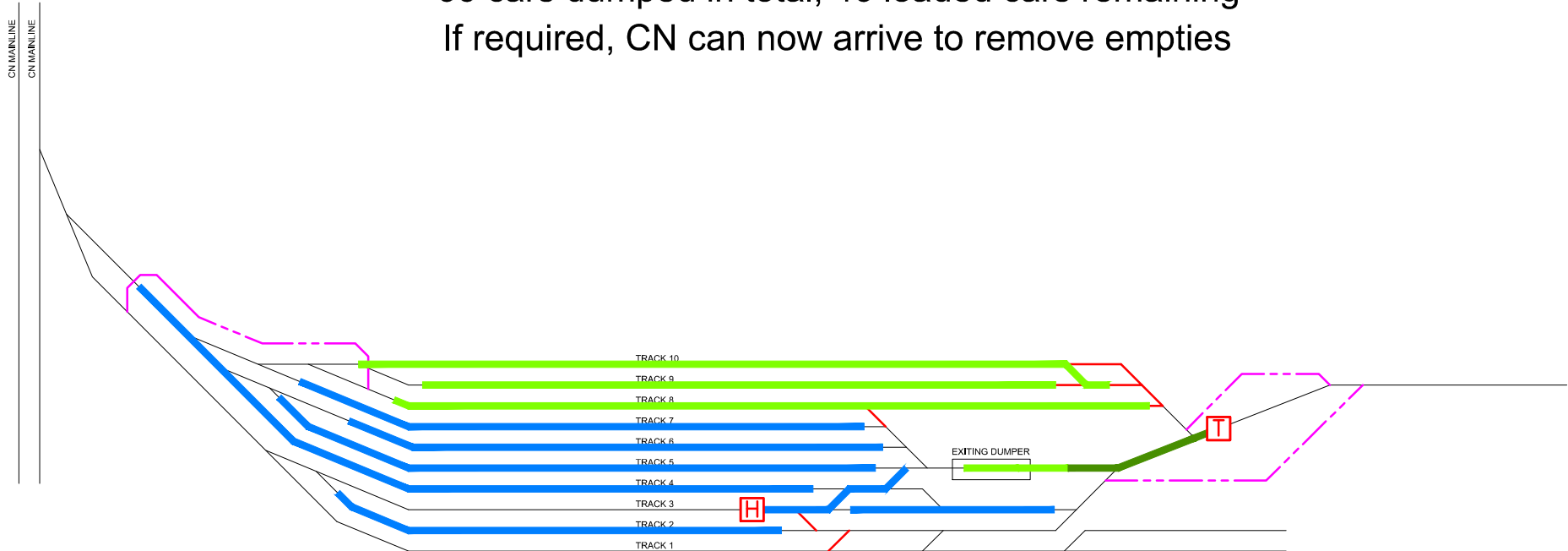
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 26
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples 5 loaded cars to unloading string
 Head shuttlewagon cuts 7 empties and travels to south end of Track 1
 66 cars dumped in total, 46 loaded cars remaining
 If required, CN can now arrive to remove empties



06:01

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

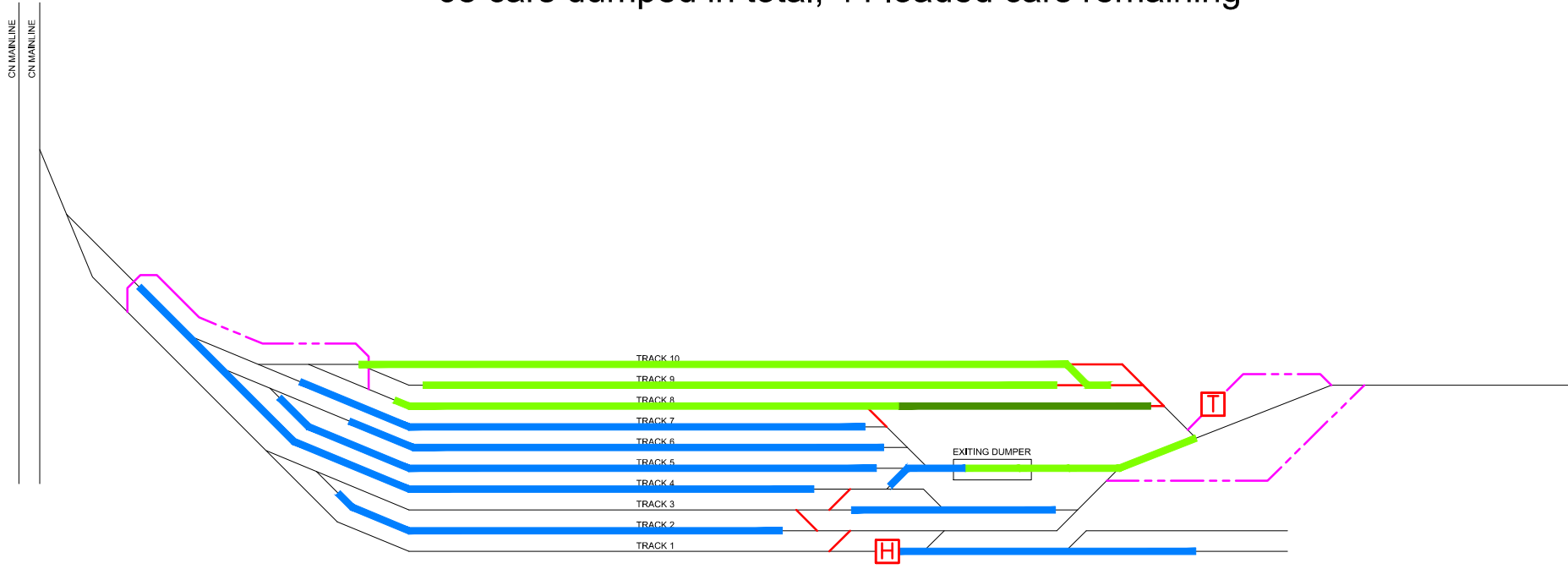
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 27
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon travelling north towards Track 9-5 foulpoint
 Head shuttlewagon spotting 7 empties onto the south end of Track 1

68 cars dumped in total, 44 loaded cars remaining



06:08

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - H LOCOMOTIVE
 - T SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

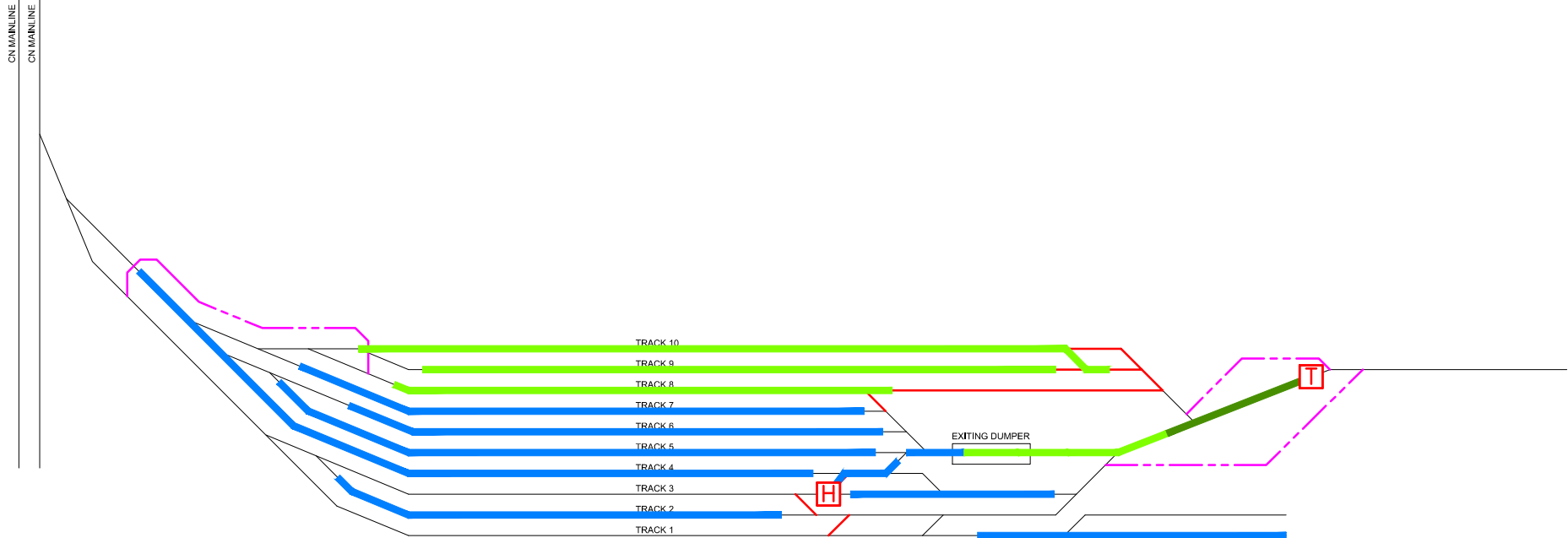
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 28
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples 5 loaded cars to unloading string
 Head shuttlewagon pulling 4 empties towards the south end of Track 1
 71 cars dumped in total, 41 loaded cars remaining



06:22

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - T LOCOMOTIVE
 - H SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

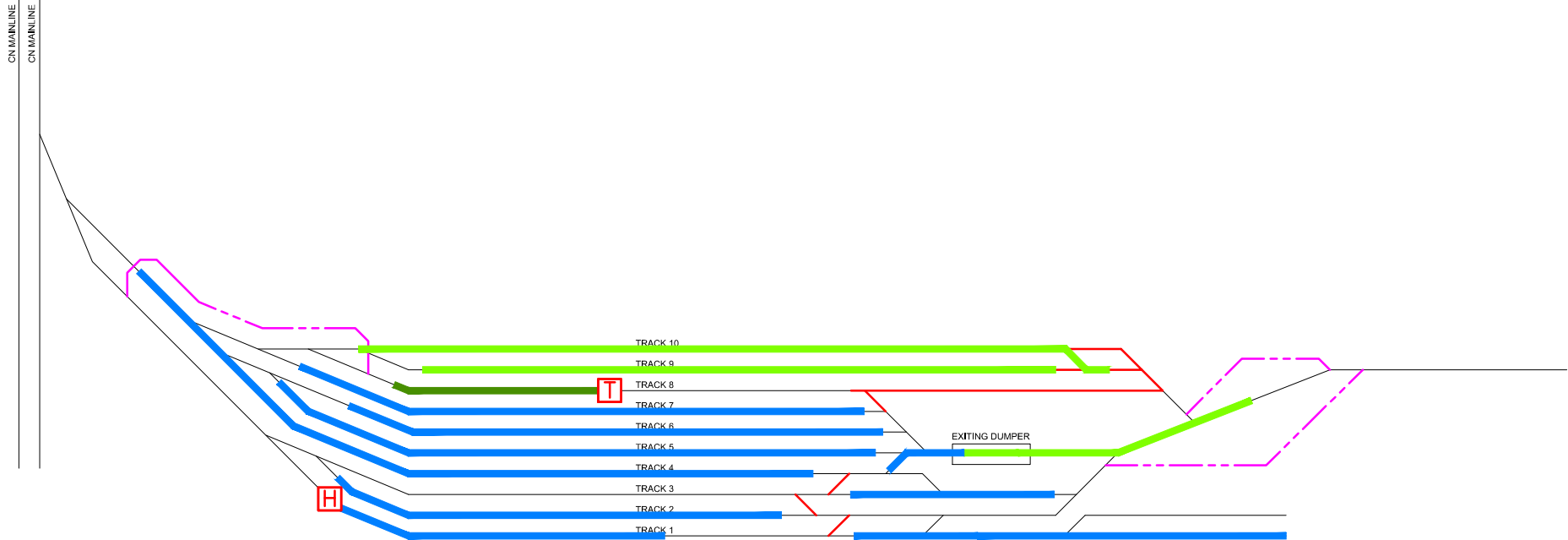
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 29
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples to 5 loaded cars on Track 8
 Head shuttlewagon spots 7 empties onto the north end of Track 1
 79 cars dumped in total, 33 loaded cars remaining



06:57

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - H LOCOMOTIVE
 - T SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 30
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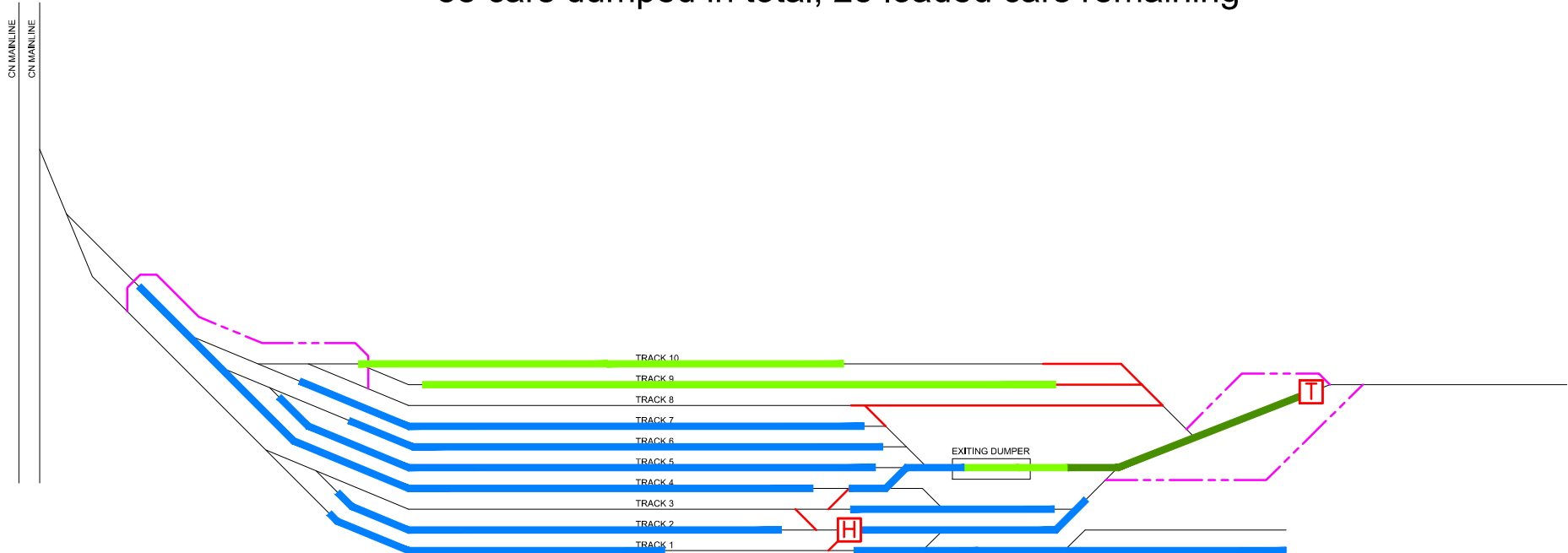
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Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon couples 5 loaded cars from Track 10 onto unloading string

Head shuttlewagon pushes 8 empties into the south end of Track 2

88 cars dumped in total, 25 loaded cars remaining



07:33

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 — SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

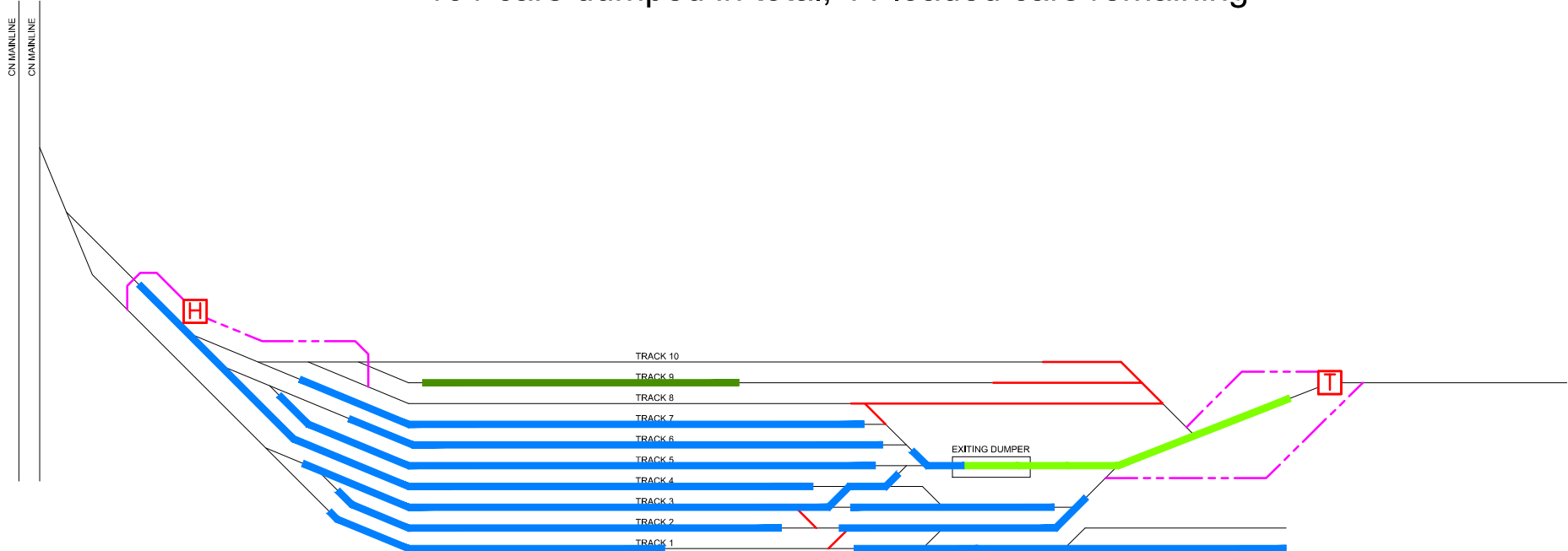
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 31
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Tail shuttlewagon decouples from unloading string
 Head shuttlewagon disengaged from Track 1 and travelling on-road to Track 8
 101 cars dumped in total, 11 loaded cars remaining



08:29

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 32
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Head shuttlewagon pulls last car clear of dumper building

Fibreco contacts CN for empty train retrieval



09:25

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 33
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

All shuttlewagons cleared from departure tracks
 Unit train ready for CN pickup



09:29

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 34
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

CN locomotives arrive on Fibreco yard and couples onto Track 4 empties



09:55

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

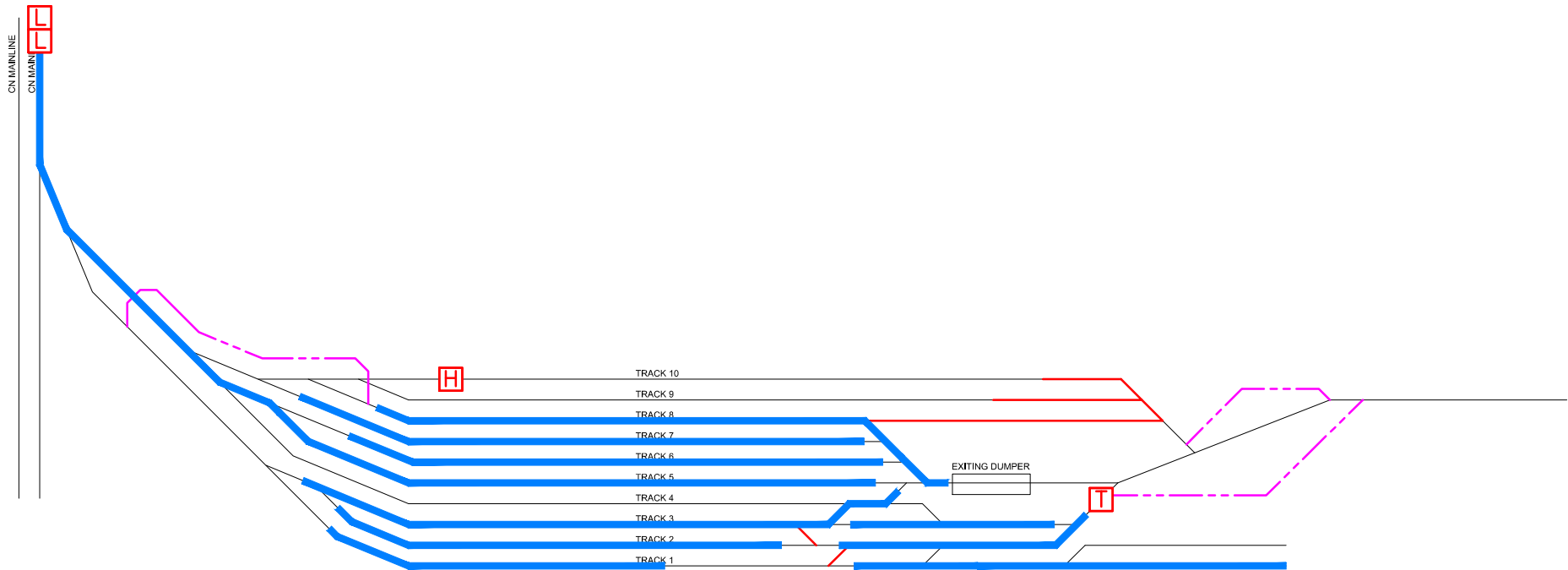
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY:	PREPARED FOR:		<p>SHEET 35</p> <p>DRAWN: WM CHECKED: ARW</p> <p>346935-RW-100-S0-3010-35.dwg</p>

Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling empties on Track 5



10:04

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

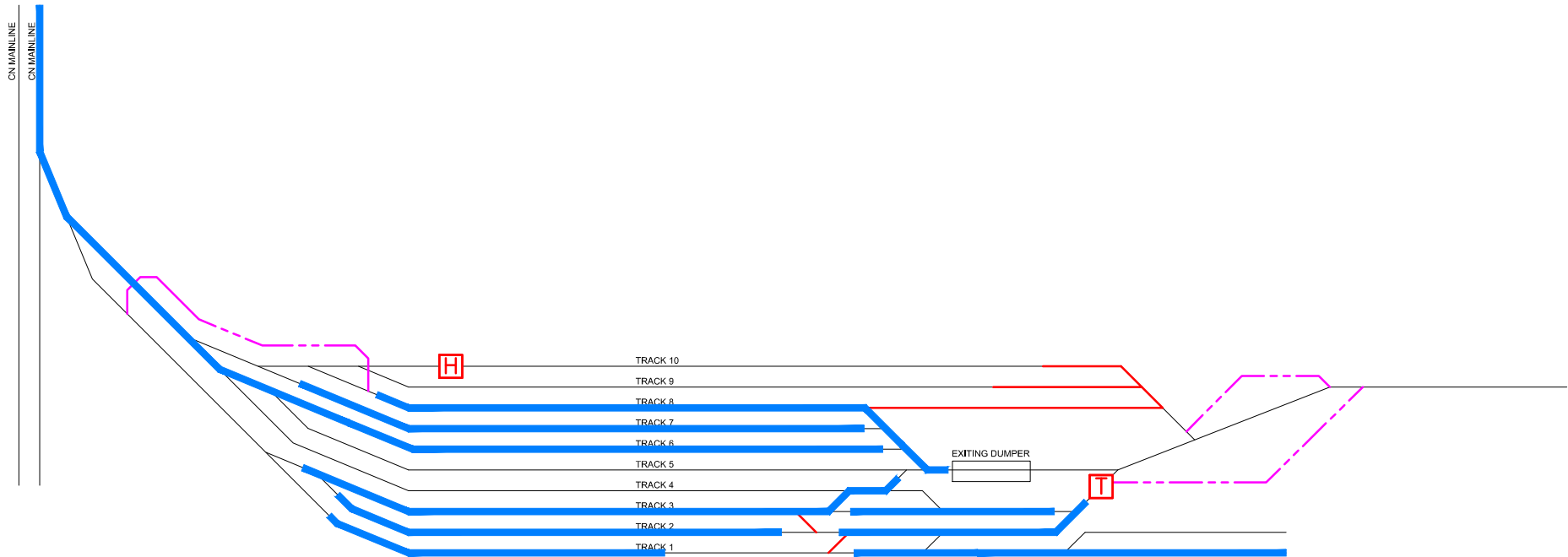
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY:	PREPARED FOR:		SHEET 36

Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling empties on Track 6



10:13

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 - - - SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

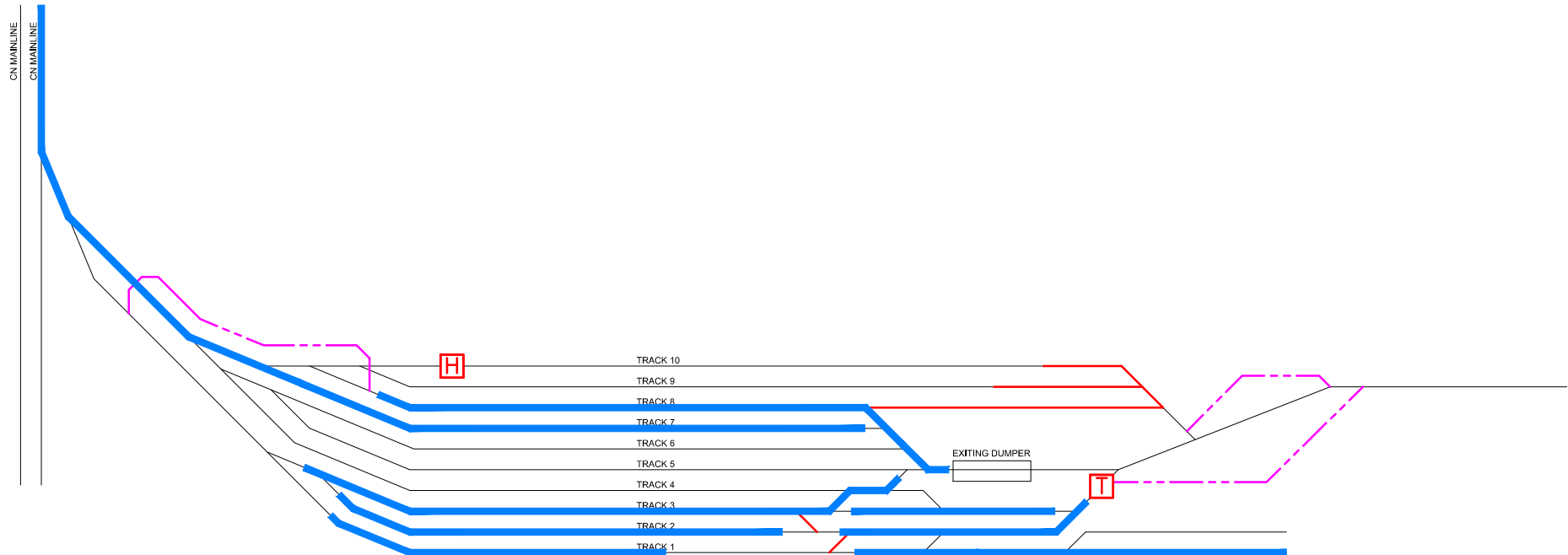
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 37
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling empties on Track 7



10:22

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:
 — EXISTING TRACK
 — PROPOSED TRACK
 - - - SHUTTLEWAGON TRAVEL PATH
 — LOADED CAR
 — UNLOADED CAR
 - - - SECTION INVOLVED IN SUBSEQUENT MOV.
 [H] LOCOMOTIVE
 [T] SHUTTLEWAGON

DRAFT FOR DISCUSSION

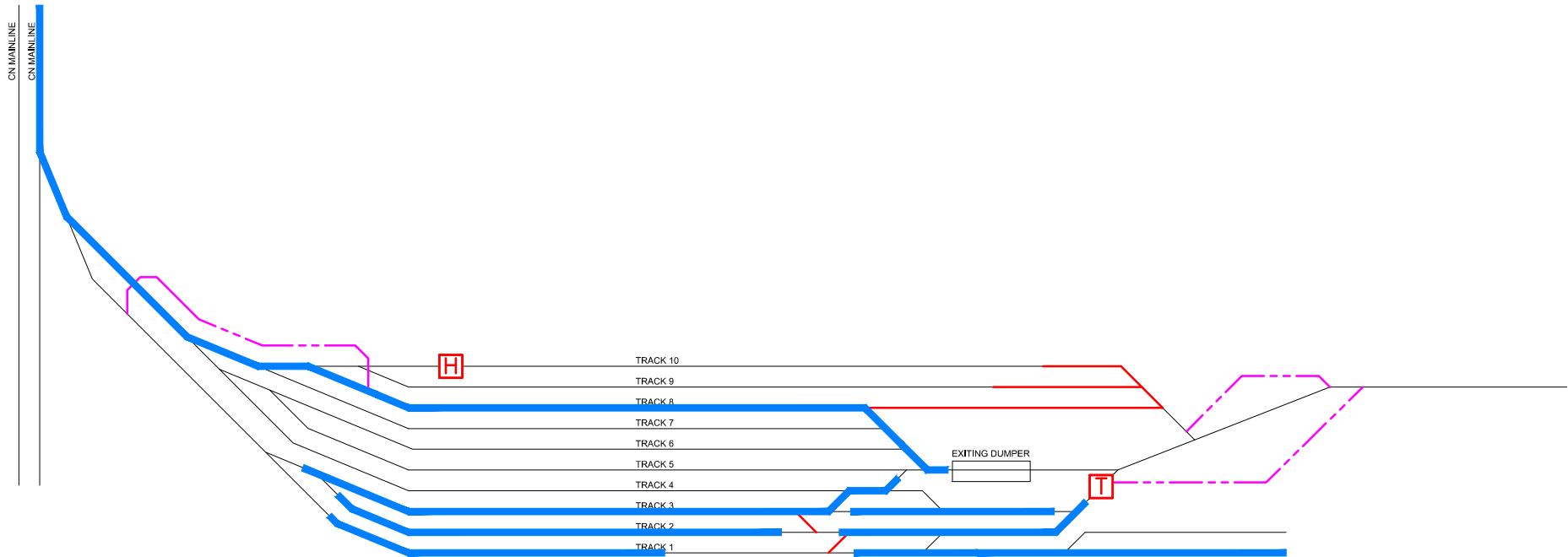
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 38
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling empties on Track 8



10:31

NOTES:
 ALL TIMES IN HR:MM
 UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- - - SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LO Locomotive
- HT Shuttlewagon

DRAFT FOR DISCUSSION

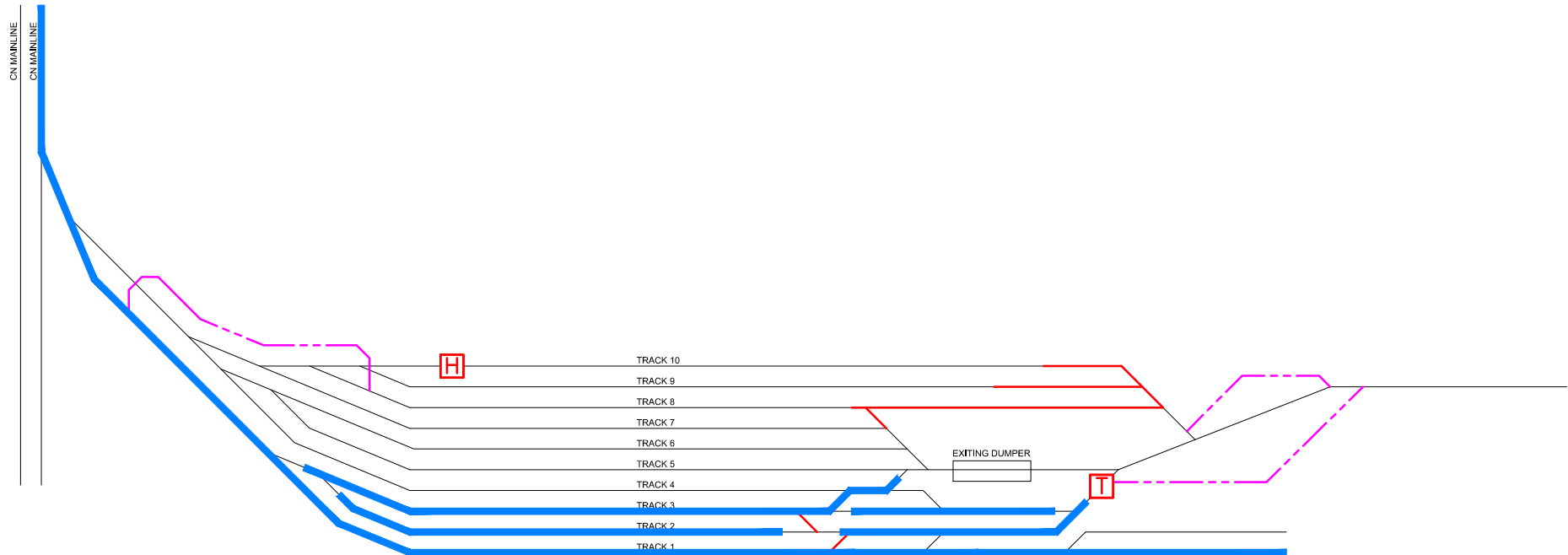
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 39
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Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling all empties on Track 1



10:49

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

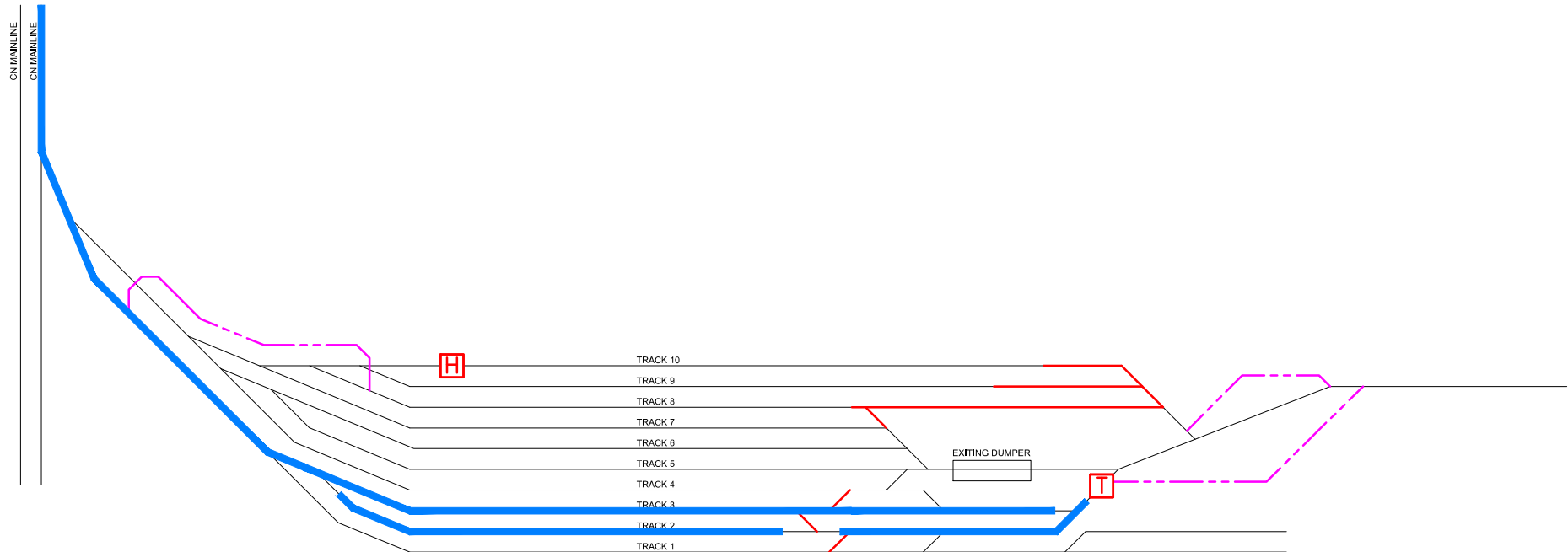
ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 40
DRAWN: WM CHECKED: ARW		

USER NAME: Mak_Wilson ON 10/19/2015 9:32 AM FILE NAME: P:\346935 - Fibreco Grain Expansion\CAD\RW\346935-RW-100-S0-3010.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling all empties on Track 3



11:07

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

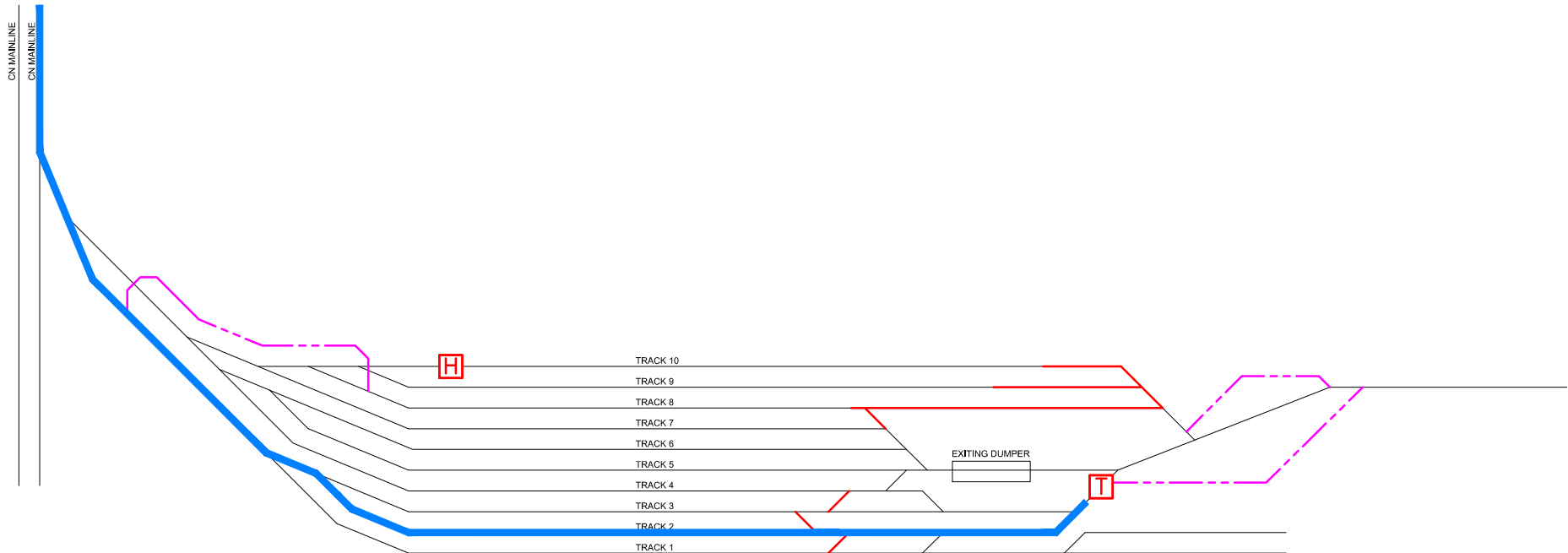
PREPARED BY: 	PREPARED FOR: 	SHEET 41
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346935-RW-100-S0-3010-41.dwg

Fibreco Grain Yard Expansion - Phase 1 Operations

CN continues to rebuild unit train by coupling all empties on Track 2



11:22

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

- LEGEND:
- EXISTING TRACK
 - PROPOSED TRACK
 - SHUTTLEWAGON TRAVEL PATH
 - LOADED CAR
 - UNLOADED CAR
 - SECTION INVOLVED IN SUBSEQUENT MOV.
 - LOCOMOTIVE
 - SHUTTLEWAGON

DRAFT FOR DISCUSSION

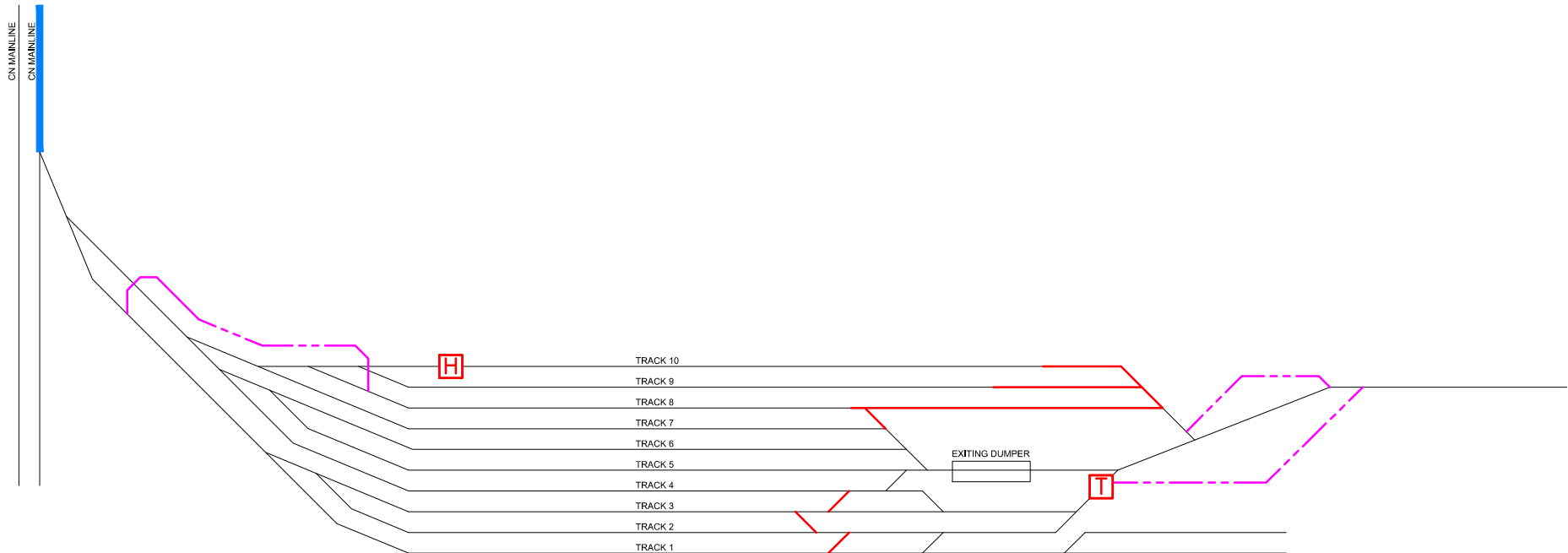
CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 42
DRAWN: WM CHECKED: ARW		

Fibreco Grain Yard Expansion - Phase 1 Operations

Empty unit train clears mainline switch and no longer within Fibreco yard



11:56

NOTES:
ALL TIMES IN HR:MM
UNIT GRAIN TRAIN CONSISTING OF 112 CARS

LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- SHUTTLEWAGON TRAVEL PATH
- LOADED CAR
- UNLOADED CAR
- SECTION INVOLVED IN SUBSEQUENT MOV.
- LOCOMOTIVE
- SHUTTLEWAGON

DRAFT FOR DISCUSSION

CONCEPTUAL - FOR DISCUSSION ONLY

ALL DISTANCES APPROXIMATE

PREPARED BY: 	PREPARED FOR: 	SHEET 43
DRAWN: WM CHECKED: ARW		

C. Timing Analysis

Existing Dumper - Phase 1 Timings
346935 Fibreco Terminal Enchantment Project

	Tail	Head	Dumper
Total required time	7:12:10	8:06:13	8:01:36
Non-operational "wait" time	0:36:34	4:21:25	0
Utilization	92%	46%	100%

LEGEND:

- CN-related Events
- Dumper & Indexer Events
- Head Shuttlewagon Events
- Tail Shuttlewagon Events

Switching times for Schematic 3010

Shuttlewagons assumed for train handling within Fibreco yard

Assuming flagger/spotter will toggle switches as required and does not affect train handling operations

NOTE: Highlighted times correspond to the times shown in the schematic

FP - Foul Point

Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
2	0:00:00	0:00:00		CN	Full Unit Train arrives at East Entrance Track			Tail of Unit Train	Gatehouse					
3	0:00:00	0:07:00	S1	CN	Travelling - Spot 12 loaded cars into tail track	Tail of Unit Train	Gatehouse	Tail of Unit Train	End of Tail Track	640 m	0:07:00			
	0:07:00	0:09:00			Cut train						0:02:00			
4	0:09:00	0:11:45	S2	CN	Travelling - Spot 15 loaded cars into Track 4					245 m	0:02:45			
	0:11:45	0:13:45			Cut train						0:02:00			
	0:13:45	0:15:45			Apply handbrake						0:02:00			
5	0:15:45	0:22:15	S3	CN	Travelling - Spot 15 loaded cars into Track 8	Tail of Unit Train	Tail of stored cars in Track 4		South FP Track 8	580 m	0:06:30			
	0:22:15	0:26:15			Cut train and apply handbrake						0:04:00			
	0:26:15	0:30:15	S4	CN	Travelling - Spot 10 loaded cars into Track 9	Tail of Unit Train	Tail of stored cars in Track 8		South FP Track 9	360 m	0:04:00			
6	0:30:15	0:34:15			Cut train and apply handbrake						0:04:00			
	0:34:15	0:38:30	S5	CN	Travelling - Spot 15 loaded cars into Track 10	Tail of Unit Train	Tail of stored cars in Track 9		South FP Track 10	380 m	0:04:15			
7	0:38:30	0:42:30			Cut train and apply handbrake						0:04:00			
	0:42:30	0:50:10	S6	CN	Travelling - Spot 13 loaded cars into Track 3	Tail of Unit Train	Tail of stored cars in Track 10		South FP Track 3	680 m	0:07:40			
8	0:50:10	0:54:10			Cut train and apply handbrake						0:04:00			
	0:54:10	0:59:10	S7	CN	Travelling - Spot 16 loaded cars into Track 2	Tail of Unit Train	Tail of stored cars in Track 3		South FP Track 2	460 m	0:05:00			
9	0:59:10	1:03:10			Cut train and apply handbrake						0:04:00			
	1:03:10	1:08:20	S8	CN	Travelling - Spot 16 loaded cars into Track 1	Tail of Unit Train	Tail of stored cars in Track 2		South FP Track 1	460 m	0:05:10			
10	1:08:20	1:13:20		CN	Uncouple locomotives and apply handbrake						0:05:00			
	1:13:20	1:15:35		CN	Travelling - CN locomotives	Loci coupling point	Tail of stored cars in Track 10	Loci coupling point	CN mainline switchpoint	200 m	0:02:15			CN no longer within Fibreco property
	1:15:35	1:18:35	L1	Indexer	Indexer takes control of string						0:03:00			
11	1:18:35	1:40:05			Dump 5 cars						0:21:30			
	1:22:53	1:23:23		Head	Travelling					40 m	0:00:30			
12	1:23:23	1:26:23		Head	Couple shuttlewagon						0:03:00			
	1:54:20	1:54:35		Tail	Travelling					20 m	0:00:15			
	1:54:35	1:57:35		Tail	Couple shuttlewagon						0:03:00			
	1:57:35	1:59:35	L2		Cut 7 loaded car string						0:02:00			
	1:59:35	2:01:35			Release handbrake for 7-car string						0:02:00			
13	1:40:05	2:01:35			Dump 5 cars						0:21:30			
	2:01:35	2:05:53			Dump 1 car						0:04:18			
	2:05:53	2:07:53			Cut 11 empties string						0:02:00			
14	2:07:53	2:09:08	U1	Head	Travelling - Spot 11 empties into Track 7					110 m	0:01:15			
	2:09:08	2:11:08			Apply handbrake						0:02:00			
15	2:11:08	2:14:08		Head	Decouple shuttlewagon						0:03:00			
	2:14:08	2:19:23		Head	Travelling					470 m	0:05:15			
	2:19:23	2:22:23		Head	Couple shuttlewagon						0:03:00			
	2:01:35	2:04:35		Tail	Travelling					270 m	0:03:00			
14	2:04:35	2:07:35	L2		Couple 7 loaded cars onto unloading string						0:03:00			
	2:05:53	2:10:11			Dump 1 car						0:04:18			
	2:07:35	2:10:35		Tail	Decouple shuttlewagon						0:03:00			
	2:10:11	2:18:47			Dump 2 cars						0:08:36			
	2:10:35	2:11:05		Tail	Shuttlewagon disengages from tracks						0:00:30			
15	2:11:05	2:12:35		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	2:12:35	2:14:05		Tail	Shuttlewagon reengages with tracks						0:01:30			
	2:14:05	2:15:45		Tail	Travelling					140 m	0:01:40			
	2:15:45	2:18:45		Tail	Couple shuttlewagon						0:03:00			
	2:18:45	2:20:45	L3		Release handbrake for 7-car string						0:02:00			
	2:20:45	2:22:25		Tail	Travelling					150 m	0:01:40			
	2:18:47	2:27:23			Dump 2 cars						0:08:36			
	2:27:23	2:31:41			Dump 1 car						0:04:18			
16	2:22:25	2:31:41			Wait for unloading string to clear FP						0:09:16			
	2:31:41	2:34:41		Tail	Travelling					270 m	0:03:00			
	2:31:41	2:35:59			Dump 1 car						0:04:18			
	2:34:41	2:37:41	L3	Tail	Couple 7 loaded cars onto unloading string						0:03:00			
	2:35:59	2:40:17			Dump 1 car						0:04:18			
	2:37:41	2:40:41		Tail	Decouple shuttlewagon						0:03:00			
	2:40:41	2:40:56		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			

Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
	2:40:56	2:41:26		Tail	Shuttlewagon disengages from tracks						0:00:30			
	2:41:26	2:42:56		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	2:42:56	2:44:26		Tail	Shuttlewagon rengages with tracks						0:01:30			
	2:44:26	2:47:36		Tail	Travelling					280 m	0:03:10			
17	2:47:36	2:50:36	L4-1	Tail	Couple shuttlewagon to one car						0:03:00			
	2:50:36	2:52:36		Tail	Release handbrake for single car						0:02:00			
	2:52:36	2:55:46		Tail	Travelling					275 m	0:03:10			
	2:55:46	2:58:46		Tail	Couple shuttlewagon						0:03:00			
	2:58:46	3:00:46	L4-2		Cut 6 loaded car string						0:02:00			
18	3:00:46	3:02:46			Release handbrake for 6-car string						0:02:00			
	3:02:46	3:03:56		Tail	Travelling					105 m	0:01:10			
	2:40:17	2:48:53			Dump 2 cars						0:08:36			
	2:48:53	2:50:53			Cut 10 empties string						0:02:00			
	2:50:53	2:51:53	U2	Head	Travelling - Spot 10 empties into Track 6					85 m	0:01:00			
	2:51:53	2:53:53			Apply handbrake						0:02:00			
	2:53:53	2:56:53		Head	Decouple shuttlewagon						0:03:00			
	2:56:53	3:01:33		Head	Travelling					410 m	0:04:40			
	3:01:33	3:04:33		Head	Couple shuttlewagon						0:03:00			
	2:48:53	3:01:47			Dump 3 cars						0:12:54			
	3:01:47	3:04:47		Tail	Travelling					270 m	0:03:00			
	3:01:47	3:06:05			Dump 1 car						0:04:18			
19	3:04:47	3:07:47	L4		Couple 7 loaded cars onto unloading string						0:03:00			
	3:07:47	3:10:47		Tail	Decouple shuttlewagon						0:03:00			
	3:10:47	3:11:02		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	3:11:02	3:11:32		Tail	Shuttlewagon disengages from tracks						0:00:30			
	3:11:32	3:13:02		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	3:13:02	3:14:32		Tail	Shuttlewagon rengages with tracks						0:01:30			
	3:14:32	3:17:02		Tail	Travelling					215 m	0:02:30			
	3:17:02	3:20:02		Tail	Couple shuttlewagon						0:03:00			
	3:20:02	3:22:02	L5		Cut 7 loaded car string						0:02:00			
	3:22:02	3:24:02			Release handbrake for 7-car string						0:02:00			
	3:24:02	3:26:32		Tail	Travelling					225 m	0:02:30			
	3:06:05	3:14:41			Dump 2 cars						0:08:36			
	3:14:41	3:27:35			Dump 3 cars						0:12:54			
	3:27:35	3:31:53			Dump 1 car						0:04:18			
	3:26:32	3:31:53			Wait for unloading string to clear FP						0:05:21			
	3:31:53	3:34:53		Tail	Travelling					270 m	0:03:00			
	3:31:53	3:36:11			Dump 1 car						0:04:18			
	3:36:11	3:38:11			Cut 12 empties string						0:02:00			
	3:38:11	3:39:11	U3	Head	Travelling - Spot 12 empties into Track 5					80 m	0:01:00			
	3:39:11	3:41:11			Apply handbrake						0:02:00			
	3:41:11	3:44:11		Head	Decouple shuttlewagon						0:03:00			
	3:44:11	3:48:56		Head	Travelling					430 m	0:04:45			
	3:48:56	3:51:56		Head	Couple shuttlewagon						0:03:00			
	3:34:53	3:37:53	L5		Couple 7 loaded cars onto unloading string						0:03:00			
	3:36:11	3:40:29			Dump 1 car						0:04:18			
	3:37:53	3:40:53		Tail	Decouple shuttlewagon						0:03:00			
	3:40:53	3:41:08		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	3:41:08	3:41:38		Tail	Shuttlewagon disengages from tracks						0:00:30			
	3:41:38	3:43:08		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	3:43:08	3:44:38		Tail	Shuttlewagon rengages with tracks						0:01:30			
	3:44:38	3:45:08		Tail	Travelling					40 m	0:00:30			
	3:45:08	3:48:08		Tail	Couple shuttlewagon						0:03:00			
	3:48:08	3:50:08	L6		Cut 7 loaded car string						0:02:00			
	3:50:08	3:52:08			Release handbrake for 7-car string						0:02:00			
	3:52:08	3:52:48		Tail	Travelling					50 m	0:00:40			
	3:40:29	4:01:59			Dump 5 cars						0:21:30			
	3:52:48	4:01:59			Wait for unloading string to clear FP						0:09:11			
	4:01:59	4:06:17			Dump 1 car						0:04:18			
	4:01:59	4:04:59		Tail	Travelling					270 m	0:03:00			
	4:04:59	4:07:59	L6		Couple 7 loaded cars onto unloading string						0:03:00			
	4:06:17	4:10:35			Dump 1 car						0:04:18			
	4:10:35	4:14:53			Dump 1 car						0:04:18			
	4:07:59	4:10:59		Tail	Decouple shuttlewagon						0:03:00			
	4:10:59	4:11:14		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	4:11:14	4:11:44		Tail	Shuttlewagon disengages from tracks						0:00:30			
	4:11:44	4:13:14		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			

Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
	4:13:14	4:14:44		Tail	Shuttlewagon rengages with tracks						0:01:30			
	4:14:53	4:23:29			Dump 2 cars						0:08:36			
	4:14:44	4:16:44		Tail	Travelling					175 m	0:02:00			
	4:16:44	4:19:44		Tail	Couple shuttlewagon						0:03:00			
	4:19:44	4:21:44	L7		Cut 7 loaded car string						0:02:00			
	4:21:44	4:23:44			Release handbrake for 7-car string						0:02:00			
	4:23:44	4:25:54		Tail	Travelling					185 m	0:02:10			
	4:23:29	4:27:47			Dump 1 cars						0:04:18			
	4:27:47	4:29:47			Cut 10 empties string						0:02:00			
	4:29:47	4:31:27	U4	Head	Travelling - Spot 12 empties into Track 4					145 m	0:01:40			
20	4:31:27	4:33:27			Apply handbrake						0:02:00			
	4:33:27	4:36:27		Head	Decouple shuttlewagon						0:03:00			
	4:36:27	4:36:57		Head	Shuttlewagon disengages from tracks						0:00:30			
21	4:36:57	4:37:27		Head	Travelling					40 m	0:00:30			
	4:37:27	4:38:57		Head	Shuttlewagon rengages with tracks						0:01:30			
	4:38:57	4:43:12		Head	Travelling					380 m	0:04:15			
22	4:43:12	4:46:12		Head	Couple shuttlewagon						0:03:00			
	4:27:47	4:32:05			Dump 1 cars						0:04:18			
20	4:25:54	4:32:05			Wait for unloading string to clear FP						0:06:11			
	4:32:05	4:35:05		Tail	Travelling					270 m	0:03:00			
	4:32:05	4:36:23			Dump 1 car						0:04:18			
	4:35:05	4:38:05	L7		Couple 7 loaded cars onto unloading string						0:03:00			
21	4:36:23	4:40:41			Dump 1 car						0:04:18			
	4:38:05	4:41:05		Tail	Decouple shuttlewagon						0:03:00			
	4:40:41	4:53:35			Dump 3 cars						0:12:54			
	4:53:35	4:55:35			Cut 6 empties string						0:02:00			
	4:55:35	4:59:15	U5	Head	Travelling - Spot 6 empties into Track 3S					320 m	0:03:40			
	4:59:15	5:01:15			Apply handbrake						0:02:00			
23	5:01:15	5:04:15		Head	Decouple shuttlewagon						0:03:00			
	5:04:15	5:06:30		Head	Travelling					200 m	0:02:15			
	5:06:30	5:09:30		Head	Couple shuttlewagon						0:03:00			
	4:53:35	4:57:53			Dump 1 car						0:04:18			
	4:41:05	4:41:20		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	4:41:20	4:41:50		Tail	Shuttlewagon disengages from tracks						0:00:30			
22	4:41:50	4:43:20		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	4:43:20	4:44:50		Tail	Shuttlewagon rengages with tracks						0:01:30			
	4:44:50	4:48:20		Tail	Travelling					315 m	0:03:30			
	4:48:20	4:51:20		Tail	Couple shuttlewagon						0:03:00			
	4:51:20	4:53:20	L8-1		Release handbrake for 2-car string						0:02:00			
	4:53:20	4:53:50		Tail	Travelling						0:00:30			
	4:53:50	4:58:00		Tail	Couple shuttlewagon					370 m	0:04:10			
	4:58:00	5:00:00	L8-2		Cut 5 loaded car string						0:02:00			
	5:00:00	5:02:00			Release handbrake for 5-car string						0:02:00			
23	5:02:00	5:02:40		Tail	Travelling					60 m	0:00:40			
	4:57:53	5:02:11			Dump 1 car						0:04:18			
	5:02:40	5:05:40		Tail	Travelling					270 m	0:03:00			
23	5:02:11	5:06:29			Dump 1 car						0:04:18			
	5:05:40	5:08:40	L8		Couple 7 loaded cars onto unloading string						0:03:00			
	5:06:29	5:10:47			Dump 1 car						0:04:18			
	5:08:40	5:11:40		Tail	Decouple shuttlewagon						0:03:00			
	5:10:47	5:27:59			Dump 4 cars						0:17:12			
	5:27:59	5:29:59			Cut 8 empties string						0:02:00			
24	5:29:59	5:35:17		Head	Wait for feeding string to clear Track 2S						0:05:18			
	5:35:17	5:42:17	U6	Head	Travelling - Spot 8 empties into Track 2N					625 m	0:07:00			
	5:42:17	5:44:17			Apply handbrake						0:02:00			
25	5:44:17	5:47:17		Head	Decouple shuttlewagon						0:03:00			
	5:47:17	5:52:02		Head	Travelling					430 m	0:04:45			
	5:52:02	5:55:02		Head	Couple shuttlewagon						0:03:00			
	5:11:40	5:11:55		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	5:11:55	5:12:25		Tail	Shuttlewagon disengages from tracks						0:00:30			
	5:12:25	5:13:55		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	5:13:55	5:15:25		Tail	Shuttlewagon rengages with tracks						0:01:30			
	5:15:25	5:17:35		Tail	Travelling					190 m	0:02:10			
	5:17:35	5:20:35		Tail	Couple shuttlewagon						0:03:00			
	5:20:35	5:22:35	L9		Cut 6 loaded car string						0:02:00			
	5:22:35	5:24:35			Release handbrake for 6-car string						0:02:00			
	5:27:59	5:32:17			Dump 1 car						0:04:18			

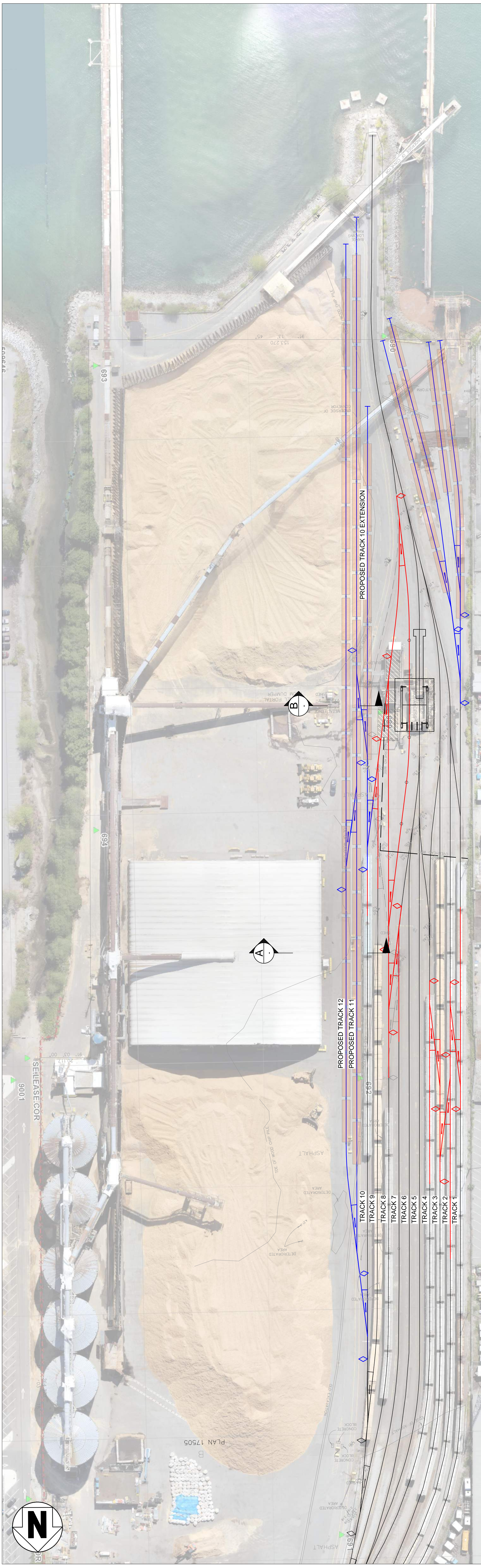
Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
24	5:24:35	5:26:45		Tail	Travelling					195 m	0:02:10			
	5:26:45	5:32:17			Wait for unloading string to clear FP						0:05:32			
	5:32:17	5:35:17		Tail	Travelling					270 m	0:03:00			
	5:32:17	5:36:35			Dump 1 car						0:04:18			
	5:35:17	5:38:17	L9		Couple 6 loaded cars onto unloading string						0:03:00			
	5:36:35	5:40:53			Dump 1 car						0:04:18			
	5:38:17	5:41:17		Tail	Decouple shuttlewagon						0:03:00			
	5:40:53	5:58:05			Dump 4 cars						0:17:12			
	5:58:05	6:00:05			Cut 7 empties string						0:02:00			
	27	6:00:05	6:09:40	U7	Head	Travelling - Spot 7 empties into Track 1S					865 m	0:09:35		
	6:09:40	6:11:40			Apply handbrake						0:02:00			
	6:11:40	6:14:40		Head	Decouple shuttlewagon						0:03:00			
	6:14:40	6:19:50		Head	Travelling					465 m	0:05:10			
	6:19:50	6:22:50		Head	Couple shuttlewagon						0:03:00			
	5:41:17	5:41:32		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	5:41:32	5:42:02		Tail	Shuttlewagon disengages from tracks						0:00:30			
	5:42:02	5:43:32		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 4 FP	130 m	0:01:30			
	5:43:32	5:45:02		Tail	Shuttlewagon rengages with tracks						0:01:30			
25	5:45:02	5:48:32		Tail	Travelling					305 m	0:03:30			
	5:48:32	5:51:32		Tail	Couple shuttlewagon						0:03:00			
26	5:51:32	5:53:32	L10		Release handbrake for 5-car string						0:02:00			
	5:53:32	5:57:02		Tail	Travelling					315 m	0:03:30			
	5:57:02	5:58:05			Wait for unloading string to clear FP						0:01:03			
	5:58:05	6:01:05		Tail	Travelling					270 m	0:03:00			
	5:58:05	6:02:23			Dump 1 car						0:04:18			
27	6:01:05	6:04:05	L10		Couple 5 loaded cars onto unloading string						0:03:00			
	6:02:23	6:06:41			Dump 1 car						0:04:18			
	6:04:05	6:07:05		Tail	Decouple shuttlewagon						0:03:00			
	6:06:41	6:10:59			Dump 1 car						0:04:18			
	6:07:05	6:07:20		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	6:07:20	6:07:50		Tail	Shuttlewagon disengages from tracks						0:00:30			
28	6:07:50	6:08:50		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 5-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	6:08:50	6:10:20		Tail	Shuttlewagon rengages with tracks						0:01:30			
	6:10:20	6:10:50		Tail	Travelling					40 m	0:00:30			
	6:10:50	6:13:50		Tail	Couple shuttlewagon						0:03:00			
X	6:13:50	6:15:50	L11		Cut 5 loaded car string						0:02:00			
	6:15:50	6:17:50			Release handbrake for 5-car string						0:02:00			
	6:17:50	6:18:30		Tail	Travelling					50 m	0:00:40			
	6:18:30	6:21:30		Tail	Travelling					270 m	0:03:00			
	6:10:59	6:15:17			Dump 1 cars						0:04:18			
	6:22:50	6:24:50			Cut 4 empties string						0:02:00			
	6:24:50	6:32:50	U8	Head	Travelling - Spot 4 empties into Track 1S					725 m	0:08:00			
	6:32:50	6:34:50			Apply handbrake						0:02:00			
	6:34:50	6:37:50		Head	Decouple shuttlewagon						0:03:00			
	6:37:50	6:42:05		Head	Travelling					385 m	0:04:15			
	6:42:05	6:45:05		Head	Couple shuttlewagon						0:03:00			
	6:15:17	6:19:35			Dump 1 car						0:04:18			
	6:19:35	6:23:53			Dump 1 car						0:04:18			
29	6:21:30	6:24:30	L11		Couple 5 loaded cars onto unloading string						0:03:00			
	6:23:53	6:28:11			Dump 1 car						0:04:18			
	6:24:30	6:27:30		Tail	Decouple shuttlewagon						0:03:00			
	6:28:11	6:41:05			Dump 3 cars						0:12:54			
	6:27:30	6:27:45		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	6:27:45	6:28:15		Tail	Shuttlewagon disengages from tracks						0:00:30			
	6:28:15	6:29:15		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 5-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	6:29:15	6:30:45		Tail	Shuttlewagon rengages with tracks						0:01:30			
	6:30:45	6:32:55		Tail	Travelling					140 m	0:02:10			
	6:32:55	6:35:55		Tail	Couple shuttlewagon						0:03:00			
	6:35:55	6:37:55	L12		Cut 5 loaded car string						0:02:00			
	6:37:55	6:39:55			Release handbrake for 5-car string						0:02:00			
	6:39:55	6:42:05		Tail	Travelling					150 m	0:02:10			
	6:42:05	6:45:05		Tail	Travelling					270 m	0:03:00			
	6:41:05	6:45:23			Dump 1 car						0:04:18			
	6:45:23	6:47:23			Cut 7 empties string						0:02:00			
	6:47:23	6:54:13	U9	Head	Travelling - Spot 7 empties into Track 1N					615 m	0:06:50			
	6:54:13	6:56:13			Apply handbrake						0:02:00			
30	6:56:13	6:59:13		Head	Decouple shuttlewagon						0:03:00			

Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
	6:59:13	7:04:53		Head	Travelling					510 m	0:05:40			
	7:04:53	7:07:53		Head	Couple shuttlewagon						0:03:00			
	6:45:05	6:48:05	L12		Couple 5 loaded cars onto unloading string						0:03:00			
	6:45:23	6:49:41			Dump 1 car						0:04:18			
	6:48:05	6:51:05		Tail	Decouple shuttlewagon						0:03:00			
	6:49:41	7:02:35			Dump 3 cars						0:12:54			
	6:51:05	6:51:20		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	6:51:20	6:51:50		Tail	Shuttlewagon disengages from tracks						0:00:30			
	6:51:50	6:52:50		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 5-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	6:52:50	6:54:20		Tail	Shuttlewagon rengages with tracks						0:01:30			
	6:54:20	6:56:30		Tail	Travelling					240 m	0:02:10			
30	6:56:30	6:59:30		Tail	Couple shuttlewagon						0:03:00			
	6:59:30	7:01:30	L13		Cut 5 loaded car string						0:02:00			
	7:01:30	7:03:30			Release handbrake for 5-car string						0:02:00			
	7:03:30	7:07:15		Tail	Travelling					515 m	0:03:45			
	7:02:35	7:06:53			Dump 1 car						0:04:18			
	7:07:15	7:10:15	L13		Couple 5 loaded cars onto unloading string						0:03:00			
	7:06:53	7:11:11			Dump 1 car						0:04:18			
	7:10:15	7:13:15		Tail	Decouple shuttlewagon						0:03:00			
	7:11:11	7:24:05			Dump 3 cars						0:12:54			
	7:24:05	7:26:05			Cut 8 empties string						0:02:00			
	7:26:05	7:30:45	U10	Head	Travelling - Spot 8 empties into Track 2S					415 m	0:04:40			
	7:30:45	7:32:45			Apply handbrake						0:02:00			
	7:32:45	7:35:45		Head	Decouple shuttlewagon						0:03:00			
31	7:35:45	7:37:00		Head	Travelling					95 m	0:01:15			to Track 3N and wait for unloading string to reach
	7:37:00	7:40:00		Head	Couple shuttlewagon						0:03:00			
	7:13:15	7:13:30		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	7:13:30	7:14:00		Tail	Shuttlewagon disengages from tracks						0:00:30			
	7:14:00	7:15:00		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 5-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	7:15:00	7:16:30		Tail	Shuttlewagon rengages with tracks						0:01:30			
	7:16:30	7:18:40		Tail	Travelling					60 m	0:02:10			
	7:18:40	7:21:40		Tail	Couple shuttlewagon						0:03:00			
	7:21:40	7:23:40	L14		Cut 5 loaded car string						0:02:00			
	7:23:40	7:25:40			Release handbrake for 5-car string						0:02:00			
	7:25:40	7:27:50		Tail	Travelling					70 m	0:02:10			
	7:27:50	7:30:50		Tail	Travelling					270 m	0:03:00			
	7:24:05	7:28:23			Dump 1 car						0:04:18			
31	7:30:50	7:33:50	L14		Couple 5 loaded cars onto unloading string						0:03:00			
	7:28:23	7:36:59			Dump 2 cars						0:08:36			
	7:33:50	7:36:50		Tail	Decouple shuttlewagon						0:03:00			
	7:36:59	7:41:17			Dump 1 car						0:04:18			
	7:41:17	7:45:35			Dump 1 car						0:04:18			
	7:36:50	7:37:05		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	7:37:05	7:37:35		Tail	Shuttlewagon disengages from tracks						0:00:30			
	7:37:35	7:38:35		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 5-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	7:38:35	7:40:05		Tail	Shuttlewagon rengages with tracks						0:01:30			
	7:40:05	7:42:45		Tail	Travelling					160 m	0:02:40			
	7:42:45	7:45:45		Tail	Couple shuttlewagon						0:03:00			
	7:45:45	7:47:45	L15		Release handbrake for 5-car string						0:02:00			
	7:47:45	7:50:30		Tail	Travelling					170 m	0:02:45			
	7:50:30	7:53:30		Tail	Travelling					270 m	0:03:00			
	7:45:35	7:49:53			Dump 1 car						0:04:18			
	7:53:30	7:56:30	L15		Couple 5 loaded cars onto unloading string						0:03:00			
	7:49:53	8:02:47			Dump 3 cars						0:12:54			
	7:56:30	7:59:30		Tail	Decouple shuttlewagon						0:03:00			
	7:59:30	7:59:45		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	7:59:45	8:00:15		Tail	Shuttlewagon disengages from tracks						0:00:30			
	8:00:15	8:01:15		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 5-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	8:01:15	8:02:45		Tail	Shuttlewagon rengages with tracks						0:01:30			
	8:02:45	8:05:25		Tail	Travelling					260 m	0:02:40			
	8:05:25	8:08:25		Tail	Couple shuttlewagon						0:03:00			
	8:08:25	8:10:25			Cut 5 loaded car string						0:02:00			
	8:10:25	8:12:25	L16		Release handbrake for 6-car string						0:02:00			
	8:02:47	8:07:05			Dump 1 car						0:04:18			
	8:07:05	8:11:23			Dump 1 car						0:04:18			
	8:12:25	8:15:10		Tail	Travelling					270 m	0:02:45			
	8:15:10	8:18:10		Tail	Travelling					270 m	0:03:00			

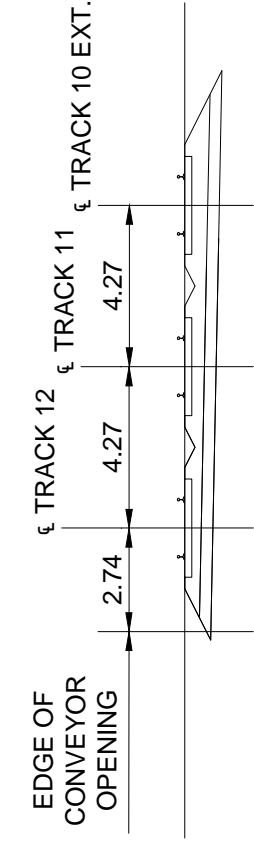
Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
	8:11:23	8:15:41			Dump 1 car						0:04:18			
	8:18:10	8:21:10	L16		Couple 5 loaded cars onto unloading string						0:03:00			
	8:15:41	8:19:59			Dump 1 car						0:04:18			
	8:19:59	8:21:59			Cut 14 empties string						0:02:00			
	8:21:59	8:23:39	U11	Head	Travelling - Spot 14 empties into Track 3N					140 m	0:01:40			
	8:23:39	8:25:39			Apply handbrake						0:02:00			
	8:25:39	8:28:39		Head	Decouple shuttlewagon						0:03:00			
32	8:28:39	8:29:09		Head	Shuttlewagon disengages from tracks						0:00:30			
	8:29:09	8:31:09		Head	Travelling					170 m	0:02:00			
	8:31:09	8:32:39		Head	Shuttlewagon rengages with tracks						0:01:30			
	8:32:39	8:34:39		Head	Travelling					190 m	0:02:00			
	8:34:39	8:37:39		Head	Couple shuttlewagon						0:03:00			
32	8:19:59	8:37:11			Dump 4 cars						0:17:12			
	8:21:10	8:24:10		Tail	Decouple shuttlewagon						0:03:00			
	8:24:10	8:24:25		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	8:24:25	8:24:55		Tail	Shuttlewagon disengages from tracks						0:00:30			
	8:24:55	8:25:55		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	8:25:55	8:27:25		Tail	Shuttlewagon rengages with tracks						0:01:30			
	8:27:25	8:30:05		Tail	Travelling					100 m	0:02:40			
	8:30:05	8:33:05		Tail	Couple shuttlewagon						0:03:00			
	8:37:11	8:41:29			Dump 1 car						0:04:18			
	8:33:05	8:35:05	L17		Release handbrake for 5-car string						0:02:00			
	8:35:05	8:37:50		Tail	Travelling					110 m	0:02:45			
	8:37:50	8:40:50		Tail	Travelling					270 m	0:03:00			
	8:40:50	8:43:50	L17		Couple 5 loaded cars onto unloading string						0:03:00			
	8:41:29	8:45:47			Dump 1 car						0:04:18			
	8:43:50	8:46:50		Tail	Decouple shuttlewagon						0:03:00			
	8:46:50	8:47:05		Tail	Travelling - Back shuttlewagon up					20 m	0:00:15			
	8:47:05	8:47:35		Tail	Shuttlewagon disengages from tracks						0:00:30			
	8:47:35	8:48:35		Tail	Travelling - On Road	Tail of shuttlewagon	Tail of 7-car string	Head of shuttlewagon	Track 8 FP	90 m	0:01:00			
	8:48:35	8:50:05		Tail	Shuttlewagon rengages with tracks						0:01:30			
	8:50:05	8:52:45		Tail	Travelling					200 m	0:02:40			
	8:52:45	8:55:45		Tail	Couple shuttlewagon						0:03:00			
	8:55:45	8:57:45	L18		Release handbrake for 5-car string						0:02:00			
	8:57:45	9:00:30		Tail	Travelling					210 m	0:02:45			
	9:00:30	9:03:30		Tail	Travelling					270 m	0:03:00			
	8:45:47	9:02:59			Dump 4 cars						0:17:12			
	9:03:30	9:06:30	L18		Couple 5 loaded cars onto unloading string						0:03:00			
	9:02:59	9:20:11			Dump 4 cars						0:17:12			
	9:20:11	9:22:11			Cut 13 empties string						0:02:00			
	9:22:11	9:22:26	U12	Head	Travelling - Spot 13 empties into Track 8					15 m	0:00:15			
	9:22:26	9:24:26			Apply handbrake						0:02:00			
33	9:24:26	9:27:26		Head	Decouple shuttlewagon						0:03:00			
34	9:27:26	9:29:06		Head	Travelling					150 m	0:01:40			On standby on Track 10 and clear of all empties track
	9:35:11	9:50:11		CN	Travelling - CN locomotives travel to site	Tail of CN Locomotive	---	Tail of CN Locomotive	Mainline Switch		0:15:00			Assume CN arrives 15 minute after last car is dumped
	9:50:11	9:51:51	R1	CN	Travelling - CN locomotives travel to site	Tail of CN Locomotive	Mainline Switch	Tail of CN Locomotive	Head of Track 4 Empties	140 m	0:01:40			
35	9:51:51	9:54:51			Couple 12 cars (Track 4)						0:03:00			
	9:54:51	9:56:51			Release Handbrakes						0:02:00			
	9:56:51	10:00:11	R2		Travelling					300 m	0:03:20			
36	10:00:11	10:03:11			Couple 12 cars (Track 5)						0:03:00			
	10:03:11	10:05:11			Release Handbrakes						0:02:00			
	10:05:11	10:09:11	R3		Travelling					360 m	0:04:00			
37	10:09:11	10:12:11			Couple 10 cars (Track 6)						0:03:00			
	10:12:11	10:14:11			Release Handbrakes						0:02:00			
	10:14:11	10:18:31	R4		Travelling					390 m	0:04:20			
38	10:18:31	10:21:31			Couple 11 cars (Track 7)						0:03:00			
	10:21:31	10:23:31			Release Handbrakes						0:02:00			
	10:23:31	10:27:21	R5		Travelling					340 m	0:03:50			
39	10:27:21	10:30:21			Couple 13 cars (Track 8)						0:03:00			
	10:30:21	10:32:21			Release Handbrakes						0:02:00			
	10:32:21	10:39:41	R6		Travelling					660 m	0:07:20			
	10:39:41	10:42:41			Couple 7 cars (Track 1)						0:03:00			
	10:42:41	10:44:41			Release Handbrakes						0:02:00			
	10:44:41	10:45:21	R7		Travelling					60 m	0:00:40			
40	10:45:21	10:48:21			Couple 11 cars (Track 1)						0:03:00			
	10:48:21	10:50:21			Release Handbrakes						0:02:00			
	10:50:21	10:56:51	R7		Travelling					580 m	0:06:30			

Sheet	Start of Action	End of Action	String Order	Power	Action	Ref Point A	From	Ref Point B	To	Travel Distance	Length of Action	Occupied Tracks	Crew	Notes:
	10:56:51	10:59:51			Couple 14 cars (Track 3)						0:03:00			
	10:59:51	11:01:51			Release Handbrakes						0:02:00			
41	11:01:51	11:03:11	R8		Travelling					120 m	0:01:20			
	11:03:11	11:06:11			Couple 6 cars (Track 3)						0:03:00			
	11:06:11	11:08:11			Release Handbrakes						0:02:00			
	11:08:11	11:13:11	R8		Travelling					440 m	0:05:00			
	11:13:11	11:16:11			Couple 8 cars (Track 2)						0:03:00			
	11:16:11	11:18:11			Release Handbrakes						0:02:00			
42	11:18:11	11:19:01	R9		Travelling					70 m	0:00:50			
	11:19:01	11:22:01			Couple 8 cars (Track 2)						0:03:00			
	11:22:01	11:24:01			Release Handbrakes						0:02:00			
	11:24:01	11:49:01			Test Brakes						0:25:00			
43	11:49:01	11:55:31	R10		Travelling	Tail of Track 2 Empties	Track 2-3 FP	Tail of Track 2 Empties	Mainline Switch	580 m	0:06:30			CN no longer within Fibreco property

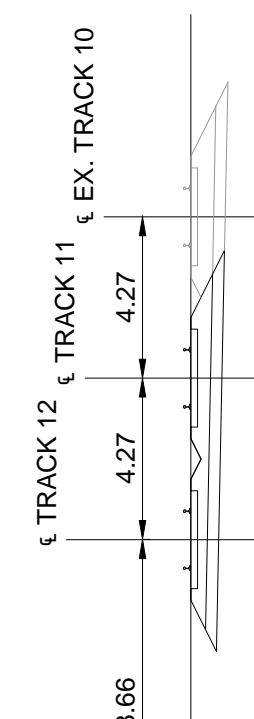
A. Proposed Layout Plan



PLAN
SCALE: 1:750



SECTION B
SCALE: 1:200



SECTION A
SCALE: 1:200

STORAGE TRACKS	CARS
TRACK 1 EXT (+3 SWITCHES)	18
TRACK 10 EXT (+1 SWITCH)	7
TRACK 11 (+3 SWITCHES)	20
TRACK 12 (+3 SWITCHES)	19
TOTAL	64

- NOTES:
1. SECTIONS BASED ON MATSON PECK & TOPLISS SURVEY DATED NOVEMBER 15, 2007.
 2. SEE HATCH DRAWINGS 369623-RW-100-S0-1001-1005 FOR REFERENCE.
 3. COSTS SHOWN IN TABLE ARE INDICATIVE ONLY @ 50
 4. COSTS ONLY INCLUDE TRACK MATERIALS AND BASIC TRACK CONSTRUCTION PLUS PAVING COSTS.

CONCEPTUAL - FOR DISCUSSION ONLY

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<p>© Mott MacDonald Canada Ltd. This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.</p>	<p>ISSUED FOR REVIEW</p> <p>Rev Date</p> <p>A 2016/08/18</p> <p>Drawn</p> <p>RH</p> <p>DESCRIPTION</p> <p>Chk d App d</p> <p>JS SR</p>	<p>LEGEND:</p> <ul style="list-style-type: none"> EXISTING TRACKS PROPOSED ADDITIONAL STORAGE TRACKS PROPOSED TRACKS (TERMINAL EXPANSION) PROPOSED POINT OF SWITCH 60 FT RAIL CARS EXISTING DERAIL 	<p>Designed</p> <p>R. HAY</p> <p>2016/07/15</p> <p>Eng check</p> <p>J. SUTCLIFFE</p> <p>2016/07/15</p> <p>Coordination</p> <p>R. HAY</p> <p>2016/07/15</p> <p>Approved</p> <p>J. SUTCLIFFE</p> <p>2016/07/15</p> <p>Rev</p> <p>S. RIDDICK</p> <p>2016/07/15</p> <p>Security</p> <p>1:750</p> <p>IFR</p> <p>A</p> <p>Drawing Number</p> <p>373557-MMD-00-P0-DR-RW-2000</p>
<p>STORAGE BUILDING</p>		<p>STORAGE BUILDING</p>	
<p>STORAGE TRACKS</p>		<p>STORAGE TRACKS</p>	
<p>TRACK 1 EXT (+3 SWITCHES)</p>		<p>TRACK 1 EXT (+3 SWITCHES)</p>	
<p>TRACK 10 EXT (+1 SWITCH)</p>		<p>TRACK 10 EXT (+1 SWITCH)</p>	
<p>TRACK 11 (+3 SWITCHES)</p>		<p>TRACK 11 (+3 SWITCHES)</p>	
<p>TRACK 12 (+3 SWITCHES)</p>		<p>TRACK 12 (+3 SWITCHES)</p>	
<p>TOTAL</p>		<p>TOTAL</p>	
<p>STORAGE TRACKS</p>		<p>STORAGE TRACKS</p>	
<p>TRACK 1 EXT (+3 SWITCHES)</p>		<p>TRACK 1 EXT (+3 SWITCHES)</p>	
<p>TRACK 10 EXT (+1 SWITCH)</p>		<p>TRACK 10 EXT (+1 SWITCH)</p>	
<p>TRACK 11 (+3 SWITCHES)</p>		<p>TRACK 11 (+3 SWITCHES)</p>	
<p>TRACK 12 (+3 SWITCHES)</p>		<p>TRACK 12 (+3 SWITCHES)</p>	
<p>TOTAL</p>		<p>TOTAL</p>	
<p>STORAGE TRACKS</p>		<p>STORAGE TRACKS</p>	
<p>TRACK 1 EXT (+3 SWITCHES)</p>		<p>TRACK 1 EXT (+3 SWITCHES)</p>	
<p>TRACK 10 EXT (+1 SWITCH)</p>		<p>TRACK 10 EXT (+1 SWITCH)</p>	
<p>TRACK 11 (+3 SWITCHES)</p>		<p>TRACK 11 (+3 SWITCHES)</p>	
<p>TRACK 12 (+3 SWITCHES)</p>		<p>TRACK 12 (+3 SWITCHES)</p>	
<p>TOTAL</p>		<p>TOTAL</p>	
<p>STORAGE TRACKS</p>		<p>STORAGE TRACKS</p>	
<p>TRACK 1 EXT (+3 SWITCHES)</p>		<p>TRACK 1 EXT (+3 SWITCHES)</p>	
<p>TRACK 10 EXT (+1 SWITCH)</p>		<p>TRACK 10 EXT (+1 SWITCH)</p>	
<p>TRACK 11 (+3 SWITCHES)</p>		<p>TRACK 11 (+3 SWITCHES)</p>	
<p>TRACK 12 (+3 SWITCHES)</p>		<p>TRACK 12 (+3 SWITCHES)</p>	
<p>TOTAL</p>		<p>TOTAL</p>	