



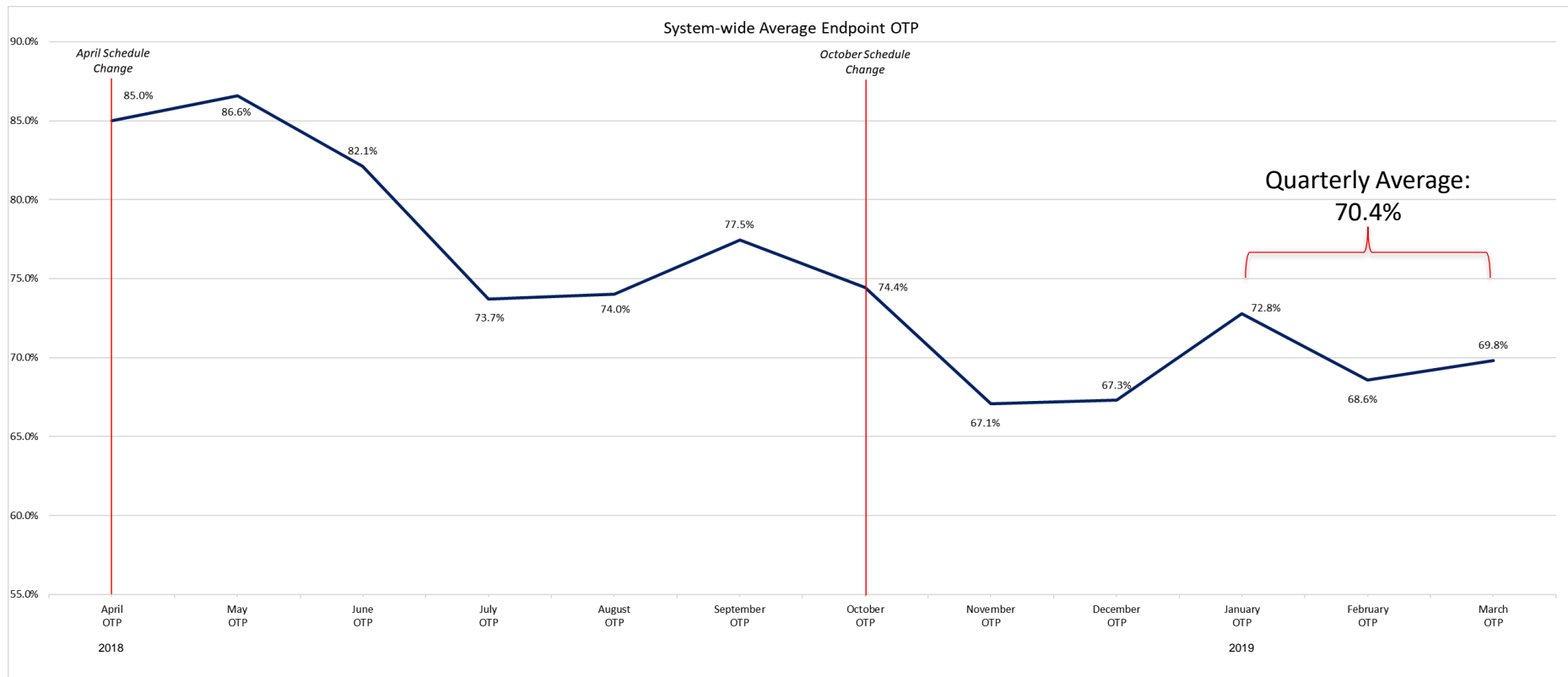
Pacific Surfliner

On-Time Performance Analysis

Second Quarter – Federal Fiscal Year 2018-19

Board of Directors
July 15, 2019

Average Endpoint OTP - Systemwide

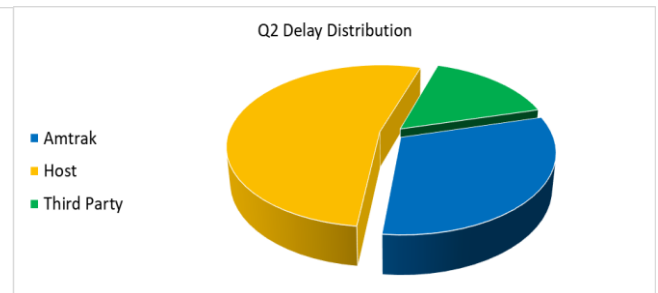
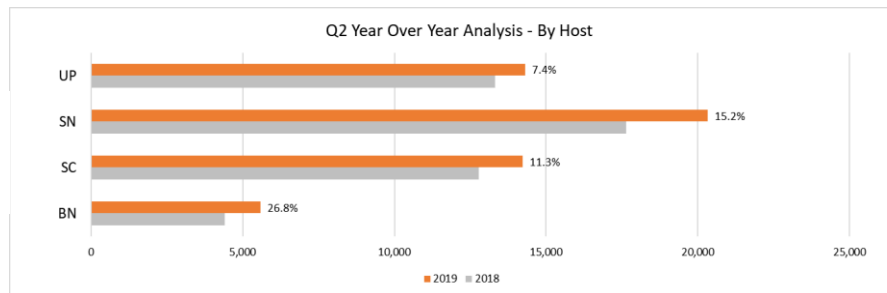
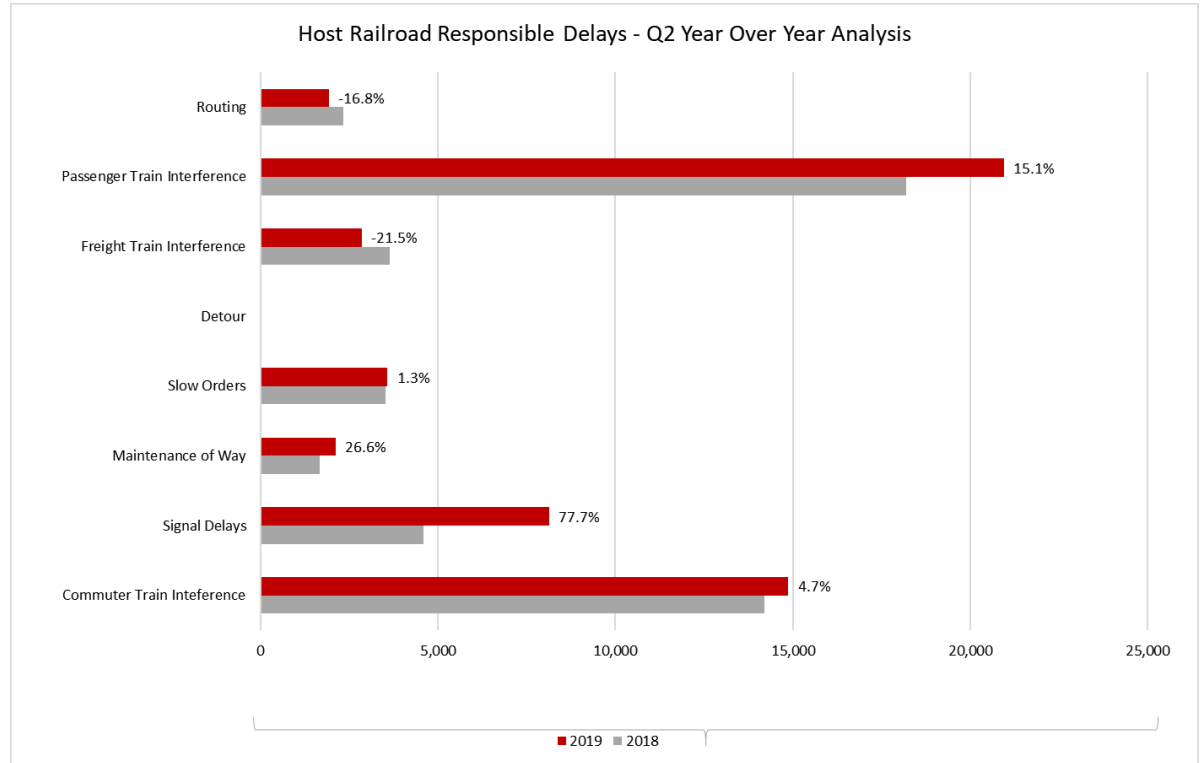
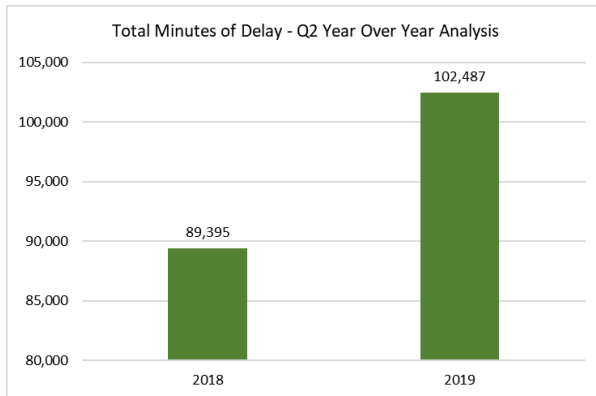
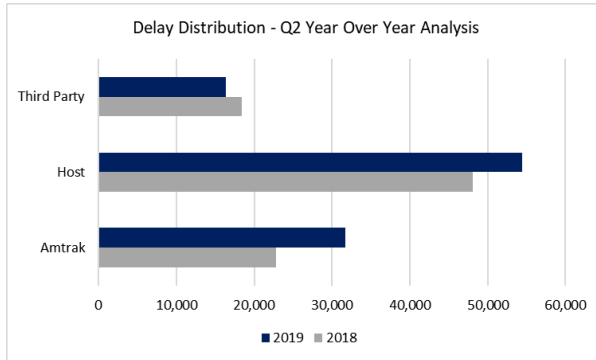


OTP = On-time performance

Average Endpoint OTP: Detail by Train

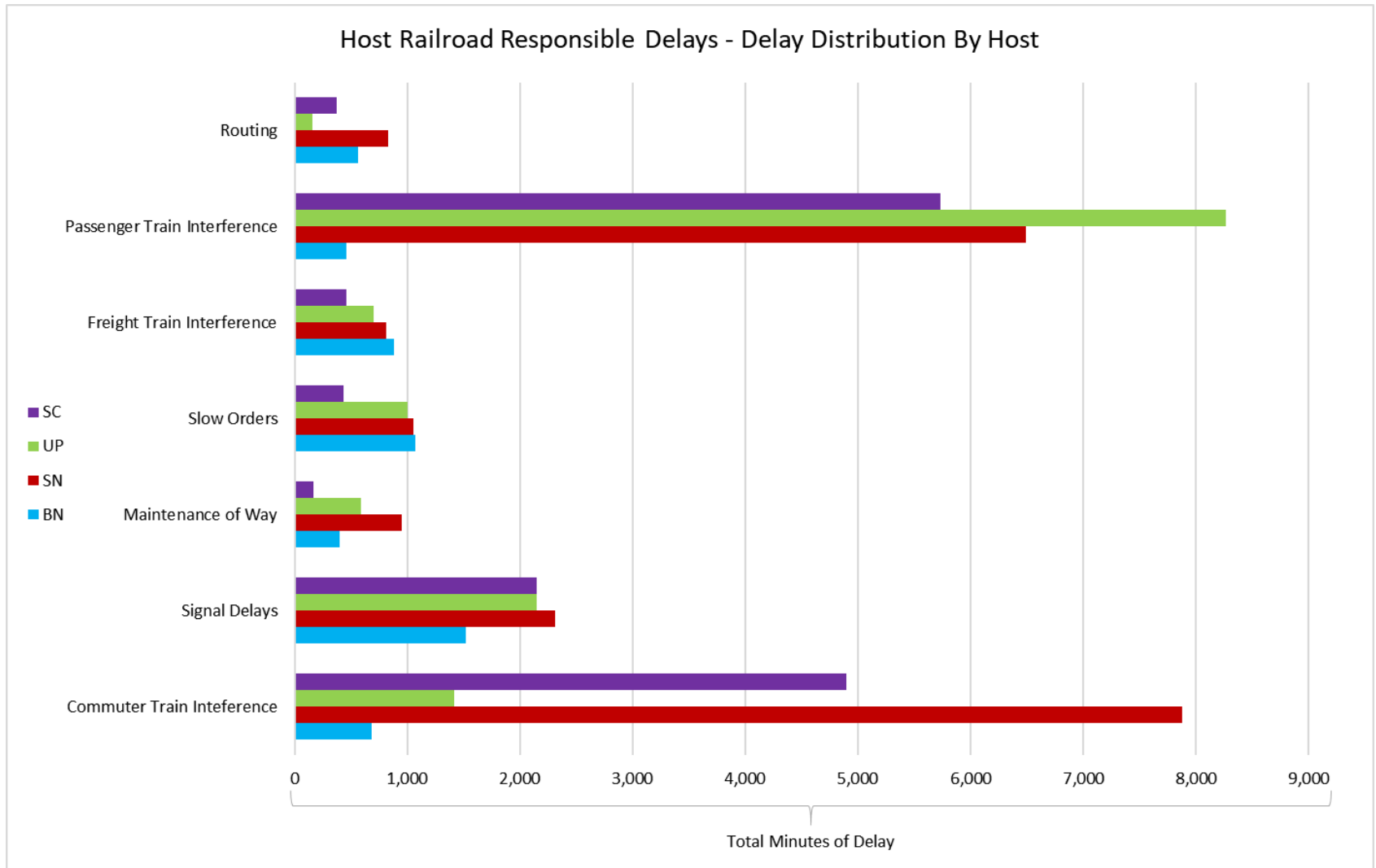
Train	April OTP	May OTP	June OTP	July OTP	August OTP	September OTP	October OTP	November OTP	December OTP	January OTP	February OTP	March OTP	12 Mnth Avg OTP
561	90.5%	86.4%	100.0%	100.0%	100.0%	100.0%	91.3%	100.0%	90.0%	86.4%	95.0%	85.7%	93.8%
1565							100.0%	100.0%	81.8%	85.7%	100.0%	83.3%	91.8%
1590							100.0%	77.8%	100.0%	85.7%	100.0%	83.3%	91.1%
759	66.7%	100.0%	95.2%	90.5%	100.0%	100.0%	100.0%	85.7%	90.0%	90.9%	80.0%	85.7%	90.4%
562	92.9%	96.7%	90.0%	90.3%	90.3%	96.4%	92.6%	83.3%	87.1%	82.8%	73.1%	74.1%	87.5%
1761	88.9%	100.0%	100.0%	100.0%	100.0%	81.8%	87.5%	100.0%	90.9%	55.6%	62.5%	80.0%	87.3%
579	93.3%	93.5%	86.7%	73.3%	93.5%	92.9%	88.0%	65.0%	100.0%	81.8%	75.0%	95.0%	86.5%
590	85.0%	95.5%	76.2%	81.0%	100.0%	84.2%	85.7%	85.7%	85.0%	85.7%	77.8%	89.5%	85.9%
768	96.7%	96.8%	83.3%	77.4%	96.8%	96.7%	80.6%	80.0%	71.0%	80.6%	82.1%	87.1%	85.8%
565	89.3%	96.8%	86.7%	96.8%	90.3%	89.3%	76.0%	66.7%	85.0%	81.8%	75.0%	66.7%	83.4%
1564							83.3%	88.9%	88.9%	66.7%	87.5%	80.0%	82.5%
1584							100.0%	77.8%	54.5%	77.8%	62.5%	100.0%	78.8%
580	90.0%	93.5%	80.0%	77.4%	74.2%	70.0%	58.1%	60.0%	80.6%	80.6%	78.6%	87.1%	77.5%
1566	71.4%	88.9%	88.9%	80.0%	50.0%	81.8%	75.0%	100.0%	72.7%	85.7%	66.7%	66.7%	77.3%
595	73.3%	90.3%	83.3%	67.7%	83.9%	73.3%	83.9%	73.3%	77.4%	77.4%	64.3%	74.2%	76.9%
1579							83.3%	88.9%	54.5%	66.7%	87.5%	80.0%	76.8%
566	100.0%	95.5%	90.0%	85.7%	87.0%	94.7%	69.6%	52.4%	36.8%	72.7%	65.0%	71.4%	76.7%
584	93.3%	90.3%	86.7%	61.3%	83.9%	85.7%	84.0%	52.4%	70.0%	72.7%	65.0%	61.9%	75.6%
591	90.0%	90.3%	73.3%	71.0%	74.2%	63.3%	74.2%	56.7%	80.6%	83.9%	71.4%	77.4%	75.5%
792	76.7%	83.9%	66.7%	61.3%	80.6%	80.0%	80.6%	76.7%	77.4%	71.0%	75.0%	74.2%	75.3%
573	92.9%	90.0%	82.8%	70.0%	71.0%	66.7%	70.8%	42.9%	84.2%	86.4%	65.0%	76.2%	74.9%
564	100.0%	93.5%	93.3%	86.7%	90.3%	86.7%	62.5%	38.1%	50.0%	68.2%	60.0%	57.1%	73.9%
1767							66.7%	100.0%	81.8%	66.7%	62.5%	50.0%	71.3%
782	70.0%	90.3%	80.0%	83.9%	67.7%	66.7%	67.7%	56.7%	58.1%	71.0%	64.3%	77.4%	71.1%
796	96.7%	80.6%	76.7%	64.5%	71.0%	56.7%	67.7%	46.7%	67.7%	71.0%	75.0%	74.2%	70.7%
572	57.1%	64.5%	73.3%	45.2%	58.1%	63.3%	68.0%	66.7%	75.0%	77.3%	60.0%	81.0%	65.8%
583	53.6%	67.7%	66.7%	51.6%	54.8%	66.7%	74.1%	60.0%	67.7%	72.4%	76.0%	70.4%	65.1%
1573								77.8%	55.6%	71.4%	66.7%	50.0%	64.3%
763	86.7%	67.7%	90.0%	71.0%	64.5%	70.0%	51.6%	20.0%	38.7%	48.4%	57.1%	58.1%	60.3%
569							61.1%	66.7%	55.0%	59.1%	50.0%	61.9%	59.0%
777	73.3%	87.1%	73.3%	64.5%	64.5%	53.3%	32.3%	30.0%	38.7%	58.1%	50.0%	61.3%	57.2%
774	83.3%	80.6%	76.7%	54.8%	48.4%	66.7%	48.4%	40.0%	35.5%	54.8%	39.3%	51.6%	56.7%
1572								66.7%	45.5%	71.4%	40.0%	33.3%	51.4%
767							33.3%	42.9%	60.0%	59.1%	65.0%	42.9%	50.5%
785	70.0%	71.0%	66.7%	25.8%	22.6%	43.3%	54.8%	33.3%	16.1%	41.9%	53.6%	48.4%	45.6%
1569								55.6%	18.2%	71.4%	40.0%	16.7%	40.4%
System Average	85.0%	86.6%	82.1%	73.7%	74.0%	77.5%	74.4%	67.1%	67.3%	72.8%	68.6%	69.8%	

Delay Analysis: Federal Fiscal Year (FFY) 2018-19, Quarter 2 (Q2) Year over Year



UP: Union Pacific
 SN: North County Transit District
 SC: Metrolink
 BN: Burlington Northern Santa Fe

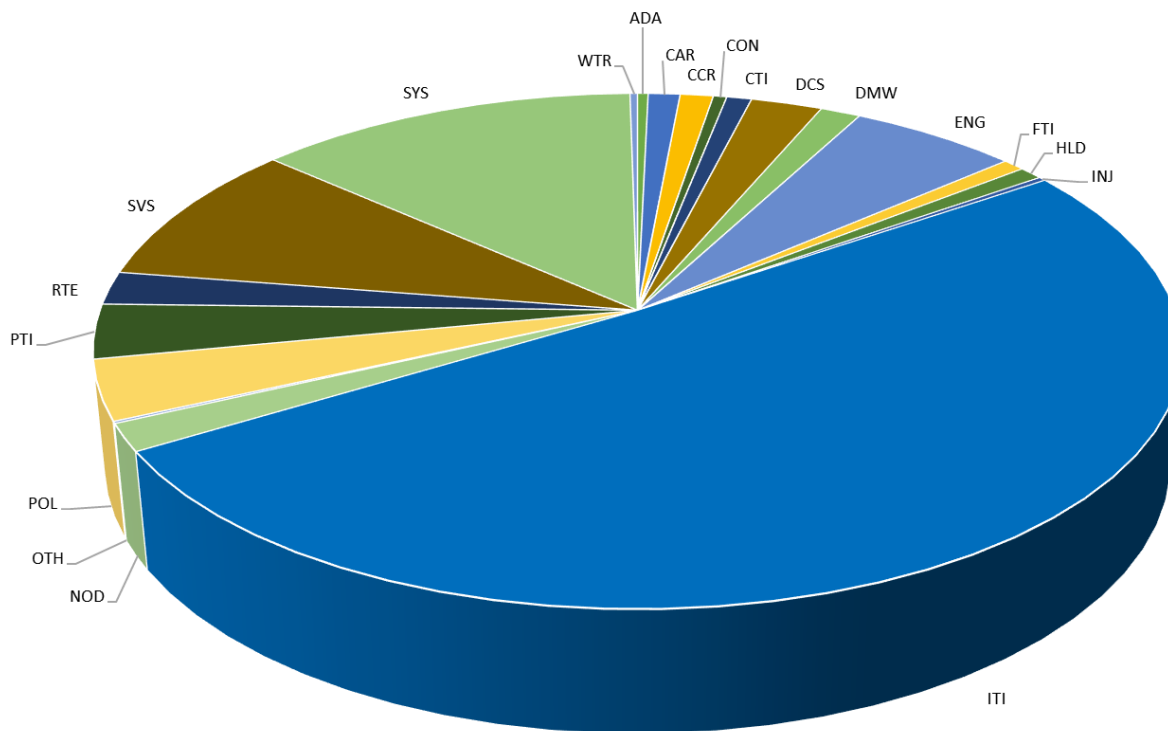
Delay Analysis: FFY Q2 – Distribution by Host



Initial Terminal Performance

Train	Total Delay Minutes
785	2292
595	541
777	502
1573	425
573	390
583	382
782	347
796	332
591	290
792	271
569	262
774	241
580	240
564	233
562	217
590	217
1579	186
1569	183
579	181
763	179
759	155
572	153
768	135
561	117
1767	111
1584	100
1590	98
584	95
1566	92
1564	61
566	54
767	53
565	52
1761	45
1565	37

Initial Terminal Performance - Delay Distribution



Delay Code Legend

Host

CTI	Commuter Train Interference
DCS	Signal Delays
DMW	Maintenance of Way
DSR	Slow Orders
DTR	Detour
FTI	Freight Train Interference
PTI	Passenger Train Interference
RTE	Routing

Amtrak

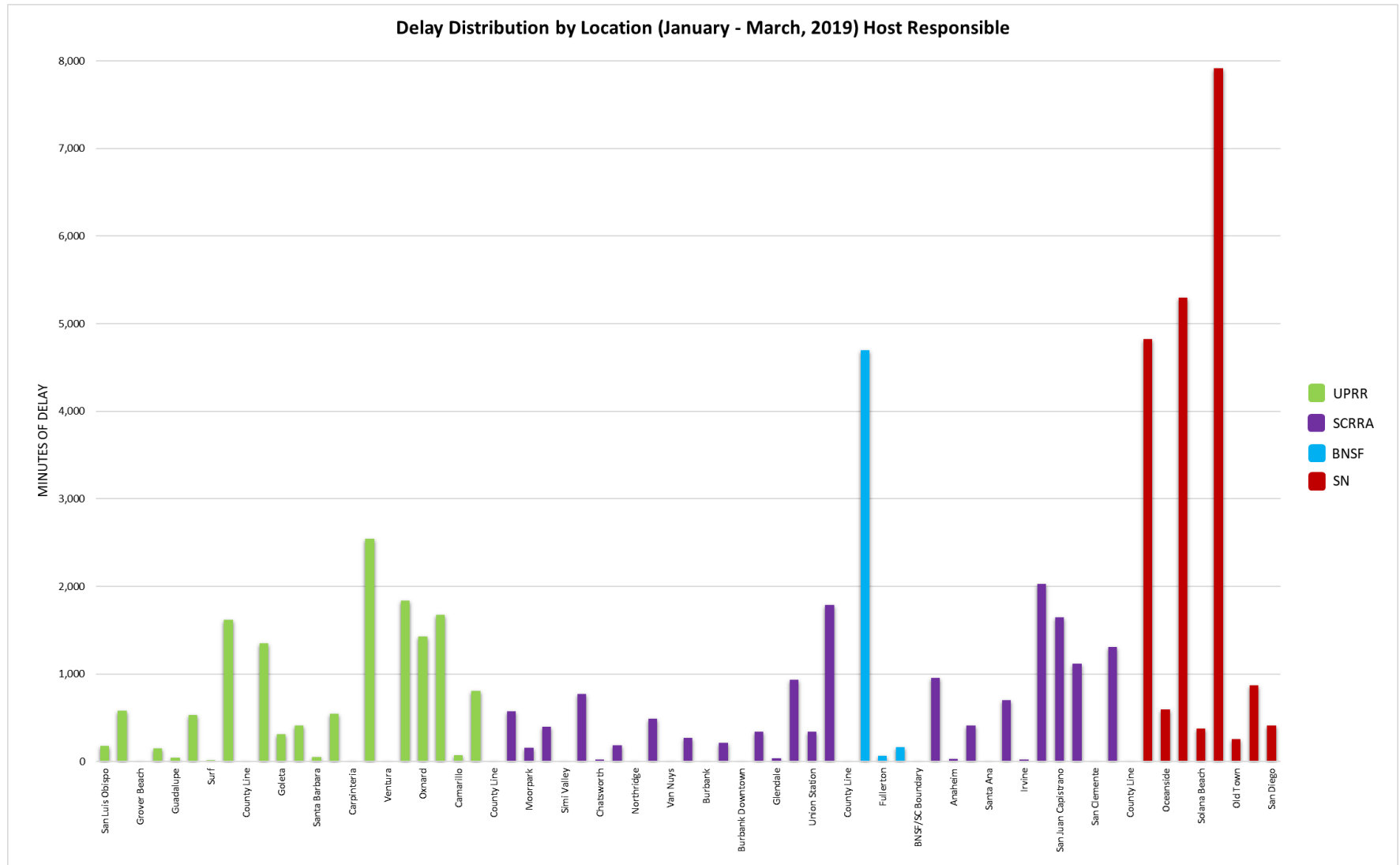
ADA	Passenger Related ADA
CAR	Car Failure
CCR	Cab Car Failure
CON	Hold for Connection
ENG	Locomotive Failure
HLD	Passenger Related
INJ	Injury Delay
ITI	Initial Terminal Delay
OTH	Misc
SVS	Servicing
SYS	Crew and System

Third Party

DBS	Debris
NOD	Unused Recovery Time
POL	Police
TRS	Trespasser
WTR	Weather

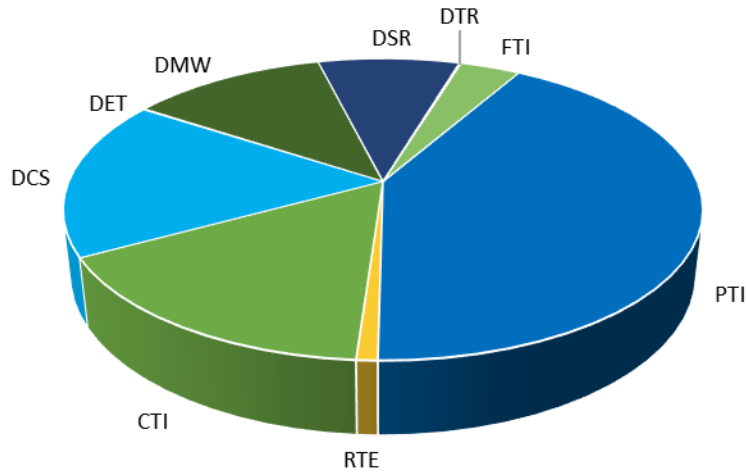
- Train 785 continues to be responsible for 25% of total initial terminal performance (ITP) delay minutes

Delay Distribution – By Location

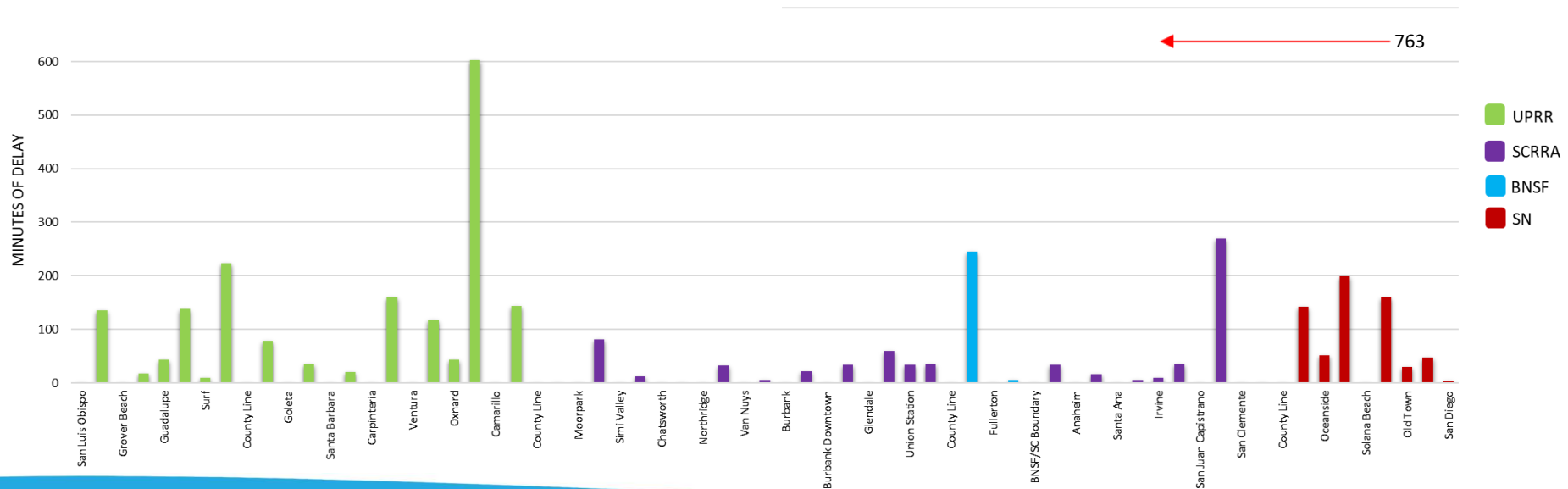


Train 763 – Delay Analysis

Train 763 - Host Delay Distribution

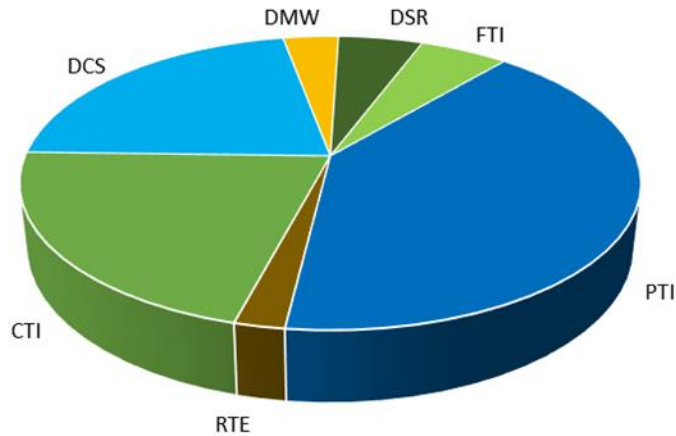


For the quarter, 57.8 percent of total delay minutes (772) are CTI and PTI
Days with highest incidence of delay start with CTI, PTI, or DCS in SN territory – cascades and intensifies as 763 travels north
These are days that have no issues with initial terminal performance

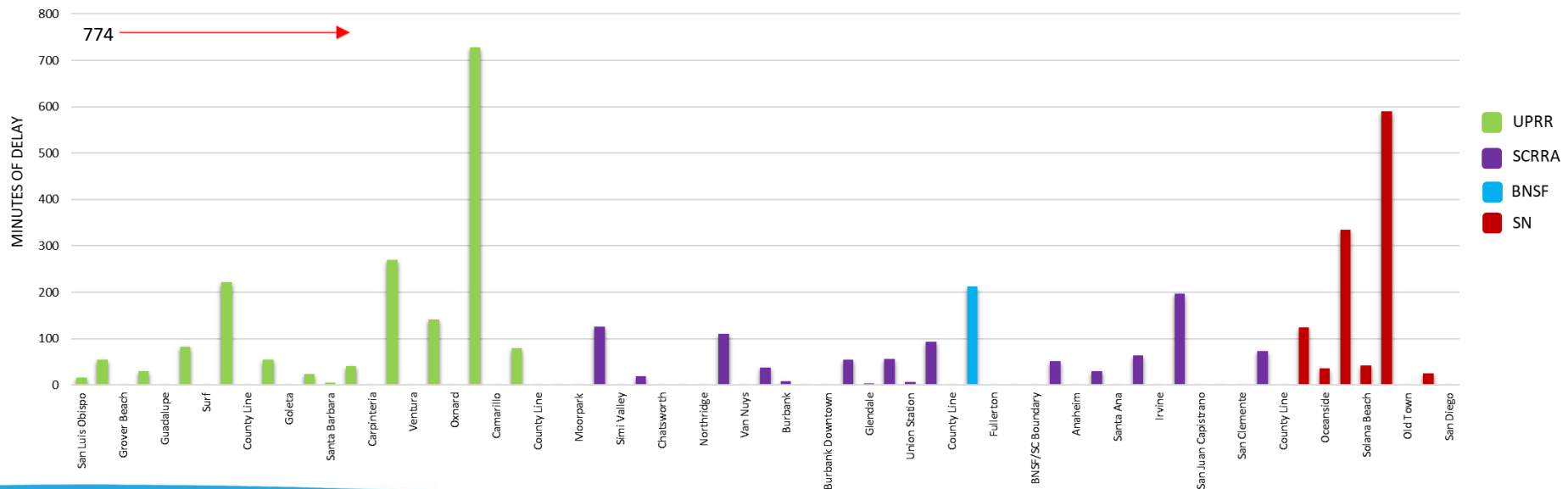


Train 774 – Delay Analysis

Train 774 - Host Delay Distribution

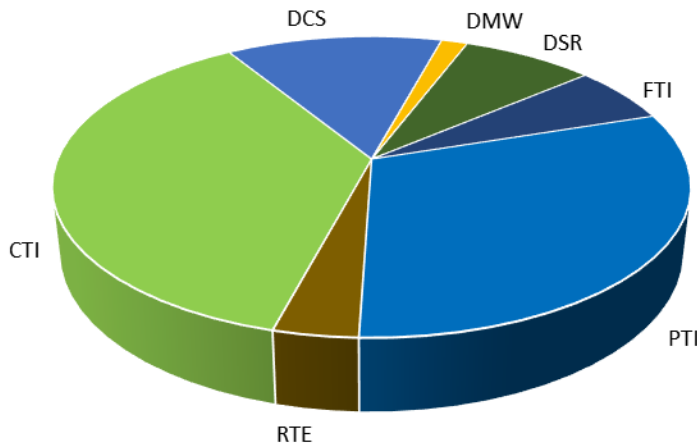


- Despite low OTP, train experiences few issues with initial terminal performance
- Over 43 percent of total delay minutes occur in UP territory
- Signal delays/slow orders account for 38 percent of this delay, PTI accounts for another 49 percent
- There is a daily average of more than 21 minutes of host responsible delay in UP territory

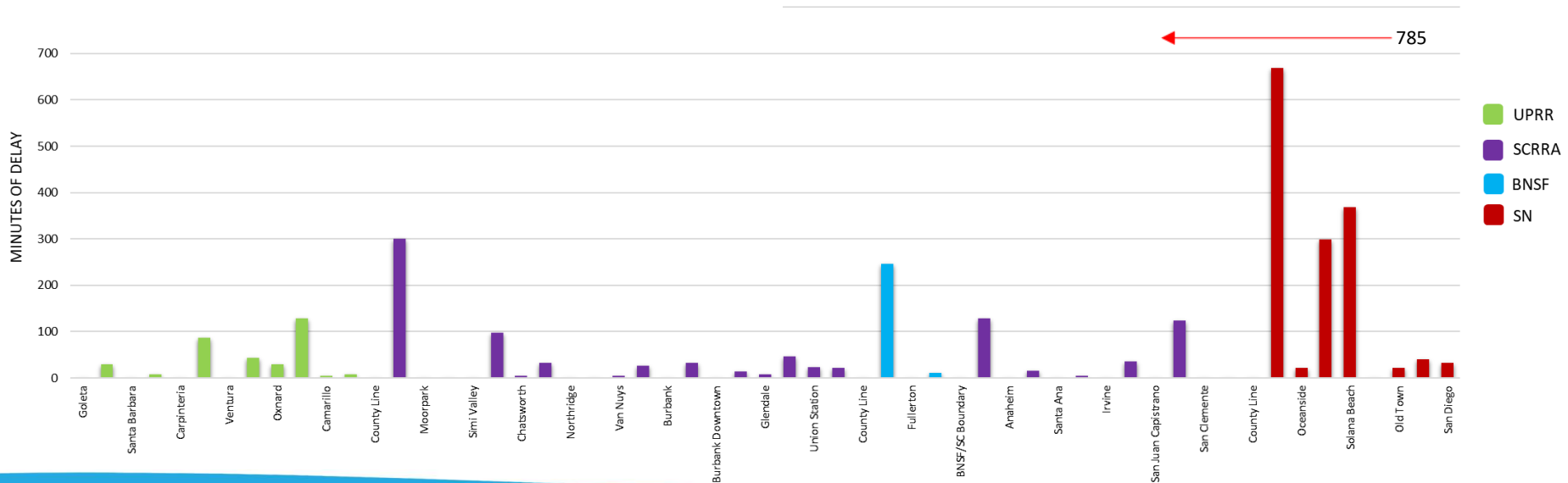


Train 785 – Delay Analysis

Train 785 - Host Delay Distribution



- Persistent issues with initial terminal delay (43 of 90 days), with **all** delays attributed to late inbound Train 774
- Over 28 percent of total delay minutes (2,024) are ITI average late departure is 47 minutes
- Another 27 percent of total delay minutes (2,007) are CTI and PTI
- More than half of this is in SN, primarily a result of late departures



Conclusions – Q2

- The OTP trend has not improved, though we saw a minor improvement in January 2019
- Train 763 continues to have CTI/PTI issues in SN, despite good initial terminal performance
- Cascading delays from Train 774 continues to cause issues on Train 785
 - Combined these bring down the entire system average by nearly 2 percent
- Host responsible delays for the quarter up by over 13,000 minutes vs. the prior year

Questions