HERE Data On Dashboard For Performance Measures

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http://bugatti.nvfast.org

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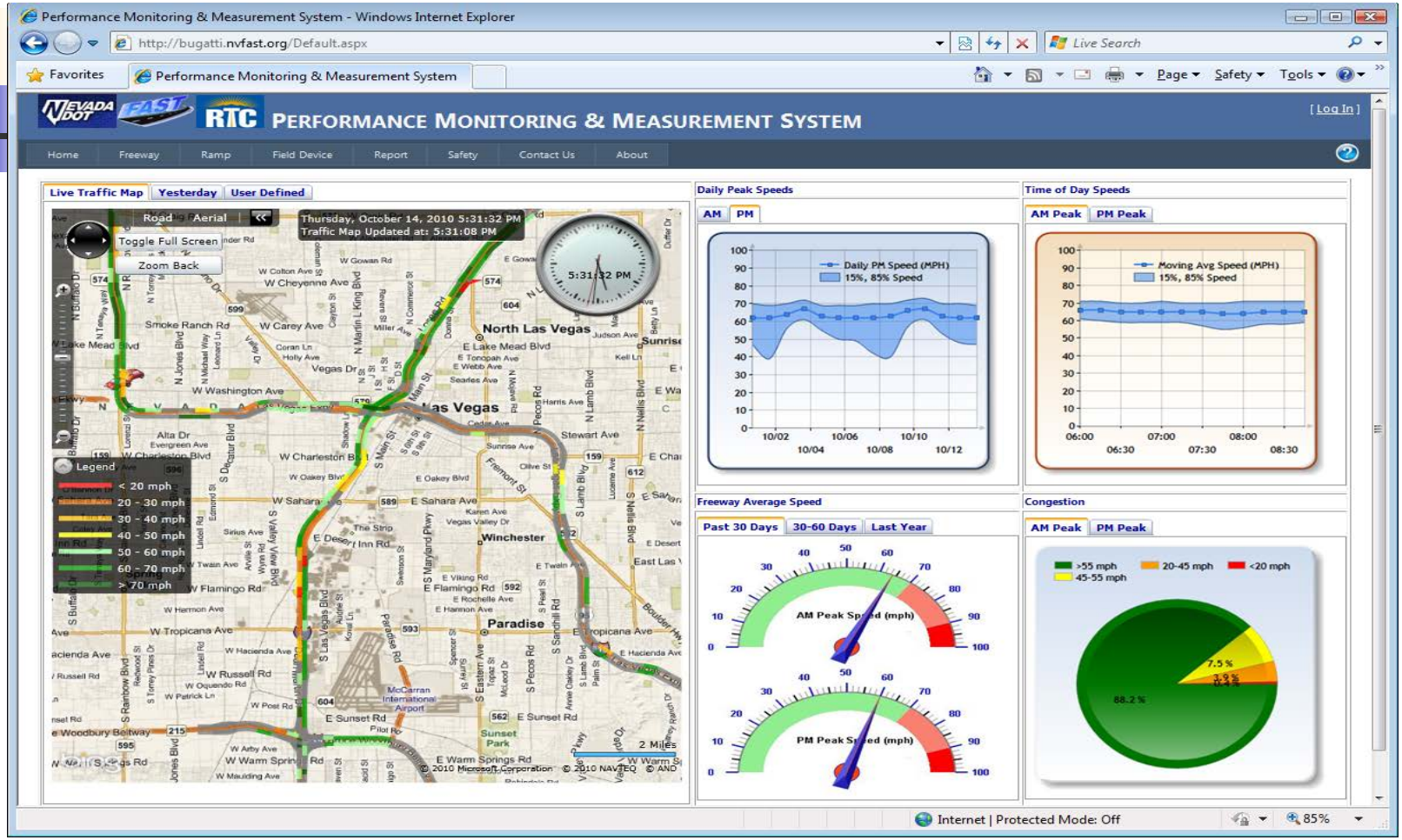
Overview

- Brief introduction of FAST Dashboard
- Why do we need to use HERE data
- Process HERE TMC links
- Establish TMC network
- Pre-define route OD pairs
- Calculate route travel times
- Visualize travel time and performance measures
- To-do list

FAST Dashboard http://bugatti.nvfast.org

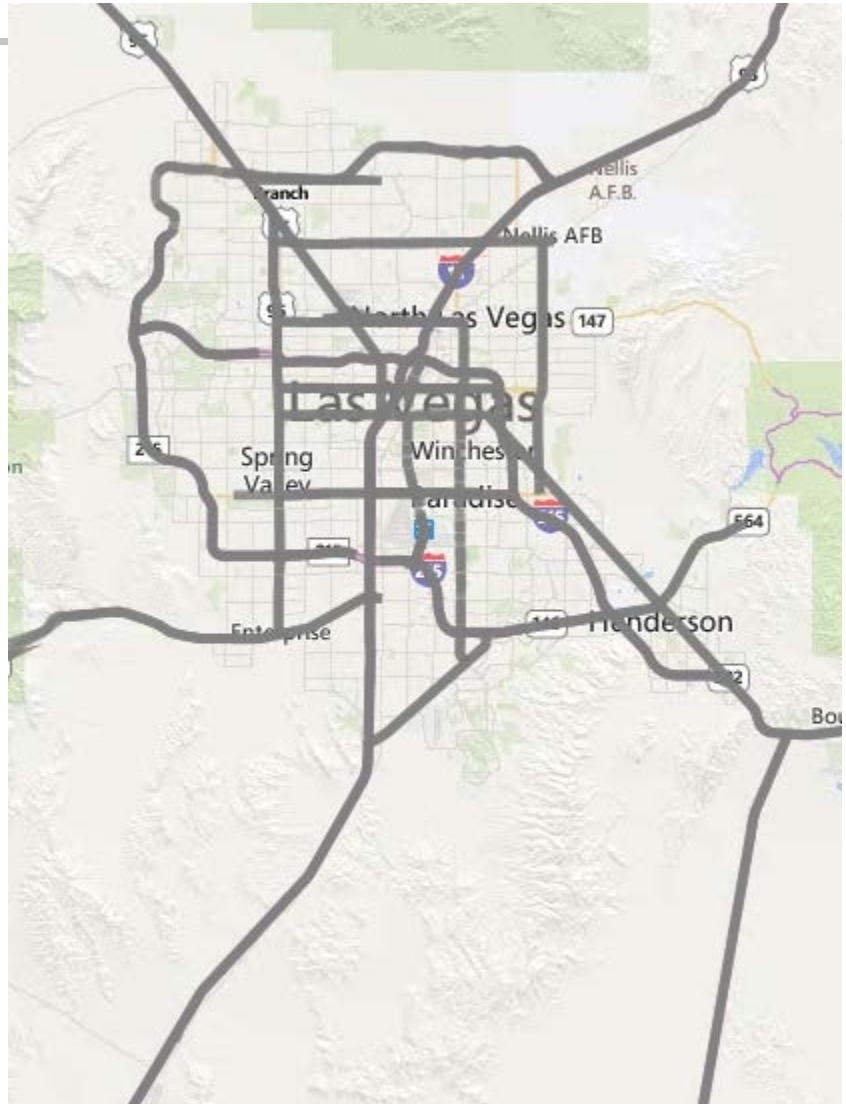


- One of 3 winners of DOT Data Innovation Challenge in 2014
- ITE Best Project of the Year Award of Management Operation & ITS Council in 2011

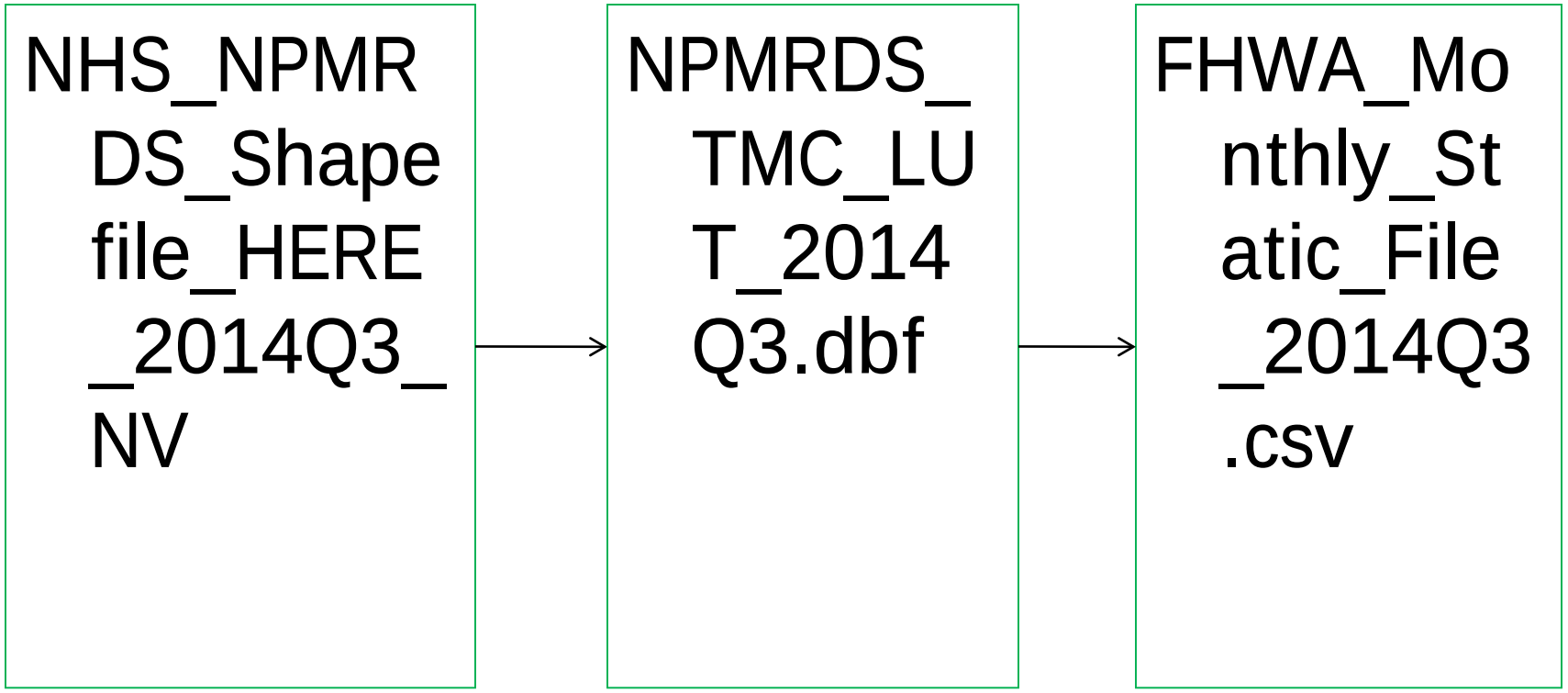
Why do we need to use HERE Data

FAST FMS Coverage

HERE Data Coverage

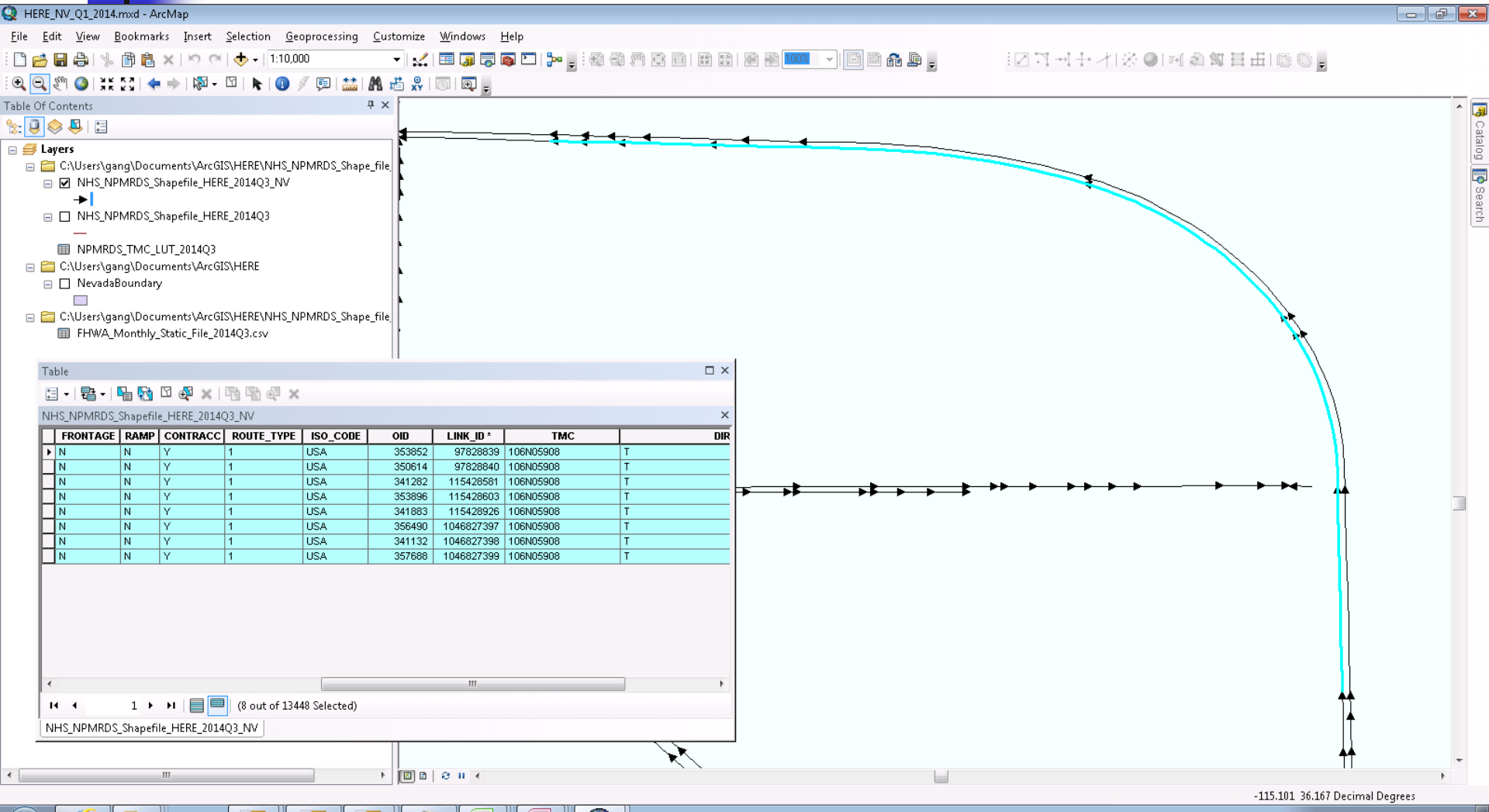


Process HERE TMC Links

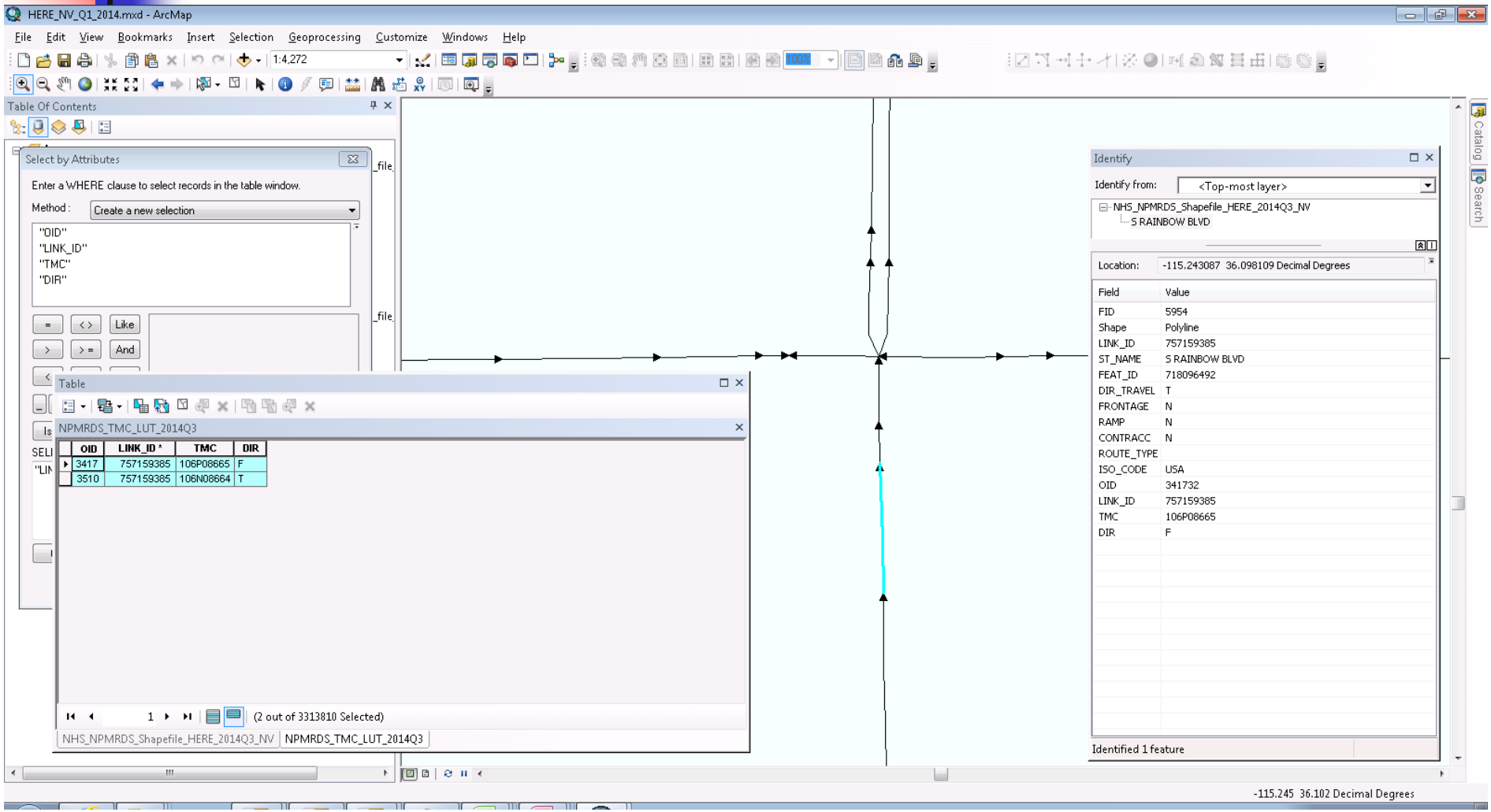


Join the shape file with two look up tables using TMC Code

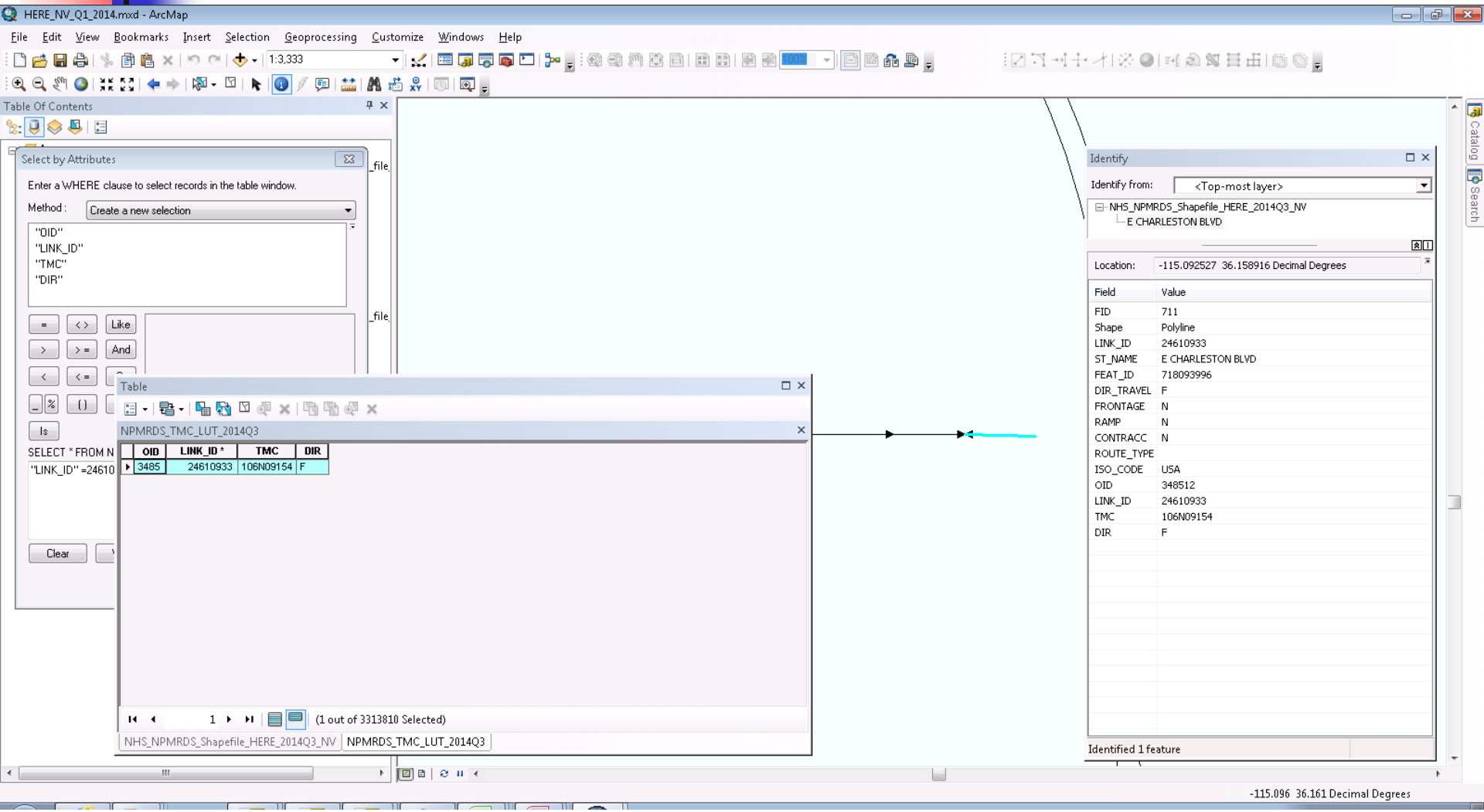
Process HERE TMC Links



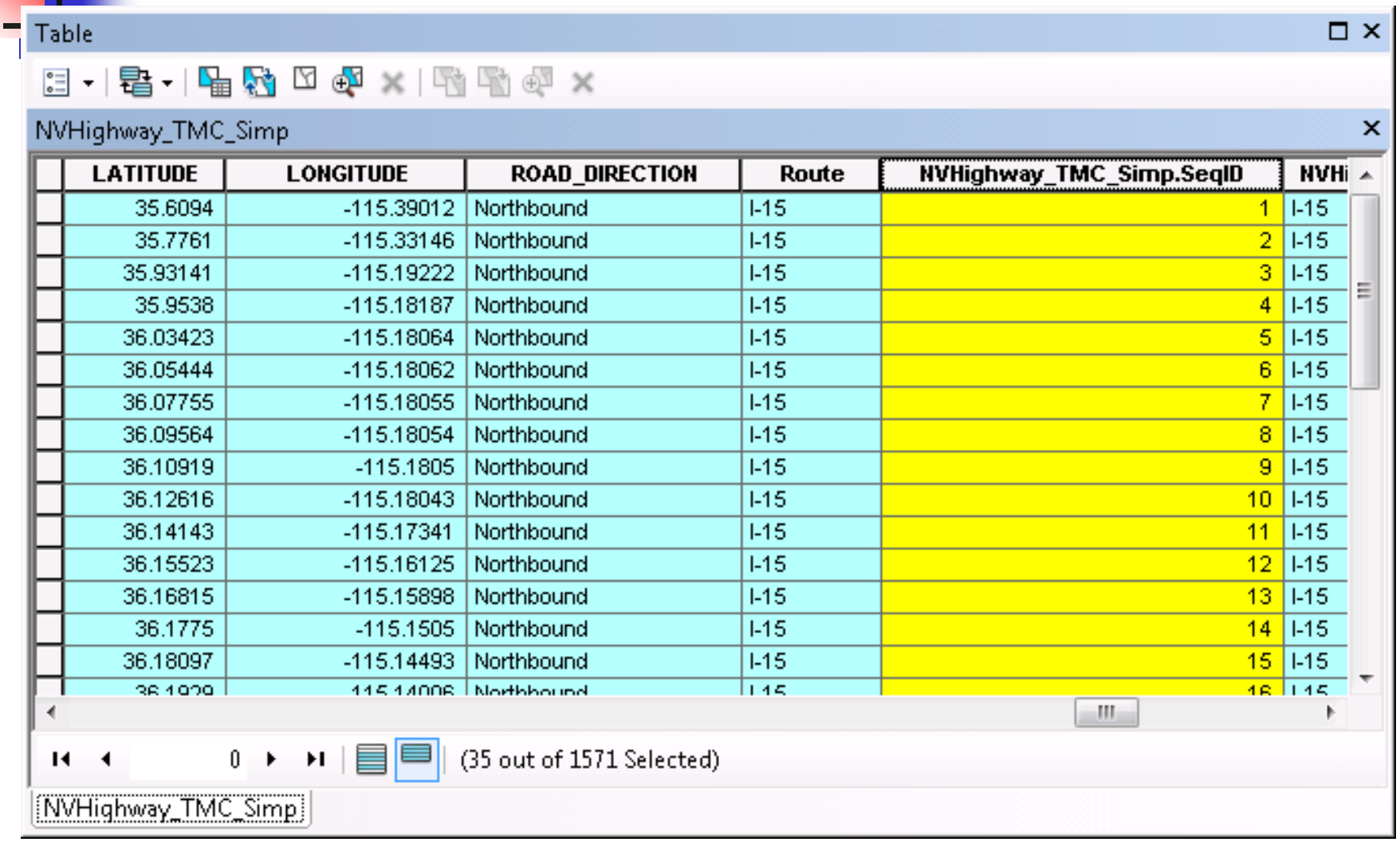
Process HERE TMC Links



Process HERE TMC Links

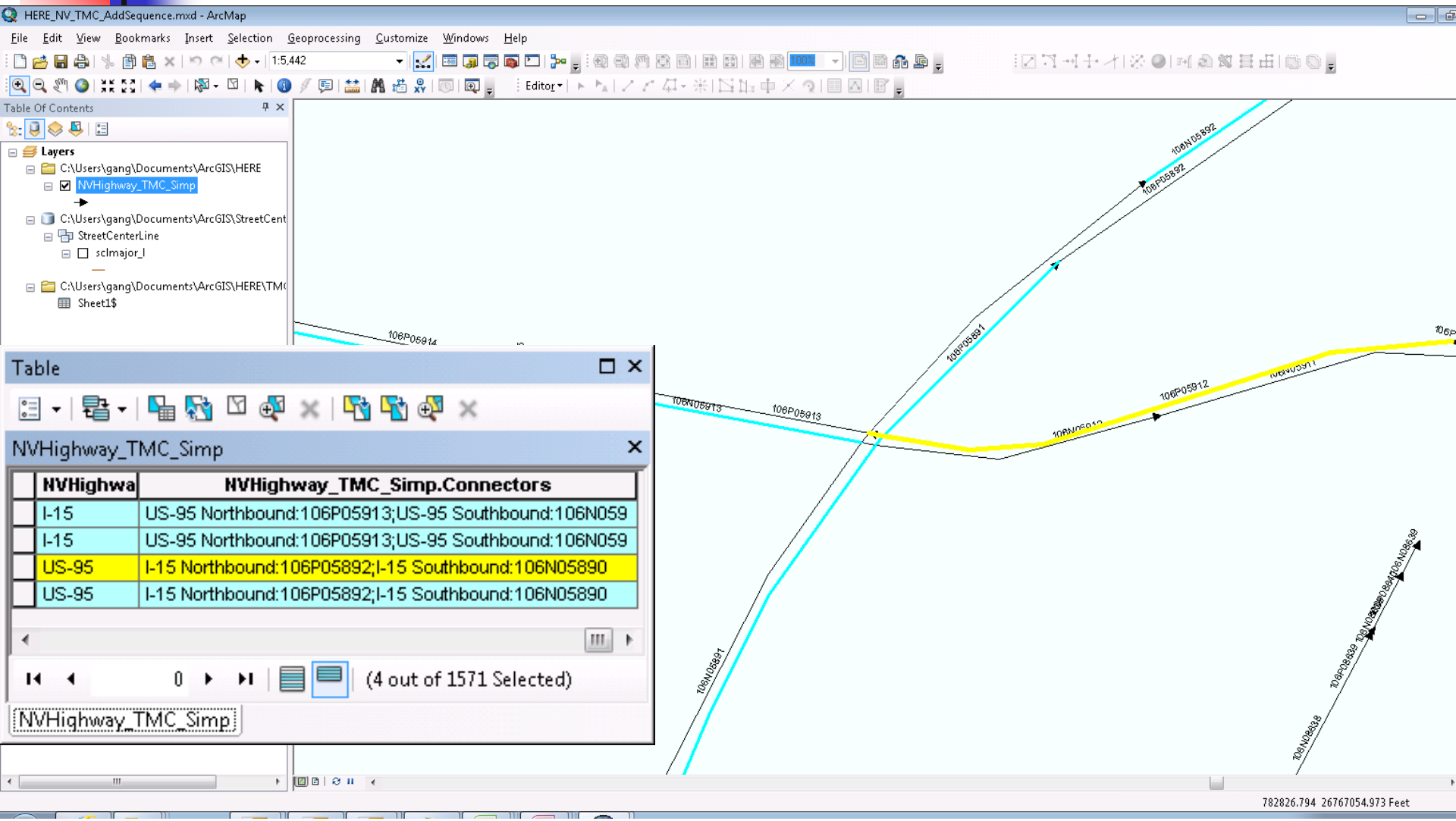


Establish TMC network (Sequence)

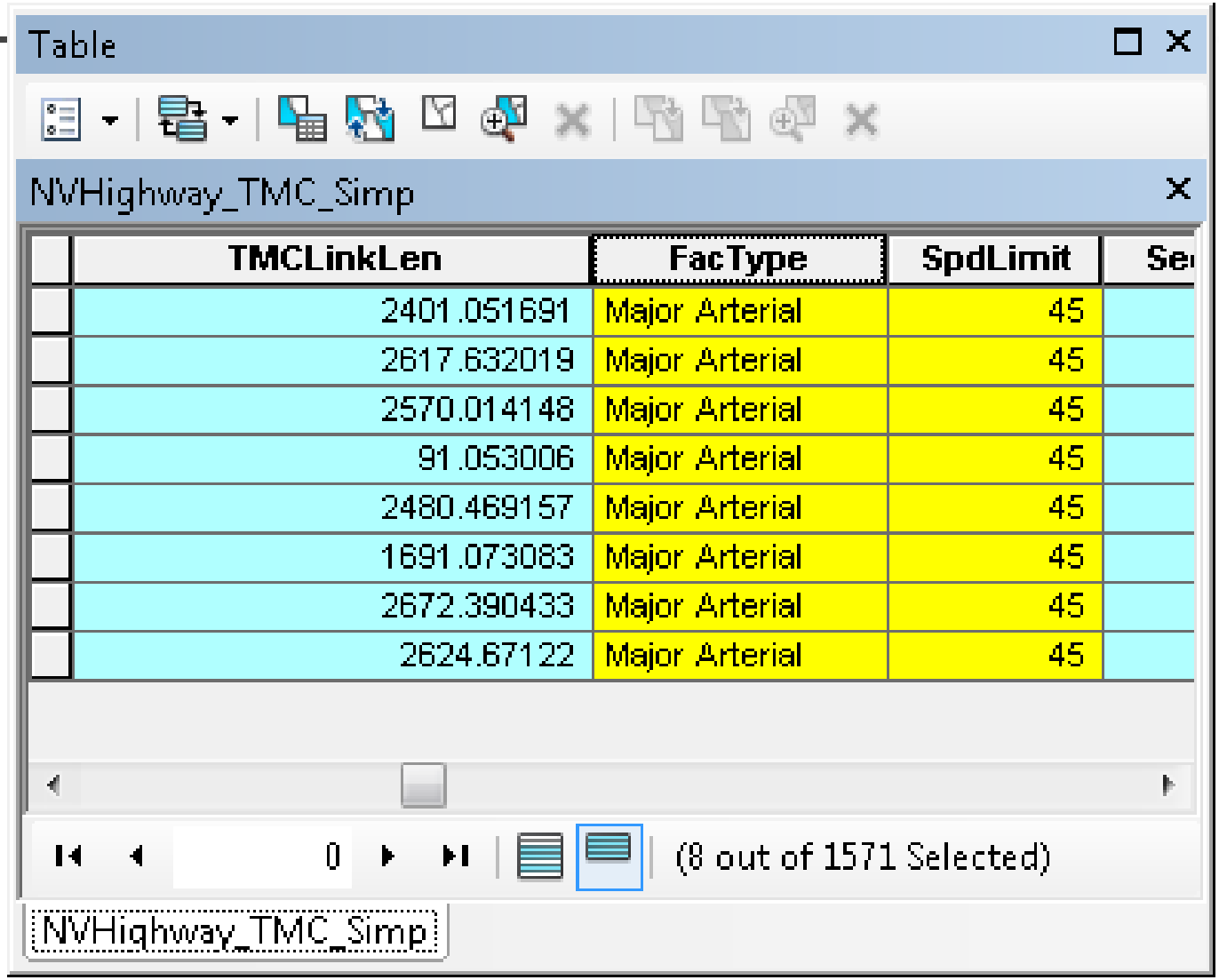


LATITUDE	LONGITUDE	ROAD_DIRECTION	Route	NVHighway_TMC_Simp.SeqID	NVHi
35.6094	-115.39012	Northbound	I-15	1	I-15
35.7761	-115.33146	Northbound	I-15	2	I-15
35.93141	-115.19222	Northbound	I-15	3	I-15
35.9538	-115.18187	Northbound	I-15	4	I-15
36.03423	-115.18064	Northbound	I-15	5	I-15
36.05444	-115.18062	Northbound	I-15	6	I-15
36.07755	-115.18055	Northbound	I-15	7	I-15
36.09564	-115.18054	Northbound	I-15	8	I-15
36.10919	-115.1805	Northbound	I-15	9	I-15
36.12616	-115.18043	Northbound	I-15	10	I-15
36.14143	-115.17341	Northbound	I-15	11	I-15
36.15523	-115.16125	Northbound	I-15	12	I-15
36.16815	-115.15898	Northbound	I-15	13	I-15
36.1775	-115.1505	Northbound	I-15	14	I-15
36.18097	-115.14493	Northbound	I-15	15	I-15
36.1929	-115.14006	Northbound	I-15	16	I-15

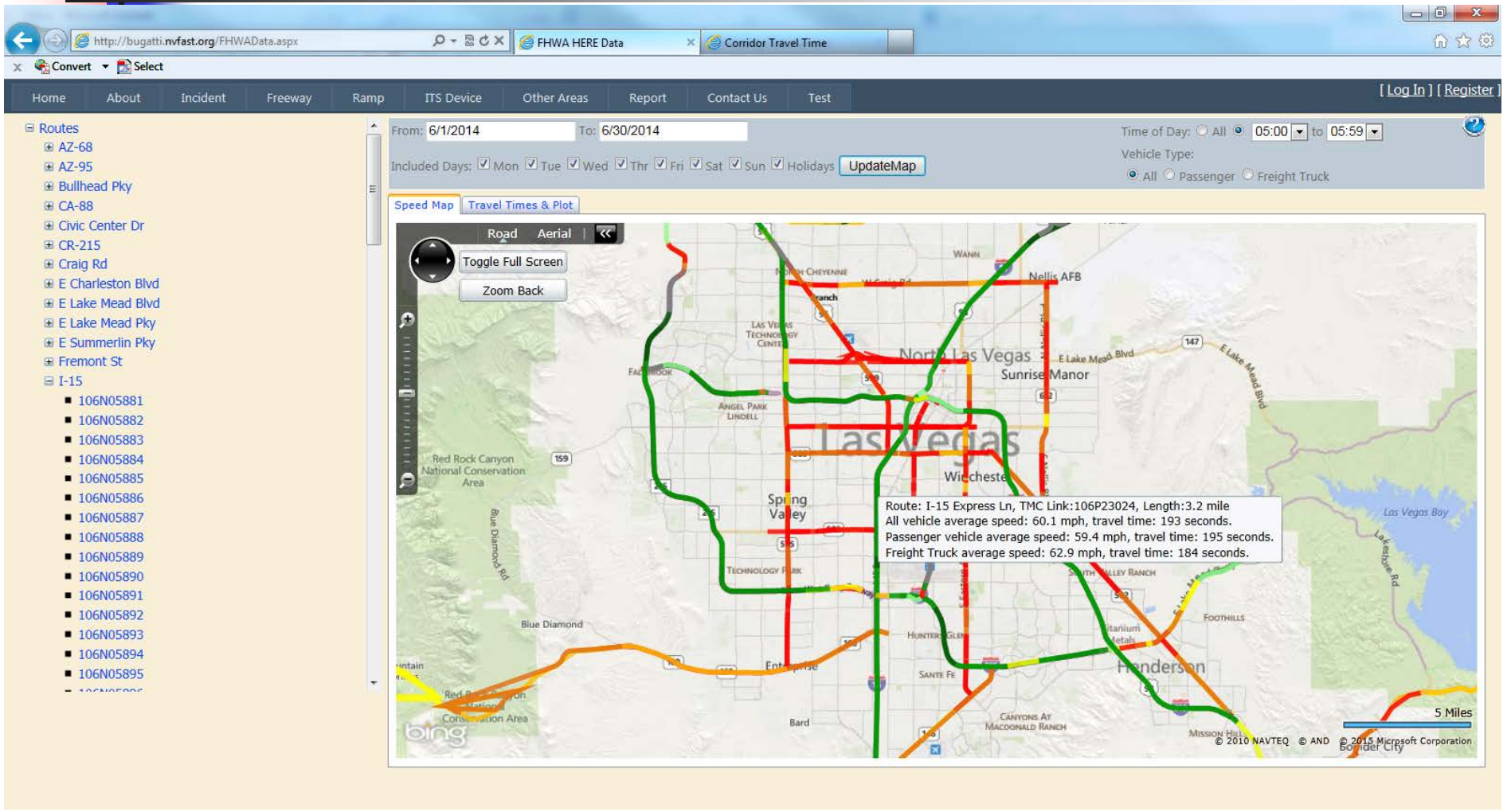
Establish TMC network (Connectors)



Establish TMC network (Roadway Information)



Individual TMC Link Speed Map



Pre-defined Routes

http://bugatti.nvfast.org/DefineRoutes.aspx — Define Route OD Pairs — Test Meeting Connection

Convert | Select

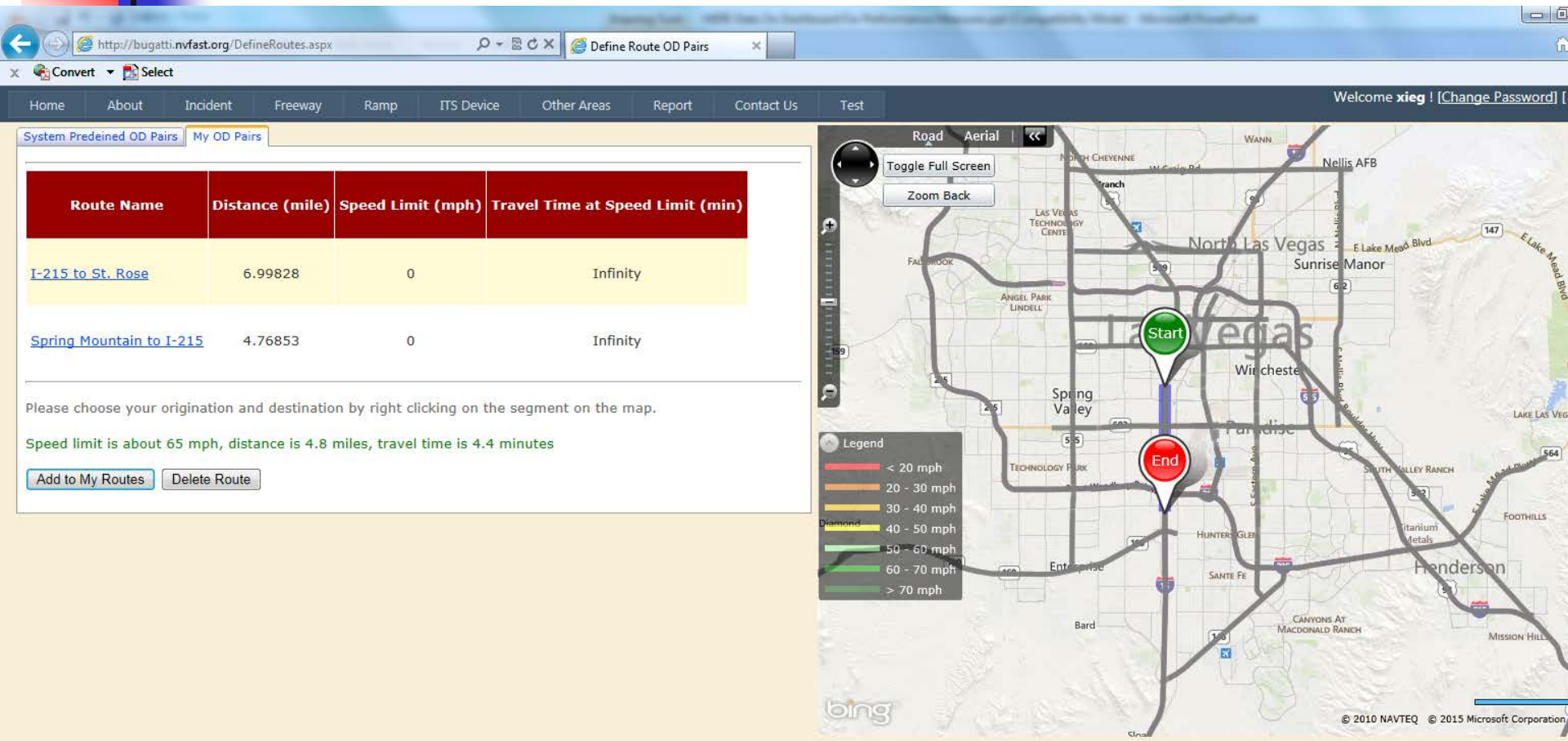
Home | About | Incident | Freeway | Ramp | ITS Device | Other Areas | Report | Contact Us | Test

Welcome **xieg** ! [Change Password] [Log

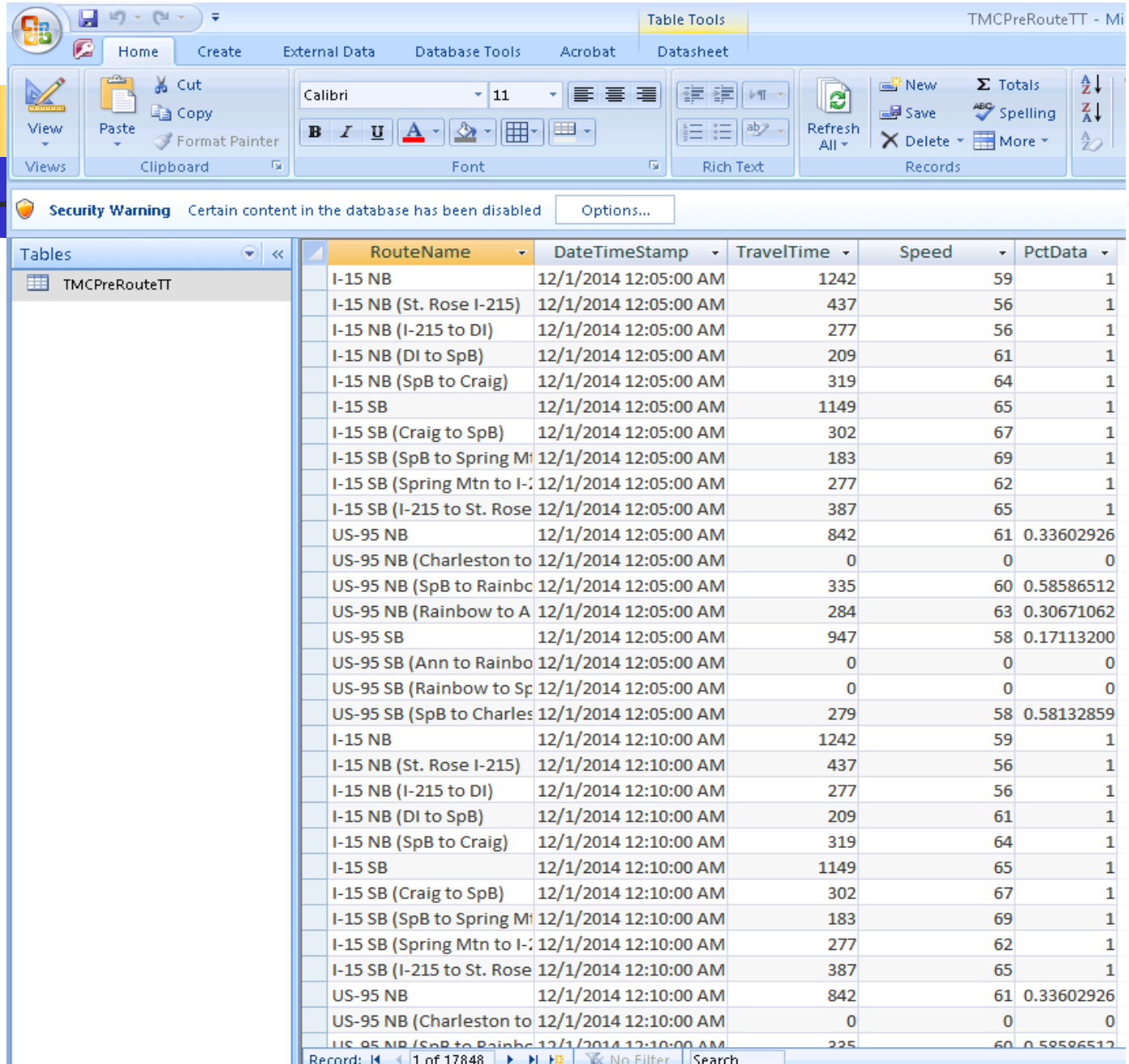
System Predeined OD Pairs | My OD Pairs

Corridor	Direction	Origination to Destination	Distance (mile)	Speed Limit (mph)	Travel Time at Speed Limit (min)
15	NB	St. Rose to Craig Road	20.28922	65	18.7
15	NB	---- St. Rose to I-215	6.84278	65	6.3
15	NB	---- I-215 to Desert Inn	4.29413	65	4.0
15	NB	---- Desert Inn to US-95	3.51766	65	3.2
15	NB	---- US-95 to Craig	5.63465	65	5.2
15	SB	Craig Road to St. Rose	20.85308	65	19.2
15	SB	---- Craig to US-95	5.58406	65	5.2
15	SB	---- US-95 to Spring Mtn	3.50221	65	3.2
15	SB	---- Spring Mtn to I-215	4.76853	65	4.4
15	SB	---- I-215 to St. Rose	6.99828	65	6.5
95	NB	Charleston to Ann Road	14.35497	65	13.3
95	NB	---- Charleston to I-15	3.73798	65	3.5
95	NB	---- I-15 to Rainbow	5.61462	65	5.2
95	NB	---- Rainbow to Ann Road	5.00237	65	4.6
95	SB	Ann Road to Charleston	15.20639	65	14.0
95	SB	---- Ann Road to Rainbow	6.14144	65	5.7
95	SB	---- Rainbow to I-15	4.58848	65	4.2
95	SB	---- I-15 to Charleston	4.47647	65	4.1

User Defined Routes



Calculate route travel times



RouteName	DateTimeStamp	TravelTime	Speed	PctData
I-15 NB	12/1/2014 12:05:00 AM	1242	59	1
I-15 NB (St. Rose I-215)	12/1/2014 12:05:00 AM	437	56	1
I-15 NB (I-215 to DI)	12/1/2014 12:05:00 AM	277	56	1
I-15 NB (DI to SpB)	12/1/2014 12:05:00 AM	209	61	1
I-15 NB (SpB to Craig)	12/1/2014 12:05:00 AM	319	64	1
I-15 SB	12/1/2014 12:05:00 AM	1149	65	1
I-15 SB (Craig to SpB)	12/1/2014 12:05:00 AM	302	67	1
I-15 SB (SpB to Spring M	12/1/2014 12:05:00 AM	183	69	1
I-15 SB (Spring Mtn to I-	12/1/2014 12:05:00 AM	277	62	1
I-15 SB (I-215 to St. Rose	12/1/2014 12:05:00 AM	387	65	1
US-95 NB	12/1/2014 12:05:00 AM	842	61	0.33602926
US-95 NB (Charleston to	12/1/2014 12:05:00 AM	0	0	0
US-95 NB (SpB to Rainbc	12/1/2014 12:05:00 AM	335	60	0.58586512
US-95 NB (Rainbow to A	12/1/2014 12:05:00 AM	284	63	0.30671062
US-95 SB	12/1/2014 12:05:00 AM	947	58	0.17113200
US-95 SB (Ann to Rainbo	12/1/2014 12:05:00 AM	0	0	0
US-95 SB (Rainbow to Sp	12/1/2014 12:05:00 AM	0	0	0
US-95 SB (SpB to Charles	12/1/2014 12:05:00 AM	279	58	0.58132859
I-15 NB	12/1/2014 12:10:00 AM	1242	59	1
I-15 NB (St. Rose I-215)	12/1/2014 12:10:00 AM	437	56	1
I-15 NB (I-215 to DI)	12/1/2014 12:10:00 AM	277	56	1
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US-95 NB	12/1/2014 12:10:00 AM	842	61	0.33602926
US-95 NB (Charleston to	12/1/2014 12:10:00 AM	0	0	0

Visualize travel time and performance measures

DMS Map | Travel Times & Plot

From: 4/26/2015 To: 5/3/2015 Time of Day: All 05:00 to 05:59

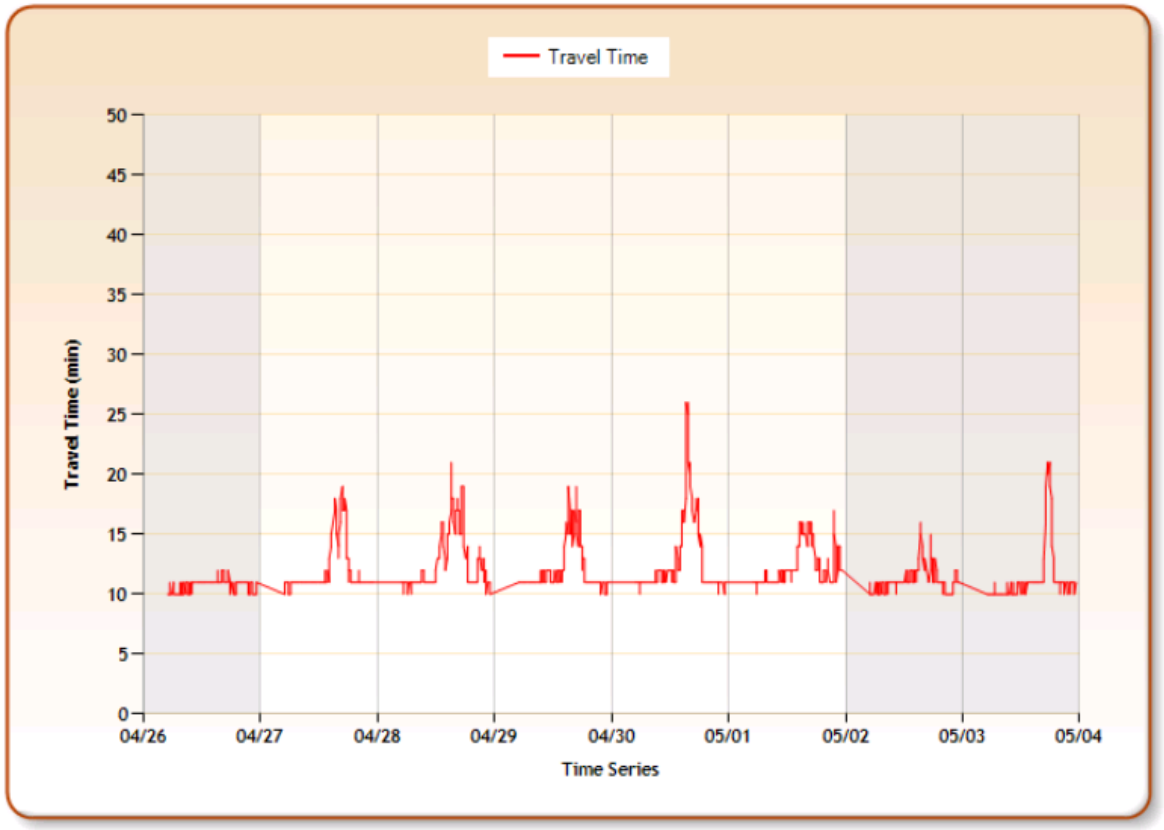
Included Days: Mon Tue Wed Thr Fri Sat Sun Holidays

Plot Type: Time Series Plot OD Pair: DMS#1 to US-95

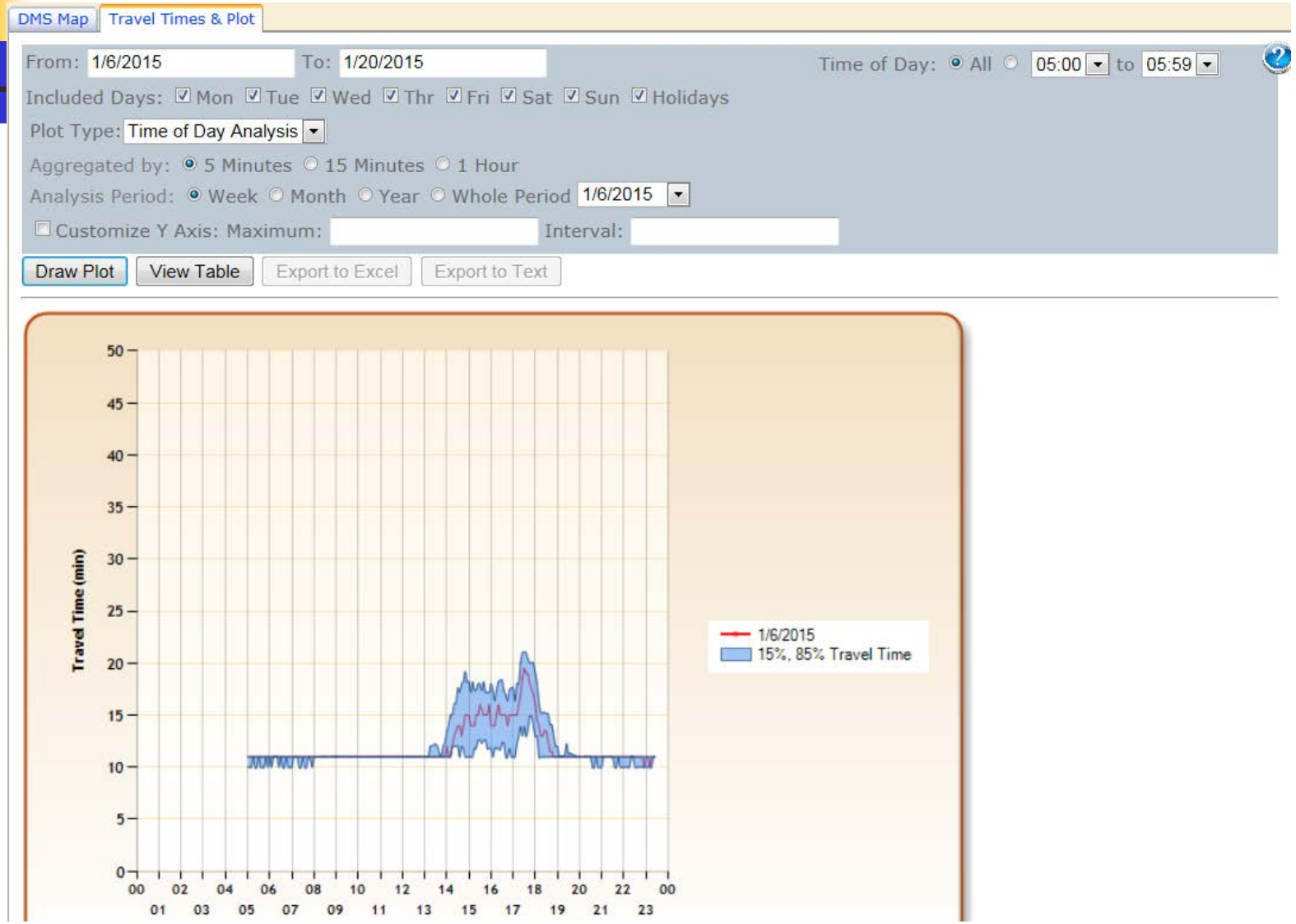
Aggregated by: 5 Minutes 15 Minutes 1 Hour

Customize Y Axis: Maximum: Interval:

Draw Plot | View Table | Export to Excel | Export to Text



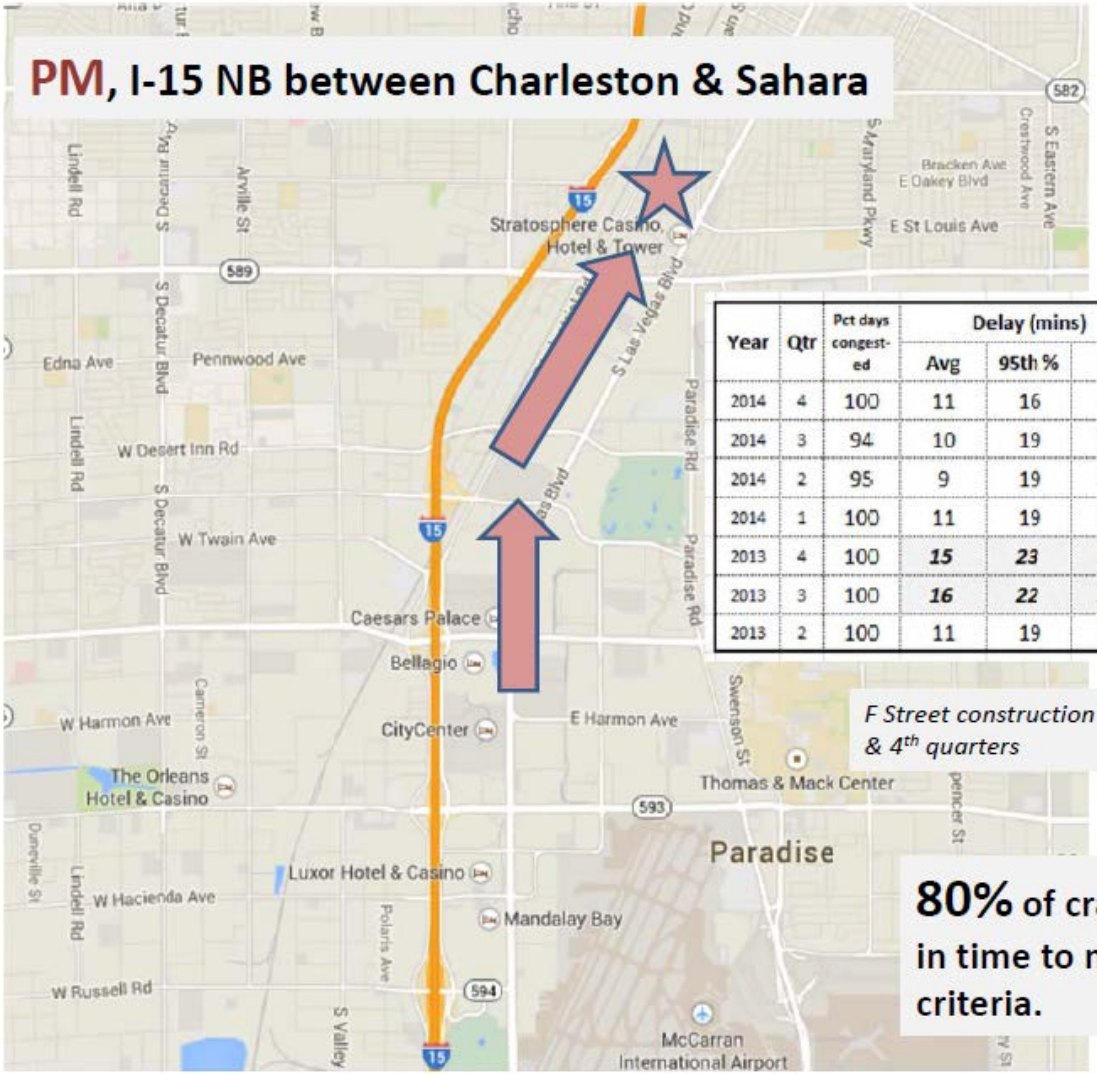
Visualize travel time and performance measures



To-Do List

- Clean up some error links
- Update the TMC network according to the newly issued data
- Develop monthly/quarterly report.

To-Do List: Monthly/Quarterly Report



Year	Qtr	Pct days congest-ed	Delay (mins)			delays begin (hh:mm)	duration (mins)
			Avg	95th %	TTI		
2014	4	100	11	16	2.1	15:09	143
2014	3	94	10	19	2.0	14:57	138
2014	2	95	9	19	1.9	15:16	116
2014	1	100	11	19	2.1	15:03	174
2013	4	100	***15***	***23***	***2.1***	***14:17***	***255***
2013	3	100	***16***	***22***	***2.1***	***13:52***	***294***
2013	2	100	11	19	2.1	14:34	133

F Street construction in place during 2013 3rd & 4th quarters

80% of crashes cleared in time to meet 30-60 criteria.

Questions?