COMLINK LAND SERVICES

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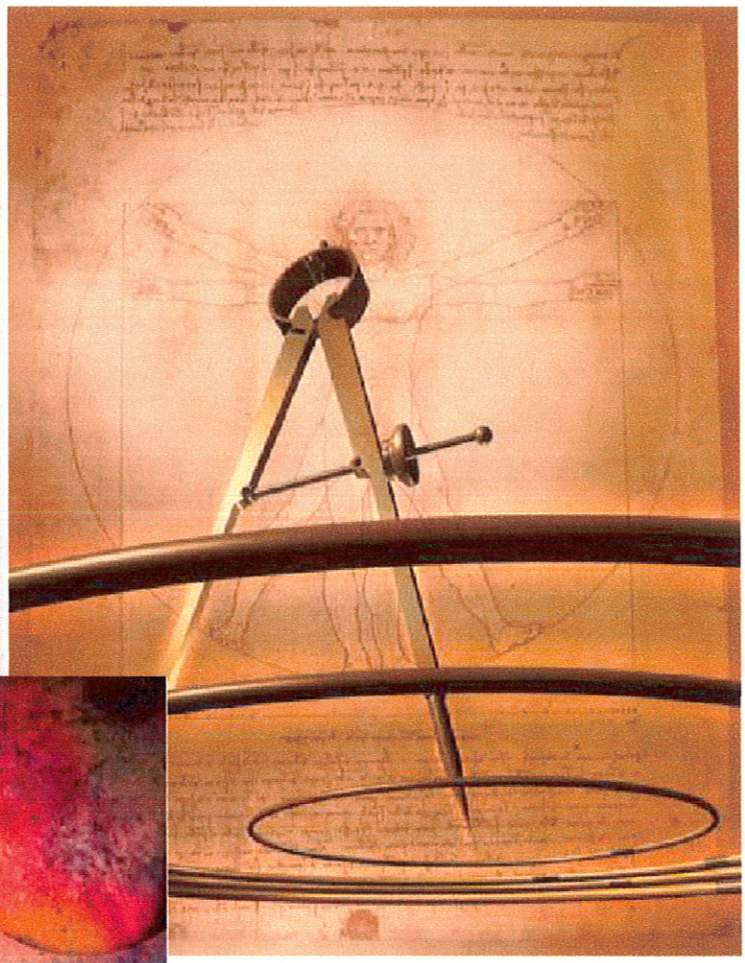
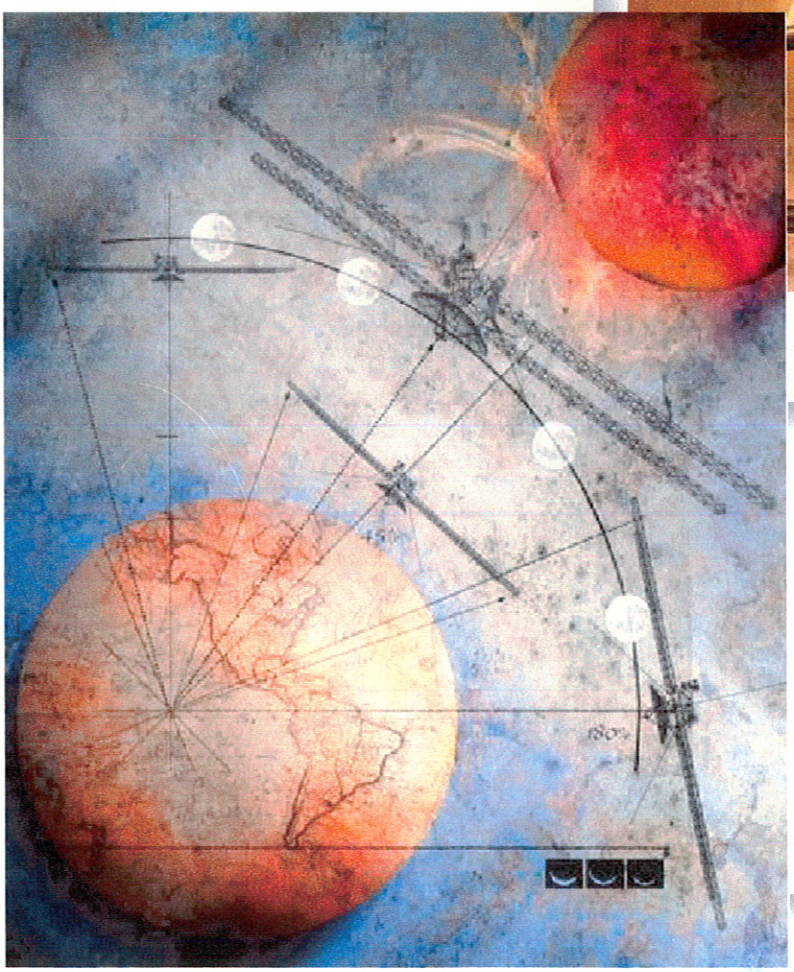


Micron
Development

Load Estimate
Substation & Line Location
and Circuit Loading
Study



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COMLINK L.S., LLC "A BRIGHTER TOMORROW THROUGH DESIGN"

ELECTRIC UTILITY CONSULTANTS

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Micron Development -Power Master Plan

July 11, 2011

Executive Summary

Micron contracted with Comlink L.S. to provide a high level electrical supply master plan for their new development which would include identifying any new substations and major transmission lines with their locations and timing, and an estimate of the projects peak load at build-out.

Estimated Peak Load at Build-out

Based on the Micron Area Plan - Land Use Table, the estimated peak load, coincident with Lehi City's system peak load, is 28.6 MW. Currently the corresponding Impact Fee for this amount of new load is $6,498,609.

Lehi City's Power System Capability to Serve the New Load

Lehi City has two circuits east out of their Bull River Substation serving load south of the proposed Micron Development. One circuit already exceeds normal operating capacity levels by 1.8 MW, the second circuit has .1 MW of capacity available to serve new load in the area before exceeding its normal operating capacity.

The Black Circuit out of the Traverse Mountain Substation has 2 MW of capacity available for new load before exceeding normal operating capacity. This circuit could be extended east to serve the new Micron development loads. There isn't any space in the DOT ROW on the north side of the highway for an underground power circuit. New easements would need to be acquired to build the circuit east to the Micron Development.

The existing available circuit capacity to serve new load is small compared to the estimated size of the Micron Development load. Other developments in the area are also competing for this available capacity making this a very short term solution. A new two bay substation is required to meet the anticipated new Micron Load. A good location for the substation is in the northern portion of the Technical / Manufacturing area. Lehi City would negotiate with Rocky Mountain Power for an additional point of interconnection (POI) directly north of the proposed substation on Rocky Mountain's Hale – 90th

South 138 kV line and build a 138 kV tap directly south to the suggested location of the new Lehi City substation required to serve the new Micron load.

The construction of a new substation in this area is in line with Lehi City's Master Plan but would accelerate the timing of the construction of the planned substation in this location. The tap of the 90th South 138 kV line is also in line with Lehi City Policy to acquire additional points of interconnection with Rocky Mountain Power as the source for new substations.

The timing of the construction of the substation and line would be defined by the time table Micron has for their development and should begin as construction of their development begins. The substation can be built in two phases. Each phase will take about 1 year to complete; from engineering and procurement of equipment and materials through construction.

Estimated Peak Load at Build-out

To develop an estimate for the project's annual peak load coincident with Lehi City's peak load, information was obtained from the Lehi City's January 7. 2008, Municipal Power Facilities Impact Fee Analysis report and annual peak load data taken from Lehi City files.

Where an estimated service size for a unit could be determined, the expected coincident demand was based on the expected load from the Impact Fee Analysis report Appendix D, Expected Demand Based on Service Size. This can be found on page 49 of that study.

The coincident load for Public buildings, and office space was based on the available square footage of the buildings in the development, using peak load data of similarly sized three story office buildings which have been recently constructed in Lehi City. The Technical/Manufacturing load was based on three times the peak load of a single story of recently constructed office space in Lehi City.

Using the information from the Micron Area Plan – Land Use Table (page L-13) the coincident loads were calculated. See Figure 1; Estimated Load at Build-out.

The raw coincident kVA was calculated to be 40,906 kVA. An additional coincident factor of 70% was applied to the raw number because of the level of information available from the project and city providing a reasonably conservative estimate. The estimated demand coincident with the city's system peak was calculated to be 28,635 kVA or approximately 28.6 MW of coincident peak load.

Figure 1
Estimated Load at Build-out

Micron Development							
Land Use	Area (Acres)	Units Per Acre	Units	Building Footprint	Panel Size (Amps)	Coincident KVA per Unit	Coincident KVA
Commercial							
Church			2		400	63	126
Mixed Use							
Storefront Residential Combo							
Store Front	38.4		120		150	7	840
Apartments	38.4	3	115		100	5	576
Office	235.8			1,651,600			21,031
Parking			5			50	250
Technical/Manufacturing	60			742,400			12,187
Public	9.5			71,200			1,169
Schools	43.9		2			174	348
Single Family	97.4	2	195		200	8	1,560
Townhomes	24.5	6	147		125	6	882
Condo/Apartment	26.9	12	323		125	6	1,938

Raw Coincident (kVA)	40,906
Additional Coincidant factor Reduction (kVA)	70%
Demand Coincident with System Peak	28,635
Estimated Impact Fee	$ 6,498,609

Lehi City Power System Current Capability to Serve the Micron Development Load

Lehi Power Department's operating philosophy for circuit loading for normal operation is to load any given circuit so that if the substation tie is lost the circuit load can be transferred to a connecting circuit. In figure two, Lehi City circuits adjacent to the Micron Development are identified. These circuits are the Black circuit out of the Traverse Mountain Substation and the Top and Bottom circuits on the East Transformer in the Bull River Substation.

Of two circuits east out of the Bull River Substation, serving load south of the proposed Micron Development, the Bottom circuit already exceeds normal operating capacity levels by 1.8 MW, the Top circuit has .1 MW of capacity available to serve new load in the area before exceeding its normal operating capacity.

The Black Circuit out of the Traverse Mountain Substation has 2 MW of capacity available for new load before exceeding normal operating capacity. This circuit could be extended east to serve the new Micron development load, but there isn't any space in the DOT ROW on the north side of the highway for extending this circuit underground. New easements would need to be acquired to build the circuit east to the Micron Development.

Figure 2

Micron Development
Circuit Capacity Availablility

	Capacity MW	Normal Loading MW	2006 Peak MW	2010 Peak MW	Capacity Available MW	Comments
Traverse Mountain Substation	22	14.3		9.5		
Green (Thanksgiving Pt)	9.18	5		6.5		
Black (Bull River Tie)	9.18	5		3.0	2.0	No room in UDOT ROW for underground circuit going East
Bull River Substation						
East Transformer	22	14.3	14	15.0		
Traverse Mountain	9.18	5	6.76	3.4	1.6	
Top (East)	9.18	5	5.69	4.9	0.1	
Bottom (east)	9.18	5	2.89	6.8	0.0	
West Transformer	22	14.3	11.6	17.5		
South	9.18	5	7.96	6.7		
Thanksgiving Point 1 - Old	9.18	5	5.96	5.7		
Thanksgiving Point 2 - New				5.1		

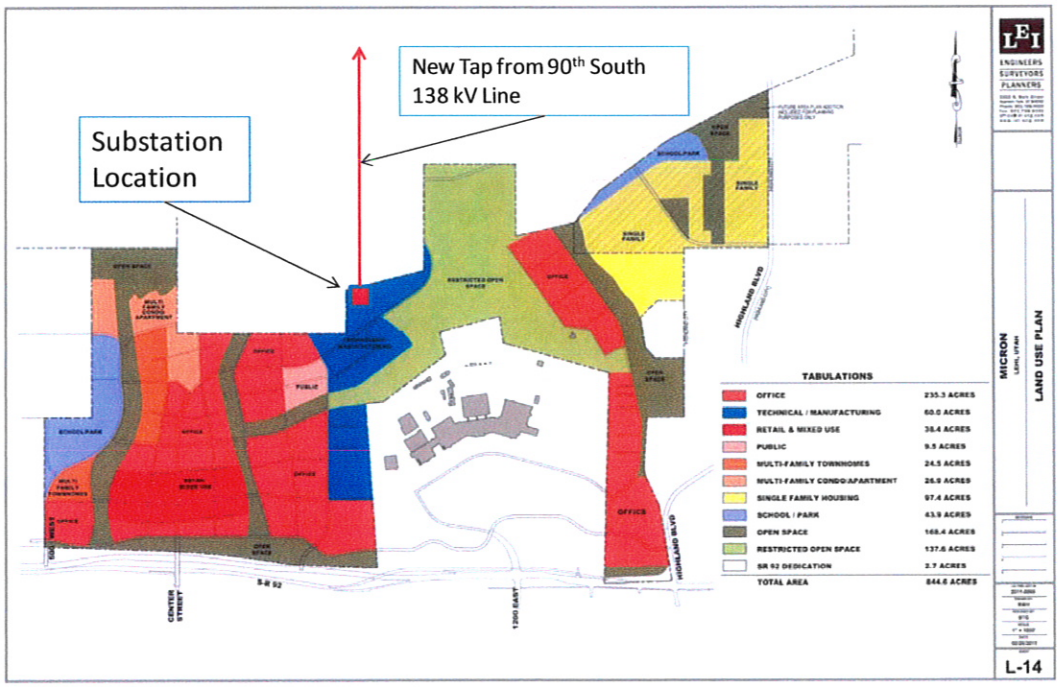
The existing available circuit capacity in this area to serve new load is small compared to the estimated size of the Micron Development load. Other developments in the area are also competing for this available capacity making this a very short term solution. A new two bay substation is required to meet the anticipated new Micron Load.

Substation and Line Location

A good location for the substation is in the northern portion of the Technical / Manufacturing area. Lehi City would negotiate with Rocky Mountain Power for an additional point of interconnection (POI) directly north of the proposed substation on Rocky Mountain's Hale – 90th South 138 kV line and build a 138 kV tap directly south to the suggested location of the new Lehi City substation required to serve the new Micron load. Using LEI's Land use Plan (page L-14 of their document) we have shown the proposed substation location and 138 kV tap on Figure 3.

Figure 3

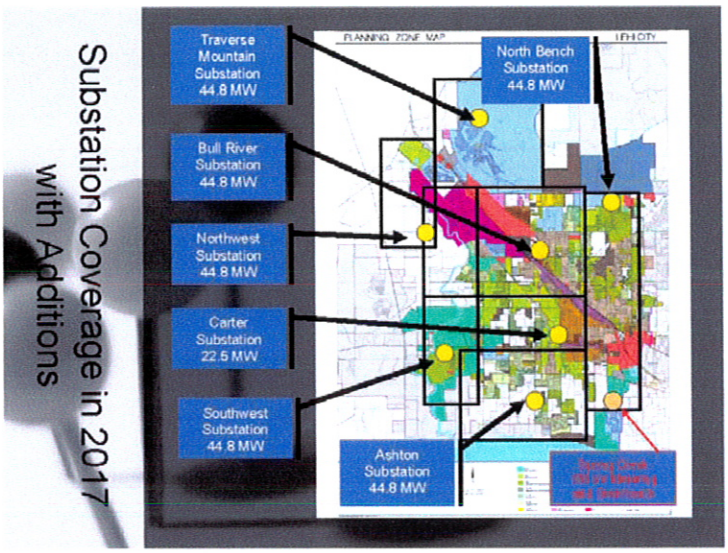
Substation and 138 kV Line Location



Lehi City Power Master Plan

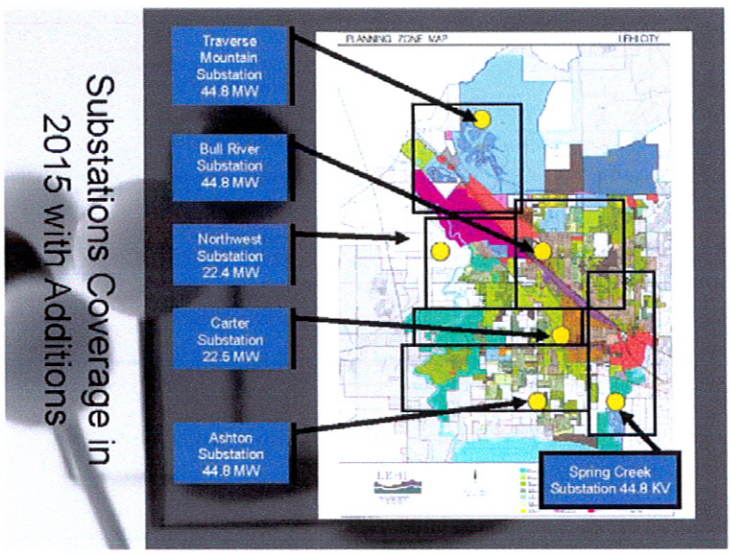
The construction of a new substation in this area is in line with Lehi City's Power Department Capital Facilities Plan. The November 12, 2007 Draft Power Department Capital Facilities Plan shows the construction of a substation just south of the proposed substation in the 10 year plan (See Figure 4).

Figure 4



In the January 7, 2008, 8 year plan the Spring Creek Substation is shown, which also would serve the area south of the Micron Development (See Figure 5).

Figure 5



Construction of the substation in the Micron Development Technical/Manufacturing land use area would be in place of the North Bench Substation and delay the Spring Creek Substation such that the Capital Costs in the Power Department's Capital Facilities Plan do not change.

The Micron Development does accelerate the timing of the construction of the planned substation in this location.

The tap of the 90th South 138 kV line is also in line with Lehi City Policy to acquire additional points of interconnection with Rocky Mountain Power as the source for new substations (See page 16 of the January 7, 2008 Capital Facilities Plan report).

The timing of the construction of the substation and line would be defined by the time table Micron has for their development and should begin as construction of their development begins. The substation can be built in two phases. Each phase will take about 1 year to complete; from engineering and procurement of equipment and materials through construction.