

# City of East Bethel

## Planning Commission Agenda

7:00 PM

June 20, 2011



	<b>Item</b>
7:00 PM	<b>1.0 Call to Order</b>
7:02 PM	<b>2.0 Adopt Agenda</b>
7:04 PM	<b>3.0 Public Hearing: Conditional Use Permit.</b> A request by applicant, Great River Energy, to obtain a Conditional Use Permit for the placement of a transmission line in portions of the City of East Bethel.
7:15 PM	<b>4.0 Approve May 24, 2011 Planning Commission Meeting Minutes</b>
7:20 PM	<b>5.0 Adjourn</b>



# City of East Bethel Planning Commission Agenda Information

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**Date:**

June 20, 2011

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**Agenda Item Number:**

Item 3.0      **AMENDED**

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**Agenda Item:**

Public Hearing - Conditional Use Permit (CUP) Request by Great River Energy (GRE) for a Proposed 69kV Transmission Line to be Located in East Bethel

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**Requested Action:**

Make Recommendation to City Council for a Conditional Use Permit (CUP) Request by Great River Energy (GRE) for a Proposed 69kV Transmission Line to be Located in East Bethel

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**Background Information:**

On April 6, 2011, City Council tabled the request from Great River Energy (GRE) for a Conditional Use Permit (CUP) for a proposed 69 kV transmission line to be located in East Bethel. City Council directed staff to hire a technical expert to analyze the proposal, the need for the additional services, and make a recommendation for route location.

Mr. Larry Schedin of LLS Resources was contracted to complete the analysis. Mr. Schedin has met with the GRE Work Group, Planning Commission, and City Council to brief individuals on updates of his project analysis.

Mr. Schedin has completed his final analysis and will be presenting his findings and recommendation at the public hearing. Attachment #1 is the final report by Mr. Schedin. Mr. Schedin's report answers many questions asked by Planning Commission and City Council, including an analysis regarding the electric power supply to the City of East Bethel, how the existing and future distribution electrical supply works, the need for the project, the potential of the proposed line operating at 115 kV, and route recommendation.

Mr. Schedin has completed an analysis for the need of a 69 kV line. After much research and analysis, Mr. Schedin agrees there is a need for this particular project, therefore, is of the opinion that a "no-build" is not an option. City staff concurs with Mr. Schedin's report in which a no-build alternate is not reasonable given the existing needs as expressed by the Applicant and the growth for electrical service presently and anticipated to occur within the area.

As part of Mr. Schedin's recommendation, he discusses "Route I" which could be significantly shortened by utilizing Durant Street. Attachment #2 shows "Route I"; the proposed alternative route is highlighted in yellow to show the shortened length. GRE has provided additional data information for this route, which will be known as Route I<sup>1</sup>. Attachment #3 analyses the data for Route I<sup>1</sup> and all other routes Mr. Schedin analyzed. As part of the presentation, Mr. Schedin will further discuss the route analysis and his recommendation of a preferred route.

Attachments:

1. Final Route Selection Report by Mr. Larry Schedin
2. Route I<sup>1</sup> Map
3. Matrices of Route Analysis

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**Fiscal Impact:**

To be determined

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**Recommendations:**

Staff requests Planning Commission take into consideration Mr. Schedin’s analysis and recommendation when making a recommendation to City Council for the CUP request by Great River Energy for a proposed 69kV transmission line known as Route A.

If Planning Commission recommends approval to City Council for the CUP request by GRE for the route known as “Route A”, then Planning Commission must give factual reasons for approval. In addition to approval, staff recommends the following conditions:

1. GRE will submit a construction plan prior to the commencing the construction of the 69 kV line, establishing both a construction time table and a progression of construction that shall be reviewed and meet the approval of the City Engineer and staff.
2. GRE shall minimize the need for any unsightly guide wires at corners, angles and dead ends, and utilize steel poles at dead ends, corners, angles and in certain high density neighborhoods designated by the City Engineer as part of this project.
3. That Great River Energy and/or its subsidiaries or other utility users that utilize its services shall install underground service drops at crossings of County Road 26 and other municipal roads within the city of East Bethel without added cost to the residents and utility users and assure that the relocation of distribution facilities to the north side of County Road 26 results in a minimum replacement of service drops, and wherever possible all service drops must be undergrounded.
4. GRE must submit easement descriptions and final route determination prior to the execution of the CUP Agreement.
5. A CUP Agreement must be executed no later than December 22, 2011. Failure to comply will null and void approved CUP. The agreement must be executed prior to the start of construction of the project.

If Planning Commission recommends denial of the CUP request for “Route A”, then Planning Commission must give factual reasons for denial.

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**City Council Action**

Motion by:\_\_\_\_\_

Second by:\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

Vote Yes:\_\_\_\_\_

Vote No:\_\_\_\_\_

No Action Required:\_\_\_\_\_

**CITY OF EAST BETHEL  
ATHENS TO MARTIN LAKE 69 KV LINE  
ROUTE SELECTION REPORT**

**Prepared by LLS Resources , LLC  
For presentation June 15, 2011  
Revised June 17, 2011**

**I. Introduction**

The following report presents the technical and engineering recommendations of LLS Resources, LLC, a Minneapolis based consulting firm, regarding the need for and routing of a 69 KV line connecting an eastern portion to a western portion of Great River Energy's (GRE's) area 69 KV transmission system. This project has been called the Athens to Martin Lake 69 KV Project. Results are based on a detailed examination of background materials provided by the City, several meetings and telecons with GRE technical representatives (including updates), several meetings with the City's GRE Work Group, and on-site field inspections of the routes and substations involved by LLS Resources principals. The work at LLS Resources, LLC was conducted by Larry L Schedin and Rob Hoerauf, both registered professional electrical engineers (PE's) in Minnesota. Separate routes both within and outside the City are evaluated along with recommended routes in both areas.

**II. Electric Power Supply to City of East Bethel**

**A. Bulk Transmission and Subtransmission**

Great River Energy (GRE), a generation and transmission cooperative headquartered in Maple Grove, owns the transmission lines supplying electricity to East Bethel. GRE's facilities supply wholesale electricity to Connexus which in turn distributes the electricity at retail to East Bethel homes and businesses.

Electric supply occurs at three successive levels in the following order: 1) bulk transmission, 230,000 volts (230 KV), 2) subtransmission, 69,000 volts (69 KV) , and 3) distribution, 12,500 volts (12.5 KV). The 230 KV bulk transmission system supplies GRE's 69 KV system in the north metro area. It originates at Rush City, MN and heads south roughly parallel to highway I35W to a point near Hugo where it turns west through Blaine toward Bunker Lake where it again turns north to Andover. At Andover, it again turns west toward Elk River and Monticello. Over this north metro path, the 230 KV system supplies the 69 KV system via 230 KV-69 KV substations located at Linwood, Blaine, Bunker Lake, and Elk River. However, as the north metro area grows, it is positioned to further supply GRE's 69 KV system via new 230 KV-69KV substations at locations such as Johnsville and Andover.

## B. Distribution System

### 1. Existing Distribution Supply

The 69 KV subtransmission system presently supplies five distribution substations at 12.5 KV, portions of which directly serve East Bethel homes and businesses via distribution lines called feeders. These distribution substations are:

- a. Cooper's Corner ( at 237<sup>th</sup> Ave and Hastings about 1 mile east of Hwy 65)
- b. East Bethel (at Viking Blvd about 1 mile west of Hwy 65)
- c. Martin Lake ( at Typo Creek Drive near Island Lake in Linwood Township)
- d. Soderville (at Hwy 65 and Crosstown Blvd in Soderville)
- e. Forest Lake ( at Forest Lake just off Hwy I35W)

According to GRE, peak demands on each distribution substation and the percentage of these peak demands supplying homes and businesses in East Bethel are as follows:

<u>Substation</u>	<u>Peak Demand (MW)</u>	<u>% E. Bethel</u>
Coopers Corner	7.8 MW	63%
East Bethel	10.8 MW	76%
Martin Lake	9.0 MW	14%
Forest Lake	16.6 MW	2%
Soderville	14.0 MW	6%

It is important to note that except for Martin Lake, each of the foregoing distribution substations is supplied by two or more 69 KV lines. Therefore, if one 69 KV source is out of service, it is backed up by one or more remaining 69 KV sources. However, Martin Lake has no such backup supply. It is supplied by only one 69 KV line from Linwood Substation near Hwy I35W. This line is called a radial feed, and its loss can be replaced only via a complicated switching procedure on the 12.5 KV distribution system typically causing lengthy outages. The foregoing tabulation and subsequent discussion shows that improving reliability to Martin Lake Substation provides direct benefits to residential and business users in East Bethel as well as improving 69 KV grid area reliability.

### 2. Future Distribution Supply

Any new area 69 KV line should recognize the possible need to supply new distribution substations located on or near alternate routes. We presented this possibility to GRE, and it asked Connexus for plans for new distribution substations within East Bethel. Connexus stated

that the existing substations are adequate for the near term future, so no new distribution substations are planned at this time.

### **III. Project Need (No Build)**

GRE's maps and diagrams show that 69 KV supply to the East Bethel area is via three 69 KV lines. Power flow studies simulate operation of these 69 KV lines and show resulting problems if any are taken out of service because of weather and other potential problems. Typical 69 KV system design requires that loss of a single 69 KV line in a local power grid should not disrupt or degrade electric service within the grid. We have reviewed some of the output of these power flow studies with GRE personnel. The studies show that outages of any one of these lines at the supply end of each causes severe low voltages in the East Bethel area along with high thermal loadings at the supply ends of the two lines remaining in service.

The supply lines and critical line sections are as follows:

<u>Supply Source</u>	<u>Critical 69 KV Line Segment</u>
Cambridge	Cambridge-Cambridge Industrial Park
Elk River	Elk River-St Francis
Soderville	Soderville-East Bethel

Information provided by GRE engineers shows that repair and/or replacement of these critical line segments supplemented by a capacitor bank could cost in the range of 4 to 5 times the \$4-\$5 million cost of an Athens-Martin Lake 69 KV line. Additionally, such upgrades would not provide 2-way service to Martin Lake Substation, an important goal of the project. Two-way service to Martin Lake would otherwise be provided by a second 69 KV line from Hwy I35W corridor or the installation of expensive diesel generators, both further adding substantially to the cost of alternatives.

In summary, addition of an Athens-Martin Lake 69 KV line avoids the expensive upgrade of three other critical 69 KV line segments in the local power grid and provides two-way 69 KV supply to Martin Lake Substation. The upgrade avoidance may also be considered a deferral depending on future growth in the State Hwy 65 corridor which may eventually require conversion to 115 KV. However, based on our limited review of studies conducted by GRE and our own observations, we feel that addition of the Athens-Martin Lake 69 KV line is a cost effective solution eliminating the two-way service problem to Martin Lake and deferring three other 69 KV upgrades. As part of this review, we determined that no 69 KV lines owned by other utilities (such as Xcel Energy) were available to supply the study area. Open access requirements allow joint use if such lines were available. We therefore agree that Athens and Martin Lake are reasonable termination points for a new 69 KV line, but with many routing options between these two points. This eliminates a "no-build" alternative.

#### **IV. Potential Operation at 115 KV**

GRE representatives have explained that GRE wishes to secure a total right-of-way (R/W) width of 70 ft for a single circuit 69 KV line with 38 ft of R/W taken via private easements along a roadway and the remaining 32 ft taken within the roadway. During our discussions with East Bethel groups, concern was raised regarding future upgrade to 115 KV. Our meeting with GRE's transmission line designer indicates that the line will not be designed so that it can simply be reconnected to operate at 115 KV. Such flexibility would not only require a design change but would also require a state siting permit as required for new 115 KV lines exceeding 1500 ft in length.

#### **V. Environmental and Archeological Considerations**

A base map showing environmentally sensitive areas was prepared by GRE, and the City provided this map (included in the handouts) as the official guide for route selection. Additionally, Cedar Creek Reserve spokesperson, Mr Jeff Corney attended task force meetings and provided special guidance regarding the Cedar Creek Reserve. Additionally, GRE retained a consultant to locate potentially sensitive archeological and historical areas, some of which are shown on the map of environmentally sensitive areas.

#### **VI. Routing Options**

In addition to the "no-build" option, we were given 15 route options to consider with option titles shown as follows and grouped with the routes listed in order from north to south and sublisted by critical corridor. Within the far north and medium north groups, the critical corridors considered utilize Sunset Road and Typo Creek Drive. In addition to evaluating previously prepared route information, the routes and related termination substations were all visually inspected by two representatives of LLS Resources. Maps of the routing options are included in the handouts.

##### **A. Far North and Medium North Groups**

###### **1. Sunset Road sub-group**

Route E: Far North, Road 9E to Xylite S, to Road 56E along north edge of Cedar Creek Reserve turning S on Durant St to Fawn Drive (76E) then Sunset Rd S to Road 26E to Typo Creek Dr S

Route F: Far North, Road 9E to Durant St (45S) to Fawn Drive (76E) to S on Sunset Rd to Road 26E, then to Typo Creek Dr S

Route F1: Far North, Road 9E to Road 12S&W to Durant St (45S) to Fawn Drive (76E) to S on Sunset Rd to Road 26E, then to Typo Creek Dr S

Route E1, Far North: Road 56E to Xylite (56S) (both on north edge of Cedar Creek Reserve) to Fawn Drive (76E), to Sunset Rd S to 26E to Typo Creek Dr S.

## **2. Typo Creek Drive sub-group**

Route G: Far North, Road 9E to 12S to 20E to Typo Creek Dr S.

Route H : Med North, Road 56E to Xylite (56S) (both on north edge of Cedar Creek Reserve) to 12E to Durant St (45S) to Fawn Drive (76E), then to Typo Creek Dr S

Route H1: Far North, Road 9E to 18S to 20W (north of Typo Lake) then to Typo Creek Dr S

Route I: Far North, Road 9E to Road 12S&W to Durant St (45S) to Fawn Drive (76E) then to Typo Creek Dr S

Route I1: Far North, Road 9E to Durant St (45S) to edge of Fish Lake to Fawn Drive (76E) then to Typo Creek Dr S

## **3. Typo Creek Drive and Sunset sub-group**

Route G1: Far North, Road 9E to 12S to 20E to Typo Creek Dr S to 29W to Sunset Rd S to 26E to Typo Creek Dr S.

## **B. Central Cut Group**

Route B: Central Cut, Road 24E from Coopers Corner to Fawn Drive (76E) to Sunset Rd S to 26E to Typo Creek Dr S.

Route B1: Central Cut, S from Athens Sub to Route 25 cutting directly across Cedar Creek Reserve to Fawn Dr (76E) to Sunset Rd S to 26E to Typo Creek Dr S.

## **C. Medium South, South and Far South Group**

Route A: Med South, 237<sup>th</sup> Ave E (Rd 24) to Road 26E to Typo Creek Drive S

Route C1: Med South, 237<sup>th</sup> Ave E (Rd 24) to Road 26E to 15S to Road 22N

Route C: South, Hwy 65 S to Road 74E to Rd 22N

Route D: Far South, Hwy 65 to Viking Blvd (Rd 68E to 22N)

## **VII. Route Attributes**

### **A. Environmental and Archeological Considerations**

A base map showing environmentally sensitive areas was prepared by GRE, and the City provided this map (included in the handouts) as the official environmental guide for route selection. Additionally, Cedar Creek Reserve spokesperson, Mr Jeff Corney attended task force meetings and provided special guidance regarding the Cedar Creek Reserve. Additionally, GRE retained a consultant to locate potentially sensitive archeological and historical areas, some of which are shown on the map of environmentally sensitive areas.

## **B. Electrical Performance**

Important electrical performance factors include:

1. Resistance which impacts electrical losses meaning lost energy simply heating the air
2. Impedance which negatively impacts voltage drop and causes low voltage problems
3. Maintenance access and costs such as vegetation control
4. Exposure to weather
5. Exposure to other hazards such as road accidents
6. Structure design and static wire which mitigates exposure to lightning and other failures.

Foregoing items No. 1-6 are directly related to line length. Shorter line distances therefore enhance these factors as well as cost, so distance is considered an important attribute. Also, double circuit construction is considered to be less reliable than single circuit construction because with double circuit construction, a single event can cause an outage of both circuits.

The horizontal insulator, single 69 KV wood pole structure design proposed by GRE, is reasonable, but requires unsightly guy wires at corners, angles and deadends (some which must cross roadways). The City may therefore wish to require steel poles at deadends, corners, and angles and possibly for tangent structures, especially in certain higher density neighborhoods. Laminated wood structures also reduce the need for guy wires, but laminated wood is not as effective as steel in reducing unsightly guy wires.

## **C. Other Route Attributes**

Many other attributes can be attached to each route option. However, following are ones which we have selected as most important with respect to making a recommendation. The attributes for each route option included the attached Route Matrix are:

1. New construction miles
2. Construction cost (\$ millions)
3. Tree clearing, acres
4. New easements, acres
5. Public land easements, miles
6. Private land easements, miles
7. Special transmission structures (reinforced or guyed deadends, corner and angle structures)
8. Distance to homes from centerline:

- a) 0-100 ft
- b) 0-200 ft
- c) 0-300 ft
- 9. Forested wetlands, miles
- 10. Non-forested wetlands, miles
- 11. Wetlands, acres
- 12. Six types of Public Water Inventory (PWI) categories:
  - a) Perennial streams and rivers crossed
  - b) Intermittent streams and rivers crossed
  - c) PWI streams crossed
  - d) No. of wetlands within route
  - e) No. of PWI lakes within ROW
  - f) No. of PWI wetlands within ROW.

The route titles and attributes are all included in the attached matrix, parts 1 and 2

### **VIII. Route Recommendation Within East Bethel**

The consulting Agreement between the City and LLS Resources, LLC specifically states that LLS Resources is to provide "... a technical expert opinion regarding the routing of a GRE 69 KV line through the City of East Bethel (City)." (emphasis added).

#### **A. Route Options Within the City**

With the former specific task in mind, we note the following routes fall largely within the City:

Routes: A, B, B1, C, C1, D

Routes B & B1 were eliminated by the Work Group at the outset because these travel through the center or near center of the Cedar Creek Reserve and were clearly rejected by Cedar Creek Reserve representative, Mr Jeff Corney. Route D was eliminated by the Work Group because of its extreme length and circuitous path thereby leaving Routes A, C and C1 as the remaining "in City" candidate routes. We agree with these eliminations.

#### **B. Route Recommendation**

A review of the route attributes shows that Route A (mostly following Road 26) is the most direct route with significantly less new ROW (7.4 miles total) and less new construction (10.4 miles total) and less cost than all the other candidate routes within the City. The other attributes of Route A compared to all the other route options (inside or outside the City) are all favorable. We therefore recommend Route A as the best route option within the City while keeping in mind certain concerns and possible disadvantages.

### **C. Route A Concerns and Disadvantages**

Route A would also accommodate rebuild and relocation of a 3-phase main feeder line as underbuild running almost the entire length of the new line. GRE proposes to build the new 69 KV line mostly along the north side of Hwy 26, whereas the 3-phase feeder is mostly on the south side of Road 26. Unless Connexus agrees to install underground service drop crossings of Road 26 without added cost, the relocation of distribution facilities to the north side of Road 26 would result in a number of unsightly service drops which now do not exist. Also, GRE should confirm that to avoid power lines on both sides of Road 26, the distribution line transfer will occur at the same time as the new 69 KV construction.

In addition to construction along the north border of the Allison Savannah, Route A also requires construction along the entire south border of Cedar Creek Reserve, a major ecosystem science reserve. However, the Reserve Work Group representative has stated that construction along the south border is preferable to construction along the north border. Additionally, GRE has been working to avoid a school forest on the west side of Typo Creek Drive just south of the intersection with Road 26.

## **IX. Route Recommendation Outside East Bethel**

### **A. Route Options Outside the City**

The far north and medium north route sub groupings listed in the previous route options section are mostly outside of the City and were specifically aimed at problem areas going south from the far north and medium north routes in order to reach Martin Lake Substation. The two potential problem areas are Typo Creek Drive (north of Road 26) and Sunset Drive. After observing the number of properties close to the roadway and pinch points along Sunset Drive, we concur with the Work Group's concerns that Sunset Drive should be eliminated from further consideration and that Typo Creek Drive would be the preferred alternate for getting from the north and far north route options to Martin Lake Substation. This leaves Routes G, H, H1 and I as the remaining outside-of-City options using Typo Creek Drive and not using Sunset Drive.

Typo Creek Drive includes several pinch points regarding homes, a park, a fire station, a town hall, and a cemetery. In addition, a report commissioned by GRE identifies potential significant archeological sites and historic preservation uncertainties. We therefore recommend that its use should be minimized. Minimum use of Typo Creek Drive is certainly not a characteristic of either Route G or H1. Also, Route H follows the north edge of the Cedar Creek Reserve, a less desirable path than others according to Mr Corney.

### **B. Route Recommendation**

Elimination of the foregoing leaves Route I as the remaining route which avoids the foregoing disadvantages. Route I utilizes about 2 miles of 69 KV deenergized line running north and east of Athens substation apparently built by GRE for future specific use.

However, Route I could be significantly shortened by utilizing Durant Street (as with Route F) rather than Route 12 when heading south off Route 9. We estimate that using this modification the distance could be shortened appreciably from 13.7 miles making the new construction distance close to that required for Route A. According to GRE, Hwy 9 is scheduled for rebuild and widening in 4-5 years, so this modification of Plan I minimizes the length of line on Hwy 9 (about two miles) exposed to rebuild or relocation. We therefore recommend this modification of Route I as the best route outside the City. We subsequently refer to this modification of Route I as Route I1

Route I1 data provided by GRE on 06/17/2011 is now included as a line item in the attached comparison matrix. It shows a total line length of 11.3 miles at a cost of \$3.905 million which is close to the \$3.678 million cost of Route A but with significantly more (11.3 miles vs 7.4 miles) of new ROW acquisition.

Prepared by Larry L Schedin PE and Rob Hoerauf PE  
Revised 06-17-11



6/17/2011 EAST BETHEL PROJECT ROUTE MATRIX 1

Route ID	Route Location	Route Description	Construction Notes	Cost (MM)	Tree Clearing (acres)	New Easements (acres)	Public Land Easements (miles)	Private Land Easements (miles)	Special Structures Requir.	Homes Route CL (0-100 ft)	Homes Route CL (100-200 ft)	Homes Route CL (200-300 ft)
E	Far North	Road 9E to Xylite S to Road 56E to north edge of Cedar Creek. Uses Sunset Road (76).	10.5 mi new construction.	\$ 3.953	18	49	0.8	9.7	24	4	58	96
F	Far North	Road 9E to 45.S. Uses Sunset Road (76) to Road 26E.	10.9 mi new construction.	\$ 3.977	19	50	0	10.9	21	6	60	94
F1	Far North	Road 9E to 12S. Uses Sunset Road (76) to Road 26.	13.4 mi new construction.	\$ 4.785	17	62	0	13.4	22	4	62	102
G	Far North	Road 9E to 12S to Road 20. Uses Typo (85S).	11.2 mi new construction.	\$ 4.040	17	52	0.6	10.6	21	3	49	76
G1	Far North	Road 9E to 12S to Road 20. Uses Sunset Road (76) to Road 26.	15.0 mi new construction.	\$ 5.245	17	69	0.6	14.4	21	4	72	116
H2	Far North	Road 56 to Xylite S. Uses Sunset Road (76).	11.0 mi new construction.	\$ 4.449	15.4	93.45	Note A	Note A	20	3	44	80
H	Far North	Road 9E to 18S to 36 to 76. Uses Typo (85S).	16.85 mi new construction.	\$ 5.437	44.1	143.59	0.6	16.2	26	7	96	150
H1	Far North	Road 9E to 18S Road 20. Uses Typo (85S).	17.34 mi new construction.	\$ 5.606	32	147.72	0.6	16.7	24	3	65	95
I	Far North	Road 9E to 12S. Uses Typo (85S). Road 9E to 12S to Road 76.	13.7 mi new construction.	\$ 5.119	14.57	117.5	0	13.7	28	4	55	95
I1	Far North	Road 9E to 45. South on 45 to the edge of Fish Lake, then east on 76 to Typo Dr.	11.3 mi new construction.	\$ 3.905	20.45	Note A	Note A	Note A	20	6	52	86
E1	Med North	Road 56E to Xylite S. Uses Sunset Road (76) to Road 26.	10.5 mi new construction.	\$ 3.927	18	49	0.8	9.8	20	4	53	89
B	Central Cut	Road 24E to 76E to Road 26. Uses Sunset Road S.	3.0 mi new dbl ckt. Plus 9.0 mi new const. = 12.0 mi.	\$ 4.298	17	42	Note A	Note A	13	4	39	68

6/17/2011 EAST BETHEL PROJECT ROUTE MATRIX 1

Route ID	Route Location	Route Description	Construction Notes	Cost (MM)	Tree Clearing (acres)	New Easements (acres)	Public Land Easements (miles)	Private Land Easements (miles)	Special Structures Req'r.	Homes Route CL (0-100 ft)	Homes Route CL (0-200 ft)	Homes Route CL (0-300 ft)
B1	Central Cut	Routes along the north of Fish Lake. Uses Sunset Road S to Road 26.	2.0 mi new dbl ckt. Plus 8.3 mi new const. = 10.3 mi.	\$ 3.696	31	54	Note A	Note A	13	4	38	62
A	Med South	Road 26E to Road 26. Avoids Sunset Rd and Typo.	3.0 mi new dbl ckt. Plus 7.4 mi new const. = 10.4 mi.	\$ 3.678	14	35	3.3	4.1	10	0	43	84
C1	Med South	Road 24 to 26 to 15S to Road 22. Avoids Sunset Rd and Typo.	3.0 mi new dbl ckt. Plus 9.4 mi new const. = 12.4 mi.	\$ 4.323	19	44	3.3	6.1	13	2	54	99
C	South	Hwy 65 to Road 74. Avoids Sunset Rd and Typo.	5.4 mi new dbl ckt. Plus 8.9 mi new const. = 14.3 mi.	\$ 5.140	20	42	0	8.9	15	7	82	121
D	Far South	Hwy 65 route south to Road 68 and Road 22.	9.5 mi new dbl ckt. Plus 9.5 mi new const. = 19.0 mi.	\$ 7.173	15	45	Note A	Note A	23	14	182	271

Note A - GRE did not provide.

6/17/2011 EAST BETHEL PROJECT ROUTE MATRIX 2

Route ID	Route Location	Route Description	Forested Wetlands		Non-Forested Wetlands		PWI Waters (Note 1)		PWI Waters (Note 2)		PWI Waters (Note 3)		PWI Waters (Note 4)		PWI Waters (Note 5)		PWI Waters (Note 6)	
			(miles)	(miles)	(miles)	(miles)	(Note 1)	(Note 2)	(Note 3)	(Note 4)	(Note 5)	(Note 6)	(Note 7)	(Note 8)	(Note 9)	(Note 10)	(Note 11)	(Note 12)
E	Far North	Road 9E to Xylite S to Road 56E to north edge of Cedar Creek. Uses Sunset Road (76).	0.4	1.0	1.8	2	2	1	2	1	1	1	1	1	1	1	2	2
F	Far North	Road 9E to 45.S. Uses Sunset Road (76) to Road 26E.	0.6	1.1	1.9	4	4	2	2	1	1	1	1	1	1	1	2	2
F1	Far North	Road 9E to 12S. Uses Sunset Road (76) to Road 26.	0.5	1.3	2.2	5	4	1	4	1	1	1	1	1	1	1	2	2
G	Far North	Road 9E to 12S to Road 20. Uses Typo (85S).	0.4	0.9	2.1	6	3	3	3	1	3	1	1	0	0	1	1	1
G1	Far North	Road 9E to 12S to Road 20. Uses Sunset Road (76) to Road 26.	0.5	1.5	2.4	6	3	3	3	1	1	1	1	0	0	2	2	2
H2	Far North	Road 56 to Xylite S. Uses Sunset Road (76).	0.02	0.32	2.73	2	2	2	2	2	2	1	1	0	0	2	2	2
H	Far North	Road 9E to 18S to 36 to 76. Uses Typo (85S).	0.06	0.21	3.8	3	6	3	6	3	3	3	3	3	3	3	3	3
H1	Far North	Road 9E to 18S Road 20. Uses Typo (85S).	0.08	0.22	4.48	5	8	5	8	3	3	3	3	2	2	3	3	3
I	Far North	Road 9E to 12S. Uses Typo (85S). Road 9E to 12S to Road 76.	0.07	0.25	3.11	4	5	4	5	4	4	4	2	1	1	2	2	2
I1	Far North	Road 9E to 45. South on 45 to the edge of Fish Lake, then east on 76 to Typo Dr.	Note A	Note A	2.84	Note A	Note A	Note A	Note A	Note A	Note A	Note A	Note A	2	2	3	3	3
E1	Med North	Road 56E to Xylite S.. Uses Sunset Road (76) to Road 26.	0.4	1.1	2.0	3	2	3	2	2	2	1	1	1	1	2	2	2

6/17/2011

## EAST BETHEL PROJECT ROUTE MATRIX 2

Route ID	Route Location	Route Description	Forested Wetlands		Non-Forested Wetlands		Wetlands (acres)	PWI Waters (Note 1)	PWI Waters (Note 2)	PWI Waters (Note 3)	PWI Waters (Note 4)	PWI Waters (Note 5)	PWI Waters (Note 6)
			(miles)	(miles)	(miles)	(miles)							
B	Central Cut	Road 24E to 76E to Road 26. Uses Sunset Road S.	0.1	1.3	6.8	2	3	1	1	1	1	1	2
B1	Central Cut	Routes along the north of Fish Lake. Uses Sunset Road S to Road 26.	0.8	1.3	7.3	2	2	1	1	1	1	1	2
A	Med South	Road 26E to Road 26. Avoids Sunset Rd and Typo.	0.1	0.8	5.8	2	1	1	1	1	1	0	1
C1	Med South	Road 24 to 26 to 15S to Road 22. Avoids Sunset Rd and Typo.	0.3	0.8	6.3	2	1	1	1	1	2	0	2
C	South	Hwy 65 to Road 74. Avoids Sunset Rd and Typo.	0.4	1.2	9.1	3	3	1	1	1	3	1	4
D	Far South	Hwy 65 route south to Road 68 and Road 22.	0.7	1.1	9.9	6	3	1	1	1	2	1	3

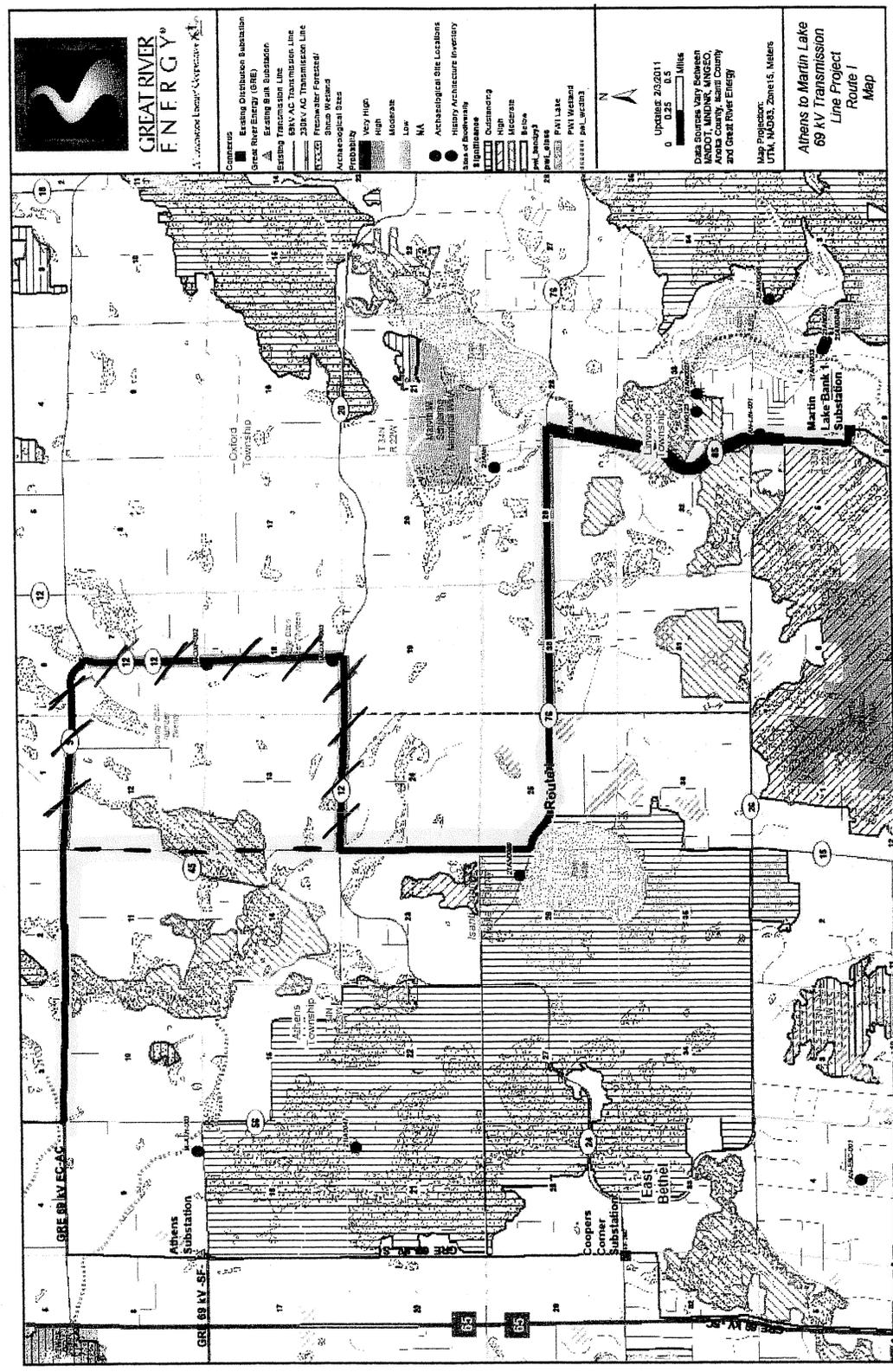
**Notes to Public Water Inventory (PWI) Categories**

- Note 1 Number of Perennial Streams and Rivers crossed by Intended Centerline.  
 Note 2 Number of Intermittent Streams and Rivers crossed by Intended Centerline.  
 Note 3 Number of PWI Streams Crossed by Intended CL.  
 Note 4 Number of Wetlands within Route.  
 Note 5 Number of PWI Lakes within ROW.  
 Note 6 Number of PWI Wetlands within ROW.

Note A GRE did not provide.

# Route 1

Utilize Durant St. to shorten route distance from 13.7 miles to 10.9 miles



6/14/2011		EAST BETHEL PROJECT ROUTE MATRIX 1										
Route ID	Route Location	Route Description	Construction Notes	Cost (MM)	Tree Clearing (acres)	New Easements (acres)	Public Land Easements (miles)	Private Land Easements (miles)	Special Structures Req'r.	Homes Route CL (0-100 ft)	Homes Route CL (0-200 ft)	Homes Route CL (0-300 ft)
E	Far North	Road 9E to Xylite S to Road 56E to north edge of Cedar Creek. Uses Sunset Road (76).	10.5 mi new construction.	\$ 3.953	18	49	0.8	9.7	24	4	58	96
F	Far North	Road 9E to 45.S. Uses Sunset Road (76) to Road 26E.	10.9 mi new construction.	\$ 3.977	19	50	0	10.9	21	6	60	94
F1	Far North	Road 9E to 12S. Uses Sunset Road (76) to Road 26.	13.4 mi new construction.	\$ 4.785	17	62	0	13.4	22	4	62	102
G	Far North	Road 9E to 12S to Road 20. Uses Typo (85S).	11.2 mi new construction.	\$ 4.040	17	52	0.6	10.6	21	3	49	76
G1	Far North	Road 9E to 12S to Road 20. Uses Sunset Road (76) to Road 26.	15.0 mi new construction.	\$ 5.245	17	69	0.6	14.4	21	4	72	116
H**	Far North	Road 56 to Xylite S. Uses Sunset Road (76).	11.0 mi new construction.	\$ 4.449	15.4	93.45	Note A	Note A	20	3	44	80
J**	Far North	Road 9E to 18S to 36 to 76. Uses Typo (85S).	16.85 mi new construction.	\$ 5.437	44.1	143.59	0.6	16.2	26	7	96	150
K**	Far North	Road 9E to 18S Road 20. Uses Typo (85S).	17.34 mi new construction.	\$ 5.606	32	147.72	0.6	16.7	24	3	65	95
I	Far North	Road 9E to 12S. Uses Typo (85S). Road 9E to 12S to Road 76.	13.7 mi new construction.	\$ 5.119	14.57	117.5	0	13.7	28	4	55	95
E1	Med North	Road 56E to Xylite S.. Uses Sunset Road (76) to Road 26.	10.5 mi new construction.	\$ 3.927	18	49	0.8	9.8	20	4	53	89
B	Central Cut	Road 24E to 76E to Road 26. Uses Sunset Road S.	3.0 mi new dbl ckt. Plus 9.0 mi new const. = 12.0 mi.	\$ 4.298	17	42	Note A	Note A	13	4	39	68
B1	Central Cut	Routes along the north of Fish Lake. Uses Sunset Road S to Road 26.	2.0 mi new dbl ckt. Plus 8.3 mi new const. = 10.3 mi.	\$ 3.696	31	54	Note A	Note A	13	4	38	62

6/14/2011		EAST BETHEL PROJECT ROUTE MATRIX 1										
Route ID	Route Location	Route Description	Construction Notes	Cost (MM)	Tree Clearing (acres)	New Easements (acres)	Public Land Easements (miles)	Private Land Easements (miles)	Special Structures Req'r.	Homes Route CL (0-100 ft)	Homes Route CL (0-200 ft)	Homes Route CL (0-300 ft)
A	Med South	Road 26E to Road 26. Avoids Sunset Rd and Typo.	3.0 mi new dbl ckt. Plus 7.4 mi new const. = 10.4 mi.	\$ 3.678	14	35	3.3	4.1	10	0	43	84
C1	Med South	Road 24 to 26 to 15S to Road 22. Avoids Sunset Rd and Typo.	3.0 mi new dbl ckt. Plus 9.4 mi new const. = 12.4 mi.	\$ 4.323	19	44	3.3	6.1	13	2	54	99
C	South	Hwy 65 to Road 74. Avoids Sunset Rd and Typo.	5.4 mi new dbl ckt. Plus 8.9 mi new const. = 14.3 mi.	\$ 5.140	20	42	0	8.9	15	7	82	121
D	Far South	Hwy 65 route south to Road 68 and Road 22.	9.5 mi new dbl ckt. Plus 9.5 mi new const. = 19.0 mi.	\$ 7.173	15	45	Note A	Note A	23	14	182	271

\*\*Note Changed from "Preliminary Draft" version dated 6/8/11 - former Route H is now Route J, former Route H1 is now route K, present route H is new.

Note A - GRE did not pursue

6/14/2011		EAST BETHEL PROJECT ROUTE MATRIX 2									
Route ID	Route Location	Route Description	Forested Wetlands (miles)	Non-Forested Wetlands (miles)	Wetlands (acres)	PWI Waters (Note 1)	PWI Waters (Note 2)	PWI Waters (Note 3)	PWI Waters (Note 4)	PWI Waters (Note 5)	PWI Waters (Note 6)
E	Far North	Road 9E to Xylite S to Road 56E to north edge of Cedar Creek. Uses Sunset Road (76).	0.4	1.0	1.8	2	2	1	1	1	2
F	Far North	Road 9E to 45.S. Uses Sunset Road (76) to Road 26E.	0.6	1.1	1.9	4	2	1	1	1	2
F1	Far North	Road 9E to 12S. Uses Sunset Road (76) to Road 26.	0.5	1.3	2.2	5	4	1	1	1	2
G	Far North	Road 9E to 12S to Road 20. Uses Typo (85S).	0.4	0.9	2.1	6	3	3	1	0	1
G1	Far North	Road 9E to 12S to Road 20. Uses Sunset Road (76) to Road 26.	0.5	1.5	2.4	6	3	1	1	0	2
H**	Far North	Road 56 to Xylite S. Uses Sunset Road (76).	0.02	0.32	2.73	2	2	2	1	0	2
J**	Far North	Road 9E to 18S to 36 to 76. Uses Typo (85S).	0.06	0.21	3.8	3	6	3	3	3	3
K**	Far North	Road 9E to 18S Road 20. Uses Typo (85S).	0.08	0.22	4.48	5	8	3	3	2	3
I	Far North	Road 9E to 12S. Uses Typo (85S). Road 9E to 12S to Road 76.	0.07	0.25	3.11	4	5	4	2	1	2
E1	Med North	Road 56E to Xylite S.. Uses Sunset Road (76) to Road 26.	0.4	1.1	2.0	3	2	2	1	1	2
B	Central Cut	Road 24E to 76E to Road 26. Uses Sunset Road S.	0.1	1.3	6.8	2	3	1	1	1	2

6/14/2011		EAST BETHEL PROJECT ROUTE MATRIX 2										
Route ID	Route Location	Route Description	Forested Wetlands (miles)	Non-Forested Wetlands (miles)	Wetlands (acres)	PWI Waters (Note 1)	PWI Waters (Note 2)	PWI Waters (Note 3)	PWI Waters (Note 4)	PWI Waters (Note 5)	PWI Waters (Note 6)	
B1	Central Cut	Routes along the north of Fish Lake. Uses Sunset Road S to Road 26.	0.8	1.3	7.3	2	2	1	1	1	2	
A	Med South	Road 26E to Road 26. Avoids Sunset Rd and Typo.	0.1	0.8	5.8	2	1	1	1	0	1	
C1	Med South	Road 24 to 26 to 15S to Road 22. Avoids Sunset Rd and Typo.	0.3	0.8	6.3	2	1	1	2	0	2	
C	South	Hwy 65 to Road 74. Avoids Sunset Rd and Typo.	0.4	1.2	9.1	3	3	1	3	1	4	
D	Far South	Hwy 65 route south to Road 68 and Road 22.	0.7	1.1	9.9	6	3	1	2	1	3	

**Notes to Public Water Inventory (PWI) Categories**

- Note 1 Number of Perennial Streams and Rivers crossed by Intended Centerline.
- Note 2 Number of Intermittent Streams and Rivers crossed by Intended Centerline.
- Note 3 Number of PWI Streams Crossed by Intended CL.
- Note 4 Number of Wetlands within Route.
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- Note 6 Number of PWI Wetlands within ROW.

\*\*Note Changed from "Preliminary Draft" version dated 6/8/11 - former Route H is now Route J, former Route H1 is now route K, present route H is new.

## EAST BETHEL PLANNING COMMISSION MEETING

May 24, 2011

The East Bethel Planning Commission met on May 24, 2011 at 7:00 P.M for their regular meeting at City Hall.

MEMBERS PRESENT: Eldon Holmes Lorraine Bonin Brian Mundle, Jr.  
Dale Voltin Glenn Terry Julie Moline

MEMBERS ABSENT: Tim Landborg

ALSO PRESENT: Stephanie Hanson, City Planner

**Adopt Agenda** Chairperson Terry called the May 24, 2011 meeting to order at 7:00 P.M.

**Terry motioned to adopt the May 24, 2011 agenda. Holmes seconded; all in favor, motion carries.**

**Terry motioned to include the revision in tonight's agenda. Holmes seconded; all in favor, motion carries.**

**Public Hearing:  
Interim Use Permit.  
A request by  
applicant, Michelle  
Hess, to obtain an  
Interim Use Permit  
for a Home  
Occupation, that  
being a hair salon.  
The location being  
2740 Viking Blvd.  
NE, East Bethel, MN  
55092, PIN 27 33 23  
32 0002. The Zoning  
Classification is  
Rural Residential  
(RR).**

Property Owner/Applicant  
Michelle Hess  
2740 Viking Blvd. NE  
East Bethel, MN 55092  
PIN 27-33-23-32-0002

The property owner/applicant is requesting an IUP for a hair salon business for the parcel located at 2740 Viking Blvd. NE. Ms. Hess currently has a salon in Ham Lake but would like to move the business to her home.

Ms. Hess plans to have the salon located in the basement of her home. Since she will be the only employee, she plans to install one (1) wash sink station. The wash station wastewater will have its' own holding tank, separate from the septic system serving the rest of the home. Ms. Hess will continue to work with the building department to obtain the proper permitting for the holding tank.

Since the property is located in the shoreland district, Ms. Hess is required to have a septic system compliance check. The system failed the compliance check. As part of the renovation process, Ms. Hess will be required to update the system prior to obtaining the required building permits needed to complete the renovation.

Home occupations are a permitted use in the RR - Rural Residential District as long as the applicant can meet the requirements of the City Code and complies with the conditions of the IUP. The proposed home occupation will meet requirements of the ordinance so long as the IUP conditions are met. In the event the conditions are not being met, the IUP would be revoked.

Staff requests Planning Commission recommend approval of an IUP for a hair salon for the property known as 2740 Viking Blvd. NE, East Bethel, PIN 27-33-

23-32-0002 with the following conditions:

1. Signage must comply with East Bethel City Code, Chapter 54, which states, "for home occupations, one identification sign is permitted, and the sign shall not exceed two square feet." Signs must be placed on the business property, as directional signs are not allowed.
2. No more than three persons, at least one of who shall reside within the principal dwelling, shall be employed by the home occupation.
3. Structure must be inspected by the Fire Inspector on a yearly basis.
4. Business street parking shall be prohibited and business parking must be on the driveway.
5. State licensing requirements must be current and a copy provided to the city and prior to opening.
6. The Interim Use Permit shall expire at the time the property changes hands and/or any of the prescribed stipulations have been violated.
7. Conditions must be met and an IUP Agreement executed no later than June 30, 2011. Failure to comply will result in the null and void of the IUP.

Hanson advised Miss Hess is here to answer any questions you may have.

**Public hearing was opened at 7:02 p.m. No comments. Public hearing closed at 7:02 p.m.**

Miss Hess advised the group the room would be on the main level, not in the basement, off a bathroom. She would be combining two rooms to make the area for her business. There would be a whole new septic system put in, which would hold hair, so she won't need a separate holding tank system. Mundle asked if she would be adding on. Miss Hess said she would not be adding on, but converting two rooms. In addition, she will be adding a new access door. Hanson advised with an IUP there could be changes made to the home, but not added onto. By code you have to have two exits from the business. Holmes said that would be checked by the Fire Marshall.

**Holmes motioned to recommend approval to City Council of the IUP for a hair salon for the property known as 2740 Viking Blvd. NE, East Bethel, PIN 27-33-23-32-0002 with the following conditions:**

1. Signage must comply with East Bethel City Code, Chapter 54, which states, "for home occupations, one identification sign is permitted, and the sign shall not exceed two square feet." Signs must be placed on the business property, as directional signs are not allowed.
2. No more than three persons, at least one of who shall reside within the principal dwelling, shall be employed by the home occupation.
3. Structure must be inspected by the Fire Inspector on a yearly basis.
4. Business street parking shall be prohibited and business parking must be on the driveway.
5. State licensing requirements must be current and a copy provided to the city and prior to opening.
6. The Interim Use Permit shall expire at the time the property changes hands and/or any of the prescribed stipulations have been violated.
7. Conditions must be met and an IUP Agreement executed no later than June 30, 2011. Failure to comply will result in the null and void of the IUP.

**Terry seconded; motion carries unanimously.**

Terry advised this recommendation the City Council will hear on June 1, 2011. Hess asked if it is the same as this meeting. Terry explained the Planning Commission is an advisory board; the Council will give the official yes or no.

**Change Next  
Planning  
Commission Meeting  
Date from June 28,  
2011 to June 20,  
2011.**

On April 6, 2011, City Council tabled the CUP request by Great River Energy for the proposed transmission line project; at which time City Council tabled the request and extended the 60-day review period per Minnesota Statutes, Section 15.99 for an additional sixty (60) days, which ends on July 1, 2011. City Council also directed staff to move forward with hiring professional technical consultant to review the project and provide a recommendation to the Great River Energy work group and Planning Commission.

Once the consultant, Mr. Larry Schedin, completes his review, the City Attorney recommends Planning Commission hold a supplemental public hearing in which Mr. Schedin can present his findings and make a recommendation to the Planning Commission. Planning Commission will then make a recommendation to the City Council.

As part of Mr. Schedin's contract, he must complete his review and provide his findings to staff by June 15, 2011. A public hearing will be scheduled for June 20, 2011 and a special meeting for City Council is proposed to be scheduled on June 22, 2011.

Staff recommends Planning Commission approve the change of the regularly scheduled meeting on June 28, 2011 to June 20, 2011.

Terry asked why the meeting is being scheduled for the 20<sup>th</sup> and not the 21<sup>st</sup>. Hanson explained it gives staff one day to get information from the Planning Commission, including minutes, prepared and sent out to the City Council. It was asked if this would be the only thing on the Planning Commission agenda. Hanson advised this would replace the regularly scheduled Planning Commission meeting. There may be one other item on the agenda, a kennel license, but nothing else at this time.

**Bonin motioned to change the regularly scheduled June Planning Commission meeting date from June 28, 2011 to June 20, 2011. Holmes seconded; all in favor, motion carries.**

**Approve May 24,  
2011 Planning  
Commission Meeting  
Minutes**

Holmes stated on the very last page, second paragraph, there is a typo. Holmes is spelled wrong – spelled Homes, versus Holmes.

**Voltin motioned to approve the May 24, 2011 Planning Commission minutes as presented with above change. Holmes seconded; all in favor, motion carries.**

**Adjourn**

**Holmes made a motion to adjourn the meeting at 7:10 PM. Moline seconded; all in favor, motion carries.**

Jill Teetzel  
Recording Secretary

DRAFT