



OPEN HOUSE #2

HIGHWAY 1 INTERCHANGE **At Garden/Conrich Roads** Functional Planning Study

WELCOME

4 pm to 8 pm

November 30, 2010



Highway 1 Interchange at Garden/Conrich Roads

OPEN HOUSE FORMAT

- This Open House is an **Informal Venue**.
- Attendees are provided with the opportunity to view the project information and discuss their interests and concerns with project staff.
- There will be no formal presentation.

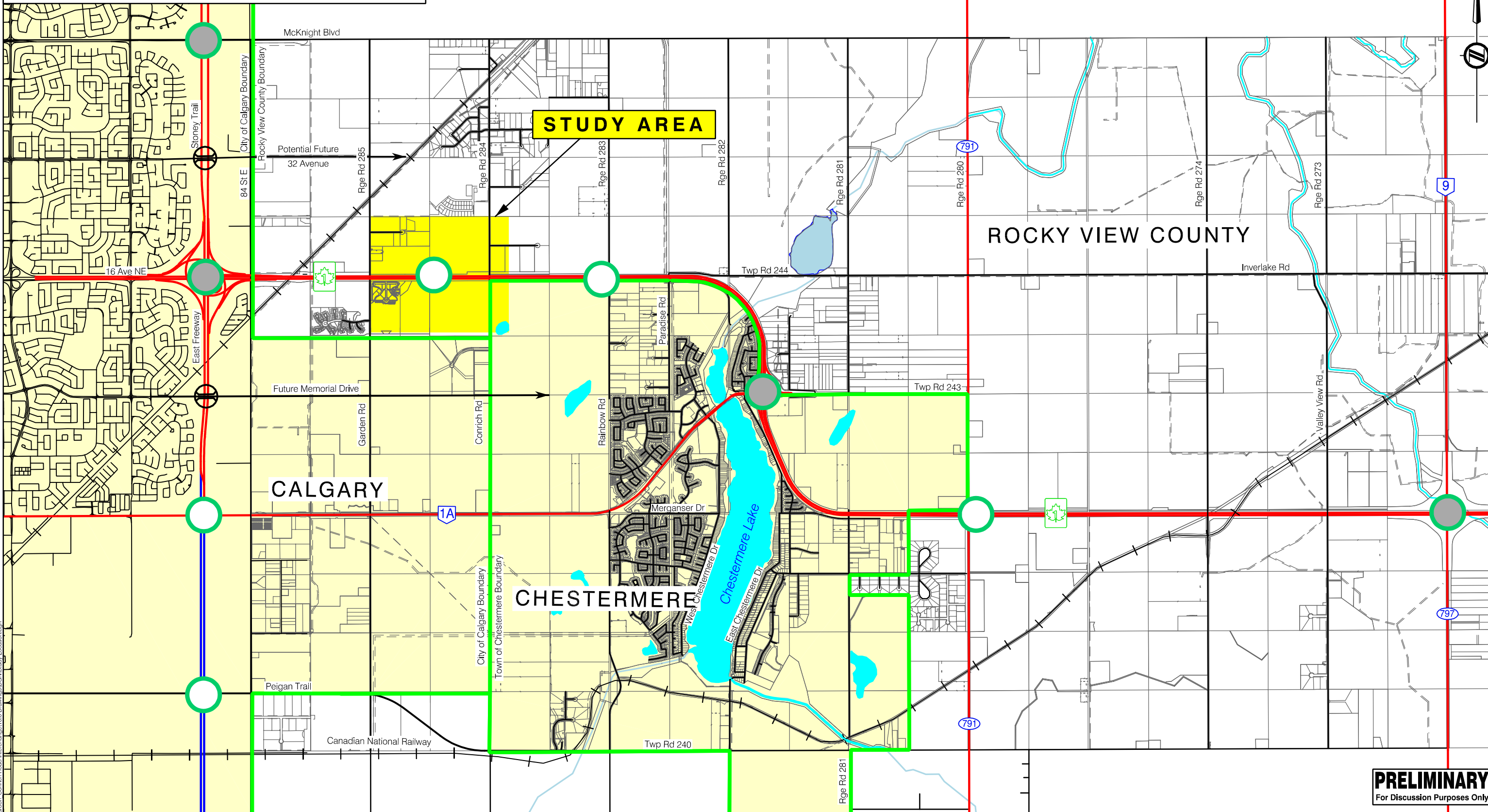
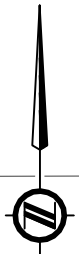


Highway 1 Interchange at Garden/Conrich Roads

OPEN HOUSE PURPOSE

To make the community aware of
the plan to be recommended to
Alberta Transportation.

Study Location



PRELIMINARY
For Discussion Purposes Only

LEGEND

- Municipal Boundary
- Existing Highway
- Existing Local Road
- Future Highway
- Existing Interchange
- Future Interchange
- Future Flyover

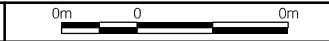


Government of Alberta

Study Location
Highway 1 Interchange at Garden/Conrich Road
Functional Planning Study

Drawn by TD Designed by TD Checked by HD Approved by

JULY 09 2010



11/23/2010 0:46:58.01 Hw:1 Garden Conrich Road Interchange/10.0 Drawings/DSN/Study Location.dgn



Highway 1 Interchange at Garden/Conrich Roads

STUDY PURPOSE

Calgary and Chestermere have expanded east and west respectively, meeting at Conrich Road.

The study:

1. Confirmed the Garden/Conrich Road interchange location;
2. Achieved Best Practice design standards for the interchange configuration and design consistency along the Trans Canada Highway;
3. Provided for ultimately achieving 8 lanes along Hwy 1; and
4. Will protect the right-of-way requirements in support of the selected interchange location and plan.



Highway 1 Interchange at Garden/Conrich Roads

STUDY PROCESS

1. Data Collection / Develop Interchange Options
2. Open House #1 – Present Alternatives
3. Confirm Preferred Plan
- 4. Open House #2 – Present Recommended Plan**
5. Finalize Plans
6. Presentation to County Council
7. Plan Approval by the Province

Highway 1 Interchange at Garden/Conrich Roads

TIMELINE

1. Open House #1 – April 8, 2010
2. **Open House #2 – November 2010**
3. Study Completion – Spring 2011

Highway 1 Interchange at Garden/Conrich Roads

PUBLIC INPUT – OPEN HOUSE 1

OpenHouse	Attendees	Comment Sheets	No Comment Response
1	65	23	13

No.	Comments – Open House 1	Frequency
		O.H. 1
1	No comment	13
2	Support Concept 1 (now the Recommended Plan)	4
3	Show CNR Conrich Intermodal Yard	1
4	Clarification of connections off of Highway 1	1
5	Good Information	1
6	Move interchange west to quarter line (developer)	1
7	Provide direct access to highway (developer)	1
8	Move interchange to Garden Road (developer)	1

Highway 1 Interchange at Garden/Conrich Roads

BACKGROUND

1. Interchange plan was last examined in 2006 as part of a functional review.
2. Calgary and Chestermere have both expanded their boundaries since 2006.
3. The adjacent East Freeway and Rainbow Road interchange plans were completed since 2006.
4. Highway 1 corridor, Calgary to Saskatchewan, is being planned to meet current Best Practices for freeway design.
5. The Garden/Conrich Road interchange plan is now also being upgraded to achieve design consistency along the Trans Canada Highway east of Calgary.

Highway 1 Interchange at Garden/Conrich Roads

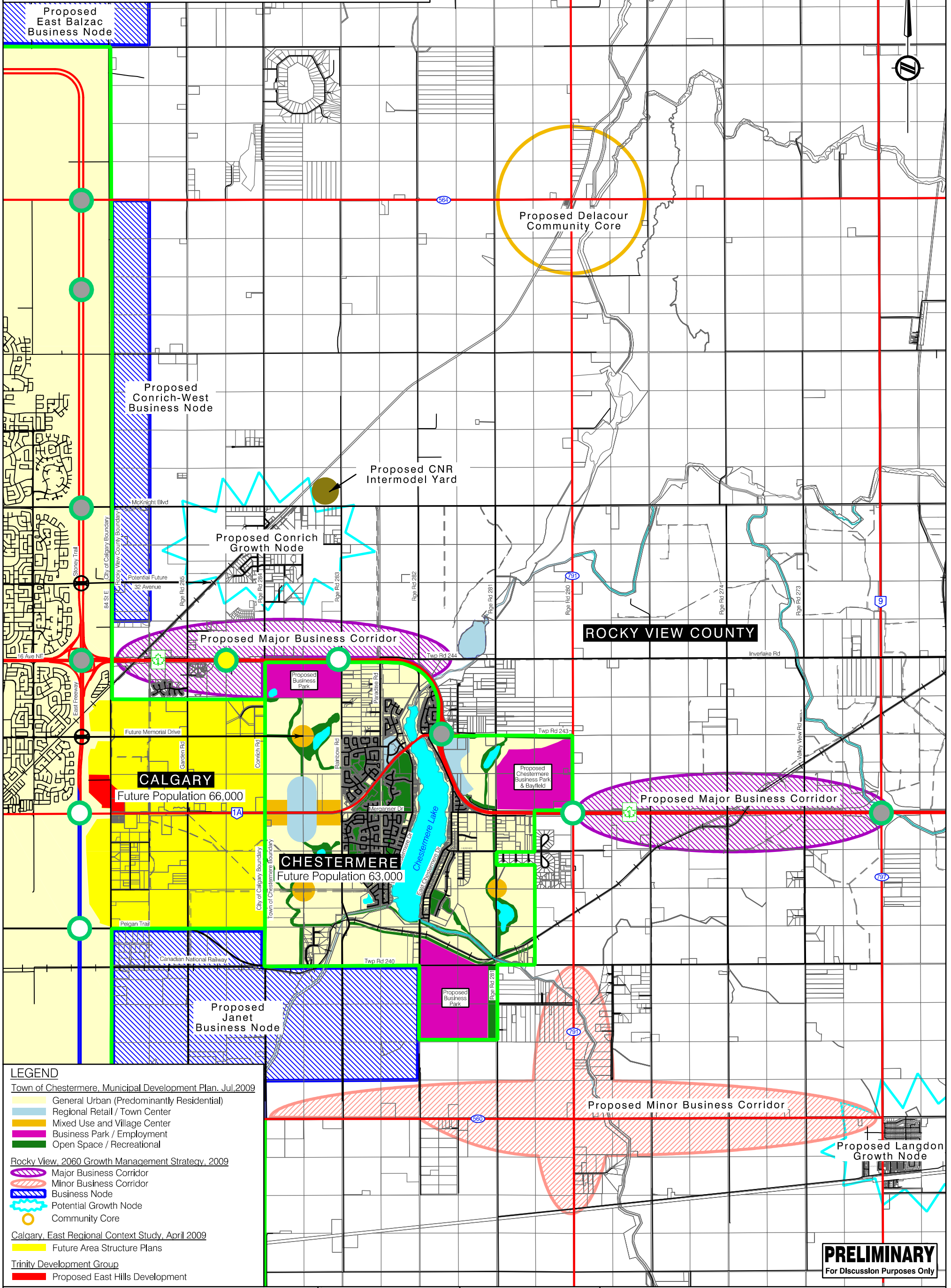
FUTURE GROWTH

There are three long-term growth plans:

1. **Chestermere** – Municipal Development Plan, July/09, and Growth Study, March 2007. Forecasts an additional 50,000 population in long term. (**63,000** ultimate population)
2. **Calgary** – East Regional Context Study, April/09. Forecasts a **66,000** population between Highway 1 and Peigan Trail.
3. **Rocky View** – 2060 Growth Management Strategy, April/09. Forecasts several major residential, commercial and industrial growth nodes in study area.

The study corridor will ultimately become fully urbanized, supporting extensive areas of business and residential development.

Future Land Use and Population



LEGEND

Town of Chestermere, Municipal Development Plan, Jul. 2009

- General Urban (Predominantly Residential)
- Regional Retail / Town Center
- Mixed Use and Village Center
- Business Park / Employment
- Open Space / Recreational

Rocky View, 2060 Growth Management Strategy, 2009

- Major Business Corridor
- Minor Business Corridor
- Business Node
- Potential Growth Node
- Community Core

Calgary, East Regional Context Study, April 2009

- Future Area Structure Plans

Trinity Development Group

- Proposed East Hills Development

- Study Interchange Location
- Future Interchange Location
- Existing Interchange Location
- Municipal Boundary
- Future Flyover

McElhanney
Consulting Services Ltd.

Government of Alberta

Future Land Use and Population
Highway 1 Interchange at Garden/Conrich Road
Functional Planning Study

PRELIMINARY
For Discussion Purposes Only

Drawn by _____ Designed by _____ Checked by _____ Approved by _____

JULY 09 2010

750m 0 1500m

Highway 1 Interchange at Garden/Conrich Roads

TRAFFIC GROWTH & FORECASTS

Year:	1977	1987	1997	2008
Past AADT ¹ Volumes	6,600	7,900	11,500	18,400

Years:	31	21	11
Past Growth Rates:	3.4%	4.1%	4.4%

Years:	-	22	20	25	25
Year:	2008	2030	2050	2075	2100
Forecast Growth Rates:	-	3.5%	2.5%	1.5%	1.0%
Forecast AADT Volumes:	18,400	33,000	50,000	69,000	86,000
Number of Lanes:	4	6	8	8	10
Vehicles per lane:	4,600	5,500	6,250	8,625	8,600

¹AADT: Average Annual Daily Traffic volumes.



Highway 1 Interchange at Garden/Conrich Roads

INTERCHANGE SPACING

To ensure safe weaving and lane changing, and to minimize turbulence in the traffic stream, there are Best Practices governing spacing between interchanges:

- In Rural Areas
 - Ranges from 10 km to 16 km
- Passing Urban Areas
 - Desirable range is from 3 km to 5 km
 - Minimum 2 km between adjacent service interchanges
 - Minimum 3 km next to systems interchange, e.g. Stoney Trail



Highway 1 Interchange at Garden/Conrich Roads

FUTURE ACCESS TO HIGHWAY 1

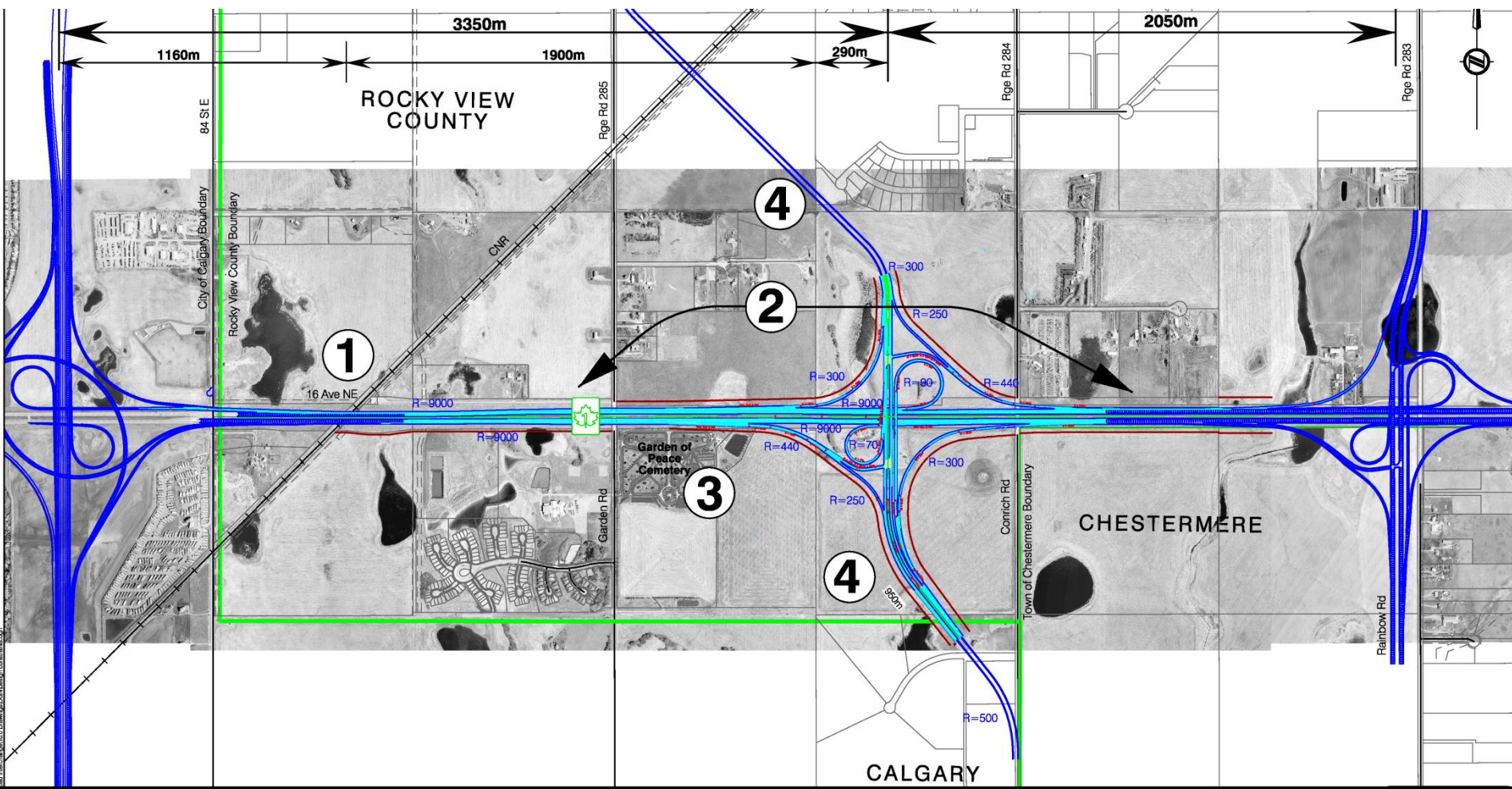
Highway 1 is the Trans Canada Highway and will ultimately achieve full freeway standards.

Access will only be possible at interchange locations. All intersections will be closed.

All future traffic resulting from development in the study area, that wishes to access Highway 1, must use either the Rainbow Road or the Garden/Conrich Road interchanges.

DESIGN CONSTRAINTS:

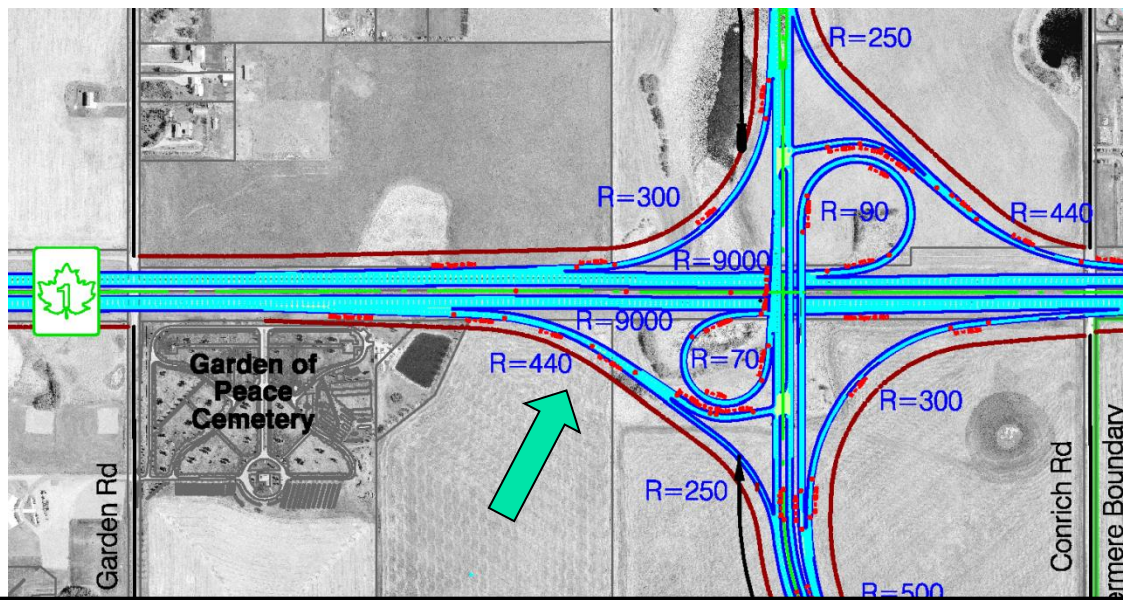
1. Alignment of Highway 1 Crossing the CNR line.
2. Interchange Spacing either side of Garden Road.
3. Garden of Peace Cemetery / Salvage existing Highway 1.
4. Alignment of North-South Arterial Road.



Highway 1 Interchange at Garden/Conrich Roads

RECOMMENDED RAMP DESIGN

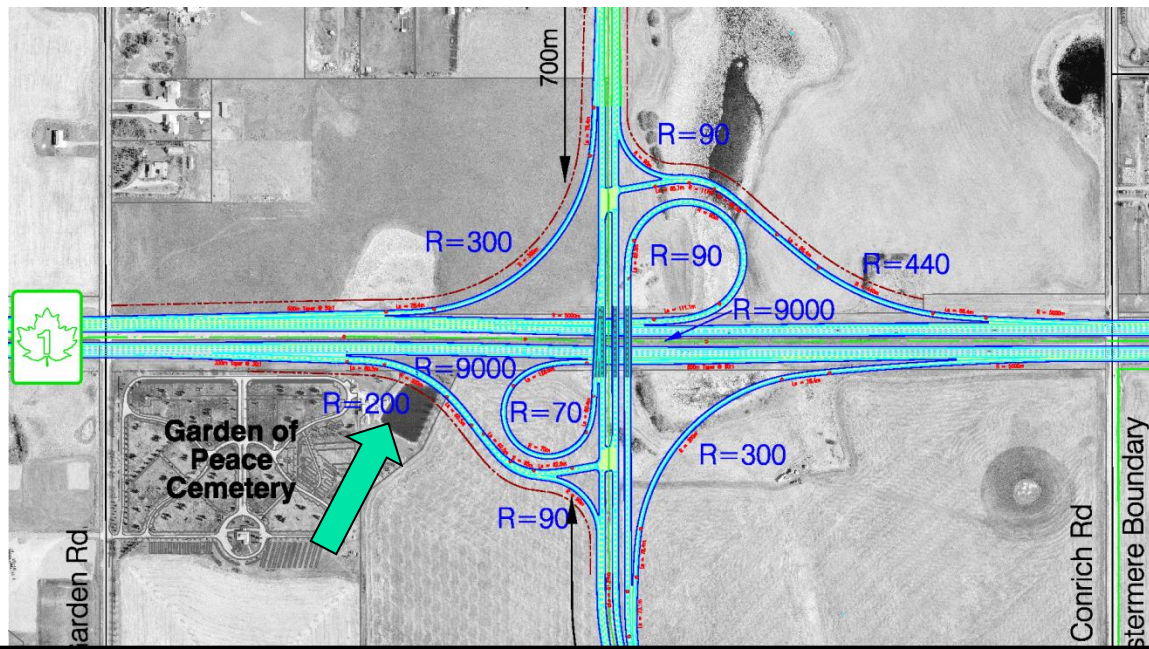
- Preferred Alberta design standard uses a direct taper exit from the main traffic lanes entering a 440m radius curve, transitioning from 130 km/h design speed on the mainline to a 100 km/h design speed on the exit ramp.
- Province's Best Practices for Planning & Design of Freeway Facilities stresses that *"interchange exit and entrance areas are the critical speed change area in freeway operations and that speed transition zones are to be provided outside of the main traffic lanes"*.
- A key objective is Design Consistency. *"The more consistent road designs are over a wide geographic area, the more effective the reduction in collision occurrence"* (TAC). Particularly for high-volume corridors.



Highway 1 Interchange at Garden/Conrlich Roads

PREVIOUS RAMP DESIGN

1. Used a 200m radius ramp off of the end of the eastbound exit taper. This radius is the controlling curve, and with a design speed of 70 km/h it would not meet deceleration requirements and posed a safety issue.
2. Vehicles would need to begin decelerating from 110 or 120 km/h on the highway or drivers would need to brake on the exit taper before entering the 70 km/h curve.
3. Previous design is minimum standard and less safe. Design is inconsistent with balance of TCH interchange designs and current best practices/guidelines.



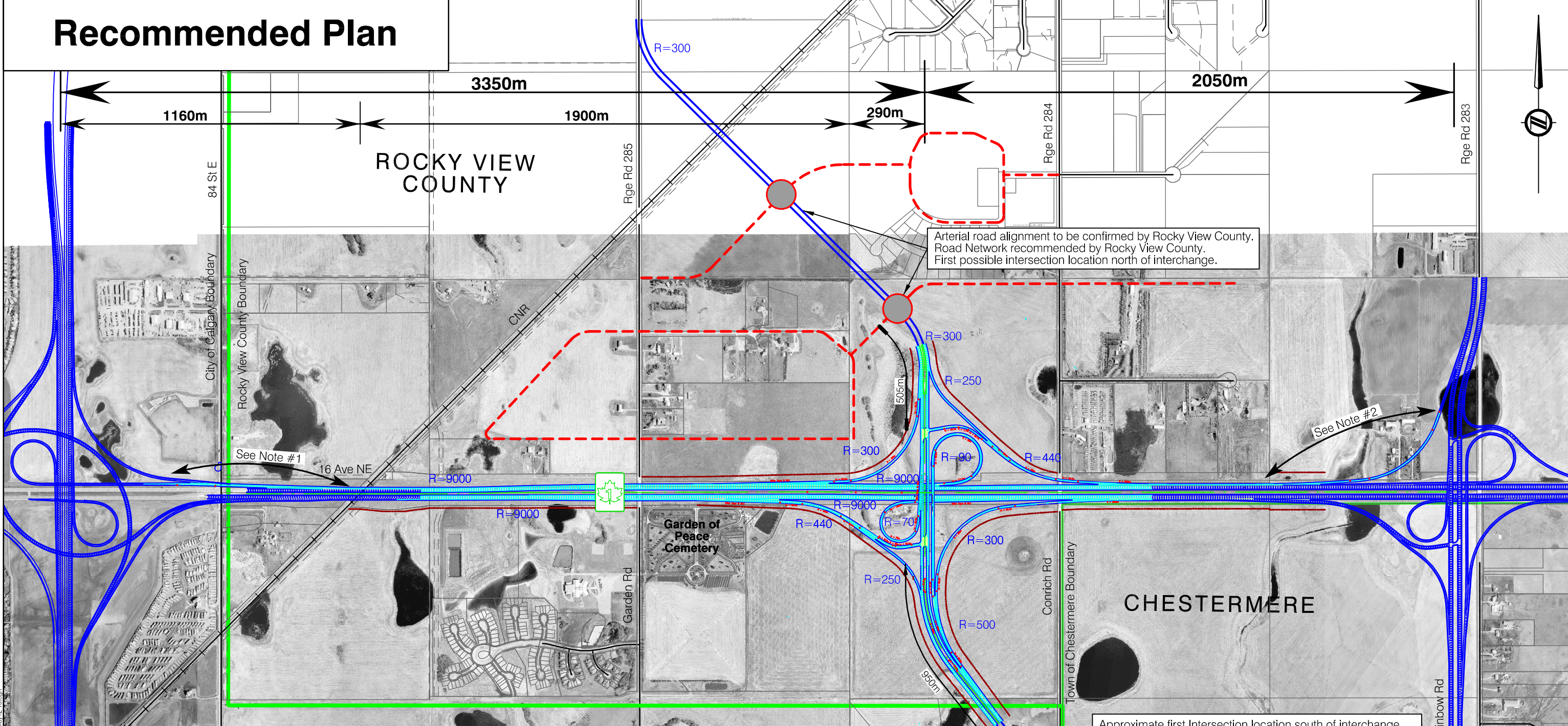


Highway 1 Interchange at Garden/Conrich Roads

RECOMMENDED PLAN

1. North-South Arterial Road:
 - Rocky View County request connection with Garden Road north of Highway 1. County's tentative road network plan is shown.
 - City of Calgary request connection with Conrich Road south of Highway 1.
2. Garden of Peace Cemetery: Minor Impacts
3. Other Criteria: The property footprint, environmental comparison and interchange costs are relatively equal.
4. Pavement Salvage: Greatest salvage of existing highway.

Recommended Plan

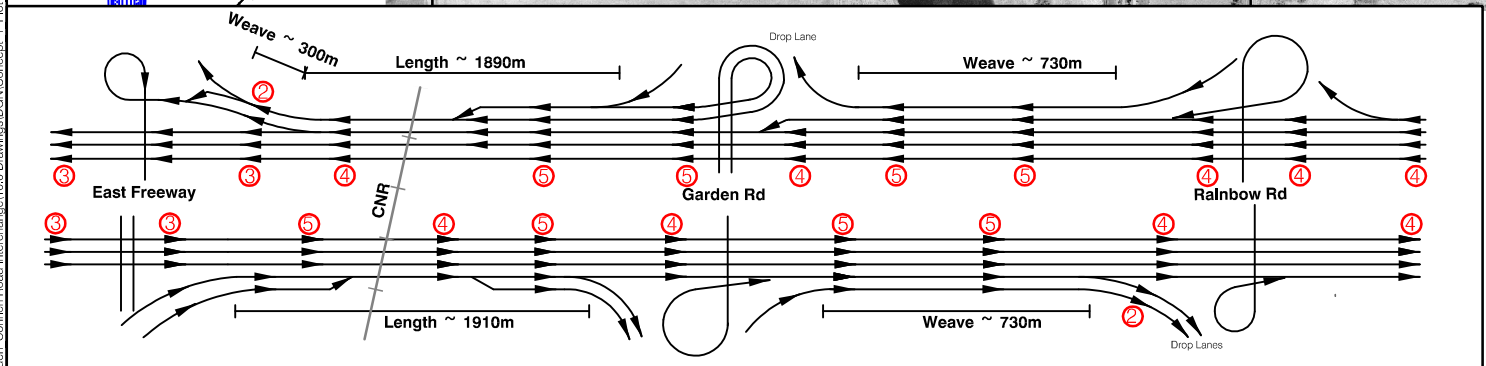


Arterial road alignment to be confirmed by Rocky View County. Road Network recommended by Rocky View County. First possible intersection location north of interchange.

Approximate first Intersection location south of interchange. Arterial road alignment to be confirmed by the City of Calgary.

See Note #1

See Note #2



LEGEND

- Existing Local Road
- Municipal Boundary
- Proposed Interchange By Others
- Proposed Alignment
- Proposed Right of Way
- Proposed New Construction

- Notes**
1. Realigned to a 2 lane off ramp to meet consecutive exit standards.
 2. Realigned on ramp to eliminate direct taper and replace with a 5000m parallel lane merge.
- Proposed Local Road Network (Rocky View County)

DESIGN SPEED

Highway 1	130 km/h
Garden Rd	80 km/h

Design Speed	Minimum Radius
70 km/h	= R 200
80 km/h	= R 250
90 km/h	= R 340
100 km/h	= R 440
110 km/h	= R 600
130 km/h	= R 950

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Consulting Services Ltd.

Government of Alberta

Recommended Plan
Garden Road / Conrich Road Interchange
Functional Planning Study

Drawn by TD Designed by TD Checked by HD Approved by

NOV 22 2010 150m 0 300m

PRELIMINARY
For Discussion Purposes Only

11/23/2010 C:\Users\8901\My Documents\10.0\Drawings\DSN\Concept_1_Plan_May12-10.dgn

Highway 1 Interchange at Garden/Conrich Roads

WHAT HAPPENS NEXT?

- The Recommended Plan will be presented to Alberta Transportation for approval.

Note: The interchange is not on Alberta Transportation's current 3-year construction program.



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COMMENTS?

- Please help us by taking the time to fill out the comment sheet provided and drop in the box near the entrance.
- The comment sheet can also be returned by mail to the address shown on the sheet.



OPEN HOUSE #2

HIGHWAY 1 INTERCHANGE At Garden/Conrich Roads Functional Planning Study

**THANK YOU
FOR ATTENDING**