County of Los Alamos
BCC Meeting Minutes
Environmental Sustainability Board

1000 Central Avenue
Los Alamos, NM 87544

Shannon Blair, Chair; Sue Barns, Vice-Chair; Joseph Chandler; Jyl DeHaven; Kella Romero; and Rebecca Paley-Williams, Members

Thursday, August 21, 2025 **5:30 PM** **1000 Central Avenue, Council Chambers**

NOTE: This meeting is in person and open to the public. However, for convenience, the following Zoom meeting link and/or telephone call in numbers may be used for pubic viewing and participation:

Please click this URL to join. https://us02web.zoom.us/j/85656951187
Or One tap mobile:
+17193594580,,85656951187# US
+16694449171,,85656951187# US

1. CALL TO ORDER - ROLL CALL

5:34 p.m. All members present.

2. PUBLIC COMMENT

None.

3. APPROVAL OF AGENDA

Motion to approve the agenda by Member Barns second by Member Chandler the motion passed unanimously.

4. APPROVAL OF MINUTES

20556-25 Approval of July 17, 2025, Environmental Sustainability Board Minutes

Presenters: Shannon Blair

Motion to approve the minutes of the Environmental Sustainability Meeting of July 17, 2025, by Member Barns, second by Member Chandler the motion passed unanimously.

5. BOARD BUSINESS

20558-25 Welcome newly appointed Environmental Sustainability Board Members

Presenters: Shannon Blair

Chair Blair introduced new board member Kella Romero and also asked the board to invite citizens to apply for the one vacancy.

20557-25 Bicycle Working Group Report by Hermann Geppert-Kleinrath

Presenters: Hermann Geppert-Kleinrath

Hermann Geppert-Kleinrath gave a presentation on the Bicycle Working Group Report he gave to the Transportation Board, and he also discussed how to increase ridership through proper infrastructure.

20559-25 Discuss and Draft Annual ESB Update to County Council

Presenters: Shannon Blair and Angelica Gurule

The Board discussed the annual ESB presentation to County Council on October 21, the presentation should focus on accomplishments from the past year and describe work programmed for the upcoming year.

20566-25 Rewiring America Recap on Becoming a Certified Electric Coach

Presenters: Angelica Gurule

Sustainability Manager Angelica Gurule gave an overview of Rewiring America's Energy Coach program, by describing what she learned, her electrification story, electrification pathway's and resources.

6. REPORTS

A. Chair's Report - Shannon Blair

None.

1). Board of Public Utilities - Sue Barns/Shannon Blair

Member Barns provided an update on the Hydroelectric facilities, built in the 1980's on the Rio Chama by El Vado and Abiquiu Lake that provide carbon free electricity. Plants are working great, big challenge drought in impacting snowpack precipitation is 46% of normal.

2). Transportation Board - Vacant

None.

3). Parks and Recreation Board - Shannon Blair

None.

4). Health Council - Jyl DeHaven

Member DeHaven reported that they are working on needs on for Social Services. They completed their task and will present it to the Health Council board at the September meeting.

5). County Council Liaison - Ryn Herrmann

Councilor Herrmann gave an update on the Council work session, presentation on the electrification study, and aging electrical lines in White Rock. The local and small engagement working group gave their report, working group consist of Councilor Herrmann, Councilor Reagor, and Councilor Ryti. Report included information gathered on what communities are doing with retail LEDA, summary of commercial rates, available land, and other items they would like the County to consider further. Presentation on the canyon rim trail feasibility of extending to bridge, no budget yet.

6). Inclusivity Task Force - Xeph Ivankovich and KokHeong McNaughton

Inclusivity Task Force Member KokHeong reported that the Inclusivity Task Force is a nine-member task force and within the task force there are several working groups.

B. Working Groups and Steering Committee

1). Los Alamos Sustainability Alliance - Sue Barns and Rebecca Paley-Williams

Member Barns reported that the Los Alamos Sustainability Alliance met, and the September newsletter will focus on bears. The alliance is working on a sustainability welcoming kit for new residents

2). Education and Outreach Working Group - Angelica Gurule and Sue Barns

A vendor for Climate Marketing and Engagement Services was selected, next steps are to draft an agreement.

3). Community-Wide EV Study Working Group

Sustainability Manager Angelica Gurule reported that the consultant is working on developing heat maps as to where the EV chargers should be, estimating EV demand, as well as estimating the community adapting to EV in the future.

4). Plastic Bag Fee Research Group - Shannon Blair, Rebecca Paley-Williams, and Hermann Geppert-Kleinrath

None.

5). Bee City Los Alamos - Britton Donharl

None.

7. STAFF REPORT

20565-25 Sustainability Manager Updates

Presenters: Angelica Gurule

Sustainability Manager Angelica Gurule reported that the sustainability newsletter now has 90 subscribers. Council has approved the EV charging infrastructure for six new level 2 at Municipal Building parking lot, working on permitting and schedule. Next project will be developing scope of work for energy audits that can be preformed on household residents.

8. PREVIEW OF UPCOMING AGENDA ITEMS

Future meetings, plastic bag update and council update presentation.

9. ADJOURNMENT

7:23 p.m.

If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing or meeting, please contact the County Human Resources Division at 662-8040 at least one week prior to the meeting or as soon as possible. Public documents, including the agenda and minutes can be provided in various accessible formats. Please contact the personnel in the Community Services Administration Office at 662-8163 if a summary or other type of accessible format is needed.

Bicycle Working Group Report

or

How to increase ridership

Ahhh Venice

Hardly any cars...

Ahhh Venice

...but you could go by car.

Los Alamos

Hardly any boats on the road.

Los Alamos

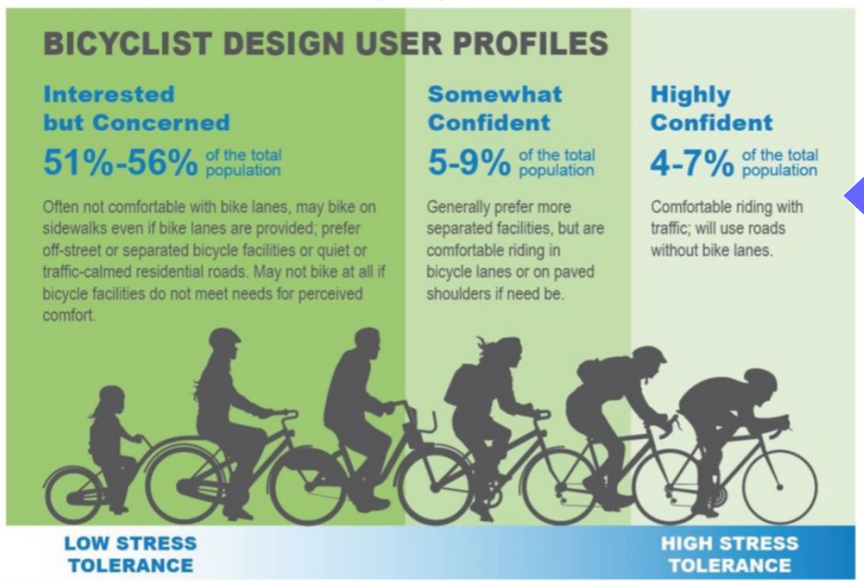
Bike rider ship depends on proper infrastructure

Infrastructure has to be:

- Safe
- Feel safe
- Continuous
- Comprehensive
- Intuitive

Level of Traffic Stress

Level of Traffic Stress (LTS)



Los Alamos is at 2.64% ridership according to the League of American Cyclists.

Most people do not feel safe riding a bike!

Equity: bikes treated like bikes

- Separated bike paths
  Conflicts feel safe
- Safety is a high priority!
- Everyone

Equality: bikes treated like cars

- No cycling infrastructure
- Risk takers
- Young men

Vision Zero a systematic approach to zero traffic fatalities

- A system that is safe only if nobody makes mistakes, is not a safe system.
- People make mistakes. Design the system so the outcomes of accidents are benign.
- Design intersections so that accidents are unlikely.
- Control vehicle speeds so that accidents that are likely to happen are not likely to be deadly.

Principles for bicycle infrastructure

Safe intersection design reduces accidents and ‘close calls’
(most accidents happen at intersections)

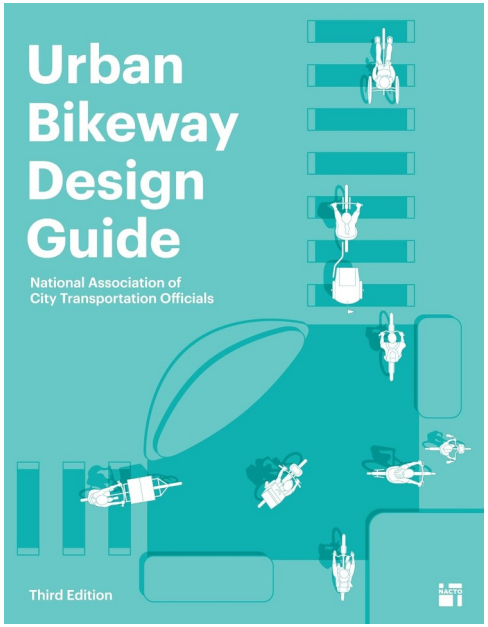
Width and degree of separation should be adjusted to traffic volume and speed

Continuous infrastructure
no gaps, no interruptions (e.g. construction work)

Easy to follow the intended design
color-coding, road signs

Comfortable, convenient, and beautiful!

National Association of City Transport Officials guides



NACTO provides different design guides with modern guidelines.
https://nacto.org/

Bike paths

The wider, the smoother,

the higher the degree of separation, the better.

Bike Path Separation

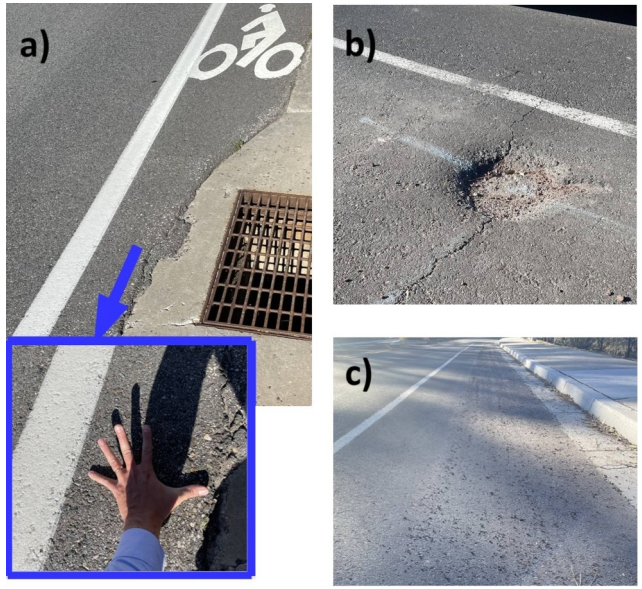
GUIDANCE FOR SELECTING ALL AGES & ABILITIES BIKEWAYS

Bikeway	Target Motor Vehicle Speed	Motor Vehicle Volume per day	Motor Vehicle Volume Peak Hour in Peak Direction
Protected Bike Lane	Any	Any	Any
Shared Spaces	≤10 mph ≤15 km/h	≤ 1,000	≤60
Bicycle Boulevard	≤ 20 mph ≤ 30 km/h	≤ 500 - 2,000	<50-150
Advisory Bike Lane	≤ 20 mph ≤ 30 km/h	≤ 500-2,000	<50-150
Constrained Bike Lanes	≤ 20 mph ≤ 30 km/h	≤ 1,500-3,000	≤ 300
Constrained Bike Lane *with Buffer*	≤ 25 mph ≤ 40 km/h	≤ 6,000	≤ 600

A high degree of separation makes cycling more enjoyable for riders of all abilities.

Bike Path Width

MINIMUM AND PREFERRED RIDEABLE WIDTHS								
Control Device	One-Way Bike Lane				Two-Way Bike Lane			
	Minimum Recommended*		Preferred		Minimum Recommended*		Preferred	
Mini Device Widths cannot be less than a typical bike	6 ft	1.8 m	7-8 ft	2.1-2.4 m	8-10 ft	2.4-3 m	11-13 ft	3.3-3.9 m
Typical Bike Device width up to 2.5 ft (0.8 m)	6 ft	1.8 m	7-8 ft	2.1-2.4 m	8-10 ft	2.4-3 m	11-13 ft	3.3-3.9 m
Cargo Bike Device width up to 3 ft (0.9 m)	6.5 ft	2 m	8-9 ft	2.5-2.8 m	9-11 ft	2.7-3.3 m	12-14 ft	3.7-4.3 m
Extra-Large Bike Device width up to 4.5 ft (1.4 m)	7 ft	2.1 m	11.5-12.5 ft	3.5-3.8 m	12-14 ft	3.6-4.2 m	15-17 ft	4.7-5.3 m



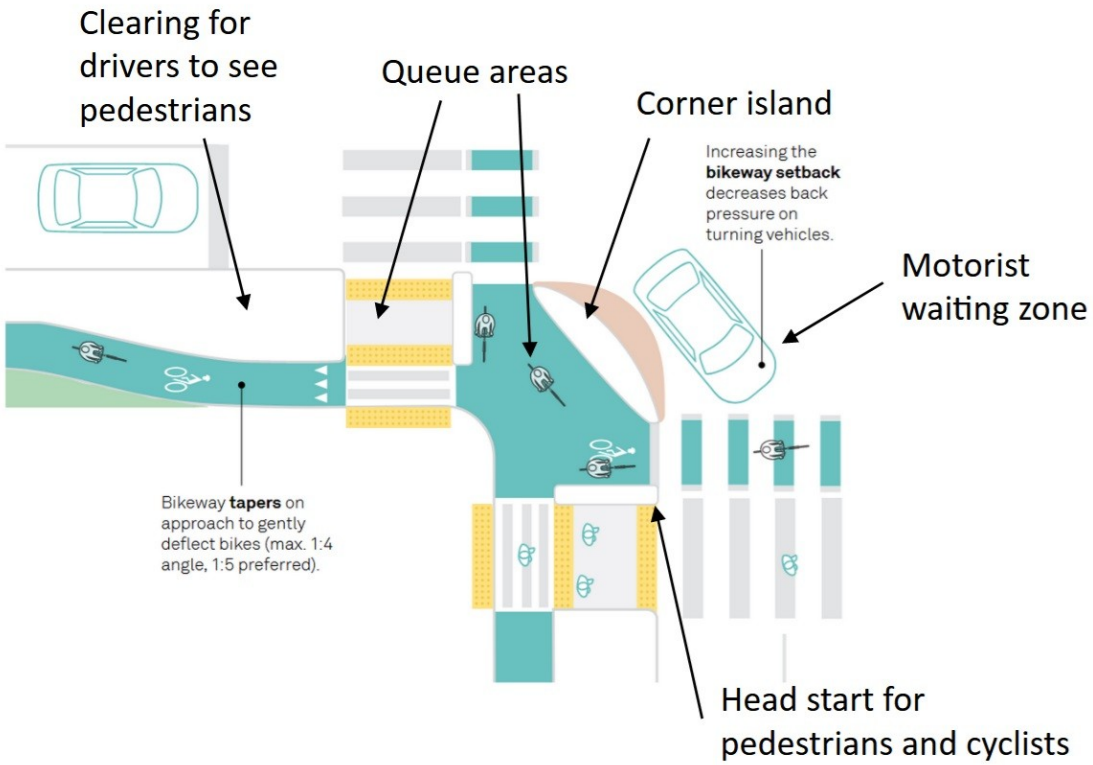
Bike paths need to be wide enough.
Grates and drainage cannot be counted to the width of a bike path.
Poles, curbs, and other obstacles require an added shy distance.

Intersection

Intersection design is of critical importance
for safety and level of traffic stress.

We have recommendations for different intersection designs
and where they can be applied.

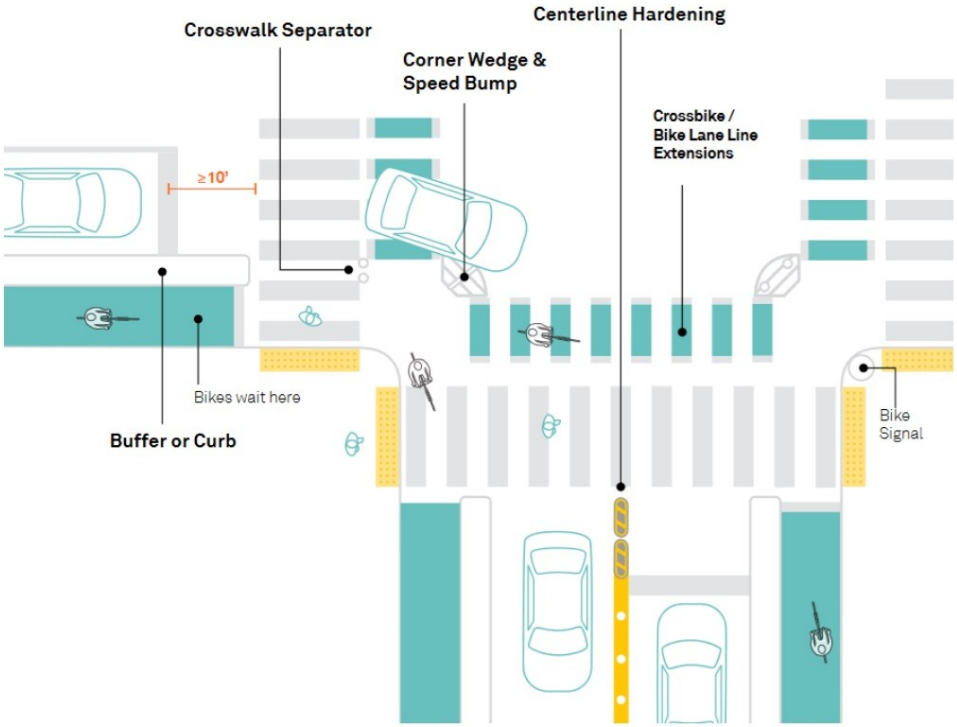
Major Protected Intersections



A safe and comfortable intersection design with queue areas for pedestrians and cyclists.

Recommended for:
Diamond Dr/Canyon Rd
Diamond Dr/Trinity Dr
Diamond Dr/West Rd
Diamond Dr/Orange St
Diamond Dr/Arkansas Avenue

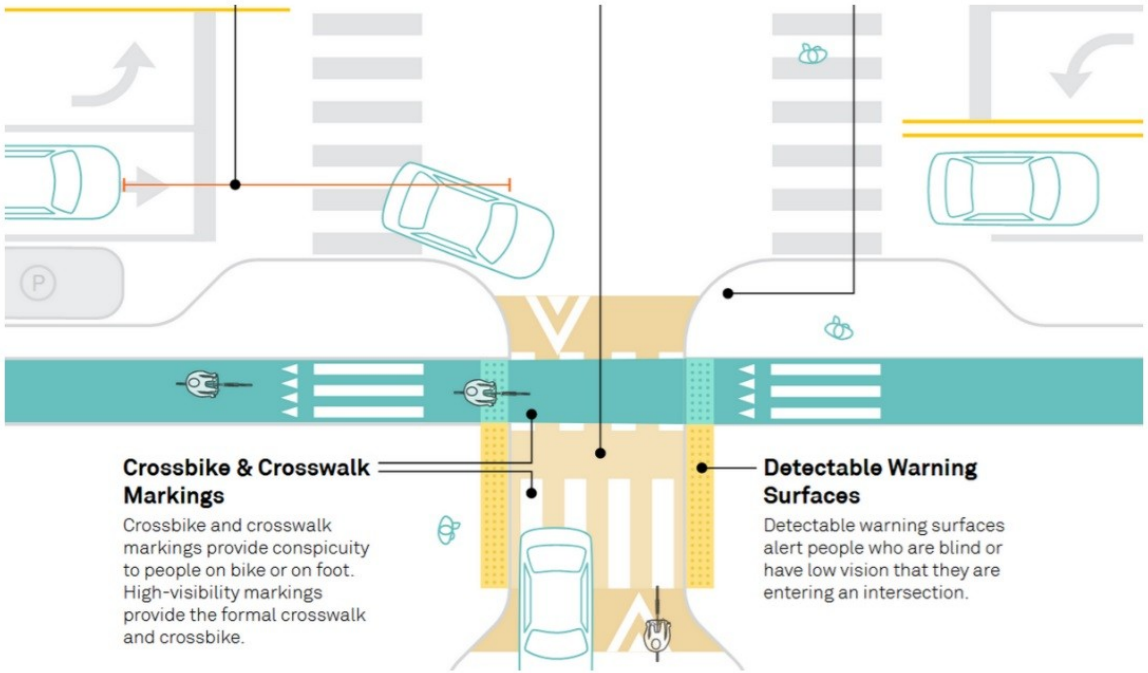
Protected Intersection



Similar to the major protected intersection with a smaller foot print.

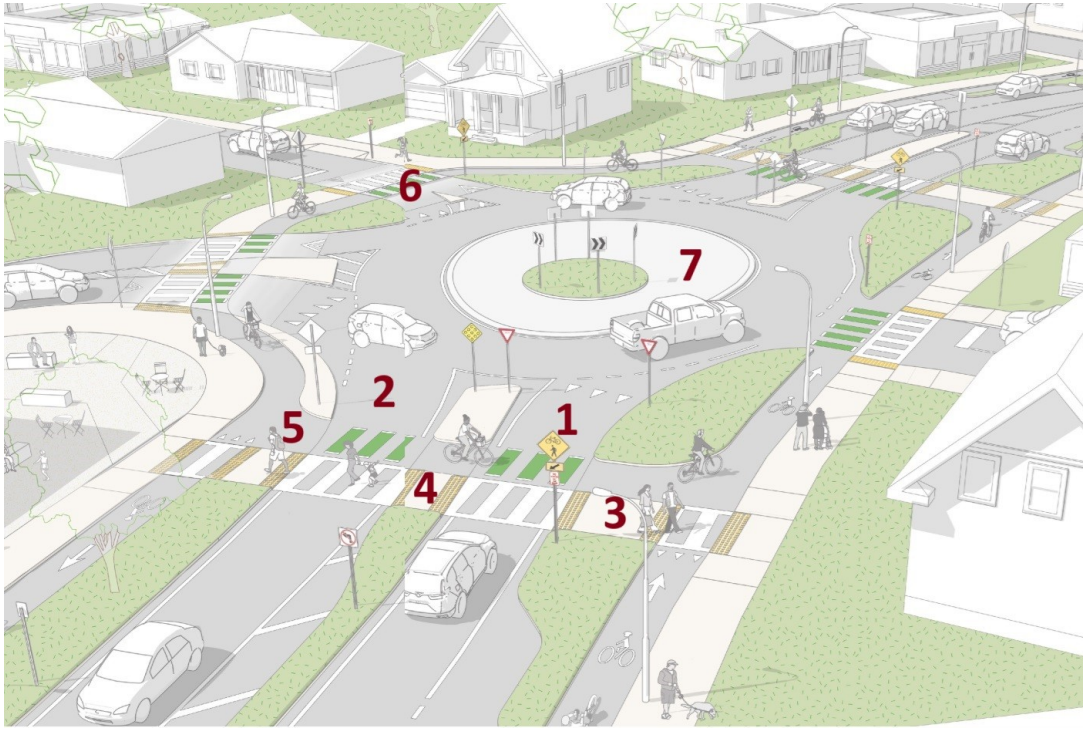
Should be used on smaller intersections.

Side Street Intersection



When a side street meets a main road. Traffic going straight on the main road is given priority.
Example: Diamond/Urban

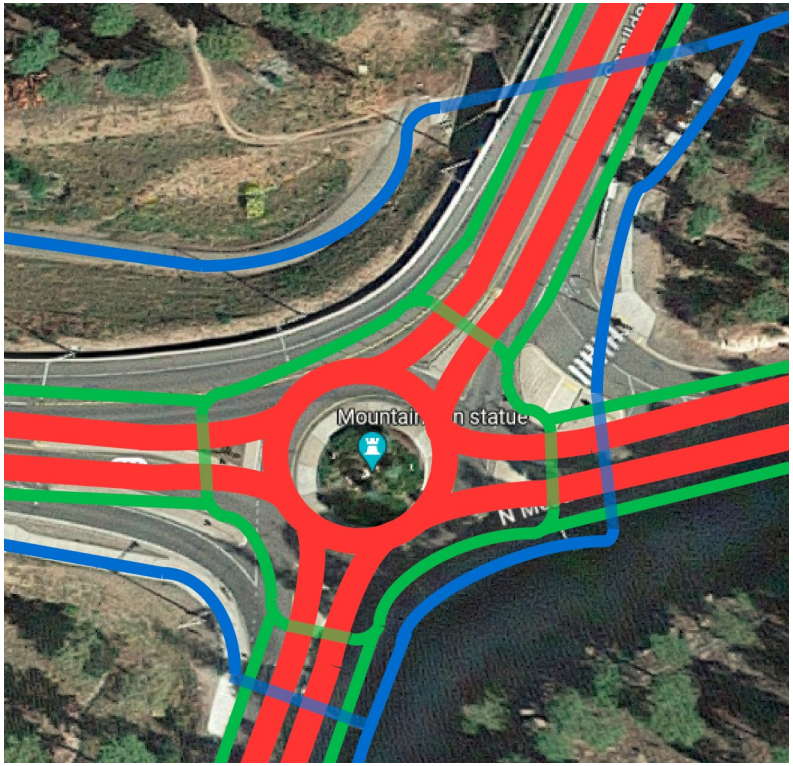
Roundabout



Safe roundabout design:

1&2: motorist waiting zones
3: pedestrian and cyclist queuing area
4: center refuge zone
5: cyclist speed control
6: raised crossing
7: car speed control via center island

Roundabout



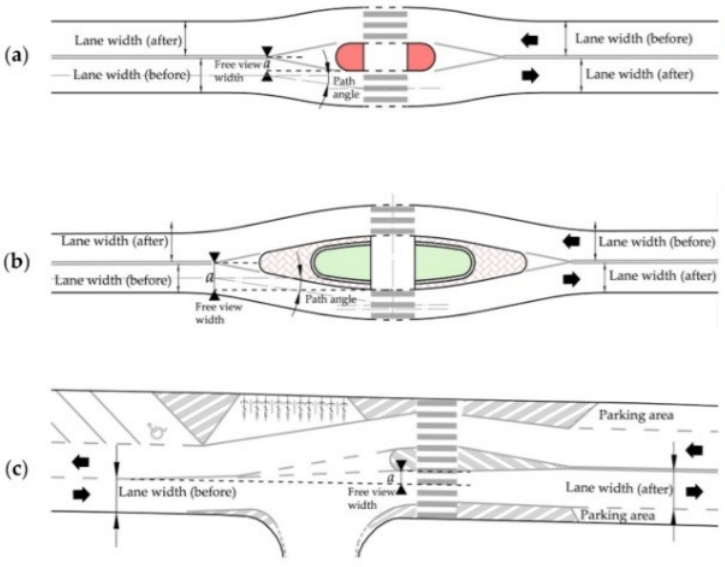
Diamond/San Ildefonso

NM504/Central Avenue/Diamond

Speed Control

Speed table:

Traffic diversion:

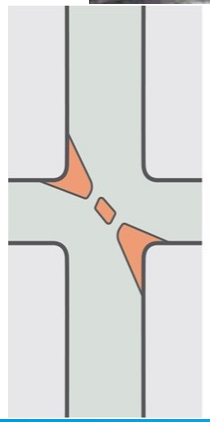


Speed Control

We recommend to rely on physical speed control measures instead on speed limit signs.

We recommend enforcing lower speeds in residential areas.

Central Avenue



We recommend a reduction of though traffic with following options:

- Reduce traffic speed with speed tables and raised crossings
- Turing Central into a one-way
- Model filtering to block through-traffic
- Pedestrianizing

A survey and temporary trail projects can inform decision making.

Education

- Education and educational materials should be easily understandable preferably without the need for literacy and designed for all ages.
- Educational material should be updated as needed.
  For example, did you know that New Mexico adopted the "Idaho stop"?
- Should target all users of the road network, including bicyclists, pedestrians, and car drivers.

Summary

Design cycling infrastructure that is safe and accessible to all ages and abilities of riders. Infrastructure should be intuitive and inherently safe. The more intuitive infrastructure is, the less one needs to rely on education for people to follow the intended design.

Follow recommendations for degree of separation between bikes and motor vehicles by the National Association of City Transportation Officials (NATCO)

Follow designs laid out in NATCO guidelines for ‘Urban Bikeway Design Guide’, ’Don’t Give Up at the Intersection’, and ’Design for all ages and abilities‘.

At traffic lights for pedestrian crossings, install separate bicycle lights or put up signs allowing cyclists to use the ‘Leading Pedestrian Intervals’.

Control vehicle speed using physical measures that encourage drivers to drive at the design speed.

Conduct education campaigns for all those who use the road network, including bicyclists, pedestrians, and vehicular drivers. Educational materials should be easily understandable and designed for all ages.

An Overview of Rewiring America's Energy Coach Program

By: Angelica Gurule

Agenda

3 Introduction

Q: What is Rewiring America's Energy Coach Certification Program?

A: The Electric Coach program is an immersive, cohort-based learning experience for experts who are ready to help their peers and communities do the work to actually electrify.

Visit Rewiring America for more information.

What I Learned

5 Determine Your Electricity Budget

- To identify how many amps you have
- You can find this on your outdoor meter

  CL200 – Continuous Line power

  Your amps are your electricity budget

  Panel trends over the ages:

  Older homes 1960's -1980's
  Have 100 amps

  Homes built after 1980's to today have 200 amps standard

  There are estimations that newer homes need 300-400 amps

6 100 Amp Electrification = Watt Diet

- **Panel upgrade can cost up to $20K**
- **It may be possible to electrify your home on 100 amps**
- **How? It takes finesse.**
  - **Energy Monitor**
  - **Splitter**
  - **Reduce heating and colling loads with weatherization**
  - **Try Level 1 EV chargers instead of a Level 2**
  - **A Level 2 EV Charger can be paired with dryer or a heat pump water heater or other 240 volt items using an auto switch, split circuit, sharing the charge**

***Redwood Energy Watt Diet Calculator**

7 Building Science

- **Thermodynamics – Hot > Cold, and temperature is always trying to equalize**
- **Leakage - Air escapes a home, windows & doors, any place where two materials meet**
- **Infiltration – Air invades a home**
- **Home built 2012+ outperform older ones with lots of weatherization**
- **Modest effort to weatherize a home will lower energy use 12-18% by air sealing and adding insulation**

8 Sweaters...

9 Energy Audits

- Audits are not necessary, but very telling.
- To find an auditor visit: Resnet or BPI
- Blower Door Test – blows 50 pascals similar to blowing 20 mph at all walls at 1 time. This measure air changes per hour. Lower is better.
- Tip – Use caution in doing blower door test in older homes it can stir up vermiculite and asbestos.
- Leakage could be 10-50% of heat load.

10 Calculating Manual J

- **Will help determine the size of a heating system**
- **More in depth than blower test, accounts for size of windows, # of occupants, ceiling height**
- **Determines how much heat needs to be added for comfort = load**

11 Cups...

12 Weatherization Goal

- Stop Leakage – Stop Infiltration!
- Start in the attic (lots of energy waste)
- Basement is next good space

13 Insulation

- Look for reputable sources
- Types:
  - Fiber glass
  - Cellulose
  - Spray Foam
  - Blown insulation (usually cellulose, fiberglass, denim), loose material
  - Batt Insulation: Good for DIY
  - Avoid spray foam with hydrofluorocarbons
  - All have carbon impacts

14 R-Values are Additive

- The higher the R Value the better the performance
- Cover joists
- Don’t cover soffit vents
- Energy travels through wood too
- Uncovered joists conducts heat in/out as a thermal bridge
- R-49 recommended for northern climates

15 DIY Weatherization

- **Attic – If air sealed, add cross batt insulation**
- **Basements – seal gaps with spray foam**
- **Inside home – caulk around window trim, baseboards, outlets, tape off where the duct meets the vent**
- **Doors – install weather stripping and sweeps**
- **Add insulated curtains and blinds**

16 Slow roll on windows

Weatherization 1st

If replacing windows proceed if:

- **Seals are failing/foggy**
- **As part of bigger renovation or addition**
- **U Factor – how well it resists the loss of air-conditioned air, the lower the number the better**

Big 3:

1) Air sealing and insulation are like Peanut Butter and Jelly

2) Attics and basements are most important to insulate and air seal

3) DIY is your friend

17 Heat Pumps

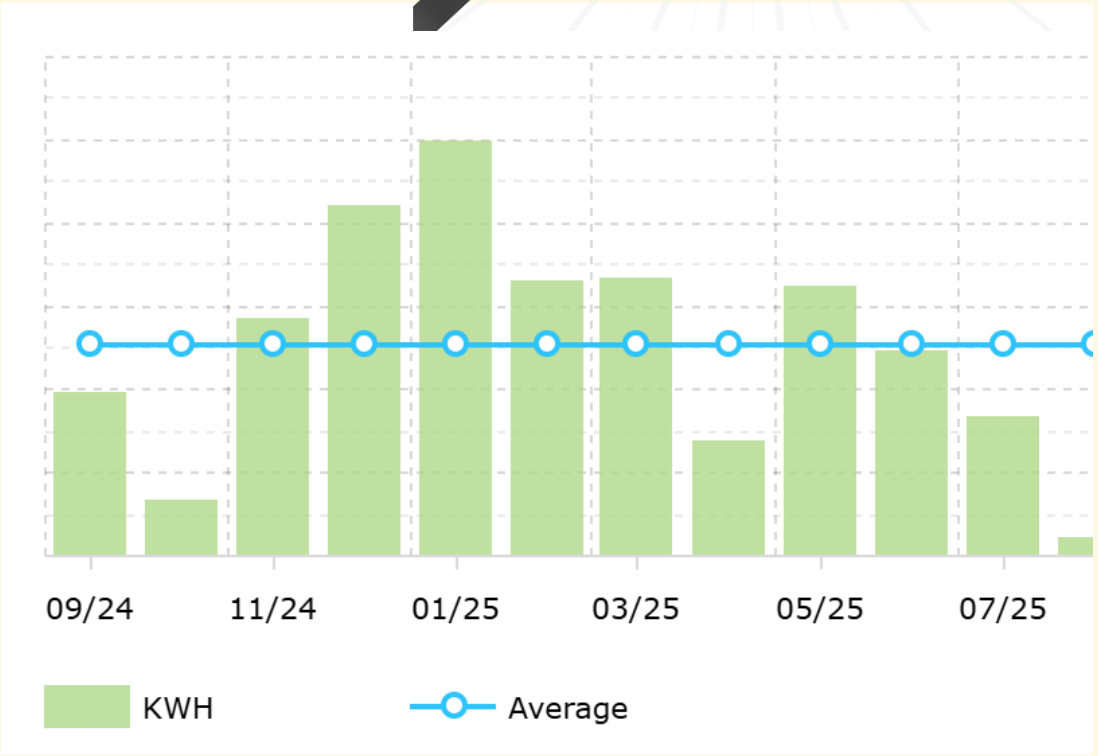
- Easy solution
- 2 in 1 – Heater and airconditioner
- 3-5x more efficient than electric resistance
- 86% of American households can save with medium efficiency heat pumps
- Cold climate heat pumps are ready now
- A solid heat calc can help you pick your equipment
- Good
  - Any place where electricity is cheap and your current heating or A/C unit is at end of life
  - When you want to add cooling or when your boiler or your furnace is at end of life

18 Mini Splits

- Flexible options – single unit & multi-zone units
- The more elements on one unit can decrease efficiency
- Each zone can have it’s own temperature
- Heat pump types: Standard and cold climate
- Tip: Set it and forget it to avoid larger spikes of electricity use

19 My Electrification Story

- I built my home in 2023
- Most windows are south facing providing abundant sunlight and natural light to warm my home and provides a bright living space, this helps reduce heating costs and energy costs
- There is no natural gas service in my area
- Propane is too expensive
- My home is fully electric with high performing weatherization
- The equipment I selected includes: heat pump water heater, electric stove, multi zone ductless mini splits and high efficiency washer and dryer, LED lighting, appliances and
- I can walk into my home on a cold winter night, I often get home after dark and my home is a reasonably comfortable temperature
- My electricity bill ranges from $105 - $200 per month at $.104 per kwh or .16kwh with tax and fees
- I do have a high efficiency wood burning stove I use for heating during winter months. January 2025 I didn't burn firewood due to technical difficulties.
- What happened next: My dad and then my uncle purchased a heat pump to replace propane furnace and to add a/c.



20 Electrification Pathway

Understand Energy Baseline

- Building Science
- Perform home energy audit
- Calculate heating and cooling loads
- Calculate heat load room by room or BTU/hour

Increase Performance & Reduce Load

- Weatherization #1 (Do what you can/ Do what you can afford)
- Before it dies, electrify! (80% of purchases for equipment happen on an emergency basis)
- Find efficient replacements for existing electric equipment

Add New Loads & Add Green Power

- New loads: Induction stoves, EV Charging, Heat Pumps
- Green Power: Solar & Batteries

21 Tax Credits & Rebates

- **Clean Vehicle Credit (30D) - $7,500 to purchase a new EV. Can transfer credit to dealer and convert into upfront discount – Expires Sept. 30**
- **Used EV - $4,000 credit, credit transferable to a dealer for upfront discount**
- **30% Tax credit for residential efficiency and electrification upgrades up to $3,200 per year. HP's and HPWH qualify for $2,000 per year. Also includes credits for insulation/weatherization, doors and windows, panel upgrades, and energy audits. Installations must be made before Dec. 31**
- **30% tax credit for the purchase and installation of solar panels, geo-thermal heat pumps, battery storage, and more. Expenditures (equipment that is installed and ready to be placed in service) must be made before December 31, 2025.**
- **30% tax credit for home EV chargers, up to $1000 per charger, limited to households in rural or low-income census tracts. Chargers must be placed in service before June 30, 2026.**
- **Rebates vary from state to state, check out EMNRD for more information.**

22 Resources

- Rewiring America: https://www.rewiringamerica.org/
  - Tax Credit Resource Hub Coming Soon
  - Savings Calculator
  - Electrification Planner
- Electric Home Show on Youtube: https://www.youtube.com/@ElectricHomeShow
- Efficiency Maine Calculator: https://www.efficiencymaine.com/
- Coolcalc for Single Family Homes: https://www.coolcalc.com/
- Watt Diet Calculator: https://www.redwoodenergy.net/watt-diet-calculator
- Volts Podcast by David Roberts: https://www.volts.wtf/podcast
- NY Times Wirecutter: https://www.nytimes.com/wirecutter/
- ElectrifyPortland.org
- Green Home Institute Webinars
- Thermentor a tool for estimating heating loads with gas bill
- Circuit Breakers – Debunking electrification myths
- Department of Energy & Heatmaps news
- Green & Health Maine Homes: https://greenmainehomes.com/
- The Build Show by Matt Risinger
- Undecided with Matt Ferrell
- Energy Vanguard with Allison Bailes
- This Old House
- Green Building Advisor
- Electrek
- Canary Media
- Shift Key Podcast
- Nate Adam's Home Comfort Book

Questions?

Thank you

Angelica V. Gurule

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