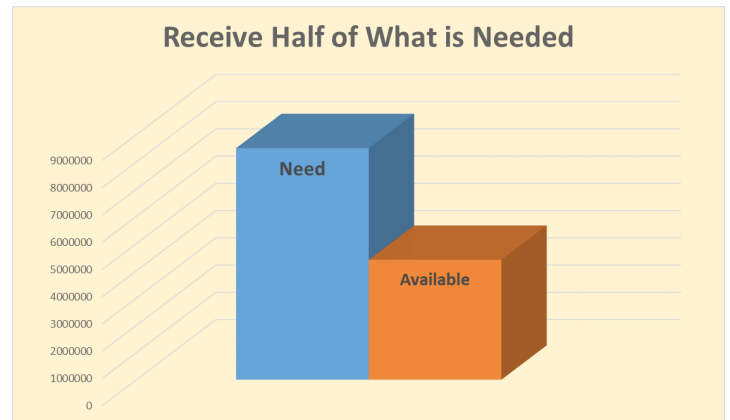


The Challenge

- The City maintains about 1,000 lane miles of asphalt roadway
- Proper asphalt preventative maintenance requires maintaining 100 lane miles per year at a cost of about \$8.5 million
- The City has on average \$4.4 million per year available for roadway maintenance—about half of what is needed
- Maintenance funds generally come from the Gas Tax paid at the pump
- Gas Tax is distributed to local government based upon road lane miles and population



Arterial RCC

A Solution

- As a possible solution to this challenge, the City of Roseville is looking into using RCC for new or reconstructed roadways
- RCC is a relatively dry concrete mix that is installed with a paving machine and then rolled just like asphalt
- This installation method keeps construction costs lower than conventional concrete and very competitive with asphalt
- RCC is generally 4" to 10" thick, installed in a single lift, and **does not** contain any reinforcing steel

- Additional benefits of RCC include reduced maintenance, cooler roads during the day, and brighter roads during the night
- RCC can operate for 20 to 25 years without maintenance while AC requires resurfacing every 7 to 10 years
- If we construct the City's new roadways with RCC, the increasing lane miles and associated population will increase the City's share of Gas Tax while the total lane miles of asphalt roadways requiring short term maintenance will remain unchanged and thereby reduce the roadway maintenance structural deficit



Residential RCC

Questions

How do we access our utility under RCC? Since it is an unreinforced concrete pavement of similar thickness to most of our asphalt roadway, you would use similar access techniques as you would on asphalt roadways—a concrete saw and jackhammer.

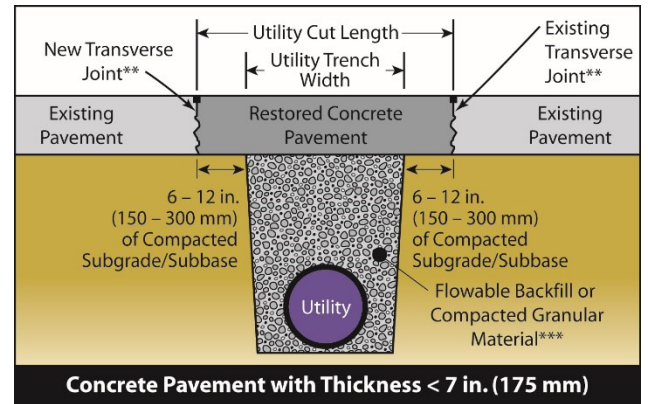
How do we patch the RCC? It is impractical to mix and pave small patches of RCC. Therefore, the use of conventional or rapid set concrete is acceptable.

Are there any special requirements or techniques for RCC patches?

- Trench cuts must be in straight lines parallel with existing saw cut lines
- The entire panel width and half the panel length must be removed and replaced
 - The replaced panel must be bordered by at least one existing transverse saw cut line.
 - Utility penetrations must be repaired with a diamond shaped concrete collar that intercepts the crack control grid and may require expansion joint material at the RCC concrete collar interface.



RCC Section



RCC Utility Trench



RCC Concrete Patch

Pilot Project

- The City of Roseville is preparing to begin the design phase of a pilot RCC project
- Design will begin this fall with construction beginning next summer
- The pilot project is broken up into three locations in order to test varying construction techniques, traffic conditions, and finishes



RCC Utility Collar

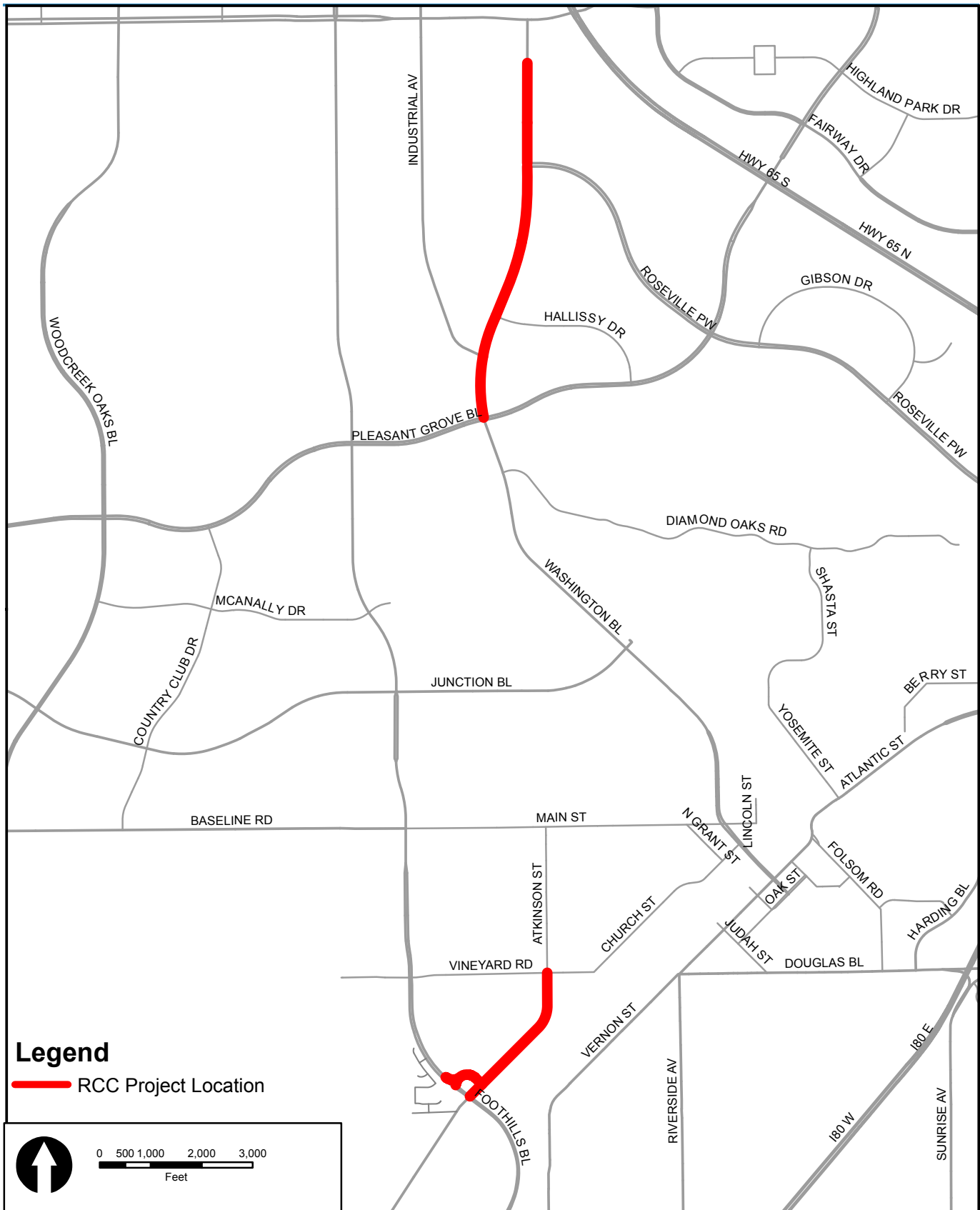
- The locations include:
 - Washington from Pleasant Grove to just north of Mountain Park Drive
 - Atkinson from Church through and including all of Denio Loop
 - A small section of a residential street
- Visit roseville.ca.us/RCC to learn more.

Contact

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RCC Sample Crack Control Pattern



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