



Discussion: Nighttime Construction

May 1, 2024



Discussion Outline

1. Allowed Construction Hours
2. Private Development Night Work & Construction Considerations
3. Public Works Night Work
4. CIP Night Work



QC: Construction Hours

1. 6:00 am – 7:00 pm (Mon.-Fri.)
2. 5:00 am - 7:00 pm (Mon.-Fri.) *summer months*
3. Saturdays (7:00 am – 5:00 pm) throughout the year
4. Sundays & Holidays = No Construction allowed



Nighttime Construction

- “NHCP” – Nighttime & Holiday Construction Permit
- Established in 2022
- For unique Construction Projects (Private and Public)



Nighttime Construction

- + Construction projects completed faster
- + Some unique jobs (concrete) need to be completed at night
- + Easier to get large trucks/vehicles to the site
- - Potential Noise impacts
- - Potential Light impacts
- - Disrupting sleep of Town residents



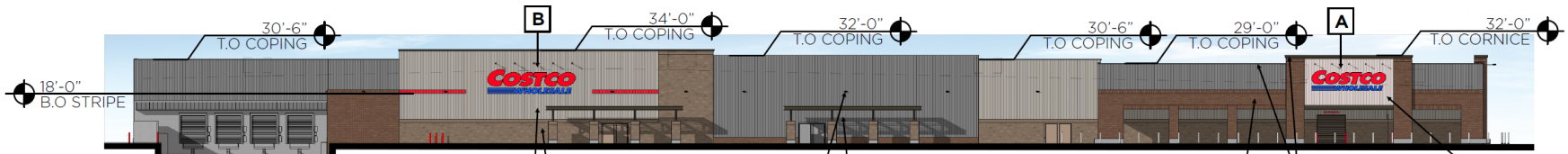
Nighttime Construction Permit Application



1. A complete schedule showing the specific dates with start and end times nighttime/holiday work is proposed to be performed;
2. A detailed description of the work to be performed on each date (delineating times when specific activities will be performed);
3. The type, size and amount of equipment, including vehicles (*i.e.*, concrete and delivery vehicles), to be used on each specific date;
4. A detailed sound and light mitigation plan, if required; and
5. A detailed plan for providing notice to the surrounding neighborhood including who will receive notice, and the methods, substance and times when notice will be provided, and a 24-hour contact for complaints.

Costco 2022: Nighttime Construction

1. April 1 – 264 Cubic Yards = 26 Concrete Trucks
 2. April 4 – 334 Cubic Yards = 33 Concrete Trucks
 3. April 5 – 269 Cubic Yards = 27 Concrete Trucks
 4. April 7 – 301 Cubic Yards = 30 Concrete Trucks
 5. April 11 – 381 Cubic Yards = 38 Concrete Trucks
 6. April 12 – 329 Cubic Yards = 30 Concrete Trucks
 7. April 14 – 187 Cubic Yards = 18 Concrete Trucks
 8. April 18 – 312 Cubic Yards = 31 Concrete Trucks
- **TOTAL = 233 Concrete Trucks**



QUEEN CREEK STATION RESIDENTS

MAYBERRY RD.

APN 314-07-623
PROPERTY ADDRESS N/A

APN 314-07-623
PROPERTY ADDRESS N/A



206TH PL.

SITE LIGHTS: THE LIGHTS WILL BE POINTING AGAINST THE RESIDENTS TO MITIGATE LIGHT EXPOSURE.

APN 314-07-322A
20220 S. ELLSWORTH RD.
QUEEN CREEK, AZ, 85142

COSTCO
WHOLESALE

QUEEN CREEK RD.

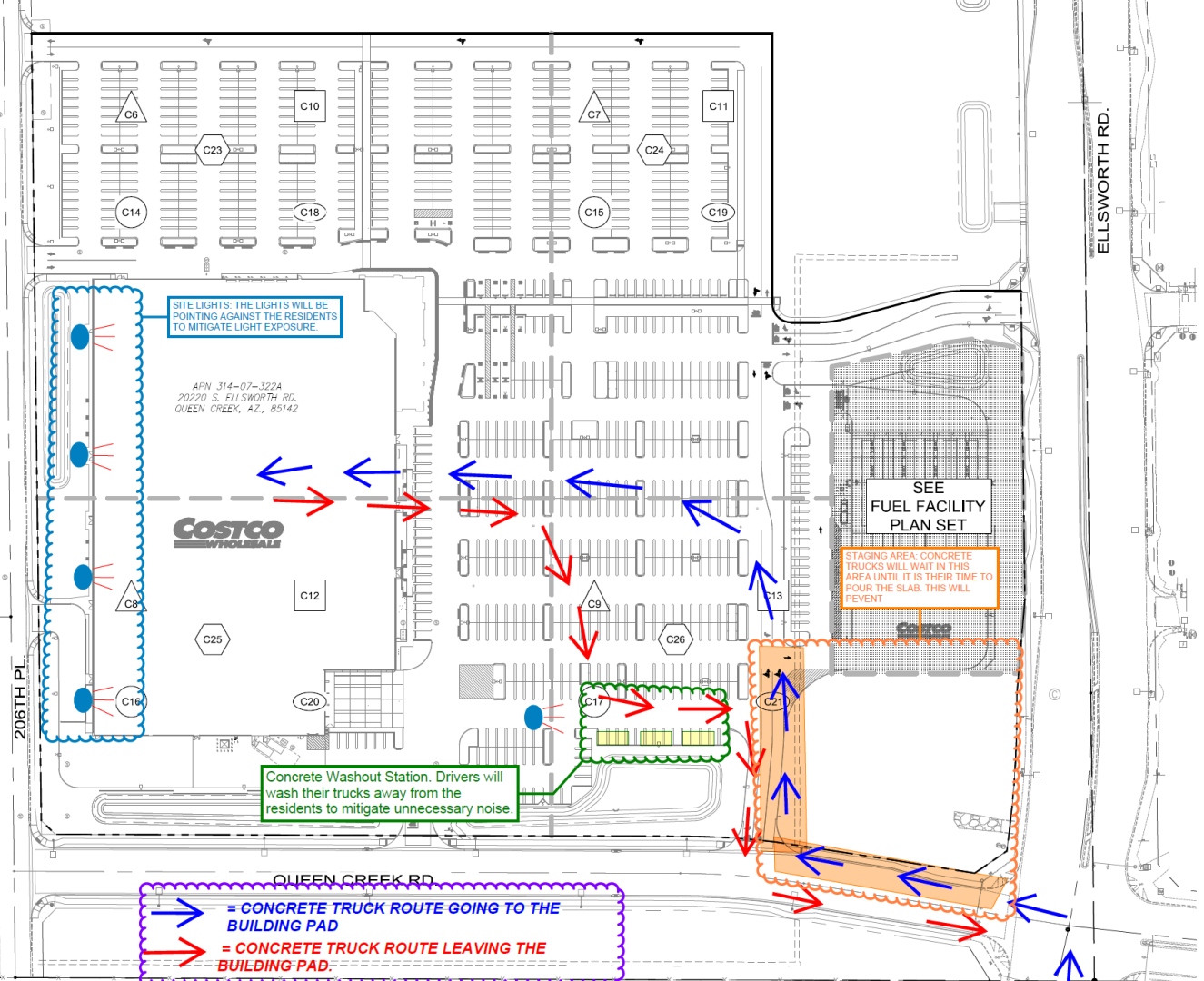
-  = CONCRETE TRUCK ROUTE GOING TO THE BUILDING PAD
-  = CONCRETE TRUCK ROUTE LEAVING THE BUILDING PAD.

Concrete Washout Station. Drivers will wash their trucks away from the residents to mitigate unnecessary noise.

SEE FUEL FACILITY PLAN SET

STAGING AREA: CONCRETE TRUCKS WILL WAIT IN THIS AREA UNTIL IT IS THEIR TIME TO POUR THE SLAB. THIS WILL PEVENT

ELLSWORTH RD.





Public Works Night Work

Pavement Preservation Projects



Pavement Preservation Definition

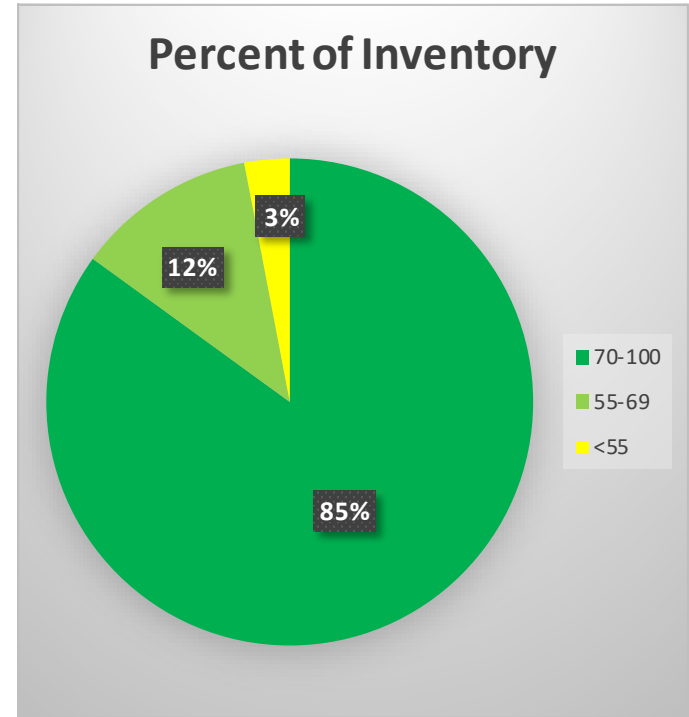
Federal Highway Administration (FHWA) guidance describes preservation as work that is planned and performed to improve or sustain the condition of the transportation facility in a state of good repair. A common *mantra* of pavement preservation is keeping good roads good. Constructing quality pavement preservation treatments when the pavement condition is still satisfactory can impede deterioration, extend service life, and improve functionality in a cost-effective manner while also enhancing safety and contributing to customer satisfaction.



Pavement Condition







PCI RANGE		Typical Repair Strategy
86-100		PREVENTIVE MAINTENANCE
71-85		REHABILITATION
56-70		
41-55		RECONSTRUCTION
26-40		
11-25		
0-10		



Types of Pavement Preservation Strategies



Type of Maintenance	Repair Activities	Ave Cost
Preventive Maintenance	Rejuvenator, Seal Coat, Crack Seal, Chip Seal	\$0.35 sq/ft
Repairs	Patching, Mill & Fill, Overlay	\$3.77 sq/ft
Reconstruction	Remove pavement structure and rebuild	\$15.78 sq/ft

	PCI	REPRESENTATIVE PAVEMENT SURFACE	REPAIR ACTIVITIES
ROUTINE MAINTENANCE	86 - 100		Pavements with PCI indexes above 85, or 'Good' may require periodic joint/crack sealing and local patching.
PAVEMENT PRESERVATION	65 - 85		Pavements with PCI conditions ranging from 'Satisfactory' to 'Good' may require surface treatments (seal coat), thin overlays, and/or joint/crack sealing.
MAJOR REHABILITATION	40 - 64		Pavements that have deteriorated below a PCI 64, or within the range of 'Poor' to 'Fair' conditions may require major rehabilitation such as pavement mill and overlay or PCC restoration activity.
MAJOR RECONSTRUCTION	0 - 39		Pavements that have deteriorated below a PCI 40, or within the range of 'Failed' to 'Very Poor' conditions may require major reconstruction.

What Will \$1,000,000 Buy?



1 lane-mile of reconstruction



5.7 lane-miles of asphalt repairs



63 lane-miles of preventive maintenance



CIP Nighttime Construction

Why has CIP used night work?

- When the impact to the traveling public would be substantial.
- To complete large concrete pours to allow for curing prior to temperatures getting to hot.





Night work for CIP Projects Pro/Con

- Pros
 - Able to complete work with less traffic impact.
- Cons
 - More expensive (shift differential, lighting)
 - Loss of staff time
 - Loss of production
 - May create unsafe work zone due to light and dark areas. (equipment movement, trench work)
 - More disturbing to residents in their homes.
 - Material deliveries may not be available.

Examples

- ASLD Infrastructure:
 - Placing traffic control barriers at the intersection of Ironwood Road and Germann Road. This restricted Ironwood to 1 lane in each direction and closed Germann Road for several hours.



Examples

- Meridian Road and Queen Creek Road Intersection:
 - Intersection closure to remove existing asphalt prior to the restart of construction at the intersection.





Discussion - Questions?