

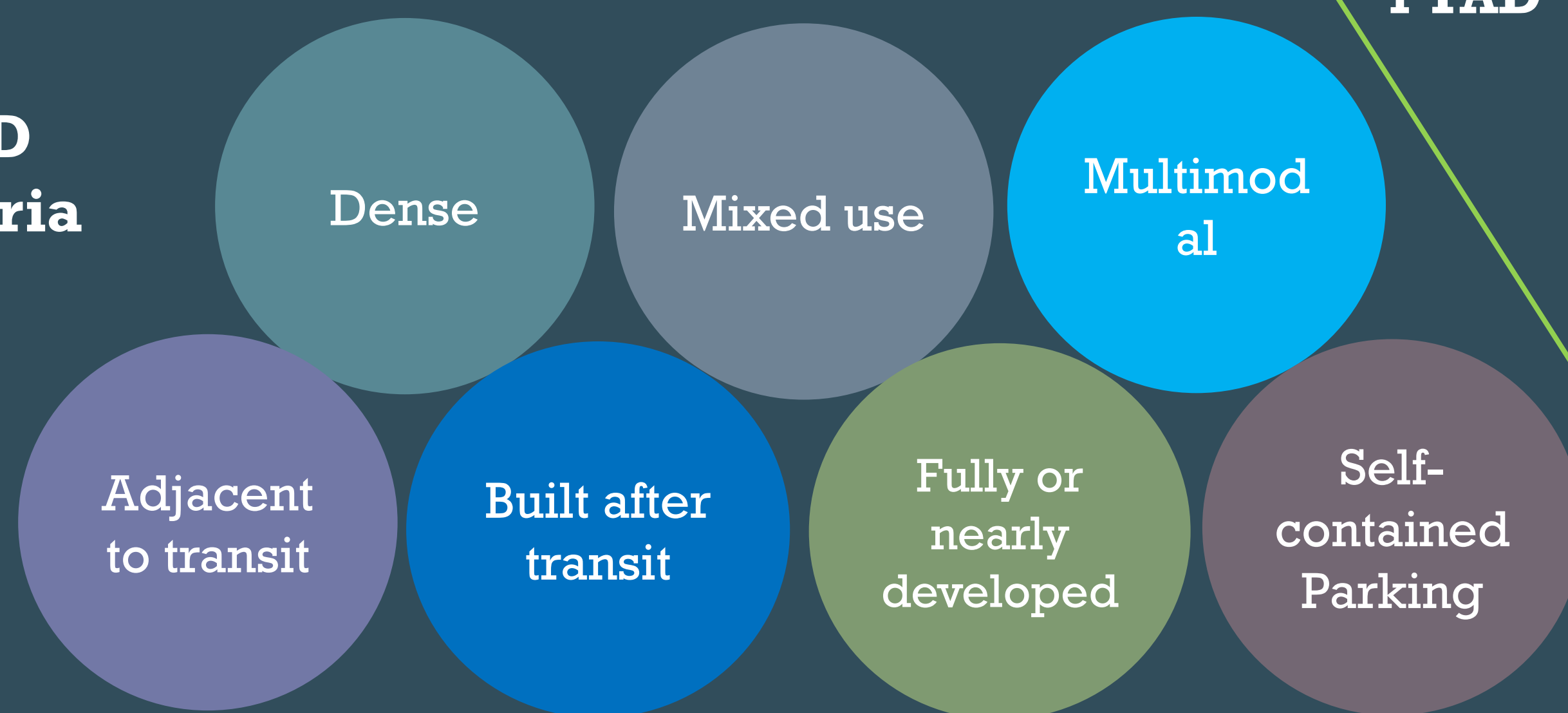
Parking Occupancy and Shared Parking: Comparative Case Studies of Parking Reduction at Transit-Oriented Developments in the U.S.

WHY THIS STUDY?

This study aims at addressing the question of parking supply and demand at transit-oriented developments (TODs) through comparative case studies of six TODs and one transit-adjacent development (TAD) in the U.S. This is one of the first studies to estimate peak parking-generation rates for TODs.

METHODS

TOD Criteria



6 TODs + 1 TAD

Selecting TODs

Identifying candidates based on teaming partners, regional transit operators and/or metropolitan planning organizations' feedback

Reviewing candidate sites with Google Earth imagery and Google Street View (face validity)

Visiting each of the metropolitan areas and taking transit from one candidate station area to the next

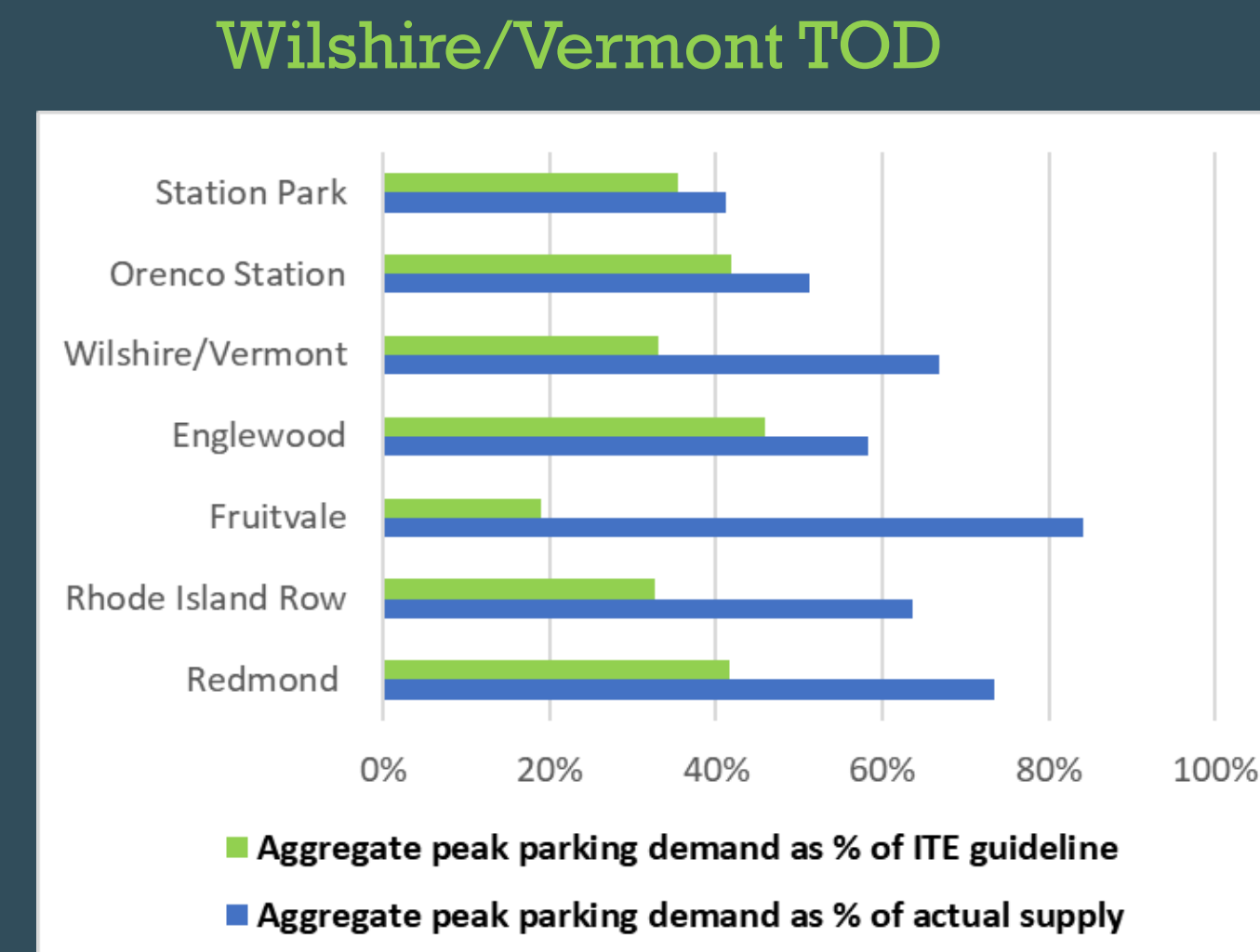
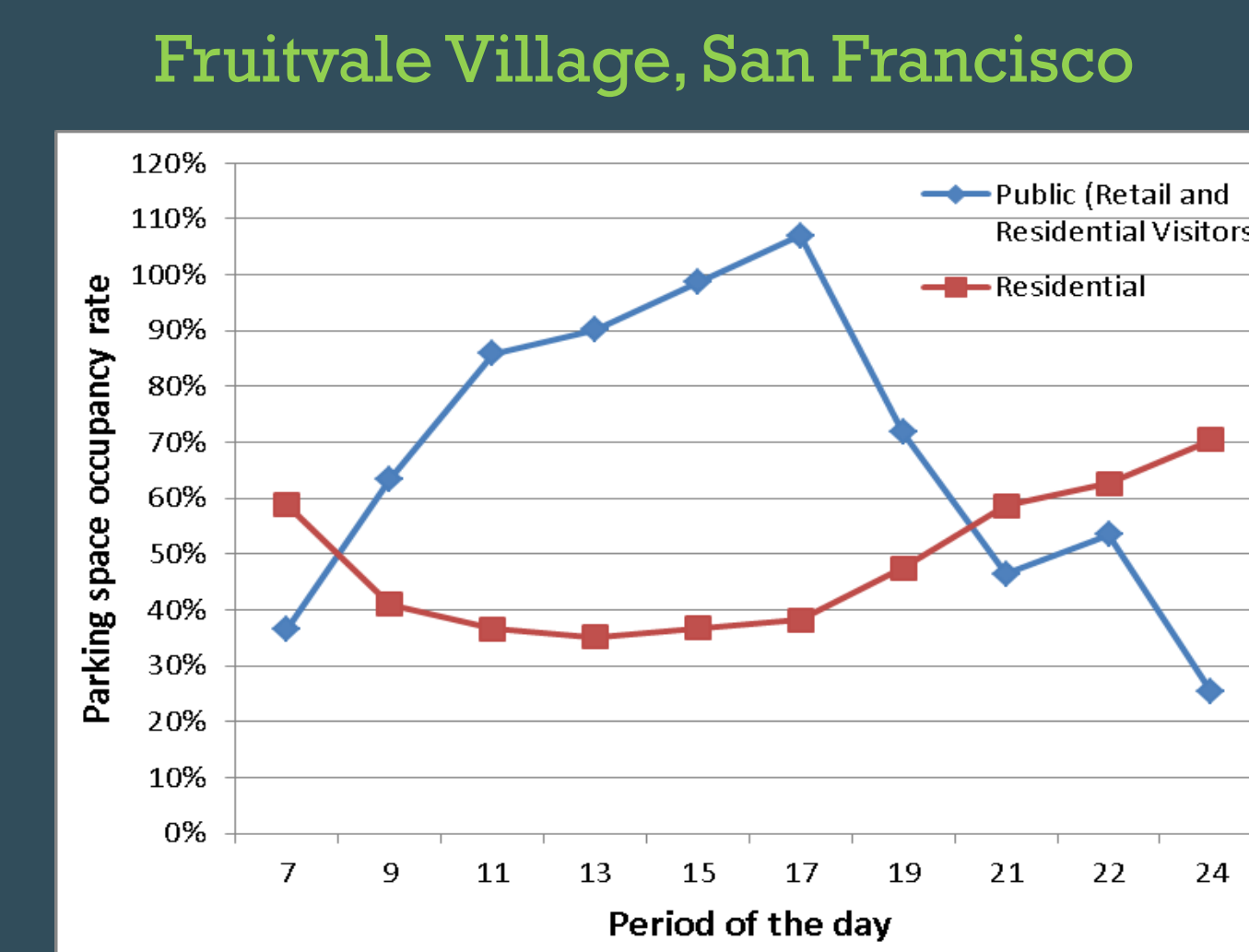
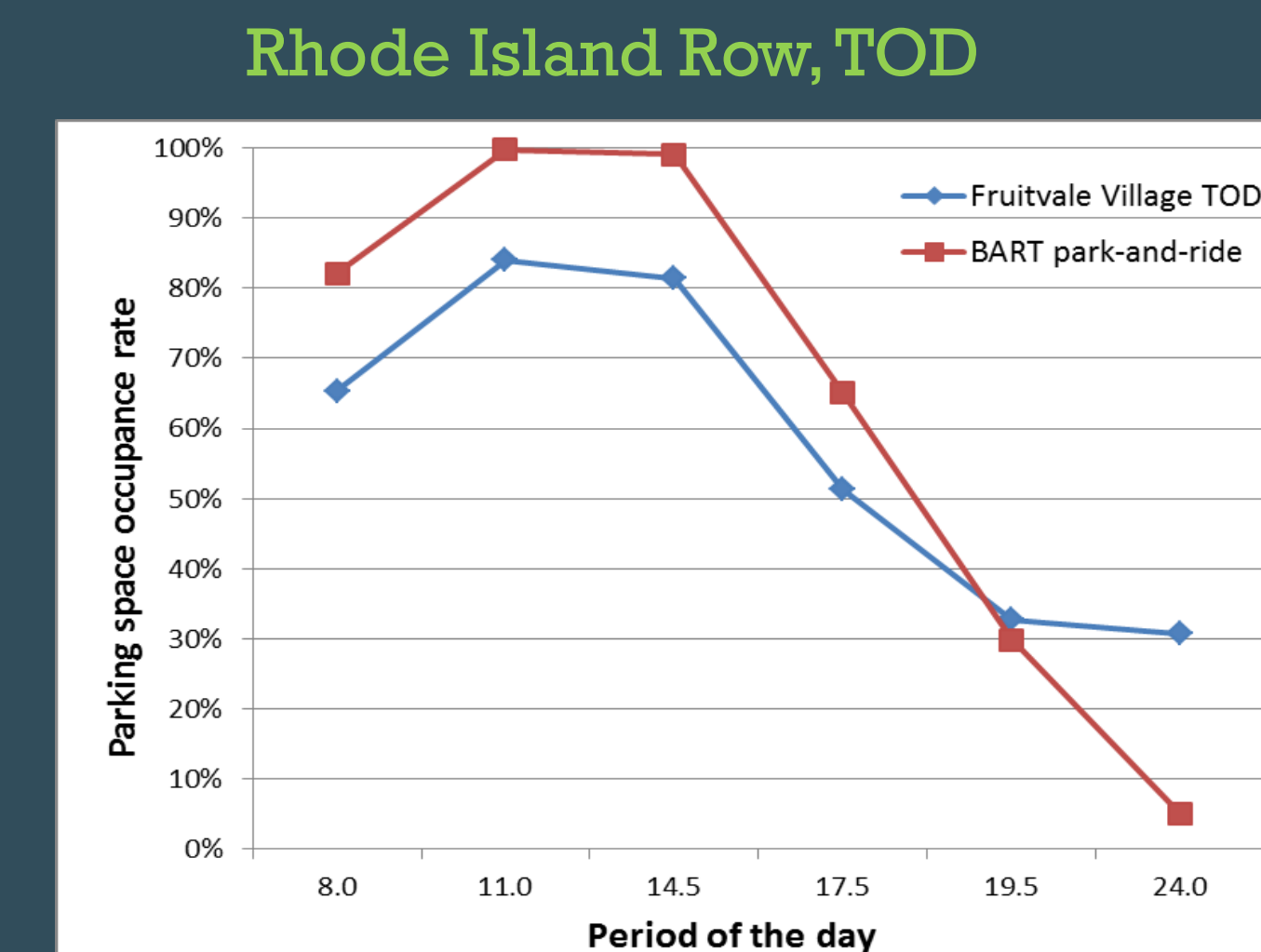
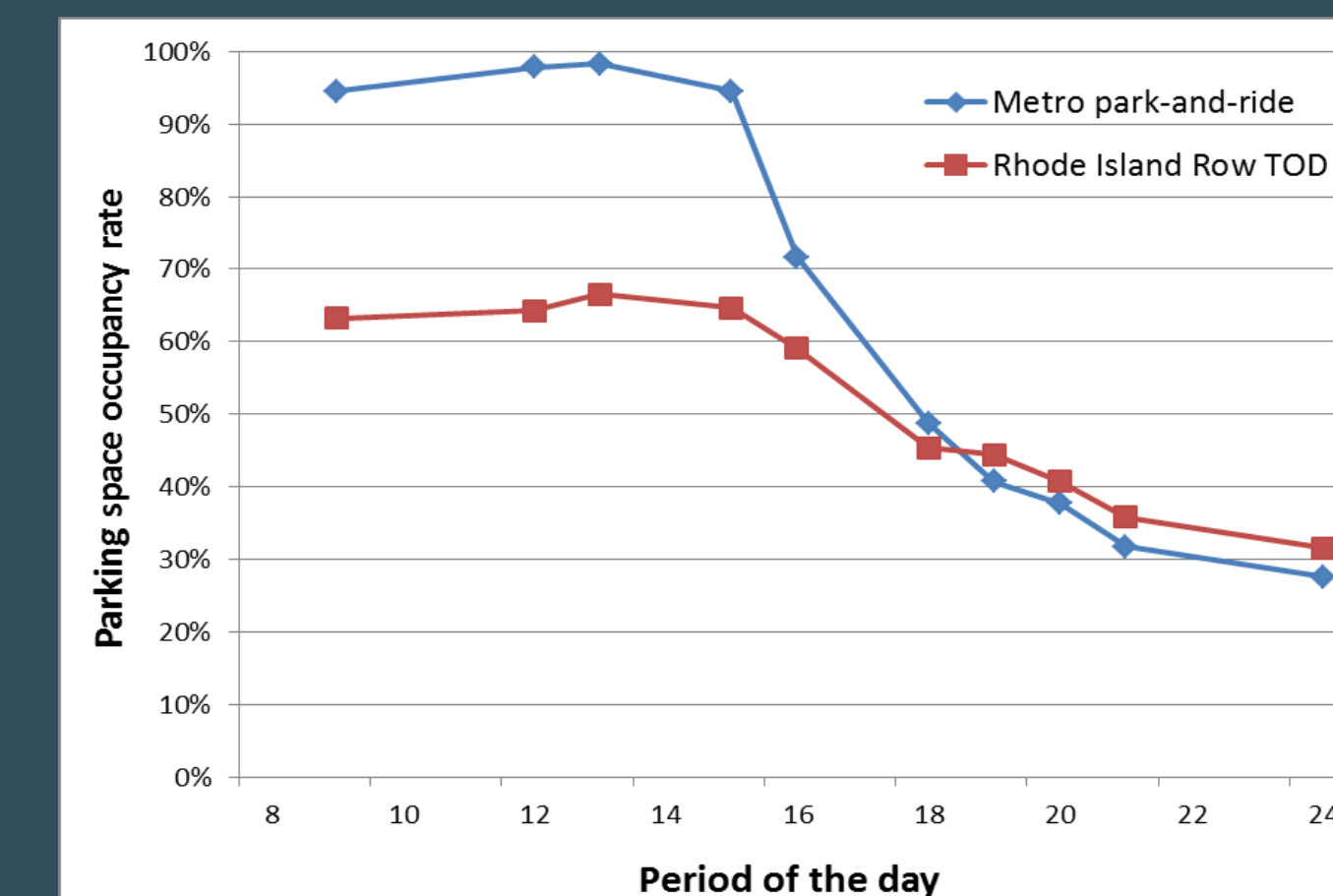
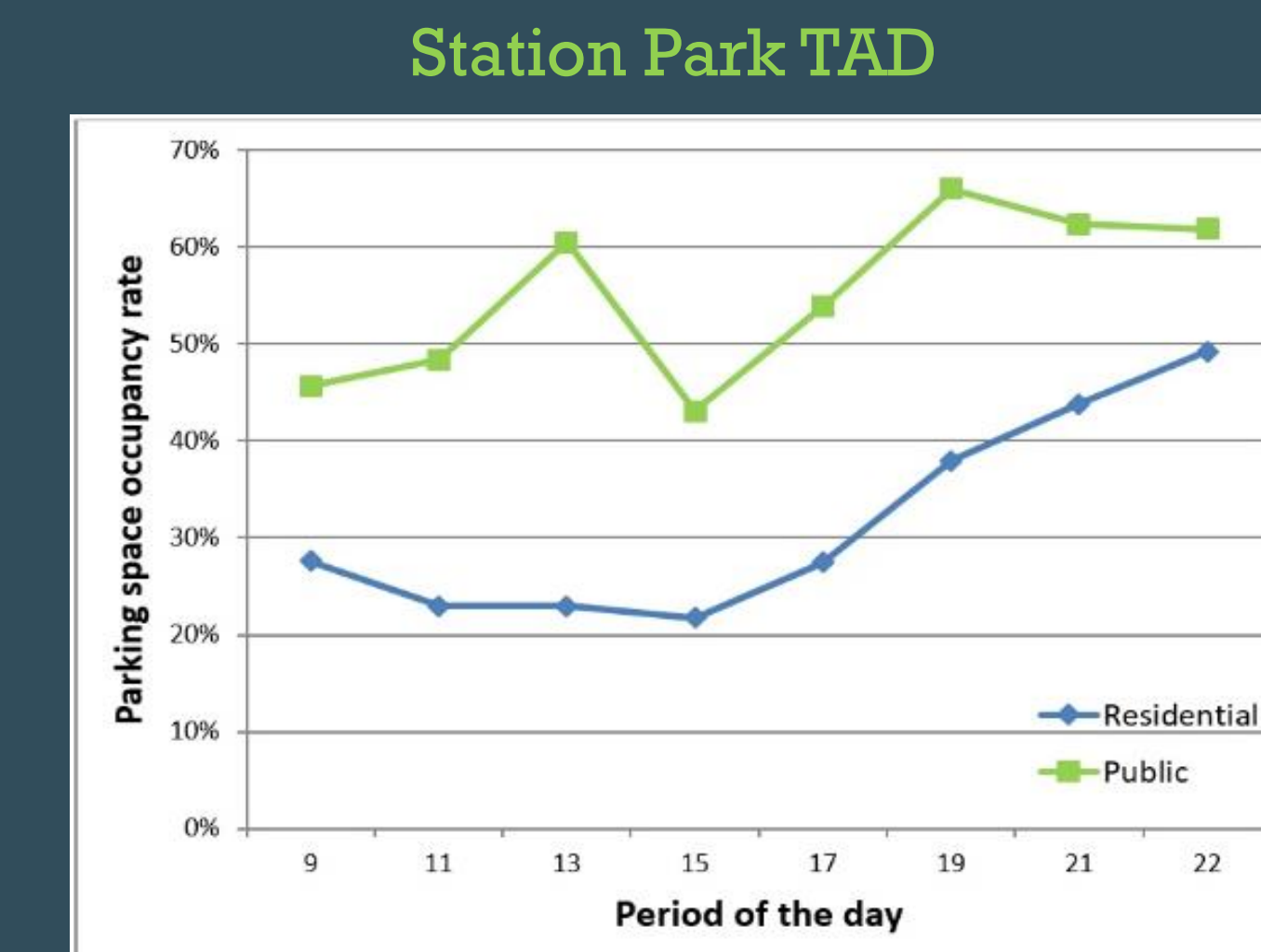
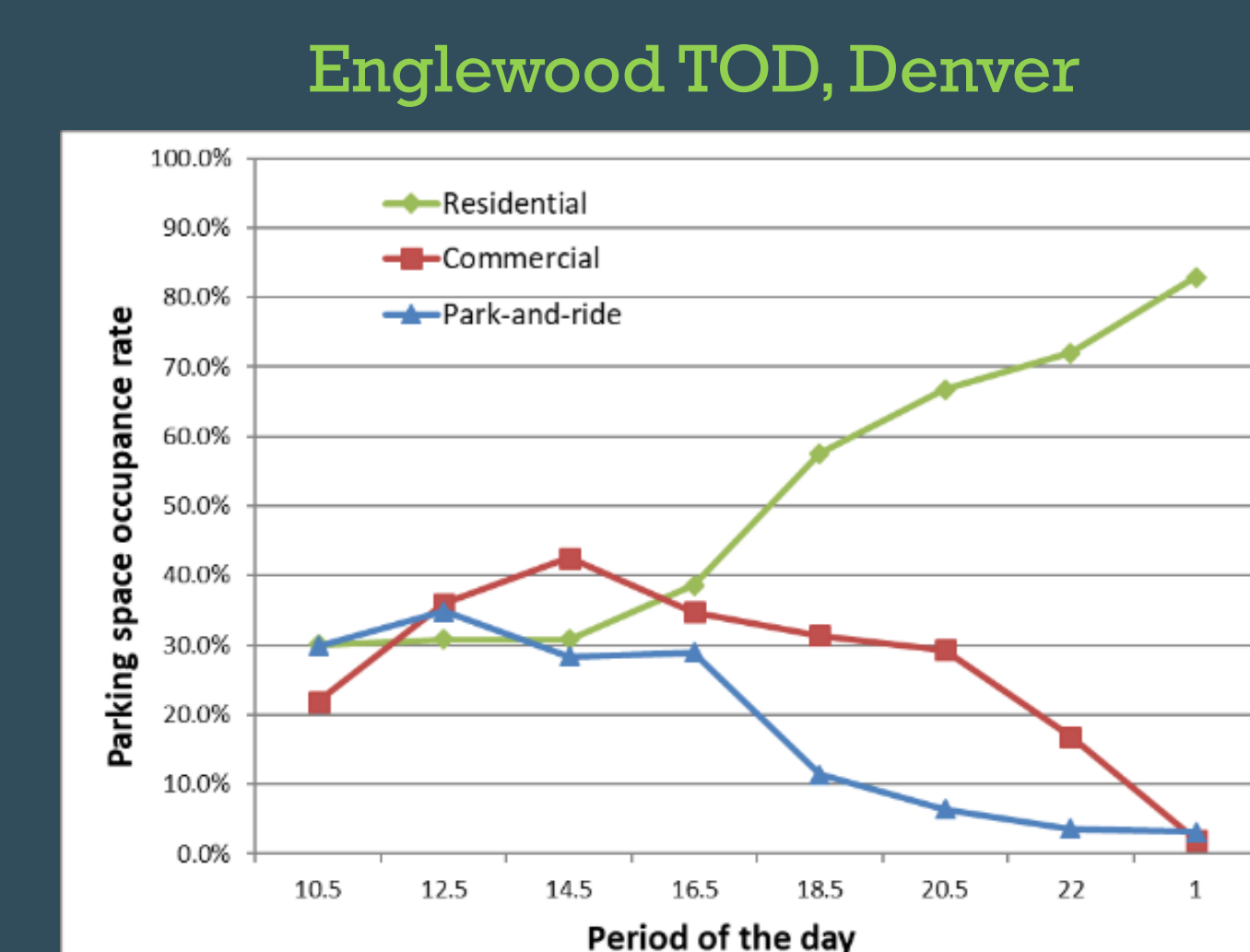
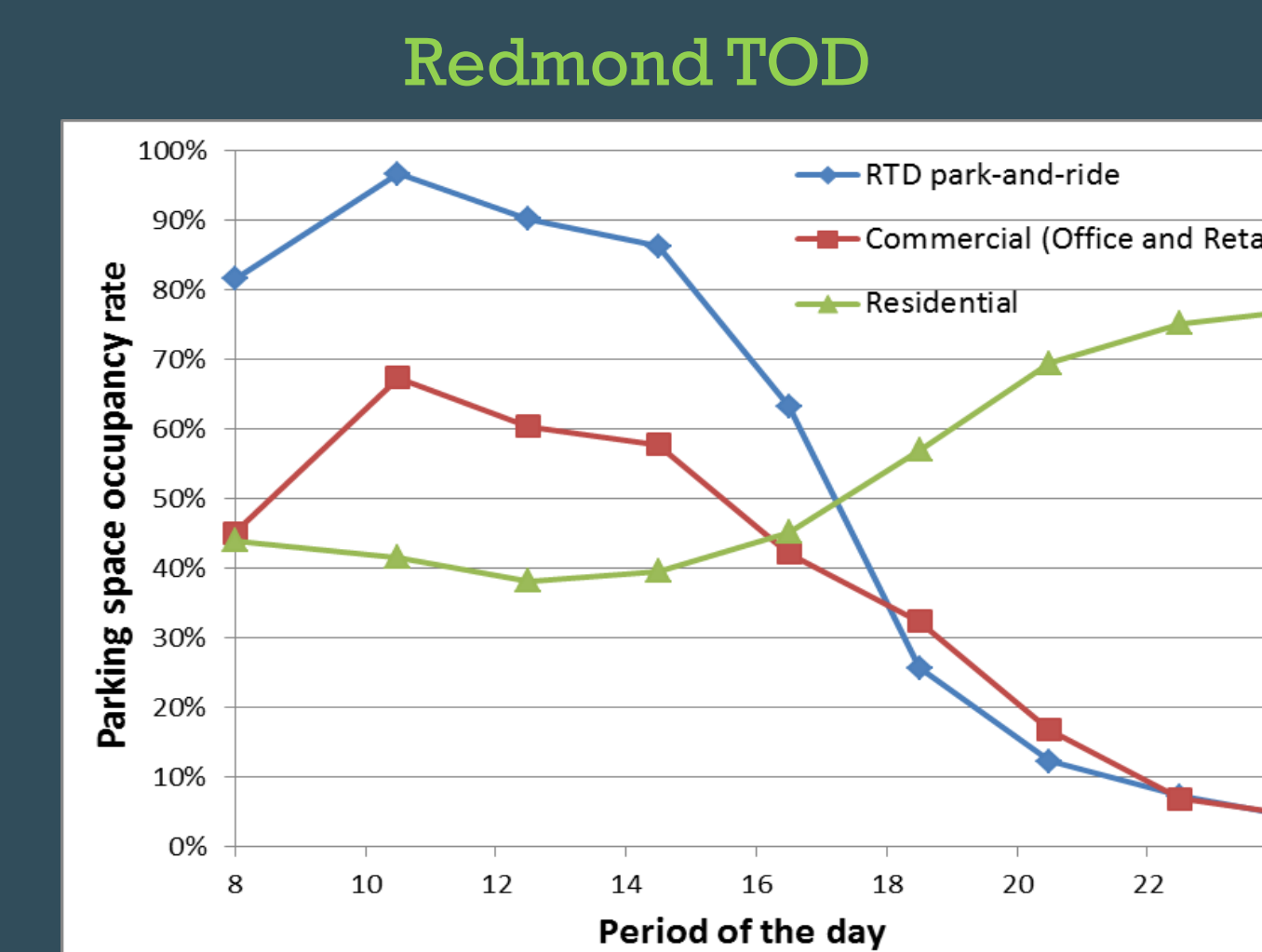
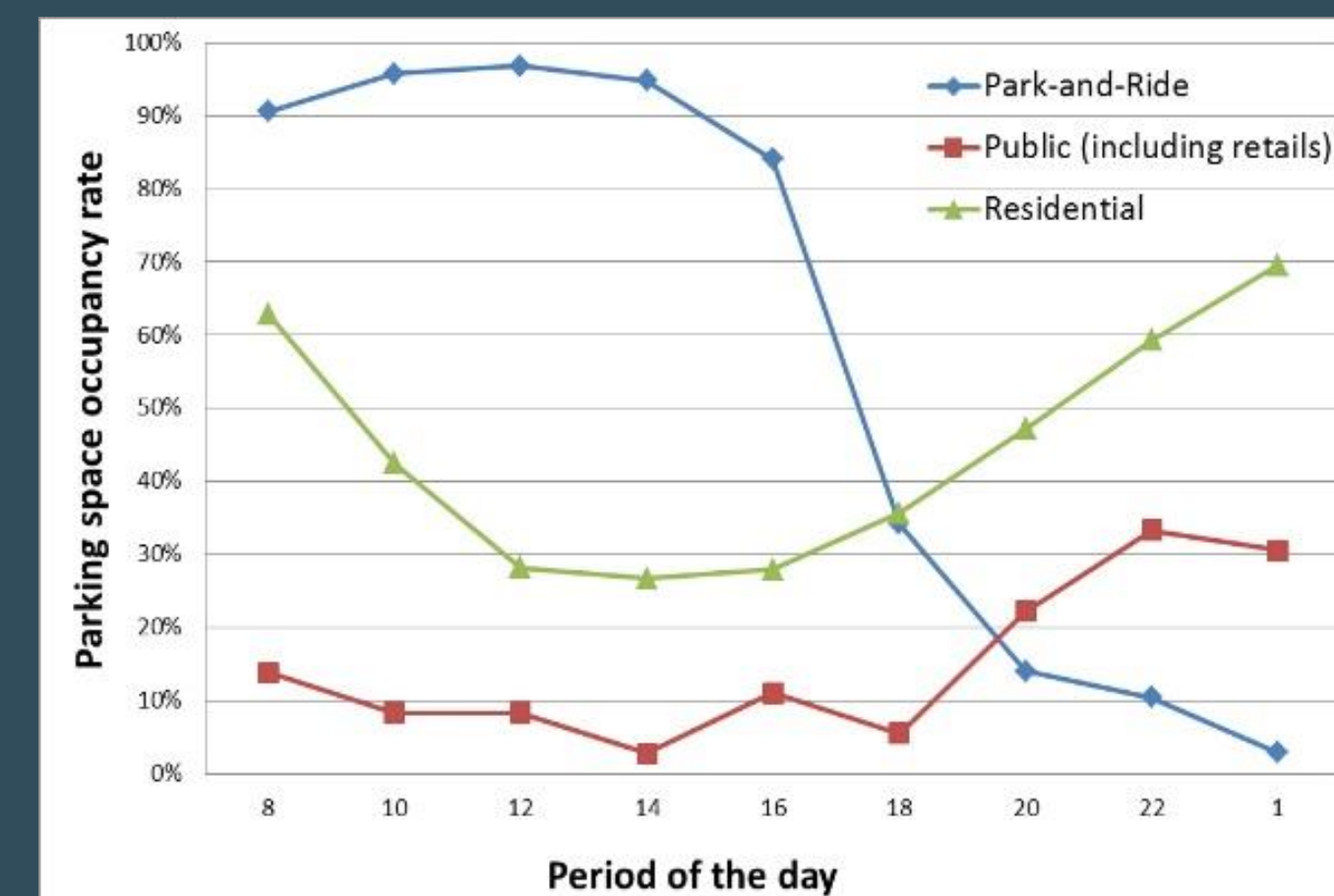
Data Collection

Full count of all persons entering and exiting commercial/residential buildings

Brief intercept survey of a sample of individuals entering and exiting the buildings

Parking inventory and occupancy surveys of off-street parking

RESULTS



TOD Profiles

| TOD | Gross Area (acres) | Gross Residential Density (units per gross acre) | Net Residential Area (acres) | Net Residential Density (units per net acre) | Gross Commercial FAR (for retail and office uses) |
|-------------------|--------------------|--|------------------------------|--|---|
| Redmond TOD | 2.5 | 129 | 2.5 | 129 | 0.11 |
| Rhode Island Row | 6 | 46 | 6 | 46 | 0.27 |
| Fruitvale Village | 3.4 | 14 | 3.4 | 14 | 0.94 |
| Englewood | 30 | 15 | 10.7 | 41 | 0.25 |
| Wilshire/Vermont | 3.2 | 140 | 3.2 | 140 | 0.27 |
| Orenco Station | 60 | 32.4 | 60 | 32.4 | 0.10 |
| Station Park | 115 | 4.1 | 20 | 23.3 | 0.23 |

Residential Parking Supply and Peak Demand

| TOD | ITE supply (spaces/unit) | TOD supply (spaces/unit) | TOD peak demand (occupied spaces/unit) | TOD supply as % of ITE supply | TOD peak demand as % of TOD supply |
|------------------|--------------------------|--------------------------|--|-------------------------------|------------------------------------|
| Redmond | 2.0 | 1.19 | 0.86 | 59.5% | 72.3% |
| Rhode Island Row | 1.4 | 0.81 | 0.44 | 57.9% | 54.3% |
| Fruitvale | 1.4 | NA | 1.02 | NA | NA |
| Englewood | 1.4 | 1.6 | 1.29 | 114.3% | 80.6% |
| Wilshire/Vermont | 2.0 | 1.10 | 0.81 | 55.0% | 73.6% |
| Orenco Station | 1.6 | 1.08 | 0.63 | 68.0% | 51.2% |
| Station Park | 1.4 | 1.13 | 0.97 | 80.7% | 82.9% |

CONCLUSION

In almost all cases, the TODs in this study supply much less parking than is called for in ITE guidelines. Despite these supply restrictions, demand for parking at TODs (and TAD) is well below the supply. That is to say, TODs are generally over-parked. The most important parking policies that need to be improved are: 1) Shared parking. There is a dearth of it, though opportunities abound; 2) Bundled residential parking. At some TODs, a parking space/permit comes with each apartment whether the renters want it and use it or not. Parking is effectively free; 3) Free commercial parking, the counterpart of bundled residential parking.

Redmond TOD, Seattle



Rhode Island Row, Washington D.C.



Fruitvale Village, San Francisco



Englewood TOD, Denver



Wilshire/Vermont, Los Angeles



Orenco Station TOD, Portland



Station Park TAD, Salt Lake City Region

