

ACCELERATED ROUNDABOUT DESIGN

The Critical Role of Communication

PROJECT PURPOSE

Roundabouts are an increasingly common feature in the United States roadway network because of safety and efficiency benefits. Many project teams are comfortable working together to create a constructible set of roundabout documents that undergo an extensive review process. Occasionally, the need to expedite the design phase arises in cases of time-sensitive funding, high collision history, or development near an intersection. For the purpose of this research, an accelerated design period is nine months or less.

When the design phase is accelerated, the industry standard communication and review process may be altered. The objective of this research is to determine what, if any, changes are expected or preferred by roadway owners and reviewing agencies during the accelerated design process. Is the frequency or means of communication altered? Are project constraints and stakeholder management affected? How does the review process change? This information may assist teams in functioning cohesively and creating a successful project.

To better understand the differences between typical and aggressive schedules, three projects were examined as case studies. We interviewed agencies and contractors to compare communication tactics. A summary of the projects, client perspectives, and lessons learned follow.

CASE STUDIES

PIONEER HIGHWAY / FIR ISLAND ROAD ROUNDABOUT *Conway, Skagit County, Washington*

Skagit County desired to improve traffic flow and safety at two closely spaced intersections located 110 feet apart and 800 feet west of Interstate 5 ramps. In 2013, the County received a federal grant as part of FHWA's Quick Response Safety Program to construct a five-leg single lane roundabout at Pioneer Highway and Fir Island Road with the aim of reducing fatal and serious injury collisions. In addition to handling local traffic, the intersection serves the agricultural and heavy trucking industries; over-size over-weight vehicle detours; and is a gateway for tourism to the Skagit County Tulip Festival.

- Design Duration: 6 months
- Reason for Accelerated Schedule: Deadline to obligate grant funds



INTERVIEW WITH SKAGIT COUNTY *Jennifer Swanson, Project Manager & Forrest Jones, Transportation Programs Section Manager*

PROJECT CHALLENGES	COMMUNICATION STRATEGY	LESSONS LEARNED
<ul style="list-style-type: none"> • Tight Timeline – Six months to complete the design phase of a large roundabout with a variety of stakeholders. • Stakeholder Management – The design team worked to accommodate large vehicles, coordinate public utility improvements, and address the concerns of local users. Two community meetings were held. • Environmental Concerns – The project area was potentially environmentally sensitive and adjacent to a known archaeological site. Design continued through the archeology investigation to meet deadlines. 	<ul style="list-style-type: none"> • Communication Frequency – As-needed. Communication was nearly daily between the County, Reid Middleton, and stakeholders to facilitate forward progress. • Primary Communication Means – Phone calls, supplemented by email. The allowable duration to return phone calls was shorter than typical projects. • Review Period – Design continued through submittal reviews. The County prefers to keep things moving and only pause if a comment may have significant impact on design. 	<ul style="list-style-type: none"> • Schedule was the most important factor for the County • The accelerated schedule did not affect the preferred means of communication, but did increase frequency • The accelerated schedule makes the project a priority for both the team and stakeholders.

LAKEWOOD STATION / SR531 ROUNDABOUT *Marysville, Washington*

In the process for retail development, vendors agree to rent or purchase space in what is little more than a building outline on paper. After this agreement, the developer springs into action, gathering a project team; constructing buildings, parking lots, site and roadway improvements; quickly working towards the desired occupancy date. The Lakewood Station mixed-use development occurred along a Washington State roadway near Interstate 5. A roundabout was selected to manage vehicles from the new development interfacing with the state route.

- Design Duration: 6 months
- Reason for Accelerated Schedule: Roundabout to be constructed prior to retail occupancy



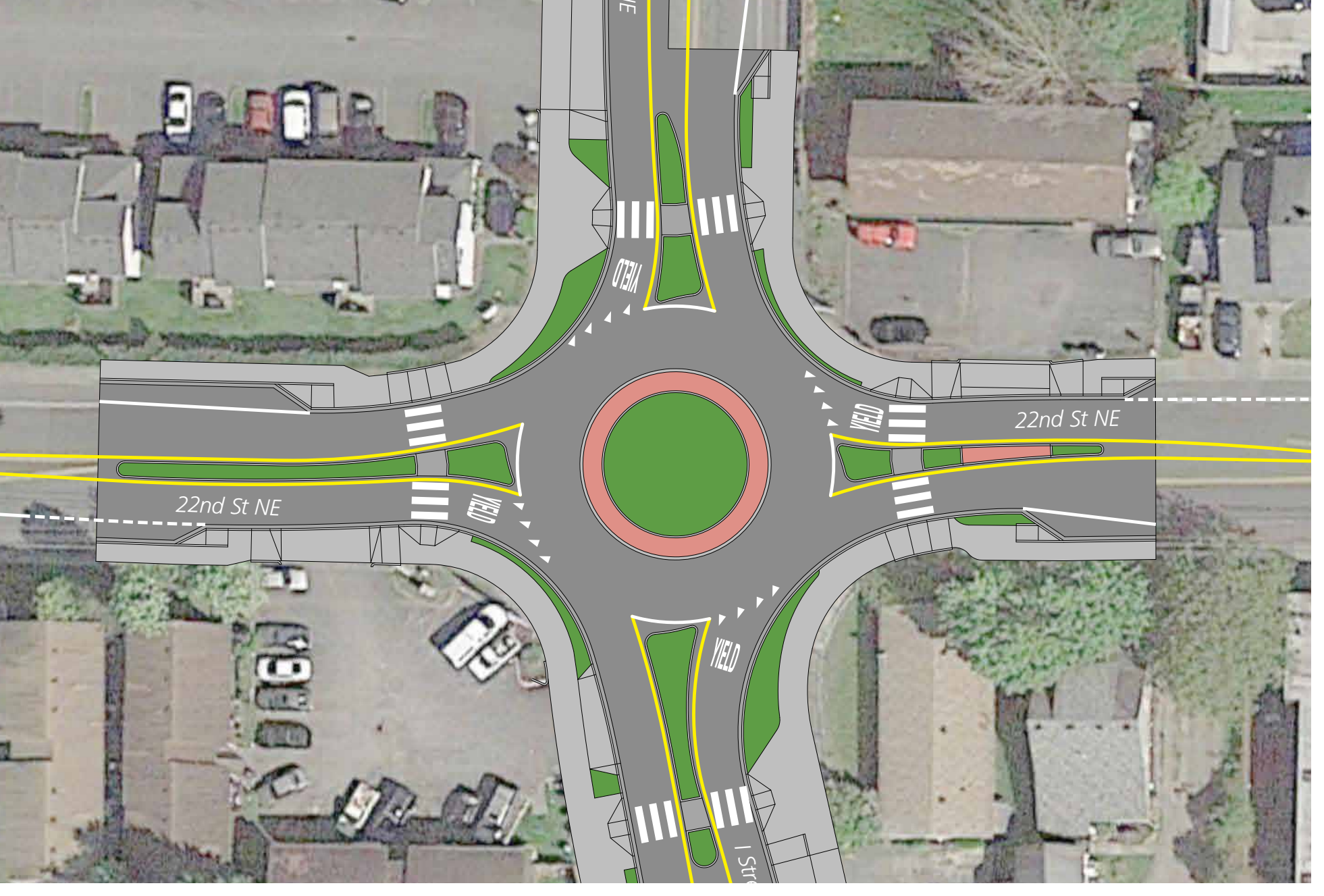
INTERVIEW WITH THE EVANS COMPANY *Ed Babbitt, Project Manager & Property Developer*

PROJECT CHALLENGES	COMMUNICATION STRATEGY	LESSONS LEARNED
<ul style="list-style-type: none"> • Tight Timeline – Occupancy promised by holiday shopping season. The City of Marysville stipulated that the roundabout complete prior to occupancy. • Stakeholder Management – Wide variety of stakeholders ranging from owners to roadway users to adjacent property owners. • Coordination with WSDOT – Challenging for an agency as large and multifaceted as WSDOT to accelerate their review process. Because the design was constantly progressing, coordination was occasionally difficult, as the previous submittal was out of date by the time review comments were complete. 	<ul style="list-style-type: none"> • Communication Frequency – As-needed. Monthly meetings with design team, reviewers, and stakeholders helped determine project direction efficiently. • Primary Communication Means – Email, supplemented by phone calls. Preferred because it provides a record of project progress and decisions, is accessible in all locations, assists in tracking schedule, and may be reviewed at a later time. • Review Period – Design continued through the submittal reviews. The project team was in close contact to accelerate review time to the maximum extent feasible. 	<ul style="list-style-type: none"> • Schedule was the most important factor for the developer • The accelerated schedule did not affect the preferred means of communication, but did increase frequency • Stakeholder management was similar to a typical project with the exception of coordination with WSDOT.

22ND STREET NE / I STREET NE ROUNDABOUT *Auburn, Washington*

The City of Auburn plans to construct a single lane, urban compact roundabout to improve safety and traffic flow at the confusing intersection of 22nd Street NE and I Street NE. The intersection presently experiences a high collision rate involving cars and pedestrians, which presents a particular concern for safety of students of a nearby middle school.

- Design Duration: 9 months
- Reason for Accelerated Schedule: Construct roundabout in summer 2017 to reduce impact on school routes



INTERVIEW WITH THE CITY OF AUBURN *Seth Wickstrom, Project Manager*

PROJECT CHALLENGES	COMMUNICATION STRATEGY	LESSONS LEARNED
<ul style="list-style-type: none"> • Nine months is considered a standard project schedule by the City of Auburn. Because this will be the City's first roundabout, design challenges related to roundabout implementation instead of schedule. 	<ul style="list-style-type: none"> • Communication Frequency – Pre-defined communication plan. A weekly phone status meeting provides updates on design progression and outstanding items. • Primary Communication Means – Phone calls, supplemented by emails • Review Period – Design stopped during the submittal reviews. Review periods were longer than anticipated, slowing the project schedule 	<ul style="list-style-type: none"> • Schedule was an important factor for the City, even though this was not considered an accelerated schedule for them. • A pre-defined communication plan was new to the City and to Reid Middleton. Both parties found the weekly status meetings to be of great value and will likely implement this strategy for future projects.