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S M I T H A N D
P A R T N E R S

MEMORANDUM

TO: City of Waxhaw

FROM: Mike Sewell, P.E. — Gresham, Smith and Partners

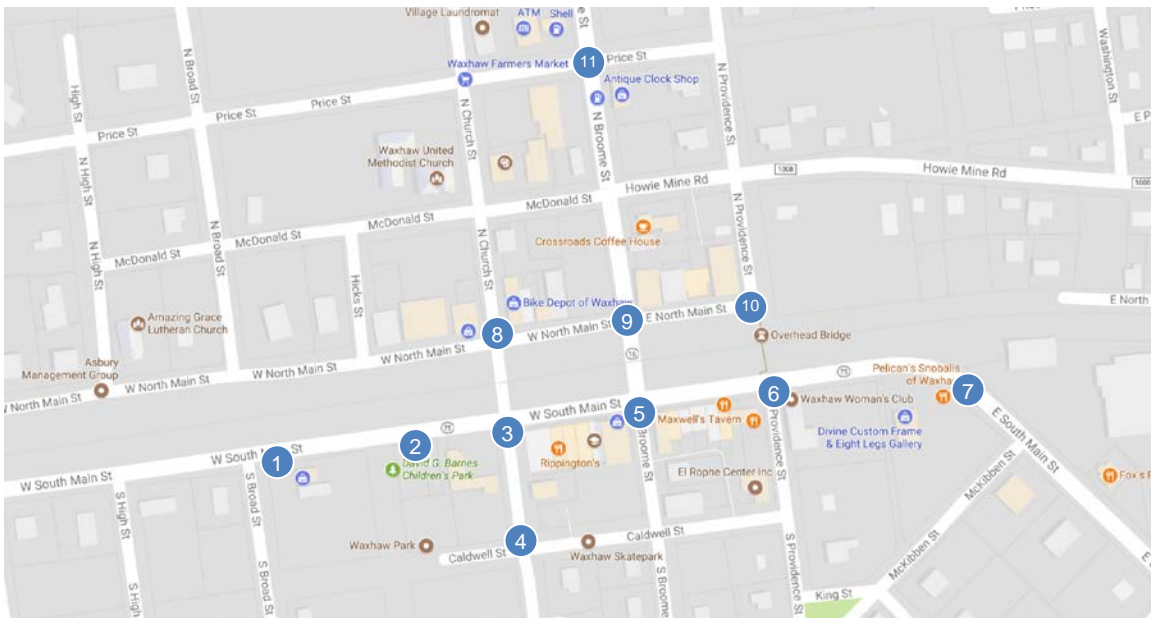
DATE: August 23, 2017

SUBJECT: **PEDESTRIAN AND BICYCLE AUDIT FIELD NOTES
WAXHAW, NC**
GS&P/NC, P.C. Project No. 42795.00

The attached represents our *draft* field notes and observations taken during the August 16, 2017 field audits that covered both pedestrian and bicycle facilities. It includes the following:

- Overview map with markers identifying points of interest or photos
- Field notes
- Project photos - <https://goo.gl/photos/WvpDchUw34FLW7JB9>

Once approved, these will be transcribed into a GIS platform to be used during public involvement.



Design Services For The Built Environment



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1 W. South Main Street near S. Broad Street.

- Vertical sight distance calculations need to be developed to verify that the desired crosswalk from South side of road to North side angled parking
- Just East of Broad, along the North side of S. Main Street - pedestrian connection desired
- Souths side along gas station, drive width reduction should be considered to limit higher than desirable speeds for motorists entering the gas station. Large paved area does not provide a clearly defined space for bikes/pedestrians.

2 W. South Main Street near David G. Barnes Children's Park

- Pedestrian main entrance may need to be redesigned completely. Analysis needed to create a better and more accommodating landing and entrance into the park including a possible bump out to increase landing area and reduce lane width to slow traffic.
- On North side of S. Main, proposed sidewalk North of parking – there appears to be plenty of depth to retain angled parking, potentially move the parking closer to the traveled way of motorists, that will provide for space North of parking for dedicated pedestrian connection.
- Fix sidewalk vertical profile between Meeting Place and park entrance – part of the entrance analysis
- Sidewalk width of 4' needs to be updated to current standards.
- Examine the possible relocation of the entrance to accommodate what appeared to be pedestrians entering outside of existing shrubs. Consider positive guidance/channeling solutions.
- Recommend removal or replacement of landscape elements preventing easy access to the park and utilization of the parking adjacent (large shrubs).
- Create a safer and clearly defined pedestrian landing on the North side of S. Main for pedestrians leaving the park.
- Remedy the lack of handicap space provision on south side. ADA accessible access to the sidewalk along the south side of the road is missing.
- Ramp to bathroom may need to be reviewed (slope/ADA) – potential to introduce a landing to accommodate ADA compliance
- Parallel spaces along South side of S. Main obstruct pedestrian crossing around the park entrance and may present a safety issue

3 W. South Main Street at Church Street

- Review pedestrian connection on East side crossing S. Main



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- Ped crossing need to be reviewed at RR – multiple tripping hazards exist
- Just east (between Church and Broome) proposed sidewalk on the North side of parking and top of wall might not yield a direct connection that pedestrians would use. It was observed in the field that most visitors were existing vehicles and crossing directly across S. Main Street not at cross walks.

4 Caldwell Street at Church Street

- Recorded a request by the Town to end the proposed sidewalk along the West side of Church at North side of Caldwell to accommodate future revisions to entrance to skate park
- Proposed sidewalk needs curb and should be designed to better contain adjacent site gravel. The new curb will require a hydraulic review. Existing condition appears to sheet flow into property at the SE quadrant
- Proposed design should include standard 6' sidewalk – pedestrian accommodations only, bicycles will continue to use the roadway along Church Street
- Recorded a request by the Town to add a bike rack and concrete pad for use in the park

5 South Main Street at Broome Street

- A crosswalk on West leg is desirable, but may be difficult to implement due to elevation difference
- Pedestrian bump out should be considered in NW quadrant (currently sitting water)
- Review signal operations – There appears to be the possibility of allowing lead green EB to allow left turns to clear; opposing right turn movement is heavy and practically free-flow. Would require signal head reconfiguration.
- East side - crossing as pedestrian - must walk up two steps or around to ramp, ADA compliance issues
- East side of intersection - High curb – pedestrian safety issue, but also unusable to adjacent parked vehicles due to inability to allow doors to open

6 E. South Main Street at Providence Street

- West side of intersection - currently flagged – evaluate for rectangular rapid flashing beacon (RRFB)
- North side – Shift taper to occur West of pedestrian bridge to possibly provide 8' (minimum) in front of pedestrian bridge to allow shared-use path connection from the East



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- Examine bike rack options close to businesses

7 E. South Main Street near McKibben Street

- Outside of project limits, but including in documentation. If enough room and sight distance, could be a good candidate for RFFB crossing.
- There appears to be plenty of room behind the guardrail to provide a shared-use path from The Loft site to the pedestrian railroad bridge
- Need to examine how to effectively calm traffic calming as motorists approach town (note that NCDOT does not allow the application of traffic calming devices/methods state roads).

Examine reducing posted speed to 20mph prior to curve into town

8 W. North Main Street near Church Street

- Wide road on Church could allow for dedicated bike lane and bike route through town if requested, but it may not be necessary due to our initial recommendation is that the apparent low vehicular traffic and speeds of motorists – may just need reinforcement of it being a bike route with signage (share the road, new shared use markings)
- Direct pedestrian accommodations and ADA compliance is an issue - stairs down from sidewalk to the road
- Examine one-way segment of Main between Church and Broome. This could help alleviate elevation difference from sidewalk to roadway also by providing more width in the roadway to address vertical disparity / ADA compliance.
- If one-way option moves forward, provide for parallel parking to support businesses
- Need to examine optimal location for bike rack along this segment

9 W. North Main Street at Broome Street

- Examine a new pedestrian landing at NW corner of intersection to provide better sense of place for gathering area
- Landing needs tie to pedestrian crossing on West side of the Broome
- Make sure that landscape elements support the future land use of the gathering area, while still maintaining the context and comfort that separation gives to pedestrians
 - o Current consensus from the group is that the existing shrubs may be providing too much visual obstruction to see the events on site from the roadway
- Examine the possibility to drop the right turn lane (with or without one way option). This will free up space for the pedestrian zone



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- Examine the move to a crosswalk on the North side of the intersection - this will connect pedestrian plazas and should provide more comfort and visibility vs. current pedestrian crossing at the RR

10 E. North Main Street at Providence Street

- Examine the feasibility of conversion to one-way traffic along Main and allocating additional space to a pedestrian plaza
 - o If one-way is allowed, place DO NOT ENTER signs at end of Providence prior to E. North Main. Providence could remain two-way.
- Drainage needs to be reviewed in this area as there are elevation issues between the existing pedestrian zone and the roadway (too little on East side of block, too much on West side of block)
- Memorial Park
 - o Lacks handicap parking
 - o Parking inhibits views of the memorial
- Parking on Providence near private residence is an issue. Motorists frequently block the private entrance. Examine vertical elements that may better define a clear area for drive
- Pedestrian traffic from corner to the pedestrian bridge is not marked
- Bike parking location should be moved to allow direct access to businesses and better visibility of bikes for patrons
- Providence appears to be a frequently traveled route for cyclists moving out of town to the NE. It is comfortable and we experienced good interactions with motorists. Examine this as a marked route for cyclists

11 Broome Street at Price Street

- Examine feasibility of pedestrian crossings across Broome
- Need to examine how to effectively calm traffic calming as motorists approach town



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● Global Comments

- Need to identify and remedy all non-compliant crosswalks to MUTCD standards
- Need to verify that all sidewalk widths meet at least minimum standards
- Examine all primary routes leading into town for traffic calming
- Examine percentage of truck traffic and the potential for a route outside of town to bypass Waxhaw
- There are several instances of pedestrian tripping hazards city-wide that need to be catalogued and addressed
- Review and revise stop bar locations at all railroad crossings
- Consider recommendations for safe routes to school
- Review all dead-end sidewalks for network connectivity