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NORTH READING, MASS.

Town of North Reading
Massachusetts

Community Planning

MINUTES

Tuesday, October 18, 2022

Mr. Christopher B. Hayden, Chairperson called the Tuesday, October 18, 2022 meeting of the Community Planning Commission to order at 7:30p.m. in Room 14 of the North Reading Town Hall, 235 North Street, North Reading, MA.

MEMBERS

PRESENT:

Christopher B. Hayden, Chairperson
David Rudloff, Vice Chairperson
Ryan Carroll, Clerk
Warren Pearce

STAFF

PRESENT:

Danielle McKnight, AICP
Town Planner/Community Planning Administrator

Mr. Hayden informed all present that the meeting is being recorded.

TEC presentation – Rte. 28 Corridor study

Samuel W. Gregorio, PE, PTOE, RSP1, Senior Traffic Engineer for TEC presented a PowerPoint. (See attached)

Mr. Pearce stated that there's a lot of possibilities. The percentage of people who didn't really care for the 3-lane road in the Town of Reading was a little surprising. He thought more people would be on-board for that 3-lane because it seems to work pretty well.

Mr. Gregorio stated that the responses to not liking the change didn't come from the residents of Reading. It was part of a pilot program, so it wasn't meant to stay if it didn't work. There are challenging locations in North Reading, even just the first location at Park Street is a trouble location with or without the road diet, though that was the option, and there are other trade outs that need to be discussed going forward. The study in no way recommends that that's the preferred option it's just saying that they're providing the information for how the town wants to approach this. Here's what it would look like under the current volume situation and that's not to say that if you did provide that, a lot of the cut through volume might go away.

Mr. Pearce stated that even if they limited their request to the Mass. DOT for things like replacement or repair of rusted poles and all those kind of things, those items are important. He also thinks one of the key things is the timing of the lights and that's what makes a big difference in how traffic flows and Mr. Gregorio stated that they haven't adjusted them in a long time.

Mr. Gregorio stated that they don't have a log in those particular control boxes, but they do are supposed to keep a log in the cabinet every time someone changes something.

Mr. Pearce stated that they could petition them to take a look at that. What he's interested in is the crash statistics on those two main intersections and if different timing would help.

Mr. Rudloff stated that he just wanted to confirm that we generally have a consistent 50' curb to curb width, and does that match the sections that showed the four twelves and one 1' foot shoulder that was shown on the PowerPoint?

He asked if the right-of-way is also consistent the whole way.

Mr. Gregorio stated it is 66' except there's a small area he believes by Ocean State Job Lot that is actually wider, but it's never less than 66'.

Mr. Rudloff stated that grants were mentioned for signaling sensors. What portion is just upkeep that Mass DOT should do on a regular basis, and what portion is the town actually going and trying to get a grant for them to do what they should be doing?

Mr. Gregorio stated that the smaller things like general maintenance, or even the signal retrofit is probably the best example of something that should be Massachusetts' responsibility with almost no Town input. What we can do as a Town is get in front of them and tell them this is an issue and the Town itself has already provided a funding source towards that and give them this study.

Mr. Rudloff stated that he believes the worst area for accidents is at Park and Main Street because there a turning lane on Main Street for both north and south, but the north side does not have a turning signal and the south does have one.

Mr. Gregorio stated that there is probably no protected left because when the light was installed 20 years ago and at that time there was probably not a lot of volume turning left.

MBTA Communities Housing - discussion

Mr. Hayden stated that he reviewed most of the changes and it looks pretty straightforward.

Mrs. McKnight stated that she has prepared a draft action plan and proposed changes regarding the requirements for the Site Plan Review.

Mr. Pearce stated that making these changes meets the updates of what they have to do. If the state decides that it's deficient in some way will they let us know so, that we can cure that deficiency.

Mrs. McKnight stated that they would be informed if they were deficient. She will send it to the Town Administrator / Select Board to review because it is being done on behalf of the Town.

The consensus of the CPC is that they approve the draft action plan.

Mr. Carroll joined the meeting at 8:24PM.

146-150 Park Street – Senior Housing Overlay District Special Permit – P.H. 8:00PM

Mr. Rudloff read the public hearing notice into the record.

Attorney Brad Latham of Latham Law Offices, LLC stated that he is representing the applicant, Bruce Wheeler, Trustee of the JB McLean House Realty Trust. The parcel is approximately 4.25 acres. The entire southerly portion, shown in dark green on the plan is being left in its natural condition. It's the northerly upland section that's involved in the application. This has been identified as 146, 148 and 150 Park Street. The topography is that the site drops from north to south, that is, from Park Street heading southerly it goes down in elevation which is one of the design features of the project that lessens the impact from Park Street. The current use of the property is a historical home that is and will continue to be used for office purposes. In recent years the property has been used for a steel fabricating business that has steel and equipment stored outside. There's parking that is both paved and gravel. There's no treatment of rain runoff from the site from any of the parking areas. The neighborhood itself is situated on the westerly side, of the public services safety building. On the east side there are two family dwellings, plus commercial. Northerly is the Bandstand Common as well as the Flint Library.

The proposal is to move the historic home onto a new foundation which will preserve the home and will also improve the site distance from the driveway which will be discussed by Mr. Ogren. In addition, the plan is to construct 50, over-55 housing units within one building. The bottom level will be inside parking and a small outside surface parking area. One feature of this is required by the zoning is that 15% of the units will be affordable and that will account for 8 units in this project. This project will provide alternative housing and gives seniors a viable option to stay within town. It is located in the center of town and will help to revitalize the center.

Appropriateness of Use - The site is in close proximity to amenities, a walkable neighborhood, the ability of seniors to participate in the youth activities in town and is close to emergency response. (i.e. fire and police)

The benefits to the town are multiple:

1. Provides senior housing which is clearly defined as a need.
2. Provides affordable housing which helps the house maintain or achieve its 10% by requiring 15% here.
3. In regard to finance: Senior housing does not impose the cost on the town that regular housing does because there's no demand on the school system. So it's a positive cash flow for the town.
4. Offsite benefit to the town is to improve the Bandstand Park.
5. Preserving the historic home and economic vitality in the area.

Waivers: the westerly parking is within the side yard setback and they are going to be requesting relief from the Board of Appeals. They would greatly appreciate it if the CPC would be inclined to support them in that endeavor to allow those five parking spaces at that location. They're located next to the public safety building and will not impact that site.

Mr. Peter Ogren of Hayes Engineering, Inc. stated that the current site is approximately 4.25 acres and the existing upland is approximately 49% impervious as it sits now. There is currently an automotive steel fabrication, office building and a garage. The automotive building is approximately 5200 sq. ft., the fabrication building is 3200 sq. ft. and the garage is 983 sq. ft. The office building that's going to remain is 1732 sq. ft.

On the southern portion of the site is the first to steep embankment and then a wetland that ultimately goes all the way to the Ipswich River. The topography starts off from Park Street and slopes in a fairly gentle direction downhill southerly. The green line on the plan shows the existing forestation on the site drops rapidly down 10' to 12' to the bordering vegetated wetlands and then the wetlands slope somewhat gently to the Ipswich River.

The plan is to keep the historic McLean house, but move it, and the move is for two reasons: it's on a poor foundation and it would be good to put it on a new wood concrete foundation; and the site distance for the primary access/only access to the site on the westerly portion of the property needs to be improved for the westerly bound traffic on Park Street. The location that they've moved it to and shown on these site plans is more in keeping with what was shown to the Town Meeting when the rezoning was proposed. They have moved it 12' back from street line which is where it was in the initial presentation.

The parking for the office use is all behind it and is the gray area located on the plan. There are 12 spaces including 2 handicap, but and they're not to be designated for the office building. The office building is entirely serviced by the surface parking. The senior housing building is the Y-shaped building on the plan and covers approximately 34,323 sq. ft. and contains 50 units allowed by the zoning and 80 underground parking spaces for the owners of the units. Two of the parking spaces nearest to the elevator is required by the handicap standards. The remaining spots that are required are 88 for the housing, at 1.75 cars per unit are outside spaces, and are mingled in with the 12 outside spaces that are provided for the office. Access to the site is to be provided directly from Park Street and has a 24' lane width and all of the turning lanes and movement lanes within the site itself are at 24' in width.

A zoning table has been added to the plan to show what was agreed upon at Town Meeting for the Senior Housing Overlay District. All of these are in compliance with the zoning bylaw. However, there are 5 spaces which came to be in this location through some of their discussions with the Conservation Commission. The Conservation Commission has a 100' buffer area which has some separate rules from the resource area, which is the land

subject to flooding, so these spaces were moved out of a position along the driveway entering the parking garage and put in this location, but unfortunately there wasn't room for the whole space, so approximately half of the spaces are about 10' that was requested to go on the setback area.

They had a number of discussions with the fire department and police department and there were a couple of concerns that were shown. The main one was access for the fire truck and it was noted, and ambulance access is likely to be required with a normal population, so they took a look at the audit return configurations which is actually required by the fire code to see what the turning movements look like on the site and the emergency vehicles would enter the site off of Park Street from either direction and come in and turn in the parking in front of it and would be able to make a three-point turn in the turning circle that's provided. This is still being reviewed by the fire department and they await their approval. On the easterly side of the site turf stone pavers are being proposed. These are provided to allow for hard surface for a fire vehicle and equipment.

The parking beneath the building is considered a parking garage, and there is a distinction in the plumbing code between a parking garage that's fully enclosed and one that's 50% open, that's not considered a parking garage in a plumbing code sense. As such, it has to have a drainage system and they've shown the drainage system to be a series of floor drains that run through, and they have to come out, and they either have to discharge to public sewer which they don't have, or to a tight tank. The tight tank is designed to collect not only the parking lot drainage which will be minimal. It's also the snow that melts off the cars, and so forth from the floor drains, but also the elevator pit for the elevator in the building itself. The other drain they have is out of the parking lot drains, there's not a lot of pavement on this site. The imperviousness is predominantly the building. But, the pavement needs to follow a treatment drain and will be captured by two double catch basins on either side of the driveway. It then goes through a treatment drain which is a deep sump catch basin / particle separator and then onto a level spreader to discharge to the wetlands. There are also two roof drainage systems: One is internal which will handle the front portions of the project's roof and the other one is external which will handle the back portion of the project's roof. The roof runoff which is presumed clean under the DEP regulations will discharge into an infiltration system. When the project is built, the sub catchments will be divided into sub catchment 1.2 which is indicated in the proposed plan here and that consists of the building which was presumed clean and would be directly infiltrated into the ground as part of the stormwater management. Sub catchment number 1.1 is the remaining parking lots, office building and landscaped areas. The paved portion of that will all go through the treatment drain and the rest of it, the landscaped areas discharged directly to the wetland. The remaining watershed 2.1 is reduced significantly in size and that's the watershed that discharges towards the public safety buildings (the fire and police buildings). There's an additional watershed which was necessary due to the grading. It's a small area that discharges towards Park Street. The grading to get over the septic system and

Accommodate the grades and not actually take water from Park Street needed to come up in grade, coming off of the Park Street pavement. So, that small portion until they get to a high point discharges towards Park Street. The flow however from that area is the minimum under the stormwater management regulations. (A chart was shown indicating the results of the stormwater analysis that they did.) They did look at the routings for the 2, 10, 25 and 100 year storms and in all cases they've reduced both rate and volume to the receiving point whether it be the wetlands or towards the public safety buildings. The only place where there's any increase at all is shown in the red columns of the stormwater analysis. The small discharge to Park Street is where the grading is required to come up off of Park Street.

The septic system has been designed for 50 housing units at 150 gallons per day for 7,500 gallons and includes the office flow of 260 gallons, for a total of 7,760 gallons. It's a pressure distribution system which is required for a system this size, and they actually designed it as two independent systems – that's not a requirement of the code, but in this particular instance it allowed them to put them at two different grades. The one being right in front of the building, being higher than the one when entering the site. It's nice to have two fields, so that if one is being serviced the building will still be maintained with the second one. The testing from the Board of Health for the entire system is complete but not yet submitted, pending any changes for fire access.

The project is located right below the town's water tank and there is a 10" line that comes up Park Street and reduces to an 8" line. They intend to tie directly into the 8" line with a proposed 8" ductile iron which will provide both the domestic and fire to the building itself. It's likely a 2" domestic that will be required and 6" fire for the fire suppression system inside the building. From that location where they enter the building they're also going to continue on and provide a new fire hydrant at the end of the turning circle for the fire department. They did call the North Reading Water Department to talk to Mark Clark. The one fire test that he has here is a little bit old, but the fire flow rate was about 7,150 gallons per minute at 20 PSI which is the fire department's standard. The reason that it's so high is a 10" line feeding it, and it's right below the tank.

They were asked what it was going to be like as far as the grade separation with the fire station and they produce a detailed plan of how it's going to be handled at those five spaces. There is quite a great separation and they intend to handle it with both a large granite retaining wall and a slope. The proposed retaining wall will run along the common line between them and the public safety building and then it will slope up to the actual parking and they've shown where the five cars will park there. There is an existing fence that they show in the cross-section which they intend to leave and the landscape architect has provided them with some proposed plantings in that area to make it a focal point and also to shield the parking lot from the public view. There will also be plantings on the side of the police department with the permission of the police department. The applicant is in a position where he is willing to plant and maintain it.

A limited traffic study was done for all that is proposed. It consisted of a site distance study based on the traffic speeds with an 85th percentile. They did do the running speeds during the day and determined that interestingly enough they were around 30mph in both directions with a 25mph speed limit. The required sight distance in the westbound direction coming towards the site was 227' and there was only 165' available with the McLean house in the sight distance. With the McLean house moved back and the sight distance is measured from the driver's eye which is a certain distance back from the fog line of the street to a point in the roadway at approximately 4 ½' high which is to simulate a car coming in that direction and that would be the other end of it and then take the travel distance along the travel line that's 278', considerably in excess of 165', and it takes into account both the fact that the road could be wet and the stopping effectiveness is not as much and that there's a down gradient slope going in that direction. The eastbound traffic coming to the site driveway has a required sight distance of 196' and there's about a 530' distance going in that direction. Traffic generation was a bit more of a question on this site. There was no IDE requirement for a fabrication shop and the automotive use there is not a busy gas station. The 50 unit multi-family housing would likely result in a reduction in AM and PM peaks and that's because they have a varied population here. First of all it's an older population because it is senior housing and they go on vacation, some don't work, so the traffic tends to distribute through the day and that's why there is a reduction, but still have an increase in the total average daily traffic. They anticipate that there will be about 41 vehicle trips per day.

Mr. Larry Reeves of Reeves Design Associates – Architect stated that they have been in numerous discussions about the character, style and scale of their building to enhance the historical town center by its use and also fully integrated in its character. Obviously, the McLean house is a strong element that was number one and was staying from day one and would generate their base point. The McLean house is a simple Victorian home that kind of pulls off the Colonial style, as well, but not a lot of detail. It did help them to tuck in on a Georgian Colonial façade on the northerly nose of their building that is directly opposite of the library. The proposed larger building sits back behind the McLean house and about 30' separates the two. The proposed courtyard will be 140' back from Park Street. They have treated the proposed building as kind of a cluster of historically referenced style structures that are attached. The groupings allow for some strong similarities in their style. Some sense of an additive building, but they kept the scale, roof slopes and types, so they're consistent with very typical structures in the center of town, and actually all throughout North Reading.

The main entrance is off to the lower right of roundabout in the upper parking area. The hash marks shown on the plan are the proposed locations for the affordable units in the building. There is a central access circulation area that's adjacent to the elevator. They have retained both planted and open areas for activities, while minimizing the hardscape out in that area.

Mr. Tom Miner, of Hawk Design Inc. Principal and Landscape Architect stated that half the site is undeveloped at the southern section with mature forests and wetlands. On the Westside there is going to be an existing line of trees on the adjacent properties. The property line meets Park Street because from that point all along the property line, down south, all the way down until it cuts around the back of the building and goes down approximately 60', to another property line. They are supplementing that existing tree line with a 6' privacy fence to provide separation and help screen some views from both sides of the fence. A plan was shown showing the proposed landscaping. They try to keep predominantly native drought tolerant plants that are suitable for the local conditions. Especially, on this site and particularly in the back along the wetlands that is 100% native material. A concept plan was shown of the outdoor amenity space still to be designed, but typically they have table seating, a grilling area, a fire pit or a self-contained water feature, along with a shaded structure, whether it's a gazebo style building or an open trellis pergola. They are currently involved in working at the request of the Conservation Commission to create a bigger naturalized transition zone between the walk and existing woods, so there's less to maintain along the wetlands and embankment. Along Park Street they're showing larger street trees at approximately 30' to 35' on center and flowering trees between 20' to 60' on center. The task that they've dealt with is all the subsurface septic system in the entry yard. They cannot put shade trees over that, or close to it. So, they've created some landscape berms around the edge of the parking lot from anywhere, from 12" to 24", maybe 3', and those serve several purposes to give some undulation to the flat ground plane to help screen the parking from Park Street, and more importantly, to provide soil for planting larger shrubs and some smaller flowering trees. They have sight distances and fire turning radiuses that they have to deal with and still have to work with Mr. Ogren on this. For foundation plantings they try to maintain four-season interest with varied textures, foliage and colored flowers.

There are 3 or 4 light poles along Park Street. There will be a pedestrian light pole and what they usually use is LEDs with dark sky feature fixtures. If they need to back screen them for any reason for shining into apartment bedrooms or into neighboring properties they will add those. There will be lower level light ballers, 36" to 42" high, along the walkway with the same LED dark sky features.

At Mr. Wheeler's request he walked the North Reading commons to see what they could do to enhance the common area and they decided to focus on the Bandstand because of the winter sledding that goes on, on the slope and towards the sidewalk they wanted to stay out of there. The biggest thing he saw was that there was no access to the Bandstand, so he believes without any topo information they could get an accessible walk from the intersection of Park Street and Haverhill Street, and work it along the slope and raise it up, so they can get rid of the steps on the entrance to the Bandstand, so that it's fully accessible and widen a portion of it to get some seating next to the Bandstand and some pavement next to it for a wheelchair seating. There are currently some Boxwood shrubs and a Rhododendron around the Bandstand that are getting a little tall. They may keep those, or enhance it with some lower.

flowering shrubs and some perennials that are drought tolerant and maintenance free to provide even more color into that area.

Attorney Latham stated that he wanted to make sure it's publicly understood that the term of ownership is intended to be a condominium which gives control over the use and the quality of the facility in future years. In addition, there is a requirement in the bylaw that could be a specific finding in §200-168 that the office use in the McLean building is compatible with the senior housing development and request that the CPC should find that in their decision. Also, to make it clear there is an elevator. The last point, as they can see from the corner of the plan is the name "1818 On the Commons" that would be used in the future if this is successful.

Mr. Pearce stated that this follows the original presentation that they got as far as what's going to happen here with of course some detail. The project looks like something that will fit in well in the center of town. He also agrees that it will provide some economic improvement in that area.

Mr. Rudloff stated that he loves the design with everything from the site work to the architecture. But, does have concern with the following:

- Agrees with the police department comments regarding the sight line. It's a vast improvement to move the McLean house back for sight distance, but he is also concerned with the trees and the existing picket fence.
- Would suggest that the trees being planted in the round-about have more of a top (lollipop look).
- No mention for ADA compliance for the curbing at the access /egress when leaving the site to head west on Park Street, but he is assuming they need that to match the sidewalk grade.
- Is the existing retaining wall going to be rebuilt, or are they able to keep that wall to match the proposed retaining wall?

Mr. Ogren stated that he hasn't looked at that particular issue, but what they might do is put a radius on their wall. If the picket fence is going to cause a problem with the sight distance they will remove it. The proposed tree is a sugar maple which has a small stem, but if the Safety Officer does not want the trees in that area they will move them.

Mr. Pearce suggested a traffic train or sign on the inside curb. They also spoke with Sgt. Howe and said that that they would provide a sign if he thinks it's needed. He also thinks that they need to add a sidewalk to the crosswalk at the intersection of Bow Street and Park Street.

Mr. Rudloff asked what type of material would be used for the 6' fence and also if there are going to be wall pack lighting.

The fence material will be PVC, and there will be lighting placed at the doorways.

Mr. Carroll stated that he does have concerns with the planting at the street and sidelines. Also, statistically when it comes to the proposed permeable paver access for the fire truck is there a curb cut, is that the intention.

Mr. Ogren stated that they are a concrete matrix and the matrix is filled with grass. They haven't really talked to the fire department about the curb cut, but, it is not meant to be an entrance for other vehicles. Perhaps they can put a break-away gate, so no one would be encouraged to use this area.

Mr. Wheeler stated that they will speak to the fire department and will follow their direction.

Mr. Nick Boniface of 136 Park Street stated that he is concerned with the crosswalk that is located near the back of the library. He does not believe that it is a safe area and he also thinks that adding 50 units to this site is too many.

Mr. Ogren stated that they do not intend to use access or egress to the site from that crosswalk.

Adam of 140 Park Street stated that the crosswalk that Mr. Boniface spoke about is right in front of his house and he is in agreement that it is not a safe area to cross because of the hill at the top of the road near the intersection. Any increase in the traffic is more of a danger at that crosswalk.

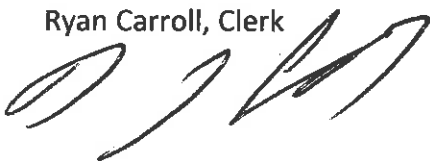
Attorney Latham asked if the planner could send a memo to the ZBA supporting the requested variance for the five parking spaces.

The CPC consents to the planner sending a memo regarding the parking variance (once one has been filed).

Public hearing continued to November 1, 2022 @ 8:00PM.

Adjournment at 8:00PM

Respectfully submitted,
Ryan Carroll, Clerk





Main Street (Route 28) Corridor Study

Town of North Reading, MA



North Reading
MASSACHUSETTS

Community Planning Commission
October 18, 2022
7:30pm

Study Goals

Corridor Planning Study TEC File No. 71068

Main Street (Route 28)
North Reading, Massachusetts

Prepared for: Town of North Reading
235 North Street
North Reading, Massachusetts 01864-1298



Prepared by: TEC, Inc.
148 Descombes Road
Andover, Massachusetts 01810



I have reviewed this document as it relates to the proposed design and have determined the design to be safe for public health and welfare in conformity with accepted engineering standards.



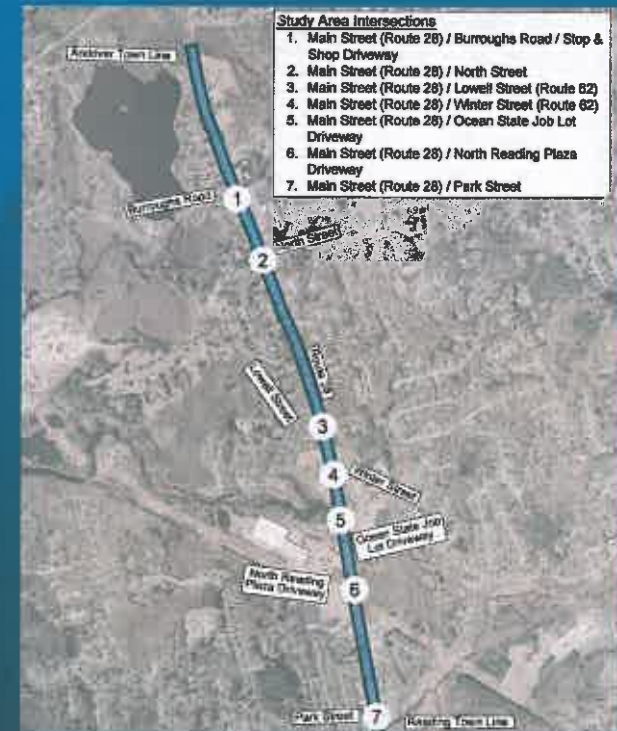
Samuel W. Gregorio
Samuel W. Gregorio, PE, PTOE, RSP,
Senior Design Engineer

March 26, 2022

- Outline challenges & deficiencies with the existing traffic operations, traffic safety, and transportation infrastructure
- Identify potential countermeasures within the corridor's current paved footprint, wherever possible.
- Identify opportunities to provide 'Complete Street' design and multi-modal flow (Ped, Bike, Transit)
- Describe potential opportunities for conformance with industry standards, the where feasible.
- Provide recommendations for next steps; both infrastructure and for funding opportunities.

What's in the Corridor Study?

- Corridor and key intersection inventory
- Documentation of existing corridor traffic volumes (COVID adjusted), vehicle speeds, and vehicle fleet
- Review of reported crash history and comparisons to statewide and District wide published data.
- Review of traffic control warranting conditions
- Traffic operational analysis
- Results of a Town of North Reading public survey
- Recommendations
 - Short-Term to Long-Term
 - Low-Cost to High-Cost



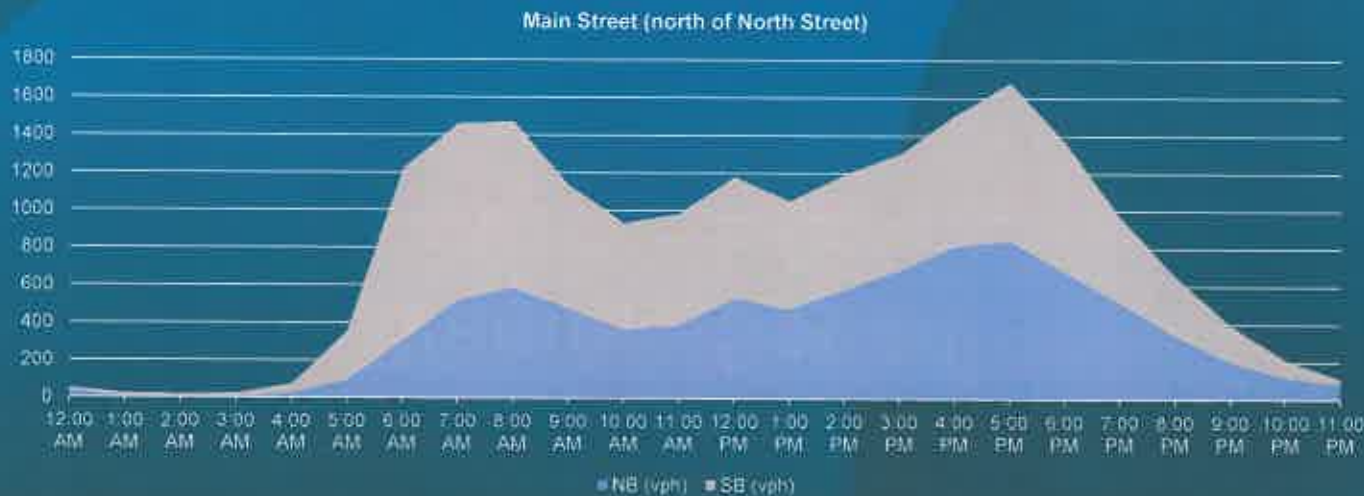
Main Street Corridor

- 2.55-miles length (Reading to Andover)
- Owned and maintained by MassDOT (signed as Route 28)
- Functional Classification: Principal Arterial
- Consistent 50-foot curb-to-curb width within a 66-foot State Highway Layout (Right-of-Way).
- Sidewalks provided (some intermittent)
- No formal bicycle accommodations
- 7 key signalized intersections
 - Burroughs Road / Stop & Shop
 - North Street
 - Lowell Street (Route 62)
 - Winter Street (Route 62)
 - Ocean State Job Lot
 - North Reading Plaza
 - Park Street



Traffic Volumes

- Main Street (Route 28) Average Daily Traffic (ADT):
 - North of North Street = 19,250 vpd
 - Btw Lowell Street and Winter Street = 27,545 vpd
 - North of Park Street = 23,030 vpd



Vehicle Speed

Location	Average Speed	85 th Percentile Speed	10 MPH Pace	% Vehs in Pace	% Vehs ≥ 40 MPH
Main Street, north of North Street					
Northbound	35 mph	40 mph	30-39 mph	70.5%	16.1%
Southbound	37 mph	42 mph	32-41 mph	68.3%	5.5%
Main Street, between Lowell Road and Winter Street					
Northbound	33 mph	39 mph	29-38 mph	67.7%	11.4%
Southbound	32 mph	37 mph	28-37 mph	71.8%	6.3%
Main Street, north of Park Street					
Northbound	36 mph	41 mph	32-41 mph	70.1%	25.5%
Southbound	34 mph	40 mph	30-39 mph	61.5%	16.3%

MassDOT Special Speed Regulation #4073 (40 – 45 mph) – ALL ATRs were in 40 mph zones.

Crash History / High Crash Locations

- HSIP Locations (Top 5% of MAPC Region)
 - Main Street at Winter Street (current eligibility)
 - Main Street at North Street (calculated eligibility)
 - Main Street at Park Street (calculated eligibility)
- Only Main Street at North Street has crash rate comparable or higher than statewide average for signalized location
- Fatal crash at Main Street / Burroughs Road / Stop & Shop Driveway on March 19, 2020 (6:30 AM). Pedestrian struck crossing Main Street
- Park Street to NR Plaza and North Street to Burroughs Road had crash rates per MVMT higher than statewide average for arterial segments

Crashes Per Year (2015-2019)	
Intersection	Annual Average
Burroughs Road	2.8
North Street	7.6
Lowell Road	2.4
Winter Street	7.2
Ocean State Job Lot	0.6
NR Plaza Driveway	2.6
Park Street	6.8

Public Survey Results

- 570 Participants (August 5, 2021 to October 1, 2021)
 - Q1: What should be focus of Improvements
 - 68% Walkable mixed-use community focus
 - Q4: Current walking comfort on Main St
 - 66% Somewhat / Extremely uncomfortable
 - Q5: Current biking comfort on Main St
 - 77% Somewhat / Extremely uncomfortable
 - Q8: Impression of Reading Road Diet
 - 37% Comfortable
 - 31% Would Not Work in North Reading
 - Q10: Level of Support for Ped / Bike Improvements
 - 49% Very supportive



Countermeasure Opportunities

- Opportunity 1: No Build (No Action)
- Opportunity 2: Existing Cross-Section Opportunities
 - Opportunity 2A – Short-Term Infrastructure Safety & Maintenance Improvements
 - Opportunity 2B – Traffic Signal Optimization and Retrofit Improvements
- Opportunity 3: Modified Cross-Section Opportunities
 - Opportunity 3A – Traffic Signal Reconstruction Improvements
 - Opportunity 3B – Roundabout Improvements (Key Locations)
 - Opportunity 3C – Pedestrian Connectivity Improvements
 - Opportunity 3D – Access Management Improvements
 - Opportunity 3E – Road Diet and Bicycle Cross-Section Improvements

Opportunity #2A – Short Term Maintenance

- General Maintenance:
 - Trim vegetation overgrowth along edges of Main Street
 - Complete crack sealing of pavement surfaces
 - Remove sediment build-up and clear grates for catch basins
- Traffic Signs & Pavement Markings:
 - Sign Inventory – retrofit all signage for condition, placement, & efficacy of signage
 - Restripe all pavement markings and utilize thermoplastic / polyurea for extended life
- Pedestrian Accommodations:
 - Reconstruct ALL curb ramps within the study area to AAB/ADA compliance
 - Reconstruct pedestrian paths at channelized islands
 - Evaluate cross and transition slopes on sidewalk segments and reconstruct, as necessary.

Opportunity #2B – Traffic Signal Retrofit

- Optimize traffic signal timings at all locations for peak-hour demand, standard clearance intervals, corridor coordination
- Repair loop detection
- Replace pedestrian signal housings and push buttons to current MUTCD and ADA compliance.
- Replace rusted / damaged traffic signal posts / vehicular signal housings
- Install GPS for updated coordination interconnect (cheaper than copper wire or radio)
- Change 4-Section signal housings for 5-sections replated to prot/perm left turns





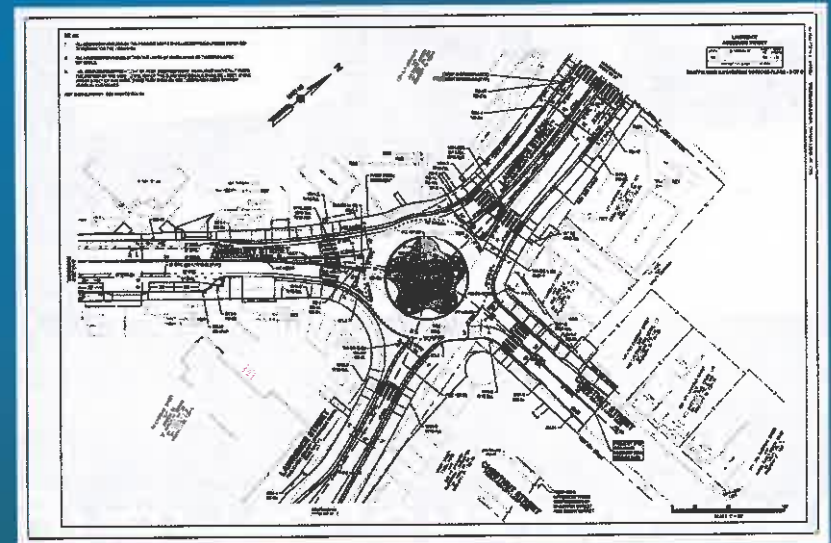
Opportunity #3A – Traffic Signal Reconstruction

- New controller system to support Advance Transportation Control (upcoming standard)
- New intersection-to-intersection communication system
- New overhead signal assemblies (support more loading)
- New signal housings with retroreflective backplates / visors
- Enhanced detection system (e.g. video detection)
- Reposition infrastructure for ADA/AAB or offset requirements.



Opportunity #3B – Roundabout Traffic Control

- Seek out opportunities to install roundabouts at key location where space is allotted.
 - Corridor study looks at planning level for four of seven key signalized intersection (Park, Winter, Lowell, and North)
 - Each location may result in challenges to the existing right-of-way and private property.
 - Further geometric evaluation is needed under Intersection Control Evaluation (ICE) for state / federal funding – required by MassDOT for TIP projects



Opportunity #3C – Pedestrian Connectivity

- Construction of new sidewalk along absent sections of both sides of Main Street
- Remove and reset curbing along Main Street to 6-inch curb reveal
- Reconstruct all curb ramps along Main Street to ADA/AAB compliance
- Where space is allotted, provide streetscape elements to pedestrian space





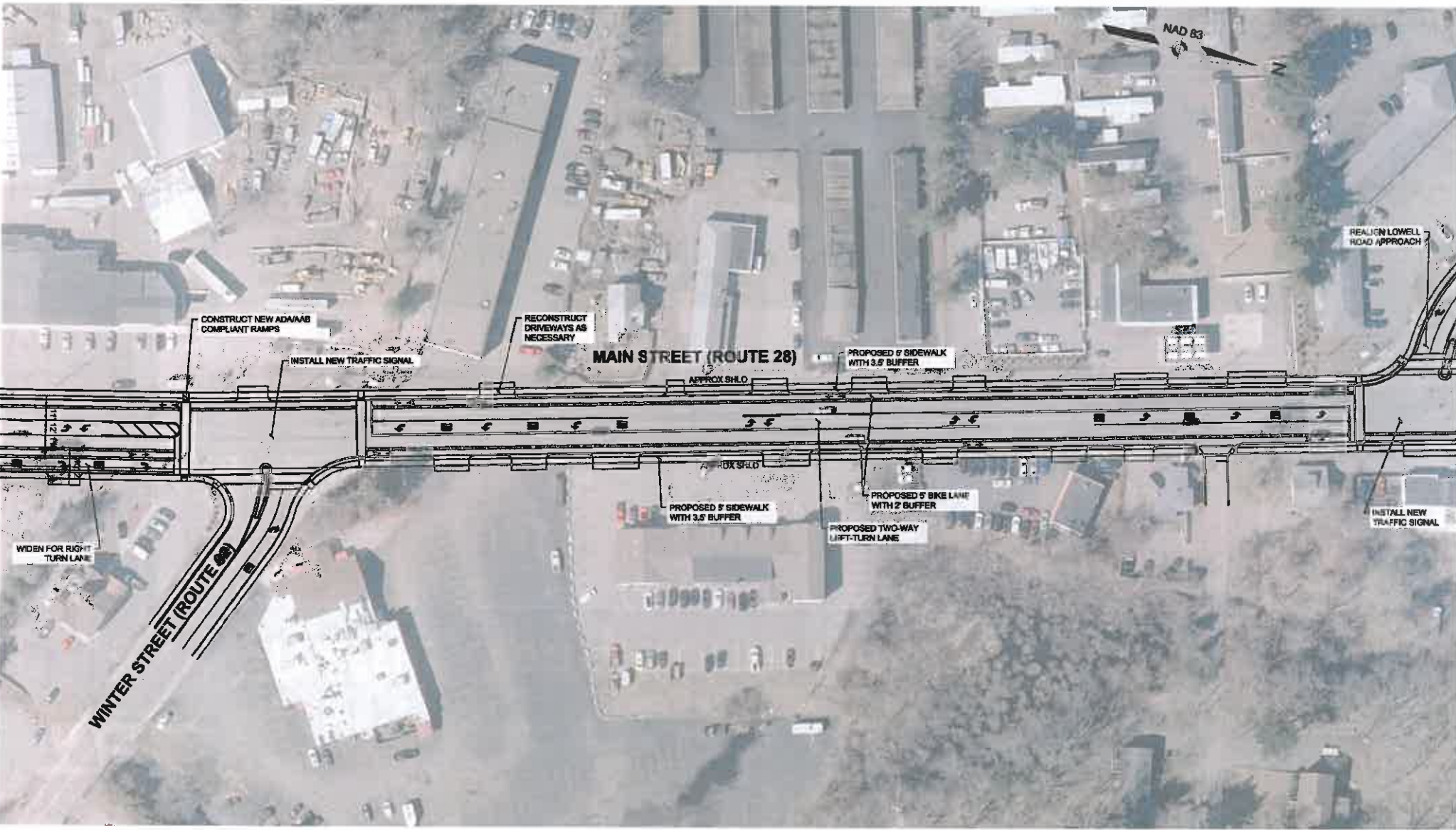
Opportunity #3D – Access Management

- Narrow existing curb-cuts or relocate existing curb-cuts to provide consistent driveway spacing and widths.
- Combine driveways through multiple properties where feasible.
- Evaluate the current zoning bylaw to update the commercial and residential driveway standards.

Opportunity #3E – Road Diet and Bicycle Cross-Section

- Similar to Town of Reading Road Diet
- Reduce travel lanes to 11' through lanes and a 12' center turn lane
- Add 5' foot buffered bicycle lanes in each direction or separated bicycle lanes (buffered bike lanes shown to right)
- Utilize existing ROW to put in grass buffer
- Temporary and/or permanent easements may be necessary at the back of sidewalk





CONSTRUCT NEW ADA/AB COMPLIANT RAMP

INSTALL NEW TRAFFIC SIGNAL

RECONSTRUCT DRIVEWAYS AS NECESSARY

MAIN STREET (ROUTE 28)

PROPOSED 5' SIDEWALK WITH 3.5' BUFFER

APPROX SHLO

PROPOSED 5' SIDEWALK WITH 3.5' BUFFER

PROPOSED 5' BIKE LANE WITH 2' BUFFER

PROPOSED TWO-WAY LEFT-TURN LANE

REALIGN LOWELL ROAD APPROACH

INSTALL NEW TRAFFIC SIGNAL

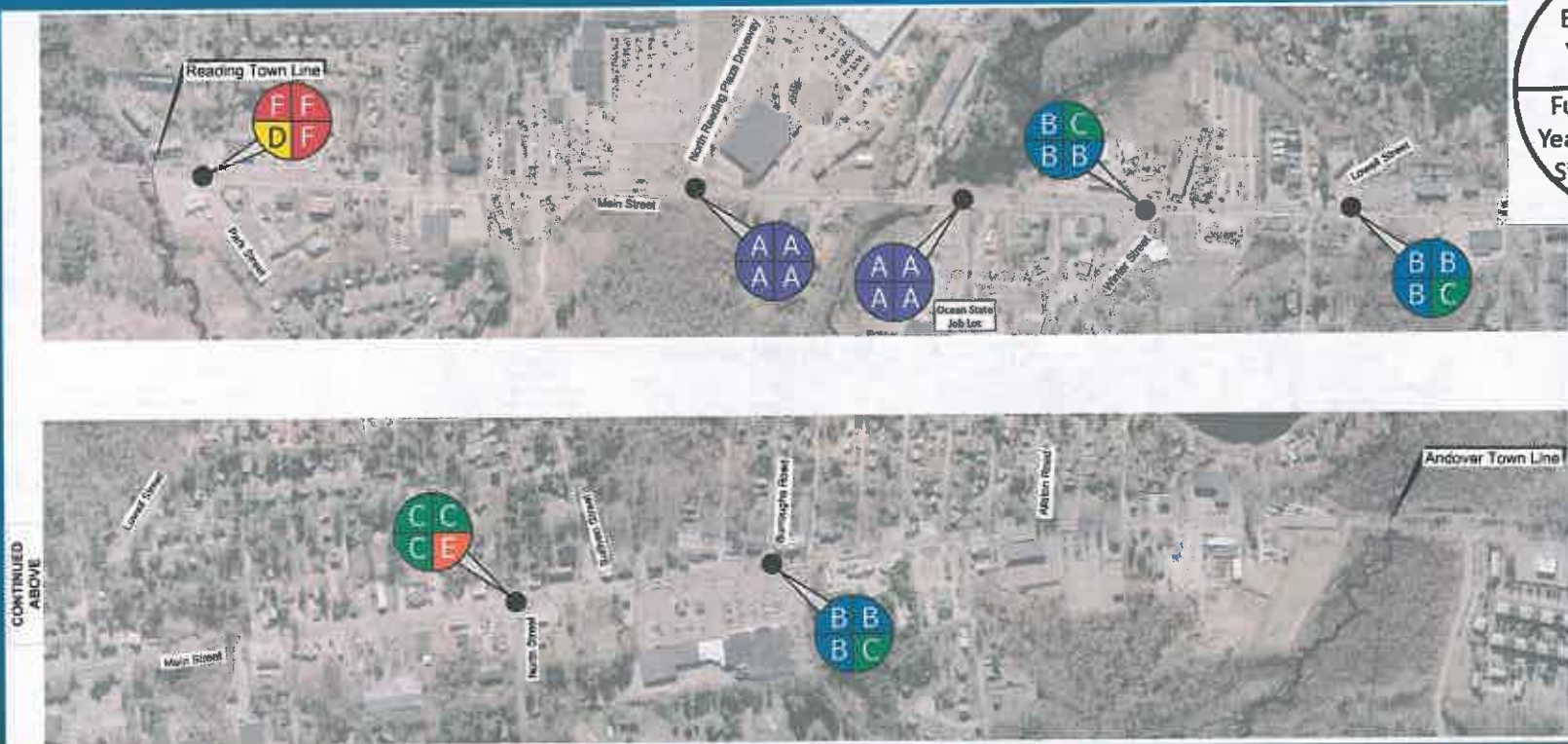
WIDEN FOR RIGHT TURN LANE

WINTER STREET (ROUTE 88)

NAD 83

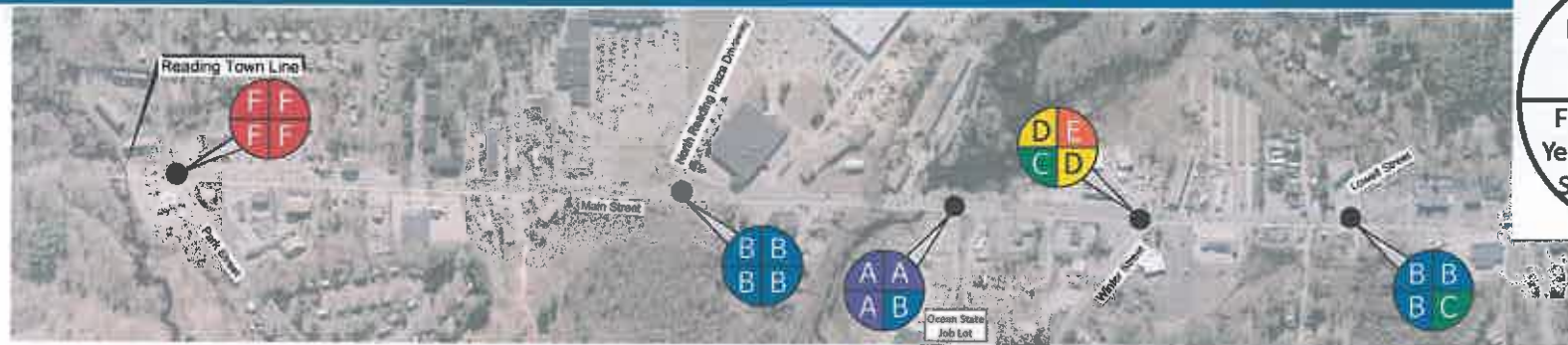
Traffic Operational Analysis - AM

Base Year	Future Year No-Build
Future Year Opt. Signal	Future Year Road Diet



CONTINUED
ABOVE

Traffic Operational Analysis - PM

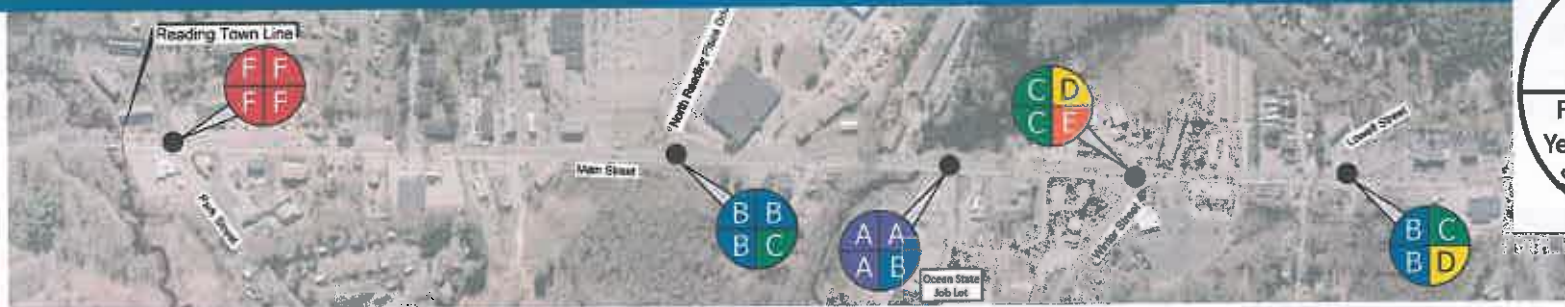


Base Year	Future Year No-Build
Future Year Opt. Signal	Future Year Road Diet

CONTINUED
ABOVE



Traffic Operational Analysis – SAT



Base Year	Future Year No-Build
Future Year Opt. Signal	Future Year Road Diet



CONTINUED
ABOVE

Summary of TEC's Findings

- Crash history is not severe but can be mitigated through improvements
- The overlapping Route 62 segment on Main Street has different capacity needs than the north and south ends
- There is an opportunity to transform the roadway to become more friendly for walkers and bikers – TEC recommends that the Town approach MassDOT with a concept that has considerable public consensus
- The project will require active business stakeholder input
- MassDOT owns and maintains the corridor – the Town should petition the Commonwealth to fund the design and construction of improvements
- Improvements will likely be phased into multiple projects over multiple funding years
- Both State Highway and local rights-of-way will be affected at intersections, requiring the Town's active involvement in the ROW process

Next Steps

- Review improvement options for the corridor and key intersections
- Work with Town Departments and the Select Board to evaluate options
- Meet with MassDOT District 4 staff to present the study findings and petition for phased improvements
- Build public and business stakeholder consensus
- Commence formal project initiation with MassDOT's MaPIT tool



Questions & Comments

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