

cityofnovi.org

CITY of NOVI CITY COUNCIL

Agenda Item 2
August 25, 2008

SUBJECT: Policy discussion regarding traffic signal support options.

SUBMITTING DEPARTMENT: Engineering *R24*

CITY MANAGER APPROVAL: *[Signature]*

BACKGROUND INFORMATION:

Currently, Grand River Avenue, Twelve Mile Road and Novi Road are the only thoroughfares designated to have decorative poles with mast arms at signalized intersections. Except for a handful of locations, traffic signals at all other intersections in Novi are supported by wooden or metal strain poles with heavy wires or cables in either a single diagonal span or a box span configuration.

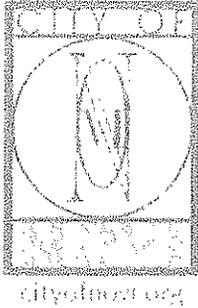
Because Council recently requested an evaluation of the costs to include mast arms in lieu of a box span for the new signal heads to be installed at the intersection of Eleven Mile and Meadowbrook Roads, we are requesting that a policy discussion take place to determine whether the scope of the current policy should be revised.

RECOMMENDED ACTION: Policy discussion regarding traffic signal support options.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Capello				
Council Member Crawford				
Council Member Gatt				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Staudt				

MEMORANDUM



TO: CLAY PEARSON, CITY MANAGER
FROM: ROB HAYES, CITY ENGINEER
SUBJECT: TRAFFIC SIGNAL POLES/MAST ARMS
DATE: AUGUST 14, 2008

8-14-08

To: Mayor and City Council Members

For discussion/additional questions as you wish.

The purpose of this memorandum is to request guidance on how to proceed with scoping future intersection signalization projects as they relate to different types of signal support configurations.

Background

At the August 11, 1997 meeting, City Council adopted a policy (attached) that requires mast arm traffic signal supports be installed at signalized intersections along Novi Road, Grand River Avenue and Twelve Mile Road (Figure 1). The standard wire signal support configuration for all other thoroughfares is currently the box span (Figures 2 and 3). Both of these configurations offer improvements over the traditional single span wire configuration (Figure 4), including increased safety for maintenance workers (who no longer need to be in the middle of a busy intersection to make repairs) and improved signal head visibility for drivers.

The Road Commission for Oakland County (RCOC), which manages signal operations throughout the City of Novi, is phasing-out single span wire configurations and replacing them with box spans. For budgeting purposes, unless an intersection is on Novi Road, Grand River Avenue or Twelve Mile Road, we include the cost for a box span configuration when scoping an intersection signalization project.

Recently, we received a request from Council to evaluate the cost of adding mast arms and poles to the Eleven Mile/Meadowbrook intersection. Also, the developers of the Providence Park Hospital expansion were required to install a decorative pole and mast arm configuration for the new signal at Beck and Providence Parkway, located immediately south of Grand River as an intersection essentially on Grand River Avenue.

Cost and Operational Evaluation

The capital cost difference between a mast arm compared to a box span configuration is roughly \$90,000 per intersection, including contingencies. According to RCOC, the cost to operate and maintain either type of configuration is roughly the same. There are no inherent safety issues or operational differences with either type of configuration; therefore, from a lifecycle cost perspective, the overall cost differential would be approximately \$90,000.

Future Intersection Signalization Projects

To properly scope future signalization projects (whether adding new signals or upgrading existing signals), I respectfully request policy guidance from Council regarding this issue. Options include:

- Revising the existing policy by expanding the number of thoroughfares that will require mast arms (16 thoroughfares in Novi including mile roads, Grand River and West Park Drive);

- Revising the existing policy by indicating which additional intersections along roads other than Novi Road, Grand River and Twelve Mile will require mast arms (41 existing signalized intersections plus any future signalized intersections); and,
- Keeping the current policy of only requiring mast arms on Novi Road, Grand River and Twelve Mile Road, with consideration given to potential retrofitting of the remaining intersections with mast arms along these three roads (37 signalized intersections, 22 of which currently have mast arms, leaving 15 to potentially be retrofitted).

See attached Existing Traffic Signal Locations map showing the locations of all existing traffic signals within the City.

Please let me know if you have any questions, comments or concerns in regard to this request.

cc: Pam Antil, Assistant City Manager
Brian Coburn, Civil Engineer
Benny McCusker, Public Works Director

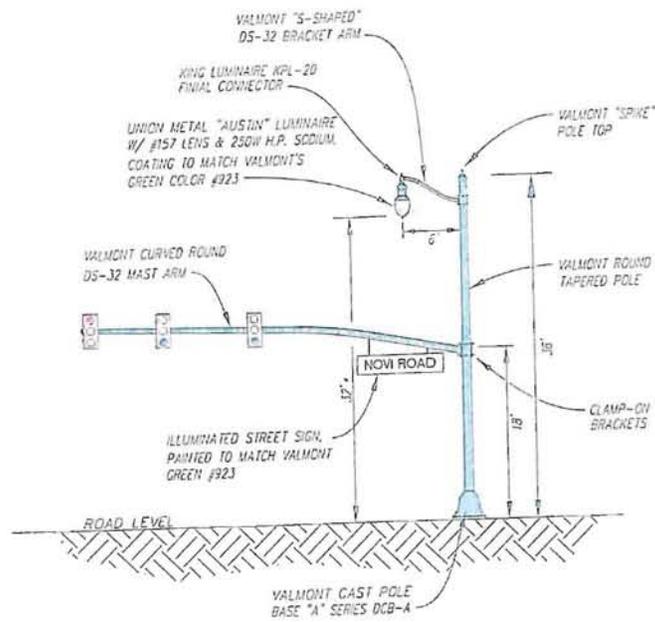


Figure 1: Decorative Pole/Mast Arm Detail

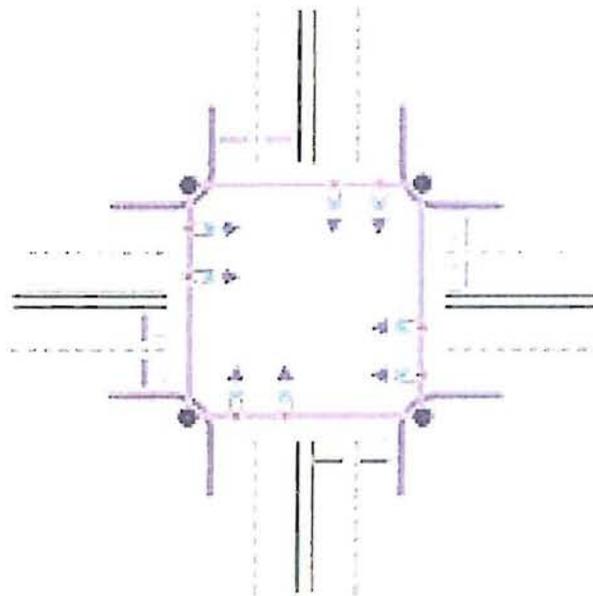


Figure 2: Typical Plan View of Box Span Configuration

Option A

CITY OF NOVI
OAKLAND COUNTY, MICHIGAN

RESOLUTION DESIGNATING MAST ARM TRAFFIC SIGNAL SUPPORTS FOR USE
ON NOVI ROAD, GRAND RIVER AVENUE AND TWELVE MILE ROADS

WHEREAS, The City Council has caused to be investigated the concept mast arm traffic signal supports for future and replacement traffic signal installations within the City by assigning such to a committee consisting of representatives of Council, Administration and the Consulting Engineers;

WHEREAS, It has been determined that mast arm traffic signal supports are appropriate for use along designated corridors within the City which are limited to Grand River Avenue, Twelve Mile Road and Novi Road; and,

WHEREAS, It has been determined that such mast arm traffic signal supports should be similar to that utilized in the Main Street Project with the finish to be anodized black and illuminated street name signs to be suspended from the mast arm.

NOW THEREFORE BE IT RESOLVED that the Novi City Council hereby designates black anodized mast arm traffic signal supports with suspended illuminated street name signs as the standard traffic signal support system for all new signal installations and signal replacements on Novi Road, Grand River Avenue and Twelve Mile Roads within the City of Novi.

BE IT FURTHER RESOLVED that the Novi City Council will allow the installation of span wire supported traffic signals for those intersections on the above roads where the road is not built to its master planned configuration if such construction is planned within 10 years of the installation or replacement of the traffic signal.

I, Tonni L. Bartholomew, duly appointed Clerk of the City of Novi, Oakland County, Michigan, do hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a Regular Meeting of the City Council held this _____ day of _____, Nineteen Hundred and Ninety-seven.

Tonni L. Bartholomew, City Clerk
City of Novi, Oakland County, Michigan



Figure 3: Box Span Configuration at Beck and Eight Mile

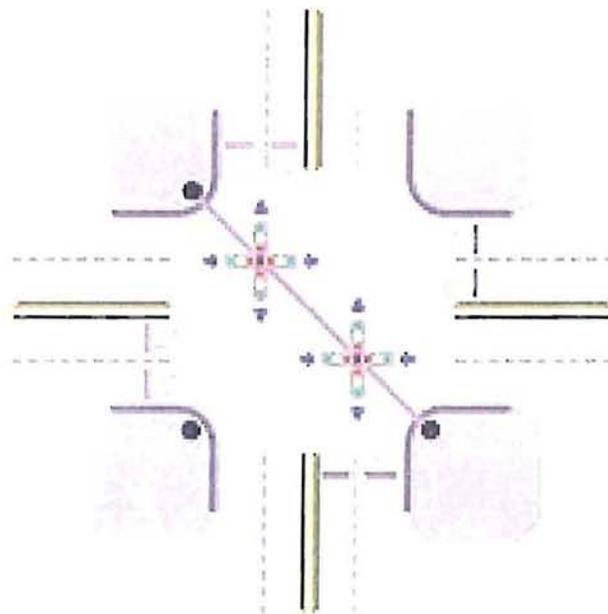


Figure 4: Typical Plan View of Single Span Wire Configuration

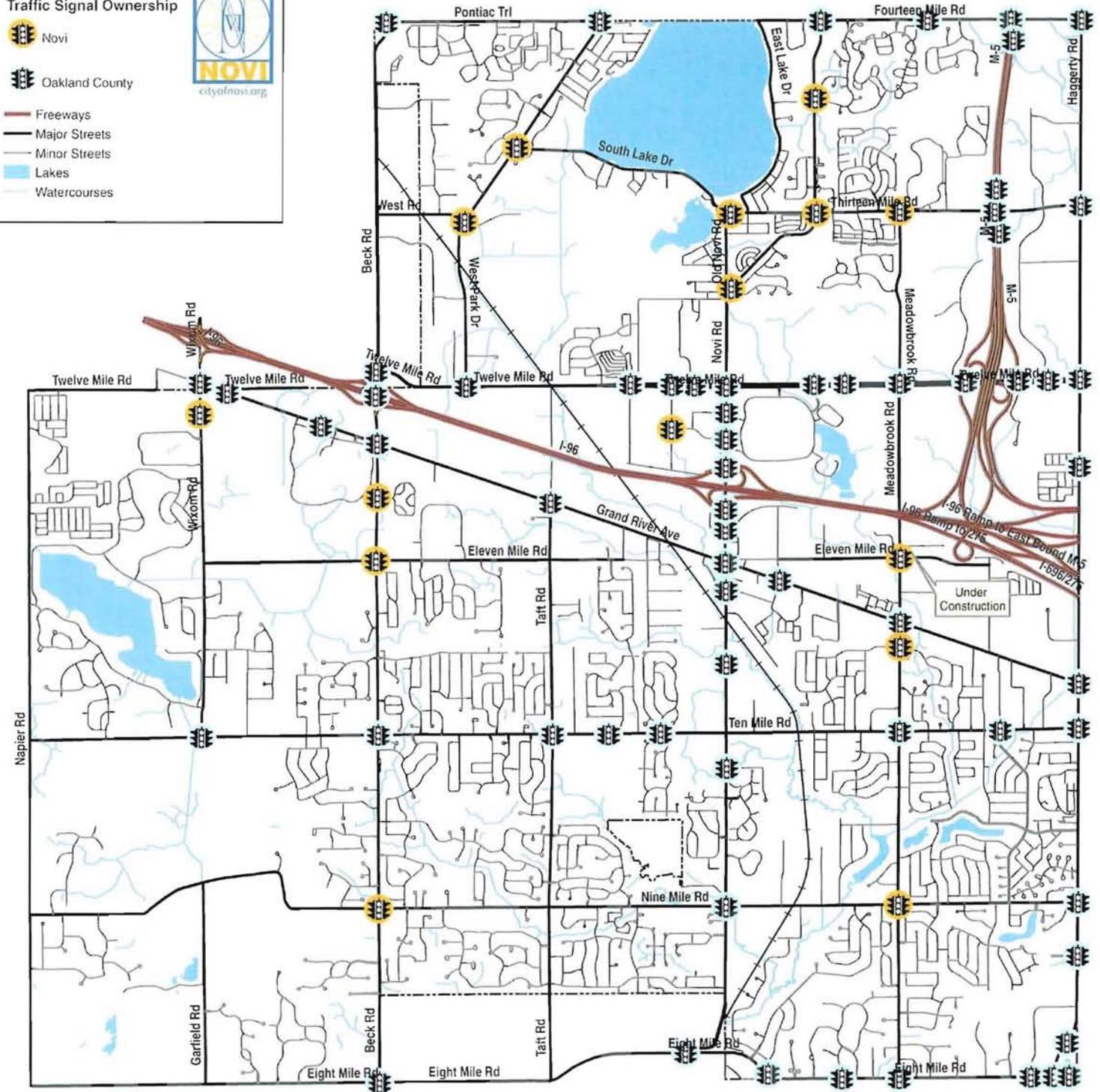
EXISTING TRAFFIC SIGNAL LOCATIONS

CITY OF NOVI, MICHIGAN

Legend

Traffic Signal Ownership

-  Novi
-  Oakland County
-  Freeways
-  Major Streets
-  Minor Streets
-  Lakes
-  Watercourses



CITY OF NOVI

ENGINEERING DIVISION

45175 W. TEN MILE ROAD

NOVI, MI 48375-3024

(248) 347-0454

MAP AUTHOR: AMBER ECKERT, GIS TECHNICIAN



0 1,700 3,400 6,800 10,200

FEET

MAP PRINT DATE: 6/14/2008

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.