

# RMA: TREES & ROADBUILDING

Lessons of our 5 years' work  
to “green” a DDOT road project  
on Embassy Row

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Founder & President, Restore Mass Ave  
On behalf of our Board & friends

Urban Forestry Advisory Council  
April 4, 2023

*“Friends working together  
to re-green Embassy Row”*





# RMA Mission

We engage residents, embassies and public and private partners to plant and sustain a full canopy of trees on Embassy Row.

We promote restoration of the complete historic landscape, creating green space for the city.

We share our know-how with others who hope to “green” their streets, making Embassy Row a living classroom

**Tree canopy increased 13 %  
in our first ten years.**



**SIDEWALK 1913**  
*2000 Block of Mass Ave.*



# CURRENT RMA INITIATIVES

- “Charismatic Trees” Sample of 20 of the 200+ impacted by MARP construction RMA & UFD
- Sidewalk Heat Study with Mike Alonzo AU
- Dupont Tree Plaza - DDOT StormWater has \$736,000 to build & plant trees in bare sidewalk.
- Renew outreach to embassies & others so they’ll preserve and extend shade.

[Restore MassAve.org](http://RestoreMassAve.org)



# DDOT STREETSCAPE PROJECTS



Total Design Fee	\$ 63.9 million
Total Construction and TM	\$ <u>836.5 million</u>
TOTAL	\$ 900.55 million
	~ <b>\$ 1 billion</b>

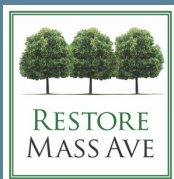
*FY 2022 DATA*

*32 PROJECTS, ALL WARDS*

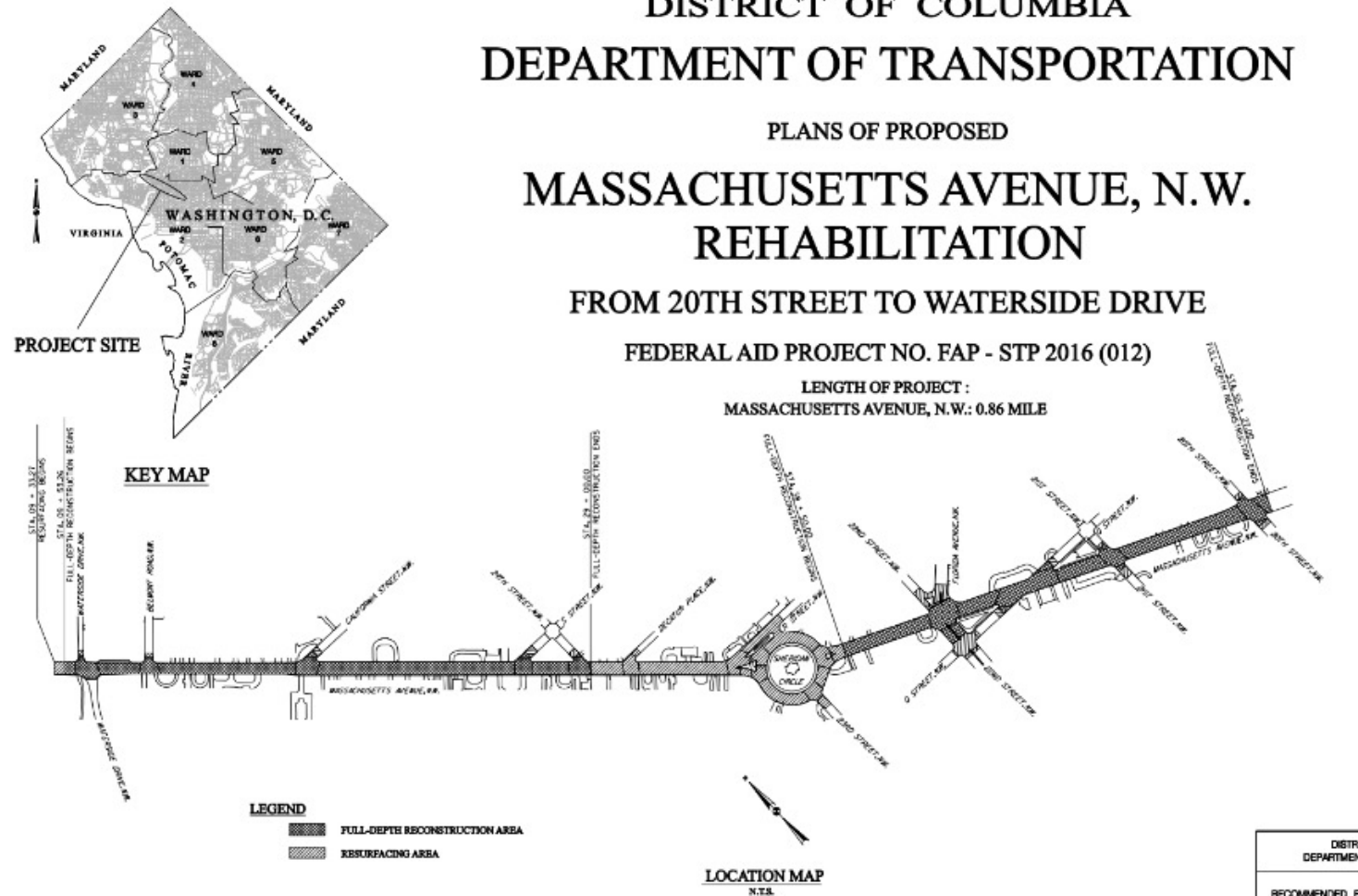
EVERYBODY LIKES “INFRASTRUCTURE” – CITY WILL SPEND LOTS MORE ON IT SOON  
DDOT SPENDS

**\$ 1 BILLION PER YEAR** REHABBING OUR CITY’S STREETS.

DDOT’s DECISION IN 2017 TO “REHABILITATE” ONE MILE OF HISTORIC MASS AVE  
by REPLACING ALL INFRASTRUCTURE would have cost a lot of trees  
if RMA hadn’t intervened. What are the lessons?



MARP plan for a mile of Restore Mass Ave's two mile route.  
First MARP plan was released October 2017







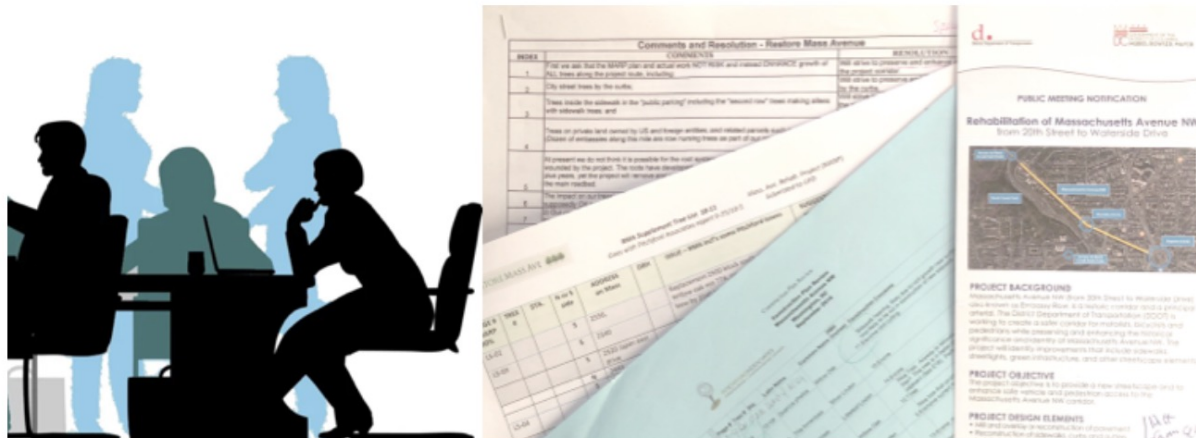
## Back Story: Pushing for Improvements 2017 – 2019

➤ 2017

➤ 2018

➤ 2019 IPMD says MARP will start in 2020

➤ 2020



We met with IPMD leaders to share our lists of trees impacted by MARP.

# LESSON 1

## *JUMP IN FAST!*

- Get Plans to Consider Trees Outside Limit of Work.
- Rolled-out map on table at first public meeting was helpful. We saw bad features & responded
- Later versions to ANCs were very brief.
- We got 300-page PDF each phase and gave input.



# LESSON 2

## *DESIGN ELEMENTS*

### *FOR TREES - 1*

**STRUCTURAL SOIL** for many street trees of 1500 cu ft. But *not* planned for Second Row trees..

**POROUS FLEXIPAVE** for many street trees. But *not* planned for Second Row trees.

**KEEP SOME LARGE & MID-SIZED trees** for shade during the years of construction, even trees whose health is not great.

**STORM DRAINS** Fewer than in early plans so trees collect rainfall. Locate drains away from tree rooting areas.





# LESSON 2

## *DESIGN ELEMENTS FOR FOR TREES - 2*

**STREETLIGHT POLES** sited midway between trees leader for least cutout. 12-foot DC Globes are evenly between trees. Elegant!

**LAMPS** are 3000 K LEDs = lowest for DC arterial .  
They are top-shielded. But other shielding issues.

**RMA positions** were informed by DC Street Light Task Force  
and DC Chapter of International Dark-Sky Association



# TEE-TUM - MARCH OF THE MACHINES

Washington Gas pipe replacement started June 2020. MARP work started Mar 1, 2021. MARP almost finished April 2023. **25 months**



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# GAS PIPE DIGS SIDEWALKS & PUBLIC PARKING

**RMA made photo record** of all gas line cuts across sidewalk to assess future health of trees.

**We asked for site meeting with Wash Gas to show our issues and learn** rules Wash Gas follows in this space. Got no official meeting. Spoke with crews. Small flexible piping was used around roots not rigid metal pipes

**Problem:** Few formal rules for trenching in “the parking” beyond the MARP Limit of Work . Trees in these park-like DC land could be harmed.





# LESSON 3

## ***PUBLIC AT RISK FROM UTILITY PROJECT AT SAME TIME***

### **MACHINES & VEHICLES CROWD THE STREETS**

Put vehicles, bikers, pedestrians at more risk. Frightening! *We plan a FOIA to Police for see if more accidents were reported.*

### **GAS LINE PUNCTURES = EMERGENCY STREET SHUTDOWNS**

They say “can’t be helped” – records are old

### **WASH GAS DUG SAME TREE SITES MANY TIMES**

and apparently not coordinated with Milani digs by same trees!





# OUR SIGNS ENABLE ANYONE TO REPORT

Milani fenced 170 trees per rules



RMA made laminated signs



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# LESSON 4

***VIGILANCE = RMA APP***



QR enables anyone to report.  
Crew members visit & learn at RMA site via signs



## QR links to OBSERVER REPORT

**Observer Report Form**

What I saw

- ☐ Fence around tree wrong size, absent or damaged
- ☐ Crew is excavating under/near trees
- ☐ Roots > 2 inches in danger
- ☐ Branches cut or broken
- ☐ Other

Description - 300 character limit: \*

Date Observed \*

09/20/2021

Time I observed this

HH : MM AM/PM

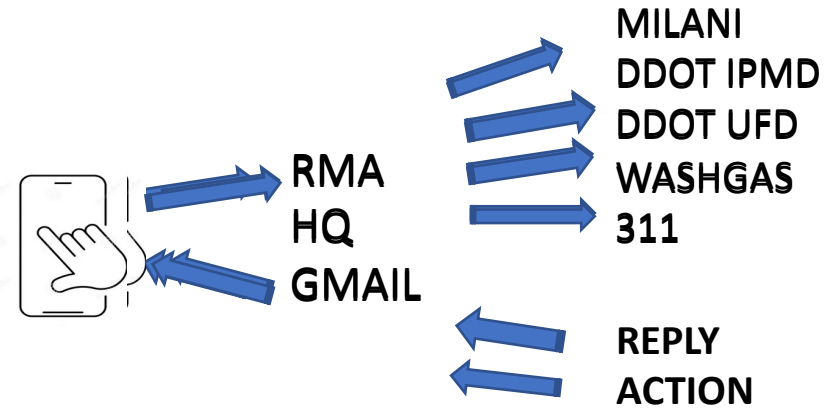
Upload a Photo (12MB size limit)

Choose Files no files selected

I reported this to DC 311 line. I got this 8-digit SRN:

I reported this also to:

## RMA HUB DIRECTS TO THE RIGHT



**WE ALSO FILED MANY ALSO  
311s to get in UFD system.**

Need 311 QR for future signs.





# OBSERVER DATABASE



Observer Reports Summary



Share

File Edit View Insert Format Data Tools Add-ons Help Last edit was seconds ago

100% \$ % .0 .00 123 Arial 10 B I S A [Grid Icon] [List Icon] [Text Color Icon] [Background Color Icon] [Link Icon] [Unlink Icon] [More Icon]

G25 fx https://restoremassave.org/rmatrees/wp-content/uploads/observer-report/Sycamore%20E51%20south%20side%20labeled.png

	A	B	C	D	E	F	G	
	Submission ID	Date Submitted	Category Chosen by Submitter	Description Provided by Submitter	Date Observed	Time Observed	Photo(s) uploaded with submission	DC 31
24	749	6/30/2021 13:12:00	Branches cut or broken	<p>ALL STREET TREES look scraped by equipment. Broken branches are dangling and need fast action for health of these trees.</p> <p>2000 block of Mass Ave from Hotel 2015 Mass to corner 2001 Mass.</p> <p>They are getting sloppy. Contrast with 2200 block of mass, south side.</p> <p>Many large machines &amp; trees look good!</p>	06-25-2021	11:00		
25	763	7/30/2021 16:26:00	Branches cut or broken	<p>Special Tree at Risk - E51, the 15.3" DBH sycamore is one of the noblest street trees on Emb Row! North-facing branches pruned for light pole If overpruned, please fine! This tree looks unbalanced on north side. On south side, big roots could be cut for CB 26 which is VERY close to base of tree.</p>	07-14-2021	12:00	<a href="https://restoremassave.org/rmatrees/wp-content/uploads/observer-report/Sycamore%20E51%20south%20side%20labeled.png">https://restoremassave.org/rmatrees/wp-content/uploads/observer-report/Sycamore%20E51%20south%20side%20labeled.png</a>	
26	764	7/30/2021 16:34:00	Branches cut or broken	<p>When/why cut off major branch of ancient ginkgo street tree on Sheridan Circle? This is E 169 . 23" DBH. When photo was taken July 28 the cuts wre fresh.</p>	07-28-2021	4:00	<a href="https://restoremassave.org/rmatrees/wp-content/uploads/observer-report/SherCir%20Ginkgo%20E169%20cut.jpeg">https://restoremassave.org/rmatrees/wp-content/uploads/observer-report/SherCir%20Ginkgo%20E169%20cut.jpeg</a>	



ObserverReports\_Main ▾

Explore



# BUILDING VIBRATIONS CRISIS

**Carole Feld** of 2556 Mass whose house was shaking found others with houses shaking , She contacted Huntae Kim at DDOT. DDOT made vibrations studies. (Carole is also a member of the RMA Board)

Below: checklist walk in January: Brian Romanowski (Pinto), Donovan Boyed (DDOT), Carole Feld, ANC 2D02, Aki Bayz, (Mass Neighbor), Shaun Davis (HNTB-Milani).



# LESSON 5

## *COMMUNICATE!*



**HNTB**

**Matt Lehtonen - UFD DDOT**  
**Matt Madeira - RMA arborist**  
**Shaun Davis - HNTB, Milani Const'n**

**Milani**  
CONSTRUCTION, LLC



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# TREE OUTCOMES & OUTLOOK

**DDOT UFD, IPMD, MILANI-HNTB DID WHAT WAS NEEDED. THANKS!**

## WINS

Biggest street trees kept per plan.  
42 new street trees: some new spaces.

2<sup>nd</sup> row big trees – ok but did not get flexipave, structural soil.

Unplanned loss – truck hit to avoid roadway congestion. Tree removed.

Species – RMA advised on historic and variety such as London plane.

Sheridan Circle median plantings poor.

## OUTLOOK

Biggest & midsized - look ok but underground damage may hurt them.

New trees planted early were inside fences, dry, overgrown.

Sod & trees need watering! Unclear who is responsible first year.

New median plants are mostly dying. RMA declined to advise on this plan.

**BUILDINGS WILL VIBRATE** adjoining DDOT projects.





# RMA NEXT STEPS

## *HEALTH & MORTALITY OF TREES IMPACTED BY ROAD CONSTRUCTION*

### CHARISMATIC TREES

- 1 21 sample trees chosen by Matt L of UFD and Matt Madeira RMA Arborist We will photograph & tell stories their outcomes
- 2 ASSESSMENT - GIS of canopy in 2020
- 3 SIDEWALK TEMPERATURE UNDER DOUBLE ROWS  
Alonzo A U study continues temp-taking by bicycle. Started 2022.





# ADVICE ON SPENDING \$ 1 BILLION / YR

**INCLUDE AREA BEYOND LOW** to protect trees on adjoining land and staging areas.

**FORECAST CANOPY CHANGE** for + 20 yrs, +40 yrs  
Compare to actual canopy as GIS is available. Set the goal of the most canopy at all time horizons.

**UFD Arborist** for each IPMD project and at each stage

**PUBLIC NOTICE** at each stage should show plans rolled out on table & give people viewing time.



# MAKE OUR 5-YEAR CAMPAIGN USEFUL

To “green” planned \$69 mill & ongoing \$836 milion DDOT

**1 ASSESSMENT OF CANOPY 2020** – In 2025 we learn how construction affected health of trees (or not).

**2 IMPROVE & TEST OBSERVER APP**

**3 POLICY CHANGES** Such as scoring of engineer plans, contractor performance for proactive ‘green’ features

*CROSS--SECTOR REPORT  
WITH DDOT & INDUSTRY? REPORT CARD?*



# RESTORE MASS AVE IS NEEDED *Block of Decatur & R*





# ***THANK YOU!***



RIGHT New sidewalk, drain, tree box, tree & bench by bus stop at Mass & S Street. 4-2-23



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