ROCKWELL ASSOCIATES
URBAN FORESTRY • ARBORICULTURE • CONSULTING

www.RockwellConsultants.com

## Field Memorandum

To: **Mr. Steve Norcini**
Cc: **Mr. Robert Zienkowski, Mr. Rodger Phillips**
Date: **August 29, 2016**
Site: **VU – Buffer /Parking lot**
Reference: **Vehicular light penetration to adjacent properties.**

Dear Mr. Norcini,

Pursuant to our night inspection at the above referenced location, please see my findings.

Steve Norcini and I met on August 24th 2016 after the monthly shade tree meeting in order to observe the light penetration/spillage from vehicles that are using the parking lots drive lanes as they enter or exit the parking spaces.

We utilized a full size pick-up truck to obtain the greatest amount of penetration and to obtain the worst case scenario.

I estimated at 90 feet from the buffer curb line, was where we obtained the greatest amount of headlight intrusion. Our field study began at the most westerly end of the parking lot and finished at the proposed new entrance lane. We utilized both high and low beams to obtain both scenarios during a typical evening.

Each drive lane was observed. We broke each section into parcels and measured the light elevation and penetration. Our goal was to see if (A) the light penetration reached above the new buffer (B) penetration through the new buffer was obtained (C) if plants locations and species were adequate for a complete screening.

**From west to east in the parking lot - Gannett Fleming, Inc will locate parcels on drawing when we meet onsite.**

| Parcel | Headlight Measurements | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU1** | High beam - 79"<br>Low beam – 27" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU2** | High beam - 76"<br>Low beam – 23" | complete | N/A | Monitor health of Plants |

T: 610.731.7969 | F: 610.521.0108 | E: jhtrees@verizon.net
Po Box 542 - Ridley Park - PA - 19078

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU3** | High beam - 78"<br>Low beam – 21" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU4** | High beam - 80"<br>Low beam – 25" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU5** | High beam - 78"<br>Low beam – 15" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU6** | High beam - 71"<br>Low beam – 26" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU7** | High beam - 107"<br>Low beam -30" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU8** | High beam - 96"<br>Low beam - 27 | Inadequate | Add 5 evergreen trees | To be field located by Rockwell |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU9** | High beam - 88"<br>Low beam – 28" | complete | N/A | Monitor health of Plants |

| Parcel | Headlight Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| **VU10** | High beam - 89"<br>Low beam – 45" | Inadequate | Transplant shrubs and add 5 new evergreen trees | Monitor health of Plants |

Conclusion

It was evident that most of the planting buffer is satisfactory at its immature state. However, adjustments are required at parcels 8 and 10 which are located at the east end of this buffer near the new entrance route. These will require additional trees.

It is imperative that both the adjacent residents and Villanova understand that the design was implemented for future growth and screening.

I will be happy to answer any questions.

Best regards,

John Rockwell Hosbach Jr., RCA

John Rockwell Hosbach Jr., Urban Forester

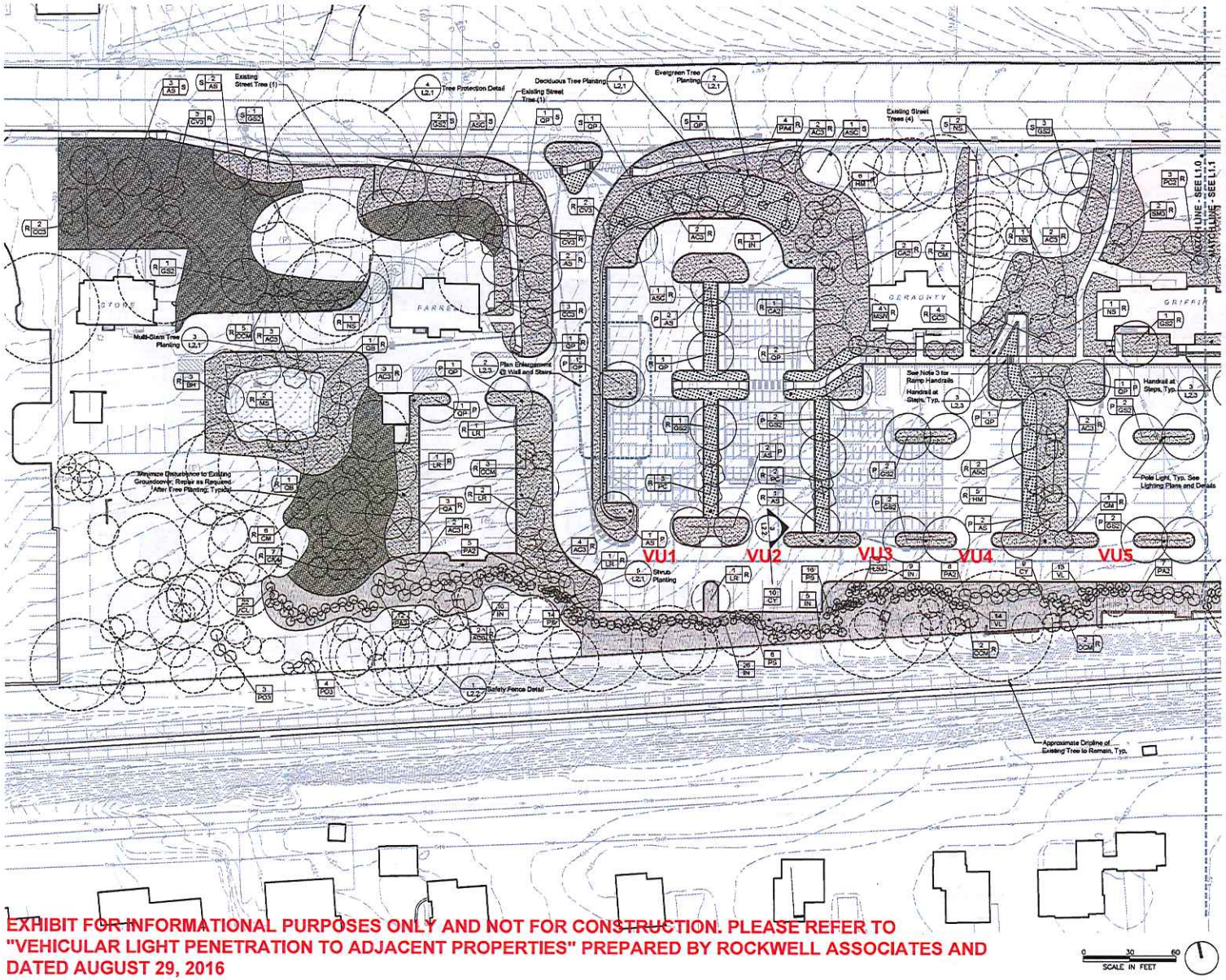



**EXHIBIT FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR CONSTRUCTION. PLEASE REFER TO "VEHICULAR LIGHT PENETRATION TO ADJACENT PROPERTIES" PREPARED BY ROCKWELL ASSOCIATES AND DATED AUGUST 29, 2016**

Legend

- Street Trees
- Replacement Trees
- Parking Lot Trees
- Lawn
- Refurbish Existing Turf Grass As Required
- Planting Bed
- "No-Mow" Seed Mix
- Rain Garden Seed Mix
- Pole Light; See Lighting Plans and Details
- Fence

Notes:

1. See Land Development Plans for Lancaster Avenue Tree Replacements Shown Within Aldwyn Triangle.
2. See "EX" series of drawings in the Lancaster Avenue Housing set for an elevation view of proposed buffer planting at the southern project boundary.
3. Handrails at Ramps Similar to Those Shown in Detail 3, Sheet L2.3, including Base and Alternate Design.
4. Buffer planting to be completed prior to the completion of project.

Villanova University
W. Lancaster Ave. Parking
Lancaster and Ithan Avenues
Villanova PA 19085

VMA
RAMSA


ARCHITECT-OF-RECORD
Voith & Mactavish Architects LLP
1616 Walnut Street, 25th Floor
Philadelphia, PA 19103
phone: 215-545-0544
fax: 215-545-3299
www.voithandmactavish.com

DESIGN ARCHITECT
Robert A.M. Stern Architects LLP
460 West 34th Street
New York, New York 10001
phone: 212-967-5100
fax: 212-967-9588
www.ramsa.com

CIVIL ENGINEER
Nave Newell Inc.
900 West Valley Road, Suite 100
Wayne, PA 19087
phone: 610-265-8323
fax: 610-265-4209
www.navenewell.com

STRUCTURAL ENGINEER
Macintosh Engineering
One East Uwchlan Avenue, Ste. 401
Exton, PA 19341
phone: 484-472-2180
fax: 484-472-2181
www.macintosheng.com

MEP/FP ENGINEER
Bala Consulting Engineers, Inc.
443 South Gulph Road
King of Prussia, PA 19406
phone: 610-649-8000
fax: 610-649-8475

LANDSCAPE ARCHITECT
Sikora Wells Appel
8 Kings Highway West, Suite A
Haddonfield, NJ 08033
phone: 856-433-6931
www.sikorawa.com

ACOUSTIC CONSULTANT
Acentech Inc.
8 Interplex Drive, Suite 218
Trenton, PA 19053
phone: 215-428-8344
fax: 215-245-1796
www.acentech.com

ELEVATOR CONSULTANT
Zipf Associates Inc.
25 Bala Avenue, Suite 201
Bala Cynwyd, PA 19004
phone: 610-667-1717
fax: 610-667-0216


Joseph Sikora
P.L.A. # LA002630

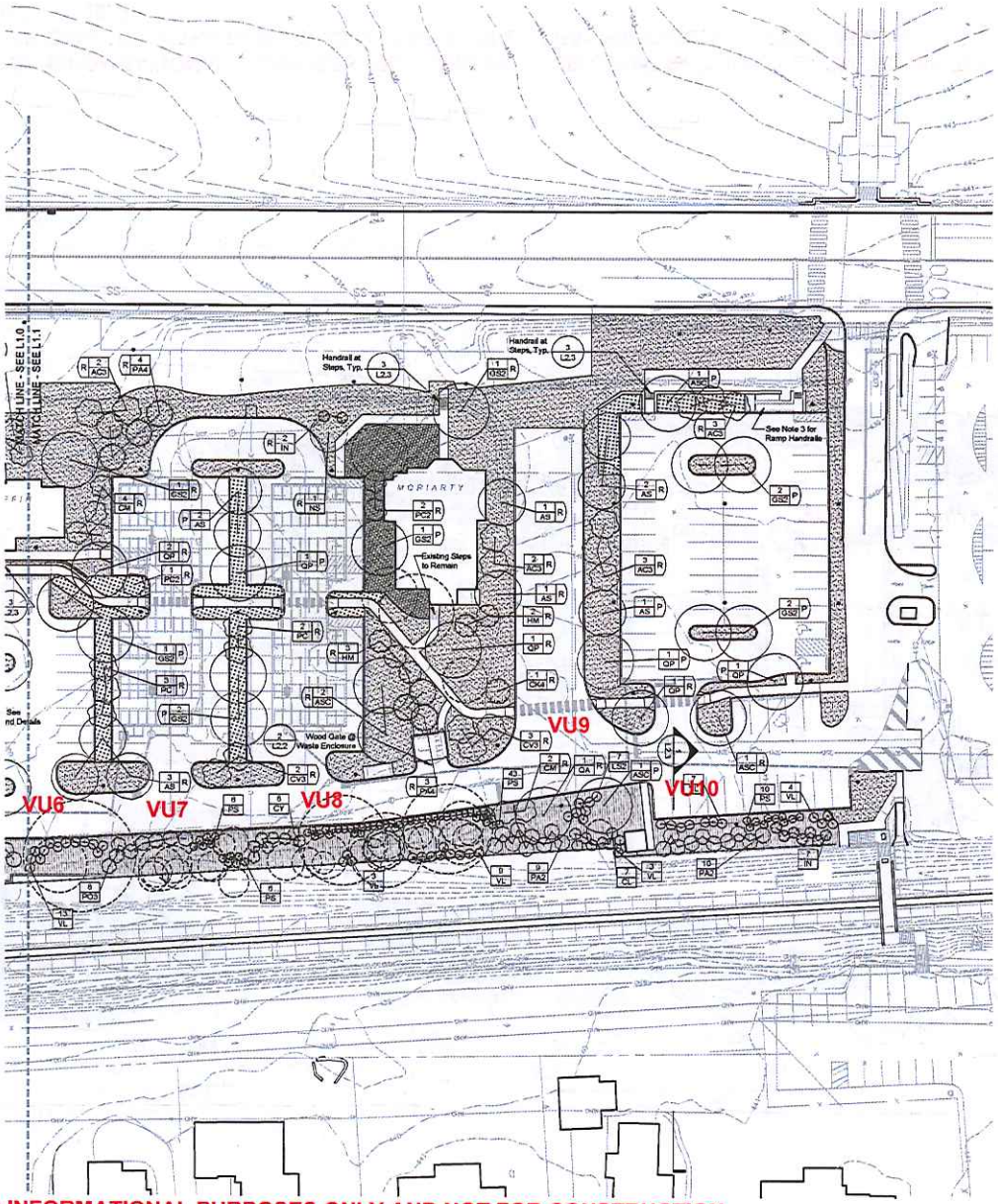
FINAL LAND DEVELOPMENT SUBMISSION

| | |
|---|---|
| Revision | August 10, 2015 |
| Date | March 6, 2015 |
| Title | Planting Plan |
| Scale | 1" = 30'-0" |
| Drawn By | RM |

L1.0

Sheet No. 25 of 34

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.




Legend

- Street Trees
- Replacement Trees
- Parking Lot Trees
- Lawn
- Refurbish Existing Turf Grass As Required
- Planting Bed
- "No-Mow" Seed Mix
- Rain Garden Seed Mix
- Pole Light, See Lighting Plans and Details
- Fence

Notes:

1. See Land Development Plans for Lancaster Avenue Tree Replacements Shown Within Aldwyn Triangle.
2. See "EX" series of drawings in the Lancaster Avenue Housing set for an elevation view of proposed buffer planting at the southern project boundary.
3. Handrails at Ramps Similar to Those Shown in Detail 3, Sheet L2.3, Including Base and Alternate Design.
4. Buffer planting to be completed prior to the completion of project.

| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
|---|---|---|---|---|
| VU5 | High beam - 75' Low beam - 27' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements | Adequacy of Coverage | Management | Notes |
| VU6 | High beam - 70' Low beam - 22' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU7 | High beam - 75' Low beam - 21' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU8 | High beam - 80' Low beam - 25' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU9 | High beam - 75' Low beam - 21' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU10 | High beam - 72' Low beam - 20' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU11 | High beam - 22' Low beam - 10' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU12 | High beam - 80' Low beam - 2' | inadequate | Add 5 evergreen trees | To be final inspected by Rockwell |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU13 | High beam - 80' Low beam - 26' | complete | N/A | Monitor health of Plants |
| Period | Height Measurements (height at above road grade) | Adequacy of Coverage | Management | Notes |
| VU30 | High beam - 60' Low beam - 45' | inadequate | Transplant shrubs and add 5 new evergreen trees | Monitor health of Plants |

**EXHIBIT FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR CONSTRUCTION. PLEASE REFER TO "VEHICULAR LIGHT PENETRATION TO ADJACENT PROPERTIES" PREPARED BY ROCKWELL ASSOCIATES AND DATED AUGUST 29, 2016.**

Villanova University
W. Lancaster Ave. Parking
Lancaster and Ithan Avenues
Villanova PA 19085

VMA
RAMSA


ARCHITECT-OF-RECORD
Voith & Mactavish Architects LLP
1616 Walnut Street, 24th Floor
Philadelphia, PA 19103
phone 215-545-1544
fax 215-545-3299
www.voithandmactavish.com

DESIGN ARCHITECT
Robert A.M. Stern Architects LLP
460 West 34th Street
New York, New York 10001
phone: 212-967-5100
fax: 212-967-9588
www.ramsa.com

CIVIL ENGINEER
Nave Newell Inc.
900 West Valley Road, Suite 100
Wayne, PA 19087
phone: 610-265-8323
fax: 610-265-4299
www.navenewell.com

STRUCTURAL ENGINEER
Macintosh Engineering
One East Uwchlan Avenue, Ste. 401
Exton, PA 19341
phone: 484-475-0180
fax: 484-475-0181
www.macintoshengineering.com

MEP&FP ENGINEER
Bala Consulting Engineers, Inc.
443 South Gulph Road
King of Prussia, PA 19406
phone: 610-649-8000
fax: 610-649-8475

LANDSCAPE ARCHITECT
Sikora Wells Appel
8 Kings Highway West, Suite A
Haddonfield, NJ 08033
phone: 856-435-9181
www.sikorawa.com

ACOUSTIC CONSULTANT
Acentech Inc.
8 Interplex Drive, Suite 218
Trenton, PA 19053
phone: 215-245-8244
fax 215-245-1798
www.acentech.com

ELEVATOR CONSULTANT
Zipf Associates Inc.
25 Bala Avenue, Suite 201
Bala Cynwyd, PA 19004
phone: 610-667-1717
fax: 610-667-0216


Joseph Skore
PALA # LA002630

FINAL LAND DEVELOPMENT SUBMISSION

| | |
|---|---|
| Revision | August 10, 2015 |
| Date | March 6, 2015 |
| Title | Planting Plan |
| Scale | 1" = 30'-0" |
| Drawn By | RM |

L1.1

Sheet No. 26 of 34

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.