VILLAGE OF VERNON HILLS

ORDINANCE 2017 – 014

AN ORDINANCE GRANTING CERTAIN APPROVALS FOR PROPERTY PREVIOUSLY KNOWN AS THE CUNEO SOUTH COMMERCIAL PROPERTY AND NOW KNOWN AS THE CUNEO SOUTH RESIDENTIAL PROPERTY TOGETHER WITH THE CUNEO MANSION & GARDEN PROPERTY LOCATEDAT THE SOUTHWEST CORNER OF MILWAUKEE AVENUE AND THE EJ&E RAILROAD TRACKS, IN THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS

THE 7th DAY OF MARCH 2017

Published in pamphlet form by the Authority of the President and Board of Trustees of the Village of Vernon Hills, Lake County, Illinois, this 13th Day of March 2017

ORDINANCE NO. 2017-014

AN ORDINANCE GRANTING CERTAIN APPROVALS FOR PROPERTY PREVIOUSLY KNOWN AS THE CUNEO SOUTH COMMERCIAL PROPERTY AND NOW KNOWN AS THE CUNEO SOUTH RESIDENTIAL PROPERTY TOGETHER WITH THE CUNEO MANSION & GARDEN PROPERTY LOCATEDAT THE SOUTHWEST CORNER OF MILWAUKEE AVENUE AND THE EJ&E RAILROAD TRACKS, IN THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS

WHEREAS, the Village is a municipal corporation organized and existing under the statutes of the State of Illinois and empowered by statutes and by Home Rule Authority; and

WHEREAS, this Ordinance is adopted pursuant to the Village's municipal and Home Rule authority; and

WHEREAS, the property that is the subject of this Ordinance is the approximately 97 acres of property formerly known as the Cuneo South Commercial Property and the Cuneo Mansion Property which is now known as the Cuneo South Residential Property and the Cuneo Mansion & Garden Property, and is located at the southwest corner of Milwaukee Avenue and the EJ&E Railroad Tracks (the "Property"), and is legally described on Exhibit A; and

WHEREAS, the Property was annexed to the Village of Vernon Hills as part of a much larger 1,174 acre annexation in November of 1988; and

WHEREAS, the bulk zoning regulations that have controlled the zoning of the Property are contained in Exhibit C to the zoning ordinance applicable to the Property (Ordinance # 683) adopted in November 1988, which zoned the Property R-7 Multiple Family Residential; and

WHEREAS, the regulations contained in Sections 18, 20, 21, and 22 the Vernon Hills Zoning Ordinance of 1982 ("Village Zoning Ordinance") relating to the land use approval process are applicable to the Property because Exhibit C in Ordinance # 683 does not contain any land use approval provisions; and

WHEREAS, in addition to Ordinance # 683 and the Village Zoning Ordinance, the Village and County of Lake in 1996 executed documents and ordinances impacting the use and development of the Property, including:

1) A Declaration of Protective Covenants, Conditions and Restrictions For the Cuneo South Commercial Property, dated June 7, 1996;
2) An Agreement for Sanitary Sewer and Water Supply Services to the Cuneo Service Area of the Village of Vernon Hills, dated June 7, 1996; and
3) Ordinance 96-30 – An Ordinance Adopting Land Management Standards and Approving Preliminary Plan of Development for the Gregg's Landing Regional Planned Unit Development on the Cuneo Property, adopted April 9, 1996.

WHEREAS, the Village and Lake County previously modified those documents and ordinance as set forth below for the express purpose of allowing the proposed development to proceed in the event that the Village granted the Property the necessary land use entitlements;

1) Intergovernmental Agreement by and between County of Lake and the Village of Vernon Hills Regarding the Cuneo Property, approved by the Village on April 5, 2016; and
2) First Amendment to Agreement for Sanitary Sewer and Water Supply Services to Cuneo Service Area of the Village of Vernon Hills, approved by the Village on April 5, 2016; and
3) Amended and Restated Declaration of Protective Covenants, Conditions and Restrictions for the Cuneo South Commercial Property Now to be Known as the Cuneo South Residential Property, approved by the Village on April 5, 2016; and
4) Cuneo Mansion and Gardens Preservation and Campus Development Agreement, adopted by the Village on November 17, 2015.

WHEREAS, the Village, Lake County and Loyola University as the owner of the Property ("Loyola"), entered into the Cuneo Mansion and Gardens Preservation and Campus Development Agreement ("Preservation Agreement") which is dated November 17, 2015; and

WHEREAS, Pulte Home Company LLC ("Pulte") in regards to the approximately 97 acres of the Property as defined on Exhibit B, has petitioned the Village of Vernon Hills for the following:

1. Approval to amend the zoning classification from R-7 Multiple Family Residential to R-5 Single-family Residential PUD; with respect to the approximately 52.750 acres of the Property legally described in Exhibit B as the "Pulte Property";

2. Approval to amend the zoning classification from R-7 Multiple Family Residential to PIB, Public & Institutional Building, with respect to the approximately 44.235 acres of the Property legally described in Exhibit C as the "Loyola Property",

3. Approval of a Special Use Permit for a Planned Unit Development to allow a single-family residential development on the Pulte Property, along with certain departures, including but not limited to setbacks and lot size and to allow construction of a parking lot, new access drive, and a detention basin serving both the Pulte Property and the Loyola Property on the Loyola Property;

4. Preliminary site and landscaping plan approvals;

5. Approval of the architectural elevations and signage plans; and

6. Preliminary approval of the Plat of Subdivision.

WHEREAS, the development shall be in substantial conformance with the plans prepared by different consultants as set forth on Exhibit D and with the Terms and Conditions of Approval as set forth on Exhibit E, and the Monotony Code Restrictions as set forth on Exhibit F (collectively "Plans"); and

WHEREAS, Pulte Homes has requested the Departures from the various zoning and subdivision code requirements as set forth on Exhibit E; and

WHEREAS, upon due notice and after public hearings held on November 9, 2016, and November 30, 2016, by the Planning and Zoning Commission of the Village of Vernon Hills, and pursuant to the Village Zoning Ordinance, said Planning and Zoning Commission has filed its report concerning said petition listed above; and

WHEREAS, it has been determined that the granting of approval of the requested zoning relief will have no serious and depreciating effect upon the value of surrounding property and will have no adverse effect upon the character of the neighborhood, public utility facilities or other matters pertaining to the public health, public safety and general welfare; and

WHEREAS, based upon the evidence adduced at said hearings and in their Application, the petitioner has entered into the record evidence and findings of facts that address the conditions in Sections 18.3 and 21.7 of the Village Zoning Ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF VERNON HILLS, COUNTY OF LAKE AND STATE OF ILLINOIS:

SECTION I. Incorporation of Recitals. The foregoing recitals are material to this Ordinance and are incorporated herein as though fully set forth in this Section 1.

SECTION II. Approval of Zoning and Special Use. Pursuant to the Vernon Hills Zoning Ordinance of 1982, as amended, amend the zoning classification from R-7, Multi-family Residential, to R-5 Single Family and PIB, Public & Institutional Building and a Special

Use for Planned Unit Development for properties legally described in Exhibits B and C are hereby approved.

SECTION III. Approval of Preliminary Site and Landscaping Plans and Preliminary Plat of Subdivision. Pursuant to the Vernon Hills Zoning Ordinance of 1982, approvals of the preliminary site and landscaping plans, and Preliminary Plat of Subdivision as set forth in Exhibit D are hereby granted subject to the Terms and Conditions listed in Section VII and in Exhibit E.

SECTION IV. Approval of Architectural Elevations. Pursuant to the Vernon Hills Zoning Ordinance of 1982, the approvals of the architectural elevations as set forth in Exhibit D are hereby granted subject to the Terms and Conditions listed in Section VII and in Exhibit E.

SECTION V. Approval of Preliminary Engineering Plans. Pursuant to the Vernon Hills Zoning Ordinance of 1982, the preliminary engineering plans as set forth in Exhibit D are hereby approved subject to the Terms and Conditions listed below in Section VII and in Exhibit E.

SECTION VI. Future Amendments to this Ordinance. After passage of this Ordinance approving the Special Use for a Planned Unit Development the owner of each respective property shall have the right to seek amendments, changes, or modifications to each party's property without the consent of the other owner, subject however to any limitations set forth in any other written recorded agreement between Loyola and Pulte and/or their successors and assigns, including, without limitation, that Declaration of Temporary Construction Easement, Permanent Easements, Right of Entry For Maintenance Purposes, and Cost Sharing Agreements entered into by Loyola and Pulte that would limit or otherwise be inconsistent with such amendment, change, or modification, and provided further, however, that as long as Loyola owns title to any portion of the Pulte Property, Loyola's consent to any amendment, change, or modification of the Special Use for the Planned Unit Development as to such Pulte Property shall require Loyola's written consent.

SECTION VII. Approval of Terms and Conditions of this Ordinance. Pursuant to the Vernon Hills Zoning Ordinance of 1982, as amended, and after consideration of the recommendations of the Planning and Zoning Commission, the Terms and Conditions as set forth in Exhibit E are hereby approved and made a part of the approvals as listed in the Sections above.

SECTION VIII. Severability. In the event that any section, clause, provision, or part of this ordinance shall be found and determined to be invalid by a court of competent jurisdiction, all valid parts that are severable from the invalid parts shall remain in full force and effect. If any part of this ordinance is found to be invalid in any one or more of its several applications, all valid applications that are severable from the invalid applications shall remain in effect.

SECTION IX. Repeal and Savings Clause. All ordinances or parts of ordinances in conflict herewith are hereby repealed; provided, however, that nothing herein contained shall affect any rights, actions or causes of action which shall have accrued to the Village of Vernon Hills prior to the effective date of this ordinance.

SECTION X. Successors and Assigns. All of the provisions of this Ordinance and the attachments hereto are binding on all successors and assigns of the petitioner, property owner, their successors and assigns.

SECTION XI. Effective Date. This ordinance shall be in full force and effect from and after its passage, approval and publication as provided by law.

SECTION XII. Ordinance Number. This ordinance shall be known as Ordinance Number 2017-014.

Adopted by roll call vote as follows:

AYES: 6 – Hebda, Schultz, Marquardt, Koch, Grieb, Williams
NAYS: 0 - None
ABSENT AND NOT VOTING: 0 - None

Roger L. Byrne, Village President

PASSED: 3/7/2017
APPROVED: 3/7/2017
PUBLISHED IN PAMPHLET FORM: 3/13/2017

ATTEST:

John Kalmar, Village Clerk

Exhibit A-1
Legal Description of the Property

PARCEL 1:

THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE WESTERLY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY CONDEMNATION IN CIRCUIT COURT, LAKE COUNTY, ILLINOIS, CASE NO. 65-2323, WITH THE SOUTHERLY RIGHT OF WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 11 DEGREES 05 MINUTES 47 SECONDS EAST ALONG SAID WESTERLY LINE OF MILWAUKEE AVENUE AS WIDENED, BEING A LINE 50.00 FEET, AS MEASURED AT RIGHT ANGLES, WESTERLY OF AND PARALLEL WITH THE CENTER LINE OF MILWAUKEE AVENUE, 553.26 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 86 DEGREES 43 MINUTES 09 SECONDS WEST, 311.96 FEET; THENCE SOUTH 85 DEGREES 35 MINUTES 41 SECONDS WEST, 153.40 FEET; THENCE SOUTH 84 DEGREES 29 MINUTES 38 SECONDS WEST 427.28 FEET; THENCE NORTH 05 DEGREES 29 MINUTES 59 SECONDS WEST, 535.67 FEET TO AN INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF SAID ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 84 DEGREES 30 MINUTES 01 SECONDS WEST ALONG SAID LAST DESCRIBED LINE, 990.10 FEET; THENCE SOUTH 00 DEGREES 22 MINUTES 54 SECONDS WEST, 1199.06 FEET; THENCE SOUTH 37 DEGREES 25 MINUTES 00 SECONDS EAST, 1032.64 FEET; THENCE SOUTH 77 DEGREES 59 MINUTES 09 SECONDS EAST, 399.87 FEET; THENCE SOUTH 84 DEGREES 27 MINUTES 58 SECONDS EAST, 688.54 FEET; THENCE SOUTH 85 DEGREES 08 MINUTES 28 SECONDS EAST, 242.41 FEET; THENCE SOUTH 86 DEGREES 31 MINUTES 10 SECONDS EAST, 125.09 FEET; THENCE NORTH 80 DEGREES 43 MINUTES 15 SECONDS EAST, 223.04 FEET TO A POINT ON THE WESTERLY LINE OF SAID MILWAUKEE AVENUE AND THE WESTERLY LINE OF MILWAUKEE AVENUE AS WIDENED PER DOCUMENT 1691385; THENCE NORTHERLY 373.39 FEET ALONG SAID WESTERLY LINE, BEING THE ARC OF A CIRCLE CONVEX EASTERLY, HAVING A RADIUS OF 11681.72 FEET, WHOSE CHORD BEARS NORTH 10 DEGREES 10 MINUTES 51 SECONDS WEST, 373.37 FEET TO A POINT OF TANGENCY; THENCE NORTH 11 DEGREES 05 MINUTES 47 SECONDS WEST ALONG SAID WESTERLY LINE, TANGENT TO THE LAST DESCRIBED COURSE, 1176.60 FEET; THENCE SOUTH 78 DEGREES 54 MINUTES 13 SECONDS WEST ALONG SAID WESTERLY LINE, 10.00 FEET; THENCE NORTH 11 DEGREES 05 MINUTES 47 SECONDS WEST ALONG SAID WESTERLY LINE, 278.35 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM ALL THAT PART THEREOF TAKEN FOR WIDENING OF MILWAUKEE AVENUE PER DOCUMENT 4543140, IN LAKE COUNTY, ILLINOIS. (CONTAINING 3,772,273 SQUARE FEET OR 86.6244 ACRES)

Exhibit A-2
Legal Description of the Property

PARCEL 2:

THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE WESTERLY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY CONDEMNATION IN CIRCUIT COURT, LAKE COUNTY, ILLINOIS, CASE NO. 65-2323, WITH THE SOUTHERLY RIGHT OF WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 11 DEGREES 05 MINUTES 47 SECONDS EAST ALONG SAID WESTERLY LINE OF MILWAUKEE AVENUE AS WIDENED, BEING A LINE 50.00 FEET, AS MEASURED AT RIGHT ANGLES, WESTERLY OF AND PARALLEL WITH THE CENTER LINE OF MILWAUKEE AVENUE, 553.26 FEET; THENCE SOUTH 86 DEGREES 43 MINUTES 09 SECONDS WEST, 311.96 FEET; THENCE SOUTH 85 DEGREES 35 MINUTES 41 SECONDS WEST, 153.40 FEET; THENCE SOUTH 84 DEGREES 29 MINUTES 38 SECONDS WEST, 427.28 FEET; THENCE NORTH 05 DEGREES 29 MINUTES 59 SECONDS WEST, 535.67 FEET TO AN INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF SAID ELGIN, JOLIET AND EASTERN RAILWAY; THENCE NORTH 84 DEGREES 30 MINUTES 01 SECONDS EAST ALONG SAID LAST DESCRIBED LINE, 838.42 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM ALL THAT PART THEREOF TAKEN FOR WIDENING OF MILWAUKEE AVENUE PER DOCUMENT 4543140, IN LAKE COUNTY, ILLINOIS. (CONTAINING 451,373 SQUARE FEET OR 10.3621 ACRE)

COMMONLY KNOWN AS: CUNEO SOUTH RESIDENTIAL PROPERTY, 1350 N. MILWAUKEE AVE., VERNON HILLS, IL 60061

Exhibit B
Legal Description of the Pulte Property

THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE WESTERLY RIGHT-OF-WAY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY DOCUMENT 4543140, WITH THE SOUTHERLY RIGHT-OF-WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 09 DEGREES 30 MINUTES 18 SECONDS EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 554.67 FEET; THENCE NORTH 80 DEGREES 29 MINUTES 42 SECONDS EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 22.00 FEET; THENCE SOUTH 09 DEGREES 30 MINUTES 18 SECONDS EAST, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 132.70 FEET; THENCE SOUTH 87 DEGREES 37 MINUTES 56 SECONDS WEST, A DISTANCE OF 113.70 FEET; THENCE NORTH 02 DEGREES 24 MINUTES 09 SECONDS WEST, A DISTANCE OF 132.07 FEET; THENCE SOUTH 87 DEGREES 55 MINUTES 10 SECONDS WEST, A DISTANCE OF 181.00 FEET; THENCE SOUTH 03 DEGREES 56 MINUTES 27 SECONDS EAST, A DISTANCE OF 79.02 FEET; THENCE NORTH 86 DEGREES 03 MINUTES 33 SECONDS EAST, A DISTANCE OF 108.83 FEET; THENCE SOUTH 06 DEGREES 54 MINUTES 34 SECONDS EAST, A DISTANCE OF 87.20 FEET; THENCE SOUTH 01 DEGREES 43 MINUTES 29 SECONDS EAST, A DISTANCE OF 20.82 FEET; THENCE SOUTH 05 DEGREES 23 MINUTES 57 SECONDS WEST, A DISTANCE OF 56.60 FEET; THENCE SOUTH 12 DEGREES 31 MINUTES 23 SECONDS WEST, A DISTANCE OF 35.36 FEET; THENCE SOUTH 19 DEGREES 38 MINUTES 49 SECONDS WEST, A DISTANCE OF 47.85 FEET; THENCE SOUTH 39 DEGREES 28 MINUTES 40 SECONDS EAST, A DISTANCE OF 69.94 FEET; THENCE SOUTH 26 DEGREES 28 MINUTES 30 SECONDS EAST, A DISTANCE OF 55.06 FEET; THENCE SOUTH 13 DEGREES 28 MINUTES 19 SECONDS EAST, A DISTANCE OF 61.26 FEET; THENCE SOUTH 00 DEGREES 28 MINUTES 09 SECONDS EAST, A DISTANCE OF 52.29 FEET; THENCE SOUTH 25 DEGREES 32 MINUTES 12 SECONDS WEST, A DISTANCE OF 104.14 FEET; THENCE SOUTH 33 DEGREES 35 MINUTES 59 SECONDS WEST, A DISTANCE OF 95.98 FEET; THENCE SOUTH 23 DEGREES 33 MINUTES 30 SECONDS EAST, A DISTANCE OF 525.03 FEET TO A POINT ON A NON-TANGENT CURVE; THENCE SOUTHWESTERLY, ALONG SAID A CURVE, CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 17.07 FEET, A CHORD BEARING SOUTH 56 DEGREES 01 MINUTES 39 SECONDS WEST, AND A CHORD DISTANCE OF 17.03 FEET TO A POINT OF TANGENCY; THENCE SOUTH 62 DEGREES 32 MINUTES 48 SECONDS WEST, A DISTANCE OF 40.98 FEET; THENCE SOUTH 66 DEGREES 07 MINUTES 05 SECONDS WEST, A DISTANCE OF 24.11 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 210.00 FEET, AN ARC DISTANCE OF 50.82 FEET, A CHORD BEARING SOUTH 59 DEGREES 11

MINUTES 09 SECONDS WEST, AND A CHORD DISTANCE OF 50.69 FEET TO A POINT OF THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE WESTERLY RIGHT-OF-WAY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY DOCUMENT 4543140, WITH THE SOUTHERLY RIGHT-OF-WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 09 DEGREES 30 MINUTES 18 SECONDS EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 554.67 FEET; THENCE NORTH 80 DEGREES 29 MINUTES 42 SECONDS EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 22.00 FEET; THENCE SOUTH 09 DEGREES 30 MINUTES 18 SECONDS EAST, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 132.70 FEET; THENCE SOUTH 87 DEGREES 37 MINUTES 56 SECONDS WEST, A DISTANCE OF 113.70 FEET; THENCE NORTH 02 DEGREES 24 MINUTES 09 SECONDS WEST, A DISTANCE OF 132.07 FEET; THENCE SOUTH 87 DEGREES 55 MINUTES 10 SECONDS WEST, A DISTANCE OF 181.00 FEET; THENCE SOUTH 03 DEGREES 56 MINUTES 27 SECONDS EAST, A DISTANCE OF 79.02 FEET; THENCE NORTH 86 DEGREES 03 MINUTES 33 SECONDS EAST, A DISTANCE OF 108.83 FEET; THENCE SOUTH 06 DEGREES 54 MINUTES 34 SECONDS EAST, A DISTANCE OF 87.20 FEET; THENCE SOUTH 01 DEGREES 43 MINUTES 29 SECONDS EAST, A DISTANCE OF 20.82 FEET; THENCE SOUTH 05 DEGREES 23 MINUTES 57 SECONDS WEST, A DISTANCE OF 56.60 FEET; THENCE SOUTH 12 DEGREES 31 MINUTES 23 SECONDS WEST, A DISTANCE OF 35.36 FEET; THENCE SOUTH 19 DEGREES 38 MINUTES 49 SECONDS WEST, A DISTANCE OF 47.85 FEET; THENCE SOUTH 39 DEGREES 28 MINUTES 40 SECONDS EAST, A DISTANCE OF 69.94 FEET; THENCE SOUTH 26 DEGREES 28 MINUTES 30 SECONDS EAST, A DISTANCE OF 55.06 FEET; THENCE SOUTH 13 DEGREES 28 MINUTES 19 SECONDS EAST, A DISTANCE OF 61.26 FEET; THENCE SOUTH 00 DEGREES 28 MINUTES 09 SECONDS EAST, A DISTANCE OF 52.29 FEET; THENCE SOUTH 25 DEGREES 32 MINUTES 12 SECONDS WEST, A DISTANCE OF 104.14 FEET; THENCE SOUTH 33 DEGREES 35 MINUTES 59 SECONDS WEST, A DISTANCE OF 95.98 FEET; THENCE SOUTH 23 DEGREES 33 MINUTES 30 SECONDS EAST, A DISTANCE OF 525.03 FEET TO A POINT ON A NON-TANGENT CURVE; THENCE SOUTHWESTERLY, ALONG SAID A CURVE, CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 17.07 FEET, A CHORD BEARING SOUTH 56 DEGREES 01 MINUTES 39 SECONDS WEST, AND A CHORD DISTANCE OF 17.03 FEET TO A POINT OF TANGENCY; THENCE SOUTH 62 DEGREES 32 MINUTES 48 SECONDS WEST, A DISTANCE OF 40.98 FEET; THENCE SOUTH 66 DEGREES 07 MINUTES 05 SECONDS WEST, A DISTANCE OF 24.11 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 210.00 FEET, AN ARC TANGENCY; THENCE SOUTH 52 DEGREES 15 MINUTES 13 SECONDS WEST, A DISTANCE OF 173.66 FEET; THENCE NORTH 68 DEGREES 41 MINUTES 45 SECONDS WEST, A DISTANCE OF 71.77 FEET TO A POINT ON A NON-

TANGENT CURVE; THENCE NORTHWESTERLY, ALONG SAID A CURVE, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 811.92 FEET, AN ARC DISTANCE OF 510.36 FEET, A CHORD BEARING NORTH 37 DEGREES 51 MINUTES 45 SECONDS WEST, AND A CHORD DISTANCE OF 502.00 FEET; THENCE NORTH 66 DEGREES 26 MINUTES 35 SECONDS EAST, A DISTANCE OF 180.32 FEET; THENCE NORTH 23 DEGREES 59 MINUTES 24 SECONDS WEST, A DISTANCE OF 63.95 FEET; THENCE NORTH 23 DEGREES 33 MINUTES 30 SECONDS WEST, A DISTANCE OF 27.10 FEET; THENCE NORTH 10 DEGREES 51 MINUTES 20 SECONDS WEST, A DISTANCE OF 61.14 FEET; THENCE NORTH 02 DEGREES 08 MINUTES 50 SECONDS EAST, A DISTANCE OF 55.06 FEET; THENCE NORTH 15 DEGREES 09 MINUTES 01 SECONDS EAST, A DISTANCE OF 61.26 FEET; THENCE NORTH 28 DEGREES 09 MINUTES 11 SECONDS EAST, A DISTANCE OF 44.61 FEET; THENCE NORTH 38 DEGREES 15 MINUTES 19 SECONDS WEST, A DISTANCE OF 24.01 FEET; THENCE SOUTH 75 DEGREES 20 MINUTES 11 SECONDS WEST, A DISTANCE OF 75.00 FEET; THENCE SOUTH 73 DEGREES 11 MINUTES 43 SECONDS WEST, A DISTANCE OF 15.79 FEET; THENCE SOUTH 79 DEGREES 21 MINUTES 04 SECONDS WEST, A DISTANCE OF 55.79 FEET; THENCE SOUTH 85 DEGREES 23 MINUTES 02 SECONDS WEST, A DISTANCE OF 31.74 FEET; THENCE NORTH 88 DEGREES 35 MINUTES 00 SECONDS WEST, A DISTANCE OF 55.79 FEET; THENCE NORTH 82 DEGREES 25 MINUTES 38 SECONDS WEST, A DISTANCE OF 32.15 FEET; THENCE NORTH 76 DEGREES 16 MINUTES 17 SECONDS WEST, A DISTANCE OF 65.61 FEET; THENCE NORTH 16 DEGREES 46 MINUTES 00 SECONDS EAST, A DISTANCE OF 15.03 FEET; THENCE NORTH 73 DEGREES 10 MINUTES 28 SECONDS WEST, A DISTANCE OF 61.83 FEET; THENCE NORTH 72 DEGREES 57 MINUTES 09 SECONDS WEST, A DISTANCE OF 72.82 FEET; THENCE NORTH 67 DEGREES 10 MINUTES 32 SECONDS WEST, A DISTANCE OF 34.77 FEET; THENCE NORTH 59 DEGREES 38 MINUTES 01 SECONDS WEST, A DISTANCE OF 54.95 FEET; THENCE NORTH 52 DEGREES 05 MINUTES 31 SECONDS WEST, A DISTANCE OF 34.77 FEET; THENCE NORTH 44 DEGREES 33 MINUTES 00 SECONDS WEST, A DISTANCE OF 54.95 FEET; THENCE NORTH 37 DEGREES 00 MINUTES 30 SECONDS WEST, A DISTANCE OF 34.77 FEET; THENCE NORTH 29 DEGREES 27 MINUTES 59 SECONDS WEST, A DISTANCE OF 62.49 FEET; THENCE NORTH 77 DEGREES 32 MINUTES 03 SECONDS WEST, A DISTANCE OF 26.09 FEET; THENCE SOUTH 12 DEGREES 09 MINUTES 42 SECONDS WEST, A DISTANCE OF 42.70 FEET; THENCE SOUTH 09 DEGREES 13 MINUTES 54 SECONDS WEST, A DISTANCE OF 66.10 FEET; THENCE SOUTH 25 DEGREES 01 MINUTES 47 SECONDS WEST, A DISTANCE OF 60.67 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 13 SECONDS WEST, A DISTANCE OF 85.40 FEET; THENCE SOUTH 68 DEGREES 27 MINUTES 52 SECONDS WEST, A DISTANCE OF 73.35 FEET; THENCE SOUTH 72 DEGREES 25 MINUTES 17 SECONDS WEST, A DISTANCE OF 53.05 FEET; THENCE SOUTH 79 DEGREES 24 MINUTES 29 SECONDS WEST, A DISTANCE OF 33.37 FEET; THENCE SOUTH 86 DEGREES 03 MINUTES 40 SECONDS WEST, A DISTANCE OF 53.76 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 22.69 FEET; THENCE NORTH 86 DEGREES 50 MINUTES 03 SECONDS WEST, A DISTANCE OF 55.94 FEET; THENCE NORTH 80 DEGREES 13 MINUTES 55 SECONDS WEST,

A DISTANCE OF 30.97 FEET; THENCE NORTH 72 DEGREES 41 MINUTES 24 SECONDS WEST, A DISTANCE OF 54.95 FEET; THENCE NORTH 65 DEGREES 08 MINUTES 54 SECONDS WEST, A DISTANCE OF 59.94 FEET; THENCE SOUTH 38 DEGREES 39 MINUTES 47 SECONDS WEST, A DISTANCE OF 74.70 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 60.00 FEET, AN ARC DISTANCE OF 40.49 FEET, A CHORD BEARING SOUTH 19 DEGREES 19 MINUTES 53 SECONDS WEST, AND A CHORD DISTANCE OF 39.72 FEET TO A POINT OF TANGENCY; THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 31.50 FEET TO A POINT OF CURVATURE; THENCE SOUTHEASTERLY, ALONG A CURVE, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 29.00 FEET, AN ARC DISTANCE OF 45.55 FEET, A CHORD BEARING SOUTH 45 DEGREES 00 MINUTES 00 SECONDS EAST, AND A CHORD DISTANCE OF 41.01 FEET TO A POINT OF TANGENCY; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 16.49 FEET TO A POINT OF CURVATURE; THENCE SOUTHEASTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHWEST, HAVING A RADIUS OF 67.50 FEET, AN ARC DISTANCE OF 118.23 FEET, A CHORD BEARING SOUTH 39 DEGREES 49 MINUTES 16 SECONDS EAST, AND A CHORD DISTANCE OF 103.69 FEET; THENCE SOUTH 66 DEGREES 48 MINUTES 10 SECONDS EAST, A DISTANCE OF 47.45 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 151.67 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 244.73 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF MUSEUM BOULEVARD IN GREGG'S LANDING SOUTH SUBDIVISION, AS RECORDED IN DOCUMENT 4192933; THENCE NORTH 35 DEGREES 51 MINUTES 18 SECONDS WEST, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 227.37 FEET TO AN ANGLE POINT ON THE EAST LINE OF OUTLOT C IN PINEHURST RESUBDIVISION, AS RECORDED IN DOCUMENT 4216425; THENCE NORTH 01 DEGREES 56 MINUTES 26 SECONDS EAST, ALONG SAID EAST LINE OF OUTLOT C AND THE EAST LINE OF OUTLOT N IN SAID PINEHURST RESUBDIVISION, A DISTANCE OF 1199.08 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE NORTH 86 DEGREES 03 MINUTES 33 SECONDS EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1801.39 FEET TO THE POINT OF BEGINNING.

CONTAINING 2,297,781 SQUARE FEET, (52.750 ACRES) MORE OR LESS.

Exhibit C
Legal Description of Loyola Property

THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE WESTERLY RIGHT-OF-WAY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY DOCUMENT 4543140, WITH THE SOUTHERLY RIGHT-OF-WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 09 DEGREES 30 MINUTES 18 SECONDS EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 554.67 FEET; THENCE NORTH 80 DEGREES 29 MINUTES 42 SECONDS EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 22.00 FEET; THENCE SOUTH 09 DEGREES 30 MINUTES 18 SECONDS EAST, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 132.70 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 87 DEGREES 37 MINUTES 56 SECONDS WEST, A DISTANCE OF 113.70 FEET; THENCE NORTH 02 DEGREES 24 MINUTES 09 SECONDS WEST, A DISTANCE OF 132.07 FEET; THENCE SOUTH 87 DEGREES 55 MINUTES 10 SECONDS WEST, A DISTANCE OF 181.00 FEET; THENCE SOUTH 03 DEGREES 56 MINUTES 27 SECONDS EAST, A DISTANCE OF 79.02 FEET; THENCE NORTH 86 DEGREES 03 MINUTES 33 SECONDS EAST, A DISTANCE OF 108.83 FEET; THENCE SOUTH 06 DEGREES 54 MINUTES 34 SECONDS EAST, A DISTANCE OF 87.20 FEET; THENCE SOUTH 01 DEGREES 43 MINUTES 29 SECONDS EAST, A DISTANCE OF 20.82 FEET; THENCE SOUTH 05 DEGREES 23 MINUTES 57 SECONDS WEST, A DISTANCE OF 56.60 FEET; THENCE SOUTH 12 DEGREES 31 MINUTES 23 SECONDS WEST, A DISTANCE OF 35.36 FEET; THENCE SOUTH 19 DEGREES 38 MINUTES 49 SECONDS WEST, A DISTANCE OF 47.85 FEET; THENCE SOUTH 39 DEGREES 28 MINUTES 40 SECONDS EAST, A DISTANCE OF 69.94 FEET; THENCE SOUTH 26 DEGREES 28 MINUTES 30 SECONDS EAST, A DISTANCE OF 55.06 FEET; THENCE SOUTH 13 DEGREES 28 MINUTES 19 SECONDS EAST, A DISTANCE OF 61.26 FEET; THENCE SOUTH 00 DEGREES 28 MINUTES 09 SECONDS EAST, A DISTANCE OF 52.29 FEET; THENCE SOUTH 25 DEGREES 32 MINUTES 12 SECONDS WEST, A DISTANCE OF 104.14 FEET; THENCE SOUTH 33 DEGREES 35 MINUTES 59 SECONDS WEST, A DISTANCE OF 95.98 FEET; THENCE SOUTH 23 DEGREES 33 MINUTES 30 SECONDS EAST, A DISTANCE OF 525.03 FEET TO A POINT ON A NON-TANGENT CURVE; THENCE SOUTHWESTERLY, ALONG SAID A CURVE, CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 17.07 FEET, A CHORD BEARING SOUTH 56 DEGREES 01 MINUTES 39 SECONDS WEST, AND A CHORD DISTANCE OF 17.03 FEET TO A POINT OF TANGENCY; THENCE SOUTH 62 DEGREES 32 MINUTES 48 SECONDS WEST, A DISTANCE OF 40.98 FEET; THENCE SOUTH 66 DEGREES 07 MINUTES 05 SECONDS WEST, A DISTANCE OF 24.11 FEET TO A POINT OF

CURVATURE; THENCE SOUTHWESTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 210.00 FEET, AN ARC DISTANCE OF 50.82 FEET, A CHORD BEARING SOUTH 59 DEGREES 11 MINUTES 09 SECONDS WEST, AND A CHORD DISTANCE OF 50.69 FEET TO A POINT OF TANGENCY; THENCE SOUTH 52 DEGREES 15 MINUTES 13 SECONDS WEST, A DISTANCE OF 173.66 FEET; THENCE NORTH 68 DEGREES 41 MINUTES 45 SECONDS WEST, A DISTANCE OF 71.77 FEET TO A POINT ON A NON-TANGENT CURVE; THENCE NORTHWESTERLY, ALONG SAID A CURVE, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 811.92 FEET, AN ARC DISTANCE OF 510.36 FEET, A CHORD BEARING NORTH 37 DEGREES 51 MINUTES 45 SECONDS WEST, AND A CHORD DISTANCE OF 502.00 FEET; THENCE NORTH 66 DEGREES 26 MINUTES 35 SECONDS EAST, A DISTANCE OF 180.32 FEET; THENCE NORTH 23 DEGREES 59 MINUTES 24 SECONDS WEST, A DISTANCE OF 63.95 FEET; THENCE NORTH 23 DEGREES 33 MINUTES 30 SECONDS WEST, A DISTANCE OF 27.10 FEET; THENCE NORTH 10 DEGREES 51 MINUTES 20 SECONDS WEST, A DISTANCE OF 61.14 FEET; THENCE NORTH 02 DEGREES 08 MINUTES 50 SECONDS EAST, A DISTANCE OF 55.06 FEET; THENCE NORTH 15 DEGREES 09 MINUTES 01 SECONDS EAST, A DISTANCE OF 61.26 FEET; THENCE NORTH 28 DEGREES 09 MINUTES 11 SECONDS EAST, A DISTANCE OF 44.61 FEET; THENCE NORTH 38 DEGREES 15 MINUTES 19 SECONDS WEST, A DISTANCE OF 24.01 FEET; THENCE SOUTH 75 DEGREES 20 MINUTES 11 SECONDS WEST, A DISTANCE OF 75.00 FEET; THENCE SOUTH 73 DEGREES 11 MINUTES 43 SECONDS WEST, A DISTANCE OF 15.79 FEET; THENCE SOUTH 79 DEGREES 21 MINUTES 04 SECONDS WEST, A DISTANCE OF 55.79 FEET; THENCE SOUTH 85 DEGREES 23 MINUTES 02 SECONDS WEST, A DISTANCE OF 31.74 FEET; THENCE NORTH 88 DEGREES 35 MINUTES 00 SECONDS WEST, A DISTANCE OF 55.79 FEET; THENCE NORTH 82 DEGREES 25 MINUTES 38 SECONDS WEST, A DISTANCE OF 32.15 FEET; THENCE NORTH 76 DEGREES 16 MINUTES 17 SECONDS WEST, A DISTANCE OF 65.61 FEET; THENCE NORTH 16 DEGREES 46 MINUTES 00 SECONDS EAST, A DISTANCE OF 15.03 FEET; THENCE NORTH 73 DEGREES 10 MINUTES 28 SECONDS WEST, A DISTANCE OF 61.83 FEET; THENCE NORTH 72 DEGREES 57 MINUTES 09 SECONDS WEST, A DISTANCE OF 72.82 FEET; THENCE NORTH 67 DEGREES 10 MINUTES 32 SECONDS WEST, A DISTANCE OF 34.77 FEET; THENCE NORTH 59 DEGREES 38 MINUTES 01 SECONDS WEST, A DISTANCE OF 54.95 FEET; THENCE NORTH 52 DEGREES 05 MINUTES 31 SECONDS WEST, A DISTANCE OF 34.77 FEET; THENCE NORTH 44 DEGREES 33 MINUTES 00 SECONDS WEST, A DISTANCE OF 54.95 FEET; THENCE NORTH 37 DEGREES 00 MINUTES 30 SECONDS WEST, A DISTANCE OF 34.77 FEET; THENCE NORTH 29 DEGREES 27 MINUTES 59 SECONDS WEST, A DISTANCE OF 62.49 FEET; THENCE NORTH 77 DEGREES 32 MINUTES 03 SECONDS WEST, A DISTANCE OF 26.09 FEET; THENCE SOUTH 12 DEGREES 09 MINUTES 42 SECONDS WEST, A DISTANCE OF 42.70 FEET; THENCE SOUTH 09 DEGREES 13 MINUTES 54 SECONDS WEST, A DISTANCE OF 66.10 FEET; THENCE SOUTH 25 DEGREES 01 MINUTES 47 SECONDS WEST, A DISTANCE OF 60.67 FEET; THENCE SOUTH 41 DEGREES 04 MINUTES 13 SECONDS WEST, A DISTANCE OF 85.40 FEET; THENCE SOUTH 68 DEGREES 27 MINUTES 52 SECONDS WEST, A DISTANCE

OF 73.35 FEET; THENCE SOUTH 72 DEGREES 25 MINUTES 17 SECONDS WEST, A DISTANCE OF 53.05 FEET; THENCE SOUTH 79 DEGREES 24 MINUTES 29 SECONDS WEST, A DISTANCE OF 33.37 FEET; THENCE SOUTH 86 DEGREES 03 MINUTES 40 SECONDS WEST, A DISTANCE OF 53.76 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 22.69 FEET; THENCE NORTH 86 DEGREES 50 MINUTES 03 SECONDS WEST, A DISTANCE OF 55.94 FEET; THENCE NORTH 80 DEGREES 13 MINUTES 55 SECONDS WEST, A DISTANCE OF 30.97 FEET; THENCE NORTH 72 DEGREES 41 MINUTES 24 SECONDS WEST, A DISTANCE OF 54.95 FEET; THENCE NORTH 65 DEGREES 08 MINUTES 54 SECONDS WEST, A DISTANCE OF 59.94 FEET; THENCE SOUTH 38 DEGREES 39 MINUTES 47 SECONDS WEST, A DISTANCE OF 74.70 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 60.00 FEET, AN ARC DISTANCE OF 40.49 FEET, A CHORD BEARING SOUTH 19 DEGREES 19 MINUTES 53 SECONDS WEST, AND A CHORD DISTANCE OF 39.72 FEET TO A POINT OF TANGENCY; THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 31.50 FEET TO A POINT OF CURVATURE; THENCE SOUTHEASTERLY, ALONG A CURVE, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 29.00 FEET, AN ARC DISTANCE OF 45.55 FEET, A CHORD BEARING SOUTH 45 DEGREES 00 MINUTES 00 SECONDS EAST, AND A CHORD DISTANCE OF 41.01 FEET TO A POINT OF TANGENCY; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 16.49 FEET TO A POINT OF CURVATURE; THENCE SOUTHEASTERLY, ALONG A CURVE, CONCAVE TO THE SOUTHWEST, HAVING A RADIUS OF 67.50 FEET, AN ARC DISTANCE OF 118.23 FEET, A CHORD BEARING SOUTH 39 DEGREES 49 MINUTES 16 SECONDS EAST, AND A CHORD DISTANCE OF 103.69 FEET; THENCE SOUTH 66 DEGREES 48 MINUTES 10 SECONDS EAST, A DISTANCE OF 47.45 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST, A DISTANCE OF 151.67 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 244.73 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF MUSEUM BOULEVARD IN GREGG'S LANDING SOUTH SUBDIVISION, AS RECORDED IN DOCUMENT 4192933; THENCE SOUTH 35 DEGREES 51 SECONDS 18 SECONDS EAST, CONTINUING ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 804.83 FEET; THENCE SOUTH 76 DEGREES 26 SECONDS 10 SECONDS EAST, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE AND THE NORTH LINE OF OUTLOT 5 IN SAID GREGG'S LANDING SOUTH SUBDIVISION, A DISTANCE OF 399.77 FEET TO THE NORTHWEST CORNER OF OUTLOT A IN AMLI AT MUSEUM GARDENS SUBDIVISION, AS RECORDED IN DOCUMENT 5215706; THENCE SOUTH 82 DEGREES 54 SECONDS 59 SECONDS EAST, ALONG THE NORTH LINE OF SAID OUTLOT A AND THE NORTH LINE OF LOT 1 OF SAID AMLI AT MUSEUM GARDENS SUBDIVISION, A DISTANCE OF 688.54 FEET; THENCE SOUTH 83 DEGREES 35 SECONDS 29 SECONDS EAST, CONTINUING ALONG SAID NORTH LINE OF LOT 1, A DISTANCE OF 242.41 FEET; THENCE SOUTH 84 DEGREES 58 SECONDS 11 SECONDS EAST, CONTINUING ALONG SAID NORTH LINE OF LOT 1, A DISTANCE OF 125.09 FEET; THENCE NORTH 82 DEGREES 27 SECONDS 59 SECONDS EAST,

CONTINUING ALONG SAID NORTH LINE OF LOT 1, A DISTANCE OF 206.97 FEET TO THE AFORESAID WESTERLY RIGHT-OF-WAY LINE OF MILWAUKEE AVENUE AS WIDENED BY DOCUMENT 4543140; THENCE NORTHERLY, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, BEING A CURVE, CONCAVE TO THE WEST, HAVING A RADIUS OF 11666.72 FEET, AN ARC DISTANCE OF 372.93 FEET, A CHORD BEARING NORTH 08 DEGREES 35 SECONDS 21 SECONDS WEST, AND A CHORD DISTANCE OF 372.91 FEET; THENCE NORTH 80 DEGREES 33 SECONDS 19 SECONDS EAST, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 15.00 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF MILWAUKEE AVENUE AS WIDENED BY DOCUMENT 1691385; THENCE NORTH 09 DEGREES 30 SECONDS 15 SECONDS WEST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 116.02 FEET TO THE AFORESAID WESTERLY RIGHT-OF-WAY LINE OF MILWAUKEE AVENUE AS WIDENED BY DOCUMENT 4543140; THENCE SOUTH 80 DEGREES 29 SECONDS 42 SECONDS WEST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 15.00 FEET; THENCE NORTH 09 DEGREES 30 SECONDS 18 SECONDS WEST, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1207.49 FEET TO THE POINT OF BEGINNING.

CONTAINING 1,926,866 SQUARE FEET, (44.235 ACRES) MORE OR LESS.

Exhibit D

Plans

The following Plans are approved, and development of Loyola and Pulte's respective property shall be in general conformance therewith:

1. Proposed Signage Plans prepared by Pulte Homes with a received date of October 10, 2016 and consisting of 7 pages.
2. Traffic Impact Study Addendum prepared by KLOA Inc with a date of October 10, 2016.
3. Index of Residences at Cuneo Mansion and Gardens prepared by Pulte Homes with a received date of October 10, 2016 and consisting of 33 pages with revisions to the Belfort American Cottage, Belfort Craftsman and the Lyon Craftsman elevations with a received date of January 17, 2017.
4. Proposed Monotony Code Restrictions prepared by Pulte Homes with a date of February 17, 2017 consisting of 2 pages.
5. TCG-9 Lot Fit Study –prepared by WBK Engineering with a date of September 30, 2016, and last revised on January 17, 2017 consisting of 4 pages.
6. TCG-5 Lot Fit Study – prepared by WBK Engineering with a date of September 30, 2016, consisting of 6 pages.
7. Lot Development Plan prepared by WBK Engineering with a date of September 3, 2016, consisting of 1 page.
8. Preliminary Plat of Subdivision prepared by Manhard Consulting, Ltd. with a revision date of March 2, 2017 consisting of 6 pages.
9. Parking Lot and Access Drive Improvements prepared by Manhard Consulting, Ltd. with a revision date of September 30, 2016, and consisting of 8 pages.
10. Parking Lot and Access Drive Improvements Lighting Plan prepared by Manhard Consulting, Ltd. with a revision date of June 22, 2016, and consisting of 1 page.
11. Preliminary Engineering Plans prepared by Manhard Consulting, Ltd. with a revision date of September 30, 2016, and consisting of 32 pages.
12. Preliminary Photometric Plans – Overall prepared by Manhard Consulting, Ltd. with a date of October 7, 2016, and consisting of pages L1 thru L8.
13. Preliminary Landscape Development Plans – Loyola Parking Lot & Driveway prepared by Signature Design Group with a revision date of September 30, 2016, and consisting of pages LL.100 thru LL103 and LTS.100 thru LTS 102.
14. Preliminary Landscape Development Plans – The Residences at Cuneo Mansion and Gardens prepared by Signature Design Group with a revision date of September 30, 2016, and consisting of pages L.100 thru L.109 and TS.100 thru TS 105.
15. Phasing Plan prepared by Manhard Consulting, Ltd. with dates of February 10, February 13, and 22 2017,consisting of 4 pages
16. Proposed Curve Number Exhibit – Phase 1 Plan prepared by Manhard Consulting, Ltd. with a date of February 15, 2016, consisting of 1 page.
17. Existing Tree Survey and Preservation Plan prepared by Signature Design Group with a date of March 1, 2017, and consisting of 1 page.

Exhibit E
Terms and Conditions of Approval

Conditions of Approval for the entire Site:

1. Common area open space (Outlots A-J) shall be maintained by the developer until such time as an HOA is managing the property. Clarification of maintenance items will be provided in the appropriate documents.
2. A public path ("Path") along Milwaukee Avenue shall be installed 8 feet in width and located within the ROW or adjacent to the ROW in a suitable easement and shall be extended from Gregg's Landing Commercial path southerly to Hawthorn Mall subject to the conditions from IDOT, the Village of Vernon Hills and the EJ&E Railroad in conformance with the Phasing Plan where construction of the Path from Cuneo Boulevard north through the EJ&E right of way to the existing Gregg's Landing Commercial path shall be completed in Phase 1 and the remainder of the Path in Phase 2. Security will be provided consistent with each phase.
3. An exhibit locating the sales trailer and related parking lot shall be included on a separate exhibit along with the location of the model homes.
4. Development identification signage shall be identified on the approved plans and comply with the Village's sign regulations.
5. Phasing plan shall incorporate transportation, utilities, and storm water management during the first phase of construction in conformance with the Phasing Plan (as depicted in Exhibit D and Exhibit G), the Phasing Plan shall incorporate the construction of transportation, utilities and storm water management during the first phase of construction, together with approximately 66 single family homes on the initial approximately 32 acres to be conveyed by Loyola in such first phase (the "First Phase Improvements"). The performance guaranty requirement in Appendix I.D of the Development Regulations in Appendix B of the Village Code shall initially require security equal to one hundred ten percent (110 %) of the approved engineer's estimate for such First Phase Improvements. Such performance guaranty requirement shall be increased as a condition to Loyola's conveyance of the final approximately 20 acres to Pulte and the Village's issuance of any building permit related to the approximately 62 homes to be constructed in the second phase based on the cost of such second phase work. The Plat of Subdivision shall separately identify the phase one lots and the phase two lots and shall include a note on the first page, in boldface, all caps font, giving record notice that no second phase lots may be sold or otherwise be built upon until the posting of the performance guarantee applicable to such second phase lots. In the event Pulte does not acquire the second phase property, the terms, conditions, and approvals contained in this Ordinance, and incorporated in all the exhibits hereto, shall continue to be binding upon and inure to the benefit of Loyola, as to the owner of such second phase Pulte Property, and any successor in title to such remaining Pulte Property.
6. The use of aluminum and vinyl siding shall be prohibited.

7. Roof covering shall be architectural random tab shingles, slate or cedar shake shingles.
8. Tree trimming, removal and detailing shall be consistent with the plans identified in Exhibit D Plan #17.
9. EIFS finishes shall only be used as an accent material and limited to architectural elements such as bays, entries, or dormers.
10. Building elevations will be approved by the Building Commissioner prior to issuance of a building permit on a per building basis.
11. Final approval of plans by the Village Engineer and Landscape Technician is required prior to issuance of a building permit.
12. Compliance with the Village's Street Lighting Pole standards as set forth in the Development Ordinance, or as approved by the Director of Public Works.
13. Developer contributions shall be made to School Districts 73 and 128 pursuant to Development Code Requirements. Fees will be collected prior to issuance of individual building permits on a per unit basis.
14. Compliance with all ordinances of the Village except as otherwise noted in this Ordinance.
15. Final Plat of subdivision shall be modified, reviewed, and approved subject to Village Attorney and Village Engineer approval.
16. Parking lot lighting will be installed so as to shield light or glare from the residential properties to the north and west.
17. Provide landscape screening for the proposed shed adjacent to the Loyola University parking lot.
18. The Park District contribution shall be $650,000 on a pro rata per lot basis payable prior to the issuance of individual building permits.
19. Removal of the gated entranceway to the residential areas.
20. The streets within the residential development will be constructed to Village standards except for sidewalks being located on only one side of the street. Roadways shall be built to a structural number of 3.0 or greater.
21. The Lot 129 Loyola detention pond and storm sewer shall be constructed as part of Phase 1.

Departures - The following departures from the Village's Ordinances are approved:

1. To allow for the FAR of individual Lots 1-128 to be a maximum FAR of .52 instead of .33.
2. Front Yard Setback: Allow a 4' encroachment for unenclosed porches, decks, stoops, platforms and steps not extending above the first floor. An additional four (4) feet of permitted obstructions (eight feet total) in the front yard setback to accommodate deeper porches. Design details added for façade articulation, including foundation bump-outs for masonry enhancements, non-masonry projections and cantilevered elements such as bay windows and box bays shall be considered permitted encroachments.
3. Rear Yard Setback: Allow a 9' encroachment for a 1-story café bay, sunroom, gathering room, decks, stoops, platforms, patios and covered porches, plus the depths of the required steps. Design details added for façade articulation, including foundation bump-outs for masonry enhancements, non-masonry

projections and cantilevered elements such as bay windows and box bays shall be considered permitted encroachments.

4. Side Yard Setback: Allow a 1' encroachment for foundation bump-outs for masonry enhancements, non-masonry projections and cantilevered elements such as bay windows and box bays added for façade articulation.
5. Right of Way Dedication: Allow 40 feet ROW dedication with a 10' easement on both sides of the ROW in lieu of the required 66 feet ROW dedication.
6. To allow sidewalk to be located on one side of the streets in the Pulte Property.
7. Non-exclusive use of masonry brick and/or stone material on all exterior walls shown on the approved elevations.9. Monotony Code: Departures from the Village's Monotony Code shall be as set forth on Exhibit F.
8. Houses within each Block A through K (as shown on Plan D-4) shall be treated independently from one another as set forth in Exhibit F.
9. To allow four "Directional Signs", three "Model Signs" and one "Sales Center" sign consistent with the dimensions included in the signage plan.
10. To allow 40 foot ROW dedication with 10 foot easements on both sides in lieu of the required 66 foot ROW dedication.
11. To allow for storm water detention ponds to have a maximum bounce of six (6) feet between the normal water line and high water line as shown on the preliminary engineering plans.
12. To allow a cul de sac greater than 1,000 feet for the Mansion Road.

Exhibit F
MONOTONY CODE RESTRICTIONS

Exhibit G

Phasing Plan

The Residences at Cuneo Mansion and Gardens
Development Phasing Summary
February 22, 2017

Phase 1

- Pavement and curb and gutter along Cuneo Boulevard, Jensen Circle, Insull Drive, Garden View Drive and the central traffic circle.
- Secondary emergency access at the northwest corner of the site behind Lots 17 and 18.
- Sanitary sewer along Cuneo Boulevard, Jensen Circle, Insull Drive and Garden View Drive.
- Water main along Cuneo Boulevard, Jensen Circle, Insull Drive and Garden View Drive.
- Looped water main system provided with connections to existing mains at the Cuneo Boulevard and Milwaukee Avenue and at the northwest corner of the site behind Lots 17 and 18.
- Storm sewer along Cuneo Boulevard, Jensen Circle, Insull Drive and Garden View Drive.
- Storm sewer behind Lots 1-24, 27-37, 39-44, 48-55, 88-91 and 96-105.
- Northeast stormwater detention basin.
- Milwaukee Avenue path from the south side of Cuneo Boulevard to the north side of the railroad right of way.
- The Lot 129 Loyola detention pond and storm sewer shall be constructed as part of Phase 1.

Phase 2

- Pavement and curb and gutter along Marshall Street and Mansion Road.
- Sanitary sewer along Marshall Street and Mansion Road.
- Water main along Marshall Street and Mansion Road.
- Mansion Road water main loop provided with connection to the existing water main at the southeast corner of the subdivision.
- Storm sewer along Marshall Street and in Mansion Road right of way.
- Storm sewer behind lots 56-78, 81-85, 110-111, and 117-121.
- Southeast stormwater detention basin.
- Milwaukee Avenue path south from Cuneo Boulevard through the Amli property.

AFFIDAVIT OF SERVICE

STATE OF ILLINOIS)
)
COUNTY OF LAKE)

I, JOHN M. KALMAR, BEING FIRST DULY APPOINTED, DEPOSES AND SAYS ON OATH THAT AS VILLAGE CLERK OF THE VILLAGE OF VERNON HILLS, HE DID CAUSE THE FOREGOING CERTIFICATE FOR ORDINANCE 2017- 014 AN ORDINANCE GRANTING CERTAIN APPROVALS FOR PROPERTY PREVIOUSLY KNOWN AS THE CUNEO SOUTH COMMERCIAL PROPERTY AND NOW KNOWN AS THE CUNEO SOUTH RESIDENTIAL PROPERTY TOGETHER WITH THE CUNEO MANSION & GARDEN PROPERTY LOCATEDAT THE SOUTHWEST CORNER OF MILWAUKEE AVENUE AND THE EJ&E RAILROAD TRACKS, IN THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS TO BE POSTED IN THE VILLAGE HALL AS REQUIRED BY LAW FROM MARCH 13, 2017 TO MARCH 23, 2017.

John M. Kalmar, Village Clerk

SUBSCRIBED AND SWORN TO BEFORE
THIS 13th DAY OF MARCH 2017

Notary Public

OFFICIAL SEAL
LISA L FISCHBACH
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:09/22/19

STATE OF ILLINOIS)
)
COUNTY OF LAKE)

CERTIFICATE

I, JOHN M. KALMAR, CERTIFY THAT I AM THE DULY APPOINTED AND ACTING VILLAGE CLERK OF THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS. I FURTHER CERTIFY THAT ON MARCH 7, 2017, THE CORPORATE AUTHORITIES OF SUCH MUNICIPALITY PASSED AND APPROVED ORDINANCE 2017-014 AN ORDINANCE GRANTING CERTAIN APPROVALS FOR PROPERTY PREVIOUSLY KNOWN AS THE CUNEO SOUTH COMMERCIAL PROPERTY AND NOW KNOWN AS THE CUNEO SOUTH RESIDENTIAL PROPERTY TOGETHER WITH THE CUNEO MANSION & GARDEN PROPERTY LOCATEDAT THE SOUTHWEST CORNER OF MILWAUKEE AVENUE AND THE EJ&E RAILROAD TRACKS, IN THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS

THE PAMPHLET FOR ORDINANCE NO. 2017-014, INCLUDING THE ORDINANCE AND A COVER SHEET THEREOF, WAS PREPARED, AND A COPY OF SUCH ORDINANCE WAS POSTED IN THE VILLAGE HALL, COMMENCING MARCH 13, 2017, AND CONTINUING FOR AT LEAST TEN DAYS THEREAFTER. COPIES OF SUCH ORDINANCE WERE ALSO AVAILABLE FOR PUBLIC INSPECTION UPON REQUEST IN THE OFFICE OF THE VILLAGE CLERK.

DATED IN VERNON HILLS, ILLINOIS, THIS 13th DAY OF MARCH 2017

John M. Kalmar, Village Clerk

SEAL

ORDINANCE 2017-014 Exhibit B1 Proposed Signage Plans prepared by Pulte Homes with a received date of October 10, 2016 and consisting of 7 pages

RECEIVED
OCT 10 2016
Community Development
Department

Pulte Homes

Cuneo Mansion and Gardens

Proposed Signage Plan

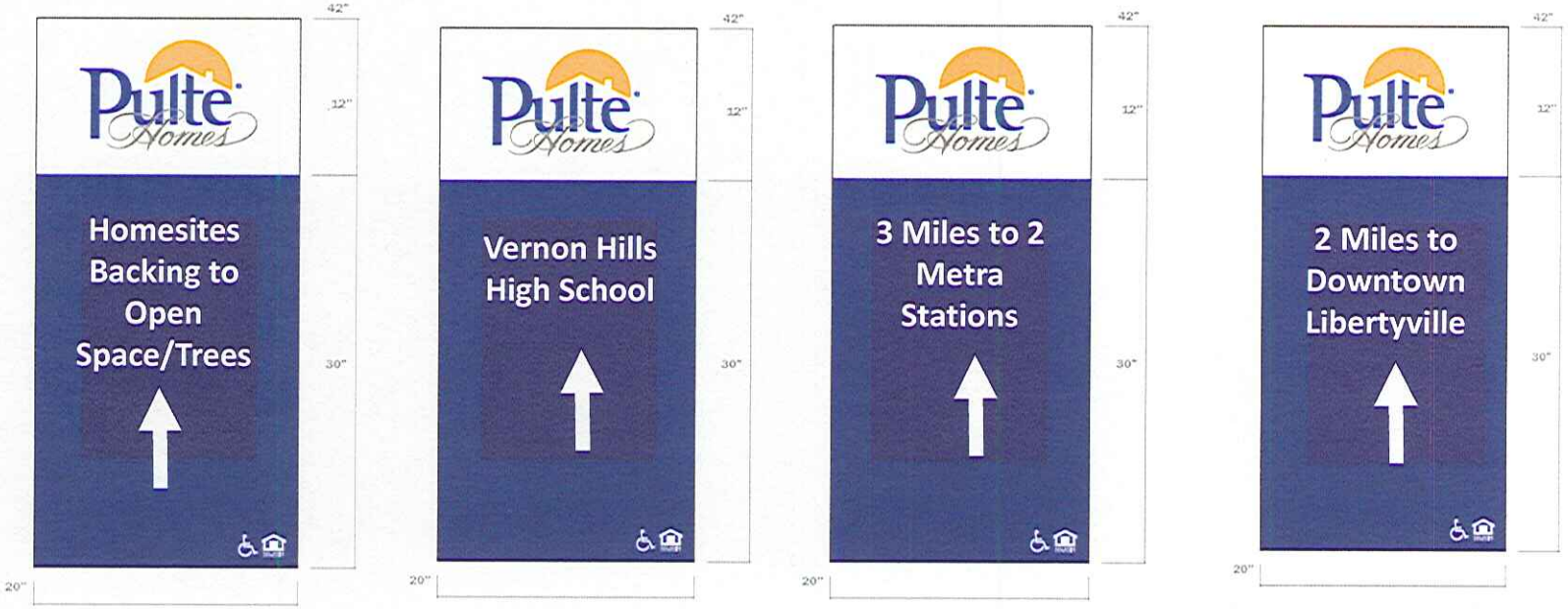
Community Entrance Signs

- Proposed size: 8’ wide by 6’ tall
- Signs will say:
  - The Residences at the Cuneo Mansion & Gardens
  - COMING SOON
  - Arrow Pointing toward community
  - Pulte.com
  - Phone Number

Overall height will be 8’ (2’ for posts and 6’ for sign face). Exact location to be determined based on tree locations.

Directional/USP Signs

Proposing box signs with our top selling positions that also direct customers to our model park. The signs will be 42" tall by 20" wide and will say:



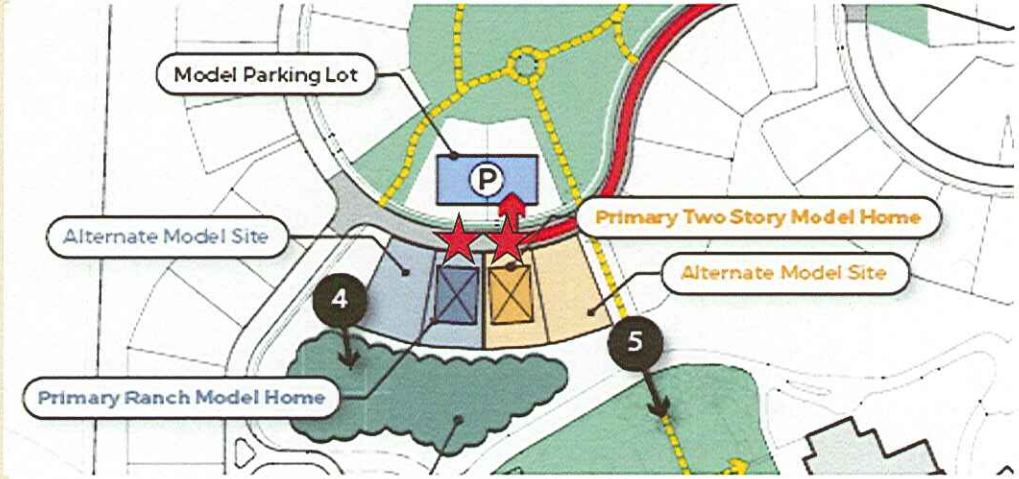
Locations for these signs found on the next slide.

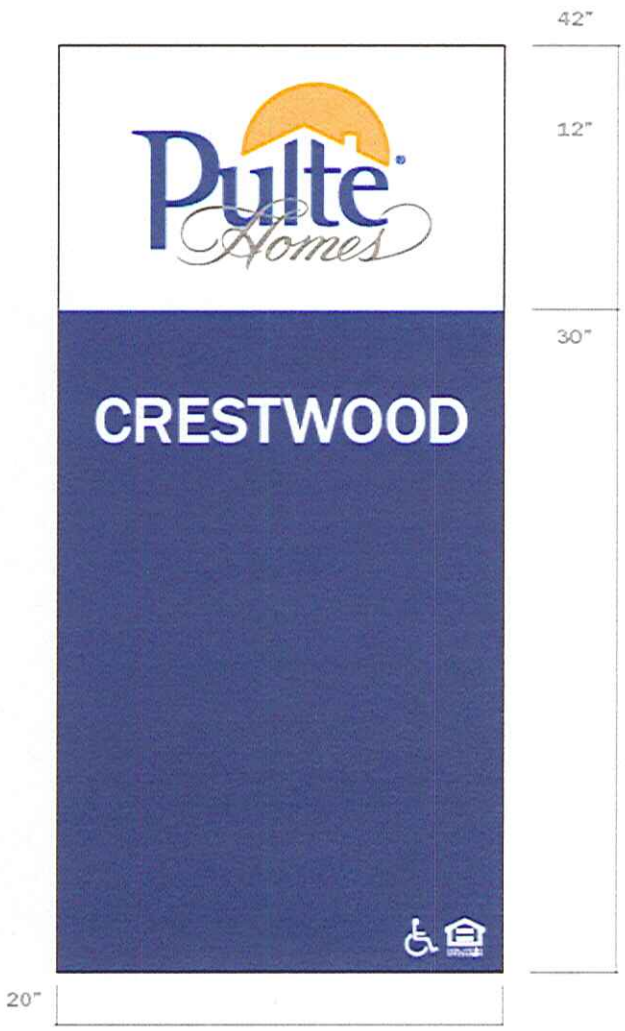
Directional/USP Signs (Locations)

Locations for directional/USP signs marked by the red stars:

Model Signage

All model homes to have a Model ID sign, generally located next to the stoop near the entrance of the home. The model names are to be determined and will be placed on the sign in lieu of "CRESTWOOD." See red stars for location below.

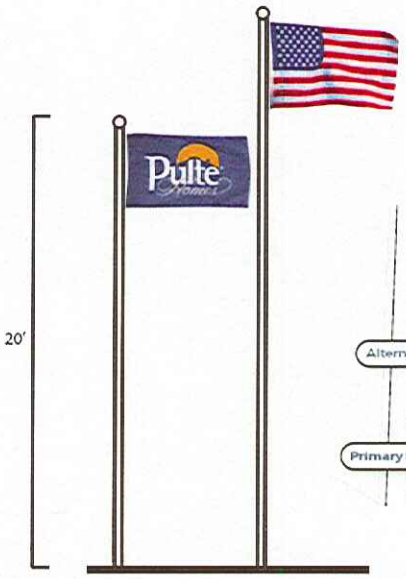


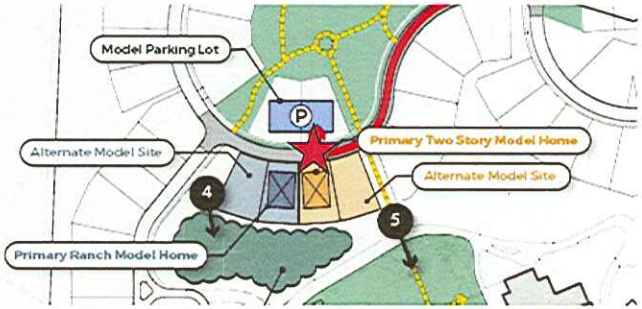


Sales Center Signage/Flagpoles

The Sales Center model will have a Welcome Sign like this that is 6' tall by 3' wide.

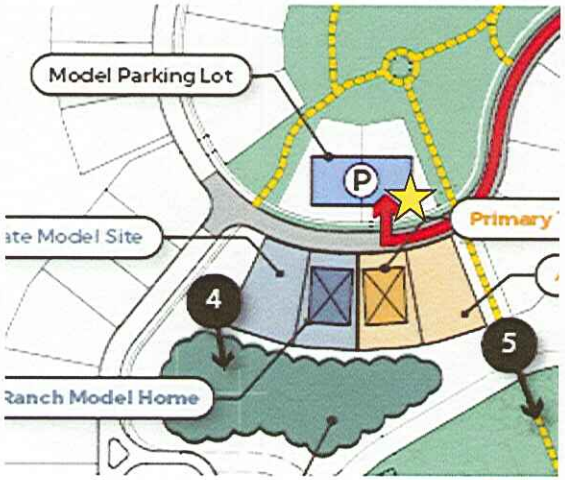
In addition, 2 flagpoles are proposed: one 20' pole with the Pulte flags and one 25' pole with the American flag. The sign/flagpoles are generally positioned in the front of the homesite to attract attention. (see red star)





Parking Signs

Parking sign to be positioned in front of the parking lot (see yellow star):



ORDINANCE 2017-014 Exhibit B2 Traffic Impact Study Addendum prepared by KLOA Inc with a date of October 10, 2016

9575 West Higgins Road, Suite 400 | Rosemont, Illinois 60018
p: 847-518-9990 | f: 847-518-9987

RECEIVED
OCT 10 2016
Community Development Department

MEMORANDUM TO: Dave Cumming
Pulte Group, Inc.

FROM: Brendan S. May
Consultant

Luay R. Aboona, PE
Principal

DATE: October 10, 2016

SUBJECT: Traffic Impact Study Addendum
Cuneo Mansion and Gardens
Vernon Hills, Illinois

This memorandum summarizes the results of a traffic evaluation conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed exit-only access that will serve the Cuneo Mansion and Gardens off Museum Boulevard in Vernon Hills, Illinois. The exit-only access drive will be provided in conjunction with the inbound-only access drive off Milwaukee Avenue. The proposed residential development to the north, which will contain 128 single-family homes, will have its access off Milwaukee Avenue's intersection with Hollister Drive only.

This memorandum serves as an addendum to the traffic study previously prepared by KLOA, Inc. dated June 27, 2016 for the proposed residential development.

Figure 1 shows the location of the site in relation to the area roadway system.

Proposed Cuneo Mansion Access System

Access to the Cuneo Mansion is currently provided via an inbound-only access drive off Milwaukee Avenue located approximately 430 feet south of the unsignalized intersection of Milwaukee Avenue with Hollister Drive and via an exit-only access drive off Milwaukee Avenue that creates the west leg to the signalized intersection of Milwaukee Avenue with Hollister Drive. As part of the proposed residential development, the exit from the Cuneo Mansion will be provided off Museum Boulevard aligned opposite Bay Tree Circle. Additionally, a 72-space parking lot will be developed on the west side of the Cuneo Mansion property.

Aerial View of Site Location **Figure 1**

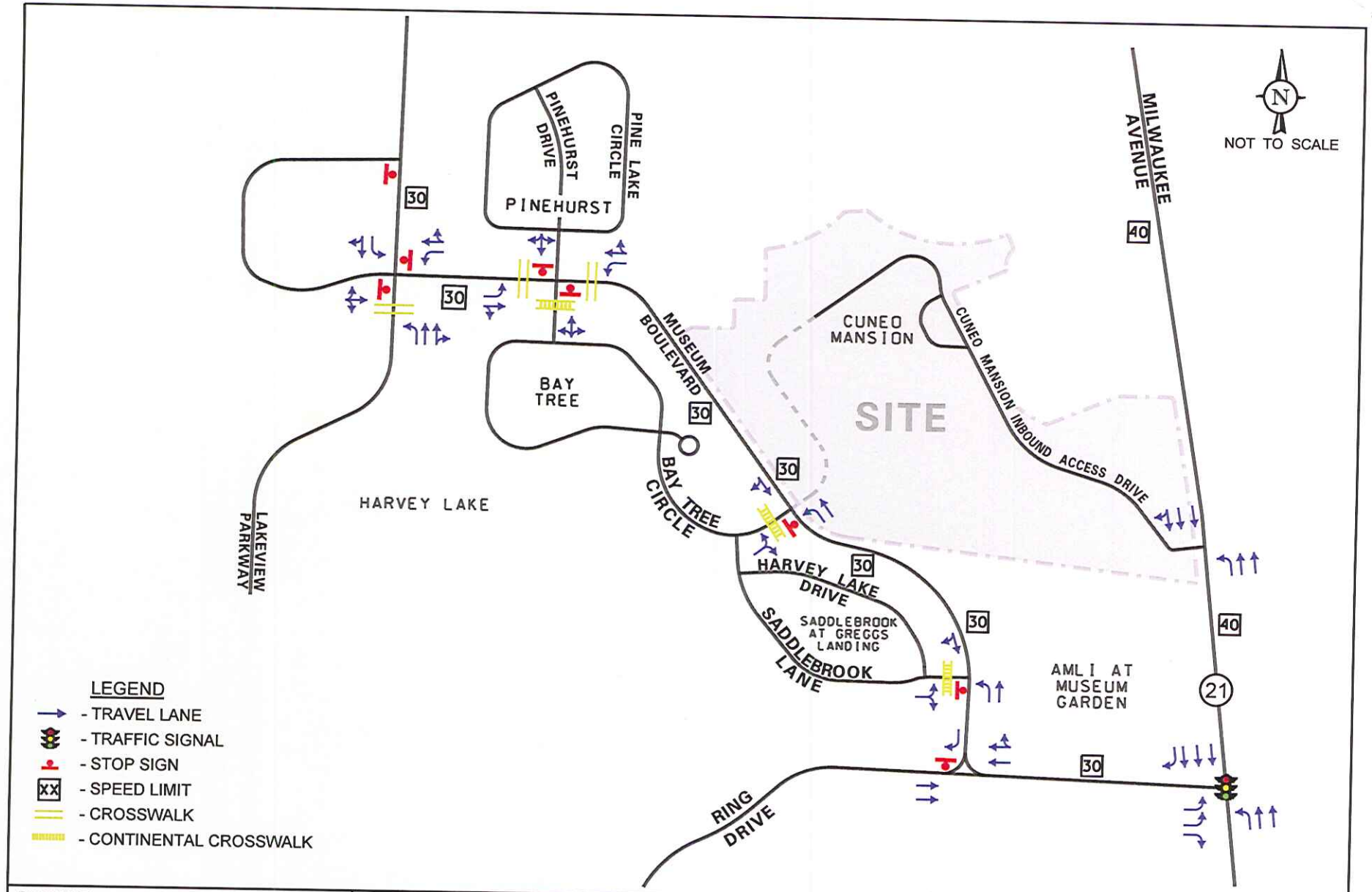
Museum Boulevard is generally a northwest to southeast collector roadway that in the vicinity of the site provides one through lane in each direction separated by a landscaped median. At its unsignalized intersection with Bay Tree Circle, Museum Boulevard provides a shared through/right-turn lane on the southeast-bound approach and an exclusive left-turn lane and an exclusive through lane on the northwest-bound approach. At its unsignalized intersection with Lakeview Parkway, Museum Boulevard provides an exclusive left-turn lane and a shared through/right-turn lane on the westbound approach that are under stop sign control. The eastbound approach at the intersection is designated as Coventry Circle, which provides an exclusive left-turn lane and a shared through/right-turn lane under stop sign control. At its unsignalized intersection with Ring Drive, Museum Boulevard provides one lane under stop sign control that is physically restricted to right-turn movements only. Museum Boulevard is under the jurisdiction of the Village of Vernon Hills and has a posted speed limit of 30 miles per hour. **Figure 2** illustrates the existing roadway characteristics.

Proposed Operations of the Cuneo Mansion

As proposed, the pavilion building within the Cuneo Mansion is proposed to be fully transitioned by August 2018 from reception use to classroom use by Loyola University. At that time, a total of five classrooms will be provided and classes will be scheduled at the following times:

- Spring Semester (Mid-January to Early May)
    - 6:00 to 9:00 P.M. – Monday through Thursday
    - 9:00 A.M. to 12:00 Noon – Saturday
- Summer Semester (Early May to Late August)
    - 9:00 A.M. to 4:00 P.M. – Monday through Thursday
    - 9:00 A.M. to 12:00 Noon – Saturday
- Fall Semester (Late August to Mid-December)
    - 6:00 to 9:00 P.M. – Monday through Thursday
    - 9:00 A.M. to 12:00 Noon – Saturday

Historically, classroom sizes for Loyola University have not exceeded 15 students and Loyola anticipates future class sizes will be well below a room's capacity. In Spring 2016 there were a total of 67 students attending eight classes, resulting in an average class size of approximately eight students or approximately 22 students per hour. In Fall 2016 there is a total of 52 students attending eight classes, resulting in an average class size of approximately six students or approximately 17 students per hour.



PROJECT:	TITLE:	
Cuneo Mansion and Gardens Vernon Hills, Illinois	Existing Roadway Characteristics	KLOA Job No: 16-072 Figure: 2

Cuneo Mansion will continue to have limited museum hours and is projected to continue to have modest attendance. Historically, tours were held on Friday, Saturday, and Sunday until 2014 when public tours were no longer offered. The tours began at 11:00 A.M. with guests required to be off the property by 4:00 P.M. Information regarding the attendance of public tours provided by Loyola University for 2012 and 2013 showed the following:

- Tours offered during spring months that coincided with the spring semester of Loyola classes (mid-January to early May) had an average daily attendance of approximately nine guests.

- Tours offered during summer months that coincided with the summer semester of Loyola classes (early May to late August) had an average daily attendance of approximately 25 guests.

- Tours offered during the fall months that coincided with the fall semester of Loyola classes (late August to mid-December) has an average daily attendance of approximately 16 guests.

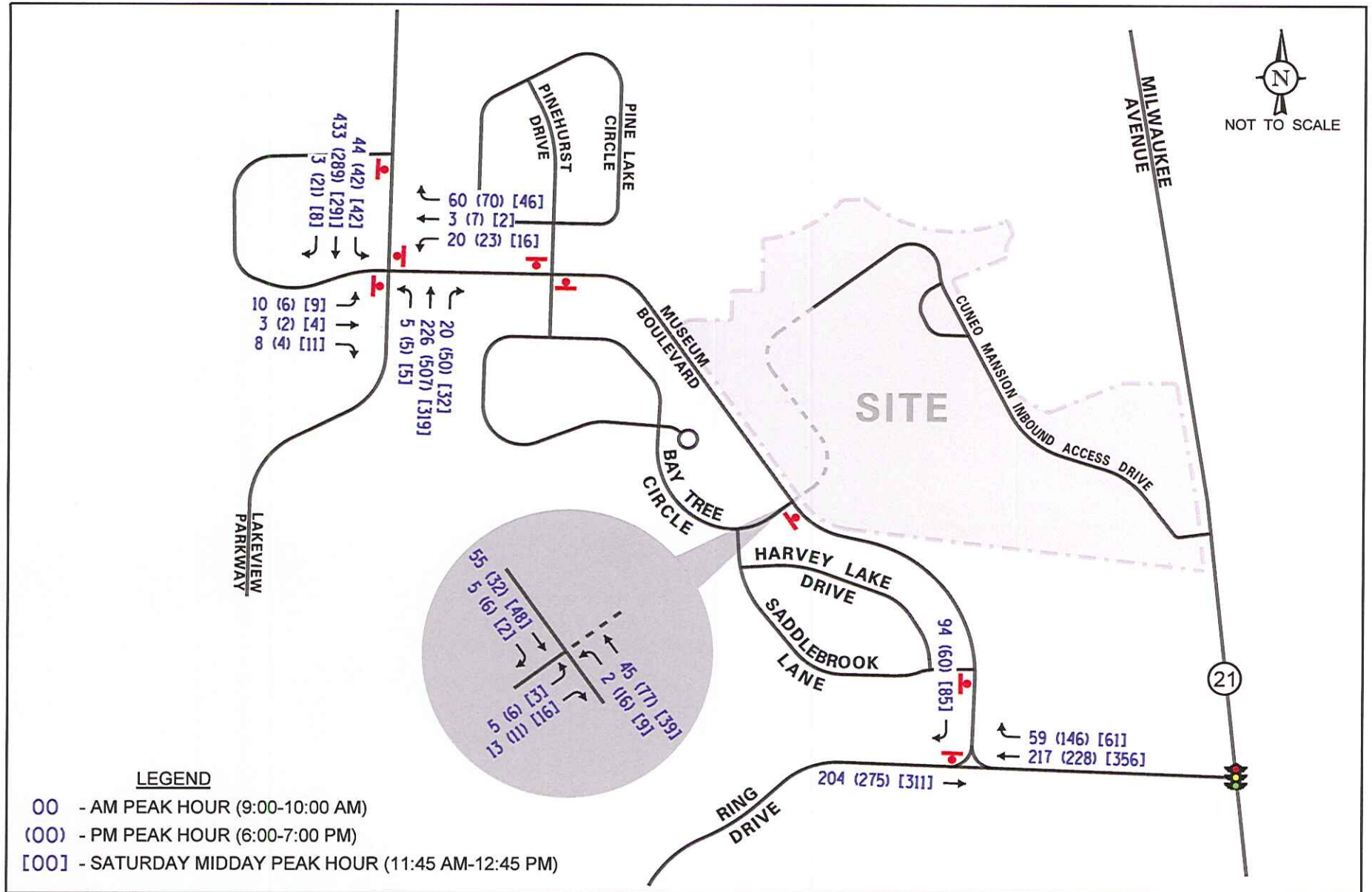
Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity, KLOA, Inc. conducted manual peak period traffic counts on Tuesday, September 20, 2016 during the weekday morning (7:00 A.M. to 10:00 A.M.) and weekday evening (4:00 P.M. to 7:00 P.M.) peak periods and on Saturday, September 25, 2016 during the midday (9:00 A.M. to 1:00 P.M.) peak period at the intersections of Museum Boulevard with Bay Tree Circle, Museum Boulevard/Coventry Circle with Lakeview Parkway, and Museum Boulevard with Ring Drive.

The time periods were selected to coincide with the peak operations of the classes. The results of the traffic counts showed that the weekday morning peak hour of traffic occurs from 8:45 to 9:45 A.M., the weekday evening peak hour of traffic occurs from 5:00 to 6:00 P.M., and the Saturday midday peak hour of traffic occurs from 11:45 A.M. to 12:45 P.M.

However, since the weekday classes start and end outside these peak hours, the weekday morning peak hour was assumed to be 9:00 to 10:00 A.M. and the weekday evening peak hour was assumed to be 6:00 to 7:00 P.M. These peak hours were used since they coincide with the times during which students of the scheduled classes would depart the Cuneo Mansion and represent worst-case conditions, especially for the 6:00 to 7:00 P.M. peak hour. This is due to the fact that the classroom students would be exiting at a constant rate during this hour when the surrounding traffic is at its highest as compared to the other two hours when classes are in session.

Figure 3 illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.



PROJECT:	TITLE:	
Cuneo Mansion and Gardens Vernon Hills, Illinois	Existing Traffic Volumes	KLOA Job No: 16-072 Figure: 3

Traffic Observations

As previously indicated, the southbound approach of Museum Boulevard at Ring Drive is physically restricted to right turns onto Museum Boulevard from Ring Drive and right turns from Museum Boulevard onto Ring Drive only. However, due to the five-lane cross section of Ring Drive and the proximity of this intersection to the parking lot serving Hawthorn Mall, southbound vehicles are able to perform U-turns onto Ring Drive and eastbound vehicles are able to perform U-turns onto Museum Boulevard directly to/from Ring Drive or by using the adjacent parking lot. It should be noted that there are several signs along Ring Drive prohibiting these movements. During the weekday morning peak hour, approximately 18 vehicles were observed performing U-turns from Museum Boulevard onto Ring Drive and three vehicles were observed performing U-turns from Ring Drive onto Museum Boulevard. During the weekday evening peak hour, approximately ten vehicles were observed performing U-turns from Museum Boulevard onto Ring Drive and one vehicle was observed performing a U-turn from Ring Drive onto Museum Boulevard. During the Saturday midday peak hour, approximately 32 vehicles were observed performing U-turns from Museum Boulevard onto Ring Drive and nine vehicles were observed performing U-turns from Ring Drive onto Museum Boulevard.

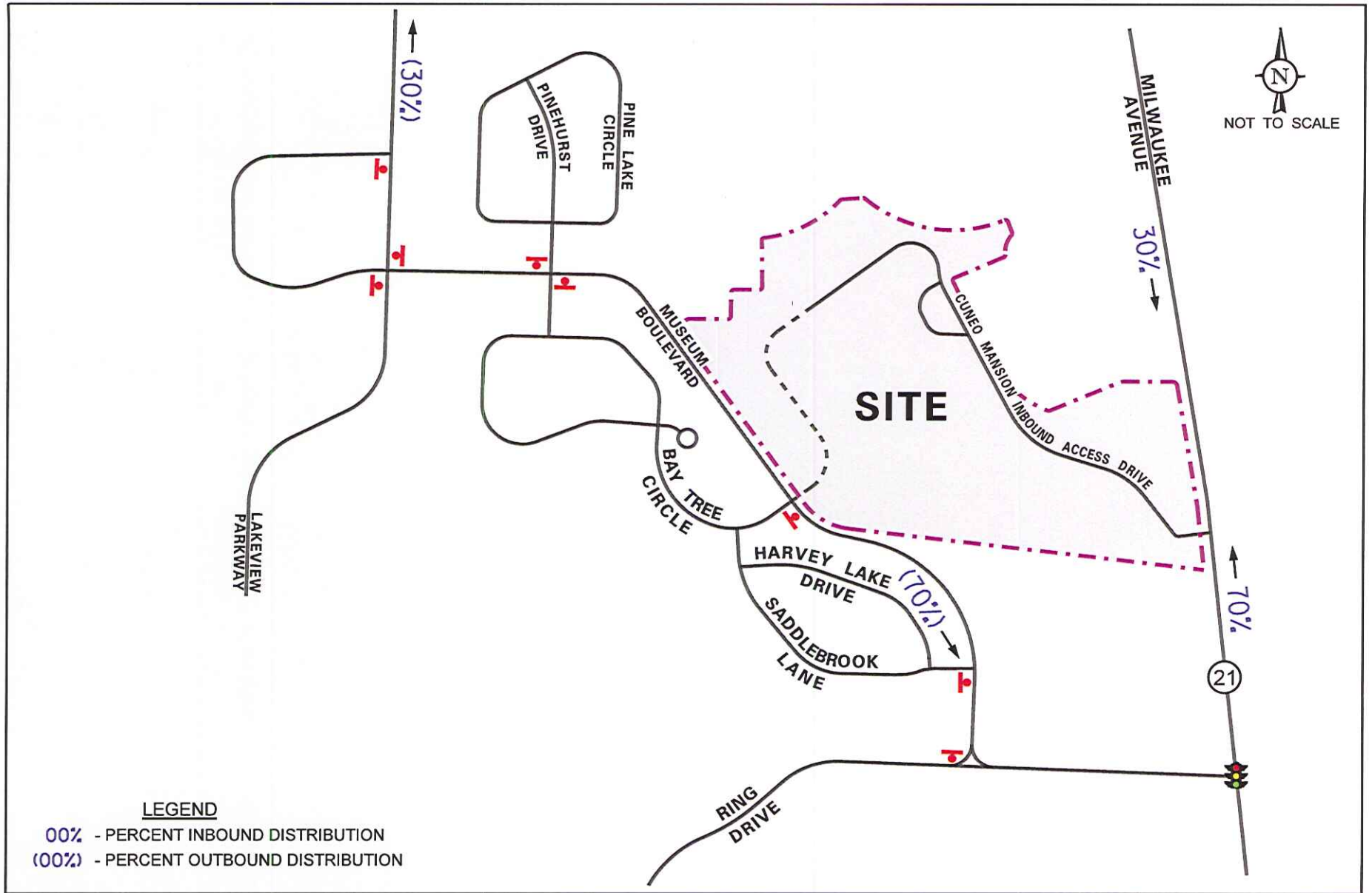
It should be noted that northbound approach at the intersection of Lakeview Parkway with Greggs Parkway experiences long delays and queueing, particularly during the weekday evening peak hour. These queues are due to the large volume of traffic and the all-way stop sign control of the intersection. However, it was observed that these queues do not impact the operations of the intersection of Lakeview Parkway with Museum Boulevard since they do not extend that far south during the weekday morning, weekday evening, and Saturday midday peak hours.

Directional Distribution

The directional distribution of future site-generated trips on the roadway system is a function of several variables, including the operational characteristics of the roadway system and the ease with which drivers can travel over various sections of the roadway system without encountering congestion. The directions from which students, employees, and guests of the Cuneo Mansion will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 4** illustrates the directional distribution of the development-generated traffic.

Estimated Site Traffic Generation

The volume of traffic generated by the Cuneo Mansion and Gardens is based on the proposed operations of the classrooms and tours and based on the historical data provided regarding classroom and tour attendance. The traffic generated by the proposed classrooms was based on the average number of students per hour in 2016. The average number students per hour was conservatively used as it represents the turnover of students who arrive and depart for classes throughout the school hours. For the summer and weekend classes, the average number of students per hour for the Spring and Fall semesters was assumed. The traffic generated for the museum was based on the average number of guests per hour when tours were offered in 2012/2013. **Table 1** shows the site-generated traffic volumes for the proposed development by semester.



PROJECT:	TITLE:	
Cuneo Mansion and Gardens Vernon Hills, Illinois	Estimated Directional Distribution	KLOA Job No: 16-072 Figure: 4

Table 1
ESTIMATED SITE-GENERATED TRAFFIC VOLUMES

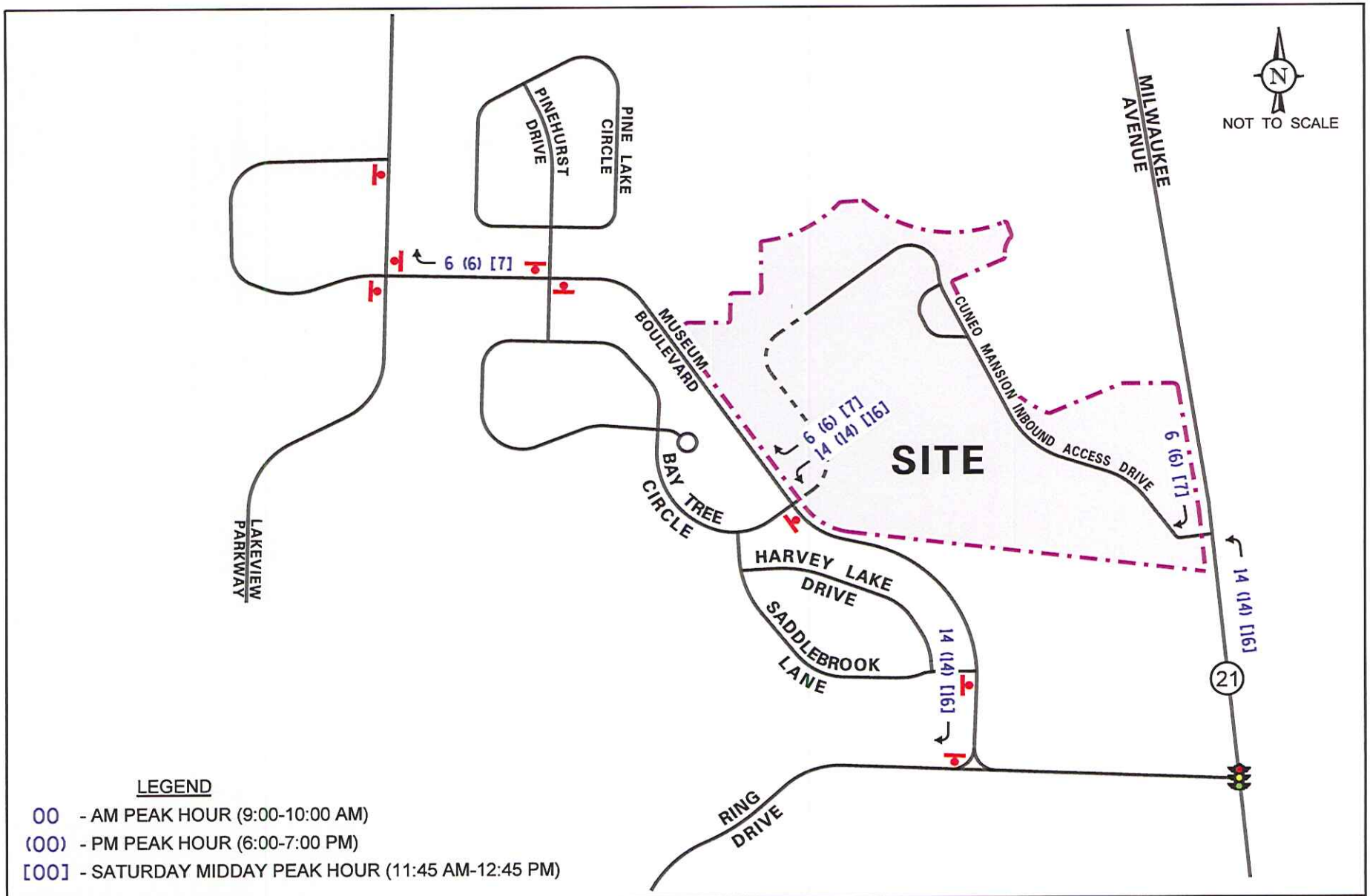
Semester	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Spring Semester									
Classroom Attendance	--	--	--	22	22	44	22	22	44
Public Tour	--	--	--	--	--	--	2	2	4
Summer Semester									
Classroom Attendance	20	20	40	20	20	40	20	20	40
Public Tour	--	--	--	--	--	--	5	5	10
Fall Semester									
Classroom Attendance	--	--	--	17	17	34	17	17	34
Public Tour	--	--	--	--	--	--	3	3	6
Average of Semesters									
Classroom Attendance	20	20	40	20	20	40	20	20	40
Public Tour	--	--	--	--	--	--	3	3	6
Average Total	**20**	**20**	**40**	**20**	**20**	**40**	**23**	**23**	**46**

Projected Traffic Conditions

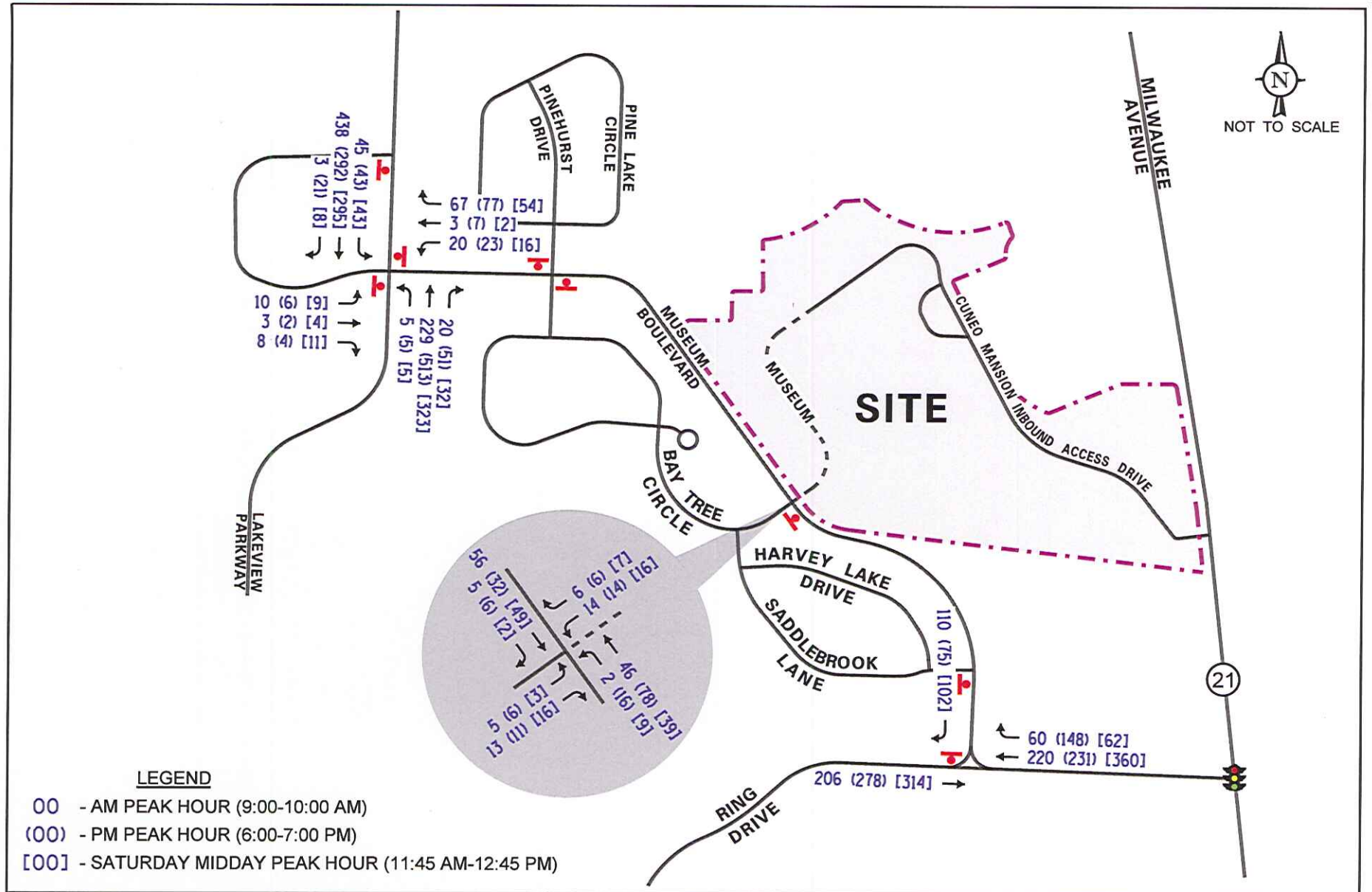
The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed classrooms were assigned to the roadway system in accordance with the previously described directional distribution (Figure 4). The traffic assignment is illustrated in **Figure 5.** The development-generated traffic was then added to the existing traffic volumes accounting for background growth to determine the Year 2022 total projected traffic volumes, shown in **Figure 6**.

Traffic Analysis and Recommendations

Capacity analyses were conducted at the intersection with the study area using HCS 2010 computer software. Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing and Year 2022 total projected conditions are presented in **Tables 2** and **3**, respectively. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.



PROJECT:	TITLE:	
Cuneo Mansion and Gardens Vernon Hills, Illinois	Estimated Site Traffic Assignment	KLOA Job No: 16-072 Figure: 5



PROJECT:	TITLE:	
Cuneo Mansion and Gardens Vernon Hills, Illinois	Year 2022 Total Projected Traffic Volumes	KLOA Job No: 16-072 Figure: 6

Table 2
CAPACITY ANALYSIS RESULTS – EXISTING TRAFFIC VOLUMES

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Museum Boulevard with Bay Tree Circle/Proposed Access Drive						
• Eastbound Approach	A	9.0	A	8.9	A	8.7
• Northbound Left Turns	A	7.4	A	7.3	A	7.3
Museum Boulevard with Lakeview Parkway						
• Eastbound Approach	C	18.5	C	19.2	B	13.3
• Westbound Approach	B	15.0	C	18.2	B	12.6
• Northbound Left Turns	A	9.1	A	8.0	A	7.9
• Southbound Left Turns	A	8.0	A	9.2	A	8.2
Museum Boulevard with Ring Drive						
• Southbound Approach	B	10.1	A	9.8	B	10.2

LOS = Level of Service
Delay is measured in seconds.

Table 3
CAPACITY ANALYSIS RESULTS – YEAR 2022 PROJECTED TRAFFIC VOLUMES

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Museum Boulevard with Bay Tree Circle						
• Eastbound Approach	A	9.0	A	9.0	A	8.7
• Westbound Approach	A	9.4	A	9.4	A	9.2
• Northbound Left Turns	A	7.4	A	7.3	A	7.3
Museum Boulevard with Lakeview Parkway						
• Eastbound Approach	C	18.9	C	19.6	B	13.5
• Westbound Approach	B	14.8	C	18.2	B	12.5
• Northbound Left Turns	A	9.2	A	8.1	A	7.9
• Southbound Left Turns	A	8.1	A	9.2	A	8.2
Museum Boulevard with Ring Drive						
• Southbound Approach	B	10.3	A	9.9	B	10.3

LOS = Level of Service
Delay is measured in seconds.

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development traffic.

Museum Boulevard with Bay Tree Circle/Proposed Exit-Only Access Drive

The results of the capacity analysis indicate that the eastbound approach at this intersection currently operates at Level of Service (LOS) A during the weekday morning, weekday evening, and Saturday midday peak hours. Under future conditions with the development of the exit-only access drive, the eastbound approach is projected to continue operating at LOS A during the peak hours with increases in delay of less than one second and the proposed access drive is projected to operate at LOS A during all three peak hours. Furthermore, northbound left turns are projected to continue operating at LOS A with limited increases in delay. Additionally, the 95th percentile queues for the eastbound approach, westbound approach, and northbound left turns are projected to be one to two vehicles. As such, the proposed access drive will not have a significant impact on the operations of this intersection and will be adequate in accommodating the traffic projected to be generated by the Cuneo Mansion.

Museum Boulevard with Lakeview Parkway

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at LOS C or better during the weekday morning, weekday evening, and Saturday midday peak hours. Under future conditions, the approaches are projected to continue operating at existing levels of service with limited increases in delay and 95th percentile queues of one to two vehicles. Additionally, the northbound and southbound approaches are projected to continue to operate at LOS A during the peak hours with 95th percentile queues of one to two vehicles. As such, the proposed development will have a limited impact on the operations of this intersection and no roadway or traffic control improvements will be required.

Museum Boulevard with Ring Drive

The results of the capacity analysis indicate that the southbound approach currently operates at LOS B during the weekday morning and Saturday midday peak hours and at LOS A during the weekday evening peak hour. Under future conditions, the southbound approach is projected to continue operating at existing levels of service with increases in delay of less than one second during all three peak hours and 95th percentile queues of one to two vehicles. As such, the proposed development will have a limited impact on the operations of this intersection and no roadway or traffic control improvements will be required.

Sight Distance Analysis

Based on a review of the sight distance exhibit prepared by Manhard Consulting, Ltd. at the intersection of the proposed exit-only access drive with Museum Boulevard, adequate stopping sight distance is available for the vehicles exiting the proposed driveway to see approaching vehicles from both directions on Museum Boulevard. A copy of the exhibit dated September 29, 2016 is included in the Appendix.

Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- Based on the size and schedule of classes, the site-generated traffic will be low and will occur outside the roadway system's peak hours.

- The results of the capacity analyses indicate that the proposed exit-only access drive will not have a significant impact on Museum Boulevard or its intersection with Bay Tree Circle.

- The proposed exit-only access for Cuneo Mansion will serve the traffic that will be generated by Cuneo Mansion only (classes and tours). No connection will be provided to the proposed residential development which will have its access restricted to the signalized intersection of Milwaukee Avenue with Hollister Drive.

- The proposed exit-only access drive should be under stop sign control and "Do Not Enter" signs should be provided facing Museum Boulevard to enforce the restriction.

- No roadway or traffic control improvements will be required under future conditions at the intersections of Museum Boulevard with Bay Tree Circle, Museum Boulevard with Lakeview Parkway, or Museum Boulevard with Ring Drive.

- The location of the exit-only access drive will meet the stopping sight distance requirement.

Appendix

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Bay Tree Circle
Site Code:
Start Date: 09/20/2016

Turning Movement Data

Start Time	Bay Tree Circle Eastbound					Museum Boulevard Northbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
7:00 AM	0	1	7	1	8	0	1	2	0	3	0	17	1	0	18	29
7:15 AM	0	2	7	2	9	0	0	5	0	5	0	24	1	0	25	39
7:30 AM	0	1	6	3	7	0	1	8	0	9	0	17	0	0	17	33
7:45 AM	0	1	0	1	1	0	0	8	0	8	0	18	1	0	19	28
Hourly Total	0	5	20	7	25	0	2	23	0	25	0	76	3	0	79	129
8:00 AM	0	1	6	2	7	0	0	1	0	1	0	19	1	0	20	28
8:15 AM	0	3	3	1	6	0	1	6	0	7	0	14	2	0	16	29
8:30 AM	0	1	4	0	5	0	0	24	0	24	0	17	0	0	17	46
8:45 AM	0	1	5	2	6	0	1	19	0	20	0	22	1	0	23	49
Hourly Total	0	6	18	5	24	0	2	50	0	52	0	72	4	0	76	152
9:00 AM	0	0	1	2	1	0	0	26	0	26	0	28	2	0	30	57
9:15 AM	0	3	5	0	8	0	0	13	0	13	0	13	1	0	14	35
9:30 AM	0	2	0	3	2	1	1	1	0	3	0	7	0	0	7	12
9:45 AM	0	0	7	3	7	0	1	5	0	6	0	7	2	0	9	22
Hourly Total	0	5	13	8	18	1	2	45	0	48	0	55	5	0	60	126
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	3	3	1	6	0	2	15	0	17	0	10	1	0	11	34
4:15 PM	0	0	3	1	3	0	3	20	0	23	0	9	4	0	13	39
4:30 PM	0	0	0	4	0	0	1	14	0	15	0	10	2	0	12	27
4:45 PM	0	2	2	6	4	0	2	9	0	11	0	5	3	0	8	23
Hourly Total	0	5	8	12	13	0	8	58	0	66	0	34	10	0	44	123
5:00 PM	0	1	3	4	4	0	3	24	0	27	0	14	4	0	18	49
5:15 PM	0	0	4	6	4	0	2	13	0	15	0	16	1	0	17	36
5:30 PM	0	1	2	5	3	0	1	20	0	21	0	7	1	0	8	32
5:45 PM	0	0	2	5	2	0	4	27	0	31	0	14	1	0	15	48
Hourly Total	0	2	11	20	13	0	10	84	0	94	0	51	7	0	58	165
6:00 PM	0	1	2	2	3	0	3	17	0	20	0	7	3	0	10	33
6:15 PM	0	0	3	1	3	0	6	19	0	25	0	8	0	0	8	36
6:30 PM	0	1	2	5	3	0	2	26	0	28	0	10	1	0	11	42
6:45 PM	0	4	4	6	8	0	5	15	0	20	0	7	2	0	9	37
Hourly Total	0	6	11	14	17	0	16	77	0	93	0	32	6	0	38	148
Grand Total	0	29	81	66	110	1	40	337	0	378	0	320	35	0	355	843
Approach %	0.0	26.4	73.6	-	-	0.3	10.6	89.2	-	-	0.0	90.1	9.9	-	-	-
Total %	0.0	3.4	9.6	-	13.0	0.1	4.7	40.0	-	44.8	0.0	38.0	4.2	-	42.1	-
Lights	0	28	81	-	109	1	39	335	-	375	0	320	34	-	354	838
% Lights	-	96.6	100.0	-	99.1	100.0	97.5	99.4	-	99.2	-	100.0	97.1	-	99.7	99.4
Buses	0	0	0	-	0	0	1	2	-	3	0	0	0	-	0	3
% Buses	-	0.0	0.0	-	0.0	0.0	2.5	0.6	-	0.8	-	0.0	0.0	-	0.0	0.4

Single-Unit Trucks	0	1	0	-	1	0	0	0	-	0	0	0	1	-	1	2
% Single-Unit Trucks	-	3.4	0.0	-	0.9	0.0	0.0	0.0	-	0.0	-	0.0	2.9	-	0.3	0.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	66	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Bay Tree Circle
Site Code:
Start Date: 09/20/2016

Turning Movement Peak Hour Data (9:00 AM)

Start Time	Bay Tree Circle Eastbound					Museum Boulevard Northbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
9:00 AM	0	0	1	2	1	0	0	26	0	26	0	28	2	0	30	57
9:15 AM	0	3	5	0	8	0	0	13	0	13	0	13	1	0	14	35
9:30 AM	0	2	0	3	2	1	1	1	0	3	0	7	0	0	7	12
9:45 AM	0	0	7	3	7	0	1	5	0	6	0	7	2	0	9	22
Total	0	5	13	8	18	1	2	45	0	48	0	55	5	0	60	126
Approach %	0.0	27.8	72.2	-	-	2.1	4.2	93.8	-	-	0.0	91.7	8.3	-	-	-
Total %	0.0	4.0	10.3	-	14.3	0.8	1.6	35.7	-	38.1	0.0	43.7	4.0	-	47.6	-
PHF	0.000	0.417	0.464	-	0.563	0.250	0.500	0.433	-	0.462	0.000	0.491	0.625	-	0.500	0.553
Lights	0	4	13	-	17	1	2	45	-	48	0	55	5	-	60	125
% Lights	-	80.0	100.0	-	94.4	100.0	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	99.2
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Single-Unit Trucks	-	20.0	0.0	-	5.6	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.8
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	8	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Bay Tree Circle
Site Code:
Start Date: 09/20/2016

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Bay Tree Circle Eastbound					Museum Boulevard Northbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	1	2	2	3	0	3	17	0	20	0	7	3	0	10	33
6:15 PM	0	0	3	1	3	0	6	19	0	25	0	8	0	0	8	36
6:30 PM	0	1	2	5	3	0	2	26	0	28	0	10	1	0	11	42
6:45 PM	0	4	4	6	8	0	5	15	0	20	0	7	2	0	9	37
Total	0	6	11	14	17	0	16	77	0	93	0	32	6	0	38	148
Approach %	0.0	35.3	64.7	-	-	0.0	17.2	82.8	-	-	0.0	84.2	15.8	-	-	-
Total %	0.0	4.1	7.4	-	11.5	0.0	10.8	52.0	-	62.8	0.0	21.6	4.1	-	25.7	-
PHF	0.000	0.375	0.688	-	0.531	0.000	0.667	0.740	-	0.830	0.000	0.800	0.500	-	0.864	0.881
Lights	0	6	11	-	17	0	16	77	-	93	0	32	6	-	38	148
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	14	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Bay Tree Circle - Saturday
Site Code:
Start Date: 09/24/2016

Turning Movement Data

Start Time	Bay Tree Circle Eastbound					Museum Boulevard Northbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
9:00 AM	0	0	3	3	3	0	0	6	0	6	0	18	1	0	19	28
9:15 AM	0	2	1	2	3	0	2	14	0	16	0	14	2	0	16	35
9:30 AM	0	1	2	1	3	0	0	5	0	5	0	16	0	0	16	24
9:45 AM	0	2	2	2	4	0	3	7	0	10	0	15	2	0	17	31
Hourly Total	0	5	8	8	13	0	5	32	0	37	0	63	5	0	68	118
10:00 AM	0	1	3	1	4	1	0	5	0	6	0	9	0	0	9	19
10:15 AM	0	1	0	1	1	0	0	10	0	10	0	19	3	0	22	33
10:30 AM	0	0	4	0	4	0	0	7	0	7	0	8	1	0	9	20
10:45 AM	0	1	6	0	7	0	2	9	0	11	0	12	4	0	16	34
Hourly Total	0	3	13	2	16	1	2	31	0	34	0	48	8	0	56	106
11:00 AM	0	1	1	3	2	0	2	7	0	9	0	12	1	0	13	24
11:15 AM	0	0	3	3	3	0	1	9	0	10	0	15	3	0	18	31
11:30 AM	0	3	3	0	6	0	2	14	0	16	0	8	0	0	8	30
11:45 AM	0	2	2	0	4	0	4	9	0	13	0	12	1	0	13	30
Hourly Total	0	6	9	6	15	0	9	39	0	48	0	47	5	0	52	115
12:00 PM	0	1	4	2	5	0	1	12	0	13	0	6	0	0	6	24
12:15 PM	0	0	4	0	4	0	4	10	0	14	0	13	0	0	13	31
12:30 PM	0	0	6	2	6	0	0	8	0	8	0	17	1	0	18	32
12:45 PM	0	1	1	0	2	0	1	10	0	11	0	10	3	0	13	26
Hourly Total	0	2	15	4	17	0	6	40	0	46	0	46	4	0	50	113
Grand Total	0	16	45	20	61	1	22	142	0	165	0	204	22	0	226	452
Approach %	0.0	26.2	73.8	-	-	0.6	13.3	86.1	-	-	0.0	90.3	9.7	-	-	-
Total %	0.0	3.5	10.0	-	13.5	0.2	4.9	31.4	-	36.5	0.0	45.1	4.9	-	50.0	-
Lights	0	16	45	-	61	1	21	139	-	161	0	203	22	-	225	447
% Lights	-	100.0	100.0	-	100.0	100.0	95.5	97.9	-	97.6	-	99.5	100.0	-	99.6	98.9
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	1	2	-	3	0	0	0	-	0	3
% Single-Unit Trucks	-	0.0	0.0	-	0.0	0.0	4.5	1.4	-	1.8	-	0.0	0.0	-	0.0	0.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	1	-	1	0	1	0	-	1	2
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.7	-	0.6	-	0.5	0.0	-	0.4	0.4
Pedestrians	-	-	-	20	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Bay Tree Circle - Saturday
Site Code:
Start Date: 09/24/2016

Turning Movement Peak Hour Data (11:45 AM)

Start Time	Bay Tree Circle Eastbound					Museum Boulevard Northbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
11:45 AM	0	2	2	0	4	0	4	9	0	13	0	12	1	0	13	30
12:00 PM	0	1	4	2	5	0	1	12	0	13	0	6	0	0	6	24
12:15 PM	0	0	4	0	4	0	4	10	0	14	0	13	0	0	13	31
12:30 PM	0	0	6	2	6	0	0	8	0	8	0	17	1	0	18	32
Total	0	3	16	4	19	0	9	39	0	48	0	48	2	0	50	117
Approach %	0.0	15.8	84.2	-	-	0.0	18.8	81.3	-	-	0.0	96.0	4.0	-	-	-
Total %	0.0	2.6	13.7	-	16.2	0.0	7.7	33.3	-	41.0	0.0	41.0	1.7	-	42.7	-
PHF	0.000	0.375	0.667	-	0.792	0.000	0.563	0.813	-	0.857	0.000	0.706	0.500	-	0.694	0.914
Lights	0	3	16	-	19	0	9	39	-	48	0	48	2	-	50	117
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	4	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Lakeview Parkway
Site Code:
Start Date: 09/20/2016

Turning Movement Data

Start Time	Museum Boulevard Eastbound						Museum Boulevard Westbound						Lakeview Parkway Northbound						Lakeview Parkway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	3	0	6	0	9	0	10	0	6	0	16	0	0	38	6	2	44	0	4	84	0	0	88	157
7:15 AM	0	8	2	1	0	11	0	16	0	12	1	28	0	0	28	5	2	33	0	7	144	3	1	154	226
7:30 AM	0	4	4	4	0	12	0	7	0	15	0	22	0	0	62	13	3	75	0	11	160	1	0	172	281
7:45 AM	0	1	1	1	0	3	0	8	0	12	0	20	0	1	57	5	1	63	0	11	111	2	0	124	210
Hourly Total	0	16	7	12	0	35	0	41	0	45	1	86	0	1	185	29	8	215	0	33	499	6	1	538	874
8:00 AM	0	2	1	1	0	4	0	7	0	8	0	15	0	0	34	1	2	35	0	9	92	2	0	103	157
8:15 AM	0	3	1	3	0	7	0	11	0	11	0	22	0	0	36	3	1	39	0	10	112	0	0	122	190
8:30 AM	0	1	1	3	0	5	0	3	1	26	0	30	0	0	81	4	2	85	0	15	137	0	0	152	272
8:45 AM	0	1	2	1	0	4	0	3	0	23	0	26	0	1	90	2	3	93	0	12	193	0	0	205	328
Hourly Total	0	7	5	8	0	20	0	24	1	68	0	93	0	1	241	10	8	252	0	46	534	2	0	582	947
9:00 AM	0	2	1	3	0	6	0	4	0	26	0	30	0	3	94	7	1	104	0	21	182	1	0	204	344
9:15 AM	0	2	0	1	0	3	0	8	0	24	0	32	0	0	59	5	3	64	0	14	128	1	0	143	242
9:30 AM	0	2	1	1	0	4	0	2	2	2	0	6	0	1	41	3	2	45	0	2	63	0	0	65	120
9:45 AM	0	4	1	3	0	8	0	6	1	8	0	15	0	1	32	5	2	38	0	7	60	1	0	68	129
Hourly Total	0	10	3	8	0	21	0	20	3	60	0	83	0	5	226	20	8	251	0	44	433	3	0	480	835
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	1	0	5	0	6	0	4	1	17	0	22	0	2	124	7	0	133	0	9	64	5	0	78	239
4:15 PM	0	3	2	3	1	8	0	5	1	20	0	26	0	0	132	7	1	139	0	16	73	4	0	93	266
4:30 PM	0	1	1	0	0	2	0	4	0	13	0	17	0	1	151	11	1	163	0	6	82	0	0	88	270
4:45 PM	0	0	0	0	0	0	0	3	1	10	0	14	0	5	155	14	0	174	0	10	71	0	0	81	269
Hourly Total	0	5	3	8	1	16	0	16	3	60	0	79	0	8	562	39	2	609	0	41	290	9	0	340	1044
5:00 PM	0	2	2	1	0	5	0	8	2	17	0	27	0	4	178	9	4	191	0	13	54	4	0	81	304
5:15 PM	0	2	1	0	0	3	0	7	1	18	0	26	0	0	181	13	4	194	0	10	78	0	0	88	311
5:30 PM	0	1	0	1	0	2	0	9	2	15	0	26	0	3	130	11	2	144	0	7	68	6	0	81	253
5:45 PM	0	3	0	0	0	3	0	7	0	21	0	28	0	4	120	13	3	137	0	13	80	1	0	94	262
Hourly Total	0	8	3	2	0	13	0	31	5	71	0	107	0	11	609	46	13	666	0	43	290	11	0	344	1130
6:00 PM	0	0	0	3	0	3	0	5	1	12	0	18	0	2	133	14	4	149	0	15	65	3	0	83	253
6:15 PM	0	2	0	1	0	3	0	5	0	21	0	26	0	3	157	11	4	171	0	17	96	5	0	118	318
6:30 PM	0	4	1	0	0	5	0	6	4	19	0	29	0	0	109	13	4	122	0	4	65	8	0	77	233
6:45 PM	0	0	1	0	0	1	0	7	2	18	0	27	0	0	108	12	2	120	1	6	63	5	0	75	223
Hourly Total	0	6	2	4	0	12	0	23	7	70	0	100	0	5	507	50	14	562	1	42	289	21	0	353	1027
Grand Total	0	52	23	42	1	117	0	155	19	374	1	548	0	31	2330	194	53	2555	1	249	2335	52	1	2637	5857
Approach %	0.0	44.4	19.7	35.9	-	-	0.0	28.3	3.5	68.2	-	-	0.0	1.2	91.2	7.6	-	-	0.0	9.4	88.5	2.0	-	-	-
Total %	0.0	0.9	0.4	0.7	-	2.0	0.0	2.6	0.3	6.4	-	9.4	0.0	0.5	39.8	3.3	-	43.6	0.0	4.3	39.9	0.9	-	45.0	-
Lights	0	50	22	39	-	111	0	153	19	373	-	545	0	30	2291	191	-	2512	1	241	2301	52	-	2595	5763
% Lights	-	96.2	95.7	92.9	-	94.9	-	98.7	100.0	99.7	-	99.5	-	96.8	98.3	98.5	-	98.3	100.0	96.8	98.5	100.0	-	98.4	98.4
Buses	0	1	1	3	-	5	0	2	0	1	-	3	0	0	23	2	-	25	0	5	18	0	-	23	56

% Buses	-	1.9	4.3	7.1	-	4.3	-	1.3	0.0	0.3	-	0.5	-	0.0	1.0	1.0	-	1.0	0.0	2.0	0.8	0.0	-	0.9	1.0
Single-Unit Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	1	15	1	-	17	0	2	13	0	-	15	33
% Single-Unit Trucks	-	1.9	0.0	0.0	-	0.9	-	0.0	0.0	0.0	-	0.0	-	3.2	0.6	0.5	-	0.7	0.0	0.8	0.6	0.0	-	0.6	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	1	3	0	-	4	5
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.4	0.1	0.0	-	0.2	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	53	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Lakeview Parkway
Site Code:
Start Date: 09/20/2016

Turning Movement Peak Hour Data (9:00 AM)

Start Time	Museum Boulevard Eastbound						Museum Boulevard Westbound						Lakeview Parkway Northbound						Lakeview Parkway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
9:00 AM	0	2	1	3	0	6	0	4	0	26	0	30	0	3	94	7	1	104	0	21	182	1	0	204	344
9:15 AM	0	2	0	1	0	3	0	8	0	24	0	32	0	0	59	5	3	64	0	14	128	1	0	143	242
9:30 AM	0	2	1	1	0	4	0	2	2	2	0	6	0	1	41	3	2	45	0	2	63	0	0	65	120
9:45 AM	0	4	1	3	0	8	0	6	1	8	0	15	0	1	32	5	2	38	0	7	60	1	0	68	129
Total	0	10	3	8	0	21	0	20	3	60	0	83	0	5	226	20	8	251	0	44	433	3	0	480	835
Approach %	0.0	47.6	14.3	38.1	-	-	0.0	24.1	3.6	72.3	-	-	0.0	2.0	90.0	8.0	-	-	0.0	9.2	90.2	0.6	-	-	-
Total %	0.0	1.2	0.4	1.0	-	2.5	0.0	2.4	0.4	7.2	-	9.9	0.0	0.6	27.1	2.4	-	30.1	0.0	5.3	51.9	0.4	-	57.5	-
PHF	0.000	0.625	0.750	0.667	-	0.656	0.000	0.625	0.375	0.577	-	0.648	0.000	0.417	0.601	0.714	-	0.603	0.000	0.524	0.595	0.750	-	0.588	0.607
Lights	0	10	3	8	-	21	0	20	3	60	-	83	0	4	219	20	-	243	0	44	423	3	-	470	817
% Lights	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	-	80.0	96.9	100.0	-	96.8	-	100.0	97.7	100.0	-	97.9	97.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	0	-	4	0	0	2	0	-	2	6
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	1.8	0.0	-	1.6	-	0.0	0.5	0.0	-	0.4	0.7
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	3	0	-	4	0	0	8	0	-	8	12
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	20.0	1.3	0.0	-	1.6	-	0.0	1.8	0.0	-	1.7	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	8	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Lakeview Parkway
Site Code:
Start Date: 09/20/2016

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Museum Boulevard Eastbound						Museum Boulevard Westbound						Lakeview Parkway Northbound						Lakeview Parkway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 PM	0	0	0	3	0	3	0	5	1	12	0	18	0	2	133	14	4	149	0	15	65	3	0	83	253
6:15 PM	0	2	0	1	0	3	0	5	0	21	0	26	0	3	157	11	4	171	0	17	96	5	0	118	318
6:30 PM	0	4	1	0	0	5	0	6	4	19	0	29	0	0	109	13	4	122	0	4	65	8	0	77	233
6:45 PM	0	0	1	0	0	1	0	7	2	18	0	27	0	0	108	12	2	120	1	6	63	5	0	75	223
Total	0	6	2	4	0	12	0	23	7	70	0	100	0	5	507	50	14	562	1	42	289	21	0	353	1027
Approach %	0.0	50.0	16.7	33.3	-	-	0.0	23.0	7.0	70.0	-	-	0.0	0.9	90.2	8.9	-	-	0.3	11.9	81.9	5.9	-	-	-
Total %	0.0	0.6	0.2	0.4	-	1.2	0.0	2.2	0.7	6.8	-	9.7	0.0	0.5	49.4	4.9	-	54.7	0.1	4.1	28.1	2.0	-	34.4	-
PHF	0.000	0.375	0.500	0.333	-	0.600	0.000	0.821	0.438	0.833	-	0.862	0.000	0.417	0.807	0.893	-	0.822	0.250	0.618	0.753	0.656	-	0.748	0.807
Lights	0	5	2	4	-	11	0	23	7	70	-	100	0	5	504	50	-	559	1	42	287	21	-	351	1021
% Lights	-	83.3	100.0	100.0	-	91.7	-	100.0	100.0	100.0	-	100.0	-	100.0	99.4	100.0	-	99.5	100.0	100.0	99.3	100.0	-	99.4	99.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.3	0.0	-	0.3	0.1
Single-Unit Trucks	0	1	0	0	-	1	0	0	0	0	-	0	0	0	3	0	-	3	0	0	0	0	-	0	4
% Single-Unit Trucks	-	16.7	0.0	0.0	-	8.3	-	0.0	0.0	0.0	-	0.0	-	0.0	0.6	0.0	-	0.5	0.0	0.0	0.0	0.0	-	0.0	0.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.3	0.0	-	0.3	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	14	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Lakeview Parkway
Site Code:
Start Date: 09/24/2016

Turning Movement Data

Start Time	Museum Boulevard Eastbound						Museum Boulevard Westbound						Lakeview Parkway Northbound						Lakeview Parkway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
9:00 AM	0	3	3	3	0	9	0	3	0	9	0	12	0	1	36	10	5	47	0	5	47	2	0	54	122
9:15 AM	0	3	0	0	0	3	0	4	0	14	0	18	0	0	33	9	4	42	0	12	55	3	0	70	133
9:30 AM	0	2	2	1	0	5	0	9	0	8	0	17	0	0	38	3	0	41	0	6	61	0	0	67	130
9:45 AM	0	1	2	5	0	8	0	3	0	10	0	13	0	0	53	2	2	55	0	10	75	1	0	86	162
Hourly Total	0	9	7	9	0	25	0	19	0	41	0	60	0	1	160	24	11	185	0	33	238	6	0	277	547
10:00 AM	0	4	0	0	0	4	0	8	0	4	0	12	0	1	77	10	4	88	0	9	52	1	0	62	166
10:15 AM	0	4	0	0	0	4	0	5	0	6	0	11	0	2	71	6	2	79	0	18	64	2	0	84	178
10:30 AM	0	0	0	0	0	0	0	6	0	11	0	17	0	2	58	4	6	64	0	6	69	1	0	76	157
10:45 AM	0	0	1	0	0	1	0	3	1	11	0	15	0	0	73	6	0	79	0	11	64	0	0	75	170
Hourly Total	0	8	1	0	0	9	0	22	1	32	0	55	0	5	279	26	12	310	0	44	249	4	0	297	671
11:00 AM	1	4	0	0	0	5	0	4	1	7	0	12	0	0	87	6	1	93	0	9	64	1	0	74	184
11:15 AM	0	4	3	1	0	8	0	8	0	8	0	16	0	3	69	13	0	85	0	8	64	2	0	74	183
11:30 AM	0	7	0	1	0	8	0	10	1	18	0	29	0	0	77	4	3	81	0	10	59	2	0	71	189
11:45 AM	0	2	3	2	0	7	0	4	0	11	0	15	0	2	87	6	0	95	0	11	86	1	0	98	215
Hourly Total	1	17	6	4	0	28	0	26	2	44	0	72	0	5	320	29	4	354	0	38	273	6	0	317	771
12:00 PM	0	3	0	3	0	6	1	6	1	10	0	18	0	2	72	10	0	84	0	11	62	0	0	73	181
12:15 PM	0	2	0	1	0	3	0	2	0	14	0	16	0	1	80	8	2	89	0	7	75	6	0	88	196
12:30 PM	0	2	1	5	0	8	0	4	1	11	0	16	0	0	80	8	4	88	0	13	68	1	0	82	194
12:45 PM	0	1	2	0	0	3	0	9	0	12	0	21	0	0	68	15	3	83	0	10	56	2	0	68	175
Hourly Total	0	8	3	9	0	20	1	21	2	47	0	71	0	3	300	41	9	344	0	41	261	9	0	311	746
Grand Total	1	42	17	22	0	82	1	88	5	164	0	258	0	14	1059	120	36	1193	0	156	1021	25	0	1202	2735
Approach %	1.2	51.2	20.7	26.8	-	-	0.4	34.1	1.9	63.6	-	-	0.0	1.2	88.8	10.1	-	-	0.0	13.0	84.9	2.1	-	-	-
Total %	0.0	1.5	0.6	0.8	-	3.0	0.0	3.2	0.2	6.0	-	9.4	0.0	0.5	38.7	4.4	-	43.6	0.0	5.7	37.3	0.9	-	43.9	-
Lights	1	42	14	22	-	79	1	87	5	162	-	255	0	14	1052	118	-	1184	0	155	1015	25	-	1195	2713
% Lights	100.0	100.0	82.4	100.0	-	96.3	100.0	98.9	100.0	98.8	-	98.8	-	100.0	99.3	98.3	-	99.2	-	99.4	99.4	100.0	-	99.4	99.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	1	0	-	1	0	1	0	2	-	3	0	0	6	2	-	8	0	0	4	0	-	4	16
% Single-Unit Trucks	0.0	0.0	5.9	0.0	-	1.2	0.0	1.1	0.0	1.2	-	1.2	-	0.0	0.6	1.7	-	0.7	-	0.0	0.4	0.0	-	0.3	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	2	0	-	2	0	0	0	0	-	0	0	0	1	0	-	1	0	1	2	0	-	3	6
% Bicycles on Road	0.0	0.0	11.8	0.0	-	2.4	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.1	-	0.6	0.2	0.0	-	0.2	0.2
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	36	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Lakeview Parkway
Site Code:
Start Date: 09/24/2016

Turning Movement Peak Hour Data (11:45 AM)

Start Time	Museum Boulevard Eastbound						Museum Boulevard Westbound						Lakeview Parkway Northbound						Lakeview Parkway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
11:45 AM	0	2	3	2	0	7	0	4	0	11	0	15	0	2	87	6	0	95	0	11	86	1	0	98	215
12:00 PM	0	3	0	3	0	6	1	6	1	10	0	18	0	2	72	10	0	84	0	11	62	0	0	73	181
12:15 PM	0	2	0	1	0	3	0	2	0	14	0	16	0	1	80	8	2	89	0	7	75	6	0	88	196
12:30 PM	0	2	1	5	0	8	0	4	1	11	0	16	0	0	80	8	4	88	0	13	68	1	0	82	194
Total	0	9	4	11	0	24	1	16	2	46	0	65	0	5	319	32	6	356	0	42	291	8	0	341	786
Approach %	0.0	37.5	16.7	45.8	-	-	1.5	24.6	3.1	70.8	-	-	0.0	1.4	89.6	9.0	-	-	0.0	12.3	85.3	2.3	-	-	-
Total %	0.0	1.1	0.5	1.4	-	3.1	0.1	2.0	0.3	5.9	-	8.3	0.0	0.6	40.6	4.1	-	45.3	0.0	5.3	37.0	1.0	-	43.4	-
PHF	0.000	0.750	0.333	0.550	-	0.750	0.250	0.667	0.500	0.821	-	0.903	0.000	0.625	0.917	0.800	-	0.937	0.000	0.808	0.846	0.333	-	0.870	0.914
Lights	0	9	4	11	-	24	1	15	2	46	-	64	0	5	317	32	-	354	0	42	289	8	-	339	781
% Lights	-	100.0	100.0	100.0	-	100.0	100.0	93.8	100.0	100.0	-	98.5	-	100.0	99.4	100.0	-	99.4	-	100.0	99.3	100.0	-	99.4	99.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	1	0	-	1	0	0	2	0	-	2	4
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	0.0	6.3	0.0	0.0	-	1.5	-	0.0	0.3	0.0	-	0.3	-	0.0	0.7	0.0	-	0.6	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Ring Drive
Site Code:
Start Date: 09/20/2016

Turning Movement Data

Start Time	Ring Drive Eastbound					Ring Drive Westbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	
7:00 AM	0	0	40	0	40	0	26	3	0	29	0	0	36	0	36	105
7:15 AM	0	0	48	0	48	0	43	4	0	47	0	0	37	0	37	132
7:30 AM	0	0	56	0	56	0	37	9	0	46	0	0	40	0	40	142
7:45 AM	0	0	65	0	65	0	44	6	0	50	0	0	29	0	29	144
Hourly Total	0	0	209	0	209	0	150	22	0	172	0	0	142	0	142	523
8:00 AM	0	0	73	0	73	0	29	7	0	36	0	0	36	0	36	145
8:15 AM	0	0	50	0	50	0	28	6	0	34	0	0	27	0	27	111
8:30 AM	0	0	68	0	68	0	56	19	0	75	0	0	36	0	36	179
8:45 AM	0	0	62	0	62	0	74	24	0	98	0	0	33	0	33	193
Hourly Total	0	0	253	0	253	0	187	56	0	243	0	0	132	0	132	628
9:00 AM	0	0	65	0	65	0	88	28	0	116	0	0	33	0	33	214
9:15 AM	0	0	50	0	50	0	41	17	0	58	0	0	24	0	24	132
9:30 AM	0	0	41	0	41	0	43	7	0	50	0	0	16	0	16	107
9:45 AM	0	0	48	0	48	0	45	7	0	52	0	0	21	0	21	121
Hourly Total	0	0	204	0	204	0	217	59	0	276	0	0	94	0	94	574
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	73	0	73	0	60	27	0	87	0	0	15	0	15	175
4:15 PM	0	0	76	0	76	0	63	25	0	88	0	0	16	0	16	180
4:30 PM	0	0	78	0	78	0	81	22	0	103	0	0	9	0	9	190
4:45 PM	0	0	85	0	85	0	75	24	0	99	0	0	13	0	13	197
Hourly Total	0	0	312	0	312	0	279	98	0	377	0	0	53	0	53	742
5:00 PM	0	0	83	0	83	0	73	32	0	105	0	0	20	0	20	208
5:15 PM	0	0	88	1	88	0	71	27	0	98	0	0	25	0	25	211
5:30 PM	0	0	78	0	78	0	63	42	0	105	0	0	19	0	19	202
5:45 PM	0	0	78	0	78	0	76	50	0	126	0	0	20	0	20	224
Hourly Total	0	0	327	1	327	0	283	151	0	434	0	0	84	0	84	845
6:00 PM	0	0	77	0	77	0	58	35	0	93	0	0	19	0	19	189
6:15 PM	0	0	75	0	75	0	53	42	3	95	0	0	16	0	16	186
6:30 PM	0	0	66	0	66	0	71	34	0	105	0	0	10	0	10	181
6:45 PM	0	0	57	3	57	0	46	35	0	81	0	0	15	3	15	153
Hourly Total	0	0	275	3	275	0	228	146	3	374	0	0	60	3	60	709
Grand Total	0	0	1580	4	1580	0	1344	532	3	1876	0	0	565	3	565	4021
Approach %	0.0	0.0	100.0	-	-	0.0	71.6	28.4	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	39.3	-	39.3	0.0	33.4	13.2	-	46.7	0.0	0.0	14.1	-	14.1	-
Lights	0	0	1562	-	1562	0	1335	526	-	1861	0	0	558	-	558	3981
% Lights	-	-	98.9	-	98.9	-	99.3	98.9	-	99.2	-	-	98.8	-	98.8	99.0
Buses	0	0	9	-	9	0	2	3	-	5	0	0	7	-	7	21
% Buses	-	-	0.6	-	0.6	-	0.1	0.6	-	0.3	-	-	1.2	-	1.2	0.5

Single-Unit Trucks	0	0	8	-	8	0	7	3	-	10	0	0	0	-	0	18
% Single-Unit Trucks	-	-	0.5	-	0.5	-	0.5	0.6	-	0.5	-	-	0.0	-	0.0	0.4
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Bicycles on Road	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	-	-	0.1	-	0.1	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	4	-	-	-	-	3	-	-	-	-	3	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Ring Drive
Site Code:
Start Date: 09/20/2016

Turning Movement Peak Hour Data (9:00 AM)

Start Time	Ring Drive Eastbound					Ring Drive Westbound					Museum Boulevard Southbound					Int. Total
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	
9:00 AM	0	0	65	0	65	0	88	28	0	116	0	0	33	0	33	214
9:15 AM	0	0	50	0	50	0	41	17	0	58	0	0	24	0	24	132
9:30 AM	0	0	41	0	41	0	43	7	0	50	0	0	16	0	16	107
9:45 AM	0	0	48	0	48	0	45	7	0	52	0	0	21	0	21	121
Total	0	0	204	0	204	0	217	59	0	276	0	0	94	0	94	574
Approach %	0.0	0.0	100.0	-	-	0.0	78.6	21.4	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	35.5	-	35.5	0.0	37.8	10.3	-	48.1	0.0	0.0	16.4	-	16.4	-
PHF	0.000	0.000	0.785	-	0.785	0.000	0.616	0.527	-	0.595	0.000	0.000	0.712	-	0.712	0.671
Lights	0	0	199	-	199	0	215	57	-	272	0	0	93	-	93	564
% Lights	-	-	97.5	-	97.5	-	99.1	96.6	-	98.6	-	-	98.9	-	98.9	98.3
Buses	0	0	1	-	1	0	1	0	-	1	0	0	1	-	1	3
% Buses	-	-	0.5	-	0.5	-	0.5	0.0	-	0.4	-	-	1.1	-	1.1	0.5
Single-Unit Trucks	0	0	4	-	4	0	1	2	-	3	0	0	0	-	0	7
% Single-Unit Trucks	-	-	2.0	-	2.0	-	0.5	3.4	-	1.1	-	-	0.0	-	0.0	1.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Museum Boulevard with Ring Drive
Site Code:
Start Date: 09/20/2016

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Ring Drive Eastbound					Ring Drive Westbound					Museum Boulevard Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
6:00 PM	0	0	77	0	77	0	58	35	0	93	0	0	19	0	19	189
6:15 PM	0	0	75	0	75	0	53	42	3	95	0	0	16	0	16	186
6:30 PM	0	0	66	0	66	0	71	34	0	105	0	0	10	0	10	181
6:45 PM	0	0	57	3	57	0	46	35	0	81	0	0	15	3	15	153
Total	0	0	275	3	275	0	228	146	3	374	0	0	60	3	60	709
Approach %	0.0	0.0	100.0	-	-	0.0	61.0	39.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	38.8	-	38.8	0.0	32.2	20.6	-	52.8	0.0	0.0	8.5	-	8.5	-
PHF	0.000	0.000	0.893	-	0.893	0.000	0.803	0.869	-	0.890	0.000	0.000	0.789	-	0.789	0.938
Lights	0	0	275	-	275	0	226	146	-	372	0	0	60	-	60	707
% Lights	-	-	100.0	-	100.0	-	99.1	100.0	-	99.5	-	-	100.0	-	100.0	99.7
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	2	0	-	2	0	0	0	-	0	2
% Single-Unit Trucks	-	-	0.0	-	0.0	-	0.9	0.0	-	0.5	-	-	0.0	-	0.0	0.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	3	-	-	-	-	3	-	-	-	-	3	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Vernon Hills, IL Weather: Warm and Dry 09/26/16
Museum Blvd and Rind Rd 15:07:05
Saturday September 25, 2016

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - by Mvmt

Intersection # 1 museum/ring/sat

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
800	7	10	0	1	19	0	0	0	0	0	13	0	50
815	2	5	3	4	15	0	0	0	0	0	20	0	49
830	14	9	2	1	25	0	0	0	0	1	22	0	74
845	6	8	1	9	30	0	0	0	0	3	26	0	83
900	10	10	3	5	28	0	0	0	0	1	21	1	79
915	12	8	1	15	29	0	0	0	0	3	32	0	100
930	14	8	5	5	33	0	0	0	0	2	33	0	100
945	16	10	1	9	42	0	0	0	0	1	48	0	127
1000	12	6	1	6	65	0	0	0	0	2	39	0	131
1015	18	7	2	16	54	0	0	0	0	4	48	0	149
1030	10	4	1	9	84	0	0	0	0	2	52	0	162
1045	11	11	2	17	100	0	0	0	0	2	64	0	207
1100	8	7	2	7	63	0	0	0	0	4	63	1	155
1115	11	10	2	17	73	0	0	0	0	2	62	0	177
1130	17	5	2	17	77	0	0	0	0	1	71	0	190
1145	12	6	2	20	97	0	0	0	0	3	63	1	204
1200	8	3	1	12	84	0	0	0	0	3	86	0	197
1215	16	9	1	17	88	0	0	0	0	1	80	0	212
1230	17	8	2	12	87	0	0	0	0	1	73	0	200
1245	8	7	1	12	97	0	0	0	0	3	71	1	200
Total	229	151	35	211	1190	0	0	0	0	39	987	4	2846

Vernon Hills, IL Weather: Warm and Dry 09/26/16
Museum Blvd and Rind Rd 15:07:05
Saturday September 25, 2016

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - Totals

Intersection # 1 museum/ring/sat

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
800	17	20	0	13	1	13	10	26	50
815	10	19	0	20	4	23	5	17	49
830	25	26	0	23	1	24	10	39	74
845	15	39	0	29	9	27	11	36	83
900	23	33	0	23	6	24	11	38	79
915	21	44	0	35	15	33	11	41	100
930	27	38	0	35	5	38	10	47	100
945	27	51	0	49	9	49	11	58	127
1000	19	71	0	41	6	40	8	77	131
1015	27	70	0	52	16	50	11	72	149
1030	15	93	0	54	9	53	6	94	162
1045	24	117	0	66	17	66	13	111	207
1100	17	70	0	68	8	65	11	71	155
1115	23	90	0	64	17	64	12	84	177
1130	24	94	0	72	17	73	6	94	190
1145	20	117	0	67	21	65	9	109	204
1200	12	96	0	89	12	87	6	92	197
1215	26	105	0	81	17	81	10	104	212
1230	27	99	0	74	12	75	9	104	200
1245	16	109	0	75	13	72	10	105	200
Total	415	1401	0	1030	215	1022	190	1419	2846

Vernon Hills, IL Weather: Warm and Dry 09/26/16
Museum Blvd and Rind Rd 15:07:05
Saturday September 25, 2016

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Flow Rates: by Movement

Intersection # 1 museum/ring/sat

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
800	28	40	0	4	76	0	0	0	0	0	52	0	200
815	8	20	12	16	60	0	0	0	0	0	80	0	196
830	56	36	8	4	100	0	0	0	0	4	88	0	296
845	24	32	4	36	120	0	0	0	0	12	104	0	332
900	40	40	12	20	112	0	0	0	0	4	84	4	316
915	48	32	4	60	116	0	0	0	0	12	128	0	400
930	56	32	20	20	132	0	0	0	0	8	132	0	400
945	64	40	4	36	168	0	0	0	0	4	192	0	508
1000	48	24	4	24	260	0	0	0	0	8	156	0	524
1015	72	28	8	64	216	0	0	0	0	16	192	0	596
1030	40	16	4	36	336	0	0	0	0	8	208	0	648
1045	44	44	8	68	400	0	0	0	0	8	256	0	828
1100	32	28	8	28	252	0	0	0	0	16	252	4	620
1115	44	40	8	68	292	0	0	0	0	8	248	0	708
1130	68	20	8	68	308	0	0	0	0	4	284	0	760
1145	48	24	8	80	388	0	0	0	0	12	252	4	816
1200	32	12	4	48	336	0	0	0	0	12	344	0	788
1215	64	36	4	68	352	0	0	0	0	4	320	0	848
1230	68	32	8	48	348	0	0	0	0	4	292	0	800
1245	32	28	4	48	388	0	0	0	0	12	284	4	800

Vernon Hills, IL Weather: Warm and Dry 09/26/16
Museum Blvd and Rind Rd 15:07:05
Saturday September 25, 2016

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Flow Rates: Appr/Exit Totals

Intersection # 1 museum/ring/sat

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
800	68	80	0	52	4	52	40	104	200
815	40	76	0	80	16	92	20	68	196
830	100	104	0	92	4	96	40	156	296
845	60	156	0	116	36	108	44	144	332
900	92	132	0	92	24	96	44	152	316
915	84	176	0	140	60	132	44	164	400
930	108	152	0	140	20	152	40	188	400
945	108	204	0	196	36	196	44	232	508
1000	76	284	0	164	24	160	32	308	524
1015	108	280	0	208	64	200	44	288	596
1030	60	372	0	216	36	212	24	376	648
1045	96	468	0	264	68	264	52	444	828
1100	68	280	0	272	32	260	44	284	620
1115	92	360	0	256	68	256	48	336	708
1130	96	376	0	288	68	292	24	376	760
1145	80	468	0	268	84	260	36	436	816
1200	48	384	0	356	48	348	24	368	788
1215	104	420	0	324	68	324	40	416	848
1230	108	396	0	296	48	300	36	416	800
1245	64	436	0	300	52	288	40	420	800

Vernon Hills, IL Weather: Warm and Dry 09/26/16
Museum Blvd and Rind Rd 15:07:05
Saturday September 25, 2016

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 1 museum/ring/sat

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
800	29	32	6	15	89	0	0	0	0	4	81	0	256
815	32	32	9	19	98	0	0	0	0	5	89	1	285
830	42	35	7	30	112	0	0	0	0	8	101	1	336
845	42	34	10	34	120	0	0	0	0	9	112	1	362
900	52	36	10	34	132	0	0	0	0	7	134	1	406
915	54	32	8	35	169	0	0	0	0	8	152	0	458
930	60	31	9	36	194	0	0	0	0	9	168	0	507
945	56	27	5	40	245	0	0	0	0	9	187	0	569
1000	51	28	6	48	303	0	0	0	0	10	203	0	649
1015	47	29	7	49	301	0	0	0	0	12	227	1	673
1030	40	32	7	50	320	0	0	0	0	10	241	1	701
1045	47	33	8	58	313	0	0	0	0	9	260	1	729
1100	48	28	8	61	310	0	0	0	0	10	259	2	726
1115	48	24	7	66	331	0	0	0	0	9	282	1	768
1130	53	23	6	66	346	0	0	0	0	8	300	1	803
1145	53	26	6	61	356	0	0	0	0	8	302	1	813
1200	49	27	5	53	356	0	0	0	0	8	310	1	809
1215	41	24	4	41	272	0	0	0	0	5	224	1	612*
1230	25	15	3	24	184	0	0	0	0	4	144	1	400*
1245	8	7	1	12	97	0	0	0	0	3	71	1	200*

Vernon Hills, IL Weather: Warm and Dry 09/26/16
Museum Blvd and Rind Rd 15:07:05
Saturday September 25, 2016

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 1 museum/ring/sat

Begin Time	Approach Totals N	E	S	W	Exit Totals N	E	S	W	Int Total
800	67	104	0	85	15	87	36	118	256
815	73	117	0	95	20	98	37	130	285
830	84	142	0	110	31	108	43	154	336
845	86	154	0	122	35	122	43	162	362
900	98	166	0	142	35	144	43	184	406
915	94	204	0	160	35	160	40	223	458
930	100	230	0	177	36	177	40	254	507
945	88	285	0	196	40	192	36	301	569
1000	85	351	0	213	48	209	38	354	649
1015	83	350	0	240	50	234	41	348	673
1030	79	370	0	252	51	248	42	360	701
1045	88	371	0	270	59	268	42	360	729
1100	84	371	0	271	63	267	38	358	726
1115	79	397	0	292	67	289	33	379	768
1130	82	412	0	309	67	306	31	399	803
1145	85	417	0	311	62	308	34	409	813
1200	81	409	0	319	54	315	35	405	809
1215	69	313	0	230	42	228	29	313	612*
1230	43	208	0	149	25	147	19	209	400*
1245	16	109	0	75	13	72	10	105	200*

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections

Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections

Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets

HCS 2010 Two-Way Stop Control Summary Report

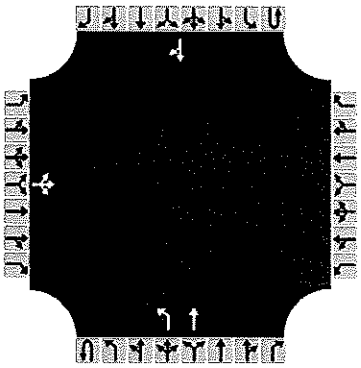
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Bay Tree
Jurisdiction	Vernon Hills
East/West Street	Bay Tree Circle
North/South Street	Museum Boulevard
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LTR							L	T					TR
Volume (veh/h)		5	0	13						2	45				55	5
Percent Heavy Vehicles		20	0	0						0						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			24							3						
Capacity			930							1531						
v/c Ratio			0.03							0.00						
95% Queue Length			0.1							0.0						
Control Delay (s/veh)			9.0							7.4						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	9.0								0.4							
Approach LOS	A															

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HCS 2010 Two-Way Stop Control Summary Report

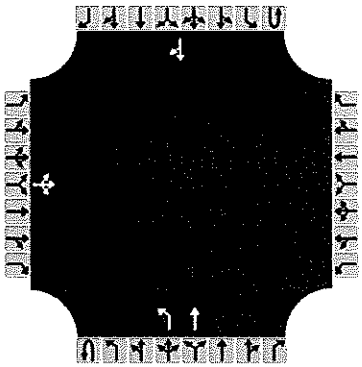
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Bay Tree
Jurisdiction	Vernon Hills
East/West Street	Bay Tree Circle
North/South Street	Museum Boulevard
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LTR							L	T					TR
Volume (veh/h)		6	0	11						16	77				32	6
Percent Heavy Vehicles		0	0	0						0						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			19							18						
Capacity			946							1579						
v/c Ratio			0.02							0.01						
95% Queue Length			0.1							0.0						
Control Delay (s/veh)			8.9							7.3						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	8.9								1.2							
Approach LOS	A															

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HCS 2010 Two-Way Stop Control Summary Report

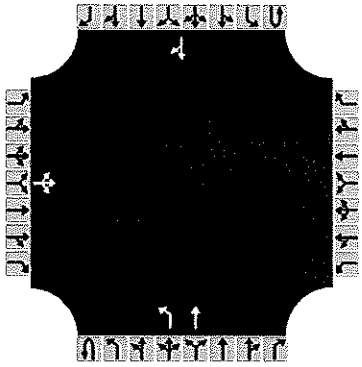
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	SAT Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Bay Tree
Jurisdiction	Vernon Hills
East/West Street	Bay Tree Circle
North/South Street	Museum Boulevard
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LTR							L	T					TR
Volume (veh/h)		3	0	16						9	39				48	2
Percent Heavy Vehicles		0	0	0						0						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			21							10						
Capacity			996							1563						
v/c Ratio			0.02							0.01						
95% Queue Length			0.1							0.0						
Control Delay (s/veh)			8.7							7.3						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	8.7								1.4							
Approach LOS	A															

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HCS 2010 Two-Way Stop Control Summary Report

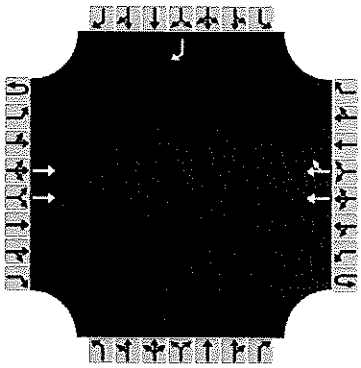
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	16-072

Site Information

Intersection	Museum with Ring
Jurisdiction	Vernon Hills
East/West Street	Ring Drive
North/South Street	Museum Boulevard
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			204				217	59								94
Percent Heavy Vehicles																1
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)																125
Capacity																830
v/c Ratio																0.15
95% Queue Length																0.5
Control Delay (s/veh)																10.1
Level of Service (LOS)																B
Approach Delay (s/veh)													10.1			
Approach LOS													B			

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HCS 2010 Two-Way Stop Control Summary Report

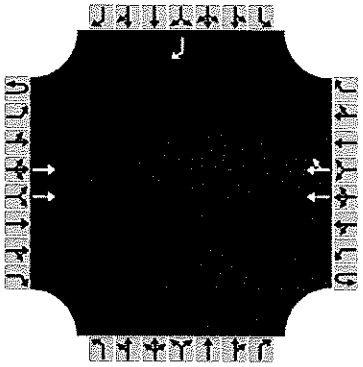
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	16-072

Site Information

Intersection	Museum with Ring
Jurisdiction	Vernon Hills
East/West Street	Ring Drive
North/South Street	Museum Boulevard
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			275				228	146								60
Percent Heavy Vehicles																0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)																64
Capacity																815
v/c Ratio																0.08
95% Queue Length																0.3
Control Delay (s/veh)																9.8
Level of Service (LOS)																A
Approach Delay (s/veh)													9.8			
Approach LOS													A			

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HCS 2010 Two-Way Stop Control Summary Report

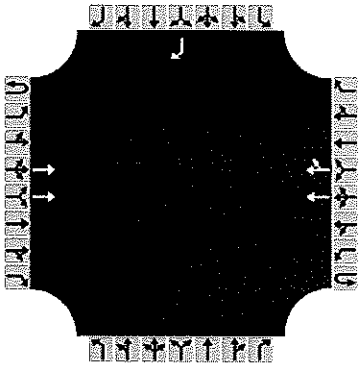
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	SAT Peak Hour
Intersection Orientation	East-West
Project Description	16-072

Site Information

Intersection	Museum with Ring
Jurisdiction	Vernon Hills
East/West Street	Ring Drive
North/South Street	Museum Boulevard
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			311				356	61								85
Percent Heavy Vehicles																2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)																89
Capacity																786
v/c Ratio																0.11
95% Queue Length																0.4
Control Delay (s/veh)																10.2
Level of Service (LOS)																B
Approach Delay (s/veh)													10.2			
Approach LOS													B			

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HCS 2010 Two-Way Stop Control Summary Report

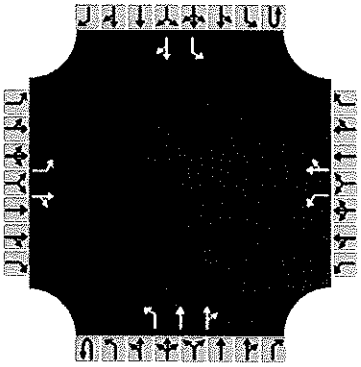
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Lakeview
Jurisdiction	Vernon Hills
East/West Street	Lakeview Parkway
North/South Street	Museum Boulevard
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		1	1	0	0	1	2	0	0	1	1	0
Configuration		L		TR		L		TR		L	T	TR		L		TR
Volume (veh/h)		10	3	8		20	3	60		5	226	20		44	433	3
Percent Heavy Vehicles		0	0	0		0	0	0		20				0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		13		15		27		84		7				59		
Capacity		215		381		175		756		875				1243		
v/c Ratio		0.06		0.04		0.15		0.11		0.01				0.05		
95% Queue Length		0.2		0.1		0.5		0.4		0.0				0.1		
Control Delay (s/veh)		22.8		14.8		29.2		10.4		9.1				8.0		
Level of Service (LOS)		C		B		D		B		A				A		
Approach Delay (s/veh)	18.5				15.0				0.2				0.7			
Approach LOS	C				B											

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HCS 2010 Two-Way Stop Control Summary Report

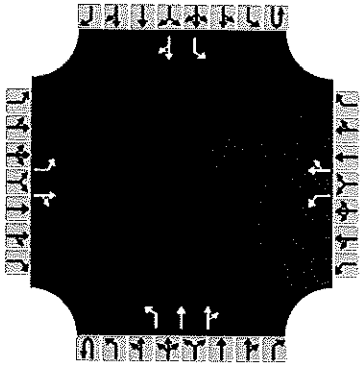
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Lakeview
Jurisdiction	Vernon Hills
East/West Street	Lakeview Parkway
North/South Street	Museum Boulevard
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		1	1	0	0	1	2	0	0	1	1	0
Configuration		L		TR		L		TR		L	T	TR		L		TR
Volume (veh/h)		6	2	4		23	7	70		5	507	50		42	289	21
Percent Heavy Vehicles		17	0	0		0	0	0		0				0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		7		7		28		95		6				52		
Capacity		199		381		147		531		1187				916		
v/c Ratio		0.04		0.02		0.19		0.18		0.01				0.06		
95% Queue Length		0.1		0.1		0.7		0.6		0.0				0.2		
Control Delay (s/veh)		23.7		14.6		35.2		13.3		8.0				9.2		
Level of Service (LOS)		C		B		E		B		A				A		
Approach Delay (s/veh)	19.2				18.2				0.1				1.1			
Approach LOS	C				C											

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HCS 2010 Two-Way Stop Control Summary Report

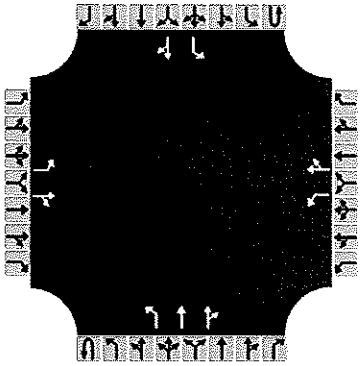
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2016
Time Analyzed	SAT Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Lakeview
Jurisdiction	Vernon Hills
East/West Street	Lakeview Parkway
North/South Street	Museum Boulevard
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		1	1	0	0	1	2	0	0	1	1	0
Configuration		L		TR		L		TR		L	T	TR		L		TR
Volume (veh/h)		9	4	11		16	2	46		5	319	32		42	291	8
Percent Heavy Vehicles		0	0	0		6	0	0		0				0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		10		16		18		53		5				46		
Capacity		350		536		252		773		1242				1184		
v/c Ratio		0.03		0.03		0.07		0.07		0.00				0.04		
95% Queue Length		0.1		0.1		0.2		0.2		0.0				0.1		
Control Delay (s/veh)		15.6		11.9		20.4		10.0		7.9				8.2		
Level of Service (LOS)		C		B		C		A		A				A		
Approach Delay (s/veh)	13.3				12.6				0.1				1.0			
Approach LOS	B				B											

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HCS 2010 Two-Way Stop Control Summary Report

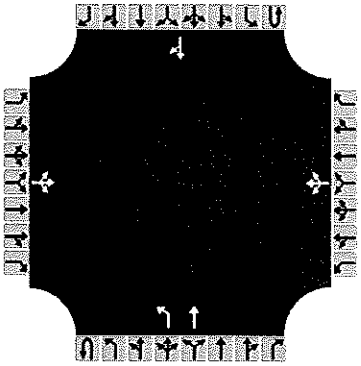
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Bay Tree
Jurisdiction	Vernon Hills
East/West Street	Bay Tree Circle
North/South Street	Museum Boulevard
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	0	0	0	1	0
Configuration			LTR				LTR			L	T					TR
Volume (veh/h)		5	0	13		14	0	6		2	46				56	5
Percent Heavy Vehicles		20	0	0		0	0	0		0						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			24				27			3						
Capacity			913				854			1528						
v/c Ratio			0.03				0.03			0.00						
95% Queue Length			0.1				0.1			0.0						
Control Delay (s/veh)			9.0				9.4			7.4						
Level of Service (LOS)			A				A			A						
Approach Delay (s/veh)	9.0				9.4				0.3							
Approach LOS	A				A											

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HCS 2010 Two-Way Stop Control Summary Report

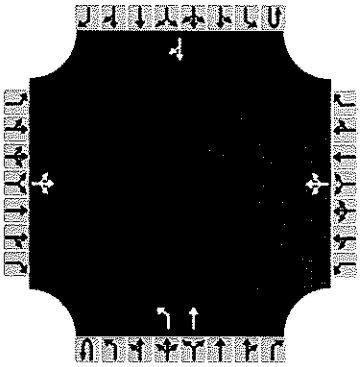
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Bay Tree
Jurisdiction	Vernon Hills
East/West Street	Bay Tree Circle
North/South Street	Museum Boulevard
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	0	0	0	1	0
Configuration			LTR				LTR			L	T					TR
Volume (veh/h)		6	0	11		14	0	6		16	78				32	6
Percent Heavy Vehicles		0	0	0		0	0	0		0						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			19				23			18						
Capacity			929				832			1579						
v/c Ratio			0.02				0.03			0.01						
95% Queue Length			0.1				0.1			0.0						
Control Delay (s/veh)			9.0				9.4			7.3						
Level of Service (LOS)			A				A			A						
Approach Delay (s/veh)	9.0				9.4				1.2							
Approach LOS	A				A											

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HCS 2010 Two-Way Stop Control Summary Report

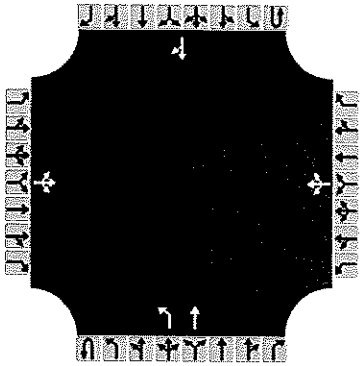
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	SAT Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Bay Tree
Jurisdiction	Vernon Hills
East/West Street	Bay Tree Circle
North/South Street	Museum Boulevard
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	0	0	0	1	0
Configuration			LTR				LTR			L	T					TR
Volume (veh/h)		3	0	16		16	0	7		9	39				49	2
Percent Heavy Vehicles		0	0	0		0	0	0		0						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			21				26			10						
Capacity			989				885			1562						
v/c Ratio			0.02				0.03			0.01						
95% Queue Length			0.1				0.1			0.0						
Control Delay (s/veh)			8.7				9.2			7.3						
Level of Service (LOS)			A				A			A						
Approach Delay (s/veh)	8.7				9.2				1.4							
Approach LOS	A				A											

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HCS 2010 Two-Way Stop Control Summary Report

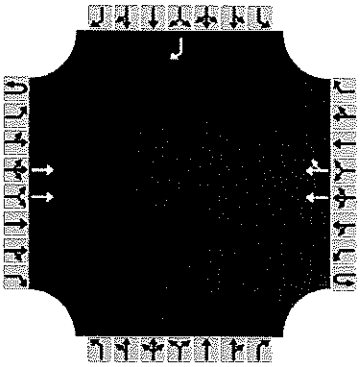
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	16-072

Site Information

Intersection	Museum with Ring
Jurisdiction	Vernon Hills
East/West Street	Ring Drive
North/South Street	Museum Boulevard
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			206				220	60								110
Percent Heavy Vehicles																1
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)																147
Capacity																828
v/c Ratio																0.18
95% Queue Length																0.6
Control Delay (s/veh)																10.3
Level of Service (LOS)																B
Approach Delay (s/veh)													10.3			
Approach LOS													B			

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HCS 2010 Two-Way Stop Control Summary Report

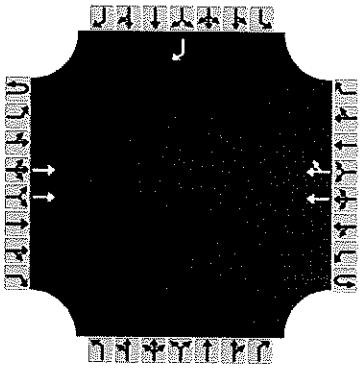
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	16-072

Site Information

Intersection	Museum with Ring
Jurisdiction	Vernon Hills
East/West Street	Ring Drive
North/South Street	Museum Boulevard
Peak Hour Factor	0.94
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			278				231	148								75
Percent Heavy Vehicles																0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)																80
Capacity																812
v/c Ratio																0.10
95% Queue Length																0.3
Control Delay (s/veh)																9.9
Level of Service (LOS)																A
Approach Delay (s/veh)													9.9			
Approach LOS													A			

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HCS 2010 Two-Way Stop Control Summary Report

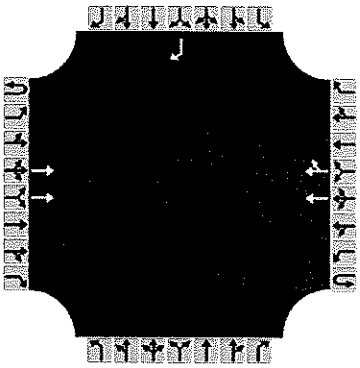
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	SAT Peak Hour
Intersection Orientation	East-West
Project Description	16-072

Site Information

Intersection	Museum with Ring
Jurisdiction	Vernon Hills
East/West Street	Ring Drive
North/South Street	Museum Boulevard
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			314				360	62								102
Percent Heavy Vehicles																2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)																106
Capacity																784
v/c Ratio																0.14
95% Queue Length																0.5
Control Delay (s/veh)																10.3
Level of Service (LOS)																B
Approach Delay (s/veh)													10.3			
Approach LOS													B			

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HCS 2010 Two-Way Stop Control Summary Report

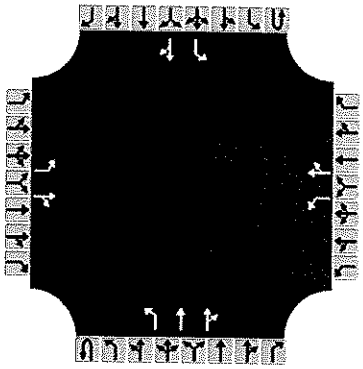
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Lakeview
Jurisdiction	Vernon Hills
East/West Street	Lakeview Parkway
North/South Street	Museum Boulevard
Peak Hour Factor	0.75
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		1	1	0	0	1	2	0	0	1	1	0
Configuration		L		TR		L		TR		L	T	TR		L		TR
Volume (veh/h)		10	3	8		20	3	67		5	229	20		45	438	3
Percent Heavy Vehicles		0	0	0		0	0	0		20				0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		13		15		27		93		7				60		
Capacity		209		375		171		761		870				1239		
v/c Ratio		0.06		0.04		0.16		0.12		0.01				0.05		
95% Queue Length		0.2		0.1		0.5		0.4		0.0				0.2		
Control Delay (s/veh)		23.4		15.0		29.9		10.4		9.2				8.1		
Level of Service (LOS)		C		B		D		B		A				A		
Approach Delay (s/veh)	18.9				14.8				0.2				0.7			
Approach LOS	C				B											

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HCS 2010 Two-Way Stop Control Summary Report

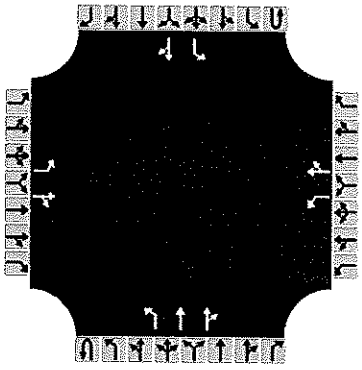
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Lakeview
Jurisdiction	Vernon Hills
East/West Street	Lakeview Parkway
North/South Street	Museum Boulevard
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		1	1	0	0	1	2	0	0	1	1	0
Configuration		L		TR		L		TR		L	T	TR		L		TR
Volume (veh/h)		6	2	4		23	7	77		5	513	51		43	292	21
Percent Heavy Vehicles		17	0	0		0	0	0		0				0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		7		7		28		104		6				53		
Capacity		193		376		144		535		1184				909		
v/c Ratio		0.04		0.02		0.19		0.19		0.01				0.06		
95% Queue Length		0.1		0.1		0.7		0.7		0.0				0.2		
Control Delay (s/veh)		24.4		14.8		36.0		13.4		8.1				9.2		
Level of Service (LOS)		C		B		E		B		A				A		
Approach Delay (s/veh)	19.6				18.2				0.1				1.1			
Approach LOS	C				C											

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HCS 2010 Two-Way Stop Control Summary Report

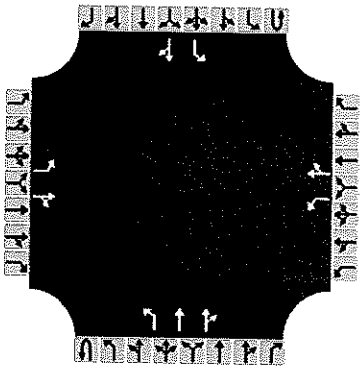
General Information

Analyst	BSM
Agency/Co.	KLOA, Inc.
Date Performed	10/6/2016
Analysis Year	2022
Time Analyzed	SAT Peak Hour
Intersection Orientation	North-South
Project Description	16-072

Site Information

Intersection	Museum with Lakeview
Jurisdiction	Vernon Hills
East/West Street	Lakeview Parkway
North/South Street	Museum Boulevard
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		1	1	0	0	1	2	0	0	1	1	0
Configuration		L		TR		L		TR		L	T	TR		L		TR
Volume (veh/h)		9	4	11		16	2	54		5	323	32		43	295	8
Percent Heavy Vehicles		0	0	0		6	0	0		0				0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		10		16		18		61		5				47		
Capacity		341		531		248		776		1238				1180		
v/c Ratio		0.03		0.03		0.07		0.08		0.00				0.04		
95% Queue Length		0.1		0.1		0.2		0.3		0.0				0.1		
Control Delay (s/veh)		15.9		12.0		20.7		10.0		7.9				8.2		
Level of Service (LOS)		C		B		C		B		A				A		
Approach Delay (s/veh)	13.5				12.5				0.1				1.0			
Approach LOS	B				B											

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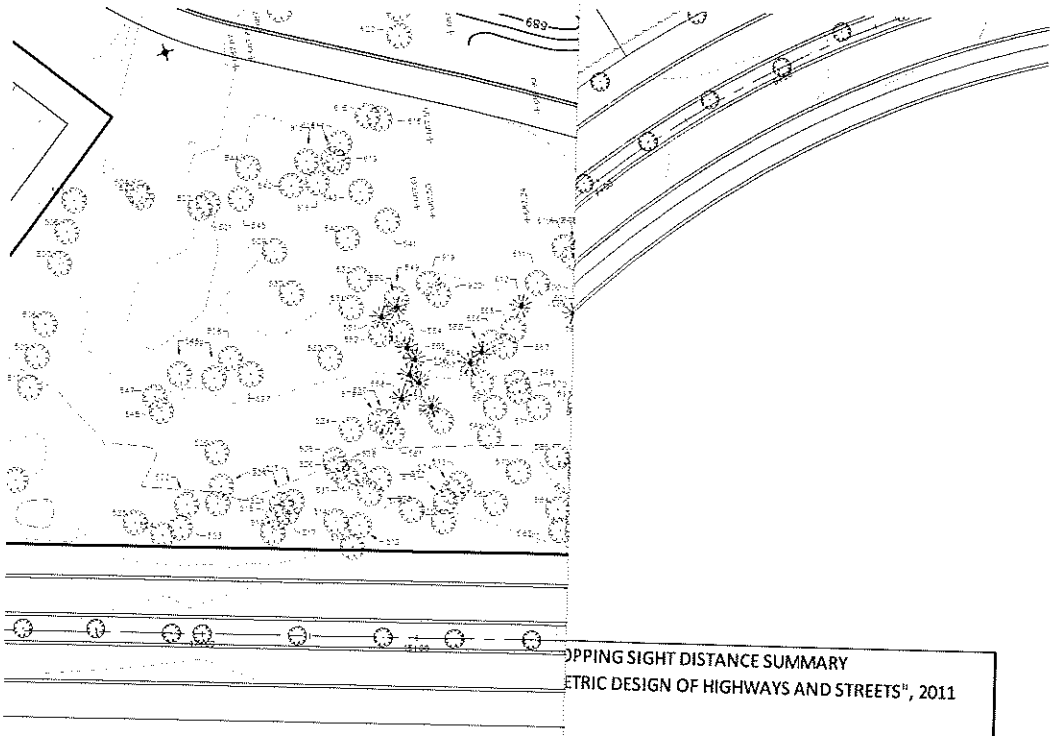
Sight Distance Exhibit



OPPING SIGHT DISTANCE SUMMARY
ETRIC DESIGN OF HIGHWAYS AND STREETS", 2011

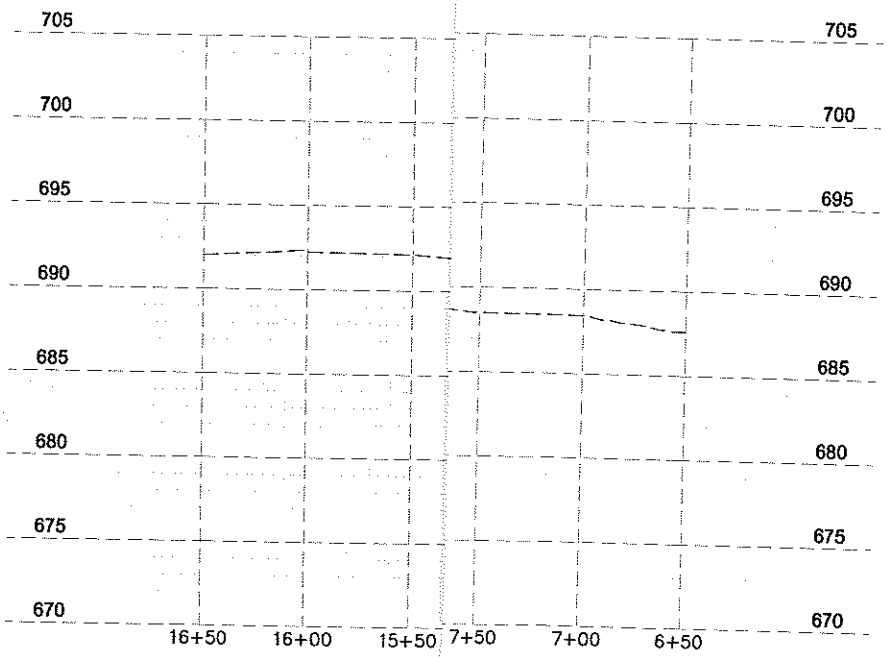
		30	MPH
		35	MPH
		3.5	FT.
		3.5	FT.
EFT	REQUIRED:	250	FT.
IGHT	REQUIRED:	250	FT.

NOTES:

1. SIGHT LINES DEPICTED ON THIS EXHIBIT ASSUME TREES AND VEGETATION WITHIN THE SIGHT TRIANGLE ON THE CUNEO PROPERTY WILL BE REMOVED.
2. EXISTING TREES AND TREE LINE ARE BASED UPON SITE CONDITIONS AS OF SEPTEMBER 28, 2016.
3. THE LOCATION OF THE EXISTING TREE LINE OUTSIDE OF THE CUNEO PROPERTY IS APPROXIMATE AND SUBJECT TO FIELD VERIFICATION.

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.



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Construction Managers • Environmental Scientists • Landscape Architects • Planners

DRAWN BY | REVISIONS | DATE

THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS, ILLINOIS
STOPPING SIGHT DISTANCE EXHIBIT - MUSEUM BOULEVARD

PROJ MGR:	WJH
PROJ ASSOC:	CAS
DRAWN BY:	CAS
DATE:	9-29-16
SCALE:	1"=40'

SHEET 1 OF 1
PULVH

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ORDINANCE 2017-014 Exhibit B3 Index of Residences at Cuneo Mansion and Gardens prepared by Pulte Homes with a received date of October 10, 2016 and consisting of 33 pages

architecture

Pulte® Homes

Index of

The Residences at Cuneo Mansion and Gardens

a new community from Pulte Homes

in the village of Vernon Hills

RECEIVED

OCT 10 2016

Community Development Department

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Strasbourg European Cottage page 8

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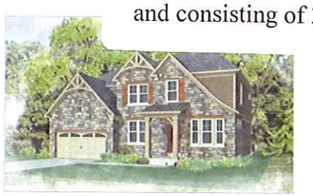

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Belfort European Cottage

Illustrative Renderings

The Residences at Cuneo Mansion and Gardens

a new community from Pulte Homes in the village of Vernon Hills

Material List:

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Siding - L.P. smart siding

Roof -30 year dimensional architectural shingle

Trim boards - L.P. smart trim

Soffit - L.P. smart soffit

Doors
Entry - Masonite fiberglass per elevation
Garage - Clopay steel per elevation

architecture

Front (standard)

Front Right (standard)

Rear (standard)

Front Left (standard)

Front (key lot)

Front Right (key lot)

Rear (key lot)

Front Left (key lot)

July 27, 2016

Belfort American Cottage

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Belfort Craftsman

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July 27, 2016

Lyon European Cottage

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Lyon American Cottage

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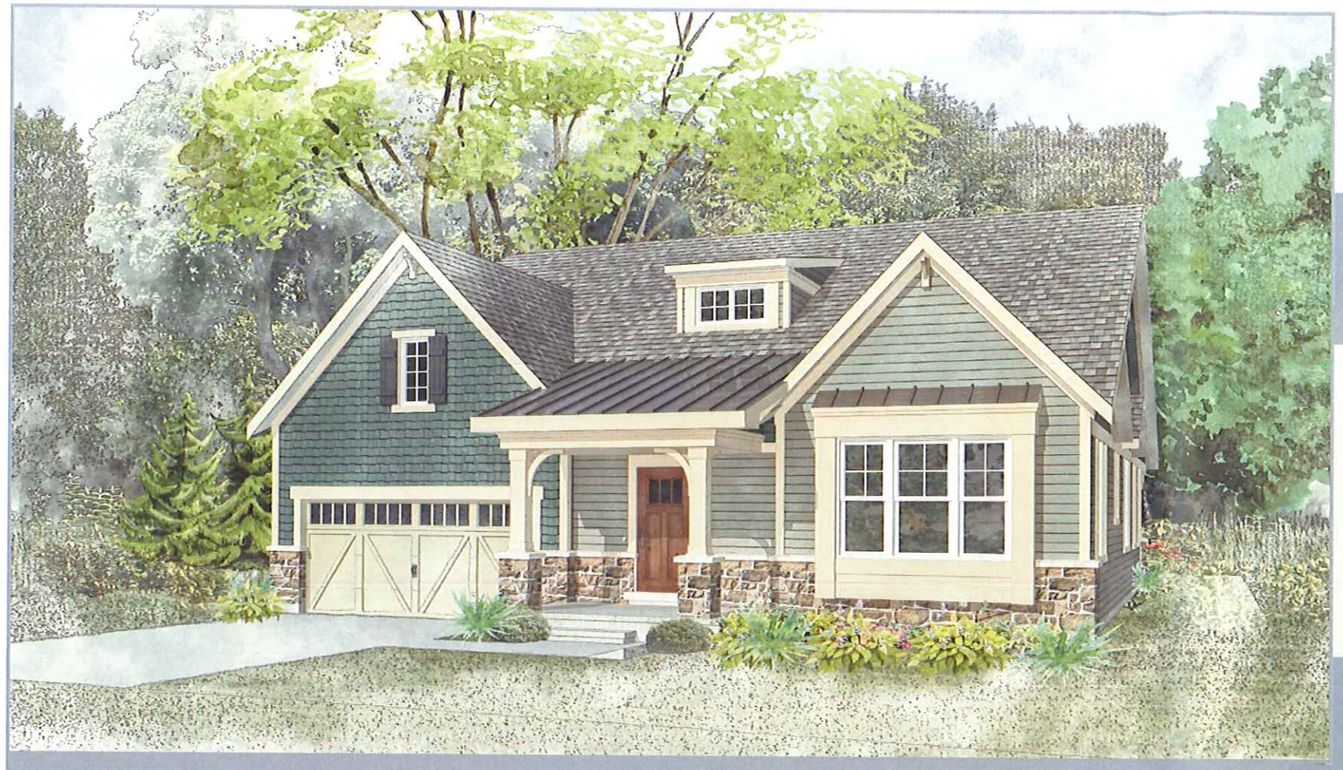

Front (standard)

Pulte Homes

Front Right (standard)

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Front Left (standard)

Front (key lot)

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July 27, 2016

Lyon Craftsman

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Strasbourg European Cottage

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Strasbourg American Cottage

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Bourges European Cottage

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Bridgeview European Cottage

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Bridgeview Craftsman

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July 27, 2016

MapleValley European Cottage

Illustrative Renderings

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MapleValley American Cottage

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MapleValley Craftsman

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July 27, 2016

Melrose European Cottage

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July 27, 2016

Melrose American Cottage

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July 27, 2016

Melrose Craftsman

Illustrative Renderings

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architecture

Front (standard)

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Front (key lot)

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Vanderbilt Northern Craftsman

Illustrative Renderings

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Front (standard)

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Vanderbilt American Cottage

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Vanderbilt Craftsman

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July 27, 2016

Willwood Northern Craftsman

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Willwood American Cottage

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Woodside Northern Craftsman

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The Residences at Cuneo Mansion and Gardens

a new community from Pulte Homes in the village of Vernon Hills

Street View 001

The Residences at Cuneo Mansion and Gardens

a new community from Pulte Homes in the village of Vernon Hills

Street View 002

ORDINANCE 2017-014 Exhibit B4 Supplemental to Index of Residences at Cuneo Mansion and Gardens prepared by Pulte Homes with a date of January 3, 2017 and consisting of 4 pages

architecture

Pulte® Homes

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a new community from Pulte Homes

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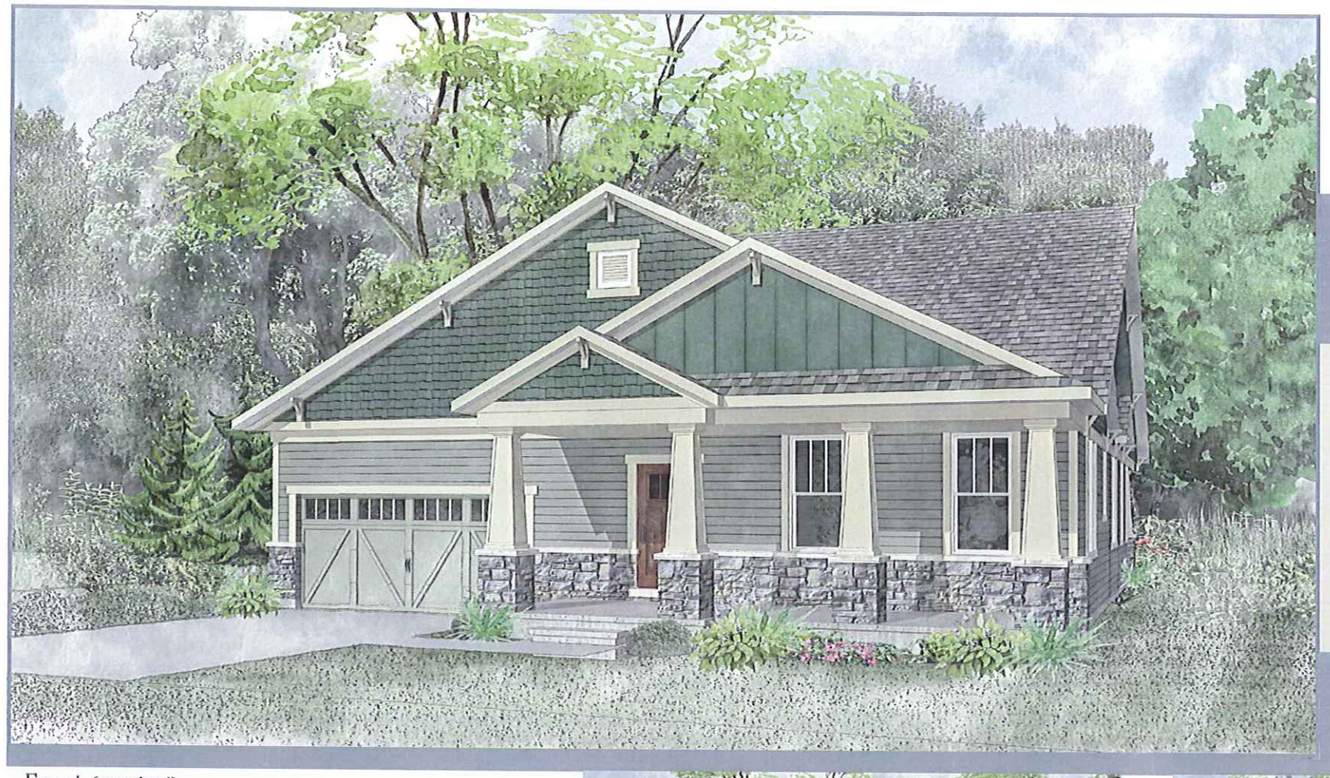

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Rear (standard)

Front Left (standard)

Front (key lot)

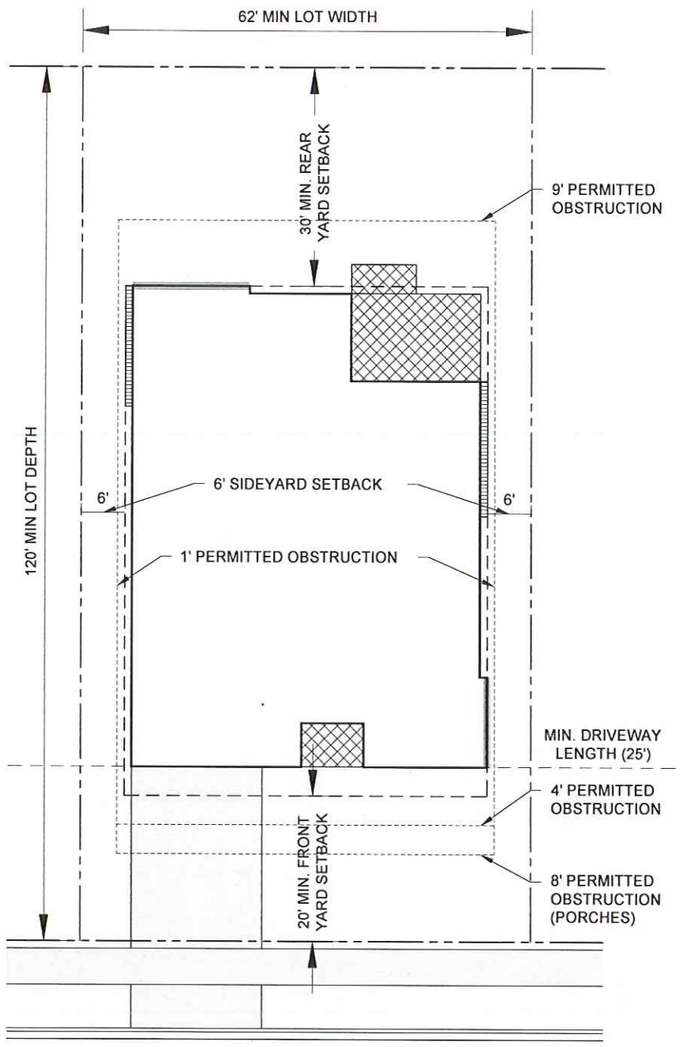
Front Right (key lot)

Rear (key lot)

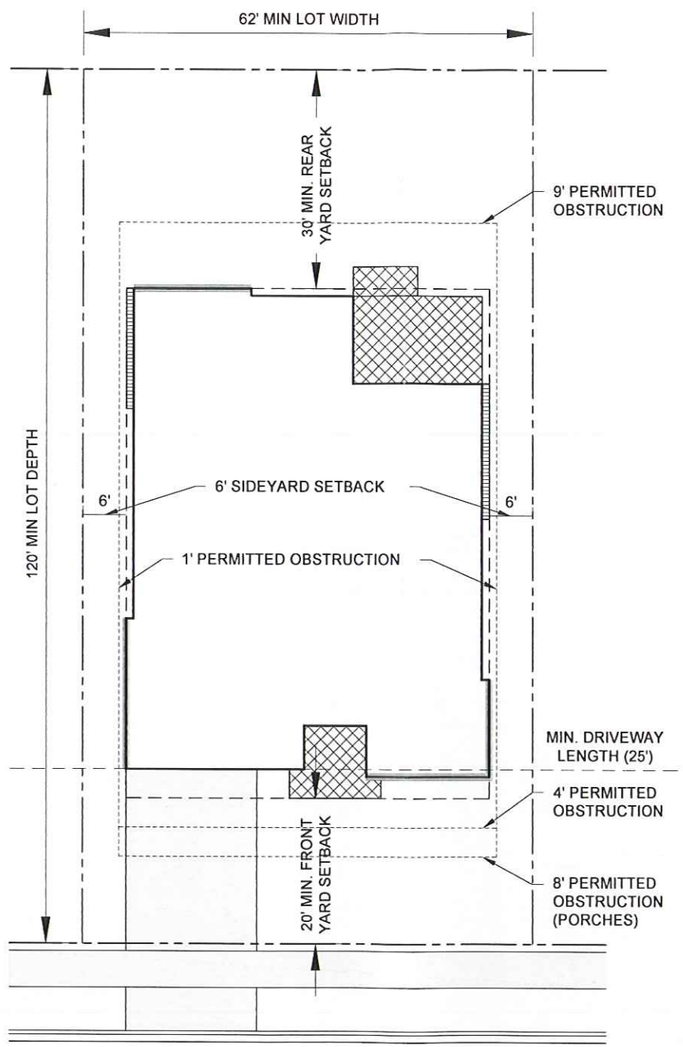
Front Left (key lot)

ORDINANCE 2017-014 Exhibit B5 TCG-9 Lot Fit Study – Belfort prepared by WBK Engineering with a date of 9/30/2016 consisting of 4 pages

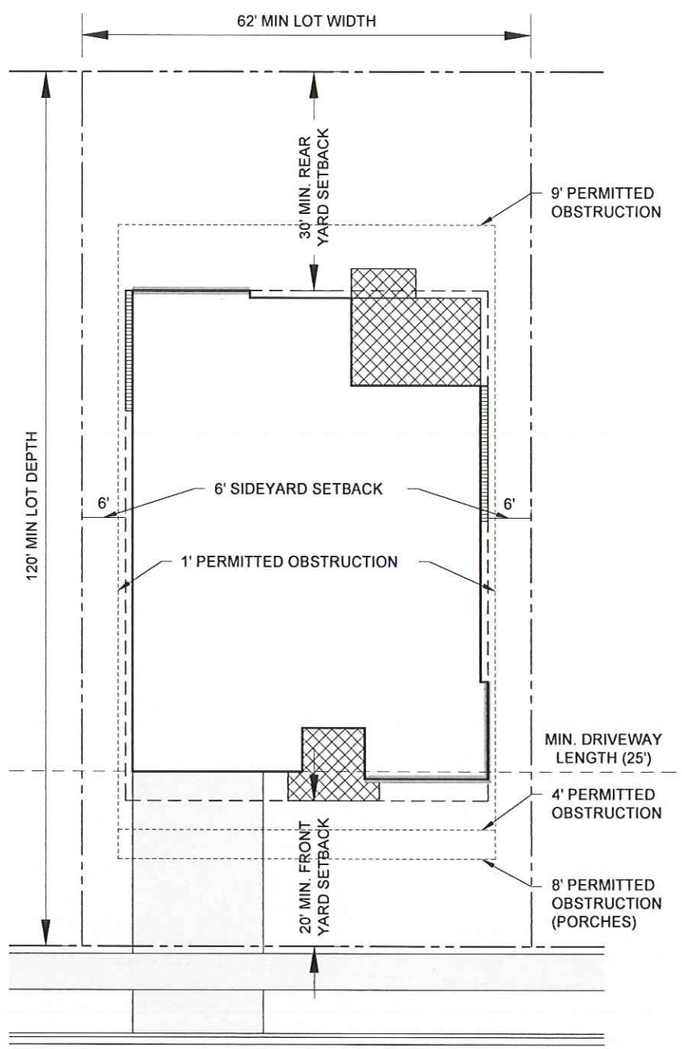
BELFORT
EUROPEAN COTTAGE



BELFORT
AMERICAN COTTAGE



BELFORT
CRAFTSMA



RECEIVED
OCT 10 2016
Community Development Department

PROJECTION TYPE
- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION AND GARDENS
TCG-9 LOT FIT STUDY - BELFORT

DSGN: WBK
DWN: AJR
CHKD: CMH
SCALE: 1" = 30'
EX13191-TCG9 FIT DWG

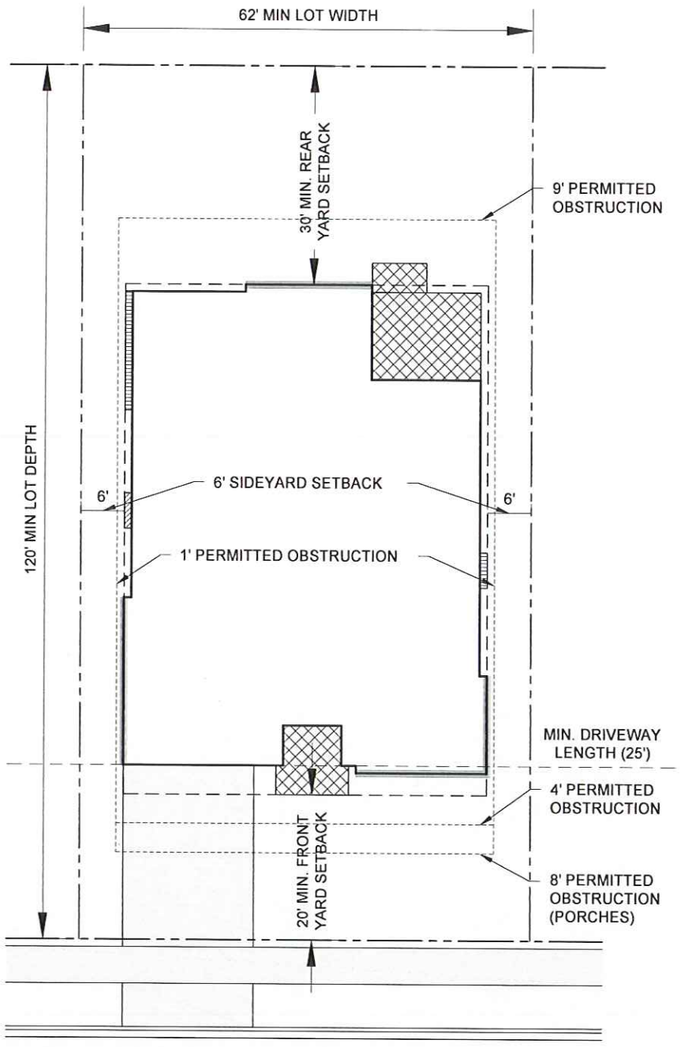
NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

WBK engineering
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755

PROJECT NO. 13-0191
DATE : 09/30/2016
DRAWING NO.
SHEET:
1 OF 4

LYON
EUROPEAN COTTAGE



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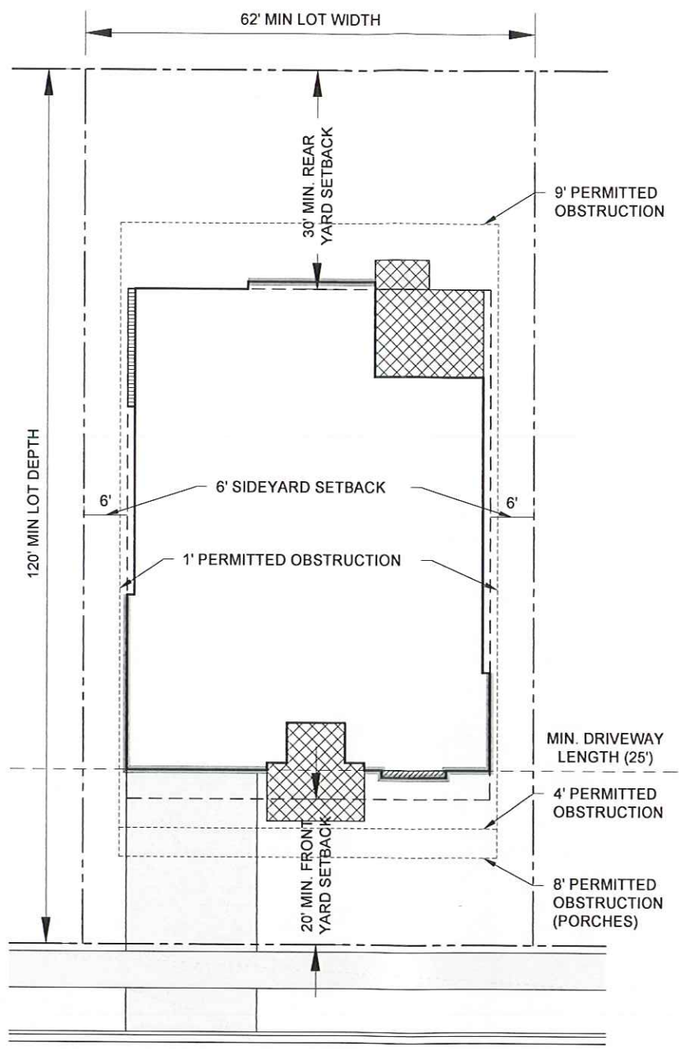
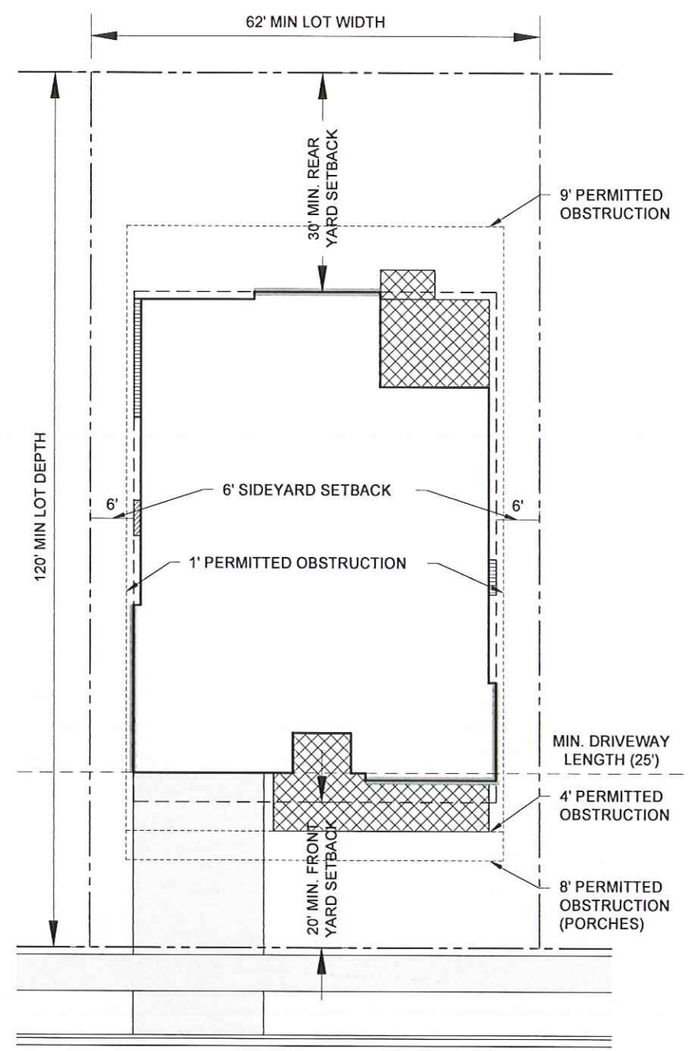
AMERICAN COTTAGE



LYON
CRAFTSMAN



PROJECTION TYPE

- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION AND GARDENS

TCG-9 LOT FIT STUDY - LYON

DSGN	WBK
DWN	AJR
CHKD	CMH
SCALE: 1" = 30'	
EX13191-TCG9 FIT.DWG	

NO	DATE	NATURE OF REVISION

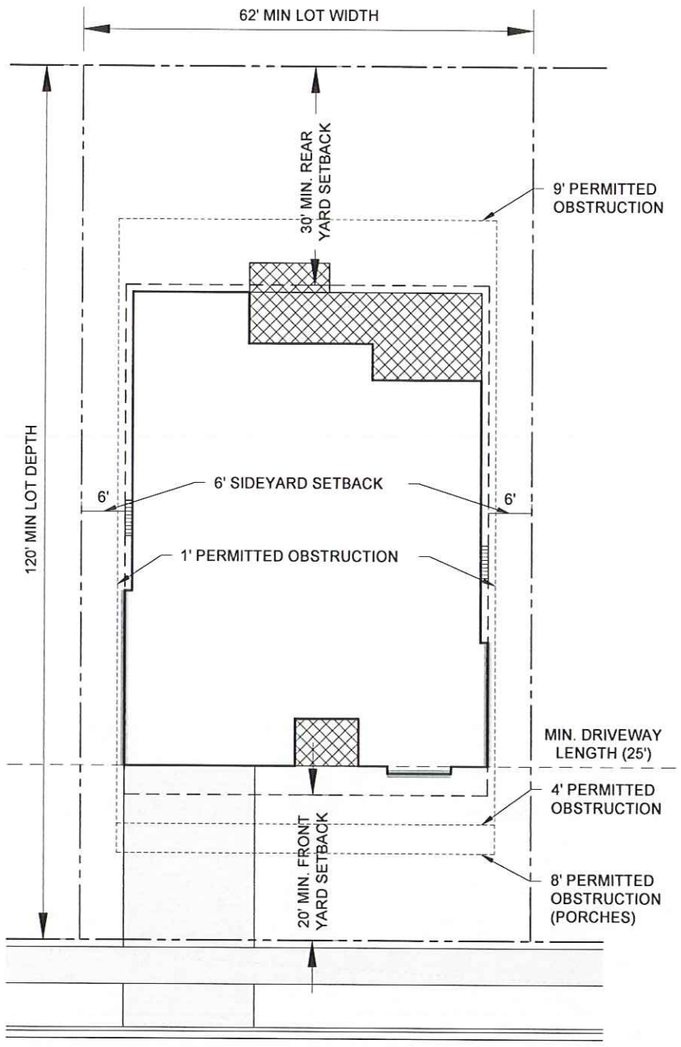
CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755

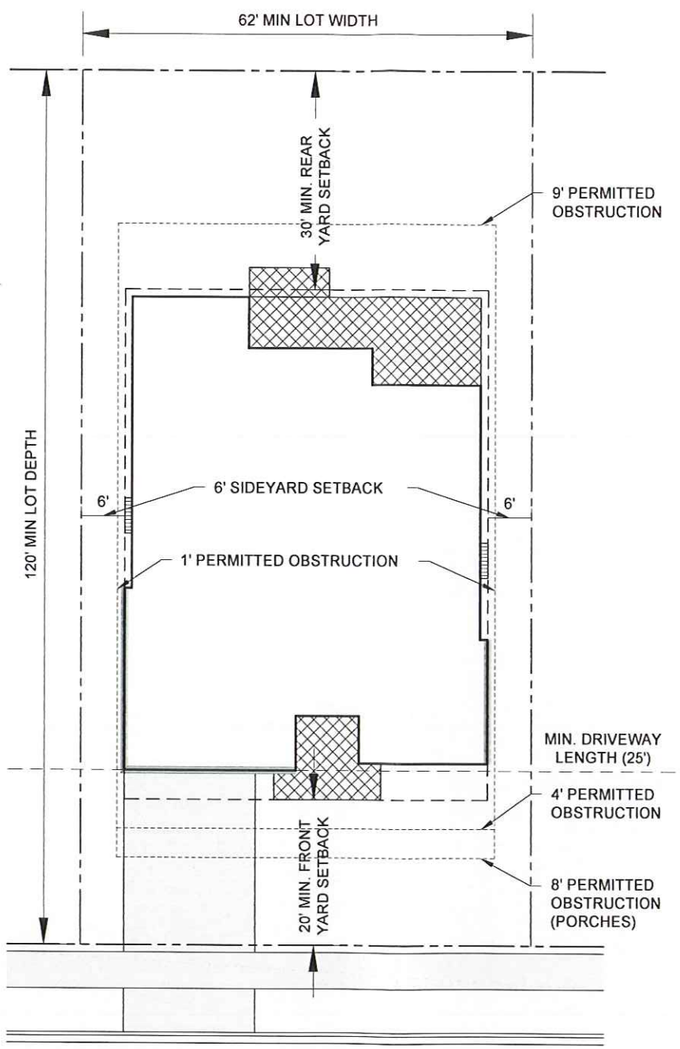
WBK engineering

PROJECT NO. 13-0191
DATE: 09/30/2016
DRAWING NO.
SHEET:
2 OF 4

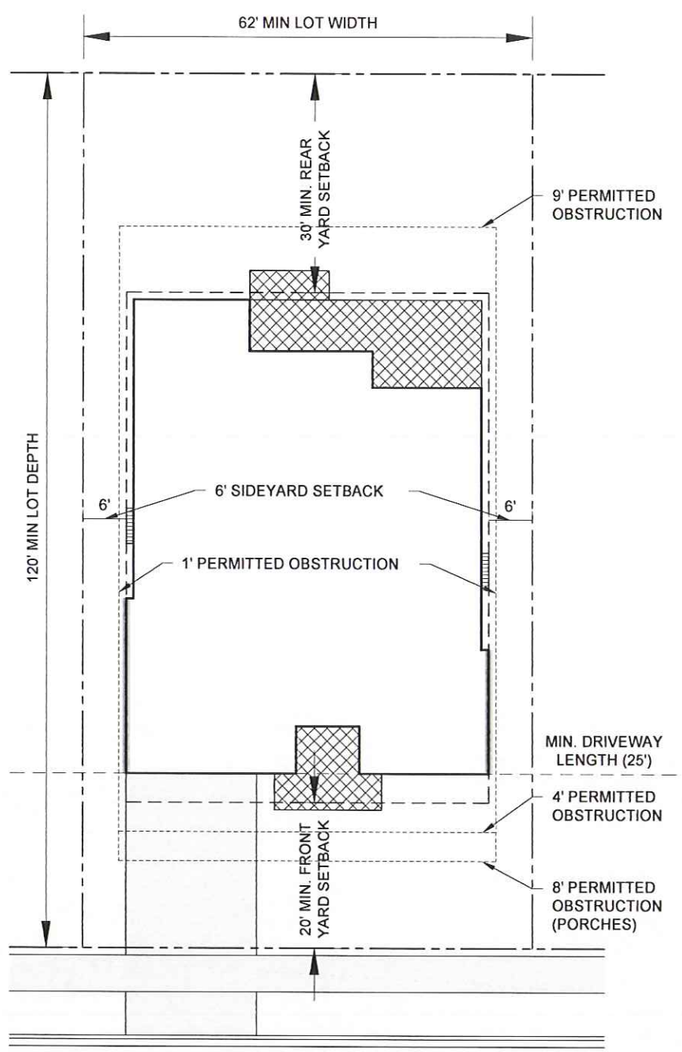
STRASBOURG
EUROPEAN COTTAGE



STRASBOURG
AMERICAN COTTAGE



STRASBOURG
CRAFTSMAN



PROJECTION TYPE

- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION AND GARDENS

TCG-9 LOT FIT STUDY - STRASBOURG

DSGN.	WBK
DWN	AJR
CHKD.	CMH
SCALE: 1" = 30'	
	EX130191-TCG9 FIT.DWG

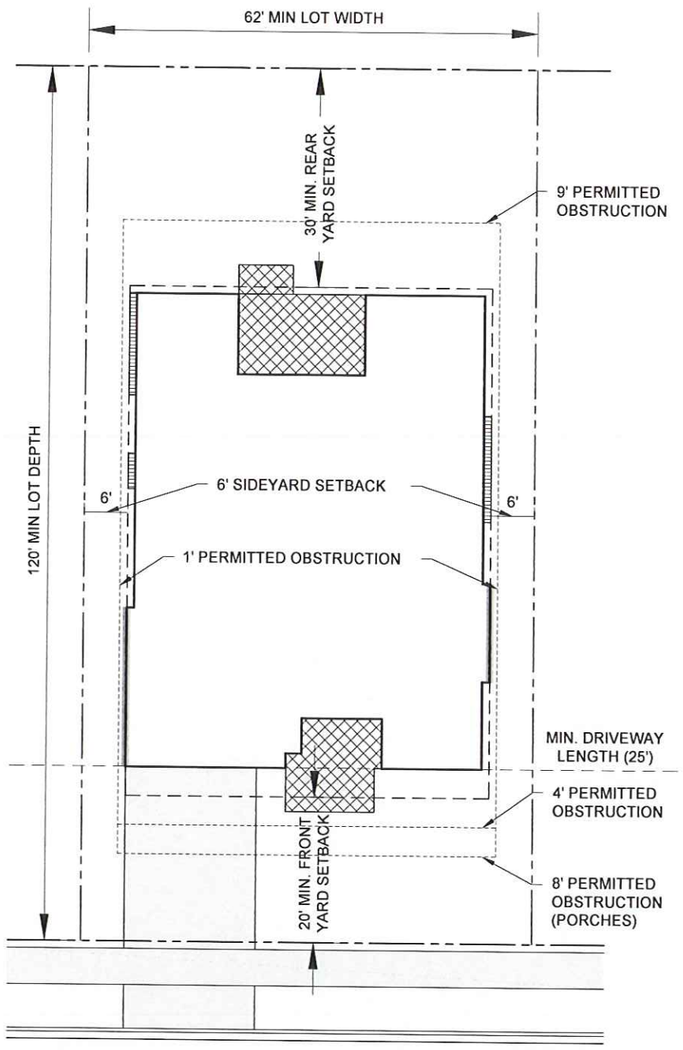
NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

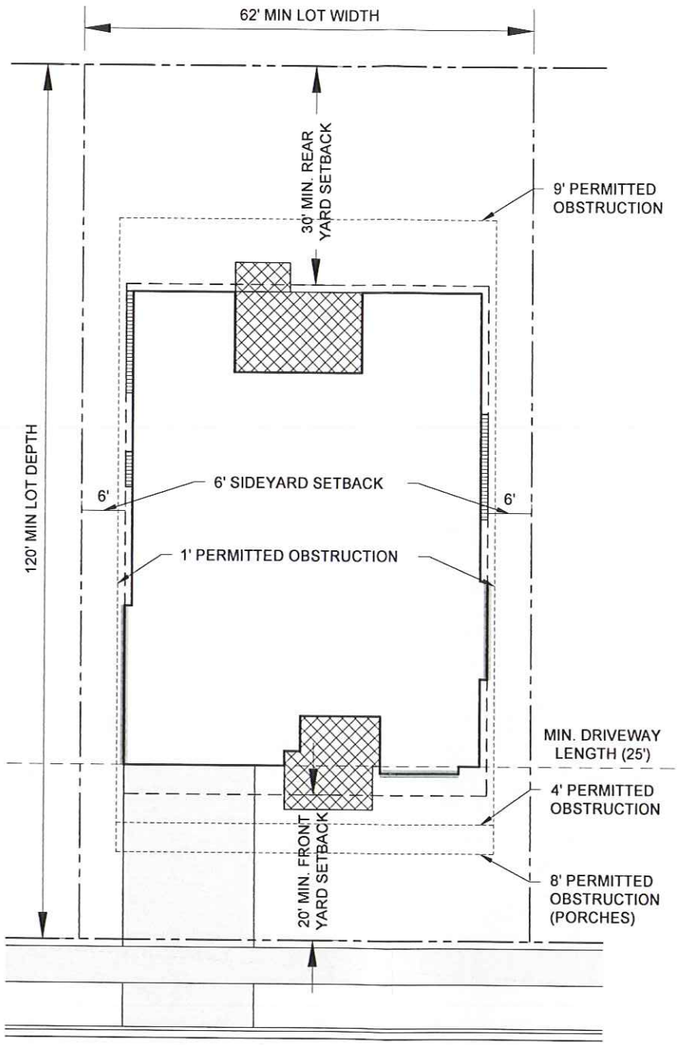
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE : 09/30/2016
DRAWING NO.
SHEET:
3 OF 4

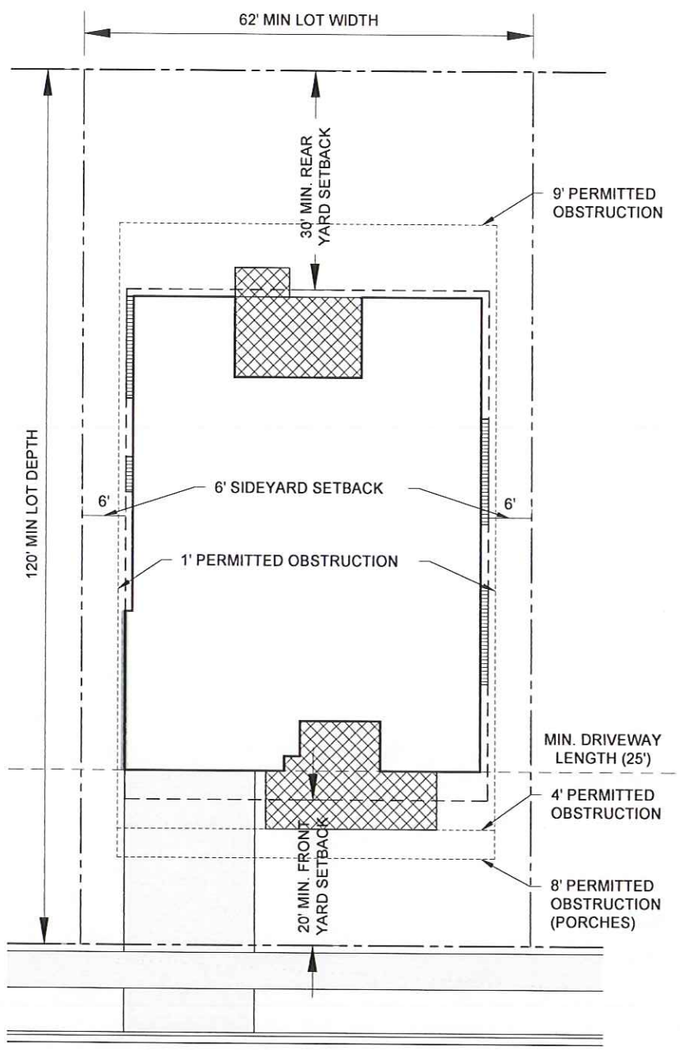
BOURGES
EUROPEAN COTTAGE



BOURGES
AMERICAN COTTAGE



BOURGES
CRAFTSMAN



PROJECTION TYPE

- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION AND GARDENS

TCG-9 LOT FIT STUDY - BOURGES

DSGN	WBK
DWN.	AJR
CHKD.	CMH
SCALE	1" = 10'
	EX130191-TCG9 FIT DWG

NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

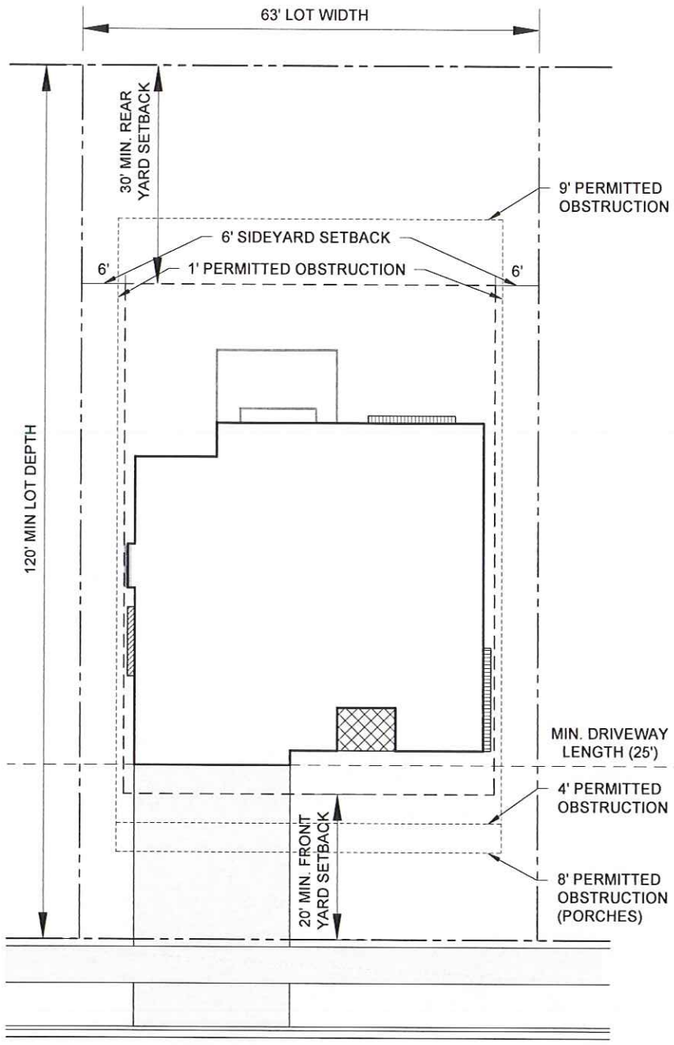
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755

WBK engineering

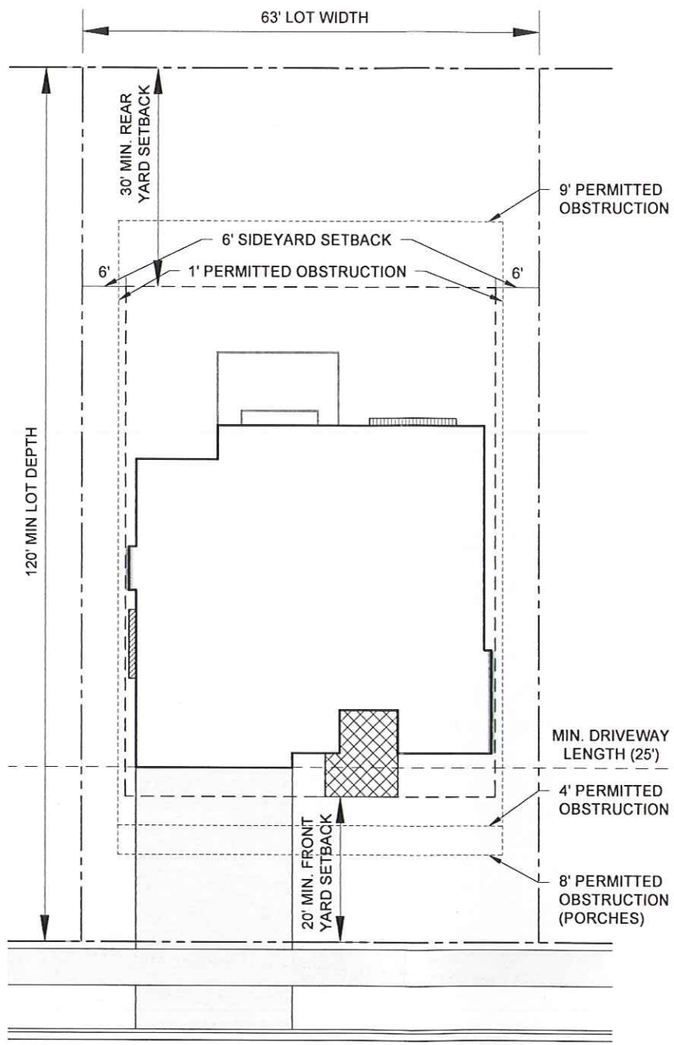
PROJECT NO. 13-0191
DATE : 09/30/2016
DRAWING NO.
SHEET:
4 OF 4

ORDINANCE 2017-014 Exhibit B6 TCG-9 Lot Fit Study – Maple Valley prepared by WBK Engineering with a date of 9/30/2016 consisting of 6 pages

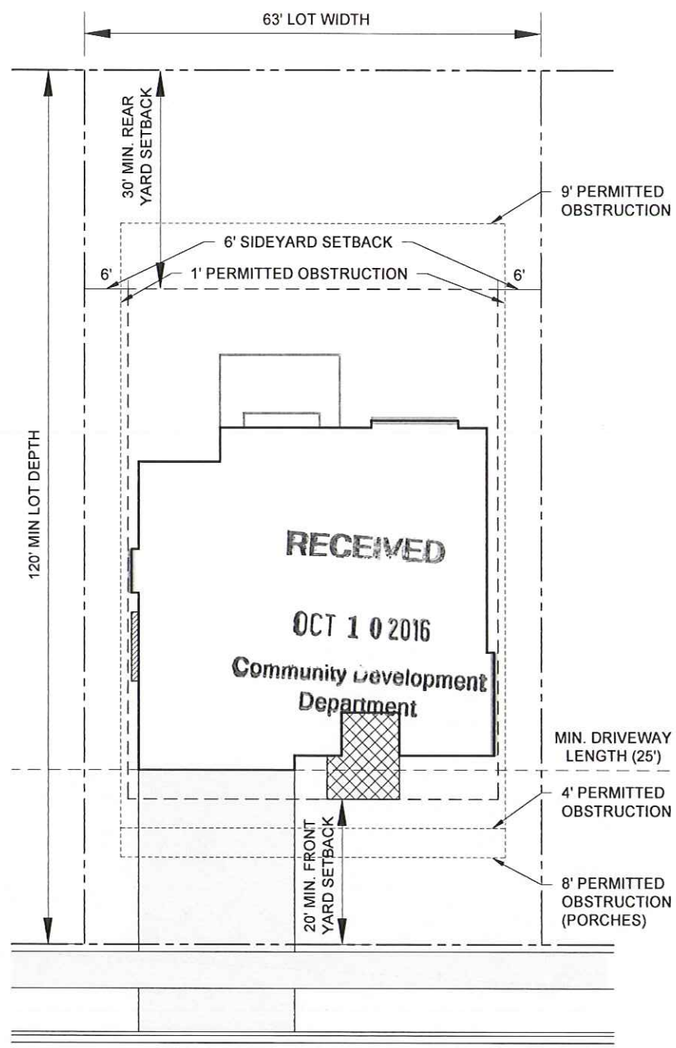
MAPLEVALLEY
EUROPEAN COTTAGE



MAPLEVALLEY
AMERICAN COTTAGE



MAPLEVALL
CRAFTSMAN



RECEIVED
OCT 10 2016
Community Development Department

PROJECTION TYPE

- STRUCTURAL OPTIONS (INCLUDING SUNROOM, CAFE BAY, GATHERING ROOM, GARAGE EXTENSION)
- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES A MANSION AND GARDENS

TCG-5 LOT FIT STUDY - MAPLEVALLEY

DSGN.	WBK
DWN	AJR
CHKD	CMH
SCALE: 1" = 10'	
EX130191-TCG5 FIT.DWG	

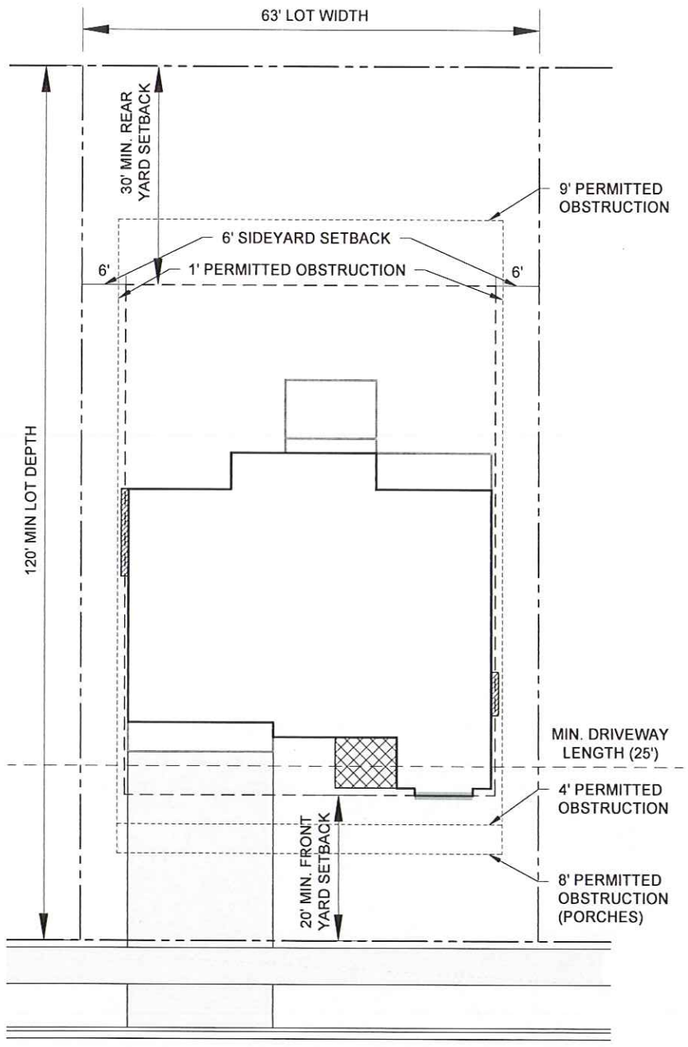
NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

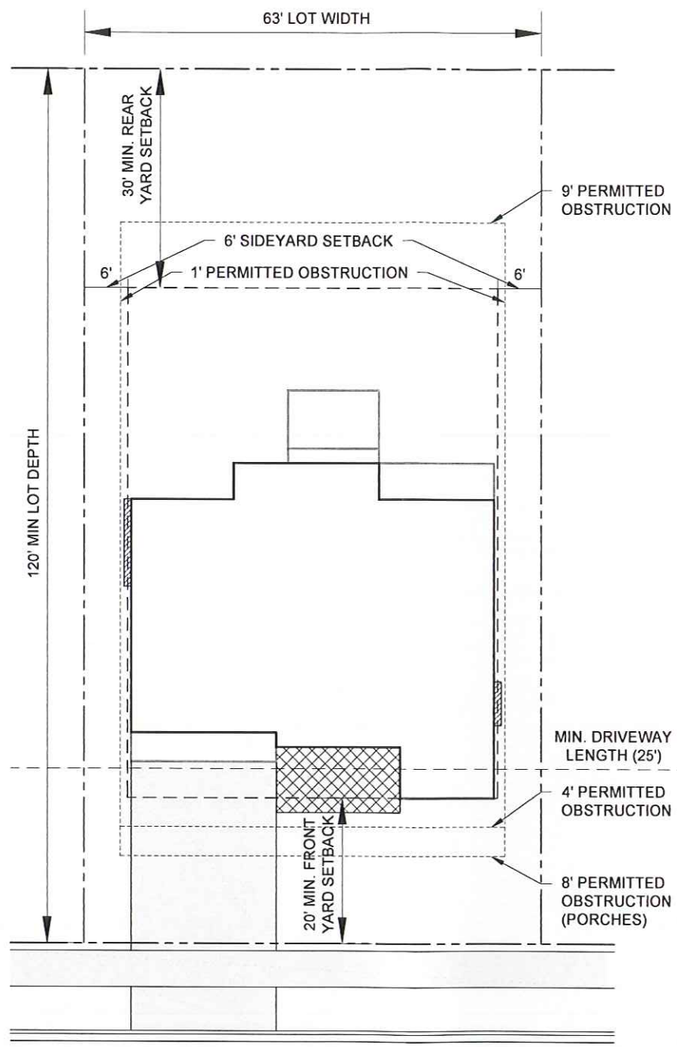
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE : 09/30/2016
DRAWING NO.
SHEET:
1 OF 6

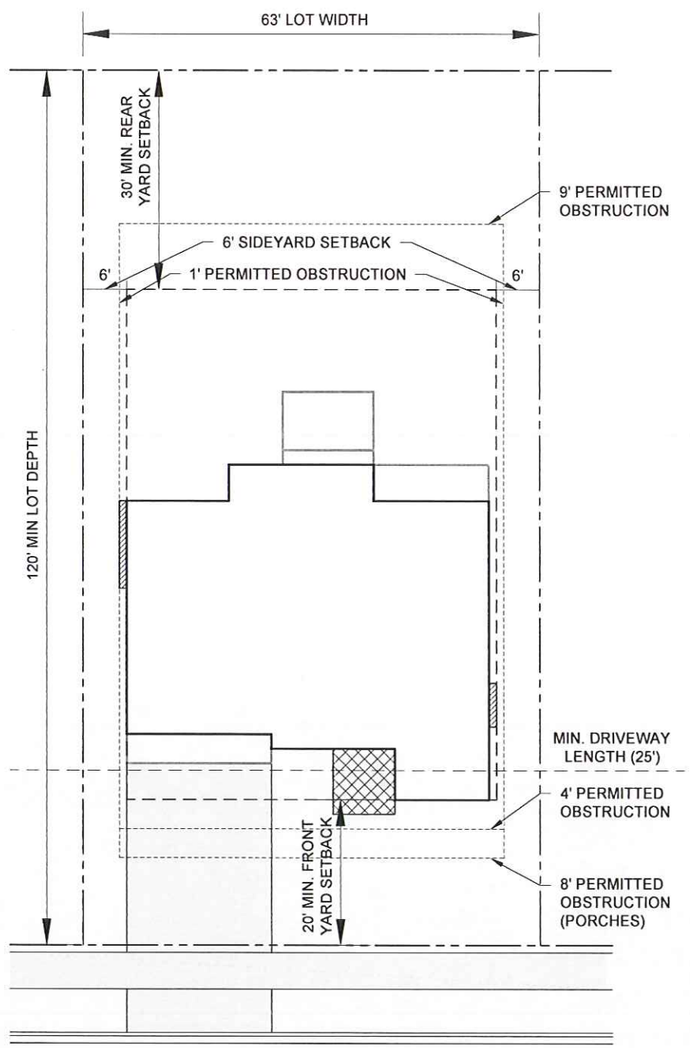
BRIDGEVIEW
EUROPEAN COTTAGE



BRIDGEVIEW
AMERICAN COTTAGE



BRIDGEVIEW
CRAFTSMAN



PROJECTION TYPE

- STRUCTURAL OPTIONS (INCLUDING SUNROOM, CAFE BAY, GATHERING ROOM, GARAGE EXTENSION)
- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION AND GARDENS

TCG-5 LOT FIT STUDY - BRIDGEVIEW

DSGN	WBK	SCALE: 1" = 30'
DWN	AJR	EX130191-TCG5-FIT.DWG
CHKD	CMH	

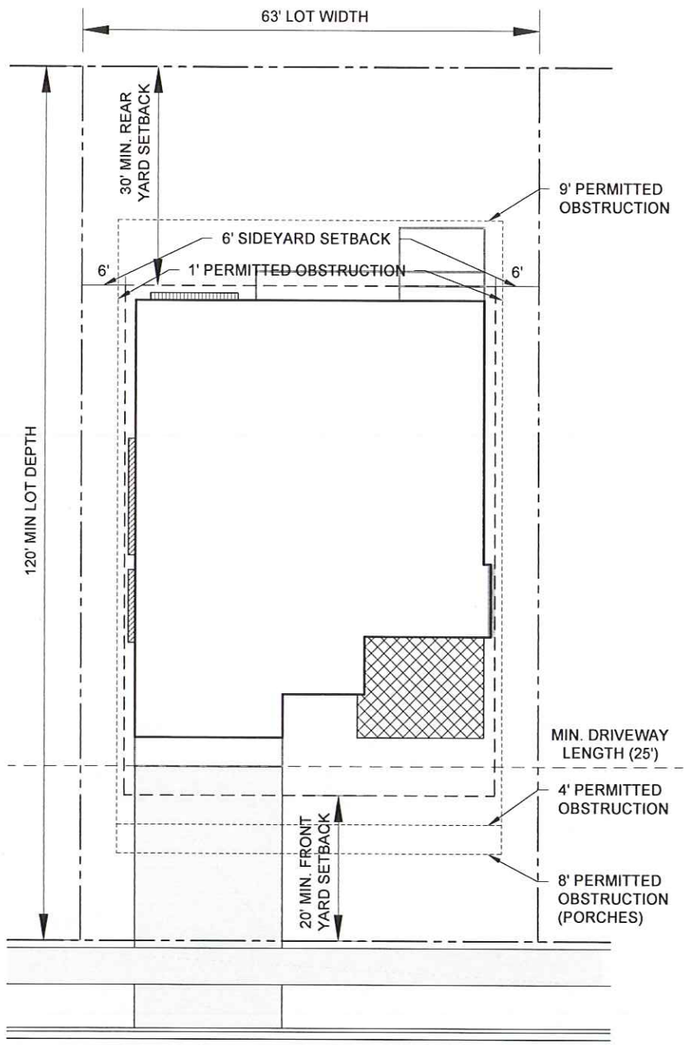
NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

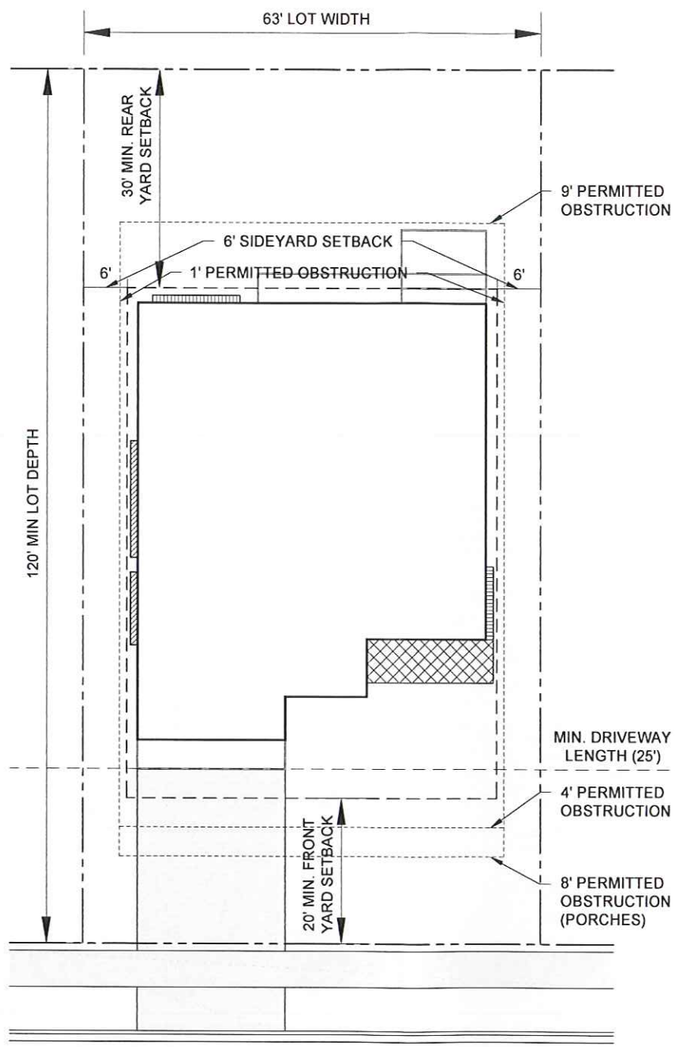
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE: 09/30/2016
DRAWING NO.
SHEET:
2 OF 6

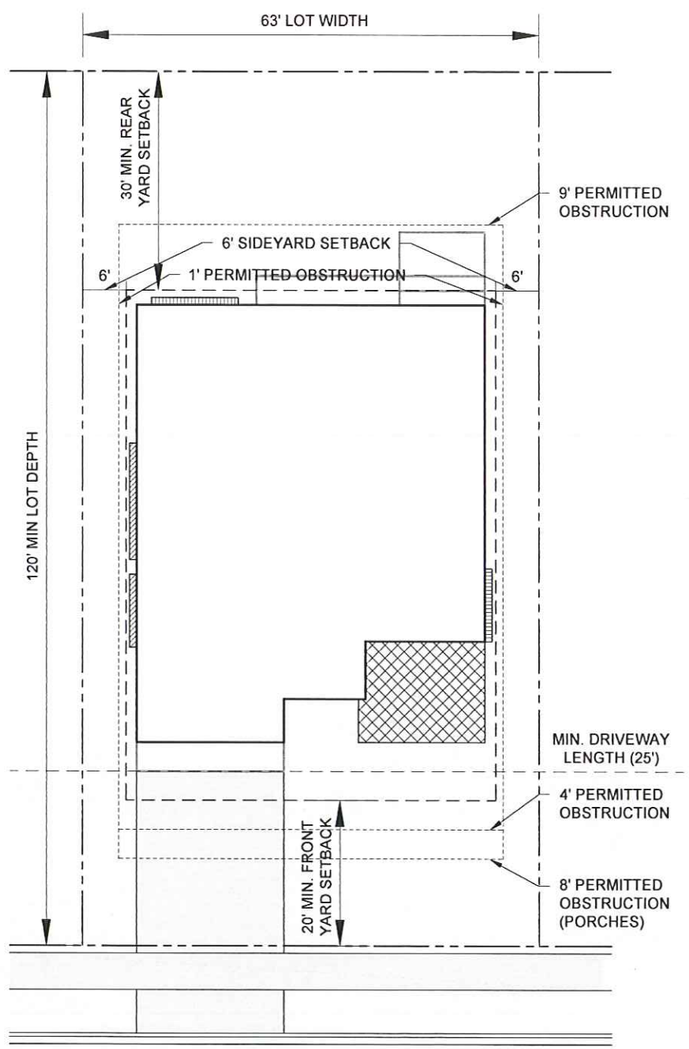
VANDERBILT
NORTHERN CRAFTSMAN



VANDERBILT
AMERICAN COTTAGE



VANDERBILT
CRAFTSMAN



PROJECTION TYPE

- STRUCTURAL OPTIONS (INCLUDING SUNROOM, CAFE BAY, GATHERING ROOM, GARAGE EXTENSION)
- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION & GARDENS

TCG-5 LOT FIT STUDY - VANDERBILT

DSGN	WBK
DWN	AJR
CHKD	GMH
SCALE: 1" = 30'	
EX13019I-TCG5 FIT.DWG	

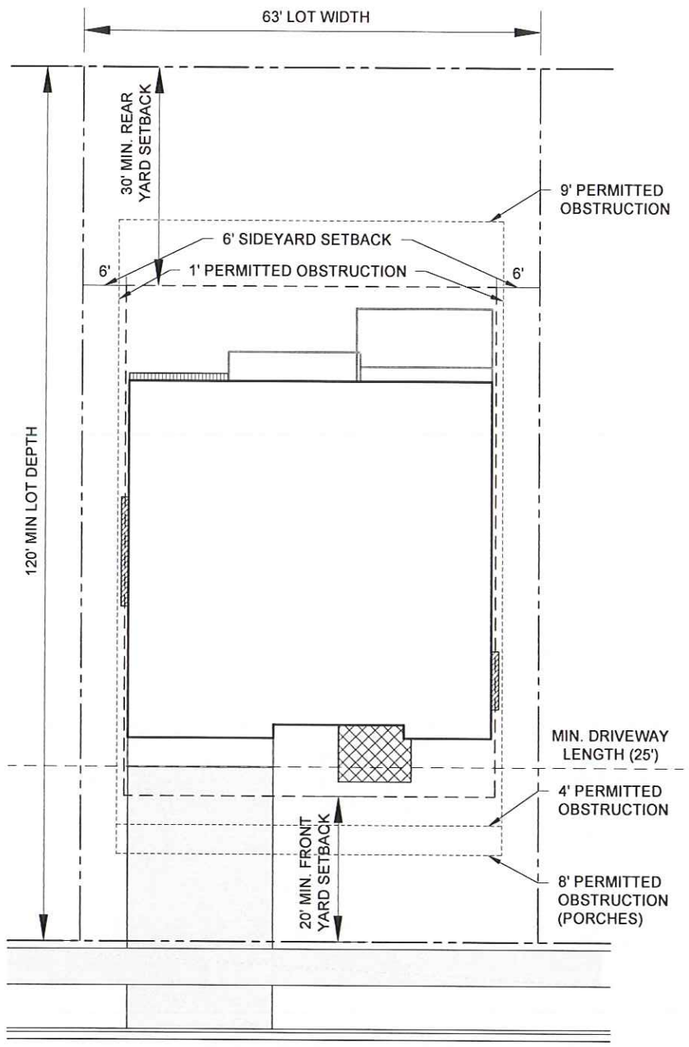
NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

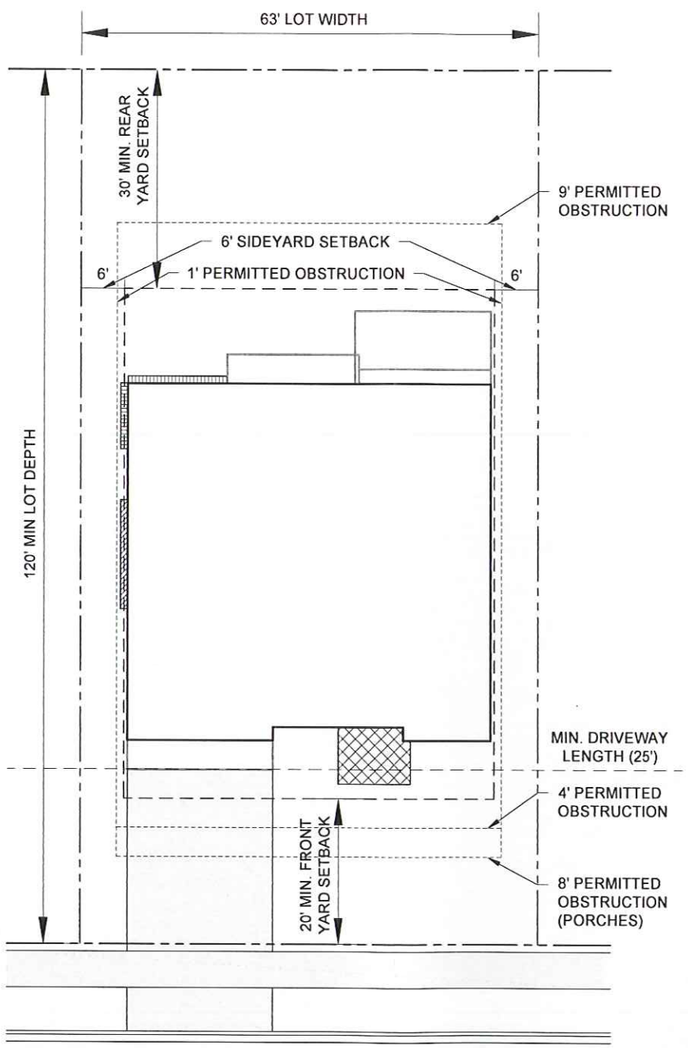
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE: 09/30/2016
DRAWING NO.
SHEET:
3 OF 6

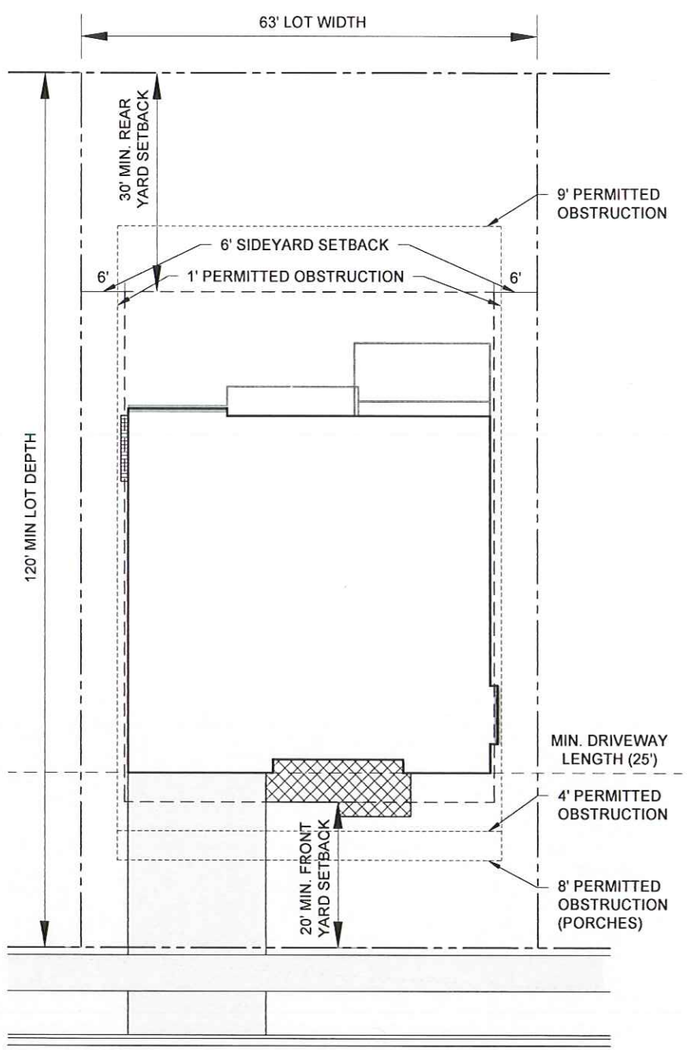
MELROSE
EUROPEAN COTTAGE



MELROSE
AMERICAN COTTAGE



MELROSE
CRAFTSMAN



PROJECTION TYPE

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- MASONRY FOUNDATION BUMPOUT
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TITLE: THE RESIDENCES AT CUNEO MANSION & GARDENS

TCG-5 LOT FIT STUDY - MELROSE

DSGN	WBK	SCALE: 1" = 30'	EX130191-TCG5 FIT.DWG
DWN	AJR		
CHKD	CMH		

NO	DATE	NATURE OF REVISION

CLIENT:
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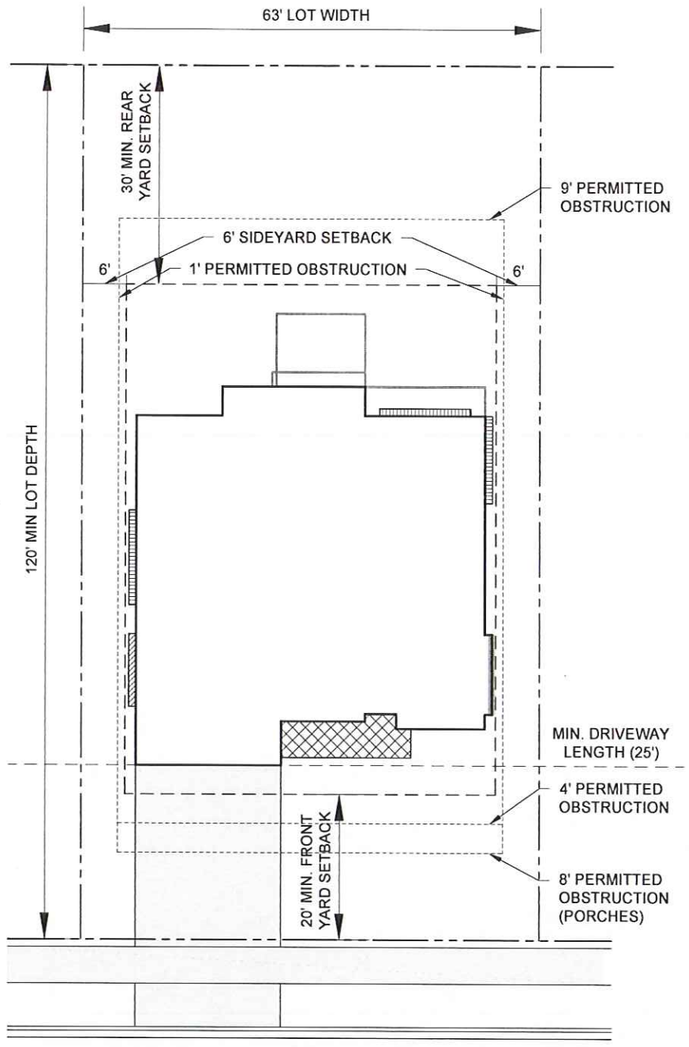
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

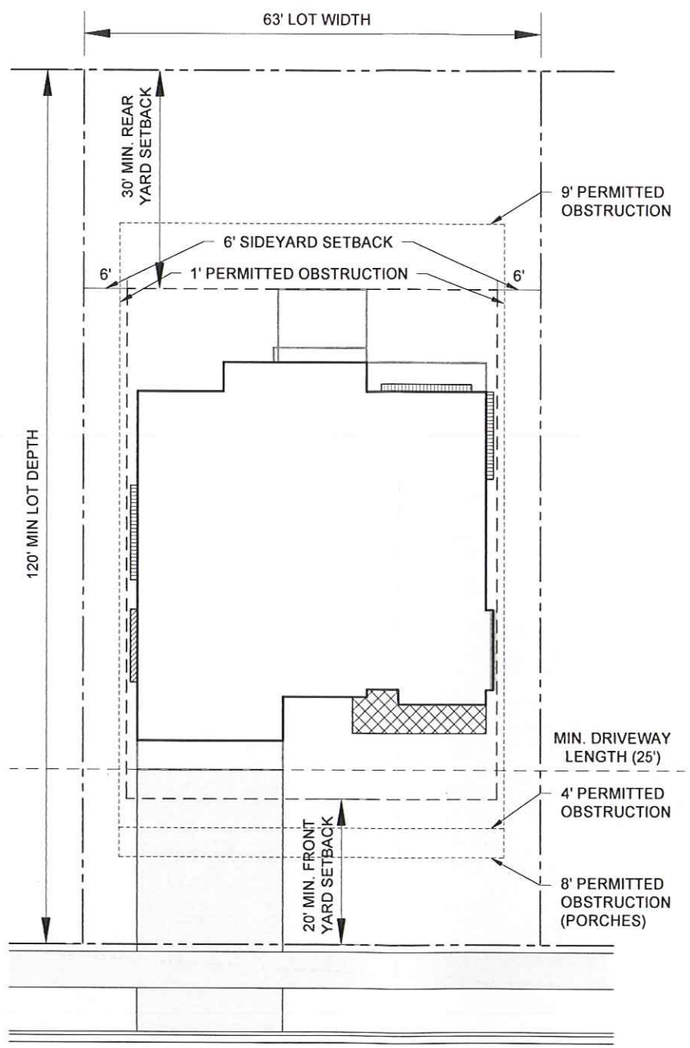
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE: 09/30/2016
DRAWING NO.
SHEET:
4 OF 6

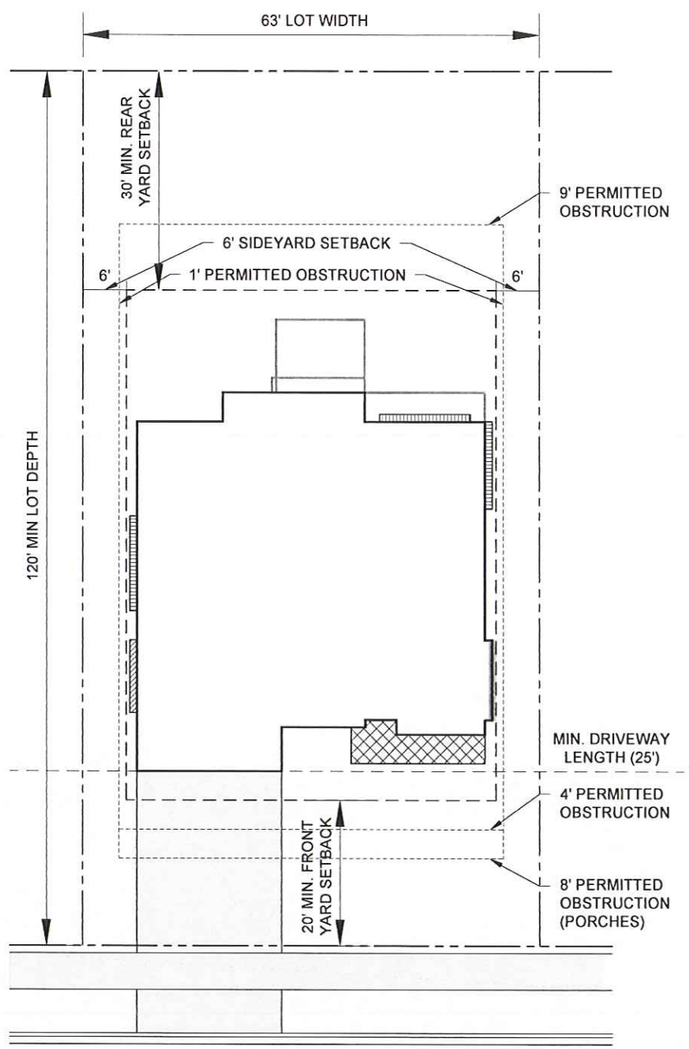
WILLWOOD
NORTHERN CRAFSTMAN



WILLWOOD
AMERICAN COTTAGE



WILLWOOD
CRAFTSMAN



PROJECTION TYPE

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- COVERED PORCH / STEPS

TITLE: THE RESIDENCES AT CUNEO MANSION & GARDENS

TCG-5 LOT FIT STUDY - WILLWOOD

DSGN	WBK
DWN	AJR
CHKD	GMH
SCALE: 1" = 10'	
EX130191-TCG5 FIT.DWG	

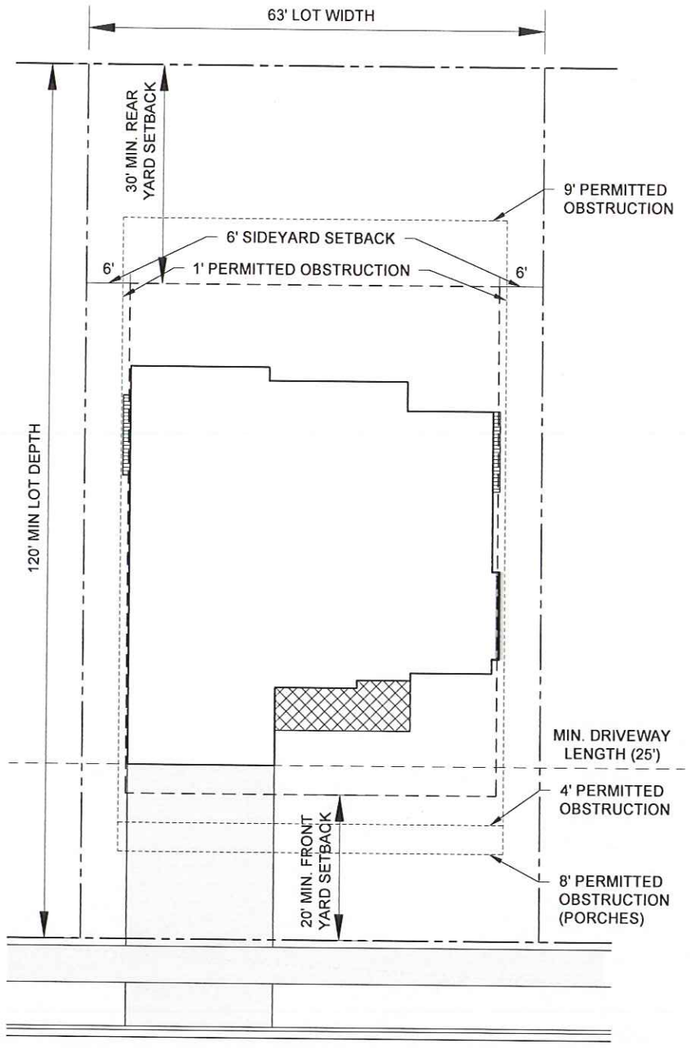
NO	DATE	NATURE OF REVISION

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

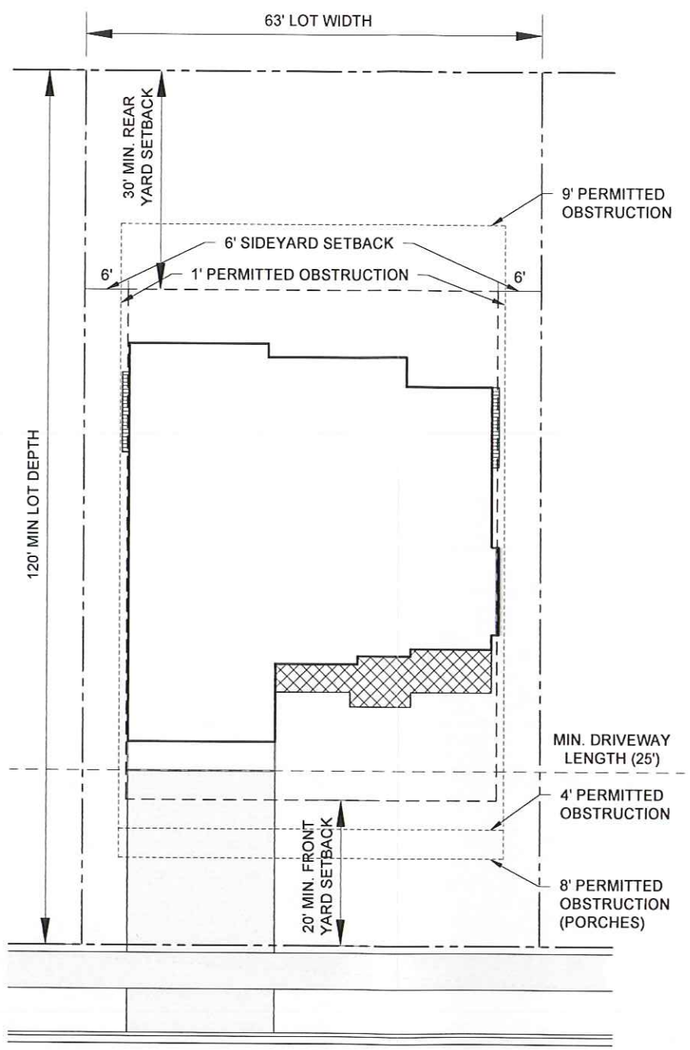
WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE : 09/30/2016
DRAWING NO.
SHEET:
5 OF 6

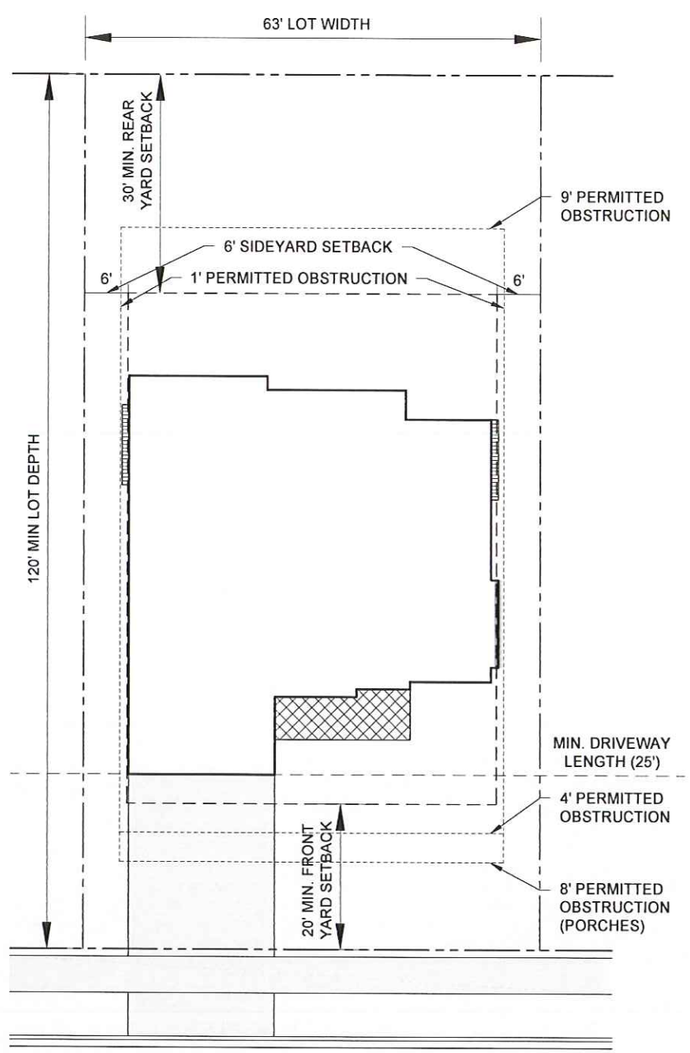
WOODSIDE
NORTHERN CRAFTSMAN



WOODSIDE
AMERICAN COTTAGE



WOODSIDE
CRAFTSMAN



PROJECTION TYPE

- STRUCTURAL OPTIONS (INCLUDING SUNROOM, CAFE BAY, GATHERING ROOM, GARAGE EXTENSION)
- MASONRY FOUNDATION BUMPOUT
- NON-MASONRY PROJECTION
- CANTILEVERED PROJECTION (BAY WINDOW, BOX BAY)
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TITLE: THE RESIDENCES AT CUNEO MANSION & GARDENS

TCG-5 LOT FIT STUDY - WOODSIDE

DSGN	WBK
DWN.	AJR
CHKD.	CMH
SCALE	1" = 10'
NO.	DATE / NATURE OF REVISION
	EX13019 1-TCG5 FIT.DWG

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD #300
SCHAUMBURG, IL 60195

WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755
WBK engineering

PROJECT NO. 13-0191
DATE : 09/30/2016
DRAWING NO.
SHEET:
6 OF 6

ORDINANCE 2017-014 Exhibit B7 Lot Development Plan prepared by WBK Engineering with a date of 9/30/2016 consisting of 1 page

P.U.D. Gross Land Area

Public & Institutional P.U.D.	44.25 acres
Residential P.U.D.	52.75 acres
P.U.D. Gross Land Area	97.00 acres

Residential P.U.D. Breakdown

Residential Development Breakdown

Residential Lots	24.98 acres
HOA-Maintained Open Space	20.69 acres
Private Road Corridor	7.08 acres
Residential PUD Land Area	52.75 acres

Residential Unit Types

Flexible Lots (Ranch or 2-Story)	105 Lots
Ranch Lots	23 Lots
Total Lots	128 Lots

Density per Acre

P.U.D. Gross Land Area	1.32 du/ac
Residential P.U.D. Area	2.43 du/ac

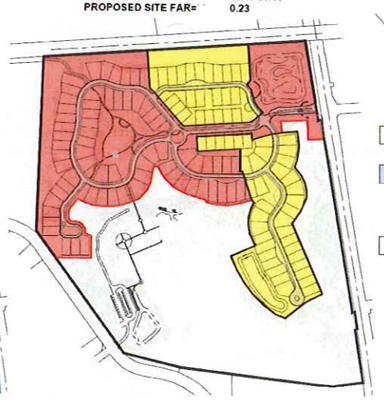
Floor Area Ratio

The proposed plan requests a variance of 0.52 FAR on an individual lot basis.

Gross Site Area	52.75 acres
Private Road Corridor	7.08 acres
Net Site Area	45.67 acres
Residential Floor Area (3,539 s.f. x 128 Units)	10.40 acres
Net Site Area	45.67 acres
PROPOSED SITE FAR=	**0.23**

Pedestrian Connectivity

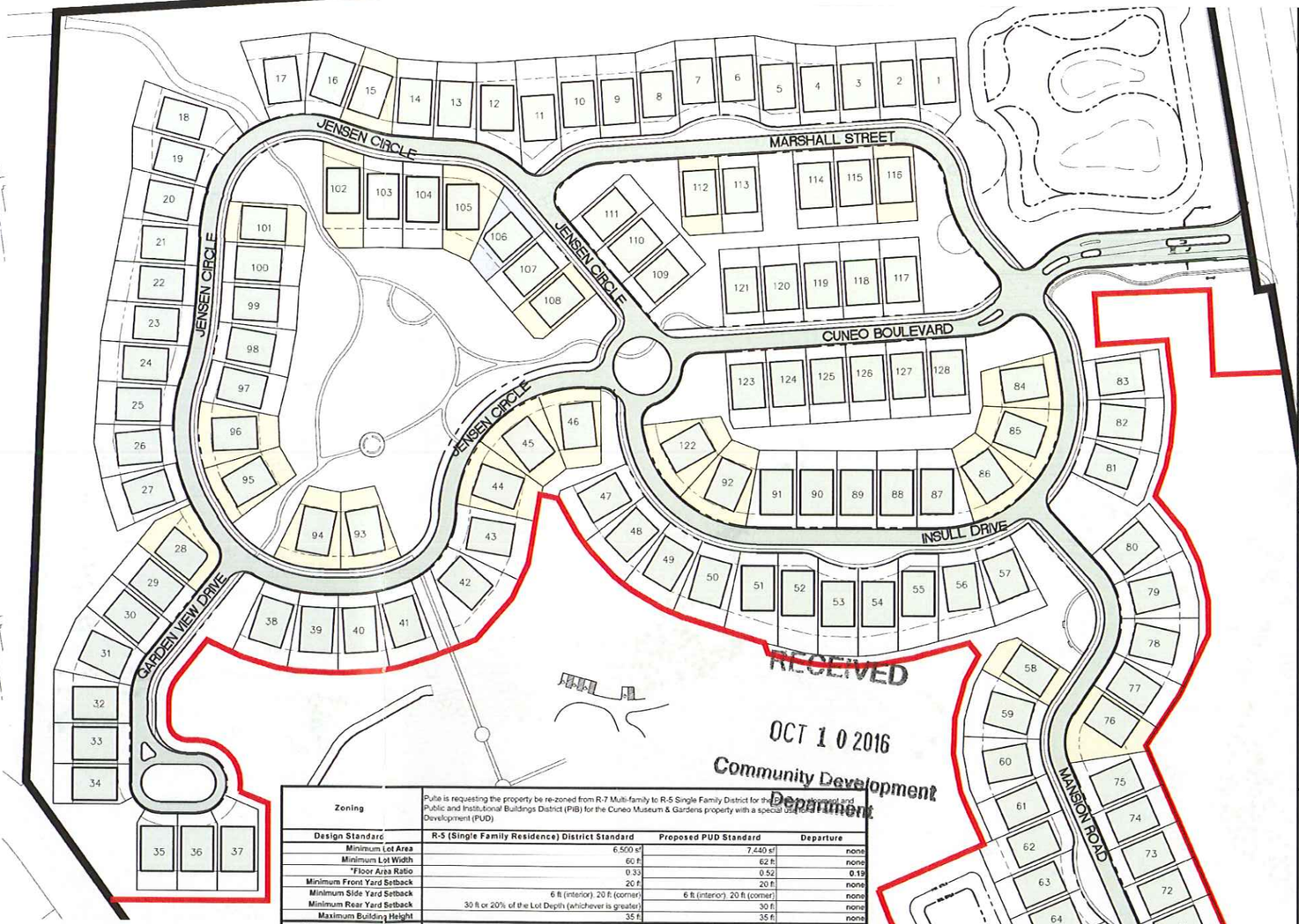
- Sidewalks
- Paths/Trail
- Park: 3.45 Acres.



Phasing Plan

- Phase 1 - Purchase/Development (Winter 2017)
- Phase 2 - Purchase/Development (Spring 2018)

*Community completion planned for 2020



BUILDING PLACEMENT DETERMINED BY BUILD PAD LINES AS INDICATED.

BUILDING PLACEMENT DETERMINED BY BUILD PAD LINES AS INDICATED. SELECTION OF BUILDING MODEL LIMITED.

BUILDING PAD (128 UNITS)

N W E S

0' 100' 200' 300'

Zoning	Pulte is requesting the property be re-zoned from R-7 Multi-family to R-5 Single Family District for the residential and Public and Institutional Buildings District (PIB) for the Cuneo Museum & Gardens property with a special use for a Planned Unit Development (PUD)

Design Standards	**R-5 (Single Family Residence) District Standard**	**Proposed PUD Standard**	**Departure**
Minimum Lot Area	6,500 sf	7,440 sf	none
Minimum Lot Width	60 ft	62 ft	none
*Floor Area Ratio	0.33	0.52	**0.19**
Minimum Front Yard Setback	20 ft	20 ft	none
Minimum Side Yard Setback	6 ft (interior), 20 ft (corner)	6 ft (interior), 20 ft (corner)	none
Minimum Rear Yard Setback	30 ft or 20% of the Lot Depth (whichever is greater)	30 ft	none
Maximum Building Height	35 ft	35 ft	none

Additional PUD Standards	**Notes**
Floor Area Ratio by Definition	By definition of the Code of Ordinances for the Village of Vernon Hills, Floor Area Ratio (FAR) is defined as: *The floor area of the building or buildings on the zoning lot, divided by the area of the zoning lot or in the case of a planned unit development, divided by the gross site area; exclusive of dedicated streets*. The Pulte development is proposed as a PUD but as provisions for open space are the primary driver behind FAR we have chosen to remove the Private Road Corridor from the calculation as if it were being dedicated as a public road. Based on this definition the FAR is calculated as follows: Gross Site Area **52.75 ac** *(minus)* Private Road Corridor, **7.03 ac** *(equals)* Net Site Area **45.72 ac**. Floor Area of the largest model, **3,539 sf** *(multiplied by)* Total Number of Units, **128** *(equals)* Total Proposed Floor Area, **10.40 ac**. **Total Proposed Floor Area,** 10.40 ac *(divided by)* Net Site Area, **45.72 ac** *(equals)* Proposed Site FAR, **0.23**.
Floor Area Ratio by Individual Lot	Pulte requests a variance for FAR, on an individual lot basis, of **0.52**. This variance considers the largest residential floor area, **3,539 sf** *(divided by)* the minimum residential lot area, **7,483 sf** *(equals)* **0.47** *(plus)* a factor of safety, **0.05** *(equals)* a Total Individual Lot FAR of **0.52**. The factor of safety provides an additional 375 square feet of additional buildable area assuming it remains in compliance with the proposed building setbacks and bulk requirements in the PUD Standards.
Permitted Obstructions-Front	Pulte will maintain a minimum 25' driveway length. A four (4) foot permitted obstruction is requested for unenclosed porches, decks, stoops, platforms, and steps not extending above the first floor. In addition, design enhancements developed for strategic key lots in the neighborhood such as foundation bumpouts for masonry enhancements, non-masonry projections, and cantilevered elements such as bay windows and box bays added for additional façade articulation shall also be considered permitted obstructions. Pulte also proposes an additional four (4) feet of permitted obstructions (eight feet total) in the front yard setback to accommodate deeper porches
Permitted Obstructions-Side	Pulte proposes a six (6) foot side yard setback and 20' corner side yard setback to the main building massing. The proposed plan requests a series of permitted obstructions in the side yard setback to include features, elements, and design enhancements developed for strategic key lot locations. A one (1) foot permitted obstruction is proposed in each side yard setback for foundation bumpouts for masonry enhancements, non-masonry projections, and cantilevered elements such as bay windows and box bays added for additional façade articulation.
Permitted Obstructions-Rear	Pulte proposes a 30' rear yard setback to the main building massing. The proposed plan requests a nine (9) foot zone for permitted obstructions in the rear yard setback to allow for one-story café bay, sunroom, gathering room, decks, stoops, platforms, patios, and covered porches, plus the depth of the required steps. In addition features, elements, and design enhancements developed for strategic key lot locations such as such as foundation bumpouts for masonry enhancements, non-masonry projections, and cantilevered elements such as bay windows and box bays added for additional façade articulation shall also be considered permitted obstructions.

THE RESIDENCES AT CUNEO MANSION AND GARDENS

LOT DEVELOPMENT PLAN

NO.	DATE	NATURE OF REVISION
1	06/20/16	Per Village Comments

DSGN | DWN. | CHKD. | SCALE AS NOTED | EX130PH-LOT DEVELOPMENT PLAN.DWG

CLIENT:
PULTE HOMES
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173

WBK ENGINEERING, LLC
116 WEST MAIN STREET, SUITE 201
ST. CHARLES, ILLINOIS 60174
(630) 443-7755

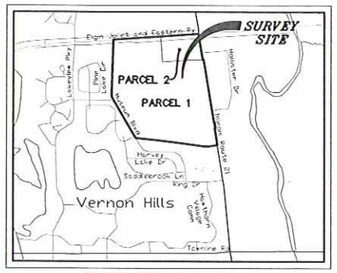
WBK engineering

PROJECT NO. 130191
DATE: 09/30/16
DRAWING NO. LDP
SHEET:
1 OF 1

ORDINANCE 2017-014 Exhibit B8 Preliminary Plat of Subdivision prepared by Manhard Consulting Ltd with a revision date of 9/29/2016 consisting of 6 pages

PRELIMINARY PLAT
OF
THE RESIDENCES AT CUNEO MANSION AND GARDENS

BEING A SUBDIVISION OF PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.



LOCATION SKETCH
NOT TO SCALE

LEGAL DESCRIPTION

PARCEL 1:

THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE INTERSECTION OF THE WESTERLY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY CONDEMNATION IN CIRCUIT COURT, LAKE COUNTY, ILLINOIS, CASE NO. 65–2323, WITH THE SOUTHERLY RIGHT OF WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 11 DEGREES 05 MINUTES 47 SECONDS EAST ALONG SAID WESTERLY LINE OF MILWAUKEE AVENUE AS WIDENED, BEING A LINE 50.00 FEET, AS MEASURED AT RIGHT ANGLES, WESTERLY OF AND PARALLEL WITH THE CENTER LINE OF MILWAUKEE AVENUE, 553.26 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 85 DEGREES 43 MINUTES 09 SECONDS WEST, 311.95 FEET; THENCE SOUTH 85 DEGREES 35 MINUTES 41 SECONDS WEST, 153.40 FEET; THENCE SOUTH 84 DEGREES 29 MINUTES 38 SECONDS WEST, 427.28 FEET; THENCE NORTH 05 DEGREES 29 MINUTES 59 SECONDS WEST, 535.67 FEET TO AN INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF SAID ELGN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 84 DEGREES 30 MINUTES 01 SECONDS WEST ALONG SAID LAST DESCRIBED LINE, 590.10 FEET; THENCE SOUTH 00 DEGREES 22 MINUTES 54 SECONDS WEST, 1199.06 FEET; THENCE SOUTH 37 DEGREES 25 MINUTES 00 SECONDS EAST, 1032.64 FEET; THENCE SOUTH 77 DEGREES 59 MINUTES 09 SECONDS EAST, 399.87 FEET; THENCE SOUTH 84 DEGREES 27 MINUTES 58 SECONDS EAST, 688.54 FEET; THENCE SOUTH 85 DEGREES 08 MINUTES 28 SECONDS EAST, 242.41 FEET; THENCE SOUTH 86 DEGREES 31 MINUTES 10 SECONDS EAST, 125.09 FEET; THENCE NORTH 80 DEGREES 43 MINUTES 15 SECONDS EAST, 223.04 FEET TO A POINT ON THE WESTERLY LINE OF SAID MILWAUKEE AVENUE AND THE WESTERLY LINE OF MILWAUKEE AVENUE AS WIDENED PER DOCUMENT 1691385; THENCE NORTHERLY, 373.39 FEET ALONG SAID WESTERLY LINE, BEING THE ARC OF A CIRCLE CONVEX EASTERLY, HAVING A RADIUS OF 11681.72 FEET, WHOSE CHORD BEARS NORTH 10 DEGREES 10 MINUTES 51 SECONDS WEST, 373.37 FEET TO A POINT OF TANGENCY; THENCE NORTH 11 DEGREES 05 MINUTES 47 SECONDS WEST ALONG SAID WESTERLY LINE, TANGENT TO THE LAST DESCRIBED COURSE, 1176.60 FEET; THENCE SOUTH 78 DEGREES 54 MINUTES 13 SECONDS WEST ALONG SAID WESTERLY LINE, 10.00 FEET; THENCE NORTH 11 DEGREES 05 MINUTES 47 SECONDS WEST ALONG SAID WESTERLY LINE, 278.35 FEET TO THE POINT OF BEGINNING, (EXCEPTING THEREFROM ALL THAT PART THEREOF TAKEN FOR WIDENING OF MILWAUKEE AVENUE PER DOCUMENT 4543140), IN LAKE COUNTY, ILLINOIS.

PARCEL 2:

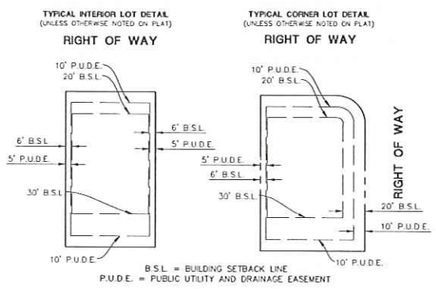
THAT PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE INTERSECTION OF THE WESTERLY LINE OF MILWAUKEE AVENUE (STATE ROUTE NO. 21) AS WIDENED BY CONDEMNATION IN CIRCUIT COURT, LAKE COUNTY, ILLINOIS, CASE NO. 65–2323, WITH THE SOUTHERLY RIGHT OF WAY LINE OF THE ELGIN, JOLIET AND EASTERN RAILWAY; THENCE SOUTH 11 DEGREES 05 MINUTES 47 SECONDS EAST ALONG SAID WESTERLY LINE OF MILWAUKEE AVENUE AS WIDENED, BEING A LINE 50.00 FEET, AS MEASURED AT RIGHT ANGLES, WESTERLY OF AND PARALLEL WITH THE CENTER LINE OF MILWAUKEE AVENUE, 553.26 FEET; THENCE SOUTH 86 DEGREES 43 MINUTES 09 SECONDS WEST, 311.95 FEET; THENCE SOUTH 85 DEGREES 35 MINUTES 41 SECONDS WEST, 153.40 FEET; THENCE SOUTH 84 DEGREES 29 MINUTES 38 SECONDS WEST,427.28 FEET; THENCE NORTH 05 DEGREES 29 MINUTES 59 SECONDS WEST, 535.67 FEET TO AN INTERSECTION WITH THE SOUTHERLY RIGHT OF WAY LINE OF SAID ELGIN, JOLIET AND EASTERN RAILWAY; THENCE NORTH 84 DEGREES 30 MINUTES 01 SECONDS EAST ALONG SAID LAST DESCRIBED LINE, 838.42 FEET TO THE POINT OF BEGINNING, (EXCEPTING THEREFROM ALL THAT PART THEREOF TAKEN FOR WIDENING OF MILWAUKEE AVENUE PER DOCUMENT 4543140), IN LAKE COUNTY, ILLINOIS.

EXISTING PIN'S

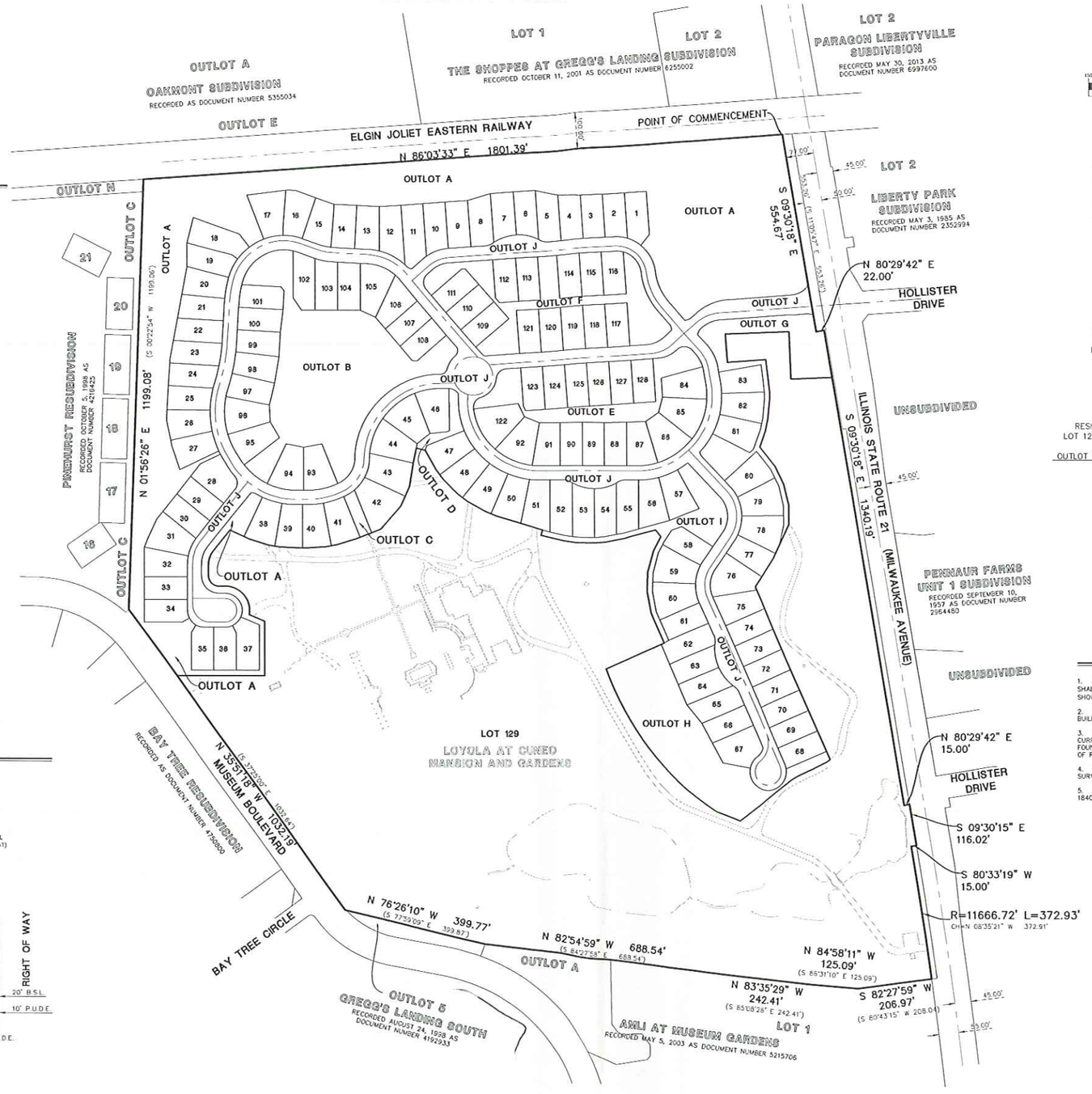
11–33–200–026
11–33–200–027
11–33–200–023

TYPICAL BUILDING SETBACK AND EASEMENT DETAILS

NOTES:
1. THE FRONT BUILDING SETBACK SHALL BE 20'
2. THE FRONT GARAGE SETBACK SHALL BE 24'
3. THE REAR BUILDING SETBACK SHALL BE 30'
4. SIDE YARD SETBACK SHALL BE 6'



NOTE: LOTS 1 THROUGH 128 SHALL HAVE EASEMENTS AND SETBACKS AS SHOWN ABOVE UNLESS OTHERWISE SHOWN ON THE PLAT.



RECEIVED
OCT 10 2016
Community Development Department

GRAPHIC SCALE
150 0 75 150 300 600
(IN FEET)
1 inch = 150 ft

BASIS OF BEARINGS

BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD83–2011 ADJUSTMENT). ADJUSTED TO GROUND VALUES, AS ESTABLISHED UTILIZING TRIMBLE VRS REAL–TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)

ABBREVIATIONS

P.U.D.E. = PUBLIC UTILITY AND DRAINAGE EASEMENT HEREBY GRANTED
B.S.L. = BUILDING SETBACK LINE HEREBY ESTABLISHED

EXISTING PROPERTY AREA

RESIDENTIAL AREA = 2,297,781 SQ. FT. (52.750 ACRES)
LOYOLA MUSEUM = 1,926,866 SQ. FT. (44.235 ACRES)
TOTAL AREA = 4,224,647 SQ. FT. 96.985 ACRES)

PROPOSED PROPERTY AREA

RESIDENTIAL LOTS 1–128 =1,088,298 SQ. FT. (24.984 ACRES)
LOT 129 (LOYOLA MUSEUM) = 1,926,866 SQ. FT. (44.235 ACRES)
OUTLOTS A–I = 903,200 SQ. FT. (20.735 ACRES)
OUTLOT J (PRIVATE STREETS) = 306,282 SQ. FT. (7.031 ACRES)
TOTAL AREA =4,224,647 SQ. FT. (96.985 ACRES)

OWNER/DEVELOPER

PULTE GROUP, INC.
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173

PRIVATE STREET NOTE

A PUBLIC UTILITY, DRAINAGE AND PRIVATE STREET EASEMENT SHALL BE GRANTED OVER ALL OF OUTLOT J

SURVEYOR'S NOTES

1. DISTANCES ARE MARKED IN FEET AND DECIMAL PLACES THEREOF. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON. DISTANCES AND/OR BEARINGS SHOWN IN PARENTHESIS (456.67') ARE RECORD OR DEED VALUES, NOT FIELD MEASURED
2. COMPARE THIS PLAT, LEGAL DESCRIPTION AND ALL SURVEY MONUMENTS BEFORE BUILDING, AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE SURVEYOR.
3. THIS SURVEY IS SUBJECT TO MATTERS OF TITLE, WHICH MAY BE REVEALED BY A CURRENT TITLE REPORT. EASEMENTS, SETBACKS AND OTHER RESTRICTIONS WHICH MAY BE FOUND IN A CURRENT TITLE REPORT, LOCAL ORDINANCES, DEEDS OR OTHER INSTRUMENTS OF RECORD MAY NOT BE SHOWN.
4. THIS SURVEY WAS PREPARED FOR PULTE GROUP, INC. BASED ON A FIELD BOUNDARY SURVEY COMPLETED ON OCTOBER 10, 2013.
5. MANHARD CONSULTING, LTD. IS A PROFESSIONAL DESIGN FIRM, REGISTRATION NUMBER 184003350, EXPIRES APRIL 30, 2017.

SHEET INDEX

SHEET 1 OF 6:	OVERALL SITE, LEGAL DESCRIPTION, NOTES
SHEET 2 OF 6:	NORTHEAST LOT DETAILS
SHEET 3 OF 6:	NORTHWEST LOT DETAILS
SHEET 4 OF 6:	SOUTHWEST LOT DETAILS
SHEET 5 OF 6:	SOUTHEAST LOT DETAILS
SHEET 6 OF 6:	CERTIFICATES

DATE	REVISIONS	BY
09/29/16	REVISED PER CLIENT AND VILLAGE REVIEW	PJT
09/15/16	REVISED PER VILLAGE REVIEW	PJT

Manhard CONSULTING LTD
990 Woodlands Parkway, Vernon Hills, IL 60061 ph 847.634.5050 fax 847.634.4055 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

THE RESIDENCES AT CUNEO MANSION AND GARDENS
VERNON HILLS, ILLINOIS
PRELIMINARY PLAT OF SUBDIVISION

PROJ. MGR.: W.H
PROJ. ASSOC.: T.M
DRAWN BY: PJT
DATE: 04/25/16
SCALE: 1"=150'

SHEET 1 OF 6
PULVH

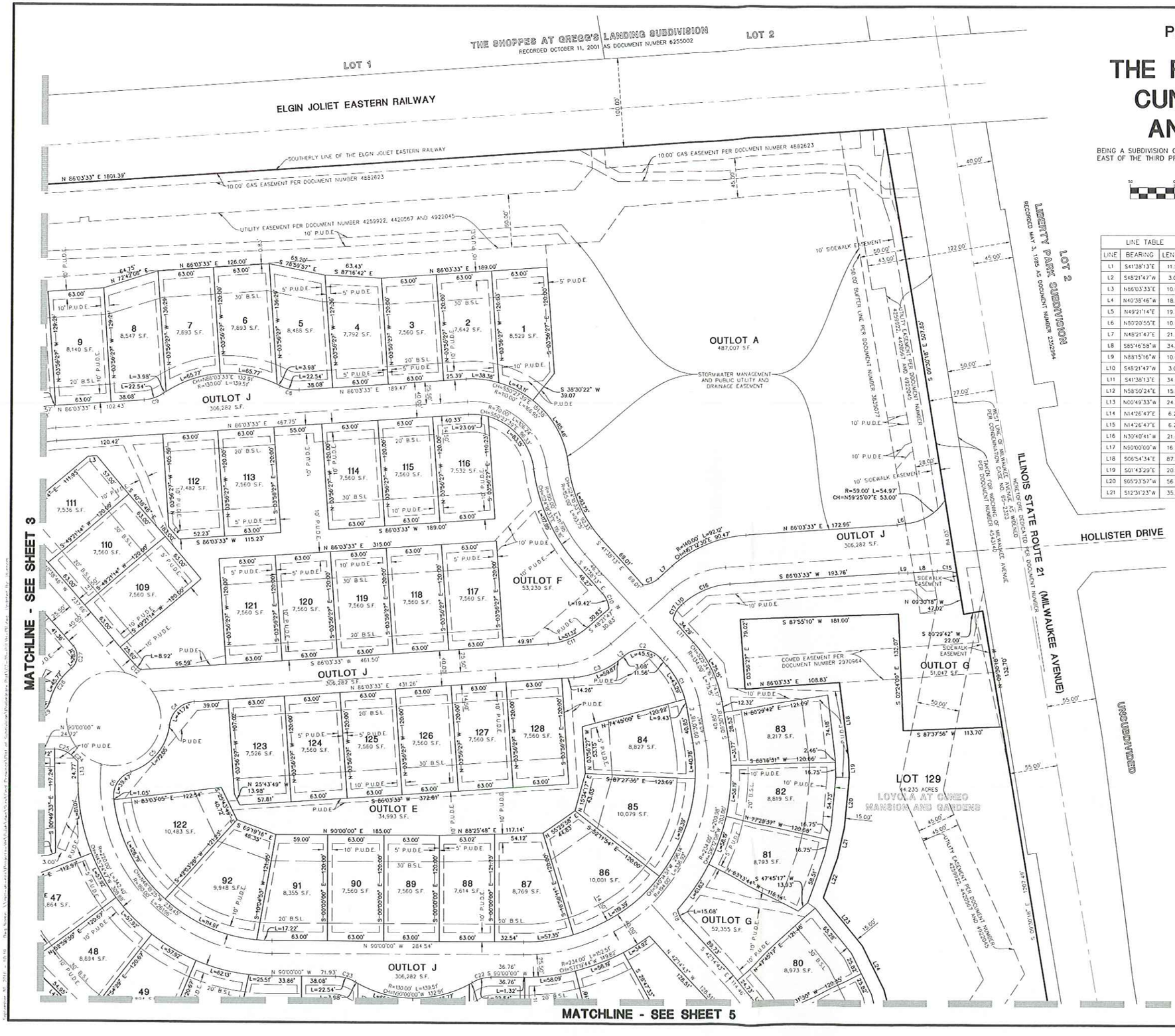
PRELIMINARY PLAT
OF
THE RESIDENCES AT CUNEO MANSION AND GARDENS

BEING A SUBDIVISION OF PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft



LINE TABLE		
LINE	BEARING	LENGTH
L1	S41°38'13"E	11.56'
L2	S48°21'47"W	3.08'
L3	N86°03'33"E	10.04'
L4	N40°38'46"W	18.01'
L5	N49°21'14"E	19.73'
L6	N80°20'55"E	10.05'
L7	N48°21'47"E	21.70'
L8	S85°46'58"W	34.17'
L9	N83°15'16"W	10.05'
L10	S48°21'47"W	3.08'
L11	S41°38'13"E	34.29'
L12	N58°50'24"E	15.12'
L13	N00°49'33"W	24.77'
L14	N14°26'47"E	6.24'
L15	N14°26'47"E	6.24'
L16	N30°40'41"W	21.66'
L17	N90°00'00"W	16.48'
L18	S06°54'34"E	87.20'
L19	S01°43'29"E	20.82'
L20	S65°23'57"W	56.60'
L21	S12°31'23"W	35.36'

LINE TABLE		
LINE	BEARING	LENGTH
L22	S19°35'49"W	47.85'
L23	S39°28'40"E	69.94'
L24	S26°28'30"E	55.06'
L25	S13°28'19"E	61.26'
L26	S00°28'09"E	52.29'
L27	N23°59'24"W	63.95'
L28	N23°33'30"W	27.10'
L29	N10°51'20"W	61.14'
L30	N02°08'50"E	55.06'
L31	N15°09'01"E	61.26'
L32	N28°09'11"E	44.61'
L33	N38°15'19"W	24.01'
L34	S75°20'11"W	75.00'
L35	S73°11'43"W	15.79'
L36	S79°21'04"W	55.79'
L37	S85°23'02"W	31.74'
L38	N58°35'00"W	55.79'
L39	N82°25'38"W	32.15'
L40	N76°16'17"W	65.61'
L41	N16°46'00"E	15.03'
L42	N73°10'28"W	61.83'

LINE TABLE		
LINE	BEARING	LENGTH
L43	N72°57'09"W	72.82'
L44	N67°10'32"W	34.77'
L45	N59°38'01"W	54.95'
L46	N52°05'31"W	34.77'
L47	N44°33'00"W	54.95'
L48	N37°00'30"W	34.77'
L49	N29°27'59"W	62.49'
L50	N77°32'03"W	26.09'
L51	S12°09'42"W	42.70'
L52	S09°13'54"W	66.10'
L53	S25°01'47"W	60.67'
L54	S41°04'13"W	85.40'
L55	S68°27'52"W	73.35'
L56	S72°25'17"W	53.05'
L57	S79°24'29"W	33.37'
L58	S66°03'40"W	53.76'
L59	N90°00'00"W	22.69'
L60	N86°50'03"W	55.94'
L61	N80°13'55"W	30.97'
L62	N72°41'24"W	54.95'
L63	N65°08'54"W	59.94'

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	94.00'	52.72'	S25°34'16"E	52.03'
C2	29.00'	45.55'	S86°38'14"E	41.01'
C3	91.00'	59.87'	S67°12'40"W	58.80'
C4	30.00'	41.74'	N46°12'13"E	38.45'
C5	63.49'	72.05'	N38°51'27"E	68.25'
C6	29.00'	39.47'	N32°22'35"E	36.49'
C7	29.00'	19.42'	N67°32'46"E	19.06'
C8	42.00'	22.54'	S78°34'10"E	22.27'
C9	42.00'	22.54'	N70°41'16"E	22.27'
C10	29.00'	19.42'	S22°27'14"E	19.06'
C11	78.00'	51.32'	N67°12'40"E	50.40'
C12	29.00'	8.92'	N49°27'26"W	8.88'
C13	29.00'	45.55'	N04°21'14"E	41.01'
C14	80.00'	51.25'	N67°42'23"E	50.38'
C15	59.26'	23.45'	N83°57'12"W	23.29'
C16	87.50'	57.57'	S67°12'40"W	56.54'
C17	29.00'	19.42'	S29°10'47"W	19.06'
C18	29.00'	15.08'	S27°21'05"E	14.91'
C19	49.00'	31.04'	N33°44'27"E	30.53'
C20	45.00'	23.93'	N38°47'39"W	23.65'
C21	45.00'	23.93'	N08°19'20"W	23.65'
C22	42.00'	22.54'	S74°37'43"W	22.27'
C23	42.00'	22.54'	N74°37'43"W	22.27'
C24	63.49'	6.73'	N46°59'37"W	6.73'
C25	29.00'	23.30'	N66°58'41"W	22.68'
C26	29.00'	14.98'	N74°54'34"W	14.81'
C27	18.00'	28.31'	S04°24'49"W	25.48'
C28	74.49'	45.77'	S31°52'13"W	45.06'
C29	18.00'	23.91'	S52°19'06"W	22.19'
C30	280.11'	59.09'	N08°24'09"E	58.98'
C31	29.00'	16.56'	S62°39'04"E	16.34'
C32	130.00'	36.59'	S78°53'30"E	36.47'
C33	320.00'	67.04'	N08°26'42"E	66.91'
C34	220.00'	18.47'	N33°05'02"W	18.47'
C35	220.00'	17.23'	N37°44'19"W	17.23'
C36	29.00'	39.81'	N00°39'45"W	36.76'
C37	80.00'	56.13'	S18°33'46"W	54.99'
C38	75.00'	17.07'	S56°01'39"W	17.03'

NOTE: LINE AND CURVE TABLES REPEATED ON SHEETS 2 THRU 5

DATE	REVISIONS	DRAWN BY
09/29/16	REVISED PER CLIENT AND VILLAGE REVIEW	MD
08/19/16	REVISED PER VILLAGE REVIEW	PJT

Manhard CONSULTING LTD
800 Woodlands Parkway Vernon Hills, IL 60061 ph 847.634.0005 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VERNON HILLS, ILLINOIS
PRELIMINARY PLAT OF SUBDIVISION

PROJ MGR.: WJH
PROJ ASSOC.: TJM
DRAWN BY: PJT
DATE: 04/25/16
SCALE: 1"=50'

SHEET 2 OF 6

PULWH

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PRELIMINARY PLAT
OF
THE RESIDENCES AT CUNEO MANSION AND GARDENS

BEING A SUBDIVISION OF PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

LINE TABLE		
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L9	N88°15'16"W	10.05'
L10	S48°21'47"W	3.08'
L11	S41°38'13"E	34.29'
L12	N58°50'24"E	15.12'
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L14	N14°26'47"E	6.24'
L15	N14°26'47"E	6.24'
L16	N30°40'41"W	21.66'
L17	N90°00'00"W	16.48'
L18	S06°54'34"E	87.20'
L19	S01°43'29"E	20.82'
L20	S05°23'57"W	56.60'
L21	S12°31'23"W	35.36'

LINE TABLE		
LINE	BEARING	LENGTH
L22	S19°38'49"W	47.85'
L23	S39°28'40"E	69.94'
L24	S26°28'30"E	55.06'
L25	S13°28'19"E	61.26'
L26	S00°28'09"E	52.29'
L27	N23°59'24"W	63.95'
L28	N23°33'30"W	22.10'
L29	N10°51'20"W	61.14'
L30	N02°08'50"E	55.06'
L31	N15°09'01"E	61.26'
L32	N28°09'11"E	44.61'
L33	N38°15'19"W	24.01'
L34	S75°20'11"W	75.00'
L35	S73°11'43"W	15.79'
L36	S79°21'04"W	55.79'
L37	S85°23'02"W	31.74'
L38	N58°35'00"W	55.79'
L39	N82°25'38"W	32.15'
L40	N76°16'17"W	65.61'
L41	N16°46'00"E	15.03'
L42	N73°10'28"W	61.83'

LINE TABLE		
LINE	BEARING	LENGTH
L43	N72°57'09"W	72.82'
L44	N67°10'32"W	34.77'
L45	N59°38'01"W	54.95'
L46	N52°05'31"W	34.77'
L47	N44°33'00"W	54.95'
L48	N37°00'30"W	34.77'
L49	N29°27'59"W	62.49'
L50	N77°32'03"W	26.09'
L51	S12°09'42"W	42.70'
L52	S09°13'54"W	66.10'
L53	S25°01'47"W	60.67'
L54	S41°04'13"W	85.40'
L55	S68°27'52"W	73.35'
L56	S72°25'17"W	53.05'
L57	S79°24'29"W	33.37'
L58	S86°03'40"W	53.76'
L59	N90°00'00"W	22.69'
L60	N86°50'03"W	55.94'
L61	N80°13'55"W	30.97'
L62	N72°41'24"W	54.55'
L63	N65°08'54"W	59.94'

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	94.00'	52.72'	S25°34'16"E	52.03'
C2	29.00'	45.55'	S86°38'14"E	41.01'
C3	91.00'	59.87'	S67°12'40"W	58.80'
C4	30.00'	41.74'	N46°12'13"E	38.45'
C5	63.49'	72.05'	N38°51'27"E	68.25'
C6	29.00'	39.47'	N32°22'35"E	36.49'
C7	29.00'	19.42'	N67°32'46"E	19.06'
C8	42.00'	22.54'	S78°34'10"E	22.27'
C9	42.00'	22.54'	N70°41'16"E	22.27'
C10	29.00'	19.42'	S22°27'14"E	19.06'
C11	78.00'	51.32'	N67°12'40"E	50.40'
C12	29.00'	8.92'	N49°27'26"W	8.88'
C13	29.00'	45.55'	N04°21'14"E	41.01'
C14	80.00'	51.25'	N67°42'23"E	50.38'
C15	59.26'	23.45'	N83°57'12"W	23.29'
C16	87.50'	57.57'	S67°12'40"W	56.54'
C17	29.00'	19.42'	S29°10'47"W	19.06'
C18	29.00'	15.08'	S27°21'05"E	14.91'
C19	49.00'	31.04'	N33°44'27"E	30.53'
C20	45.00'	23.93'	N38°47'39"W	23.65'
C21	45.00'	23.93'	N08°19'20"W	23.65'
C22	42.00'	22.54'	S74°37'43"W	22.27'
C23	42.00'	22.54'	N74°37'43"W	22.27'
C24	63.49'	6.73'	N46°59'37"W	6.73'
C25	29.00'	23.30'	N66°58'41"W	22.68'
C26	29.00'	14.98'	N74°54'34"W	14.81'
C27	18.00'	28.31'	S04°24'49"W	25.48'
C28	74.49'	45.77'	S31°52'13"W	45.06'
C29	18.00'	23.91'	S52°19'06"W	22.19'
C30	280.11'	59.09'	N08°24'09"E	58.98'
C31	29.00'	16.56'	S62°39'04"E	16.34'
C32	130.00'	36.59'	S78°53'30"E	36.47'
C33	320.00'	67.04'	N08°26'42"E	66.91'
C34	220.00'	18.47'	N33°05'02"W	18.47'
C35	220.00'	17.27'	N37°44'19"W	17.27'
C36	29.00'	39.81'	N00°39'45"W	36.76'
C37	80.00'	56.13'	S18°33'46"W	54.99'
C38	75.00'	17.07'	S56°01'39"W	17.03'

NOTE: LINE AND CURVE TABLES REPEATED ON SHEETS 2 THRU 5

DATE	REVISIONS	DRAWN BY
05/19/16	REVISED PER CLIENT AND VILLAGE REVIEW	JD
06/15/16	REVISED PER VILLAGE REVIEW	PJT

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VERNON HILLS, ILLINOIS
PRELIMINARY PLAT OF SUBDIVISION

PROJ MGR:	W.H
PROJ ASSOC:	T.H
DRAWN BY:	PJT
DATE:	04/25/16
SCALE:	1"=50'

SHEET 3 OF 6
PULVH

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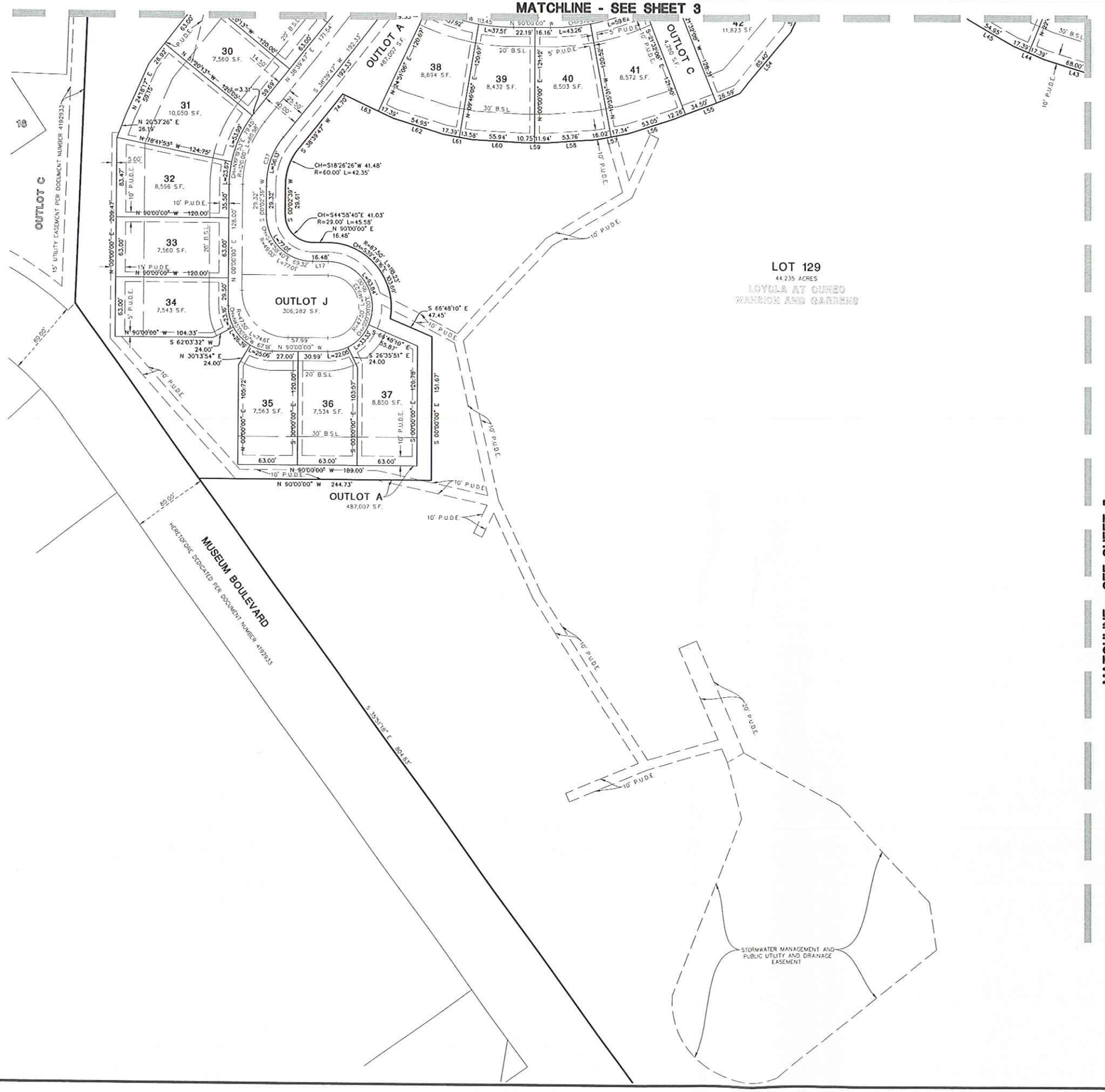

PRELIMINARY PLAT OF THE RESIDENCES AT CUNEO MANSION AND GARDENS

BEING A SUBDIVISION OF PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LINE TABLE		
LINE	BEARING	LENGTH
L1	S41°38'13"E	11.56'
L2	S48°21'47"W	3.08'
L3	N86°03'33"E	10.04'
L4	N40°38'46"W	18.01'
L5	N49°21'14"E	19.73'
L6	N80°20'55"E	10.05'
L7	N48°21'47"E	21.70'
L8	S85°46'58"W	34.17'
L9	N88°15'16"W	10.05'
L10	S48°21'47"W	3.08'
L11	S41°38'13"E	34.29'
L12	N58°50'24"E	15.12'
L13	N00°49'33"W	24.77'
L14	N14°26'47"E	6.24'
L15	N14°26'47"E	6.24'
L16	N30°40'41"W	21.66'
L17	N90°00'00"W	16.48'
L18	S06°54'34"E	87.20'
L19	S01°43'29"E	20.82'
L20	S05°23'57"W	56.60'
L21	S12°31'23"W	35.36'

LINE TABLE		
LINE	BEARING	LENGTH
L22	S19°38'49"W	47.85'
L23	S39°28'40"E	69.94'
L24	S26°28'30"E	55.06'
L25	S13°28'19"E	61.26'
L26	S00°28'09"E	52.29'
L27	N23°59'24"W	63.95'
L28	N23°33'30"W	27.10'
L29	N10°51'20"W	61.14'
L30	N02°08'50"E	55.06'
L31	N15°09'01"E	61.26'
L32	N28°09'11"E	44.61'
L33	N38°15'19"W	24.01'
L34	S75°20'11"W	75.00'
L35	S73°11'43"W	15.79'
L36	S79°21'04"W	55.79'
L37	S85°23'02"W	31.74'
L38	N88°35'00"W	55.79'
L39	N82°25'38"W	32.15'
L40	N76°16'17"W	65.61'
L41	N16°46'00"E	15.03'
L42	N73°10'28"W	61.83'

LINE TABLE		
LINE	BEARING	LENGTH
L43	N72°57'09"W	72.82'
L44	N67°10'32"W	34.77'
L45	N59°38'01"W	54.95'
L46	N52°05'31"W	34.77'
L47	N44°33'00"W	54.95'
L48	N37°00'30"W	34.77'
L49	N29°27'59"W	62.49'
L50	N77°32'03"W	26.09'
L51	S12°09'42"W	42.70'
L52	S09°13'54"W	66.10'
L53	S25°01'47"W	60.67'
L54	S41°04'13"W	85.40'
L55	S68°27'52"W	73.35'
L56	S72°25'17"W	53.05'
L57	S79°24'29"W	33.37'
L58	S86°03'40"W	53.76'
L59	N90°00'00"W	22.69'
L60	N86°50'03"W	55.94'
L61	N80°13'55"W	30.97'
L62	N72°41'24"W	54.95'
L63	N65°08'54"W	59.94'

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	94.00'	52.72'	S25°34'16"E	52.03'
C2	29.00'	45.55'	S86°38'14"E	41.01'
C3	91.00'	59.87'	S67°12'40"W	58.80'
C4	30.00'	41.74'	N46°12'13"E	38.45'
C5	63.49'	72.05'	N38°51'27"E	68.25'
C6	29.00'	39.47'	N32°22'35"E	36.49'
C7	29.00'	19.42'	N67°32'46"E	19.06'
C8	42.00'	22.54'	S78°34'10"E	22.27'
C9	42.00'	22.54'	N70°41'16"E	22.27'
C10	29.00'	19.42'	S22°27'14"E	19.06'
C11	78.00'	51.32'	N67°12'40"E	50.40'
C12	29.00'	8.92'	N49°27'26"W	8.88'
C13	29.00'	45.55'	N04°21'14"E	41.01'
C14	80.00'	51.25'	N67°42'23"E	50.38'
C15	59.26'	23.45'	N83°57'12"W	23.29'
C16	87.50'	57.57'	S67°12'40"W	56.54'
C17	29.00'	19.42'	S29°10'47"W	19.06'
C18	29.00'	15.08'	S27°21'05"E	14.91'
C19	49.00'	31.04'	N33°44'27"E	30.53'
C20	45.00'	23.93'	N38°47'39"W	23.65'
C21	45.00'	23.93'	N08°19'20"W	23.65'
C22	42.00'	22.54'	S74°37'43"W	22.27'
C23	42.00'	22.54'	N74°37'43"W	22.27'
C24	63.49'	6.73'	N46°59'37"W	6.73'
C25	29.00'	23.30'	N66°58'41"W	22.68'
C26	29.00'	14.98'	N74°54'34"W	14.81'
C27	18.00'	28.31'	S04°24'49"W	25.48'
C28	74.49'	45.77'	S31°52'13"W	45.06'
C29	18.00'	23.91'	S52°19'06"W	22.19'
C30	280.11'	59.09'	N08°24'09"E	58.98'
C31	29.00'	16.56'	S62°39'04"E	16.34'
C32	130.00'	36.59'	S78°53'30"E	36.47'
C33	320.00'	67.04'	N08°26'42"E	66.91'
C34	220.00'	18.47'	N33°05'02"W	18.47'
C35	220.00'	17.27'	N37°44'19"W	17.27'
C36	29.00'	39.81'	N00°39'45"W	36.76'
C37	80.00'	56.13'	S18°33'46"W	54.99'
C38	75.00'	17.07'	S56°01'39"W	17.03'

NOTE: LINE AND CURVE TABLES REPEATED ON SHEETS 2 THRU 5

DRAWN BY	DATE	REVISIONS
JD	09/29/16	REVISED PER CLIENT AND VILLAGE REVIEW
PJT	06/10/16	REVISED PER VILLAGE REVIEW

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VERNON HILLS, ILLINOIS
PRELIMINARY PLAT OF SUBDIVISION

PROJ MGR:	WH
PROJ ASSOC:	TJM
DRAWN BY:	PJT
DATE:	04/25/16
SCALE:	1"=50'

SHEET 4 OF 6
PULVH

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PRELIMINARY PLAT
OF
THE RESIDENCES AT CUNEO MANSION AND GARDENS

BEING A SUBDIVISION OF PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft

MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 4

OUTLOT J
306,282 S.F.

OUTLOT I
28,627 S.F.

OUTLOT H
37,629 S.F.

LOT 129
44.235 ACRES
LOYOLA AT CUNEO MANSION AND GARDENS

UNSUBDIVIDED

PERMAIAR FARMS UNIT 1 SUBDIVISION
RECORDED SEPTEMBER 10, 1957 AS DOCUMENT NUMBER 2964480

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

HOLLISTER DRIVE

STORMWATER MANAGEMENT AND PUBLIC UTILITY AND DRAINAGE EASEMENT

TAKEN FOR WIDENING OF MILWAUKEE AVENUE PER DOCUMENT NUMBER 4343140

UTILITY EASEMENT PER DOCUMENT NUMBER 4259922, 4425057 AND 4525545

15' SIDEWALK EASEMENT

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	94.00'	52.72'	S25°34'16"E	52.03'
C2	29.00'	45.55'	S86°38'14"E	41.01'
C3	91.00'	59.87'	S67°12'40"W	58.80'
C4	30.00'	41.74'	N46°12'13"E	38.45'
C5	63.49'	72.05'	N38°51'27"E	68.25'
C6	23.00'	39.47'	N32°22'35"E	36.49'
C7	29.00'	19.42'	N67°32'45"E	19.06'
C8	42.00'	22.54'	S78°34'10"E	22.27'
C9	42.00'	22.54'	N70°41'16"E	22.27'
C10	23.00'	19.42'	S22°27'14"E	19.06'
C11	78.00'	51.32'	N67°12'40"E	50.40'
C12	29.00'	8.92'	N49°27'26"W	8.85'
C13	29.00'	45.55'	N04°21'14"E	41.01'
C14	80.00'	51.25'	N67°42'23"E	50.38'
C15	59.26'	23.45'	N83°57'12"W	23.29'
C16	87.50'	57.57'	S67°12'40"W	56.54'
C17	29.00'	19.42'	S29°10'47"W	19.06'
C18	29.00'	15.08'	S27°21'05"E	14.91'
C19	49.00'	31.04'	N33°44'27"E	30.53'
C20	45.00'	23.93'	N38°47'39"W	23.65'
C21	45.00'	23.93'	N08°19'20"W	23.65'
C22	42.00'	22.54'	S74°37'43"W	22.27'
C23	42.00'	22.54'	N74°37'43"W	22.27'
C24	63.49'	6.73'	N46°59'37"W	6.73'
C25	29.00'	23.30'	N66°58'41"W	22.68'
C26	29.00'	14.98'	N74°54'34"W	14.81'
C27	18.00'	28.31'	S04°24'49"W	25.48'
C28	74.49'	45.77'	S31°52'13"W	45.06'
C29	18.00'	23.91'	S52°19'06"W	22.19'
C30	280.11'	59.09'	N08°24'09"E	58.98'
C31	29.00'	16.56'	S62°39'04"E	16.34'
C32	130.00'	36.59'	S78°53'30"E	36.47'
C33	320.00'	67.04'	N08°26'42"E	66.91'
C34	220.00'	18.47'	N33°05'02"W	18.47'
C35	220.00'	17.27'	N37°44'19"W	17.27'
C36	29.00'	39.81'	N00°39'45"W	36.76'
C37	80.00'	56.13'	S18°33'45"W	54.99'
C38	75.00'	17.07'	S56°01'39"W	17.03'

NOTE: LINE AND CURVE TABLES REPEATED ON SHEETS 2 THRU 5

LINE TABLE		
LINE	BEARING	LENGTH
L1	S41°38'13"E	11.56'
L2	S48°21'47"W	3.08'
L3	N86°03'33"E	10.04'
L4	N40°38'46"W	18.01'
L5	N49°21'14"E	19.73'
L6	N80°20'55"E	10.05'
L7	N48°21'47"E	21.70'
L8	S85°46'58"W	34.17'
L9	N88°15'16"W	10.05'
L10	S48°21'47"W	3.08'
L11	S41°38'13"E	34.29'
L12	N58°50'24"E	15.12'
L13	N00°49'33"W	24.77'
L14	N14°26'47"E	6.24'
L15	N14°26'47"E	6.24'
L16	N30°40'41"W	21.66'
L17	N90°00'00"W	16.48'
L18	S06°54'34"E	87.20'
L19	S01°43'29"E	20.82'
L20	S05°23'57"W	56.60'
L21	S12°31'23"W	35.36'

LINE TABLE		
LINE	BEARING	LENGTH
L22	S19°38'49"W	47.85'
L23	S39°28'40"E	69.94'
L24	S26°28'30"E	55.06'
L25	S13°28'19"E	61.26'
L26	S00°28'09"E	52.29'
L27	N23°59'24"W	63.95'
L28	N23°33'30"W	27.10'
L29	N10°51'20"W	61.14'
L30	N02°08'50"E	55.06'
L31	N15°09'01"E	61.26'
L32	N28°09'11"E	44.61'
L33	N38°15'19"W	24.01'
L34	S75°20'11"W	75.00'
L35	S73°11'43"W	15.79'
L36	S79°21'04"W	55.79'
L37	S85°23'02"W	31.74'
L38	N88°35'00"W	55.79'
L39	N82°25'38"W	32.15'
L40	N76°16'17"W	65.61'
L41	N16°46'00"E	15.03'
L42	N73°10'28"W	61.83'

LINE TABLE		
LINE	BEARING	LENGTH
L43	N72°57'09"W	72.82'
L44	N67°10'32"W	34.77'
L45	N59°38'01"W	54.95'
L46	N52°05'31"W	34.77'
L47	N44°33'00"W	54.95'
L48	N37°00'30"W	34.77'
L49	N29°27'59"W	62.49'
L50	N77°32'03"W	26.09'
L51	S12°09'42"W	42.70'
L52	S09°13'54"W	66.10'
L53	S25°01'47"W	60.67'
L54	S41°04'13"W	85.40'
L55	S68°27'52"W	73.35'
L56	S72°25'17"W	53.05'
L57	S79°24'29"W	33.37'
L58	S86°03'40"W	53.76'
L59	N90°00'00"W	22.69'
L60	N86°50'03"W	55.94'
L61	N80°13'55"W	30.97'
L62	N72°41'24"W	54.95'
L63	N65°08'54"W	59.94'

NOTE: LINE AND CURVE TABLES REPEATED ON SHEETS 2 THRU 5

DATE	REVISIONS	DRAWN BY
06/29/16	REVISED PER CLIENT AND VILLAGE REVIEW	JSD
09/16/16	REVISED PER VILLAGE REVIEW	PJT

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

THE RESIDENCES AT CUNEO MANSION AND GARDENS
VERNON HILLS, ILLINOIS
PRELIMINARY PLAT OF SUBDIVISION OF SUBDIVISION

PROJ MGR: WJH
PROJ ASSOC: TJH
DRAWN BY: PJT
DATE: 04/25/16
SCALE: 1"=50'

SHEET 5 OF 6

PULVH

PRELIMINARY PLAT
OF
THE RESIDENCES AT CUNEO MANSION AND GARDENS

BEING A SUBDIVISION OF PART OF SECTION 33, TOWNSHIP 44 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS.

OWNER'S CERTIFICATE

THIS IS TO CERTIFY THAT _____ IS THE LEGAL OWNER OF THE LAND DESCRIBED ON THE ATTACHED PLAT, AND HAS CAUSED THE SAME TO BE SURVEYED, SUBDIVIDED AND THE PLATTED AS SHOWN BY THE PLAT FOR THE USES AND PURPOSES INDICATED THEREON AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE THEREON INDICATED.

THIS IS TO ALSO CERTIFY THAT THE UNDERSIGNED, AS OWNER OF THE PROPERTY DESCRIBED AS THE RESIDENCES AT CUNEO MANSION AND GARDENS SUBDIVISION AND LEGALLY DESCRIBED ON THE PLAT OF THE SAME NAME, HAVE DETERMINED TO THE BEST OF OUR KNOWLEDGE THE SCHOOL DISTRICT IN WHICH EACH OF THE FOLLOWING LOTS LIE.

LOT NUMBER(S)	SCHOOL DISTRICT
ALL	GRADE SCHOOL DISTRICT NO. 7 HIGH SCHOOL DISTRICT NO. 128 JUNIOR COLLEGE DISTRICT – COLLEGE OF LAKE COUNTY

DATED THIS _____ DAY OF _____, A.D., 2016.

BY: _____

_____
PRINTED NAME AND TITLE

OWNER'S NAME AND ADDRESS

_____
_____
_____
_____

NOTARY PUBLIC

STATE OF _____)
) SS
COUNTY OF _____)

I, _____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT _____ WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS ANNEXED PLAT AS A FREE AND VOLUNTARY ACT FOR THE PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS ____ DAY OF _____, A.D., 2016.

_____
NOTARY PUBLIC

MORTGAGEE CONSENT

THE UNDERSIGNED, AS MORTGAGEE, UNDER THE PROVISIONS OF CERTAIN MORTGAGE DATED _____ AND RECORDED IN THE RECORDER'S OFFICE OF _____ COUNTY, ILLINOIS, ON THIS _____ DAY OF _____, A.D., _____ AS DOCUMENT NUMBER _____, HEREBY CONSENTS TO THE SUBDIVISION STATED HEREIN.

DATED: _____, A.D., 2016.

BY: _____

_____
PRINTED NAME AND TITLE

MORTGAGEE'S NAME AND ADDRESS

_____
_____
_____
_____

ATTEST: _____

_____
PRINTED NAME AND TITLE

MORTGAGEE NOTARY PUBLIC

STATE OF _____)
) SS
COUNTY OF _____)

I, _____, A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____ OF _____ WHO ARE PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS INSTRUMENT AS A FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES HEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS ____ DAY OF _____, A.D. 2016.

_____
NOTARY PUBLIC

DRAINAGE STATEMENT

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF THIS SUBDIVISION OR ANY PART THEREOF, OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS _____ DAY OF _____, A.D., 2016.

BY: _____
OWNER/ATTORNEY

_____
WILLIAM J. HUPPERICH P.E.
MANHARD CONSULTING, LTD.
900 WOODLANDS PARKWAY
VERNON HILLS, IL 60061

ILLINOIS DEPARTMENT OF TRANSPORTATION CERTIFICATE

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT TO PARAGRAPH 2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL BE REQUIRED BY THE DEPARTMENT.

_____ _____
JOHN A. FORTMANN, P.E. DATE
DEPUTY DIRECTOR OF HIGHWAYS,
REGION ONE ENGINEER

VILLAGE ENGINEER CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

THIS IS TO CERTIFY THAT I, _____, VILLAGE ENGINEER FOR THE VILLAGE OF VERNON HILLS, ILLINOIS, HAVE REVIEWED AND APPROVED THIS PLAT.

DATED THIS _____ DAY OF _____, A.D. 2016

_____
VILLAGE ENGINEER

VILLAGE PLANNING AND ZONING COMMISSION CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

APPROVED BY PLANNING COMMISSION OF THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS.

DATED THIS _____ DAY OF _____, A.D. 2016

BY: _____
CHAIRMAN

ATTEST: _____
SECRETARY

VILLAGE BOARD OF TRUSTEES CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

THIS IS TO CERTIFY THAT THE VILLAGE BOARD OF TRUSTEES OF THE VILLAGE OF VERNON HILLS, ILLINOIS, HAVE REVIEWED AND APPROVED THIS PLAT.

DATED AT VERNON HILLS, LAKE COUNTY, ILLINOIS, THIS ____ DAY OF _____, A.D. 2016.

_____
VILLAGE PRESIDENT

_____
PRINTED NAME

_____
VILLAGE CLERK

_____
PRINTED NAME

VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

I, _____, VILLAGE COLLECTOR FOR THE VILLAGE OF VERNON HILLS, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OF ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE NOT BEEN APPORTIONED AGAINST THE TRACT, INCLUDED IN THE PLAT.

DATED AT VERNON HILLS, LAKE COUNTY, ILLINOIS, THIS ____ DAY OF _____, A.D. 2016.

_____
VILLAGE COLLECTOR

COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
)S.S.
COUNTY OF LAKE)

I, _____, COUNTY CLERK OF LAKE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, UNPAID CURRENT GENERAL TAXES, DELINQUENT SPECIAL ASSESSMENTS OR UNPAID CURRENT SPECIAL ASSESSMENTS AGAINST ANY OF THE LAND INCLUDED IN THE DESCRIBED PROPERTY. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK OF LAKE COUNTY, ILLINOIS,

THIS_____ DAY OF _____, A.D., 2016.

_____
COUNTY CLERK, LAKE COUNTY, ILLINOIS

PUBLIC UTILITY EASEMENT PROVISIONS

AN EASEMENT IS HEREBY RESERVED AND GRANTED OVER AND UNDER THE PLATTED AREAS HEREON NOTED AS "PUBLIC UTILITY EASEMENT" AND THE PROPERTY DESIGNATED IN THE PLAT FOR STREETS TO THE VILLAGE OF VERNON HILLS, COMMONWEALTH EDISON COMPANY, NORTH SHORE GAS COMPANY, AT&T CORPORATION (F.K.A. SBC ILLINOIS), THE CABLE COMPANY FRANCHISED BY THE VILLAGE, AND TO LAKE COUNTY PUBLIC WORKS DEPARTMENT ("LCPWD") TO THE ABOVE SPECIFIED EASEMENTS, TOGETHER WITH THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, TO INSTALL, LAY, CONSTRUCT, RENEW, OPERATE AND MAINTAIN, CONDUITS, CABLES, WIRES, SEWERS, PIPES, SURFACE AND SUBSURFACE DRAINAGE, AND WATER MAINS, UNDERGROUND, WITH ALL NECESSARY MANHOLES, WATER VALVES AND OTHER EQUIPMENT FOR THE PURPOSE OF SERVING THE SAID REAL ESTATE WITH CABLE TELEVISION TRANSMISSIONS, SANITARY AND STORM SEWER, WATER SERVICE, DRAINAGE, AND OTHER MUNICIPAL SERVICES, ALSO THERE IS HEREBY GRANTED THE RIGHT TO ENTER UPON THE SAID REAL ESTATE AT ALL TIMES TO INSTALL, LAY, CONSTRUCT, RENEW, OPERATE AND MAINTAIN WITHIN THE SAID REAL ESTATE, SAID CONDUITS, CABLES, WIRES, MANHOLES, WATER VALVES, PIPES, SURFACE AND SUBSURFACE DRAINAGE, AND OTHER EQUIPMENT; THE RIGHT OF INGRESS AND EGRESS IS HEREBY GRANTED OVER, UPON AND THROUGH THE SAID REAL ESTATE OF EMERGENCY VEHICLES OF ANY AND ALL TYPES, FOR ANY PURPOSE WHATEVER, NO PERMANENT BUILDING SHALL HEREAFTER BE PLACED ON THE SAID EASEMENT BUT THE SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING AND SUCH OTHER PURPOSES THAT THEN AND LATER DO NOT UNREASONABLY INTERFERE WITH THE USES OR THE RIGHTS HEREIN GRANTED, HOWEVER NO PERSON SHALL CONSTRUCT OR MAINTAIN ANY LANDSCAPING MATERIALS, ON ANY EASEMENT THAT WOULD INTERFERE WITH SURFACE DRAINAGE OR WITH ANY STORMWATER FACILITY OF THE VILLAGE OF VERNON HILLS OR ANY OTHER RIGHT HEREIN GRANTED TO THE VILLAGE OF VERNON HILLS.
(NO OVERHEAD UTILITIES ARE PERMITTED)

DRAINAGE EASEMENT PROVISIONS

A NON-EXCLUSIVE EASEMENT IS HEREBY GRANTED TO THE VILLAGE OF VERNON HILLS AND TO THEIR SUCCESSORS AND ASSIGNS, TO HAVE THE RIGHT, BUT NOT THE DUTY TO INSTALL AND MAINTAIN SURFACE DRAINAGE, SUB-SURFACE DRAINAGE AND/OR STORM SEWERS, WITH ALL NECESSARY MANHOLES, CONNECTIONS, AND OTHER APPURTENANCES IN, UPON, OVER OR ALONG THE STRIPS OF LAND DESIGNATED ON THE PLAT AND MARKED "DRAINAGE EASEMENT" FOR THE PURPOSE OF PROVIDING, INSTALLING AND MAINTAINING SURFACE DRAINAGE, SUB-SURFACE DRAINAGE AND STORM SEWER SERVICE TO THE PUBLIC IN GENERAL, TOGETHER WITH THE RIGHT TO, BUT NOT THE DUTY ENTER UPON THE SAID EASEMENT AT ALL TIMES FOR ANY AND FOR ALL OF THE PURPOSES AFORESAID AND TO TRIM AND KEEP TRIMMED ANY TREES, SHRUBS, OR SAPLINGS THAT INTERFERE WITH ANY SUCH STORM SEWERS AND/OR DRAINAGE. NO PERMANENT BUILDINGS SHALL BE PLACED ON SAID EASEMENT, BUT MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, AND OTHER PURPOSES THAT DO NOT INTERFERE WITH THE USE OF SAID EASEMENT FOR DRAINAGE AND STORM SEWER PURPOSES INCLUDING ANY PURPOSES APPROVED BY THE VILLAGE OF VERNON HILLS WITH THIS DEVELOPMENT PLAN. THE VILLAGE OF VERNON HILLS SHALL HAVE AND BE ENTITLED TO A LEGALLY ENFORCEABLE LIEN FOR THE COST OF SUCH MAINTENANCE AND REPAIRS UPON EACH LOT WITHIN THE SUBDIVISION. THE PROPERTY OWNER'S ASSOCIATION, AND/OR OWNER OF EACH LOT ON A PRO-RATED BASIS, SHALL BE LIABLE FOR ANY AND ALL COSTS INCURRED IN ANY SUCH WORK AND/OR REPAIR. THE VILLAGE OF VERNON HILLS MAY RECOVER THE COST OF SUCH WORK AND/OR REPAIRS, BY THE FORECLOSURE OF ITS LIEN, AND SHALL ALSO BE ENTITLED TO RECOVER ITS COSTS AND ATTORNEY'S FEES. THE PERFORMANCE OF ANY WORK BY THE VILLAGE OF VERNON HILLS ON ANY SUBDIVISION PARCEL FOR WHICH AN EASEMENT IS GRANTED FOR "DRAINAGE EASEMENT PROVISIONS" OR OTHER PUBLIC PURPOSES SHALL NOT CONSTITUTE ACCEPTANCE OF SUCH AREAS AS PUBLIC PROPERTY NOR BE DEEMED TO BE A TACIT DEDICATION THEREOF."

STORMWATER MANAGEMENT EASEMENT PROVISIONS

IF THE VILLAGE OF VERNON HILLS DETERMINES THAT ANY OF THE STORM SEWERS AND AREAS SET ASIDE AS OR RESERVED FOR STORMWATER DETENTION/RETENTION, AND/OR IDENTIFIED AS SUCH BY EASEMENT ARE IN A STATE OF DISREPAIR OR HAVE BEEN ALTERED FROM THE ORIGINAL APPROVED ELEVATIONS, GRADES, SLOPES, SIZE OR GEOMETRY, THE VILLAGE OF VERNON HILLS SHALL HAVE THE RIGHT, BUT NOT THE DUTY TO ENTER UPON THE AFFECTED PROPERTY AND OVER, ONTO, OR ACROSS ANY LOT, TRACT, OR PARCEL OF LAND WITHIN THE SUBDIVISION, TO MAKE NECESSARY REPAIRS. THE VILLAGE OF VERNON HILLS SHALL HAVE AND BE ENTITLED TO A LEGALLY ENFORCEABLE LIEN FOR THE COST OF SUCH MAINTENANCE AND REPAIRS UPON EACH LOT WITHIN THE SUBDIVISION. THE PROPERTY OWNER'S ASSOCIATION, AND/OR OWNER OF EACH LOT ON A PRO-RATED BASIS, SHALL BE LIABLE FOR ANY AND ALL COSTS INCURRED IN ony SUCH WORK AND/OR REPAIR. THE VILLAGE OF VERNON HILLS MAY RECOVER THE COST OF SUCH WORK AND/OR REPAIRS, BY THE FORECLOSURE OF ITS LIEN, AND SHALL ALSO BE ENTITLED TO RECOVER ITS COSTS AND ATTORNEY'S FEES. THE PERFORMANCE OF ANY WORK BY THE VILLAGE OF VERNON HILLS ON ANY SUBDIVISION PARCEL FOR WHICH AN EASEMENT IS GRANTED FOR STORMWATER DETENTION OR RETENTION OR OTHER PUBLIC PURPOSES SHALL NOT CONSTITUTE ACCEPTANCE OF SUCH AREAS AS PUBLIC PROPERTY NOR BE DEEMED TO BE A TACIT DEDICATION THEREOF.

COMED AND AT&T (F.K.A. SBC ILLINOIS) EASEMENT PROVISIONS
COMED COMPANY,
AT&T CORPORATION (F.K.A. SBC ILLINOIS)

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO:

THEIR RESPECTIVE LICENSEES, SUCCESSORS, AND ASSIGNS, JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLES, GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES USED IN CONNECTION WITH AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY COMMUNICATIONS, SOUNDS AND SIGNALS IN, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION), THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN OR UPON THE PROPERTY WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION), WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH IN SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2, AS AMENDED FROM TIME TO TIME. THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCEL OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS SUCH AS "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", "COMMON GROUND", "PARKING" AND "COMMON AREA". THE TERM "COMMON AREA OR AREAS", AND "COMMON ELEMENTS" INCLUDES REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL OR RETENTION POND OR MECHANICAL EQUIPMENT. RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF GRANTOR/LOT OWNER, UPON WRITTEN REQUEST. (NO OVERHEAD UTILITIES ARE PERMITTED)

NORTH SHORE GAS EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH NATURAL GAS SERVICE IS HEREBY RESERVED FOR AND GRANTED TO NORTH SHORE GAS COMPANY THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, JOINTLY AND SEVERALLY, TO INSTALL, OPERATE, MAINTAIN AND REMOVE, FROM TIME TO TIME, FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DOTTED LINES ON THE PLAT AND MARKED "PUBLIC UTILITY EASEMENT", THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS A "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE DOTTED LINES MARKED "PUBLIC UTILITY EASEMENT" WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH IN SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2(E), AS AMENDED FROM TIME TO TIME. THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCEL OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS SUCH AS "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", "COMMON GROUND", "PARKING AND COMMON AREA". THE TERMS "COMMON AREA OR AREAS" AND "COMMON ELEMENTS" INCLUDES REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL OR RETENTION POND, OR MECHANICAL EQUIPMENT. RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

EASEMENT CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

THE APPROVING AUTHORITIES ON SIGNING THIS DOCUMENT HEREBY APPROVE AND ACCEPT THE UTILITY EASEMENTS SHOWN HEREON.

ACCEPTED: _____
COMMONWEALTH EDISON COMPANY

_____
PRINTED NAME AND TITLE

ACCEPTED: _____
NORTH-SHORE GAS COMPANY

_____
PRINTED NAME AND TITLE

ACCEPTED: _____
AT&T CORPORATION

_____
PRINTED NAME AND TITLE

ACCEPTED: _____
LAKE COUNTY PUBLIC WORKS DEPARTMENT (LCPWD)

_____
PRINTED NAME AND TITLE

PERMISSION TO RECORD

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

I, TWOTHY J. MURPHY, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HEREBY GRANT PERMISSION TO THE ANY REPRESENTATIVE OF THE VILLAGE OF VERNON HILLS TO RECORD THIS PLAT. THE REPRESENTATIVE SHALL PROVIDE THIS SURVEYOR WITH A RECORDED COPY OF THIS PLAT.

DATED THIS _____ DAY OF _____, A.D. 2016.

FOR REVIEW ONLY

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-002870
LICENSE EXPIRES NOVEMBER 30, 2016

TIMOTHY J. MURPHY ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2870 VERNON HILLS, ILLINOIS

SURVEYORS CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF LAKE)

THIS IS TO DECLARE THAT THE PROPERTY DESCRIBED HEREON WAS SURVEYED AND SUBDIVIDED BY MANHARD CONSULTING, LTD., UNDER THE SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION:

SUBDIVIDED PROPERTY CONTAINS 66.985 ACRES, MORE OR LESS AND ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

THIS IS ALSO TO DECLARE THAT THE PROPERTY AS DESCRIBED ON THE ANNEXED PLAT LIES WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF VERNON HILLS, LAKE COUNTY, ILLINOIS WHICH HAS ADOPTED A VILLAGE PLAN AND IS EXERCISING THE SPECIAL POWER AUTHORIZED BY 65 ILCS 5, SECTION 11-12-6.

5/8" DIAMETER BY 24" LONG IRON RODS WILL BE SET AT ALL SUBDIVISION CORNERS, LOT CORNERS, POINTS OF CURVATURE AND POINTS OF TANGENCY IN COMPLIANCE WITH ILLINOIS STATUTES AND APPLICABLE ORDINANCES, UNLESS OTHERWISE NOTED.

THIS IS ALSO TO DECLARE THAT THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM COMMUNITY PANEL NUMBER 17097C0252K WITH AN EFFECTIVE DATE OF SEPTEMBER 18, 2013 INDICATES THAT THE ABOVE DESCRIBED PROPERTY LIES WITHIN AREAS DESIGNATED AS ZONE X (UNSHADED), ZONE X (UNSHADED) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THESE MAPS DO NOT NECESSARILY SHOW ALL AREAS SUBJECT TO FLOODING IN THE COMMUNITY OR ALL PLANIMETRIC FEATURES OUTSIDE SPECIAL FLOOD HAZARD AREAS. THIS DOES NOT GUARANTEE THAT THE SURVEYED PROPERTY WILL OR WILL NOT FLOOD.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, A.D. 2016.

FOR REVIEW ONLY

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-002870
LICENSE EXPIRES NOVEMBER 30, 2016

DESIGN FIRM PROFESSIONAL REGISTRATION
NO. 184003350-EXPIRES APRIL 30, 2017

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A SUBDIVISION SURVEY.

TIMOTHY J. MURPHY ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2870 VERNON HILLS, ILLINOIS

DATE	DRAWN BY	REVISIONS
		JD
		PJT
09/29/16		REVISED PER CLIENT AND VILLAGE REVIEW
06/16/16		REVISED PER VILLAGE REVIEW

Manhard CONSULTING LTD
900 Woodlands Parkway, Vernon Hills, IL 60061 ph:847.634.0005 fx:847.634.0005 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

THE RESIDENCES AT CUNEO MANSION AND GARDENS
VERNON HILLS, ILLINOIS
PRELIMINARY PLAT OF SUBDIVISION

PROJ MGR:	WH
PROJ ASSOC:	TM
DRAWN BY:	PJT
DATE:	04/25/16
SCALE:	N/A

SHEET
6 OF 6
PULVH

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ORDINANCE 2017-014 Exhibit B9 Parking Lot and Access Drive Improvements prepared by Manhard Consulting Ltd with a revision date of 9/30/2016 and consisting of 8 pages

PULTE HOMES
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL. 60173

PRELIMINARY ENGINEERING PLANS
for

PARKING LOT AND ACCESS DRIVE IMPROVEMENTS

CUNEO MANSION AND MUSEUM
VILLAGE OF VERNON HILLS, ILLINOIS

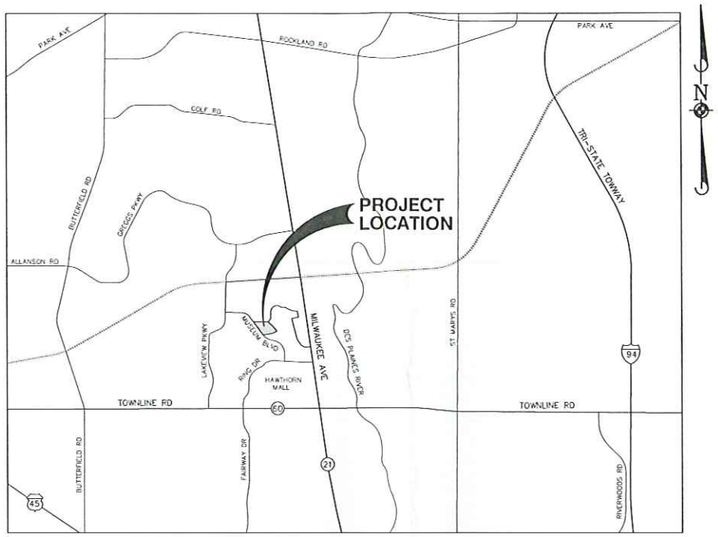
RECEIVED
OCT 10 2016
Community Development Department

STANDARD SYMBOLS

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	COMBINED SEWER	
FM	FORCEMAIN	FM
	DRAINTILE	
W	WATER MAIN	W
E	ELECTRIC	E
G	GAS	G
T	TELEPHONE	T
OH	OVERHEAD WIRES	OH
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	STORM INLET	
	CLEANOUT	
	HAY BALES	
	RIP RAP	
	VALVE IN VAULT	
	VALVE IN BOX	
	FIRE HYDRANT	
	BUFFALO BOX	
	FLARED END SECTION	
	STREET LIGHT	
S/D	SUMMIT / LOW POINT	S/D
795.23 / 790.33	RIM ELEVATION / INVERT ELEVATION	795.23 / 790.33
	DITCH OR SWALE	
	DIRECTION OF FLOW	
	OVERFLOW RELIEF SWALE	
764	1 FOOT CONTOURS	764
	CURB AND GUTTER	
	DEPRESSED CURB AND GUTTER	
	REVERSE CURB AND GUTTER	
	SIDEWALK	
	DETECTABLE WARNINGS	
	PROPERTY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	MAIL BOX	
	SIGN	
	TRAFFIC SIGNAL	
	POWER POLE	
	GUY WIRE	
	GAS VALVE	
	HANDHOLE	
	ELECTRICAL EQUIPMENT	
	TELEPHONE EQUIPMENT	
	CHAIN-LINK FENCE	
792.8	SPOT ELEVATION	792.8
	BRUSH/TREE LINE	
18"	DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TBR)	18"
25'	CONIFEROUS TREE WITH HEIGHT IN FEET (TBR)	25'
S	SILT FENCE	S
	RETAINING WALL	
	WETLAND	

ABBREVIATIONS

ADJ	ADJUST	F/L	FLOW LINE	R	RADIUS
AGG.	AGGREGATE	FM	FORCE MAIN	R.O.W.	RIGHT-OF-WAY
ARCH	ARCHITECT	G	GROUND	RCP	REINFORCED CONCRETE PIPE
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	GAS	GAS	REM	REMOVAL
B-B	BACK TO BACK	G/F	GRADE AT FOUNDATION	REV	REVERSE
B/C	BACK OF CURB	GW	GUY WIRE	RR	RAILROAD
B/P	BOTTOM OF PIPE	HDWL	HEADWALL	RT	RIGHT
B/W	BACK OF WALK	HH	HANDHOLE	SAN	SANITARY
B-BOX	BUFFALO BOX	HWL	HIGH WATER LEVEL	SF	SQUARE FOOT
BIT.	BITUMINOUS	HYD.	HYDRANT	SHLD.	SHOULDER
BM	BENCHMARK	INL	INLET	SL	STREET LIGHT
B.O.	BY OTHERS	INV.	INVERT	SMH	SANITARY MANHOLE
C.E.	COMMERCIAL ENTRANCE	IP	IRON PIPE	ST	STORM
CB	CATCH BASIN	LT	LEFT	STA.	STATION
CL	CENTERLINE	MAX.	MAXIMUM	STD	STANDARD
CMP	CORRUGATED METAL PIPE	MB	MAILBOX	SW	SIDEWALK
CNTRL	CONTROL	M/E	MEET EXISTING	SY	SQUARE YARDS
C.O.	CLEANOUT	MH	MANHOLE	TBR	TO BE REMOVED
CONC.	CONCRETE	MIN.	MINIMUM	T	TELEPHONE
CY	CUBIC YARD	NWL	NORMAL WATER LEVEL	T-A	TYPE A
D	DITCH	P.E.	PRIVATE ENTRANCE	T/C	TOP OF CURB
DIA.	DIAMETER	PC	POINT OF CURVATURE	T/F	TOP OF FOUNDATION
DIP	DUCTILE IRON PIPE	PCC	POINT OF COMPOUND CURVE	T/P	TOP OF PIPE
DIWM	DUCTILE IRON WATER MAIN	PGL	PROFILE GRADE LINE	T/W	TOP OF WALK
DS	DOWNSPOUT	PI	POINT OF INTERSECTION	T/WALL	TOP OF WALL
DT	DRAIN TILE	PL	PROPERTY LINE	TEMP	TEMPORARY
E	ELECTRIC	PP	POWER POLE	TRANS	TRANSFORMER
E-E	EDGE TO EDGE	PROP.	PROPOSED	V.B.	VALVE BOX
ELEV.	ELEVATION	PT	POINT OF TANGENCY	VCP	VITRIFIED CLAY PIPE
E/P	EDGE OF PAVEMENT	PVC	POLYVINYL CHLORIDE PIPE	V.V.	VALVE VAULT
EX.	EXISTING	PVC	POINT OF VERTICAL CURVATURE	WL	WATER LEVEL
F.E.	FIELD ENTRANCE	PVI	POINT OF VERTICAL INTERSECTION	WM	WATER MAIN
F-F	FACE TO FACE	PVT	POINT OF VERTICAL TANGENCY		
F.F.	FINISHED FLOOR	P	PAVEMENT		
FES	FLARED END SECTION	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT		



LOCATION MAP
N.T.S.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	PRELIMINARY SITE DIMENTIONAL AND PAVING PLAN
4	TRAFFIC CIRCULATION PLAN
5	PRELIMINARY GRADING PLAN
6	PRELIMINARY UTILITY PLAN
7	CONSTRUCTION DETAILS
8	CONSTRUCTION SPECIFICATIONS

BENCHMARKS:

REFERENCE BENCHMARK NO. 1:
NATIONAL GEODETIC SURVEY MONUMENT DESIGNATED AS LD013 (PID DM3891) FLANGE ENCASED STAINLESS STEEL ROD LOCATED APPROXIMATELY 7.0 FEET EAST OF THE EAST BACK OF CURB OF ILLINOIS ROUTE 21 (MILWAUKEE AVENUE), 89 FEET SOUTH OF THE SOUTH BACK OF CURB OF HOLLISTER DRIVE (SOUTHERLY LOCATION) AND 66 FEET WEST OF A POND WITH A FOUNTAIN.

ELEVATION = 670.23 (NAVD 88)

REFERENCE BENCHMARK NO. 2:
VILLAGE OF VERNON HILLS PRIMARY SURVEY CONTROL POINT NUMBER 102 CONCRETE MONUMENT AND BRASS CAP LOCATED BETWEEN THE NORTH BACK OF CURB OF ILLINOIS ROUTE 60 (TOWNLINE ROAD) AND THE SOUTH EDGE OF A CONCRETE SIDEWALK APPROXIMATELY 500 FEET EAST OF THE CENTERLINE OF BUTTERFIELD ROAD.

ELEVATION = 714.73 (NAVD 88)

SITE BENCHMARK NO. 1:
CUT SQUARE ON SOUTHEAST CORNER OF TRAFFIC SIGNAL MANHOLE LOCATED APPROXIMATELY 69 FEET EAST OF THE CENTERLINE OF MILWAUKEE AVENUE AND 7 FEET SOUTH OF THE CENTERLINE OF HOLLISTER DRIVE.

ELEVATION = 668.66

SITE BENCHMARK NO. 2:
CUT SQUARE ON EAST SIDE OF 6 FEET DIAMETER STORM SEWER GRATE LOCATED APPROXIMATELY 92 FEET SOUTH OF THE CENTERLINE OF THE ELGIN JOLIET EASTERN RAILWAY AND 120 FEET EAST OF THE CENTERLINE OF PINE LAKE CIRCLE (NEAR NORTHWEST CORNER OF PROPOSED DEVELOPMENT).

ELEVATION = 691.23

SITE BENCHMARK NO. 3:
SOUTHWEST BOLT ON RAILROAD WARNING LIGHT LOCATED APPROXIMATELY 36 FEET EAST OF THE CENTERLINE OF MILWAUKEE AVENUE AND 23 FEET SOUTH OF THE CENTERLINE OF THE ELGIN JOLIET EASTERN RAILWAY.

ELEVATION = 675.69

NOTES:

1. THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY MANHARD CONSULTING, LTD. ON FEBRUARY, 29TH, 2016. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.
2. CONTRACTOR TO NOTIFY LAKE COUNTY PUBLIC WORKS DEPARTMENT, 48 HOURS IN ADVANCE OF ANY PRECON, START OF CONSTRUCTION AND AS NECESSARY TO INSPECT THE WATERMAIN AND SANITARY SEWER INSTALLATION THROUGHOUT THE PROJECT.

Manhard CONSULTING LTD
900 Woodlands Parkway, Vernon Hills, IL 60061 ph:847.634.5550 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

UTILITY CONTACTS

ELECTRIC COMED X x (847)-816-5492 CONTACT:KATRINA TAYLOR	WATER LAKE COUNTY PUBLIC WORKS 650 W. WINCHESTER ROAD LIBERTYVILLE, IL 60061 (847)-377-7141 CONTACT:HEATHER GALAN
GAS NORTH SHORE GAS x (847)-263-4687 CONTACT: GERALD GLOGOVSKY (goglogovsky@northshorederiver.com)	TELEPHONE AT&T X (847)-759-5573 CONTACT: ANTHONY VELASQUEZ (av3143@att.com)
SEWER LAKE COUNTY PUBLIC WORKS 650 W. WINCHESTER ROAD LIBERTYVILLE, IL 60061 (847)-377-7141 CONTACT:HEATHER GALAN (hgalan@lakecountyil.gov)	CABLE COMCAST X (630)-288-1567 CONTACT: BRYANT TAYLOR (bryant_taylor@cable.comcast.net)

JULIE ILLINOIS ONE-CALL SYSTEM
Simply Call 811

MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

DATE	REVISIONS	DRAWN BY
8-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
9-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
TITLE SHEET

PROJ. MGR.: W.J.H.
PROJ. ASSOC.: C.S.
DRAWN BY: REH
DATE: 6-22-16
SCALE: N.T.S.

SHEET 1 OF 8

PULVH

SEAL

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MUSEUM BOULEVARD

REMOVE EX. FENCE

REMOVE EX. TREES AND UNDERBRUSH IN SIGHT LINE

FENCE, BUILDING & RETAINING WALLS (TO BE REMOVED)

CULVERT (TBR)

WM AND STRUCTURES (TO BE REMOVED)

SAWCUT, FULL DEPTH

CUNEO MANSION AND GARDENS

MUSEUM AND MANSION

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- SIDEWALK TO BE REMOVED
- AGGREGATE TO BE REMOVED
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
- TREE TO BE REMOVED
- (TBR) TO BE REMOVED

NOTE:
CONTRACTOR TO REMOVE BARBED WIRE FROM EXISTING CUNEO CHAIN LINK FENCE.

EXISTING CONDITIONS NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF FEBRUARY 26, 2016. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

DRAWN BY	REVISION	DATE
AS	REVISED PER VILLAGE REVIEW COMMENTS	9-30-16
AS	REVISED PER VILLAGE REVIEW COMMENTS	6-20-16

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
EXISTING CONDITIONS AND DEMOLITION PLAN

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: REH
DATE: 6-22-16
SCALE: 1"=40'

SHEET 2 OF 8
PULVH

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MUSEUM BOULEVARD

PROPOSED FENCE (REFER TO LANDSCAPE PLAN)

PROPOSED AUTOMATIC GATE WITH OPTICOM

SHED

WHEEL STOP, (TYP)

18 SP AT 9'=162'

18 SP AT 9'=162'

DETENTION BASIN
HWL 682.0
NWL 677.0

HWL 684.0
NWL 679.0

BOLLARD LIGHT (TYP)

STREET LIGHT (TYP)

5' CONCRETE SIDEWALK

MANSION GARDENS

POOL

MEET EX PAVEMENT ALONG SAWCUT LINE

5' CONCRETE SIDEWALK BY OTHERS

SWING SET

STONE WALK

DUNEO MANSION AND MUSEUM

3 SP AT 18'=54'

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

SITE DIMENSIONAL AND PAVING NOTES:

1. ALL DIMENSIONS ARE E/P TO E/P UNLESS NOTED OTHERWISE.
2. ALL PROPOSED CURB AND GUTTER SHALL BE M3.12 UNLESS OTHERWISE NOTED.
3. ALL CURB RADII SHALL BE 3' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
4. TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH 2-#6 BARS x 18" LONG DOWELED INTO EXISTING CURB.
5. LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
6. ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, SYMBOLS, ETC. SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL ENTITY DETAILS.
7. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
8. DEPRESS CURB & GUTTER AT ALL SIDEWALK AND PATH LOCATIONS FOR HANDICAP ACCESS PER FEDERAL AND STATE STANDARDS.
9. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.

SIGN LEGEND

① R1-1 STOP SIGN
② R7-8 HANDICAP PARKING SIGN
③ R5-1 DO NOT ENTER

PAVEMENT MARKING LEGEND

Ⓐ 24" WHITE STOP BAR
Ⓑ 4" YELLOW LINE
Ⓒ 4" YELLOW DIAGONAL AT 45° SPACED 2' O.C. W/ 4" YELLOW BORDER
Ⓓ LETTERS AND SYMBOLS PAVEMENT MARKINGS

SITE DATA

PARKING PROVIDED	72 SPACES
HANDICAP PROVIDED	4 SPACES
TOTAL PARKING	76 SPACE

PAVEMENT LEGEND

STANDARD DUTY PAVEMENT
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
2 1/4" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
8" AGGREGATE BASE COURSE, TYPE B

CONCRETE SIDEWALK
4" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF
4" COMPACTED AGGREGATE BASE, TYPE B

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

DATE	REVISIONS	DRAWN BY
9-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
8-29-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
PRELIMINARY SITE DIMENTIONAL AND PAVING PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	6-22-16
SCALE:	1"=40'

SHEET 3 OF 8

PULVH

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OUTLOT D
5,813 S.F.

OUTLOT I
28,627 S.F.

OUTLOT J
106,282 S.F.
7.031 AC.

OUTLOT H
87,629 S.F.

CUNEO GARDENS

CUNEO MANSION

PROPOSED ONE-WAY ACCESS ROAD

PROPOSED ONE-WAY ACCESS ROAD

EXISTING ONE-WAY ACCESS ROAD

MILWAUKEE BOULEVARD

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

N

GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

TRAFFIC DIRECTION LEGEND
- EXISTING DIRECTION OF TRAFFIC
- PROPOSED DIRECTION OF TRAFFIC

EMERGENCY ACCESS LEGEND
- EXISTING EMERGENCY ACCESS ROUTE
- PROPOSED EMERGENCY ACCESS ROUTE

DRAWN BY	DATE	REVISIONS
AS	8-30-16	REVISED PER VILLAGE REVIEW COMMENTS
AS	6-20-16	REVISED PER VILLAGE REVIEW COMMENTS

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
TRAFFIC CIRCULATION PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	C.S.
DATE:	6-22-16
SCALE:	1"=80'

SHEET 4 OF 8

PULVH

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MUSEUM BOULEVARD

SHED
F.F. 688.50

DETENTION BASIN
HWL 684.0
NWL 679.0

LIMITS OF EX. WETLANDS

EX. POND WATER LEVEL 674.4

EX. CUNEO MANSION GARDENS

MEET EX. GRADES ALONG SAWCUT LINE

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

TYPICAL DETENTION BASIN CROSS SECTION
N.T.S.

GRADING NOTES:

1. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
2. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
3. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
4. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
6. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
7. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
8. EXISTING TOPOGRAPHY SHOWN REFRESENTS SITE CONDITIONS AS PREPARED BY MANHARD CONSULTING, LTD. ON FEBRUARY 26, 2016 . CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.

DATE	REVISIONS	DRAWN BY
6-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
PRELIMINARY GRADING PLAN

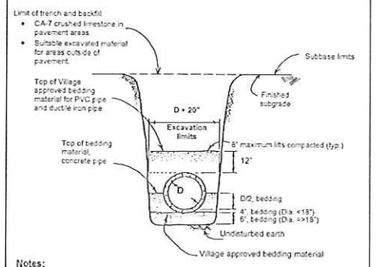
PROJ. MGR:	W.J.H.
PROJ. ASSOC:	C.S.
DRAWN BY:	REH
DATE:	6-22-16
SCALE:	1"=40'

SHEET 5 OF 8

PULVH

VILLAGE OF VERNON HILLS
EXHIBIT NO. 1

TYPICAL TRENCH BACKFILL AND STANDARD BEDDING

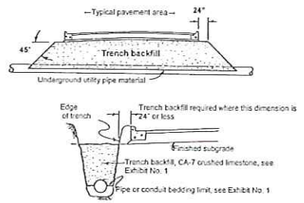


Notes:

1. Village approved bedding material for pipe shall be well compacted CA-7 crushed limestone aggregate.
2. Limits of trench width shall meet the requirements of the "Standard Specifications for Road and Bridge Construction, IDOT, current edition.
3. Voids left by sheeting shall be filled with standard bedding materials as the sheeting is removed.
4. Once final grading has been completed, all trenches within pavement shall be exposed to the top of the aggregate trenches. Additional trench and backfill shall be added, if necessary, before any subbase placement. Clay caps over trenches shall not be allowed.
5. Trench and backfill material for trenches not within the limits of pavement or two (2) foot outside the limit of pavement, may be backfilled with suitable excavated material from the trench. Frozen material shall not be considered acceptable. Each lift shall be compacted by mechanical means to the satisfaction of the Engineer.
6. Open holes shall be protected at all times.

VILLAGE OF VERNON HILLS
EXHIBIT NO. 2

TRENCH BACKFILL

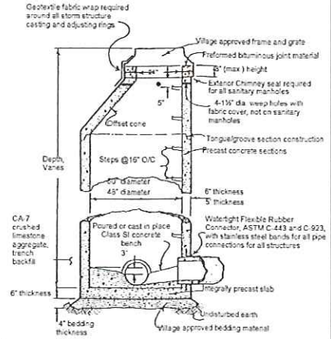


Notes:

1. Trench backfill shall conform to the provision of compaction of the "Standard Specifications for Road and Bridge Construction", latest edition, IDOT.
2. For instances where open cutting of an existing road for utility repairs has been allowed by the Village Engineer, the entire trench shall be backfilled with a controlled low-strength material in accordance with IDOT Section 593 for CLSM. Only one lift shall be allowed for backfilling.
3. All trench backfill areas shall be exposed after final subgrade has been approved within all pavement areas, including sidewalks and driveways. Additional aggregate trench backfill shall be added to bring the trenches up to final subgrade.

VILLAGE OF VERNON HILLS
EXHIBIT NO. 3

STANDARD MANHOLE

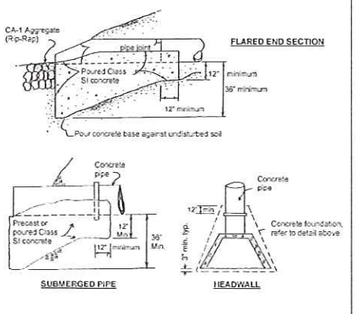


Notes:

1. For sewers twenty-four (2) inch or less in diameter, use forty-eight (48) inch manholes; for sewers more than twenty-four (24) in diameter, use sixty (60) manholes.
2. All structure sections shall be joined in tongue and groove method with a preformed bituminous joint sealer throughout the sealing surface.
3. All castings shall conform to the current Village approved casting list.
4. Trench backfill is required around all structures.

VILLAGE OF VERNON HILLS
EXHIBIT NO. 10

FOUNDATION DETAILS FOR HEADWALLS, SUBMERGED PIPES AND FLARED END SECTIONS

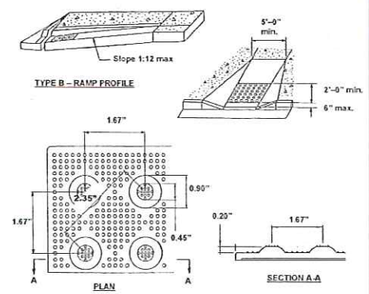


Notes:

1. Width of the foundation shall be minimum three (3) inches wider than the headwall, submerged pipe, or flared end section. The top of foundation shall extend half-way (1/2) up the side of the headwall, submerged pipe, or flared end section.
2. The bottom of the foundation shall rest on undisturbed earth. The bottom of the foundation shall be no less than three (3) feet deep at the open end of the headwall, pipe, or flared end section.
3. Grates are required for all flared end sections twelve (12) inches in diameter or greater.

VILLAGE OF VERNON HILLS
EXHIBIT NO. 30

SIDEWALK CURB RAMPS



NOTES:

1. **Precast Detectable Warnings Tile(s), Federal color 'Brick Red' minimum 2'-0" x 3'-0" dimension, submit for Village Engineer's approval.**
2. **This detail shall be used with Village Exhibit NO. 29.**
3. **Sidewalk ramps shall meet current Federal, State, ADAGG and Village Requirements.**

COUNTRYSIDE FIRE PROTECTION DISTRICT NOTES

1. Hydrants shall be appropriately marked based on the water flow available from them. The colors signify the capacity of the individual hydrant as tested. The Countryside Fire Protection District will conduct hydrant flow tests to determine the capacity. The color of the caps shall be as follows: Light Blue - 1,500 gpm or greater, Green - 1,000 to 1,499 gpm, Orange 500 - 999 gpm and Red - Less than 500 gpm. All hydrants shall have an identification flag which extends above the hydrant.
2. Hydrants shall have a discharge that is maintained at least 14 inches, but no more than 26 inches, from the surface from which the hydrant protrudes. No object shall be constructed, maintained or installed within 48 inches of a fire hydrant. These obstacles may hide or impede the use of the hydrant.
3. The contractor shall hydrostatically test underground piping with water at not less than 200 psi for 2 hours. Notify the Lake County Public Works Water Department 48 hours in advance so they can witness the test. Provide a certificate from the installing contractor that all underground mains have been inspected, hydrostatically tested and flushed.

DRAWN BY	DATE	REVISIONS
AS	- -	
AS	6–20–16	REVISED PER VILLAGE REVIEW COMMENTS
	6–30–16	REVISED PER VILLAGE REVIEW COMMENTS

Manhard CONSULTING LTD
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Civil Engineers • Land Surveyors • Water Resource Engineers • Structural Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
CONSTRUCTION DETAILS

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	6–22–16
SCALE:	N.T.S.

SHEET 7 OF 8

PULVH

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01-01-13

MANHARD CONSULTING, LTD.
STANDARD SPECIFICATIONS
GENERAL CONDITIONS

CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR'S covenants stated herein.

DEFINITION OF TERMS

a. "CLIENT" shall mean Pulte Home Corporation, which is the person or entity with whom Manhard Consulting, Ltd. has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.

b. "ENGINEER" shall mean Manhard Consulting, Ltd., a Civil Engineering consultant on the subject project.

c. "PLANS and SPECIFICATIONS" shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.

d. "CONTRACTOR" shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.

e. "JURISDICTIONAL GOVERNMENTAL ENTITY" shall mean any municipal, county, state or federal unit of government from whom an approval, permit and/or review is required for any aspect of the subject project.

INTENT OF THE PLANS AND SPECIFICATIONS

The intention of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify, labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinitely determined so as to include minor items obviously required as part of the work. The PLANS and SPECIFICATIONS require new material and equipment unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor component part. It is not intended, however, that materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied unless distinctly so noted. Materials or work described in words, which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

INTERPRETATION OF PLANS AND SPECIFICATIONS

a. The CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.

b. The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.

c. Should any discrepancies or conflicts on the PLANS or SPECIFICATIONS be discovered either prior to or after award of the contract, the ENGINEER'S attention shall be called to the same before the work is begun thereon and the proper corrections made. Neither the CLIENT nor the CONTRACTOR may take advantage of any error or omissions in the PLANS and SPECIFICATIONS. The ENGINEER will provide information when errors or omissions are discovered.

GOVERNING BODIES

All works herein proposed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, and all such pertinent laws, directives, ordinances and the like shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, the CLIENT and/or the CONTRACTOR shall immediately notify the ENGINEER in writing.

LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, storm sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and elevation of such facilities and utilities. At the locations wherein detailed positions of these facilities and utilities become necessary to the new construction, including all points of connection, the CONTRACTOR shall furnish all labor and tools to verify, or definitely establish the horizontal location, elevation, size and material (if appropriate) of the facilities and utilities. The CONTRACTOR shall notify the ENGINEER at least 48 hours prior to construction if any discrepancies in existing utility information or conflicts with existing utilities exist. The ENGINEER assumes no responsibility whatever with respect to the sufficiency or accuracy of the information shown on the PLANS and SPECIFICATIONS relative to the location of underground facilities and utilities, nor the manner in which they are removed or adjusted.

It shall be the CONTRACTOR'S responsibility prior to construction, to notify all Utility Companies of the intentions to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

UNSUITABLE SOILS

The PLANS have been prepared by the ENGINEER based on the assumption that all soils on the project are suitable to support the proposed improvements shown. The CLIENT or CONTRACTOR shall immediately notify the ENGINEER if he discovers or encounters an obstruction that prevents the installation of the improvement according to the line and grades shown on the PLANS.

PROTECTION OF TREES

All trees that are not to be removed shall be protected from damage.

NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

The CONTRACTOR shall notify all applicable Jurisdictional Governmental Entities or utility companies, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the location and elevation of underground pipes, conduits or cables adjoining or crossing proposed construction.

TRAFFIC CONTROL

The CONTRACTOR shall provide when required by any JURISDICTIONAL GOVERNMENTAL ENTITY, all signs, equipment, and personnel necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. The CLIENT may, at his discretion, require the CONTRACTOR to furnish traffic control under these or other circumstances where in his opinion it is necessary for the protection of life and property. Emergency vehicle access shall be maintained at all times. Unless authorized by the CLIENT or CLIENT'S construction representative, all existing access points shall be maintained at all times by the CONTRACTOR. The need for traffic control shall be anticipated by the CLIENT.

WORK AREA

The CONTRACTOR, his agents and employees and their employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project or work area specified by the Client. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

UTILITY POLES

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

RESTORATION

It is the intent of these SPECIFICATIONS that clean-up and final restoration shall be performed immediately upon completion of each phase of the work, both inside and outside the Project, or when so directed by the CLIENT so that these areas will be restored as nearly as possible to their original condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drain tiles, water mains, etc.

CLEANING UP

The CONTRACTOR shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish, tools, scaffolding and surplus materials and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

ROAD CLEANING

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR'S trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall immediately remove said mud and/or debris.

SAFETY AND PROTECTION

The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss, and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR'S duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable. The duties of the ENGINEER do not include review of the adequacy of either the CONTRACTOR'S or the general public's safety in, on, or near the construction site.

HOLD HARMLESS

To the fullest extent permitted by law, any CONTRACTOR, material supplier or other entity by use of these plans and specifications hereby waives any right of contribution and agrees to indemnify, defend, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all manner of claims, causes, causes of action, damages, losses and expenses, including but not limited to, attorneys' fees arising out of, resulting from or in connection with the performance of any work, pursuant to or with respect to these plans and specifications. However, this indemnity shall not be construed to indemnify ENGINEER, its consultants, agents or employees against its own negligence.

Claims, damages, losses and expenses as these words are used in the Agreement shall mean and include, but not be limited to (1) injury or damage occurring by reason of the failure of or use or misuse of any hoist, riggings, blocking, scaffolding or any and all other kinds of items of equipment, whether or not the same be owned, furnished or loaned by any part or entity, including any contractor; (2) all attorneys' fees and costs incurred in bringing an action to enforce the provisions of this indemnity; (3) costs for time expended by the indemnified party and its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or any of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts or any insurance maintained by CONTRACTOR or any Subcontractor or any other party.

INSURANCE

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, (prior to commencing any work) general public liability insurance insuring against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and its consultants, agents and representatives as additional insureds under such insurance policy, provided that any party using or relying on these plans having obligations to maintain specific insurance by reason of any agreement with CLIENT or any CONTRACTOR or ENGINEER shall provide evidence and certificates of insurance as required by such contract or agreement. Such insurance must contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEER'S other applicable coverage is considered secondary. Such insurance shall not limit any liability of any party providing work or services or providing materials.

THIRD PARTY BENEFICIARY

Manhard Consulting, Ltd., the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement.

DETAILED SPECIFICATIONS

I. DEMOLITION

A. CONTRACTOR shall perform all demolition work in accordance with all applicable Federal, State and local requirements.

B. The CONTRACTOR is responsible for demolition, removal and disposal (in a location approved by all JURISDICTIONAL GOVERNING ENTITIES) of all structures, pads, walls, flumes, foundations, road, parking lots, drives, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All facilities to be removed shall be underout to suitable material and brought to grade with suitable compacted fill material per the specifications.

C. The CONTRACTOR is responsible for removing all debris from the site and disposing the debris in a lawful manner.

D. The CONTRACTOR shall coordinate all demolition with the JURISDICTIONAL GOVERNING ENTITY and CLIENT to ensure protection and maintenance of sanitary sewer and water utilities as necessary and to provide stormwater conveyance until new facilities are constructed, tested and placed into operation.

E. The locations of all existing utilities shown on this plan have been determined from the best information available and are given for the convenience of the CONTRACTOR and are not to be interpreted as the exact location, or as the only obstacles that may occur on the site. The ENGINEER assumes no responsibility for their accuracy. Prior to the start of any demolition activity, the CONTRACTOR shall notify the utility companies for location of existing utilities and shall verify existing conditions and proceed with caution around any anticipated features.

F. CONTRACTOR must protect the public at all times with fencing, barricades, enclosures, and other appropriate best management practices.

G. Prior to demolition occurring, all erosion control devices are to be installed.

H. CONTRACTOR shall develop and implement a daily program of dust control and shall submit and obtain JURISDICTIONAL GOVERNING ENTITY approval of dust control procedures prior to demolition of any structures. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

I. The CONTRACTOR is responsible for obtaining all permits required for demolition and approval.

J. The CONTRACTOR shall coordinate with respective utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company concerning portions of work which may be performed by the Utility Company's forces and any fees which are to be paid to the utility company for their services. The CONTRACTOR is responsible for paying for all fees and charges.

K. Electrical, telephone, cable, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company.

L. Any material containing asbestos found within existing structures shall be removed from the site and disposed of off-site by the CONTRACTOR in accordance with County, State and Federal regulations.

M. Voids left by any item removed under any proposed building, pavement, walk, etc. or within 24" therof shall be filled and compacted with suitable materials by the CONTRACTOR.

N. All fire access lanes within the project area shall remain in service, clean of debris, and accessible for use by emergency vehicles.

O. Any existing wells encountered shall be exposed and sealed 3' below proposed finish grade by the CONTRACTOR in accordance with Section 920.120 (latest edition) of the Illinois Water Well Construction Code, Department of Public Health, and all applicable local rules and regulations.

P. Any existing septic tanks and grease traps encountered shall have all liquids and solids removed and disposed of by a licensed commercial hauler in accordance with JURISDICTIONAL GOVERNING ENTITY regulations, and the tank and grease traps shall then be filled with suitable materials or removed from the site and disposed of by the CONTRACTOR.

Q. The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings.

R. Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials designed to be relocated on this plan, all other construction materials shall be new.

S. CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc. clear and free from any construction activity and/or material to ensure easy and safe pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate/phase all construction activity within proximity of the building and utility interruptions with the facility manager to minimize disturbance and inconvenience to facility operations.

T. The CONTRACTOR shall coordinate water main work with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to plan the proposed improvements and to ensure adequate fire protection is constantly available to the facility and site throughout this specific work and through all phases of construction. CONTRACTOR shall be responsible for arranging/providing any required water main shut offs with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

II. EARTHWORK

A. STANDARDS

This work shall be completed in conformance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition except as modified below.

B. SOIL BORING DATA

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different then indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

C. EARTHWORK CALCULATIONS AND CROSS SECTIONS

The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are provided without any guarantee by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own subsurface investigations as necessary and his own calculations and cross sections to determine site soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction to tolerances and construction methods that are beyond the control of the ENGINEER.

D. CLEARING, GRUBBING AND TREE REMOVAL

The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

E. TOPSOIL STRIPPING

Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

F. TOPSOIL RESPREAD

Upon completion of roadway and/or parking lot improvements and installation of underground utilities a minimum of four inches (4") of topsoil shall be respread over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

G. SEEDING

Upon completion of topsoil respread, the CONTRACTOR shall apply seed and fertilizer to all respread areas in accordance with IDOT standards or as designated on landscape drawings and specifications provided by the CLIENT.

H. SODDING

Upon completion of topsoil respread, the CONTRACTOR shall install sod to all areas designated on the plans or as designated on the landscape drawings and specifications provided by the CLIENT.

I. EXCAVATION AND EMBANKMENT

Upon completion of topsoil stripping, all excavation and embankments shall be completed as shown on the PLANS. All suitable excavated materials shall be hauled, placed (moisture conditioned if necessary) and compacted in the embankment areas. The CONTRACTOR shall include all filtered dewatering, temporary ditching and culverts necessary to complete the excavation and embankment.

Specifically included in the scope of Excavation and Embankments is grading and shaping of all cut or fill areas including swales and ditches; handling of sewer spoil, etc., and all work required to provide positive drainage at the end of each working day and upon completion of a section.

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filling of the roads, building pads and parking lots with the work limits to lines & grades shown on the plans. He shall be responsible for obtaining compaction in accordance with the minimum values listed in the table below for all embankments unless more stringent values are listed in the soil's report, and to use any method approved by the CLIENT necessary to obtain this compaction (i.e., soil fabric or any undercutting that may be required).

Type Material	Percent Compaction Standard	Pavement & Floor Slabs	Grass Areas
Sandy Soils	Modified Proctor	95%	90%
Clayey Soils	Standard Proctor	95%	90%

unless approved otherwise in the soils report or by the CLIENT.

The CONTRACTOR shall notify the CLIENT if proper compaction cannot be obtained so that the CLIENT may determine what remedial measures may be needed.

A soils testing firm employed by the CLIENT shall determine which soils are unsuitable. Materials in their natural state being defined as unsuitable that would be suitable material if moisture conditioned, shall be conditioned by the CONTRACTOR and used as suitable embankment material or hauled from the site.

For purposes of definition, unsuitable material shall be as follows unless determined otherwise by the Soils Engineer:

1. Any soil whose optimum moisture content exceeds 25%.
2. Any cohesive soil with an unconfined compressive strength of 1.5 tons per square foot or less.
3. Any soil whose silt content exceeds 60% by weight.
4. Any soil whose maximum density is less than 100 pounds per cubic foot.
5. Any soil containing organic, deleterious, or hazardous material.

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the subgrade and replaced with an impermeable clay liner, including adjacent to and under storm sewer inlets and outlets. It is the intent of these PLANS and SPECIFICATIONS that the CONTRACTOR shall prepare the lake bottoms, side slopes, and compaction thereof so that the lakes will maintain the proposed normal water level and that leakage does not exceed ¼ inch per week.

Ditches and swales are to be excavated to the lines and grades indicated on the PLANS. All suitable materials excavated from the ditches shall be used in construction of the embankments.

The CONTRACTOR shall notify the CLIENT immediately upon encountering groundwater during excavation. If in the opinion of the CLIENT or the JURISDICTIONAL GOVERNING ENTITY the condition necessitates the installation of perforated drain tile bedded in washed gravel or open storm sewer joints wrapped with fabric, the CONTRACTOR shall install the same.

During excavation and embankment, grades may be adjusted to provide an overall site earthwork balance. The CONTRACTOR shall cooperate fully with the CLIENT in adjustment of grades, construction methods and placement of material to meet the above goals and shall immediately advise CLIENT if he believes that the earthwork will not balance.

It is the intent of these PLANS that storm waters falling on the site be diverted to sedimentation control devices and into the detention basins during construction. The CONTRACTOR shall construct and maintain any temporary ditches or swales that are necessary to accomplish this prior to beginning mass excavation.

J. EROSION CONTROL

Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual, Lake County Stormwater Management Commission, Village of Vernon Hills and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

K. UNDERCUTTING DURING EARTHWORK

If the subgrade cannot be dried adequately by discing as outlined above for placement of material to planned grades and if the Geotech, Village Engineer, and CLIENT determines that the subgrade does not meet the standards set forth by the Village of Vernon Hills Ordinances, undercutting may be required.

L. MISCELLANEOUS CONTRACT ITEMS

The following items may be required at the CLIENT's option, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY.

(1) GEOTEXTILE FABRIC

Geotextile fabric or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY where proper compaction of embankments over existing soft soils is not possible. Geotextile fabric shall meet the material specifications of and shall be installed in accordance with the above standards.

(2) EROSION CONTROL BLANKET

Erosion control blanket or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY for the stabilization of disturbed areas. Erosion control blanket shall meet the material specifications of and shall be installed in accordance with the above standards, the Illinois Urban Manual and/or the details shown on the PLANS.

III. UNDERGROUND IMPROVEMENTS

A. GENERAL

STANDARDS

All underground improvements shall be constructed and tested in accordance with the Village of Vernon Hills and Lake County Department of Public Works Departments, the Standard Specifications for Water and Sewer Construction in Illinois and Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition. In the event of conflicting guidelines, the more restrictive shall govern.

TRENCH BACKFILL

Trench Backfill shall conform to Village Exhibits NO. 1 and 2.

MANHOLES, CATCH BASIN, INLETS & VALVE VAULTS

All Manholes, Catch Basins, Inlets, and Valve Vaults shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with the latest revision of ASTM designation C-478. All joints between sections and frames (except sanitary manholes, see Section IIB Manholes, below) shall be sealed with a continuous preformed bituminous butyl rope material. Manholes shall have offset cones except that no cone shall be used on storm manholes 6'-0" deep or less in which case a reinforced concrete flat top section shall be used, and Valve Vaults shall have concentric cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 8" in height. All manholes and catch basin steps shall be copolymer polypropylene with continuous ½" steel reinforcement as manufactured by MA Industries, or approved equal.

*** AUGER/BORING AND CASING** - INTENTIONALLY DELETED

*** AUGER (OPEN BORE)** - INTENTIONALLY DELETED

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

Horizontal and vertical separation of water and sewer mains shall be in accordance with Standard Specifications for Water and Sewer Construction in Illinois Section 41-2.01A and 41-2.01B and Standard Drawing 18, 19, 20, 21, 22, 23 and 24.

STRUCTURE ADJUSTMENTS

Structures shall be adjusted to the finished grade as shown on PLANS.

B.* SANITARY SEWERS AND APPURTENANCES - INTENTIONALLY DELETED

C.* WATER MAINS AND APPURTENANCES - INTENTIONALLY DELETED

D. STORM SEWERS AND APPURTENANCES

STORM SEWER PIPE

Storm sewer pipe shall conform to the following:

(1) Reinforced concrete pipe minimum Class IV, 12 inch diameter, in conformance with the latest revision of ASTM designation C76 with C361 or C443 flexible gasket joints, except that bituminous mastic joints may be used in grass areas.

(2) Polyvinyl Chloride (PVC) Pipe: ASTM D3034 (4 inch thru 15-inch) or ASTM F679 (18-inch thru 36-inch), rated SDR 26, continually marked with manufacturer's name, pipe size, cell classification, SCR rating. Joints shall be flexible elastomeric seals conforming to ASTM D3212.

Storm sewers may be constructed with reinforced concrete pipe using only flexible gasket joints (ASTM 361 or 443) for water main crossings.

Storm sewer shall include bedding and trench backfill.

MANHOLES, INLETS & CATCH BASINS

Manholes, Inlets and Catch Basins shall be constructed in conformance with Section IIIA Manholes, etc. above. The space between connecting pipes and the wall of the manhole shall be completely filled with non-shrink hydraulic cement mortar. Frames and lids shall be Neenah or Village approved equal unless specified otherwise on the PLANS. All frames and grates shall be provided such that the flange fully covers the opening plus 2" of the structure as a minimum. * Provide "**Vane**" Type frame & grate for all structures located in curb where gradient exceeds 2.0%. Manholes shall include step, frame & grate, bedding and trench backfill.

FLARED END SECTION AND HEADWALLS

Flared end sections and headwalls shall be pre-cast reinforced concrete per the Illinois Department of Transportation and the Village of Vernon Hills standards, and shall be installed where shown on the PLANS. All flared end sections and headwalls shall include a poured concrete base. See Village Exhibit NO. 10. All flared end sections and headwalls shall be installed with galvanized grate, securely attached.

RIP RAP

Stone rip rap consisting of pieces of "A" quality stone 4" to 8" in diameter shall be furnished and installed in accordance with IDOT Specifications and shall be placed where shown on the plans, to a minimum thickness of 12" and a width as indicated on the plans. Broken concrete or concrete blocks will not be acceptable.

*** FOUNDATION, BEDDING AND HAUNCHING**

SEE VILLAGE EXHIBITS NO. 1 AND NO. 2.

UNDERDRAINS

Pipe underdrains and fittings shall be Polyvinyl Chloride (PVC) pipe: ASTM D3034, rated SDR 26, perforated and wrapped in a soil filter fabric. Installation shall conform to the Village of Vernon Hills Exhibit NO. 11. All PVC pipe shall connect to concrete pipe and/or structures shall be cored and boot installed per Village Exhibit NO. 43. Trench Backfill shall be in accordance to Village Exhibits NO. 1 and 2.

MISCELLANEOUS

(1) All existing field drainage tile or storm sewers encountered or damaged during construction shall either be restored to their original condition, properly rerouted and/or connected to the storm sewer system.

(2) Footing drains shall be connected to sump pumps or discharged directly into storm sewers. Footing drains or drainage tile shall not be connected to the sanitary sewer.

CONNECTION FOR STORM SERVICE TO STORM MAIN

Connections of storm sewer services to storm sewer mains should be made with manufactured tees when available. Availability of manufactured tees will be a function of the storm sewer material and pipe diameter size of the service sewer and main. If manufactured tees are not reasonably available, connections should be made in accordance with manufacturer's recommendations for all storm sewer other than concrete pipe. For concrete pipe connections without manufactured tees the storm sewer main shall be machine cored and the service sewer connected using non-shrink grout for the void between pipes. The service sewer shall be cut flush with the inside wall of the sewer main and not extend into the inside flow area of the main or otherwise impede flow.

D. ROADWAY AND PARKING LOT IMPROVEMENTS

STANDARDS

Work shall be completed in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition (hereinafter referred to collectively as the "Standard Specifications") except as modified below and except that payment will be defined as detailed in the contract documents between the CLIENT and the CONTRACTOR. Supplementing the Standard Specifications shall be the applicable sections of the latest editions of the "Supplemental Specifications and Recurring Special Provisions", the "Manual on Uniform Traffic Control Devices for Streets and Highways" and the Illinois Supplement thereto, (hereinafter referred to collectively as the "MUTCD"). Any references to "ENGINEER" in the "Standard Specifications" shall be interpreted as the CLIENT or CLIENT's Construction Representative.

SUBGRADE PREPARATION

The CONTRACTOR shall be responsible for all subgrade completion and preparation to the lines and grades shown on the plans.

***AGGREGATE BASE COURSE TYPE 'B'**

Aggregate Base Course Type B shall be constructed using CA-6. Aggregate base courses shall be proof rolled as outlined below.

***PROOF ROLL**

The CONTRACTOR shall provide a proof-roll for all subgrade, subbase, and prior to placement of the final surface course. Proof-rolling shall conform to the Village of Vernon Hills Code of Ordinance Appendix B - Development Regulations Section H - Streets and Pavements. The CLIENT and JURISDICTIONAL GOVERNING ENTITY shall be present for all proof-rolling. In any case of deficiency, the subgrade and/or base course shall be repaired and retested and approved before proceeding with the pavement construction.

***HOT-MIX ASPHALT BASE COURSE** - INTENTIONALLY DELETED

HOT-MIX ASPHALT BINDER AND SURFACE COURSE

HMA binder and surface courses, shall be constructed to the compacted thickness as shown on the PLANS. The base course shall be cleaned and primed in accordance with the JURISDICTIONAL GOVERNING ENTITY. The surface course shall be placed after the base course has gone through one winter season, or as directed by the CLIENT. Before applying the surface course, the binder course shall be thoroughly cleaned and primed in accordance with the JURISDICTIONAL GOVERNING ENTITY. Prior to the placement of the surface course, the JURISDICTIONAL GOVERNING ENTITY shall examine the completed pavement, including curb and gutter, and all failures shall be corrected by the CONTRACTOR.

CONCRETE PAVEMENTS

Concrete pavements shall be constructed in accordance with American Concrete Institute Standard ACI330R-08 and as shown on the PLANS.

Slabs and driveway aprons shall be constructed with 6" x 6" - W2.9 x W2.9 welded wire fabric positioned on steel chair supports. Placing fabric during the concrete pouring operation will not be allowed.

Sawing of joints shall commence as soon as the concrete has cured and hardened sufficiently to permit sawing without excessive raveling, but no later than eight hours after the concrete has been placed. All joints shall be sawed to the depth as shown in the details and before uncontrolled shrinkage cracking take place. If necessary, the sawing operation shall occur during the day or at night, regardless of weekends, holidays or weather conditions. The CONTRACTOR shall be aware of jurisdictional noise ordinances and holiday restrictions for scheduling purposes.

The CONTRACTOR is responsible to guard fresh concrete until it sets and hardens sufficiently to prevent people from writing, walking, riding bicycles or otherwise permanently marking, defacing or causing depressions of any type in the concrete. Any concrete so marked will be removed and replaced by the CONTRACTOR at the CONTRACTOR'S expense.

The CONTRACTOR shall protect the pavement against all traffic, including that of their own employees or other workers, until test specimens have attained the specified strength.

***SIDEWALKS**

Concrete sidewalks shall be constructed to width and thickness as shown on the PLANS. Sidewalks shall be thickened to a minimum of 6" at all driveways. All sidewalks shall be IDOT Class SI concrete, on 4 inches compacted CA-6 aggregate. A ½-inch preformed bituminous expansion joint with dowels shall be provided per Village Exhibits NO. 29 and 30, including where sidewalk abuts curb and gutter and existing sidewalk.

CURB AND GUTTER

Curb and gutter shall be as per the detail shown on the PLANS, which shall include compacted aggregate base course under the curb and gutter. All contraction and expansion joints shall be constructed as per the detail.

CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT

The CONTRACTOR shall saw-cut and remove the existing concrete curb where shown on the PLANS and install a curb of similar cross section and pavement to that removed (or depressed curb and gutter if shown on the PLANS). Upon completion of the curb and gutter any voids between the existing pavement and the new curb shall be filled with concrete to within 2" of the final surface, which is to be filled with bituminous pavement. The area behind the curb shall be filled and compacted with embankment material within 6" of the top of the new curb. The CONTRACTOR shall then restore the remaining 6" to its original condition (i.e., sod, gravel, topsoil). Where proposed curb connects to an existing curb, the existing curb shall be saw-cut and trim two 18" long x ¾" (#3) dowel bars shall be drilled and installed 9" into the existing and proposed curb. Bars shall be installed in a location similar to the expansion joint in the curb.

FRAME ADJUSTMENTS

The road contractor shall be responsible for making final adjustments and the setting on a bituminous mastic jointing compound all castings located in the roadway, sidewalks, and parking areas prior to construction of any curbing, sidewalk, or final surface. Any structures that needs to be lowered, or raised in excess of 4" shall be completed and the work backcharged against the underground contractor. This Contractor shall also be responsible for cleaning all of the above structures immediately upon completion of his phase of work. This work shall be incidental to the cost of the pavement.

PAVEMENT MARKING - PAINT

The CONTRACTOR shall furnish and apply painted marking lines, letters & symbols of the patterns, sizes and colors where shown on the PLANS. Paint pavement marking shall be applied in accordance with the IDOT Standard Specifications.

*** PAVEMENT MARKING - THERMOPLASTIC** - INTENTIONALLY DELETED

QUALITY CONTROL

The CONTRACTOR shall provide all testing necessary to ensure improvements are in accordance with the project specifications and provide testing documentation that specifications were met.

***AS-BUILT RECORD DRAWINGS**

Upon completion of the site improvements and prior to the placement of the final surface course, AS-Built Record Drawings shall be submitted to the JURISDICTIONAL GOVERNING ENTITY. Drawings shall be prepared by the Design Engineer and meet the requirements of the Village of Vernon Hills Code of Ordinance Appendix B - Development Regulations Section P - As-Built Record Drawings.

DRAWN BY	DATE	REVISIONS
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
AS	6-30-16	REVISED PER VILLAGE REVIEW COMMENTS
AS	6-20-16	REVISED PER VILLAGE REVIEW COMMENTS

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
CONSTRUCTION SPECIFICATIONS

PROJ MGR.	W.J.H.
PROJ ASSOC.	C.S.
DRAWN BY	REH
DATE	6-22-16
SCALE	N.T.S.

SHEET 8 OF 8

PULVH

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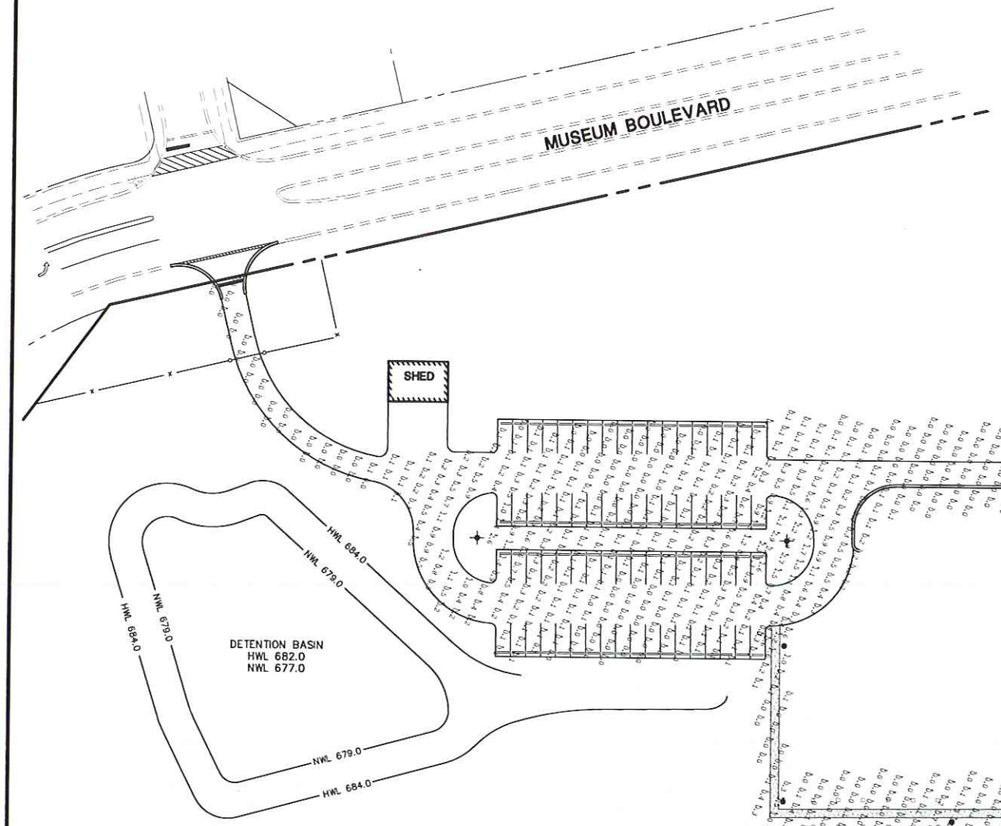
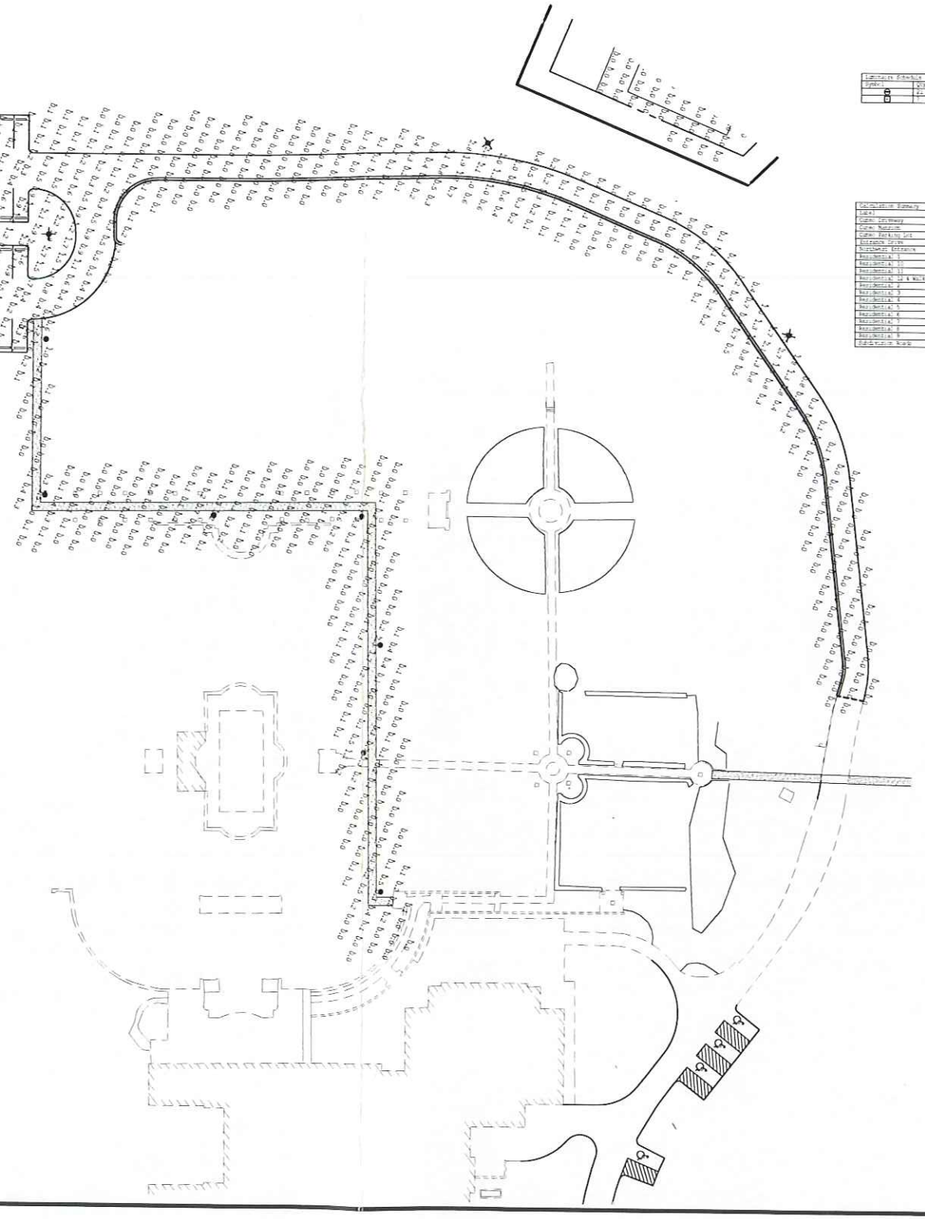
ORDINANCE 2017-014 Exhibit B10 Parking Lot and Access Drive Improvements Lighting Plan prepared by Manhard Consulting Ltd with a revision date of 6/22/2016 and consisting of 1 page





GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	Bug Rating
B	24	MS805-B3S1-3000K	SINGLE	24000	1.000	MS805	330	B3-U0-G1
B	1	DWUSP-SWB	SINGLE	1600	1.000	3W WB SW	20	B1-U0-G1

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Curbs Driveway	Illuminance	Fc	0.61	3.5	0.0	N.A.	N.A.
Curbs Parking	Illuminance	Fc	0.61	3.5	0.0	N.A.	N.A.
Curbs Parking Lot	Illuminance	Fc	0.61	3.5	0.0	N.A.	N.A.
Entrance Drive	Illuminance	Fc	0.47	1.2	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.53	1.2	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.55	2.3	0.0	N.A.	N.A.
Residential 10	Illuminance	Fc	0.61	2.3	0.0	N.A.	N.A.
Residential 12	Illuminance	Fc	0.61	2.3	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.61	2.3	0.0	N.A.	N.A.
Residential 2 at Walking Trail	Illuminance	Fc	0.61	2.3	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.61	2.4	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.61	2.3	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.61	2.3	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.61	2.4	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.59	2.4	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.56	2.3	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.61	2.4	0.0	N.A.	N.A.
Substation Road	Illuminance	Fc	0.72	2.3	0.0	N.A.	N.A.

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PARKING LOT AND ACCESS DRIVE IMPROVEMENTS
VILLAGE OF VERNON HILLS, ILLINOIS
LIGHTING PLAN

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: ZRS
DATE: 6-22-16
SCALE: 1"=40'

SHEET
L1 OF L1

PULVH

ORDINANCE 2017-014 Exhibit B11 Preliminary Engineering Plans prepared by Manhard Consulting Ltd with a revision date of 9/30/2016 and consisting of 32 pages

PULTE HOMES
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL. 60173

Preliminary Engineering Plans for

THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS, ILLINOIS

STANDARD SYMBOLS

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	COMBINED SEWER	
FM	FORCEMAIN	FM
	DRAINTILE	
W	WATER MAIN	W
E	ELECTRIC	E
G	GAS	G
T	TELEPHONE	T
OH	OVERHEAD WIRES	OH
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	STORM INLET	
	CLEANOUT	
	HAY BALES	
	RIP RAP	
	VALVE IN VAULT	
	VALVE IN BOX	
	FIRE HYDRANT	
	BUFFALO BOX	
	FLARED END SECTION	
	STREET LIGHT	
S/L	SUMMIT / LOW POINT	S/L
755.25 / 750.25	RIM ELEVATION / INVERT ELEVATION	755.25 / 750.25
	DITCH OR SWALE	
	DIRECTION OF FLOW	
	OVERFLOW RELIEF SWALE	
764	1 FOOT CONTOURS	764
	CURB AND GUTTER	
	DEPRESSED CURB AND GUTTER	
	REVERSE CURB AND GUTTER	
	SIDEWALK	
	DETECTABLE WARNINGS	
	PROPERTY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	MAIL BOX	
	SIGN	
	TRAFFIC SIGNAL	
	POWER POLE	
	GUY WIRE	
	GAS VALVE	
	HANDHOLE	
	ELECTRICAL EQUIPMENT	
	TELEPHONE EQUIPMENT	
	CHAIN-LINK FENCE	
702.8	SPOT ELEVATION	702.8
	BRUSH/TREE LINE	
6"	DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TBR)	8"
25'	CONIFEROUS TREE WITH HEIGHT IN FEET (TBR)	25'
	SILT FENCE	
	RETAINING WALL	S
	WETLAND	

ABBREVIATIONS

ADJ	ADJUST	F/L	FLOW LINE	R	RADIUS
AGG.	AGGREGATE	FM	FORCE MAIN	R.O.W.	RIGHT-OF-WAY
ARCH	ARCHITECT	G	GROUND	RCP	REINFORCED CONCRETE PIPE
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	GAS	GAS	REM	REMOVAL
B-B	BACK TO BACK	G/F	GRADE AT FOUNDATION	REV	REVERSE
B/C	BACK OF CURB	GW	GUY WIRE	RR	RAILROAD
B/P	BOTTOM OF PIPE	HDWL	HEADWALL	RT	RIGHT
B/W	BACK OF WALK	HH	HANDHOLE	SAN	SANITARY
B-BOX	BUFFALO BOX	HWL	HIGH WATER LEVEL	SF	SQUARE FOOT
BIT.	BITUMINOUS	HYD.	HYDRANT	SHLD.	SHOULDER
BM	BENCHMARK	INL.	INLET	SL	STREET LIGHT
B.O.	BY OTHERS	INV.	INVERT	SMH	SANITARY MANHOLE
C.E.	COMMERCIAL ENTRANCE	IP	IRON PIPE	ST	STORM
CB	CATCH BASIN	LT	LEFT	STA.	STATION
CL	CENTERLINE	MAX.	MAXIMUM	STD	STANDARD
CMP	CORRUGATED METAL PIPE	MB	MAILBOX	SW	SIDEWALK
CNTRL	CONTROL	M/E	MEET EXISTING	SY	SQUARE YARDS
C.O.	CLEANOUT	MH	MANHOLE	TBR	TO BE REMOVED
CONC.	CONCRETE	MIN.	MINIMUM	T	TELEPHONE
CY	CUBIC YARD	NWL	NORMAL WATER LEVEL	T-A	TYPE A
D	DITCH	P.E.	PRIVATE ENTRANCE	T/C	TOP OF CURB
DIA.	DIAMETER	PC	POINT OF CURVATURE	T/F	TOP OF FOUNDATION
DIP	DUCTILE IRON PIPE	PCC	POINT OF COMPOUND CURVE	T/P	TOP OF PIPE
DWM	DUCTILE IRON WATER MAIN	PGL	PROFILE GRADE LINE	T/W	TOP OF WALK
DS	DOWNSPOUT	PI	POINT OF INTERSECTION	T/WALL	TOP OF WALL
DT	DRAIN TILE	PL	PROPERTY LINE	TEMP	TEMPORARY
E	ELECTRIC	PP	POWER POLE	TRANS	TRANSFORMER
E-E	EDGE TO EDGE	PROP.	PROPOSED	V.B.	VALVE BOX
ELEV.	ELEVATION	PT	POINT OF TANGENCY	VCP	VITRIFIED CLAY PIPE
E/P	EDGE OF PAVEMENT	PVC	POLYVINYL CHLORIDE PIPE	V.V.	VALVE VAULT
EX.	EXISTING	PVC	POINT OF VERTICAL CURVATURE	WL	WATER LEVEL
F.E.	FIELD ENTRANCE	PVI	POINT OF VERTICAL INTERSECTION	WM	WATER MAIN
F-F	FACE TO FACE	PVT	POINT OF VERTICAL TANGENCY		
F.F.	FINISHED FLOOR	P	PAVEMENT		
FES	FLARED END SECTION	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT		

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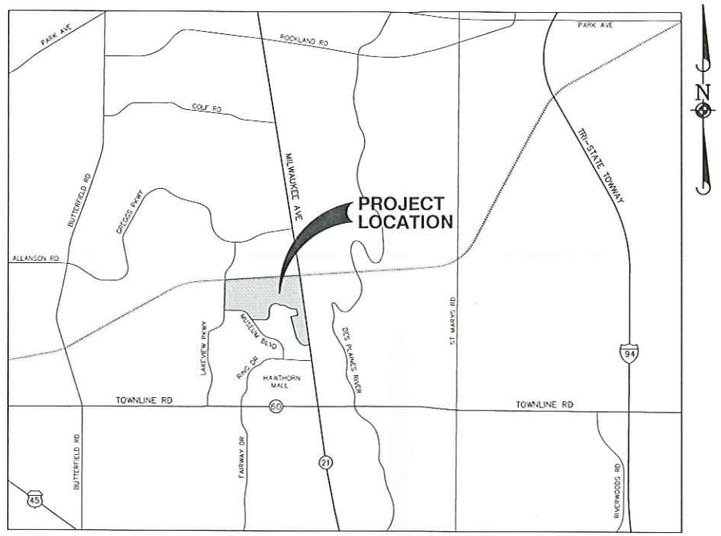

LOCATION MAP
N.T.S.

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3	EXISTING CONDITIONS AND DEMOLITION PLAN – NORTHWEST
4	EXISTING CONDITIONS AND DEMOLITION PLAN – NORTH–CENTRAL
6	EXISTING CONDITIONS AND DEMOLITION PLAN – SOUTHWEST
5	EXISTING CONDITIONS AND DEMOLITION PLAN – NORTHEAST
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27	PHASING PLAN
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29	CONSTRUCTION DETAILS
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31	CONSTRUCTION DETAILS
32	CONSTRUCTION SPECIFICATIONS

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NOTES:

1. THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY MANHARD CONSULTING, LTD. ON FEBRUARY, 29TH, 2016. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.
2. CONTRACTOR TO NOTIFY LAKE COUNTY PUBLIC WORKS DEPARTMENT, 48 HOURS IN ADVANCE OF ANY PRECON, START OF CONSTRUCTION AND AS NECESSARY TO INSPECT THE WATERMAIN AND SANITARY SEWER INSTALLATION THROUGHOUT THE PROJECT.

BENCHMARKS:

REFERENCE BENCHMARK NO. 1:
NATIONAL GEODETIC SURVEY MONUMENT DESIGNATED AS LD013 (PID DM3891) FLANGE ENCASED STAINLESS STEEL ROD LOCATED APPROXIMATELY 7.0 FEET EAST OF THE EAST BACK OF CURB OF ILLINOIS ROUTE 21 (MILWAUKEE AVENUE), 89 FEET SOUTH OF THE SOUTH BACK OF CURB OF HOLLISTER DRIVE (SOUTHERLY LOCATION) AND 66 FEET WEST OF A POND WITH A FOUNTAIN.
ELEVATION = 670.23 (NAVD 88)

REFERENCE BENCHMARK NO. 2:
VILLAGE OF VERNON HILLS PRIMARY SURVEY CONTROL POINT NUMBER 102 CONCRETE MONUMENT AND BRASS CAP LOCATED BETWEEN THE NORTH BACK OF CURB OF ILLINOIS ROUTE 60 (TOWNLINE ROAD) AND THE SOUTH EDGE OF A CONCRETE SIDEWALK APPROXIMATELY 500 FEET EAST OF THE CENTERLINE OF BUTTERFIELD ROAD.
ELEVATION = 714.73 (NAVD 88)

SITE BENCHMARK NO. 1:
CUT SQUARE ON SOUTHEAST CORNER OF TRAFFIC SIGNAL MANHOLE LOCATED APPROXIMATELY 69 FEET EAST OF THE CENTERLINE OF MILWAUKEE AVENUE AND 7 FEET SOUTH OF THE CENTERLINE OF HOLLISTER DRIVE.
ELEVATION = 668.66

SITE BENCHMARK NO. 2:
CUT SQUARE ON EAST SIDE OF 6 FEET DIAMETER STORM SEWER GRATE LOCATED APPROXIMATELY 92 FEET SOUTH OF THE CENTERLINE OF THE ELGIN JOLIET EASTERN RAILWAY AND 120 FEET EAST OF THE CENTERLINE OF PINE LAKE CIRCLE (NEAR NORTHWEST CORNER OF PROPOSED DEVELOPMENT).
ELEVATION = 691.23

SITE BENCHMARK NO. 3:
SOUTHWEST BOLT ON RAILROAD WARNING LIGHT LOCATED APPROXIMATELY 36 FEET EAST OF THE CENTERLINE OF MILWAUKEE AVENUE AND 23 FEET SOUTH OF THE CENTERLINE OF THE ELGIN JOLIET EASTERN RAILWAY.
ELEVATION = 675.69

UTILITY CONTACTS

ELECTRIC COMED X x (847)–816–5492 CONTACT: KATRINA TAYLOR	WATER LAKE COUNTY PUBLIC WORKS 650 W. WINCHESTER ROAD LIBERTYVILLE, IL 60061 (847)–377–7141 CONTACT: HEATHER GALAN
GAS NORTH SHORE GAS x (847)–263–4687 CONTACT: GERALD GLOGOVSKY (gaglogovsky@northshoredeliver.com)	TELEPHONE AT&T X (847)–759–5573 CONTACT: ANTHONY VELASQUEZ (av3143@att.com)
SEWER LAKE COUNTY PUBLIC WORKS 650 W. WINCHESTER ROAD LIBERTYVILLE, IL 60061 (847)–377–7141 CONTACT: HEATHER GALAN (hgalan@lakecountyil.gov)	CABLE COMCAST X (630)–288–1567 CONTACT: BRYANT TAYLOR (bryant_taylor@cable.comcast.net)

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
TITLE SHEET

PROJ. MGR.:	W.J.H.
PROJ. ASSOC.:	C.S.
DRAWN BY:	REH
DATE:	4–25–16
SCALE:	N.T.S.

SHEET 1 OF 32
PULVH

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PRELIMINARY, FOR REVIEW ONLY

ELGIN JOLIET EASTERN RAILWAY

SEE SHEET 3

SEE SHEET 4

SEE SHEET 5

SEE SHEET 6

SEE SHEET 7

SEE SHEET 8

SEE SHEET 9

OUTLOT J
7,252 S.F.
0.01 AC.±

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

HOLLISTER DRIVE

ARLINGTON BOULEVARD

EXIST POND
APPROX. WATER ELEV = 674.4

EXIST POND
APPROX. WATER ELEV = 672.2

EXIST POND
APPROX. WATER ELEV = 670.2

EXIST POND

N

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- BUILDING TO BE REMOVED
- SIDEWALK TO BE REMOVED
- AGGREGATE TO BE REMOVED
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
- TREE TO BE REMOVED
- (TBR) TO BE REMOVED

EXISTING CONDITIONS NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF FEBRUARY 26, 2016. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

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AS	REVISED PER VILLAGE REVIEW COMMENTS	6-20-16

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=100'

SHEET 2 OF 32

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N

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- BUILDING TO BE REMOVED
- SIDEWALK TO BE REMOVED
- AGGREGATE TO BE REMOVED
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
- TREE TO BE REMOVED
- (TBR) TO BE REMOVED

EXISTING CONDITIONS NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF FEBRUARY 26, 2016. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

NO DEMOLITION SHALL BE INITIATED ON THE SITE UNTIL ALL APPROVALS AND PERMITS ARE OBTAINED FROM ALL REGULATORY AUTHORITIES.

DRAWN BY	REVISIONS	DATE
AS	REVISED PER VILLAGE REVIEW COMMENTS	5-20-16
AS	REVISED PER VILLAGE REVIEW COMMENTS	6-29-16

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

EXISTING CONDITIONS AND DEMOLITION PLAN - NORTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 3 OF 32

PULVH

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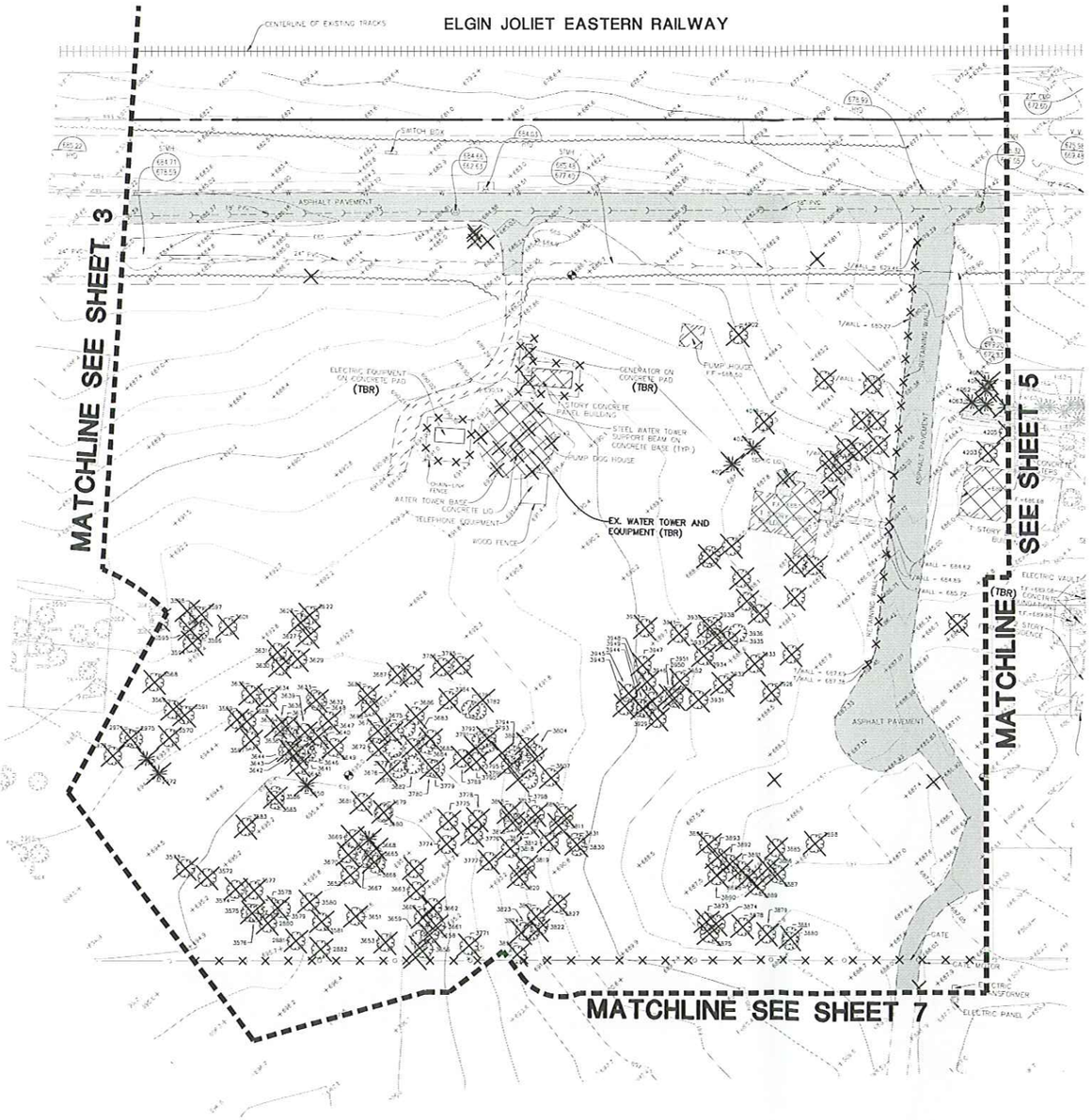

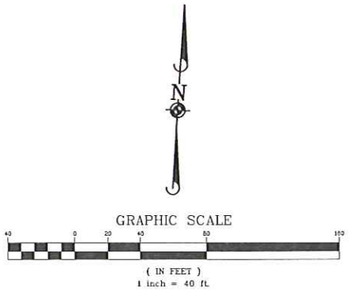

DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- BUILDING TO BE REMOVED
- SIDEWALK TO BE REMOVED
- AGGREGATE TO BE REMOVED
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
- TREE TO BE REMOVED
- (TBR) TO BE REMOVED

EXISTING CONDITIONS NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF FEBRUARY 26, 2016. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

NO DEMOLITION SHALL BE INITIATED ON THE SITE UNTIL ALL APPROVALS AND PERMITS ARE OBTAINED FROM ALL REGULATORY AUTHORITIES.

DATE	REVISION	DRAWN BY
5-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
6-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

Manhard CONSULTING LTD
200 Woodlands Parkway, Vernon Hills, IL 60061 ph847.634.0050 fx847.634.0099 manhard.com
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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

EXISTING CONDITIONS AND DEMOLITION PLAN - NORTH-CENTRAL

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 4 OF 32

PULVH

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N

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- BUILDING TO BE REMOVED
- SIDEWALK TO BE REMOVED
- AGGREGATE TO BE REMOVED
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
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DRAWN BY	DATE	REVISIONS
AS		
AS	3-30-16	REVISED PER VILLAGE REVIEW COMMENTS
	6-20-16	REVISED PER VILLAGE REVIEW COMMENTS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

EXISTING CONDITIONS AND DEMOLITION PLAN - NORTHEAST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 5 OF 32

PULVH

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DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- BUILDING TO BE REMOVED
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- AGGREGATE TO BE REMOVED
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- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
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DATE	REVISIONS	DRAWN BY
3-30-16	REVISED PDR VILLAGE REVIEW COMMENTS	AS
6-20-16	REVISED PDR VILLAGE REVIEW COMMENTS	AS

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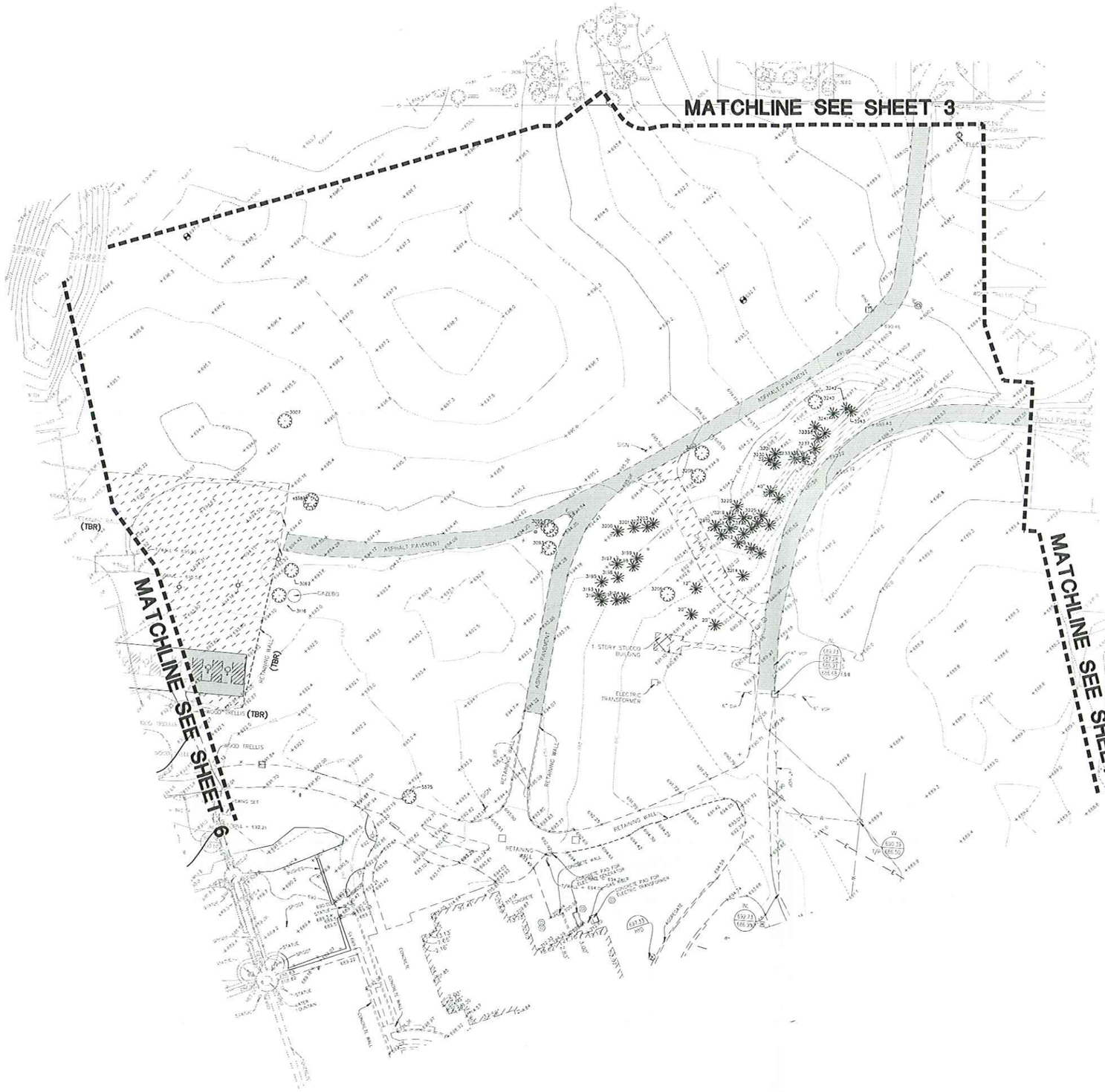
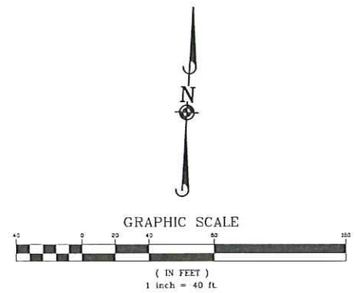
THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"= 40'

SHEET 6 OF 32
PULVH

PRELIMINARY, FOR REVIEW ONLY





DEMOLITION LEGEND

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5-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
6-30-16	REVISED PER VILLAGE REVIEW COMMENTS	

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

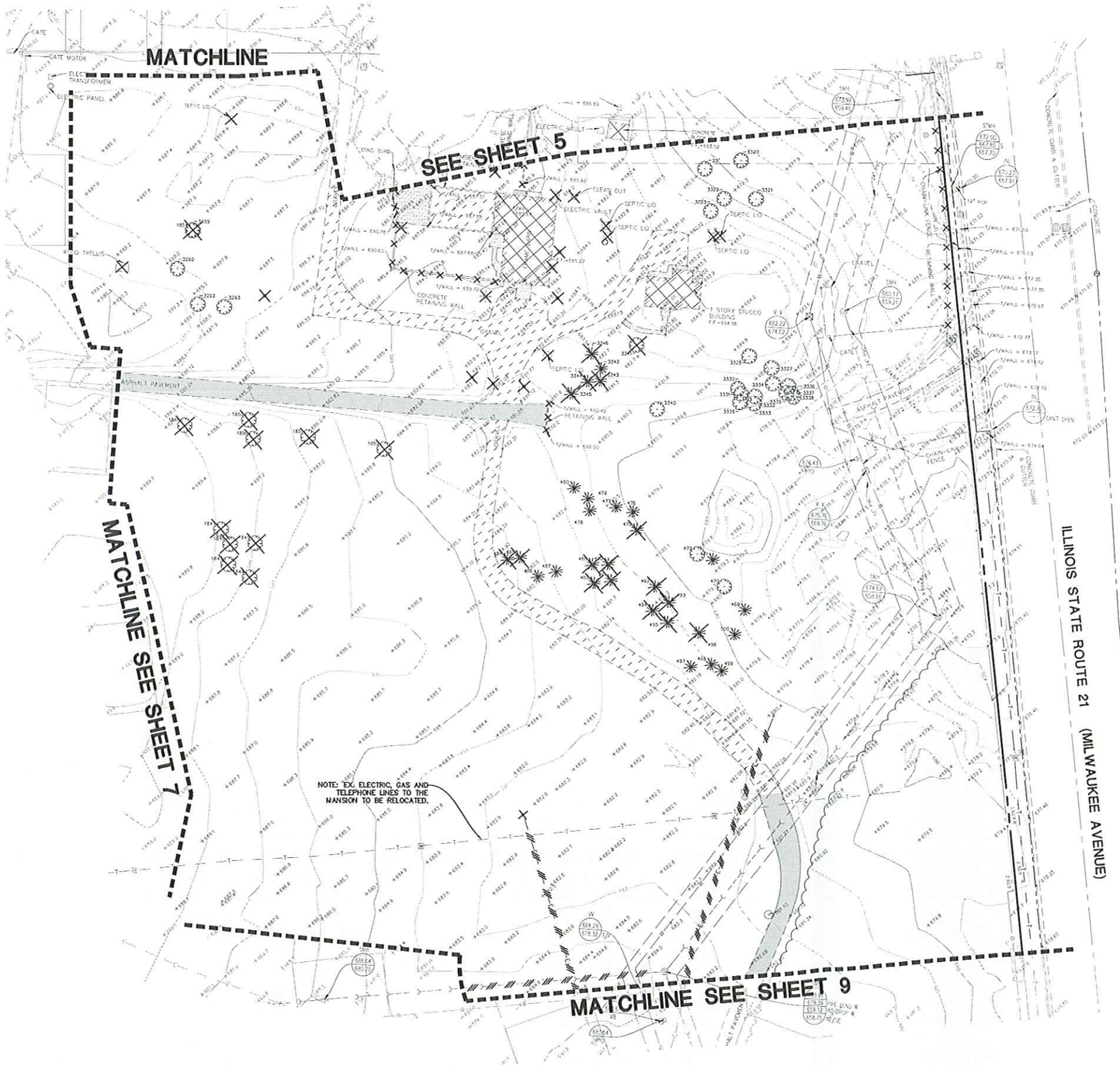
EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTH-CENTRAL

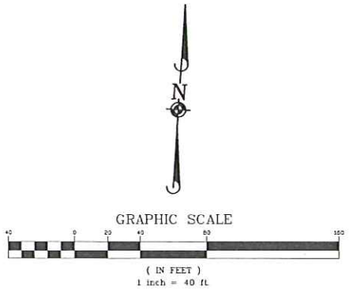
PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 7 OF 32

PULVH

PRELIMINARY, FOR REVIEW ONLY





DEMOLITION LEGEND

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DATE	REVISIONS	DRAWN BY
5-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
6-29-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTHEAST

PROJ. MGR.	W.J.H.
PROJ. ASSOC.	C.S.
DRAWN BY	REH
DATE	4-25-16
SCALE	1"=40'

SHEET 8 OF 32

PULVH

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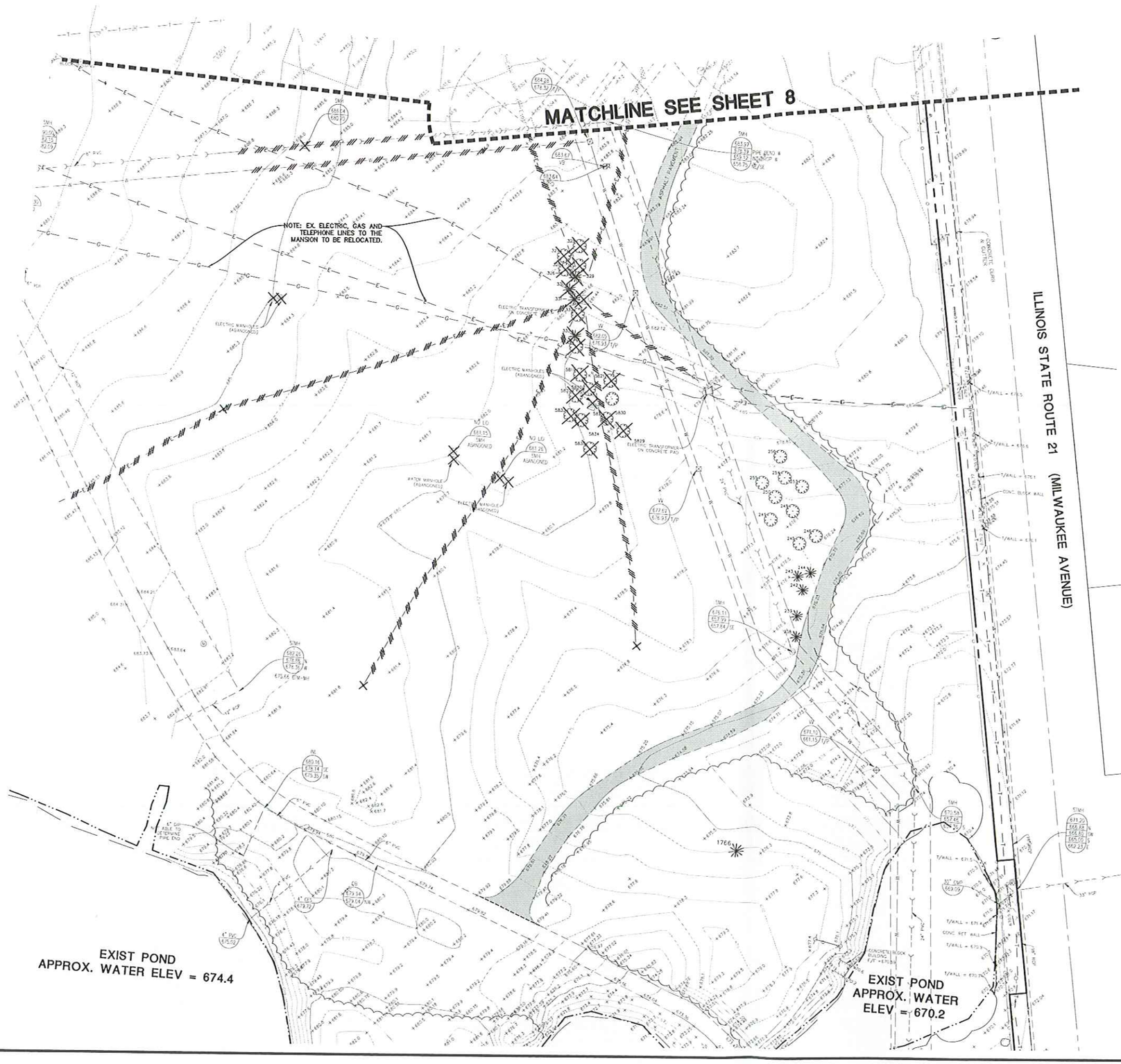

GRAPHIC SCALE

40 0 20 40 80 120

(IN FEET)
1 inch = 40 ft

DEMOLITION LEGEND

- PAVEMENT AND BASE TO BE REMOVED
- BUILDING TO BE REMOVED
- SIDEWALK TO BE REMOVED
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DATE	REVISIONS	DRAWN BY
3-30-16	REVISED PDP VILLAGE REVIEW COMMENTS	AS
6-20-16	REVISED PDP VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
EXISTING CONDITIONS AND DEMOLITION PLAN - SOUTH

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 9 OF 32

PULVH

PRELIMINARY, FOR REVIEW ONLY

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GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft

GRADING NOTES:

1. RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
2. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
3. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
4. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
6. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
7. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
8. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
9. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
10. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY MANHARD CONSULTING, LTD. ON FEBRUARY 26, 2016. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
11. TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 1:2 UNLESS OTHERWISE NOTED.

DRAWN BY	DATE	REVISIONS
AS	A-30-16	REVISED PER VILLAGE REVIEW COMMENTS
AS	4-20-16	REVISED PER VILLAGE REVIEW COMMENTS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY OVERALL GRADING PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=100'

SHEET 10 OF 32

PULVH

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ELGIN JOLIET EASTERN RAILWAY

OUTLOT A

15' BITUMINOUS PATH

ASPHALT PAVEMENT

JENSEN CIRCLE

SEE SHEET 12

MATCHLINE

MATCHLINE SEE SHEET 14

MATCHLINE SEE SHEET 15

EX. PINEHURST SUBDIVISION

LIMITS OF EX. WETLANDS

OUTLOT B

OUTLOT B
PARK

5' BITUMINOUS PATH

L/O 17 T/F=694.1 G/F=693.4
L/O 16 T/F=694.6 G/F=693.9
L/O 15 T/F=695.5 G/F=694.8
L/O 14 T/F=696.1 G/F=695.4
L/O 13 T/F=695.7 G/F=695.0
DS 18 T/F=694.3 G/F=693.6
DS 19 T/F=695.4 G/F=694.7
DS 20 T/F=697.5 G/F=696.8
DS 21 T/F=699.5 G/F=698.8
22 T/F=701.5 G/F=700.8
23 T/F=702.5 G/F=701.8
24 T/F=702.5 G/F=701.8
25 T/F=702.1 G/F=701.4
26 T/F=701.8 G/F=701.1
T/F=695.4 G/F=694.7 102
T/F=695.8 G/F=695.1 103
T/F=696.1 G/F=695.4 104
T/F=696.1 G/F=695.4 105
T/F=698.3 G/F=697.6 101 L/O
T/F=700.5 G/F=699.8 100 L/O
T/F=702.3 G/F=701.6 99 L/O
T/F=702.7 G/F=702.0 98 L/O
T/F=702.7 G/F=702.0 97 L/O
T/F=702.9 G/F=702.2 96 L/O

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

GRADING NOTES:

1. RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
2. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SL/OPE OF 2.00% OR LESS.
3. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
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THE SWALES BETWEEN LOTS 17 & 18 ABD LOTS 101 & 102 ARE NECESSARY TO PROVIDE OVERLAND DRAINAGE RELIEF FOR RAINFALLS IN EXCESS OF A 10-YEAR STORM EVENT. THEY MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN ELEVATIONS AND CROSS SECTIONS SHOWN HEREIN. ANY ALTERATIONS AND/OR REVISIONS TO THESE PLANS OR THE CONSTRUCTION THEREOF WITHOUT FIRST OBTAINING WRITTEN APPROVAL OF MANHARD CONSULTING, LTD. MAY RESULT IN SIGNIFICANT DAMAGE TO PROPERTY AND/OR BODILY INJURY.

W/O = WALKOUT BASEMENT
L/O = LOOKOUT BASEMENT
DS = DROP SIDING REQUIRED BEHIND HOUSE

DATE	REVISIONS	DRAWN BY
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6-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY GRADING PLAN - NORTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 11 OF 32

PULVH

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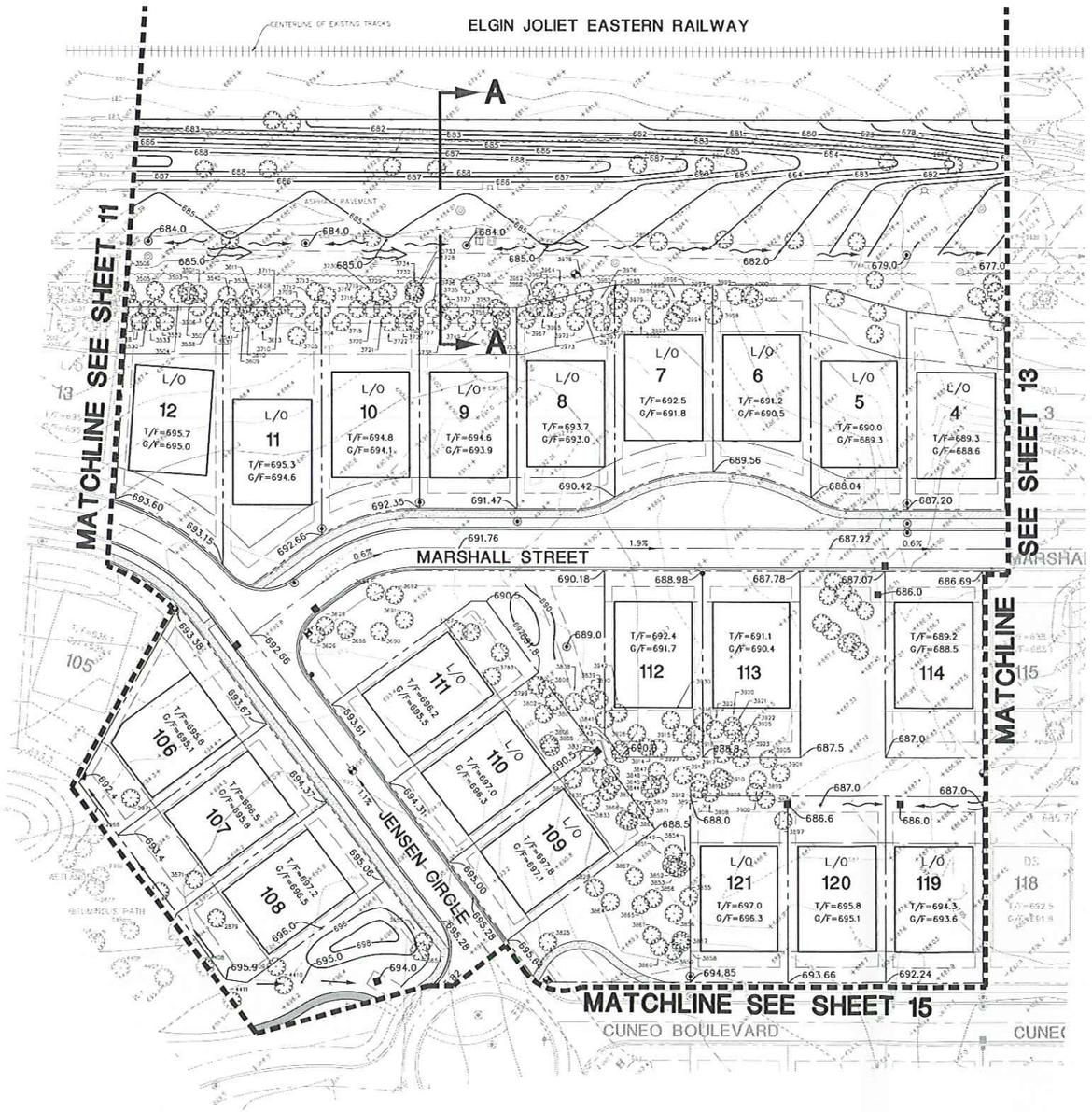

GRADING NOTES:

1. RETAINING WALL DESIGN TO BE PROVIDED BY OTHERS.
2. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
3. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
5. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO L/OCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE L/OCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD L/OCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REL/OCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
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8. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SL/OPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
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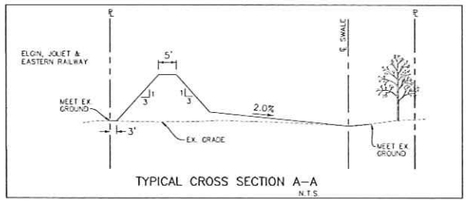
W/O = WALKOUT BASEMENT
L/O = LOOKOUT BASEMENT
DS = DROP SIDING REQUIRED BEHIND HOUSE



TYPICAL CROSS SECTION A–A
N.T.S.

NO.	REVISION	DATE	DRAWN BY
1	REVISED PER VILLAGE REVIEW COMMENTS	6-30-16	AS
2	REVISED PER VILLAGE REVIEW COMMENTS	8-25-16	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY GRADING PLAN - NORTH-CENTRAL

PROJ. MGR.:	W.J.H.
PROJ. ASSOC.:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 12 OF 32
PULVH

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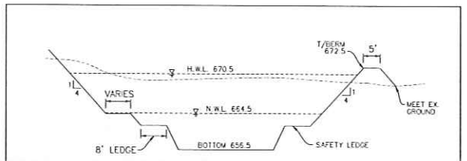

TYPICAL DETENTION BASIN CROSS SECTION
N.T.S.

DATE	REVISIONS	DRAWN BY
3-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
5-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY GRADIING PLAN - NORTHEAST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 13 OF 32
PULVH

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GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

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THE SWALES BETWEEN LOTS 27 & 28 IS NECESSARY TO PROVIDE OVERLAND DRAINAGE RELIEF FOR RAINFALLS IN EXCESS OF A 10-YEAR STORM EVENT. IT MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN ELEVATIONS AND CROSS SECTIONS SHOWN HEREIN. ANY ALTERATIONS AND/OR REVISIONS TO THESE PLANS OR THE CONSTRUCTION THEREOF WITHOUT FIRST OBTAINING WRITTEN APPROVAL OF MANHARD CONSULTING, LTD. MAY RESULT IN SIGNIFICANT DAMAGE TO PROPERTY AND/OR BODILY INJURY.

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L/O = LOOKOUT BASEMENT
DS = DROP SIDING REQUIRED BEHIND HOUSE

DATE	REVISION	DRAWN BY
8-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
6-09-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY GRADIING PLAN - SOUTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 14 OF 32
PULVH

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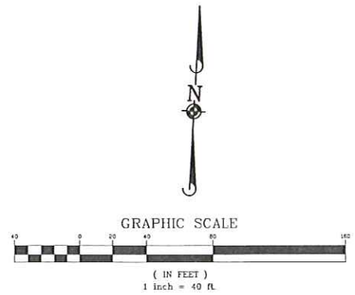

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DRAWN BY	DATE	REVISION
AS	5-20-16	REVISED PER VILLAGE REVIEW COMMENTS
AS	6-29-16	REVISED PER VILLAGE REVIEW COMMENTS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY GRADIING PLAN - SOUTH-CENTRAL

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 15 OF 32
PULVH

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GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

GRADING NOTES:

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DATE	REVISIONS	DRAWN BY
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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY GRADING PLAN - SOUTHEAST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET
16 OF 32
PULVH

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MATCHLINE SEE SHEET 16

MANSION ROAD

DETENTION BASIN
HWL 679.0
NWL 674.0

LOT H
0.5 AC.±

EXIST POND
APPROX. WATER ELEV = 674.4

EXIST POND
APPROX. WATER
ELEV = 670.2

679.0
OVERFLOW

BITUMINOUS PATH

CONCRETE CURB & GUTTER

CONC. BLOCK WALL

GRAPHIC SCALE

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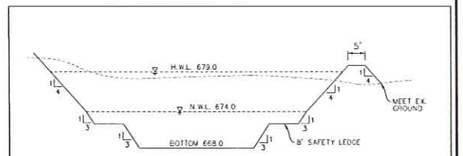

TYPICAL DETENTION BASIN CROSS SECTION
N.T.S.

DRAWN BY	DATE	REVISIONS	
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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY GRADING PLAN - SOUTH

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
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SHEET
17 OF 32
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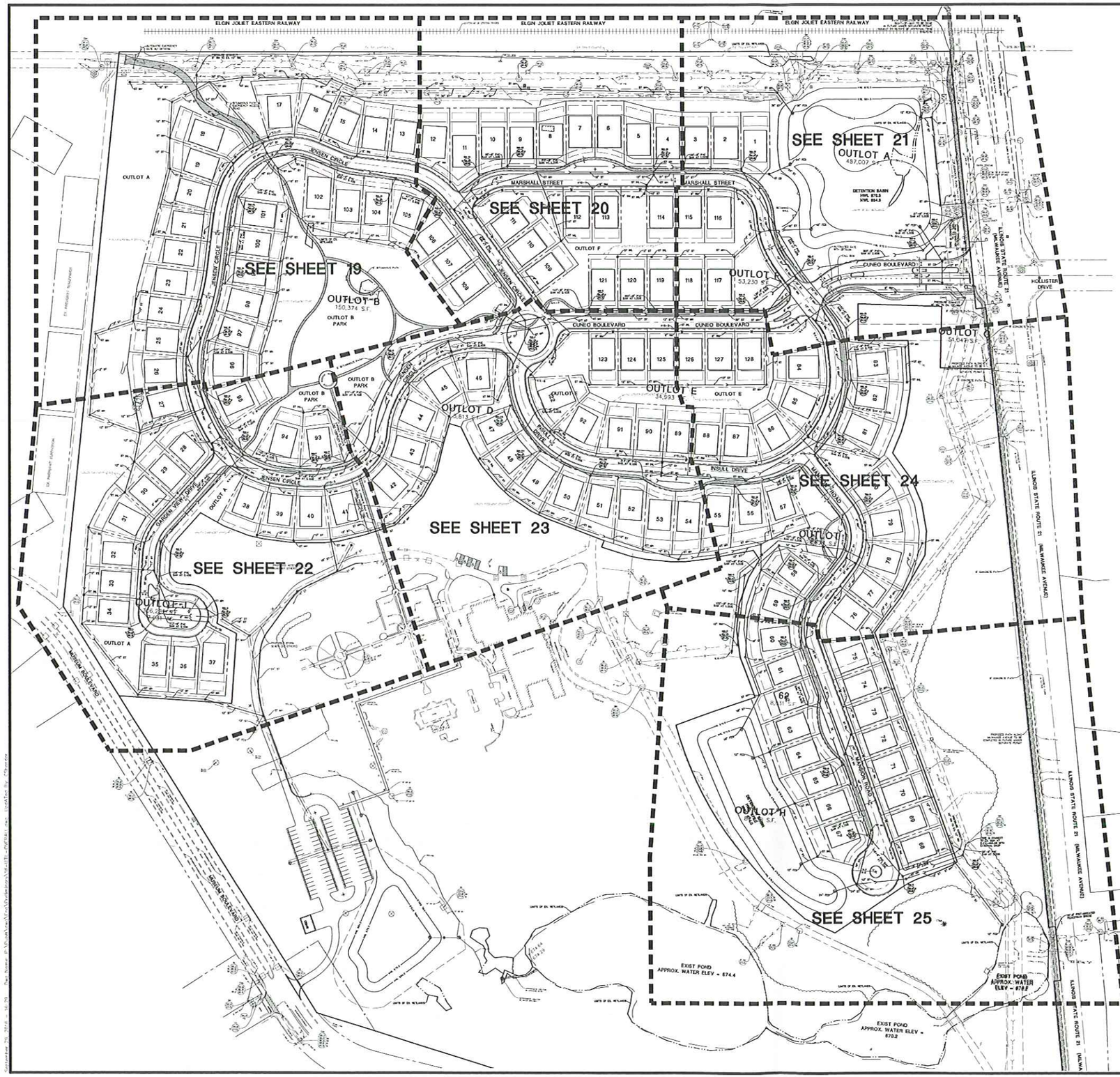

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
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UTILITY NOTES:

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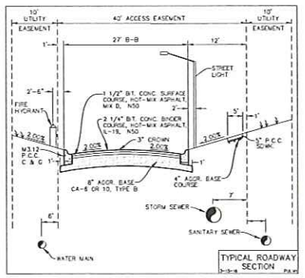

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3-30-16	REVISED PDP VILLAGE REVIEW COMMENTS	AS
4-20-16	REVISED PDP VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY OVERALL UTILITY PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	RDH
DATE:	4-25-16
SCALE:	1"=100'

SHEET 18 OF 32
PULVH

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ELGIN JOLIET EASTERN RAILWAY

AUTOMATIC EMERGENCY GATE W/ OPTICOM

PRESSURE CONNECT 8" WM TO EX. 12" WM

EX. GAS EASEMENT

SWITCH BOX

ASPHALT PAVEMENT

BITUMINOUS PATH & EMERGENCY ACCESS ROAD

OUTLOT A

JENSEN CIRCLE

SEE SHEET 20

SEE SHEET 12

MATCHLINE

MATCHLINE SEE SHEET 23

MATCHLINE SEE SHEET 22

EX. PINEHURST SUBDIVISION

LIMITS OF EX. WETLANDS

OUTLOT B
150,374 S.F.

OUTLOT B
PARK

5' BITUMINOUS PATH

263'-8" PVC SAN AT 0.45%

125'-8" PVC SAN AT 0.45%

188'-8" PVC SAN AT 2.50%

97'-8" PVC SAN AT 0.50%

107'-8" PVC SAN AT 2.50%

271'-8" PVC SAN AT

GRAPHIC SCALE

(IN FEET)
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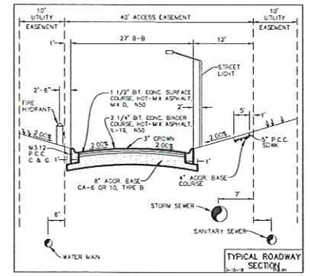

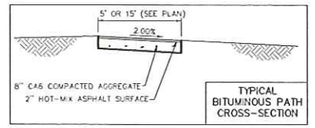

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY UTILITY PLAN - NORTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 19 OF 32

PULVH

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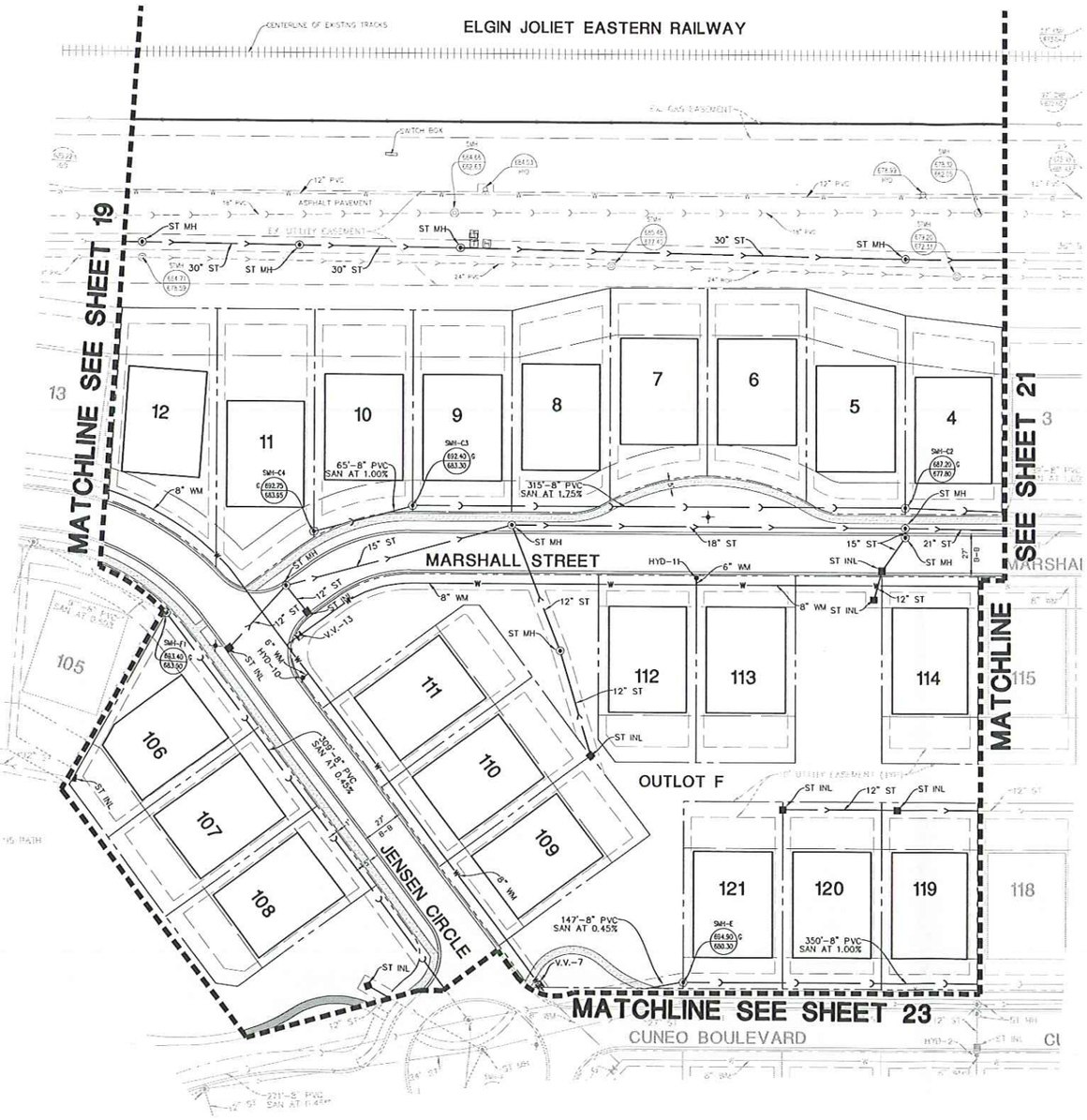

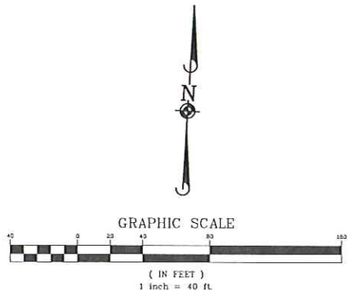

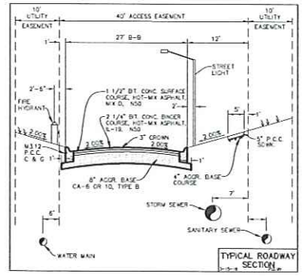

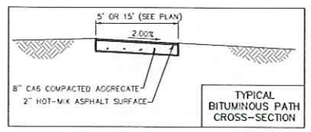

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AS	3-30-16	REVISED PER VILLAGE REVIEW COMMENTS
AS	4-20-16	REVISED PER VILLAGE REVIEW COMMENTS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY UTILITY PLAN - NORTH-CENTRAL

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 20 OF 32
PULVH

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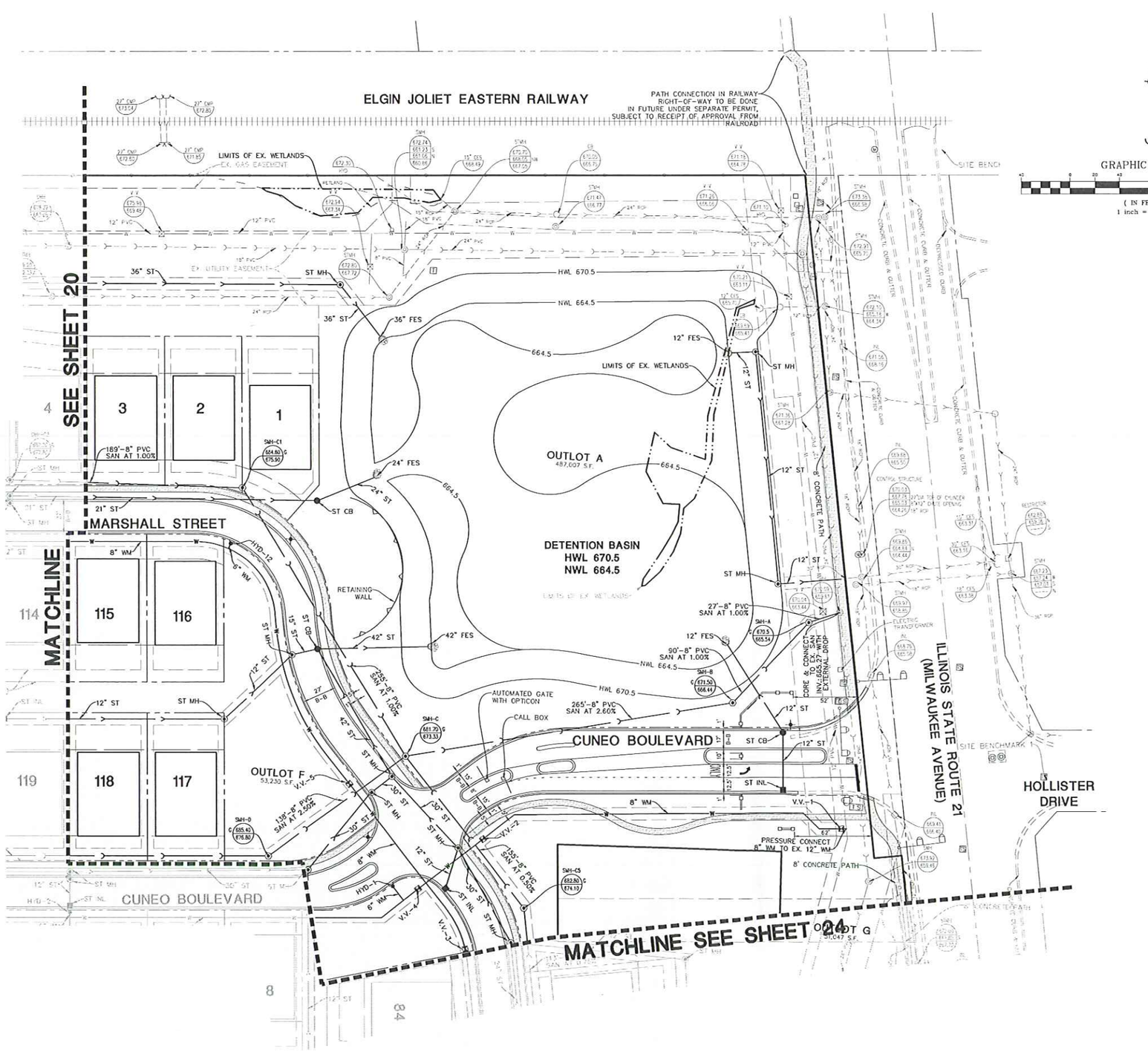

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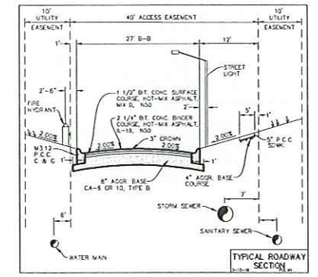

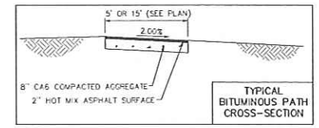

DATE	REVISION	COMMENTS
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6-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY UTILITY PLAN - NORTHEAST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	RCH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 21 OF 32
PULVH

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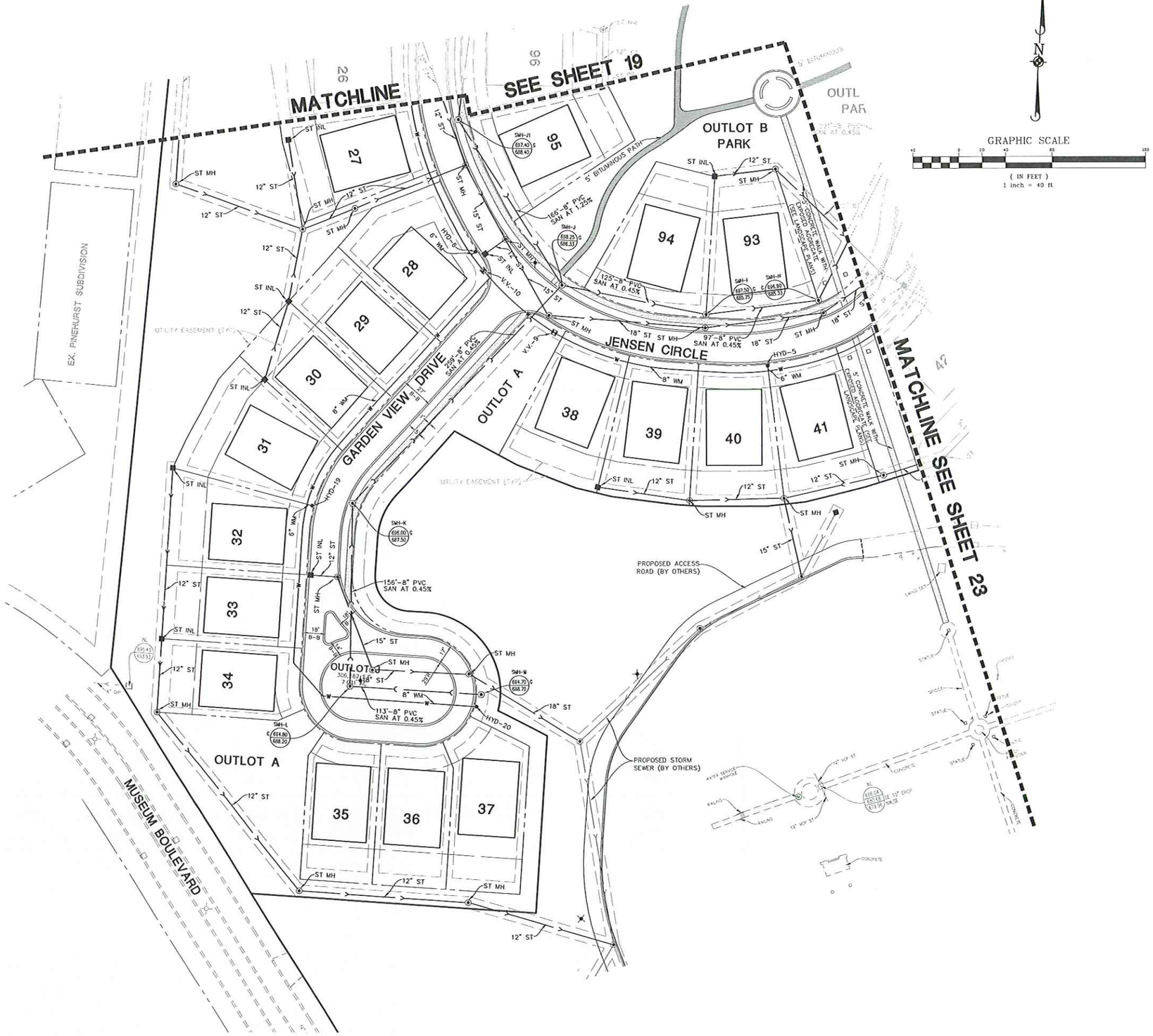

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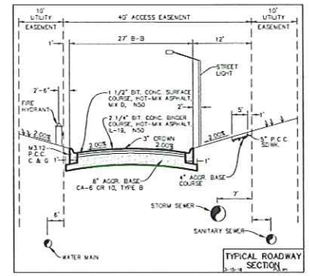

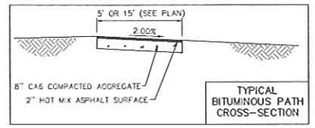

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY UTILITY PLAN - SOUTHWEST

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: RDH
DATE: 4-25-16
SCALE: 1"=40'

SHEET 22 OF 32
PULVH

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MATCHLINE SEE SHEET 20

MATCHLINE SEE SHEET 22

MATCHLINE SEE SHEET 24

CUNEO BOULEVARD

JENSEN CIRCLE

INSULL DRIVE

OUTLOT B
PARK

OUTLOT D
5,813 S.F.

OUTLOT E

OUTLOT F
24,993 S.F.

5' BITUMINOUS PATH

123 124 125 126

46 45 44 43 42

47 48 49 50 51 52 53 54 55

92 91 90 89 88 87

271'-8" PVC SAN AT 0.45%

177'-8" PVC SAN AT 2.00%

120'-8" PVC SAN AT 2.00%

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RETAINING WALL

CONCRETE PAD FOR ELECTRIC GENERATOR

CONCRETE PAD FOR ELECTRIC TRANSFORMER

CONCRETE WALL

STATUE

WATER FOUNTAIN

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

UTILITY NOTES:

1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
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4. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
5. LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY.
6. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
7. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
8. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE T/C ELEVATIONS.
9. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
10. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
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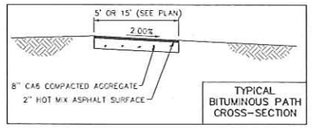
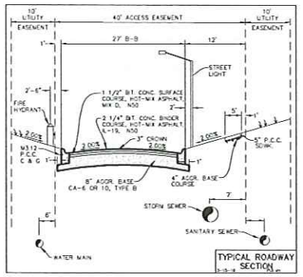
12. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
13. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
14. EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
15. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
16. ALL D.I. WATERMAIN AND FITTINGS SHALL BE WRAPPED.
17. ALL CURB AND GUTTER SHALL BE M3.12 UNLESS OTHERWISE NOTED.
18. ALL SUMP PUMPS ARE TO BE CONNECTED TO STORM SEWERS.



TYPICAL BITUMINOUS PATH CROSS-SECTION



TYPICAL ROADWAY SECTION

DATE	REVISION	DRAWN BY
8-03-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
5-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY UTILITY PLAN - SOUTH-CENTRAL

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET 23 OF 32
PULVH

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PRELIMINARY, FOR REVIEW ONLY

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

UTILITY NOTES:

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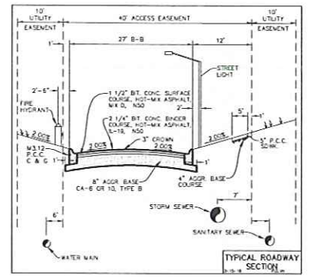

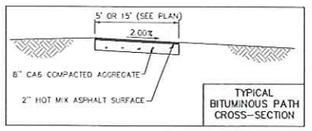

DRAWN BY	DATE	REVISIONS
AS		
AS	3-30-16	REVISED PER VILLAGE REVIEW COMMENTS
	4-29-16	REVISED PER VILLAGE REVIEW COMMENTS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PRELIMINARY UTILITY PLAN - SOUTHEAST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET
24 OF 32
PULVH

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MATCHLINE SEE SHEET 24

MANSION ROAD

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

DETENTION BASIN
HWL 679.0
NWL 674.0

EXIST POND
APPROX. WATER ELEV = 674.4

EXIST POND
APPROX. WATER
ELEV = 670.2

LIMITS OF EX. WETLANDS

PROPOSED PATH ALONG MILWAUKEE AVENUE TO BE COMPLETED IN FUTURE UNDER SEPARATE PERMIT

8' CONCRETE PATH

CORE & CONNECT TO EX. SMH AT ELEV.=665.68 WITH EXTERNAL DROP

20'x8' PREFABRICATED PEDESTRIAN BRIDGE

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

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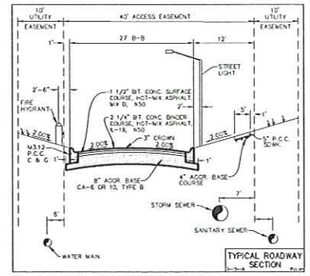

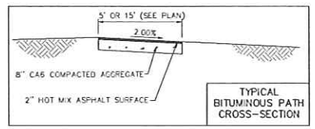

DRAWN BY	DATE	REVISIONS	
AS		6-30-16	REVISED PER VILLAGE REVIEW COMMENTS
AS		6-09-16	REVISED PER VILLAGE REVIEW COMMENTS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY UTILITY PLAN - SOUTH

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET
25 OF 32
PULVH

PRELIMINARY, FOR REVIEW ONLY

MATCHLINE SEE BELOW LEFT

EXIST POND
APPROX. WATER
ELEV = 670.2

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

EX. 30' UTILITY EASEMENT

EX. R.O.W.

PROPOSED PATH ALONG MILWAUKEE AVENUE SOUTH OF CUNEO BOULEVARD TO BE COMPLETED IN FUTURE UNDER SEPARATE PERMIT

MATCHLINE SEE ABOVE RIGHT

EX. MONUMENT SIGN

EX. 15' PEDESTRIAN PATHWAY EASEMENT

EX. 30' UTILITY EASEMENT

EX. R.O.W.

AMLI AT MUSEUM GARDENS APARTMENTS

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

20' WATER AND SANITARY EASEMENT

20' UTILITY EASEMENT

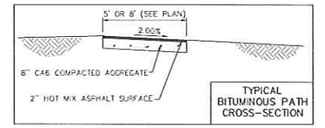
RING DRIVE

HAWTHORN CENTER

N

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft



NO.	DATE	REVISIONS	DRAWN BY
1	9-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

OFFSITE MILWAUKEE AVENUE - PATH PLAN

PROJ. MGR.:	W.J.H.
PROJ. ASSOC.:	C.S.
DRAWN BY:	REH
DATE:	4-25-16
SCALE:	1"=40'

SHEET
26 OF 32
PULVH

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ELGIN JOLIET EASTERN RAILWAY

PHASE 1, TEMPORARY DITCH

PHASE 1

PHASE 2

PHASE 1

PHASE 2

PHASE 1 SANITARY SEWER

PHASE 1 TEMPORARY DITCH

PHASE 2

OUTLOT A

OUTLOT B
150,374 S.F.
OUTLOT B PARK

OUTLOT D
6,813 S.F.

OUTLOT E
34,993 S.F.

OUTLOT F

OUTLOT G
53,230 S.F.

OUTLOT H
OUTLOT I
OUTLOT J

DETENTION BASIN
HWL 873.5
NWL 864.5

JENSEN CIRCLE
MARSHALL STREET
CUNEO BOULEVARD
HOLLISTER DRIVE
HAMPTON ROAD
GARDEN VIEW DRIVE
ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

EXIST POND
APPROX. WATER ELEV = 874.4

EXIST POND
APPROX. WATER ELEV = 870.2

EXIST POND
APPROX. WATER ELEV = 877.2

EXIST POND

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

DRAWN BY	DATE	REVISION	
AS	3-30-16	REVISED PER VILLAGE REVIEW COMMENTS	
RDH	5-14-26	REVISED PER VILLAGE REVIEW COMMENTS	

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THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
PHASING PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	RDH
DATE:	4-25-16
SCALE:	1"=100'

SHEET
27 OF 32
PULVH

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GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft

PAVEMENT MARKING LEGEND

- (A) 24" WHITE STOP BAR
- (B) 6" SOLID WHITE

SIGN LEGEND

1. R1-1 STOP SIGN
2. R1-2 YIELD SIGN
3. R5-1 DO NO ENTER SIGN
4. R6-1R ONE WAY SIGN
5. "ONCOMING TRAFFIC DOES NOT STOP"
6. "TRAFFIC FROM RIGHT DOES NOT STOP"
7. "TRAFFIC FROM LEFT DOES NOT STOP"

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

DATE	REVISION	DRAWN BY
5-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
6-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY SIGNAGE AND LIGHTING PLAN

PROJ. MGR:	W.J.H.
PROJ. ASSOC.:	C.S.
DRAWN BY:	RDH
DATE:	4-25-16
SCALE:	1"=100'

SHEET
28 OF 32
PULVH

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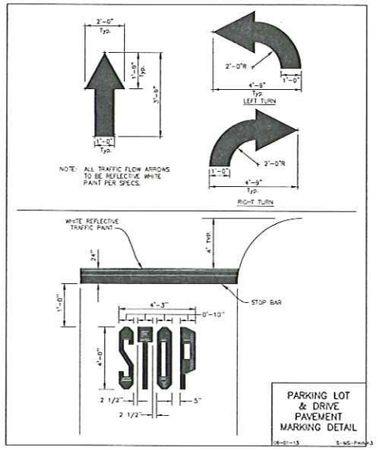
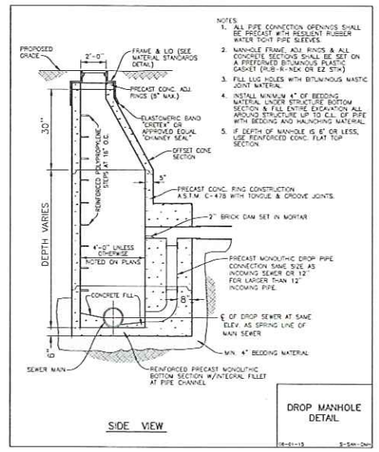
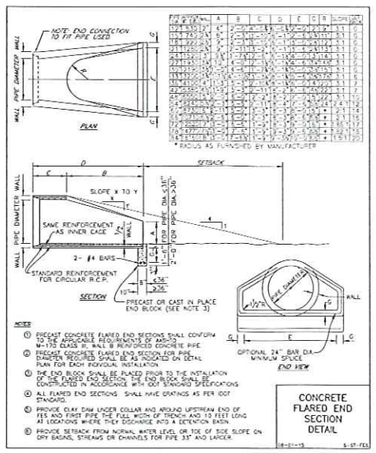


PARKING LOT & DRIVE PAVEMENT MARKING DETAIL

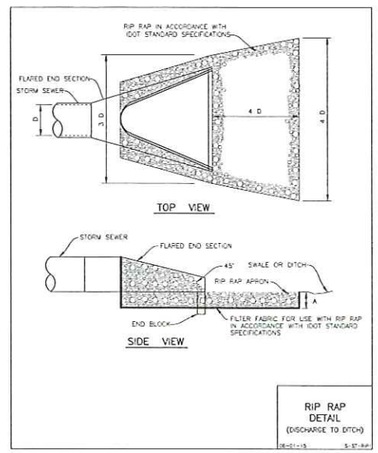


SIDE VIEW

DROP MANHOLE DETAIL



CONCRETE FLARED END SECTION DETAIL



RIP RAP DETAIL (DISCHARGE TO DITCH)

RIP–RAP

PIPE DIAMETER (IN.) D	STONE RIP–RAP							BEDDING
	QUALITY DESIGNATION	GRADATION NUMBER RR	MINIMUM THICKNESS (IN.) A	MINIMUM LENGTH (FT.) 4D	WEIGHT RANGE (#)	WEIGHT AVERAGE (#)	SIZE AVERAGE (IN.)	MINIMUM THICKNESS (IN.)
12"	B	3	8"	4'	1–50	10	4.5"	N/A
15"	B	3	8"	5	1–50	10	4.5"	N/A
18"	B	4	16"	6'	1–150	40	7"	6"
21"	B	4	16"	7'	1–150	40	7"	6"
24"	B	4	16"	8'	1–150	40	7"	6"
27"	B	4	16"	9'	1–150	40	7"	6"
30"	B	4	16"	10'	1–150	40	7"	6"
36"	B	5	22"	12'	3–400	90	10"	8"
42"	B	5	22"	14'	3–400	90	10"	8"
48"	B	6	26"	16'	6–600	170	12"	10"
54"	B	6	26"	18'	6–600	170	12"	10"
60"	B	6	26"	20'	6–600	170	12"	10"
72"	B	6	26"	24'	6–600	170	12"	10"

NOTE:
1. FOR PIPE LARGER THAN 72" A SPECIAL DESIGN OF RIP–RAP OR APRON IS REQUIRED.
2. REFER TO I.D.O.T. SPECIFICATIONS AND STANDARDS FOR BEDDING GRADITION.

STONE RIP RAP DETAIL

RIP RAP DETAIL (DISCHARGE TO LAKE)

MATERIAL STANDARDS

ITEM	BRAND	PRODUCT
FIRE HYDRANTS (TRAFFIC MODEL)	MUELLER SUPER CENTURION WATEROUS PACER	A-423 WB-67
GATE VALVES SPECIFY SIZE, NON-RISING STEM, 2" NUT, M.J., OPEN LEFT	MUELLER (5 1/2") AMERICAN FLOW CONTROL	A-2360-20L SERIES 2500
VALVE BOXES 3 PIECE	EAST JORDAN TYLER/UNION	SCREW ADJUSTING EXTENSION TYPE
CURB STOPS (SPECIFY SIZE)	MUELLER FORD	300 BALL VALVE BALL VALVE
CORPORATION VALVE (SPECIFY SIZE)	MUELLER FORD	H-15000 FB600 (AWWA/CC THREAD)
MANHOLES/CATCHBASINS/INLETS IN OPEN AREAS AND PAVEMENT (SELF-SEALING LID WITH PROPER UTILITY MARKINGS)	NEENAH	
	CLOSED LID	R-1772
	OPEN LID *1 SWALES AND DITCHES	R-4340 "BEEHIVE"
MANHOLES/CATCH BASINS/INLETS IN COMBINATION CURB & GUTTER (BICYCLE SAFE)	NEENAH ROLL/MOUNTABLE CURB BE 12 CURB	R-3281 (Tr 11)
WATER SERVICE SADDLES (ALL SERVICE SADDLES SHALL BE DOUBLE STRAP, BRONZE, NYLON COATED OR STAINLESS STEEL)	MUELLER FORD SMITH–BLAIR 3/4" & 1"	DR25 FS 303 / 317
BUBOX (AT LEAST 1 1/4" TOP SECTION) ARCH PATTERN, PLUG STYLE LID	FORD MCELLER	EA2 CURB BOX

*1 WHEREVER STORMWATER COULD POSSIBLY ENTER STORM STRUCTURE

MATERIAL STANDARDS

1. HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER SHALL COMPLY WITH IEPA REQUIREMENTS.
2. CONTRACTOR MAY BEND WATER MAIN PIPE UNIFORMLY UNDER SEWERS WITHOUT USING FITTINGS, PROVIDED THAT JOINT DEFLECTION DOES NOT EXCEED 5 DEGREES PER JOINT FOR PIPE UNDER 14" IN DIAMETER AND 3 DEGREES PER JOINT FOR PIPE 14" AND OVER IN DIAMETER. IF FITTINGS ARE USED, CONTINUOUS STRAPPING WITH RODS, STRAPS, NUTS AND BOLTS BELOW NORMAL WATER MAIN DEPTH ARE REQUIRED, OR RETAINER GLANDS MAY BE USED IN LIEU OF STRAPPING.

WATER MAIN LOWERING DETAIL

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41–2.01 PROTECTION OF WATER MAIN AND WATER SERVICE LINES

41–2.01A GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

41–2.01B HORIZONTAL SEPARATION – WATER MAINS AND SEWERS

(1.) Water mains shall be located at least ten (10) feet (3.1 m) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

(2.) Water mains may be located closer than ten (10) feet (3.1 m) to a sewer line when:

(a) local conditions prevent a lateral separation of ten (10) feet (3.1 m); and

(b) the water main invert is at least eighteen (18) inches (460 mm) above the crown of the sewer; and

(c) the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(3.) When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of slip–on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling. See Standard Drawing No. 18.

WATER AND SEWER SEPARATION REQUIREMENTS (HORIZONTAL SEPARATION)

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41–2.01C VERTICAL SEPARATION – WATER MAINS AND SEWERS

(1.) A water main shall be separated from a sewer so that its invert is a minimum of eighteen (18) inches (460mm) above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten (10) feet (3.1m) horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

(2.) Both the water main and sewer shall be constructed of slip–on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction when:

(a) it is impossible to obtain the proper vertical separation as described in (1) above; or

(b) the water main passes under a sewer or drain.

NOTES:
(1) CASING OF EITHER THE WATER MAIN OR SEWER PIPE IS ACCEPTABLE IN LIEU OF PLACING THE SEWER IN WATER MAIN EQUIVALENT PIPE.
(2) THE STORM SEWER CAN BE CONSTRUCTED WITH REINFORCED CONCRETE PIPE USING FLEXIBLE GASKETS JOINTS, (ASTM C361 C443) INSTEAD OF CONSTRUCTING THE STORM SEWER WITH WATER MAIN EQUIVALENT PIPE OR CASING PIPE.

(3.) A vertical separation of eighteen (18) inches (460 mm) between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the main, as shown on the Plans or as approved by the ENGINEER.

(4.) Construction shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten (10) feet (3.1 m) See Standard Drawings No. 19–23.

WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)

COUNTRYSIDE FIRE PROTECTION DISTRICT NOTES

1. Hydrants shall be appropriately marked based on the water flow available from them. The colors signify the capacity of the individual hydrant as tested. The Countryside Fire Protection District will conduct hydrant flow tests to determine the capacity. The color of the caps shall be as follows: Light Blue - 1,500 gpm or greater, Green - 1,000 to 1,499 gpm, Orange 500 - 999 gpm and Red - Less than 500 gpm. All hydrants shall have an identification flag which extends above the hydrant.
2. Hydrants shall have a discharge that is maintained at least 14 inches, but no more than 26 inches, from the surface from which the hydrant protrudes. No object shall be constructed, maintained or installed within 48 inches of a fire hydrant. These obstacles may hide or impede the use of the hydrant.
3. The contractor shall hydrostatically test underground piping with water at not less than 200 psi for 2 hours. Notify the Lake County Public Works Water Department 48 hours in advance so they can witness the test. Provide a certificate from the installing contractor that all underground mains have been inspected, hydrostatically tested and flushed.

DRAWN BY	DATE	REVISION
AS	5–30–16	REVISED PER VILLAGE REVIEW COMMENTS
AS	6–20–16	REVISED PER VILLAGE REVIEW COMMENTS

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Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS
CONSTRUCTION DETAILS

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: REH
DATE: 4–25–16
SCALE: N.T.S.

SHEET 29 OF 32
PULVH

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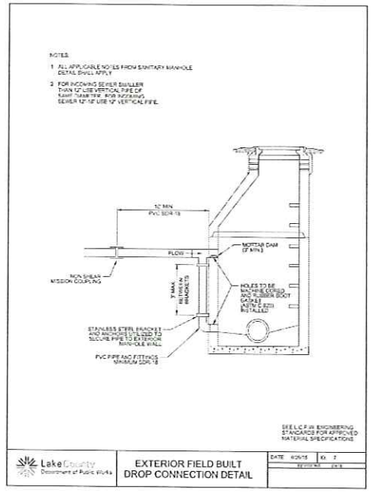

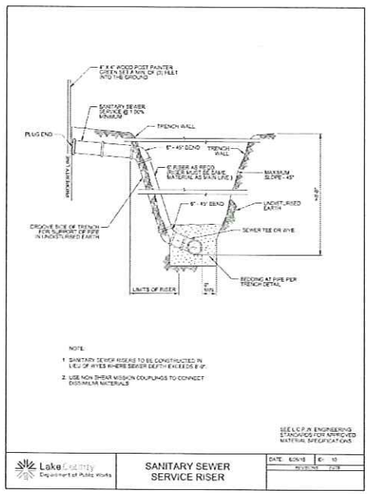

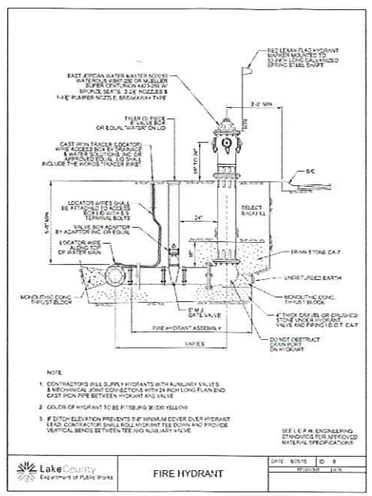

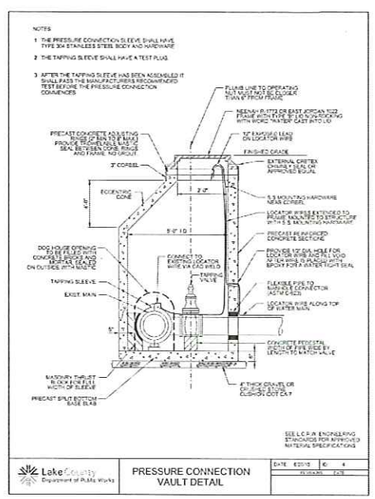

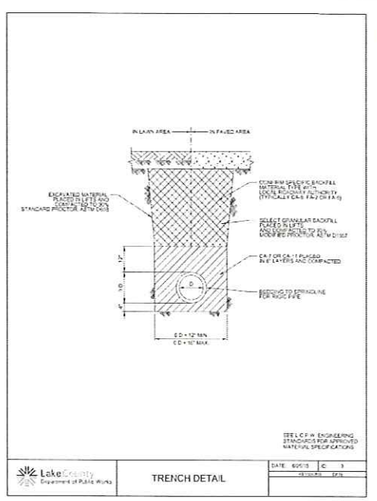

DATE	REVISIONS	DRAWN BY
4-30-16	REVISED PER VILLAGE REVIEW COMMENTS	AS
6-20-16	REVISED PER VILLAGE REVIEW COMMENTS	AS

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DRAWN BY:	REH
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SCALE:	N.T.S.

SHEET 31 OF 32
PULVH

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01-01-13

MANHARD CONSULTING, LTD.
STANDARD SPECIFICATIONS
GENERAL CONDITIONS

CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR'S covenants stated herein.

DEFINITION OF TERMS

a. "CLIENT" shall mean Pulte Home Corporation, which is the person or entity with whom Manhard Consulting, Ltd. has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.

b. "ENGINEER" shall mean Manhard Consulting, Ltd., a Civil Engineering consultant on the subject project.

c. "PLANS and SPECIFICATIONS" shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.

d. "CONTRACTOR" shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.

e. "JURISDICTIONAL GOVERNMENTAL ENTITY" shall mean any municipal, county, state or federal unit of government from whom an approval, permit and/or review is required for any aspect of the subject project.

INTENT OF THE PLANS AND SPECIFICATIONS

The intention of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinitely determined so as to include minor items obviously required as part of the work. The PLANS and SPECIFICATIONS require new material and equipment unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor component part. It is not intended, however, that materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied unless distinctly so noted. Materials or work described in words, which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

INTERPRETATION OF PLANS AND SPECIFICATIONS

a. The CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.

b. The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.

c. Should any discrepancies or conflicts on the PLANS or SPECIFICATIONS be discovered either prior to or after award of the contract, the ENGINEER's attention shall be called to the same before the work is begun thereon and the proper corrections made. Neither the CLIENT nor the CONTRACTOR may take advantage of any error or omissions in the PLANS and SPECIFICATIONS. The ENGINEER will provide information when errors or omissions are discovered.

GOVERNING BODIES

All works herein proposed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, and all such pertinent laws, directives, ordinances and the like shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, the CLIENT and/or the CONTRACTOR shall immediately notify the ENGINEER in writing.

LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, storm sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and elevation of such facilities and utilities. At the locations wherein detailed positions of these facilities and utilities become necessary to the new construction, including all points of connection, the CONTRACTOR shall furnish all labor and tools to verify or definitely establish the horizontal location, elevation, size and material (if appropriate) of the facilities and utilities. The CONTRACTOR shall notify the ENGINEER at least 48 hours prior to construction if any discrepancies in existing utility information or conflicts with existing utilities exist. The ENGINEER assumes no responsibility whatever with respect to the sufficiency or accuracy of the information shown on the PLANS and SPECIFICATIONS relative to the location of underground facilities and utilities, nor the manner in which they are removed or adjusted.

It shall be the CONTRACTOR's responsibility prior to construction, to notify all Utility Companies of the intentions to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

UNSUITABLE SOILS

The PLANS have been prepared by the ENGINEER based on the assumption that all soils on the project are suitable to support the proposed improvements shown. The CLIENT or CONTRACTOR shall immediately notify the ENGINEER if he discovers or encounters an obstruction that prevents the installation of the improvement according to the line and grades shown on the PLANS.

PROTECTION OF TREES

All trees that are not to be removed shall be protected from damage.

NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

The CONTRACTOR shall notify all applicable Jurisdictional Governmental Entities or utility companies, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the location and elevation of underground pipes, conduits or cables adjoining or crossing proposed construction.

TRAFFIC CONTROL

The CONTRACTOR shall provide when required by any JURISDICTIONAL GOVERNMENTAL ENTITY, all signs, equipment, and personnel necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. The CLIENT may, at his discretion, require the CONTRACTOR to furnish traffic control under these or other circumstances where in his opinion it is necessary for the protection of life and property. Emergency vehicle access shall be maintained at all times. Unless authorized by the CLIENT or CLIENT's construction representative, all existing access points shall be maintained at all times by the CONTRACTOR. The need for traffic control shall be anticipated by the CLIENT.

WORK AREA

The CONTRACTOR, his agents and employees and their employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project or work area specified by the Client. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

UTILITY POLES

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

RESTORATION

It is the intent of these SPECIFICATIONS that clean-up and final restoration shall be performed immediately upon completion of each phase of the work, both inside and outside the Project, or when so directed by the CLIENT so that these areas will be restored as nearly as possible to their original condition or better, and shall include but not be limited to: restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drain tiles, water mains, etc.

CLEANING UP

The CONTRACTOR shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish, tools, scaffolding and surplus materials and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

ROAD CLEANING

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR's trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall immediately remove said mud and/or debris.

SAFETY AND PROTECTION

The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR's duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable. The duties of the ENGINEER do not include review of the adequacy of either the CONTRACTOR's or the general public's safety in, on, or near the construction site.

HOLD HARMLESS

To the fullest extent permitted by law, any CONTRACTOR, material supplier or other entity by use of these plans and specifications hereby waives any right of contribution and agrees to indemnify, defend, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all manner of claims, causes of action, damages, losses and expenses, including but not limited to, attorneys' fees arising out of, resulting from or in connection with the performance of any work, pursuant to or with respect to these plans and specifications. However, this indemnity shall not be construed to indemnify ENGINEER, its consultants, agents or employees against its own negligence.

Claims, damages, losses and expenses as these words are used in the Agreement shall mean and include, but not be limited to (1) injury or damage occurring by reason of the failure of or use or misuse of any hoist, riggings, blocking, scaffolding or any and all other kinds of items of equipment, whether or not the same be owned, furnished or loaned by any part or entity, including any contractor, (2) all attorneys' fees and costs incurred in bringing an action to enforce the provisions of this indemnity, (3) costs for time expended by the indemnified party and its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or any of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts or any insurance maintained by CONTRACTOR or any Subcontractor or any other party.

INSURANCE

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, (prior to commencing any work) general public liability insurance insuring against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and its consultants, agents and representatives as additional insureds under such insurance policy, provided that any party using or relying on these plans having obligations to maintain specific insurance by reason of any agreement with CLIENT or any CONTRACTOR or ENGINEER shall provide evidence and certificates of insurance as required by such contract or agreement. Such insurance must contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEER's other applicable coverage is considered secondary. Such insurance shall not limit any liability of any party providing work or services or providing materials.

THIRD PARTY BENEFICIARY

Manhard Consulting, Ltd., the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement.

DETAILED SPECIFICATIONS

I. DEMOLITION

A. CONTRACTOR shall perform all demolition work in accordance with all applicable Federal, State and local requirements.

B. The CONTRACTOR is responsible for demolition, removal and disposal (in a location approved by all JURISDICTIONAL GOVERNING ENTITIES) of all structures, pads, walls, flumes, foundations, road, parking lots, drives, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All facilities to be removed shall be undercut to suitable material and brought to grade with suitable compacted fill material per the specifications.

C. The CONTRACTOR is responsible for removing all debris from the site and disposing the debris in a lawful manner.

D. The CONTRACTOR shall coordinate all demolition with the JURISDICTIONAL GOVERNING ENTITY and CLIENT to ensure protection and maintenance of sanitary sewer and water utilities as necessary and to provide stormwater conveyance until new facilities are constructed, tested and placed into operation.

E. The locations of all existing utilities shown on the plan have been determined from the best information available and are given for the convenience of the CONTRACTOR and are not to be interpreted as the exact location, or as the only obstacles that may occur on the site. The ENGINEER assumes no responsibility for their accuracy. Prior to the start of any demolition activity, the CONTRACTOR shall notify the utility companies for location of existing utilities and shall verify existing conditions and proceed with caution around any anticipated features.

F. CONTRACTOR must protect the public at all times with fencing, barricades, enclosures, and other appropriate best management practices.

G. Prior to demolition occurring, all erosion control devices are to be installed.

H. CONTRACTOR shall develop and implement a daily program of dust control and shall submit and obtain JURISDICTIONAL GOVERNING ENTITY approval of dust control procedures prior to demolition of any structures. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

I. The CONTRACTOR is responsible for obtaining all permits required for demolition and disposal.

J. The CONTRACTOR shall coordinate with respective utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company concerning portions of work which may be performed by the Utility Company's forces and any fees which are to be paid to the utility company for their services. The CONTRACTOR is responsible for paying for all fees and charges.

K. Electrical, telephone, cable, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company.

L. Any material containing asbestos found within existing structures shall be removed from the site and disposed of off-site by the CONTRACTOR in accordance with County, State and Federal regulations.

M. Voids left by any item removed under any proposed building, pavement, walk, etc. or within 24" thereof shall be filled and compacted with suitable materials by the CONTRACTOR.

N. All fire access lanes within the project area shall remain in service, clean of debris, and accessible for use by emergency vehicles.

O. Any existing wells encountered shall be exposed and sealed 3' below proposed finish grade by the CONTRACTOR in accordance with Section 920.120 (latest edition) of the Illinois Water Well Construction Code, Department of Public Health, and all applicable local rules and regulations.

P. Any existing septic tanks and grease traps encountered shall have all liquids and solids removed and disposed of by a licensed commercial hauler in accordance with all applicable JURISDICTIONAL GOVERNING ENTITY regulations, and the tank and grease traps shall then be filled with suitable materials or removed from the site and disposed of by the CONTRACTOR.

Q. The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings.

R. Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials designed to be relocated on this plan, all other construction materials shall be new.

S. CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc. clear and free from any construction activity and/or material to ensure easy and safe pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate phase all construction activity within proximity of the building and utility interruptions with the facility manager to minimize disturbance and inconvenience to facility operations.

T. The CONTRACTOR shall coordinate water main work with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to plan the proposed improvements and to ensure adequate fire protection is constantly available to the facility and site throughout this specific work and through all phases of construction. CONTRACTOR shall be responsible for arranging/providing any required water main shut offs with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

II. EARTHWORK

A. STANDARDS

This work shall be completed in conformance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition except as modified below.

B. SOIL BORING DATA

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

C. EARTHWORK CALCULATIONS AND CROSS SECTIONS

The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are provided without any guarantee by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own calculations and cross sections as necessary and has given such calculations and cross sections to determine site soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction to tolerances and construction methods that are beyond the control of the ENGINEER.

D. CLEARING, GRUBBING AND TREE REMOVAL

The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

E. TOPSOIL STRIPPING

Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

F. TOPSOIL RESPREAD

Upon completion of roadway and/or parking lot improvements and installation of underground utilities a minimum of four inches (4") of topsoil shall be respread over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

G. SEEDING

Upon completion of topsoil respread, the CONTRACTOR shall apply seed and fertilizer to all respread areas in accordance with IDOT standards or as designated on landscape drawings and specifications provided by the CLIENT.

H. SODDING

Upon completion of topsoil respread, the CONTRACTOR shall install sod to all areas designated on the plans or as designated on the landscape drawings and specifications provided by the CLIENT.

I. EXCAVATION AND EMBANKMENT

Upon completion of topsoil stripping, all excavation and embankments shall be completed as shown on the PLANS. All suitable excavated materials shall be hauled, placed (moisture conditioned if necessary) and compacted in the embankment areas. The CONTRACTOR shall include all filtered dewatering, temporary ditching and culverts necessary to complete the excavation and embankment.

Specifically included in the scope of Excavation and Embankments is grading and shaping of all cut or fill areas including swales and ditches, handling of sewer spoil, etc., and as required to provide positive drainage at the end of each working day and upon completion of a section.

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filling of the roads, building pads and parking lots within the work limits to lines & grades shown on the plans. He shall be responsible for obtaining compaction in accordance with the minimum values listed in the table below for all embankments unless more stringent values are listed in the soils report, and to use any method approved by the CLIENT necessary to obtain this compaction (i.e., soil fabric or any undercutting that may be required).

Type Material	Percent Compaction Standard	Pavement & Floor Slabs	Gross Areas
Sandy Soils	Modified Proctor	95%	90%
Clayey Soils	Standard Proctor	95%	90%

unless approved otherwise in the soils report or by the CLIENT.

The CONTRACTOR shall notify the CLIENT if proper compaction cannot be obtained so that the CLIENT may determine what remedial measures may be needed.

A soils testing firm employed by the CLIENT shall determine which soils are unsuitable. Materials in their natural state being defined as unsuitable that would be suitable material if moisture conditioned, shall be conditioned by the CONTRACTOR and used as suitable embankment material or hauled from the site.

For purposes of definition, unsuitable material shall be as follows unless determined otherwise by the Soils Engineer.

1. Any soil whose optimum moisture content exceeds 25%
2. Any cohesive soil with an unconfined compressive strength of 1.5 tons per square foot or less.
3. Any soil whose silt content exceeds 60% by weight
4. Any soil whose maximum density is less than 100 pounds per cubic foot
5. Any soil containing organic, deleterious, or hazardous material.

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the subgrade and replaced with an impermeable clay liner, including adjacent to and under storm sewer inlets and outlets. It is the intent of these PLANS and SPECIFICATIONS that the CONTRACTOR shall prepare the lake bottoms, side slopes, and compaction thereof so that the finished lake will maintain the proposed normal water level and that leakage does not exceed ½ inch per week.

Ditches and swales are to be excavated to the lines and grades indicated on the PLANS. All suitable materials excavated from the ditches shall be used in construction of the embankments.

The CONTRACTOR shall notify the CLIENT immediately upon encountering groundwater during excavation. If in the opinion of the CLIENT or the JURISDICTIONAL GOVERNING ENTITY the condition necessitates the installation of perforated drain tile bedded in washed gravel or open storm sewer joints wrapped with fabric, the CONTRACTOR shall install the same.

During excavation and embankment, grades may be adjusted to provide an overall site earthwork balance. The CONTRACTOR shall cooperate fully with the CLIENT in adjustment of grades, construction methods and placement of material to meet the above goals and shall immediately advise CLIENT if he believes that the earthwork will not balance.

It is the intent of these PLANS that storm waters falling on the site be diverted to sedimentation control devices and into the detention basins during construction. The CONTRACTOR shall construct and maintain any temporary ditches or swales that are necessary to accomplish this prior to beginning mass excavation.

J. EROSION CONTROL

Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual, Lake County Stormwater Management Commission, Village of Vernon Hills and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

K. UNDERCUTTING DURING EARTHWORK

If the subgrade cannot be dried adequately by discing as outlined above for placement of material to planned grades and if the Geotech, Village Engineer, and CLIENT determines that the subgrade does not meet the standards set forth by the Village of Vernon Hills Ordinances, undercutting may be required.

L. MISCELLANEOUS CONTRACT ITEMS

The following items may be required at the CLIENT's option, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY.

(1) GEOTEXTILE FABRIC

Geotextile fabric or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY where proper compaction of embankments over existing soft soils is not possible. Geotextile fabric shall meet the material specifications of and shall be installed in accordance with the above standards.

(2) EROSION CONTROL BLANKET

Erosion control blanket or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY for the stabilization of disturbed areas. Erosion control blanket shall meet the material specifications of and shall be installed in accordance with the above standards, the Illinois Urban Manual and/or the details shown on the PLANS.

III. UNDERGROUND IMPROVEMENTS

A. GENERAL

STANDARDS

All underground improvements shall be constructed and tested in accordance with the Village of Vernon Hills and Lake County Department of Public Works Departments, the Standard Specifications for Water and Sewer Construction in Illinois and Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition. In the event of conflicting guidelines, the more restrictive shall govern.

TRENCH BACKFILL

Trench Backfill shall conform to Village Exhibits NO. 1 and 2.

MANHOLES, CATCH BASIN, INLETS & VALVE VAULTS

All Manholes, Catch Basins, Inlets, and Valve Vaults shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with the latest revision of ASTM designation C-478. All joints between sections and frames (except sanitary manholes, see Section I.B Manholes, below) shall be sealed with a continuous preformed bituminous butyl rope material. Manholes shall have offset cones except that no cone shall be used on storm manholes 6'-0" deep or less in which case a reinforced concrete flat top section shall be used, and Valve Vaults shall have concentric cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 8" in height. All manholes and catch basin steps shall be copolymer polypropylene with continuous ½" steel reinforcement as manufactured by MA Industries, or approved equal.

*** AUGER/BORING and CASING** - INTENTIONALLY DELETED

*** AUGER (OPEN BORE)** - INTENTIONALLY DELETED

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

Horizontal and vertical separation of water and sewer mains shall be in accordance with Standard Specifications for Water and Sewer Construction in Illinois Section 41-2.01A and 41-2.01B and Standard Drawing 18, 19, 20, 21, 22, 23 and 24.

STRUCTURE ADJUSTMENTS

Structures shall be adjusted to the finished grade as shown on PLANS.

B. SANITARY SEWERS AND APPURTENANCES

*** SANITARY SEWER PIPE**

Sanitary sewer pipe including bedding services, shall conform to the following:

(1) Polyvinyl Chloride (PVC) Sewer Pipe with a minimum SDR 21 conforming to AWWA C-900, C-909 CL 150. PVC pipe shall have push-on joints, utilizing an integral bell and stainless steel reinforced gasket, complying with ASTM D-3139 PVC.

(2) Ductile Iron Sewer Pipe shall conform with ANSI A21.5 (AWWA C-151) will be allowed only when necessary due to load requirements as determined by the ENGINEER and approved by the Lake County Department of Public Works. Ductile iron pipe shall have the approved bolgenic corrosion resistant liner, Protecto 401 or approved equal, and otherwise meet ANSI A21.4 (AWWA C-104). Class thickness shall be minimum Class 52 and designed per ANSI A21.5 (AWWA C-150). Pipe shall have push-on joints per ASA A21.11. Corrosion control shall be provided using polyethylene wrapping per ASHI/AWWA C-105/A21.5.

Sanitary sewers shall include bedding and backfilling.

MANHOLES

Manholes shall be constructed in conformance with Section IIIA Manholes, etc. above. The concrete base and bottom section shall be constructed of precast reinforced concrete monolithically cast sections including benches, pipe connection and invert flow lines. Manhole frame and lids shall be self-sealing Neenah R-1772 or approved equal, with lids imprinted 'SANITARY', with a T-seal and concealed pickhole. Manhole joints between adjustment rings and frames and between manhole sections shall be sealed with a continuous preformed bituminous butyl rope material. Manholes shall be constructed with an integral corbel to accept a GREATEX or equal approved exterior chimney seal. All pipe connection openings shall be precast with resilient rubber watertight pipe sleeves. Manholes shall include steps, frame & grate, backing, and trench backfill.

All drop manholes shall be spray lined with a minimum 1" of hydrogen sulfide resistant cementitious mortar, Strong Corporation Strongseal, Kerneos SewerCoat, or approved equal. Coating shall be applied in strict conformance with manufacturer's written procedures.

*** FOUNDATION, BEDDING AND HAUNCHING**

SEE VILLAGE EXHIBITS NO. 1 AND NO. 2

TESTING

Sanitary sewers shall be air tested and tested for deflection in accordance with the requirements of Section 31-4.12 "TESTING AND INSPECTION FOR ACCEPTANCE OF SANITARY SEWERS" of the Standard Specifications for Water and Sewer Construction in Illinois or the JURISDICTIONAL GOVERNING ENTITY, whichever is more restrictive. In addition, a televised inspection of the completed sanitary sewers shall be conducted and a copy of the videotape and report furnished to the JURISDICTIONAL GOVERNING ENTITY.

All sanitary manholes are to be tested for water tightness in accordance with ASTM C969 "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines", or ASTM C1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test".

SERVICES

A wye branch or "tee" and sanitary service line, properly plugged and sealed shall be constructed as shown on the PLANS. The ends of all services shall be marked with a 4"x4" post extending 36" above grade and painted red. The CONTRACTOR shall keep accurate records of all Wye or Tee locations as measured from the downstream manhole as well as the service lengths and furnish same to CLIENT.

Records of all service connections are to be provided to Lake County Public Works.

***RISERS** - Risers shall be constructed in locations as shown on the PLANS and according to the detail.

***DROP MANHOLE CONNECTIONS**

Drop manhole connections to existing manholes shall be constructed according to the PLANS and the detail. External concrete encased drop pipe shall be cast integral with manhole base and barrel sections.

All drop manholes shall be spray lined with a minimum 1" of hydrogen sulfide resistant cementitious mortar, Strong Corporation Strongseal (www.strongseal.com, Kerneos SewerCoat, or approved equal. Coating shall be applied in strict conformance with manufacturer's written procedures.

***SANITARY SEWER FORCE MAIN** - INTENTIONALLY DELETED

TELEVISION INSPECTION

Videotapes and written report of all television inspections shall be provided to the CLIENT. The form of report and type and format of the videotape shall be approved by the JURISDICTIONAL GOVERNING ENTITY.

All sewers and appurtenances shall be cleaned prior to inspection and testing required by this section.

All defects and corrective work required as the result of television inspection shall be performed by the CONTRACTOR without delay. All dips, cracks, leaks, improperly sealed joints and departures from approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and such further inspection made as may appear warranted by the CLIENT. TV inspection is required by Lake County Public Works Department.

MISCELLANEOUS

All floor drains shall be connected to the sanitary sewer.

C. WATER MAINS AND APPURTENANCES

***WATER MAIN PIPE (3" AND LARGER)**

Water main pipe shall conform to the following:

1. Ductile iron pipe conforming to ANSI A21.50 (AWWA C150) designed per ANSI A21.50 (AWWA C150) with minimum wall thickness corresponding to Class 52. Pipe shall be cement lined per ANSI A21.4 (AWWA C104) and encased for corrosion protection with wrapper meeting ANSI/AWWA Standard C105/A21.5. Wrap shall be extended for a minimum of three feet up from all copper water service connections. Fittings shall conform to ANSI A21.10. Connections shall be made with flanged or push on joints with elastomeric seals meeting ASTM A536, ASTM D2241 and AWWA C900, C905 or C909 for watermain or service applications 4" diameter and above. PVC C900 and C905 pipe shall have a minimum wall thickness corresponding to an SDR of 18 PVCO C909 pipe shall have a minimum wall thickness corresponding to an SDR of 33. PVC piping shall be provided in cast (ductile) pipe outside diameter sizes. Connections shall be made with flanged or push-on joints with elastomeric seals meeting ASTM 3139 and ASTM F477. No solvent cement joints will be allowed. Flanged joints are required for all connections to pumps, valves and other serviceable pipeline appurtenances.

All water mains shall be installed with an insulated 12 gauge copper wire tapped to the top of the main. This wire shall terminate inside every valve vault, building service valve box and at any hydrant auxiliary valve box more than (10) feet in length from the main. The wire shall be securely terminated at each valve vault and valve box on stainless steel hardware with exposed lead of at least (12) inches in length.

Installation shall be in accordance with ANSI/AWWA C600 (Ductile Iron) or ANSI/AWWA C605 (PVC). All water main shall have mechanical joint cast iron or ductile iron fittings in accordance with ANSI/AWWA C110/A21.10 or compact ductile iron fittings in accordance with ANSI/AWWA C153/A21.53 with 250 psi working pressure.

Poured or monolithic concrete thrust blocks are required to brace all tees, plugs, caps, and bends of 11 1/4 degree deflection or greater. Minimum cover for all water mains, including services, shall be 5'-6" from the finished grade. Water main shall include bedding and backfilling.

WATER VALVES

All valves shall be, per JURISDICTIONAL GOVERNING ENTITY requirements conforming to the latest revision of ANSI/AWWA C509 or C515, with a rated working pressure of 200 psi in accordance with JURISDICTIONAL GOVERNING ENTITY requirements, except that butterfly valves conforming to ANSI/AWWA C515 shall be constructed on all water mains 18" diameter and larger. Valves shall be non-rising stem and shall close by turning clockwise.

VALVE VAULTS

Valve vaults shall be constructed in conformance with Section IIA Manholes, etc. above. Frame and lids shall be as approved by the JURISDICTIONAL GOVERNING ENTITY and shall be imprinted 'WATER'.

VALVE BOXES

Valve boxes shall be constructed in conformance with the standard detail. Valve boxes shall be cast iron extension screw type having lids imprinted with the letters 'WATER'.

FIRE HYDRANTS

Fire Hydrants shall be per JURISDICTIONAL GOVERNING ENTITY requirements. All fire hydrants shall be located as shown on the PLANS and shall be painted in a manner acceptable to the JURISDICTIONAL GOVERNING ENTITY after installation and shall be adjusted to final grade.

TAP, STOPS AND BOX

The CONTRACTOR shall determine from the JURISDICTIONAL GOVERNING ENTITY as to the exact style, type, and manufacture of Corporation stops, ground key stops and services boxes preferred by the JURISDICTIONAL GOVERNING ENTITY and shall furnish same.

***SMALL WATER SERVICES (2" DIAMETER OR LESS)**

Water services shall be type K copper size as shown on PLANS, and constructed where shown on the PLANS. The ends of all services shall be marked with a 4"x4" post extending 36" above grade and painted blue. The CONTRACTOR shall keep accurate records of top locations and service box locations, as well as the service lengths and furnish the same to CLIENT. Water services shall include bedding and trench backfill. Records of all service connections are to be provided to Lake County Public Works.

DISINFECTION

Disinfections shall meet all of the requirements of the State of Illinois, Environmental Protection Agency, Public Water Supplies Division. The safe quality of the water supply shall be demonstrated by bacteriological analysis of samples collected at sampling taps on at least two consecutive days following disinfection of the mains and copies of the said report submitted to the JURISDICTIONAL GOVERNING ENTITY and the CLIENT.

PRESSURE TEST

Allowable leakage, test pressure and duration shall be as per the requirements of the JURISDICTIONAL GOVERNING ENTITY.

PRESSURE CONNECTION TO EXISTING WATER MAIN

The CONTRACTOR shall maintain system pressure to the existing water main at all times. Existing water main shall be located and material excavated, and valve basin slab and main supports installed. The existing water main shall be cleaned and the exterior disinfected prior to installing the tapping tee (material to conform to AWWA C110). The tapping valve shall be installed (valve to conform to AWWA C500) and the pressure tap completed in accordance with the detail on the plans. Valve shall be constructed in conformance with the detail. Payment for pressure connection to existing water main shall include disinfection, tapping valve and tee, valve vault, frame and lid, bedding, and trench backfill.

DRY CONNECTION TO EXISTING WATER MAIN

A dry connection to existing water main shall include a connection to an existing water main stub where shown on the PLANS. The CONTRACTOR shall obtain approval of the JURISDICTIONAL GOVERNING ENTITY to shut down any main, including submittal of a schedule of the time of shut off and the time the line will be returned to service. All mains shut down that are opened to atmosphere must be disinfected prior to returning main into service.

POLYETHYLENE TUBE (FOR DUCTILE IRON WATER MAIN ONLY)

All ductile iron water main shall be encased for corrosion protection with wrapper meeting ANSI/AWWA Standard C105/A21.5. Wrap shall be extended for a minimum of 3 feet up from all copper water service connections.

FOUNDATION, BEDDING AND HAUNCHING

See Village Exhibits NO. 1 and 2.

D. STORM SEWERS AND APPURTENANCES

*** STORM SEWER PIPE**

Storm sewer pipe shall conform to the following:

(1) Reinforced concrete pipe minimum Class IV, 12 inch diameter, in conformance with the latest revision of ASTM designation C76 with C361 or C443 flexible gasket joints, except that bituminous mastic joints may be used in grass areas.

(2) Polyvinyl Chloride (PVC) Pipe: ASTM D3034 (4-inch thru 15-inch) or ASTM F679 (18-inch thru 36-inch), rated SDR 26, continually marked with manufacturer's name, pipe size, cell classification, SDR rating. Joints shall be flexible elastomeric seals conforming to ASTM D3212.

Storm sewers may be constructed with reinforced concrete pipe using only flexible gasket joints (ASTM 361 or 443) for water main crossings.

Storm sewer shall include bedding and trench backfill.

MANHOLES, INLETS & CATCH BASINS

Manholes, Inlets and Catch Basins shall be constructed in conformance with Section IIIA Manholes, etc. above. The space between connecting pipes and the wall of the manhole shall be completely filled with non-shrink hydraulic cement mortar. Frames and lids shall be Neenah or Village approved equal unless specified otherwise on the PLANS. All frames and grates shall be provided such that the flange fully covers the opening plus 2" of the surface as a minimum. * Provide "Vane" Type frame & grate for all structures located in curb where gradient exceeds 2.0%. Manholes shall include steps, frame & grate, bedding and trench backfill.

FLARED END SECTION AND HEADWALLS

Flared end sections and headwalls shall be pre-cast reinforced concrete per the Illinois Department of Transportation and the Village of Vernon Hills standards, and shall be installed where shown on the PLANS. All flared end sections and headwalls shall include a poured concrete base, See Village Exhibit NO. 10. All flared end sections and headwalls shall be installed with galvanized grate, securely attached.

RIP RAP

Stone rip rap consisting of pieces of "A" quality stone 4" to 8" in diameter shall be furnished and installed in accordance with IDOT Specifications and shall be placed where shown on the plans, to a minimum thickness of 12" and a width as indicated on the plans. Broken concrete or concrete blocks will not be acceptable.

*** FOUNDATION, BEDDING AND HAUNCHING**

SEE VILLAGE EXHIBITS NO. 1 AND NO. 2

UNDERDRAINS

Pipe underdrains and fittings shall be Polyvinyl Chloride (PVC) pipe: ASTM D3034, rated SDR 26, perforated and wrapped in a soil filter fabric. Installation shall conform to the Village of Vernon Hills Exhibit NO. 11. All PVC pipe shall connect to concrete pipe and/or structures shall be sored and bost installed per Village Exhibit NO. 43. Trench Backfill shall be in accordance to Village Exhibits NO. 1 and 2.

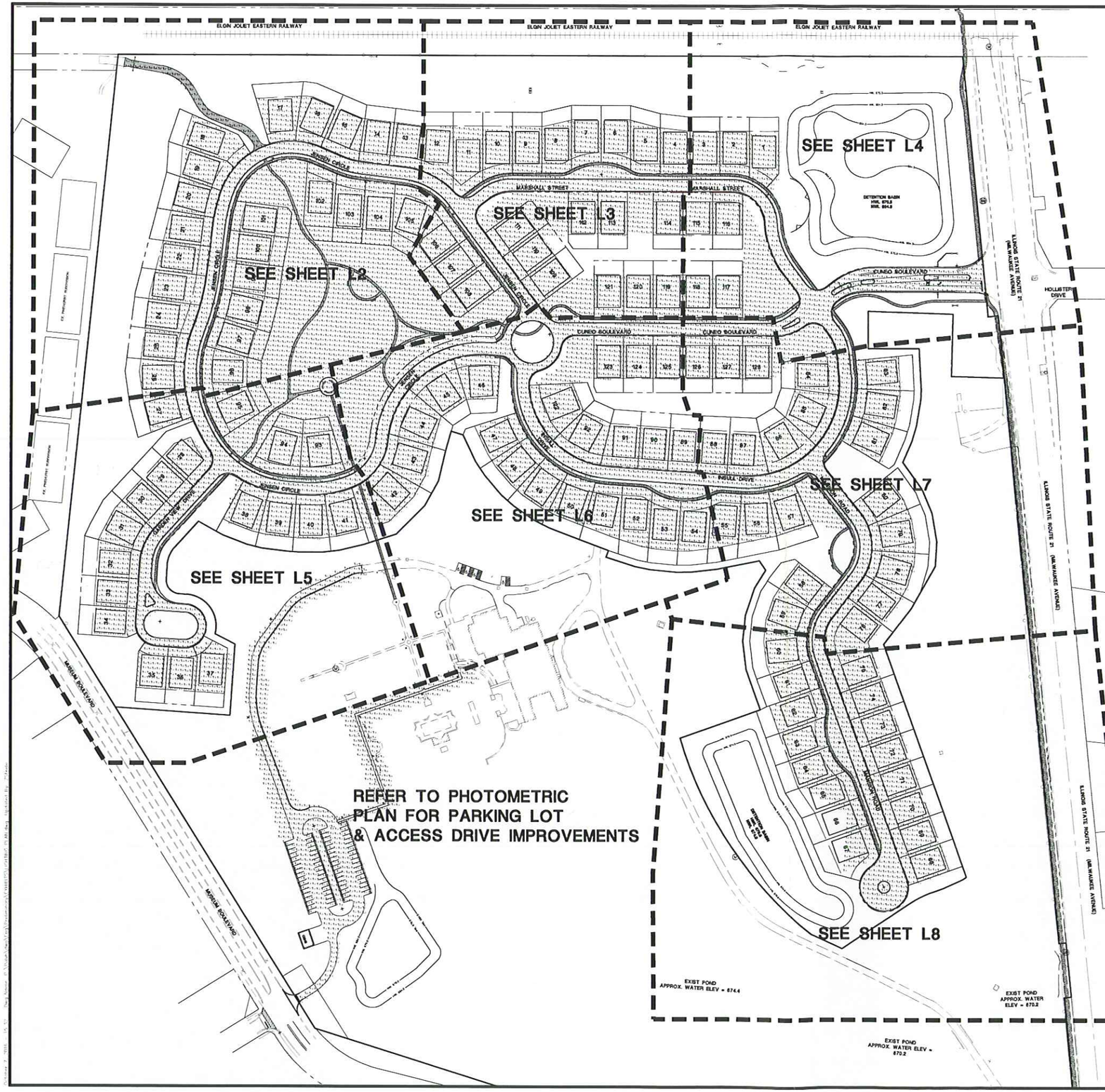
MISCELLANEOUS

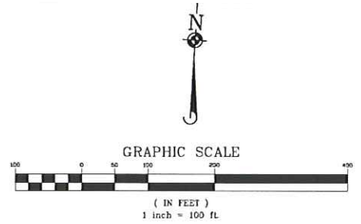
(1) All existing field drainage tile or storm sewers encountered or damaged during construction shall either be restored to their original condition, properly rerouted and/or connected to the storm sewer system.

(2) Footing drains shall be connected to sump pumps or discharged directly into storm sewers. Footing drains or drainage tile shall not be connected to the sanitary sewer.

**C

ORDINANCE 2017-014 Exhibit B12 Preliminary Photometric plans – Overall prepared by Manhard Consulting Ltd with a date of 10/07/2016 and consisting of pages L1 thru L8





Calculation Summary								
Label	Calculation Type	Units	Avg	Max	Min	Avg/Min	Max/Min
Cuneo Driveway	Illuminance	Fc	1.76	4.9	0.0	N.A.	N.A.
Cuneo Roadway	Illuminance	Fc	1.27	3.1	0.0	N.A.	N.A.
Cuneo Parking Lot	Illuminance	Fc	1.27	3.1	0.0	N.A.	N.A.
Hollister Drive	Illuminance	Fc	0.41	1.2	0.0	N.A.	N.A.
Northern Entrance	Illuminance	Fc	0.41	1.2	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 3a & Walking Trail	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Subdivision Road	Illuminance	Fc	0.44	1.1	0.0	N.A.	N.A.

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

RECEIVED

OCT 10 2016

Community Development Department

Manhard CONSULTING LTD

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - OVERALL

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	ZRS
DATE:	10-07-16
SCALE:	1"=100'

SHEET L1 OF L8

PULVH

ELGIN JOLIET EASTERN RAILWAY

JENSEN CIRCLE

EX. PINEHURST SUBDIVISION

SEE SHEET L3

MATCHLINE

SEE SHEET L5

MATCHLINE SEE SHEET L6

GRAPHIC SCALE

40 0 20 40 80 160

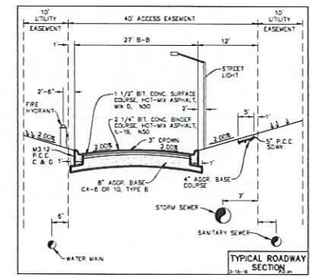
(IN FEET)
1 inch = 40 ft

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	Total Watts
	21	3000-400w-HPS	SINGLE	1 x 50000	1.000	400 W	465	9,765.00
	1	250-sap-TYPE	SINGLE	1 x 0	1.000	250 W SAP	0	0.00

Calculation Summary							
Label	Calculation	Units	Avg	Max	Min	Avg/Min	Max/Min
Cuneo Driveway	Illuminance	Fc	0.36	0.9	0.0	N.A.	N.A.
Cuneo Roadside	Illuminance	Fc	0.19	0.5	0.0	N.A.	N.A.
Cuneo Parking Lot	Illuminance	Fc	0.47	0.6	0.0	N.A.	N.A.
Entrance Circle	Illuminance	Fc	0.42	0.6	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.09	0.4	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.11	0.4	0.0	N.A.	N.A.
Residential 11	Illuminance	Fc	0.07	0.2	0.0	N.A.	N.A.
Residential 12	Illuminance	Fc	0.07	0.2	0.0	N.A.	N.A.
Residential 13 & Walking Trail	Illuminance	Fc	0.08	2.9	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.11	0.4	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.25	2.1	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.13	0.5	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.11	0.3	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.11	0.3	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.08	0.2	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.11	0.3	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.11	0.3	0.0	N.A.	N.A.
Subdivision Road	Illuminance	Fc	0.49	2.9	0.0	N.A.	N.A.

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.



THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - NORTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	ZRS
DATE:	10-07-15
SCALE:	1"=40'

SHEET

L2 OF L8

PULVH

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Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
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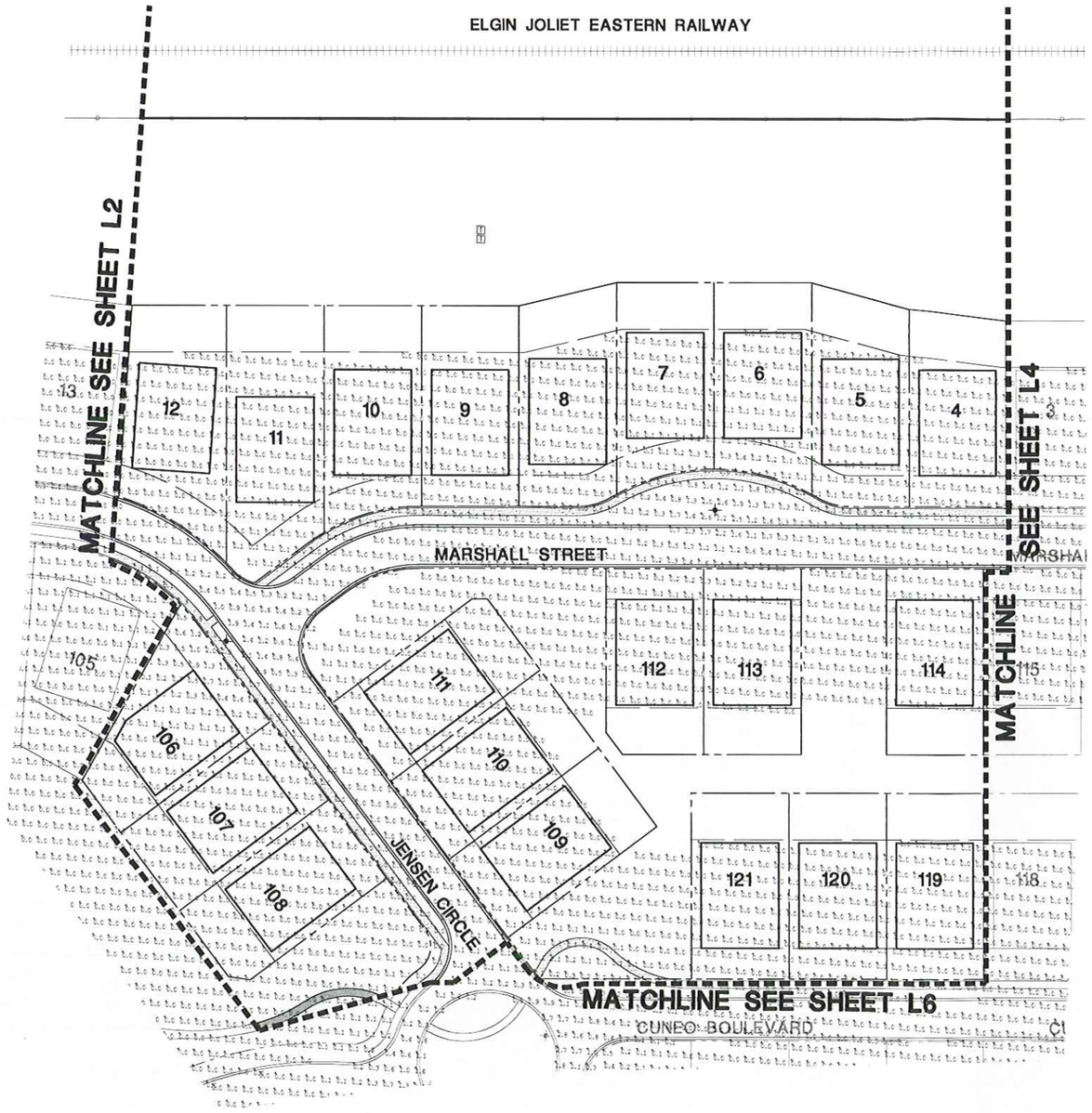
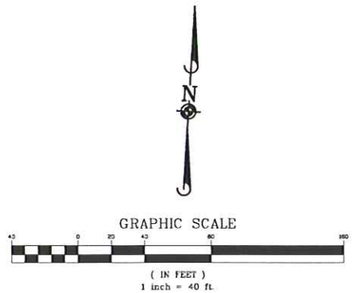
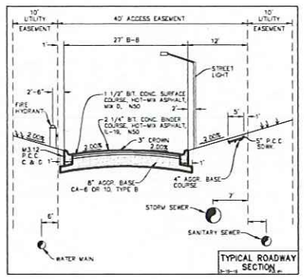




Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	Total Watts
	37	MS805-MSV-150HPS	SINGLE	14400	1.000	MS805	150	5,550.00
	1	SINGLE-TYPE	SINGLE	14400	1.000	MS805	150	150.00

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CUNEO ENTRANCE	Illuminance	Fc	0.13	3.5	0.0	N.A.	N.A.
CUNEO PARKING	Illuminance	Fc	0.41	1.4	0.0	N.A.	N.A.
CUNEO PARKING SIDE	Illuminance	Fc	0.49	1.4	0.0	N.A.	N.A.
Entrance Drive	Illuminance	Fc	0.49	1.4	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.03	0.3	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.01	0.8	0.0	N.A.	N.A.
Residential 10	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 11	Illuminance	Fc	0.01	0.3	0.0	N.A.	N.A.
Residential 12 & Walking Trail	Illuminance	Fc	0.08	0.8	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.03	0.4	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.04	0.4	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Turnaround Area	Illuminance	Fc	0.22	2.9	0.0	N.A.	N.A.



NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

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DRAWN BY | REVISION | DATE

THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - NORTH MIDDLE

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: ZRS
DATE: 10-07-15
SCALE: 1"=40'

SHEET
L3 OF L8
PULVH

ELGIN JOLIET EASTERN RAILWAY

SEE SHEET L3

MARSHALL STREET

MATCHLINE

HWL 670.5

NWL 664.5

664.5

DETENTION BASIN
HWL 670.5
NWL 664.5

CUNEO BOULEVARD

ILLINOIS STATE ROUTE 21
(MILWAUKEE AVENUE)

HOLLISTER
DRIVE

MATCHLINE SEE SHEET L7

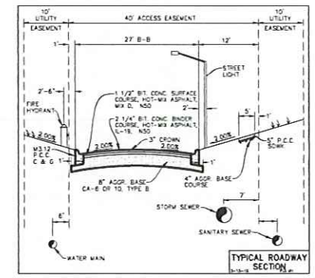
GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

Calculation Summary							
Label	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
Cuneo Driveway	Illuminance	Fc	0.36	4.9	0.0	N.A.	N.A.
Cuneo Mansion	Illuminance	Fc	0.19	3.1	0.0	N.A.	N.A.
Cuneo Parking Lot	Illuminance	Fc	0.40	3.4	0.0	N.A.	N.A.
Entrance Drive	Illuminance	Fc	0.47	3.4	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.03	2.4	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.03	2.4	0.0	N.A.	N.A.
Residential 10	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.
Residential 11	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.
Residential 12 & Walking Trail	Illuminance	Fc	0.06	0.9	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.05	0.9	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.04	0.9	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.03	2.4	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.04	0.9	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Signalization Ramp	Illuminance	Fc	0.22	2.5	0.0	N.A.	N.A.

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	Total Watts
A	11	MSB05-T5HO	SINGLE	5400	1.000	SMS-MS-T5HO	54	594.00
B	1	MSB05-T5HO	SINGLE	5400	1.000	SMS-MS-T5HO	54	54.00

Calculation Summary							
Label	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
Cuneo Driveway	Illuminance	Fc	0.36	4.9	0.0	N.A.	N.A.
Cuneo Mansion	Illuminance	Fc	0.19	3.1	0.0	N.A.	N.A.
Cuneo Parking Lot	Illuminance	Fc	0.40	3.4	0.0	N.A.	N.A.
Entrance Drive	Illuminance	Fc	0.47	3.4	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.03	2.4	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.03	2.4	0.0	N.A.	N.A.
Residential 10	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.
Residential 11	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.
Residential 12 & Walking Trail	Illuminance	Fc	0.06	0.9	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.05	0.9	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.04	0.9	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.03	2.4	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.04	0.9	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Signalization Ramp	Illuminance	Fc	0.22	2.5	0.0	N.A.	N.A.



NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MSB05 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - NORTHEAST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	ZRS
DATE:	10-07-16
SCALE:	1"=40'

SHEET
L4 OF L8
PULVH

MATCHLINE SEE SHEET L2

MATCHLINE SEE SHEET L6

EX. PINEHURST SUBDIVISION

GARDEN VIEW DRIVE

JENSEN CIRCLE

MUSEUM BOULEVARD

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Add Watts	800 Rating
S	11	MONTE-ARTO-LONGS	SINGLE	14000	1.000	MONTE	120	53-01-00
D	1	MONTE-TOPP	SINGLE	14000	1.000	SMALL MONTE	90	53-01-00

Calculation Summary							
Label	Calculation	Units	Avg	Max	Min	Avg/Min	Max/Min
Curbs: Driveway	Illuminance	Fc	0.36	2.6	0.0	N.A.	N.A.
Curbs: Museum	Illuminance	Fc	0.31	3.3	0.0	N.A.	N.A.
Curbs: Parking Lot	Illuminance	Fc	0.41	2.6	0.0	N.A.	N.A.
Entrance Drives	Illuminance	Fc	0.41	2.6	0.0	N.A.	N.A.
Pedestrian Sidewalk	Illuminance	Fc	0.41	2.6	0.0	N.A.	N.A.
Res/Central 1	Illuminance	Fc	0.31	2.1	0.0	N.A.	N.A.
Res/Central 10	Illuminance	Fc	0.31	2.4	0.0	N.A.	N.A.
Res/Central 11	Illuminance	Fc	0.31	2.4	0.0	N.A.	N.A.
Res/Central 12 & Walking Trail	Illuminance	Fc	0.31	2.6	0.0	N.A.	N.A.
Res/Central 2	Illuminance	Fc	0.31	2.6	0.0	N.A.	N.A.
Res/Central 3	Illuminance	Fc	0.31	2.7	0.0	N.A.	N.A.
Res/Central 4	Illuminance	Fc	0.31	2.7	0.0	N.A.	N.A.
Res/Central 5	Illuminance	Fc	0.31	2.6	0.0	N.A.	N.A.
Res/Central 6	Illuminance	Fc	0.31	2.4	0.0	N.A.	N.A.
Res/Central 7	Illuminance	Fc	0.36	2.6	0.0	N.A.	N.A.
Res/Central 8	Illuminance	Fc	0.31	2.6	0.0	N.A.	N.A.
Res/Central 9	Illuminance	Fc	0.31	2.4	0.0	N.A.	N.A.
Subdivision Roads	Illuminance	Fc	0.41	2.6	0.0	N.A.	N.A.

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - SOUTHWEST

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	ZAS
DATE:	10-07-16
SCALE:	1"=40'

SHEET

L5 OF L8

PULVH

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NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

Subdivision Schedule							
Symbol	Lamp	Luminaire	Total Lamp Lumens	LLF	Description	Arr. Watts	IES Ref.File
SA	2	MSB05-4@30-SYM@90	2(24K)	1.000	MSB05	226	93-21-05
SB	1	MSB05-TYPE	24K	1.000	SMC NO. 10k	121	93-14-01

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Cuneo Gateway	Illuminance	Fc	0.55	2.9	0.0	N.A.	N.A.
Cuneo Roadway	Illuminance	Fc	0.33	2.3	0.0	N.A.	N.A.
Cuneo Parking Lot	Illuminance	Fc	0.21	0.4	0.0	N.A.	N.A.
Entrance Drive	Illuminance	Fc	0.21	0.4	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 11	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 12 & Walking Trail	Illuminance	Fc	0.08	2.3	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.08	2.3	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.04	2.4	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.01	0.4	0.0	N.A.	N.A.
Public Walking Route	Illuminance	Fc	0.12	2.9	0.0	N.A.	N.A.

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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - SOUTH MIDDLE

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	ZRS
DATE:	10-07-16
SCALE:	1"=40'

SHEET

L6 OF L8

PULVH

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Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	Total Watts
⊡	47	MSB01-SBS-210025	Single	14000	1.000	MSB01	175	8225.00
⊡	1	MSB01-TWN	Twin	14000	1.000	MSB01	175	8225.00

Calculation Summary							
Label	Calculation	Units	Avg	Max	Min	Avg/Min	Max/Min
Cuneo Driveway	Illuminance	Fc	1.46	2.4	0.6	N.A.	N.A.
Cuneo Median	Illuminance	Fc	1.21	2.4	0.6	N.A.	N.A.
Cuneo Parkway Strip	Illuminance	Fc	1.21	2.4	0.6	N.A.	N.A.
Entrance Sign	Illuminance	Fc	0.43	1.4	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.43	1.4	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 10	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 11	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 12 & Walking Trail	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Subdivision Road	Illuminance	Fc	0.64	2.4	0.0	N.A.	N.A.

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MS805 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

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DRAWN BY | REVISIONS | DATE

THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN - SOUTHEAST

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: ZRS
DATE: 10-07-16
SCALE: 1"=40'

SHEET
L7 OF L8
PULVH

MATCHLINE SEE SHEET L7

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft

N

MANSION ROAD

ILLINOIS STATE ROUTE 21 (MILWAUKEE AVENUE)

DETENTION BASIN
HWL 679.0
NWL 674.0

HWL 679.0
NWL 674.0

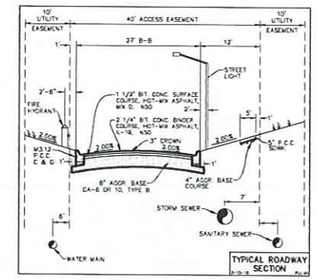
EXIST POND
APPROX. WATER ELEV = 674.4

EXIST POND
APPROX. WATER
ELEV = 670.2

Calculation Summary							
Label	Calculation	Units	Avg	Max	Min	Avg/Min	Max/Min
Calwin Driveway	Illuminance	Fc	0.50	2.5	0.0	N.A.	N.A.
Calwin Roadside	Illuminance	Fc	0.21	2.5	0.0	N.A.	N.A.
Calwin Parking Lot	Illuminance	Fc	0.21	2.5	0.0	N.A.	N.A.
Entrance Sign	Illuminance	Fc	0.47	2.5	0.0	N.A.	N.A.
Northwest Entrance	Illuminance	Fc	0.59	2.4	0.0	N.A.	N.A.
Residential 1	Illuminance	Fc	0.01	2.4	0.0	N.A.	N.A.
Residential 2	Illuminance	Fc	0.01	2.4	0.0	N.A.	N.A.
Residential 2a	Illuminance	Fc	0.01	0.3	0.0	N.A.	N.A.
Residential 2a & Walking Trail	Illuminance	Fc	0.08	2.5	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 3	Illuminance	Fc	0.05	2.3	0.0	N.A.	N.A.
Residential 4	Illuminance	Fc	0.03	2.5	0.0	N.A.	N.A.
Residential 5	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
Residential 6	Illuminance	Fc	0.01	2.4	0.0	N.A.	N.A.
Residential 7	Illuminance	Fc	0.04	2.4	0.0	N.A.	N.A.
Residential 8	Illuminance	Fc	0.01	0.2	0.0	N.A.	N.A.
Residential 9	Illuminance	Fc	0.03	0.4	0.0	N.A.	N.A.
Subdivision Road	Illuminance	Fc	0.22	2.5	0.0	N.A.	N.A.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	BUG Rating
	47	400W-ASSO SHORE	SINGLE	140000	1.000	NORTH	435	B3-U0-G5
	47	3W LED-ONE	SINGLE	7600	1.000	PRC 3W 4K	51	B1-U0-G1

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description	Arr. Watts	BUG Rating
	47	400W-ASSO SHORE	SINGLE	140000	1.000	NORTH	435	B3-U0-G5
	47	3W LED-ONE	SINGLE	7600	1.000	PRC 3W 4K	51	B1-U0-G1



TYPICAL ROADWAY SECTION

NOTES:

1. STREET LIGHTS FIXTURES TO BE MAIN STREET SERIES MSB05 AS MANUFACTURED BY STERNBERG LIGHTING. POLES TO BE 3900 RICHMOND SERIES.

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DRAWING	REVISIONS	DATE

THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS

PRELIMINARY PHOTOMETRICS PLAN -SOUTH

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	ZRS
DATE:	10-07-16
SCALE	1"=40'

SHEET
L8 OF L8
PULVH

ORDINANCE 2017-014 Exhibit B13 Preliminary Landscape Development Plans – Loyola Parking Lot & Driveway prepared by Signature Design Group with a revision date of 9/30/2016 and consisting of pages LL.100 thru LL103 and LTS.100 thru LTS 102

Preliminary
Landscape Development Plans

SIGNATURE DESIGN GROUP

△1 6.20.2016 - Per Village Review Comments dated May 24, 2016

△2 9.30.2016 - Per Village Review Comments

Loyola Parking Lot & Driveway

VERNON HILLS, ILLINOIS

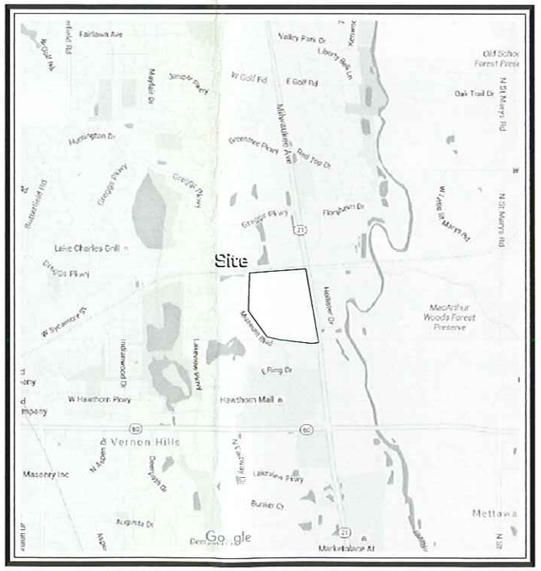
RECEIVED
OCT 10 2016
Community Development Department

DEVELOPER :
Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173
(847) 230.5331 voice

LAND PLANNER :
WBK Engineering, LLC
116 W. Main Street
St. Charles, IL 60174
(630) 443.7755 voice
Project Manager: Chuck Hanlon

ENGINEER :
Manhard Consulting, Ltd.
700 Springer Drive
Lombard, IL 60148
(630) 691.8500 voice
Project Manager: Bill Hupperich, P.E.

LANDSCAPE ARCHITECT :
Signature Design Group, Inc.
132 N. Washington Street
Naperville, Illinois 60540
(630) 305.3980 Fax: (630) 305.3994
Project Manager: Greg G. Sagen, RLA



LOCATION MAP

INDEX OF DRAWINGS

LL.100 Overall Landscape Plan
LL.101 Parking Lot Enlargement Plan
LL.102 Site Details
LL.103 Village Detention Basin Details

LTS.100 Existing Tree Survey
LTS.101 Existing Tree Inventory & Notes
LTS.102 Existing Tree Inventory & Notes

Preliminary Plant & Material Legend :

Shade Trees, 2.5" - 4.0" Caliper

Autum Blaze Maple	Swamp White Oak
State Street Maple	Shawnee Brave Baldcypress
Chicagoland Hackberry	Accolade Elm
Kentucky Coffeetree	Skyline Locust
Exclamation London Planetree	Bur Oak

Ornamental Trees, 6' - 10' m/s

River Birch	European Black Alder
Prairie Fire Crab	Apple Serviceberry
Ivory Silk Tree Lilac	Redbud
Thornless Cockspur Hawthorne	Washington Hawthorn

Evergreen Trees, 6' - 10' tall

Norway Spruce	Fairview Juniper
Colorado Spruce	Nigra Arborvitae
White Pine	Austrian Pine
White Fir	

Evergreen Shrubs, 18" - 24" wide

Boxwood var.	Green Sargent Juniper
Kellay Compact Juniper	Dense Yews

Deciduous Shrubs, 18" - 36" tall

Northern Bayberry	Grolo Sumac
Black Chokeberry	Staghorn Sumac
Dogwood var.	Viburnum var.
Hydrangea var.	Shrub Rose Var.
Texas Scarlet Quince	Grefshim Spirea

Perennials / Ornamental Grasses, 1gal.

Blue Wonder Catmint	Black Eye Susan
Autumn Joy Sedum	Feather Reed Grass
Firework Goldenrod	Prairie Dropseed

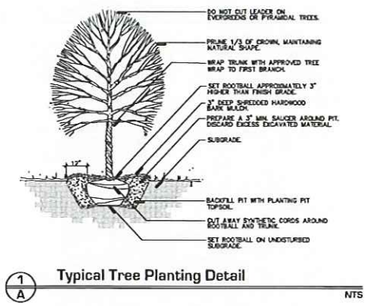
Existing Trees [see LTS.100 - LTS.101]
To Be Preserved

Existing Trees [see LTS.100 - LTS.101]
To Be Removed

Village Landscape Requirements:
The Landscape Plans will be prepared in accordance with Village Ordinance, Article 8 - Tree Preservation and Landscaping.

Stormwater Management:
Stormwater management will be in a Naturalized Basin at the S.E. corner of the parking lot. This basin will utilize BMP's and will include side slopes planted with native vegetation to improve water quality, and discourage geese populations.

See Sheet LL.103 for Village Standard Details. ⚠



1/A Typical Tree Planting Detail — NTS

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE, IL 60563 – 630.305.3580 Fax 630.305.3594

Loyola Parking Lot & Driveway Relocation

Vernon Hills, Illinois

sheet description:

Preliminary Overall Plan

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 50 100 150 250 350

north: scale: 1" = 100'0"

revisions:		
⚠	9.30.2016	Per Village Review Comments
⚠	8.20.2016	Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: LL.100

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Preliminary Plant & Material Legend :

Shade Trees, 2.5" - 4.0" Caliper

Autum Blaze Maple	Swamp White Oak
State Street Maple	Shawnee Brave Baldcypress
Chicagoland Hackberry	Accolade Elm
Kentucky Coffeetree	Skyline Locust
Exclamation London Planetree	Bur Oak

Ornamental Trees, 6' - 10' m/s

River Birch	European Black Alder
Prairie Fire Crab	Apple Serviceberry
Ivory Silk Tree Lilac	Redbud
Thornless Cockspur Hawthorne	Washington Hawthorn

Evergreen Trees, 6' - 10' tall

Norway Spruce	Fairview Juniper
Colorado Spruce	Nigra Arborvitae
White Pine	Austrian Pine
White Fir	

Evergreen Shrubs, 18" - 24" wide

Boxwood var.	Green Sargent Juniper
Kallay Compact Juniper	Dense Yews

Deciduous Shrubs, 18" - 36" tall

Northern Bayberry	Gro-lo Sumac
Black Chokeberry	Staghorn Sumac
Dogwood var.	Viburnum var.
Hydrangea var.	Shrub Rose Var.
Texas Scarlet Guince	Grefshim Spirea

Perennials / Ornamental Grasses, 1gal.

Blue Wonder Catmint	Black Eye Susan
Autumn Joy Sedum	Feather Reed Grass
Firework Goldenrod	Prairie Dropseed

Existing Trees (see LTS.100 - LTS.101)
To Be Preserved

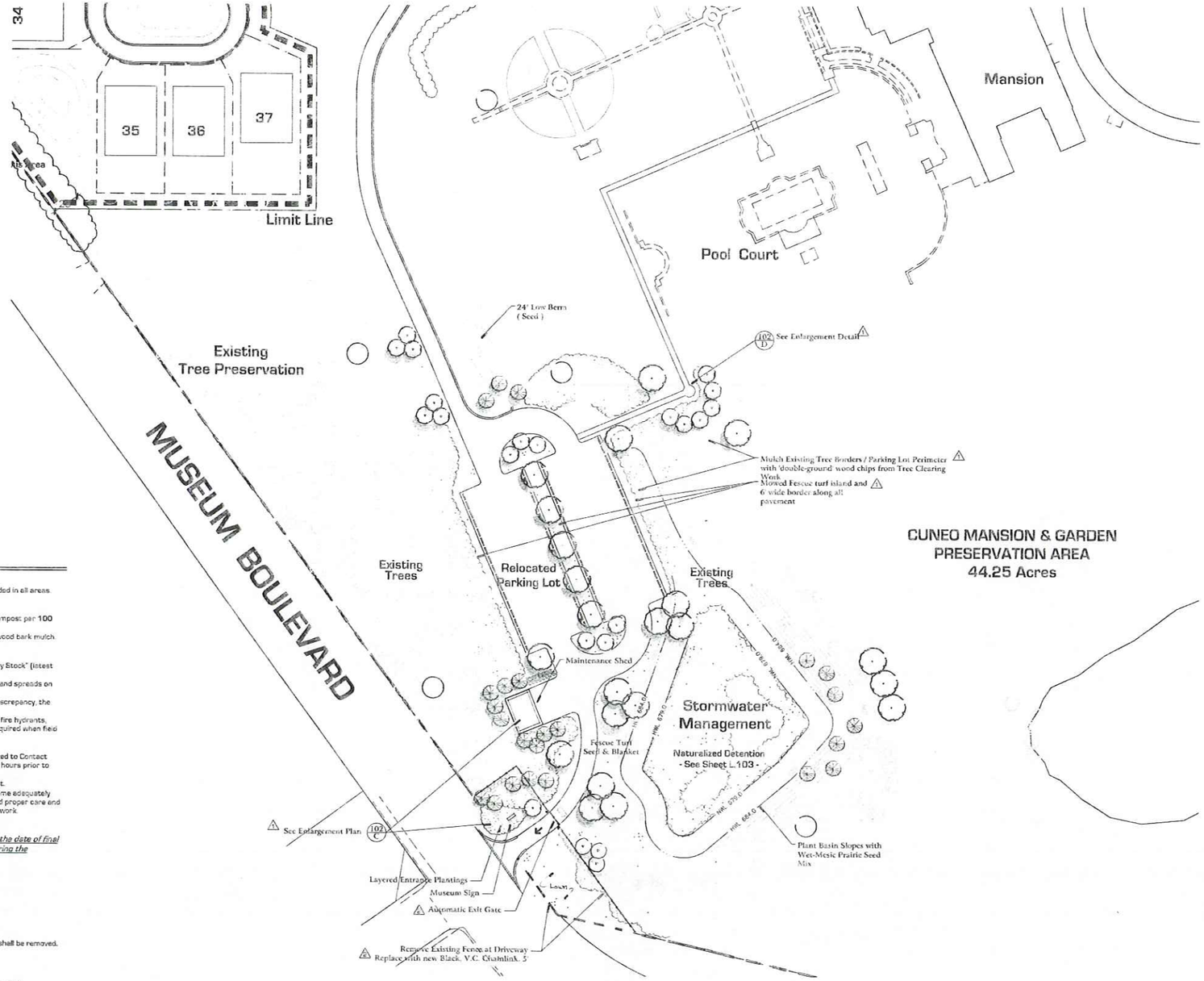
Existing Trees (see LTS.100 - LTS.101)
To Be Removed

CONSTRUCTION NOTES :

- Fine grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.
- Prior to turf installation all areas shall be fertilized with a 12-12-12 granular fertilizer at a rate of 400 lbs. per Acre.
- Prepare perennial, ornamental grass, groundcover and annual flower beds with 1 CY. mushroom compost per 100 SF. rototilled to an 6" depth.
- Mulch all trees, shrub, perennial & om'l grass beds with a minimum of three inches shredded hardwood bark mulch.
- All bed lines and tree saucers require a 4" deep spaded edge between lawn and mulch areas.
- All evergreen (conifers) trees and shrubs must be grown in a natural shape – and not sheared.
- Plant material sizing, branching and ball sizes shall conform to the "American Standards for Nursery Stock" (latest edition) by the American Association of Nurseryman, Inc.
- Plant material shall be nursery grown and be either balled and burlapped or container grown. Sizes and spreads on plant list represent minimum requirements.
- Quantity lists are supplied as a convenience. Contractor shall verify all quantities, and in case of a discrepancy, the plan shall prevail.
- The Landscape Contractor shall adjust plant locations in field to maintain appropriate spacing from fire hydrants, light poles, all utility structures, driveways and sidewalks. Approval of the Landscape Architect is required when field adjustments to be implemented do not conform to the intent of the plans.
- Contractor shall report any discrepancies in the field to the Landscape Architect and/or Owner.
- The Landscape Contractor shall verify locations of all underground utilities prior to digging, is required to Contact J.U.L.I.E. (1.800.892.0123), and any other public or private agency necessary for utility location 48 hours prior to construction.
- Where underground utilities exist, all field adjustments must be approved by the landscape architect.
- The Landscape Contractor shall water plant material, seed and sod areas until the plants have become adequately established and until final acceptance by the owner. Owner to provide all supplemental watering and proper care and maintenance of all plant materials, seed and sod areas after acceptance of Landscape Contractors work.
- No plants are to be changed or substituted without the approval of the Landscape Architect and the village of Vernon Hills.
- *Landscape Contractor shall warrantee all material and labor for a period of one year from the date of final acceptance and shall repair any defects and replace all dead plant material as required during the warranty period.*

⚠ CUNEO: Existing Tree Trimming / Removal Notes

1. All dead, or damaged trees (or limbs) in public areas that causes an immediate safety concern shall be removed.
2. All dead Ash trees shall be removed.
3. All small, internal tree groves shall be pruned and the understory cleaned-up and mulched (or seeded).
4. All large, perimeter tree groves shall be pruned, detailed and mulched around the full perimeter to a depth of 25 feet. The internal portion of these tree groves shall be left in it's natural state for wildlife habitat and screening.
5. All trees in the Central Park shall be pruned, detailed and mulched.
6. Mulch: Woodchips from the removal / pruning operations shall be used for mulching existing woodlands and tree groves. These woodchips shall be "double-ground" to achieve a fine, uniform consistency.



CUNEO MANSION & GARDEN
PRESERVATION AREA
44.25 Acres

A **Museum Parking Lot Enlargement**
scale: 1" = 50'0"

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Land Planning
Landscape Architecture
Environmental Site Design
604 WASHINGTON ST. - NAPERVILLE, IL 60563 – 630.305.3660 Fax 630.305.3664

Loyola Parking Lot & Driveway Relocation

Vernon Hills, Illinois

sheet description:

Preliminary Parking Lot Enlargement Plan

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale: As Shown

revisions:			
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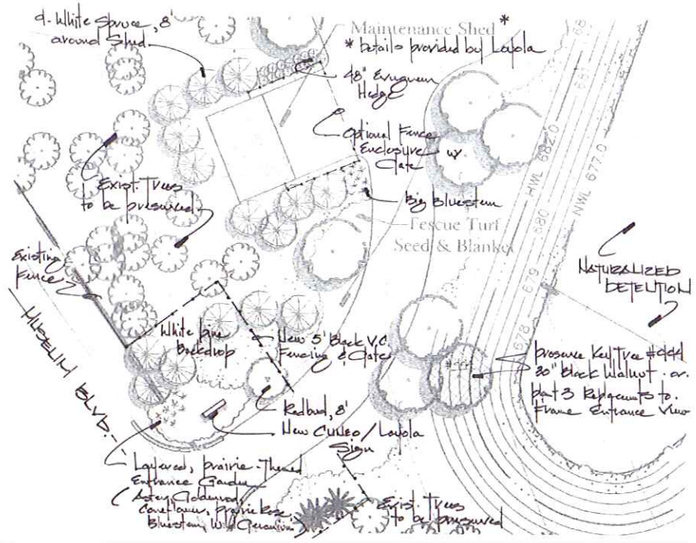
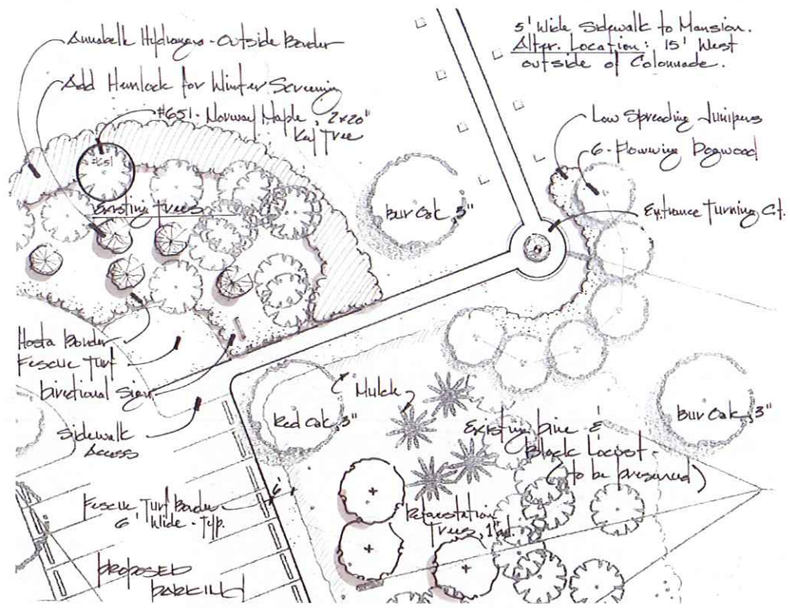


C Museum Blvd. Entrance Detail



D Parking Lot Entrance Court / Sidewalk Detail

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Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE IL 60563 - 630.305.3960 Fax 630.305.3964

Loyola Parking Lot & Driveway Relocation

Vernon Hills, Illinois

sheet description:

Site Details

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale: As Shown

revisions:
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checked by:

project no.: 23045

sheet no.: LL.102

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DETENTION POND PLANTING SPECIFICATIONS

1. MESIC & WET PRAIRIE COMMUNITY (Seeds)

(N.W.L. to top of slope) 4:1 Slope, See Typical Planting Section.

A. BED PREPARATION

Existing vegetative growth should be removed or killed with an approved herbicide (Rodeo). Till surface of seedbed to 2"- 4" and till as close as possible to waterline. Lightly compact soil with roller, cultipacker, or similar implement. Omit tilling if using a no-till seed drill.

B. SEEDING

Specified seed or equal shall be refrigerated for at least 90 days prior to installation. The seed must be of wild ecotype. No hybrids or cultivars may be included. Mix seed with an equal volume of coarse sand, vermiculite or oats. Seed mixes shall contain at least 70% of the species listed and no one species shall constitute more than 10 % of the total seed mix by weight. Any deviation from the plant list is to be submitted to the Village for review and approval prior to installation.

Broadcast seeds evenly either by hand or no-till drill seeder, cyclone spreader, or shoulder mount spreader. Spread seed in different directions to cover evenly. If not included in seed mix, plant nurse crop of seed oats at 40lbs/acre with seed mix. Roll seed into soil to 1/4" depth with cultipacker or similar implement.

No seeding should occur until N.W.L. is reached and sustained within Detention Pond.

C. SEEDING DATES

May 15 ——June 30
July 1 ——October 31 (irrigation twice per week for 60 days)
November 1——December 1 (dormant seeding)

D. FABRIC INSTALLATION

Install erosion control blanket, North American Green SC 250 or equal along N.W.L., 6.5' width ½ width or 3.25' below water and ½ width or 3.25' above water around perimeter of pond. Install North American Green DS 75 from limits of SC250 to top of slope. Install as per manufacturer's guidelines. For exact locations, see Exhibit No. 47.

2. SHALLOW WATER EMERGENT COMMUNITY (Plugs)

(N.W.L. to two linear feet (2' down from pond side slope) 4:1 Slope, See Typical Planting Section.

A. BED PREPARATION

Prior to planting, pump down or drain pond level to facilitate installation of erosion fabric.

B. FABRIC INSTALLATION

Center of 6.50' erosion control blanket North American Green, SC 250 or equal shall be placed at normal water level and rolled along entire shoreline. Install as per manufacturer's guidelines.

C. PLANTING DATES

May 15 ——June 30
July 1 ——October 31 (irrigation twice per week for 60 days)

D. PRODUCT

Plugs shall have a minimum size of 2" diameter and 4" depth and shall be thoroughly rooted through the container.

E. PLUG INSTALLATION

Emergent plant plugs shall be installed at water line to 6" water depths. Cut through fabric and install plants at 18" o.c., staggered. Evenly distribute each species around pond, planting in groups of 3 to 5 plants of each species.

No installation should occur until N.W.L. is reached and sustained within Detention Pond.

3. DEEP WATER EMERGENT COMMUNITY (Aquatics)

(Beyond Shallow Emergent Community In 12" to 24" of water depth)

A. PLUG INSTALLATION

Emergent plant plugs or floating leaf plants shall be installed in 12" to 24" water depths. Cut through fabric and install plants at 18"- 24"o.c., staggered for twenty linear (20') and repeat again every sixty (60') around entire pond perimeter.

No installation should occur until N.W.L. is reached and sustained within Detention Pond.

4. ACCEPTANCE

A. MESIC & WET PRAIRIE COMMUNITY (Seeds)

At the beginning of the second growing season, the following conditions shall be met:

COVERAGE: 25% of each plant community shall be covered with vegetation.

PRESENCE: 40% of the species shall be alive and present.

ABUNDANCE: 60% of the vegetation should be native species of the permanent matrix.

At the beginning of the third growing season, the following conditions shall be met.

COVERAGE: 50% of each plant community shall be covered with vegetation.

PRESENCE: 60% of the species shall be alive and present.

ABUNDANCE: 80% of the vegetation should be native species of the permanent matrix.

B. SHALLOW WATER EMERGENT COMMUNITY (Plugs)

At the end of the first growing season, the following conditions shall be met:

1. 95% of the plugs shall be alive and thoroughly rooted.
2. 50% of the shoreline shall be covered within three (3) years.

C. DEEP WATER EMERGENT COMMUNITY (Aquatics)

At the end of the first growing season, the following conditions shall be met:

1. 75% of the species shall be alive and thoroughly rooted.
2. 40% of the shoreline shall be covered within three (3) years.

5. MAINTENANCE

1st YEAR: Mow at 6" when the oats set seed heads. Mow again when competitive weeds are at 8"-12" in height. Cut back to 6" with flail type mower two or three times during the first season.

2nd YEAR: Keep area mowed at 12" to control weed competition. Mow in late May and late June. Maintain goose barrier control for 2 years. Then remove fencing, lath, and monofilament.

3rd YEAR: Prescribed/controlled burn the area in mid-Spring. If burning is not an option, mow again to control weeds but remove the clippings. Do not burn or mow after new plant growth has reached 12" or taller.

LONG - TERM MANAGEMENT: Employ the services of a qualified and licensed company to manage prairie plantings and control species deemed detrimental such as Purple Loosestrife, Canada Thistle, Reed Canary Grass, Queen Anne's Lace, Sweet Clover, Cattails, Common Teasel, Ragweeds, Buckthorn and Sandbar Willow.

6. GOOSE BARRIER CONTROL

A. INSTALLATION

Set first row of stakes in 18" of water depth at 8 foot intervals around entire pond. Drive each stake 1 foot into bottom. Attach 48" high poultry netting, 20 gauge, around entire area. Extend fence to pond bottom. Set second row of stakes 8 feet up and also at 8 foot intervals around entire pond. Drive each stake 6"-12" into ground. To protect top enclosure, attach two rows of monofilament line and secure red survey ribbons to stakes.

7. UPLAND FOREST COMMUNITY

A. QUANTITY.

To determine minimum quantity required, divide the length around the pond at the top of the slope by 40' (feet). Trees to be planted in groups by species around perimeter of pond and not intended to be planted at a 40' o.c. spacing. Bald Cypress should be planted near water's edge. Spacing and species to be shown on overall landscape plan. All trees to be alive and thriving at time of acceptance and at end of 2 year maintenance period.

8. SIGNAGE

A. INSTRUCTIONAL SIGNS

Signs to be placed at 150' intervals around perimeter of pond. Signs shall be metal, 12" x 18" in size, with green background and white lettering that reads: NATIVE PRAIRIE DO NOT MOW. Sign to be mounted to a green channel post. Top of sign to be five feet (5') above ground.

BIBLIOGRAPHY

Center for Watershed Protection, 2001a. *The Stormwater Resource Center Stormwater Management Fact Sheet: Stormwater Wetland.* Last updated January 2, 2001

Environmental Laboratory, 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterway Experiment Station

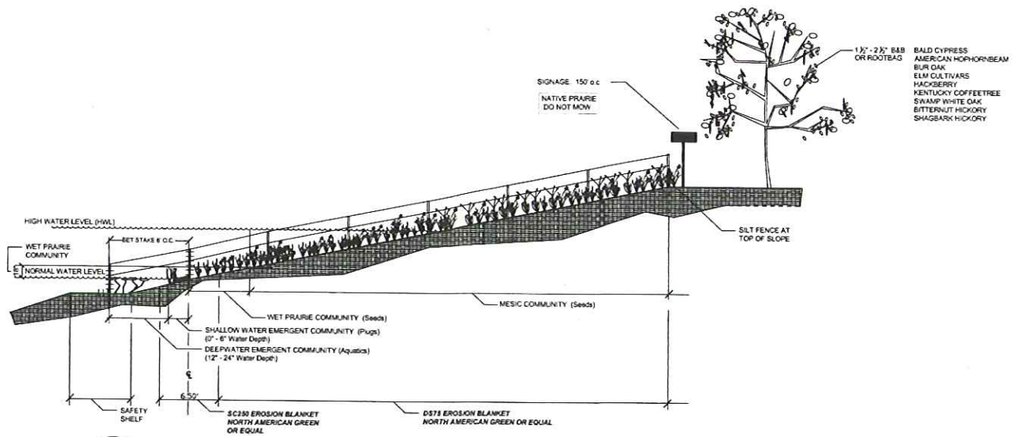
NTCHS (National Technical Committee for Hydric Soils), 1991. Hydric Soils of the United States. U.S. Soils Conservation Service, Washington, D.C.

Schuler, T.R., 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Metropolitan Washington Council of Governments, Washington, D.C.

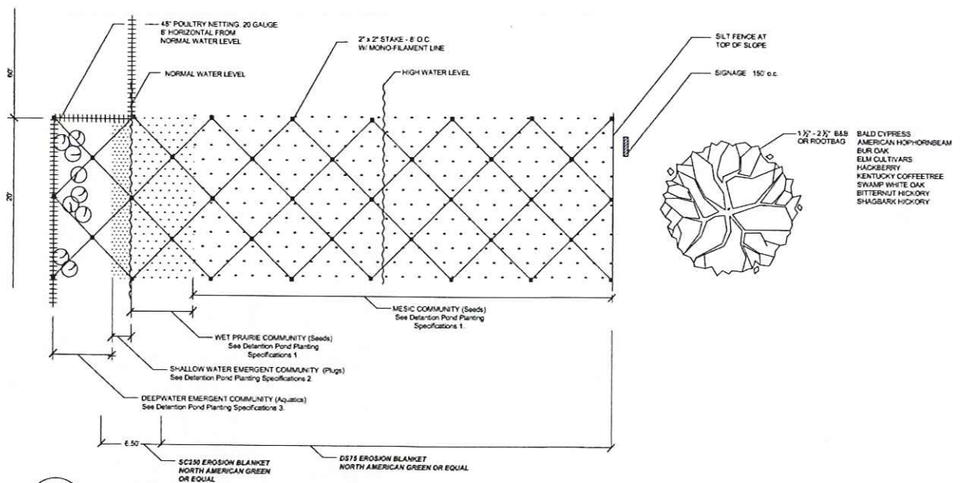
Shaw, D. and Schmidt, R., 2003. Plants for Stormwater Design: Species Selection for the Upper Midwest. Minnesota Pollution Control Agency

Swink, F. and Wilhelm, G., 1994. Plants of the Chicago Region. The Morton Arboretum, Lisle, Illinois

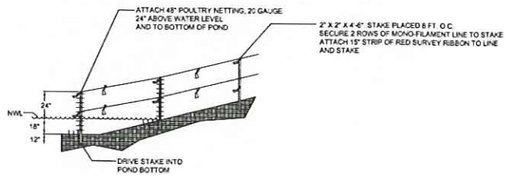
USDA Natural Resources Conservation Services (USDA-NRCS), 1997. *Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois*



1 TYPICAL PLANTING SECTION
NOT TO SCALE



2 GOOSE PROTECTION DETAILS FOR PLANTING PLAN
NOT TO SCALE



3 GOOSE PROTECTION SECTION
NOT TO SCALE

PLANT COMMUNITIES

MESIC COMMUNITY

	POUNDS/ACRE
Grasses and Sedges	
Andropogon gerardii (Big Blue Stem)	3.000
Andropogon scoparius (Little Blue Stem)	3.000
Elymus canadensis (Virginia Wild Rye)	0.188
Elymus virginicus (Virginia Wild Rye)	0.188
Panicum virgatum (Switchgrass)	0.250
Sorghastrum nutans (Indian Grass)	4.500
Avena sativa (Oats)	40.000
Wildflowers	
Aster laevis (Smooth Dull Aster)	0.125
Aster novae-angliae (New England Aster)	0.125
Baptisia leucantha (White Wild Indigo)	0.125
Coreopsis tripteris (Tall Coreopsis)	0.188
Echinacea purpurea (Purple Cornflower)	0.250
Eryngium yuccifolium (Rattlesnake Master)	0.250
Helianthus grosseserratus (Sawtooth Sunflower)	0.188
Heliopsis helianthoides (False Sunflower)	0.188
Liatris aspera (Rough Blazing Star)	0.025
Monarda fistulosa (Wild Bergamot)	0.125
Petalostemum purpureum (Purple Prairie Clover)	0.188
Pycnanthemum virginianum (Mountain Mint)	0.016
Ratibida pinnata (Yellow Coneflower)	0.250
Rudbeckia hirta (Black-Eyed Susan)	0.188
Rudbeckia subtomentosa (Sweet Black-Eyed Susan)	0.188
Silphium laciniatum (Compass Plant)	0.125
Silphium terebinthinaceum (Prairie Dock)	0.063
Solidago rigida (Stiff Goldenrod)	0.125
Tradescantia ohioensis (Spiderwort)	0.090
Vernonia fasciculata (Common Ironweed)	0.188
Veronicastrum virginium (Culver's Root)	0.063
Zizia aptera (Heartleaved Alexander)	0.125

WET PRAIRIE COMMUNITY

Grasses and Sedges	
Carex comosa (Bristly Sedge)	0.125
Carex hystericina (Porcupine Sedge)	0.125
Carex lupulina (Hop Sedge)	0.125
Carex stipata (Awl-Fruited Sedge)	0.125
Carex vulpinoidea (Brown Fox Sedge)	0.125
Elymus virginicus (Virginia Wild Rye)	0.188
Glyceria striata (Fowl Manna Grass)	0.125
Leersia oryzoides (Rice Cut Grass)	0.125
Scirpus atrovirens (Dark Green Bulrush)	0.125
Spartina pectinata (Prairie Cordgrass)	0.125
Avena sativa (Oats)	40.000
Wildflowers	
Angelica atropurpurea (Angelica)	0.125
Asclepias incarnata (Swamp Milkweed)	0.063
Aster novae-angliae (New England Aster)	0.125
Aster umbellatus (Flat-topped Aster)	0.125
Eupatorium maculatum (Spotted Joe-Pye Weed)	0.063
Eupatorium perfoliatum (Boneset)	0.188
Helenium autumnale (Autumn Sneezeweed)	0.063
Liatris spicata (Marsh Blazing Star)	0.025
Lobelia cardinalis (Cardinal Flower)	0.068
Pycnanthemum virginianum (Mountain Mint)	0.016
Silphium intergrifolium (Rosinweed)	0.125
Solidago riddellii (Riddell's Goldenrod)	0.125
Verbena hastata (Blue Vervain)	0.063
Vernonia fasciculata (Smooth Ironweed)	0.063

SHALLOW WATER EMERGENT COMMUNITY
0-1 foot Depth

Graminoids
Carex stricta (Common Tussock Sedge)
Eleocharis smallii (Creeping Spike Rush)
Juncus effusus (Common Rush)
Scirpus acutus (Hardstem Bulrush)
Scirpus americanus (Chairmaker's Rush)
Scirpus fluviatilis (River Bulrush)
Scirpus tabernaemontani (Softstem Bulrush)

Forbs
Acorus calamus (Sweet Flag)
Alisma subcordata (Common Water Plantain)
Iris virginica (Blue Flag Iris)
Polygonum amphibium (Water Smartweed)
Pontederia cordata (Pickerel Weed)
Sagittaria latifolia (Broadleaf Arrowhead)
Sparganium eurycarpum (Common Burreed)

Deep Water Emergent Community
1.0 - 2.0 foot Depth

Nuphar advena (Yellow Pond Lily)
Nymphaea tuberosa (White Water Lily)
Potamogeton natans (Common Pondweed)
Potamogeton pectinatus (Sago Pondweed)

NOTE:
This exhibit is meant to be a guideline only and should not be considered a substitute for any requirements of other regulating agencies.

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

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Loyola Parking Lot & Driveway Relocation

Vernon Hills, Illinois

sheet description:

Village Detention Basin Details

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north:

scale: As Shown

revisions:		
1	9.30.2016	Per Village Review Comments
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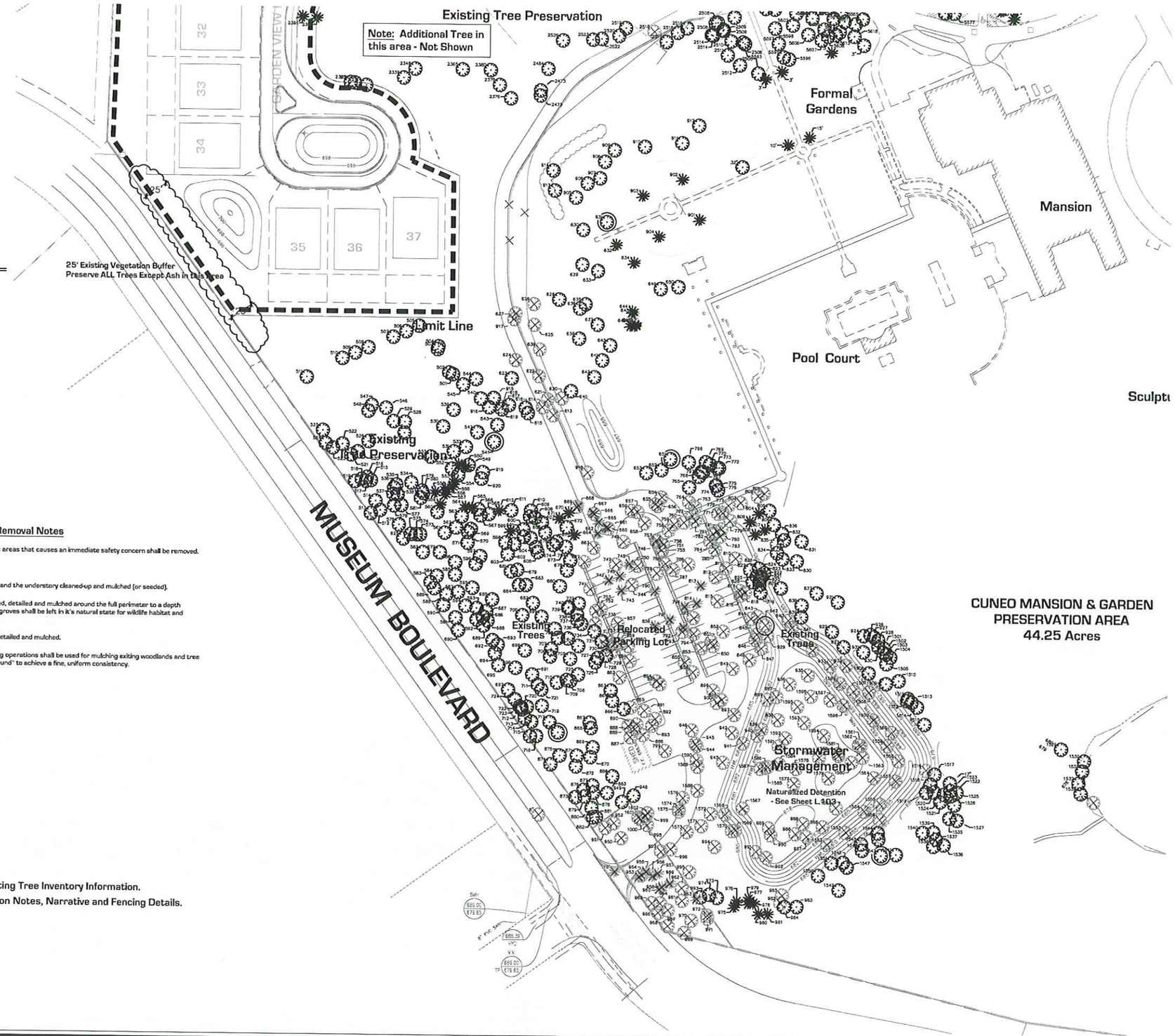

Legend :

- Existing Deciduous Tree
- Existing Evergreen Tree
- Trees to be Removed
- Tree to be Preserved
- Key Trees

⚠ CUNEO: Existing Tree Trimming / Removal Notes

1. All dead, or damaged trees (or limbs) in public areas that causes an immediate safety concern shall be removed.
2. All dead Ash trees shall be removed.
3. All small, internal tree groves shall be pruned and the understory cleaned-up and mulched (or seeded).
4. All large, perimeter tree groves shall be pruned, detailed and mulched around the full perimeter to a depth of 25 feet. The internal portion of these tree groves shall be left in it's natural state for wildlife habitat and screening.
5. All trees in the Central Park shall be pruned, detailed and mulched.
6. Mulch: Woodchips from the removal / pruning operations shall be used for mulching exiting woodlands and tree groves. These woodchips shall be "double- ground" to achieve a fine, uniform consistency.

Notes :

1. See sheet LTS.101 & LTS.102 for Existing Tree Inventory Information.
2. See sheet LTS.101 for Tree Preservation Notes, Narrative and Fencing Details.

CUNEO MANSION & GARDEN PRESERVATION AREA
44.25 Acres

SIGNATURE DESIGN GROUP

Land Planning
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Loyola Parking Lot & Driveway Relocation

Vernon Hills, Illinois

sheet description:

Existing Tree Survey & Preservation Plan

developer :

Pulte Homes
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0 25 50 75 125 175

north: scale: 1" = 50'0"

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checked by:
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sheet no.: LTS.100

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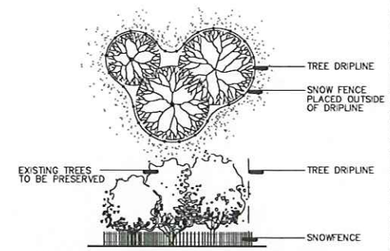
Existing Tree Inventory (2011) :

- Original inventory of trees on the North half of the site was completed by the Shaw Group in fall of 2011. Our office has field verified (and updated where necessary) findings of that inventory. A hard copy booklet of those approx. 2500 trees will be submitted separate as a reference document.

Existing Tree Inventory (2016) :

- Additional trees in the Southwest corner of the site were located and tagged by Manhard Consulting in Fall 2015 and Winter 2016. Ongoing inventories of these trees will continue through preliminary and final design, and in conjunction with the parking lot relocation project.



1/A Typical Tree Preservation Fencing

NTS

Existing Tree Inventory (Sheet LTS.100 Only) :

Tag	Botanical Name	Common Name	DBH	Cond Rating	Remarks	S/R
541	Celtis occidentalis	Hackberry	20	4	Key Tree	
543	Pinus strobus	White Pine	21	3		
604	Picea abies	Norway Spruce	12	3		
605	Picea abies	Norway Spruce	8	3		
606	Picea abies	Norway Spruce	14	2		
607	Acer platanoides	Norway Maple	10	3		
608	Acer platanoides	Norway Maple	8	3		
609	Acer platanoides	Norway Maple	8	3		
610	Acer platanoides	Norway Maple	7	Dead		
611	Acer platanoides	Norway Maple	16	3		
613	Acer negundo	Boxelder	18	2		
614	Acer negundo	Boxelder	15	2	leaning	
615	Acer platanoides	Norway Maple	6	2		
616	Acer platanoides	Norway Maple	7	3		
617	Acer platanoides	Norway Maple	8	3		
618	Acer platanoides	Norway Maple	8	3		
619	Acer platanoides	Norway Maple	7	2		
621	Acer negundo	Boxelder	8	2		
625	Acer platanoides	Norway Maple	22	1		
626	Acer platanoides	Norway Maple	28	2		
627	Acer platanoides	Norway Maple	22	1		
628	Acer platanoides	Norway Maple	19	2		
628	Acer platanoides	Norway Maple	19	Dead		
629	Acer platanoides	Norway Maple	19	3		
630	Acer platanoides	Norway Maple	21	3		
631	Picea abies	Norway Spruce	22	4	Key Tree	
632	Picea abies	Norway Spruce	16	3		
633	Acer platanoides	Norway Maple	20	3		
634	Picea abies	Norway Spruce	18	3		
635	Acer platanoides	Norway Maple	12	3		
636	Acer platanoides	Norway Maple	10	2		
637	Acer platanoides	Norway Maple	22	2		
638	Acer platanoides	Norway Maple	38	Dead	fork at 2 ft.	
640	Morus alba	Mulberry	2x14	2		
642	Prunus serotina	Black Cherry	6	1		
643	Morus alba	Mulberry	14	2		
644	Acer platanoides	Norway Maple	10	3		
645	Prunus serotina	Black Cherry	12	2	leaning	
646	Acer platanoides	Norway Maple	8	2		
649	Acer platanoides	Norway Maple	24	3		
650	Acer platanoides	Norway Maple	30	3	2 lights	
651	Acer platanoides	Norway Maple	2x20	4	Key Tree	
652	Acer platanoides	Norway Maple	24	3		
653	Acer platanoides	Norway Maple	9	3		
654	Acer platanoides	Norway Maple	10	3		
655	Acer platanoides	Norway Maple	13	2		
657	Acer platanoides	Norway Maple	15	3		
658	Acer platanoides	Norway Maple	8	3		
659	Carya cordiformis	Bitternut Hickory	15	2		
660	Picea abies	Norway Spruce	14	1		
660	Picea abies	Norway Spruce	13	2		
661	Acer platanoides	Norway Maple	10	2		
662	Picea abies	Norway Spruce	15	3		
662	Picea abies	Norway Spruce	18	2		
663	Picea abies	Norway Spruce	16	3		
664	Picea abies	Norway Spruce	16	Dead		
665	Picea abies	Norway Spruce	13	Dead		

Tag	Botanical Name	Common Name	DBH	Cond Rating	Remarks	S/R
665	Picea abies	Norway Spruce	13	Dead		
666	Acer platanoides	Norway Maple	18	3		
667	Picea abies	Norway Spruce	20	1		
667	Acer platanoides	Norway Maple	18	4		
668	Picea abies	Norway Spruce	16	2		
669	Acer platanoides	Norway Maple	18	2		
670	Picea abies	Norway Spruce	18	3		
671	Picea abies	Norway Spruce	17	3		
673	Picea abies	Norway Spruce	9	3		
674	Picea abies	Norway Spruce	8	Dead		
675	Picea abies	Norway Spruce	12	3		
677	Picea abies	Norway Spruce	19	4	Key Tree	
678	Fraxinus pennsylvanica	Green Ash	10	Dead		
682	Picea abies	Norway Spruce	28	2		
683	Picea abies	Norway Spruce	25	3		
684	Picea abies	Norway Spruce	17	3		
696	Acer platanoides	Norway Maple	14	3		
697	Acer negundo	Silver Maple	22	3		
698	Picea abies	Norway Spruce	18	Dead		
699	Picea abies	Norway Spruce	15	Dead		
700	Picea abies	Norway Spruce	13	Dead		
704	Picea abies	Norway Spruce	18	Dead		
705	Picea abies	Norway Spruce	18	2		
706	Picea abies	Norway Spruce	18	3		
707	Picea abies	Norway Spruce	15	Dead		
712	Acer negundo	Silver Maple	38	Dead		
717	Acer platanoides	Norway Maple	17	3		
718	Acer platanoides	Norway Maple	34	4		
719	Acer platanoides	Norway Maple	20	3		
720	Acer platanoides	Norway Maple	13	2		
722	Acer platanoides	Norway Maple	6	2		
723	Acer platanoides	Norway Maple	6	2		
724	Prunus serotina	Black Cherry	7	3		
726	Picea abies	Norway Spruce	12	Dead		
727	Picea abies	Norway Spruce	16	1	rotten	
728	Picea abies	Norway Spruce	6	3		
729	Picea abies	Norway Spruce	13	3		
730	Picea abies	Norway Spruce	10	3		
734	Acer platanoides	Norway Maple	12	3		
741	Acer platanoides	Norway Maple	18	2		
741	Picea abies	Norway Spruce	16	2		
752	Picea abies	Norway Spruce	14	3		
754	Picea abies	Norway Spruce	12	3		
762	Acer platanoides	Norway Maple	10	3		
763	Acer platanoides	Norway Maple	13	2		
764	Acer platanoides	Norway Maple	10	3		
765	Fraxinus pennsylvanica	Green Ash	16	Dead		
766	Acer platanoides	Norway Maple	10	3		
767	Acer platanoides	Norway Maple	14	2		
768	Acer platanoides	Norway Maple	8	2		
769	Robinia pseudoacia	Black Locust	14	3		
770	Robinia pseudoacia	Black Locust	10	3		
771	Robinia pseudoacia	Black Locust	14	2		
772	Robinia pseudoacia	Black Locust	8	3		
773	Robinia pseudoacia	Black Locust	6	2		
774	Acer platanoides	Norway Maple	10	3		
775	Acer platanoides	Norway Maple	12	3		

Tag	Botanical Name	Common Name	DBH	Cond Rating	Remarks	S/R
776	Acer platanoides	Norway Maple	8	Dead		
777	Robinia pseudoacia	Black Locust	16	2		
778	Robinia pseudoacia	Black Locust	14	2		
779	Robinia pseudoacia	Black Locust	13	2		
780	Acer platanoides	Norway Maple	8	3		
781	Robinia pseudoacia	Black Locust	14	2		
782	Robinia pseudoacia	Black Locust	18	2		
784	Robinia pseudoacia	Black Locust	16	2		
785	Robinia pseudoacia	Black Locust	13	2		
786	Acer platanoides	Norway Maple	15	3		
791	Picea abies	Norway Spruce	18	3		
792	Picea abies	Norway Spruce	10	2		
793	Acer platanoides	Norway Maple	8	2		
794	Acer platanoides	Norway Maple	8	3		
795	Acer platanoides	Norway Maple	10	3		
796	Quercus palustris	White Pine	2x20	3		
797	Acer platanoides	Norway Maple	17	Dead		
799	Fraxinus pennsylvanica	Green Ash	2x12	Dead	fork at 2 ft.	
801	Prunus serotina	Black Cherry	14	1		
802	Acer platanoides	Norway Maple	24	3		
804	Pinus strobus	White Pine	12	2		
805	Acer negundo	Boxelder	12	3	leaning	
806	Robinia pseudoacia	Black Locust	18	3		
808	Pinus strobus	White Pine	20	Dead		
809	Pinus strobus	White Pine	16	2		
810	Robinia pseudoacia	Black Locust	22	3		
811	Robinia pseudoacia	Black Locust	32	3		
813	Picea abies	Norway Spruce	17	3		
814	Picea abies	Norway Spruce	15	1		
815	Acer platanoides	Norway Maple	7	3		
816	Acer platanoides	Norway Maple	8	3		
817	Robinia pseudoacia	Black Locust	22	2		
819	Acer platanoides	Norway Maple	6	3		
820	Robinia pseudoacia	Black Locust	23	2		
821	Robinia pseudoacia	Black Locust	21	2		
822	Robinia pseudoacia	Black Locust	15	2		
823	Acer platanoides	Norway Maple	6	1		
824	Robinia pseudoacia	Black Locust	10	Dead		
825	Robinia pseudoacia	Black Locust	17	2		
826	Robinia pseudoacia	Black Locust	20	3		
827	Robinia pseudoacia	Black Locust	15	2		
828	Acer platanoides	Norway Maple	6	2		
829	Acer platanoides	Norway Maple	22	3		
830	Robinia pseudoacia	Black Locust	21	2		
831	Acer platanoides	Norway Maple	2x8	2		
832	Robinia pseudoacia	Black Locust	21	3		
833	Robinia pseudoacia	Black Locust	8	1		
834	Robinia pseudoacia	Black Locust	9	Dead		
834	Picea abies	Norway Spruce	11	1		
835	Robinia pseudoacia	Black Locust	11	1		
835	Prunus serotina	Black Cherry	8	1	no top	
836	Robinia pseudoacia	Black Locust	18	3		
837	Aesculus glabra	Buckeye	12	3		
838	Acer platanoides	Norway Maple	28	3		
839	Acer platanoides	Norway Maple	6	3		
840	Acer platanoides	Norway Maple	8	3		
841	Acer platanoides	Norway Maple	12	Dead		

CONDITION RATINGS :

Rating	Description	General Criteria
4	Excellent	The tree is typical of the species, has less than 10% deadwood in the crown that is attributable to normal causes, has no other observed problems, and requires no remedial action
3	Good	The tree is typical of the species and / or has less than 20% deadwood in the crown, only 1 or 2 minor problems that are easily corrected with normal care.
2	Fair	The tree is typical of the species and / or has less than 40% deadwood in the crown, only 1 or 2 minor problems that are not imminently lethal to the tree and no significant decay or significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to ensure continued health.
1	Poor	The tree is not typical of the species and / or has over 50% deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corected would not result in the long term survival of the tree.
0	Dead	less than 10% of the tree shows signs of life

Tree Preservation Notes :

1. Tree Removal Permit Required: A tree removal permit shall be required for the removal of any tree in the woodland. No person shall, directly or indirectly, remove, damage or destroy a woodland without having secured a TRP.
2. The Owner or his/her designee shall be responsible for construction and maintenance of temporary fencing or other tree protection measures, to be used during construction.
3. Snow fencing shall be temporarily installed at the critical root zone for protection of trees prior to any construction activities and maintained throughout the entire project. The Critical Root zones equals one foot (1') for each one inch (1") of trunk diameter measured 4.5 feet above ground. See detail A.
4. Grading and construction equipment shall be forbidden from encroaching within the drip line of a tree.
5. No construction activity, movement, and/or placement of equipment or materials or spoils storage shall be permitted within the critical root zone of a protected tree or at any higher location where drainage toward the tree could conceivably affect the health of the tree. No excess soil, additional fill, liquids or construction debris shall be placed within the critical root zone of a protected tree.
6. No attachments, fences, or wires, other than those approved for bracing, guying or wrapping, shall be attached to trees during the construction period.
7. Grade change shall be allowed under the drip line of any trees designated for preservation only if tree trunks and branches are protected when construction must occur within tree drip line areas.
8. To improve the survival rate of trees, root pruning and/or thinning shall be performed in accordance with industry standards and practices and where indicated on the plan.

Existing Tree Summary Narrative :

Much of the existing site is heavily wooded. Based on our current 2014-2016 inventory of the full site, we have found the existing trees to be a combination of low quality Boxelder, Silver Maple, Elm and Buckthorn with remnant groves of Norway Spruce and Norway Maple from Jensen's original design. Additionally some specimen Black Walnuts, Hackberry and Sugar Maples can be found scattered around the site.
The proposed site plan carefully locates roads and parking around the desirable trees in order to preserve a large percentage of the best trees on site, while removing the lower quality, invasive vegetation.

⚠ CUNEO: Existing Tree Trimming / Removal Notes

1. All dead, or damaged trees (or limbs) in public areas that causes an immediate safety concern shall be removed.
2. All dead Ash trees shall be removed.
3. All small, internal tree groves shall be pruned and the understory cleaned-up and mulched (or seeded).
4. All large, perimeter tree groves shall be pruned, detailed and mulched around the full perimeter to a depth of 25 feet. The internal portion of these tree groves shall be left in it's natural state for wildlife habitat and screening.
5. All trees in the Central Park shall be pruned, detailed and mulched.
6. Mulch: Woodchips from the removal / pruning operations shall be used for mulching exiting woodlands and tree groves. These woodchips shall be "double-ground" to achieve a fine, uniform consistency.

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE, IL 60563 – 630.305.3980 Fax 630.305.3964

Loyola Parking Lot & Driveway Relocation

Vernon Hills, Illinois

sheet description:

Existing Tree Inventory

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale:

revisions:		
⚠	9.30.2016	Per Village Review Comments
⚠	6.20.2016	Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:

checked by:

project no.: 23045

sheet no.: LTS.101

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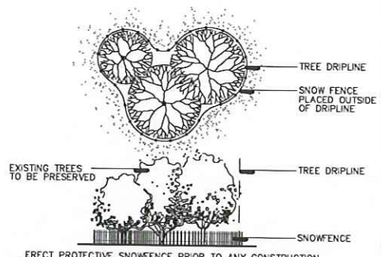
Existing Tree Inventory (2011) :

- Original inventory of trees on the North half of the site was completed by the Shaw Group in fall of 2011. Our office has field verified (and updated where necessary) findings of that inventory. A hard copy booklet of those approx. 2500 trees will be submitted separate as a reference document.

Existing Tree Inventory (2016) :

- Additional trees in the Southwest corner of the site were located and tagged by Manhard Consulting in Fall 2015 and Winter 2016. Ongoing inventories of these trees will continue through preliminary and final design, and in conjunction with the parking lot relocation project.



1/A Typical Tree Preservation Fencing

NTS

Tree Preservation Notes :

1. Tree Removal Permit Required: A tree removal permit shall be required for the removal of any tree in the woodland. No person shall, directly or indirectly, remove, damage or destroy a woodland without having secured a TRP.
2. The Owner or his/her designee shall be responsible for construction and maintenance of temporary fencing or other tree protection measures, to be used during construction.
3. Snow fencing shall be temporarily installed at the critical root zone for protection of trees prior to any construction activities and maintained throughout the entire project. The Critical Root zones equals one foot (1') for each one inch (1") of trunk diameter measured 4.5 feet above ground. See detail A.
4. Grading and construction equipment shall be forbidden from encroaching within the drip line of a tree.
5. No construction activity, movement, and/or placement of equipment or materials or spoils storage shall be permitted within the critical root zone of a protected tree or at any higher location where drainage toward the tree could conceivably affect the health of the tree. No excess soil, additional fill, liquids or construction debris shall be placed within the critical root zone of a protected tree.
6. No attachments, fences, or wires, other than those approved for bracing, guying or wrapping, shall be attached to trees during the construction period.
7. Grade change shall be allowed under the drip line of any trees designated for preservation only if tree trunks and branches are protected when construction must occur within tree drip line areas.
8. To improve the survival rate of trees, root pruning and/or thinning shall be performed in accordance with industry standards and practices and where indicated on the plan.

Existing Tree Inventory (Sheet LTS.100 Only) :

Tag	Botanical Name	Common Name	DBH	Cond Rating	Remarks	S/R
842	Populos deltoides	Cottonwood	50	3		
845	Robinia pseudoacia	Black Locust	8	1		
846	Robinia pseudoacia	Black Locust	10	1		
847	Acer platanoides	Norway Maple	10	2		
848	Robinia pseudoacia	Black Locust	20	2		
849	Acer platanoides	Norway Maple	22	3		
849	Acer platanoides	Norway Maple	24	1		
850	Acer platanoides	Norway Maple	23	1		
852	Acer platanoides	Norway Maple	20	2		
853	Picea abies	Norway Spruce	8	2		
856	Picea abies	Norway Spruce	22	4	Key Tree	
857	Picea abies	Norway Spruce	18	3		
858	Picea abies	Norway Spruce	8	3		
859	Picea abies	Norway Spruce	7	2		
860	Acer saccharinum	Silver Maple	13	2		
861	Fraxinus pennsylvanica	Green Ash	16	Dead		
862	Prunus serotina	Black Cherry	15	2		
863	Prunus serotina	Black Cherry	12	2		
864	Fraxinus pennsylvanica	Green Ash	14	Dead		
865	Acer platanoides	Norway Maple	10	Dead		
866	Fraxinus pennsylvanica	Green Ash	14	Dead		
869	Fraxinus pennsylvanica	Green Ash	2 x20, 12	2		
870	Fraxinus pennsylvanica	Green Ash	10	Dead		
871	Populos deltoides	Cottonwood	30	Dead	no top	
874	Acer platanoides	Norway Maple	12	3		
875	Acer platanoides	Norway Maple	16	3		
882	Fraxinus pennsylvanica	Green Ash	18	Dead		
886	Fraxinus pennsylvanica	Green Ash	18	Dead		
887	Fraxinus pennsylvanica	Green Ash	8	Dead		
887	Acer negundo	Boxelder	14	2		
888	Fraxinus pennsylvanica	Green Ash	12	Dead		
889	Fraxinus pennsylvanica	Green Ash	7	Dead		
890	Fraxinus pennsylvanica	Green Ash	10	Dead		
896	Juglans nigra	Black Walnut	2x20	3		
898	Juglans nigra	Black Walnut	8	1		
899	Acer platanoides	Norway Maple	12	3		
900	Aesculus glabra	Buckeye	2x12	3	fused at 5 ft.	
905	Acer platanoides	Norway Maple	20	3		
906	Acer platanoides	Norway Maple	25	3		
907	Acer platanoides	Norway Maple	19	3		
908	Acer platanoides	Norway Maple	18	3		
909	Acer platanoides	Norway Maple	27	3		
913	Acer platanoides	Norway Maple	24	3		
914	Acer platanoides	Norway Maple	18	3		
917	Acer negundo	Boxelder	20	3	leaning	
918	Acer negundo	Boxelder	24	2	leaning	
919	Acer negundo	Boxelder	14	2		
920	Acer negundo	Boxelder	13	2		
921	Acer platanoides	Norway Maple	8	3		
922	Acer platanoides	Norway Maple	8	3		
924	Acer platanoides	Norway Maple	32	3		
926	Acer platanoides	Norway Maple	6	2		
927	Acer platanoides	Norway Maple	6	2		
927	Acer platanoides	Norway Maple	37	3		
928	Acer platanoides	Norway Maple	8	3		
929	Robinia pseudoacia	Black Locust	8	1		
930	Acer platanoides	Norway Maple	18	2		
931	Acer platanoides	Norway Maple	18	3		

Tag	Botanical Name	Common Name	DBH	Cond Rating	Remarks	S/R
932	Acer platanoides	Norway Maple	20	3		
933	Acer platanoides	Norway Maple	15	3		
933	Acer platanoides	Norway Maple	18	3		
934	Acer platanoides	Norway Maple	18	1		
935	Acer platanoides	Norway Maple	22	2		
936	Acer saccharum	Sugar Maple	27	4	Key Tree	
937	Acer platanoides	Norway Maple	8	3		
938	Acer platanoides	Norway Maple	13	2		
940	Juglans nigra	Black Walnut	10	1		
941	Acer negundo	Boxelder	13	1		
942	Acer platanoides	Norway Maple	20	Dead		
944	Acer saccharinum	Silver Maple	12	2		
945	Acer saccharinum	Silver Maple	10	2		
945	Acer saccharinum	Silver Maple	15	1		
946	Fraxinus pennsylvanica	Green Ash	12	Dead		
946	Fraxinus pennsylvanica	Green Ash	12	1		
948	Rhamnus catharica	Common Buckthorn	6x8	2		
949	Fraxinus pennsylvanica	Green Ash	9	Dead		
950	Fraxinus pennsylvanica	Green Ash	16	Dead		
951	Juglans nigra	Black Walnut	7	3		
952	Juglans nigra	Black Walnut	10	1		
953	Pinus strobus	White Pine	15	2		
954	Pinus strobus	White Pine	14	1		
955	Pinus strobus	White Pine	24	1		
956	Pinus strobus	White Pine	18	1		
957	Prunus serotina	Black Cherry	7	3		
958	Pinus strobus	White Pine	13	1		
961	Prunus serotina	Black Cherry	12	2		
962	Prunus serotina	Black Cherry	8	2		
963	Pinus strobus	White Pine	11	1		
964	Rhamnus catharica	Common Buckthorn	8	1		
973	Prunus serotina	Black Cherry	8	Dead		
974	Prunus serotina	Black Cherry	9	1		
986	Acer negundo	Boxelder	26	1		
987	Celtis occidentalis	Hackberry	9	3		
988	Celtis occidentalis	Hackberry	8	3		
989	Fraxinus pennsylvanica	Green Ash	13	Dead		
990	Juglans nigra	Black Walnut	28	3		
994	Juglans nigra	Black Walnut	30	4	Key Tree	
999	Prunus serotina	Cherry	9	2		
1000	Rhamnus catharica	Common Buckthorn	14	1		
1502	Acer platanoides	Norway Maple	6	2		
1503	Acer platanoides	Norway Maple	6	Dead		
1504	Acer platanoides	Norway Maple	3x8	3		
1505	Acer platanoides	Norway Maple	26	3		
1506	Acer platanoides	Norway Maple	20	2		
1507	Acer platanoides	Norway Maple	18	Dead		
1508	Acer platanoides	Norway Maple	21	2		
1509	Acer platanoides	Norway Maple	24	Dead		
1510	Morus alba	Mulberry	20	2		
1511	Ulmus rubra	Red Elm	11	2		
1512	Ulmus rubra	Red Elm	7	2		
1513	Acer saccharinum	Silver Maple	2x18,8	2		
1514	Fraxinus pennsylvanica	Green Ash	8	Dead		
1515	Acer negundo	Boxelder	14	Dead		
1516	Acer saccharinum	Silver Maple	40	3		
1517	Acer platanoides	Norway Maple	13	3		
1519	Acer platanoides	Norway Maple	13	3		

Tag	Botanical Name	Common Name	DBH	Cond Rating	Remarks	S/R
1520	Acer saccharinum	Silver Maple	32	3		
1521	Acer saccharinum	Silver Maple	18	3		
1522	Acer saccharinum	Silver Maple	16	2		
1523	Acer saccharinum	Silver Maple	24	3		
1524	Acer platanoides	Norway Maple	8	2		
1525	Acer saccharum	Sugar Maple	14	3		
1526	Acer saccharinum	Silver Maple	19	3		
1527	Acer saccharinum	Silver Maple	28	3		
1535	Acer saccharinum	Silver Maple	18	3		
1537	Fraxinus pennsylvanica	Green Ash	14	Dead		
1538	Acer platanoides	Norway Maple	20	3		
1539	Fraxinus pennsylvanica	Green Ash	18	Dead		
1540	Acer platanoides	Norway Maple	21	Dead		
1541	Fraxinus pennsylvanica	Green Ash	11	Dead		
1542	Celtis occidentalis	Hackberry	24	4	Key Tree	
1543	Juglans nigra	Black Walnut	28	3		
1544	Juglans nigra	Black Walnut	10	Dead		
1548	Acer negundo	Boxelder	10	1		
1550	Prunus serotina	Black Cherry	12	Dead		
1551	Acer negundo	Boxelder	8	1		
1552	Acer platanoides	Norway Maple	3x10	Dead		
1553	Acer platanoides	Norway Maple	15	Dead		
1554	Acer platanoides	Norway Maple	22	3		
1555	? Dead	Norway Spruce	10	Dead		
1556	Celtis occidentalis	Hackberry	7	3		
1557	Acer platanoides	Norway Maple	18	3		
1558	Acer saccharinum	Silver Maple	32	2		
1559	Acer saccharinum	Silver Maple	30	2		
1562	Acer saccharinum	Silver Maple	28	3		
1567	Fraxinus pennsylvanica	Green Ash	9	Dead		
1568	Juglans nigra	Black Walnut	28	3		
1569	Juglans nigra	Black Walnut	18	3		
1570	Fraxinus pennsylvanica	Green Ash	10	Dead		
1571	Fraxinus pennsylvanica	Green Ash	20	Dead		
1572	Juglans nigra	Black Walnut	22	3		
1573	Acer platanoides	Norway Maple	6	3		
1574	Fraxinus pennsylvanica	Green Ash	30	Dead		
1575	Celtis occidentalis	Hackberry	8	3		
1577	Robinia pseudoacia	Black Locust	22	3		
1578	Celtis occidentalis	Hackberry	8	3		
1580	Fraxinus pennsylvanica	Green Ash	8	Dead		
1581	Fraxinus pennsylvanica	Green Ash	10	Dead		
1582	Fraxinus pennsylvanica	Green Ash	8	Dead		
1583	Acer platanoides	Norway Maple	12	3		
1584	Fraxinus pennsylvanica	Green Ash	20	Dead		
1588	Celtis occidentalis	Hackberry	7	3		
1589	Fraxinus pennsylvanica	Green Ash	10	Dead		
1590	Fraxinus pennsylvanica	Green Ash	12	Dead		
1591	Fraxinus pennsylvanica	Green Ash	16	Dead		
1592	Acer negundo	Boxelder	8	1		
1593	Fraxinus pennsylvanica	Green Ash	17	Dead		
1596	Acer saccharinum	Silver Maple	42	3		
1597	Acer saccharinum	Silver Maple	17	2		
1599	Acer platanoides	Norway Maple	20	1		
1601	Prunus serotina	Black Cherry	8	2		
1787	Acer platanoides	Norway Maple	14	Dead		
2445	Picea abies	Norway Spruce	26	3		
2472	Quercus palustris	Pin Oak	14	3		
2473	Picea abies	Norway Spruce	17	3		
2474	Picea abies	Norway Spruce	13	2		
2475	Picea abies	Norway Spruce	13	Dead		
2483	Picea abies	Norway Spruce	11	1		
2484	Picea abies	Norway Spruce	14	3		
2487	Quercus palustris	Pin Oak	28	3		
2492	Quercus palustris	Pin Oak	30	3		
2493	Acer platanoides	Norway Maple	24	3		
2496	Acer platanoides	Norway Maple	25	2		
2497	Acer platanoides	Norway Maple	30	3		
2498	Acer platanoides	Norway Maple	28	2	1/2 hollow	
2507	Acer platanoides	Norway Maple	22	3		
2508	Picea abies	Norway Spruce	15	2		
2509	Picea abies	Norway Spruce	14	Dead		
2510	Picea abies	Norway Spruce	14	2		
2511	Picea abies	Norway Spruce	16	Dead		
2512	Picea abies	Norway Spruce	14	2		
2514	Picea abies	Norway Spruce	13	Dead		
2515	Picea abies	Norway Spruce	18	2		
2516	Picea abies	Norway Spruce	11	2		
2517	Picea abies	Norway Spruce	18	3		
2518	Picea abies	Norway Spruce	17	2		
2519	Picea abies	Norway Spruce	12	2		
2520	Picea abies	Norway Spruce	12	2		

CONDITION RATINGS :

Rating	Description	General Criteria
4	Excellent	The tree is typical of the species, has less than 10% deadwood in the crown that is attributable to normal causes, has no other observed problems, and requires no remedial action
3	Good	The tree is typical of the species and / or has less than 20% deadwood in the crown, only 1 or 2 minor problems that are easily corrected with normal care.
2	Fair	The tree is typical of the species and / or has less than 40% deadwood in the crown, only 1 or 2 minor problems that are not imminently lethal to the tree and no significant decay or significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to ensure continued health.
1	Poor	The tree is not typical of the species and / or has over 50% deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corected would not result in the long term survival of the tree.
0	Dead	Less than 10% of the tree shows signs of life

Existing Tree Summary Narrative :

Much of the existing site is heavily wooded. Based on our current 2014-2016 inventory of the full site, we have found the existing trees to be a combination of low quality Boxelder, Silver Maple, Elm and Buckthorn with remnant groves of Norway Spruce and Norway Maple from Jensen's original design. Additionally some specimen Black Walnuts, Hackberry and Sugar Maples can be found scattered around the site.
The proposed site plan carefully locates roads and parking around the desirable trees in order to preserve a large percentage of the best trees on site, while removing the lower quality, invasive vegetation.

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Land Planning
Landscape Architecture
Environmental Site Design

804 WASHINGTON ST. - NAPERVILLE IL 60563 - 630.305.3080 Fax 630.305.3094

Loyola Parking Lot & Driveway Relocaiton

Vernon Hills, Illinois

sheet description:

Existing Tree Inventory

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north:

scale:

revisions:
1 | 8.30.2016 | Per Village Review Comments
2 | 6.20.2016 | Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:

checked by:

project no.: 23045

sheet no.: LTS.102

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ORDINANCE 2017-014 Exhibit B14 Preliminary Landscape Development Plans – The Residences at Cuneo Mansion and Gardens prepared by Signature Design Group with a revision date of 9/30/2016 and consisting of pages LL.100 thru LL.109 and TS.100 thru TS 105

Preliminary
Landscape Development Plans

SIGNATURE DESIGN GROUP

△1 6.20.2016 - Per Village Review Comments dated May 24, 2016

△2 9.30.2016 - Per Village Review Comments

The Residences at Cuneo Mansion and Gardens

VERNON HILLS, ILLINOIS

DEVELOPER :

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Schaumburg, Illinois 60173
(847) 230.5331 voice

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Project Manager: Chuck Hanlon

ENGINEER :

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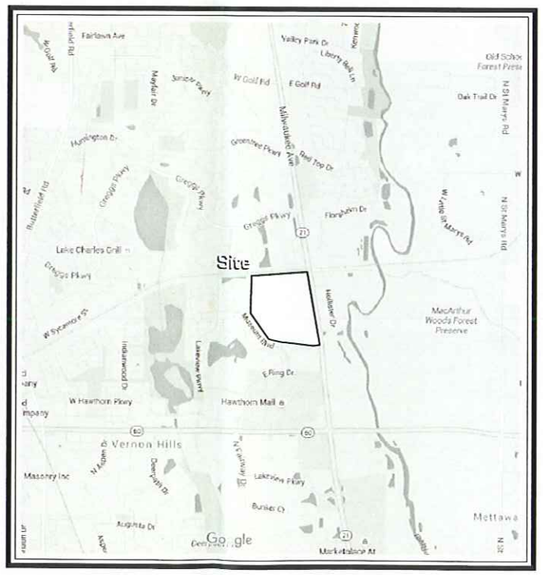
Lombard, IL 60148
(630) 691.8500 voice
Project Manager: Bill Hupperich, P.E.

LANDSCAPE ARCHITECT :

Signature Design Group, Inc.
132 N. Washington Street
Naperville, Illinois 60540
(630) 305.3980 Fax: (630) 305.3994
Project Manager: Greg G. Sagen, RLA



LOCATION MAP

INDEX OF DRAWINGS

L.100	Overall Landscape Plan
L.101	Entrance Enlargement
L.102	Central Park Enlargement
L.103	Site Details
L.104	Plant Legend, Notes & Details
L.105	Native Planting Specs
L.106	Landscape Specifications
L.107	Garden Sculpture & Ornament Plan
L.108	Typical House Landscape Packages
L.109	Village Detention Basin Details
TS.100	Existing Tree Survey & Preservation Plan
TS.101	Existing Tree Survey & Preservation Plan
TS.102	Existing Tree Survey & Preservation Plan
TS.103	Existing Tree Survey & Preservation Plan
TS.104	Existing Tree Survey & Preservation Plan
TS.105	Existing Tree Inventory

RECEIVED
OCT 10 2016
Community Development Department

Preliminary Plant & Material Legend :

⚠ See Sheet L.104 for a detailed, representative list.

Parkway Trees, 2.5" Caliper - [per Village Appendix A]

Greenspire Linden	Skyline Locust
Norway Maple	Swamp White Oak
Sugar Maple	Accolade Elm

Shade Trees, 2.5" - 4.0" Caliper

Autumn Blaze Maple	Swamp White Oak
State Street Maple	Shawnee Brave Baldcypress
Chicagoland Hackberry	Accolade Elm
Kentucky Coffeetree	Skyline Locust
Exclamation London Planetree	Bur Oak

Ornamental Trees, 6' - 10' m/s

River Birch	European Black Alder
Prairie Fire Crab	Apple Serviceberry
Ivory Silk Tree Lilac	Redbud
Thornless Cockspur Hawthorne	Washington Hawthorn

Evergreen Trees, 6' - 10' tall

Norway Spruce	Fairview Juniper
Colorado Spruce	Nigra Arborvitae
White Pine	Austrian Pine
White Fir	

Evergreen Shrubs, 18" - 24" wide

Boxwood var.	Green Sargent Juniper
Kallay Compact Juniper	Dense Yews

Deciduous Shrubs, 18" - 36" tall

Northern Bayberry	Gro-lo Sumac
Black Chokeberry	Staghorn Sumac
Dogwood var.	Viburnum var.
Hydrangea var.	Shrub Rose Var.
Texas Scarlet Quince	Grefshim Spirea

Perennials / Ornamental Grasses, 1gal.

Blue Wonder Catmint	Black Eye Susan
Autumn Joy Sedum	Feather Reed Grass
Firework Goldenrod	Prairie Dropseed

Existing Trees (see TS.100 - TS.105)

To Be Preserved

Proposed Trail Corridors : ⚠

- Internal Subdivision & Park Trails - 5' Wide Asphalt
- Axial promenade - 6' Wide Exposed Agg Concrete [Match Existing Gardens]
- Subdivision Street Walks - 5' Wide Concrete
- Proposed Village Trail - 8' Asphalt

Village Landscape Requirements:

The Landscape Plans will be prepared in accordance with Village Ordinance, Article II - Tree Preservation and Landscaping.

Design Intent:

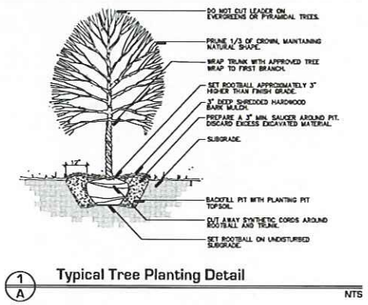
The original site plan was designed by renowned Landscape Architect Jens Jensen in the early 1900's. Our design will attempt to seamlessly integrate the new development with the existing landscape and as follows:

- Utilize a "prairie style" curvilinear design for the neighborhood framework and road network
- Preserve and integrate existing Jensen tree groves into the new subdivision
- Supplement the existing plantings with new tree groves and large plant masses featuring species to compliment the original design. Native plant material and perennials will be widely used.
- Incorporate other Jensen design elements such as 'Council-Ring' sitting areas, long axial views and layered planting beds.

Naturalized Stormwater Management:

On site stormwater management will use naturalized "wetland-style" detention basins. These basins will incorporate BMP's such as open water sedimentation pools, deep water channels, biofilter bars and extensive native wetland plantings. These naturalized basins will provide:

- Improved water quality
- Reduced stormwater runoff
- Increase ground water infiltration
- Provide valuable wildlife habitat and aesthetics



1/A Typical Tree Planting Detail — NTS

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Landscape Architecture
Environmental Site Design

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Preliminary Landscape Plan

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 50 100 150 250 350

north: scale: 1" = 100'0"

revisions:		
⚠	8.30.2016	Per Village Review Comments
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drawn by:
checked by:
project no.: 23045
sheet no.: L.100

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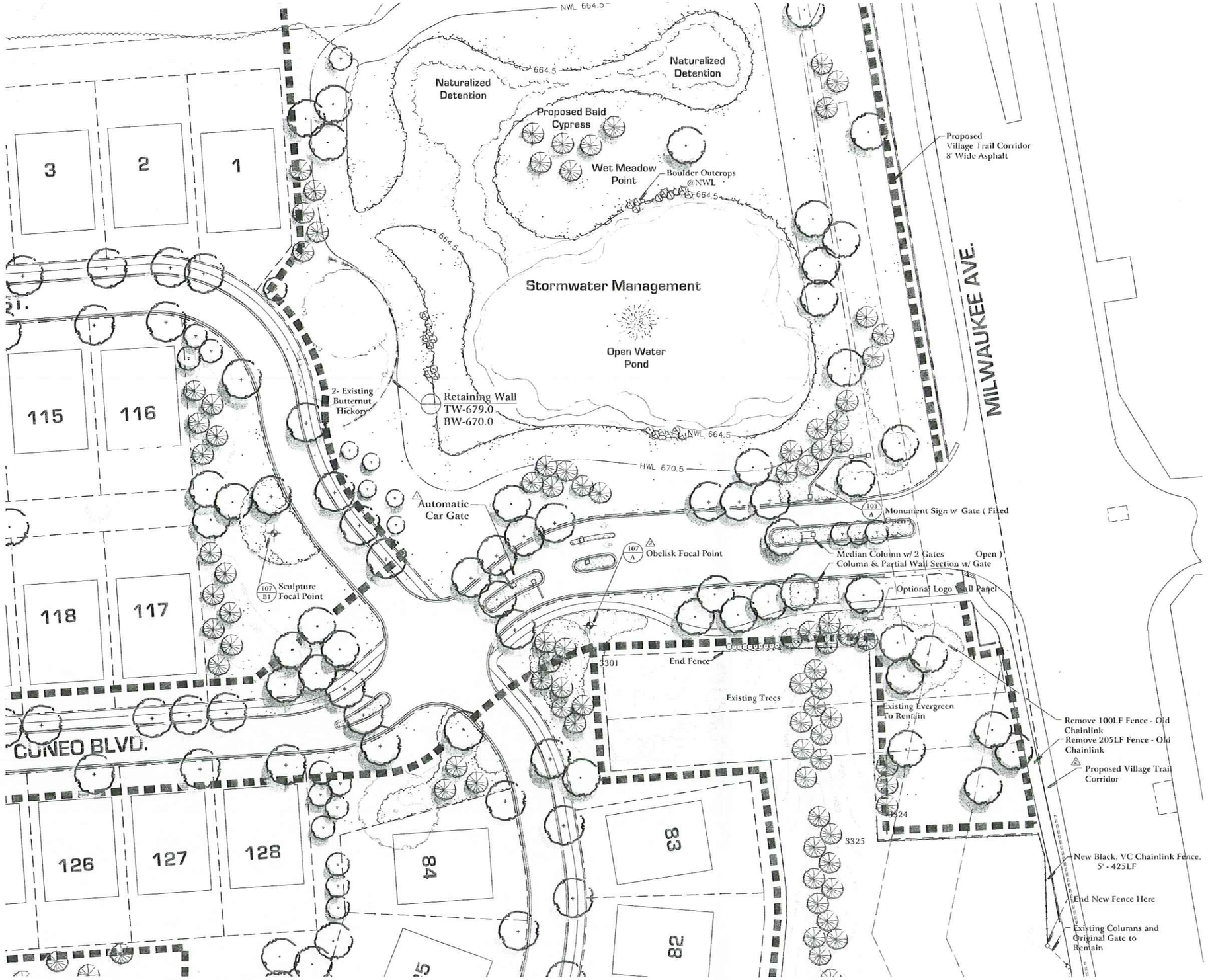

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Environmental Site Design

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Preliminary Entrance Enlargement

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 15 30 45 75 105

north: scale: 1" = 30'0"

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sheet no: L.101

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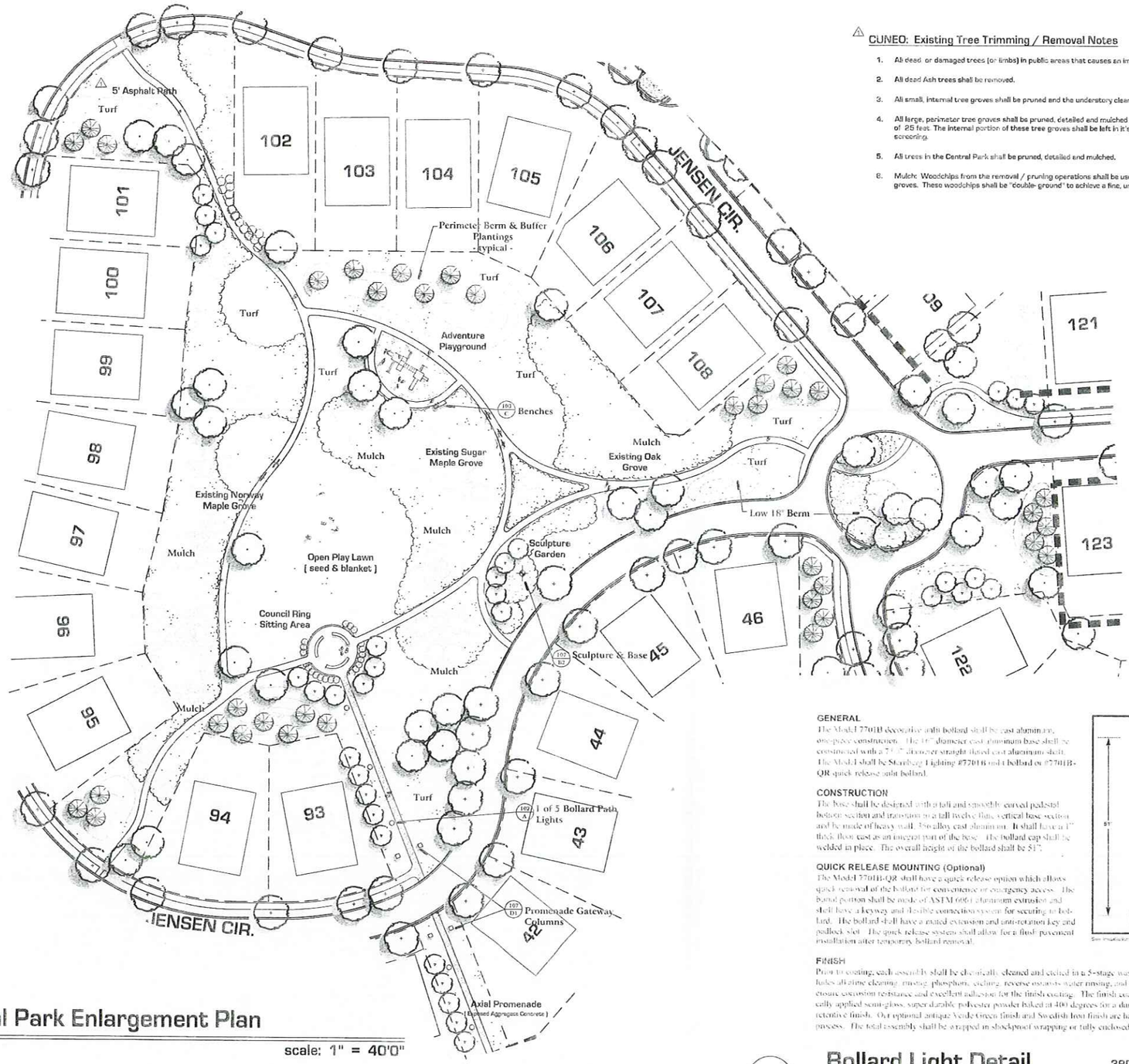


A Central Park Enlargement Plan

scale: 1" = 40'0"

⚠ CUNEO: Existing Tree Trimming / Removal Notes

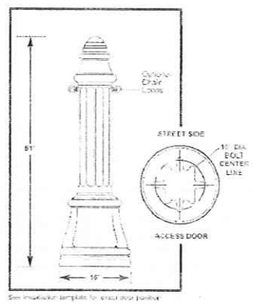
1. All dead or damaged trees (or limbs) in public areas that causes an immediate safety concern shall be removed.
2. All dead Ash trees shall be removed.
3. All small, internal tree groves shall be pruned and the understory cleaned-up and mulched (or seeded).
4. All large, perimeter tree groves shall be pruned, detailed and mulched around the full perimeter to a depth of 25 feet. The internal portion of these tree groves shall be left in it's natural state for wildlife habitat and screening.
5. All trees in the Central Park shall be pruned, detailed and mulched.
6. Mulch: Woodchips from the removal / pruning operations shall be used for mulching exiting woodlands and tree groves. These woodchips shall be "double-ground" to achieve a fine, uniform consistency.

GENERAL
The Model 7701B decorative mini bollard shall be cast aluminum, one-piece construction. The 10" diameter cast aluminum base shall be constructed with a 7.5° diameter straight fluted cast aluminum shaft. The Model shall be Sternberg Lighting #77016 mini bollard or #7701B-QR quick release mini bollard.

CONSTRUCTION
The base shall be designed with a tall and smoothly curved pedestal bottom section and transition to a tall twelve flute vertical base section and be made of heavy wall, 356 alloy cast aluminum. It shall have a 1" thick floor cast as an integral part of the base. The bollard cap shall be welded in place. The overall height of the bollard shall be 51".

QUICK RELEASE MOUNTING (Optional)
The Model 7701B-QR shall have a quick release option which allows quick removal of the bollard for convenience or emergency access. The barrel portion shall be made of ASTM 6061 aluminum extrusion and shall have a keyway and flexible connection system for securing to bollard. The bollard shall have a mated extension and anti-rotation key and padlock slot. The quick release system shall allow for a flush pavement installation after temporary bollard removal.

FINISH
Prior to coating, each assembly shall be chemically cleaned and etched in a 5-stage washing system which includes alkaline cleaning, rinsing, phosphate, etching, reverse osmosis water rinsing, and non-chromic sealing to ensure corrosion resistance and excellent adhesion for the finish coating. The finish coating shall be electrostatically applied semi-gloss, super durable, polyester powder baked at 400 degrees for a durable and superior, color retentive finish. Our optional antique Verde Green finish and Swedish Iron finish are hand brushed using a 3-step process. The total assembly shall be strapped in shockproof wrapping or fully enclosed in corrugated cartons.



See installation template for exact hole location

A Bollard Light Detail

3901LB RICHMOND BOLLARD LIGHT

Color : Black, Match Mansion

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804 WASHINGTON ST. - NAPERVILLE, IL 60563 - (630) 305-3660 Fax 630 305 3664

The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Central Park Enlargement

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 20 40 60 100 140

north: scale: 1" = 40'0"

revisions:		
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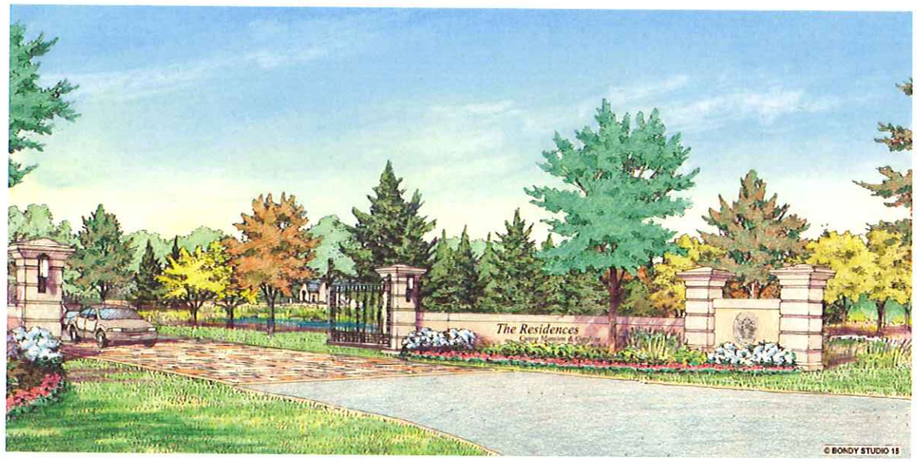
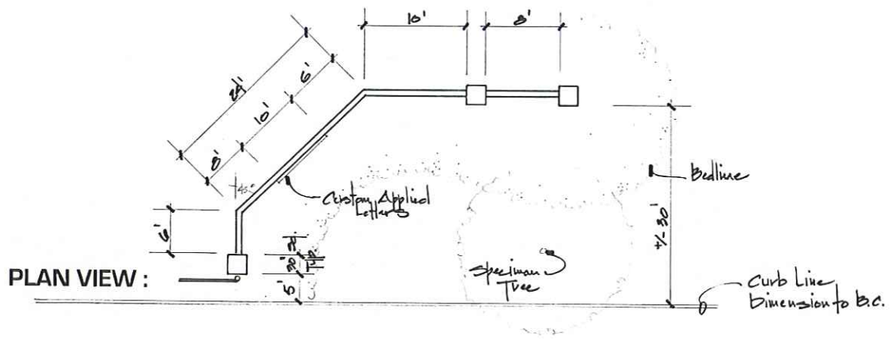
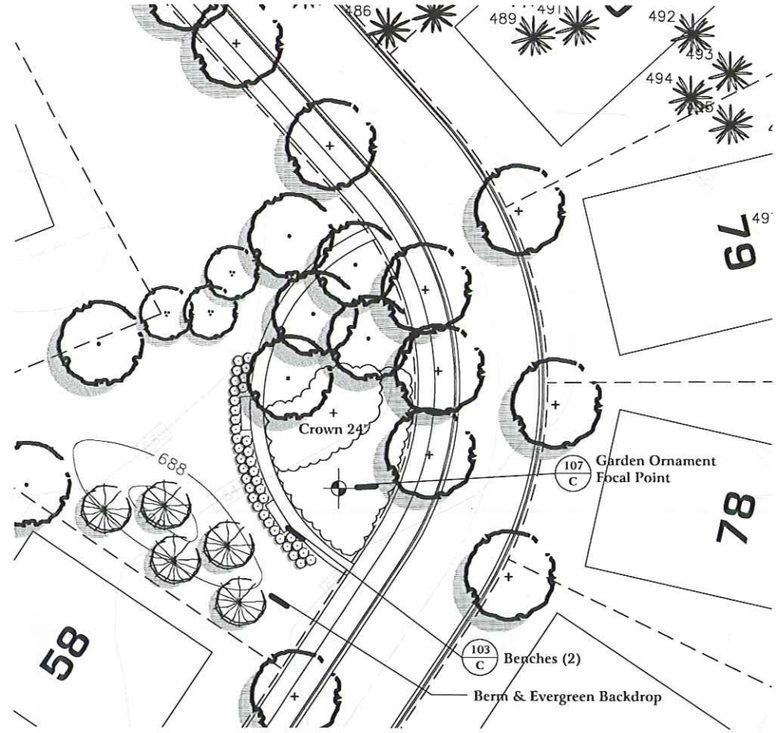


A — Proposed Entrance Sign Wall - Color Elevation △1

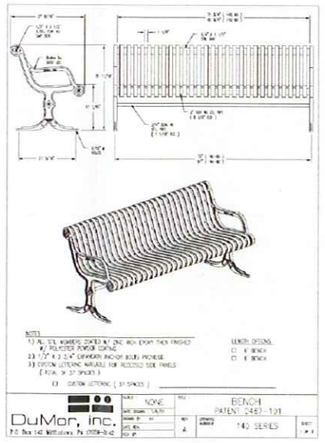


A — Proposed Entrance Sign Layout & Dimensions △1



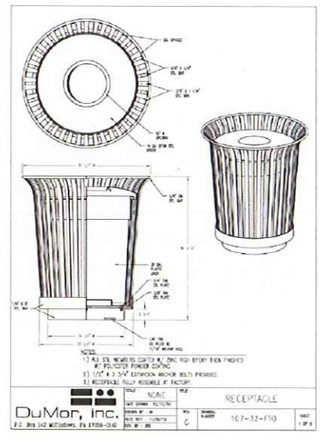
B — Sitting Area Detail

scale: 1" = 20'0"



Color: Black - 6 foot

C — Bench Detail



Color: Black

D — Trash Receptacle

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Site Details

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north:

scale: As Shown

revisions:		
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checked by:

project no.: 23045

sheet no.: L.103

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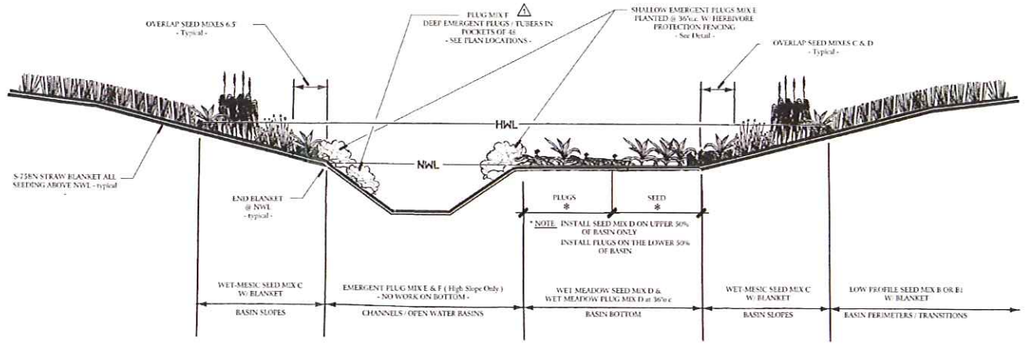
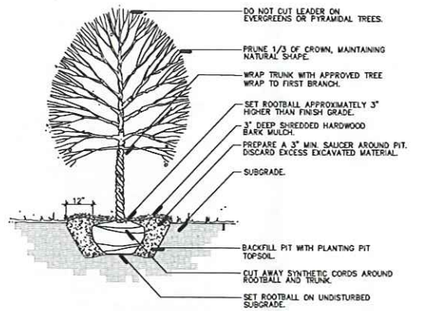
⚠ Preliminary Plant & Material Legend : (Sheets L.100 - L.102)

Code	Scientific Name	Common Name	Size	Qty	Remarks
SHADE TREES					
AGB	Aesculus glabra	Ohio Buckeye	2.5"		B&B
AAB	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	3.0"		B&B
AAB 4	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	4.0"		B&B
AAMS	Acer miyabei 'Morton'	State Street Maple	2.5"		B&B
AGM	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2.5"		B&B
ARS	Acer rubrum 'Red Sunset'	Red Sunset Maple	2.5"		B&B
COC	Celtis occidentalis 'Chicagoland'	Chicagoland Hackberry	2.5"		B&B
CS	Catalpa species	Catalpa species	2.5"		B&B
GBM	Gingko biloba 'Magyar'	Magyar Gingko	2.5"		B&B
GD	Gymnocladus dioicus	Kentucky Coffeetree	2.5"		B&B
GTS	Gleditsia triacanthos var. inermis 'Skyline'	Skyline Honeylocust	4.0"		B&B
PAL	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	3.0"		B&B
PCC	Pyrus calleryana 'Chanticleer'	Chanticleer Pear	3.0"		B&B
QB	Quercus bicolor	Swamp White Oak	2.5"		B&B
QM	Quercus macrocarpa	Bur Oak	2.5"		B&B
QMC	Quercus muehlenbergii	Chinkapin Oak	2.5"		B&B
QR	Quercus rubra	Red Oak	2.5"		B&B
TAR	Tilia americana 'Redmond'	Redmond American Linden	3.0"		B&B
TCG	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	3.0"		B&B
TCG 10	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	10'		B&B, Multi-Stem
TD	Taxodium distichum	Bald Cypress	2.5"		B&B
ORNAMENTAL TREES					
AG	Alnus glutinosa	Black Alder	8'		B&B, Multi-Stem
ASG	Amelanchier x grandiflora	Apple Serviceberry	6'		B&B, Multi-Stem
BNH	Betula nigra 'Heritage'	Heritage River Birch	10'		B&B, Multi-Stem
CCI	Crataegus crusgalli var. inermis	Thornless Cockspur Hawthorn	7'		B&B, Multi-Stem
CMG	Cornus mas 'Golden Glory'	Golden Glory Cherry Dogwood	6'		B&B, Multi-Stem
CP	Crataegus phaenopyrum	Washington Hawthorn	8'		B&B, Multi-Stem
CRB	Cercis canadensis	Eastern Redbud	6'		B&B, Multi-Stem
MJ	Malus floribunda	Japanese Flowering Crab	2.5"		B&B
MPF	Malus 'Prairifire'	Prairifire Flowering Crab	2.5"		B&B
MSC	Malus 'Snowdrift'	Snowdrift Flowering Crab	8'		B&B, Multi-Stem
SPM	Syringa pekinensis 'Morton'	China Snow Pekin Lilac	2.5"		B&B
SRI	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	8'		B&B, Multi-Stem
VP	Viburnum prunifolium	Blackhaw Viburnum	6'		B&B, Multi-Stem
EVERGREEN TREES					
JCT	Juniperus chinensis 'Taliview'	Taliview Upright Juniper	6'		B&B
PAB	Picea abies	Norway Spruce	8'		B&B
PFG	Pinus flexilis 'Glauca'	Blue Limber Pine	6'		B&B
PG	Picea glauca 'Densata'	Black Hills Spruce	8'		B&B
PN	Pinus nigra	Austrian Pine	8'		B&B
PP.S	Picea pungens	Colorado Green Spruce	8'		B&B
PSW	Pinus strobus	Eastern White Pine	8'		B&B
EVERGREEN SHRUBS					
JGS	Juniperus chinensis var. sargentii	Green Sargent Juniper	18"		5 Gallon Container
JKC	Juniperus chinensis 'Kallays Compacta'	Kallay's Compact Juniper	18"		5 Gallon Container
JSG	Juniperus chinensis 'Sea Green'	Sea Green Juniper	24"		5 Gallon Container
ORNAMENTAL SHRUBS					
AABC	Aronia arbutifolia 'Brilliantissima'	Brilliant Red Chokeberry	24"		5 Gallon Container
AMM	Aronia melanocarpa 'Morton'	Iroquois Beauty Chokeberry	24"		5 Gallon Container
AFBB	Aesculus parviflora 'Rogers'	Rogers Bottle Buckeye	24"		5 Gallon Container
CA	Cotinus coetser x'coggygria'	Peking Cotinus x'ety	30"		5 Gallon Container
CSB	Cornus sericea 'Bailey'	Bailey's Redtwig Dogwood	30"		5 Gallon Container
CSC	Cornus sericea 'Cardinal'	Coral Dogwood	30"		5 Gallon Container
CTS	Chaenomeles speciosa 'Texas Scarlet'	Texas Scarlet Quince	18"		5 Gallon Container
EAW	Euonymus atropurpureus	Eastern Wahoo	36"		B&B
FM	Forsythia 'Meadowlark'	Meadowlark Forsythia	24"		5 Gallon Container
HAA	Hydrangea arborescens 'Annabelle'	Annabelle Hydrangea	24"		5 Gallon Container
HPT	Hydrangea paniculata 'Tardiva'	Tardiva Hydrangea	24"		5 Gallon Container
IVH	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	18"		5 Gallon Container
IVT	Ilex verticillata 'Jim Dandy'	J.D. Winterberry	24"		5 Gallon Container
IVR	Ilex verticillata 'Red Sprite'	R.S. Winterberry	24"		5 Gallon Container
MPB	Myrica pensylvanica	Northern Bayberry	24"		5 Gallon Container
RAG	Rhus aromatica 'Gro-low'	Gro-Low Fragrant Sumac	18"		5 Gallon Container
RBK	Rosa 'Blushing Knockout'	Blushing Knockout Rose	18"		5 Gallon Container
RCP	Rhus copallina 'Prairie Flame'	Prairie Flame Shining Sumac	18"		5 Gallon Container
RKO	Rosa 'Knockout'	Knockout Shrub Rose	18"		5 Gallon Container
RTT	Rhus Typhina 'Staghorn'	Staghorn Cutleaf Sumac	36"		5 Gallon Container
SCG	Spiraea x cinerea 'Grefsheim'	Grefsheim Spirea	24"		5 Gallon Container
SS	Sorbis alnifolia	Utzil Tabespirea	24"		5 Gallon Container
VBW	Viburnum x burkwoodii	Burkwood Viburnum	30"		5 Gallon Container
VDC	Viburnum dentatum 'Christom'	Viburnum Blue Muffin	30"		5 Gallon Container
VLN	Viburnum lentago	Nannyberry Viburnum	30"		5 Gallon Container
VOC	Viburnum opulus	European Cranberrybush Vib.	30"		5 Gallon Container
VPM	Viburnum plicatum var. tom. 'Mariesii'	Maries Double-file Viburnum	30"		5 Gallon Container
PERENNIALS & ORNAMENTAL GRASSES					
AFM	Achillea filipendulina 'Moonshine'	Moonshine Yarrow	1 G		Container
AFS	Allium aflatunense 'Purple Sensation'	Purple Sensation Allium	1 G		Container
CAB	Calamagrostis arundinacea v. brachytricha	Featail Feather Reed Grass	1 G		Container
CKF	Calamagrostis acutiflora 'Karl Forester'	Karl Forester Feather Reed Grass	1 G		Container
CNN	Calamintha nepeta x nepeta	Lesser Calamintha	1 G		Container
COT	Chelone obliqua	Rose Turtlehead	1 G		Container
LMG	Lupatorium maculatum 'Gateway'	Spotted Joe-Pye Weed	1 G		Container
LPM	Echinacea purpurea 'Magnus'	Purple Coneflower	1 G		Container
GR	Geranium x 'Rozanne'	Rozanne Cranesbill	1 G		Container
HH	Hesperocallis 'Hyperion'	Hyperion Daylily	1 G		Container
HHR	Hesperocallis 'Happy Returns'	Happy Returns Daylily	1 G		Container
NBW	Nepeta x faassenii 'Blue Wonder'	Blue Wonder Catmint	1 G		Container
PA	Perovskia atriplicifolia	Russian Sage	1 G		Container
PVS	Panicum virgatum 'Shenendoah'	Shenandoah Switch Grass	1 G		Container
RFG	Rudbeckia fulgida 'Goldstrum'	Blackeye Susan	1 G		Container
SAG	Sesleria autumnalis	Autumn Moor Grass	1 G		Container
SH	Sporobolus heterolepis	Prairie Dropseed	1 G		Container
SPG	Spartina pectinata	Prairie Cord Grass	1 G		Container
SFJ	Schizpo regma 'Fireworks'	Fireworks Goldenrod	1 G		Container
SSC	Schizachyrium 'Carousel'	Dwarf Little Bluestem	1 G		Container

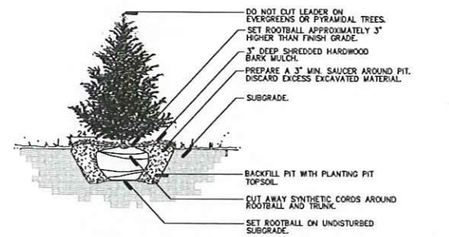
⚠ **Note:** This list represents the palette of plant material, and general sizes, to be used on this project for preliminary Village Review. Plant material will be individually labeled and final schedule quantities provided upon submittal to the Village for Final PUD Approval.



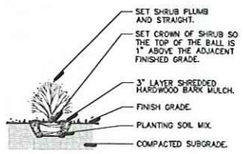
E Typical Native Basin Section — See L.105 & L.109 for Native Specifications ⚠⚠ — NTS



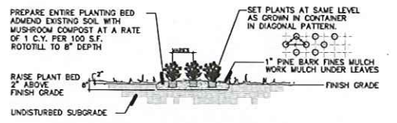
A Typical Tree Planting Detail — NTS



B Typical Evergreen Planting Detail — NTS



C Typical Shrub Planting Detail — NTS



D Typical Perennial Planting Detail — NTS

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Plant Legend, Notes & Dtails

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale:

revisions:
⚠ 8.30.2016 | Per Village Review Comments
⚠ 8.20.2016 | Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: L.104

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DESCRIPTION OF WORK

As part of this project, stormwater management basins will be planted with native vegetation. The purpose of the plan is to maximize the functions of the naturalized areas by installing and maintaining a native plant community. These native plant communities will provide a distinctive landscape that will provide erosion and sediment control, stormwater filtration, infiltration, and wildlife habitat.

PART 1 - NATURALIZED AREAS PLANTING SPECIFICATIONS

1.01 QUALITY CONTROL PROCEDURES

A. Native seed and live plant material must be shipped, stored and handled in a manner that will insure protection from moisture, heat, or other conditions that would jeopardize viability or cause germination before installation.
B. Plant species substitutions shall be approved by the Landscape Architect with input from the Native Landscape Contractor if necessary. Perennial Rye, Winter Rye, Grain Rye and Winter Wheat are not to be used as a cover crop.
C. Seed supplied to the site shall be tagged with seed species, weights, and documentation of PLS (Pure Live Seed) testing. Seed must meet a minimum 75% PLS per species as verified by independent laboratory test results no more than 1 year old. For Prairie Cord Grass (Spartina pectinata) test results shall be no more than 6 months old. Native seed shall be obtained from sources within the same EPA level III Ecoregion as the project site (Central Corn Belt Plains).

1.02 CONTRACTOR EXPERIENCE

A. The Native Landscape Contractor chosen for the establishment of the natural areas must be experienced in the restoration, installation and management of said areas. They must have a minimum of five years experience in the field. There shall be a foremen on-site at all times that can identify non-native and native plants by genus and species.
B. The goal of restoring native plant communities is a long-term process. Therefore it is imperative that a qualified contractor performs the initial installation maintenance.
C. Qualified bidders shall possess specialized equipment for working in and around water, including a small boat, hip waders, and flotation life preservers to be worn while working in water.

1.03 ENVIRONMENTAL REQUIREMENTS

A. Installation shall be performed in mid to late spring, specifically between April 1 and July 1.
B. Hydrology shall be established prior to installation. Detention pond must have an established pool level to utilize as a reference for planting.
C. Surrounding uplands shall be stabilized with the specific grass seed mix. No pre-emergent herbicides shall be applied to surrounding turf during the six months prior to installation and for at least 1 year following installation.
D. Emergent plants shall be installed prior to seeded communities.

1.04 EARTHWORK COORDINATION

A. The Native Landscape Contractor must coordinate with the on-site Earthwork Contractor to ensure proper soil handling within the planting areas.
B. A preconstruction meeting shall be held in order to coordinate equipment movement within the planting areas and to avoid soil compaction and to review underground utility location maps and plans. Equipment having low unit pressure ground contact shall be utilized within the planting areas.
C. If compaction occurs, the soil must be ripped, disked, or otherwise loosened to a depth of at least 12 inches until compaction readings average below 250 psi. to provide proper conditions for plant root growth.
D. Areas that have been excavated into subsoil should be amended by the following process: Over excavate to 6 inches below the final elevations shown on plans. Apply and evenly spread enough topsoil to achieve final grades as specified in the grading plans.
E. Earthwork Contractor shall ensure that all planting areas shall have a minimum of 12 inches of topsoil. Acceptable topsoil shall consist of loose friable loam, free of heavy clay, refuse, stumps and large roots, rocks over 1.5 inch in diameter, brush, weeds and weed seeds, or other material that would de detrimental to the proper development of vegetative growth. Topsoil should contain 3 to 5 percent organic matter.
F. Earthwork Contractor is to ensure that the planting area is properly protected from sedimentation and erosion by following the erosion and sedimentation control plan prepared by the project engineer.
G. Upon inspection and acceptance of the planting areas by the Native Landscape Contractor, the planting bed shall be prepared for seeding, utilizing any method that leaves the upper 1-3 inches of soil broken down into fine particle seedbed with no clods greater than 3 inches in diameter.

1.05 PLANT MATERIALS

A. Provide a fresh clean crop of the species and proportions as specified.
B. Mycorrhizal inoculants shall be pelletized and mixed at 1 lb. per acre with the fine seeds before installation. The inoculants shall contain a diverse mixture of Glomales fungal species (Glomus spp.) in pelletized form.
C. Plugs shall be deep cell grown and have top growth sufficient to reach above water level after planting. (minimum 12")
D. Plugs shall be planted between May 1 and July 1.
E. Emergent plugs shall be installed prior to Wet Meadow seeding.
F. Wet Meadow plugs shall be installed after Wet Meadow seeding.
G. Seeding Shall be done between October 15 and June 1.

General Turf Mix A:

To be drill-seeded and covered with an S-75 BN straw blanket. In all maintained turf areas as specified on the plans. Seed shall be installed at a rate of 200lbs. per acre.

65% Improved Kentucky Bluegrass (minimum three varieties)
25% Improved Perennial Ryegrass (minimum two varieties with endophytes)
10% Creeping Red Fescue

Low Maintenance Fescue Turf Mix B:

The Low Maintenance Turf Grass is to be installed as a transition area to the native landscape as specified on the plans. To be drill seeded and covered with an S-75 BN straw blanket.

IDOT 1B Low Maintenance Mix:

75%	Fine Leaf Turf-Type Fescue - 3 varieties:	150#
	(⅓ Crossfire II TTF)*	
	(⅓ Bladerunner TTF)*	
	(⅓ Cayenne TTF)*	
10%	Perennial Ryegrass	20#
10%	Creeping Red Fescue	20#
5%	Red Top	10#
		200# / Acre

*TTF varieties available from Auther Clesen, or other approved sources.

Wet to Mesic Prairie Seed Mix C:

To be planted on the basin slopes between Normal Water Line (NWL) and High Water Line (HWL), and as specified on the plans.

Wet to Mesic Prairie Seed Mix

Botanical Name	Common Name	Ounces/Acre
Permanent Grasses:		
Andropogon gerardii	Big Bluestem	44.00
Calamagrostis canadensis	Bluejoint Grass	12.00
Carex frankii	Bristly Cattail Sedge	5.00
Carex lurida	Bottlebrush Sedge	4.00
Carex sparganioides v. cephalodea	Rough-Clustered Sedge	4.00
Elymus canadensis	Canada Wild Rye	42.00
Panicum virgatum	Switch Grass	13.00
Scirpus pendulus	Red Bulrush	0.50
Sorghastrum nutans	Indian Grass	12.00
Spartina pectinata	Prairie Cord Grass	14.00
	Total	150.50
Temporary Cover:		
Avena sativa	Common Oat	360.00
Lolium multiflorum	Annual Rye	124.00
	Total	480.00
Forbs:		
Aster novae-angliae	New England Aster	0.25
Baptisia lactea	White Wild Indigo	0.75
Chamaecrista fasciculata	Partridge Pea	6.00
Coreopsis tripteris	Tall Coreopsis	3.00
Desmodium illinoense	Illinois Tick Trefoil	0.50
Eryngium yuccifolium	Rattlesnake Master	2.00
Filipendula rubra	Queen of the Prairie	0.25
Gentiana andrewsii	Bottle Gentian	0.25
Helenium autumnale	Sneezeweed	2.50
Helianthus grosseserratus	Saw-Tooth Sunflower	0.50
Lespedeza capitata	Round-Headed Bush Clover	1.50
Liatris spicata	Marsh Blazing Star	1.00
Monarda fistulosa	Wild Bergamot	0.75
Parthenium integrifolium	Wild Quinine	1.00
Physostegia virginiana	Obedient Plant	0.25
Pycnanthemum virginianum	Common Mountain Mint	1.00
Ratibida pinnata	Yellow Coneflower	3.50
Rudbeckia hirta	Black-Eyed Susan	2.50
Rudbeckia laciniata	Cut-Leaf Coneflower	1.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	0.50
Silphium integrifolium	Rosin Weed	1.00
Silphium laciniatum	Compass Plant	2.00
Silphium perfoliatum	Cup Plant	3.00
Silphium terebinthinaceum	Prairie Dock	6.00
Solidago juncea	Early Goldenrod	0.25
Solidago rigida	Stiff Goldenrod	1.00
Solidago rugosa	Rough Goldenrod	0.25
Tradescantia ohiensis	Common Spiderwort	1.25
Vernonia gigantea	Smooth Tall Ironweed	3.00
Veronicastrum virginianum	Culver's Root	0.25
Zizia aurea	Golden Alexanders	0.50
	Total	47.50

Wet Prairie - Wet Meadow Seed Mix D:

To be seeded on the basin bottom, from 12" above NWL to the edge of open water sedimentation pool.

Wet Prairie - Wet Meadow Seed Mix

Botanical Name	Common Name	LBS/Acre
Cover Crop:		
Agrostis alba	Redtop	2.000
Agrostis alba palustris	Creeping Bent	3.000
Avena sativa	Seed Oats	32.000
Elymus virginicus	Virginia Wild Rye	2.500
	Subtotal	39.500
Sedges, Rushes, and Reeds		
Carex bebbii	Bebb's Sedge	0.125
Carex comosa	Bristly Sedge	0.063
Carex cristatella	Crested Oval Sedge	0.063
Carex stipata	Common Fox Sedge	0.188
Carex scoparia	Lance-Fruited Oval Sedge	0.063
Carex vulpinoidea	Fox Sedge	0.063
Eleocharis erythropoda	Red-Rooted Spike Rush	0.125
Juncus dudleyi	Dudley's Rush	0.063
Juncus torreyi	Torrey's Rush	0.063
Scirpus atrovirens	Dark Green Rush	0.250
Scirpus cyperinus	Woolgrass	0.063
Scirpus pendulus	Red Bulrush	0.125
Scirpus validus creber	Great Bulrush	0.250
	Subtotal	1.504
Forbs:		
Alnus subcordatum	Common Water Plantain	0.250
Asclepias incarnata	Swamp Milkweed	0.125
Aster novae-angliae	New England Aster	0.125
Bidens cernua	Nodding Bur Marigold	0.063
Bidens frondosa	Common Beggar's Tick	0.063
Eupatorium perfoliatum	Common Boneset	0.188
Helenium autumnale	Sneezeweed	0.125
Juncus torreyi	Torrey's Rush	0.125
Physostegia virginiana	False Dragonhead	0.094
Polygonum amphibium stipulaceum	Water Smartweed	0.250
Sagittaria latifolia	Common Arrowhead	0.125
Silphium perfoliatum	Cup Plant	0.188
Verbena hastata	Blue Vervain	0.125
Vernonia fasciculata	Common Ironweed	0.094
	Subtotal	1.940
	Total	43.944

Low Profile Native Grass Mix B1:

The Low Profile Turf Grass is to be installed in buffer area as specified on the plans. To be drill seeded and covered with an S-75 BN straw blanket.

Low Profile Native Grasses Mix		
Scientific Name	Common Name	lbs/Acre
Agrostis alba palustris	Bent grass	2
Bouteloua curtipendula	Side-Oats Grama	6
Calamagrostis canadensis	Bluejoint	2
Carex vulpin	Prairie Sedge Mix	2
Elymus canadensis	Canada Wild Rye	3
Panicum virgatum	Switch Grass	3
Schizachyrium scoparium	Little Bluestem	3
	Total lbs/Acre	21

Temporary Cover		lbs/Acre
Avena sativa	Common Oat	60
Lolium multiflorum	Annual Rye	20
	Total lbs/Acre	80
	TOTAL	101

Wet Meadow Plug Mix D:

To be planted on the full basin bottom, below Normal Water Line (NWL) to the edge of openwater sedimentation pools / channels, and as specified on the plans. (36"o.c.)

Wet Meadow Plug Mix

Botanical Name	Common Name	Plugs/Acre
Grasses:		
Leersia oryzoides	Rice Cutgrass	400
Panicum virgatum	Prairie Switchgrass	400
	Subtotal	800
Sedges, Rushes, and Reeds		
Carex comosa	Bristly Sedge	400
Carex cristatella	Crested Oval Sedge	400
Carex stipata	Awl-Fruited Sedge	400
Carex vulpinoidea	Fox Sedge	400
Juncus torreyi	Torrey's Rush	400
Scirpus cyperinus	Woolgrass	400
Scirpus pendulus	Red Bulrush	400
Scirpus validus	Softstem Bulrush	400
	Subtotal	3200
Forbs:		
Asclepias incarnata	Swamp Milkweed	200
Eupatorium perfoliatum	Common Boneset	200
Iris virginica shrevei	Blue Flag Iris	200
Polygonum amphibium stipulaceum	Water Smartweed	200
	Subtotal	800
	Total	4800

Shallow Emergent Plug Mix E:

To be planted below NWL around the edge of open water channels & sedimentation pools, and as specified on the plans. (36"o.c.)

Emergent Wetland Plug Mix

Botanical Name	Common Name	Plants/Acre
Sedges/Rushes/Reeds:		
Juncus effusus	Common Rush	800
Scirpus acutus	Hard-Stemmed Bulrush	400
Scirpus fluviatilis	River Bulrush	600
Scirpus purgens	Common three-square	300
Scirpus validus creber	Softstem Bulrush	300
Sparganium eurycarpum	Common Bur Reed	400
	Subtotal	2,800
Forbs:		
Acorus calamus	Sweet Flag	400
Iris virginica shrevei	Blue Flag Iris	500
Potamogeton pectinatus	Sago Pondweed	400
Ranunculus longirostris	White Water Crowfoot	300
Sagittaria latifolia	Common Arrowhead	400
	Subtotal	2,000
	Total Plugs/Acre	4,800

Deep Emergent Plant Mix F: ⚠

To be planted in 1-3ft. water depth (Below Emergent Plugs) in pods of 48 as shown on the plan.

Deep Emergent Plant Mix

Botanical Name	Common Name	Qty/Pod
Pontederia cordata	Pickeral Weed	18
Nymphaea tuberosa	White Waterlily	30 stapled tubers
	Total	48 / POD

Forb Enhancement Mix:

To be planted in high visibility areas in conjunction with Seed Mix C.

Annual Perennial Forbs Seed Mix

Botanical Name	Common Name	Ounces/Acre
Permanent Native Species:		
Chamaecrista fasciculata	Partridge Pea	16.00
Coreopsis lanceolata	Sand Coreopsis	10.00
Desmanthus illinoensis	Illinois Sensitive Plant	12.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	10.00
Lupinus perennis	Wild Lupine	1.00
Monarda fistulosa	Wild Bergamot	1.50
Penistemon digitalis	Foxglove Beard Tongue	1.00
Ratibida pinnata	Yellow Coneflower	4.50
Rudbeckia hirta	Black-Eyed Susan	10.00
	Total	66.00

PART 2 - NATURALIZED AREAS MONITORING

2.01 HERBIVORE PROTECTION

A. A framed goose protection structure/ pods made of wood posts and chicken wire (hardware cloth) shall be installed prior to emergent (plug) plant installation as specified on plan. The structure shall remain in place for a period of at least one year, and then removed by the Contractor once the plants are well established.

2.02 PLANT/PLUG INSTALLATION

A. All aquatic plants must be installed in the appropriate water depths in the herbivore protection pods.
B. Evenly distribute each species around the pond, planting groups of 5 to 7 plants of each species.

2.03 SEEDING IMPLIMENTATION

A. Seeding operations must occur when soil moisture is appropriate for the seeding operation.
B. Native plant seed shall not receive fertilizer.
C. Wet seed that is moldy or otherwise damaged in transit or storage shall not be used.
D. All seeding equipment whether broadcast or drilled should be calibrated to deliver the seed at the rates and proportions specified. Hand broadcast seed shall be spread at twice the specified rate. Equipment should be operated in such a manner as to ensure complete coverage of the entire area to be seeded, and seed must be placed no deeper than ¼ inch in the soil.
E. After seeding operation is completed, install erosion control blanket per manufacturer's specifications upon all areas at or above the normal water level.

2.04 EROSION CONTROL BLANKET

A. Seeded areas will be covered with North American Green S-75, or approved equal, 3:1 slopes and/or fall/winter plantings require North American Green S-150 or approved equal. The area 3 feet below the normal water level line (i.e. half of the blanket width) of the stormwater detention basin will be stabilized with North American Green C-125, or approved equal. See manufacturer's specifications for erosion control blanket composition and installation.

2.05 "NO MOWING AND/OR NO DUMPING SIGNAGE

A. "No Mowing" signage shall be installed along the perimeter of the basin to define the boundary between the basin and adjacent properties.
B. Sign shall be 12" x12" Non-reflective Baked Enamel 18 Gauge steel and legible at 10' and shall clearly state "Native Turf Area No Mowing or Dumping". Contractor shall submit sample to Owner for approval prior to installation.
C. Sign shall be installed 4' above the finish grade, secured to a metal post and maintained at intervals and locations approved by the Owner, (i.e. not less than 150' o.c.)

2.06 CLEAN UP PROTECTION

A. During landscape work, store materials and equipment where directed. Keep pavements, work areas, and adjoining areas clean and in an orderly condition.
B. Protect landscape work and materials from damage due to landscape operations or operations by other trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed by the plan.

2.07 INSPECTIONS AND ACCEPTANCE

A. The Owner and/or the Owner's Representative reserves the right to inspect all seeds and plants either at place of growth or at site before planting for compliance with requirements for name, variety, size, quantity, quality or mix proportion.
B. Native Landscape Contractor is to keep records of the certificates of composition or invoices of seed mixtures and integrity of plant materials with respect to species, variety, and source of purchase.
C. Native Landscape Contractor is to notify Owner or Owner's Representative within five days after completing initial and/or supplemental plantings in each area.

PART 3 - NATURALIZED AREAS MANAGEMENT

Management of the naturalized area is essential to the realization of potential functional and habitat benefits of designed native vegetation. Listed below are the management activities for each season:

3.01 FIRST SEASON - Mow the planted areas (not including the emergent areas) two to four times during the growing season. Mowing shall take place prior to or when non-native and weedy species are flowering so as to prevent seed set. Control of undesirable plant species, when present in small quantities, shall be controlled by hand pulling prior to the development and maturity of the plant. Hand removal shall include the removal of all above-ground and below-ground stems, roots, and flower masses prior to development of seeds. Apply herbicide (as necessary) to non-native and weedy species within the naturalized areas with appropriate herbicide.

3.02 SECOND SEASON - Control of undesirable plant species during the second growing season shall be controlled by hand pulling and selective herbicide application. Mowing shall be conducted two to four times to a height of six (6) to eight (8) inches to prevent annual weeds from producing seed.

3.03 THIRD THROUGH FIFTH SEASON - Management of undesirable plant species during the third growing season shall be controlled by hand pulling and selective herbicide.

At the completion of the second or third full growing season (depending on fuel availability) after planting, fire shall be introduced into the naturalized areas as the primary management tool. State and local permits shall be required prior to controlled burning. Burning shall be conducted by trained professionals experienced in grassland fire control. Prior to controlled burn, surrounding property owners as well as local fire and police departments shall be notified. A burn plan designating preferred wind direction and speed, location of fire breaks, and necessary personnel and equipment shall be prepared to be utilized in planning and burn implementation.

The initial burn shall be dependent on fuel availability which is directly related to the quantity and quality of grasses contained within the plant matrix. Timing of the burn shall be determined based on results of the annual monitoring indicating species composition of the management area and other analysis of management goals. Generally, burns shall be scheduled from spring to fall on a rotational basis. Burn frequency shall also be dependent on the species composition within the management area. Generally, a new prairie restoration area shall be burned annually for two years after the second or third full growing season after planting and then every 2-3 years thereafter.

Large prairie tracts shall not be burned completely each burn session. Management areas shall be divided into sections, depending on the size of the tract, and burned on a rotational basis. Burning of a section of a prairie may occur each year with the entire prairie burned over a 2-3 year period.

3.04 LONG-TERM - As the natural areas mature, required supplemental management shall be significantly reduced or eliminated. Once accepted by the Owner or Owner's Representative, the Owner will assume routine maintenance activities that should include debris management, structure inspections, vegetation management, water level maintenance, and non-native/weedy species management. A Long Term Management Plan shall be prepared, for the Owner, by the Native Landscape Contractor for on-going maintenance and management including all the components maintenance tasks, similar to the examples provided in section.

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Native Planting Specifications

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale:

revisions:
⚠ | 9.30.2016 | Per Village Review Comments
⚠ | 8.29.2016 | Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: L.105

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PART 1 - GENERAL SPECIFICATIONS

1.01 SCOPE OF WORK

A. This work shall consist of preparing planting beds, seed beds, seed or ground surface, and furnishing, transporting and placing plants, mulch, seed, sod, fertilizer and other materials required in the specific operations.

B. Planting required for this work is indicated on the Landscape Plans and, in general consists of the following:
   1. The establishment of trees, shrubs, perennials, annuals, lawn and natural areas as shown on the Landscape Plans.
   2. The provision of post-planting management as specified herein;
   3. Any remedial operations necessary for conformance with the Landscape Plans as specified in these specifications.

1.02 GENERAL

A. Permits: The Landscape Contractor shall be responsible for obtaining any permits required for the completion of the work and shall be responsible for the cost of the same.

B. Field Verification: Upon notice to begin work the Landscape Contractor shall verify all existing conditions of the site and shall report any conditions that will impede the beginning of the work to the Owner or the Landscape Architect in writing. The Landscape Contractor shall examine areas, conditions, grades, soils and water levels under which work is to be performed and notify the Owner or the Landscape Architect of conditions detrimental to the proper and timely completion of the work.

C. Existing Utilities: The Landscape Contractor shall verify location of all underground utilities before construction. Contact J.U.L.I.E. at 1.800.892.0123; 48 hours prior to digging. Notification of any disturbance of existing utilities shall be given to the Owner or the Landscape Architect immediately. Should uncharted or incorrect utilities be encountered, notify the Owner or the Landscape Architect immediately.

D. Inspection of Project: During the construction period, all phases of work shall be available for inspections by the Owner or the Landscape Architect. All plant material shall be subject to inspection and approval, and the Owner or the Landscape Architect reserves the right to reject any plants which fail to meet the standards of this Inspection. The Owner or the Landscape Architect reserves the right to inspect nursery stock either at place of growth or at site for compliance with requirements of variety, size and quality.

1.03 QUALITY ASSURANCE

A. All planting techniques and methods shall be consistent with the latest edition of "Horticulture Standards of Nurserymen" and as detailed on drawings.

B. The landscape Contractor shall provide protection for structures, utilities, roads, trees and vegetation from damage caused by settlement, undermining, washout and other hazards created by landscape operations.

C. The Landscape Contractor shall not park on any asphalt, concrete or paver driveway at any time.

D. Any damage to streets, curbs, driveways, utilities, structures, plantings, lawns or site improvements that result from the Landscape Contractor's course of work will be repaired at the Landscape Contractor's expense, to the satisfaction of the Owner or the Landscape Architect, in a reasonably timely manner with as little inconvenience to the Owner as possible.

E. Existing Trees, shrubs and plant material to remain shall be protected. Damage to existing plants that result from the Landscape Contractor's course of work shall be repaired by a qualified nurseryman or replaced with approved material at the expense of the Landscape Contractor.

1.04 SUBSTITUTIONS

A. Substitutions from the approved plans will be accepted when satisfactory evidence in writing is submitted to the Landscape Architect, showing that the plant specified is not available.

B. Landscape Contractor shall submit request for approval to substitute available plant material. Only those substitutions of equivalent size having essential characteristics similar to the originally specified material will be approved.

C. Any unauthorized substitutions will be removed and replaced by the Landscape Contractor at the expense of the Landscape Contractor.

1.05 SUBMITTALS

A. Submit the following material samples, if requested:
   1. Mulch -Bulk or Bagged.

B. Submit the following materials certification, if requested
   1. Topsoil source and pH value.
   2. Peat moss, compost, or other organic soil amendments.
   3. Plant fertilizer.
   4. Sod: Submit sod growers certification of grass species.
   5. Seed: Submit seed vendor's certification for required grass seed mixture indicating percentage by weight, and percentages of purity, germination, and weed seed for each grass species.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver all items to the site in their original containers with all labels intact and legible at the time of inspection.

B. Sod: Deliver and install sod cut within a 48-hour period.
   1. Do not transport sod when moisture content may adversely affect sod survival.
   2. Cover sod on pallets to prevent dehydration.
   3. Do not tear, stretch, or drop sod during handling and installation.

C. Seed: Deliver seed and fertilizer materials in original unopened containers, showing weight, analysis, and name of manufacturer. Store in a manner to prevent wetting and deterioration.

D. Deliver fertilizer materials in original, unopened, and undamaged containers showing weight, analysis, and name of manufacture. Store in a manner to prevent wetting and deterioration.

E. Take all precautions customary in good trade practices in preparing plants for moving.

F. Use all means necessary to protect plant materials before, during and after installation and to protect the installed work and materials of all other trades.

2.01 MATERIALS

A. Plants:
   1. Provide plants typical of their species or variety, with normal, densely-developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasions of the bark, plant disease insect eggs, borers, and all forms of infestation.
   2. Dig balled and burlapped plants with firm, natural balls of earth. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock." Cracked or mushroomed balls are not acceptable. Tree spade transplanting is not acceptable.
   3. Container-grown stock: Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.
      a. No plants shall be loose in the container.
      b. Container stock shall not be pot bound.
   4. When specified by caliper, provide shade and ornamental trees with a single main trunk. When specified by height, provide shade and ornamental trees as multi-stemmed plants with not less than three (3) main trunks and side branches that are generous and well twigged.
   5. Provide plants matched in form when arranged in groups.
   6. Plants larger than those specified in the plant list may be used when acceptable to the Landscape Architect.
   7. Provide plants free from pruning wounds with diameters of more than 1". Acceptable wounds must show vigorous bark on all edges.
   8. Provide unsheared evergreen trees branched to the ground unless otherwise specified or accepted.
   9. Provide shrubs and small plants meeting the requirements for spread and height indicated in the plant list.
      a. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.
      b. Single stemmed or thin plants will be rejected.
      c. Side branches shall be generous, well-twigged, and the plant as a whole well-bushed to the ground.
      d. Plants shall be in a moist, vigorous condition, free from dead wood, bruises, or other root or branch injuries.
   10. Herbaceous perennial plants shall be container grown to specified size.

B. Sod:
   1. Provide an 'approved' nursery grown blend of Improved Kentucky Bluegrass varieties that is native to the locality of the work. Sod that has been grown on soil high in organic matter, such as peat, is not acceptable.
   2. Provide well-rooted, healthy sod, free of disease, nematodes and soil borne insects. Provide sod uniform in color, leaf texture, density, and free or weeds, undesirable, grasses, stones, roots, thatch, and extraneous materials, viable and capable of growth and development where planted.
   3. The Landscape Architect reserves the right to reject unacceptable sod at the nursery or the job site.

C. Seed:
   1. Lawn seed: Fresh, clean seed from most recently harvested crop which complies with all local, state, and federal seed and weed laws and is free from Poa annuals, bent grass and noxious weeds.
   2. Erosion Control Blanket: Shall be North American Green S-75 Straw Blanket, or approved equal. Secure with 4" biostakes.
   3. Straw Mulch: Clean oat or wheat straw, well seasoned before bailing, free from mature seed-baring stalks or roots of prohibited or noxious weeds.
   4. Tackifier: Liquid concentrate diluted with water forming a transparent 3-dimensional film-like crust permeable to water and air and containing no agents toxic to seed germination.

D. Subdrainage piping: Provide types and sizes indicated. Provide matching reducers, adaptors, couplings, fittings, and accessory components to ensure continuity of the subdrainage system.

E. Drainage fill: AASHTO M43 (3/8" to 3/4") clean uniformly grade stone or gravel.

F. Filter fabric: DuPont Typar or other approved non-woven porous, Polypropolene fabric.

2.02 ACCESSORIES

A. Topsoil for Planting Beds: Fertile, friable, natural topsoil of loamy character, without admixture of subsoil, material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign material with acidity range between PH 6.0 and 6.8.

B. Amended Topsoil: A mixture of 80% topsoil and 20% mushroom compost which have been thoroughly incorporated.

C. Mulch: 6 month old, well rooted, shredded, hardwood bark mulch, not larger than 4" in length and ½" in width, free of woodchips and sawdust.

D. Water: Free of substances harmful to plant or turf growth. Hoses or other methods of transportation furnished by Contractor.

E. Stakes for Guying: Hardwood, 2" x 4" x 36" long, or steel screw anchors.

F. Guying Wires: Double strand No. 12 gauge galvanized wire.
   1. Turnbuckles: Galvanized steel of size and gauge required to provide tensile strength equal to that of the wire. Turnbuckle openings shall be at least 3".

G. Guying Hose: Two-ply, reinforced garden hose not less than ½" inside diameter.

H. Tree Wrap: Standard waterproofed tree wrapping paper, 2-1/2" wide, made of 2 layers of crepe kraft paper weighing not less than 30 lbs. per ream.

I. Twine: Two-ply jute material.

J. Sand: Coarse 'torpedo' sand.

K. Tree, Shrub and Groundcover Fertilizer:
   1. Bonemeal with an approximate analysis of 4% nitrogen, and 20% phosphorous.
   2. Commercial 10-10-10 fertilizer.

L. Sod Fertilizer:
   1. Provide a granular, non-burning fertilizer from a commercial source. Fertilizer types, ratios and application rates shall be as follows:
      a. MFG: PAR EX slow release fertilizer with IBDU or approved equal. 10-18-22 ratio.

M. Seed Fertilizer:
   1. Granular non-burning product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer.
      a. Starter fertilizer with an approximate analysis of 6N, 24P2O5, 24K2O, or similar approved composition.
      b. Post emergent fertilizer with an approximate analysis of 30-5-5.

N. Herbicide: Herbicide shall be a granular form of herbicide applied in shrub and groundcover beds in strict accordance with the manufacturer's directions and recommendations. Acceptable products are "Treflan", Ronstar" or approved equal.

O. Anti-Desiccant: Anti-Desiccant shall be an applicable emulsion that forms a transparent protective film over plant surface, permeable enough to permit transpiration. Acceptable product is "Wilt-Pruf", manufactured by Nursery Specialty Products, Inc., or approved equal.

P. Retaining Walls: Retaining walls must always be installed in strict compliance with manufacturer's recommendations for sizing and reinforcement.
   1. Retaining wall material shall be as specified on the drawings or as approved by the Landscape Architect.

Q. Pavers: Pavers must always be installed in strict compliance with manufacturer's recommendations.
   1. Pavers shall be as specified on the drawings or as approved by the Landscape Architect.

PART 3 - INSTALLATION AND EXECUTION

3.01 INSPECTION

A. Prior to all work in this section, carefully inspect work of all other trades and verify that such work is complete to the point where this installation may properly commence. Verify that planting may be completed in accordance with the original design. Work will commence only when satisfactory conditions exist.

B. Check that grading by others, including spreading of topsoil and all other sub-surface work in lawn areas have been completed and accepted by the Owner or the Landscape Architect. Start of work in this section shall constitute acceptance of grade. Lawn irrigation system must be completed and in operation before seeding and sodding begins.

3.02 PREPARATION

A. Time of planting: Install plants and turf during normal planting seasons for each type of material required.
   1. Evergreen material: Plant evergreen materials between September 2nd and November 1st or in Spring before new growth begins. If project requires planting at other times, spray plants with an anti-desiccant prior to planting operations.
   2. Deciduous material: Plant deciduous materials in a dormant condition. If deciduous trees are planted in leaf, spray with an anti-desiccant prior to planting operations.
   3. Seeding: The generally accepted times for seeding: Spring - April 1st to May 31st, and Fall - August 15th to September 30th.
   4. The conditions of the warrantee apply regardless of the date of Installation. Obtain Landscape Architect's approval for planting times, other than indicated, prior to commencing work.

B. Install plantings using only experienced workmen familiar with planting under the supervision of a qualified supervisor.

C. Locate plants as indicated and approved in the field by the Landscape Architect. If obstructions are encountered that are not shown on the drawings, do not proceed with planting operations until alternate locations have been selected.

D. Excavate circular plant pits with tapered sides as shown on the drawing details. In general, all plant pits shall have a rounded bottom with the depth of the pit equal to the depth of the ball to be planted. The diameter of the pit shall be a minimum of two (2) times the width of the ball.

E. Excavate all clay and debris to 8" depth beneath all perennial, ornamental grass, annual flower and groundcover beds. Backfill with 12" amended topsoil, thus resulting in all these areas being elevated or crowned by 4" wherever site drainage allows.

F. Seed and sod bed preparation shall not be started until all stones, boulders, debris and similar material larger than 3 inches in diameter have been removed. Loosen topsoil of turf areas to a minimum depth of 3 inches and remove all rocks, stones and debris larger than 1 inch in diameter.

G. The area to be seeded or sodded shall be assumed to be at final grades established by Excavator. The Landscape Contractor, however, shall be responsible for the proper drainage of the entire area. The landscape Contractor shall fine grade all turf areas including any grading necessary to eliminate ponding of water, ruts and ridges. Limit preparation of turf areas to 48 hours prior to seed and sod installation.

H. Immediately prior to the seed and sod bed preparation, specified fertilizer nutrients shall be uniformly spread at the following rate: For sod areas, apply fertilizer at the rate of 360 lbs per acre and work into the soil. For seeded areas, apply starter fertilizer to indicated seed areas at a rate equal to 650 lbs. per acre and work into soil.

I. Final surface of topsoil immediately before seeding shall be within plus or minus ½" of required elevation, with no pockets or low spots in which water can collect. Restore prepared areas to specific conditions if eroded, settled, or otherwise disturbed after fine grading and prior to seeding and sodding. Finish grade surface with a drag or rake. Round out all breaks in grade, smooth down all lumps and ridges, fill in all holes and crevices.

J. In the event of settlement, re-adjust the work to required finished grade.

3.03 PLANT INSTALLATION

A. Trees and Shrubs:
   1. Set plant material in the planting pit to proper grade and alignment. Set plants upright, plumb, and faced to give the best appearance or relationship to each other or adjacent structure. Set plant material 2" above the adjacent grade. The Contractor is responsible for planting to correct grades and alignment and all plants shall be set so that when settled will bear the same relationship to finished grade as they did before being transported.
   2. Remove all non-biodegradable strings and twine from top of ball. Remove non-biodegradable burlap from top 1/3 of ball after the plant is set in the planting hole. The wire basket should remain. Fold the top portion of the wire basket into the hole.
   3. Any topsoil excavated from the plant pits shall be used in the backfill soil mixture. No filling will be permitted around trunks or stems. Mix bonemeal or approved commercial fertilizer at 10 lbs. per cubic yard of topsoil and backfill the pit with topsoil mixture. Do not use frozen or muddy mixture for backfilling. Form a ring of soil around the edge of each planting pit to retain water.
   4. After plants are set, muddle topsoil mixture around bases of balls and fill all voids. Install enough topsoil to insure finish grades are met after settling.
   5. Prepare tree and shrub planting pits and shrub beds with 4" spade edge and mulch with required mulching material 3" deep immediately after planting. Thoroughly water mulched areas. After watering, rake mulch to provide a uniform finished surface.
   6. Wrap trunks of all trees spirally from bottom to top with specified tree wrap and secure in place. Inspect trees for injury to trunks, evidence of insect infestations and improper pruning before wrapping.
   7. All evergreen trees and trees 4" caliper and greater shall be guyed. Guying of shade and ornamental trees 4" caliper or less shall be at the option of the Landscape Contractor or as specified on the drawings, however, all trees shall remain plumb and straight through final inspection.
   8. Prune branches of deciduous stock, after planting, to preserve the natural character appropriate to the particular plant requirements. Remove or cut back broken, damaged, and unsymmetrical growth of new wood.
   9. Prune evergreens only to remove broken or damaged branches.

B. Perennials, Ornamental Grasses, Annual Flowers and Groundcovers:
   1. Where perennials, ornamental grasses, annual flowers and groundcovers are specified on the plans, provide planting soil mixture consisting of equal parts cooled mushroom compost and pinebark fines (Same as Midwest Trading CM30 mix) at 1 C.Y. per 100 S.F. Planting pits shall be excavated and fill with friable topsoil (stockpiled at site) to a depth of 8" prior to adding and incorporating planting bed soil mixture. Roto-till entire plant bed incorporating 1 CY. Layer of planting soil mixture per 100 SF. Incorporate commercial 10-10-10 fertilizer into prepared soil mixture at an approximate rate of 1lb. per square yard.
   2. Space plants in accordance with dimensions indicated on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants. Fill entire bed to within 18" of the trunks of trees and shrubs or at edge of plant ball, whichever is closest. Plant to within 12" of edge of bed.
   3. After planting apply specified commercial pre-emergent herbicide (Treflan, Ronstar or equal) per manufacturer's directions to all planting beds.
   4. Mulch with 2"-3" of specified mulching material using care to keep foliage exposed. Thoroughly water mulched bed areas.

3.04 CARE OF EXISTING TREES

A. Selectively prune existing trees in construction limits, under Landscape Architect's direction. Remove sucker shoots, dead, rubbing, and damaged branching.

B. Clean up miscellaneous organic debris within construction limits.

3.05 TREE RELOCATION

A. Prune, dig, ball and burlap, and move designated trees for relocation to the designated plant storage area for healing in of materials until final planting areas are prepared.
   1. Maintain plants in storage areas by bracing plants in vertical position and setting balls in an enclosed berm of topsoil and bark. Water as required to maintain adequate root moisture.
   2. Re-burlap plant balls if required before final transplanting operations.
   3. Move to final work locations shown on the drawings and plant in accordance with specified tree planting requirements

3.06 TURF INSTALLATION

A. Sod
   1. Lay sod to form a solid mass with tightly-fitted joints. Butt ends and sides of sod strips. Do not overlay edges. Stagger strips to offset joints in adjacent courses. Remove excess sod to avoid smothering of adjacent grass. Provide sod pad top flush with adjacent curbs, sidewalks, drains, and seeded areas.
   2. Do not lay dormant sod or install sod on saturated or frozen soil.
   3. Install initial row of sod in a straight line, beginning at bottom of slopes, perpendicular to direction of the sloped area. Place subsequent rows parallel to and tightly against previously installed row.
   4. Tamp or roll with light lawn roller to ensure contact with sub-grade.
   5. Stake sod (with organic stakes) on slopes greater than 3 to 1 to prevent slippage. Sod shall be staked with 2 2 stakes per yard of sod as necessary to stabilize.
   6. Water sod thoroughly with a fine spray immediately after laying. Sod shall not be allowed to dry out. Any sod that has shrunk shall be replaced.
   7. Landscape Contractor shall assure watering is repeated thereafter as frequently as required to prevent drying of sod and watering shall continue through preliminary acceptance to ensure proper establishment.
   8. Landscape Contractor shall mow the lawn area as soon as top growth reaches a 3 inch height. Repeat mowing as required maintaining a 2 inch height until Landscape Architect issues a written preliminary acceptance of completed work.

B. General Turf Seed
   1. Seed immediately after preparation of bed.
   2. Seed indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.
   3. Perform seeding operations when the soil is dry and when winds do not exceed 10 miles per hour velocity.
   4. Sow grass seed with specified seed mix at rates specified on plan.
   5. Broadcast Seeding: Apply seed with a rotary or drop type distributor. Install seed evenly by sowing equal quantities in two directions, at right angles to each other. After seeding, rake soil surface lightly to incorporate seed. Roll with light lawn roller.
   6. Mechanical Seeding: Using a "Brillion-type" seeder and cultipacker, sow seed evenly over entire area sowing equal quantities in two directions at right angles to each other. Using this method, raking and rolling is not required.
   7. Following seeding, all seed areas will be covered with straw mulch or erosion control blanket as specified on plan.
      a. Straw Mulch: Within 24 hours, placed straw mulch uniformly at 2 ½ tons per acre using manual or mechanical methods. On slopes of 3:1 or steeper, anchor straw mulch with liquid tackifier, applied uniformly at a rate of 60 gallons per acre.
      b. Erosion Control Blanket: After sowing seed cover areas with specified erosion control blanket and staple in place with organic stakes.
   8. Landscape Contractor shall mow the lawn area as soon as top growth reaches a 3 inch height. Repeat mowing as required maintaining a 2 inch height until Landscape Architect issues a written preliminary acceptance of completed work.
   9. It shall be the Landscape Contractor's responsibility to determine and implement whatever procedures deemed necessary to establish the turf as part of the work. Reseed bare areas and provide erosion control as necessary until complete establishment is achieved.

C. Native Turf Seeding and Plugs - See Natural Areas Planting Specifications

D. Reconditioning Existing Turf
   1. Recondition existing turf damaged by Contractor's operations, including storage of materials or equipment and movement of construction vehicles.
   2. Provide fertilizer, seed and soil amendments as specified for new lawns and as required to provide a satisfactory reconditioned lawn. Provide topsoil as required to fill low areas and meet new finish grades.
   3. Cultivate all bare and compacted areas thoroughly.
   4. Remove diseased or unsatisfactory lawn areas. Do not bury into soil. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, stones, gravel, and other construction materials.
   5. Where substantial, but thin lawn remains, rake, aerate if compacted, and cultivate soil, fertilize and seed.
   6. Water newly seeded areas. Maintain adequate soil moisture until new grass is established.

3.07 MAINTENANCE

A. Landscape Contractor shall maintain all planting, starting at the beginning of planting operations and continuing until receiving preliminary acceptance in writing from the Landscape Architect.
   1. Maintenance of plants and planting beds shall include watering, resetting plants to proper grades or upright position, restoring planting saucers, tightening and repair of guy wires and stakes, weeding, cultivating, pruning, application of appropriate insecticides and fungicides necessary to keep the plant materials in a healthy growing condition and to keep the planted areas neat and attractive.

B. Landscape Contractor shall maintain lawn areas as specified until all substantially completed work has received written preliminary acceptance by the Landscape Architect.
   1. Maintenance of lawn areas shall include watering, spot weeding, mowing, application of herbicides, fungicides, insecticides, re-seeding and re-sodding until a full, uniform stand of grass free of weed, undesirable grass species, disease, and insects is achieved and accepted by the Landscape Architect.

3.08 CLEANING

A. Perform thorough cleaning of the project area daily during installation of the work and upon completion of the work remove from site all excess materials, debris, and equipment and repair damage resulting from all operations.

3.09 INSPECTIONS

A. In addition to normal progress inspections, the Landscape Contractor shall schedule and conduct the following inspections, giving the Landscape Architect at least 24 hours prior notice of readiness for inspection.
   1. Inspection of plants and containers prior to planting.
   2. Inspection of plant location layout to verify compliance with the Landscape Plans.
   3. Preliminary acceptance inspection after completion of planting. Schedule this inspection sufficiently in advance and in cooperation with the Landscape Architect so that the inspection may be conducted in a timely manner.
   4. Final acceptance inspection at the end of the maintenance period provided that all previous deficiencies have been corrected.
   5. All other inspections necessary for replacement warranty work and completion of the project.

PART 4 - WARRANTY AND ACCEPTANCE

4.01 PRELIMINARY ACCEPTANCE

A. It shall be the responsibility of the Landscape Contractor to complete and verify all work is completed for the Initial installation and maintained as per plan prior to notifying the Landscape Architect for Inspection of preliminary acceptance.

B. For preliminary acceptance of the initial installation all plant material shall be in a healthy growing condition. Any plants, lawn areas, workmanship, etc. not meeting the standards will be rejected and the Landscape Contractor will be instructed to make the necessary corrections immediately before preliminary acceptance of the Initial Installation will be granted.

⚠ C. Seeded areas will be inspected for acceptance after the first mowing by the Landscape Contractor and will be satisfactory provided requirements, including maintenance, have been complied with and a uniform healthy close stand of the specified grass is established, free of weeds, bare spots exceeding 5 by 5 inches, undesirable grass species, disease, insects and surface irregularities. Coverage shall exceed 90%.

D. Sodded areas will be inspected for acceptance after the first mowing by the Landscape Contractor and will be satisfactory provided requirements, including maintenance, have been complied with and when all areas show a uniform stand of the specified grass in a healthy, well-rooted, even-colored, viable lawn condition, free of weeds, undesirable grass species, open joints, bare areas, disease, insects and irregular surfaces.

E. The Landscape Contractor shall assume liability for the correction of his work and liability for any other charges incurred due to the correction of his work.

F. Upon the receipt of written acceptance of the preliminary inspection of the Initial installation the Owner will be responsible for maintenance.

G. The warranty period will begin upon receipt of written acceptance of the preliminary inspection for Initial Installation from the Landscape Architect.

H. After preliminary acceptance of the Initial Installation and receipt of notification in writing from the Landscape Architect, the Landscape Architect will recommend the release of payment, less retainers deemed necessary by the Owner, for the completed work.

I. The release of all fees will be at the discretion of the Owner upon receipt of written invoice from the Landscape Contractor.

4.02 WARRANTEE AGREEMENT

A. The Landscape Contractor shall provide a replacement warranty for all plant material and shall guarantee all work free of any defect in quality or workmanship for a minimum period of one (1) year or until final Inspection and written acceptance by the Landscape Architect.

B. The warranty period will be from the date of the Landscape Architect's written preliminary acceptance of substantial completion and will continue through the end of the following years growing season upon the final inspection and written acceptance of the work.

C. The warranty shall provide against defects including death, unsatisfactory growth, and provides the material to be in good, healthy and flourishing condition, except for defects resulting from neglect by the owner, abuse or damage by others or unusual phenomena or incidents which are beyond Landscape Contractor's control. For verification of such defects, neglect, abuse or damage by others, the Landscape Contractor must notify the Landscape Architect in writing immediately upon identifying said occurrences.

D. Annual Increases in the size of required replacements shall serve to maintain the continuity of the landscape design. At the time of the scheduled replacements, the required landscape replacement material shall be increased in size from the original plan to match the new growth size of the surrounding plants.

E. During the warranty period, should any plant die, the appearance of any plant indicate weakness and/or probability of dying, the Landscape Contractor shall immediately begin replacement of said plants with new and healthy plants of the same type and size as soon as weather conditions permit and within a specified planting period after notification of such occurrences from the Landscape Architect without additional cost to the Owner.

F. The Landscape Contractor shall make all necessary repairs of damage due to plant replacements. Such repairs shall be done at no extra cost to the Owner.

G. Replacements shall be in accordance with and subject to all requirements of landscape Installation, mulching, maintenance, warranty and acceptance procedures.

H. The Contractor is responsible for the watering and maintenance necessary to ensure establishment of the replacement plants until the Landscape Architect Inspects the replacement plants and issues final acceptance in writing.

I. The Landscape Contractor, upon written final acceptance of the replacements, shall warranty all replacements until the end of the following growing season.

J. The Landscape Contractor shall remove tree wrapping, tree guy wires, stakes and tags from all established plants prior to contacting the Landscape Architect for final acceptance Inspection. Tags, tree wrap, guy wires and stakes shall remain on all replacements until completion of additional warranty period.

K. Warranty shall not include on-site relocation of existing plants.

L. If within one year of final completion, settlement occurs, make all adjustments without extra cost to the Owner including the complete restoration of all damaged planting, paving, or other improvements of any kind.

4.03 FINAL ACCEPTANCE

A. Inspection of all work will be made by the Landscape Architect at the end of the warranty periods upon request of the Landscape Contractor.

B. The Landscape Architect shall prepare and submit, to the Owner and the Landscape Contractor, a list of warranty replacement items to be completed before final acceptance shall be deemed to have occurred. The failure to include any items on such list does not alter the responsibility of the Landscape Contractor to complete all work in accordance with the contract.

C. The Landscape Contractor shall complete all warranty replacement work as deemed necessary by the Landscape Architect, shall verify completion of all work required to satisfy the contract and shall notify the Landscape Architect upon completion of all work for review and final acceptance.

D. The Landscape Architect will perform a final Inspection of the completed work with the Landscape Contractor and the Owner or Owner's Representative. At that time if all work is satisfactory, a written statement will be issued by the Landscape Architect that will constitute final acceptance of completed work to date and will recommend release of fees in retention for the completed work, except for retention fees deemed necessary by the Owner and the Landscape Architect for work still under additional warranty.

E. The Landscape Architect will make a follow-up inspection of all additional warranty replacements at the written request of the Landscape Contractor and issue a written report accepting satisfactory completion of the warranty obligations and request release of the remaining retention fees.

F. The release of all retention fees will be at the discretion of the Owner after receipt of written notification from the Landscape Architect and upon receipt of written invoice from the Landscape Contractor.

G. The written final acceptance of all work following any necessary replacements shall terminate the Landscape Contractor's plant warranty period.

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE IL 60563 - 630.305.9990 Fax 630.305.9994

The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Preliminary Landscape Specifications

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale:

revisions:		
⚠	9.30.2016	Per Village Review Comments
⚠	8.20.2016	Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: L.106

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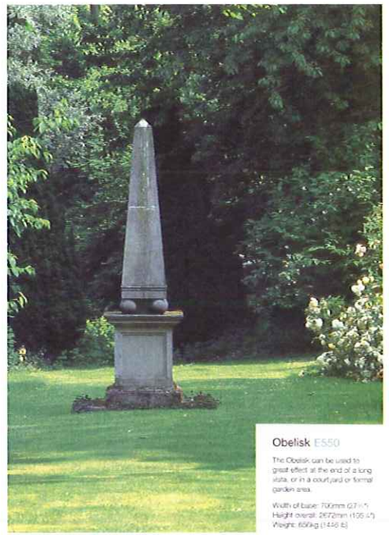
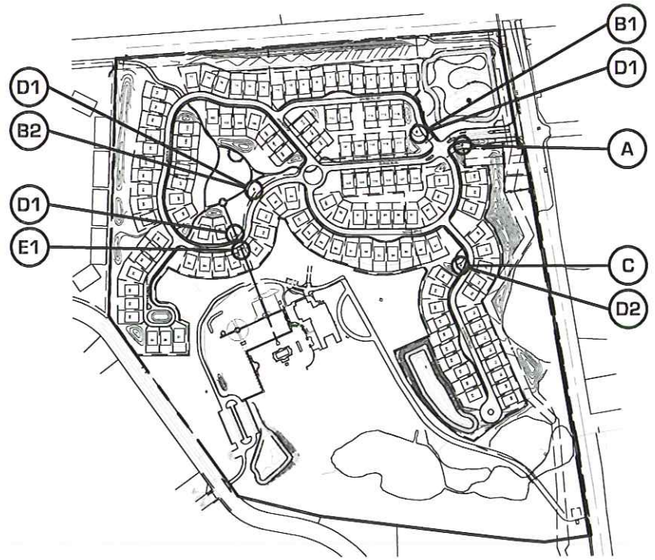
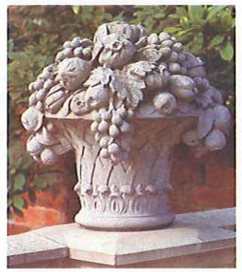


A Obelisk Detail



Garden Ornament Location Plan

B Sculpture Details

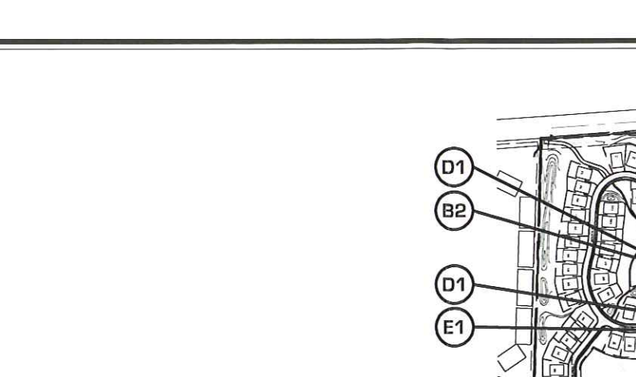


Large Basket of Fruit
E220

This neo-Gothic style basket with interlaced strapwork overflows with ripe fruits in a naturalistic style. See Archives for Festoon of Fruit.

Height: 455mm (18")
Width overall: 470mm (18½")
Width at base: 230mm (9")
Weight: 45kg (99 lb)

C Sitting Area Focal Point



27"Queen Anne Pedestal B255

Pedestal featuring a deeply fielded panel to the pedestal shaft.

Cap and base width: 455mm (19")
Height: 685mm (27")
Weight: 153kg (337 lb)

27"Queen Anne Plinth B300

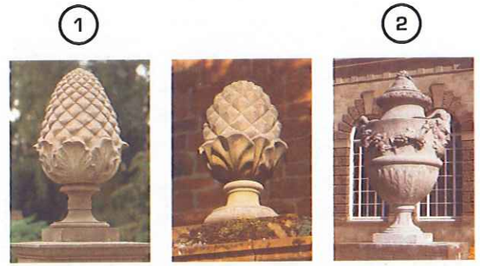
Queen Anne-period fielded plinth with plain mouldings around cap and base.

Width at cap: 329mm (12 ⅞")
Width at base: 337mm (13¼")
Height: 695mm (27⅜")
Weight: 77kg (170 lb)

20" Elizabethan Plinth B400

Width at cap: 377mm (14⅞")
Width at base: 337mm (13¼")
Height: 499mm (20")
Weight: 73kg (161 lb)

D Pedestal & Plinth Details



Ham House Pineapple E380

The National Trust granted the right for Haddonstone to include in its Collection a perfect replica of the beautiful Coade Stone pineapples adorning the perimeter pedestals at Ham House, Richmond.

Height: 820mm (32⅜")
Width overall: 455mm (18")
Width at base: 300mm (11¾")
Weight: 66kg (209 lb)

Pineapple and Base E590

An early XVIII century pineapple design.

Height: 585mm (23")
Width overall: 345mm (13⅝")
Width at base: 280mm (11")
Weight: 43kg (95 lb)

Margam Masked Urn E500

A Georgian-style urn adorned in high relief with naturalistic vines and satyr heads. This piece was also restored for Margam Orangery, South Wales.

Width overall: 560mm (22")
Width at base: 265mm (10")
Height: 915mm (36")
Weight: 78kg (172 lb)

E Promenade Finial Details

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Environmental Site Design

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Garden Sculpture & Ornament Plan

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale:

revisions:
1 | 9.30.2015 | Per Village Review Comments
2 | 5.20.2016 | Per Village Review Comments dated May 24, 2016

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drawn by:
checked by:
project no.: 23045
sheet no.: L.107

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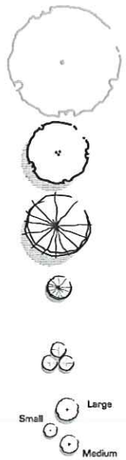
⚠ PLANT MATERIAL LEGEND : (Sheet L.108 Only)



Shade Trees, 2.5" Caliper
30 % Skyline Honeylocust
20 % Chaticleer Pear (unit sides)
20 % Greenspire Linden
10 % Autumn Blaze Maple
10 % Pacific Sunset Maple
10 % Swamp White Oak

Ornamental Trees, 6' - 8' m/s or 2.5" cal.
30 % Prairie Fire Crab, 8' or 2 1/2"
20 % Red Jewel Crab, 8' or 2 1/2"
20 % Apple Serviceberry, 7
20 % Cornelian Cherry Dogwood, 8
5 % Common Witchhazel, 6'
5 % River Birch, 10'

Large Evergreen, 6' - 8' tall
50 % Colorado Spruce, 7'
30 % Norway Spruce, 7
10 % White Fir, 8'
10 % Canadian Hemlock, 6'

Upright Evergreens, 4'-6' tall
60 % Mission Arborvitae, 6'
20 % Brabant Arborvitae , 7
20 % Fairview Upright Juniper, 8'

Evergreen Shrubs, 18" - 24" wide
30 % Dense Yew, 24"
30 % Kallay Compact Juniper, 24"
30 % Green Velvet Boxwood, 18"
10 % Bigleaf Euonymus (Vegetus), 18"

Deciduous Shrubs, 18" 36" tall
35 % Redtwig Dogwood, 36" (large)
25 % MohicanViburnums , 36" (large)
20 % Limelight Hydrangea, 30" (large)
20 % Miss Kim Lilac, 36" (large)
50 % Annabella Hydrangea, 24" (med.)
20 % Black Chokeberry, 24" (med.)
20 % Knockout Shrub Rose, 18" (med.)
10 % Snowmound Spira, 24" (med.)
20 % G.M. Alpine Currant , 18" (small)
20 % Goldmound Spirea, 18" (small)
20 % Neon Flash Spira (small)
20 % Potentilla - Yellow, 18" (small)
20 % H.G. Sweetspire, 18" (small)

Perennials & Grasses, 1 Gal.
Rozanne Geranium
Purple Coneflower
Blue Catmint
Happy Returns Daylily
A.J. Sedum
Prairie DropseedFeather Reed Grass
Northern Sea Oats (Shade)
Autumn Moor Grass
Gold Standard Hosta
Francee Hosta

CONSTRUCTION NOTES :

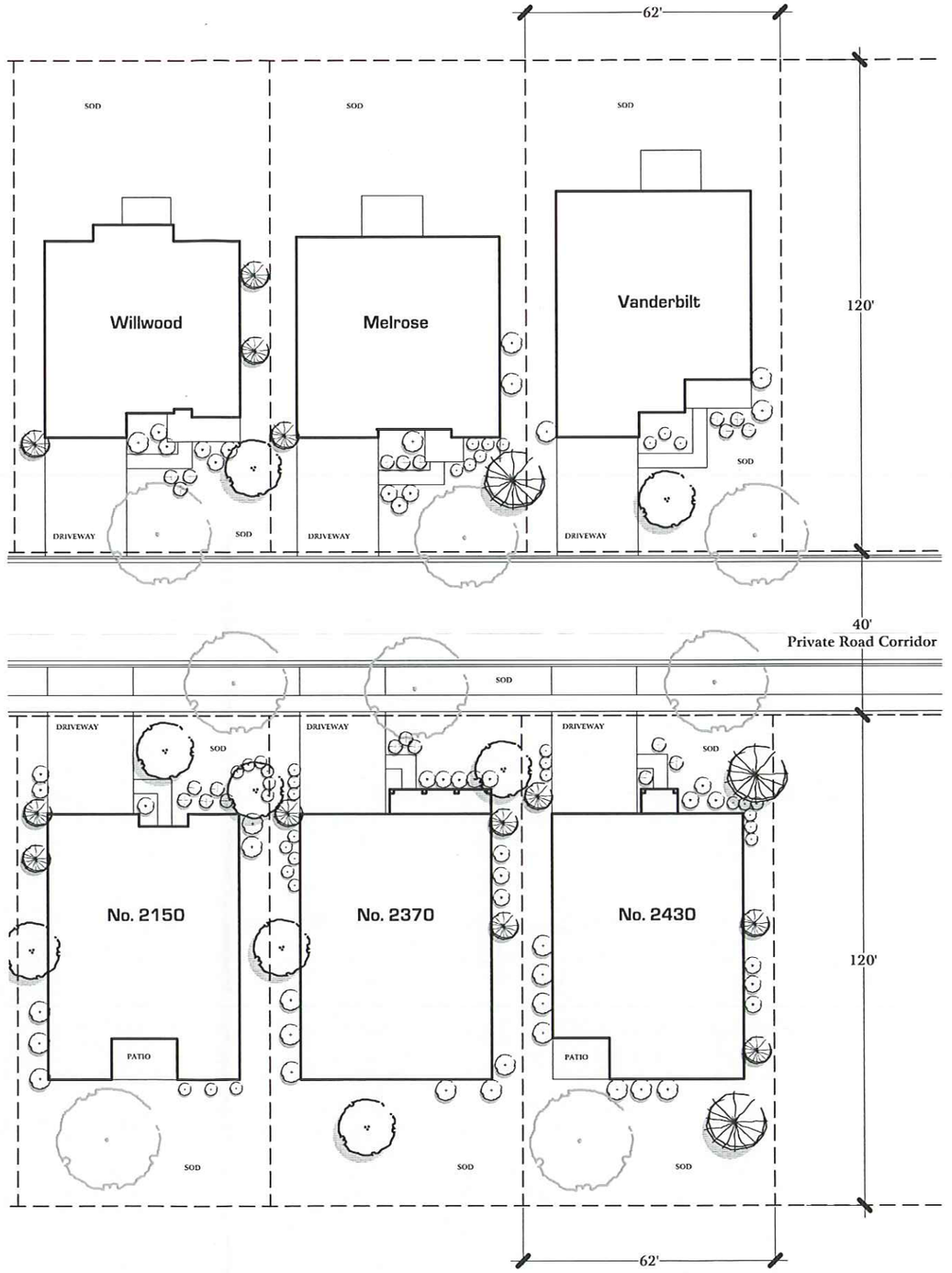
- Sod full lots areas as noted with an approved blend of improved Kentucky Bluegrass Sod with a mineral soil back.
- Fine grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.
- Prior to turf installation all areas shall be fertilized with a 12-12-12 granular fertilizer at a rate of 400 lbs. per Acre.
- Prepare perennial, ornamental grass, groundcover and annual flower beds with 1 CY. mushroom compost per 100 SF. rototilled to an 8" depth.
- Mulch all trees, shrub, perennial & orn'l grass beds with a minimum of three inches shredded hardwood bark mulch.
- All bed lines and tree saucers require a 4" deep spaded edge between lawn and mulch areas.
- All evergreen (conifers) trees and shrubs must be grown in a natural shape – and not sheared.
- Plant material sizing, branching and ball sizes shall conform to the "American Standards for Nursery Stock" (latest edition) by the American Association of Nurserymen, Inc.
- Plant material shall be nursery grown and be either balled and burlapped or container grown. Sizes and spreads on plant list represent minimum requirements.
- Quantity lists are supplied as a convenience. Contractor shall verify all quantities, and in case of a discrepancy, the plan shall prevail.
- The Landscape Contractor shall adjust plant locations in field to maintain appropriate spacing from fire hydrants, light poles, all utility structures, driveways and sidewalks. Approval of the Landscape Architect is required when field adjustments to be implemented do not conform to the intent of the plans.
- Contractor shall report any discrepancies in the field to the Landscape Architect and/or Owner.
- The Landscape Contractor shall verify locations of all underground utilities prior to digging, is required to Contact J.U.L.I.E. (1.800.892.0123), and any other public or private agency necessary for utility location 48 hours prior to construction.
- Where underground utilities exist, all field adjustments must be approved by the landscape architect.
- The Landscape Contractor shall water plant material, seed and sod areas until the plants have become adequately established and until final acceptance by the owner. Owner to provide all supplemental watering and proper care and maintenance of all plant materials, seed and sod areas after acceptance of Landscape Contractors work.
- No plants are to be changed or substituted without the approval of the Landscape Architect and the Village of Vernon Hills.
- *Landscape Contractor shall warrantee all material and labor for a period of one year from the date of final acceptance and shall repair any defects and replace all dead plant material as required during the warranty period*

Note: Plant material must differ by min. 50% from adjacent buildings.

Note: Adjacent common area trees, evergreens and ornamentals are not shown on this exhibit. See Common area landscape plans for additional plantings.

Note: Typical Townhome Planting Plans show the ground level of landscaping, plant material selections and design intent. Final Plans will be adjusted as required for unit mix, front and sideyard setback requirements.

Two Story Product :



Ranch Product :

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Typical Preliminary Landscape Packages

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
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0 7.5 15 22.5 37.5 52.5

north: scale: 1" = 15'0"

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DETENTION POND PLANTING SPECIFICATIONS

1. MESIC & WET PRAIRIE COMMUNITY (Seeds)

(N.W.L. to top of slope) 4:1 Slope, See Typical Planting Section

A. BED PREPARATION

Existing vegetative growth should be removed or killed with an approved herbicide (Rodeo). Till surface of seedbed to 2"- 4" and fill as close as possible to waterline. Lightly compact soil with roller, cultipacker, or similar implement. Omit tilling if using a no-till seed drill.

B. SEEDING

Specified seed or equal shall be refrigerated for at least 90 days prior to installation. The seed must be of wild ecotype. No hybrids or cultivars may be included. Mix seed with an equal volume of coarse sand, vermiculite or oats. Seed mixes shall contain at least 70% of the species listed and no one species shall constitute more than 10 % of the total seed mix by weight. Any deviation from the plant list is to be submitted to the Village for review and approval prior to installation.

Broadcast seeds evenly either by hand or no-till drill seeder, cyclone spreader, or shoulder mount spreader. Spread seed in different directions to cover evenly. If not included in seed mix, plant nurse crop of seed oats at 40lbs/acre with seed mix. Roll seed into soil to 1/4" depth with cult-packer or similar implement.

No seeding should occur until N.W.L. is reached and sustained within Detention Pond.

C. SEEDING DATES

May 15 ———June 30
July 1 ———October 31 (irrigation twice per week for 60 days)
November 1———December 1 (dormant seeding)

D. FABRIC INSTALLATION

Install erosion control blanket, North American Green SC 250 or equal along N.W.L., 6.5' width, ½ width or 3.25' below water and ½ width or 3.25' above water around perimeter of pond. Install North American Green DS 75 from limits of SC250 to top of slope. Install as per manufacturer's guidelines. For exact locations, see Exhibit No. 47.

2. SHALLOW WATER EMERGENT COMMUNITY (Plugs)

(N.W.L to two linear feet (2' down from pond side slope) 4:1 Slope, See Typical Planting Section.

A. BED PREPARATION

Prior to planting, pump down or drain pond level to facilitate installation of erosion fabric.

B. FABRIC INSTALLATION

Center of 6.50' erosion control blanket North American Green, SC 250 or equal shall be placed at normal water level and rolled along entire shoreline. Install as per manufacturer's guidelines.

C. PLANTING DATES

May 15 ———June 30
July 1 ———October 31 (irrigation twice per week for 60 days)

D. PRODUCT

Plugs shall have a minimum size of 2" diameter and 4" depth and shall be thoroughly rooted through the container.

E. PLUG INSTALLATION

Emergent plant plugs shall be installed at water line to 6" water depths. Cut through fabric and install plants at 18" o.c., staggered. Evenly distribute each species around pond, planting in groups of 3 to 5 plants of each species.

No installation should occur until N.W.L. is reached and sustained within Detention Pond.

3. DEEP WATER EMERGENT COMMUNITY (Aquatics)

(Beyond Shallow Emergent Community in 12" to 24" of water depth)

A. PLUG INSTALLATION

Emergent plant plugs or floating leaf plants shall be installed in 12" to 24" water depths. Cut through fabric and install plants at 18"- 24"o.c., staggered for twenty linear (20') and repeat again every sixty (60') around entire pond perimeter.

No installation should occur until N.W.L. is reached and sustained within Detention Pond.

4. ACCEPTANCE

A. MESIC & WET PRAIRIE COMMUNITY (Seeds)

At the beginning of the second growing season, the following conditions shall be met:

COVERAGE: 25% of each plant community shall be covered with vegetation.

PRESENCE: 40% of the species shall be alive and present.

ABUNDANCE: 60% of the vegetation should be native species of the permanent matrix.

At the beginning of the third growing season, the following conditions shall be met:

COVERAGE: 50% of each plant community shall be covered with vegetation.

PRESENCE: 60% of the species shall be alive and present.

ABUNDANCE: 80% of the vegetation should be native species of the permanent matrix.

B. SHALLOW WATER EMERGENT COMMUNITY (Plugs)

At the end of the first growing season, the following conditions shall be met.

1. 95% of the plugs shall be alive and thoroughly rooted.
2. 50% of the shoreline shall be covered within three (3) years.

C. DEEP WATER EMERGENT COMMUNITY (Aquatics)

At the end of the first growing season, the following conditions shall be met.

1. 75% of the species shall be alive and thoroughly rooted.
2. 40% of the shoreline shall be covered within three (3) years.

5. MAINTENANCE

1st YEAR: Mow at 6" when the oats set seed heads. Mow again when competitive weeds are at 8"-12" in height. Cut back to 6" with flail type mower two or three times during the first season.

2nd YEAR: Keep area mowed at 12" to control weed competition. Mow in late May and late June. Maintain goose barrier control for 2 years. Then remove fencing, lath, and monofilament.

3rd YEAR: Prescribed/controlled burn the area in mid-Spring. If burning is not an option, mow again to control weeds but remove the clippings. Do not burn or mow after new plant growth has reached 12" or taller.

LONG - TERM MANAGEMENT: Employ the services of a qualified and licensed company to manage prairie plantings and control species deemed detrimental such as Purple Loosestrife, Canada Thistle, Reed Canary Grass, Queen Anne's Lace, Sweet Clover, Cattails, Common Teasel, Ragweeds, Buckthorn and Sandbar Willow.

6. GOOSE BARRIER CONTROL

A. INSTALLATION

Set first row of stakes in 18" of water depth at 8 foot intervals around entire pond. Drive each stake 1 foot into bottom. Attach 48" high poultry netting, 20 gauge, around entire area. Extend fence to pond bottom. Set second row of stakes 8 feet up and also at 8 foot intervals around entire pond. Drive each stake 6'-12" into ground. To protect top enclosure, attach two rows of monofilament line and secure red survey ribbons to stakes.

7. UPLAND FOREST COMMUNITY

A. QUANTITY.

To determine minimum quantity required, divide the length around the pond at the top of the slope by 40' (feet). Trees to be planted in groups by species around perimeter of pond and not intended to be planted at a 40' o.c. spacing. Bald Cypress should be planted near water's edge. Spacing and species to be shown on overall landscape plan. All trees to be alive and thriving at time of acceptance and at end of 2 year maintenance period.

8. SIGNAGE

A. INSTRUCTIONAL SIGNS

Signs to be placed at 150' intervals around perimeter of pond. Signs shall be metal, 12" x 18" in size, with green background and white lettering that reads: NATIVE PRAIRIE DO NOT MOW. Sign to be mounted to a green channel post. Top of sign to be five feet (5') above ground.

BIBLIOGRAPHY

Center for Watershed Protection, 2001a. *The Stormwater Resource Center Stormwater Management Fact Sheet: Stormwater Wetland.* Last updated January 2, 2001

Environmental Laboratory, 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterway Experiment Station

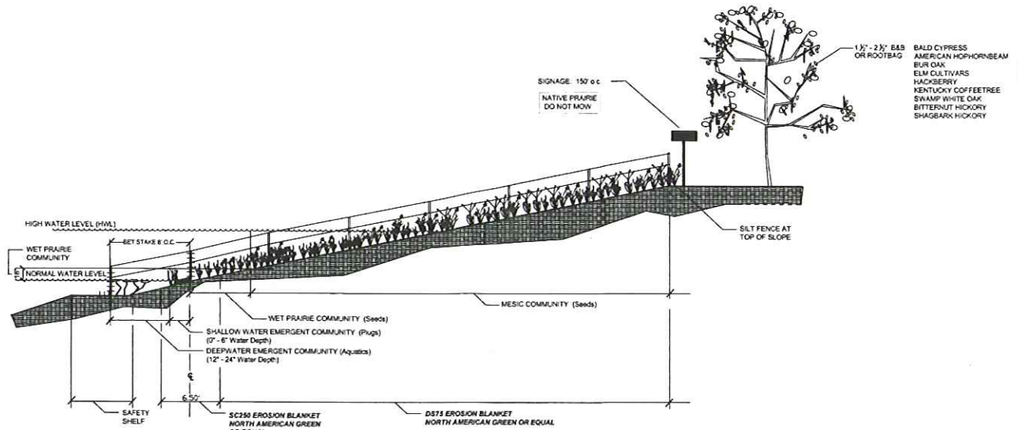
NTCHS (National Technical Committee for Hydric Soils), 1991. Hydric Soils of the United States. U.S. Soils Conservation Service, Washington, D.C.

Schuler, T.R., 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Metropolitan Washington Council of Governments, Washington, D.C.

Shaw, D. and Schmidt, R., 2003. Plants for Stormwater Design: Species Selection for the Upper Midwest. Minnesota Pollution Control Agency.

Swink, F. and Wilhelm, G., 1994. Plants of the Chicago Region. The Morton Arboretum, Lisle, Illinois

USDA Natural Resources Conservation Services (USDA-NRCS), 1997. *Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois*



1 TYPICAL PLANTING SECTION
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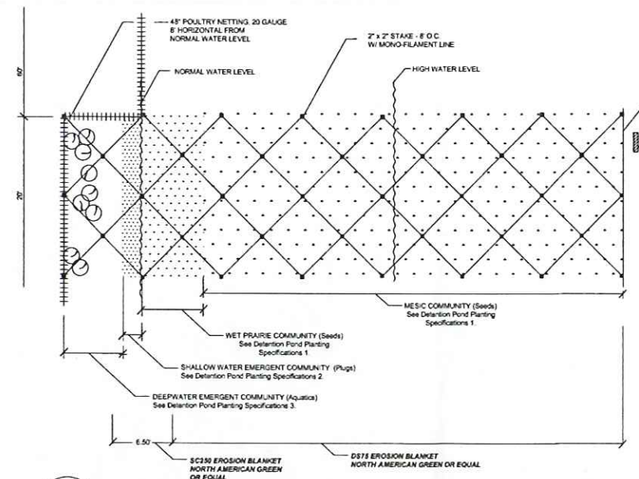
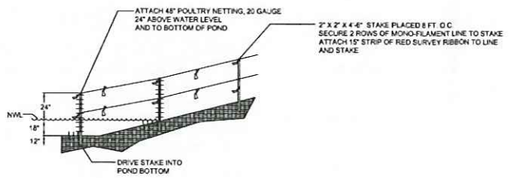


2 GOOSE PROTECTION DETAILS FOR PLANTING PLAN
NOT TO SCALE



3 GOOSE PROTECTION SECTION
NOT TO SCALE

NOTE:
This exhibit is meant to be a guideline only and should not be considered a substitute for any requirements of other regulating agencies.

PLANT COMMUNITIES

MESIC COMMUNITY

	POUNDS/ACRE
Grasses and Sedges	
Andropogon gerardii (Big Blue Stem)	3.000
Andropogon scoparius (Little Blue Stem)	3.000
Elymus canadensis (Virginia Wild Rye)	0.188
Elymus virginicus (Virginia Wild Rye)	0.188
Panicum virgatum (Switchgrass)	0.250
Sorghastrum nutans (Indian Grass)	4.500
Avena sativa (Oats)	40.000
Wildflowers	
Aster laevis (Smooth Dull Aster)	0.125
Aster novae-angliae (New England Aster)	0.125
Baptisia leucantha (White Wild Indigo)	0.125
Coreopsis tripteris (Tall Coreopsis)	0.188
Echinacea purpurea (Purple Cornflower)	0.250
Eryngium yuccifolium (Rattlesnake Master)	0.250
Helianthus grosseserratus (Sawtooth Sunflower)	0.188
Heliopsis helianthoides (False Sunflower)	0.188
Liatris aspera (Rough Blazing Star)	0.025
Monarda fistulosa (Wild Bergamot)	0.125
Petalostemum purpureum (Purple Prairie Clover)	0.188
Pycnanthemum virginianum (Mountain Mint)	0.016
Ratibida pinnata (Yellow Coneflower)	0.250
Rudbeckia hirta (Black-Eyed Susan)	0.188
Rudbeckia subtomentosa (Sweet Black-Eyed Susan)	0.188
Silphium laciniatum (Compass Plant)	0.125
Silphium terebinthinaceum (Prairie Dock)	0.063
Solidago rigida (Stiff Goldenrod)	0.125
Tradescantia ohioensis (Spiderwort)	0.090
Vernonia fasciculata (Common Ironweed)	0.188
Veronicastrum virginicum (Culver's Root)	0.063
Zizia aptera (Heartleaved Alexander)	0.125

WET PRAIRIE COMMUNITY

Grasses and Sedges	
Carex comosa (Bristly Sedge)	0.125
Carex hystericina (Porcupine Sedge)	0.125
Carex lupulina (Hop Sedge)	0.125
Carex stipata (Awl-Fruited Sedge)	0.125
Carex vulpinoidea (Brown Fox Sedge)	0.125
Elymus virginicus (Virginia Wild Rye)	0.188
Glyceria striata (Fowl Manna Grass)	0.125
Leersia oryzoides (Rice Cut Grass)	0.125
Scirpus atrovirens (Dark Green Bulrush)	0.125
Spartina pectinata (Prairie Cordgrass)	0.125
Avena sativa (Oats)	40.000
Wildflowers	
Angelica atropurpurea (Angelica)	0.125
Asclepias incarnata (Swamp Milkweed)	0.083
Aster novae-angliae (New England Aster)	0.125
Aster umbellatus (Flat-topped Aster)	0.125
Eupatorium maculatum (Spotted Joe-Pye Weed)	0.063
Eupatorium perfoliatum (Boneset)	0.188
Helenium autumnale (Autumn Sneezeweed)	0.063
Liatris spicata (Marsh Blazing Star)	0.025
Lobelia cardinalis (Cardinal Flower)	0.088
Pycnanthemum virginianum (Mountain Mint)	0.016
Silphium integrifolium (Rosinweed)	0.125
Solidago riddellii (Riddell's Goldenrod)	0.125
Verbena hastata (Blue Vervain)	0.063
Vernonia fasciculata (Smooth Ironweed)	0.063

SHALLOW WATER EMERGENT COMMUNITY
0-1 foot Depth

Graminoids
Carex stricta (Common Tussock Sedge)
Eleocharis smallii (Creeping Spike Rush)
Juncus effusus (Common Rush)
Scirpus acutus (Hardstem Bulrush)
Scirpus americanus (Chairmaker's Rush)
Scirpus fluviatilis (River Bulrush)
Scirpus tabernaemontani (Softstem Bulrush)

Forbs
Acorus calamus (Sweet Flag)
Alisma subcordata (Common Water Plantain)
Iris virginica (Blue Flag Iris)
Polygonum amphibium (Water Smartweed)
Pontederia cordata (Pickerel Weed)
Sagittaria latifolia (Broadleaf Arrowhead)
Sparganium eurycarpum (Common Burreed)

Deep Water Emergent Community
1.0 - 2.0 foot Depth

Nuphar advena (Yellow Pond Lily)
Nymphaea tuberosa (White Water Lily)
Potamogeton natans (Common Pondweed)
Potamogeton pectinatus (Sago Pondweed)

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Environmental Site Design

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Village Detention Basin Details

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 7.5 15 22.5 37.5 52.5

north: scale: 1" = 15'0"

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project no.: 23045
sheet no.: L.109

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⚠ CUNEO: Existing Tree Trimming / Removal Notes

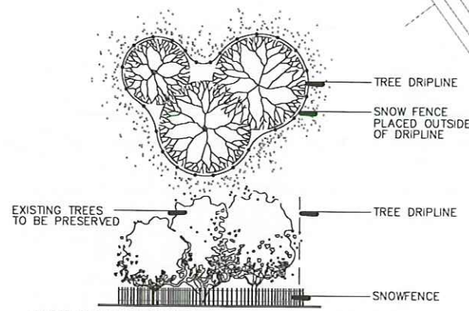
1. All dead, or damaged trees (or limbs) in public areas that causes an immediate safety concern shall be removed.
2. All dead Ash trees shall be removed.
3. All small, internal tree groves shall be pruned and the understory cleaned-up and mulched (or seeded).
4. All large, perimeter tree groves shall be pruned, detailed and mulched around the full perimeter to a depth of 25 feet. The internal portion of these tree groves shall be left in it's natural state for wildlife habitat and screening.
5. All trees in the Central Park shall be pruned, detailed and mulched.
6. Mulch: Woodchips from the removal / pruning operations shall be used for mulching exiting woodlands and tree groves. These woodchips shall be "double-ground" to achieve a fine, uniform consistency.

Legend :

- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Tree To Be Removed
- Existing Tree To Be Preserved

Notes :

1. See sheet TS.105 for Existing Tree Inventory Data.
2. See sheet TS.105 for Tree Preservation Notes, Narrative and Fencing Details.



ERECT PROTECTIVE SNOWFENCE PRIOR TO ANY CONSTRUCTION ACTIVITY. DO NOT STORE ANY EQUIPMENT WITHIN THE PROTECTED AREA. REMOVE THE PROTECTIVE FENCE ONLY AFTER CONSTRUCTION OPERATIONS ARE COMPLETED.

1/A **Typical Tree Preservation Fencing**

NTS

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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Existing Tree Survey & Preservation Plan

developer :

Pulte Homes
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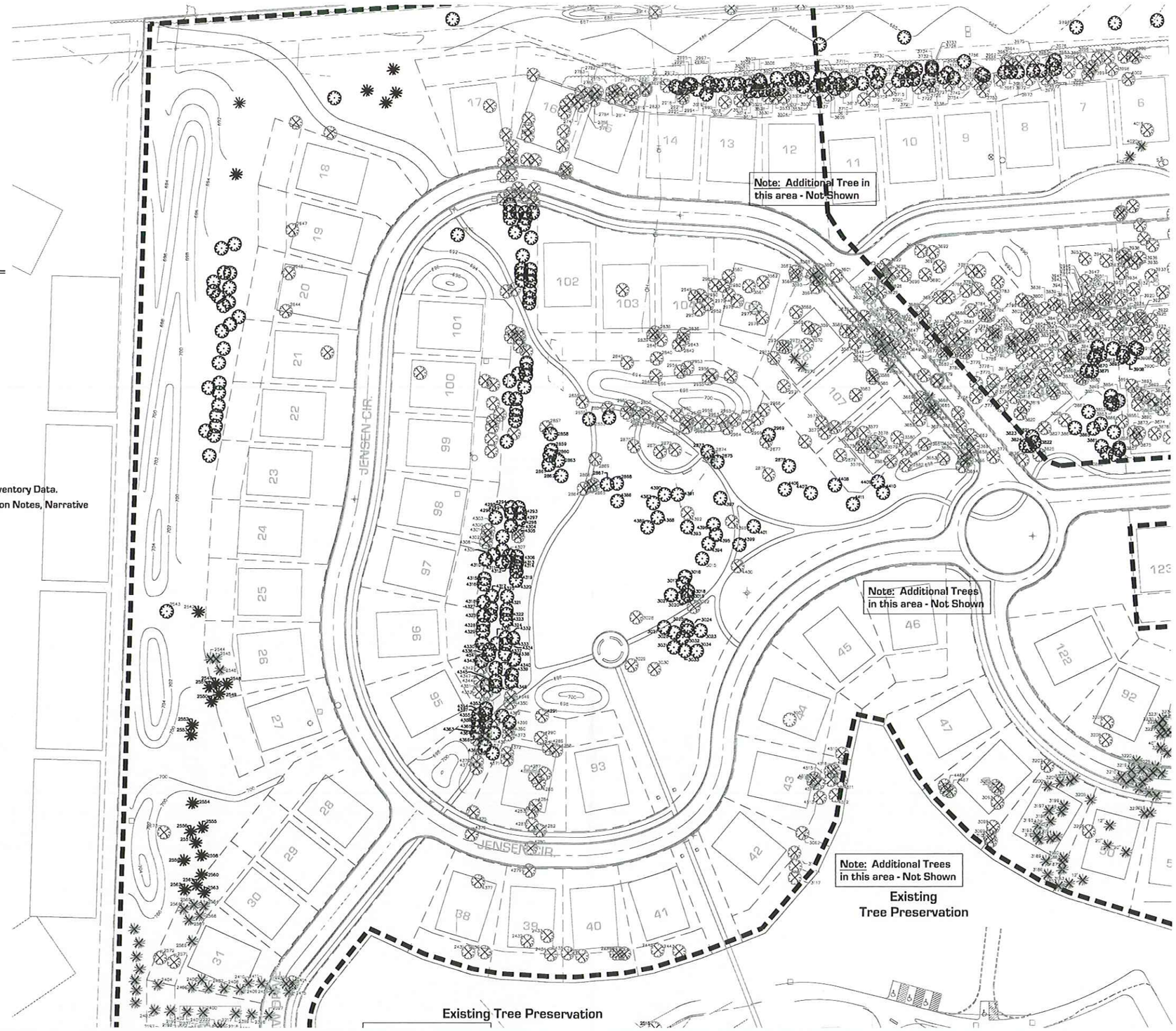

Legend :

- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Tree To Be Removed
- Existing Tree To Be Preserved

Notes :

1. See sheet TS.105 for Existing Tree Inventory Data.
2. See sheet TS.105 for Tree Preservation Notes, Narrative and Fencing Details.

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0 25 50 75 125 175

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Legend :

- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Tree To Be Removed
- Existing Tree To Be Preserved

Notes :

1. See sheet TS.105 for Existing Tree Inventory Data.
2. See sheet TS.105 for Tree Preservation Notes, Narrative and Fencing Details.

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE, IL 60563 – 630.305.9990 Fax 630.305.9964

The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Existing Tree Survey & Preservation Plan

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 25 50 75 125 175

north: scale: 1" = 50'0"

revisions:		
1	8.30.2016	Per Village Review Comments
2	9.20.2016	Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:

checked by:

project no.: 23045

sheet no.: TS.102

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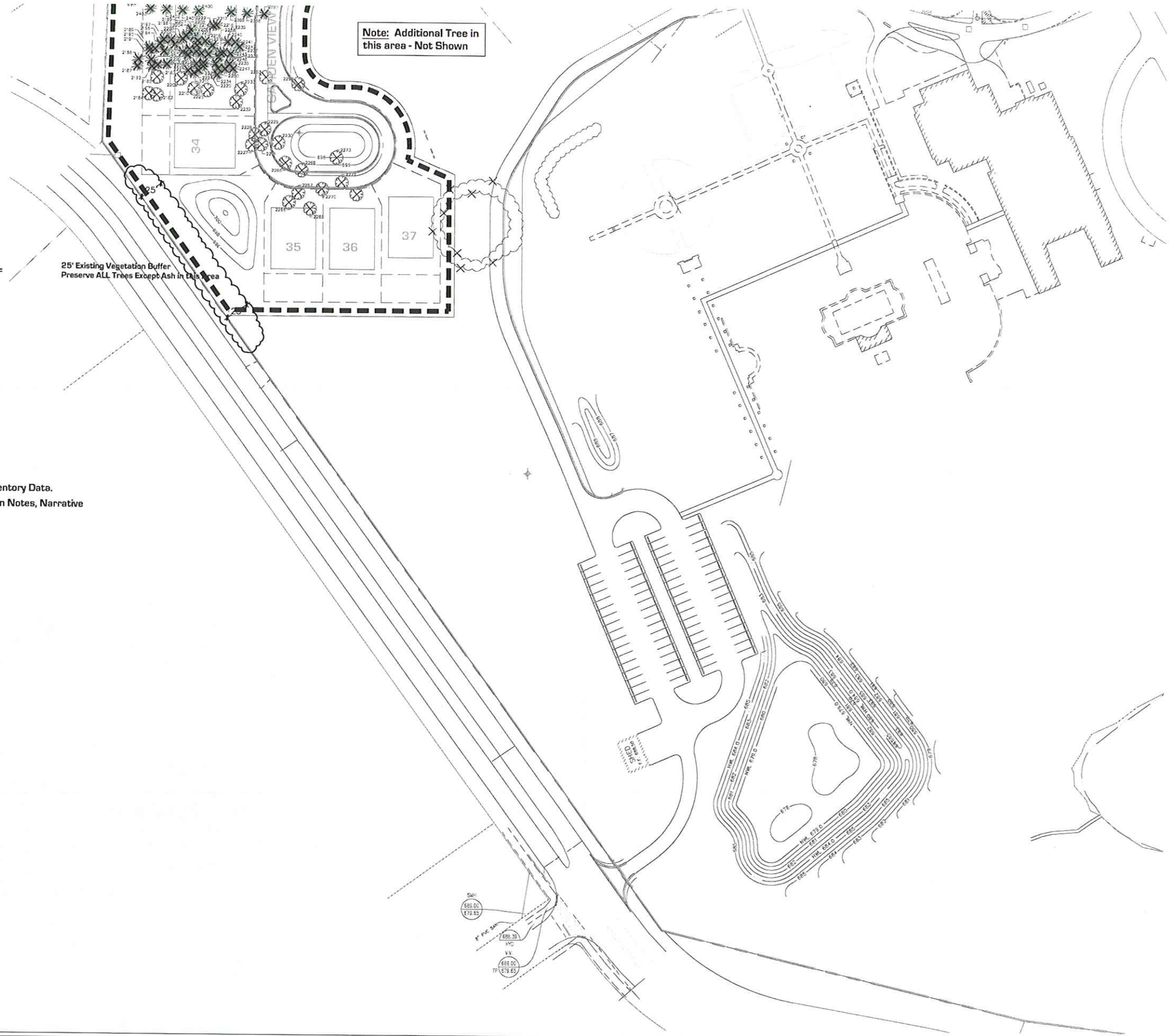

Legend :

- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Tree To Be Removed
- Existing Tree To Be Preserved

Notes :

1. See sheet TS.105 for Existing Tree Inventory Data.
2. See sheet TS.105 for Tree Preservation Notes, Narrative and Fencing Details.

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Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. • NAPERVILLE, IL 60563 • 630.305.3990 Fax 630.305.3994

The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Existing Tree Survey & Preservation Plan

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 25 50 75 125 175

north: scale: 1" = 50'0"

revisions:
- 3 | 9.30.2016 | Per Village Review Comments
- 2 | 6.20.2016 | Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: TS.103

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Legend :

- 2543 - Existing Deciduous Tree
- 2780 2790 - Existing Evergreen Tree
- 2543 - Existing Tree To Be Removed
- 2780 2754 - Existing Tree To Be Preserved

Notes :

1. See sheet TS.105 for Existing Tree Inventory Data.
2. See sheet TS.105 for Tree Preservation Notes, Narrative and Fencing Details.

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Land Planning
Landscape Architecture
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The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Existing Tree Survey & Preservation Plan

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 25 50 75 125 175

north: scale: 1" = 50'0"

revisions:
- 9.30.2016 | Per Village Review Comments
- 6.20.2016 | Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: TS.104

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Existing Tree Inventory (2013 - 2015) :

Existing Tree Inventory (2011) :

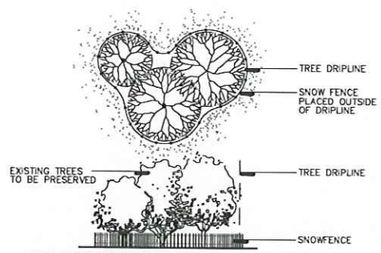
- Original inventory of trees on the North half of the site was completed by the Shaw Group in fall of 2011. Our office has field verified (and updated where necesssry) findings of that inventory. A hard copy booklet of those approx. 2500 trees will be submitted separate as a reference document.

Existing Tree Inventory (2016) :

- Additional trees in the Southwest corner of the site were located and tagged by Manhard Consulting in Fall 2015 and Winter 2016. Ongoing inventories of these trees will continue through preliminary and final design, and in conjunction with the parking lot relocation project.

⚠ CUNEO: Existing Tree Trimming / Removal Notes

1. All dead, or damaged trees (or limbs) in public areas that causes an immediate safety concern shall be removed.
2. All dead Ash trees shall be removed.
3. All small, internal tree groves shall be pruned and the understory cleaned-up and mulched (or seeded).
4. All large, perimeter tree groves shall be pruned, detailed and mulched around the full perimeter to a depth of 25 feet. The internal portion of these tree groves shall be left in it's natural state for wildlife habitat and screening.
5. All trees in the Central Park shall be pruned, detailed and mulched.
6. Mulch: Woodchips from the removal / pruning operations shall be used for mulching exiting woodlands and tree groves. These woodchips shall be "double-ground" to achieve a fine, uniform consistency.



ERECT PROTECTIVE SNOWFENCE PRIOR TO ANY CONSTRUCTION ACTIVITY. DO NOT STORE ANY EQUIPMENT WITHIN THE PROTECTED AREA. REMOVE THE PROTECTIVE FENCE ONLY AFTER CONSTRUCTION OPERATIONS ARE COMPLETED.

1/A Typical Tree Preservation Fencing — NTS

Tag No.	Botanical Name	Common Name	DBH	Condition	Remarks	Save / Remove
97	Picea pungens	Colorado Spruce	4	2		
98	Picea pungens	Colorado Spruce	4	2		
99	Picea pungens	Colorado Spruce	4	2		
100	Acer platanoides	Norway Maple	15	3		
103	Acer platanoides	Norway Maple	10	3		
104	Celtis occidentalis	Hackberry	30	4		
107	Fraxinus pennsylvanica	Green Ash	30	0		
108	Acer platanoides	Norway Maple	26	4		
111	Acer platanoides	Norway Maple	20	4		
1843	Acer platanoides	Norway Maple	34	3		
1844	Acer platanoides	Norway Maple	28	3		
1845	Acer platanoides	Norway Maple	26	3		
1846	Acer platanoides	Norway Maple	20	2		
1847	Acer platanoides	Norway Maple	30	3		
1848	Acer platanoides	Norway Maple	26	3		
1849	Acer platanoides	Norway Maple	36	3		
1850	Acer platanoides	Norway Maple	34	3		
1851	Acer platanoides	Norway Maple	22	3		
1852	Acer platanoides	Norway Maple	34	3		
1853	Acer saccharum	Sugar Maple	30	3		
1854	Acer platanoides	Norway Maple	18	3	tag fell off 3289	
2181	Fraxinus pennsylvanica	Green Ash	18	1		
2182	Fraxinus pennsylvanica	Green Ash	12	1		
2187	Celtis occidentalis	Hackberry	14	3		
2188	Acer negundo	Boxelder	2x16	2		
2189	Picea abies	Norway Spruce	50	3		
2190	Picea abies	Norway Spruce	50	3		
2191	Picea abies	Norway Spruce	45	3		
2192	Picea abies	Norway Spruce	50	3		
2403	Pseudotsuga menziesii	Douglas Fir	55	3		
2544	Picea abies	Norway Spruce	50	3		
2545	Picea abies	Norway Spruce	60	3		
2546	Picea abies	Norway Spruce	55	3		
2547	Picea abies	Norway Spruce	60	3		
2548	Picea abies	Norway Spruce	60	3		
2549	Picea abies	Norway Spruce	60	3		
2550	Picea abies	Norway Spruce	45	3		
2551	Picea abies	Norway Spruce	65	3		
2552	Picea abies	Norway Spruce	65	3		
2553	Picea abies	Norway Spruce	60	3		
2554	Picea abies	Norway Spruce	65	3		
2555	Picea abies	Norway Spruce	65	3		
2556	Picea abies	Norway Spruce	55	3		
2557	Picea abies	Norway Spruce	65	3		
2558	Picea abies	Norway Spruce	50	3		
2559	Picea abies	Norway Spruce	55	3		
2572	Fraxinus pennsylvanica	Green Ash	26	1		
2573	Fraxinus pennsylvanica	Green Ash	3x14	1		
2596	Acer platanoides	Norway Maple	12	3		
2597	Acer platanoides	Norway Maple	2x10	3		
2644	Acer platanoides	Norway Maple	26	3		
2645	Acer platanoides	Norway Maple	24	3		
2647	Acer platanoides	Norway Maple	12	3		
2655	Acer platanoides	Norway Maple	28	3		
2658	Picea abies	Norway Spruce	55	2		
2659	Picea abies	Norway Spruce	55	3		
2661	Picea abies	Norway Spruce	55	3		
2662	Picea abies	Norway Spruce	60	3		
2670	Acer platanoides	Norway Maple	2x20	3		
2857	Acer negundo	Boxelder	34	1		
2858	Acer saccharum	Sugar Maple	22	2		
2859	Acer saccharum	Sugar Maple	19	3		
2860	Acer saccharum	Sugar Maple	12	3		
2861	Acer saccharum	Sugar Maple	26	2		
2862	Acer saccharum	Sugar Maple	24	2		
2863	Acer saccharum	Sugar Maple	20	3		
2866	Acer saccharinum	Silver Maple	16	3		
2867	Acer saccharinum	Silver Maple	4x12	3		
2868	Acer saccharum	Sugar Maple	30	3		
2876	Rhamnus cathartica	Buckthorn	10	1		
2877	Acer negundo	Boxelder	14	1		
2878	Acer saccharum	Sugar Maple	14	3		
2879	Quercus rubra	Red Oak	36	2		
2881	Rhamnus cathartica	Buckthorn	12	1		
2882	Acer negundo	Boxelder	10	2		
2883	Acer platanoides	Norway Maple	13	2		
2969	Quercus rubra	Red Oak	44	3		
3007	Acer platanoides	Norway Maple	20	3		
3015	Acer saccharum	Sugar Maple	16	3		
3017	Fraxinus pennsylvanica	Green Ash	14	1		
3018	Acer saccharum	Sugar Maple	10	1		
3019	Acer saccharum	Sugar Maple	14	2		
3020	Acer saccharum	Sugar Maple	12	3		
3021	Acer platanoides	Norway Maple	2x14	3		
3022	Acer saccharum	Sugar Maple	14	2		
3023	Acer saccharum	Sugar Maple	13	2		
3024	Acer saccharum	Sugar Maple	13	2		
3025	Acer saccharum	Sugar Maple	12	2		
3026	Acer saccharum	Sugar Maple	16	3		
3027	Acer saccharum	Sugar Maple	12	3		
3028	Acer saccharum	Sugar Maple	36	2		
3029	Acer saccharum	Sugar Maple	26	2		
3030	Acer platanoides	Norway Maple	26	2		
3031	Acer saccharum	Sugar Maple	16	2		
3032	Acer saccharum	Sugar Maple	12	2		
3033	Acer saccharum	Sugar Maple	14	2		
3034	Acer saccharum	Sugar Maple	12	2		
3249	Pinus strobus	White Pine	20	3		
3250	Acer platanoides	Norway Maple	24	1		
3251	Acer platanoides	Norway Maple	30	3		
3252	Acer platanoides	Norway Maple	26	3		
3254	Acer platanoides	Norway Maple	26	3		
3255	Acer platanoides	Norway Maple	14	2	hollow	
3257	Acer platanoides	Norway Maple	20	3		
3258	Acer platanoides	Norway Maple	30	3		
3259	Ulmus americana	Elm	24	2		
3261	Acer platanoides	Norway Maple	36	3		
3261	Acer platanoides	Norway Maple	36	3		
3275	Acer platanoides	Norway Maple	26	2		
3276	Acer platanoides	Norway Maple	22	3		
3276	Acer platanoides	Norway Maple	20	2		
3277	Acer platanoides	Norway Maple	22	3		
3277	Acer platanoides	Norway Maple	20	2		
3279	Acer platanoides	Norway Maple	36	2		
3279	Acer platanoides	Norway Maple	34	1		
3289	Acer platanoides	Norway Maple	18	3		
3290	Acer platanoides	Norway Maple	15	2		
3291	Acer platanoides	Norway Maple	24	1		
3291	Acer platanoides	Norway Maple	28	2		
3292	Acer platanoides	Norway Maple	28	2		
3293	Acer saccharum	Sugar Maple	30	2		
3295	Robinia pseudoacacia	Black Locust	38	3		
3300	Acer negundo	Boxelder	14	2		
3301	Acer saccharum	Sugar Maple	12	2		
3302	Acer saccharinum	Silver Maple	3x24	3		
3303	Acer saccharinum	Silver Maple	48	2		
3304	Acer saccharinum	Silver Maple	42	2		
3305	Acer saccharinum	Silver Maple	32	2		
3306	Acer saccharinum	Silver Maple	15	2		
3307	Acer saccharinum	Silver Maple	16	2		
3308	Acer saccharinum	Silver Maple	26	2		
3309	Acer saccharinum	Silver Maple	2x24	2		
3310	Acer saccharinum	Silver Maple	2x24	2		
3311	Acer saccharinum	Silver Maple	3x20	2		
3312	Celtis occidentalis	Hackberry	15	3		
3313	Fraxinus pennsylvanica	Green Ash	10	1		
3314	Morus alba	Mulberry	12	2		
3315	Fraxinus pennsylvanica	Green Ash	12	1		
3316	Fraxinus pennsylvanica	Green Ash	12	1		
3317	Acer platanoides	Norway Maple	18	2		
3318	Acer saccharinum	Silver Maple	30	2		
3319	Acer saccharinum	Silver Maple	2x18	2		
3320	Acer saccharinum	Silver Maple	36	2		
3321	Morus alba	Mulberry	22	1		
3322	Tilia americana	American Linden	28	2		
3323	Tilia americana	American Linden	36	3		
3324	Ailanthus altissima	Tree of Heaven	3x12	2		
3325	Acer platanoides	Norway Maple	30	2		
3326	Tilia americana	American Linden	32	2		
3820	Robinia pseudoacacia	Black Locust	9	2		
3821	Robinia pseudoacacia	Black Locust	16	2		
3822	Robinia pseudoacacia	Black Locust	10	2		
3823	Robinia pseudoacacia	Black Locust	6x18	2		
3824	Robinia pseudoacacia	Black Locust	15	2		
3825	Robinia pseudoacacia	Black Locust	12	2		
3850	Acer negundo	Boxelder	10	2		
3851	Robinia pseudoacacia	Black Locust	8	2		
3852	Robinia pseudoacacia	Black Locust	12	2		
3853	Robinia pseudoacacia	Black Locust	12	2		
3854	Robinia pseudoacacia	Black Locust	14	2		
3855	Fraxinus pennsylvanica	Green Ash	12	1		
3856	Pseudotsuga menziesii	Douglas Fir	45	2		
3857	Robinia pseudoacacia	Black Locust	16	2		
3858	Robinia pseudoacacia	Black Locust	14	2		
3859	Robinia pseudoacacia	Black Locust	13	1		
3860	Robinia pseudoacacia	Black Locust	12	2		
4219	Acer platanoides	Norway Maple	3x12	2		
4220	Acer platanoides	Norway Maple	4x12	2		
4221	Acer platanoides	Norway Maple	30	2		
4222	Acer platanoides	Norway Maple	26	2		
4223	Juglaus nigra	Butternut	26	3	Key Tree	
4224	Juglaus nigra	Butternut	30	3	Key Tree	
4291	Acer platanoides	Norway Maple	2x16	2		
4293	Acer platanoides	Norway Maple	14	1		
4297	Acer platanoides	Norway Maple	12	2		
4298	Acer platanoides	Norway Maple	16	2		
4300	Acer platanoides	Norway Maple	12	1		
4301	Acer platanoides	Norway Maple	12	2		
4302	Acer platanoides	Norway Maple	14	1		
4303	Acer platanoides	Norway Maple	12	2		
4304	Acer platanoides	Norway Maple	12	2		
4305	Acer platanoides	Norway Maple	14	3		
4308	Acer platanoides	Norway Maple	10	2		
4309	Acer platanoides	Norway Maple	10	2		
4310	Acer platanoides	Norway Maple	16	2		
4311	Acer platanoides	Norway Maple	15	3		
4312	Acer platanoides	Norway Maple	9	2		
4315	Acer platanoides	Norway Maple	10	2		
4316	Acer platanoides	Norway Maple	12	3		
4317	Acer platanoides	Norway Maple	14	2		
4318	Acer platanoides	Norway Maple	14	2		
4326	Acer platanoides	Norway Maple	16	2		
4327	Acer platanoides	Norway Maple	14	2		
4328	Acer platanoides	Norway Maple	9	2		
4329	Acer platanoides	Norway Maple	14	2		
4330	Acer platanoides	Norway Maple	12	2		
4342	Acer platanoides	Norway Maple	16	3		
4343	Acer platanoides	Norway Maple	16	2		
4344	Acer platanoides	Norway Maple	13	2		
4345	Acer platanoides	Norway Maple	13	2		
4346	Acer platanoides	Norway Maple	12	2		
4347	Acer platanoides	Norway Maple	10	2		
4348	Acer platanoides	Norway Maple	14	2		
4352	Acer platanoides	Norway Maple	16	2		
4353	Acer platanoides	Norway Maple	16	2		
4354	Acer platanoides	Norway Maple	12	2		
4355	Acer platanoides	Norway Maple	10	2		
4356	Acer platanoides	Norway Maple	14	2		
4357	Acer platanoides	Norway Maple	13	2		
4358	Acer platanoides	Norway Maple	12	2		
4363	Acer platanoides	Norway Maple	10	2		
4364	Acer platanoides	Norway Maple	16	2		
4365	Acer platanoides	Norway Maple	12	1		
4366	Acer platanoides	Norway Maple	14	1		
4368	Acer platanoides	Norway Maple	12	2		
4370	Acer platanoides	Norway Maple	12	2		
4374	Acer platanoides	Norway Maple	12	2		
4386	Acer saccharum	Sugar Maple	20	3		
4387	Acer saccharum	Sugar Maple	18	2		
4388	Acer saccharum	Sugar Maple	16	2		
4389	Acer saccharum	Sugar Maple	20	2		
4390	Acer saccharum	Sugar Maple	25	2		
4391	Acer saccharum	Sugar Maple	22	2		
4392	Acer saccharum	Sugar Maple	24	3		
4393	Acer saccharum	Sugar Maple	25	1		
4394	Acer saccharum	Sugar Maple	16	2		
4395	Acer saccharum	Sugar Maple	20	2		
4396	Fraxinus pennsylvanica	Green Ash	12	1		
4397	Acer platanoides	Norway Maple	14	2		
4398	Acer negundo	Boxelder	22	2		
4399	Acer saccharum	Sugar Maple	18	2		
4400	Acer negundo	Boxelder	28	2		
4401	Acer saccharum	Sugar Maple	19	3		
4406	Quercus rubra	Red Oak	42	2		
4407	Quercus rubra	Red Oak	34	3		
4408	Quercus rubra	Red Oak	26	3		
4409	Quercus rubra	Red Oak	29	3		
4410	Quercus rubra	Red Oak	42	4		
4411	Quercus rubra	Red Oak	32	3		
5316	Aesculus hippocastanum	Horse Chestnut	32	2		
5689	Acer platanoides	Norway Maple	36	1		
5690	Acer platanoides	Norway Maple	32	1		
5691	Acer platanoides	Norway Maple	24	1	hollow	
5692	Acer platanoides	Norway Maple	25	2		
5802	Acer Rubrum	Red Maple	10	3		
5803	Acer platanoides	Norway Maple	10	3		
5805	Acer platanoides	Norway Maple	24	1		
5806	Acer platanoides	Norway Maple	24	1		
5807	Acer Rubrum	Red Maple	10	3		
5808	Fraxinus pennsylvanica	Green Ash	30	0		
5809	Acer platanoides	Norway Maple	22	3		
5810	Acer platanoides	Norway Maple	26	2		
5811	Acer platanoides	Norway Maple	12	2		

CONDITION RATINGS :

Rating	Description	General Criteria
4	Excellent	The tree is typical of the species, has less than 10% deadwood in the crown that is attributable to normal causes, has no other observed problems, and requires no remedial action
3	Good	The tree is typical of the species and / or has less than 20% deadwood in the crown, only 1 or 2 minor problems that are easily corrected with normal care.
2	Fair	The tree is typical of the species and / or has less than 40% deadwood in the crown, only 1 or 2 minor problems that are not imminently lethal to the tree and no significant decay or significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to ensure continued health.
1	Poor	The tree is not typical of the species and / or has over 50% deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corected would not result in the long term survival of the tree.
0	Dead	Less than 10% of the tree shows signs of life

Tree Preservation Notes :

1. Tree Removal Permit Required: A tree removal permit shall be required for the removal of any tree in the woodland. No person shall, directly or indirectly, remove, damage or destroy a woodland without having secured a TRP.
2. The Owner or his/her designee shall be responsible for construction and maintenance of temporary fencing or other tree protection measures, to be used during construction.
3. Snow fencing shall be temporarily installed at the critical root zone for protection of trees prior to any construction activities and maintained throughout the entire project. The Critical Root zones equals one foot (1') for each one inch (1") of trunk diameter measured 4.5 feet above ground. See detail A.
4. Grading and construction equipment shall be forbidden from encroaching within the drip line of a tree.
5. No construction activity, movement, and/or placement of equipment or materials or spoils storage shall be permitted within the critical root zone of a protected tree or at any higher location where drainage toward the tree could conceivably affect the health of the tree. No excess soil, additional fill, liquids or construction debris shall be placed within the critical root zone of a protected tree.
6. No attachments, fences, or wires, other than those approved for bracing, guying or wrapping, shall be attached to trees during the construction period.
7. Grade change shall be allowed under the drip line of any trees designated for preservation only if tree trunks and branches are protected when construction must occur within tree drip line areas.
8. To improve the survival rate of trees, root pruning and/or thinning shall be performed in accordance with industry standards and practices and where indicated on the plan.

Existing Tree Summary Narrative :

Much of the existing site is heavily wooded. Based on an earlier 2011 Tree Survey of Neighborhood 1, and our current 2014-2015 partial inventory of the full site, we have found the existing trees to be a combination of low quality Boxelder, Silver Maple, Elm and Buckthorn with remnant groves of Norway Spruce and Norway Maple from Jensen's original design. Additionally some specimen Oaks, Hickories and Sugar Maples can be found scattered around the site.
The proposed site plan carefully locates roads and homes around the desirable tree groves in order to preserve a large percentage of the best trees on site, while removing the lower quality, invasive vegetation.

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE IL 60563 – 630.305.3980 Fax 630.305.3984

The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Existing Tree Inventory

developer :

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

north: scale:

revisions:
⚠ 8.30.2016 | Per Village Review Comments
⚠ 8.20.2016 | Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no.: 23045
sheet no.: TS.105

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ORDINANCE 2017-014 EXHIBIT B-15 Phasing Plan prepared by Manhard Consulting, Ltd. with dates of February 10, February 13, and 22 2017,consisting of 4 pages

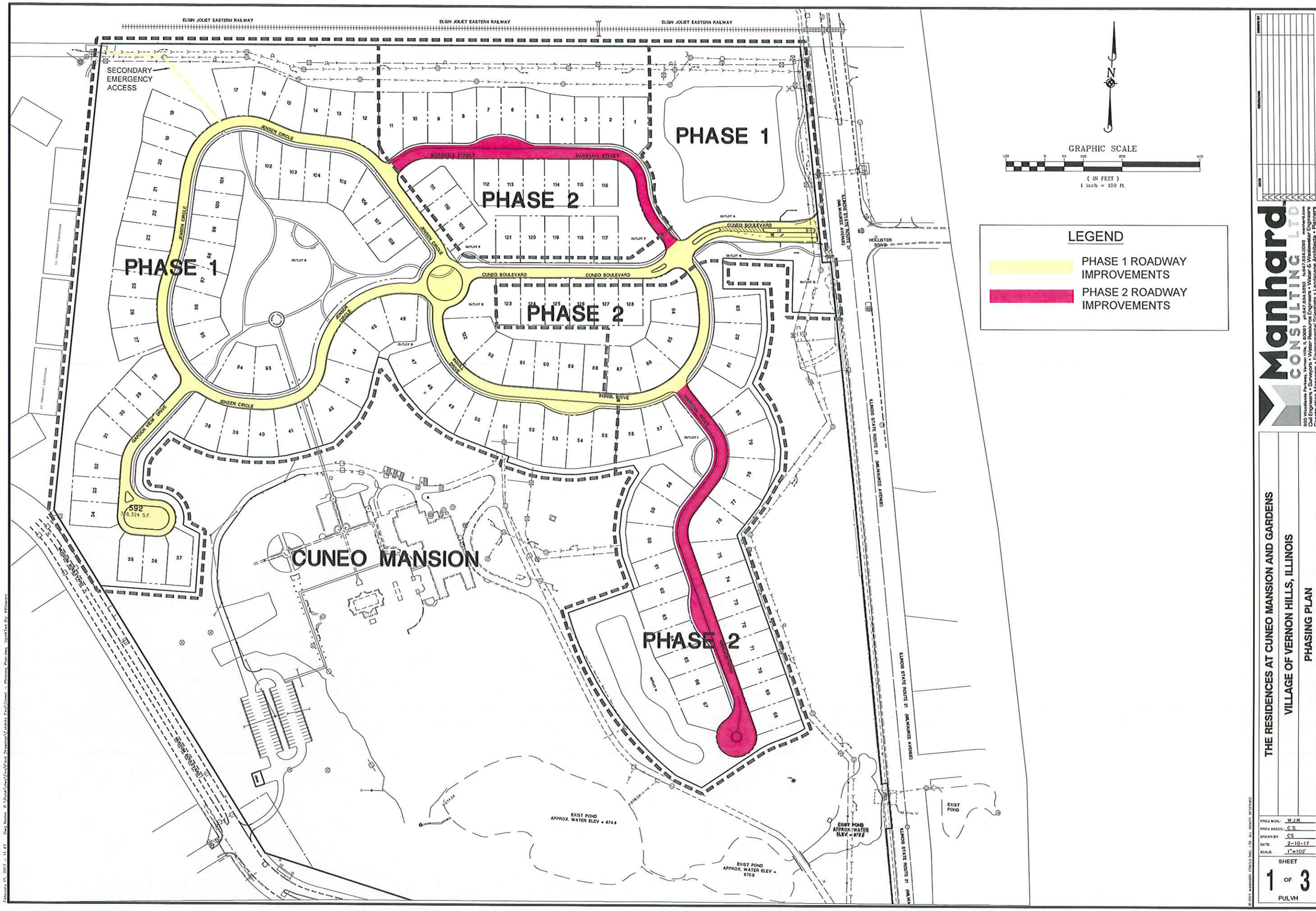
The Residences at Cuneo Mansion and Gardens
Development Phasing Summary
February 22, 2017

Phase 1

- Pavement and curb and gutter along Cuneo Boulevard, Jensen Circle, Insull Drive, Garden View Drive and the central traffic circle.
- Secondary emergency access at the northwest corner of the site behind Lots 17 and 18.
- Sanitary sewer along Cuneo Boulevard, Jensen Circle, Insull Drive and Garden View Drive.
- Water main along Cuneo Boulevard, Jensen Circle, Insull Drive and Garden View Drive.
- Looped water main system provided with connections to existing mains at the Cuneo Boulevard and Milwaukee Avenue and at the northwest corner of the site behind Lots 17 and 18.
- Storm sewer along Cuneo Boulevard, Jensen Circle, Insull Drive and Garden View Drive.
- Storm sewer behind Lots 1-24, 27-37, 39-44, 48-55, 88-91 and 96-105.
- Northeast stormwater detention basin.
- Milwaukee Avenue path from the south side of Cuneo Boulevard to the north side of the railroad right of way.

Phase 2

- Pavement and curb and gutter along Marshall Street and Mansion Road.
- Sanitary sewer along Marshall Street and Mansion Road.
- Water main along Marshall Street and Mansion Road.
- Mansion Road water main loop provided with connection to the existing water main at the southeast corner of the subdivision.
- Storm sewer along Marshall Street and in Mansion Road right of way.
- Storm sewer behind lots 56-78, 81-85, 110-111, and 117-121.
- Southeast stormwater detention basin.
- Milwaukee Avenue path south from Cuneo Boulevard through the Amli property.



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THE RESIDENCES AT CUNEO MANSION AND GARDENS

VILLAGE OF VERNON HILLS, ILLINOIS

PHASING PLAN

PROJ MGR:	W.J.H.
PROJ ASSOC:	C.S.
DRAWN BY:	CS
DATE:	2-10-17
SCALE:	1"=100'

SHEET 1 OF 3

PULVH

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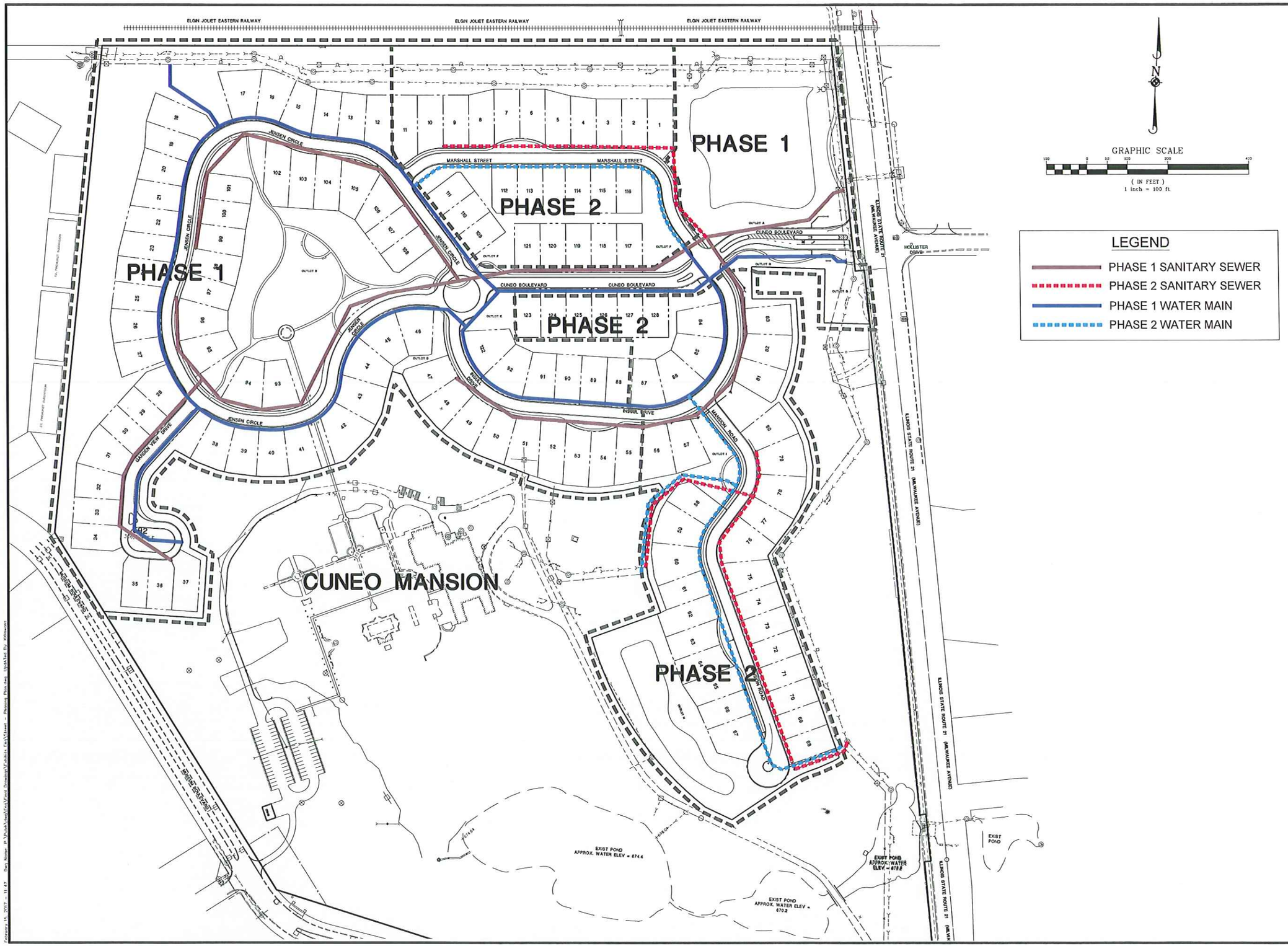

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft

LEGEND

- PHASE 1 SANITARY SEWER
- PHASE 2 SANITARY SEWER
- PHASE 1 WATER MAIN
- PHASE 2 WATER MAIN

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DRAWN BY | REVISIONS | DATE

THE RESIDENCES AT CUNEO MANSION AND GARDENS
VILLAGE OF VERNON HILLS, ILLINOIS
PHASING PLAN

PROJ MGR: W.J.H.
PROJ ASSOC: C.S.
DRAWN BY: C.S.
DATE: 2-13-17
SCALE: 1"=100'

SHEET 2 OF 3
PULVH

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February 15, 2017 - 11:47 Dan Nance P:\Projects\2015\015-0147 Cuneo Property\Civil\Site Plan\Phasing Plan.dwg Modified By: dnance

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SHEET 3 OF 3

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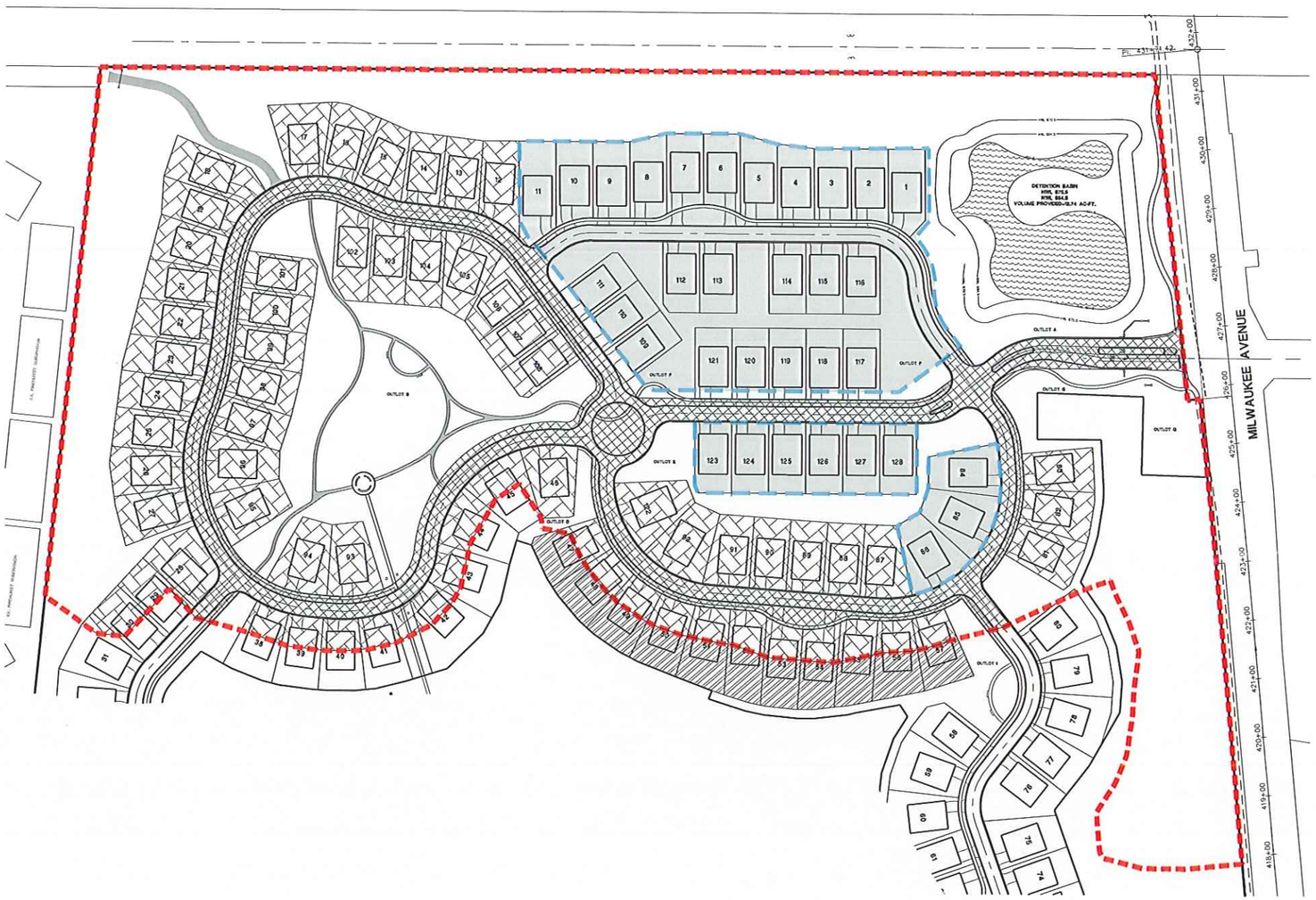
ORDINANCE 2017-014 EXHIBIT B-16 Proposed Curve Number Exhibit – Phase 1 Plan prepared by Manhard Consulting, Ltd. with a date of February 15, 2016, consisting of 1 page.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ORDINANCE 2017-014 EXHIBIT B-17 Existing Tree Survey and Preservation Plan prepared by Signature Design Group with a date of March 1, 2017, and consisting of 1 page.

⚠ CUNEO: Existing Tree Trimming / Removal Notes

A) **Central Park and Residential Lot Areas (orange) :**
Remove all Ash trees and dead trees. Remove all condition 1 (Poor Quality) trees. Crown prune all trees as required for structure and safety. Clean up understory and mulch (or seed) as required.

B) **Perimeter Woodlands - High Visibility (yellow) :**
Remove all Ash trees and dead trees. Remove all condition 1 (Poor Quality) trees and Buckthorn. Crown prune all trees as required for structure and safety. Mulch perimeter 25' of woodland - maintain natural ground surface beyond.

C) **Perimeter Large Woodlands - Buffers (green) :**
Remove all Ash trees and dead trees. Remove condition 1 (Poor Quality) trees and Buckthorn. Clean the forest floor as part of the Buckthorn removal operation and woodchips from the chipping operation will be placed on the forest floor.

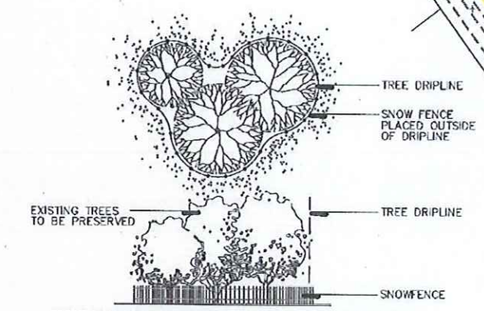
D) **Mulch :**
Woodchips generated from the removal/pruning operations shall be used for mulching the existing woodland borders and trees.

Legend :

- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Tree To Be Removed
- Existing Tree To Be Preserved

Notes :

1. See sheet TS.105 for Existing Tree Inventory Data.
2. See sheet TS.105 for Tree Preservation Notes, Narrative and Fencing Details.



ERECT PROTECTIVE SNOWFENCE PRIOR TO ANY CONSTRUCTION ACTIVITY. DO NOT STORE ANY EQUIPMENT WITHIN THE PROTECTED AREA. REMOVE THE PROTECTIVE FENCE ONLY AFTER CONSTRUCTION OPERATIONS ARE COMPLETED.

1/A **Typical Tree Preservation Fencing** NTS

SIGNATURE DESIGN GROUP

Land Planning
Landscape Architecture
Environmental Site Design

604 WASHINGTON ST. - NAPERVILLE, IL 60563 - 630.305.0850 Fax 630.305.0864

The Residences at Cuneo Mansion and Gardens

Vernon Hills, Illinois

sheet description:

Existing Tree Survey & Preservation Plan

EXHIBIT A.

developer:

Pulte Homes
1900 E. Golf Road - Suite 300
Schaumburg, Illinois 60173

0 25 50 75 125 175

north: scale: 1" = 50'-0"

revisions:		
⚠	3.01.2017	Per Village Review
⚠	2.20.2017	Per Village Review
⚠	8.30.2016	Per Village Review Comments
⚠	6.20.2016	Per Village Review Comments dated May 24, 2016

original issue date: 21 March 2016

drawn by:
checked by:
project no: 23045
sheet no:

TS.100

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MONOTONY CODE RESTRICTIONS

Dated 2/17/17

I. The Residences at Cuneo Mansion and Gardens

Due to the curvilinear nature of the land plan and heavily landscaped open areas, which serve to create variety in the streetscape, the following criteria apply to houses within predefined blocks (Exhibit A).

a. Houses within each block (A through K) shall be considered independently from houses in other blocks when applying the monotony code restrictions.

b. No house shall have the same plan AND architectural style that is within four (4) houses on either side of subject house OR on any of the three (3) houses most directly across the street from the subject house.
   i. Homes that are immediately adjacent to one another including open space between lots AND front the same street, but within different blocks, CANNOT have the same plan AND architectural style.
   ii. The same plan BUT different architectural style IS allowed.
   iii. The same architectural style BUT different plan IS allowed.

c. No house shall have the same color package that is within one (1) house on either side **or** on any one (1) house most directly across the street from the subject house.

Note: If required based on buyer preferences, additional elevations can be developed and administratively approved by the Building Commissioner if the design is in keeping with the originally approved elevations use of detailing and stone/brick application and quantity.

II. Definitions

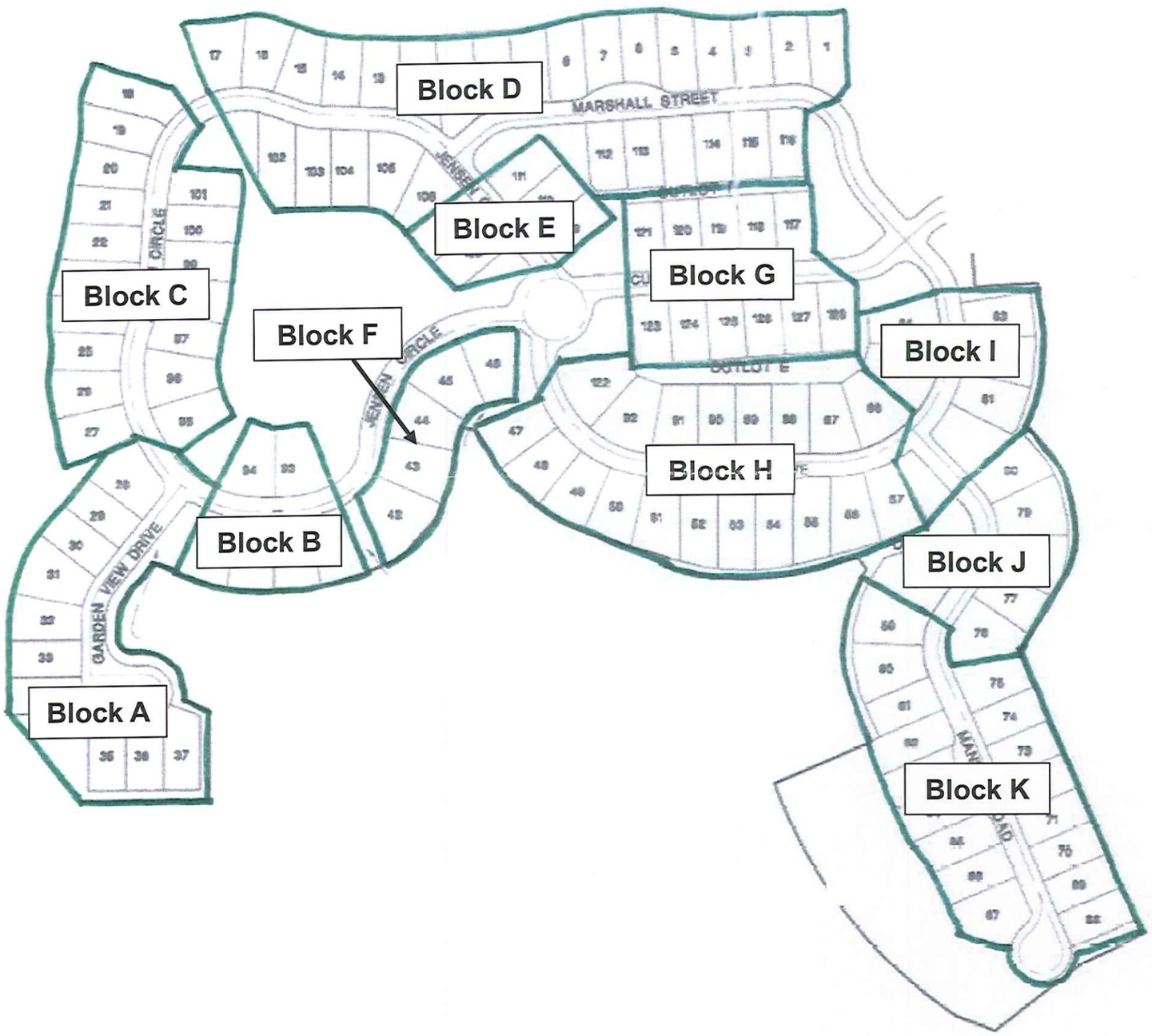
a. Plan – Belfort, Lyon, Strasbourg, Bourges, Bridgeview, Maple Valley, Melrose, Vanderbilt, Willwood and Woodside (Exhibit B)

b. Architectural Style – European Cottage, American Cottage, Northern Craftsman and Craftsman (Exhibit B)

c. Color Package – A predefined combination of siding & trim, shutters, entry door, garage door, gutters & downspouts, cultured stone, brick and roofing colors (Exhibit C).

Exhibit A

Monotony Code Restrictions
The Residences at Cuneo Mansion and Gardens



Predefined Blocks

Monotony Code Restrictions

Pulte Homes

Index of

The Residences at

Cuneo Mansion and Gardens

a new community from Pulte Homes

in the village of Vernon Hills

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Version 02-05042016

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Strasbourg European Cottage page 8

Belfort American Cottage page 3

Strasbourg American Cottage page 9

Belfort Craftsman page 4

Strasbourg Craftsman page10

Lyon European Cottage page 5

Bourges European Cottage page 11

Lyon American Cottage page 6

Bourges American Cottage page 12

Lyon Craftsman page 7

Bourges Craftsman page 13

Bridgeview European Cottage page 14

Melrose European Cottage page 20

Willwood Northern Craftsman page 26

Bridgeview American Cottage page 15

Melrose American Cottage page 21

Willwood American Cottage page 27

Bridgeview Craftsman page 16

Melrose Craftsman page 22

Willwood Craftsman page 28

MapleValley European Cottage page 17

Vanderbilt Northern Craftsman page 23

Woodside Northern Craftsman page 29

MapleValley American Cottage page 18

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Woodside American Cottage page 30

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Woodside Craftsman page 31

Exhibit B

Exhibit C
Monotony Code Restrictions

The Residences at Cuneo Mansion and Gardens

by Pulte Homes

SCHEME	LP SIDING				VINYL	PAINTED PRODUCTS		ALUMINUM	STONE PRODUCT CULTURED	BRICK PRODUCT	ROOFING PRODUCT	
	HORIZONTAL	BOARD & BATTEN	SHAKE	TRIM (Soffit, Lineal, Freeze, Ext. Corners)	VINYL SHUTTERS	ENTRY DOORS	GARAGE DOORS & PAINTED TRIM	GUTTERS/TRIM (Fascia, freeze)	CORONADO	BRICK CRAFT	TAMKO	TAMKO
					MID AMERICAN ACCENT COLOR (shutter color)	SHERWIN WILLIAMS ACCENT COLOR	SHERWIN WILLIAMS PAINT	MASTIC METALS / NAPCO METALS	Tuscan Villa / Country Rubble / Appalachian Fieldstone		3 Tab (25yr)	Architectural (30yr)
4001	c	Country Green PM216	Country Green PM216	SW 7014 - Eider White	Black 002	SW 6258 - Tricorn Black	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Tuscan Villa Coastal Brown	Country Road	Weathered Wood	Weathered Wood
4002	Eucalyptus PM212	Camoflauge PM312	Camoflauge PM312	SW 7014 - Eider White	Black 002	SW 6258 - Tricorn Black	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Country Rubble Dakota Brown	Cedar Creek	Weathered Wood	Weathered Wood
4003	Pumice PM318	Sand Castle PM210	Sand Castle PM210	SW 7014 - Eider White	Musket Brown 010	SW 6076 - Turkish Coffee	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Country Rubble Coastal Brown	Cutawba	Weathered Wood	Weathered Wood
4004	Outside White	Mineral Gray PM119	Mineral Gray PM119	SW 7038 - Tony Taupe	Midnight Blue 166	SW 6237 - Dark Night	SW 7038 - Tony Taupe	Tuscan Clay / Jefferson Tan / Stone Clay	Country Rubble Newport Gray	Country Road	Oxford Grey	Oxford Grey
4005	Pumice PM318	Acorn PM314	Acorn PM314	SW 7014 - Eider White	Federal Brown 009	SW 6076 - Turkish Coffee	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Tuscan Villa Romano	Cutawba	Weathered Wood	Weathered Wood
4006	Pumice PM318	Outside White	Outside White	SW 7047 - Porpoise	Black 002	SW 6258 - Tricorn Black	SW 7047 - Porpoise	Terratone Bronze / Terra Bronze / Terratone	Tuscan Villa Romano	Sandalwood	Rustic Hickory	Rustic Hickory
4007	Eucalyptus PM212	Acorn PM314	Acorn PM314	SW 7014 - Eider White	Black 002	SW 6258 - Tricorn Black	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Country Rubble Dakota Brown	Sandalwood	Rustic Hickory	Rustic Hickory
4008	Sandstone	Pumice PM318	Pumice PM318	SW 6076 - Turkish Coffee	Federal Brown 009	SW 6076 - Turkish Coffee	SW 6076 - Turkish Coffee	Musket Brown / Musket Brown / Musket Brown	Country Rubble Coastal Brown	Cedar Creek	Weathered Wood	Weathered Wood
4009	Colonial Grey PM211	Windy Gray PM102	Blue Iron PM120	SW 7006 - Extra White	Black 002	SW 6258 - Tricorn Black	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Newport Gray	Country Road	Oxford Grey	Oxford Grey
4010	Pumice PM318	Country Green PM216	Country Green PM216	SW 7006 - Extra White	Musket Brown 010	SW 6076 - Turkish Coffee	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Dakota Brown	Sandalwood	Weathered Wood	Weathered Wood
4011	Sand Castle PM210	Pumice PM318	Pumice PM318	SW 7014 - Eider White	Bordeaux 167	SW 6034 - Arresting Auburn	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Old Country Ledge Antique Cream	Country Road	Oxford Grey	Oxford Grey
4012	Pumice PM318	Sandstone	SW 6076 - Turkish Coffee	Federal Brown 009	SW 6076 - Turkish Coffee	SW 6076 - Turkish Coffee	Musket Brown / Musket Brown / Musket Brown	Country Rubble Dakota Brown	Sandalwood	Rustic Hickory	Rustic Hickory	
4013	Pumice PM318	Port Wine PM413	Port Wine PM413	SW 7047 - Porpoise	Tuxedo Gray 018	SW 6005 - Folkstone	SW 7047 - Porpoise	Terratone Bronze / Terra Bronze / Terratone	Country Rubble Newport Gray	Chicago Heritage	Rustic Hickory	Rustic Hickory
4014	Pumice PM318	Acorn PM314	Acorn PM314	SW 7014 - Eider White	Midnight Green 122	SW 6174 - Andiron	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Tuscan Villa Romano	Cedar Creek	Weathered Wood	Weathered Wood
4015	Sandstone	Sand Castle PM210	Sand Castle PM210	SW 7038 - Tony Taupe	Black 002	SW 6258 - Tricorn Black	SW 7038 - Tony Taupe	Tuscan Clay / Jefferson Tan / Stone Clay	Tuscan Villa Coastal Brown	Country Road	Weathered Wood	Weathered Wood
4016	Windy Gray PM102	Outside White	Outside White	SW 7006 - Extra White	Black 002	SW 6258 - Tricorn Black	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Newport Gray	Country Road	Oxford Grey	Oxford Grey
4017	Pumice PM318	Outside White	Outside White	SW 7047 - Porpoise	Black 002	SW 6258 - Tricorn Black	SW 7047 - Porpoise	Terratone Bronze / Terra Bronze / Terratone	Tuscan Villa Coastal Brown	Cedar Creek	Weathered Wood	Weathered Wood
4018	Pumice PM318	Colonial Grey PM211	Colonial Grey PM211	SW 7014 - Eider White	Black 002	SW 6258 - Tricorn Black	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Country Rubble Newport Gray	Cedar Creek	Weathered Wood	Weathered Wood
4019	Blue Iron PM120	Windy Gray PM102	Windy Gray PM102	SW 7006 - Extra White	Black 002	SW 6258 - Tricorn Black	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Newport Gray	Country Road	Oxford Grey	Oxford Grey
4020	Camoflauge PM312	Sandstone	Sandstone	SW 7006 - Extra White	Black 002	SW 6258 - Tricorn Black	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Dakota Brown	Sandalwood	Weathered Wood	Weathered Wood
4021	Eucalyptus PM212	Camoflauge PM312	Camoflauge PM312	SW 7014 - Eider White	Black 002	SW 6258 - Tricorn Black	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Country Rubble Dakota Brown	Campfire	Weathered Wood	Weathered Wood
4022	Pumice PM318	Country Green PM216	Country Green PM216	SW 7006 - Extra White	Musket Brown 010	SW 6076 - Turkish Coffee	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Dakota Brown	Campfire	Weathered Wood	Weathered Wood
4023	Pumice PM318	Sandstone	Sandstone	SW 6076 - Turkish Coffee	Federal Brown 009	SW 6076 - Turkish Coffee	SW 6076 - Turkish Coffee	Musket Brown / Musket Brown / Musket Brown	Country Rubble Dakota Brown	Campfire	Rustic Hickory	Rustic Hickory
4024	Camoflauge PM312	Sandstone	Sandstone	SW 7006 - Extra White	Black 002	SW 6258 - Tricorn Black	SW 7006 - Extra White	White / 30 Degree White / Liberty White	Country Rubble Dakota Brown	Campfire	Weathered Wood	Weathered Wood
4025	Pumice PM318	Sand Castle PM210	Sand Castle PM210	SW 7014 - Eider White	Musket Brown 010	SW 6076 - Turkish Coffee	SW 7014 - Eider White	Natural Linen / Linen / Heritage Linen	Country Rubble Coastal Brown	Wabash	Weathered Wood	Weathered Wood
4026	Sandstone	Pumice PM318	Pumice PM318	SW 6076 - Turkish Coffee	Federal Brown 009	SW 6076 - Turkish Coffee	SW 6076 - Turkish Coffee	Musket Brown / Musket Brown / Musket Brown	Country Rubble Coastal Brown	Wabash	Weathered Wood	Weathered Wood
4027	Sandstone	Sand Castle PM210	Sand Castle PM210	SW 7038 - Tony Taupe	Black 002	SW 6258 - Tricorn Black	SW 7038 - Tony Taupe	Tuscan Clay / Jefferson Tan / Stone Clay	Tuscan Villa Coastal Brown	Harvard	Weathered Wood	Weathered Wood
4028	Pumice PM318	Outside White	Outside White	SW 7047 - Porpoise	Black 002	SW 6258 - Tricorn Black	SW 7047 - Porpoise	Terratone Bronze / Terra Bronze / Terratone	Tuscan Villa Coastal Brown	Harvard	Weathered Wood	Weathered Wood
4029	Sandstone	Brown Velvet PM509	Brown Velvet PM509	SW 7038 - Tony Taupe	Federal Brown 009	Natural Wood	SW 7038 - Tony Taupe	n/a	Country Rubble Dakota Brown	Country Road	Weathered Wood	Weathered Wood
4030	Pumice PM318	Camoflauge PM312	Camoflauge PM312	SW 7014 - Eider White	Black 002	Natural Wood	SW 2138 - Stonecrest	n/a	Country Rubble Newport Gray	Country Road	Weathered Wood	Weathered Wood
4031	Gray Base	Blue Iron PM120	Blue Iron PM120	SW 7014 - Eider White	Black 002	Natural Wood	SW 2102 - Silverpointe	n/a	Old Country Ledge Antique Cream	Country Road	Weathered Wood	Weathered Wood
4032	Taupe	Acorn PM314	Acorn PM314	SW 7038 - Tony Taupe	Federal Brown 009	Natural Wood	SW 7038 - Tony Taupe	n/a	Country Rubble Newport Gray	Chicago Heritage	Weathered Wood	Weathered Wood
4033	Acorn PM314	Pumice PM318	Pumice PM318	SW 7014 - Eider White	Musket Brown 010	Natural Wood	SW 7038 - Tony Taupe	n/a	Country Rubble Coastal Brown	Chicago Heritage	Weathered Wood	Weathered Wood
4034	Gray Base	Sharkskin PM107	Sharkskin PM107	SW 7014 - Eider White	Black 002	Natural Wood	SW 7006 - Extra White	n/a	Country Rubble Newport Gray	Cedar Creek	Weathered Wood	Weathered Wood